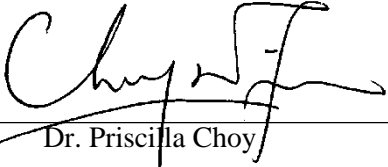


Civil Engineering and Development Department

**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 March 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.

WELLAB LIMITED
Room 1714, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong
Tel: (852) 2898 7388 Fax: (852) 2898 7076
Website: www.wellab.com.hk

Civil Engineering and Development Department
North Development Office
Unit 1501, Level 15, Tower I, Metroplaza,
223 Hing Fong Road,
Kwai Fong, N.T.

Attention: Mr. Ryan Chau

Your Reference

Our Reference

EC/TC/df/414202/L0106

3/F Manulife Place
348 Kwun Tong Road
Kowloon
Hong Kong

T +852 2828 5757
F +852 2827 1823
mottmac.hk

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. 29 (March 2022)

23 April 2022

BY EMAIL

Dear Sir,

We refer to email of 22 April 2022 attaching the Monthly Environmental Monitoring and Audit Report No. 29 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



Ir Thomas Chan
Independent Environmental Checker
T +852 2828 5967
Thomas.Chan@mottmac.com

c.c.
AECOM
Wellab Ltd.

Mr. Chris Ho	chris.ho@aecom.com
Dr. Priscilla Choy/	priscilla.choy@wellab.com.hk
Ms. Ivy Tam	ivy.tam@wellab.com.hk

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EXECUTIVE SUMMARY**Introduction**

1. This is the 29th 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 March 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	3, 9, 15, 21, 25 and 31 Mar 22	3, 9, 15, 21, 25 and 31 Mar 22	N/A	N/A	N/A	
	FLN-DMS3			N/A	N/A	3, 9, 15, 21, 25 and 31 Mar 22			
	FLN-DMS5			4, 10, 16, 22 and 28 Mar 22	4, 10, 16, 22 and 28 Mar 22	N/A			
	KTN-DMS4	4, 10, 16, 22 and 28 Mar 22		4, 10, 16, 22 and 28 Mar 22	N/A				
24-hr TSP Monitoring	FLN-DMS1	N/A	N/A	2, 8, 14, 18, 24, and 30 Mar 22	2, 8, 14, 18, 24, and 30 Mar 22	N/A	N/A	N/A	
	FLN-DMS3			N/A	N/A	2, 8, 14, 18, 24, and 30 Mar 22			
	FLN-DMS5A			4, 10, 16, 22 and 28 Mar 22	4, 10, 16, 22 and 28 Mar 22	N/A			
	KTN-DMS4	4, 10, 16, 22 and 28 Mar 22		4, 10, 16, 22 and 28 Mar 22	N/A				
Noise Monitoring	CP-FLN-NMS1	N/A			3, 9, 15, 21 and 31 Mar 22			N/A	
	CP-FLN-NMS2	N/A				3, 9, 15, 21 and 31 Mar 22	N/A		
	CP-KTN-NMS2	4, 10, 16 and 22 Mar 22	N/A	N/A					
	CP-KTN-NMS3								
	CP-KTN-NMS5								
	CP-KTN-NMS6	N/A	4, 10, 16 and 22 Mar 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*	3, 4, 7, 11, 15, 18, 21, 25 and 29 Mar 22	3, 7, 15, 21 and 29 Mar 22	N/A*	N/A*	N/A*	
	Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream and Siu Hang San Tsuen Stream	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	

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
	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	17 and 23 Mar 22	17 and 23 Mar 22	17 Feb 22	17 Mar 22	17 Mar 22	N/A*	N/A*
24-hr RSP (Ambient Arsenic) Monitoring for Land Contamination		3, 9, 15, 21, 25 and 31 Mar 22	N/A	3, 9, 15, 21, 25 and 31 Mar 22	N/A	N/A	N/A	N/A
Water Quality Monitoring		N/A	2, 4, 7, 9, 11, 14, 16, 18, 21, 23, 25, 28 and 30 Mar 22	N/A	2, 4, 7, 9, 11, 14, 16, 18, 21, 23, 25, 28 and 30 Mar 22	N/A	N/A	N/A
Landfill Gas Monitoring		9 Mar 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		1, 8, 16, 22 and 31 Mar 22	2, 9, 18, 23 and 30 Mar 22	4, 11, 15 and 25 Mar 22	3, 10, 16, 24 and 31 Mar 22	7, 17, 21 and 28 Mar 22	3, 10, 17, 24 and 31 Mar 22	4, 11, 14 and 25 Mar 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	L _{eq} (30min)	0	0	0	0	0	0
Water Quality ^[1]	DO	0	2	2	0	0	0
	Turbidity	0	5	5	0	0	0
	SS	0	5	5	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. Two (2) Limit Level for DO, five (5) Limit Level exceedances for turbidity, five (5) Limit Level exceedances for suspended solids of impact water quality monitoring were recorded. After investigation, all exceedances were considered non-projected related. 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. Two environmental complaints for ND/2019/02 were 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 (April 2022 and May 2022)
ND/2019/01	<ul style="list-style-type: none"> (a) Site Clearance, remove of existing structures and tree felling in Portion 1a (b) Site clearance, ground investigation, sheet piling, excavation and drainage in Portion 1b (c) Site Clearance and tree felling in Portion 1e (d) Site clearance, tree felling, temporary road construction and site formation work in Portion 2 (e) Site clearance, backfilling, excavation and tree felling in Portion 3 (f) Site clearance, sheet piling and excavation, drainage works and temporary road construction in Portion 5 (g) Site Clearance, sheet piling and excavation, pipes laying, backfilling, construction of KB01 retaining wall, haul road construction in Portion 6a (h) Operation of HAC treatment facility in Portion 6b (i) Site clearance, sheetpiling and excavation, pipes laying in Portion 7 (j) Construction of retaining Wall, slope cutting, slope drainage and maintenance access construction, RC construction of flushing water service reservoir and fresh water reservoir in Portion 8a (k) Sheet piling for receiving pit, trenchless works, excavation in Portion 8b (l) Sheet piling and excavation, pipes laying, demolition of existing structures, GI works in Portion 9b (m) Stockpile of soil and excavation in Portion 9c (n) Excavation, sheetpiling for ELS, drainage works, road construction and utilities laying in Portion 10a (o) Sheetpiling and excavation, drainage works in Portion 10b (p) Construction of MBR at 11b (q) Construction of temporary sewage pumping station in Portion 14
ND/2019/02	<ul style="list-style-type: none"> (a) Pipe Jacking (b) ELS (c) Concreting (d) Backfilling (e) Sheet Pile Installation (f) Bedding and Pipe Laying (g) Cut and Fill of Slope (h) Manhole Construction (i) Open cut (j) Preparation works
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 - Construction of Tea House - Construction of Composting Facility - Construction of Bird Hide

	<ul style="list-style-type: none"> - 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 (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 B1 & B2(Portion II), C1(Portion II) - Bored piling at B1(Portion I), B1&B2(Portion II), C1(Portion II), C1-03, C2-02, C2-03a, C2-03b, C3-02, C3-04a, D2-01 & E2-01. - ELS and Pile cap construction at C1-04, C3-04b, D1-01, D1-02, D1-03, D1-04, E1-01, E1-02, E1-03 & E1-04 - C4-01 Portal Beam - Bailey bridge construction - Piling platform & haul road construction from B2-03 to C1-02a at Portion II - Footing construction at C4-02 - Pier construction at C3-03b, C4-03, C4-04aM, D1-01, E1-01, E1-02, E1-03 & E1-04 (b) Viaduct Works <ul style="list-style-type: none"> - 1st SOP is targeted to cast by the middle of Mar 2022. - Target to cast in 36 segments in Mar 2022 and 42 segments in Apr 2022. - LG component (main winch trolley) testing resumed after heavy snow and completed in February 2022. All testing to be completed and disassemble for minor adjustment will be carried out. - Remaining components of E2-02 Form Traveller (FT) design was endorsed by ICE and submitted via CSF on 4 Mar 2022. - Main truss of E3-03 FT design was endorsed by ICE and submitted via CSF on 4 Mar 2022. - External PT design for Bridge C3, C4, E2 and E3 was in progress. - Rotation Bridge Design for E2-01 and D2-01 was in progress. (c) South Team Works <ul style="list-style-type: none"> - Venton Area – Gas main laying. - Portion 13 – Twin DN1200 storm drain construction. Backfill FW 52 bay 1 and bay 2. - Portion 17 and 18 – Construction of DN 600 and DN450 sewer. RW 52 bay 6 - Portion 18 – Gas main laying - TWSR (West) – RW06 construction and FS04 slope works. - HKY FB (East) – construction of LT1, P02 - Portion 11 – DN1200 and DN600 watermain laying work. - E2-02 pier – Construction of tower crane foundation. Construction of SOP - E2-03 – Pile cap construction. - E3-01 – Pile cap construction. - E3-03 – Pier Head and SOP construction - D2-02 – Pile cap construction. - D2-03 – Piling works. - E3-04a – predrilling and piling works.

ND/2019/06	(a) Finishing works for the additional water tank and pump house at Portion 3. (b) Installation of handrails at MOB at Portion 4. (c) Joint sealant application for carriageway at Portion 3. (d) Grating installation at Portion 3. (e) Installation of signage of the market at Portion 3. (f) Installation of the main gate.
ND/2019/07	(a) Site clearance at Portion 4 (b) Erection of site hoarding at Portion 4 (c) C&D waste disposal at Portion 1, 2, 4 and 5 (d) G.I. works at Portion 4 (e) Construction of box culvert at Portion 2 (f) Filling works at Portion 1, 2 and 4 (g) Tree felling/ Disposal of yard waste at Portion 4 (h) Construction of site haul road at Portion 4 (i) Drainage works and sewage works at Portion 1, 3 and 4 (j) Mini piling works at Portion 4 and 5 (k) Construction of noise barrier at Portion 5

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 29th EM&A Report which summarises the key findings of the EM&A programme in March 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	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	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	C3	Establishment of alternative egret sites and enhance the existing egret site at Ho Sheung Heung and/or its vicinity (Condition 2.7)	Figure 18
EP-473/2013/A	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	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 (March 2022)
ND/2019/01	<ul style="list-style-type: none"> (a) Site clearance, tree felling, demolition of existing structures and site formation works in Portion 1a (b) Site clearance, sheet piling, excavation, drainage and demolition of existing structures in Portion 1b (c) Site clearance, demolition of existing structures in Portion 1e (d) Site clearance, tree felling, temporary road construction and site formation works in Portion 2 (e) Site clearance, excavation, backfilling in Portion 3 (f) Site clearance, sheet piling, excavation, drainage works, watermain, backfill in Portion 5 (g) Site clearance, drainage works, backfill and retaining wall KB01 construction in Portion 6a (h) Operation of HAC soil treatment facility in Portion 6b (i) Site clearance, sheet piling and excavation, drainage works and site formation works in Portion 7 (j) Construction of retaining wall, slope cutting, slope drainage and maintenance access construction, RC construction of flushing water service reservoir and fresh water service reservoir in Portion 8a (k) Site clearance, excavation for jacking pit, sheet piling for receiving pit in Portion 8b (l) Sheet piling and excavation, drainage works in Portion 9b (m) Stockpile of soil and excavation in Portion 9c (n) Excavation, sheet piling for ELS, drainage works and road work, utilities works in Portion 10a (o) Sheet piling and excavation in Portion 10b (p) Construction of MBR in Portion 11b (q) Construction of temporary sewage pumping station in Portion 14 (r) Construction of CLC in Portion 16
ND/2019/02	<ul style="list-style-type: none"> (a) Sheet Pile Installation (b) Concreting (c) Sheet Pile Installation (d) ELS (e) Open cut (f) Preparation works
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 Bund / 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 (March 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) Site clearance (b) Tree felling (c) Predrill (d) Bored piling (e) Excavation (f) Sheet piling and ELS
ND/2019/05	<ul style="list-style-type: none"> (a) The pre-drilling will start at the B2 bridge in Portion III. (b) The rotary drilling rigs, one is located at B1. The second is located at C1-01b. The third one is located at C2-03. The fourth one rig is located at C3-02, C3-03a and C2-04a. The RCD rig is located at E2-01 and another RCD rig located at D2-03. C2-04a. (c) C4-01 Portal Beam support system, C4-03 cross head, C4-04 pier head and E3-03 pier head are in progress. (d) The 3rd Pour include roof of LT1 for HKY is in progress. (e) TWSR-East drainage and watermain from Ch250 to Ch350 install works are in progress.
ND/2019/06	<ul style="list-style-type: none"> (a) Rectification works for E&M installations for the steel canopy, MOB and additional water tank and pump house at Portion 3 have been completed. (b) Flag pole installation at Portion 3 has been completed. (c) Finishing works for the additional water tank and pump house at Portion 3 are in progress. (d) Installation of handrails at new pump house at Portion 3 has been completed. (e) Joint sealant application for carriageway at Portion 3 is in progress. (f) Grating cover installation at Portion 3 is in progress.
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-RN0654-21	13/09/2021	07/03/2022	Expired in the reporting month
	GW-RN0690-21	30/09/2021	29/03/2022	Expired in the reporting month
	GW-RN0692-21	25/09/2021	24/03/2022	Expired in the reporting month
	GW-RN0036-22	23/01/2022	16/07/2022	Valid
	GW-RN0975-21	08/01/2022	07/04/2022	Valid
	GW-RN0172-22	25/03/2022	24/09/2022	Valid
	GW-RN0173-22	08/03/2022	07/09/2022	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-RN0764-21	28/10/2021	27/04/2022	Valid
	GW-RN0050-22	27/01/2022	29/03/2022	Expired in the reporting month
	GW-RN0162-22	03/03/2022	02/06/2022	Valid
	GW-RN0189-22	10/03/2022	29/03/2022	Expired in the reporting month
ND/2019/05	GW-RN0782-21	27/10/2021	26/04/2022	Valid
	GW-RN0952-21	25/12/2021	23/03/2022	Expired in the reporting month
	GW-RN0039-22	01/02/2022	31/03/2022	Expired in the reporting month
	GW-RN0096-22	14/02/2022	13/05/2022	Valid
	GW-RN0095-22	11/02/2022	10/05/2022	Valid
	GW-RN0222-22	30/03/2022	29/06/2022	Valid
ND/2019/06	GW-RN0054-22	13/02/2022	12/08/2022	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation				
ND/2019/01	451792	11/12/2019	N/A	Valid
ND/2019/02	454012	05/03/2020	N/A	Valid
ND/2019/03	452216	24/12/2019	N/A	Valid
	452332	31/12/2019	N/A	Valid
	452333	31/12/2019	N/A	Valid
ND/2019/04	461184	23/10/2020	N/A	Valid
ND/2019/05	454323	13/03/2020	N/A	Valid
ND/2019/06	449369	24/09/2019	N/A	Valid
ND/2019/07	459393	28/08/2020	N/A	Valid
Billing Account for Disposal of Construction Waste				
ND/2019/01	7036265	17/01/2020	N/A	Valid
ND/2019/02	7036898	01/04/2020	N/A	Valid
ND/2019/03	7036378	22/01/2020	N/A	Valid
ND/2019/04	7038391	22/09/2020	N/A	Valid
ND/2019/05	7036901	01/04/2020	N/A	Valid

Contract No.	Permit / License No.	Valid Period		Status
		From	To	
ND/2019/06	7035473	17/10/2019	N/A	Valid
ND/2019/07	7038309	14/09/2020	N/A	Valid
Registration of Chemical Waste Producer				
ND/2019/01	5213-545-B2578-01	10/01/2020	N/A	Valid
ND/2019/02	5213-548-C4439-01	06/05/2020	N/A	Valid
ND/2019/03	5213-623-S4231-01	14/04/2020	N/A	Valid
ND/2019/04	5211-624-D2709-01	26/11/2020	N/A	Valid
ND/2019/05	5213-625-C4464-01	20/05/2020	N/A	Valid
ND/2019/06	5213-625-N2716-01	02/10/2019	N/A	Valid
ND/2019/07	5213-625-C4498-01	21/09/2020	N/A	Valid
Effluent Discharge License under Water Pollution Control Ordinance				
ND/2019/01	WT00036071-2020	22/06/2020	30/06/2025	Valid
	WT00036073-2020	22/06/2020	30/06/2025	Valid
	WT00036067-2020	22/06/2020	30/06/2025	Valid
	WT00036075-2020	22/06/2020	30/06/2025	Valid
	WT00036076-2020	22/06/2020	30/06/2025	Valid
	WT00037191-2020	02/02/2021	28/02/2025	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-DMS5A KTN-DMS4	Dust Monitor (1-hour and 24-hour TSP)	Met One Instruments	AEROCET-831	10
FLN-DMS1 FLN-DMS3	Dust Monitor (1-hour TSP)			
	HVS Sampler (TSP) (24-hour TSP)	Tisch	TISCH Model: TE-5170	2

- 3.8 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 $\pm 5\%$. 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	97.0	81.1 – 127.9	303	500
FLN-DMS3	97.0	63.2 – 137.1	301	500
FLN-DMS5	81.7	61.7 – 113.9	279	500
KTN-DMS4	60.2	33.4 – 91.3	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	82.6	24.7 – 128.7	150	260
FLN-DMS3	56.3	19.2 – 75.6	165	260
FLN-DMS5A	91.9	62.1 – 106.9	153	260
KTN-DMS4	60.7	37.2 – 106.5	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 project-related non-compliance of the criteria occur, 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	6
Acoustical Calibrator	Brüel & Kjær	4231	1
	SVANTEK	SV30A	2

Monitoring Parameters, Frequency and Duration

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

Table 4.3 Noise Monitoring Parameters, Duration and Frequency

Contract No.	Monitoring Stations	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]	57.0 – 71.9	69.9	75
ND/2019/04				
ND/2019/05	CP-FLN-NMS2 ^[2]	56.4 – 68.4	59.6	
ND/2019/01	CP-KTN-NMS2 ^[3]	54.6 – 59.4	58.6	
	CP-KTN-NMS3 ^[4]	51.2 – 59.4	51.6	
ND/2019/01	CP-KTN-NMS5	50.8 – 63.8	57.2	
ND/2019/02	CP-KTN-NMS6	56.3 – 58.6	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	2

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	<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	<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 Two (2) Limit Level for DO, five (5) Limit Level exceedances for turbidity, five (5) Limit Level exceedances for suspended solids of impact water quality monitoring were recorded. After investigation, all exceedances were considered non-projected related. The summary of exceedance record in the reporting month is shown in **Appendix O**.

Event and Action Plan

- 5.38 Should any project related non-compliance of the criteria occur, 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.
- 6.5 The revised Arsenic Assessment Report and Treatment Plan (AAR & ATP) has been submitted to EPD dated 14 December 2021 and the quarterly report for the progress of SI works will be submitted by the Contractor to EPD based on the approved AAR & ATP. Once received the quarterly report from the Contractor, ET will provide such records in the Monthly EM&A Report.

Monitoring Location

- 6.6 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.

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

- 6.8 **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

- 6.9 **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

- 6.10 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).
- 6.11 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

6.12 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

- 6.13 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.
- 6.14 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%.
- 6.15 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

- 6.16 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)
03/03/2022	KTN-DMS4(A)	2.03	9.36	11.7
09/03/2022		2.87		
15/03/2022		1.25		
21/03/2022		0.23		
25/03/2022		1.24		
31/03/2022		0.81		

- 6.17 All ambient arsenic monitoring was conducted as scheduled in the reporting month. During the reporting month, around 3435 tons of arsenic soil was transported to soil treatment plant and 4210 tons were treated. No Action/Limit Level exceedances were recorded.

Event and Action Plan

- 6.18 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.

Date of avifauna monitoring: 3rd, 4th, 7th, 11th, 15th, 18th, 21st, 25th, 29th March 2022

Date of night-time monitoring: 4th, 18th March 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, 66 species of birds were recorded during the bird surveys within assessment area. Among the recorded birds, there were 23 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 swallow water habitat. In addition, *Calidris ferruginea*, a spring passage migrant species with conservation interest, was observed in wet agricultural land in the reporting month.

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, while construction activities were observed beside T2 during the avifauna monitoring. Other 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.

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.

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

- 9.25 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.
- 9.26 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

- 9.27 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.
- 9.28 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)

- 9.29 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.
- 9.30 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)

- 9.31 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

- 9.32 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: 17th, 23rd March 2022

Monitoring Location

- 9.33 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

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

Monitoring Parameters

9.35 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

- 9.36 During the survey, a total of 3 mammal species were recorded from transects T1, T3, T4, T5 and T6. A total of 1 species of conservation importance was recorded, namely bat *Pipistrellus abramus*.
- 9.37 Domestic cat, *Felis catus* was found at T1. Domestic dog, *Canis lupus familiaris*, was found at T1 and T4, where associated with human settlements.
- 9.38 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).
- 9.39 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).
- 9.40 *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).
- 9.41 Bat species, *Pipistrellus abramus* was recorded in flight at nighttime at all of the transects.

Herpetofauna (Amphibians and Reptiles)

- 9.42 Along the transects, a total of 5 herpetofauna species were observed. No species of conservation importance were recorded. Species including toads and geckos were recorded near wetland habitats and watercourse. Transect T5 had higher species diversity than other transects.

Insects (Butterfly and Dragonfly)

- 9.43 During the insect survey, a total of 17 butterfly species and 2 odonata species were recorded from the transects, with all butterfly species being common or very common, except an uncommon species with conservational interest recorded at T5, *Charaxes marmax*. Transects T4 and T5 had higher butterfly species diversity than other transects.
- 9.44 Adverse weather condition including heavy rain and sudden drop in temperature during the survey of T1 & T6 on 23rd March 2022 might have led to the difference in recorded species diversity at T1 & T6 compared to other transects.
- 9.45 The 2 species of odonata recorded this month were both recorded at T5. Neither of the species were of particular conservation importance.
- 9.46 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**.
- 9.47 Since activities of odonata can fluctuates with environmental conditions, in addition to potential effects of surrounding human activities and alteration to their natural habitat (vegetative clearance and construction works outside of the projects observed at various transect), more attention should be paid to future monitoring results, potential sources of disturbance and other relevant ecological data.
- 9.48 For the monitoring conducted on 17th March 2022 on Transect T/5, 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.

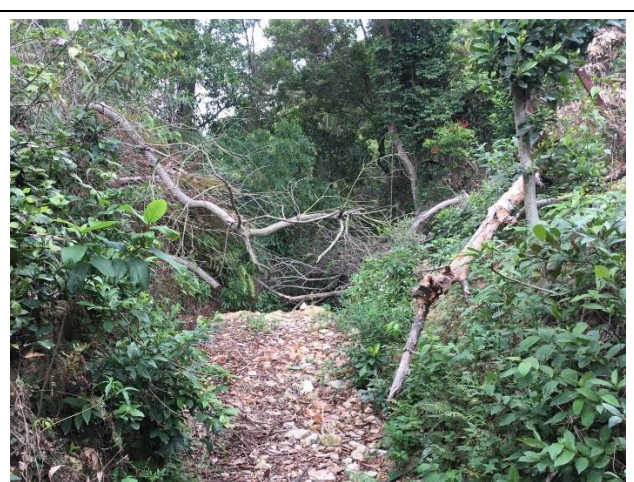


Photo 2. Inaccessible part of transect T5 blocked by the fallen trees.

Results and ObservationDetails of the Influencing FactorsMajor Activities

- 9.49 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.

- 9.50 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.
- 9.51 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.
- 9.52 During the survey of Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution, construction activities NOT under this project were observed at T3 and T5. Dust plumes and considerable alteration of vegetative habitat were observed as a result of these activities.

Weather Conditions

- 9.53 According to the observation during survey, temperature and the rain flow record in the Reporting Month (Reference: <http://www.weather.gov.hk/wxinfo/pastwx/metob202203.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	1, 8, 16, 22 and 31 Mar 22	2, 9, 18, 23 and 30 Mar 22	4, 11, 15 and 25 Mar 22	3, 10, 16, 24 and 31 Mar 22	7, 17, 21 and 28 Mar 22	3, 10, 17, 24 and 31 Mar 22	4, 11, 14 and 25 Mar 22
Joint Site Audit with representative of the <i>Supervisor's</i> Representative, the Contractor and IEC	16 Mar 22	18 Mar 22	15 Mar 22	16 Mar 22	17 Mar 22	10 Mar 22	14 Mar 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**.

Table 10.2 Observations and Recommendations during Site Audits

	Date	Observations and Recommendations	Follow-up
Contract No.: ND/2019/01			
<i>Waste/ Chemical Management</i>	01/03/2022	Construction waste shall be disposed of regularly.	Improvement/Rectification was observed during follow-up audit session on 8 March 2022.
<i>Air Quality</i>	16/03/2022	Access road should be kept clean and free from dust.	Improvement/Rectification was observed during follow-up audit session on 22 March 2022.
Contract No.: ND/2019/02			
<i>Water Quality</i>	23/02/2022	To enhance water mitigation measure to prevent surface runoff to pavement.	Improvement/Rectification was observed during follow-up audit session on 2 March 2022.
<i>Waste/ Chemical Management</i>	23/02/2022	Drip tray should be provided for chemical storage.	Improvement/Rectification was observed during follow-up audit session on 2 March 2022.
<i>Air Quality</i>	02/03/2022	Dusty haul road should be sprayed with water regularly.	Improvement/Rectification was observed during follow-up audit session on 9 March 2022.
<i>Landscape and Visual</i>	02/03/2022	To erect 2m dull green barrier fences around active work area. (3 locations shown in the photo)	Item was remarked as 220309-R01.
	09/03/2022	To erect 2m dull green barrier fences around active work area. (3 locations shown in the photo)	Item was remarked as 220318-R01.
	18/03/2022	To erect 2m dull green barrier fences around active work area. (3 locations shown in the photo)	Improvement/Rectification was observed during follow-up audit session on 23 March 2022.
<i>Water Quality</i>	23/03/2022	Enhance water mitigation measures to prevent muddy stagnant water runoff.	Improvement/Rectification was observed during follow-up audit session on 30 March 2022.
	30/03/2022	Remove the stagnant water inside U-channel.	Follow-up action is needed to be reported in the following month.
Contract No.: ND/2019/03			
<i>Water Quality</i>	25/02/2022	To enhance water mitigation measures around water stream near 巨賓, exposed slope of the stream should be covered to prevent further debris from entering the irrigation water channels.	Item was remarked as 220304-O01.
	25/02/2022	Wheel-washing Bay should be cleared and cleaned regularly.	Item was remarked as 220304-R01.
	04/03/2022	To enhance water mitigation measures around water stream near 巨賓, exposed slope of the stream should be covered to prevent further debris from entering the irrigation water	Improvement/Rectification was observed during follow-up audit session on 11 March 2022.

	Date	Observations and Recommendations	Follow-up
		channels.	
	04/03/2022	Wheel-washing Bay should be cleared and cleaned regularly.	Improvement/Rectification was observed during follow-up audit session on 11 March 2022.
Contract No.: ND/2019/04			
Water Quality	23/02/2022	Direct the muddy stagnant water to de-silting facility before discharge to drainage and U-channel. (Portion B)	Item was remarked as 220303-O01.
	03/03/2022	Direct the muddy stagnant water to de-silting facility before discharge to drainage and U-channel. (Portion B)	Item was remarked as 220310-O01.
	03/03/2022	Dusty stockpile should be covered by impervious sheeting.	Improvement/Rectification was observed during follow-up audit session on 10 March 2022.
	03/03/2022	To enhance the drainage system and the capacity of de-silting facility to prevent surface runoff.	Item was remarked as 220310-R02.
	10/03/2022	Direct the muddy stagnant water to de-silting facility before discharge to drainage and U-channel. (Portion B)	Improvement/Rectification was observed during follow-up audit session on 16 March 2022.
	10/03/2022	To enhance the drainage system and the capacity of de-silting facility to prevent surface runoff.	Item was remarked as 220316-R01.
	16/03/2022	To enhance the drainage system and the capacity of de-silting facility to prevent surface runoff.	Item was remarked as 220324-R01.
	24/03/2022	To enhance the drainage system and the capacity of de-silting facility to prevent surface runoff.	Item was remarked as 220331-R01.
	24/03/2022	To clear the U-channel regularly.	Improvement/Rectification was observed during follow-up audit session on 31 March 2022.
	31/03/2022	To enhance the drainage system and the capacity of de-silting facility to prevent surface runoff.	Follow-up action is needed to be reported in the following month.
Waste/ Chemical Management	16/03/2022	To clear the oil stain on the ground.	Improvement/Rectification was observed during follow-up audit session on 24 March 2022.
Ecology	31/03/2022	Silt curtain was observed oversized and bulky. Please rectify to make sure the silt curtain function properly.	Follow-up action is needed to be reported in the following month.
Contract No.: ND/2019/05			
Air Quality	28/02/2022	Dusty worksite shall be watered regularly.	Improvement/Rectification was observed during follow-up audit session on 7 March 2022.


	Date	Observations and Recommendations	Follow-up
	07/03/2022	NRMM label shall be displayed on regulated machine.	Improvement/Rectification was observed during follow-up audit session on 17 March 2022.
	17/03/2022	Dusty worksite shall be watered regularly.	Improvement/Rectification was observed during follow-up audit session on 21 March 2022.
	21/03/2022	Dusty stockpile shall be covered properly by impervious sheeting.	Improvement/Rectification was observed during follow-up audit session on 28 March 2022.
	28/03/2022	Site entrance should be kept clean and free from dust.	Follow-up action is needed to be reported in the following month.
Water Quality	28/02/2022	To enhance water mitigation measure to prevent surface runoff.	Improvement/Rectification was observed during follow-up audit session on 7 March 2022.
	21/03/2022	Replace broken sandbags to prevent surface runoff.	Improvement/Rectification was observed during follow-up audit session on 28 March 2022.
Waste/ Chemical Management	07/03/2022	Drip tray shall be provided for chemical storage.	Improvement/Rectification was observed during follow-up audit session on 17 March 2022.
	17/03/2022	General refuse shall be disposed of regularly.	Improvement/Rectification was observed during follow-up audit session on 21 March 2022.
Contract No.: ND/2019/06			
Waste/ Chemical Management	03/03/2022	Drip tray should be provided for chemical storage.	Item was remarked as 220310-R01.
	10/03/2022	Drip tray should be provided for chemical storage.	Improvement/Rectification was observed during follow-up audit session on 17 March 2022.
Contract No.: ND/2019/07			
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Implementation Status of Environmental Mitigation Measures

- 10.3 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
<u>EP-466/2013</u>	2.9	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.</p>	$\wedge_{[1]}$
<u>EP-468/2013/A</u>	2.11	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.</p>	$\wedge_{[1]}$
<u>EP-469/2013</u>	2.7	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.</p>	$\wedge_{[1]}$
<u>EP-473/2013/A</u>	2.13	 <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>	$\wedge_{[1]}$

<div> <div>EP-475/2013/A</div> <div>2.7</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></div> <div>Λ_[1]</div> </div>
<div>Implementation status:</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>	








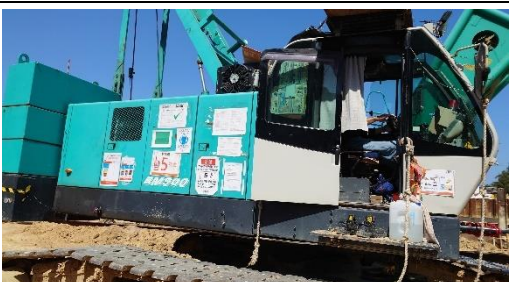
[1]: Barrier fences might be subjected to change according to phasing plan designed at detailed design stage

- 10.4 Under EP-467/2013/A (Condition 2.9), to minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas. As the Works programme under above EPs were still under preparation work and the barrier fences erection was still progressing in the Reporting Month, 2m high solid dull green site barrier fences will be checked once in place. The Hoarding Plan of the above EPs **refer to EP submission**.

Implementation Status of Air Quality and Noise Mitigation Measures

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

Table 10.4 Specific Air Quality and Noise Mitigation Measures for Major Construction Works in the Reporting Month

Works Contracts	Photographic Records	
ND/2019/01	 Hard paved exposed slope surface	 Access road watered regularly
ND/2019/02	 Hard paved exposed haul road	 Hard paved exposed slope surface
ND/2019/03	 Deployment of noise barriers between construction site and NSRs	 Vehicle washing facilities at exit point
ND/2019/04	 Haul road watered regularly	 Regulated machines display with Non-road Mobile Machinery labels

ND/2019/05		
	Covering dusty stockpile	Access road watered regularly
ND/2019/06		
	Regulated machines display with Non-road Mobile Machinery labels	Hard paved exposed haul road
ND/2019/07		
	Covering exposed slope surface with tarpaulin	Access road watered regularly








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, ND/2019/06 and ND/2019/07 include inert construction and demolition (C&D) materials and non-inert C&D wastes in the Reporting Month.
- 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, ND/2019/06 and ND/2019/07 during the reporting month are shown in **Appendix R**.
- 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 to share the progress of LVNP with different stakeholders, including CEDD, AFCD, CA, HKBWS, Contractor, ET, IEC and farmers. However, meeting in March was canceled due to pandemic outbreak.
- 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>Calidris ferruginea</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 Two (2) Limit Level for DO, five (5) Limit Level exceedances for turbidity, five (5) Limit Level exceedances for suspended solids of impact water quality monitoring were recorded. After investigation, all exceedances were considered non-projected related. 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 Two environmental complaints for ND/2019/02 were 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 (April to May 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	<ul style="list-style-type: none"> - Construction Dust impact - Noise Impact (Construction Phase) - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste) 	Air <ul style="list-style-type: none"> - Watering on exposed earth and haul road. - Cover the stockpiles or dusty materials. - Deploy water browsers to water the haul road. - Deploy mist-cannon on site - Install sprinkler 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 Solidification / Stabilization 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 site hoarding. Noise
	(b) GI works	Portion 1b, 9b		
	(c) Excavation	Portion 1b, 3, 5, 6a, 7, 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, 9b		
	(g) Construction of temporary site haul road	Portion 2, 5, 6a, 10a		
	(h) Operation of HAC treatment facility	Portion 6b		
	(i) Tree felling	Portion 1a, 1e, 2, 3		

	(j) Drainage Works	Portion 1b, 5, 6a, 7, 8a, 9b, 10a, 10b, 11b		<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 and practicable. - Conduct noise monitoring regularly. - Erect silent-up noise barrier at Portion 6b.
	(k) Sheetpiling	Portion 1b, 5, 6a, 7, 8b, 9b, 10a, 10b		
				<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. - Delivery of yard waste to Y-Park for reuse/ upcycling or agreed alternative site.

ND/2019/02	(a) Pipe Jacking	Portion 2, 3	Air, Noise, Waste	<ul style="list-style-type: none"> - Dusty works should be spray water or 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) ELS	Portion 2, 3, 7	Air, Noise, Waste	
	(c) Concreting	Portion 3, 9, 10	Air, Noise, Water, Waste, Ecology	
	(d) Backfilling	Portion 3	Air, Noise, Water, Waste, Ecology	
	(e) Sheet Pile Installation	Portion 3, 7	Air, Noise, Water, Waste, Ecology	
	(f) Bedding and Pipe Laying	Portion 3	Air, Noise, Water, Waste	
	(g) Cut and Fill of Slope	Portion 7	Air, Noise, Water, Waste	
ND/2019/03	(a) Excavation of irrigation channel	Long Valley	<ul style="list-style-type: none"> - C&D waste - Air pollution - Noise pollution 	<ul style="list-style-type: none"> - Watering exposed earth regularly - Cover C&D material by tarpaulin - Adopt QPME for excavation
	(b) Excavation of trench in Yin Kong Road	Portion 1 and Portion 1A	<ul style="list-style-type: none"> - C&D waste - Air pollution - Noise pollution - Water pollution 	<ul style="list-style-type: none"> - Watering exposed earth regularly - Cover C&D material by tarpaulin - Noise barrier for screening from source of noise - Wastewater will be treated before discharging to channel
	(c) Demolition of existing structure	Long Valley	<ul style="list-style-type: none"> - C&D material - Air Pollution 	<ul style="list-style-type: none"> - Cover C&D material by tarpaulin - Watering while demolish the structure
	(d) Construction works of storage shed and Type 2 Storage House	Long Valley	<ul style="list-style-type: none"> - C&D material - Air Pollution 	<ul style="list-style-type: none"> - Watering exposed earth regularly - Cover C&D material by tarpaulin

ND/2019/04	(a) Sheet piling	Portion H, Bridge F, A2	- 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 A1, A3, Portion E, H	- Air, Noise, Water, Waste	
	(d) Excavation and ELS	Portion H	- Air, Noise, Waste	
	(e) Site clearance	Portion H	- Air, Noise, Waste	
	(f) Tree felling	Portion H	- 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) - Waste Management (Construction Waste) - Landscape and Visual - Cultural Heritage 	<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 - 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.
	(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.		
	(c) Pipe Pilling	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		<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 - Sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions - Provide training to workers on appropriate waste management procedures, including waste reduction, reuse and recycling - To adopt other good site practice, such as arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site and regular cleaning and maintenance programme for drainage - Chemical wastes to be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation - Conducting Construction Vibration Monitoring - 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 – Tree unavoidably affected by the Project works should be transplanted where practical. Tree should be transplanted straight to their
	(f) Bailey bridge construction Portal Beam	C4-01		
	(g) Footing Construction	C4-02		
	(h) Utilities Diversion 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		
	(l) Slope works	RW06, FS04		
	(m) Demolition	HD Warehouse		

				final receptor site and not held in a temporary nursey as far as possible. - Erect 2m high dull green site boundary fence.
ND/2019/06	A. Rectification works for E&M installations for the steel canopy, MOB and additional water tank and pump house	Portion 3	- Noise pollution - Air pollution	- Adopt noise barrier in screening noise - Adopt ultra-low sulphur diesel
	B. Flag pole installation	Portion 3	- Noise pollution	- Adopt noise barrier in screening noise
	C. Finishing works for the additional water tank and pump house	Portion 3	- Air pollution - Noise pollution	- Unloading material shall be kept in minimum height and speed - Adopt “Approved” NRMM label
	D. Installation of handrails at new pump house	Portion 3	- Noise pollution	- Adopt noise barrier in screening noise
	E. Grating cover installation	Portion 3	- Noise pollution	- loading material shall be kept in minimum height and speed
ND/2019/07	(a) Site clearance	Portion 4, 5	- Construction Dust Impact - Noise Impact - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste) - Landscape and Visual	- Regular watering on exposed worksites and haul road. - Stockpiling area should be provided with covers and water spraying system. - Only well maintained plant to be operated on site. - Plant known to emit noise strongly in one direction, where possible; be orientated so that the noise is directed away from nearby NSRs. - Mobile plant to be sited as far away from NSRs as possible practicable. - All open stockpiles of construction materials of more than 50m ³ to be covered with tarpaulin. - Manholes to be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system.
	(b) Erection of site hoarding	Portion 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 1, 4		
	(i) Sewage works	Portion 1, 3		

	(j) Construction of Noise Barrier	Portion 5		<ul style="list-style-type: none"> - All vehicles and plant to be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. - Segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal. - Sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions. - Provide training to workers on appropriate waste management procedures, including waste reduction, reuse and recycling. - To adopt other good site practice, such as arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site and regular cleaning and maintenance programme for drainage. - Chemical wastes to be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. - Tree Protection & Preservation – 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.
	(k) Drainage Works	Portion 1, 3		

				<ul style="list-style-type: none">- Tree Transplantation Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible.- Erect 2m high dull green site boundary fence.- Light Control Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.
--	--	--	--	--

12.2 The major site activities in coming 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 March 2022 in accordance with Updated EM&A Manual.

13.2 No Action/Limit Level exceedance were recorded for air quality, construction noise, ambient arsenic and landfill gas monitoring in the reporting month. Two (2) Limit Level for DO, five (5) Limit Level exceedances for turbidity, five (5) Limit Level exceedances for suspended solids of impact water quality monitoring were recorded. After investigation, all exceedances were considered non-projected related.

Contract No. ND/2019/01

13.3 Environmental site inspection were conducted on 1, 8, 16, 22 and 31 Mar 22 by ET in the reporting month.

Contract No. ND/2019/02

13.4 Environmental site inspection were conducted on 2, 9, 18, 23 and 30 Mar 22 by ET in the reporting month.

Contract No. ND/2019/03

13.5 Environmental site inspection were conducted on 4, 11, 15 and 25 Mar 22 by ET in the reporting month.

Contract No. ND/2019/04

13.6 Environmental site inspection were conducted on 3, 10, 16, 24 and 31 Mar 22 by ET in the reporting month.

Contract No. ND/2019/05

13.7 Environmental site inspections were conducted on 7, 17, 21 and 28 Mar 22 by ET in the reporting month.

Contract No. ND/2019/06

13.8 Environmental site inspections were conducted on 3, 10, 17, 24 and 31 Mar 22 by ET in the reporting month.

Contract No. ND/2019/07

13.9 Environmental site inspections were conducted on 4, 11, 14 and 25 Mar 22 by ET in the reporting month.

13.10 There were Two environmental complaint for ND/2019/02 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.

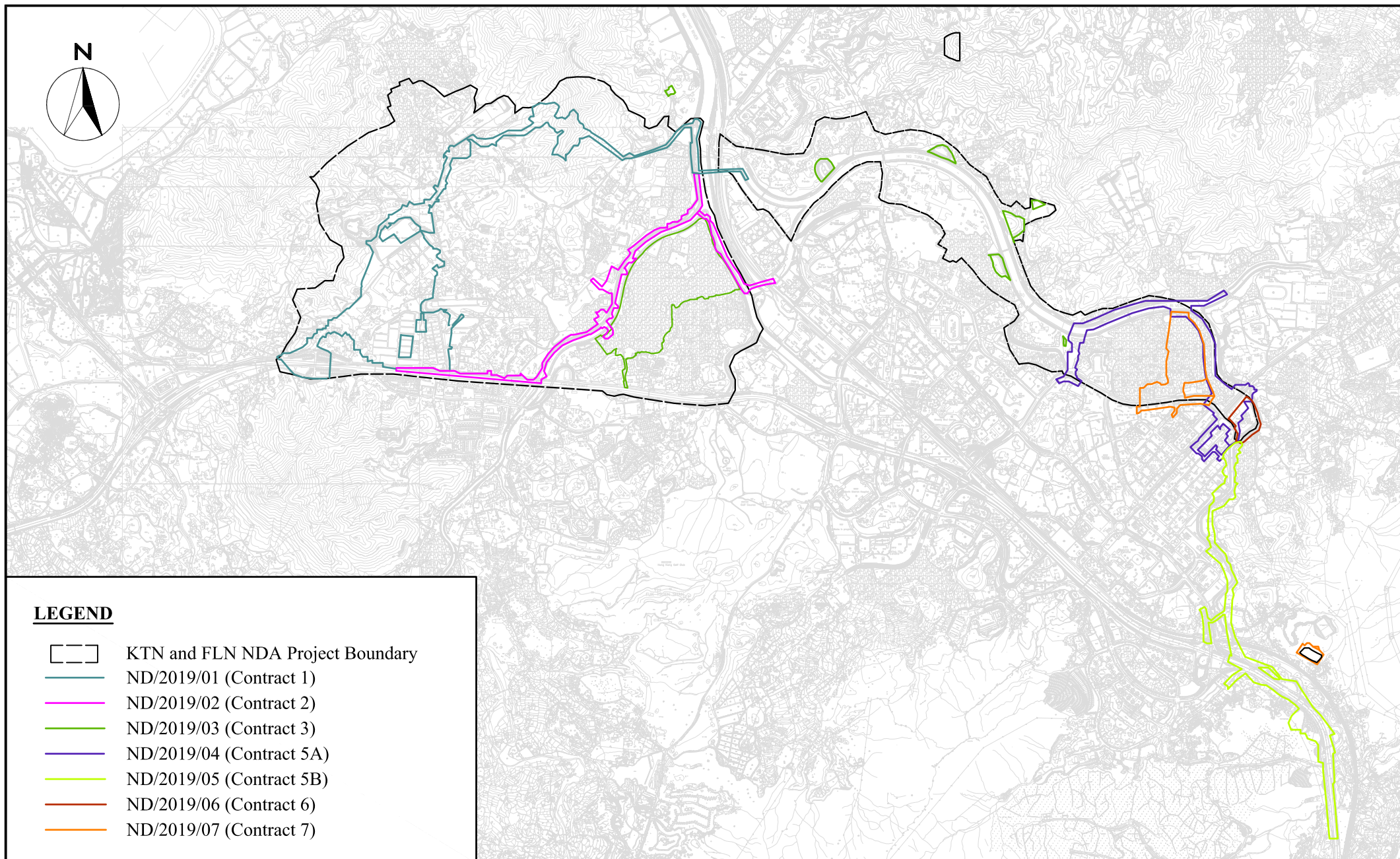
Ecology

- 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.

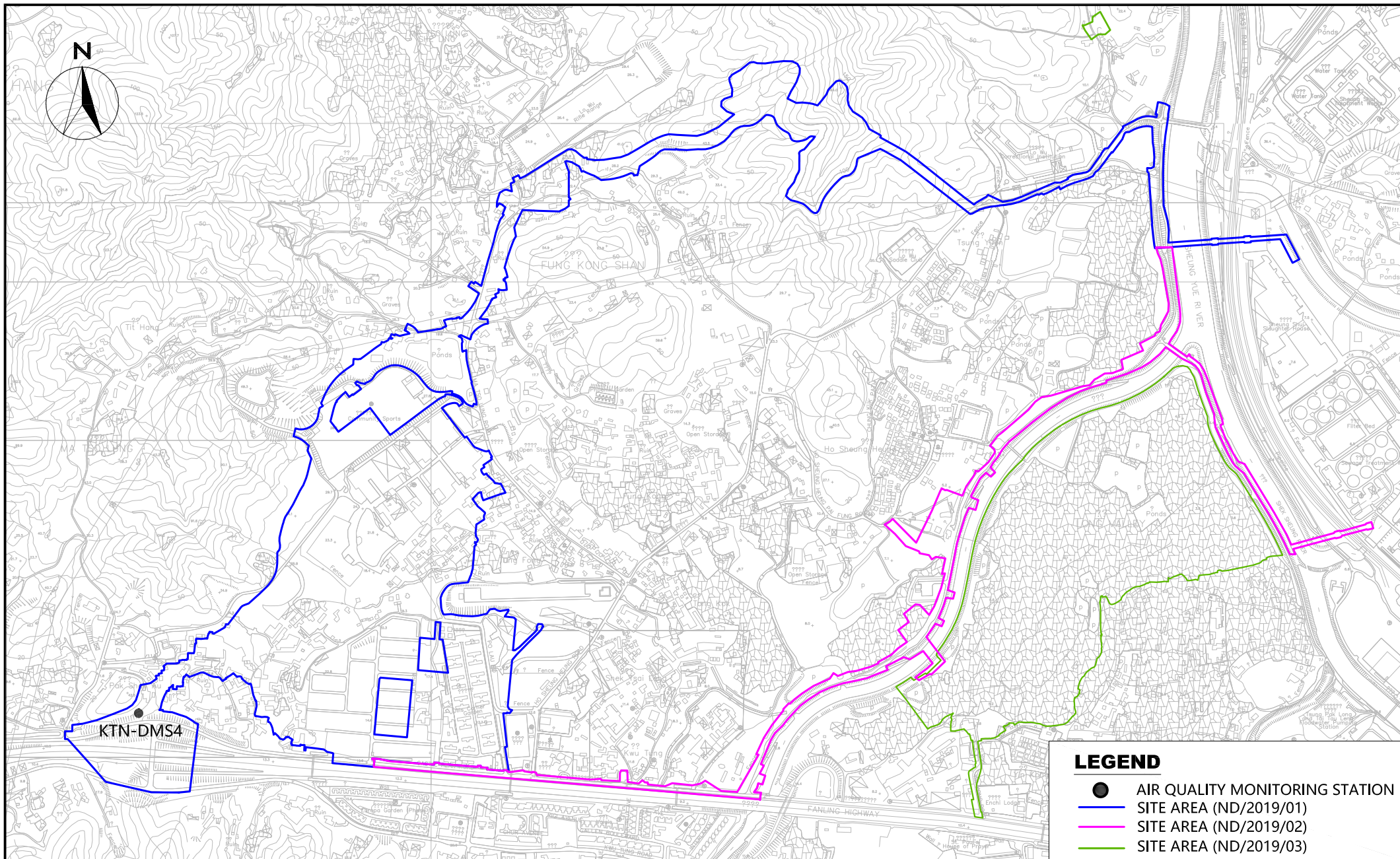
DRAWING(S)



LEGEND

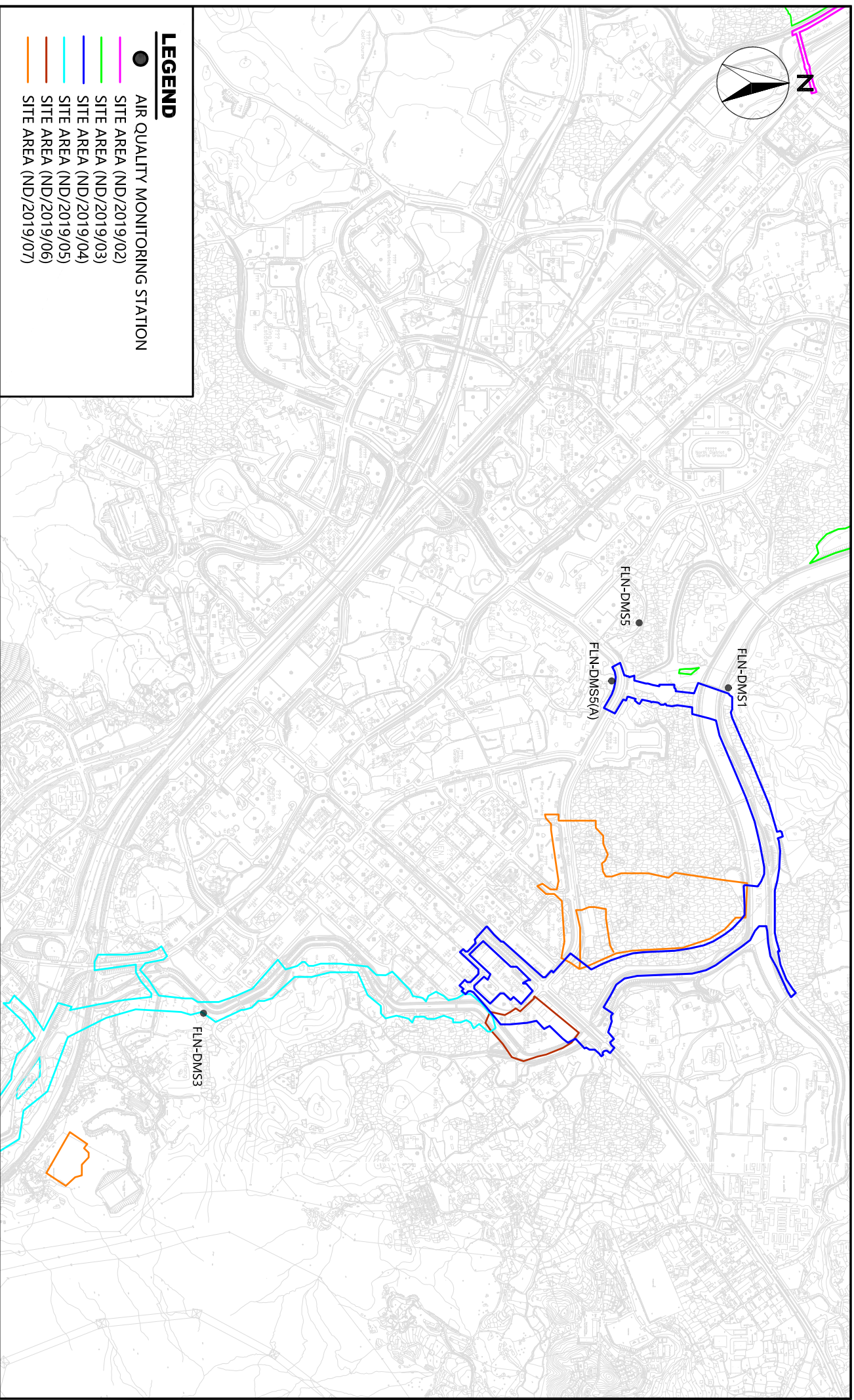
- KTN and FLN NDA Project Boundary
- ND/2019/01 (Contract 1)
- ND/2019/02 (Contract 2)
- ND/2019/03 (Contract 3)
- ND/2019/04 (Contract 5A)
- ND/2019/05 (Contract 5B)
- ND/2019/06 (Contract 6)
- ND/2019/07 (Contract 7)

FIGURE(S)

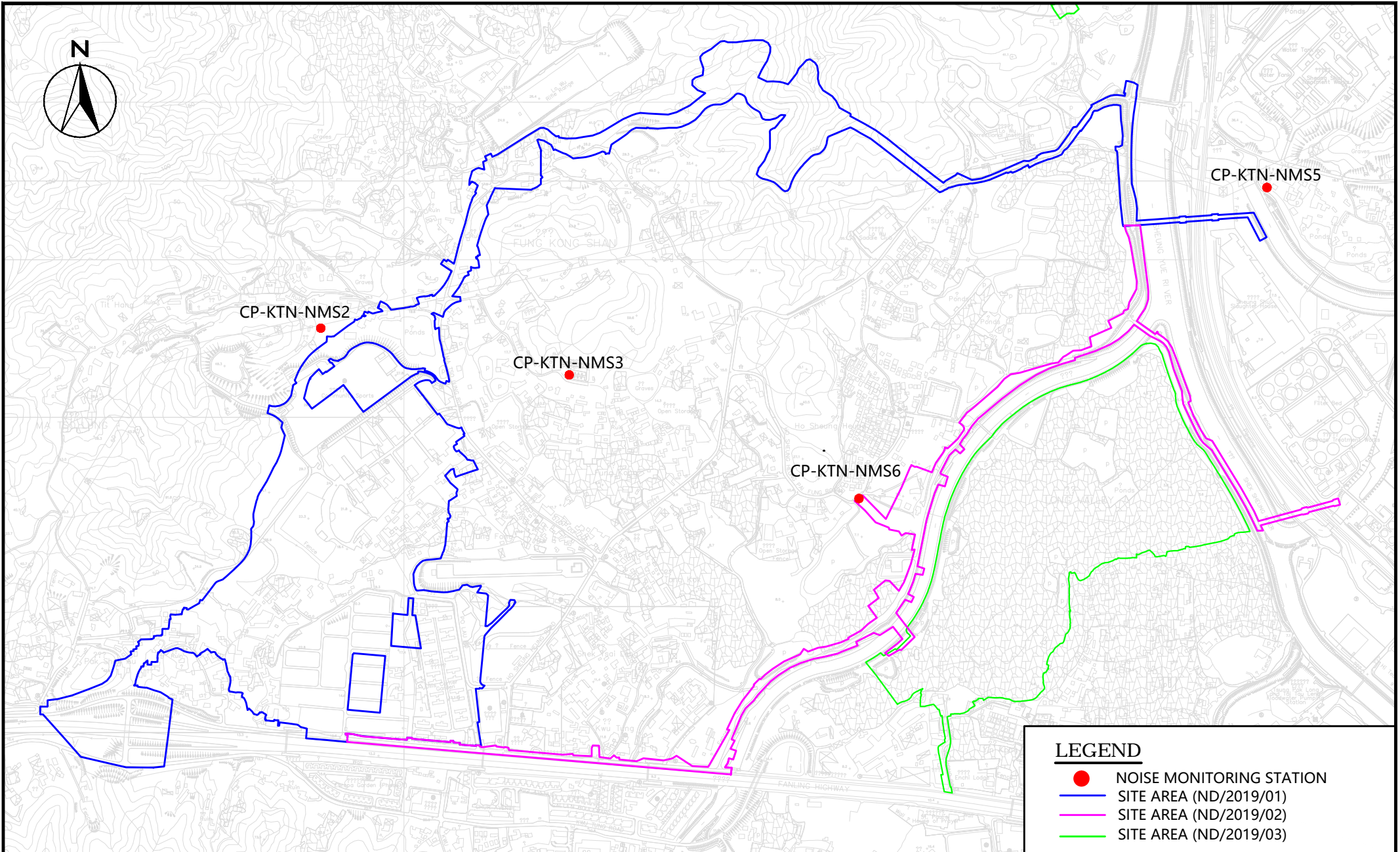


LEGEND

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

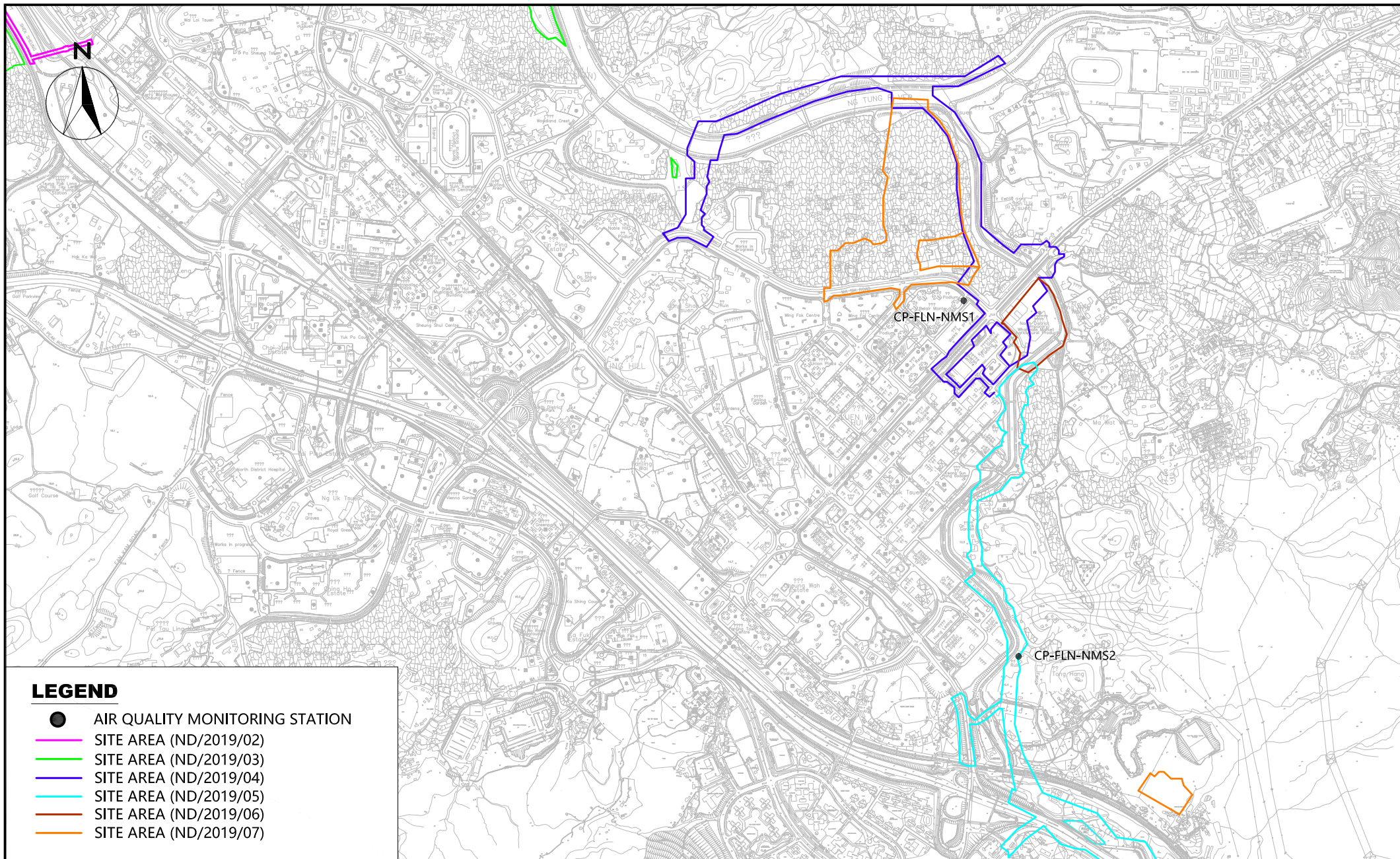


<div><div>WELLAB</div><div>consulting . testing . research</div></div>			Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction		
Phase for the First Phase Development of KTN and FLN NDAs			Location of Air Quality Monitoring Station (FLN)		
SCALE	A4 @ 1:40000	DATE	DEC 2021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



LEGEND

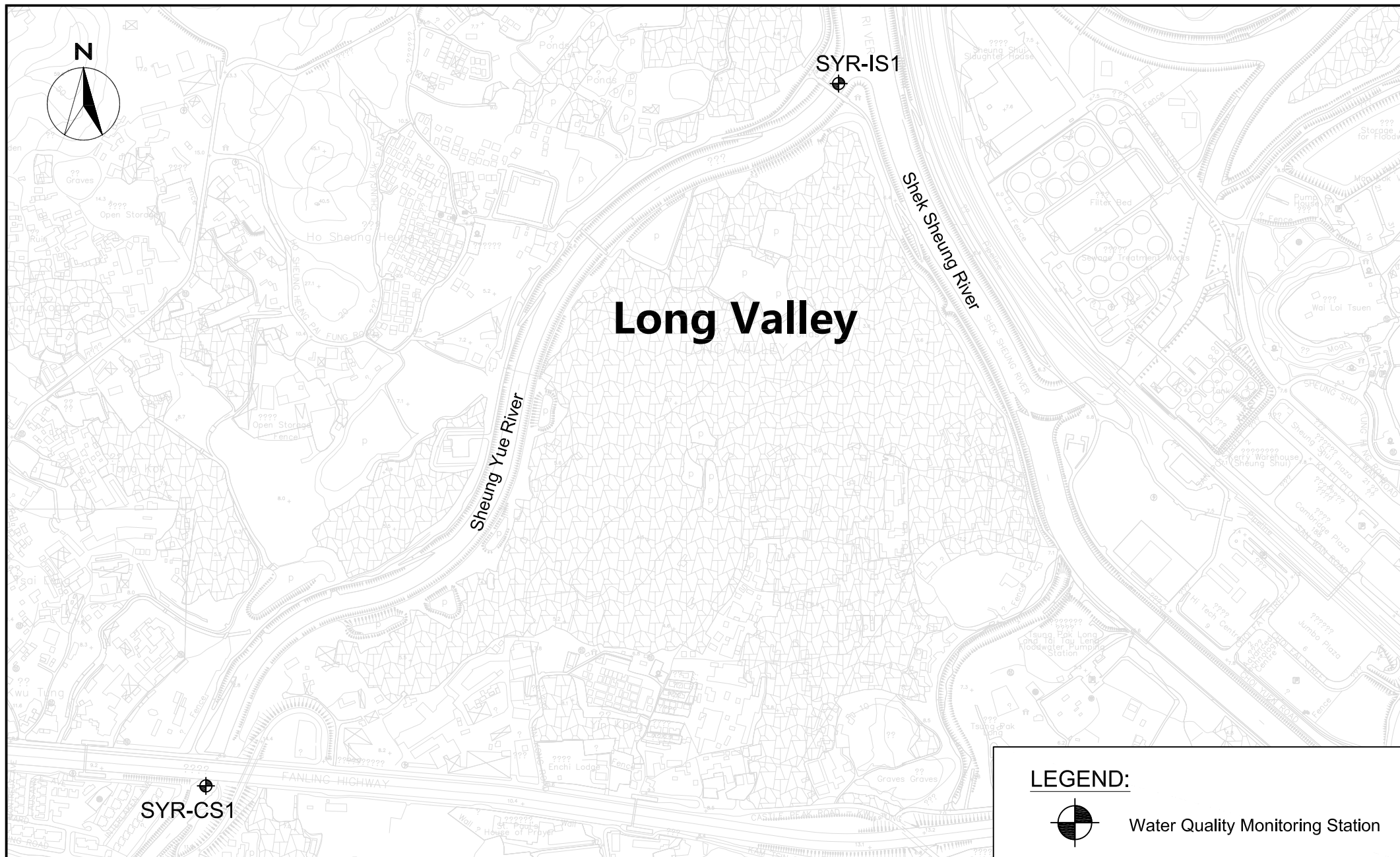
- NOISE MONITORING STATION
- SITE AREA (ND/2019/01)
- SITE AREA (ND/2019/02)
- SITE AREA (ND/2019/03)



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:



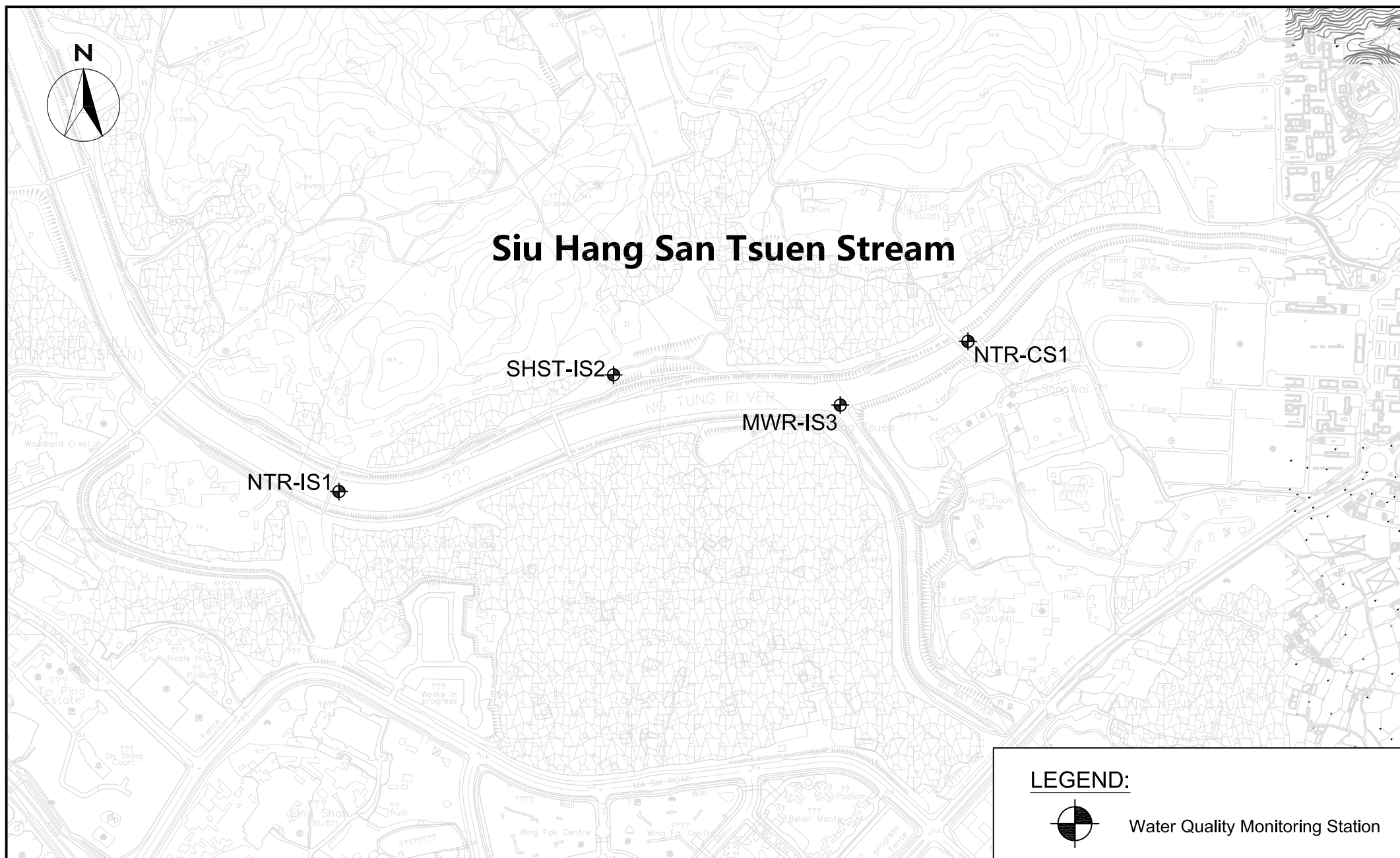
Water Quality Monitoring Station

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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 —

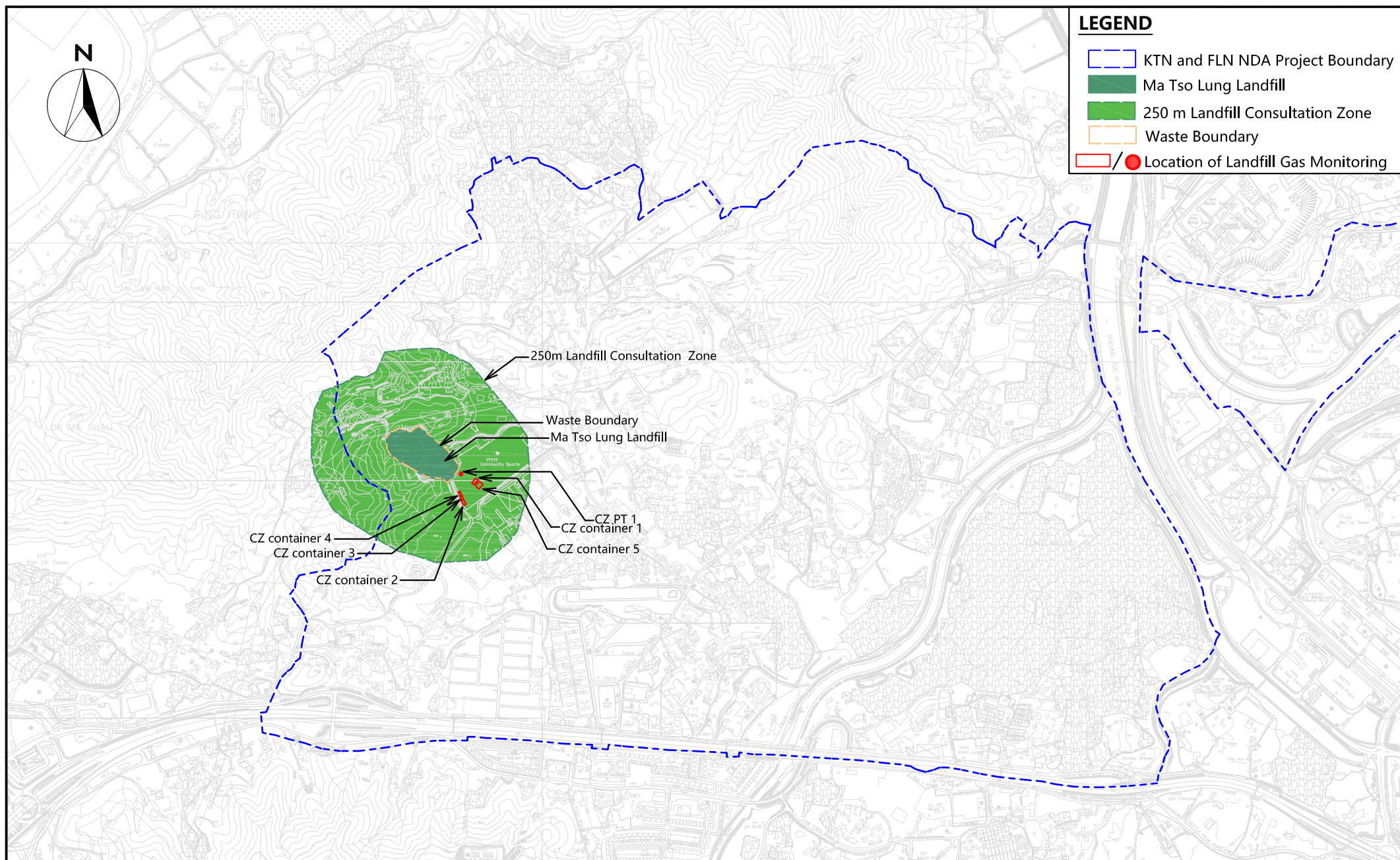


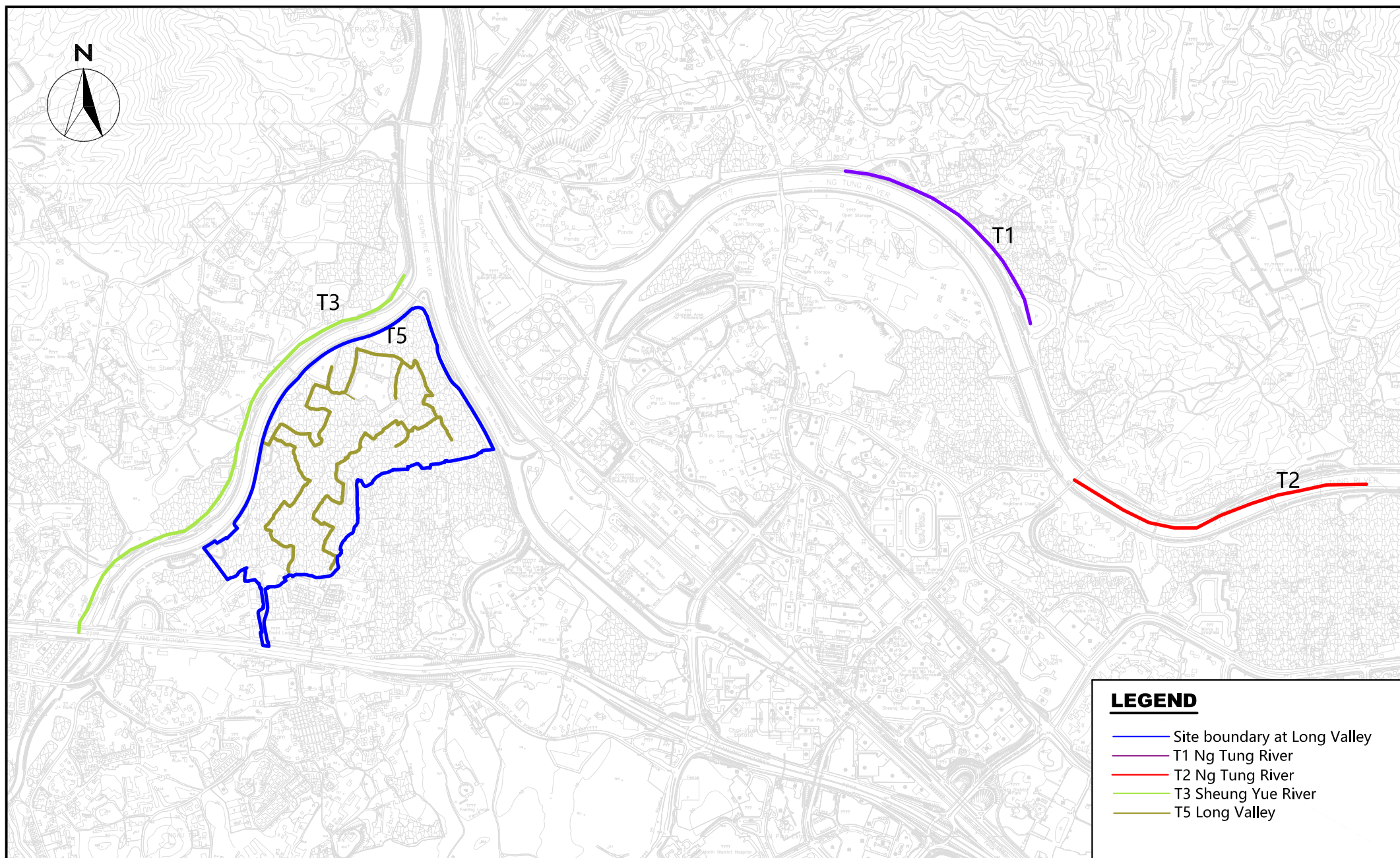
LEGEND:



Water Quality Monitoring Station

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









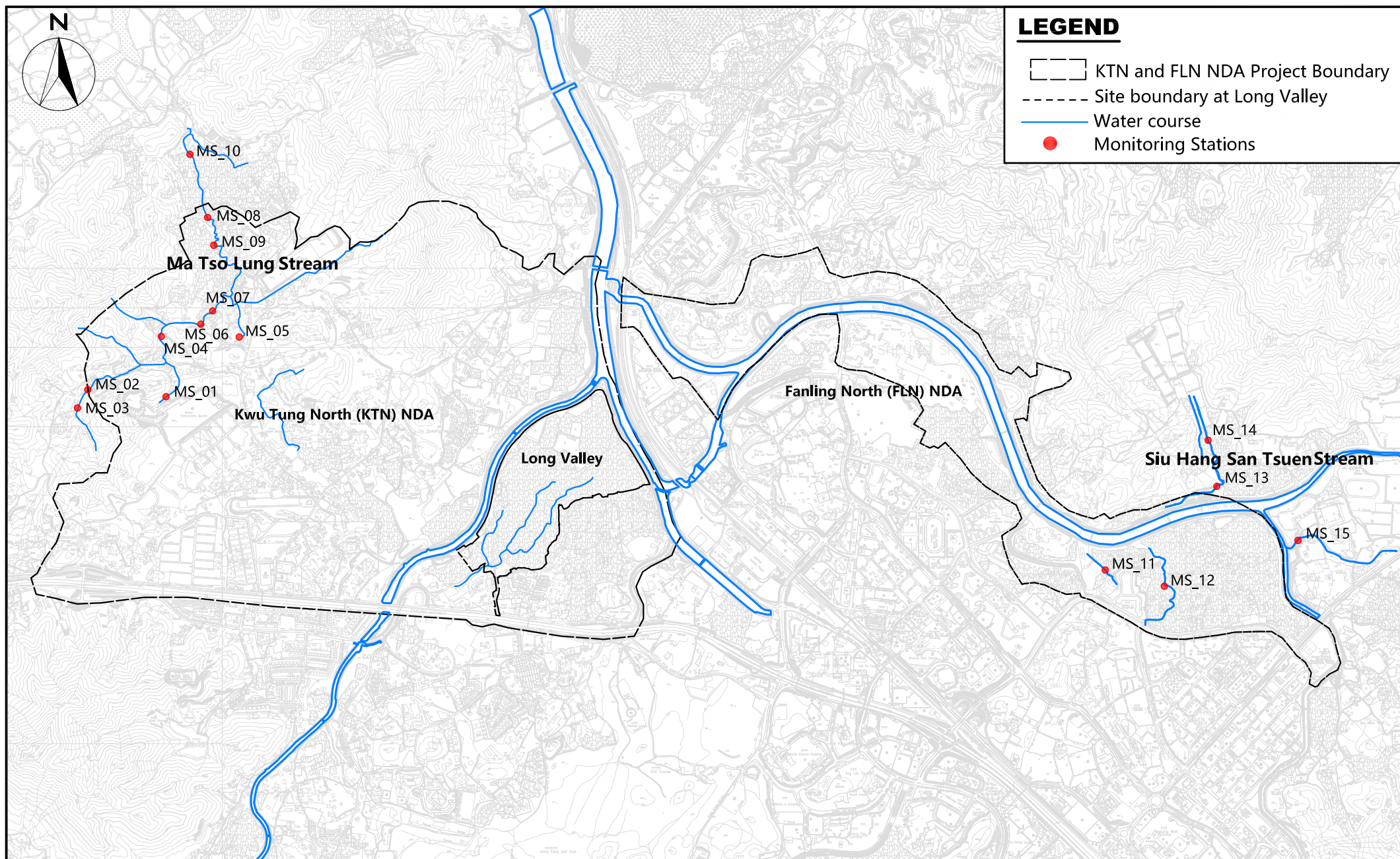
LEGEND

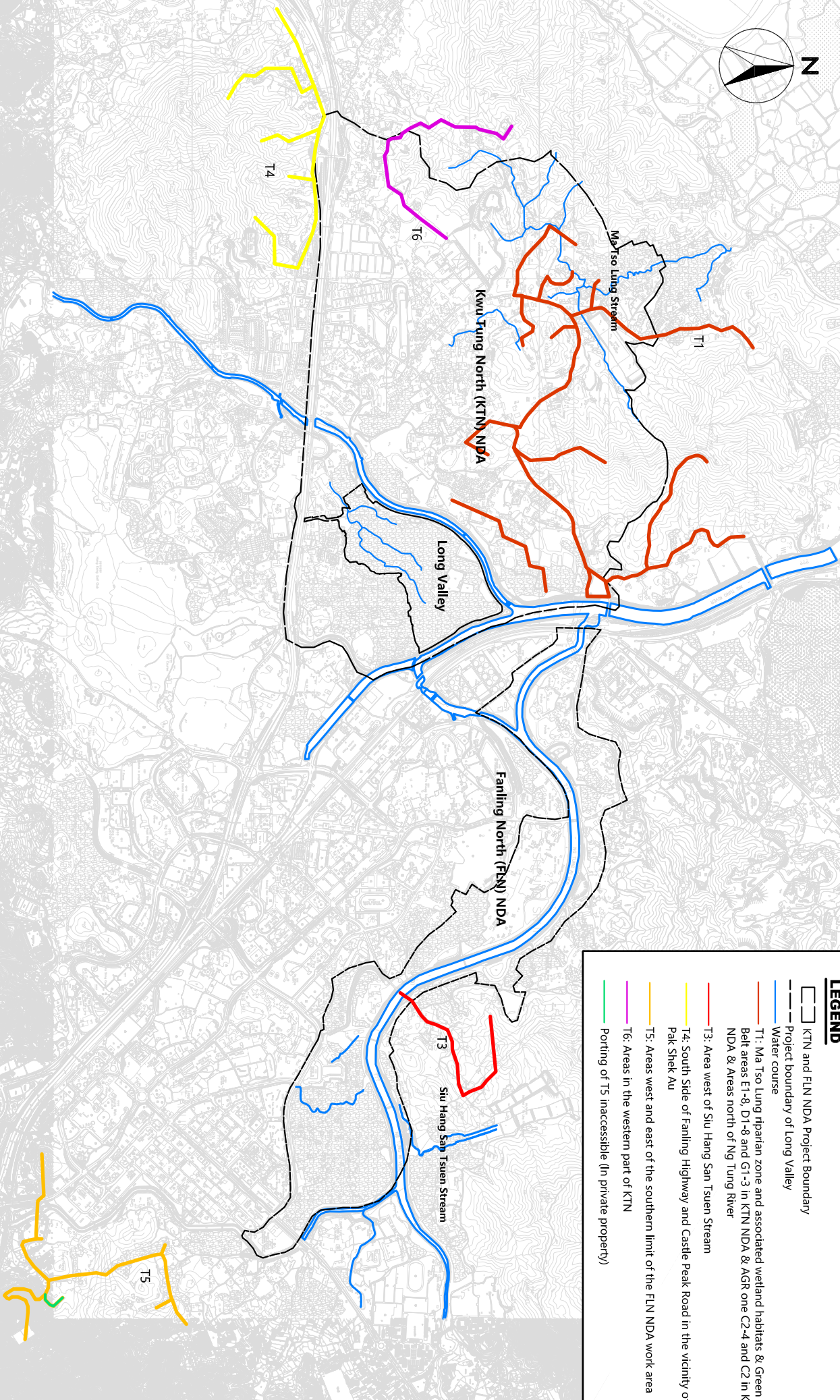
- Site boundary at Long Valley
- T1 Ng Tung River
- T2 Ng Tung River
- T3 Sheung Yue River
- T5 Long Valley



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 E1-8, 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)

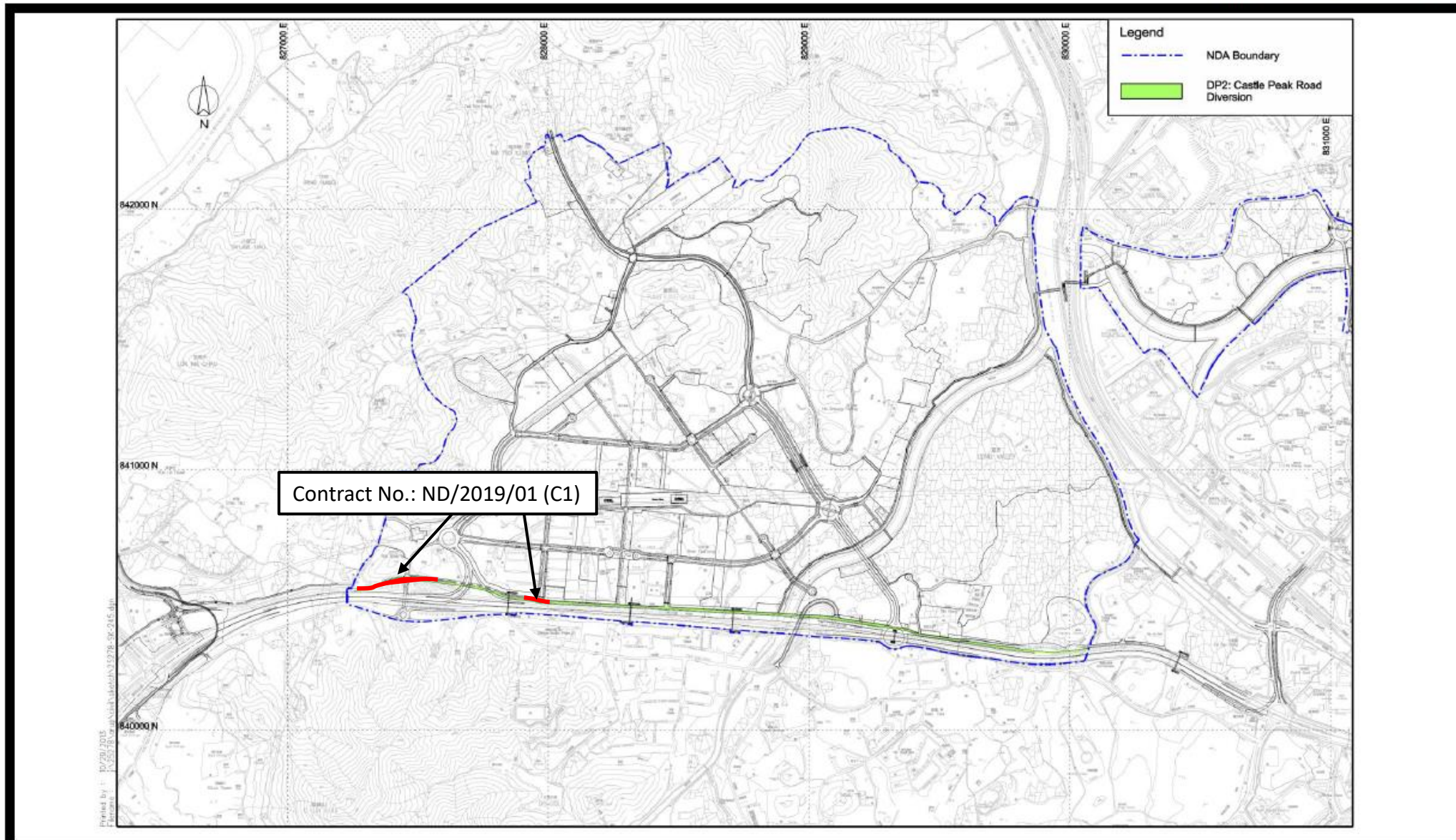
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction
Phase for the First Phase Development of KTN and FLN NDAs
Location of Transect Route of Ecological Sensitive Habitats
(Non-Aquatic Fauna) Transects (T1, T3-T6)

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)

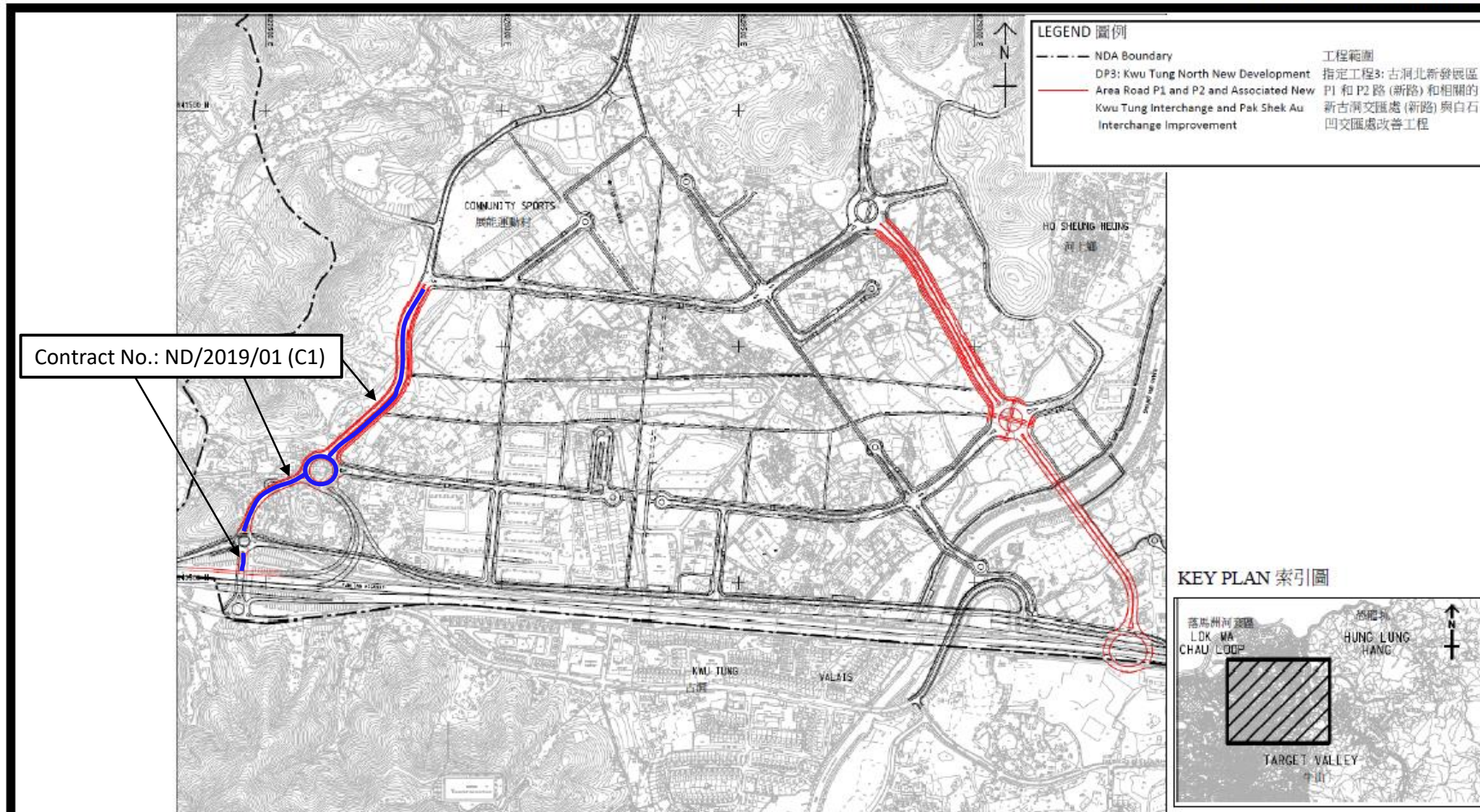
**Environmental Permit No:
EP-466/2013**



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



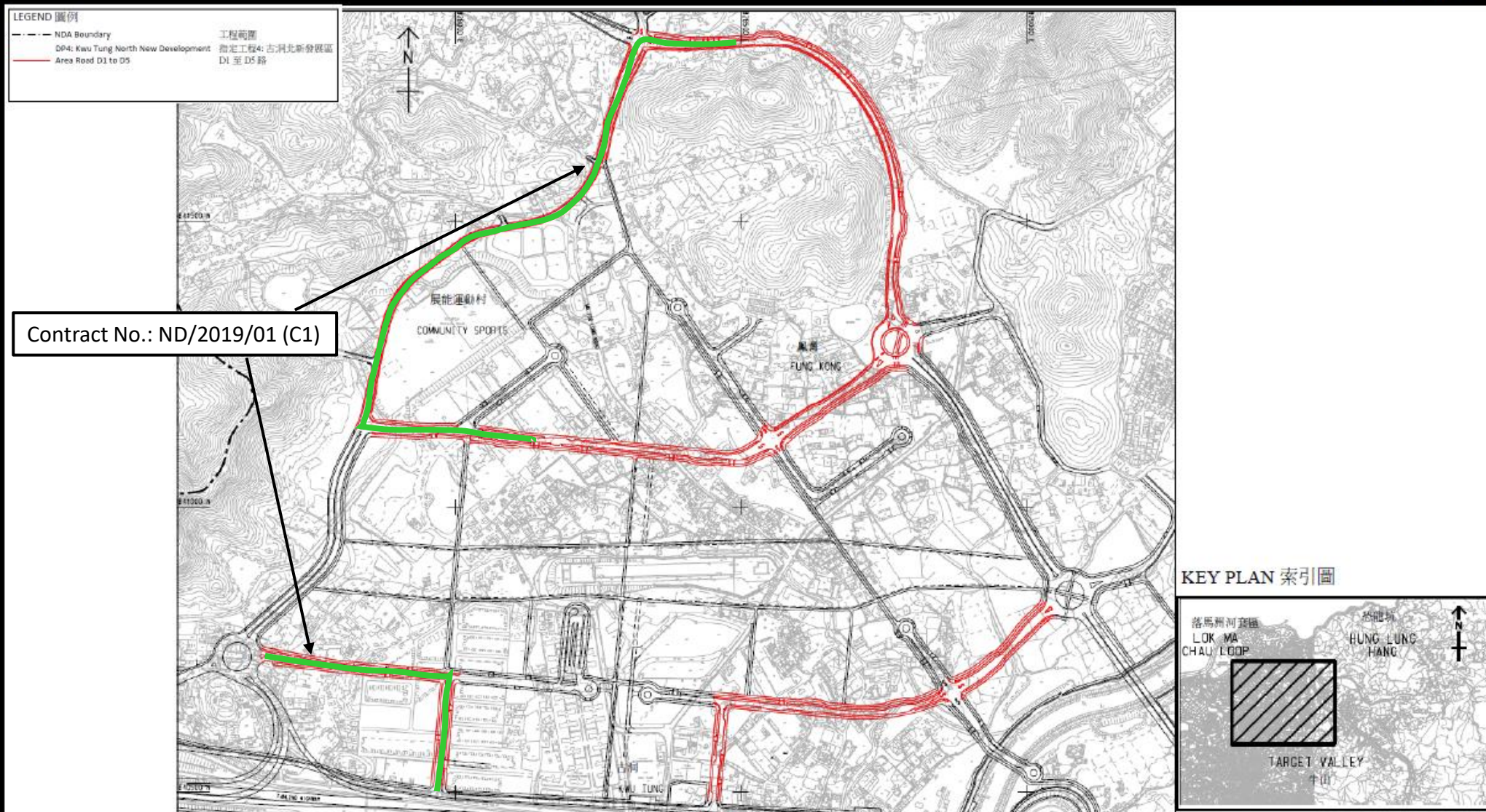
Figure 1: Location Plan for Interchange Improvement (Indicative)
 (This figure was prepared based on Figure 1.2 of VEP application (No.: VEP-523/2016))

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))

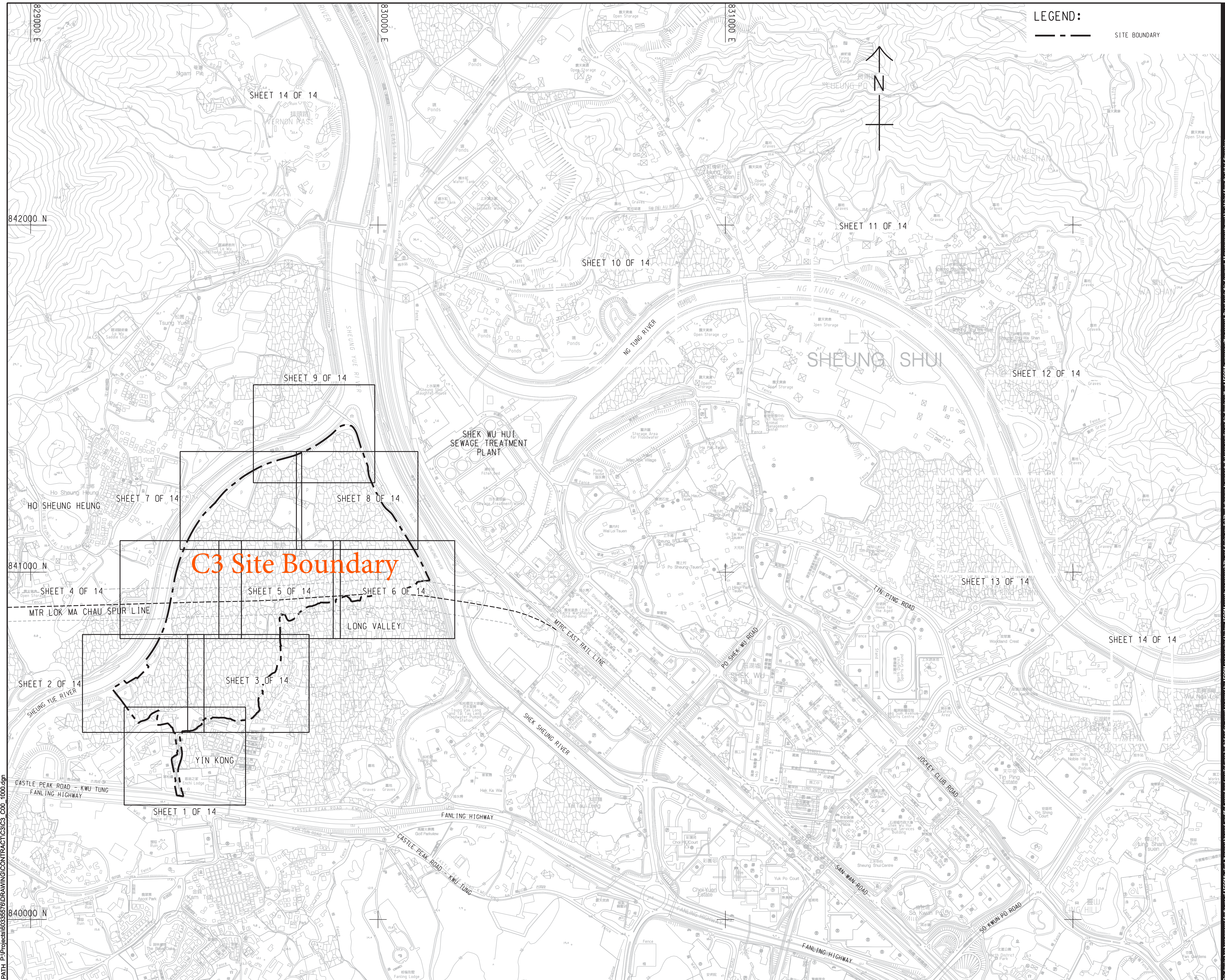
圖1：工程項目位置 (示意圖)

(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

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION			
修訂			
-	JUN-19	TENDER DRAWING	CYCH 
I/R	DATE	DESCRIPTION	CHK

STATUS
階段

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

KEY PLAN

索引圖

PROJECT NO. 項目編號	CONTRACT NO. 合約編號
60335576	ND/2019/03

SHEET TITLE
圖紙名稱

KEY PLAN OF GENERAL LAYOUT

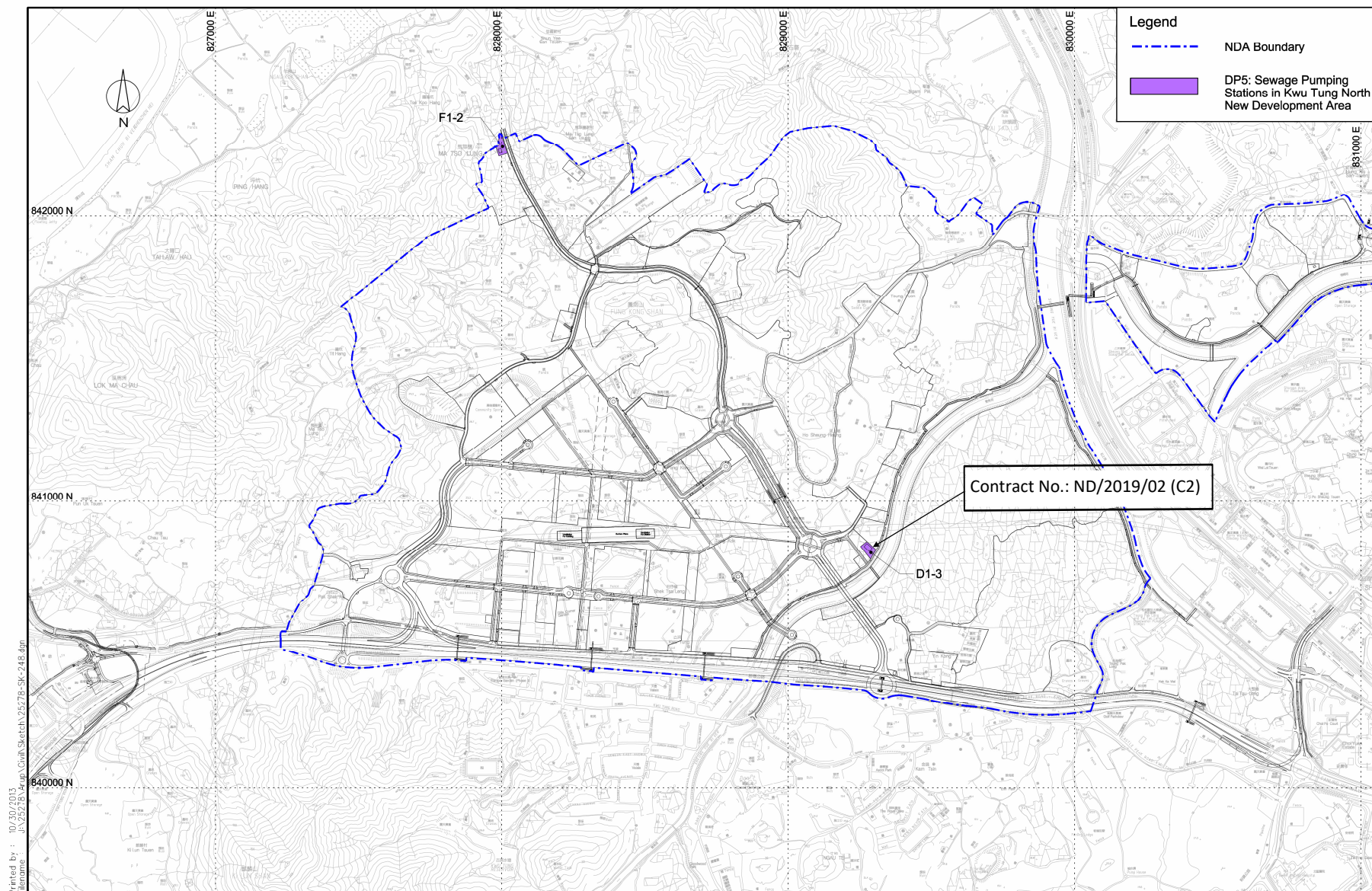
SHEET NUMBER
圖紙編號

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)

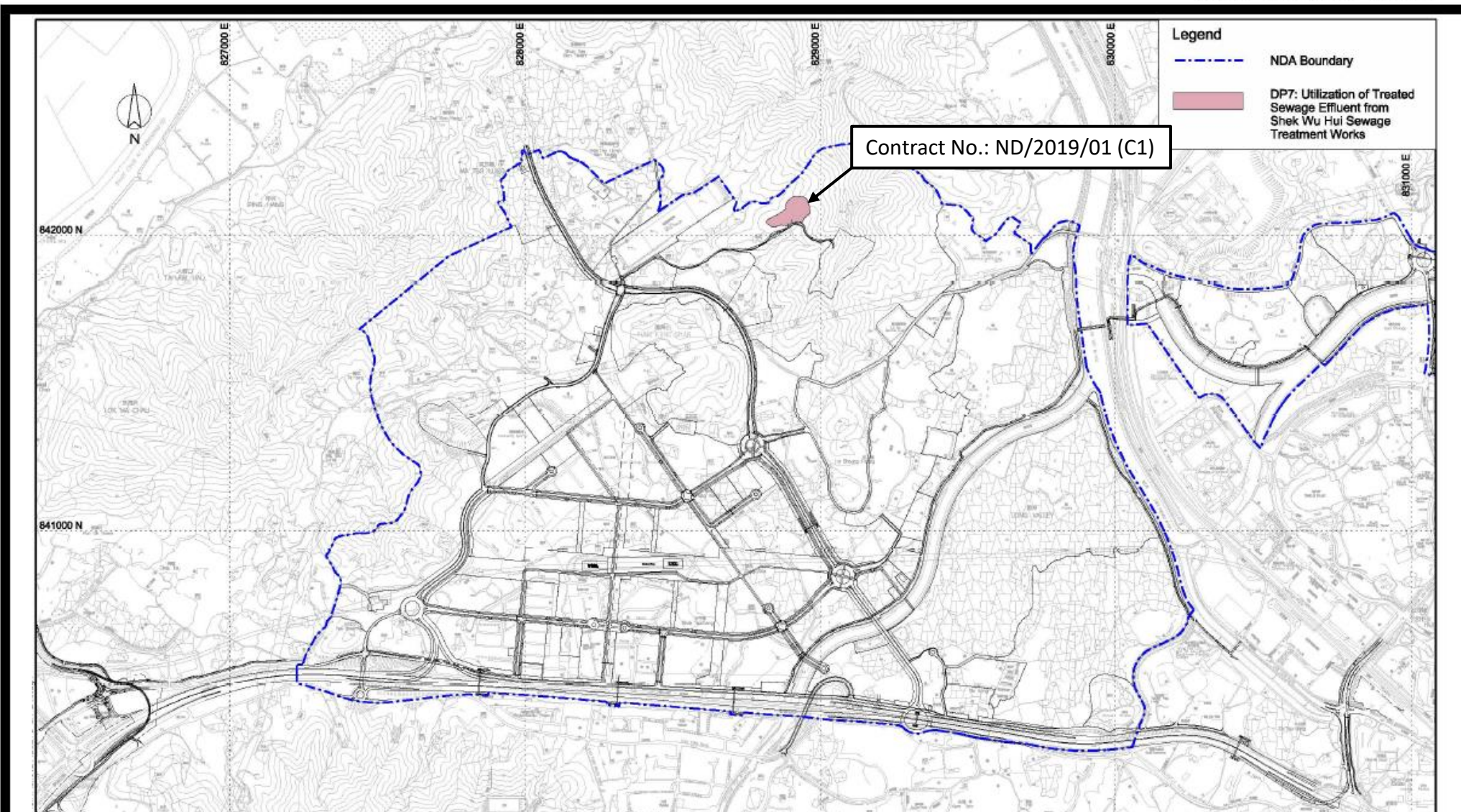
**Environmental Permit No:
EP-469/2013**



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)

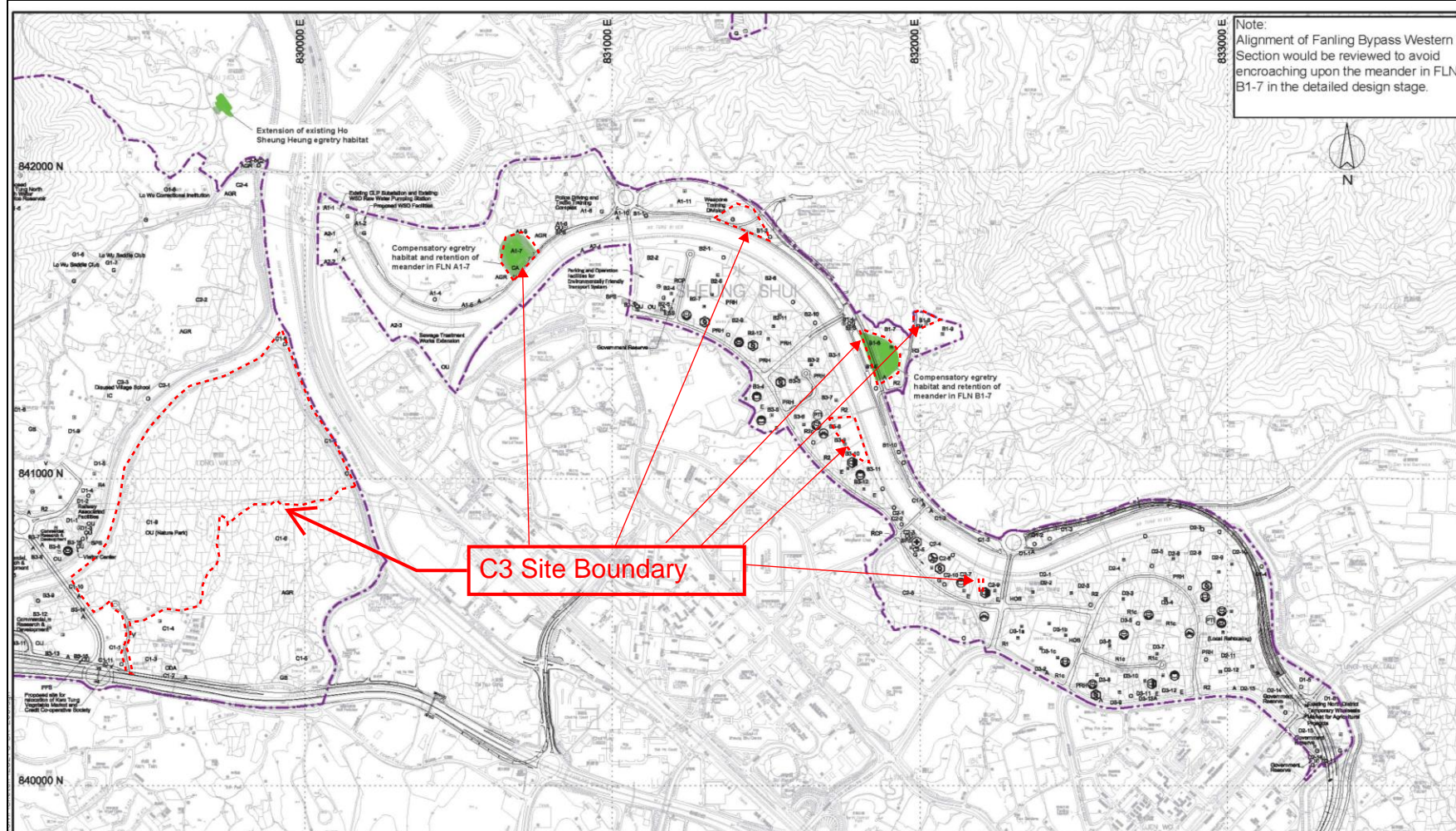
**Environmental Permit No:
EP-470/2013**



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)

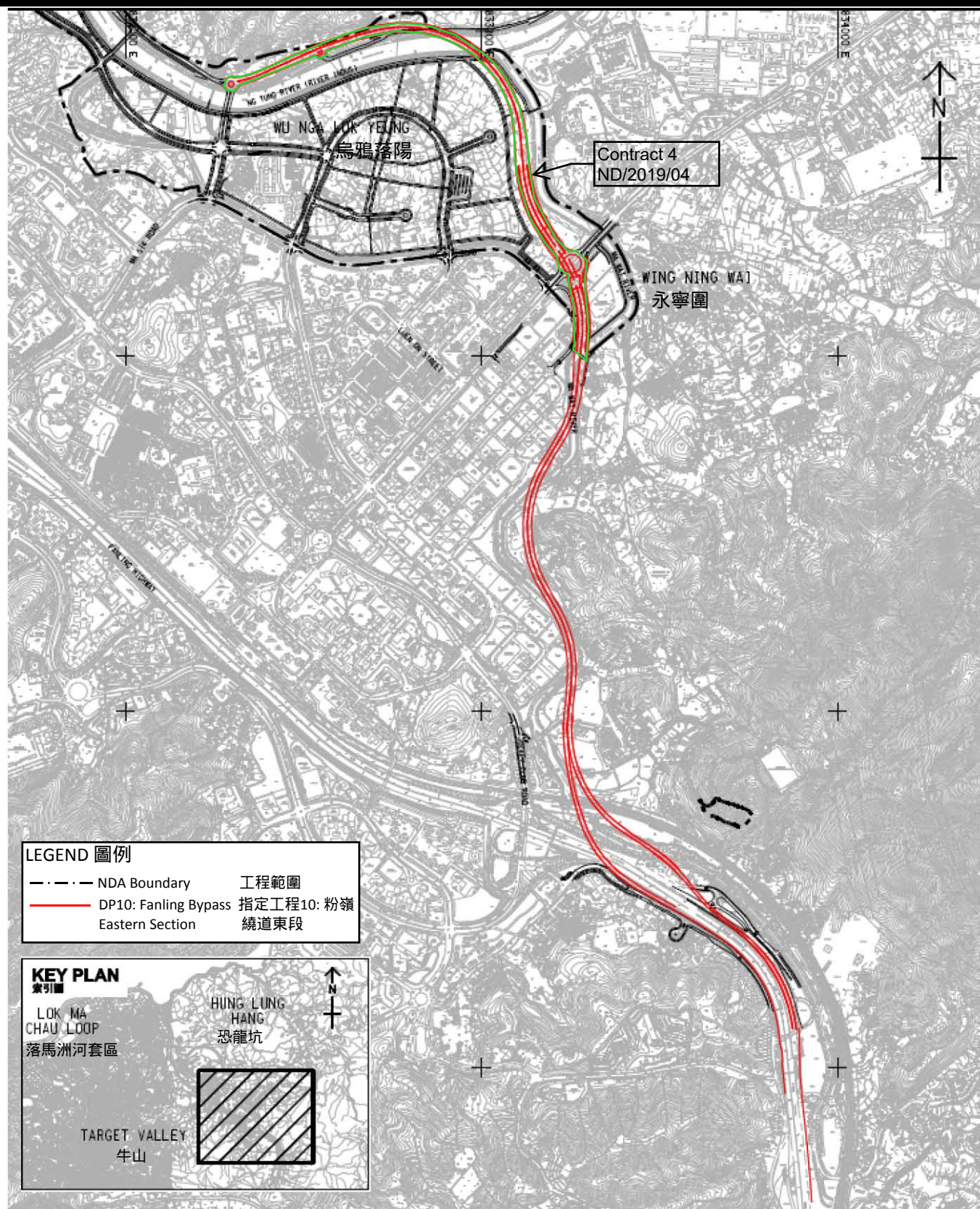
Environmental Permit No:
EP-473/2013/A
環境許可證編號: EP-473/2013/A



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:

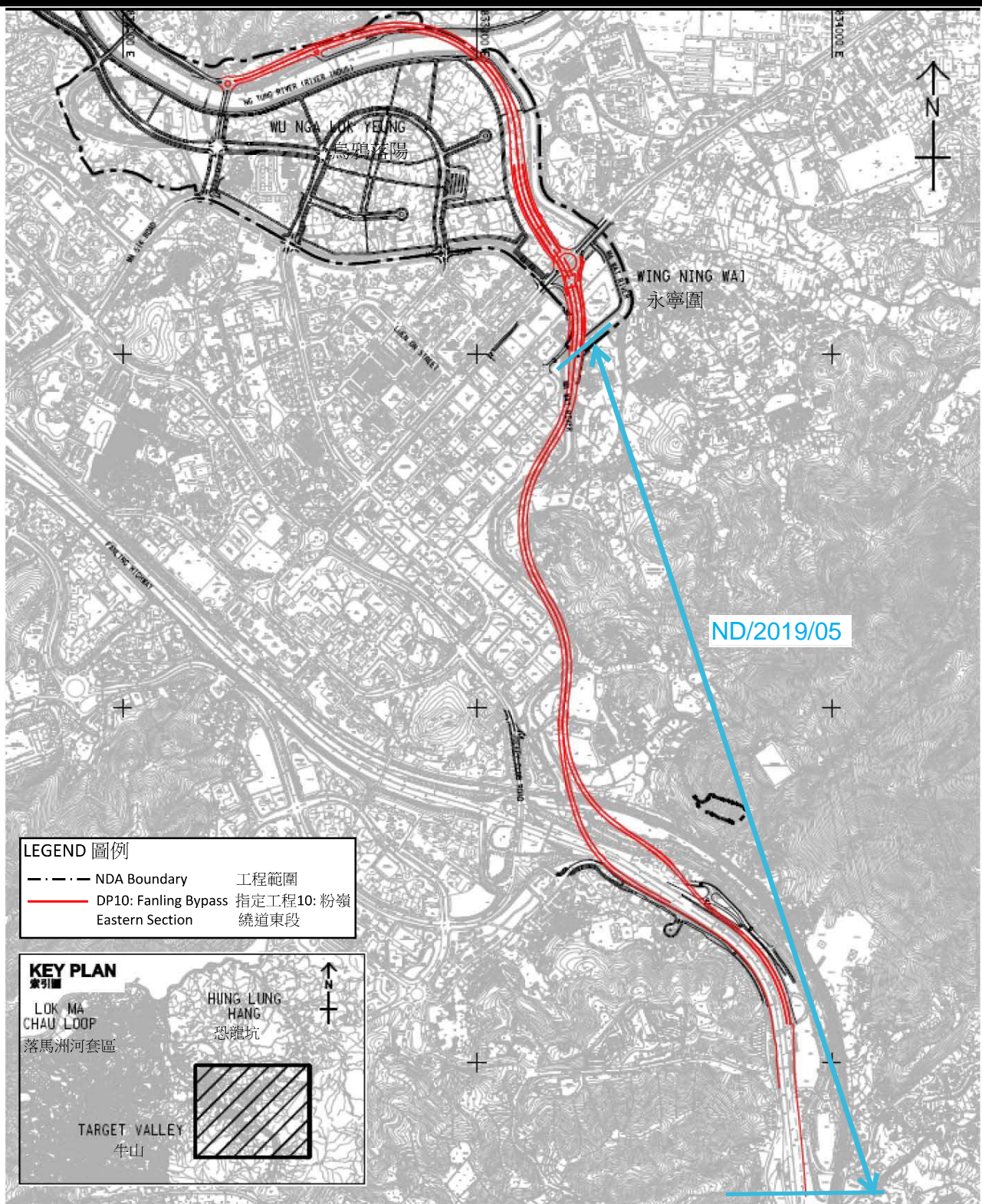
EP-473/2013/A



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

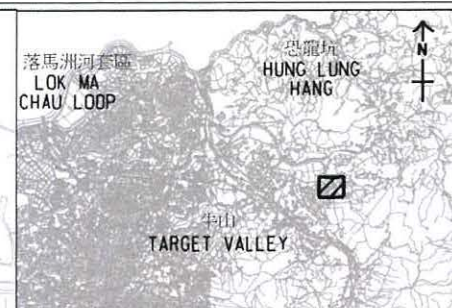
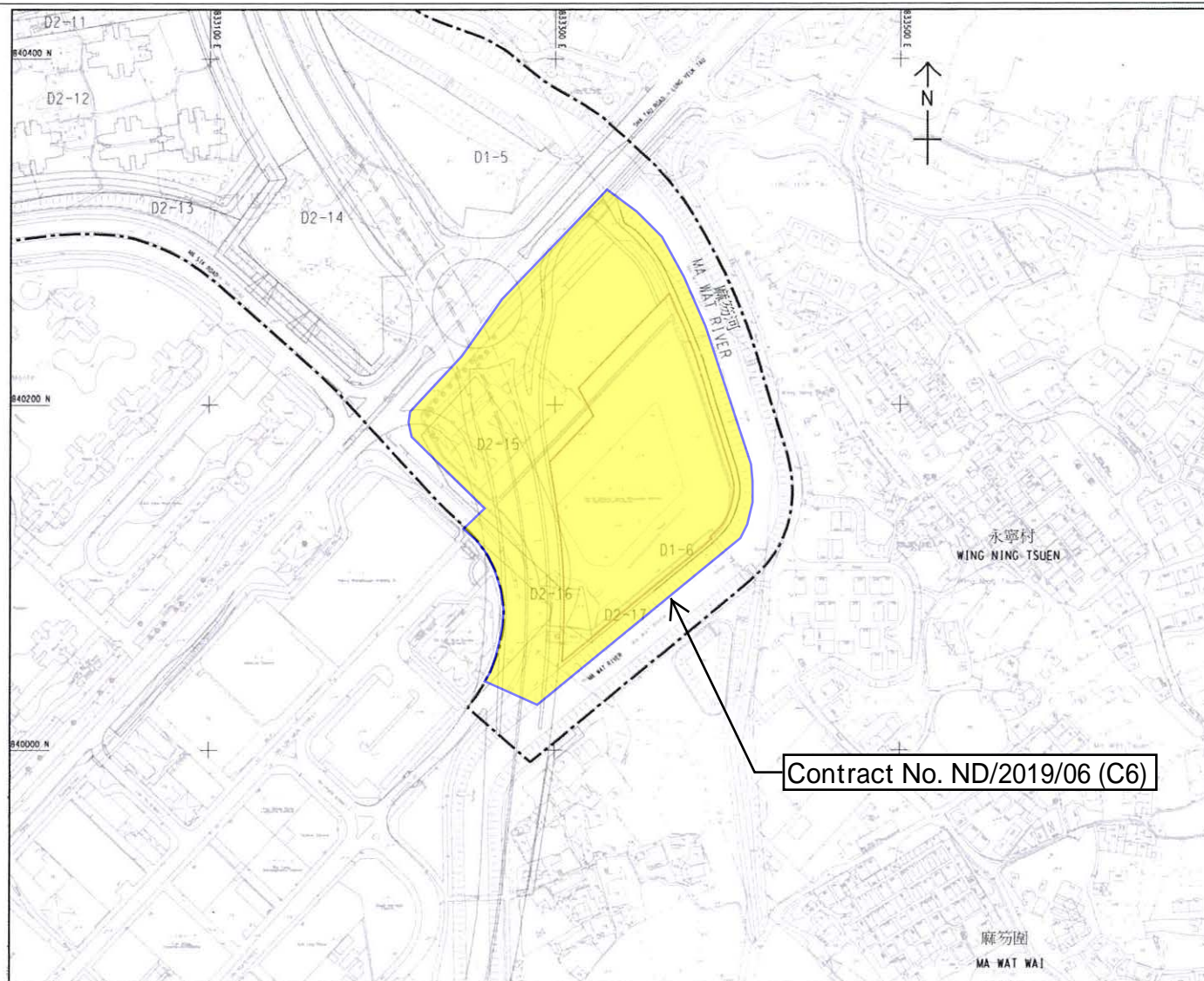
EP-473/2013/A



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

Contract No. ND/2019/06 (C6)



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）

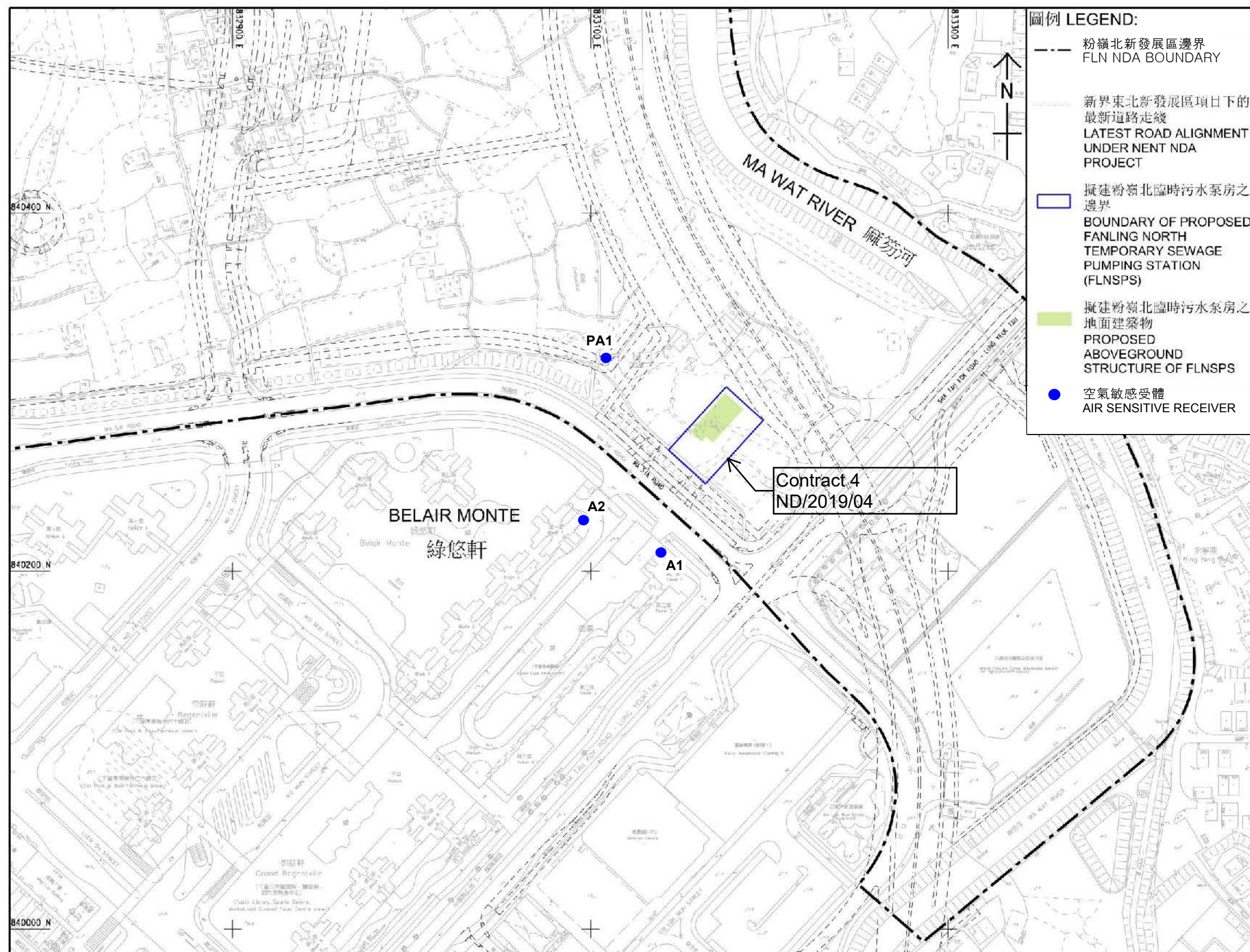
(This figure was prepared based on Figure 1.1 of VEP application (No.: VEP-516/2016))
 (本圖是根據申請更改環境許可證(編號 VEP-516/2016) 圖 1.1 編制)



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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	March 2022					April 2022					May 2022					June 2022				
							27	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12	19	26		
Revised Programme (2022-03-25) Rev.0																										
2.0 - Site Access Dates																										
AD-1000	Poriton 1a	0	25-Mar-22*		-262	CD(7d)	◆ Poriton 1a ◆ Poriton 1c ◆ Poriton 9a ◆ Poriton 12 ◆ Poriton 13																			
AD-1020	Portion 1c	0	25-Mar-22*		-78	CD(7d)																				
AD-1150	Portion 9a	0	28-Feb-22 A			CD(7d)																				
AD-1230	Poriton 12	0	25-Mar-22*		-262	CD(7d)																				
AD-1240	Poriton 13	0	25-Mar-22*		-78	CD(7d)																				
3.0 - Site Completion Dates							◆ Section 2A - all works in Area E ◆ Section 3 - all works in Area E ◆ KD1 609 days after starting date																			
3.2 Planned Sectional Work Completeion																										
SC-1010	Section 2A - all works in Area C1	0		06-Jun-22*	-120	CD(7d)																				
SC-1030	Section 3 - all works in Area E	0		31-Mar-22*	-38	CD(7d)																				
4.0 - Key Dates							◆ KD1 609 days after starting date																			
4.2 Planned Key Date Completion																										
KD-1000	KD1 609 days after starting date	0		30-Mar-22*	-236	CD(7d)																				
6.0 - Prelimiaries and General Requirements							◆ Section 2A - all works in Area E ◆ Section 3 - all works in Area E ◆ KD1 609 days after starting date																			
6.2 - General Submissions																										
GS-1230	Submission of Major Method Statements	42	06-Dec-19 A	05-May-22	648	CD(7d)																				
GS-1290	Preparation and Submission of Fully Corodinated BIM	1406	21-Aug-20 A	28-Jan-26*	8	CD(7d)																				
6.3 - Subletting Packages							◆ Section 2A - all works in Area E ◆ Section 3 - all works in Area E ◆ KD1 609 days after starting date																			
SP-1180	E&M works and Lift Installation for Pak Shek Au Pedestrian Subway	110	05-Apr-22	23-Jul-22	648	CD(7d)																				
7.0 Construction							◆ Section 2A - all works in Area E ◆ Section 3 - all works in Area E ◆ KD1 609 days after starting date																			
Section 1																										
S1-1022	Potential Delay on Production and Supply of PrecastConcrete Pipes (EWN 040) (CNE 047)	0		25-Mar-22	-139	CD(7d)	◆ Potential Delay on Production and Supply of Precast Concrete Pipes (EWN 040) (CNE 047) ◆ Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047) ◆ Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047) ◆ Delay in Fabrication & Supply of Structural Steel Members for NB 35 due to the Severe Outbreak of Omicron (EWN 055)																			
S1-1024	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0		25-Mar-22	-182	CD(7d)																				
S1-1026	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0		25-Mar-22	-182	CD(7d)																				
S1-1028	Delay in Fabrication & Supply of Structural Steel Members for NB 35 due to the Severe Outbreak of Omicron (EWN 055)	0		25-Mar-22	-52	CD(7d)																				
Portion 10a in Area H, H1, H2 (Soil Treatment & Provision of Site Access & EVA to MWSC)																										
KD1 - Provision of Site Access and EVA to MWSC							◆ Planned Completion KD1																			
S1K1-1000	Planned Completion KD1	0		30-Mar-22	-236	CD(7d)																				
Civil Works							◆ Planned Completion KD1																			
Road D1 (Stage 1)																										
S1K1-2000	Construct & maintain Temporary drainage	24	25-Mar-22	26-Apr-22	-148	WD(6d)	◆ Planned Completion KD1																			
S1K1-2010	Pressure test for Fresh & Flushing watermain (around 190m)	12	25-Mar-22	08-Apr-22	-136	WD(6d)																				
S1K1-2014	Underground utilities (under footpath)	24	03-May-21 A	26-Apr-22	-148	WD(6d)																				
S1K1-2018	Road works - Road kerb	0	15-Nov-21 A	10-Mar-22 A		WD(6d)																				
S1K1-2020	Road works - Laying bituminous paving	5	29-Jan-22 A	30-Mar-22	-193	WD(6d)																				
Road D1 (Stage 2) Castle Peak road junction							◆ Planned Completion KD1																			
S1K1-2024	Construct & maintain Temporary drainage	155	25-Mar-22	03-Oct-22	-148	WD(6d)																				
S1K1-2026	Underground Drainage ELS & Excavation (around 40m)	0	18-Oct-21 A	14-Mar-22 A		WD(6d)																				
S1K1-2028	Underground Drainage (around 40m)	18	20-Dec-21 A	19-Apr-22	-131	WD(6d)																				
S1K1-2030	Underground Sewerage (around 40m)	24	20-Dec-21 A	26-Apr-22	-137	WD(6d)																				
S1K1-2032	Underground Fresh & Flushing watermain (around 40m)	35	24-Jan-22 A	11-May-22	-148	WD(6d)																				
S1K1-2033	Pressure test for Fresh & Flushing watermain (around 40m)	12	12-May-22	25-May-22	-148	WD(6d)																				
S1K1-2034	Underground utilities (around 40m)	47	16-Feb-22 A	25-May-22	-148	WD(6d)																				
S1K1-2036	Road works - Formation & Sub base	36	26-May-22	08-Jul-22	-148	WD(6d)																				

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	March 2022					April 2022					May 2022					June 2022					
							27	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12	19	26			
Road L1	S1K1-3008	DfMA SMH KT2002 - Assembly on site	18	10-Jan-22 A	19-Apr-22	-131	WD(6d)																				
	S1K1-2100	Construct & maintain Temporary drainage	29	25-Mar-22	03-May-22	-66	WD(6d)																				
	S1K1-2102	Underground Sewerage ELS & Excavation (around 120m)	0	21-Dec-20 A	17-Mar-21 A		WD(6d)																				
	S1K1-2108	Underground Fresh & Flushing watermain (under footpath)	16	20-Aug-21 A	13-Apr-22	-193	WD(6d)																				
	S1K1-2109	Pressure test for Fresh & Flushing watermain (around 120m)	12	14-Apr-22	30-Apr-22	-65	WD(6d)																				
	S1K1-2110	Underground utilities (under footpath)	29	05-Nov-21 A	03-May-22	-66	WD(6d)																				
	S1K1-2112	Road works - Formation & Sub base	0	15-Nov-21 A	07-Mar-22 A		WD(6d)																				
	S1K1-2114	Road works - Road kerb	0	08-Feb-22 A	18-Mar-22 A		WD(6d)																				
	S1K1-2116	Road works - Laying bituminous paving	5	19-Mar-22 A	30-Mar-22	-193	WD(6d)																				
	S1K1-2130	Completion of access with min. 7.3m width and EVA with min. 6m width	0		30-Mar-22	-236	CD(7d)																				
	Smart Road Lightings System Installation																										
	S1K1-3010	Submissions and Approval of smart road lighting system design and shop drawings	36	10-Sep-20 A	29-Apr-22	-160	CD(7d)																				
	S1K1-3020	Procurement and delivery of smart road lighting system	90	30-Apr-22	28-Jul-22	-160	CD(7d)																				
	Section 2A																										
S2A-1000	Planned Completion Date of Section 2A	0		06-Jun-22	-120	CD(7d)																					
S2A-1006	Temporary Stockpile at Portion 5 and Additional Land D (EWN No. 020) (CNE No. 020, 037, 038)	0		25-Mar-22	-110	CD(7d)																					
S2A-1008	Temporary Stockpile in Area C1 (EWN 027)	0		25-Mar-22	-110	CD(7d)																					
S2A-1010	The footing detail for Roadside Directional Sign ADS30 at Portion 5 (EWN 043)	0		25-Mar-22	-109	CD(7d)																					
S2A-1012	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)	0		25-Mar-22	-109	CD(7d)																					
Portion 5 in Area C1 (Soil Treatment & Interface with HD's Contractors)																											
Soil Treatment																											
S2AP5-2000	Construct & maintain Temporary drainage	56	25-Mar-22	06-Jun-22	-96	WD(6d)																					
S2AP5-2020	Remaining works (Site formation, proofrolling, chain Link fence, open channel)	48	04-Apr-22	06-Jun-22	-96	WD(6d)																					
S2AP5-2022	Remove Temporary Stockpiling of excavated material (100,000 m3)	8	17-Jul-21 A	02-Apr-22	-96	WD(6d)																					
Section 2B																											
S2B-1002	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)	0		28-Feb-22 A		CD(7d)																					
Portion 9a in Area C2 (Soil Treatment & Interface with HD's Contractors)																											
Preparation work/Tree Survey/Site Clearance/GI																											
S2BP9a-1020	Site clearance	38	15-Mar-22 A	14-May-22	219	WD(6d)																					
Interface with HD's Contractor to carry out GI																											
S2BP9a-3010	HD's Contractor to carry out GI in Area C2 (Stage 1A/2/2A)	30	23-Mar-22 A	23-Apr-22	338	CD(7d)																					
Section 3																											
S3-1000	Planned Completion Date of Section 3	0		31-Mar-22	-38	CD(7d)																					
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-Mar-22	19-Apr-22	779	WD(6d)																					
S3P1a-1050	Arsenic Treatment Plan	18	20-Apr-22	12-May-22	779	WD(6d)																					
S3P1a-1080	Site Formation and Construct Chain Link fence	6	18-Feb-22 A	31-Mar-22	-33	WD(6d)																					
Soil Treatment																											
S3P1a-2000	Construct & maintain Temporary drainage	84	13-May-22	20-Aug-22	1001	WD(6d)																					
S3P1a-2010	Remove soil (original assumed 17334m3) (1 / 13 EGI completed, interim soil to be excavated / treated : 1260m3 / 400m3)	36	13-May-22	24-Jun-22	779	WD(6d)																					
Portion 7 in Area E (Soil Treatment & Interface with HKHS's Contractors)																											
Soil Treatment																											
S3P7-2000	Construct & maintain Temporary drainage	6	25-Mar-22	31-Mar-22	-33	WD(6d)																					
S3P7-2010	Remove soil (original assumed 15718m3) (3 / 4 EGI completed, interim soil to be excavated / treated : 6300m3 / 2000m3)	0	20-Apr-21 A	28-Feb-22 A		WD(6d)																					
S3P7-2020	Backfilling to the formation levels & Construct Chain Link Fence	6	25-Oct-21 A	31-Mar-22	-33	WD(6d)																					
Section 4A																											
Portion 1b in Area D1 (Soil Treatment & Interface with HD's Contractors)																											



Build King – Richwell Engineering
Joint Venture

Planned Work

Critical Work

Actual Work

Milestone

Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-03)

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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	March 2022					April 2022					May 2022				June 2022				
							27	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12	19	26	
Preparation work/Tree Survey/Site Clearance/GI																									
S4AP1b-1012	Approval & Acceptance of Tree Felling Application	0	22-Feb-22 A	25-Mar-22 A		CD(7d)																			
S4AP1b-1020	Site Clearance & Tree Felling	69	24-Mar-22 A	25-Jun-22	63	WD(6d)																			
S4AP1b-1025	Ground investigation (0 / 3 GI completed)	18	20-Jan-22 A	19-Apr-22	118	WD(6d)																			
S4AP1b-1030	Environmental ground investigation and lab test (3/4 completed)	24	10-Jan-22 A	26-Apr-22	112	WD(6d)																			
S8P9b-3136	Submit and Approval of Asbestos Abatement Programme	0	28-Dec-21 A	25-Mar-22 A		CD(7d)																			
S8P9b-3146	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	48	26-Mar-22	27-May-22	87	WD(6d)																			
Soil Treatment																									
S4AP1b-2002	Remove soil (Grid SA4AG6)	0	22-Dec-21 A	22-Mar-22 A		WD(6d)																			
Interface with HD's Contractor to carry out GI																									
S4AP1b-3010	HD's Contractor to carry out GI in Area D1 (Stage 1)	30	14-Mar-22 A	23-Apr-22	138	CD(7d)																			
Section 4B																									
S4B-1002	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)	0		25-Mar-22	340	CD(7d)																			
Portion 1c in Area D2 (Soil Treatment & Interface with HD's Contractors)																									
Preparation work/Tree Survey/Site Clearance/GI																									
S4BP1c-1012	Approval & Acceptance of Tree Felling Application	0	22-Feb-22 A	25-Mar-22 A		CD(7d)																			
S4BP1c-1020	Site Clearance & Tree Felling	60	26-Mar-22	11-Jun-22	275	WD(6d)																			
S4BP1c-1025	Ground investigation (1 / 1 GI completed)	0	17-Mar-22 A	25-Mar-22 A		WD(6d)																			
S4BP1c-1030	Environmental ground investigation and laboratory test(2 / 2 EGI completed)	0	14-Mar-22 A	25-Mar-22 A		WD(6d)																			
S4BP1c-1040	Prepare Arsenic Assessment Report	30	13-Jun-22	18-Jul-22	275	WD(6d)																			
Interface with HD's Contractor to carry out GI																									
S4BP1c-3010	HD's Contractor to carry out GI in Area D2 (Stage 1A/2/2A)	4	09-Mar-22 A	28-Mar-22	572	CD(7d)																			
Section 4C																									
Portion 1b in Area D3 (Soil Treatment & Interface with ArchSD's Contractors)																									
Preparation work/Tree Survey/Site Clearance/GI																									
S4CP1 b-1012	Approval & Acceptance of Tree Felling Application	0	22-Feb-22 A	11-Mar-22 A		CD(7d)																			
S4CP1 b-1020	Site Clearance & Tree Felling	63	14-Mar-22 A	14-Jun-22	32	WD(6d)																			
S4CP1 b-1025	Ground investigation (0 / 1 GI completed)	18	15-Jun-22	06-Jul-22	32	WD(6d)																			
S4CP1 b-1030	Environmental ground investigation and laboratory test(2 / 2 EGI completed)	0	07-Feb-22 A	28-Feb-22 A		WD(6d)																			
Interface with ArchSD's Wet Market Contractor to carry out GI																									
S4CP1 b-3010	ArchSD's Wet Market Contractor to carry out GI in Area D3	24	07-Jan-22 A	26-Apr-22	233	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-Apr-22	-25	CD(7d)																			
S6AP1e-1020	Site Clearance & Tree Felling	60	22-Apr-22	05-Jul-22	-18	WD(6d)																			
S6AP1e-1025	Ground investigation (0 / 1 GI completed)	0	20-Sep-21 A	23-Sep-21 A		WD(6d)																			
S6AP1e-1060	Notification and Approval of Asbestos Abatement Programme	0	27-Jan-21 A	21-Feb-22 A		CD(7d)																			
S6AP1e-1070	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	0	22-Feb-22 A	25-Mar-22 A		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-Apr-22	833	CD(7d)																			
S6BP1e-1020	Site Clearance & Tree Felling	60	20-Apr-22	02-Jul-22	677	WD(6d)																			
S6BP1e-1060	Notification and Approval of Asbestos Abatement Programme	0	27-Jan-21 A	21-Feb-22 A		CD(7d)																			
S6BP1e-1070	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	0	22-Feb-22 A	25-Mar-22 A		WD(6d)																			
Section 7 (Subject to excision)																									
KD2 - Portion 11b in Area K (Laying sewer rising mains and connect to existing MBR)																									
Sewerage Works																									



**Build King – Richwell Engineering
Joint Venture**

Planned Work
 Critical Work
 Actual Work
 Milestone
 Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-03)

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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	March 2022					April 2022					May 2022					June 2022				
							27	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12	19	26		
	S7P11b-1015	Construct & maintain Temporary drainage	18	25-Mar-22	19-Apr-22	246	WD(6d)																			
	S7P11b-1060	Construction of MBR	18	08-Apr-21 A	19-Apr-22	246	WD(6d)																			
	S7P11b-1080	Testing & Commissioning (T&C) of E&M equipment for MBR	30	12-Apr-22	11-May-22	299	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-Mar-22	01-Sep-22	151	WD(6d)																			
Section 8																										
	S8-1012	Suspension of Works at Part of Portion 2 (EWN No. 019)	0		25-Mar-22	-526	CD(7d)																			
	S8-1014	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016) (CNE No. 022)	0		25-Mar-22	-526	CD(7d)																			
	S8-1016	Opening of Cycle Track at Portion 2 and 10a (EWN No. 017)	0		25-Mar-22	-526	CD(7d)																			
	S8-1018	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)	0		25-Mar-22	-526	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-Apr-22	-427	WD(6d)																			
	S8P2-0018	Construction of temporary road	28	24-Nov-21 A	30-Apr-22	-443	WD(6d)																			
	S8P2-0020	Traffic diversion to temp road	12	03-May-22	17-May-22	-443	WD(6d)																			
	S8P2-1016	Remaining Ground investigation (0 / 1 GI completed)	12	18-May-22	31-May-22	-186	WD(6d)																			
	S8P2-1018	Site clearance after Road Diversion	36	18-May-22	29-Jun-22	-210	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	18-May-22*	17-Jun-22	-443	WD(6d)																			
	S8P2-2020	Backfilling to the formation levels	48	18-Jun-22	13-Aug-22	-248	WD(6d)																			
Civil Work																										
Construction of Pak Shek Au Junction																										
	S8P2-4100	Cut slope with soil nail construction at existing slope KS34	180	18-May-22	19-Dec-22	-274	WD(6d)																			
	S8P2-4110	Expose existing UU & ELS for Drainage & Water Main	100	18-May-22	14-Sep-22	-274	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-Mar-22	-312	CD(7d)																			
	S8P1a-0102	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0		25-Mar-22	134	CD(7d)																			
	S8P1a-0104	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0		25-Mar-22	134	CD(7d)																			
	S8P1a-1002	Tree survey and prepare tree felling and transplant report	33	26-Jul-21 A	07-May-22	-256	WD(6d)																			
	S8P1a-1004	Approval & Acceptance of Tree Felling Application	30	08-May-22	06-Jun-22	-316	CD(7d)																			
	S8P1a-1010	Site clearance	48	07-Jun-22	02-Aug-22	-255	WD(6d)																			
	S8P1a-1050	Archaeological Survey	72	07-Apr-22	07-Jul-22	-196	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-Mar-22	365	CD(7d)																			
	S8P3-0104	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0		25-Mar-22	365	CD(7d)																			
	S8P3-1008	Approval & Acceptance of Tree Felling Application & Tree Felling	0	13-Apr-21 A	11-Mar-22 A		WD(6d)																			
	S8P3-1010	Site clearance	60	14-Mar-22 A	10-Jun-22	65	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-Jun-22*	09-Jul-22	65	WD(6d)																			
Civil Work																										
	S8P3-3000	Construct & maintain Temporary drainage	465	11-Jun-22	30-Dec-23	65	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-Mar-22	0	CD(7d)																			
	S8P5-0104	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0		25-Mar-22	0	CD(7d)																			
	S8P5-0106	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0		25-Mar-22	0	CD(7d)																			
Construction according to CSD for Alternative on Bored Pile Wall																										



Build King – Richwell Engineering
Joint Venture

Planned Work

Critical Work

Actual Work

Milestone

Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-03)

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Run Date: 28-Mar-21

Project ID: ND201901-RP-25.0


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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	March 2022					April 2022					May 2022					June 2022				
							27	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12	19	26		
S8P5-2005	Construct & maintain Temporary drainage	578	25-Mar-22	06-Mar-24	0	WD(6d)																				
Civil Work																										
S8P5-4000.02	Road P1 (pipe laying SMH1006 to 1005) - Underground Drainage work	0	24-Sep-21 A	12-Mar-22 A		WD(6d)																				
S8P5-4002	Divert Local Road	321	14-Apr-22	16-May-23	0	WD(6d)																				
S8P5-4004.00	Roadwork - Formation, Sub base, Road Kerbs and Laying Bitumen (North bound Carriageway) CH 400 to CH 539	16	25-Nov-21 A	13-Apr-22	0	WD(6d)																				
S8P5-4014	Drainage works across DJ watermain (SMH1006a and pipe laying to 1006)	145	25-Mar-22	20-Sep-22	0	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-Mar-22	-236	CD(7d)																				
Preparation work/Tree Survey/Site Clearance/GI																										
S8P6a-1010	Site Clearance & Tree Felling	18	15-Feb-20 A	19-Apr-22	16	WD(6d)																				
Construction according to CSD for Alternative on Bored Pile Wall																										
S8P6a-2004	Construct & maintain Temporary drainage	571	25-Mar-22	27-Feb-24	0	WD(6d)																				
Civil Work																										
S8P6a-4000.02	Road D4 Underground Drainage work (between SMH 5001F - 5001C2)	0	18-Oct-21 A	15-Mar-22 A		WD(6d)																				
S8P6a-4010.06	Road D4 (between SMH1002A and KT1001) - Underground Drainage work	60	14-Apr-22	29-Jun-22	0	WD(6d)																				
S8P6a-4010.08	Road D4 (SMHKT1001A and pipe laying to KT1001) - Underground Drainage work	70	09-Jun-22	30-Aug-22	0	WD(6d)																				
S8P6a-4018.01	Construction of Concrete Barrier Footing KB01 Stage 3 (Bay 4 to 12) (5 / 9 bays completed)	52	15-Jan-22 A	31-May-22	0	WD(6d)																				
S8P6a-4018.02	Construction of Concrete Barrier Stem Wall KB01 Stage 3 (Bay 4 to 12) (1 / 9 bays completed)	114	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-Mar-22*	-236	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-Mar-22	-236	CD(7d)																				
S8P9b-0004	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0		25-Mar-22	-164	CD(7d)																				
S8P9b-3112	Conflict between Drainage Works and Existing Twin DN2200 Dongjiang Water Mains (CNE 051)	0		25-Mar-22	-164	CD(7d)																				
S8P9b-3114	Conflict between Drainage Works and Water Mains in Road W1 (CNE 052)	0		25-Mar-22	-164	CD(7d)																				
S8P9b-3116	Level Different between Road A3 and Road D4-1 (CNE 055)	0		25-Mar-22	-164	CD(7d)																				
Preparation work/Tree Survey/Site Clearance/GI																										
S8P9b-0006	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Mar-22	-223	CD(7d)																				
S8P9b-1002	Submission & Acceptance of Tree Felling Application	24	05-May-21 A	17-Apr-22	-223	CD(7d)																				
S8P9b-1010	Site clearance & Tree Felling	48	19-Apr-22	16-Jun-22	-155	WD(6d)																				
S8P9b-1015	Ground investigation (10 / 13 GI completed)	25	22-Feb-21 A	27-Apr-22	-161	WD(6d)																				
S8P9b-1025	Verification of Ground Condition & Design Review by Project Manager	60	28-Apr-22	26-Jun-22	-201	CD(7d)																				
S8P9b-1040	Arsenic Treatment Plan (Stage 2)	36	25-Mar-22	12-May-22	-218	WD(6d)																				
Soil Treatment																										
S8P9b-2010	Remove soil (original assumed 15758m3) (0 / 8 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	40	17-Jun-22*	03-Aug-22	-155	WD(6d)																				
Civil Work																										
S8P9b-3015	Construct & maintain Temporary drainage	790	25-Mar-22	21-Nov-24	-224	WD(6d)																				
S8P9b-3030	Excavation for retaining wall (4701m3)	96	20-May-22	12-Sep-22	-224	WD(6d)																				
S8P9b-3040.02	Construction of retaining wall KW04 (3 / 3 footing completed & 0 / 3 stem wall completed)	30	24-Dec-21 A	04-May-22	-212	WD(6d)																				
S8P9b-3040.04	Construction of retaining wall KW03 (1 / 3 footing completed & 0 / 3 stem wall completed) Stage 1	85	21-Feb-22 A	11-Jul-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	37	26-Jan-22 A	13-May-22	-171	WD(6d)																				
S8P9b-3058.02	Road D5 - Construction of Underground Drainage Manhole SMH KT7104 to SMH KT7105 (Works Recommended)	30	23-Dec-21 A	04-May-22	-212	WD(6d)																				
S8P9b-3058.04	Road D5 - Construction of Underground Drainage Manhole SMH KT7102 to SMH KT7103	42	17-Jan-22 A	19-May-22	-224	WD(6d)																				
S8P9b-3100	Confirmation of Details for DCS pipes at D4-1 & D5 Road (EWN 030)	0		25-Mar-22*	-236	CD(7d)																				
Portion 8a in Area A (Soil Treatment, Reservoirs, Slope, Drainage & Roadwork)																										
S8P8a-1106	Design Change on Road W1 (EWN 025)	0		25-Mar-22	-179	CD(7d)																				
S8P8a-3090	Insufficient Width of Road W1 for Accommodation of All Underground Utilities (CNE 056)	0		25-Mar-22	-179	CD(7d)																				
Preparation work/Tree Survey/Site Clearance/GI																										
S8P8a-1030	Ground investigation (2 / 3 GI completed) to Fresh Water Service Reservoir	12	21-Dec-20 A	08-Apr-22	-34	WD(6d)																				
S8P8a-1046	Verification of Ground Condition & Design Review by Project Manager (to Fresh Water Service Reservoir)	60	09-Apr-22	07-Jun-22	-41	CD(7d)																				
Forming Site Access and Site Fomation																										



Build King – Richwell Engineering
Joint Venture

Planned Work

Critical Work

Actual Work

Milestone

Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-03)

Data Date: 25-Mar-22

Run Date: 28-Mar-21

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THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	March 2022					April 2022					May 2022					June 2022				
							27	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12	19	26		
Stage 1 General Excavation near Flushing Water Servie Reservior (Excavation Volume 52834 m3)																										
S8P8a-1105	Construct & maintain Temporary drainage	40	25-Mar-22	17-May-22	-146	WD(6d)																				
S8P8a-1160	General excavation for remaining of Road W1	40	11-Jun-20 A	17-May-22	-146	WD(6d)																				
Stage 2 General Excavation near Fresh Water Servie Reservior (Excavation Volume 299396 m3)																										
S8P8a-1208	Construct & maintain Temporary drainage	13	25-Mar-22	09-Apr-22	-96	WD(6d)																				
S8P8a-1220	General excavation for New Feature KS47 and adjacent road	13	01-Dec-20 A	09-Apr-22	-96	WD(6d)																				
S8P8a-1230	General excavation for New Feature KS49 and adjacent road	13	11-Jan-21 A	09-Apr-22	-96	WD(6d)																				
S8P8a-1240	General excavation for area surrounding Fresh Water Service Reservoir	0	01-Dec-20 A	11-Mar-22 A		WD(6d)																				
S8P8a-1250	General excavation for remaining of Road W2	13	14-Dec-20 A	09-Apr-22	-96	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-Mar-22	-188	CD(7d)																				
S8K8-6002	Strong Objection on the Construction of Fresh and Flushing Reservoirs (EWN 031) Maintenance Access beside KS47	0		25-Mar-22	-104	CD(7d)																				
Construction of Kwu Tung North Flushing Water Service Reservoir (KTN FLWSR)																										
Civil Works																										
S8K8-1005	Construct & maintain Temporary drainage	200	25-Mar-22	25-Nov-22	47	WD(6d)																				
S8K8-1030.052	Construction of Outlet Chamber	18	07-Jun-21 A	19-Apr-22	85	WD(6d)																				
S8K8-1030.26	Construction of Retaining wall GL 12 - 15 at GL G	0	01-Mar-22 A	25-Mar-22 A		WD(6d)																				
S8K8-1030.27	Construction of Retaining wall GL 12 - 15 at GL A	0	14-Feb-22 A	08-Mar-22 A		WD(6d)																				
S8K8-1030.28	Construction of Retaining wall GL 12 - 15 at GL D	0	14-Feb-22 A	15-Mar-22 A		WD(6d)																				
S8K8-1030.46	Construction of Roof Slab bay 4 (GL 12 - 15 & GL D - G)	36	07-Jun-22	19-Jul-22	47	WD(6d)																				
S8K8-1030.47	Construction of Roof Slab bay 4a (GL 12 - 15 & GL A - D)	36	22-Apr-22	06-Jun-22	47	WD(6d)																				
S8K8-1030.48	Construction of Landing Platforms	20	24-Mar-22 A	21-Apr-22	47	WD(6d)																				
E&M Works																										
S8K8-2010	Design and Approval for E&M works for KTN FLWSR	30	01-Feb-21 A	23-Apr-22	127	CD(7d)																				
S8K8-2020	Submission and Approval of E&M plants & materials for KTN FLWSR	70	01-Feb-21 A	02-Jun-22	87	CD(7d)																				
S8K8-2030	Procurement of E&M equipment for KTN FLWSR	60	03-Jun-22	01-Aug-22	87	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-Mar-22	-4	CD(7d)																				
S8K8-6044	Potential Delay on Supply of Steel Moulds for Construction of Fresh Water Service Reservoir(FWSR) (EWN 053)	0		25-Mar-22	-4	CD(7d)																				
Civil Works																										
S8K8-1000.02	Base Slab - bay2 & bay 4	0	31-Jan-22 A	03-Mar-22 A		WD(6d)																				
S8K8-1000.04	Base Slab - bay3 & bay 5a	17	04-Mar-22 A	14-Apr-22	-17	WD(6d)																				
S8K8-1000.06	Base Slab - bay5b	18	19-Apr-22	11-May-22	-17	WD(6d)																				
S8K8-1000.08	Base Slab - bay 6 & bay 7	18	12-May-22	01-Jun-22	-17	WD(6d)																				
S8K8-1000.20	Pad Footing - GL 3-5 / C-G (No. 12)	2	03-Mar-22 A	26-Mar-22	-72	WD(6d)																				
S8K8-1000.22	Pad Footing - GL 6-8 / C-G (No. 11) Stage 1	16	28-Mar-22	19-Apr-22	-72	WD(6d)																				
S8K8-1000.26	Pad Footing - GL 9-11 / C-G (No. 10)	18	20-Apr-22	12-May-22	-72	WD(6d)																				
S8K8-1000.28	Pad Footing - GL 3-5 / L-Q (No. 15)	18	13-May-22	02-Jun-22	-72	WD(6d)																				
S8K8-1000.30	Pad Footing - GL 9-11 / L-Q (No. 14)	18	04-Jun-22	24-Jun-22	-72	WD(6d)																				
S8K8-1000.40	Cover Slab - No. 19	12	20-Apr-22	04-May-22	-72	WD(6d)																				
S8K8-1000.42	Cover Slab - No. 18	12	05-May-22	19-May-22	-72	WD(6d)																				
S8K8-1000.44	Cover Slab - No. 17 Stage 1	12	20-May-22	02-Jun-22	-72	WD(6d)																				
S8K8-1000.48	Cover Slab - No. 16	12	04-Jun-22	17-Jun-22	-72	WD(6d)																				
S8K8-1000.50	Cover Slab - No. 23	12	18-Jun-22	02-Jul-22	-72	WD(6d)																				
S8K8-1000.60	Columns (152 nos)	208	04-Jun-22	11-Feb-23	-58	WD(6d)																				
S8K8-1002.00	Wall - No. 1	18	04-Jun-22	24-Jun-22	-58	WD(6d)																				
S8K8-3000	Construct & maintain Temporary drainage	523	25-Mar-22	28-Dec-23	0	WD(6d)																				
S8K8-3025	Construction of Sub soil drainage (Stage 1)	12	06-Dec-21 A	08-Apr-22	-36	WD(6d)																				
S8K8-3026	Construction of Sub soil drainage (Stage 2)	48	13-May-22	09-Jul-22	-36	WD(6d)																				
S8K8-3042	Up Hill Recieving Pit - Form Temporary road	0	06-Jan-22 A	25-Mar-22 A		WD(6d)																				
S8K8-3043	Up Hill Recieving Pit - GI works (0/7 completed)	30	29-Mar-22	07-May-22	-223	WD(6d)																				
S8K8-3044	Up Hill Recieving Pit - Temporary Cut & Soil Nail	50	10-May-22	08-Jul-22	-223	WD(6d)																				

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	March 2022					April 2022					May 2022					June 2022				
							27	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12	19	26		
E&M Works																										
S8K8-4010	Design and Approval for E&M works for KTN FWSR	70	20-Dec-21 A	02-Jun-22	-90	CD(7d)																				
S8K8-4020	Submission and Approval of E&M plants & materials for KTN FWSR	153	03-Jun-22	02-Nov-22	-90	CD(7d)																				
Remaining Civil Work in Portion 8a Area A																										
S8P8a-2550	Construction of Temporary Road on Additional Land E	5	23-Dec-21 A	30-Mar-22	-157	WD(6d)																				
S8P8a-2558	Construct & maintain Temporary drainage	240	31-Mar-22	19-Jan-23	-142	WD(6d)																				
S8P8a-2560	Excavation for retaining wall KW06 bay 1 - bay 7 (bays 0/7 completed)	100	31-Mar-22	03-Aug-22	-151	WD(6d)																				
S8P8a-2598	Construct & maintain Temporary drainage	242	17-Jun-22	06-Apr-23	-157	WD(6d)																				
S8P8a-2600	Excavation for retaining wall KW05 bay 8 - bay 16 (bays 0/9 completed)	120	17-Jun-22	08-Nov-22	-157	WD(6d)																				
S8P8a-2628	Construct & maintain Temporary drainage	144	31-Mar-22	24-Sep-22	-157	WD(6d)																				
S8P8a-2630	Excavation for retaining wall KW05 bay 1 - bay 7 (bays 0/7 completed)	60	31-Mar-22	16-Jun-22	-157	WD(6d)																				
S8P8a-2632	Construction of retaining wall KW05 bay 1 - bay 7 (bays 0/7 completed)	110	17-May-22	24-Sep-22	-157	WD(6d)																				
S8P8a-2658	Construct & maintain Temporary drainage	249	31-Mar-22	02-Feb-23	-151	WD(6d)																				
S8P8a-2660	Excavation for retaining wall KW11 bay 1 - bay 11 (bays 0/11 completed)	120	31-Mar-22	26-Aug-22	-151	WD(6d)																				
S8P8a-2662	Construction of retaining wall KW11 bay 1 - bay 11 (bays 0/11 completed)	220	11-May-22	02-Feb-23	-151	WD(6d)																				
S8P8a-3046	Construct & maintain Temporary drainage	665	22-Jun-22	13-Sep-24	-157	WD(6d)																				
S8P8a-3048	Backfill to level of utilities laying	263	22-Jun-22	10-May-23	-157	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-Mar-22	-315	CD(7d)	◆ Assumed resumption date of fresh and flushing reservoirs construction due to CNE No. 006 & EWN No. 005																			
S8P8b-1003	Works affected by the New Constructed 1650mm dia. Drain Pipe along Ho Sheung Heung Road at Portion 8b (CNE 072)	0		25-Mar-22	-202	CD(7d)	◆ Works affected by the New Constructed 1650mm dia. Drain Pipe along Ho Sheung Heung Road at Portion 8b (CNE 072)																			
S8P8b-1004	Suspension of EGI works and withdrawal of TTA on Ho Sheung Heung Rd (CNE No.24)	0		25-Mar-22	-315	CD(7d)	◆ Suspension of EGI works and withdrawal of TTA on Ho Sheung Heung Rd (CNE No.24)																			
S8P8b-1005	Unavailability of Vehicular Access and Movement towards Receiving Pit (CNE 068)	0		25-Mar-22	-191	CD(7d)	◆ Unavailability of Vehicular Access and Movement towards Receiving Pit (CNE 068)																			
S8P8b-1006	Disruption of Precast Concrete Pipe (Jacking Pipe) Supply due to the Severe Outbreak of Omicron (EWN 054)	0		25-Mar-22	-191	CD(7d)	◆ Disruption of Precast Concrete Pipe (Jacking Pipe) Supply due to the Severe Outbreak of Omicron (EWN 054)																			
Preparation work																										
S8P8b-1010	Site clearance & Tree Felling	66	25-Mar-22	17-Jun-22	-258	WD(6d)																				
S8P8b-1022	Remaining Environmental ground investigation and laboratory test (0 / 4 EGI)	36	25-Mar-22*	12-May-22	-164	WD(6d)																				
S8P8b-1030	Prepare Arsenic Assessment Report	30	18-Jun-22	23-Jul-22	-194	WD(6d)																				
S8P8b-1070	Approval & Acceptance of Tree Felling Application	36	22-Jan-22 A	29-Apr-22	-270	CD(7d)																				
Construction of Watermains																										
Construction of watermains by trenchless method																										
S8P8b-4000	Construct & maintain Temporary drainage	921	25-Mar-22	08-May-25	-258	WD(6d)																				
S8P8b-4010	Construction of receiving pit at Portion 8b near Sheung Yue River	41	22-Nov-21 A	18-May-22	-196	WD(6d)																				
S8P8b-4010.02	Sheung Yue River - Preparation, Submission and Approval for ADMS Monitoring System	0	10-Jan-22 A	17-Feb-22 A		WD(6d)																				
S8P8b-4010.04	Sheung Yue River - Preparation, Submission and Approval for ADMS Monitoring Tower	0	10-Jan-22 A	18-Feb-22 A		WD(6d)																				
S8P8b-4010.06	Sheung Yue River - Preparation, Submission and Approval for Drilling and Inclined Grouting below MTR railway	0	10-Jan-22 A	15-Feb-22 A		WD(6d)																				
S8P8b-4010.07	Resubmit & Approval of CIA Report & Pipe Jacking Method Statement	60	06-Apr-22*	21-Jun-22	-224	WD(6d)																				
S8P8b-4012.04	Sheung Yue River - Procurement & Testing of DN1200 Jacking pipes	75	22-Jun-22	19-Sep-22	-224	WD(6d)																				
S8P8b-4020	Constructon of launching pit at Portion 8a	200	18-Jun-22	16-Feb-23	-258	WD(6d)																				
S8P8b-4062	Up Hill Pipe Jacking Pit - Formal notification to Lo Wu Saddle Club	0	25-Jan-22 A	24-Mar-22 A		WD(6d)																				
S8P8b-4064	Up Hill Pipe Jacking Pit - Procurement for ELS	11	25-Jan-22 A	07-Apr-22	-118	WD(6d)																				
S8P8b-4066	Up Hill Pipe Jacking Pit - Pipe Pile Construction (136 nos.)	55	08-Apr-22	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	72	04-Apr-22*	05-Jul-22	-332	WD(6d)																				
Section 9																										
S9-1002	Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034)	0		25-Mar-22	-262	CD(7d)	◆ Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034)																			
Portion 12 in Area F (Soil Treatment & Interface with EMSD's Contractors)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S9P12-1010	Tree survey and prepare tree felling and transplant report	0	23-Aug-21 A	25-Mar-22 A		WD(6d)																				
S9P12-1012	Approval & Acceptance of Tree Felling Application	30	26-Mar-22	24-Apr-22	-144	CD(7d)																				
S9P12-1020	Site Clearance & Tree Felling	60	30-Apr-22	13-Jul-22	-114	WD(6d)																				
S9P12-1025	Ground investigation (0 / 1 GI completed)	0	10-Mar-22 A	14-Mar-22 A		WD(6d)																				



**Build King – Richwell Engineering
Joint Venture**

Planned Work

Critical Work

Actual Work

◆ Milestone

◆ Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-03)

Data Date: 25-Mar-22 Run Date: 28-Mar-21

Project ID: ND201901-RP-25.0


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THE 3-MONTH ROLLING PROGRAMME			
Date	Revision	Checked	Approved
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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	March 2022					April 2022					May 2022					June 2022				
							27	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12	19	26		
S9P12-1030	Environmental Ground investigation and laboratory test (2 / 3 EGI completed)	18	21-Feb-22 A	19-Apr-22	-45	WD(6d)																				
Section 10A																										
S10A-1002	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Mar-22	30	CD(7d)						◆ Removal of Existing CLP Facilities (EWN No. 018)														
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-Apr-22	-147	CD(7d)																				
S10AP1e-1020	Site Clearance & Tree Felling	48	19-Apr-22	16-Jun-22	-117	WD(6d)																				
S10AP1e-1030	Environmental ground investigation and lab test (1 EGI) (another 1 EGI in other portion represent part of this portion)	0	02-Jun-21 A	07-Jun-21 A		WD(6d)																				
S10AP1e-1040	Prepare Arsenic Assessment Report	30	17-Jun-22	22-Jul-22	-117	WD(6d)																				
S10AP1e-1060	Notification and Approval of Asbestos Abatement Programme	0	27-Jan-21 A	21-Feb-22 A		CD(7d)																				
S10AP1e-1070	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	0	22-Feb-22 A	25-Mar-22 A		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-Mar-22	391	CD(7d)						◆ Planned completion of KD9 - Portion 4														
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-Mar-22	910	CD(7d)						◆ Unstable Supply of Cement for HAC Soil Treatment (EWN 036, 038)														
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant																										
S11P6b-2005	Construct & maintain Temporary drainage	997	25-Mar-22	07-Aug-25	124	WD(6d)																				
Operation and Dismantling of the Soil Treatment Plant																										
S11P6b-3010	Provide treatment to high arsenic-containing soil	840	03-Dec-20 A	08-Feb-25*	0	WD(6d)																				
Section 12A																										
Portion 10b in Area L1 (Soil Treatment, Drainage & Roadwork)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S12P10b-1012	Approval & Acceptance of Tree Felling Application	18	16-Dec-20 A	19-Apr-22	482	WD(6d)																				
S12P10b-1020	Site Clearance & Tree Felling	42	04-Oct-21 A	19-May-22	458	WD(6d)																				
S12P10b-1040	Prepare Arsenic Assessment Report	36	20-May-22	02-Jul-22	458	WD(6d)																				
Civil Work																										
S12P10b-3000	Construct & maintain Temporary drainage	468	25-Mar-22	21-Oct-23	260	WD(6d)																				
S12P10b-3010	Underground utilities & Drainage work (158m drain and 5 M/H)	390	13-Oct-21 A	20-Jul-23	254	WD(6d)																				
Section 13																										
S13-1012	Suspension of Works at Part of Portion 2 (CNE No. 016) (EWN No. 019)	0		25-Mar-22	60	CD(7d)						◆ Suspension of Works at Part of Portion 2 (CNE No. 016) (EWN No. 019)														
S13-1025	Clarification of Road Profile for the South Roundabout at Portion 2 in Pak Shek Au (EWN 061)	0		25-Mar-22	0	CD(7d)						◆ Clarification of Road Profile for the South Roundabout at Portion 2 in Pak Shek Au (EWN 061)														
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	23-Apr-22	45	WD(6d)																				
Soil Treatment																										
S13P2-2010	Remove soil (original assumed 10854m3) (0 / 3 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	32	25-Apr-22	02-Jun-22	45	WD(6d)																				
S13P2-2020	Backfilling to the formation levels	80	04-Jun-22	06-Sep-22	45	WD(6d)																				
Civil Works																										
S13P2- 3150	Revised Slope KS38 - Approval & Acceptance of Initial Tree Survey report	30	15-Jan-21 A	23-Apr-22	743	CD(7d)																				
S13P2- 3170	Revised Slope KS38 - Approval & Acceptance of tree felling and transplant report	28	16-Apr-21 A	21-May-22	743	CD(7d)																				
S13P2- 4010	West Quadrant - Site formation of south roundabout	77	03-Jan-22 A	30-Jun-22	0	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-Mar-22	-262	CD(7d)						◆ Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034)														
S13P1a-1000	Tree survey and prepare tree felling and transplant report	54	04-Aug-21 A	02-Jun-22	297	WD(6d)																				
S13P1a-1002	Approval & Acceptance of Tree Felling Application	30	03-Jun-22	02-Jul-22	365	CD(7d)																				
Portion 7 in Area N (Soil Treatment, Drainage & Roadwork)																										

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	March 2022					April 2022					May 2022					June 2022				
							27	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12	19	26		
Preparation work/Tree Survey/Site Clearance/GI																										
S13P7-1030	Prepare Arsenic Assessment Report	6	16-Jul-20 A	31-Mar-22	652	WD(6d)																				
S13P7-1040	Arsenic Treatment Plan	6	09-Nov-20 A	31-Mar-22	652	WD(6d)																				
Civil Work																										
Underground Utilities																										
S13P7-3000	Construct & maintain Temporary drainage	484	25-Mar-22	10-Nov-23	614	WD(6d)																				
S13P7-3011	Underground drainage (309m drain and 8 M/H)	214	18-Jun-21 A	19-Dec-22	652	WD(6d)																				
S13P7-3012	Underground sewage (about 150m and 3 M/H)	350	25-Mar-22	01-Jun-23	602	WD(6d)																				
S13P7-3013	Underground watermains	320	25-Mar-22	25-Apr-23	612	WD(6d)																				
Portion 1b in Area N (Soil Treatment, Drainage & Roadwork)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S13P1b-1002	Approval & Acceptance of Tree Felling Application	0	22-Feb-22 A	25-Mar-22 A		CD(7d)																				
S13P1b-1010	Site clearance	62	25-Mar-22	13-Jun-22	599	WD(6d)																				
S13P1b-1015	Ground investigation (0 / 1 GI completed)	6	14-Jun-22	20-Jun-22	608	WD(6d)																				
S13P1b-1020	Environmental ground investigation and laboratory test(1 EGI in other portion represent this portion)	15	14-Jun-22	30-Jun-22	599	WD(6d)																				
Portion 6a & 5 in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S13P6a-1003	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0		25-Mar-22	600	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-Mar-22*	04-May-22	557	WD(6d)																				
S13P6a-2020	Backfilling to the formation levels	60	05-May-22	16-Jul-22	557	WD(6d)																				
Civil Work																										
S13P6a-3000	Construct & maintain Temporary drainage	575	25-Mar-22	02-Mar-24	844	WD(6d)																				
S13P6a-3012	Drainage works across DJ watermain	160	25-Mar-22	10-Oct-22	487	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-Mar-22	581	CD(7d)																				
S13P1c-1010	Site clearance	45	15-Mar-22 A	23-May-22	471	WD(6d)																				
S13P1c-1015	Ground investigation (0 / 2 GI completed)	12	24-May-22	07-Jun-22	471	WD(6d)																				
S13P1c-1020	Environmental ground investigation and laboratory test(1 / 2 EGI completed)	8	19-Mar-22 A	02-Apr-22	514	WD(6d)																				
S13P1c-1025	Site investigation for Noise Barriers	30	08-Jun-22	13-Jul-22	471	WD(6d)																				
S13P1c-1030	Prepare Arsenic Assessment Report	36	31-May-22	13-Jul-22	471	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	30-May-22	605	WD(6d)																				
S13P9a-1025	Site investigation for Noise Barriers	30	31-May-22	06-Jul-22	647	WD(6d)																				
S13P9a-1030	Prepare Arsenic Assessment Report	36	31-May-22	13-Jul-22	605	WD(6d)																				
Section 14																										
Portion 7 in Area S3 (Soil Treatment & Operation of HAC Soil Treatment Plant)																										
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant																										
S14P7S3-2010	Set up, testing and commissioning high arsenic-containing soil treatment plant (KD4) (CSD for Treated soil Stock pile)	4	06-Oct-20 A	29-Mar-22	0	WD(6d)																				
Operation and Dismantling of the Soil Treatment Plant																										
S14P7S3-3010	Stock Pile of Treated Soil	734	20-Nov-20 A	19-Sep-24	0	WD(6d)																				
Portion 16 in Area Q (Soil Treatment & Construction of CLC)																										
KD7 - Complete the construction works of Community Liaison Centre in Area Q																										
S14P16-3050	BS works / ABWF works / Internal cleaning / Moving-in furniture / FS Installation	6	10-May-21 A	31-Mar-22	809	WD(6d)																				
S14P16-3060	FS Notification & Confirmation for CLC FS Plan	0		31-Mar-22	995	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																										



Build King – Richwell Engineering
Joint Venture

Planned Work

Critical Work

Actual Work

◆

Milestone

◆

Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-03)

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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	March 2022				April 2022				May 2022				June 2022						
							27	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12	19	26	
	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-Mar-22	321	CD(7d)	Late Possession of Site of Part of Portions 7 and 10a (in Area H, H1, T1, T2 & T3) (CNE No. 001)																	
	S14P7T-1010	Tree survey and prepare tree felling and transplant report (Area T1)	30	25-Mar-22	04-May-22	229	WD(6d)																		
	S14P7T-1012	Ground investigation (0 / 1 GI completed) (Area T1)	30	05-May-22	10-Jun-22	255	WD(6d)																		
	S14P7T-1020	Site clearance (Area T1)	30	05-May-22	10-Jun-22	255	WD(6d)																		
	S14P7T-1022	Approval & Acceptance of Tree felling Application (Area T1)	30	05-May-22	03-Jun-22	280	CD(7d)																		
	S14P7T-1024	Tree felling works (Area T1)	30	04-Jun-22	09-Jul-22	231	WD(6d)																		
Land Contamination Assessment																									
	S14P7T-1063	Submit and acceptance of Contamination Assessment Report (CAR) & Remediation Action Plan (RAP)	14	04-Dec-20 A	11-Apr-22	111	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	26-Apr-22	121	WD(6d)																		
Portion 1b in Area S2 (Soil Treatment)																									
Preparation work/Tree Survey/Site Clearance/GI																									
	S14P1b-1015	Approval & Acceptance of Tree felling Application	30	22-Feb-22 A	23-Apr-22	796	CD(7d)																		
	S14P1b-1020	Site Clearance & Tree Felling	48	29-Apr-22	27-Jun-22	645	WD(6d)																		
Portion 1c & 9a in Area S2 (Soil Treatment)																									
Preparation work/Tree Survey/Site Clearance/GI																									
	S14P1c-1000	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)	0		25-Mar-22	726	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-Mar-22	726	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-Mar-22	19-Apr-22	589	WD(6d)																		
	S14P1c-1012	Approval & Acceptance of Tree felling Application	30	20-Apr-22	19-May-22	725	CD(7d)																		
	S14P1c-1020	Site Clearance & Tree Felling	48	28-May-22	25-Jul-22	588	WD(6d)																		
Portion 6a in Area S2 (Soil Treatment)																									
Preparation work/Tree Survey/Site Clearance/GI																									
	S14P6a-1040	Prepare Arsenic Assessment Report	36	25-Mar-22	12-May-22	755	WD(6d)																		
	S14P6a-1050	Arsenic Treatment Plan	36	13-May-22	24-Jun-22	755	WD(6d)																		
Portion 6b in Area S2 (Soil Treatment)																									
Preparation work/Tree Survey/Site Clearance/GI																									
	S14P6b-1017	Tree felling	30	25-Mar-22	04-May-22	719	WD(6d)																		
	S14P6b-1025	Ground investigation (0 / 1 GI completed)	6	05-May-22	12-May-22	719	WD(6d)																		
	S14P6b-1040	Prepare Arsenic Assessment Report	36	13-May-22	24-Jun-22	719	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-Mar-22	12-May-22	815	WD(6d)																		
	S14P1f-1050	Arsenic Treatment Plan	36	13-May-22	24-Jun-22	815	WD(6d)																		
Interim Community Liaison Centre (CLC)																									
	S14P1f-2030	Occupation of interim CLC	6	18-May-20 A	31-Mar-22	995	CD(7d)																		
	S14P1f-2040	Dismantling of interim CLC	12	01-Apr-22	19-Apr-22	809	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	12-Apr-22	836	WD(6d)																		
Soil Treatment																									
	S14P9c-2000	Construct & maintain Temporary drainage	26	25-Mar-22	28-Apr-22	1095	WD(6d)																		
	S14P9c-2020	Backfilling to the formation levels	26	18-Oct-21 A	28-Apr-22	1095	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-Mar-22	1749	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-Mar-22	10-Jun-22	113	WD(6d)																		
	S14P13-1012	Approval & Acceptance of Tree felling Application	30	11-Jun-22	16-Jul-22	113	WD(6d)																		
Cycle Track from Area H to Area N																									

 <p>Build King – Richwell Engineering Joint Venture</p>	<p> Planned Work Critical Work Actual Work Milestone Milestone Critical </p>	<h2 style="margin: 0;">ND/2019/01 - 3 Month Rolling Programme (2022-03)</h2> <p style="margin: 10px 0 0 0;"> Data Date: 25-Mar-22 Run Date: 28-Mar-21 </p>	<p>Project ID: ND201901-RP-25.0</p> <p>Layout: ND201901-3MRP with logo</p> <p>Page 10 of 13</p>	THE 3-MONTH ROLLING PROGRAMME			
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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	March 2022					April 2022					May 2022					June 2022				
							27	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12	19	26		
Underground Utilities underneath Cycle Track																										
S14CT-1030.01	Underground Utilities in Portion 5 (Stage 1)	52	01-Dec-21 A	31-May-22	669	WD(6d)																				
Portion 1b (Soil Treatment & Civil Works)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S14P1b-1102	Approval & Acceptance of Tree felling Application	0	22-Feb-22 A	11-Mar-22 A		CD(7d)																				
S14P1b-1104	Site clearance & Tree felling	60	12-Mar-22 A	10-Jun-22	257	WD(6d)																				
S14P1b-1108	Environmental ground investigation and laboratory test(0 / 2 EGI) MTRC Zone	30	11-Jun-22	16-Jul-22	257	WD(6d)																				
Civil Works																										
S14P1b-1300	Underground Drainage (around 120m, 4 nos MH)	72	25-Jan-22 A	24-Jun-22	889	WD(6d)																				
Portion 3 (Soil Treatment & Civil Works)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S14P3-1102	Approval & Acceptance of Tree felling Application	0	13-May-21 A	11-Mar-22 A		CD(7d)																				
S14P3-1104	Site clearance & Tree felling	18	03-Jun-21 A	19-Apr-22	721	WD(6d)																				
Soil Treatment																										
S14P3-1200	Construct & maintain Temporary drainage	93	25-Mar-22	20-Jul-22	830	WD(6d)																				
S14P3-1202	Remove soil (original assumed 4061 m3) (2 / 2 EGI completed, interim soil to be excavated / treated : 16200m3 / 7200m3)	24	03-Jun-21 A	26-Apr-22	721	WD(6d)																				
S14P3-1204	Backfilling to the formation levels	75	15-Nov-21 A	20-Jul-22	830	WD(6d)																				
Portion 5 (Soil Treatment & Civil Works)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S14P5-1108	Prepare Arsenic Assessment Report	30	25-Mar-22	04-May-22	745	WD(6d)																				
S14P5-1110	Arsenic Treatment Plan	30	25-Mar-22	04-May-22	745	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-Apr-22	833	CD(7d)																				
S14P1e-2020	Site clearance & Tree felling	60	22-Apr-22	05-Jul-22	677	WD(6d)																				
S6AP1e-3040	Notificatioan and Approval of Asbestos Abatement Programme	0	27-Jan-21 A	21-Feb-22 A		CD(7d)																				
S6AP1e-3050	Set up Containment Area , Removal and Disposal of Asbestos and Clean up Works	0	22-Feb-22 A	25-Mar-22 A		WD(6d)																				
Section 15																										
S15-1000	Presevation and protection of tree	1357	06-Dec-19 A	10-Dec-25	27	CD(7d)																				
Section 18 (Subject to excision)																										
S18-1040	Watermain laying work in Portion 5	315	20-Sep-21 A	19-Apr-23	22	WD(6d)																				
S18-1050	Watermain laying work in Portion 6a & 6b	380	25-Mar-22	08-Jul-23	283	WD(6d)																				
S18-1075	Watermain laying work in Portion 8a	350	22-Jun-22	23-Aug-23	-102	WD(6d)																				
Section 20 (Subject to excision)																										
S20-1012	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016)	0		25-Mar-22	-279	CD(7d)																				
S20-1016	Opening Cycle Track at Portion 2 (EWN No. 017)	0		25-Mar-22	-279	CD(7d)																				
S20-1018	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)	0		25-Mar-22	-279	CD(7d)																				
S20-1020	Suspension of Works at Part of Portion 2 (EWN No. 019)	0		25-Mar-22	-279	CD(7d)																				
Construction of Pedestrian Subway cum Cycle Track Stage 2 (South of Castle Peak Road)																										
Civil and Structural Work																										
S20S2-7320	ELS, Excavation & UU suspension works for subway	180	25-May-22	27-Dec-22	-275	WD(6d)																				
S20S2-7330	Access ramp and tunnel in Portion 1a	310	18-Jun-22	04-Jul-23	-275	WD(6d)																				
S20S2-7350	Access ramp and tunnel in Portion 2	310	18-Jun-22	04-Jul-23	-275	WD(6d)																				
S20S2-7370	Raft Foundation Construction CSD	170	18-Jun-22	09-Jan-23	-270	WD(6d)																				
Section 21 (Subject to excision)																										
S21-1013	Late Possession of Site of Portions 1d & 11a (CNE No. 009)	0		25-Mar-22	767	CD(7d)																				
Portion 1b in Area M (Soil Treatment)																										
Preparation work																										
S21P1b-1010	Tree survey and prepare tree felling and transplant report	30	25-Mar-22	04-May-22	620	WD(6d)																				



Build King – Richwell Engineering
Joint Venture

Planned Work

Critical Work

Actual Work

Milestone

Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-03)

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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	March 2022					April 2022					May 2022					June 2022				
							27	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12	19	26		
	S21P1b-1012	Approval & Acceptance of Tree felling Application	30	05-May-22	10-Jun-22	620	WD(6d)																			
	S21P1b-1020	Site Clearance & Tree Felling	60	11-Jun-22	20-Aug-22	620	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-Mar-22	04-May-22	620	WD(6d)																			
	S21P1d-1012	Approval & Acceptance of Tree felling Application	30	05-May-22	10-Jun-22	620	WD(6d)																			
	S21P1d-1020	Site Clearance & Tree Felling	60	11-Jun-22	20-Aug-22	620	WD(6d)																			
Portion 11a in Area M (Soil Treatment)																										
Preparation work																										
	S21P11a-1010	Tree survey and prepare tree felling and transplant report	30	25-Mar-22	04-May-22	615	WD(6d)																			
	S21P11a-1012	Approval & Acceptance of Tree felling Application	30	05-May-22	10-Jun-22	615	WD(6d)																			
	S21P11a-1020	Site Clearance & Tree Felling	60	11-Jun-22	20-Aug-22	615	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-Mar-22	620	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-Mar-22	-315	CD(7d)																				
EC-1014	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016) (CNE No. 022)	0	23-Dec-19 A	25-Mar-22	-526	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-Mar-22	-526	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-Mar-22	-223	CD(7d)																				
EC-1026	Handling of Unlawful Occupied Property Affected by the Works (CNE No. 014)	0	21-Aug-20 A	25-Mar-22	1749	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-Mar-22	1749	CD(7d)																				
EC-1028	Suspension of Works at Part of Portion 2 (CNE No. 016) (EWN No. 019)	0	31-Aug-20 A	25-Mar-22	-526	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-Mar-22	-188	CD(7d)																				
EC-1030	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)	0	19-Oct-20 A	25-Mar-22	-526	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-Mar-22	-315	CD(7d)																				
EC-1039	Design Change on Road W1 (EWN 025)	0	22-Mar-21 A	25-Mar-22	-179	CD(7d)																				
EC-1040	Temporary Stockpile in Area C1 (EWN 027)	0	31-May-21 A	25-Mar-22	-110	CD(7d)																				
EC-1042	Details of DCS pipe at D4-1 & D5 Road (EWN 030)	0	21-May-21 A	25-Mar-22	-236	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-Mar-22	-104	CD(7d)																				
EC-1045	Delay in the Access to and Use of Portion 1b of the Site (CNE 033)	0	06-Jul-21 A	17-Feb-22 A		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-Mar-22	-312	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-Mar-22	1749	CD(7d)																				
EC-1050	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0	17-Sep-21 A	25-Mar-22	-164	CD(7d)																				
EC-1051	Unstable Supply of Cement for HAC Soil Treatment (EWN 036, 038) (CNE 049)	0	27-Sep-21 A	25-Mar-22	910	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-Mar-22	1749	CD(7d)																				
EC-1053	Potential Delay on Production and Supply of Precast Concrete Pipes (EWN 040) (CNE 047)	0	06-Oct-21 A	25-Mar-22	-139	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-Mar-22	-182	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-Mar-22	-182	CD(7d)																				
EC-1056	Inclement Weather on 8th October 2021 (CNE 036)	0	08-Oct-21 A	25-Mar-22	1749	CD(7d)																				
EC-1057	Tropical Cyclone Warning Signal No.8 on 9th October 2021 (CNE 039)	0	09-Oct-21 A	25-Mar-22	1749	CD(7d)																				
EC-1058	Tropical Cyclone Warning Signal No.8 on 13th October 2021 (CNE 040)	0	13-Oct-21 A	25-Mar-22	1749	CD(7d)																				
EC-1059	The footing detail for Roadside Directional Sign ADS30 at Portion 5 (EWN 043)	0	22-Oct-21 A	25-Mar-22	-109	CD(7d)																				
EC-1061	Suspension of Concretes Supply due to Cement Shortage (EWN 045) (CNE 046)	0	02-Nov-21 A	25-Mar-22	1749	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-Mar-22	-109	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-Mar-22	1749	CD(7d)																				
EC-1064	Extra Time on Production and Delivery of Road Lighting Products (EWN 51)	0	13-Dec-21 A	25-Mar-22	-124	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-Mar-22	726	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-Mar-22	1749	CD(7d)																				
EC-1067	Conflict between Drainage Works and Existing Twin DN2200 Dongjiang Water Mains (CNE 051)	0	29-Nov-21 A	25-Mar-22	-164	CD(7d)																				
EC-1068	Conflict between Drainage Works and Water Mains in Road W1 (CNE 052)	0	02-Dec-21 A	25-Mar-22	-164	CD(7d)																				
EC-1069	Level Different between Road A3 and Road D4-1 (CNE 055)	0	08-Dec-21 A	25-Mar-22	-164	CD(7d)																				
EC-1070	Insufficient Width of Road W1 for Accommodation of All Underground Utilities (CNE 056)	0	04-Jan-22 A	25-Mar-22	-179	CD(7d)																				



Build King – Richwell Engineering
Joint Venture

Planned Work

Critical Work

Actual Work

Milestone

Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-03)

Data Date: 25-Mar-22

Run Date: 28-Mar-21

Project ID: ND201901-RP-25.0

Laayout: ND201901-3MRP with logo

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THE 3-MONTH ROLLING PROGRAMME

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar		March 2022					April 2022					May 2022				June 2022					
								27	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12	19	26		
<div></div>	EC-1071	Revised Construction Drawings of Fresh Water Service Reservoir (CNE 067, 067a)	0	14-Dec-21 A	25-Mar-22	-4	CD(7d)	<div></div>					<div></div>														
	EC-1072	Unavailability of Vehicular Access and Movement towards Receiving Pit (CNE 068)	0	29-Dec-21 A	25-Mar-22	-191	CD(7d)	<div></div>																			
	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-Mar-22	-202	CD(7d)	<div></div>																			
	EC-1075	Works affected by the Sever Outbreak of Omicron (CNE 073) (EWN 058)	0	25-Feb-22 A	25-Mar-22	1749	CD(7d)	<div></div>																			
	EC-1076	Potential Delay on Supply of Steel Moulds for Construction of Fresh Water Service Reservoir(FWSR) (EWN 053)	0	18-Feb-22 A	25-Mar-22	-4	CD(7d)	<div></div>																			
	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-Mar-22	-191	CD(7d)	<div></div>					<div></div>														
	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-Mar-22	-52	CD(7d)	<div></div>																			
	EC-1079	Delay in Supply of Precast Concrete Pipe due to the Severe Outbreak of Omicron (EWN 056)	0	16-Feb-22 A	25-Mar-22	1749	CD(7d)	<div></div>																			
	EC-1080	Possible Suspension of Concrete Supply due to the Severe Outbreak of COVID-19 (EWN 059)	0	02-Mar-22 A	25-Mar-22	1749	CD(7d)	<div></div>																			
	EC-1081	Suspension of Precast Concrete Manhole Supply due to the Severe Outbreak of COVID-19 in Mainland China (EWN 060)	0	14-Mar-22 A	25-Mar-22	-223	CD(7d)	<div></div>																			
	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-Mar-22	0	CD(7d)	<div></div>																			

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

- Portion 8a**
1.Construction of Retaining Wall
2.Slope Drainage & maintenance access construction
3.RC construction of Flushing/ Fresh water service Reservoir
4.Construction of temp Haul road
5.Slope cutting

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

- Portion 6a**
1.Site Clearance
2.Construction of Retaining Wall
3.Sheet piling & Excavation
4.Pipe laying
5.Haul Road Construction
6.Backfilling

- Portion 5**
1.Site Clearance
2.Sheet piling & Excavation
3.Drainage works
4.Temporary road construction

- Portion 3**
1.Site Clearance
2.Backfilling
3.Excavation
4.Tree Felling

- Portion 2**
1.Site Clearance
2.Tree Felling
3.Temporary road construction.
4.Site formation Work

- Portion 7**
1.Site Clearance
2.Sheet piling & Excavation
3.Pipe laying

- Portion 14**
1.Construction of temporary sewage pumping station

- Portion 9b**
1.Sheet piling & Excavation
2.Pipe laying
3.Demolition of existing structures
4.GI works

- Portion 9c**
1.Stockpile of Soil
2.Excavation

- Portion 1b**
1.Site Clearance
2.Ground Investigation
3.Sheet piling
4.Excavation and drainage

- Portion 10b**
1.Sheet piling & Excavation
2.Drainage works

- Portion 1a/e**
1.Site Clearance
2.Remove of existing structures
3.Tree Felling

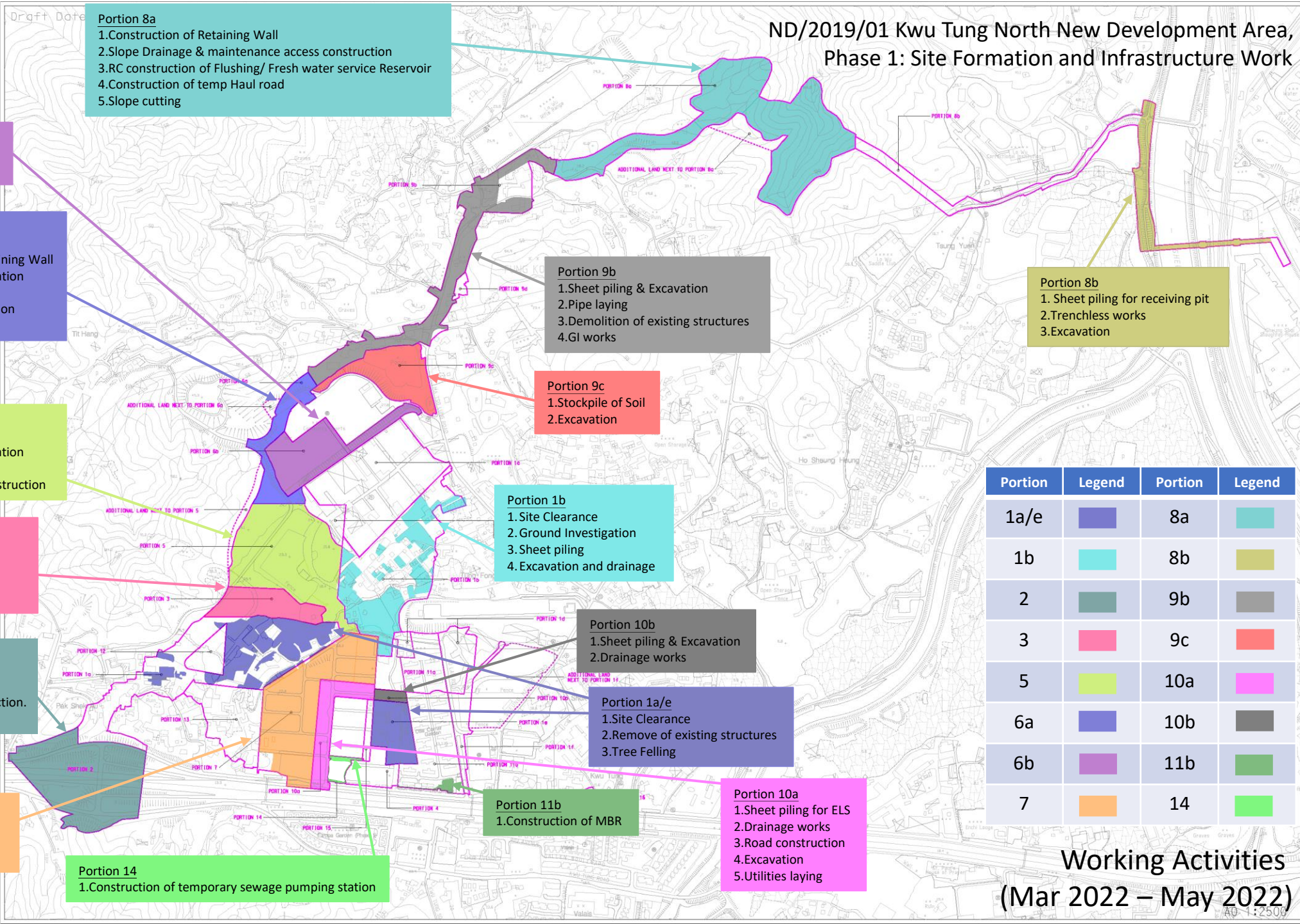
- Portion 11b**
1.Construction of MBR

- Portion 10a**
1.Sheet piling for ELS
2.Drainage works
3.Road construction
4.Excavation
5.Uilities laying

- Portion 8b**
1. Sheet piling for receiving pit
2.Trenchless works
3.Excavation

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

Working Activities
(Mar 2022 – May 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

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Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance	2022				
										Mar	Apr	May	Jun	Jul
ND-2019-02 KTNDA Phase 1:Roads and Drains between Kv		1739	1191	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	544						
Programme Data		1739	1191	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	544						
Preliminaries		1739	1191	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	544						
Subletting		25	25			30-Apr-22	31-May-22	0						
Specialist Subcontractors		25	25			30-Apr-22	31-May-22	0						
SC-1190	Award of subcontract - ABWF works	0	0				30-Apr-22*	0						
SC-1200	Award of subcontract - Temporary Sewerage System	0	0				31-May-22*	0						
Statutory Submission		205	90	30-Sep-20	08-Dec-20	17-Jan-22 A	29-Jun-22	121						
HyD		90	90	30-Sep-20	08-Dec-20	31-Mar-22 A	29-Jun-22	121						
XP-1010	Excavation permit (XP) application for Portion 4	90	90	30-Sep-20	08-Dec-20	31-Mar-22 A	29-Jun-22	121	0					
TPRP		132	37			17-Jan-22 A	16-May-22	-31						
TPRP-1040	Tree Felling Proposal Submission and Approval for FMH1.30A (CSF-477)	80	12			17-Jan-22 A	15-Apr-22	-31	0					
TPRP-1050	Tree Felling (26 nos)	24	24			18-Apr-22	16-May-22	-31	0					
Site Offices & Preliminaries		1739	1191	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	167						
Site Offices & Preliminaries		1739	1191	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	167						
Temporary office for RE		1739	1191	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	167						
SP-1000b	Maintenance of container office	1739	1191	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	167	0					
Contractor's Design		206	163	27-Feb-21	21-Jun-22	17-Feb-22 A	10-Sep-22	1572						
Temporary Works Design		104	96			17-Mar-22 A	05-Jul-22	68						
Footbridge FK2		35	28			17-Mar-22 A	05-May-22	13						
Formwork Design (Bridge Pier) - CSF576		10	6			17-Mar-22 A	08-Apr-22	-10						
TWD-1330	Formwork and Falsework Design (Bridge Pier) - 2nd submission to PM & Approval	10	6			17-Mar-22 A	08-Apr-22	-10						
Falsework Design (Bridge Deck) - CSF584		35	28			24-Mar-22 A	05-May-22	13						
TWD-1350	Falsework Design (Bridge Deck) - Review and Resubmission	21	14			24-Mar-22 A	18-Apr-22	13						
TWD-1360	Falsework Design (Bridge Deck) - 2nd submission to PM & Approval	14	14			19-Apr-22	05-May-22	13						
Sewage Pumping Station		35	35			01-Jun-22	05-Jul-22	68						
Formwork Design		35	35			01-Jun-22	05-Jul-22	68						
TWD-1030	Formwork and Falsework Design - 1st submission to PM & review	21	21			01-Jun-22*	21-Jun-22	68						
TWD-1040	Formwork and Falsework Design - Review and Resubmission	14	14			22-Jun-22	05-Jul-22	68						
Visitor Centre		14	13			18-Mar-22 A	13-Apr-22	-18						
Formwork Design for Superstructure - CSF598		14	13			18-Mar-22 A	13-Apr-22	-18						
TWD-1390	Formwork and Falsework Design - 2nd submission to PM & Approval	14	13			18-Mar-22 A	13-Apr-22	-18						
Pipeworks		45	45			13-Apr-22	27-May-22	9						
TWD-1190	Formwork and Falsework Design for Manhole - 1st submission to PM & review	21	21			13-Apr-22*	03-May-22	9						
TWD-1200	Formwork and Falsework Design for Manhole - Review and Resubmission	10	10			04-May-22	13-May-22	9						
TWD-1205	Formwork and Falsework Design for Manhole - 2nd submission to PM & Approval	14	14			14-May-22	27-May-22	9						

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

Data Date: 31-Mar-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 (Mar to Jun 2022)

Date	Revision	Checked	Approved
31-Mar-22	Rev 1 (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	Total Float	Time Risk Allowance	2022				
										Mar	Apr	May	Jun	Jul
E&M and BS		163	126	09-Sep-21	13-Jun-22	17-Feb-22 A	30-Aug-22	1306						
Visitor Centre		21	15	09-Sep-21	30-Sep-21	25-Mar-22 A	19-Apr-22	110						
ConD-1200	Visitor Centre - Review and approval	21	15	09-Sep-21	30-Sep-21	25-Mar-22 A	19-Apr-22	110	0					
Sewage Pumping Station		60	23	18-Jan-22	31-Mar-22	17-Feb-22 A	28-Apr-22	1409						
ConD-1150	Sewage Pumping Station - 2nd submission to PM & approval	14	4	18-Jan-22	07-Feb-22	17-Feb-22 A	06-Apr-22	1428	0					
ConD-1180	Sewage Pumping Station - 1st submission to relevant Government Dep.	28	5	07-Feb-22	11-Mar-22	05-Mar-22 A	07-Apr-22	129	0					
ConD-1210	Sewage Pumping Station - Re-submission and approval	18	18	11-Mar-22	31-Mar-22	08-Apr-22	28-Apr-22	129	0					
FootBridge		60	60	01-Apr-22	13-Jun-22	21-Jun-22	30-Aug-22	-36						
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	21-Jun-22	30-Aug-22	-36	0					
Footbridge FK2 Road lighting		74	74	27-Feb-21	15-Jun-21	23-May-22	18-Aug-22	-36						
RD-1000	Preparation of Road Lighting system (PS section 30)	74	74	27-Feb-21	15-Jun-21	23-May-22	18-Aug-22	-36	0					
Irrigation System		76	76	04-Mar-22	21-Jun-22	14-Jun-22	10-Sep-22	-13						
IS-1000	Preparation of Irrigation System (PS section 3)	76	76	04-Mar-22	21-Jun-22	14-Jun-22	10-Sep-22	-13	0					
Works in Section 2		148	90	27-Feb-21	17-Sep-22	20-Jan-22 A	19-Jul-22	84						
Portion 2 - Road & Drains		85	85	13-Jul-21	30-Aug-21	01-Apr-22	13-Jul-22	24						
Sewer Installation from KT1.29A to KT1.30A by pipejacking		49	49	13-Jul-21	30-Aug-21	16-Apr-22	14-Jun-22	-31						
ELS of Launching shaft at FMH_KT1.30A		49	49	13-Jul-21	30-Aug-21	16-Apr-22	14-Jun-22	-31						
P2-3140	Set up works area for tree felling & ELS works	1	1	13-Jul-21	15-Jul-21	16-Apr-22	16-Apr-22	-31	0					
P2-3150	ELS for launching shaft at FMH_KT1.30A	21	21	16-Jul-21	26-Aug-21	17-May-22	10-Jun-22	-31	6					
P2-3160	Install decking at KT1.30A & release TTA	3	3	27-Aug-21	30-Aug-21	11-Jun-22	14-Jun-22	-31	0					
Sewer Installation from KT1.30A to KT1.32A by pipejacking		24	24			15-Jun-22	13-Jul-22	-31						
ELS of Receiving shaft at FMH_KT1.32A		24	24			15-Jun-22	13-Jul-22	-31						
P2-7190	Set up TTA at Castle Peak Road Carriageway (westbound)	3	3			15-Jun-22	17-Jun-22	-31	0					
P2-7200	ELS for inspection shaft at FMH_KT1.32A	21	21			18-Jun-22	13-Jul-22	-31	6					
Pipe Jacking		74	74			01-Apr-22	29-Jun-22	35						
2100 dia Pipe		74	74			01-Apr-22	29-Jun-22	35						
(KT6003A to KT2003)		74	74			01-Apr-22	29-Jun-22	35						
P2-8165	Setup working platform	2	2			01-Apr-22	02-Apr-22	35	5					
P2-8170	Setup Thrust Wall	6	6			04-Apr-22	11-Apr-22	35	0					
P2-8175	Install Slurry Pipe and Power Cable	7	7			12-Apr-22	19-Apr-22	35	0					
P2-8180	Dismantle 5 tonnes hoisting frame	1	1			20-Apr-22	20-Apr-22	35	0					
P2-8185	Target date of deliver 2.1m dia TBM to site	0	0				19-Apr-22*	36	2					
P2-8190	Set Up Pipe Jacking TBM	11	11			21-Apr-22	04-May-22	35	0					

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








Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance	2022				
										Mar	Apr	May	Jun	Jul
P2-8195	Pipe Jacking from KT6003A to KT2003 (2.1 dia) (115m ~3m/day)	38	38			05-May-22	18-Jun-22	35	5					
P2-8200	Dismantle of TBM from shaft KT2003	9	9			20-Jun-22	29-Jun-22	35	0					
Manhole Construction		63	63			08-Apr-22	22-Jun-22	6						
FMH_KT1.23 & SMH_KT2003		63	63			08-Apr-22	22-Jun-22	6						
P2-8286	Erection of Working Platform	6	6			08-Apr-22*	14-Apr-22	33	1					
P2-8288	Modification of Strut for Manhole FMH_KT1.23 construction	9	9			15-Apr-22	25-Apr-22	33	1					
P2-8290	Manhole FMH_KT1.23 construction	21	21			27-May-22	22-Jun-22	6	1					
Portion 3 - Road & Drains		148	90	16-May-22	17-Sep-22	20-Jan-22 A	19-Jul-22	78						
Drainage Outfall_6013 constuction by Open Cut (By CE-067)		68	68			01-Apr-22	22-Jun-22	46						
Manhole SMH_KT6013A & FMH_KT1.36A		68	68			01-Apr-22	22-Jun-22	46						
P3-5290	Rebar fixing for manhole of KT1.36A (lower portion: +0.022mPD)	3	3			01-Apr-22	04-Apr-22	46	3					
P3-5295	Concreting of manhole KT1.36A (lower portion: +0.022mPD)	1	1			06-Apr-22	06-Apr-22	46	2					
P3-5297	Dismantle of formwork	2	2			07-Apr-22	08-Apr-22	46	2					
P3-5297.1	Backfill lower part of manhole KT1.36A	6	6			09-Apr-22	15-Apr-22	46	2					
P3-5297.3	Dismantle the 3rd strut & waling	3	3			16-Apr-22	19-Apr-22	46	2					
P3-5300	Blinding layer of manhole KT6013A: (lower portion :+1.797mPD)	1	1			09-Apr-22	09-Apr-22	50	2					
P3-5310	Formwork erection of manhole KT6013A: (lower portion :+1.797mPD)	4	4			11-Apr-22	14-Apr-22	50	2					
P3-5320	Rebar fixing of manhole KT6013A: (lower portion :+1.797mPD)	4	4			20-Apr-22	23-Apr-22	46	2					
P3-5330	Concreting of manhole KT6013A: (lower portion :+1.797mPD)	1	1			25-Apr-22	25-Apr-22	46	2					
P3-5610	Formwork for middle portion of manhole KT1.36A and KT6013A	4	4			26-Apr-22	29-Apr-22	46	2					
P3-5620	Rebar fixing for middle portion of manhole of KT1.36A and KT6013A	4	4			30-Apr-22	05-May-22	46	2					
P3-5630	Concreting for middle portion of manhole of KT1.36A and KT6013A	1	1			06-May-22	06-May-22	46	2					
P3-5640	Dismantle of formwork	1	1			07-May-22	07-May-22	46	2					
P3-5650	Backfill to Middle Part of Manhole	3	3			09-May-22	11-May-22	46	2					
P3-5670	ELS between Manhole KT6013A to Outfall	9	9			12-May-22	21-May-22	46	2					
P3-5680	Laying of 3m dia. Mild Steel drain	4	4			23-May-22	26-May-22	46	2					
P3-5690	Backfill drain trench to Existing Ground Level	6	6			27-May-22	02-Jun-22	46	2					
P3-5700	Dismantle the 1st layer strut & waling	5	5			04-Jun-22	09-Jun-22	46	2					

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

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance	2022				
										Mar	Apr	May	Jun	Jul
P3-5710	Construct Last Part of Manhole KT1.36A and KT6013A	6	6			10-Jun-22	16-Jun-22	46	2					
P3-5720	Backfill to original ground level and remove Sheet Pile	5	5			17-Jun-22	22-Jun-22	46	2					
Sewer Pipeline Installation (KT1.33A to KT1.41A)		148	90	16-May-22	17-Sep-22	20-Jan-22 A	19-Jul-22	78						
KT1.39A - KT1.38A (99m) (Pipe Jacking by CE-074)		96	90			24-Mar-22 A	19-Jul-22	-67						
P3-2554	Set up Pipe Jacking Equipment	30	24			24-Mar-22 A	29-Apr-22	-67	2					
P3-2556	Pipe Jacking of Twins 800 Concrete Pipe (1.39A to 1.38A) (2 x 99m ~3m/d)	66	66			30-Apr-22	19-Jul-22	-67	2					
KT1.39A - KT1.40A (99m) (Pipe Jacking by CE-074)		5	5			01-Apr-22	07-Apr-22	32						
P3-5490	KT1.40A Soft Excavation to F.L ; (approx. 8.5m depth)	5	5			01-Apr-22	07-Apr-22	32	2					
KT1.38A - KT1.37A (99m) (Open Cut by CE-075)		128	70	19-Jul-22	17-Sep-22	20-Jan-22 A	24-Jun-22	98						
P3-2210	Soft Excavation to 1st strut level (99m @12m / Bay)	72	14	19-Jul-22	09-Aug-22	20-Jan-22 A	18-Apr-22	95	2					
P3-2210.1	Installation of strut S1 (99m @12m / Bay)	75	20			24-Jan-22 A	25-Apr-22	93	2					
P3-2220	Soft Excavation to 2nd strut level (99m @12m / Bay)	75	29	23-Jul-22	13-Aug-22	01-Mar-22 A	06-May-22	92	2					
P3-2220.1	Installation of strut S2 (99m @12m / Bay)	61	33			01-Mar-22 A	13-May-22	92	2					
P3-2250	Soft Excavation to F.L ; (99m @12m / Bay)	59	40	10-Aug-22	07-Sep-22	10-Mar-22 A	19-May-22	84	2					
P3-2253	Receipt from manufacturer's notification for delay of delivery due to Covid-19	51	24			01-Mar-22 A	29-Apr-22	84	3					
P3-2255	Impacted Delivery Date of Concrete Pipe	0	0			30-Apr-22	30-Apr-22	84	3					
P3-2260	Bedding & Pipe Laying (Twins 800 Concrete Pipe)	19	19	27-Aug-22	17-Sep-22	30-Apr-22	23-May-22	84	2					
P3-2265	Backfilling of drain to at grade level KT1.37A	40	40			09-May-22	24-Jun-22	98	2					
KT1.37A - KT1.36A (90m) (Open Cut by CE-068)		111	87	16-May-22	13-Jul-22	01-Mar-22 A	15-Jul-22	21						
Before Tree Removal		30	23			04-Mar-22 A	28-Apr-22	64						
P3-2008	Sheet Pile Installation for open trench at KT1.37A - KT1.36A (Cycle Track Side)	30	23			04-Mar-22 A	28-Apr-22	64	2					
Tree Removal		81	54			01-Mar-22 A	06-Jun-22	33						
P3-2009.4	Application and Approval for tree felling of T0937	78	51			01-Mar-22 A	01-Jun-22	33	2					
P3-2009.5	Tree felling works of T0937 to release working space for sheet piling	3	3			02-Jun-22	06-Jun-22	33	2					
After Tree Removal		73	87	16-May-22	13-Jul-22	28-Mar-22 A	15-Jul-22	21						
P3-2009.6	Sheet Pile Installation for open trench at KT1.37A - KT1.36A (River side After tree removal)	21	21			07-Jun-22	30-Jun-22	33	2					
P3-2010	Soft Excavation to 1st strut level	30	87	16-May-22	07-Jun-22	28-Mar-22 A	15-Jul-22	21	2					
P3-2010.1	Installation of strut S1	32	32			15-Apr-22	23-May-22	21	2					
P3-2020	Soft Excavation to 2nd strut level	20	20	23-May-22	16-Jun-22	04-May-22	26-May-22	21	2					
P3-2020.1	Installation of strut S2	32	32			16-May-22	22-Jun-22	21	2					

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

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance	2022				
										Mar	Apr	May	Jun	Jul
P3-2070	Soft Excavation to F.L ; (approx. 8.5m depth)	24	24	02-Jun-22	02-Jul-22	27-May-22	24-Jun-22	21	2					
P3-2110	Bedding & Pipe Laying (Twins 750 Concrete Pipe)	25	25	21-Jun-22	13-Jul-22	06-Jun-22	05-Jul-22	21	2					
Portion 4 - Road & Drains		63	63	27-Feb-21	23-Oct-21	03-May-22	16-Jul-22	86						
Pre-construction works		63	63	27-Feb-21	23-Oct-21	03-May-22	16-Jul-22	86						
P4-1050	Trial Pit (3nos.), Submission & Approval of GI Report	54	54	27-Feb-21	10-May-21	03-May-22*	06-Jul-22	95	3					
P4-1060	Circulation & Approval of TTAs	18	18	27-Sep-21	23-Oct-21	25-Jun-22	16-Jul-22	-55	0					
Portion 7 - Kwu Tung North Sewage Pumping station		74	74			31-Mar-22 A	29-Jun-22	-30						
Sewage Pumping Station		74	74			31-Mar-22 A	29-Jun-22	-30						
Excavation		74	74			31-Mar-22 A	29-Jun-22	-30						
1st Stage		25	25			31-Mar-22 A	30-Apr-22	-30						
P7-3122	Excavate down to level suit for driving Middle Part Sheet Pile Wall	6	8			31-Mar-22 A	11-Apr-22	-30	5					
P7-3125	Sheetpile Installation for Middle part wall (~24m; approx. 60nos)	15	15			12-Apr-22	28-Apr-22	-30	5					
P7-3126	Dewatering Well Installation outside the sheetpile wall (4nos)	7	7			21-Apr-22	28-Apr-22	-30	5					
P7-3126.1	Pumping Test	2	2			29-Apr-22	30-Apr-22	-30	5					
2nd Stage		39	39			03-May-22	17-Jun-22	-30						
P7-3126.2	Cut and Fill of slope to form platform for installation of strut at Portion 3	3	3			03-May-22	05-May-22	-30	5					
P7-3126.3	Installation of strut at Portion 3 (+4.5mPD)	6	6			06-May-22	12-May-22	-30	5					
P7-3127	Soft Excavation to temp slope of Portion 1 & 2 and extend the slope to Portion 4 (600cu m)	6	6			13-May-22	19-May-22	-30	1					
P7-3128	Installation of 2nd level of strut at Portion 3 (+2.2mPD)	6	6			20-May-22	26-May-22	-30	1					
P7-3129	Cut and Fill of slope to form platform for installation of strut at Portion 4 to 6 (600 cu m)	6	6			27-May-22	02-Jun-22	-30	1					
P7-3130	Installation of strut S1 (+4.5mPD) at Portion 4 , 5 and 6	12	12			04-Jun-22	17-Jun-22	-30	1					
3rd Stage		10	10			18-Jun-22	29-Jun-22	-30						
P7-3135	Soft Excavation to 2nd strut level (+1.47mPD) at Portion 4 to 6 (~980cu.m)	10	10			18-Jun-22	29-Jun-22	-30	1					
Works in Section 3		175	82	25-May-21	28-Jun-21	09-Dec-21 A	09-Jul-22	-36						
Portion 8 - Roads & Drains		167	74			09-Dec-21 A	29-Jun-22	-55						
Pre-construction works		167	74			09-Dec-21 A	29-Jun-22	-55						
CLP Cable Relocation		148	55			09-Dec-21 A	07-Jun-22	-36						
P8-1060	KT1.40 - KT1.41 Application & Approval for the relocation of existing power cables by CLP	90	25			09-Dec-21 A	30-Apr-22	-36	2					
P8-1070	KT1.40 - KT1.41 Relocation of existing power cables by CLP	30	30			03-May-22	07-Jun-22	-36	2					
HyD Pillar Box / Lighting Relocation		83	74			22-Mar-22 A	29-Jun-22	-55						
P8-9040	Preparation and submission of proposal for temp traffic / pedestrian route lighting at KT1.40 - KT1.41	14	5			22-Mar-22 A	07-Apr-22	-55	2					
P8-9050	Approval of proposal for temp traffic / pedestrian route lighting KT1.40 - KT1.41	48	48			08-Apr-22	04-Jun-22	-55	2					

 Primary Baseline  Actual Work  Remaining Work  Critical Remaining Work  Baseline Milestone	 Critical ...  Non-Crit...	Data Date: 31-Mar-22 Project Start: 03-Feb-20 Project End: 30-Dec-26 Baseline: Monthly Markup Programme (Feb 2021) (Accepted on 15 April 2021) Page : 6 of 8	<div>Three Months Rolling Programme (Mar to Jun 2022)</div>	Date	Revision	Checked	Approved
				31-Mar-22	Rev 1 (Three Months Rolling Progr...	TW	ZL

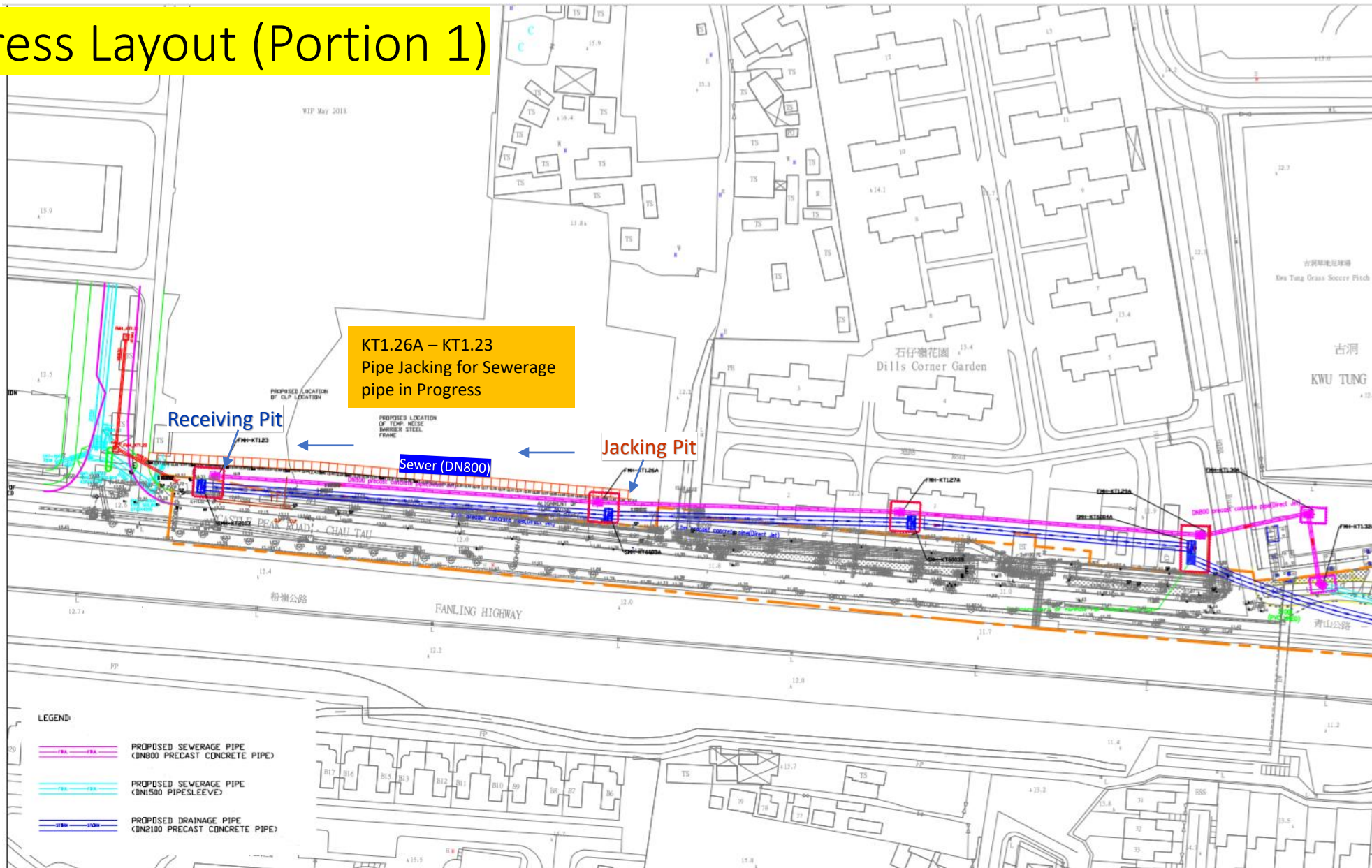
ND/2019/02 - Kwu Tung North New Development Area Phase 1: Roads & Drains between Kwu Tong North
New Development Area and Shek Wu Hui

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance	2022																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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	Visitor Centre	78	78			01-Apr-22	05-Jul-22	-19																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

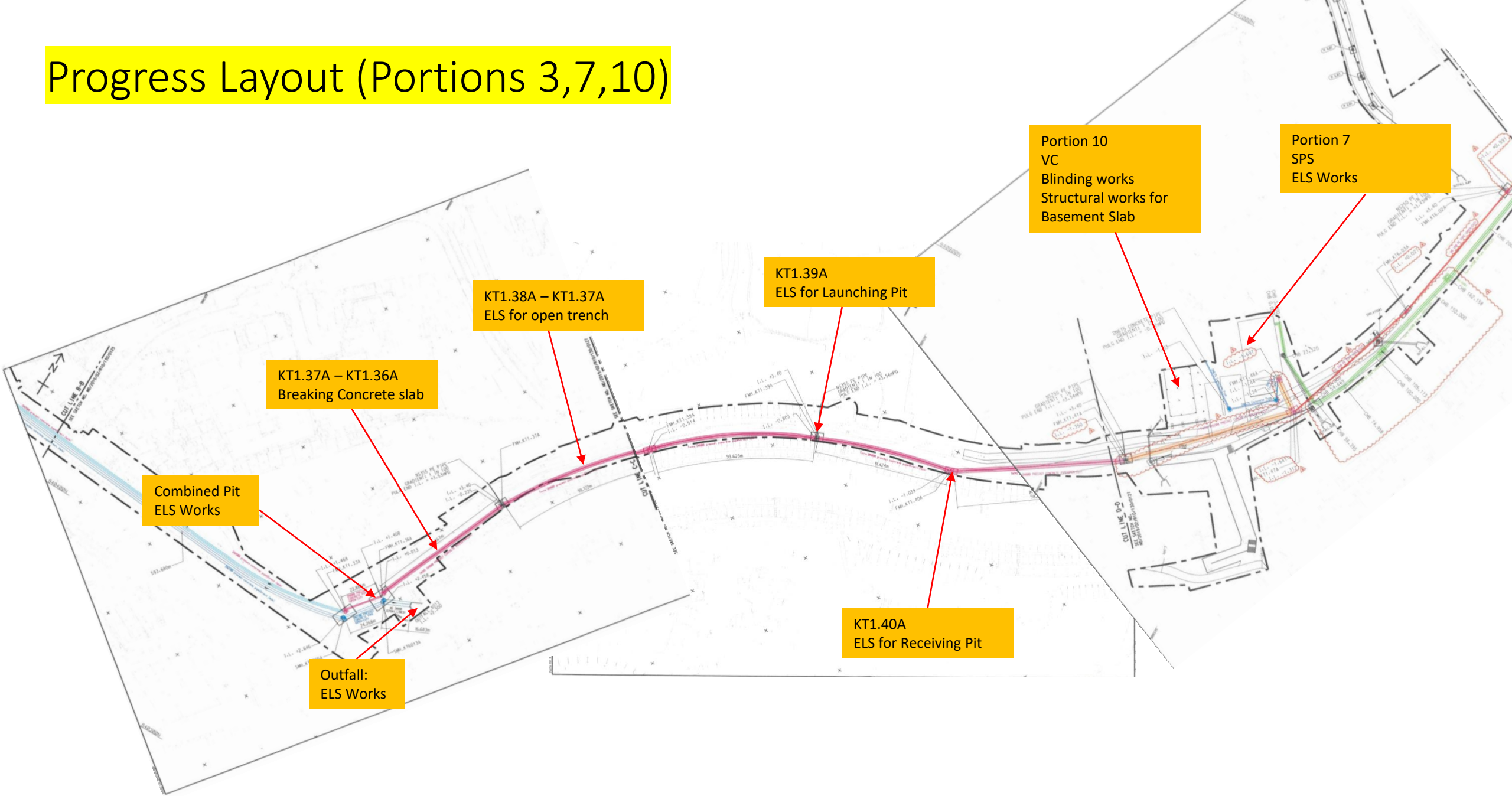
ND/2019/02 - Kwu Tung North New Development Area Phase 1: Roads & Drains between Kwu Tong North
New Development Area and Shek Wu Hui

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance	2022				
										Mar	Apr	May	Jun	Jul
P10-2120.176	Basement wall Rebar Fixing to +7.6mPD	9	9			06-Jun-22	15-Jun-22	-18	2					
P10-2120.186	Basement wall Formwork to +7.6mPD	7	7			16-Jun-22	23-Jun-22	-18	2					
P10-2120.196	Concreting of Basement wall to +7.6mPD	1	1			24-Jun-22	24-Jun-22	-18	2					
P10-2120.206	Acheive Early Strength of concrete to retain earth pressure (up to +7.6mPD)	7	7			25-Jun-22	04-Jul-22	-18	2					
Works in Section 5		578	201	30-Dec-20	10-Oct-22	30-Dec-20 A	29-Nov-22	21						
Portion 11 - Village Resite Area		578	201	30-Dec-20	10-Oct-22	30-Dec-20 A	29-Nov-22	21						
Preliminary Works		578	201	30-Dec-20	10-Oct-22	30-Dec-20 A	29-Nov-22	21						
P11-1005	Temporary Storage Area	578	201	30-Dec-20	10-Oct-22	30-Dec-20 A	29-Nov-22	21	0					

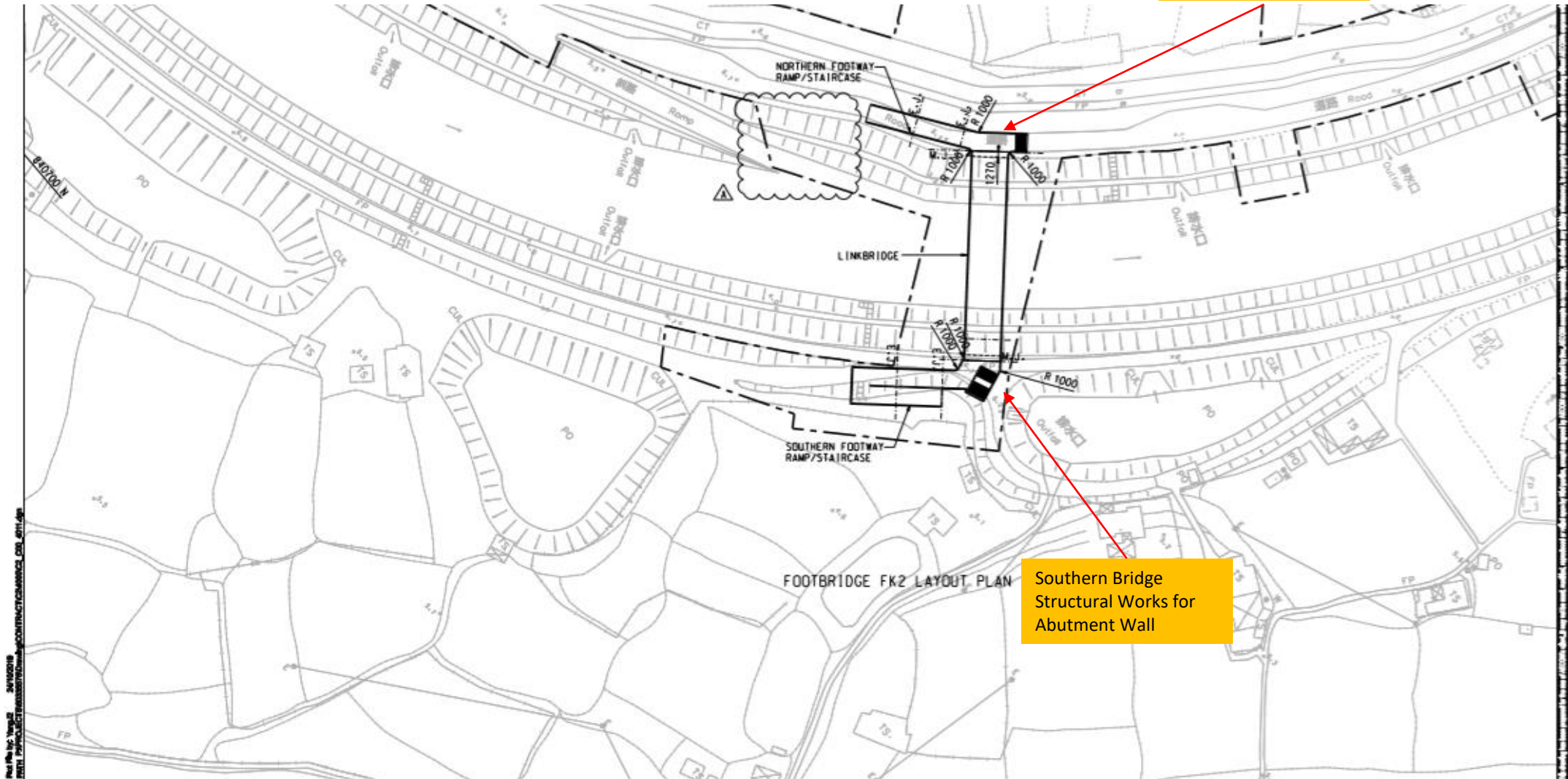
Progress Layout (Portion 1)



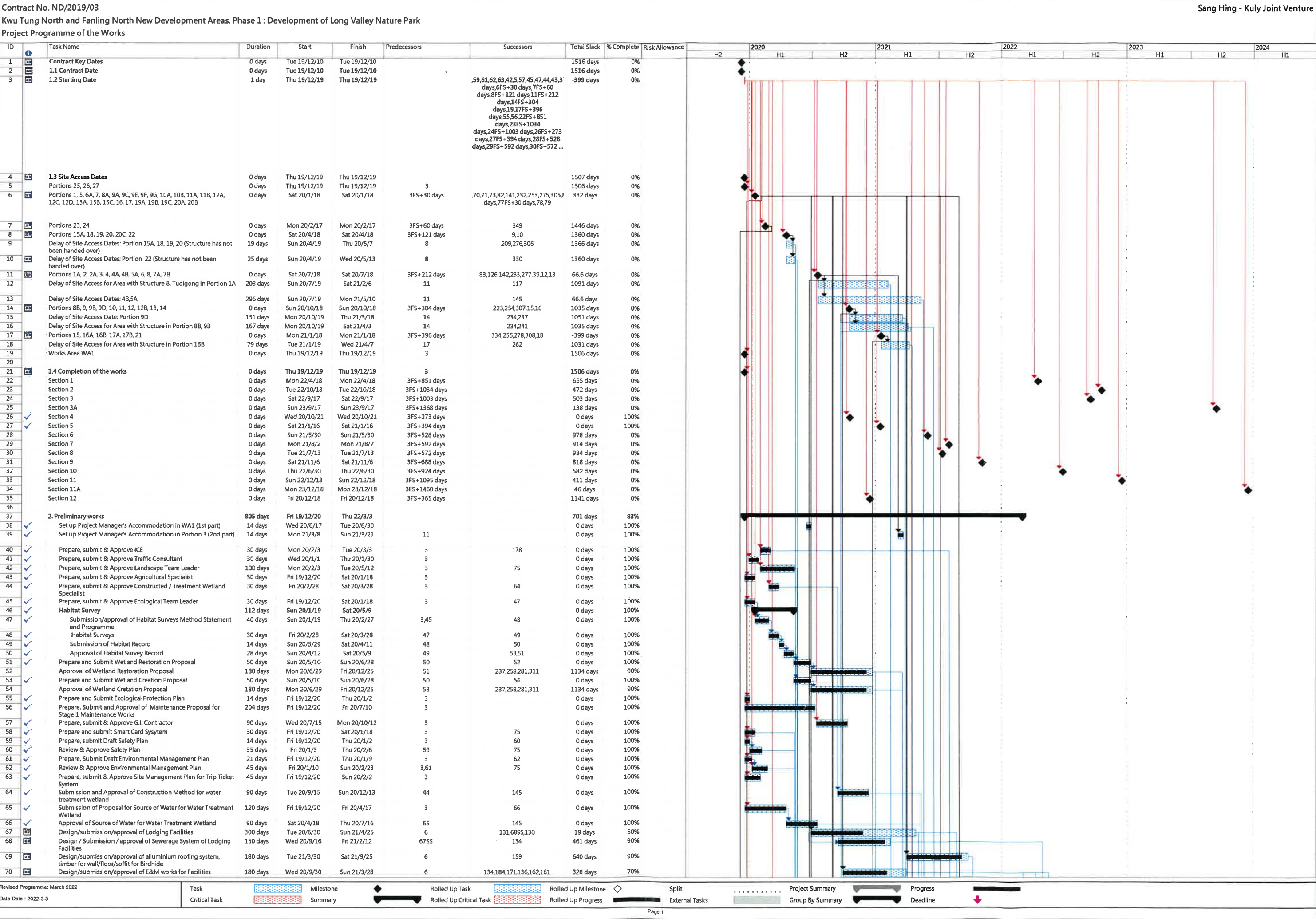
Progress Layout (Portions 3,7,10)



Progress Layout (Portion 9)



Construction Programme of ND/2019/03



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

Project Programme of the Works

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
71	Design/submit/approval of Plumbing works for Facilities	240 days	Wed 21/7/7	Thu 22/3/3	6	162,171	108 days	60%																
72	Design/submit/approval and supply of Lighting	180 days	Tue 20/6/30	Sat 20/12/26	6		1133 days	0%																
73	Design/submit/approval and supply of park facilities	180 days	Sun 20/8/30	Thu 21/2/25	6	165	0 days	100%																
74	Submission and Approval for Fire Extinguisher	50 days	Wed 21/4/14	Wed 21/6/2	3	161,171,191,198,290,184	0 days	100%																
75	Tree survey and submission	450 days	Wed 20/5/13	Thu 21/8/5	42,60,62,58	7655+30 days	0 days	100%																
76	Tree felling / Site clearance	450 days	Fri 20/6/12	Sat 21/9/4	7555+30 days		0 days	100%																
77	Design/submit/approval of Entrance gantry signages	180 days	Wed 21/9/1	Sun 22/2/27	6FS+30 days	173	142 days	0%																
78	Design/submit/approval of Irrigation system for landscape softworks	180 days	Thu 21/4/1	Mon 21/9/27	6		858 days	90%																
79	Design/submit/approval of Irrigation Channel and other associated facilities	130 days	Tue 20/9/1	Fri 21/1/8	6	244,265,295,324	178 days	97%																
80																								
81	3. Section 1 of the works (Portions 1 and 1A)	1068 days	Fri 19/12/20	Mon 22/11/21			438 days	65%																
82	Site Access in Portion 1	0 days	Sat 20/1/18	Sat 20/1/18	6	106,92FS+30 days,105,104,90	0 days	100%																
83	Site Access in Portion 1A	0 days	Sat 20/7/18	Sat 20/7/18	11	117,99	0 days	100%																
84	Compensation Event No. 39 (PMI-038)- Widening of Yin Kong Road and Revising Associated Facilities	0 days	Wed 21/11/17	Wed 21/11/17		87,108FF+150 days,119,110	-97 days	0%																
85	Design/submit/approval and supply of Road Lighting System along Yin Kong Road	180 days	Tue 20/6/30	Sat 20/12/26	6FS+30 days		0 days	100%																
86	Design/submit/approval and supply of Road Lighting System along Yin Kong Road (PMI 038, CE039)	90 days	Wed 21/11/17	Mon 22/2/14		109,120	-113 days	50%																
87	Application for XP for construction of Yin Kong Road	90 days	Thu 21/11/18	Tue 22/2/15	84	88	642 days	20%																
88	Prepare TTA for TMLG and approval from TD and RMO	90 days	Mon 20/3/16	Fri 22/4/1	87	89	642 days	50%																
89	Application of Traffic Advice and Road Work Advice	30 days	Sat 22/4/2	Sun 22/5/1	88		642 days	0%																
90	Submission of Utilities Detection Report	30 days	Wed 20/7/29	Thu 20/8/27	82	106	0 days	100%																
91	Additional Widening works for Yin Kong Road (to be approved by Relevant Department)	30 days	Thu 21/7/1	Fri 21/7/30			917 days	0%																
92	Relocation of Utilities (by Others)	335 days	Sun 20/3/1	Fri 21/1/29	82FS+30 days		0 days	100%																
93	Relocation of CLP Pole at Yin Kong Road in (Portion 1)	195 days	Sun 20/3/1	Fri 20/9/11			0 days	100%																
94	Planning for Relocation	60 days	Sun 20/3/1	Wed 20/4/29		95	0 days	100%																
95	Construction of New Pole	60 days	Thu 20/4/30	Sun 20/6/28	94	96	0 days	100%																
96	Outage and Diversion of Underground Cable	75 days	Mon 20/6/29	Fri 20/9/11	95	106	0 days	100%																
97																								
98	Relocation of CLP Pole at Yin Kong Road (Portion 1A)	195 days	Sun 20/7/19	Fri 21/1/29			0 days	100%																
99	Planning for Relocation	60 days	Sun 20/7/19	Wed 20/9/15	83	100	0 days	100%																
100	Construction of New Pole	60 days	Thu 20/9/17	Sun 20/11/15	99	101	0 days	100%																
101	Outage and Diversion of Underground Cable	75 days	Mon 20/11/16	Fri 21/1/29	100		0 days	100%																
102																								
103	Site Works (under Portion 1)	975 days	Fri 19/12/20	Sat 22/8/20			0 days	64%																
104	Compensation Event No. 002 - Construction of Chain Link Fence and Gate adjacent to Yin Kong Road	21 days	Thu 20/4/16	Wed 20/5/6	82	106	0 days	100%																
105	Compensation Event No. 003 - Reprovision of Hoarding and gate at Enchi Lodge	30 days	Wed 20/4/22	Thu 20/5/21	82	106	0 days	100%																
106	Remove existing fencing and site clearance	30 days	Fri 20/8/28	Sat 20/9/26	82,90,96,104,105		0 days	100%																
107	Road widening	120 days	Sat 22/4/16	Sat 22/8/13	108,110	109FF	-217 days	0%																
108	Drainage works	150 days	Wed 21/5/5	Fri 22/4/15	84FF+150 days	107,110FF	-217 days	80%	7 days															
109	Lighting and installation of street furniture	76 days	Mon 22/5/30	Sat 22/8/13	86,107FF	121	-217 days	0%	4 days															
110	Additional Dwarf Wall	30 days	Thu 22/3/17	Fri 22/4/15	84,108FF	107	-217 days	0%																
111	Construction of Pai Lau	975 days	Fri 19/12/20	Sat 22/8/20			0 days	80%																
112	Instruction from PM	365 days	Fri 19/12/20	Fri 20/12/18	3	113	0 days	100%																
113	Compensation Event No. 36 (PMI-036)- Design and Construction of Yin Kong Village Pai Lau	0 days	Fri 21/12/24	Fri 21/12/24	112	114	0 days	100%																
114	Design/submit/approval	90 days	Fri 21/12/24	Wed 22/3/23	113	115	45 days	80%																
115	Construction of Pai Lau	150 days	Thu 22/3/24	Sat 22/8/20	114	123	-124 days	30%	7 days															
116	Site Works (under Portion 1A)	528 days	Sun 21/2/7	Thu 22/7/14			0 days	57%																
117	General site clearance / demolition work / Removal of Asbestos Containing Material & Dioxin Contaminated	120 days	Sun 21/2/7	Sun 21/6/6	83,12		0 days	100%																
118	Road Widening	120 days	Thu 22/3/17	Thu 22/7/14	119	120FF	-187 days	30%																
119	Drainage works	120 days	Wed 21/11/17	Wed 22/3/16	84	118	36 days	60%	7 days															
120	Lighting and installation of street furniture	40 days	Sun 22/6/5	Thu 22/7/14	86,118FF	121	-187 days	0%	4 days															
121	Paving block on footway	60 days	Sun 22/8/14	Wed 22/10/12	109,120	122	-217 days	0%																
122	bituminous pavement on carriageway	40 days	Thu 22/10/13	Mon 22/11/21	121	123	-217 days	0%																
123	Completion of Section 1 of the works	0 days	Mon 22/4/18	Mon 22/4/18	122,115		-217 days	0%																
124																								
125	4. Section 2 of the works (Portions 2 and 2A)	803 days	Sat 20/7/18	Thu 22/9/29			19 days	5%																
126	Site Access in Portions 2 and 2A	0 days	Sat 20/7/18	Sat 20/7/18	11	127	0 days	100%																
127	General site clearance / demolition work / Removal of Asbestos Containing Material	60 days	Sun 20/7/19	Wed 20/9/16	126	129	0 days	100%																
128	Construction of lodging facility & associated facilities	743 days	Thu 20/9/17	Thu 22/9/29			19 days	0%																
129	Excavation and formation preparation	120 days	Thu 20/9/17	Thu 21/1/14	127	130	120 days	0%																
130	Construction of foundation / pavement	120 days	Mon 21/4/26	Mon 21/8/23	129,67	131	19 days	0%																
131	Supply of logging units	200 days	Tue 21/8/24	Fri 22/3/11	130,67	132FS-50 days	19 days	0%																
132	Installation of lodging units	100 days	Fri 22/1/21	Sat 22/4/30	131FS-50 days	133,134,135,136	19 days	0%	3 days															
133	Installation of furniture / facility	120 days	Sun 22/5/1	Sun 22/8/28	132	137	24 days	0%																
134	Installation of E&M works	125 days	Sun 22/5/1	Fri 22/9/2	70,68,132	137	19 days	0%	5 days															
135	Installation of Fire Services	125 days	Sun 22/5/1	Fri 22/9/2	132	137	19 days	0%																
136	Installation of plumbing works	125 days	Sun 22/5/1	Fri 22/9/2	70,132	137	19 days	0%	5 days															
137	Testing and commissioning	27 days	Sat 22/9/3	Thu 22/9/29	136,134,135,133	138	19 days	0%																
138	Completion of Section 2 of the works	0 days	Thu 22/9/29	Thu 22/9/29	137		19 days	0%																
139																								
140	5. Section 3 of the works (Portions 3, 4, 4A, 4B, 5, 5A, 6 & 6A)	1111 days	Sat 20/1/18	Thu 23/2/2			365 days	25%																
141	Site Access in Portions 5 and 6A	0 days	Sat 20/1/18	Sat 20/1/18	6	145,1435S	0 days	100%																
142	Site Access in Portions 3, 4, 4A, 4B, 5A and 6	0 days	Sat 20/7/18	Sat 20/7/18	11	156,145,143FF+20 days	0 days	100%																
143	General site clearance / demolition work / Removal of Asbestos Containing Material	300 days	Sun 20/1/19	Fri 20/11/13	1415S,142FF+20 days	165,156	0 days	100%																
144	Construction of water treatment wetland	588 days	Tue 21/5/11	Mon 22/12/19			410 days	22%																
145	Excavation for sedimentation pond	120 days	Tue 21/5/11	Tue 21/9/7	64,141,142,66,13	146	42.6 days	20%																
146	Excavation for macrophyte zones - down stream	71 days	Wed 21/9/8	Wed 21/11/17	145	147,153	-138 days	60%																
147	Bedding preparation	45 days	Thu 21/11/18	Sat 22/1/1	146	148,150	-138 days	0%																
148	Excavation for macrophyte zones - mid stream																							

Project Programme of the Works

Revised Programme: March 2022

Date Date : 2022-3-3

Task

Critical Task

Milestone

Summary

Rolled Up Task

Rolled Up Critical Task

Rolled Up Milestone

Rolled Up Progress

Split

External Tasks

Project Summary

Group By Summary

Progress

Deadline

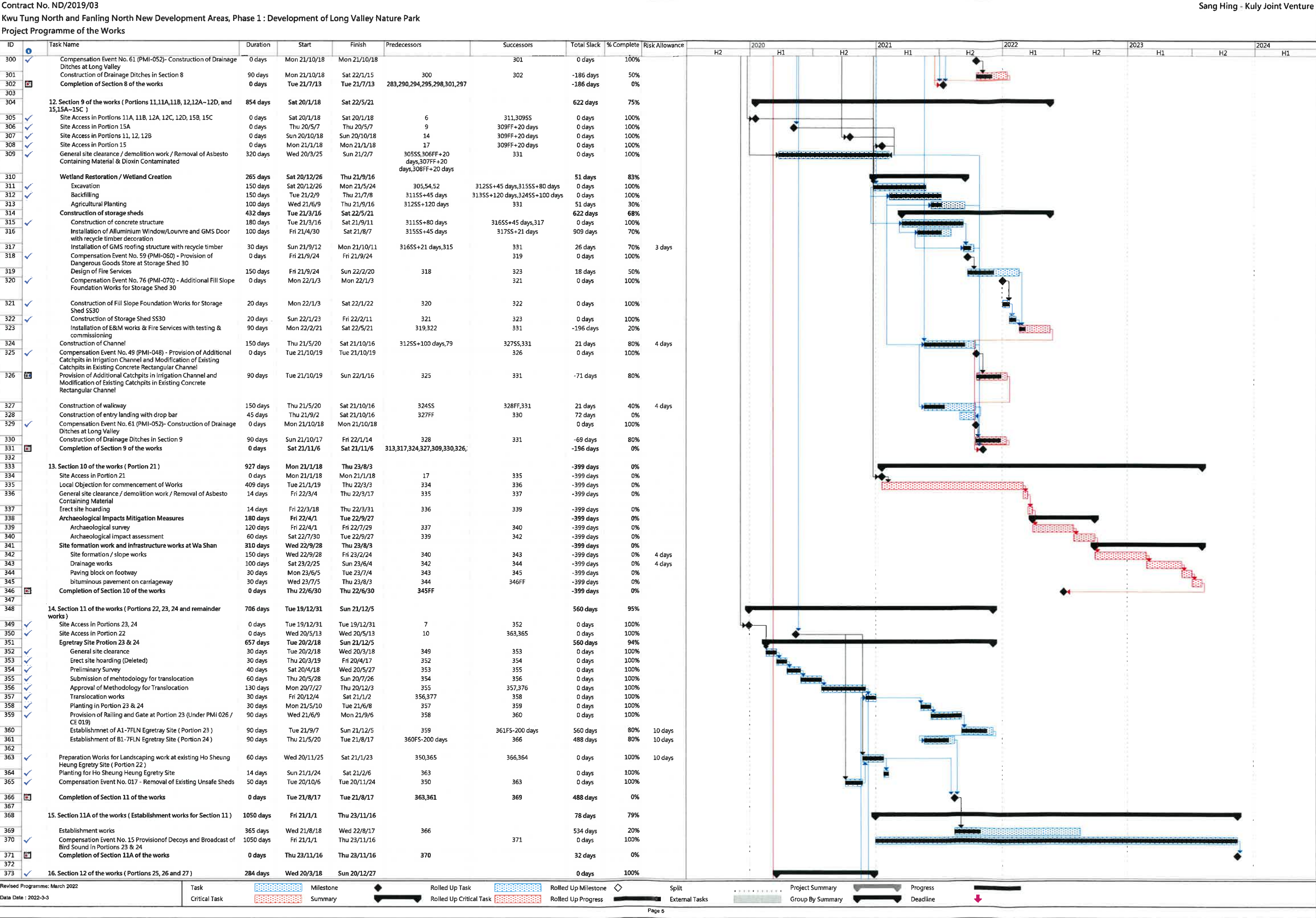
Page 3

Project Programme of the Works

Revised Programme: March 2022
 Date Due : 2022-3-3

Task Milestone Rolled Up Task Rolled Up Milestone Split Project Summary Progress
 Critical Task Summary Rolled Up Critical Task Rolled Up Progress External Tasks Group By Summary Deadline

Page 4



Contract No. ND/2019/03

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

Project Programme of the Works

Sang Hing - Kuly Joint Venture

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance												
										2020	2021		2022		2023		2024				
374	Site Access in Portions 25, 26, 27	0 days	Wed 20/3/18	Wed 20/3/18	3FS+90 days	375FS+60 days	0 days	100%		H2	H1	H2	H1	H2	H1	H2	H1				
375	Boundary Site Area	60 days	Mon 20/5/18	Thu 20/7/16	374FS+60 days		0 days	100%													
376	Preparation for translocation works	4 days	Fri 20/12/4	Mon 20/12/7	356	380,377	0 days	100%													
377	Compensation Event No. 11 - Translocation of Rose Bitterling	20 days	Tue 20/12/8	Sun 20/12/27	376	357	0 days	100%													
378	Collection site C1 (Portion 25)	5 days	Mon 20/12/14	Fri 20/12/18	379	381FF	0 days	100%													
379	Collection site C2 (Portion 26)	3 days	Fri 20/12/11	Sun 20/12/13	380	381FF,378	0 days	100%													
380	Collection site C3 (Portion 27)	3 days	Tue 20/12/8	Thu 20/12/10	376	381FF,379	0 days	100%													
381	Completion of Section 12 of the works	0 days	Fri 20/12/18	Fri 20/12/18	378FF,379FF,380FF		0 days	100%													

Revised Programme: March 2022

Data Date : 2022-3-3

Task

Critical Task

Milestone

Summary

Rolled Up Task

Rolled Up Critical Task

Rolled Up Milestone

Rolled Up Progress

Split

External Tasks

Project Summary

Group By Summary

Progress

Deadline

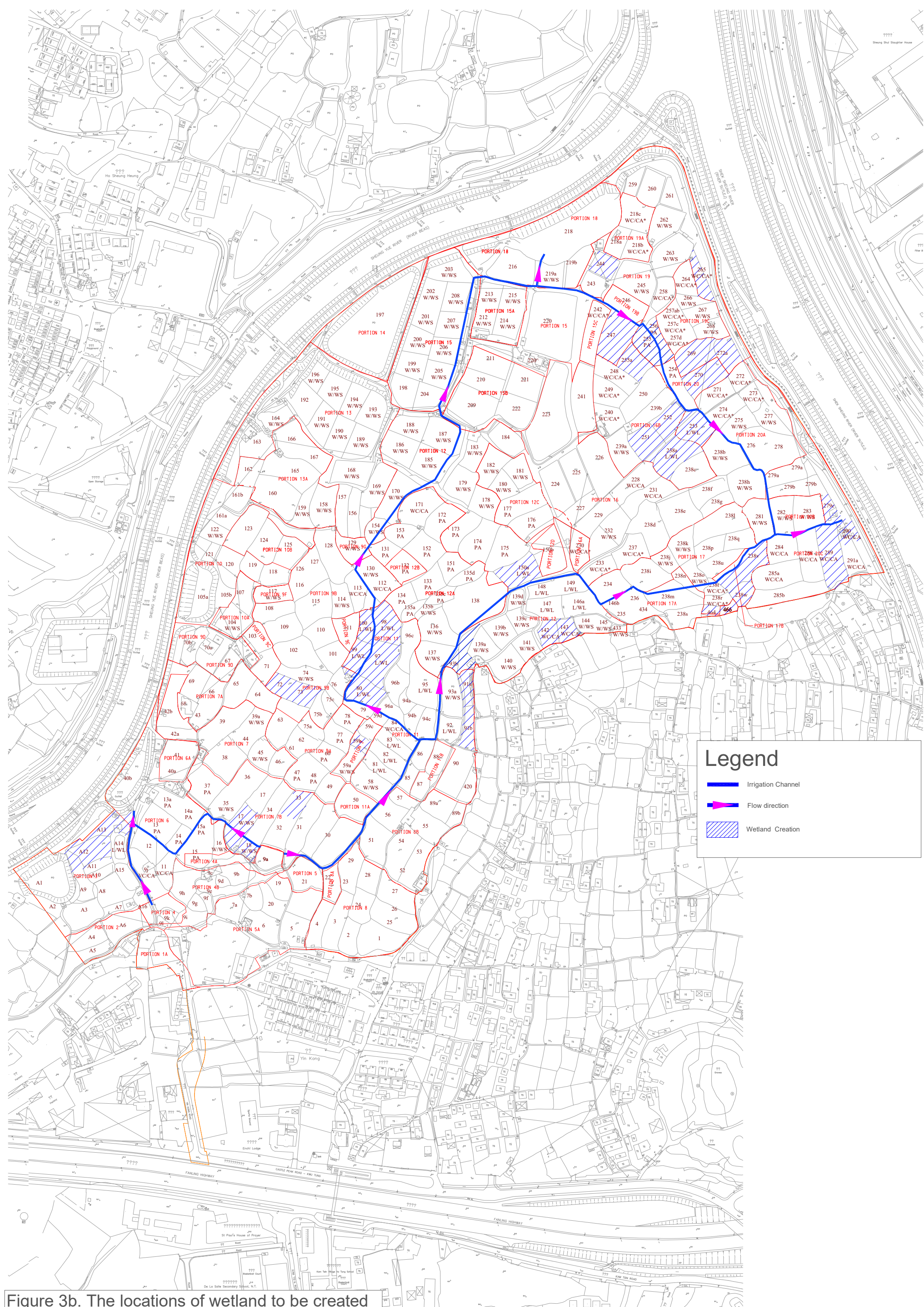
Page 6



Legend

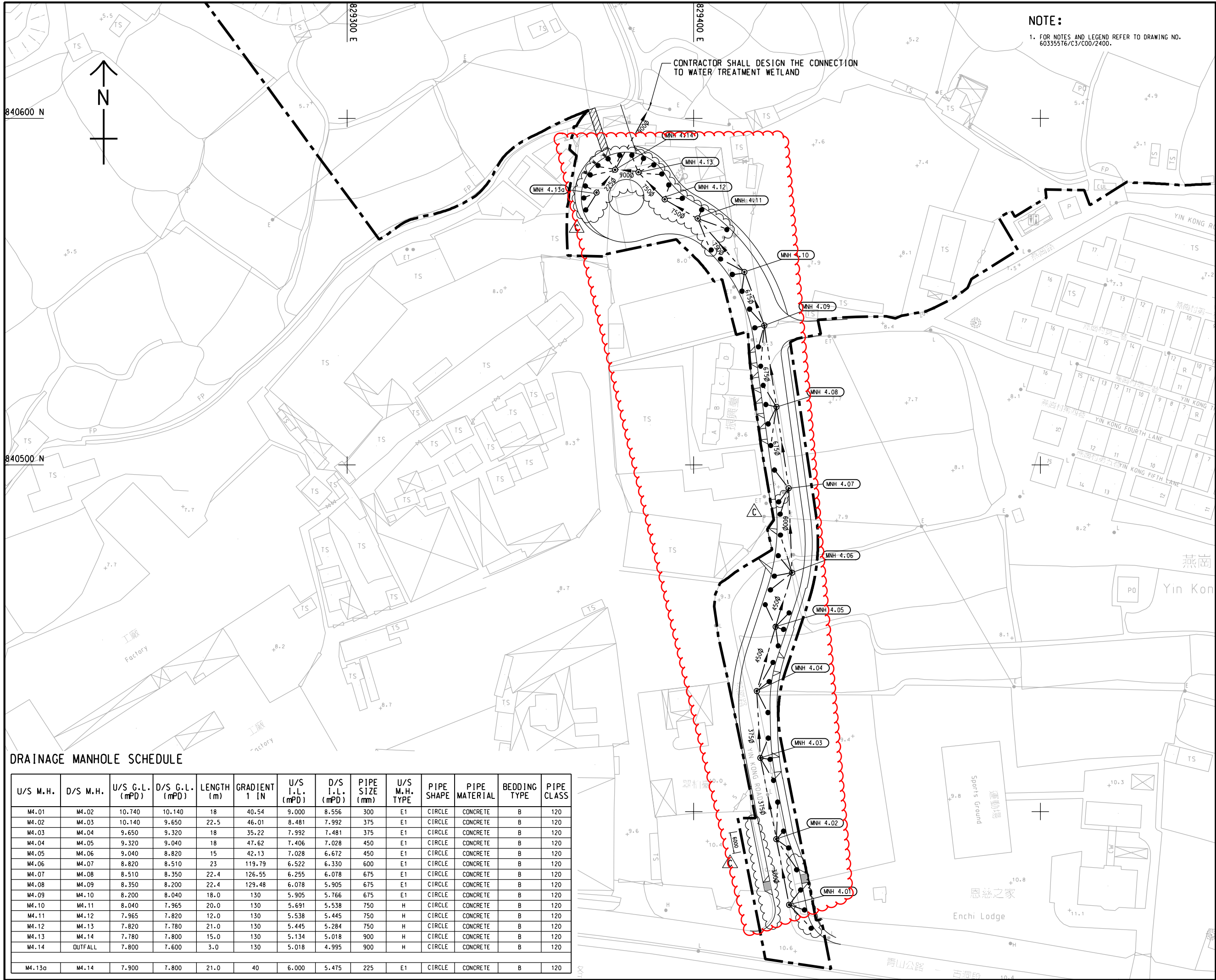
- | | | | |
|--------------|---|--|--------------------------------------|
| W/W/S | Intensive Wet Agricultural Land
- Watercress/Water Spinach | | Mitigation Plantation |
| WC/CA | Less Intensive Wet Agricultural Land
- Water Chestnut/ Chinese Arrowhead | | Village Area/ Urban/Residential Area |
| L/W/L | Less Intensive Wet Agricultural Land
- Lotus/Water Lily | | Water Treatment Wetland |
| PA | Intensive Wet Agricultural Land
- Paddy Field | | Irrigation Channel |
| | Marsh - Open Water | | Flow direction |
| | Marsh | | |
| | Marsh - Reedbed | | |
| | Pond | | |
| | Water Flea Pond | | |
| | Mitigation Wetland | | |
| | Dry Agricultural Land | | |
| | Plantation | | |
- (*) Habitat planted with low density of wet crops (<20% coverage) that concentrate at the centre



Figure 3. LVNP proposed layout plan

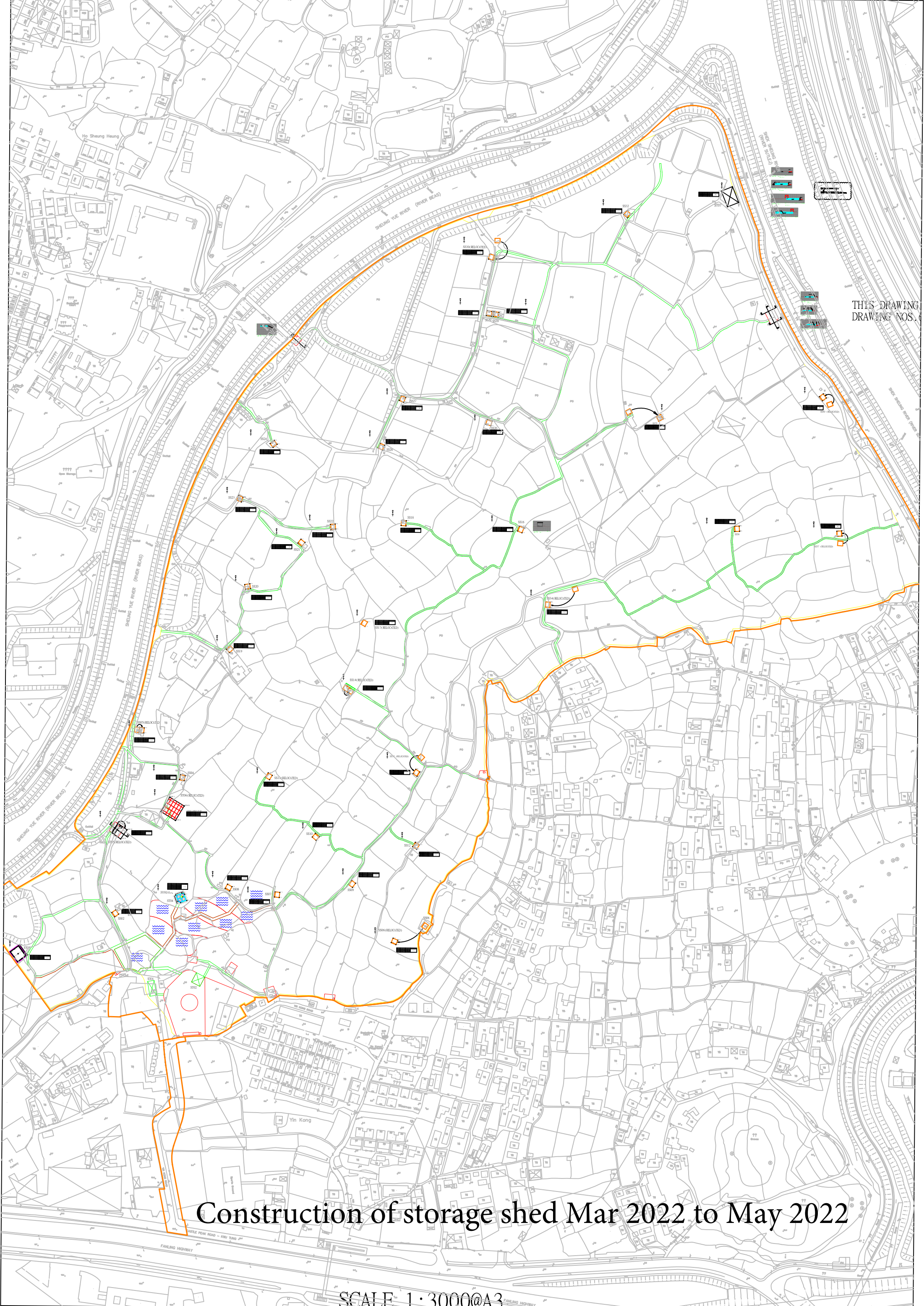








C	21/05/21	LAYOUT AMENDED	HLH	DT	WT
B	7/12/20	ROAD ALIGNMENT AMENDED	KLC	DT	WT
A	15/07/20	RUN IN ADDED AND MANHOLE RE-ARRANGED	KLC	DF	PY
REV.	DATE	DESCRIPTION	DRAWN	PRE.	APP.
CLIENT					
<div>土木工程拓展署 Civil Engineering and Development Department</div>					
CONSULTANT					
<div></div>					
PROJECT				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



THIS DRAWING
DRAWING NOS.

Construction of storage shed Mar 2022 to May 2022

SCALE 1:3000@A3

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

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ND/2019/04

Preliminary Works Programme

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

Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float	202120222023202420252026																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
								Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul

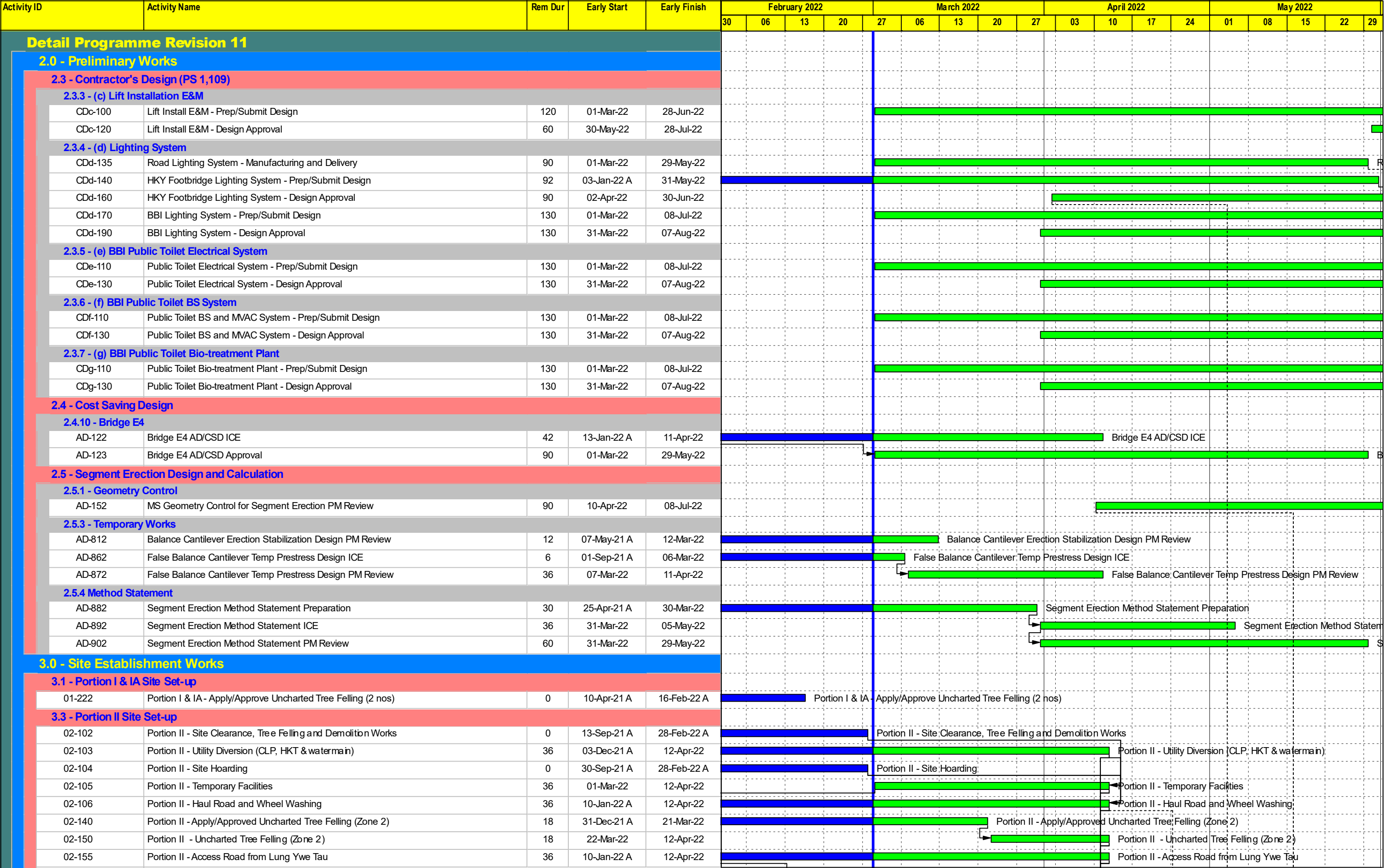
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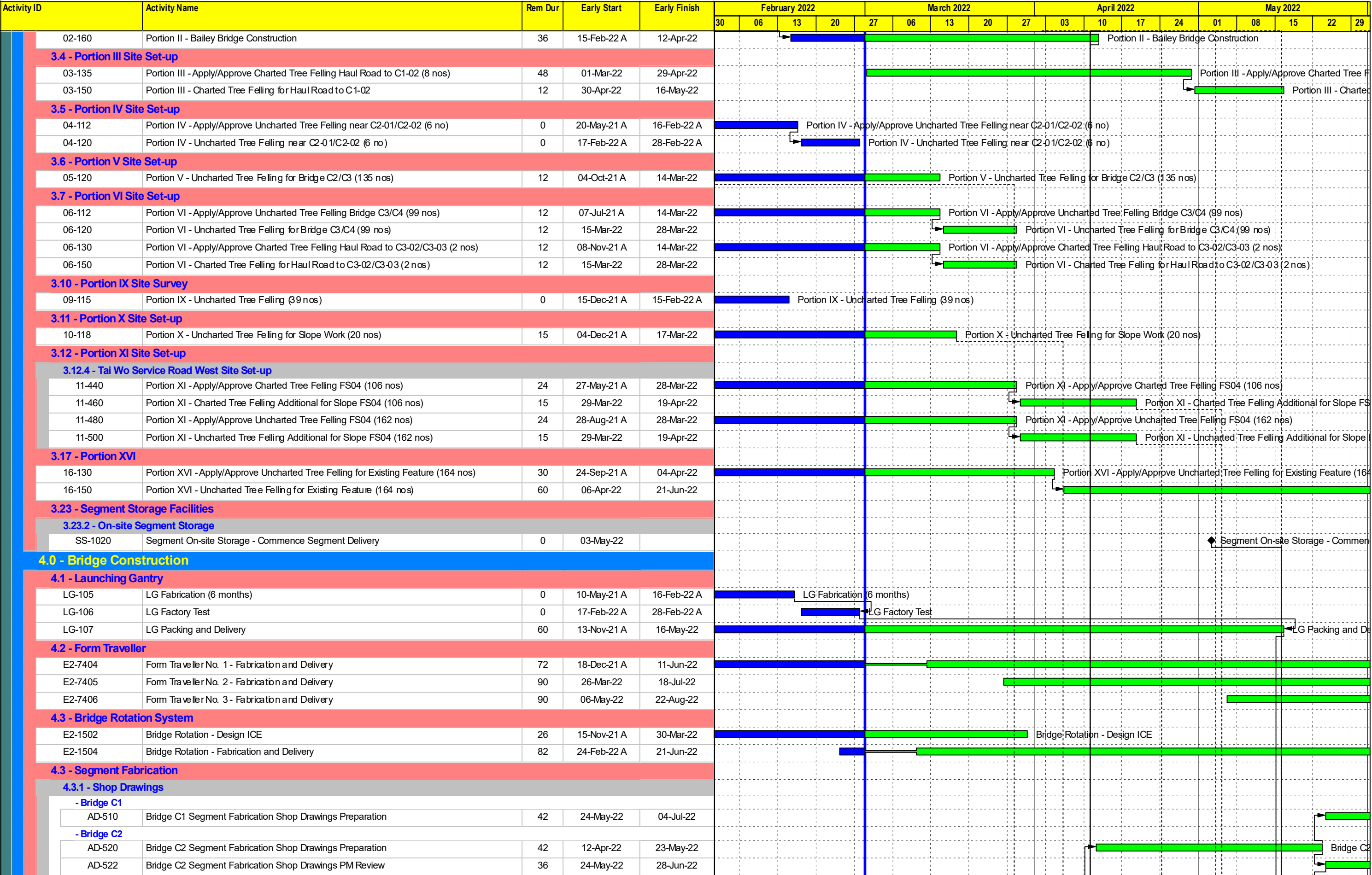
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Activity ID		Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float	2021																												2022												2023												2024												2025												2026																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
									Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	

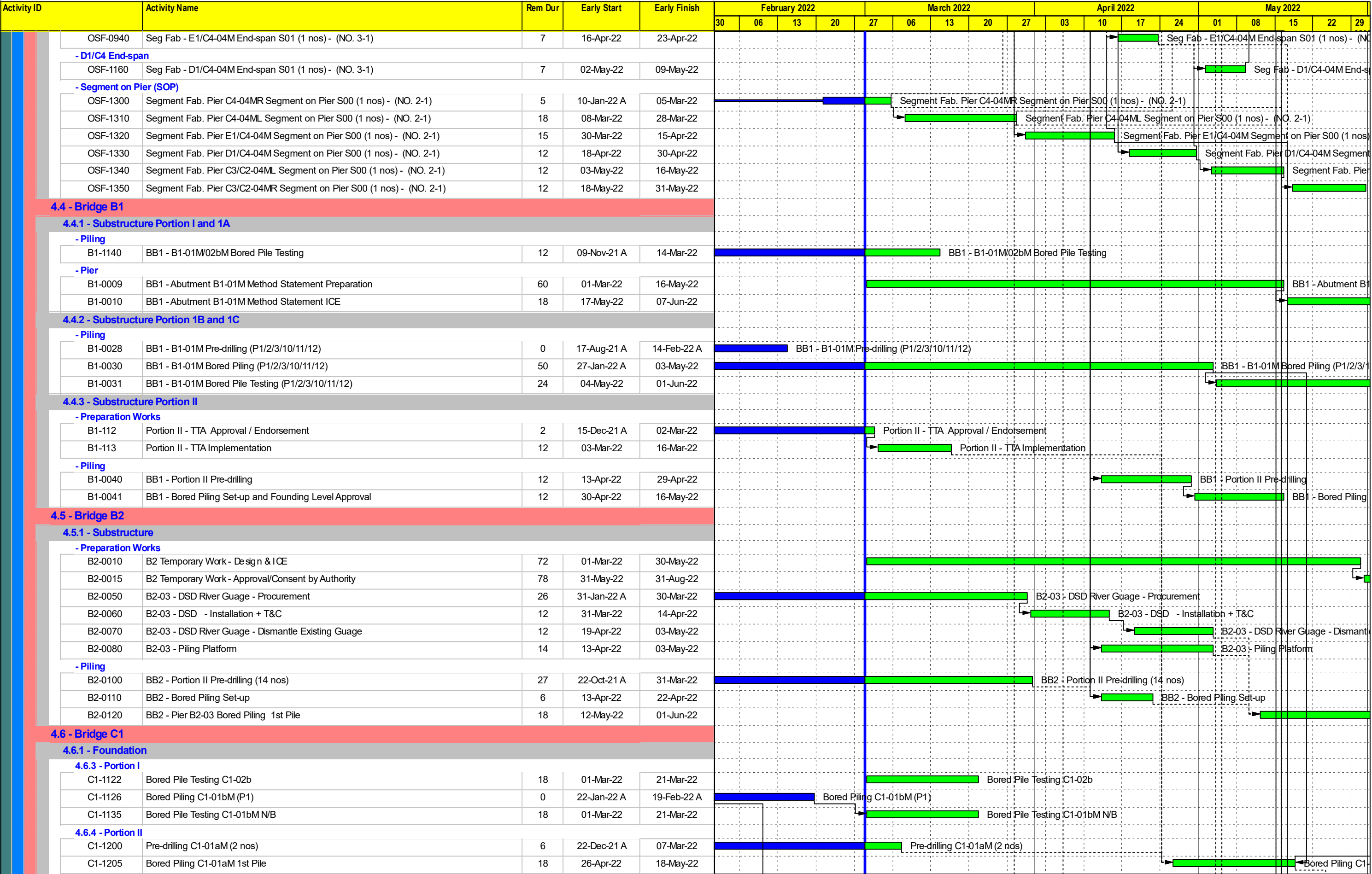
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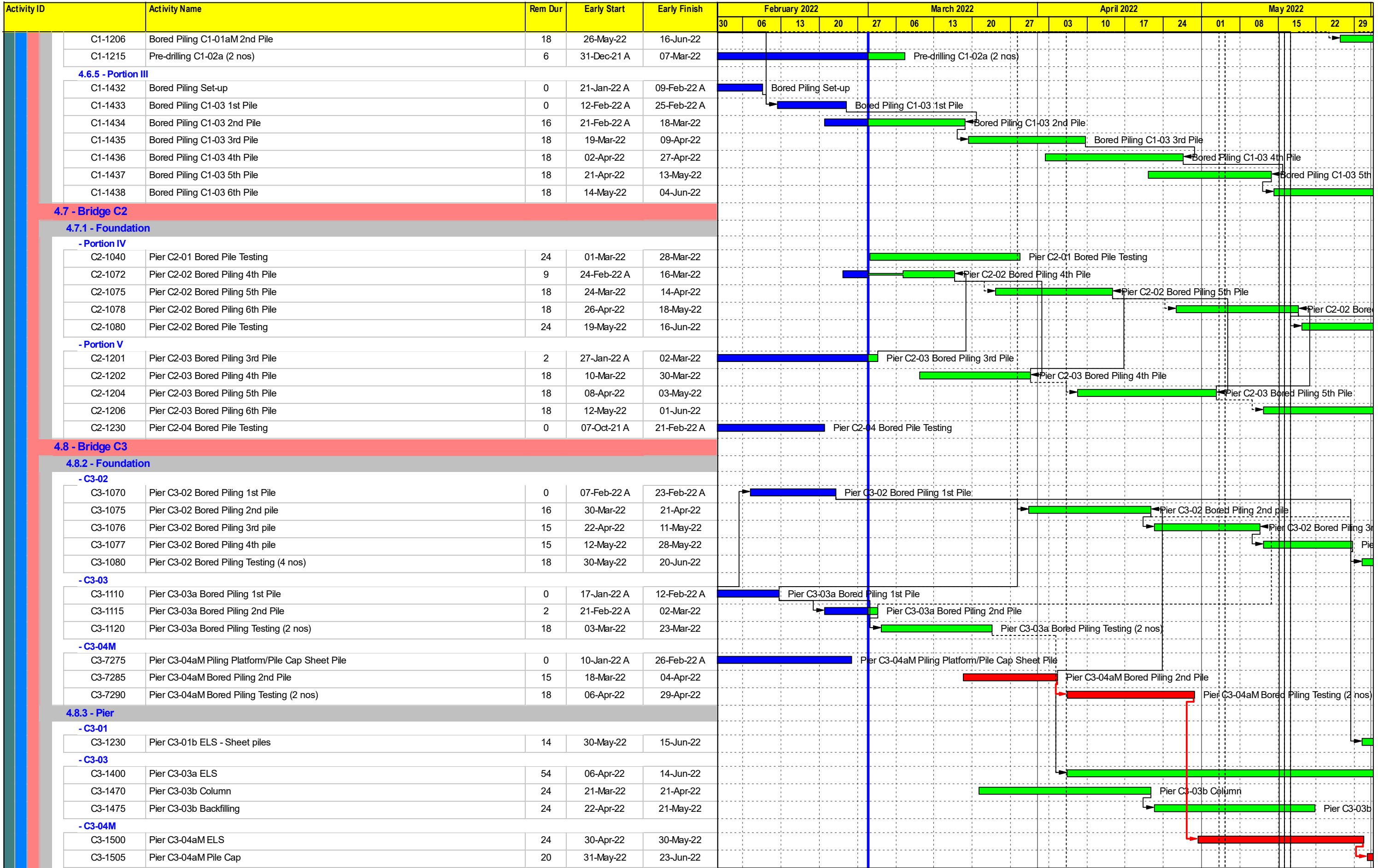
Construction Programme of ND/2019/05





Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	February 2022					March 2022					April 2022				May 2022				
					30	06	13	20	27	06	13	20	27	03	10	17	24	01	08	15	22	29	
- Bridge C3																							
AD-530	Bridge C3 Segment Fabrication Shop Drawings Preparation	42	01-Mar-22	11-Apr-22																			
AD-532	Bridge C3 Segment Fabrication Shop Drawings PM Review	36	12-Apr-22	17-May-22																			
- Bridge E1																							
AD-560	Bridge E1 Segment Fabrication Shop Drawings Preparation	42	01-Mar-22	11-Apr-22																			
AD-562	Bridge E1 Segment Fabrication Shop Drawings PM Review	36	12-Apr-22	17-May-22																			
AD-567	Bridge E1/C4 SOP Segment Fabrication Shop Drawings PM Review	0	31-Jan-22 A	11-Feb-22 A																			
- Bridge E3																							
AD-580	Bridge E3 Segment Fabrication Shop Drawings Prepararion	42	12-Apr-22	23-May-22																			
AD-582	Bridge E3 Segment Fabrication Shop Drawings PM Review	36	24-May-22	28-Jun-22																			
- Bridge E4																							
AD-590	Bridge E4 Segment Fabrication Shop Drawings Preparation	42	24-May-22	04-Jul-22																			
- Bridge D1																							
AD-540	Bridge D1 Segment Fabrication Shop Drawings Preparation	42	01-Mar-22	11-Apr-22																			
AD-542	Bridge D1 Segment Fabrication Shop Drawings PM Review	36	12-Apr-22	17-May-22																			
AD-547	Bridge D1/C4 SOP Segment Fabrication Shop Drawings PM Review	0	31-Jan-22 A	11-Feb-22 A																			
4.3.2 - Off-Site Fabrication																							
- Preparation Works																							
OSF-180	Complete Fabrication and Set-up of 7th Typical Segment Mould	0	01-Mar-22 A																				
- C2-03 T-span																							
OSF-0540	Seg Fab - C2-03L T-span SOP and 1st Pair (3 nos) - (NO. 4-1)	18	24-May-22	13-Jun-22																			
- C3-01 T-span																							
OSF-0620	Seg Fab - C3-01L T-span SOP and 1st Pair (3 nos) - (NO. 2-2)	18	30-May-22	18-Jun-22																			
- C4/C3 End-span																							
OSF-0770	Seg Fab - C4/C3-04MR End-span S01 - (NO. 1-2)	6	16-May-22	21-May-22																			
OSF-0775	Seg Fab - C4/C3-04MR End-span S02 to S08 (7 nos) - (NO. 1-2)	21	24-May-22	16-Jun-22																			
- C4-01 T-span																							
OSF-0780	Seg Fab - C4-01L T-span S01 and S02 (2 nos) - (NO. 1-1)	12	21-Mar-22	02-Apr-22																			
OSF-0783	Seg Fab - C4-01L T-span S03 and S10 (8 nos) - (NO. 1-1)	24	05-Apr-22	02-May-22																			
OSF-0785	Seg Fab - C4-01L T-span S01 and S02 (2 nos) - (NO. 1-1)	12	05-May-22	18-May-22																			
OSF-0787	Seg Fab - C4-01L T-span S03 and S10 (8 nos) - (NO. 1-1)	24	20-May-22	16-Jun-22																			
OSF-0792	Seg Fab - C4-01R T-span S03 and S10 (8 nos) - (NO. 1-2)	24	12-Jan-22 A	28-Mar-22																			
OSF-0795	Seg Fab - C4-01R T-span S01 and S02 (2 nos) - (NO. 1-2)	12	31-Mar-22	13-Apr-22																			
OSF-0815	Seg Fab - C4-01R T-span S03 and S10 (8 nos) - (NO. 1-2)	24	15-Apr-22	12-May-22																			
- C4-02 T-span																							
OSF-0820	Seg Fab - C4-02L T-span S01 and S02 (2 nos) - (NO. 3-1)	12	12-May-22	25-May-22																			
OSF-0823	Seg Fab - C4-02L T-span S03 and S09 (7 nos) - (NO. 3-1)	21	27-May-22	20-Jun-22																			
OSF-0835	Seg Fab - C4-02R T-span S01 and S02 (2 nos) - (NO. 3-2)	12	05-May-22	18-May-22																			
OSF-0855	Seg Fab - C4-02R T-span S03 and S09 (7 nos) - (NO. 3-2)	21	20-May-22	13-Jun-22																			
- C4-03 T-span																							
OSF-0903	Seg Fab - C4-03aL T-span S03 to S10 (8 nos) - (NO. 1-1)	15	03-Dec-21 A	17-Mar-22																			
OSF-0907	Seg Fab - C4-03bL N/B T-span S03 to S10 (8 nos) - (NO. 3-1)	14	17-Dec-21 A	16-Mar-22																			
OSF-0912	Seg Fab - C4-03aR T-span S03 to S10 (8 nos) - (NO. 2-2)	21	08-Jan-22 A	24-Mar-22																			
OSF-0915	Seg Fab - C4-03bR T-span S01 and S02 (2 nos) - (NO. 3-2)	0	12-Feb-22 A	24-Feb-22 A																			
OSF-0930	Seg Fab - C4-03bR T-span S03 to S10 (8 nos) - (NO. 3-2)	24	05-Apr-22	02-May-22																			
- C4/D1-E1 End-span																							
OSF-0860	Seg Fab - C4-04aML End-span S01 (1 nos) - (NO. 2-2)	6	28-Mar-22	02-Apr-22																			
OSF-0865	Seg Fab - C4-04aML End-span S02 to S07 (6 nos) - (NO. 2-2)	18	05-Apr-22	25-Apr-22																			
OSF-0870	Seg Fab - C4-04bMR End-span S01 (1 nos) - (NO. 2-2)	6	28-Apr-22	04-May-22																			
OSF-0890	Seg Fab - C4-04bMR End-span S02 to S07 (6 nos) - (NO. 2-2)	18	06-May-22	26-May-22																			
- E1/C4 End-span																							





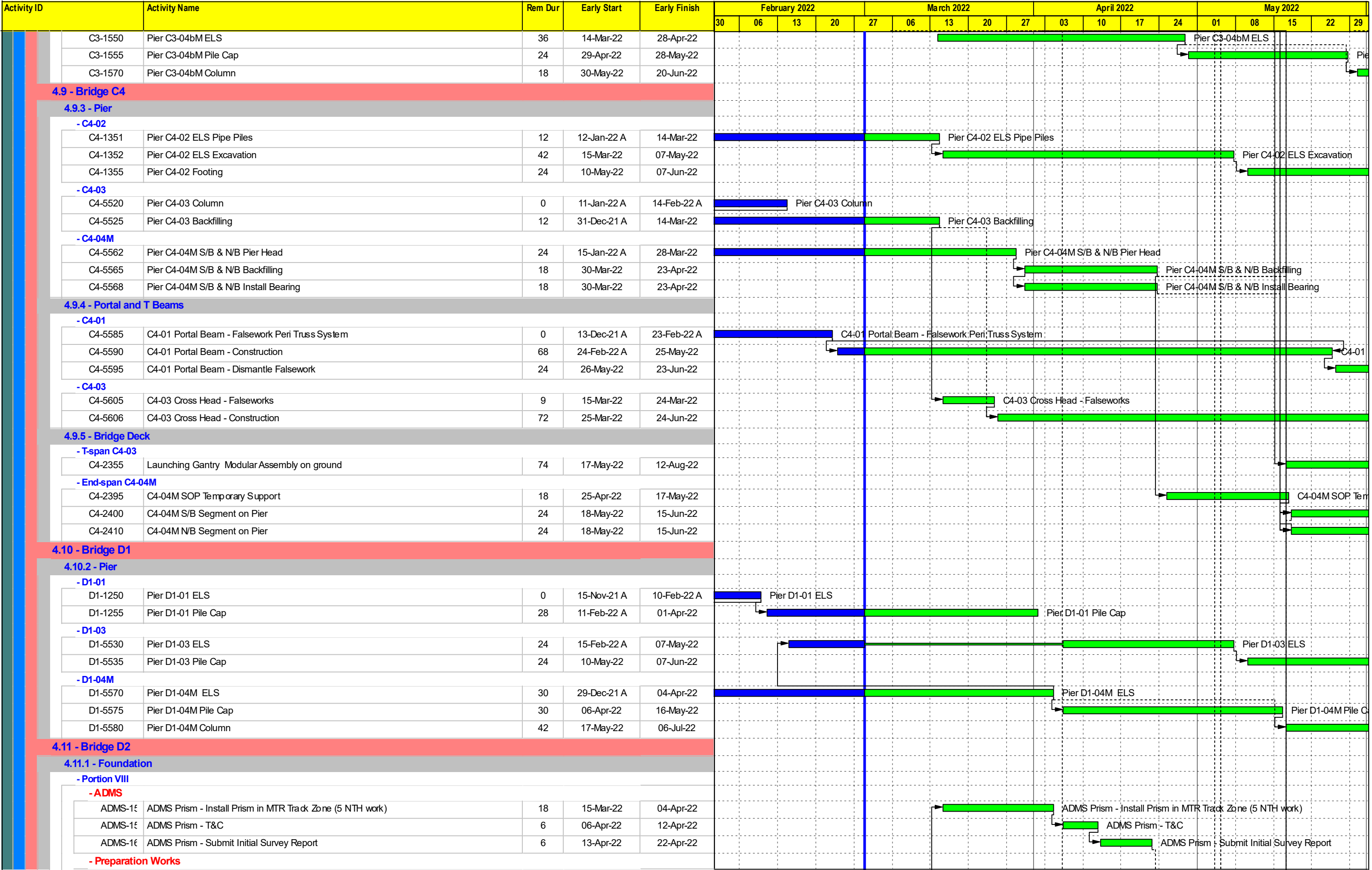
CRCC - Paul Y.
Joint Venture

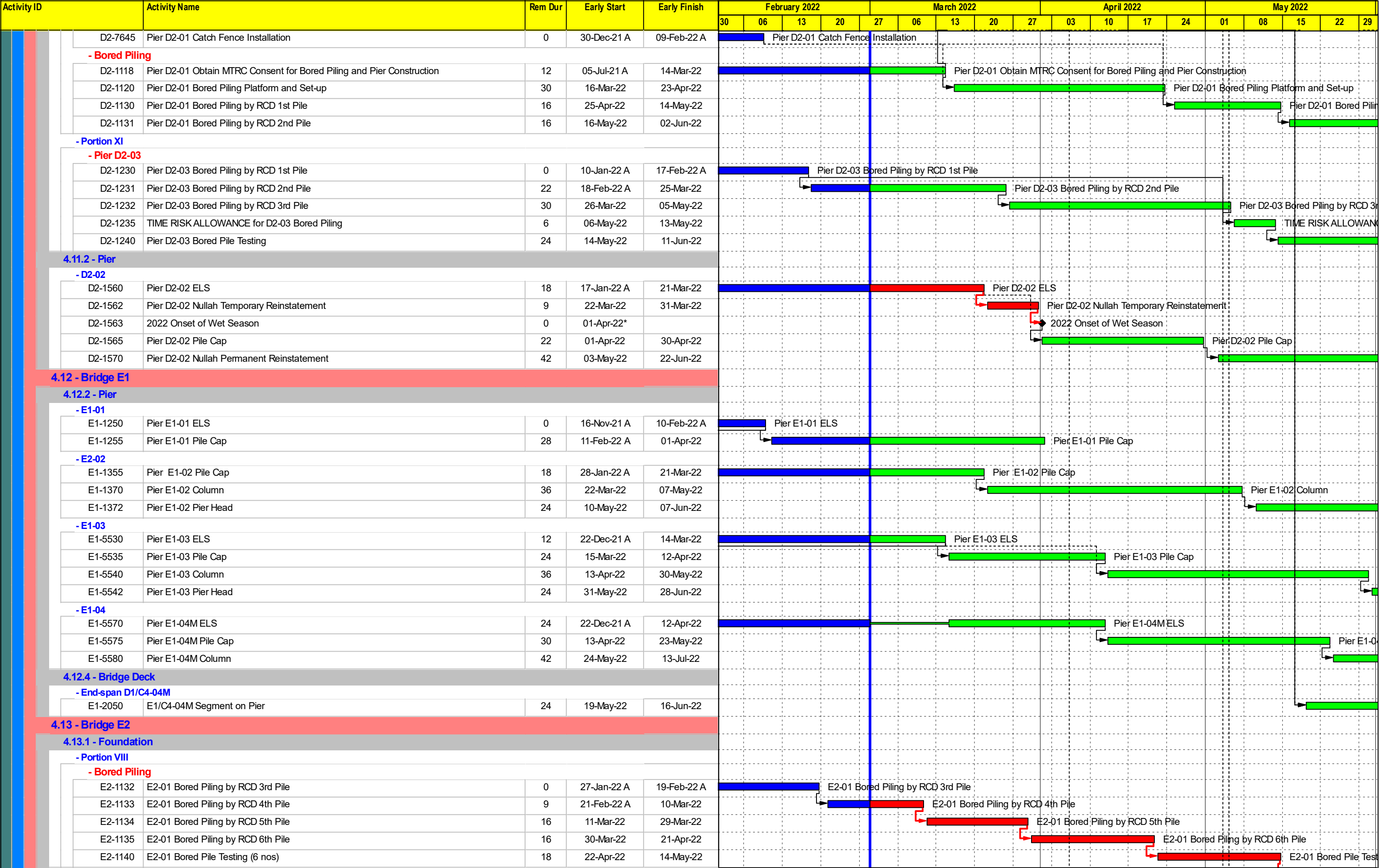
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- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone

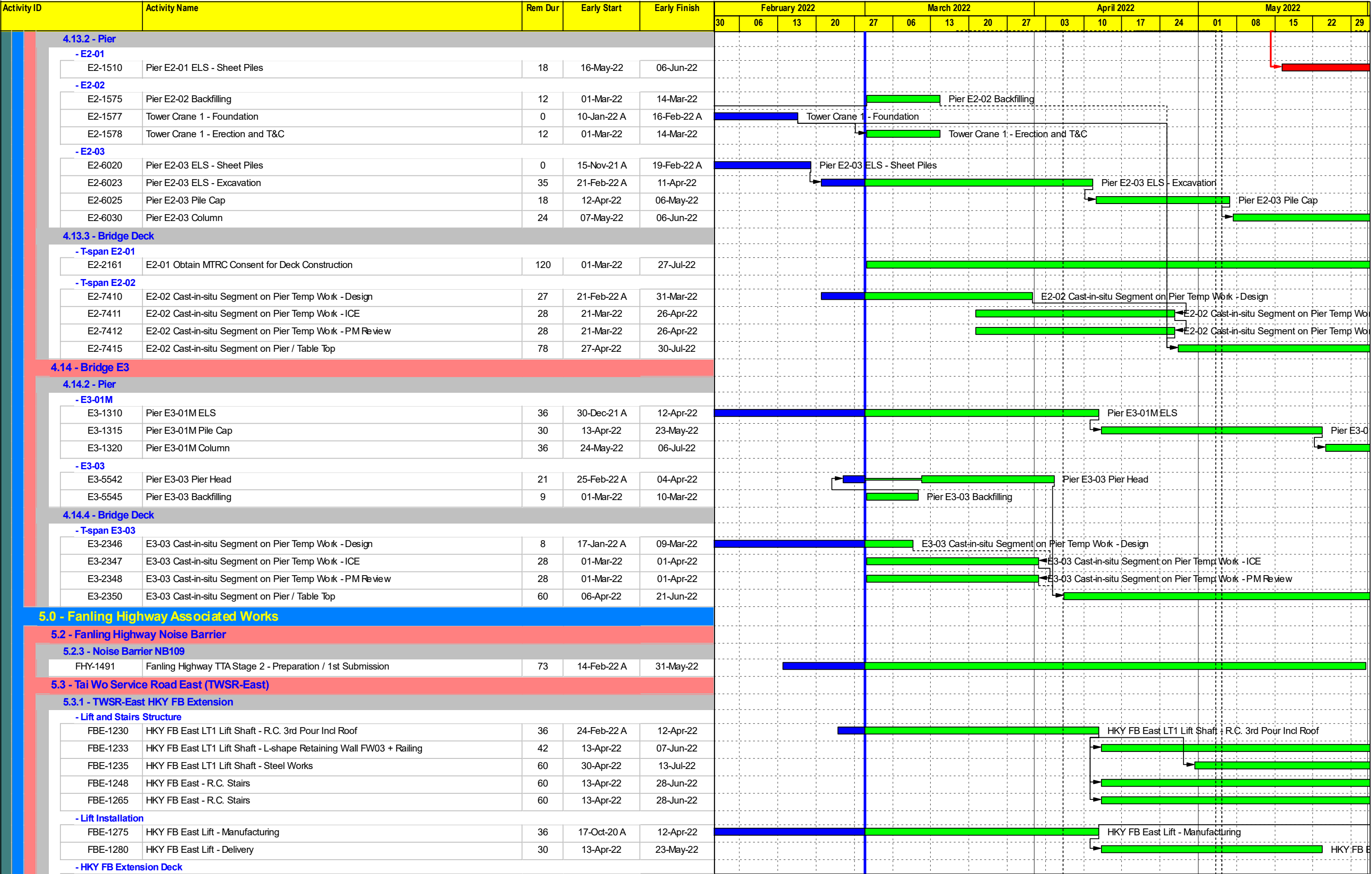
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)
3-Month Rolling Programme - Mar 2022

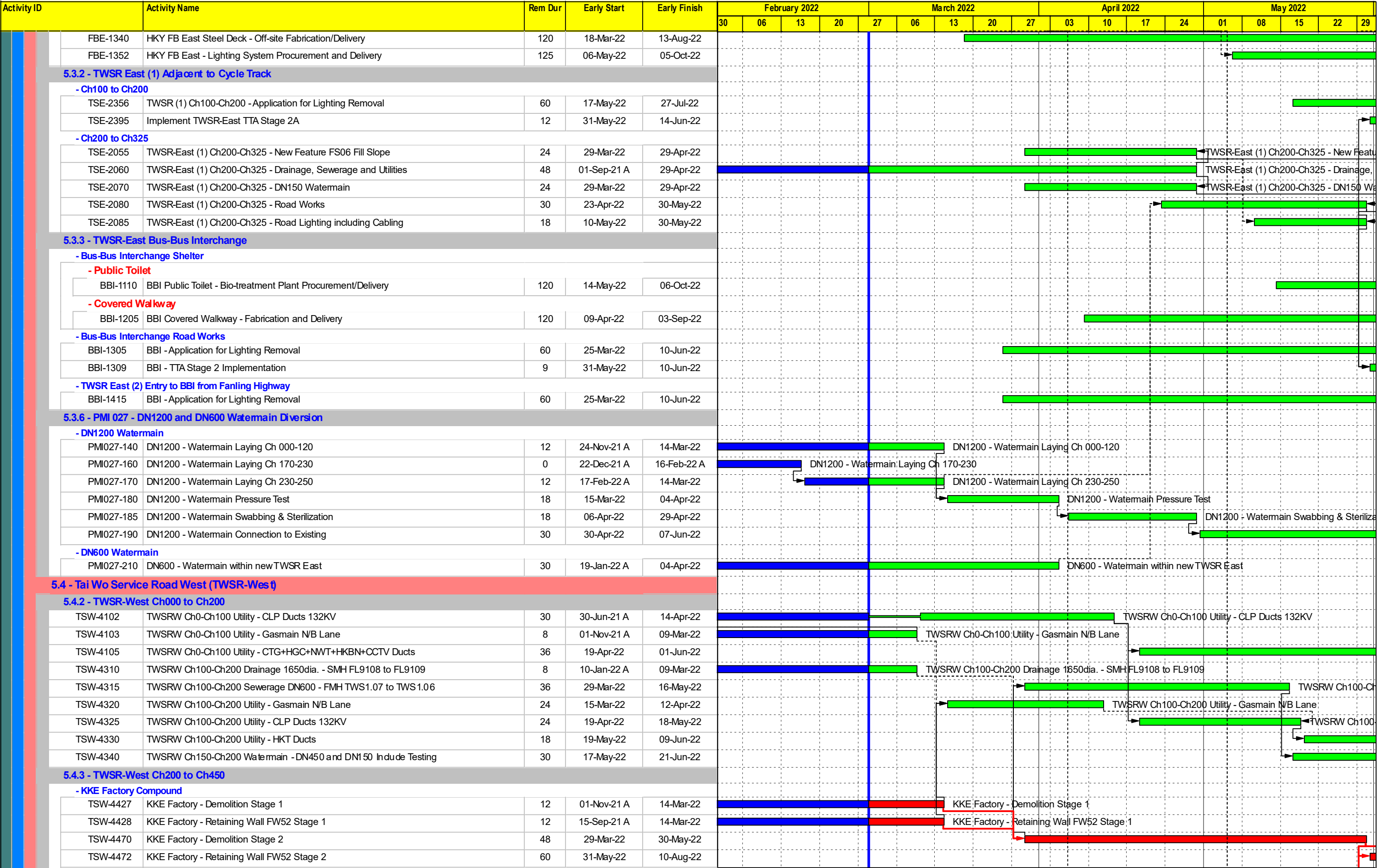
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Layout : ND201905 3MRP
Date : Page 5 of 11

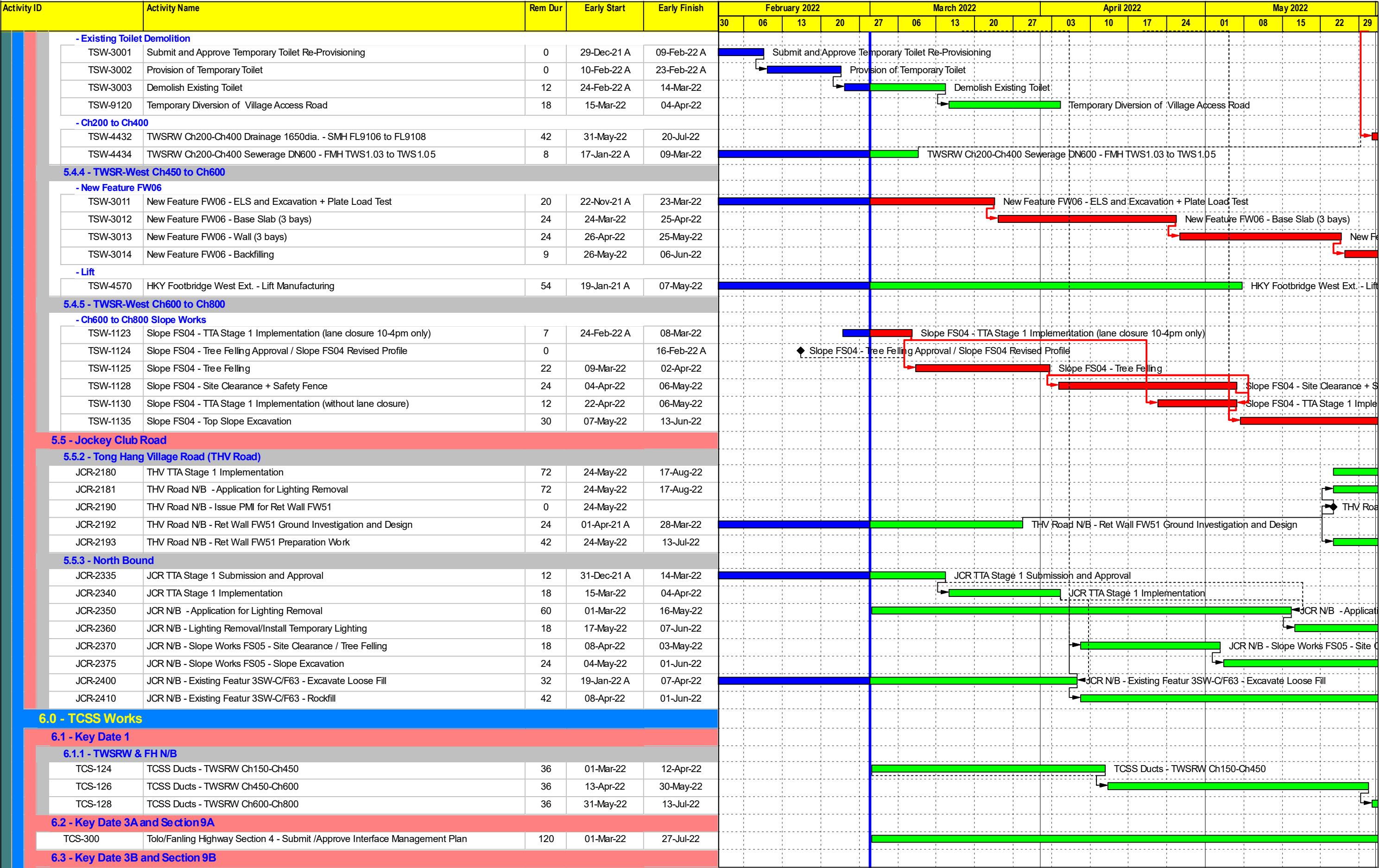
3-Month Rolling Programme			
Date	Revision	Checked	Approved
01-Mar-22	Mar 2022		



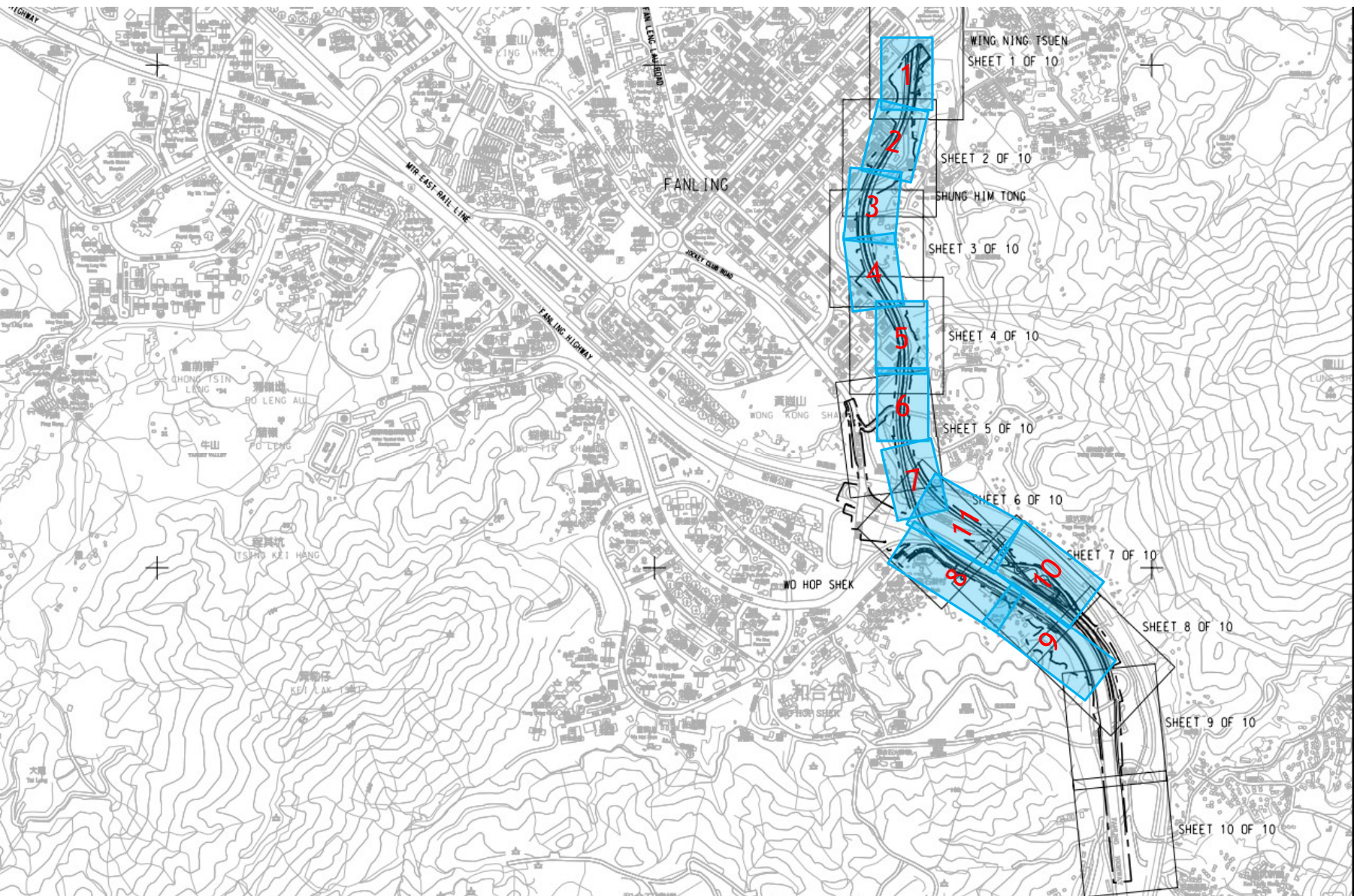








Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	February 2022				March 2022					April 2022				May 2022				
					30	06	13	20	27	06	13	20	27	03	10	17	24	01	08	15	22	29
TCS-370	Traffic Defector System - Submit /Approve Interface Management Plan	120	01-Mar-22	27-Jul-22																		
7.0 - Miscellaneous Works																						
MIS-100	Preservation and Protection of Trees	150	28-Oct-20 A	31-Aug-22																		



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.

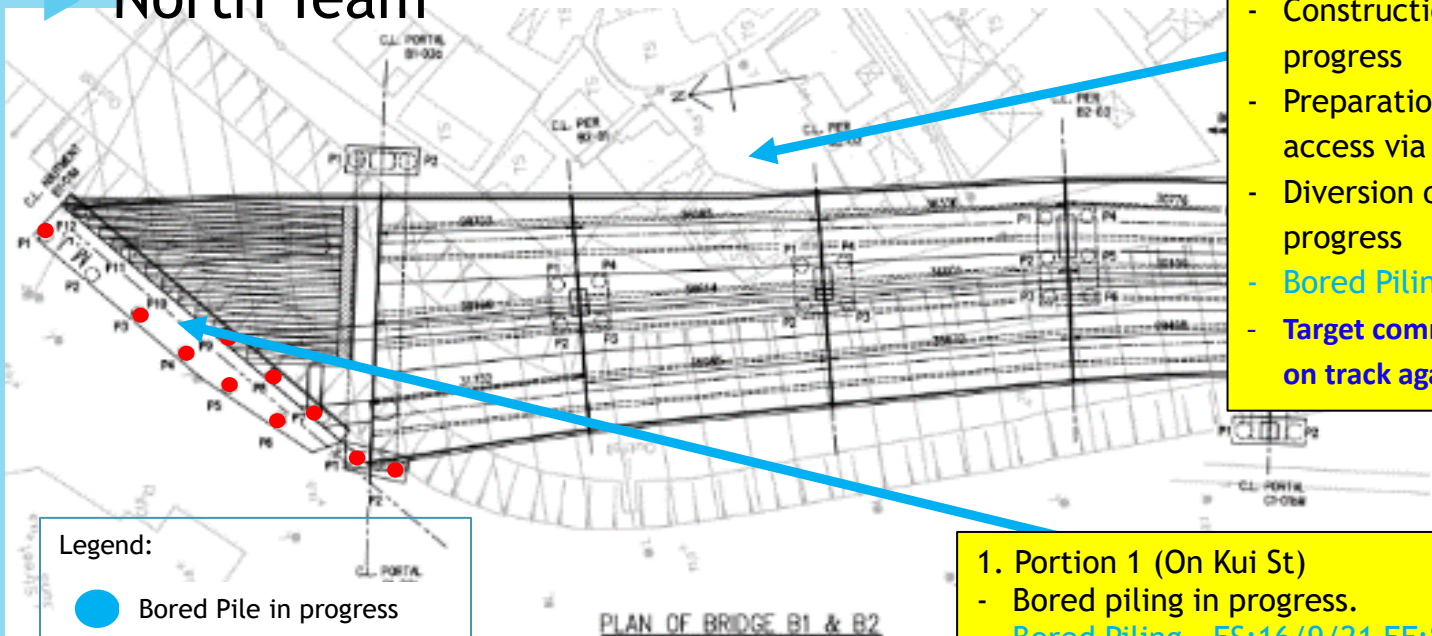
ND/2019/05

SHEET TITLE

KEY PLAN AND LOCATION PLAN

1

North Team



Legend:

- Bored Pile in progress
- Bored Pile Completed

2. Portion 2 (Shum Him Tong)

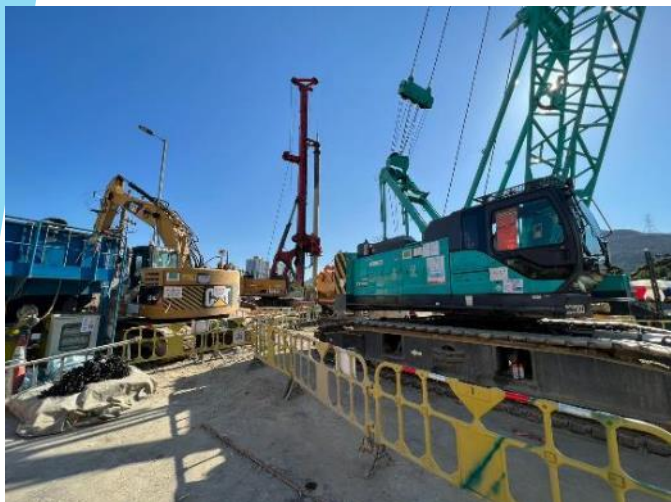
- Construction of temporary footpath in progress
- Preparation works for temporary site access via Lung Yeuk Tau in progress
- Diversion of fresh water main in progress
- Bored Piling - ES:20/4/22 EF:2/11/22
- Target commencement 17 Mar 22. Still on track against R9

1. Portion 1 (On Kui St)

- Bored piling in progress.
- Bored Piling - ES:16/9/21 EF:8/4/22



Portion II - Diversion of fresh water main.



Portion 1 - Bored pile at B1-01 & B1-02b



Preparation works for temporary site access via Lung Yeuk Tau



Portion II - Construction of temporary footpath

2 North Team

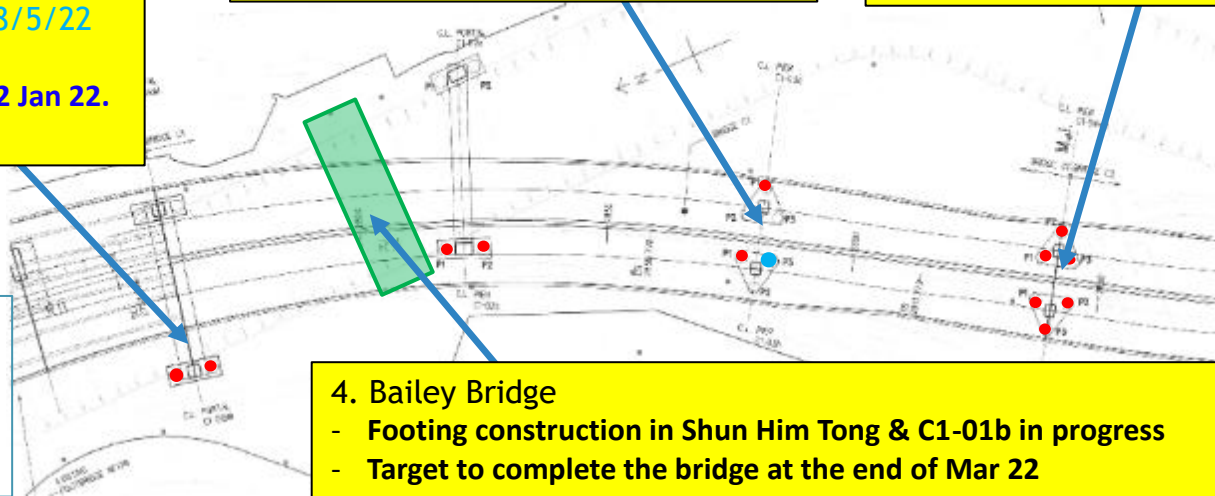
3. C1-01b
- Pile piling at C1-01b completed
 - Bored Piling - ES:28/5/22 EF:11/6/22
 - Target completion 12 Jan 22. Ahead against R9

5. Portion 3 (C1-03)
- Bored pile in progress.
 - TTA implemented.
 - Bored Piling predrill - ES:18/12/21 EF:04/02/22
 - Target completion 19 Jan 22. On track against R9

6. Portion 3 (C1-04)
- Sonic test completed
 - Grouting to be carried out.
 - Bored Piling test - ES:29/12/21 EF:26/01/22
 - Target completion 17 Feb 22. Slippage against R9

Legend:

- Bored Pile in progress
- Bored Pile Completed



4. Bailey Bridge
- Footing construction in Shun Him Tong & C1-01b in progress
 - Target to complete the bridge at the end of Mar 22



Bored pile works in C1-03



Bailey Bridge Footing Construction in progress

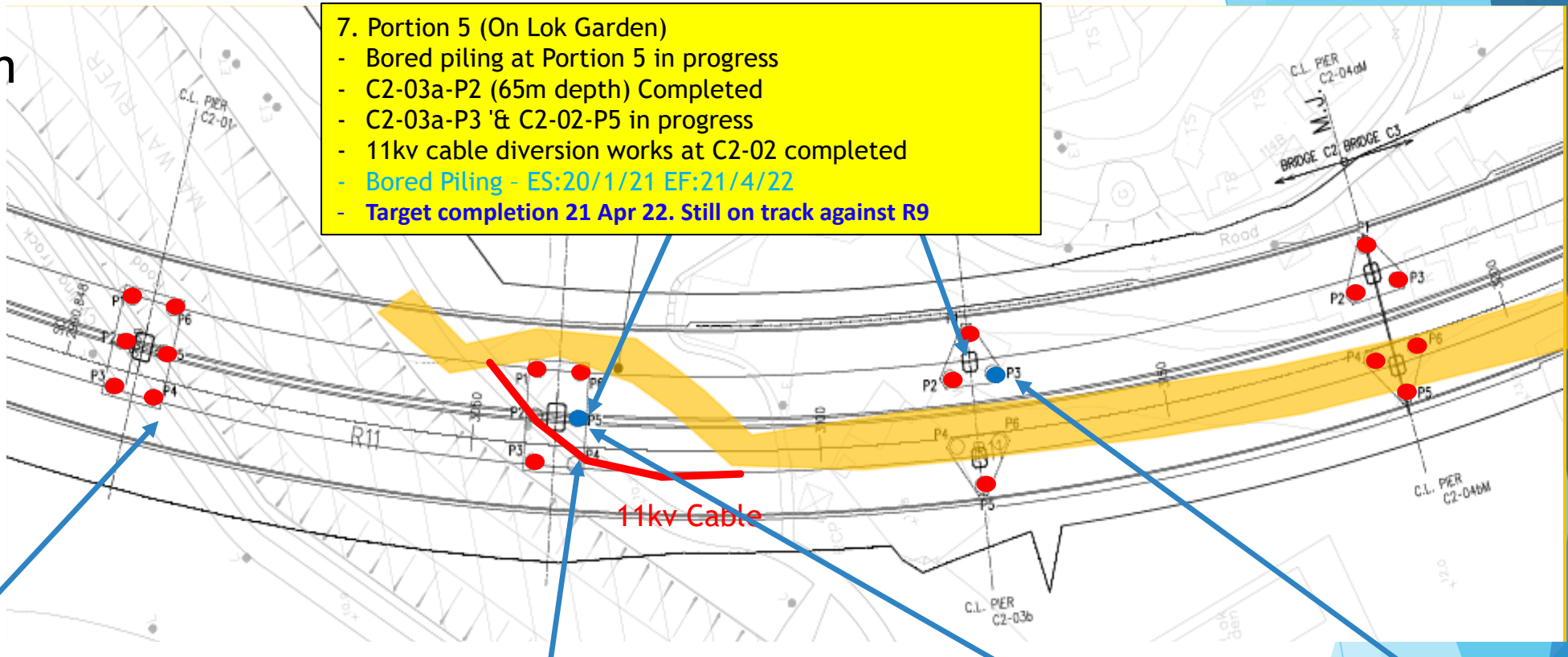


TTA implemented in Kui Sik Street

3 North Team

Legend:

- Bored Pile in progress
- Bored Pile Completed



6. Portion 4 (C2-01)
- C2-01 Bored Pile completed
 - DSD Access Ramp Reinstated



11kv cable diversion work at C2-02 completed on 26 Feb 2022

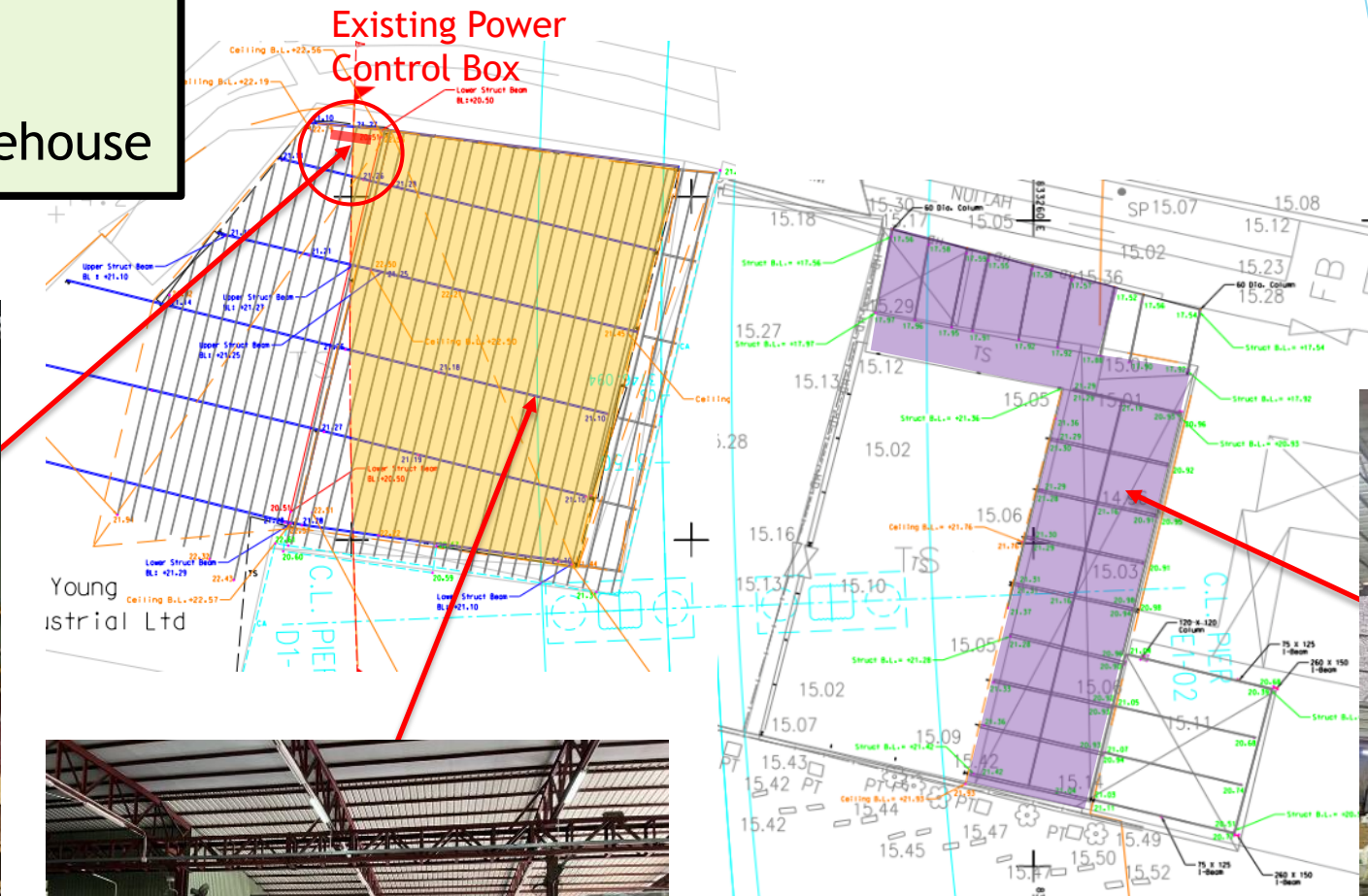


C2-02-P5 Bored pile in progress



C2-03-P3 Bored pile in progress

▶ North Team
Area Highlighted
- Man Young Warehouse



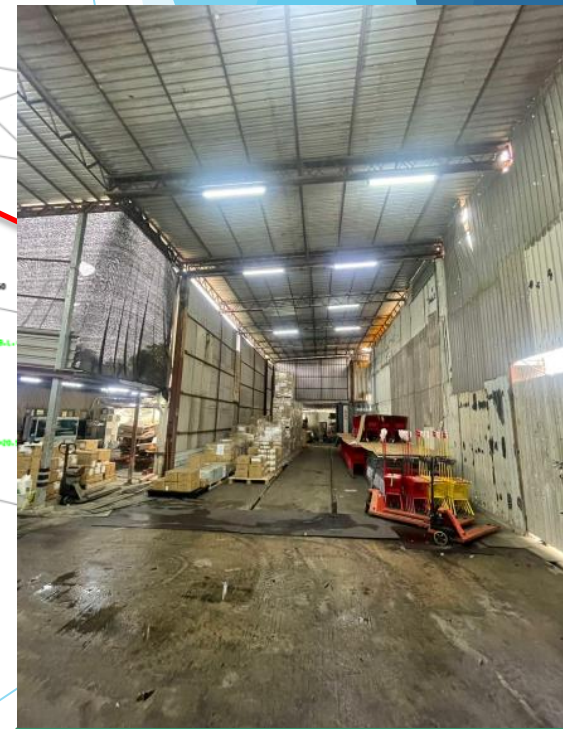
Portion 8
Kim Hoi Warehouse near D1-02 (Part 3)
Existing Power Control Box



Portion 8
Kim Hoi Warehouse near D1-02 (Part 3)

Portion 8
Kim Hoi Warehouse (Part 3 and part 4)

- The updated modification design proposal for part 3 have been issued on 4/3/22
- The updated design proposal and the construction details submitted to owner on 4/3/22

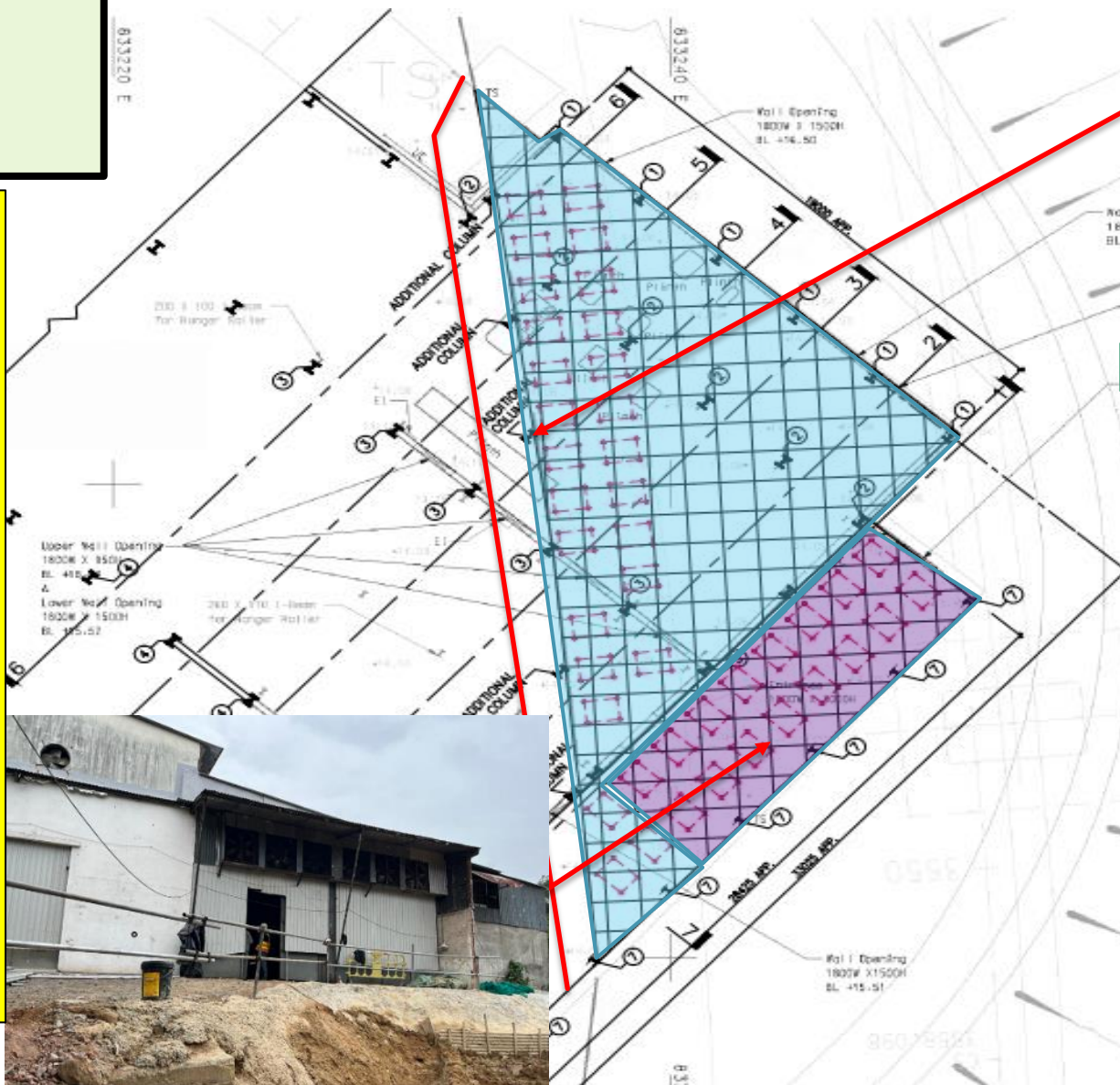


Portion 8
Kim Hoi Warehouse near E1-02 (Part 4)

4

▶ North Team Area Highlighted - HD Warehouse

11. Portion 6 HD Factory
Stage 1 Demolition Works for HD Warehouse completed on 07/01/22
- Stage 2 Modification Works for HD Warehouse commenced on 07/02/22
- Temporary protection barrier completed on 11/02/2022
 - Modification Works (additional permanent structural members with welding test will be completed on 9/3/22)
 - Permanent new boundary wall is in-progress
 - Target completion date: 16/4/2022
- Stage 3 Demolition Works for HD Warehouse
- Method Statement will be submitted by next week
 - Target commencement date: 18/4/2022
 - Target completion date: 7/5/2022



Stage 1 Demolition works Completed



Additional Steel members



Welding Test

5

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



Erected Soffit Formwork Panel in progress for C4-01 Portal Beam Construction

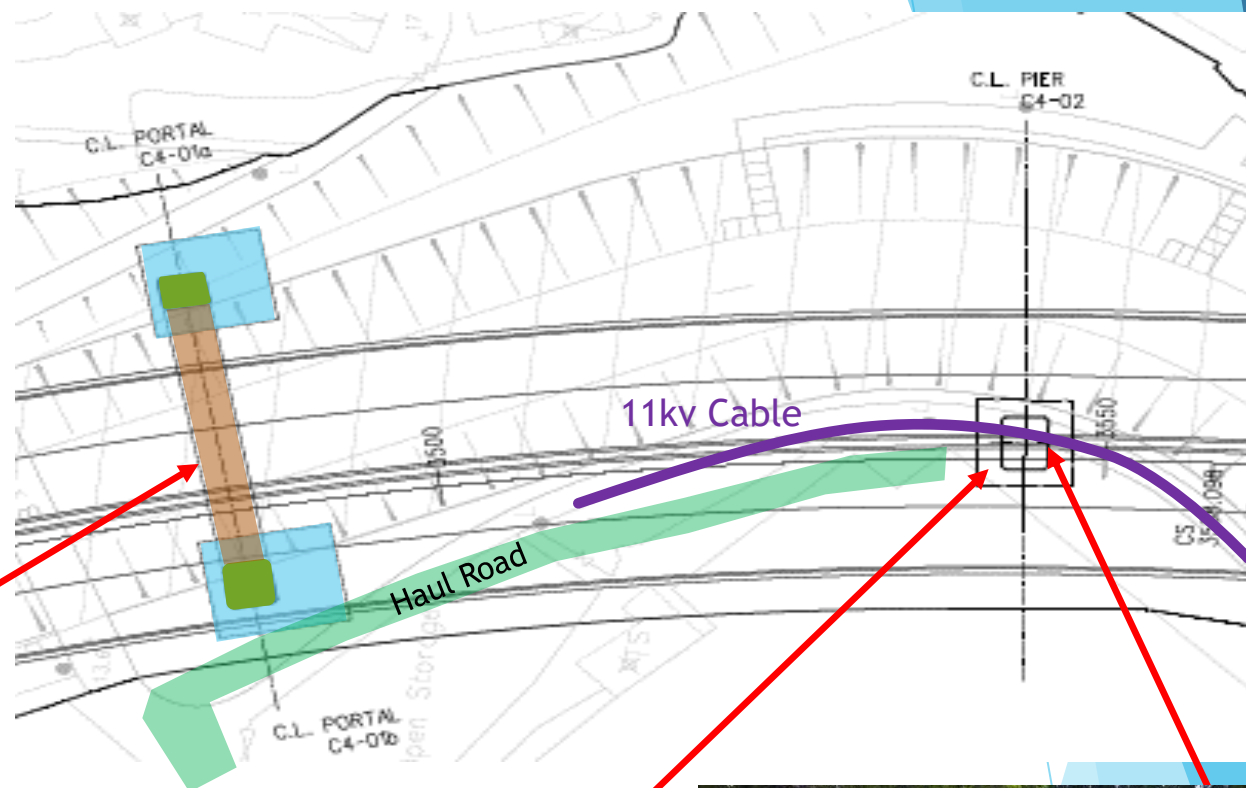
10. Portion 6

C4-01 portal beam

- C4-01 truss is completed on 10 Feb 2022
- Support Falsework & access is completed on 2 March 2022
- Formwork erection is in progress

- C4-01 portal beam - ES:9/12/21 EF:16/5/22
 - Target completion 11 Apr 2022. Slippage against R9 C4-02

- 11kV cable slewing and lowering down platform is completed on 24 Feb 2022
- 2nd Stage ELS is in progress
- C4-02 ELS pipe pile - ES:18/1/22 EF:17/2/22
- Target completion 6 Feb 2022. Slippage against R9



C4-02 2nd Stage ELS Pipe Piling is in progress

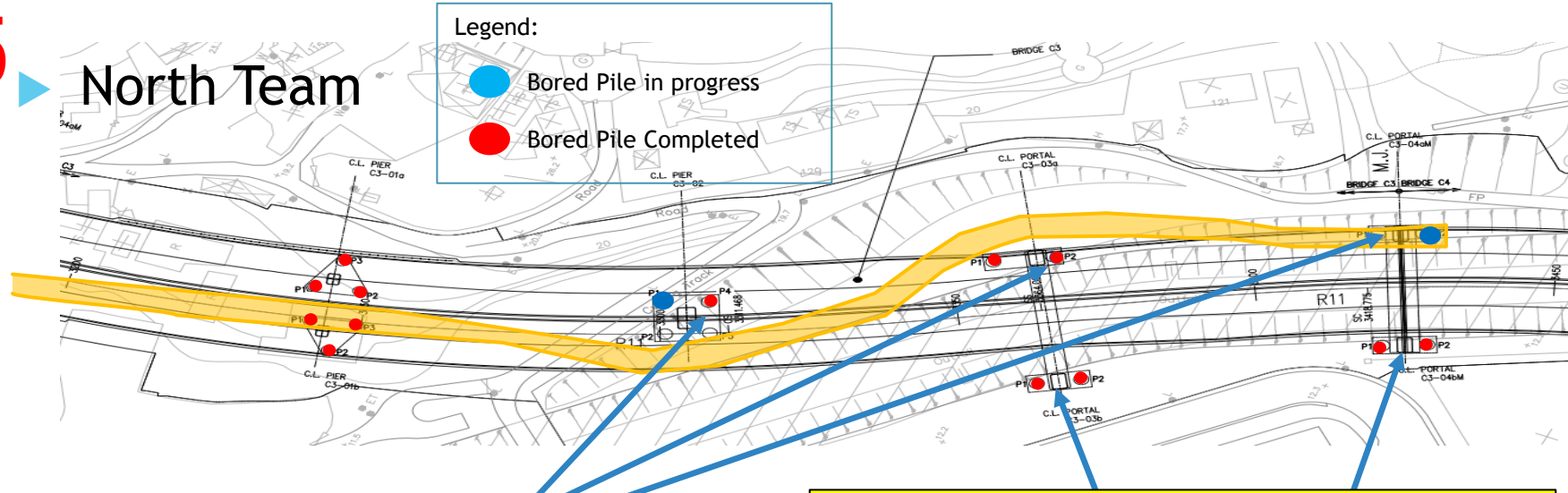


11kV Cable Slewing and lowering down platform completed

North Team

Legend:

- Bored Pile in progress
- Bored Pile Completed



8. Portion 6 (Village side)

- C3-03a-P1 & P2 Bored Pile completed.
- C3-02 & C3-04a bored in progress.
- Bored Piling - ES:29/12/21 EF:26/3/22
- Target completion 26 Mar 22. On track against R9

9. Portion 6 (Yip Fung St)

- C3-03b column construction is in progress
- 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. Ahead against R9
- Target ELS completion 31 May 21. Slippage against R9



C3-04b ELS Pipe pile completed & Excavation in progress



C3-02-P4 Bored Pile completed
C3-02-P1 in progress



C3-03a-P1 & P2 Bored Pile completed



C3-03b pile cap backfilling completed & column construction in progress

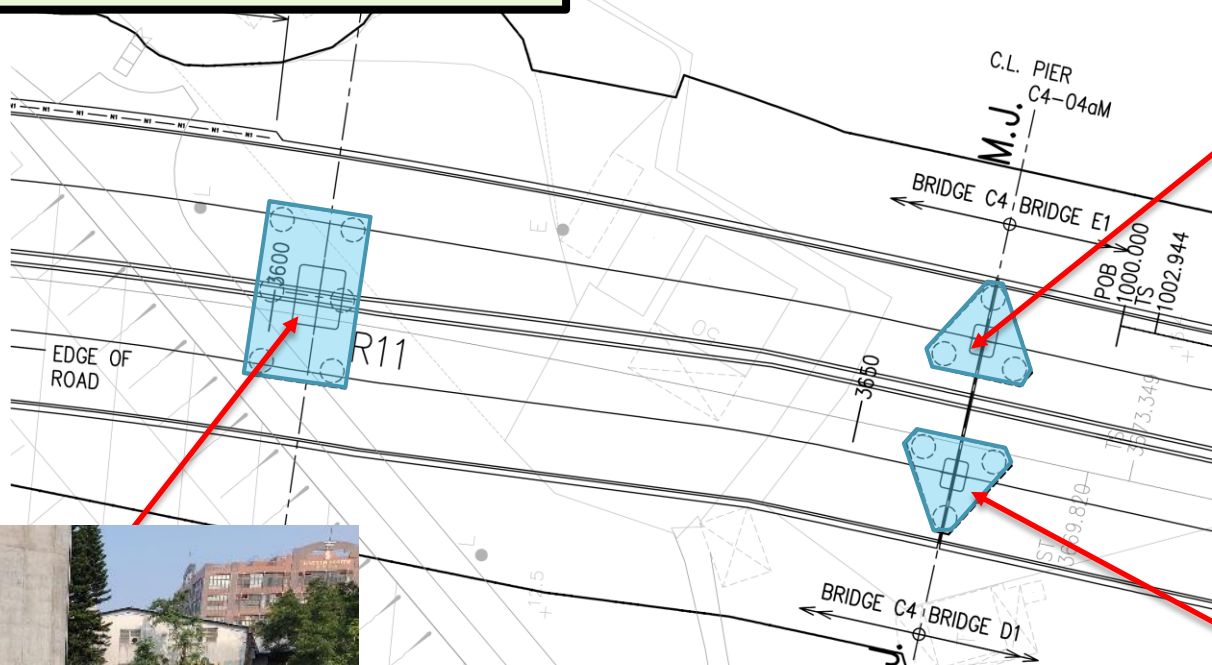


C3-04a-P2 Bored Piling in progress

6

North Team

Area Highlighted - C4-03 & C4-04



C4-04aM Pier Head Construction is in progress



Column construction & scaffolding dismantling completed. ELS Removal and backfilling in progress for subsequent C4-03 Cross Head Construction.

11. Portion 8 (CTC yard)

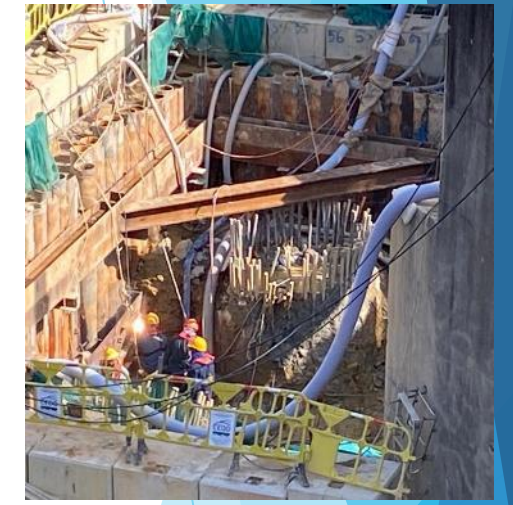
- Dismantling of scaffold at C4-03 Column completed on 7/03/22.
- backfilling works for C4-03 Tee Pier Head is in progress
- C4-03 column - ES:27/01/22 EF:31/3/22
- Target completion 26 May 2022. Slippage against R9
- Pier head construction for C4-04bM Pier Head Completed on 2 Mar 2022
- Pier head construction for C4-04aM in progress
- Erection steel mould for C4-04aM in progress
- C4-04 pier head - ES:28/1/22 EF:7/3/22
- Target completion 19 Mar 2022. Slippage against R9



C4-04bM Pier Head construction completed & subsequent C4-04aM Pier Head construction followed

7 ▶ South Team - Area Highlighted

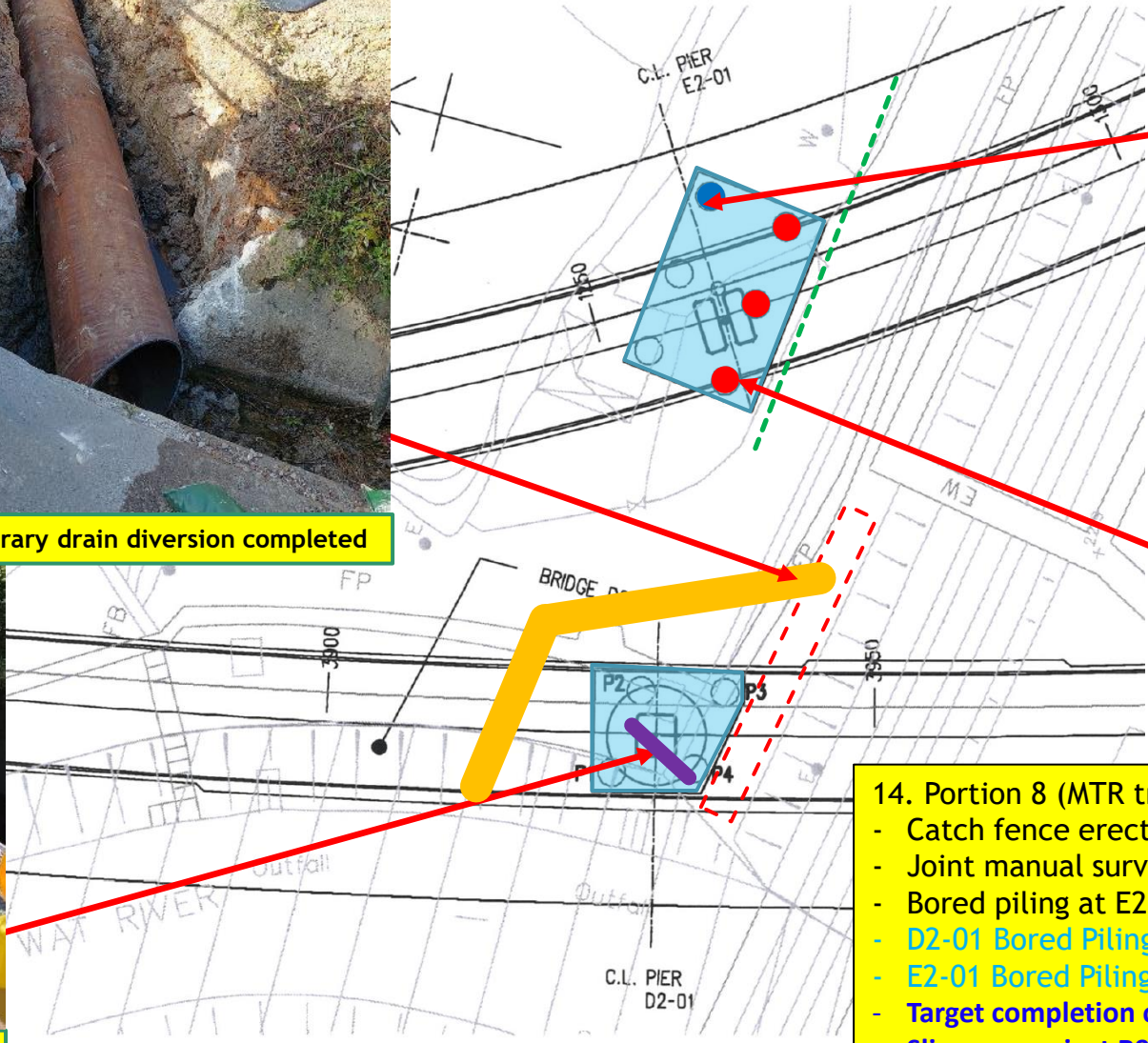
D2-02 Temporary ELS by concrete block (3 layers will be applied) outside pipepile wall as contingency measure in case. Project Team is aimed to complete pile cap by end of Mar 2022. Set up temp area for wet soil mixing before disposal



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



Temporary drain diversion completed



E2-01-P5: RCD Drilling



E2-01-P2: Bored Pile Concreting completed

14. Portion 8 (MTR trackside)
- Catch fence erection completed on 8/02/22.
 - Joint manual survey carried out bi-weekly.
 - Bored piling at E2-01 commenced on 20/12/21
 - 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 30 April 2022.
 - Slippage against R9

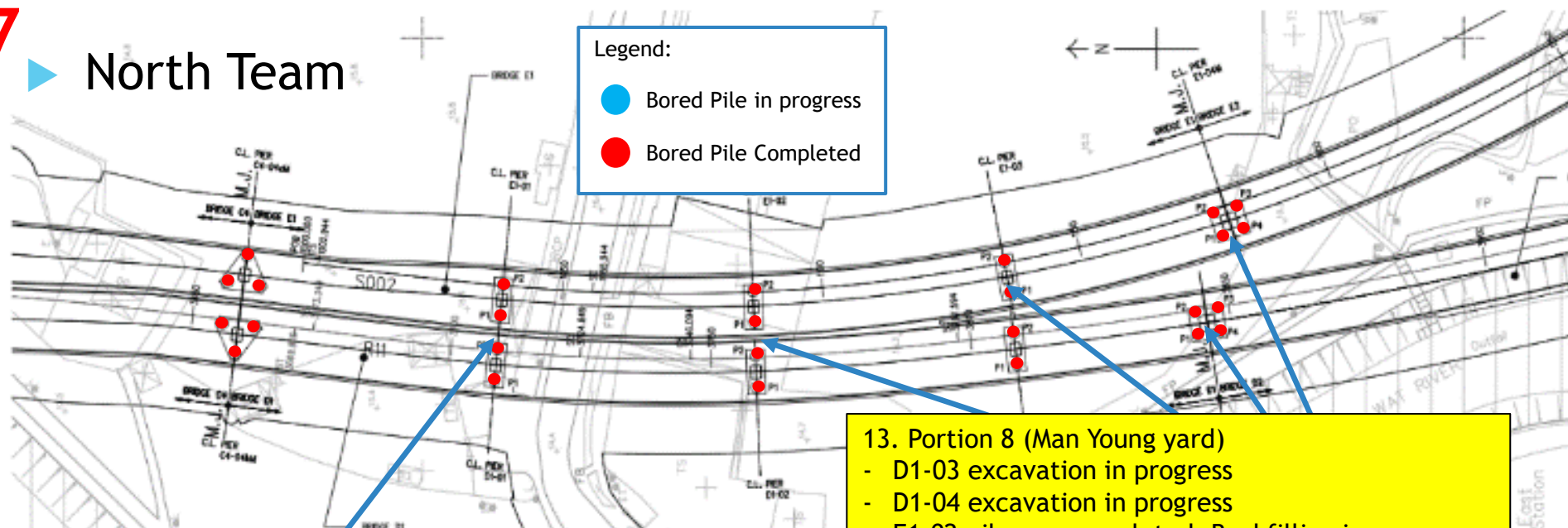
7

North Team

Legend:

● Bored Pile in progress

● Bored Pile Completed



12. Portion 8 (CTC yard)

- D1-01 & E1-01 pile cap rebar fixing in progress.
- ELS - ES:12/5/22 EF:9/6/22
- on track against R9

13. Portion 8 (Man Young yard)

- D1-03 excavation in progress
- D1-04 excavation in progress
- E1-02 pile cap completed. Backfilling in progress.
- E1-03 formwork erection in progress
- E1-04 excavation completed
- ELS - ES:10/6/22 EF:5/8/22
- On track against R9

D1-04 ELS Excavation in Progress



D1-03 ELS Pipe Piling in Progress



E1-04 ELS Excavation in progress



D1-01/ E1-01 Rebar fixing in progress



E1-02 Backfilling in Progress



E1-03 Formwork Erection in Progress

▶ South Team



1. D2-02 ELS for Cap

D2-1560 (R9) ES: 04/02/22 EF: 24/02/22
LS: 04/02/22 LF: 24/02/22

- 2nd layer waling completed
- Excavation in progress
- To reduce impact of shortage of manpower due to 5th wave of Covid-19. Temporary suspended other work fronts for 1 week and re-allocate manpower for the construction work.

D2-02

D2-03

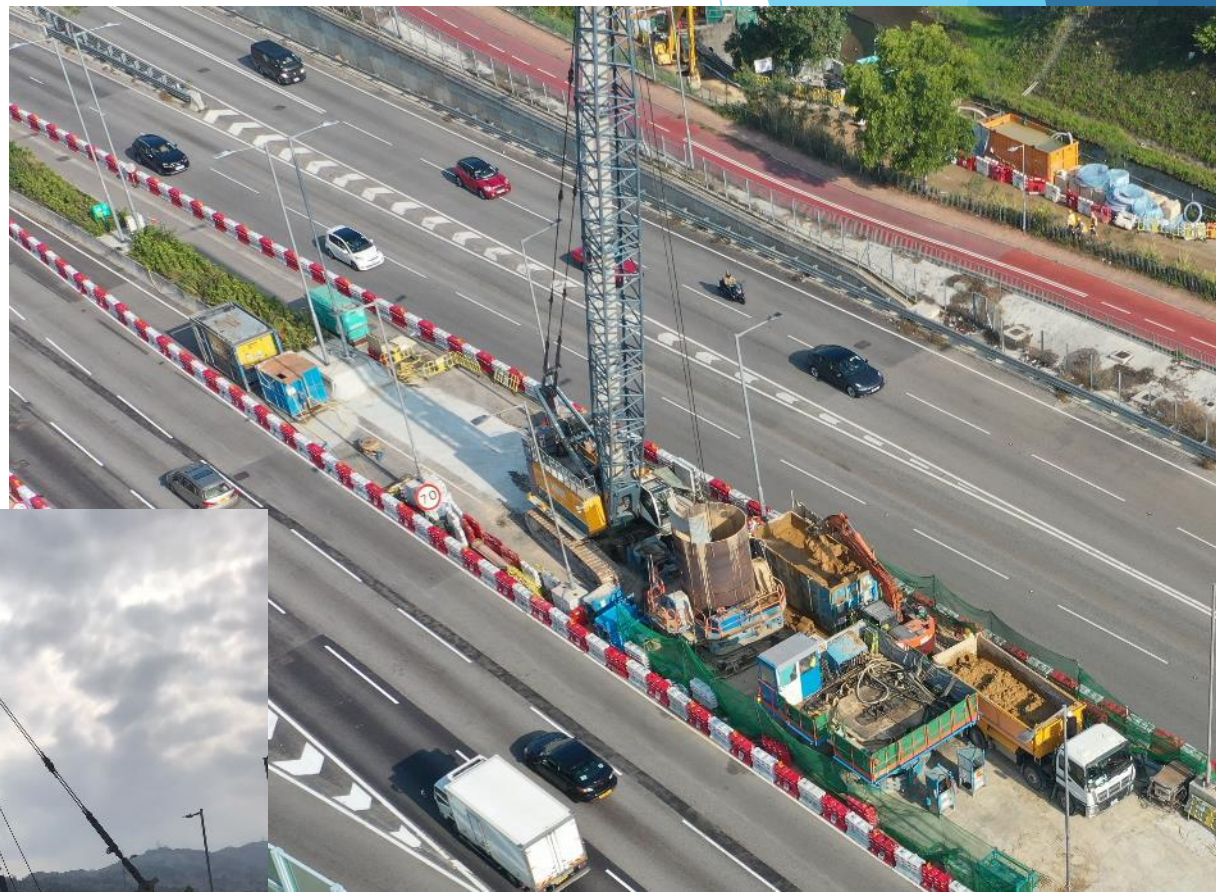
2. D2-03 Bored Pilling Works (3 Nrs)

D2-1230 (R9) ES: 16/12/21 EF: 09/02/22
LS: 30/12/22 LF: 21/02/22

- Piling P3 cast on 17/02/22
- Piling P2 target cast on 22/03/22
- 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)

▶ South Team - Area Highlighted

D2-03 Pile P2 in progress and target cast on to be placed concrete on 22 Mar 2022 with about 200m3 concrete.



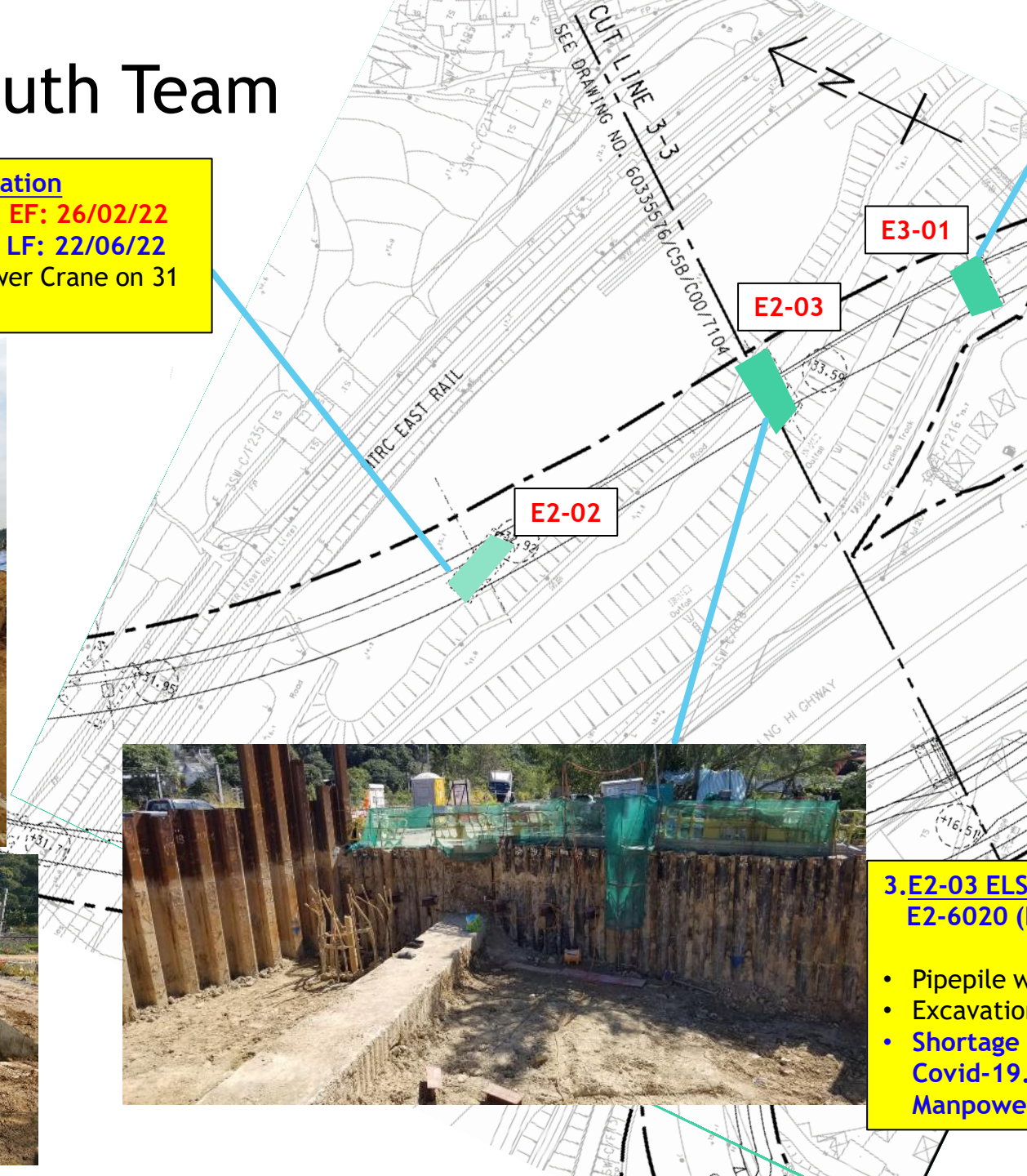
7 & 11

► South Team

1. E2-02 Tower Crane - Foundation

E2-1577 (R9) ES: 13/12/21 EF: 26/02/22
LS: 07/04/22 LF: 22/06/22

- Target complete cap for Tower Crane on 31 Mar 22



2. E3-01 Cap

E3-1315 (R9) ES: 18/02/22 EF: 10/03/22
LS: 25/03/22 LF: 19/04/22

- Target place blinding on 21/03/22
- Target cast cap on 31/03/22
- Shortage of manpower due to 5th wave of Covid-19. Temporary suspended for 1 week. Manpower re-allocate to D2-02.

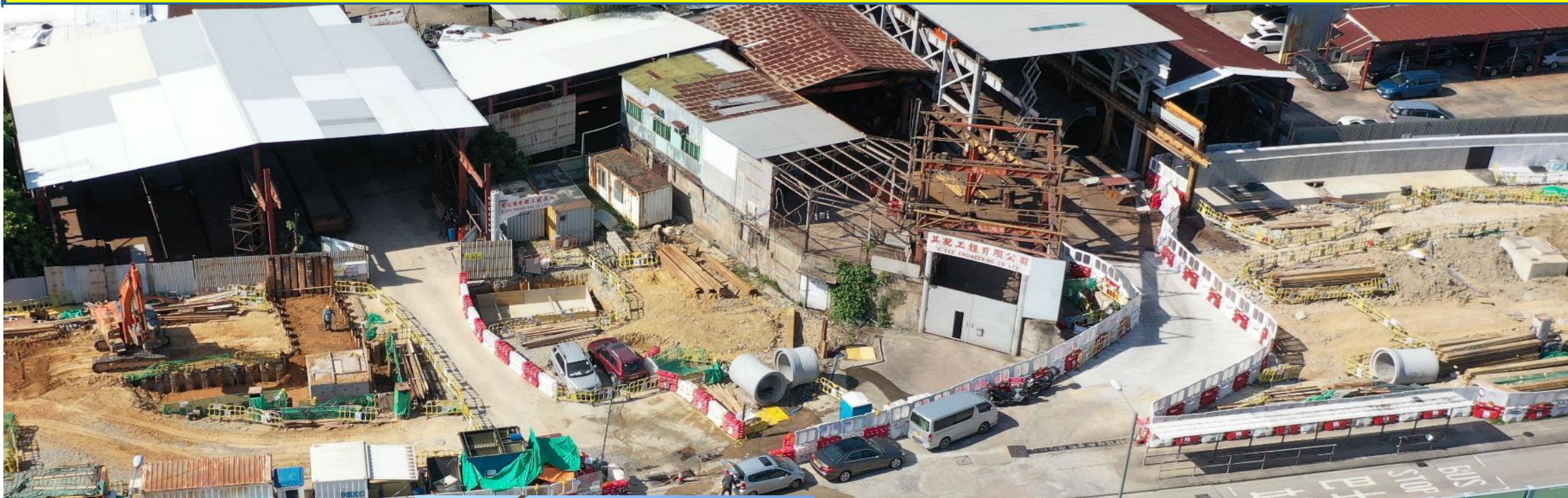


3. E2-03 ELS:

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
- Shortage of manpower due to 5th wave of Covid-19. Temporary suspended for 1 week. Manpower re-allocate to D2-02.

Kei Kee After temporary access diversion, K. Kee continue demolish its roof top.



8 & 9

► South Team



1. Venton area

- Gas main work in progress



1650 dia.(30m)
Completed

600 dia.(20m) in
progress

600 dia.(25m)
Completed

1650 dia.(55m)
Completed

1650 dia.(53m)
Completed

K. Kee

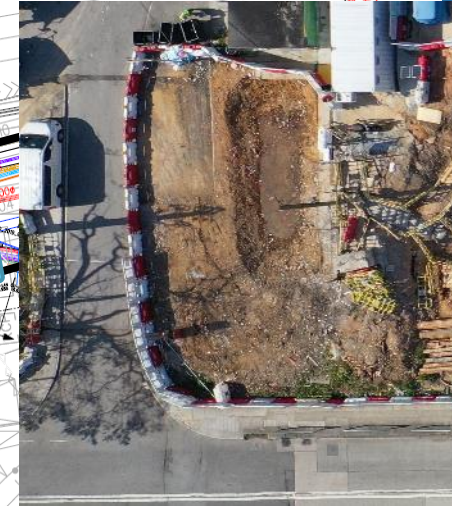
2. Portion 18 (K. Kee)

- Forming temporary access for K. Kee



3. Provide temp toilet and Demolition Existing Toilet TSW-3002 and TSW 3003(R9) ES: 20/01/22 EF: 12/02/22

- Temp toilet provide cleaning service on 12 Feb 22
- Demolish toilet completed
- Awaiting CLP relocate overhead cable pole



4. Portion 18

- Dn 225 dully drainage in progress

- Drainage and Sewage
- Total: 1,453m
- As of 10 Mar 22 completion: 67 m (4.61%)
- Overall Completion: 328m (22.6%)
- Drainage/sewer work across K. Kee area need to divide into serval phases in order to maintain access
- Some drainage/ sewer need to commence after UU laying, removal of toilet, diversion of TWSRW

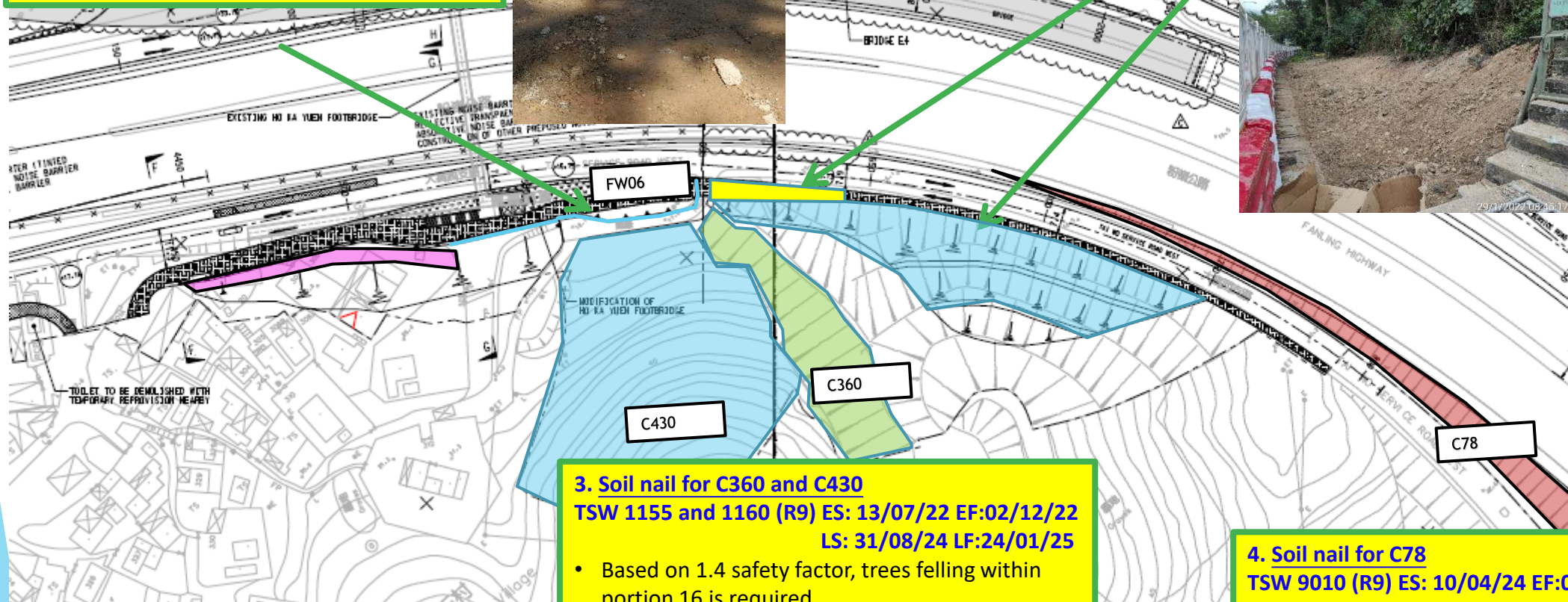


► South Team

1. FW06 - Excavation

TSW 3011 (R9) ES: 22/11/21 EF:11/12/21
LS: 29/11/21 LF:18/12/21

- Excavation bay 3 in progress
- 2nd plateload test commenced 08/03/22
- **AT trees affect the excavation works.**



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

- Based on 1.4 safety factor, trees felling within portion 16 is required.
- Revised TPRP submitted on 16 Feb 22

2. FS 04 – Site Establishment for Slope works

TSW 1125 (R9) ES: 29/12/21 EF: 19/01/22
LS: 20/01/22 LF:12/02/22

- Site clearance completed for CLP 132 ducts laying (highlight in yellow)
- Tree felling for slope works in progress and target completed 17/03/22



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:22/5/22 EF:28/6/22
LS:23/7/22 LF:26/8/22

- Need to maintain access for piling work of E3-01

E3-02

2. Drainage works after road diversion in progress



3. 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 Mar 22 for Dn1200.

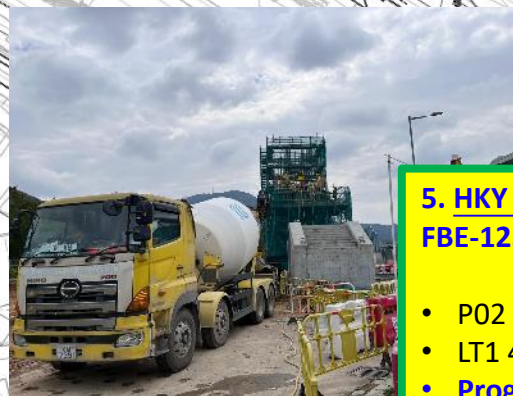
E3-03



4. E3-03 Column

E3-5542(R9) ES:31/12/21 EF:21/01/22
LS:08/01/22 LF:28/01/22

- Pier head mould target delivery on 19/02/22
- Rebar fixing in progress
- Target cast on 19/03/22
- Due to enhanced land border transportation restriction, delivery of Pier head mould is affected



5. HKY FB Lift Shaft LT1 (3rd pour)

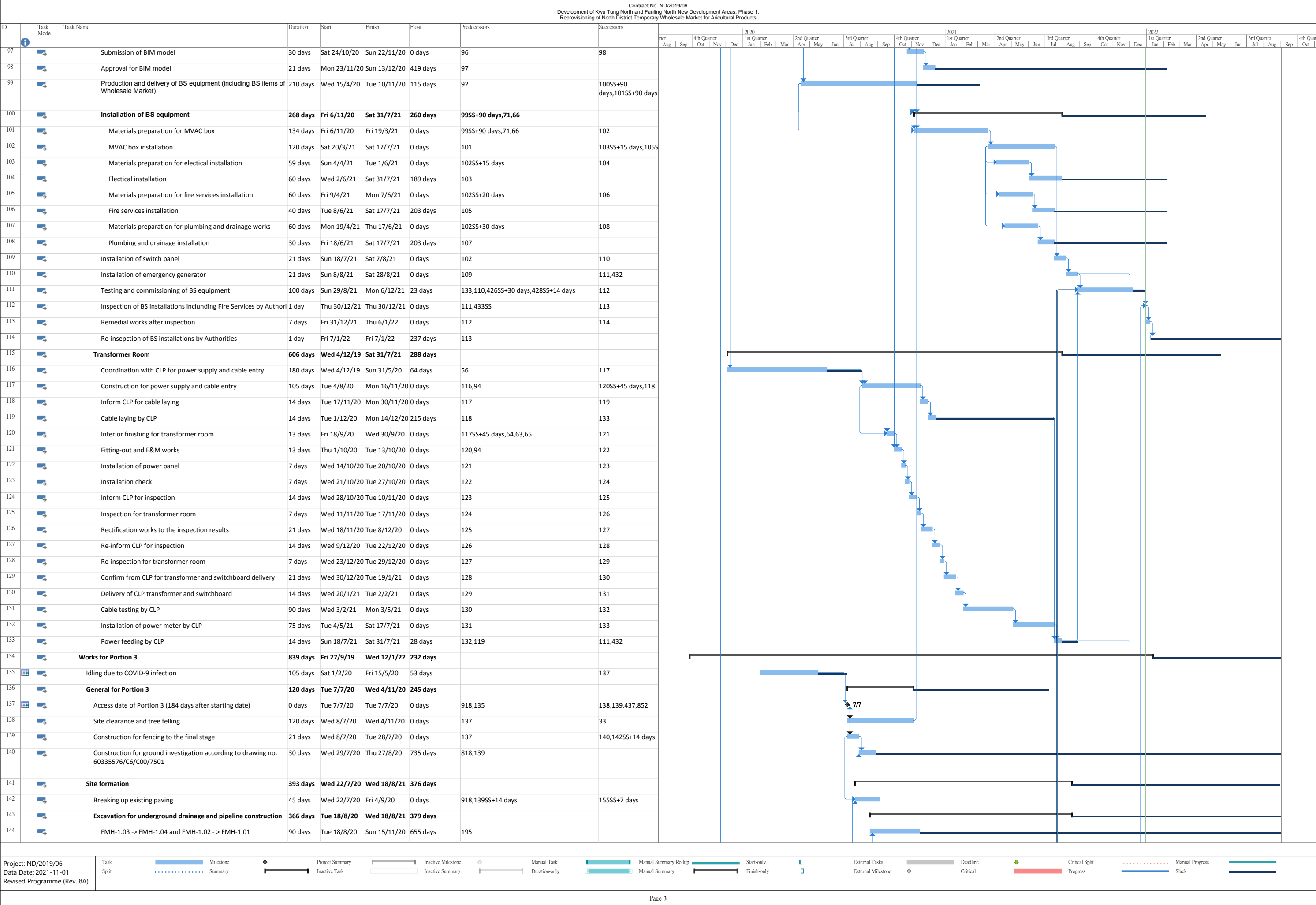
FBE-1230 (R9) ES:13/12/21 EF:26/02/22
LS:10/02/22 LF:02/03/22

- P02 cast on 07/03/22
- LT1 4th pour target cast on 28/03/22
- Progress affected due to compulsory

Construction Programme of ND/2019/06

Contract No. ND/2019/06 Development of Kwu Tung North and Fanling North New Development Areas, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Aricultural Products																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors																										
49		As-build survey	65 days	Mon 22/2/21	Tue 27/4/21	649 days			3rd Quarter	4th Quarter	2020	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	2021	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	2022	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	2023	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	2024	1st Quarter	2nd Quarter	
50		Section 1 of the Works	839 days	Fri 27/9/19	Wed 12/1/22	232 days																												
51		Works for Portion 4	834 days	Fri 27/9/19	Fri 7/1/22	237 days																												
52		General for Portion 4	68 days	Fri 27/9/19	Tue 3/12/19	288 days																												
53		Access date of Portion 4	0 days	Fri 27/9/19	Fri 27/9/19	0 days		54,91																										
54		Site clearance and tree felling	30 days	Fri 27/9/19	Sat 26/10/19	0 days	53	55																										
55		Breaking up existing paving	20 days	Sun 27/10/19	Fri 15/11/19	0 days	54	56																										
56		Excavation for management office building	18 days	Sat 16/11/19	Tue 3/12/19	0 days	55	59,116																										
57		Management Office Building	834 days	Fri 27/9/19	Fri 7/1/22	237 days																												
58		Civil and strucutal works	382 days	Wed 4/12/19	Sat 19/12/20	319 days																												
59		Construction of foundation from G.L. E-H / 1-3	60 days	Wed 4/12/19	Sat 1/2/20	735 days	56																											
60		Idling due to COVID-9 infection	120 days	Sat 1/2/20	Sat 30/5/20	0 days		61,68																										
61		Construction of foundation from G.L. A-E / 1-3	14 days	Sun 31/5/20	Sat 13/6/20	0 days	60	63,62																										
62		Construction of G/F slabs from G.L. E-H / 1-3	25 days	Sun 14/6/20	Wed 8/7/20	0 days	61	68																										
63		Construction for G/F slabs from G.L. A-E/1-3	25 days	Sun 14/6/20	Wed 8/7/20	0 days	61	120,64,153,164																										
64		Construction for G/F to R/F columns and wall from G.L. A-E/1-3	30 days	Thu 9/7/20	Fri 7/8/20	0 days	63	120,65																										
65		Construction for R/F slabs and beams from G.L. A-E/1-3	30 days	Sat 8/8/20	Sun 6/9/20	0 days	64	120,66																										
66		Construction for transformer room upper slab, columns and walls at G.L. B-C/1-3	30 days	Mon 7/																														



Contract No. ND/2019/06
Development of Kwu Tung North and Fanling North New Development Areas, Phase 1:
Reprovisioning of North District Temporary Wholesale Market for Aricultural Products

ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors	2020																												2021																												2022																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter

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Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter 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Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May	3rd Quarter Jun	4th Quarter Jul	1st Quarter Aug	2nd Quarter Sep	3rd Quarter Oct	4th Quarter Nov	1st Quarter Dec	2nd Quarter Jan	3rd Quarter Feb	4th Quarter Mar	1st Quarter Apr	2nd Quarter May

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Contract No. ND/2019/06 Development of Kwu Tung North and Fanling North New Development Areas, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Aricultural Products																																								
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors																																
435		Re-inseption of BS installations by Authorities	1 day	Fri 7/1/22	Fri 7/1/22	236 days	434	811FF																																
436		Demolition and re-provision works for toilet and RCB	213 days	Wed 8/7/20	Fri 5/2/21	245 days																																		
437		Underground Utilities detection	14 days	Wed 8/7/20	Tue 21/7/20	0 days	137	438																																
438		PR plan for relocation of toilet and RCB	14 days	Wed 22/7/20	Tue 4/8/20	0 days	437	439																																
439		Re-provision of toilet and RCB before demolish the existing toilet and RCB	21 days	Wed 5/8/20	Tue 25/8/20	0 days	438	440																																
440		TTA submission for temporary diversion of public footpath near Ma Wat River	60 days	Wed 26/8/20	Sat 24/10/20	0 days	439	441																																
441		Temporay diversion of public footpath near Ma Wat River	19 days	Sun 25/10/20	Thu 12/11/20	0 days	440	442																																
442		Re-opening of public footpath near Ma Wat River according to AECOM instruction	1 day	Fri 13/11/20	Fri 13/11/20	0 days	441	453,443,447																																
443		Instruction from AECOM for tree trimming and additional lighting provided for the footpath at Wing Ning Wai	27 days	Sat 14/11/20	Thu 10/12/20	0 days	442	444																																
444		Arrangement for trees trimming between Wing Ning Wai Footbridge and the footbridge at On Chuen Street adjacent to Shung Him Tong Village along Ma Wat River	7 days	Fri 11/12/20	Thu 17/12/20	0 days	443	445SS+5 days																																
445		Arrangement of temporary solar lighting between Wing Ning Wai Footbridge and the footbridge at On Chuen Street adjacent to Shung Him Tong Village along Ma Wat River	7 days	Wed 16/12/20	Tue 22/12/20	0 days	444SS+5 days	446																																
446		Re-temporary diversion of public footpath near Ma Wat River	2 days	Wed 23/12/20	Thu 24/12/20	0 days	445	451,820,830																																
447		Temporary enclosure for demolish the existing public toilet	3 days	Sat 14/11/20	Mon 16/11/20	0 days	442	448																																
448		Demolish the existing toilet	21 days	Tue 17/11/20	Mon 7/12/20	0 days	447	451,449																																
449		Construction of temporary 900mm dia. Stormwater drain next to the existing public toilet	60 days	Tue 8/12/20	Fri 5/2/21	16 days	448	459																																
450		Site formation and mini-pile works	190 days	Fri 13/11/20	Fri 21/5/21	322 days																																		
451		Site formation for mini-pile works	7 days	Fri 12/2/21	Thu 18/2/21	0 days	823,448,446	458																																
452		Pre-drill works	21 days	Fri 13/11/20	Thu 3/12/20	322 days																																		
453		Temporary fence off for pre-drill works due to unable for temporary diversion of public footpath near Ma Wat River	1 day	Sat 14/11/20	Sat 14/11/20	0 days	442	454FF																																
454		Mobilization of S.I. Drilling Rig	2 days	Fri 13/11/20	Sat 14/11/20	0 days	453FF	455																																
455		Pre-Drill works (4nos)	12 days	Sun 15/11/20	Thu 26/11/20	0 days	454	456																																
456		Completion Log Report	7 days	Fri 27/11/20	Thu 3/12/20	77 days	455	458																																
457		Mini Pile Works	53 days	Fri 19/2/21	Mon 12/4/21	245 days																																		
458		Mobilization of Percussive Drilling Rig	3 days	Fri 19/2/21	Sun 21/2/21	0 days	456,451	459																																
459		Drilling Works by 2 rigs (40nos.)	40 days	Mon 22/2/21	Fri 2/4/21	0 days	458,449	460SS+15 days,461F																																
460		Grouting works (40nos.)	35 days	Tue 9/3/21	Mon 12/4/21	507 days	459SS+15 days																																	
461		Post Drilling (2nos.)	6 days	Sun 4/4/21	Fri 9/4/21	0 days	459FF+7 days	463																																
462		Loading test	42 days	Sat 10/4/21	Fri 21/5/21	245 days																																		
463		Allow for the mini piles to gain sufficient strength of the grout selection of the test pile by AECOM	28 days	Sat 10/4/21	Fri 7/5/21	0 days	461	464																																
464		Setup loading test platform by Kentledge Method	4 days	Sat 8/5/21	Tue 11/5/21	0 days	463	465																																
465		Loading Test Reading (1nos. Of load test pile)	4 days	Wed 12/5/21	Sat 15/5/21	0 days	464	466																																
466		Demobilization of loading test platform	4 days	Sun 16/5/21	Wed 19/5/21	0 days	465	467SS+2 days																																
467		Site Clearance	4 days	Tue 18/5/21	Fri 21/5/21	0 days	466SS+2 days	469,836																																
468		Ramp structure and road works	80 days	Sat 22/5/21	Mon 9/8/21	245 days																																		
469		Cutting mini-pile and provide anchorage reinforcements from mini piles to base slab of the ramp structure (40 nos.)	14 days	Sat 22/5/21	Fri 4/6/21	0 days	467	470																																
470		Construction for ramp structure	43 days	Sat 5/6/21	Sat 17/7/21	0 days	469	471,839,473																																
471		Backfilling to the adjacent road level due to revised drawings (around +11.6mPD)	21 days	Sun 18/7/21	Sat 7/8/21	0 days	470,838	472																																
472		Relocation of site layout	2 days	Sun 8/8/21	Mon 9/8/21	0 days	471	554,710																																
Project: ND/2019/06 Data Date: 2021-11-01 Revised Programme (Rev. 8A)		<div>Task Split Milestone Summary Project Summary Inactive Task Inactive Milestone Inactive Summary Manual Task Duration-only Manual Summary Rollup Manual Summary Start-only Finish-only External Tasks External Milestone Deadline Critical Critical Split Progress Manual Progress Slack</div>																																						
Page 10																																								

Contract No. ND/2019/06
Development of Kwu Tung North and Fanling North New Development Areas, Phase 1:
Reprovisioning of North District Temporary Wholesale Market for Aricultural Products

ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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473		Construction of steel vehicle parapet and thrie bear	21 days	Sun 18/7/21	Sat 7/8/21	390 days	470																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

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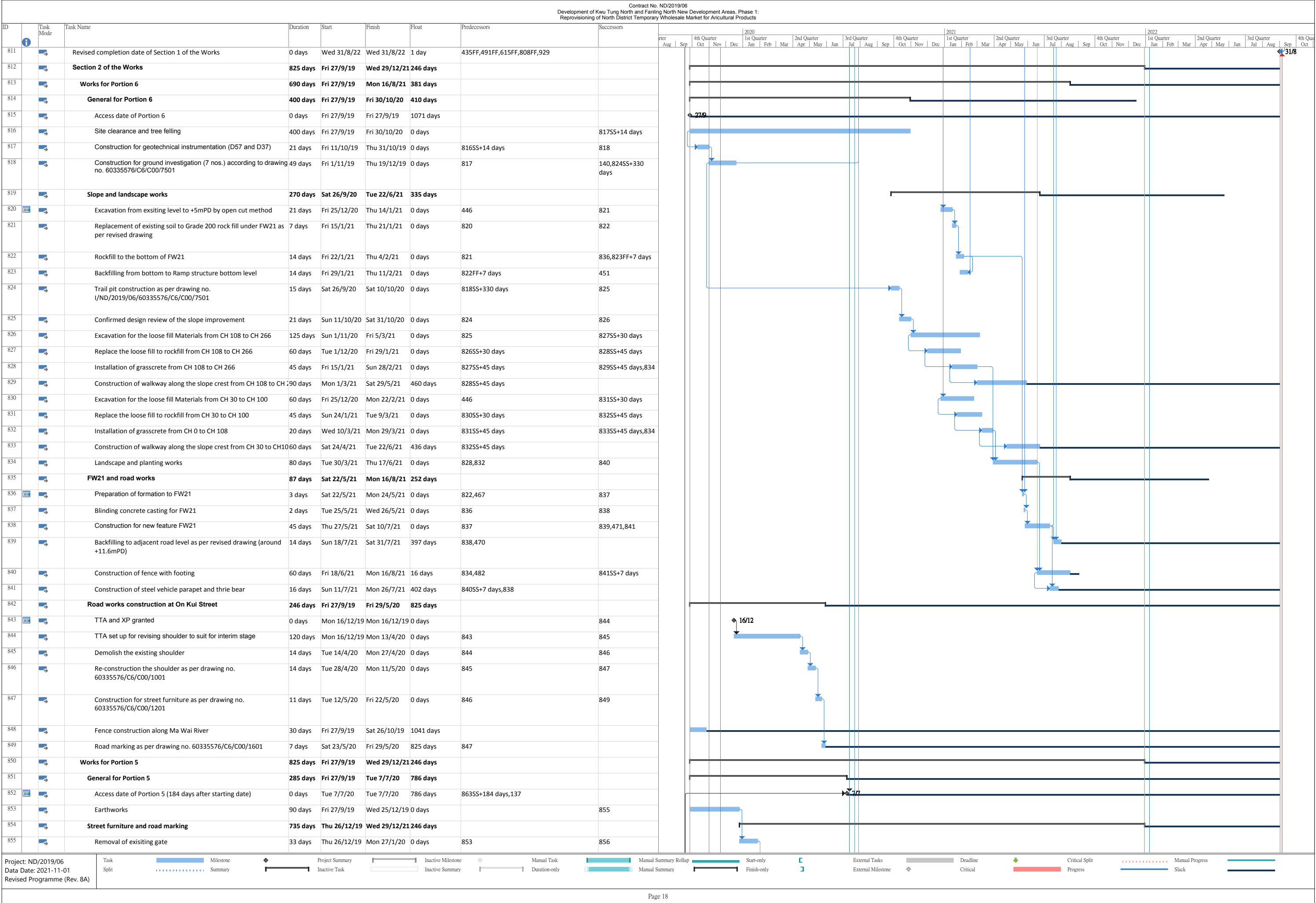
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Contract No. ND/2019/06
Development of Kwu Tung North and Fanling North New Development Areas, Phase 1:
Reprovisioning of North District Temporary Wholesale Market for Aricultural Products

ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter

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Contract No. ND/2019/06
Development of Kwu Tung North and Fanling North New Development Areas, Phase 1:
Reprovisioning of North District Temporary Wholesale Market for Aricultural Products

ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors																																																
856		Construction for Street furniture as per drawing no. 60335576/C6/C00/1202	110 days	Tue 28/1/20	Sat 16/5/20	838 days	855																																																	
857		Road marking as per drawing no. 60335576/C6/C00/1602	14 days	Thu 16/12/21	Wed 29/12/21	0 days	490FF	859FF																																																
858		Orignal Completion date of Section 2 of the Works	0 days	Mon 26/4/21	Mon 26/4/21	494 days																																																		
859		Revised completion date of Section 2 of the Works	1 day	Wed 29/12/21	Wed 29/12/21	246 days	857FF																																																	
860		Section 3 of the Works	292 days	Fri 27/9/19	Tue 14/7/20	301 days																																																		
861		Works at Portion 1	278 days	Fri 27/9/19	Tue 30/6/20	301 days																																																		
862		General for Portion 1	58 days	Fri 27/9/19	Sat 23/11/19	301 days																																																		
863		Access date of Portion 1	0 days	Fri 27/9/19	Fri 27/9/19	0 days		865,864,881,852SS+																																																
864		Site clearance and tree felling	21 days	Sun 27/10/19	Sat 16/11/19	0 days	46,47,863	866,32																																																
865		Construction for fencing for interim stage	21 days	Fri 27/9/19	Thu 17/10/19	0 days	863	868																																																
866		Construction for the insumentation (FLN-2-SF-DH005(P))	7 days	Sun 17/11/19	Sat 23/11/19	93 days	864	899																																																
867		Earthworks / site formation, drainage, fresh water and power suuply works	107 days	Fri 18/10/19	Sat 1/2/20	943 days																																																		
868		Excavation for drainage works	30 days	Fri 18/10/19	Sat 16/11/19	0 days	865	869																																																
869		Drainage pipelaying	21 days	Sun 17/11/19	Sat 7/12/19	0 days	868	870																																																
870		Manhole construction	14 days	Sun 8/12/19	Sat 21/12/19	0 days	869	871																																																
871		Backfilling to the drainage area	21 days	Sun 22/12/19	Sat 11/1/20	0 days	870	872																																																
872		Connection to the existing manhole	7 days	Sun 12/1/20	Sat 18/1/20	0 days	871	873																																																
873		Connection of fresh water supply	7 days	Sun 19/1/20	Sat 25/1/20	0 days	872	874																																																
874		Connection of power supply	7 days	Sun 26/1/20	Sat 1/2/20	943 days	873																																																	
875		Pavments and road marking to the ground for interim stage	65 days	Sat 1/2/20	Sun 5/4/20	359 days																																																		
876		Idling due to COVID-9 infection	30 days	Sat 1/2/20	Sun 1/3/20	0 days		917,877																																																
877		100m bituminous materials on compacted backfill	21 days	Mon 2/3/20	Sun 22/3/20	0 days	876	878																																																
878		Installation of street furniture according to drawing no. 60335576/C6/C00/1201	7 days	Mon 23/3/20	Sun 29/3/20	0 days	877	879,886SS+7 days																																																
879		Construction for road marking and traffic sign as per drawing no. 60335576/C6/C00/1601	7 days	Mon 30/3/20	Sun 5/4/20	879 days	878																																																	
880		Temporary lighting installation for Portion 1 and Portion 2	215 days	Fri 27/9/19	Tue 28/4/20	301 days																																																		
881		Temporary lighting design	120 days	Fri 27/9/19	Fri 24/1/20	0 days	863	882,888																																																
882		Temporary lighting design submission	14 days	Sat 25/1/20	Fri 7/2/20	0 days	881	883																																																
883		Temporary lighting aprvooal	30 days	Sat 8/2/20	Sun 8/3/20	0 days	882	886,884																																																
884		Materials preparation for temporary lighting	14 days	Mon 9/3/20	Sun 22/3/20	0 days	883	885																																																
885		Idling due to COVID-9 infection	28 days	Mon 23/3/20	Sun 19/4/20	0 days	884	886																																																
886		Temporary lighting installation	9 days	Mon 20/4/20	Tue 28/4/20	856 days	883,878SS+7 days,885																																																	
887		Rain Shelter Construction	158 days	Sat 25/1/20	Tue 30/6/20	301 days																																																		
888		Desgin submission for foldable rain shelter	30 days	Sat 25/1/20	Sun 23/2/20	0 days	881	890,889																																																
889		Approval for design submission for foldable rain shelter	21 days	Mon 24/2/20	Sun 15/3/20	44 days	888	891																																																
890		Idling due to COVID-9 infection	65 days	Mon 24/2/20	Tue 28/4/20	0 days	888	917,891																																																
891		Material preparation for foldable rain shelter	14 days	Wed 29/4/20	Tue 12/5/20	0 days	890,889	892																																																
892		Construction for foldable rain shelter	14 days	Wed 13/5/20	Tue 26/5/20	828 days	891																																																	
893		PMI for changing part of foldable rain shelter to fixed rain shelter	0 days	Mon 6/4/20	Mon 6/4/20	0 days		894																																																
894		Design submission for fixed rain shelter	30 days	Mon 6/4/20	Tue 5/5/20	0 days	893	895																																																
895		Approval for design submission for fixed rain shelter	21 days	Wed 6/5/20	Tue 26/5/20	0 days	894	896																																																
896		Materials preparation for fixed rain shelter	14 days	Wed 27/5/20	Tue 9/6/20	0 days	895	897																																																
897		Construction for fixed rain shelter	21 days	Wed 10/6/20	Tue 30/6/20	0 days	896	917SS+14 days																																																
898		Works at Portion 2	141 days	Tue 25/2/20	Tue 14/7/20	779 days																																																		
899		General for Portion 2	7 days	Tue 25/2/20	Mon 2/3/20	887 days	866																																																	
900		Access date for Portion 2 (152 days after starting date)	0 days	Tue 25/2/20	Tue 25/2/20	0 days		901																																																
901		Site clearance and tree felling	7 days	Tue 25/2/20	Mon 2/3/20	0 days	900	903																																																

Project: ND/2019/06
Data Date: 2021-11-01
Revised Programme (Rev. 8A)

Task Split

Milestone Summary

Project Summary Inactive Task

Inactive Milestone Inactive Summary

Manual Task Duration-only

Manual Summary Rollup Manual Summary

Start-only Finish-only

External Tasks External Milestone

Deadline Critical

Critical Split Progress

Manual Progress Slack

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Contract No. ND/2019/06

Development of Kwu Tung North and Fanling North New Development Areas. Phase 1:
Reprovisioning of North District Temporary Wholesale Market for Aricultural Products

ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
902		Underground drainage works	24 days	Tue 3/3/20	Thu 26/3/20	887 days		
903		Excavation for underground drainage	7 days	Tue 3/3/20	Mon 9/3/20	0 days	901	904
904		Underground drainage pipelaying	7 days	Tue 10/3/20	Mon 16/3/20	0 days	903	905
905		Construction of manhole	7 days	Tue 17/3/20	Mon 23/3/20	0 days	904	906
906		Connection to the existing manhole	3 days	Tue 24/3/20	Thu 26/3/20	0 days	905	907
907		Road marking as per drawing no. 60335576/C6/C00/1601	2 days	Fri 27/3/20	Sat 28/3/20	887 days	906	
908		Container office - Modification works	91 days	Wed 15/4/20	Tue 14/7/20	779 days		
909		PMI for container office modification works	0 days	Wed 15/4/20	Wed 15/4/20	0 days		910
910		Desgin submission for contanier office modification works	30 days	Wed 15/4/20	Thu 14/5/20	0 days	909	911
911		Design approval for container office modification works	21 days	Fri 15/5/20	Thu 4/6/20	0 days	910	912
912		Material preparation for contanier office modification works	7 days	Fri 5/6/20	Thu 11/6/20	26 days	911	913
913		Construction of container offices modification works	7 days	Wed 8/7/20	Tue 14/7/20	779 days	912,918	
914		Change of Market Stage	188 days	Sat 1/2/20	Thu 6/8/20	301 days		
915		From Existing Stage to Iterim Stage Arrangement	158 days	Sat 1/2/20	Tue 7/7/20	245 days		
916		Idling due to COVID-9 infection	88 days	Sat 1/2/20	Tue 28/4/20	56 days		917
917		Notice to stall traders for relocation to Interim Market (30 days before the key date)	7 days	Wed 24/6/20	Tue 30/6/20	0 days	916,8975S+14 days,890,876	918
918		Relocation of stall traders from existing NDTWM to Interim Market	7 days	Wed 1/7/20	Tue 7/7/20	0 days	917	922,142,137,920FF,5
919		Original Key Date completion of interim North District Temporary Wholesale Market for Agricultural Products	0 days	Sat 28/3/20	Sat 28/3/20	888 days		
920		Revised Key Date completion of interim North District Temporary Wholesale Market for Agricultural Products	0 days	Tue 7/7/20	Tue 7/7/20	786 days	918FF	
921		Completion of Reinstatement of interim NDTWM	30 days	Wed 8/7/20	Thu 6/8/20	756 days		
922		Carrying out reinstatement works	30 days	Wed 8/7/20	Thu 6/8/20	756 days	918	
923		Fabrication & Installation of Additional Steel Cover	365 days	Wed 1/9/21	Wed 31/8/22	0 days		
924		Design of Additional Steel Cover of Covered Walkway	80 days	Wed 1/9/21	Fri 19/11/21	0 days		925
925		Approval of Design	14 days	Sat 20/11/21	Fri 3/12/21	0 days	924	926
926		Fabrication	120 days	Sat 4/12/21	Sat 2/4/22	0 days	925	927
927		On Site Installation	90 days	Sun 3/4/22	Fri 1/7/22	0 days	926	928
928		E&M and FS Installation	60 days	Sat 2/7/22	Tue 30/8/22	0 days	927	929
929		Inspection of BS Installations including Fire Services Inspection	1 day	Wed 31/8/22	Wed 31/8/22	0 days	928	930,811
930		Handover of the Superstructure of Additional Steel Covered Walkway	1 day	Thu 1/9/22	Thu 1/9/22	0 days	929	

Project: ND/2019/06

Data Date: 2021-11-01

Revised Programme (Rev. 8A)

Task Split

Milestone

Summary

Project Summary

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

External Tasks

External Milestone

Deadline

Critical

Critical Split

Progress

Manual Progress

Slack

Page 20




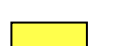
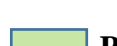



創業工程建設有限公司 NEW CONCEPTS ENGINEERING DEVELOPMENT LTD.

Project: Fanling North new development area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural products

Site Layout Plan

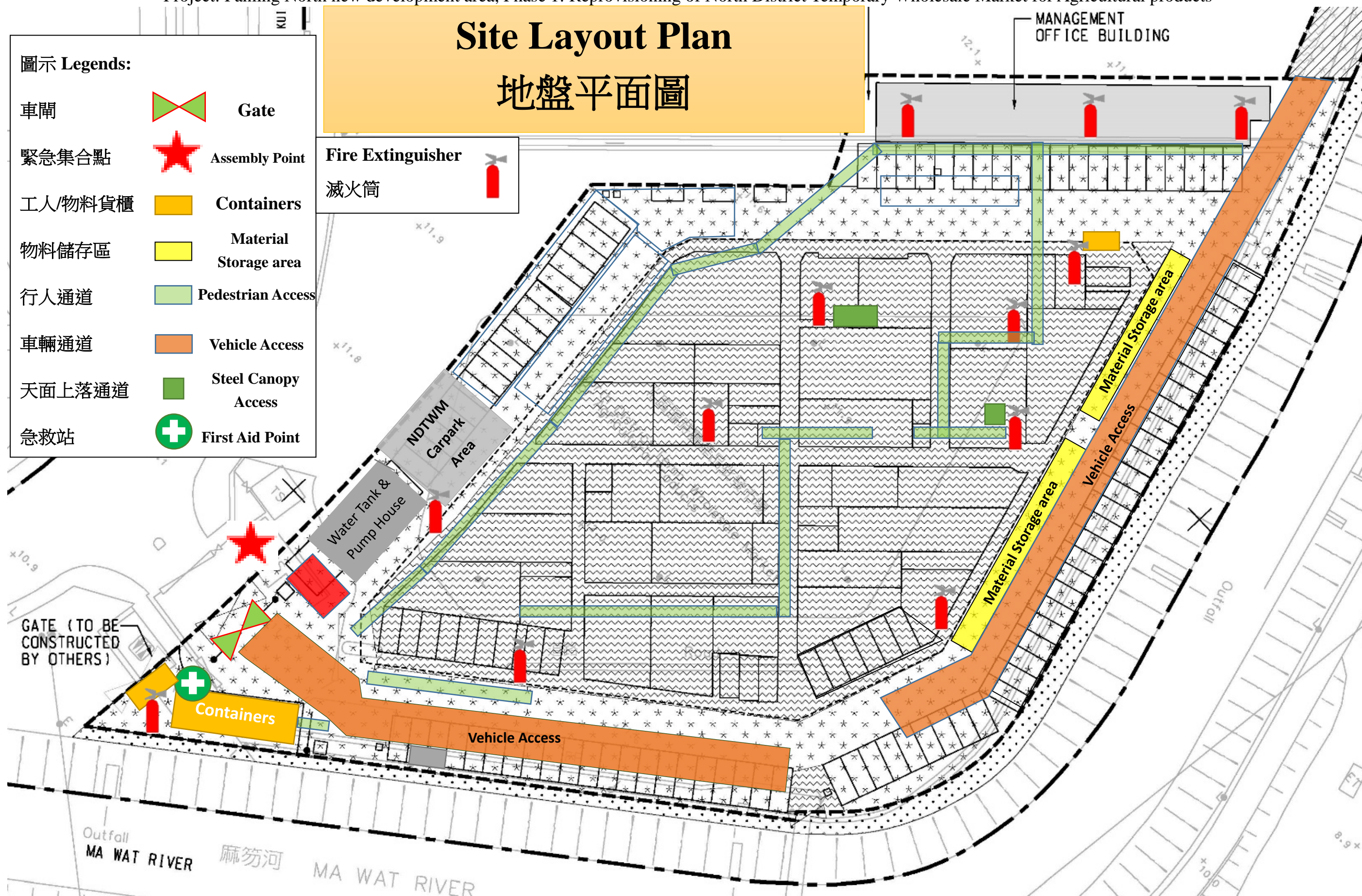
地盤平面圖

圖示 Legends:

- | | | |
|---------|---|-----------------------|
| 車閘 |  | Gate |
| 緊急集合點 |  | Assembly Point |
| 工人/物料貨櫃 |  | Containers |
| 物料儲存區 |  | Material Storage area |
| 行人通道 |  | Pedestrian Access |
| 車輛通道 |  | Vehicle Access |
| 天面上落通道 |  | Steel Canopy Access |
| 急救站 |  | First Aid Point |

Fire Extinguisher

滅火筒



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	2022	2022	2022	2022	2022
						Mar	Apr	May	Jun	Jul
Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works										
Key Dates and Sectional Completion of the Works										
Contractual Sectional Completion of the Works		0	31-Mar-22	31-Mar-22	0					
KDS1020	Section 2- Completion of site formation and infrastructure works in Works Area B	0		31-Mar-22*	0					
Preliminaries, Contractor's Design, Method Statement Submission and Approval										
General Submission		478	30-Dec-20 A	21-Apr-22	619					
PGS1200	Preparation and approval of TTA scheme and traffic impact assessment(PS1.16)	290	30-Dec-20 A	16-Apr-22	-183					
PGS1230	Submission of construction impact assessment (CIA) (PS 1.108)	45	08-Mar-22	21-Apr-22	619					
Contractor's Design Submission and Approval		245	09-Oct-21 A	19-Aug-22	251					
Permanent Works Design		122	31-Mar-22	19-Aug-22	251					
PWD1030	Design for irrigation system	75	31-Mar-22	25-Jun-22	132					
PWD1040	Design for noise barrier panel	90	07-May-22	19-Aug-22	251					
Major Temporary Works Design		170	09-Oct-21 A	24-May-22	70					
TWD1030	ELS design for pipe laying works on Ma Sik Road	60	09-Oct-21 A	24-Mar-22	-124					
TWD1035	Time risk allowance for ELS design for pipe laying works on Ma Sik Road	7	25-Mar-22	01-Apr-22	-124					
TWD1050	ELS design for construction of foundation of noise barrier	60	08-Mar-22	16-May-22	70					
TWD1055	Time risk allowance for ELS design for construction of foundation of noise barrier	7	17-May-22	24-May-22	70					
TWD1060	Formwork design for construction of noise barrier	45	24-Mar-22	14-May-22	71					
TWD1065	Time risk allowance for Formwork design for construction of noise barrier	7	16-May-22	23-May-22	71					
Major Construction Works Method Statement		60	29-Dec-21 A	22-Apr-22	97					
MS1580	Method statement submission and approval for construction of noise barrier	60	29-Dec-21 A	22-Apr-22	97					
Tendering and Procurement for Major Subcontractor		250	26-Mar-21 A	30-Mar-22	251					
TDS1070	Subletting for road works	120	26-Mar-21 A	24-Mar-22	96					
TDS1110	Subletting for irrigation system works	100	05-May-21 A	30-Mar-22	132					
TDS1140	Subletting for supply and installation of noise barrier post and panels	30	01-Dec-21 A	30-Mar-22	251					
Tree Works and Submission of the tree survey report and tree preservation and removal prc										
Tree Works in Area FL-G14.1		36	08-Mar-22	22-Apr-22	10					
TWS1170	Tree felling works (FL-G14.1)	36	08-Mar-22	22-Apr-22	10					
Tree Works on Ma Sik Road		101	08-Mar-22	16-Jun-22	263					
TWS1200	Tree felling works (Ma Sik Road) (before Noise Barrier Construction)	80	08-Mar-22	16-Jun-22	215					
TWS1210	Tree transplanting works at the side of road (9nos) (before noise barrier construction)	80	08-Mar-22	26-May-22	267					
Section 1- Site Formation and Infrastructure Works in Area A										
Site Formation (Portion I- Area A 11042m2)		230	09-Aug-21 A	04-Jul-22	445					
Remaining Site Formation Works after trees felled in FL-G14.1 & FL-G14.2		230	09-Aug-21 A	04-Jul-22	445					
S1-SF1011	Erection of hoarding along the site boundary (326m)	100	09-Aug-21 A	18-May-22	483					
S1-SF1051	Ground investigation works (2nos) and trial pit(2nos) (PMI005)	80	30-Oct-21 A	27-Apr-22	87					
S1-SF1185	Removal of temporary works, haul road and temporary accesses	30	23-Apr-22	30-May-22	445					
S1-SF1190	Construction of open channel (45m)	28	31-May-22	04-Jul-22	445					
Site Formation (Portion II- Area A 21900m2)		154	03-Jan-22 A	14-Jul-22	61					
Site Formation Works in South Part of Portion II		154	03-Jan-22 A	14-Jul-22	61					
S1-SF1415	Site formation works part 2 (12577m3) and Removal of temporary works, haul road and temporary accesses	75	03-Jan-22 A	06-Apr-22	61					
S1-SF1417	Site formation works part 3 (12577m3) and Removal of temporary works, haul road and temporary accesses	78	07-Apr-22	14-Jul-22	61					
Site Formation (Portion III- Area A 4900m2)		81	08-Mar-22	17-Jun-22	458					
S1-SF1450	Erection of hoarding along the site boundary (173m)	30	08-Mar-22	12-Apr-22	134					
S1-SF1546	Removal of existing feature 3SW-A/F85	15	23-Apr-22	12-May-22	173					
S1-SF1640	Site formation works(1000m3) and Removal of temporary works, haul road and temporary accesses	15	23-Apr-22	12-May-22	128					
S1-SF1650	Removal of temporary works, haul road and temporary accesses	30	13-May-22	17-Jun-22	458					
Site Formation (Portion IV- Area A 3800m2)		40	25-Nov-21 A	11-Apr-22	135					
S1-SF1765	Erection of hoarding along the site boundary (515m)	40	27-Jan-22 A	11-Apr-22	135					
S1-SF1780	Site clearance	20	30-Dec-21 A	18-Mar-22	154					
S1-SF1800	Construction of haul road	21	23-Dec-21 A	18-Mar-22	154					
S1-SF1810	Ground investigation works (2nos) (PMI005)	21	25-Nov-21 A	18-Mar-22	104					
Box Culvert BC3 and Outfall 10		275	10-Nov-21 A	11-Nov-22	-158					
Box Culvert BC3 (CH168 to CH216)		57	07-Jan-22 A	30-Mar-22	-158					
S1-BC0880	Construction of the box culvert side wall and top slab Bay 18 (CH214 to CH216)	20	08-Mar-22	30-Mar-22	-158					
S1-BC0890	Backfilling from Bay 15 to Bay 18 (4620m3)	31	07-Jan-22 A	30-Mar-22	-158					
Box Culvert BC3 (CH0 to CH168)		275	10-Nov-21 A	11-Nov-22	-158					
S1-BC0930	Excavation and construction of the box culvert Bay 11 (CH120 to CH132)	30	17-Nov-21 A	24-Mar-22	-153					
S1-BC0940	Backfilling from Bay 11 to Bay 14 (4620m3)	31	31-Mar-22	12-May-22	-158					
S1-BC0950	Excavation and construction of the box culvert Bay 10 (CH108 to CH120)	30	10-Nov-21 A	22-Apr-22	-158					
S1-BC0960	Excavation and construction of the box culvert Bay 9 (CH96 to CH108)	30	12-Nov-21 A	12-May-22	-158					
S1-BC0970	Excavation and construction of the box culvert Bay 8 (CH84 to CH96)	30	12-Nov-21 A	30-May-22	-158					
S1-BC0980	Excavation and construction of the box culvert Bay 7 (CH72 to CH84)	30	03-Dec-21 A	17-Jun-22	-158					
S1-BC1000	Excavation and construction of the box culvert Bay 6 (CH60 to CH72)	30	04-Dec-21 A	07-Jul-22	-158					
S1-BC1010	Excavation and construction of the box culvert Bay 5 (CH48 to CH60)	30	06-Dec-21 A	25-Jul-22	-158					
S1-BC1020	Excavation and construction of the box culvert Bay 4 (CH36 to CH48)	30	08-Dec-21 A	11-Aug-22	-158					
S1-BC1030	Excavation and construction of the box culvert Bay 3 (CH24 to CH36)	30	10-Dec-21 A	29-Aug-22	-158					
S1-BC1050	Excavation and construction of the box culvert Bay 2 (CH12 to CH24)	30	11-Jan-22 A	19-Oct-22	-158					
S1-BC1060	Excavation and construction of the box culvert Bay 1 and inspection chamber (CH0 to CH12)	40	11-Jan-22 A	11-Nov-22	-158					
Noise Barrier NB63		124	19-Feb-22 A	05-Aug-22	294					
Noise Barrier NB63(Bay 18 to Bay 21)		124	19-Feb-22 A	11-Jul-22	316					
S1-NB1260	Pre-drilling works	10	19-Feb-22 A	18-Mar-22	114					
S1-NB1265	Installation of Mini Piles(Bay18-Bay21 18 nos) (CSD) (Original:24nos H-pile,36days)	18	19-Mar-22	09-Apr-22	118					
S1-NB1275	Excavation and construction of base slab (Bay18-Bay21)	42	11-Apr-22	04-Jun-22	296					
S1-NB1280	Construction of wall stem(Bay18-Bay21)	30	06-Jun-22	11-Jul-22	316					
Noise Barrier NB63(Bay 7 to Bay 17)		112	19-Mar-22	05-Aug-22	195					

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



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



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

Page : 1 of 2

Date	Revision	Checked	Approved
15-Mar-22	A	LDS	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 Hours	2022	2022	2022	2022	2022
						Mar	Apr	May	Jun	Jul
S1-NB1160	Pre-drilling works	22	19-Mar-22	14-Apr-22	114		Pre-drilling works			
S1-NB1180	Installation of Mini Piles (Bay7-Bay12 16 nos) (CSD) (Original:30nos H-pile,45days)	20	19-Apr-22	13-May-22	114			Installation of Mini Piles (Bay7-Bay12 16 nos) (CSD) (Original:30nos H-pile,45days)		
S1-NB1190	Installation of Mini Piles (Bay13-Bay17 20 nos) (CSD) (Original:36nos H-pile,54days)	24	14-May-22	11-Jun-22	241				Installation of Mini Piles (Bay13-Bay17 20 nos) (CSD) (Original:36nos H-pile,54days)	
S1-NB1200	Installation of sheet piles (Bay7-Bay12)	50	08-Jun-22	05-Aug-22	114					
Noise Barrier NB63(Bay 1 to Bay 6)		14	27-May-22	13-Jun-22	218					
S1-NB1020	UU detection and trial pit	14	27-May-22	13-Jun-22	218				UU detection and trial pit	
Drainage, Sewerage, Waterworks and Road Works		523	02-Oct-21 A	27-Aug-22	308					
Along Ma Sik Road		80	19-Apr-22	25-Jul-22	-148					
TTA -Closure of Ma Sik Road Eastbound Slow Lane between Wo Tai Street and Site Boundary		80	19-Apr-22	25-Jul-22	-148					
S1-CS1240	Implement TTA	10	19-Apr-22	29-Apr-22	-148		Implement TTA			
S1-CS1260	UU detection and trial pit	10	30-Apr-22	13-May-22	-148			UU detection and trial pit		
S1-CS1265	Sheetpile works and excavation	60	14-May-22	25-Jul-22	-148					
Along Proposed Cycletrack and Footpath		523	02-Oct-21 A	27-Aug-22	308					
Works in Portion I		141	01-Mar-22 A	27-Aug-22	180					
S1-CS1460	Irrigation system (utility service by others)(CT71 Ch369.376 to Ch429 total 59m)	20	23-Apr-22	18-May-22	10			Irrigation system (utility service by others)(CT71 Ch369.376 to Ch429 total 59m)		
S1-CS1465	Fresh water main works (CT71 Ch369.376 to Ch429 total 59m)	20	23-Apr-22	18-May-22	180			Fresh water main works (CT71 Ch369.376 to Ch429 total 59m)		
S1-CS1468	Flushing water main works (CT71 Ch369.376 to Ch429 total 59m)	20	23-Apr-22	18-May-22	175			Flushing water main works (CT71 Ch369.376 to Ch429 total 59m)		
S1-CS1472	Irrigation system (CT73 Ch100 to Ch400 total 300m)	85	19-May-22	27-Aug-22	10					
S1-CS1473	Fresh water main works (CT73 Ch100 to Ch400 total 300m)	85	19-May-22	27-Aug-22	180					
S1-CS1474	Flushing water main works (CT73 Ch100 to Ch400 total 300m)	85	19-May-22	27-Aug-22	175					
S1-CS1475	U-Channel along the Cycletrack (CT73 Ch100 to Ch400 total 300m)	85	19-May-22	27-Aug-22	10					
S1-CS1487	Drainage work (4nos Manholes) (utility service by others)(CT74 158m)	80	01-Mar-22 A	23-May-22	91		Drainage work (4nos Manholes) (utility service by others)(CT74 158m)			
Works in Portion III(CT76 Ch100 to Ch298.277)		461	02-Oct-21 A	13-Aug-22	320					
S1-CS1570	Drainage work(3nos Manhole and 200m 1500m pipe) (CE027 Original:1nos Manhole)	80	02-Oct-21 A	25-May-22	320			Drainage work(3nos Manhole and 200m 1500m pipe) (CE027 Original:1nos Manhole)		
S1-CS1580	Irrigation system (utility service by others)(198m)	67	26-May-22	13-Aug-22	320					
S1-CS1590	Fresh water main works (198m)	67	26-May-22	13-Aug-22	320					
S1-CS1600	Flushing water main works (198m)	67	26-May-22	13-Aug-22	320					
Section 2- Site Formation and Infrastructure Works in Area B		35	31-May-22	12-Jul-22	-119					
Site Formation and Infrastructure Works in Area B1 & B2		35	31-May-22	12-Jul-22	-119					
Site Formation Works after trees felled in FL-G14.9		35	31-May-22	12-Jul-22	-119					
S2-SF2380	Construction of open channel (53m)	35	31-May-22*	12-Jul-22	-119					
Section 3- Site Formation and Infrastructure Works in Area C		186	05-Nov-21 A	28-Jul-22	-19					
Site Formation and Infrastructure Works in Portion I Area C (13990m2)		75	05-Nov-21 A	29-Apr-22	-19					
Site Formation Works after trees felled in FL-G14.7 partial and FL-G14.2		75	05-Nov-21 A	29-Apr-22	-19					
S3-SF1120	Site formation works and Removal of temporary works,haul road and temporary accesses	75	05-Nov-21 A	29-Apr-22	-19		Site formation works and Removal of temporary works,haul road and temporary accesses			
Site Formation and Infrastructure Works in Portion IV Area C (10730m2)		186	09-Nov-21 A	28-Jul-22	-19					
S3-SF1195	Site clearance	25	09-Nov-21 A	24-Mar-22	-13		Site clearance			
S3-SF1200	Construction of haul road	21	25-Mar-22	22-Apr-22	-13		Construction of haul road			
S3-SF1250	Site formation works and Removal of temporary works,haul road and temporary accesses	30	30-Apr-22	07-Jun-22	-19			Site formation works and Removal of temporary works,haul road and temporary accesses		
S3-SF1260	Construction of open channel (303m)	43	08-Jun-22	28-Jul-22	-19					
Section 4- Site Formation and Infrastructure Works in Area D		164	04-Feb-22 A	22-Jul-22	10					
S4-SF1025	Diversion of existing footpath	60	08-Feb-22 A	27-Apr-22	10		Diversion of existing footpath			
S4-SF1030	Diversion of existing utilities and services (Highway Roadlight)	60	08-Feb-22 A	27-Apr-22	10		Diversion of existing utilities and services (Highway Roadlight)			
S4-SF1040	Tree felling works (FL-G 14.4 & FL-G 14.5)	40	09-Feb-22 A	18-Mar-22	20		Tree felling works (FL-G 14.4 & FL-G 14.5)			
S4-SF1050	Site clearance	40	11-Feb-22 A	12-Apr-22	20		Site clearance			
S4-SF1120	Site formation works(8218m3) and Removal of temporary works,haul road and temporary accesses	80	04-Feb-22 A	22-Jul-22	10					
Section 5- Site Formation and Infrastructure Works in Area E and Remainder of the Works		226	08-Nov-21 A	20-Aug-22	64					
Road L1		226	08-Nov-21 A	20-Aug-22	21					
Road L1 in Portion I (P700 CH 175 to CH245)		147	05-Jan-22 A	11-Jul-22	22					
S5-RD1040	Construction of drainage (5nos Manholes 166m)	70	05-Jan-22 A	04-May-22	52			Construction of drainage (5nos Manholes 166m)		
S5-RD1042	Construction of sewerage (2nos Manholes)	70	08-Mar-22	04-Jun-22	22			Construction of sewerage (2nos Manholes)		
S5-RD1045	Construction of Irrigation system (168m)	70	13-Apr-22	11-Jul-22	22					
S5-RD1060	Fresh water main works (168m)	70	13-Apr-22	11-Jul-22	22					
S5-RD1070	Flushing water main works (168m)	70	13-Apr-22	11-Jul-22	22					
Road L1 in Portion IV (P600 CH 194 to CH393, P700 CH100 to CH175)		216	08-Nov-21 A	09-Aug-22	31					
S5-RD1148	Diversion of existing utilities and services (Village lighting removal works)	60	08-Feb-22 A	27-Apr-22	31		Diversion of existing utilities and services (Village lighting removal works)			
S5-RD1150	Site clearance after tree felling works (FL-G14.7)	14	08-Mar-22	23-Mar-22	57		Site clearance after tree felling works (FL-G14.7)			
S5-RD1160	Ground investigation works(2nos) and Trial pit (2nos) (PMI005)	35	08-Nov-21 A	28-Mar-22	53		Ground investigation works(2nos) and Trial pit (2nos) (PMI005)			
S5-RD1177	Site formation works	30	09-Nov-21 A	08-Apr-22	59		Site formation works			
S5-RD1180	Construction of drainage (17nos Manholes)	85	28-Apr-22	09-Aug-22	31					
Road L1 in Portion V (P600 CH 100 to CH194)		159	11-Jan-22 A	20-Aug-22	-162					
S5-RD1275	Site clearance (after tree felled in FL-G14.3)	14	11-Jan-22 A	15-Mar-22	-34		Site clearance (after tree felled in FL-G14.3)			
S5-RD1278	Diversion of existing utilities and services (Village lighting removal works)	50	08-Feb-22 A	27-Apr-22	-212		Diversion of existing utilities and services (Village lighting removal works)			
S5-RD1315	Site formation works	30	28-Apr-22	04-Jun-22	-212			Site formation works		
S5-RD1345	Construction of drainage works (8nos Manholes)	80	18-May-22	20-Aug-22	-212					
Road L2		90	08-Feb-22 A	28-Jun-22	3					
S5-RD1485	Diversion of existing utilities and services (Village lighting removal works)	60	08-Feb-22 A	27-Apr-22	3		Diversion of existing utilities and services (Village lighting removal works)			
S5-RD1495	Site formation works	50	28-Apr-22	28-Jun-22	3			Site formation works		
Noise Barrier NB62		110	10-Feb-22 A	16-Aug-22	68					
S5-NB1040	Installation of pre-bored Mini Piles (Bay 1-Bay 6 28nos)(2 rigs) (Original:36nos H-pile,54days)	28	10-Feb-22 A	09-Apr-22	101		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	25-May-22	16-Aug-22	68					
Section 6-Completion of Preservation And Protection Of Existing Trees		1146	31-Aug-20 A	16-Jul-24	-158					
S6-CS1000	Preservation and protection of trees	1146	31-Aug-20 A	16-Jul-24	-158					

Portion	Legend
I	
II	
III	
IV	
V	

PORITION II

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

PORITION I

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

PORITION IV

1. Site Clearance
2. Demolition of villager's houses
3. Drainage works
4. Sewerage works
5. C&D waste disposal
6. Filling works
7. Tree felling / Disposal of yard waste
8. Erection of site hoarding
9. G.I. works
10. Mini piling works

PORITION V

1. Site Clearance
2. C&D waste disposal
3. Demolition of villager's houses
4. Mini piling works
5. Tree felling / Disposal of yard waste
6. G.I. Works
7. Construction of noise barrier

PORITION III

1. Drainage works
2. Sewerage works

ND/2019/07

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

Working Activities (Feb 2022 – Apr 2022)

APPENDIX B
ACTION AND LIMIT LEVELS

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

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

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

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

Table B-3 Action and Limit Levels for Construction Noise

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

Noted:

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

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

Table B-4.1 Action and Limit Levels for Water Quality Monitoring⁽¹⁾

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

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

Remarks:

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

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

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

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

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

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

Table B-4.2 Summary of Baseline Water Quality Monitoring Results (KTN NDA)⁽¹⁾

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

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

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

Note:

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

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

Parameters	Action Level	Limit Level
River Beas (SYR-IS1)		
DO in mg/L (depth average) ^[1]	SYR-IS1: <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.:	36237
Date of Issue:	2022-01-10
Date Received:	2022-01-07
Date Tested:	2022-01-07
Date Completed:	2022-01-10
Next Due Date:	2022-03-09

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)	1.121
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PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TSP - Total Suspended Particulates (1 hr Dust Meter)

Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-01	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23807	2203
Calibration Date:	7-Jan-22	7-Jan-22
Location:	Wellab Office (Calibration Room)	

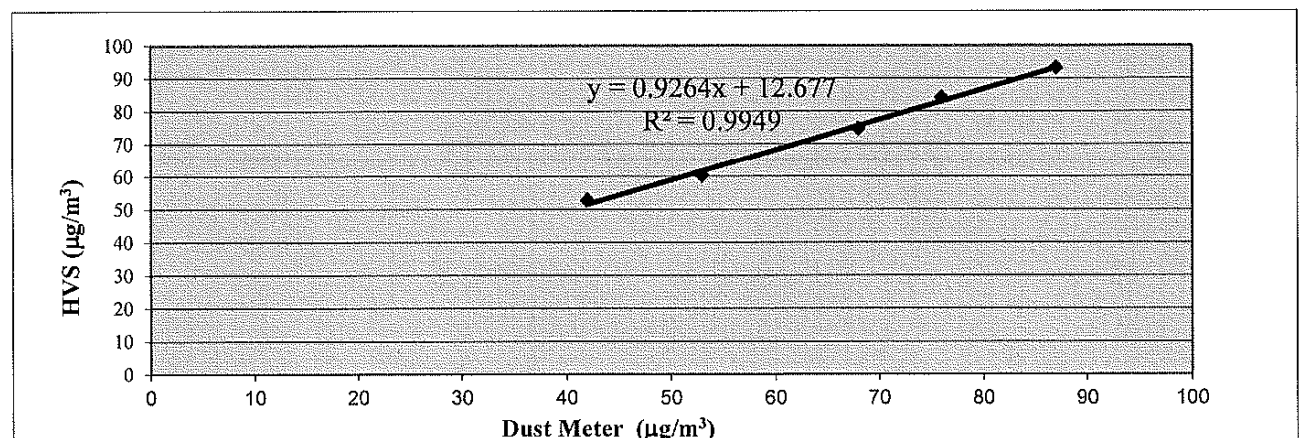
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	42	53
2	53	60
3	68	75
4	76	84
5	87	93
Average	65.2	73.1

By Linear Regression of Y on X
 Slope, $m_w =$ 0.9264 Intercept, $b_w =$ 12.6773
 Correlation coefficient* = 0.9974

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	73.1
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	65.2
Measuring time, (min)	60

Set Correlation Factor, SCF
 $\text{SCF} = [K = \text{High Volume Sampler} / \text{Dust Meter, } (\mu\text{g}/\text{m}^3)]$ 1.121



QC Reviewer: LZZ MMW HZZ Signature: hvi Date: 7/1/2022

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)	

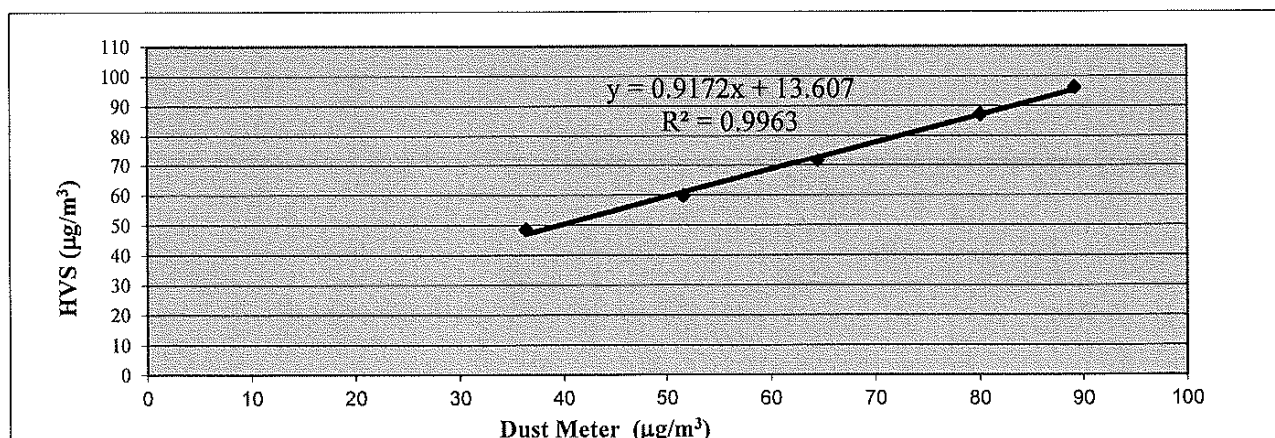
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	36	48
2	52	60
3	65	72
4	80	87
5	89	96
Average	64.4	72.6

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: GB MAN HBR Signature: Le 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.:	36237A
Date of Issue:	2022-01-10
Date Received:	2022-01-07
Date Tested:	2022-01-07
Date Completed:	2022-01-10
Next Due Date:	2022-03-09

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

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

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.135
-------------------------	-------

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TSP - Total Suspended Particulates (1 hr Dust Meter)

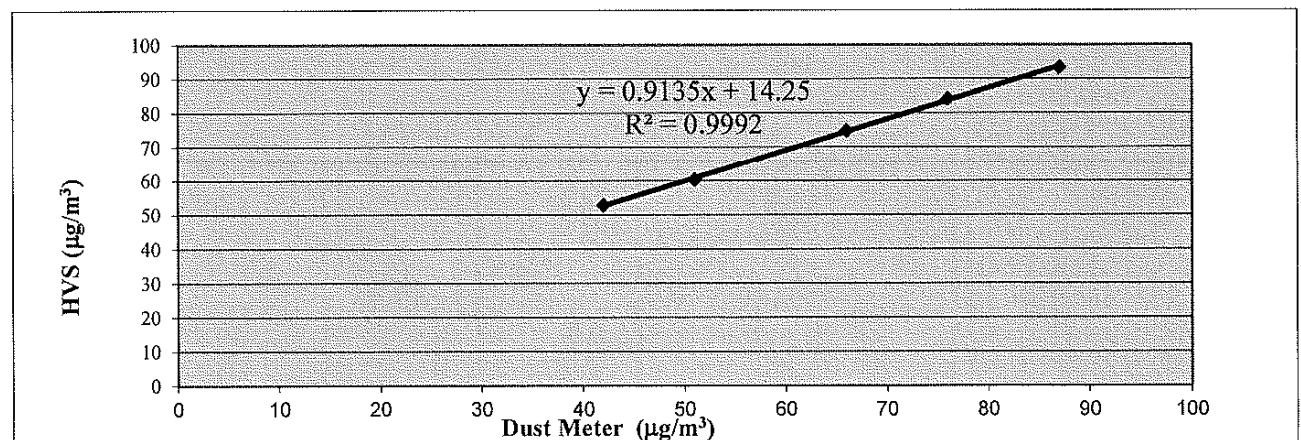
Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-02	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23808	2203
Calibration Date:	7-Jan-22	7-Jan-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	42	53
2	51	60
3	66	75
4	76	84
5	87	93
Average	64.4	73.1
<p>By Linear Regression of Y on X</p> <p>Slope, $m_w =$ <u>0.9135</u> Intercept, $b_w =$ <u>14.2498</u></p> <p>Correlation coefficient* = <u>0.9996</u></p>		

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	73.1
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	64.4
Measuring time, (min)	60
<p>Set Correlation Factor, SCF</p> <p>SCF = $[K = \text{High Volume Sampler} / \text{Dust Meter, } (\mu\text{g}/\text{m}^3)]$ <u>1.135</u></p>	



QC Reviewer: LEE Maw Hui Signature: hli Date: 7/1/2022

TEST REPORT

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

Test Report No.:	36404A
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.	: X23808
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-02

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.116
-------------------------	-------

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-02	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23808	2203
Calibration Date:	4-Mar-22	4-Mar-22
Location:	Wellab Office (Calibration Room)	

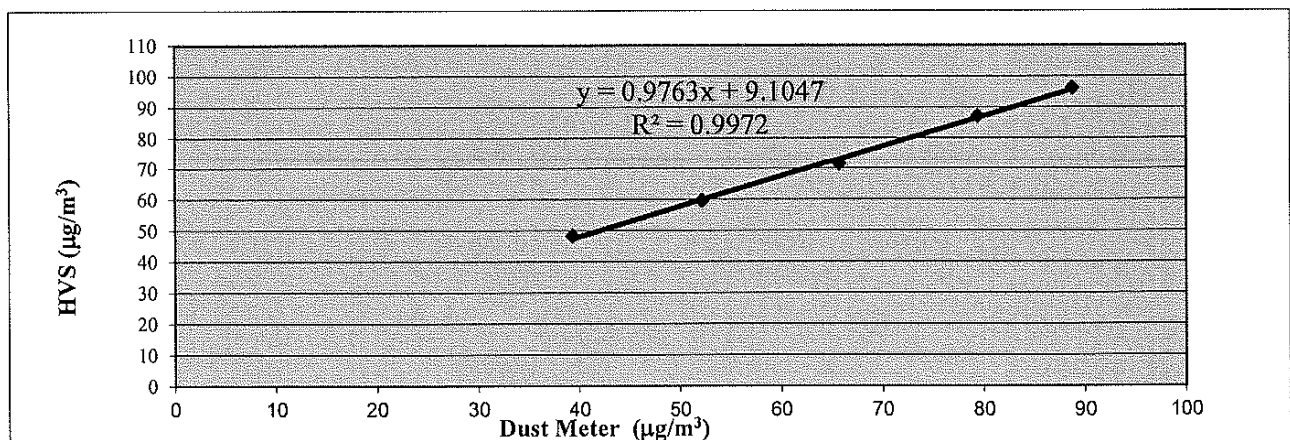
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	39	48
2	52	60
3	66	72
4	79	87
5	89	96
Average	65.1	72.6

By Linear Regression of Y on X
 Slope, mw = 0.9763 Intercept, bw = 9.1047
 Correlation coefficient* = 0.9986

*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 ($\mu\text{g}/\text{m}^3$)	65.1
Measuring time, (min)	60

Set Correlation Factor, SCF
 SCF = [K=High Volume Sampler / Dust Meter, ($\mu\text{g}/\text{m}^3$)] 1.116



QC Reviewer: MAN H22 Signature: Le. Date: 4/2/22

TEST REPORT

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

Test Report No.:	36237B
Date of Issue:	2022-01-10
Date Received:	2022-01-07
Date Tested:	2022-01-07
Date Completed:	2022-01-10
Next Due Date:	2022-03-09

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)	1.088
-------------------------	-------

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:	7-Jan-22	7-Jan-22
Location:	Wellab Office (Calibration Room)	

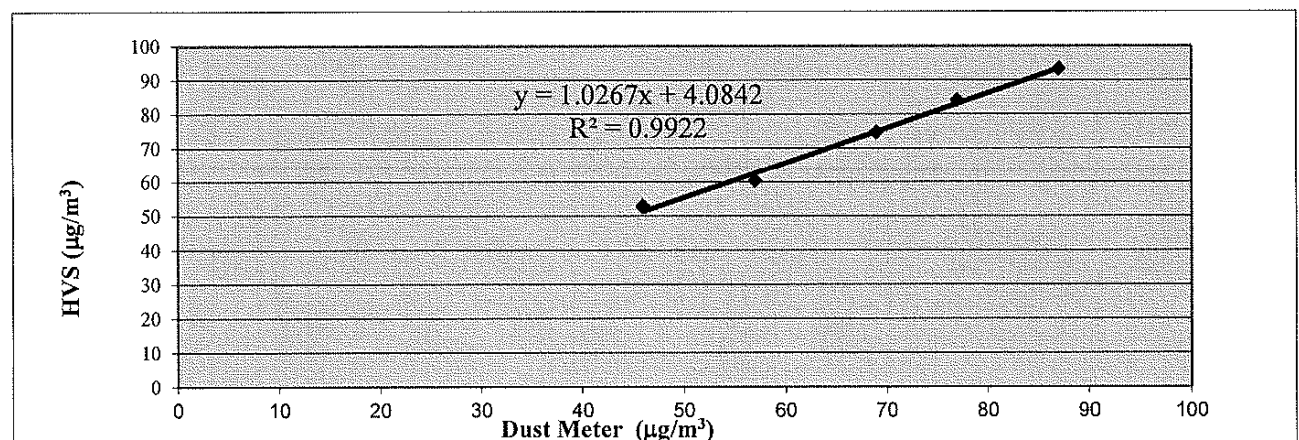
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	46	53
2	57	60
3	69	75
4	77	84
5	87	93
Average	67.2	73.1

By Linear Regression of Y on X
 Slope, mw = 1.0267 Intercept, bw = 4.0842
 Correlation coefficient* = 0.9961

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	73.1
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	67.2
Measuring time, (min)	60

Set Correlation Factor, SCF
 SCF = [K=High Volume Sampler / Dust Meter, ($\mu\text{g}/\text{m}^3$)] 1.088



QC Reviewer: LEE MAN HEE Signature: Lee Date: 7/1/2022

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)	

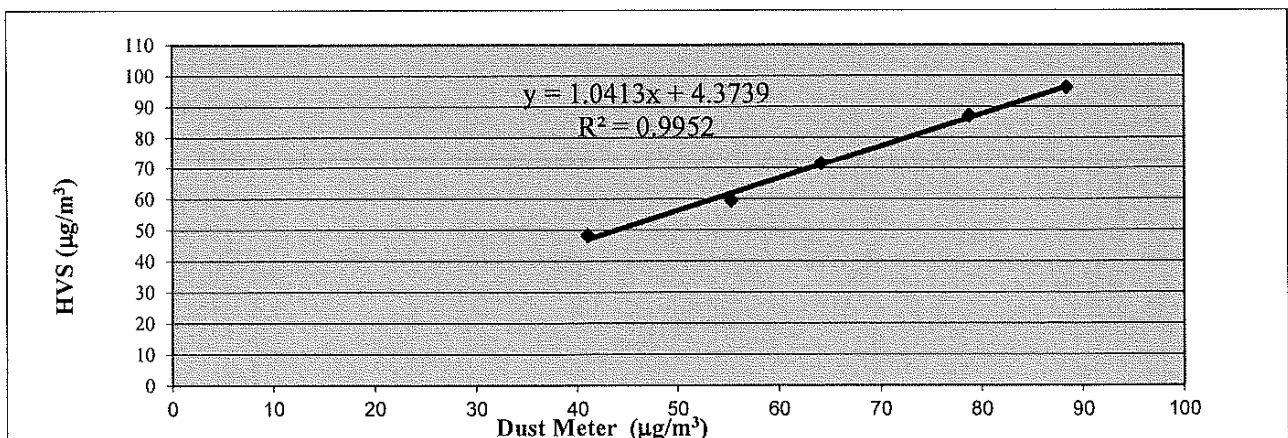
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	41	48
2	55	60
3	64	72
4	79	87
5	88	96
Average	65.6	72.6

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.:	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)	

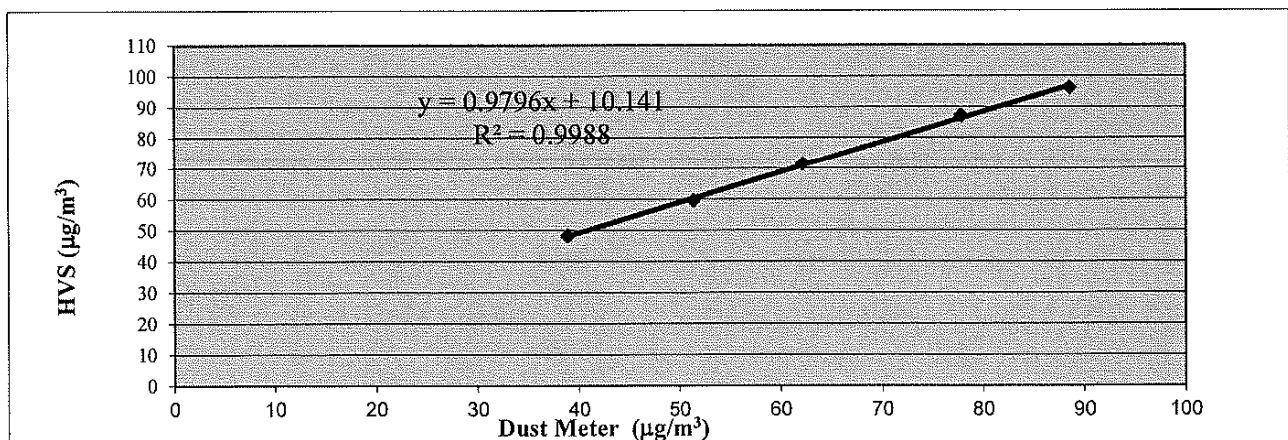
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	39	48
2	51	60
3	62	72
4	78	87
5	89	96
Average	63.8	72.6

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.:	36403
Date of Issue:	2022-02-28
Date Received:	2022-02-26
Date Tested:	2022-02-26
Date Completed:	2022-02-28
Next Due Date:	2022-04-27

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)	1.096
-------------------------	-------

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:	26-Feb-22	26-Feb-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	31	36
2	40	48
3	58	62
4	81	88
5	88	92
Average	59.6	65.3

By Linear Regression of Y on X

Slope, mw = 0.9831

Intercept, bw = 6.7051

Correlation coefficient* = 0.9972

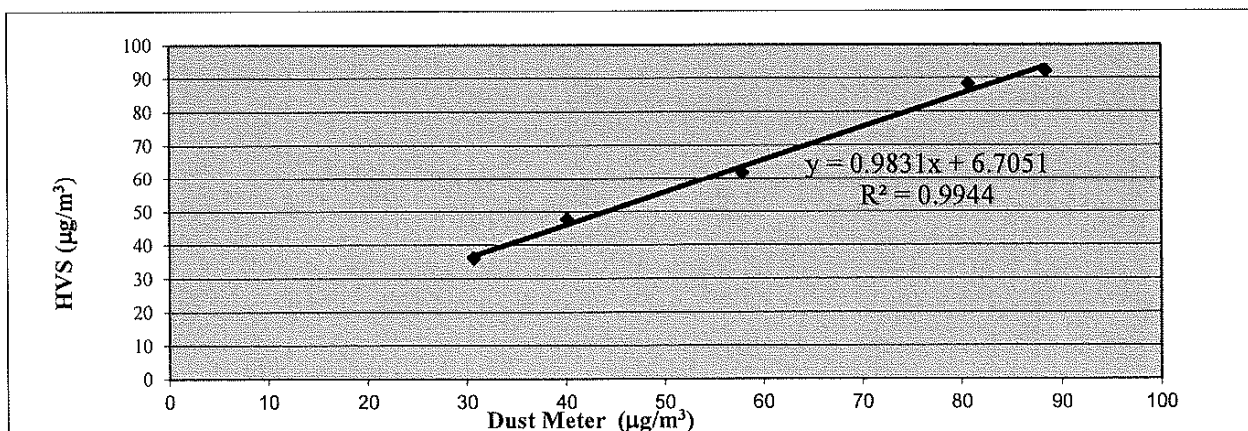
*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	65.3
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	59.6
Measuring time, (min)	60

Set Correlation Factor, SCF

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

1.096



QC Reviewer: LEE MAN HEE

Signature: hm

Date: 26/2/2022

TEST REPORT

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

Test Report No.: 36403A
Date of Issue: 2022-02-28
Date Received: 2022-02-26
Date Tested: 2022-02-26
Date Completed: 2022-02-28
Next Due Date: 2022-04-27

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)	1.141
-------------------------	-------

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TSP - Total Suspended Particulates (1 hr Dust Meter)

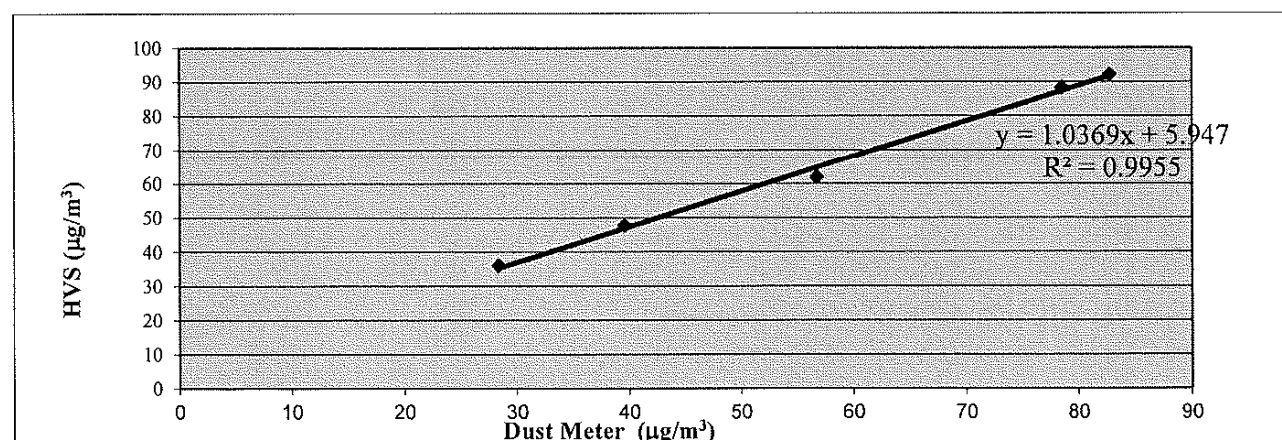
Calibration Report

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:	26-Feb-22	26-Feb-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	28	36
2	40	48
3	57	62
4	79	88
5	83	92
Average	57.2	65.3
<p>By Linear Regression of Y on X</p> <p>Slope, $m_w =$ <u>1.0369</u> Intercept, $b_w =$ <u>5.9470</u></p> <p>Correlation coefficient* = <u>0.9977</u></p>		

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	65.3
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	57.2
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>1.141</u></p>	



QC Reviewer: LEE MAN HEE Signature: hee Date: 26/2/2022

TEST REPORT

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

Test Report No.:	36237D
Date of Issue:	2022-01-10
Date Received:	2022-01-07
Date Tested:	2022-01-07
Date Completed:	2022-01-10
Next Due Date:	2022-03-09

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)	1.097
-------------------------	-------

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TSP - Total Suspended Particulates (1 hr Dust Meter)

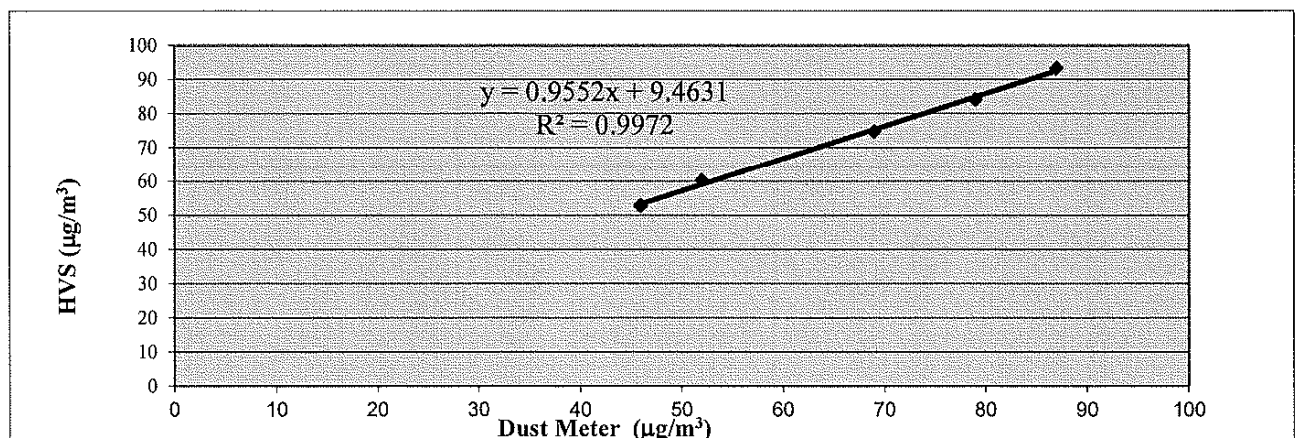
Calibration Report

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:	7-Jan-22	7-Jan-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	53
2	52	60
3	69	75
4	79	84
5	87	93
Average	66.6	73.1
<p>By Linear Regression of Y on X</p> <p>Slope, $m_w =$ <u>0.9552</u> Intercept, $b_w =$ <u>9.4631</u></p> <p>Correlation coefficient* = <u>0.9986</u></p>		

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	73.1
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	66.6
Measuring time, (min)	60
<p>Set Correlation Factor, SCF</p> <p>SCF = $[K = \text{High Volume Sampler} / \text{Dust Meter, } (\mu\text{g}/\text{m}^3)]$ <u>1.097</u></p>	



QC Reviewer:

LEE

MMA

H62

Signature:

hi

Date:

7/1/2022

TEST REPORT

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

Test Report No.:	36403B
Date of Issue:	2022-02-28
Date Received:	2022-02-26
Date Tested:	2022-02-26
Date Completed:	2022-02-28
Next Due Date:	2022-04-27

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)	1.155
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PREPARED AND CHECKED BY:

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



PATRICK TSE
General Manager

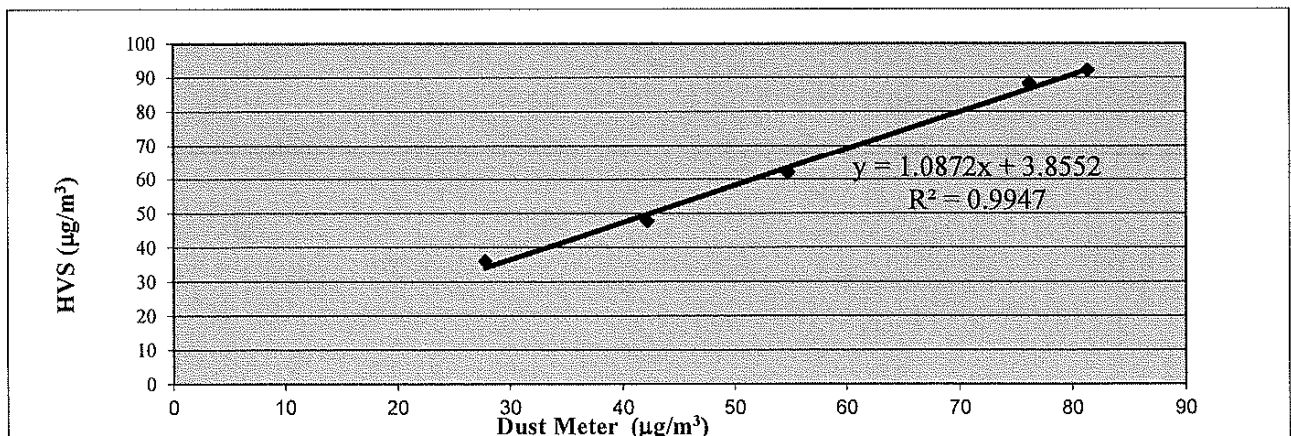
TSP - Total Suspended Particulates (1 hr Dust Meter) Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-08	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24479	2203
Calibration Date:	26-Feb-22	26-Feb-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	28	36
2	42	48
3	55	62
4	76	88
5	81	92
Average	56.5	65.3
<p>By Linear Regression of Y on X</p> <p>Slope, $m_w =$ <u>1.0872</u> Intercept, $b_w =$ <u>3.8552</u></p> <p>Correlation coefficient* = <u>0.9974</u></p>		

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	65.3
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	56.5
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>1.155</u></p>	



QC Reviewer: LEE MAM HEE Signature: Lee Date: 26/2/2022

TEST REPORT

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

Test Report No.:	36403C
Date of Issue:	2022-02-28
Date Received:	2022-02-26
Date Tested:	2022-02-26
Date Completed:	2022-02-28
Next Due Date:	2022-04-27

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X23811
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-09

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.148
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PREPARED AND CHECKED BY:

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


PATRICK TSE
Laboratory Manager

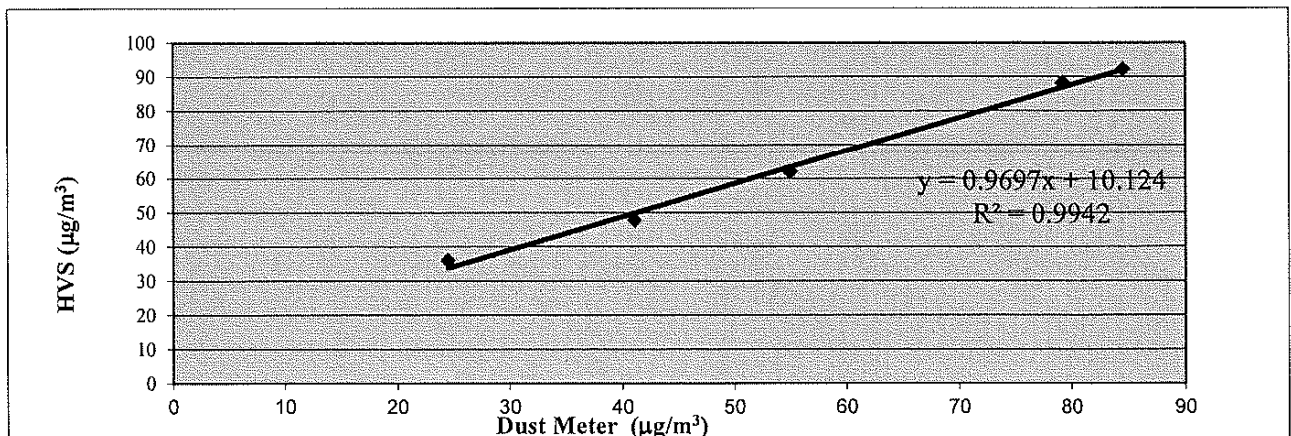
TSP - Total Suspended Particulates (1 hr Dust Meter) Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-09	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23811	2203
Calibration Date:	26-Feb-22	26-Feb-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	25	36
2	41	48
3	55	62
4	79	88
5	85	92
Average	56.9	65.3
<p>By Linear Regression of Y on X</p> <p>Slope, mw = <u>0.9697</u> Intercept, bw = <u>10.1240</u></p> <p>Correlation coefficient* = <u>0.9971</u></p>		

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	65.3
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	56.9
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>1.148</u></p>	



QC Reviewer: LEE MAM HEE Signature: ha Date: 26/2/2022

TEST REPORT

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

Test Report No.:	36403D
Date of Issue:	2022-02-28
Date Received:	2022-02-26
Date Tested:	2022-02-26
Date Completed:	2022-02-28
Next Due Date:	2022-04-27

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)	1.102
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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)

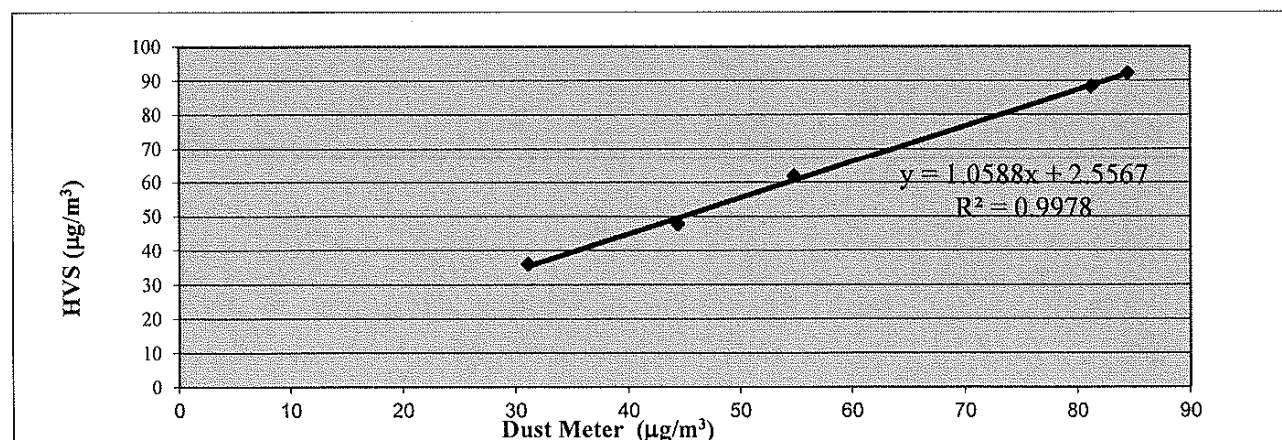
Calibration Report

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-10	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24478	2203
Calibration Date:	26-Feb-22	26-Feb-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	31	36
2	44	48
3	55	62
4	81	88
5	85	92
Average	59.2	65.3
<p>By Linear Regression of Y on X</p> <p>Slope, mw = <u>1.0588</u> Intercept, bw = <u>2.5567</u></p> <p>Correlation coefficient* = <u>0.9989</u></p>		

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	65.3
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	59.2
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>1.102</u></p>	



QC Reviewer: LEE MAN HEE Signature: her Date: 26/2/2022

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

Station FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark File No. WMA20002/20/0010
Date: 17-Jan-22 Operator: HL
Equipment No.: WA-12-20 Next Due Date: 16-Mar-22
Serial No. 3223

Ambient Condition			
Temperature, Ta (K)	290.8	Pressure, Pa (mmHg)	768.7

Orifice Transfer Standard Information					
Serial No.	0993	Slope, mc	0.0569	Intercept, bc	-0.01398
Last Calibration Date:	28-Jan-21	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	28-Jan-22	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

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	12.3	3.57	63.02	8.4	2.95
2	10.5	3.30	58.24	7.1	2.71
3	7.8	2.84	50.23	5.7	2.43
4	5.9	2.47	43.72	4.1	2.06
5	3.5	1.90	33.73	2.5	1.61

By Linear Regression of Y on X

Slope, mw = 0.0456 Intercept, bw = 0.0826

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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 4.03

Remarks: _____

Conducted by: Hee Lee Signature: _____

Checked by: Bob Min Hee Signature: _____

Date: 17/1/22

Date: 17/1/2022

High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

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

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	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
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	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: LEE MAN HING Signature: Lee Man Hing Date: 15/3/2022
Checked by: Ho Ka Chun Signature: Ho Ka Chun Date: 15/3/2022

High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

Station	FLN-DMS3 - House near Tong Hang	File No.	WMA20002/17/0010
Date:	21-Jan-22	Operator:	HL
Equipment No.:	WA-12-17	Next Due Date:	20-Mar-22
		Serial No.	3218

Ambient Condition			
Temperature, Ta (K)	293.1	Pressure, Pa (mmHg)	765.6

Orifice Transfer Standard Information					
Serial No.	0993	Slope, mc	0.0569	Intercept, bc	-0.01398
Last Calibration Date:	28-Jan-21	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	28-Jan-22	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

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	14.2	3.81	67.29	9.7	3.15
2	11.7	3.46	61.10	8.0	2.86
3	9.7	3.15	55.66	6.5	2.58
4	6.8	2.64	46.64	4.4	2.12
5	3.4	1.87	33.05	2.5	1.60

By Linear Regression of Y on X

Slope, mw = 0.0458 Intercept, bw = 0.0459

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 = $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 3.97

Remarks:

Conducted by: Ho Ka Chun Signature: [Signature]

Checked by: LEE MAN HO Signature: [Signature]

Date: 24/1/22

Date: 21/1/2022

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

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

Station KTN-DMS4A - Temporary Structure at Pak Shek Au File No. WMA20002/03/0010
Date: 26-Jan-22 Operator: KC
Equipment No.: WA-11-03 Next Due Date: 25-Mar-22
Serial No. 3225

Ambient Condition			
Temperature, Ta (K)	293	Pressure, Pa (mmHg)	766.2

Orifice Transfer Standard Information					
Serial No.:	0993	Slope, mc	0.0569	Intercept, bc	-0.01398
Last Calibration Date:	28-Jan-21	Next Calibration Date:	28-Jan-22		

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	8.7	8.92	52.75	51.45	1.46	9.5	2.00
2	7.4	7.59	48.67	47.47	1.34	8.4	1.88
3	5.5	5.64	42.00	40.96	1.16	6.8	1.69
4	3.4	3.49	33.07	32.25	0.91	5.1	1.47
5	2.7	2.77	29.50	28.77	0.81	4.1	1.31

By Linear Regression of Y on X

Slope, mw = 0.0293 Intercept, bw = 0.4929
Correlation coefficient* = 0.9981

- (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>38.94</u>
Sampler Well - Type Manometer Set Point, SSP	
$SSP = [(mw \times SFR + bw)^2 \times Pa] / (Ta + 30) =$	<u>6.34</u>

Remarks: _____

Conducted by: [Signature] Signature: [Signature] Date: 26/1/22
Checked by: [Signature] Signature: [Signature] Date: 26/1/2022

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

Certificate of Calibration

Calibration Certification Information			
Cal. Date: January 28, 2021	Rootsmeter S/N: 438320	Ta: 294 °K	
Operator: Jim Tisch		Pa: 763.5 mm Hg	
Calibration Model #: TE-5025A	Calibrator S/N: 0993		

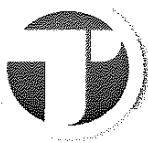
Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4160	3.3	2.00
2	3	4	1	0.9980	6.4	4.00
3	5	6	1	0.8890	8.0	5.00
4	7	8	1	0.8500	8.8	5.50
5	9	10	1	0.7020	12.9	8.00

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)
1.0139	0.7160	1.4271	0.9957	0.7032	0.8776
1.0098	1.0118	2.0182	0.9916	0.9936	1.2411
1.0076	1.1334	2.2564	0.9895	1.1131	1.3875
1.0066	1.1842	2.3666	0.9885	1.1629	1.4553
1.0011	1.4261	2.8542	0.9831	1.4004	1.7551
QSTD	m=	2.00902	QA	m=	1.25802
	b=	-0.01398		b=	-0.00860
	r=	0.99997		r=	0.99997

Calculations	
Vstd= $\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va= $\Delta Vol((Pa-\Delta P)/Pa)$
Qstd= $Vstd/\Delta Time$	Qa= $Va/\Delta Time$
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:	rootsmeter manometer reading (mm Hg)
Ta:	actual absolute temperature (°K)
Pa:	actual barometric pressure (mm Hg)
b:	intercept
m:	slope

RECALIBRATION
US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30



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

Test Report No.: 34872C
Date of Issue: 2021-03-08
Date Received: 2021-03-05
Date Tested: 2021-03-05
Date Completed: 2021-03-08
Next Due Date: 2022-03-07

Page: 1 of 1

ATTN: Mr. W. K. Tang

Certificate of Calibration**Item for calibration:**

Description : Sound Level Meter
Manufacturer : BSWA
Model No. : BSWA 308
Serial No. : 580006
Equipment No. : WN-01-04

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

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

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for calibration:

Description : Sound Level Meter
Manufacturer : BSWA
Model No. : BSWA 308
Serial No. : 580006
Equipment No. : WN-01-04

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
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.: 36481B
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. : 580017
Equipment No. : WN-01-10

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

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

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

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

Test Conditions:

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

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

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.:	36159A
Date of Issue:	2021-12-20
Date Received:	2021-12-17
Date Tested:	2021-12-17 to 2021-12-20
Date Completed:	2021-12-20

ATTN: Miss Mei Ling Tang

Page: 1 of 2

Certificate of Calibration

Item for calibration:

YSI EXO1 Multiparameter Sondes	Equipment No.:	SW-08-121
Manufacturer:	YSI Incorporated, a Xylem brand	
Description:	Model No.	Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599502-24	17B101447
- EXO Optical DO Sensor, Ti	599100-01	16J101001
- EXO conductivity/Temperature Sensor, Ti	599870	17B100798
- EXO Turbidity Sensor, Ti	599101-01	17B102266
- EXO pH Sensor Assembly, Guarded, Ti	599701	17B100250

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.:	36159A
Date of Issue:	2021-12-20
Date Received:	2021-12-17
Date Tested:	2021-12-17 to 2021-12-20
Date Completed:	2021-12-20
Page:	2 of 2

Certificate of Calibration

Results:

Conductivity performance checking

	Instrument Readings ($\mu\text{S}/\text{cm}$)	Acceptance Criteria	Comment
KCl stock solution (12890 $\mu\text{S}/\text{cm}$)	12800	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	20.002	-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	6.87	6.86 ± 0.10	Pass
pH QC buffer 9.18	9.23	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
7.94	8.07	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	10.16	9.0-11.0	Pass
50 NTU	51.28	45.0-55.0	Pass
100 NTU	103.6	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.: 36338
Date of Issue: 2022-02-14
Date Received: 2022-02-11
Date Tested: 2022-02-11 to
2022-02-14
Date Completed: 2022-02-14

ATTN: Miss Mei Ling Tang

Page: 1 of 2

Certificate of Calibration

Item for calibration:

YSI EXO1 Multiparameter Sondes	Equipment No.: SW-08-40	
Manufacturer:	YSI Incorporated, a Xylem brand	
Description:	Model No.	Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599502-24	16J102312
- EXO Optical DO Sensor, Ti	599100-01	17K101624
- EXO conductivity/Temperature Sensor, Ti	599870	17B100806
- EXO Turbidity Sensor, Ti	599101-01	16H102461
- EXO pH Sensor Assembly, Guarded, Ti	599701	16J101293

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.:	36338
Date of Issue:	2022-02-14
Date Received:	2022-02-11
Date Tested:	2022-02-11 to 2022-02-14
Date Completed:	2022-02-14

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 $\mu\text{S}/\text{cm}$)	13200	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	20.002	-0.002	N/A

pH performance checking

	Instrument Readings (pH unit)	Acceptance Criteria	Comment
pH QC buffer 4.00	4.01	4.00 ± 0.10	Pass
pH QC buffer 6.86	6.84	6.86 ± 0.10	Pass
pH QC buffer 9.18	9.26	9.18 ± 0.10	Pass

D.O. performance checking

	Instrument Readings (mg/L)	Acceptance Criteria	Comment
Zero DO solution	0.07	$<0.1\text{mg/L}$	Pass

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Acceptance Criteria	Comment
8.02	8.13	Difference between Titration value and instrument reading $<0.2\text{mg/L}$	Pass

Turbidity performance checking

Turbidity stock solution	Instrument Readings (NTU)	Acceptance Criteria	Comment
10 NTU	10.06	9.0-11.0	Pass
50 NTU	50.63	45.0-55.0	Pass
100 NTU	102.0	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*****



Eurotron Instruments (UK) Ltd
Unit 18 Austin Way
Royal Oak Industrial Estate
Daventry, NN 11 8QY
T: +44 (0)1327 871044, F: +44 (0)1327 301255
E: sales@Eurotronuk.com www.eurotronuk.com

CALIBRATION CERTIFICATE

For Gas Analyser: Rasi 700 BIO

With Serial Number: 330055

The adjustment and calibration of the flue gas analyser is due to a measurement with certified test gases. Other measuring procedures correspond with the technical regulations and norms valid at the time of the measurement. Traceability is guaranteed by nation normative!

Measuring Installations:

Measurement with certified test gases:

CO/O ₂	Cylinder-nr. 88772	NO	Cylinder-nr. 72126
CO/H ₂ /O ₂	Cylinder-nr. D5CPTH5	NO ₂	Cylinder-nr. 88778
CO ₂ /CH ₄ /H ₂ S	Cylinder nr. 1421177		

MRU-Pressure calibrator DK1500 S/N 285943 MRU-Temp calibrator TT2, I-Nr.:T024
Gas mixing unit #v010

Measuring Results:

El. Chemical	Nominal Value	Tolerance Value	Actual Value
O ₂ in Vol. %	0,00	+/- 0,2	0.02
O ₂ in Vol. %	2.01	+/- 0,2	2.02
O ₂ in Vol. %	10.00	+/-0,3	10.03
NDIR:			
CH ₄ in Vol%	60.0	+/-1.8	60.0
CO ₂ in Vol%	40.0	+/-1.2	40.0
T Air in °C	125.0	+/- 1,0	124.7
T Gas in °C	250.0	+/- 2,0	249.6
Draft in hPa	Measuring range are according to specifications	+/- 0,03	Values are within specified tolerances
Pressure in Hpa	Measuring range are according to specifications	+/-0.03	Not installed

Special Remarks _____

Date of Calibration: 16/03/21 carried out by:

Calibration Due: 16/03/22



CALIBRATION CERTIFICATE

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

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

*References are traceable to NIST or equivalent.

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

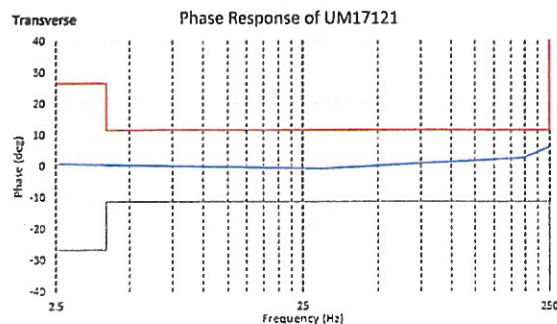
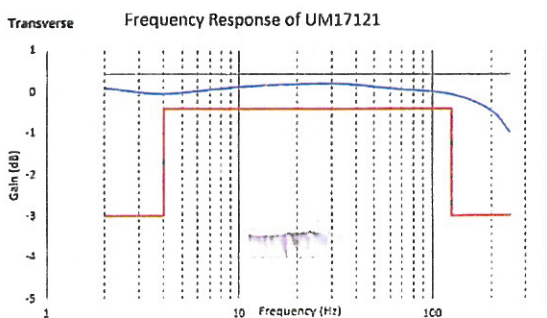
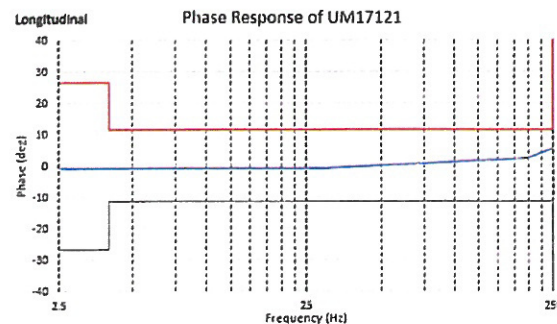
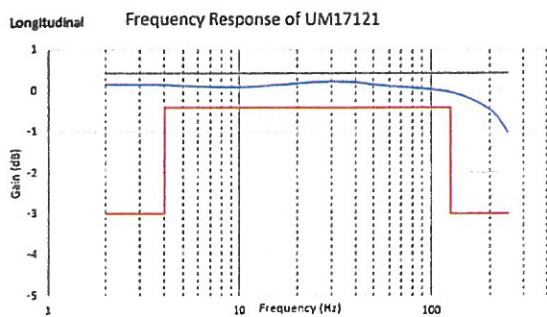
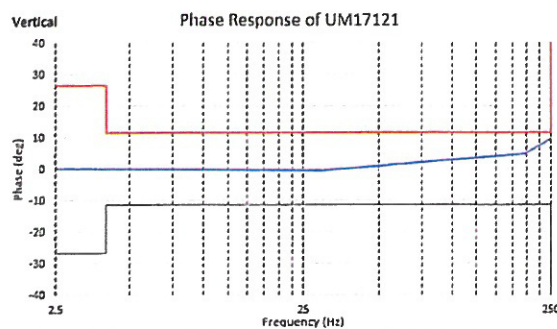
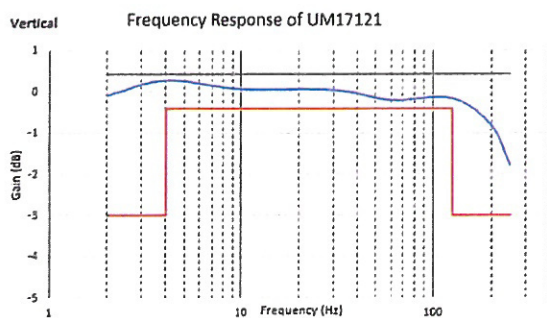
Authorized by: _____



(Anson Kan)

Date: 21 February 2022

Frequency Responses UM17121



CALIBRATION CERTIFICATE

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

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

*References are traceable to NIST or equivalent.

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

Authorized by: _____



(Anson Kan)

Date: 21 February 2022

CALIBRATION CERTIFICATE

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

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

*References are traceable to NIST or equivalent.

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

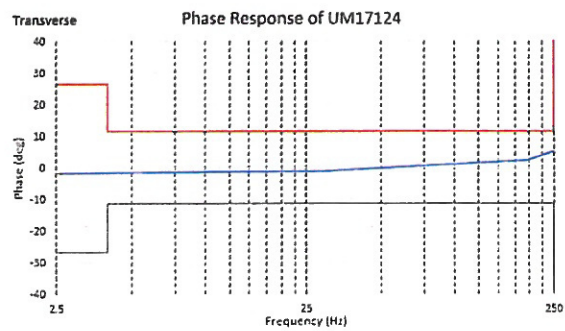
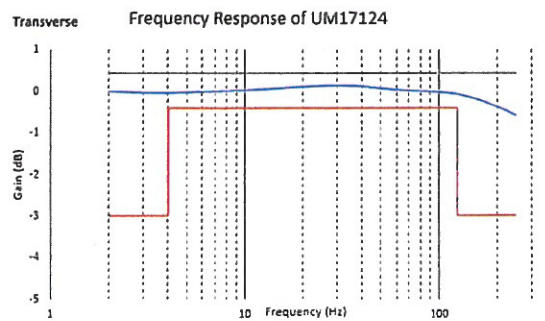
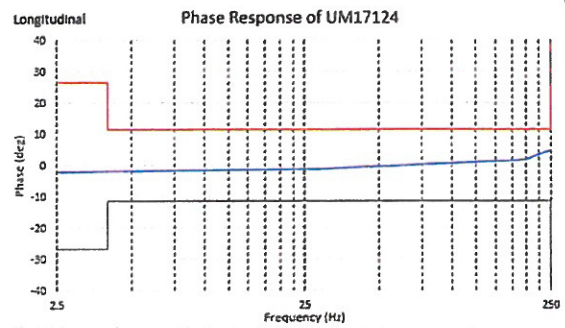
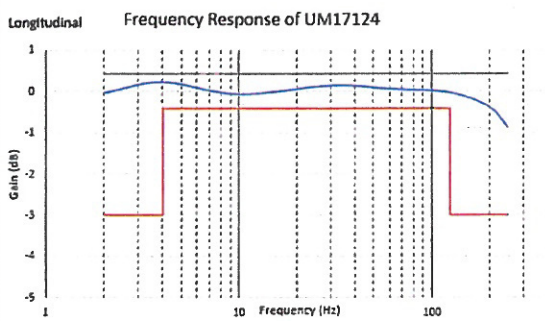
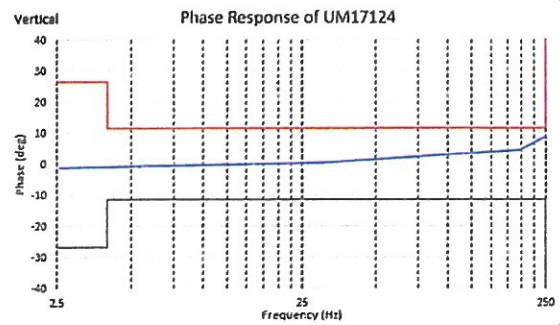
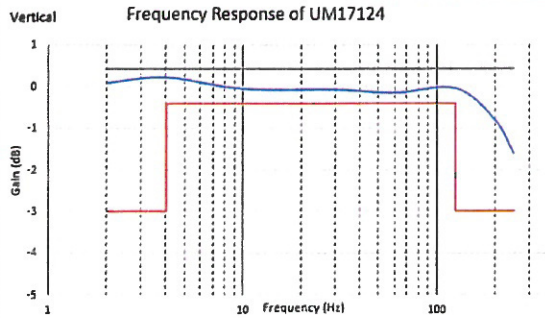
Authorized by: _____



(Anson Kan)

Date: 21 February 2022

Frequency Responses UM17124



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
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

*References are traceable to NIST or equivalent.

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

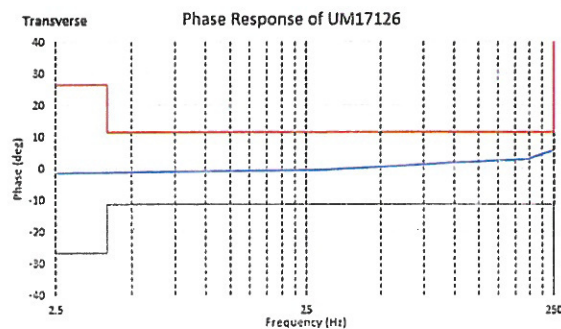
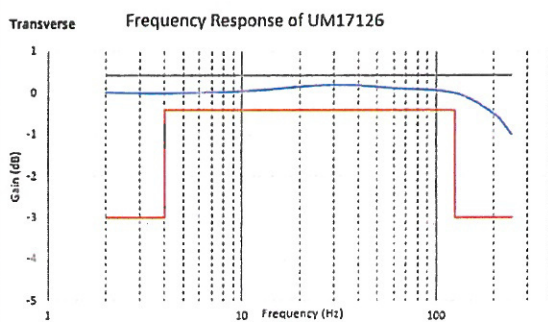
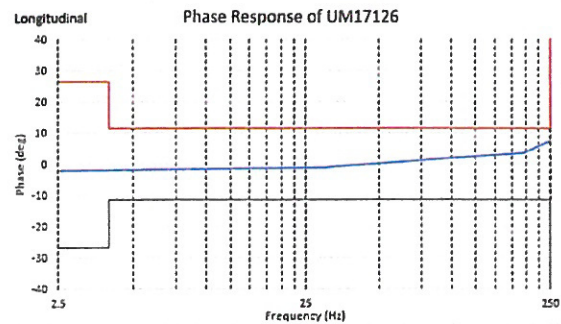
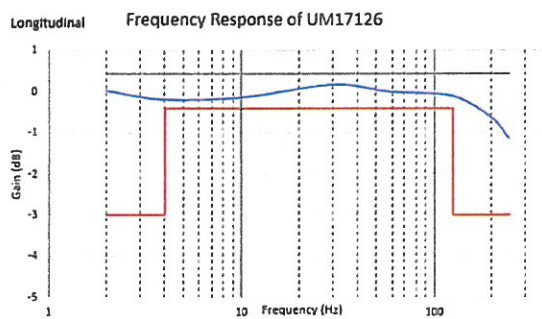
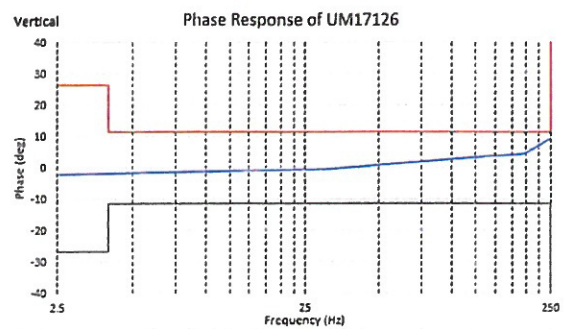
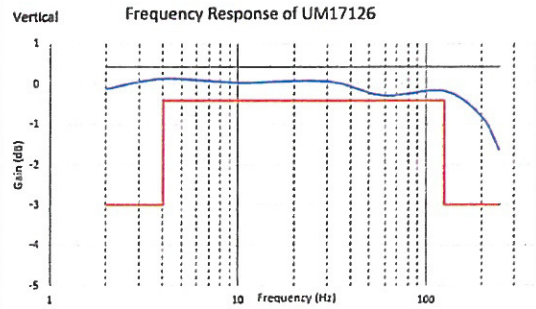
Authorized by: _____



(Anson Kan)

Date: 28 February 2022

Frequency Responses UM17126



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

*References are traceable to NIST or equivalent.

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

Authorized by: _____



(Anson Kan)

Date: 28 February 2022

**APPENDIX D
ENVIRONMENTAL MONITORING
SCHEDULES**

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

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

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 (March 2022)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Mar	2-Mar	3-Mar	4-Mar	5-Mar
			<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	
6-Mar	7-Mar	8-Mar	9-Mar	10-Mar	11-Mar	12-Mar
	<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	
13-Mar	14-Mar	15-Mar	16-Mar	17-Mar	18-Mar	19-Mar
	<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	
20-Mar	21-Mar	22-Mar	23-Mar	24-Mar	25-Mar	26-Mar
	<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	
27-Mar	28-Mar	29-Mar	30-Mar	31-Mar		
	<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			

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 (March 2022)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Mar	2-Mar	3-Mar	4-Mar	5-Mar
				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: 15:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <u>T3 TS#</u> High tide: Start time: 11:00 Low tide: Start time: 15:00	
6-Mar	7-Mar	8-Mar	9-Mar	10-Mar	11-Mar	12-Mar
	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 Disturbance to Water Birds in Sheung Yue River and Long Valley <u>T3 TS</u> High tide: Start time: 15:00 Low tide: Start time: 09:00	
13-Mar	14-Mar	15-Mar	16-Mar	17-Mar	18-Mar	19-Mar
		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>T3, T4, T5</u>	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <u>T3 TS#</u> High tide: Start time: 10:00 Low tide: Start time: 15:00	
20-Mar	21-Mar	22-Mar	23-Mar	24-Mar	25-Mar	26-Mar
	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 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 TS</u> High tide: Start time: 09:00 Low tide: Start time: 14:00	
27-Mar	28-Mar	29-Mar	30-Mar	31-Mar		
		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: 13:00				

#Night-time avifauna monitoring in Long Valley

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

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

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

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 (April 2022)

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

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 (April 2022)

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

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 (April 2022)

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

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

#Night-time avifauna monitoring in Long Valley

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

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

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

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 ($\mu\text{g}/\text{m}^3$)
3-Mar-22	13:05	Sunny	86.2
3-Mar-22	14:05	Sunny	99.1
3-Mar-22	15:05	Sunny	104.5
9-Mar-22	11:00	Sunny	85.6
9-Mar-22	13:00	Sunny	81.7
9-Mar-22	14:00	Sunny	92.2
15-Mar-22	9:00	Sunny	84.9
15-Mar-22	10:00	Sunny	81.1
15-Mar-22	11:00	Sunny	94.6
21-Mar-22	13:00	Cloudy	119.9
21-Mar-22	14:00	Cloudy	125.7
21-Mar-22	15:00	Cloudy	110.4
25-Mar-22	9:00	Cloudy	81.3
25-Mar-22	10:00	Cloudy	93.0
25-Mar-22	11:00	Cloudy	87.0
31-Mar-22	9:00	Cloudy	99.4
31-Mar-22	10:00	Cloudy	127.9
31-Mar-22	11:00	Cloudy	91.5
		Minimum	81.1
		Maximum	127.9
		Average	97.0

Location FLN-DMS3 - House near Tong Hang			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
3-Mar-22	13:00	Sunny	71.0
3-Mar-22	14:00	Sunny	67.6
3-Mar-22	15:00	Sunny	66.0
9-Mar-22	11:00	Sunny	63.2
9-Mar-22	13:00	Sunny	73.0
9-Mar-22	14:00	Sunny	68.7
15-Mar-22	13:00	Sunny	129.0
15-Mar-22	14:00	Sunny	122.3
15-Mar-22	15:00	Sunny	94.9
21-Mar-22	9:00	Cloudy	114.8
21-Mar-22	10:00	Cloudy	125.0
21-Mar-22	11:00	Cloudy	84.4
25-Mar-22	13:00	Cloudy	104.2
25-Mar-22	14:00	Cloudy	100.1
25-Mar-22	15:00	Cloudy	94.0
31-Mar-22	13:00	Sunny	113.8
31-Mar-22	14:00	Sunny	117.5
31-Mar-22	15:00	Sunny	137.1
		Minimum	63.2
		Maximum	137.1
		Average	97.0

Appendix E - 1-hour TSP Monitoring Results

Location FLN-DMS5 - Noble Hill			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
4-Mar-22	13:00	Sunny	73.8
4-Mar-22	14:00	Sunny	80.1
4-Mar-22	15:00	Sunny	83.2
10-Mar-22	9:00	Sunny	70.7
10-Mar-22	10:00	Sunny	67.3
10-Mar-22	11:00	Sunny	81.5
16-Mar-22	13:00	Cloudy	113.9
16-Mar-22	14:00	Cloudy	84.4
16-Mar-22	15:00	Cloudy	98.5
22-Mar-22	9:00	Cloudy	81.3
22-Mar-22	10:00	Cloudy	95.0
22-Mar-22	11:00	Cloudy	96.0
28-Mar-22	13:00	Rainy	61.7
28-Mar-22	14:00	Rainy	65.1
28-Mar-22	15:00	Rainy	72.3
		Minimum	61.7
		Maximum	113.9
		Average	81.7

Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
4-Mar-22	13:00	Sunny	74.6
4-Mar-22	14:00	Sunny	91.3
4-Mar-22	15:00	Sunny	89.1
10-Mar-22	13:00	Sunny	33.4
10-Mar-22	14:00	Sunny	34.2
10-Mar-22	15:00	Sunny	44.2
16-Mar-22	13:00	Cloudy	39.2
16-Mar-22	14:00	Cloudy	36.2
16-Mar-22	15:00	Cloudy	42.0
22-Mar-22	13:00	Cloudy	49.9
22-Mar-22	14:00	Cloudy	57.6
22-Mar-22	15:00	Cloudy	53.6
28-Mar-22	13:00	Cloudy	81.6
28-Mar-22	14:00	Cloudy	89.5
28-Mar-22	15:00	Cloudy	86.5
		Minimum	33.4
		Maximum	91.3
		Average	60.2

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			
2-Mar-22	Sunny	291.7	3.3325	3.5564	0.2239	5935.4	5959.4	24.0	1.21	1.21	1.21	1739.8	128.7
8-Mar-22	Sunny	289.4	3.2978	3.4335	0.1357	5959.4	5983.4	24.0	1.21	1.22	1.21	1747.7	77.6
14-Mar-22	Sunny	294.2	3.3198	3.4598	0.1400	5983.4	6007.4	24.0	1.20	1.20	1.20	1726.9	81.1
18-Mar-22	Cloudy	296.2	3.3770	3.5899	0.2129	6007.4	6031.4	24.0	1.22	1.21	1.21	1749.1	121.7
24-Mar-22	Cloudy	289.6	3.3230	3.3668	0.0438	6031.4	6055.4	24.0	1.24	1.23	1.23	1773.6	24.7
30-Mar-22	Sunny	293.8	3.3565	3.4659	0.1094	6055.4	6079.4	24.0	1.23	1.22	1.22	1763.0	62.1
												Min	24.7
												Max	128.7
												Average	82.6

Location FLN-DMS3 - House near Tong Hang

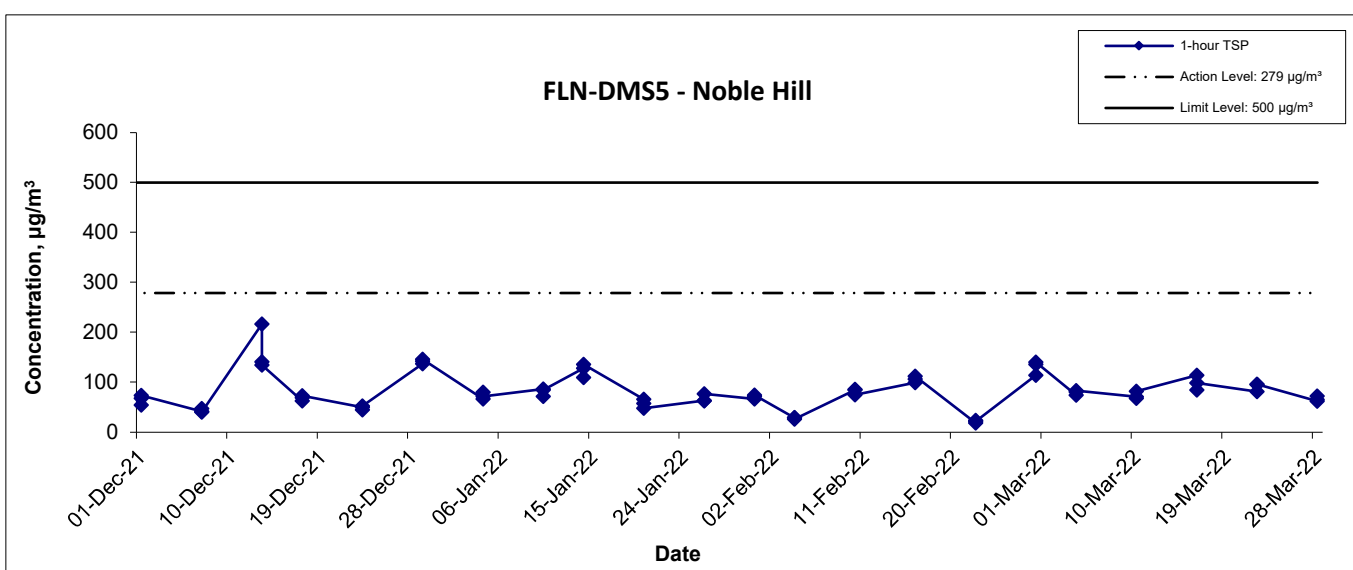
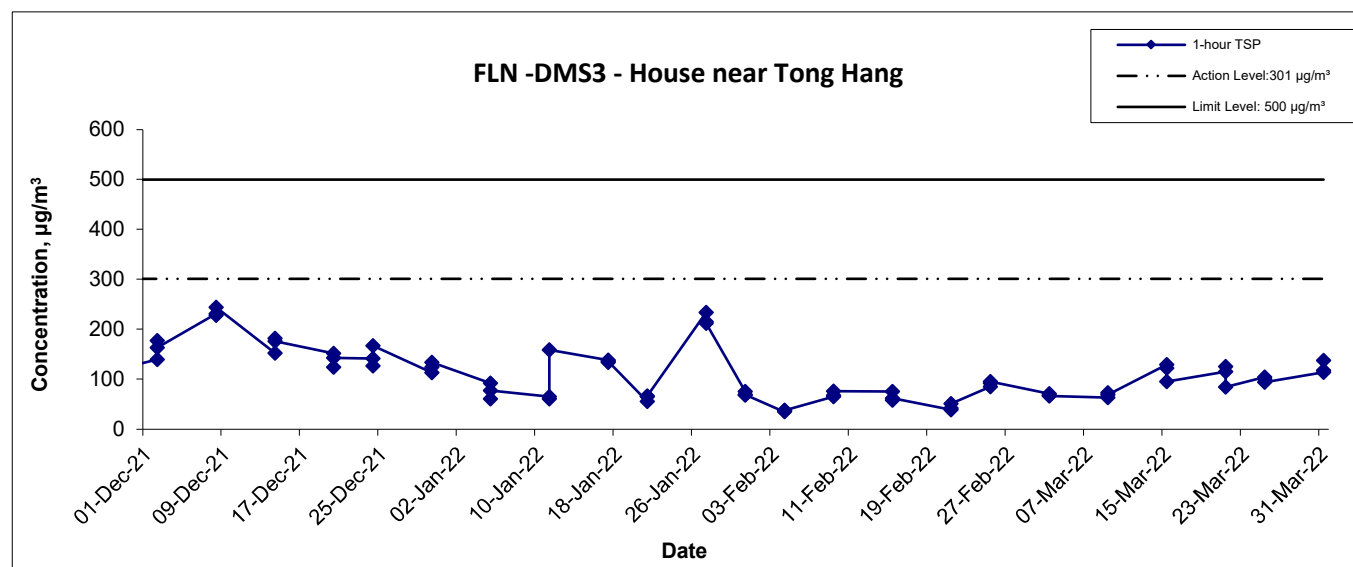
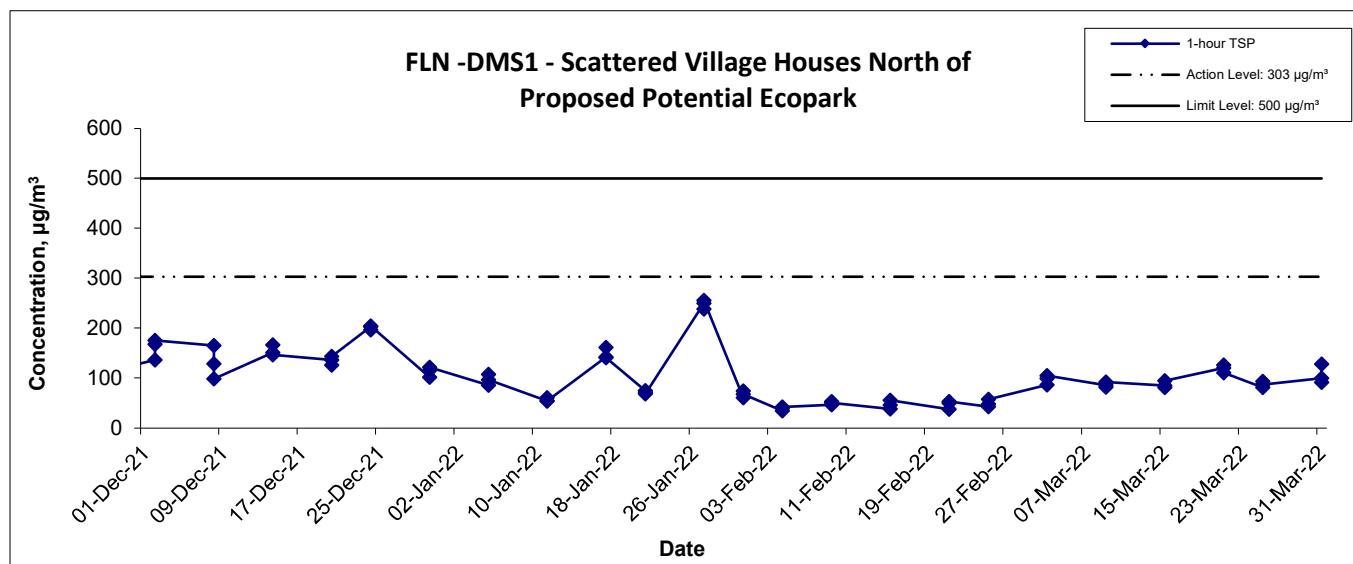
Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m ³ /min.)		Av. flow (m ³ /min)	Total vol. (m ³)	Conc. (µg/m ³)
			Initial	Final		Initial	Final		Initial	Final			
2-Mar-22	Sunny	291.7	3.3216	3.4469	0.1253	6978.8	7002.8	24.0	1.23	1.23	1.23	1764.9	71.0
8-Mar-22	Sunny	289.4	3.2990	3.4325	0.1335	7002.8	7026.8	24.0	1.23	1.23	1.23	1772.7	75.3
14-Mar-22	Sunny	294.2	3.2553	3.3475	0.0922	7026.8	7050.8	24.0	1.22	1.22	1.22	1752.1	52.6
18-Mar-22	Cloudy	296.2	3.4117	3.5436	0.1319	7050.8	7074.8	24.0	1.21	1.21	1.21	1743.6	75.6
24-Mar-22	Cloudy	289.6	3.2786	3.3127	0.0341	7074.8	7098.8	24.0	1.24	1.23	1.23	1777.0	19.2
30-Mar-22	Sunny	293.8	3.2866	3.3644	0.0778	7098.8	7122.8	24.0	1.23	1.22	1.23	1766.0	44.1
												Min	19.2
												Max	75.6
												Average	56.3


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-Mar-22	9:00	Sunny	97.2
10-Mar-22	9:00	Sunny	96.7
16-Mar-22	11:00	Cloudy	62.1
22-Mar-22	12:00	Rainy	106.9
28-Mar-22	12:00	Cloudy	96.5
		Minimum	62.1
		Maximum	106.9
		Average	91.9

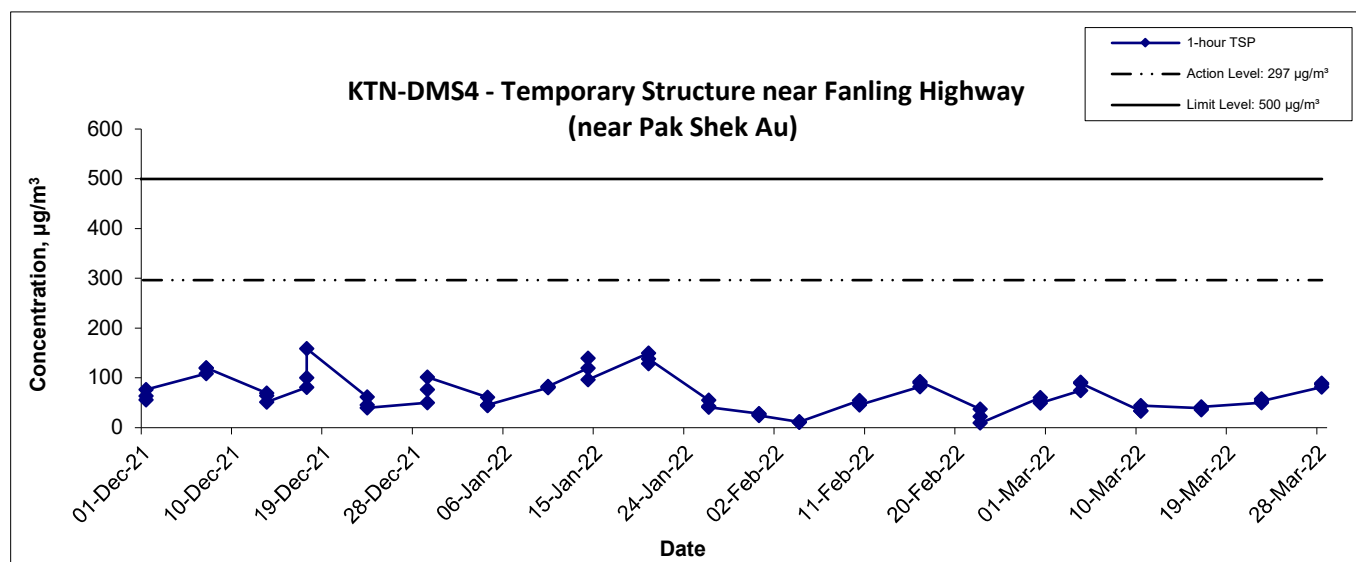
Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
4-Mar-22	9:00	Sunny	106.5
10-Mar-22	9:20	Sunny	37.2
16-Mar-22	11:00	Cloudy	42.3
22-Mar-22	12:00	Rainy	46.3
28-Mar-22	12:00	Cloudy	71.3
		Minimum	37.2
		Maximum	106.5
		Average	60.7


1-hr TSP Concentration Levels



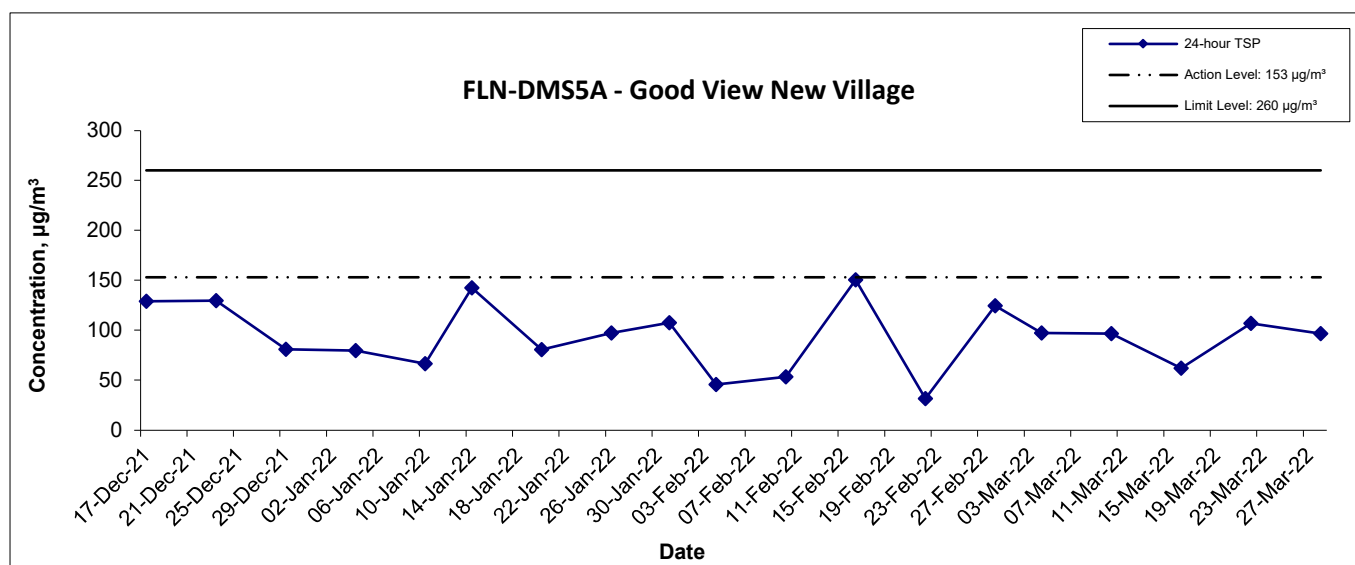
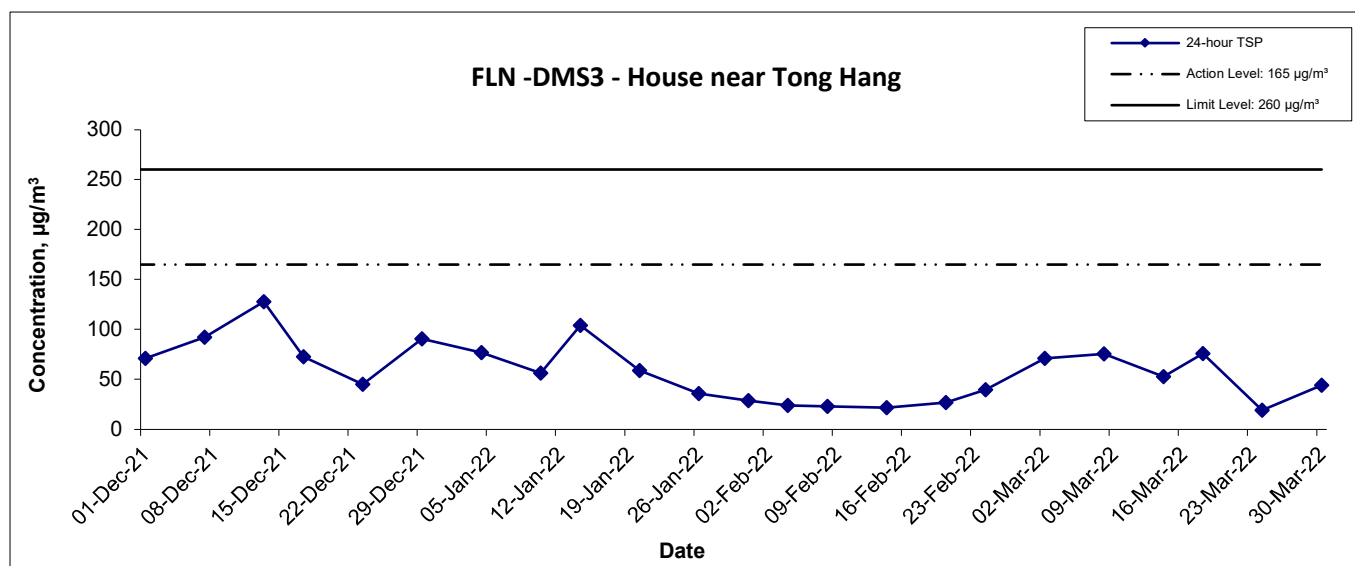
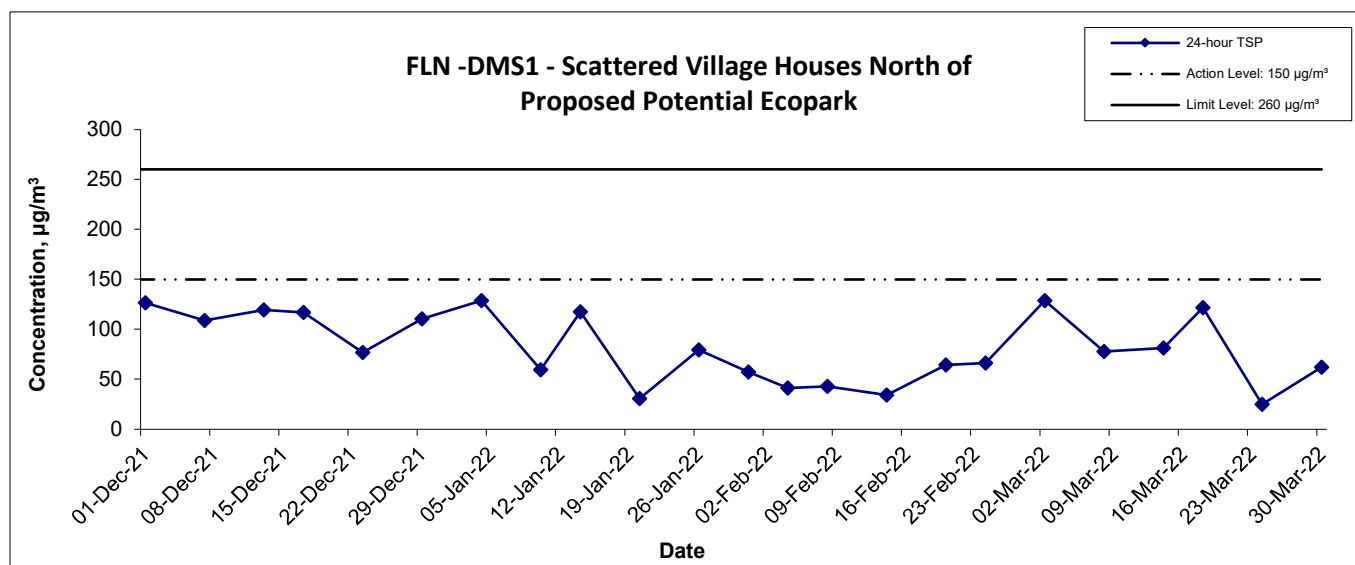
Title	Service Contract No. NDO 04/2019	Scale	Project No.	 consulting . testing . research
	Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas	N.T.S	WMA20002	
	Graphical Presentation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

1-hr TSP Concentration Levels



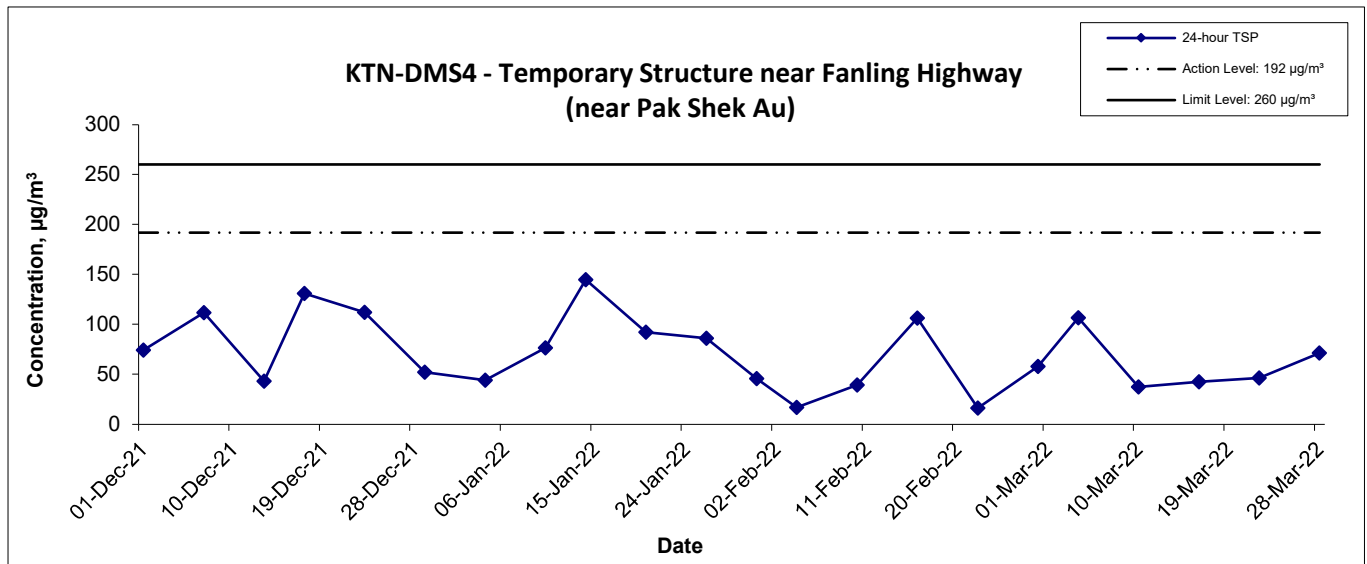
Title Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	Scale N.T.S	Project No. WMA20002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


24-hr TSP Concentration Levels



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

24-hr TSP Concentration Levels

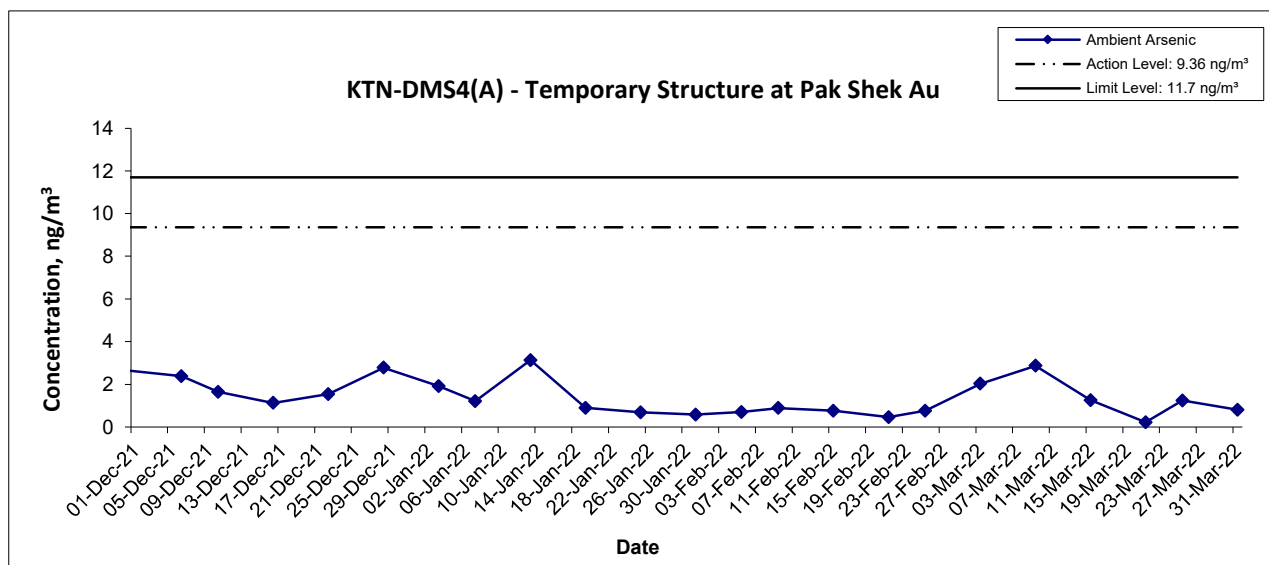



Title Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 24-hour TSP Monitoring Results	Scale	Project No.	
	N.T.S	WMA20002	
	Date	Appendix	
	Mar 22	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)
3-Mar-22	3.2	1577.8	2.03
9-Mar-22	4.5	1568.2	2.87
15-Mar-22	2.0	1594.5	1.25
21-Mar-22	0.36	1594.0	0.23
25-Mar-22	2.0	1612.4	1.24
31-Mar-22	1.3	1606.4	0.81

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 Mar 22	Appendix E	

TEST REPORT

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

Report No.:	36412
Date of Issue:	2022-03-10
Date Received:	2022-03-04
Date Tested:	2022-03-04
Date Completed:	2022-03-10

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36412
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	210906/026
Sample No.	36412-1
Arsenic (µg)	3.2

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 36412
Date of Issue:	2022-03-10
Date Received:	2022-03-04
Date Tested:	2022-03-04
Date Completed:	2022-03-10

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 (%)	101	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 36412

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 36412
Date of Issue:	2022-03-10
Date Received:	2022-03-04
Date Tested:	2022-03-04
Date Completed:	2022-03-10

Page: 2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	105	75-125

Filter Duplicate

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

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	93	90-110

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36412

*****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.:	36435
Date of Issue:	2022-03-16
Date Received:	2022-03-10
Date Tested:	2022-03-10
Date Completed:	2022-03-16

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36435
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	210906/027
Sample No.	36435-1
Arsenic (µg)	4.5

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

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	QC 36435
Date of Issue:	2022-03-16
Date Received:	2022-03-10
Date Tested:	2022-03-10
Date Completed:	2022-03-16

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 (%)	98	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	108	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	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 36435

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 36435
Date of Issue:	2022-03-16
Date Received:	2022-03-10
Date Tested:	2022-03-10
Date Completed:	2022-03-16

Page: 2 of 2

QC report:

Matrix Spike

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

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	10	RPD \leq 20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	100	90-110

Remarks: 1) \leq less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36435

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

TEST REPORT

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

Report No.:	36462
Date of Issue:	2022-03-22
Date Received:	2022-03-16
Date Tested:	2022-03-16
Date Completed:	2022-03-22

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36462
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	210906/028
Sample No.	36462-1
Arsenic (µg)	2.0

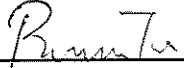
Remarks: 1) <= less than

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 36462
Date of Issue:	2022-03-22
Date Received:	2022-03-16
Date Tested:	2022-03-16
Date Completed:	2022-03-22

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 (%)	109	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 (%)	111	70-130

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36462

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 36462
Date of Issue:	2022-03-22
Date Received:	2022-03-16
Date Tested:	2022-03-16
Date Completed:	2022-03-22

Page: 2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	102	75-125

Filter Duplicate

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

Serial dilution check

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

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36462

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

TEST REPORT

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

Report No.:	36496
Date of Issue:	2022-03-28
Date Received:	2022-03-22
Date Tested:	2022-03-22
Date Completed:	2022-03-28

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36496
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	210906/029
Sample No.	36496-1
Arsenic (µg)	0.36

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 36496
Date of Issue:	2022-03-28
Date Received:	2022-03-22
Date Tested:	2022-03-22
Date Completed:	2022-03-28

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 (%)	98	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	98	70-130

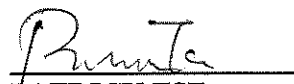
Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36496

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 36496
Date of Issue:	2022-03-28
Date Received:	2022-03-22
Date Tested:	2022-03-22
Date Completed:	2022-03-28

Page: 2 of 2

QC report:

Matrix Spike

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

Filter Duplicate

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

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	100	90-110

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36496

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

TEST REPORT

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

Report No.: 36497
Date of Issue: 2022-04-01
Date Received: 2022-03-28
Date Tested: 2022-03-28
Date Completed: 2022-04-01

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36497
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	210906/030
Sample No.	36497-1
Arsenic (µg)	2.0


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 36497
Date of Issue:	2022-04-01
Date Received:	2022-03-28
Date Tested:	2022-03-28
Date Completed:	2022-04-01

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 (%)	109	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 (%)	98	70-130

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36497

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 36497
Date of Issue:	2022-04-01
Date Received:	2022-03-28
Date Tested:	2022-03-28
Date Completed:	2022-04-01

Page: 2 of 2

QC report:

Matrix Spike

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

Filter Duplicate

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

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	105	90-110

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36497

*****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.:	36518
Date of Issue:	2022-04-08
Date Received:	2022-04-01
Date Tested:	2022-04-01
Date Completed:	2022-04-08

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36518
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	210906/031
Sample No.	36518-1
Arsenic (µg)	1.3


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 36518
Date of Issue: 2022-04-08
Date Received: 2022-04-01
Date Tested: 2022-04-01
Date Completed: 2022-04-08

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 (%)	86	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 (%)	102	70-130

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36518

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 36518
Date of Issue:	2022-04-08
Date Received:	2022-04-01
Date Tested:	2022-04-01
Date Completed:	2022-04-08

Page: 2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	111	75-125

Filter Duplicate

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

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	97	90-110

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36518

*****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}
3-Mar-22	Sunny	13:20	70.1	72.5	67.3	70.2	69.9
		13:25	71.7	73.6	67.7		
		13:30	71.3	72.7	69.1		
		13:35	70.2	73.6	66.7		
		13:40	66.4	69.9	58.7		
		13:45	69.9	72.8	64.8		
9-Mar-22	Sunny	13:40	71.9	73.2	70.6	71.4	
		13:45	72.0	73.9	69.7		
		13:50	71.3	72.7	69.2		
		13:55	70.1	72.1	67.4		
		14:00	71.1	73.3	68.8		
		14:05	71.8	73.3	70.0		
15-Mar-22	Sunny	13:00	66.5	70.3	57.6	71.9	
		13:05	65.8	69.4	59.7		
		13:10	73.0	76.3	62.1		
		13:15	71.3	75.1	61.0		
		13:20	73.3	77.2	64.1		
		13:25	74.9	78.8	65.2		
21-Mar-22	Cloudy	10:30	57.0	59.3	53.6	57.0	
		10:35	59.2	62.7	53.7		
		10:40	57.1	60.6	53.0		
		10:45	57.7	60.7	53.6		
		10:50	54.2	54.8	52.9		
		10:55	55.1	56.7	52.9		
31-Mar-22	Cloudy	11:00	66.2	68.9	61.0	67.1	
		11:05	66.3	70.0	58.0		
		11:10	68.3	72.2	60.4		
		11:15	66.9	70.8	61.1		
		11:20	66.3	70.1	58.2		
		11:25	67.9	71.7	58.4		

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}
3-Mar-22	Sunny	16:30	63.8	65.4	59.5	65.0	59.6
		16:35	65.2	68.2	60.3		
		16:40	64.2	66.8	59.3		
		16:45	64.3	65.5	57.2		
		16:50	66.2	68.2	60.4		
		16:55	65.6	69.0	59.6		
9-Mar-22	Sunny	11:30	54.0	55.0	53.1	68.4	
		11:35	53.1	53.7	52.3		
		11:40	52.7	53.4	52.0		
		11:45	53.3	54.0	52.5		
		11:50	71.9	73.8	68.7		
		11:55	74.0	75.7	72.1		
15-Mar-22	Sunny	13:45	59.6	62.4	56.0	59.7	
		13:50	56.7	58.1	54.7		
		13:55	59.3	60.5	56.2		
		14:00	60.8	61.6	57.4		
		14:05	62.0	64.8	55.4		
		14:10	58.1	61.2	54.8		
21-Mar-22	Cloudy	11:30	57.0	59.3	53.6	57.0	
		11:35	59.2	62.7	53.7		
		11:40	57.1	60.6	53.0		
		11:45	57.7	60.7	53.6		
		11:50	54.2	58.2	52.9		
		11:55	55.1	56.7	52.9		
31-Mar-22	Sunny	13:00	55.9	56.8	51.9	56.4	
		13:05	55.0	55.8	52.5		
		13:10	54.9	55.8	53.4		
		13:15	56.4	57.9	54.6		
		13:20	58.0	59.8	55.2		
		13:25	57.5	59.7	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-Mar-22	Sunny	15:50	54.5	58.2	47.7	54.6	58.6
		15:55	56.8	60.8	47.8		
		16:00	50.3	56.3	48.5		
		16:05	53.4	55.2	47.0		
		16:10	55.5	58.6	49.4		
		16:15	54.4	57.9	48.4		
10-Mar-22	Sunny	09:25	62.1	66.5	50.2	59.4	
		09:30	61.3	65.7	50.0		
		09:35	59.4	62.7	55.8		
		09:40	58.5	62.2	49.9		
		09:45	56.0	59.7	49.5		
		09:50	54.1	56.9	48.5		
16-Mar-22	Cloudy	13:10	57.7	58.6	51.2	56.7	
		13:15	55.3	58.0	50.4		
		13:20	54.3	56.2	50.8		
		13:25	58.7	55.6	50.0		
		13:30	58.1	56.0	52.0		
		13:35	53.8	55.6	51.8		
22-Mar-22	Cloudy	09:05	58.3	58.6	54.6	57.0	
		09:10	57.2	59.3	54.8		
		09:15	57.2	59.9	53.9		
		09:20	56.6	58.6	54.2		
		09:25	56.0	57.7	53.4		
		09:30	56.3	57.6	53.8		

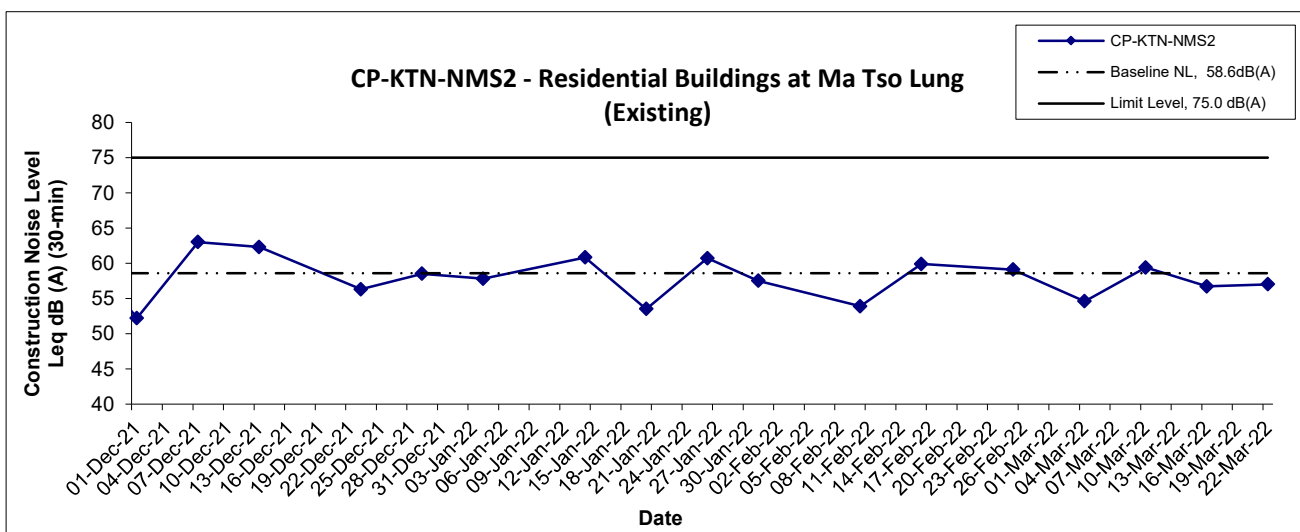
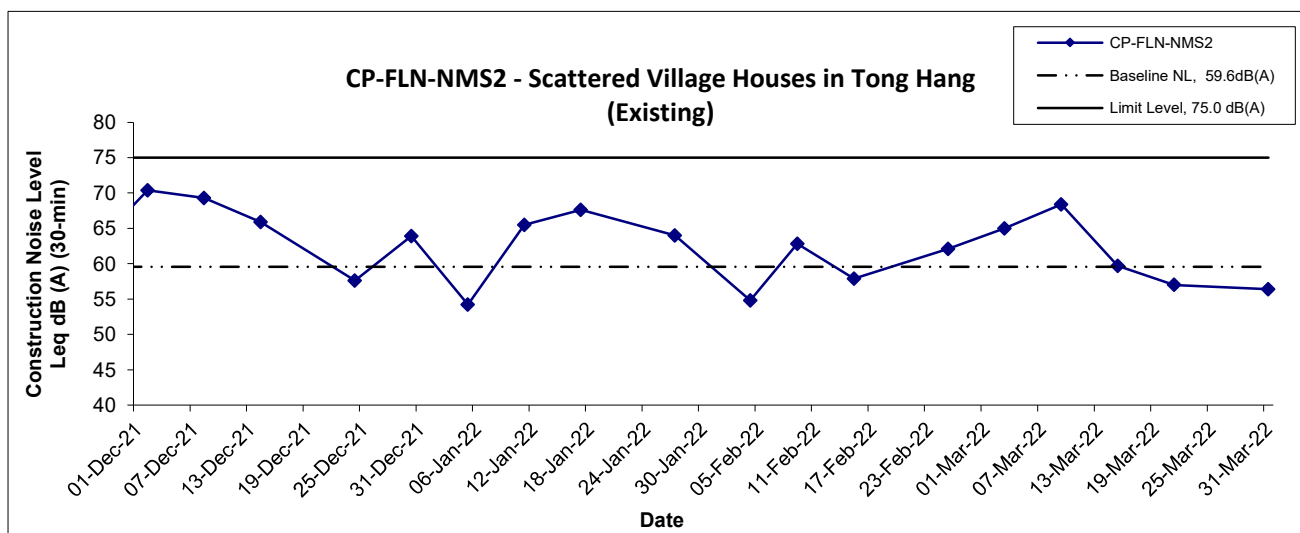
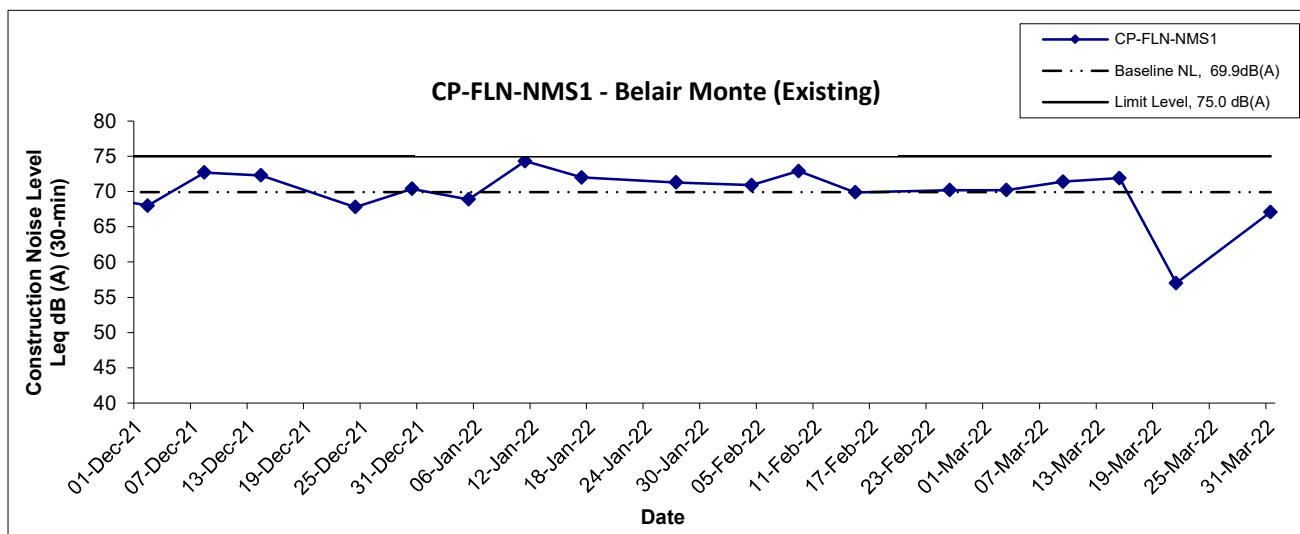
Location CP-KTN-NMS3 - Fung Kong Garden (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
4-Mar-22	Sunny	15:45	53.7	54.7	52.7	56.8	51.6
		15:50	54.7	57.3	52.7		
		15:55	62.6	63.9	52.9		
		16:00	53.0	55.5	50.8		
		16:05	51.7	52.1	50.9		
		16:10	51.9	52.5	50.7		
10-Mar-22	Sunny	09:35	50.8	50.5	48.3	51.2	
		09:40	49.6	51.1	48.0		
		09:45	48.7	49.0	47.5		
		09:50	50.0	52.0	47.7		
		09:55	49.1	50.0	47.4		
		10:00	55.0	55.7	47.8		
16-Mar-22	Cloudy	13:45	53.0	54.4	50.1	51.8	
		13:50	51.4	53.1	49.8		
		13:55	53.0	52.9	50.3		
		14:00	50.6	51.0	49.6		
		14:05	51.0	52.1	49.9		
		14:10	51.4	52.7	50.1		
22-Mar-22	Cloudy	09:20	59.6	60.0	58.5	59.4	
		09:25	59.2	59.8	58.7		
		09:30	59.6	59.8	58.8		
		09:35	59.4	60.2	58.8		
		09:40	59.3	60.0	58.6		
		09:45	59.0	59.4	58.7		


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-Mar-22	Sunny	16:40	54.0	56.1	50.8	57.0	57.2
		16:45	53.3	55.8	50.5		
		16:50	52.9	54.8	50.8		
		16:55	55.5	57.9	51.5		
		17:00	61.5	62.5	50.7		
		17:05	57.8	59.2	50.5		
10-Mar-22	Sunny	11:00	54.2	55.6	52.7	54.5	
		11:05	54.0	55.0	53.1		
		11:10	56.1	58.3	53.8		
		11:15	54.6	56.1	53.1		
		11:20	54.3	55.2	52.8		
		11:25	53.6	54.5	52.5		
16-Mar-22	Cloudy	14:50	58.2	59.6	52.9	63.8	
		14:55	60.6	63.5	54.2		
		15:00	60.7	63.8	54.4		
		15:05	68.7	71.7	57.9		
		15:10	65.0	68.2	55.4		
		15:15	59.0	61.4	54.4		
22-Mar-22	Cloudy	11:15	50.7	53.7	46.5	50.8	
		11:20	52.4	54.0	47.1		
		11:25	50.8	54.1	46.5		
		11:30	50.2	52.6	46.0		
		11:35	50.1	52.3	46.1		
		11:40	50.3	53.5	46.4		

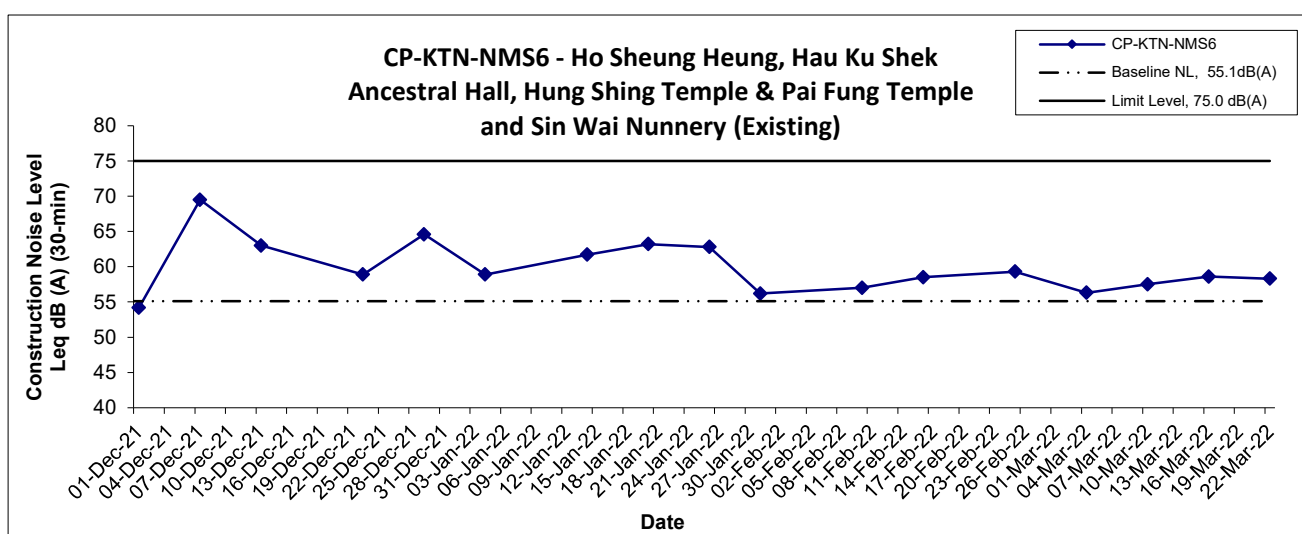
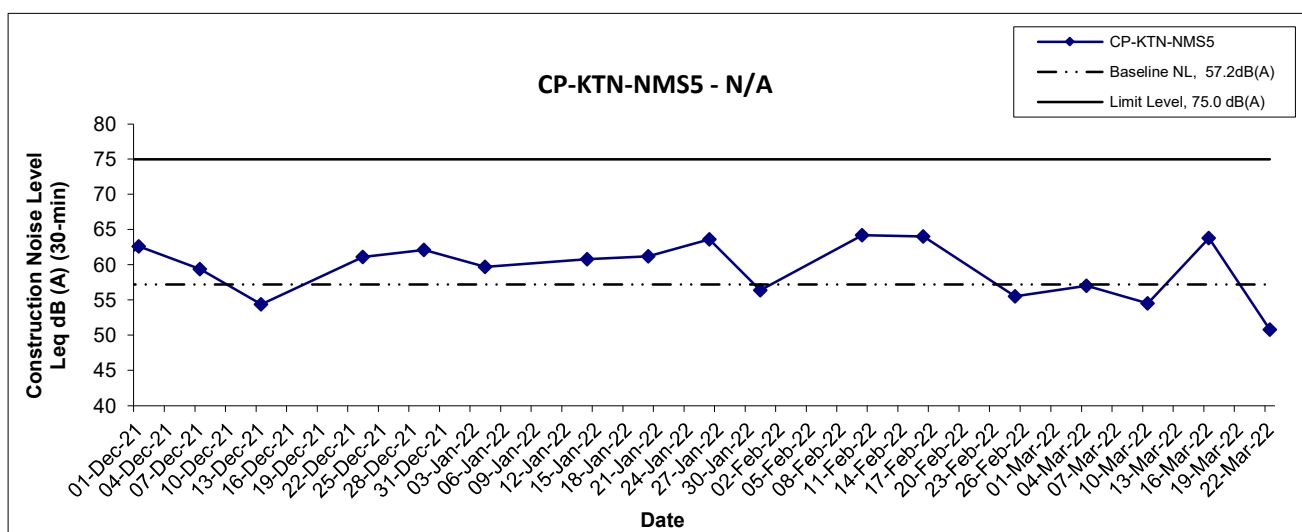
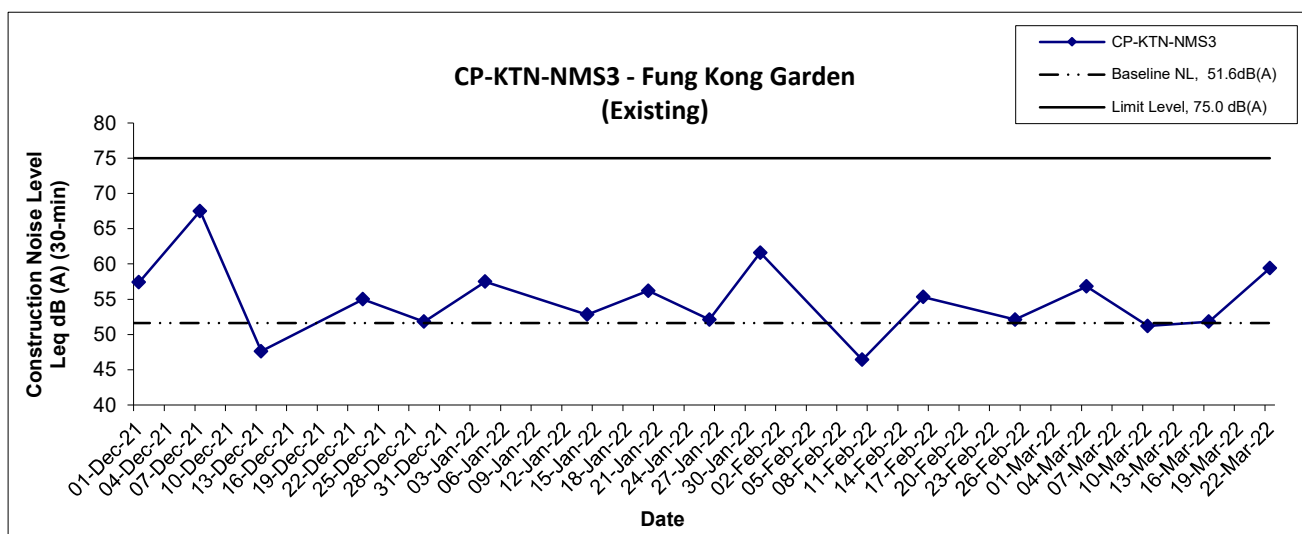
Location CP-KTN-NMS6 - Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
4-Mar-22	Sunny	17:30	55.3	57.8	50.8	56.3	55.1
		17:35	61.8	65.8	57.1		
		17:40	51.6	54.9	47.2		
		17:45	50.4	53.3	46.4		
		17:50	49.7	52.5	46.8		
		17:55	55.9	56.5	47.0		
10-Mar-22	Sunny	10:15	58.1	62.2	47.7	57.5	
		10:20	57.1	61.1	48.7		
		10:25	58.6	62.6	47.6		
		10:30	58.7	63.4	47.6		
		10:35	56.4	60.2	46.6		
		10:40	54.6	57.3	45.0		
16-Mar-22	Cloudy	14:00	57.1	58.1	48.9	58.6	
		14:05	60.1	64.0	51.2		
		14:10	59.9	62.4	56.9		
		14:15	57.7	57.9	55.7		
		14:20	57.0	58.3	55.8		
		14:25	58.7	59.0	55.7		
22-Mar-22	Cloudy	10:30	55.2	56.9	53.1	58.3	
		10:35	56.6	57.8	53.3		
		10:40	56.5	57.1	52.5		
		10:45	57.8	59.7	52.6		
		10:50	59.3	61.9	54.7		
		10:55	61.4	64.0	53.7		

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	
	Date Mar 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	
	Date Mar 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
2-Mar-22	Sunny	10:39	Middle	0.2	20.9 20.9	20.9	7.8 7.8	7.8	0.1 0.1	0.1	18.2 17.8	18.0	1.6 1.6	1.6	7.2 7.2	7.2	7 8	7.5	6 6	6.0
4-Mar-22	Sunny	13:17	Middle	0.2	22.6 22.6	22.6	7.7 7.7	7.7	0.1 0.1	0.1	59.6 59.4	59.5	5.2 5.1	5.2	8.0 8.1	8.1	11 13	12.0	6 6	6.0
7-Mar-22	Sunny	12:19	Middle	0.3	24.6 24.6	24.6	8.3 8.3	8.3	0.2 0.2	0.2	74.9 74.7	74.8	6.2 6.2	6.2	6.7 6.6	6.7	7 7	7.0	8 9	8.5
9-Mar-22	Sunny	14:43	Middle	0.2	22.7 22.8	22.8	7.5 7.5	7.5	0.2 0.2	0.2	72.7 72.5	72.6	6.3 6.3	6.3	8.1 7.9	8.0	12 11	11.5	9 8	8.5
11-Mar-22	Sunny	11:09	Middle	0.1	21.7 21.7	21.7	8.8 8.8	8.8	0.2 0.2	0.2	63.5 63.4	63.5	5.6 5.6	5.6	12.6 12.7	12.7	26 23	24.5	9 8	8.5
14-Mar-22	Sunny	13:28	Middle	0.2	25.7 25.7	25.7	9.7 9.7	9.7	0.2 0.2	0.2	77.0 76.4	76.7	6.3 6.2	6.3	7.2 7.1	7.2	11 14	12.5	9 9	9.0
16-Mar-22	Cloudy	11:00	Middle	0.2	23.8 23.8	23.8	8.5 8.5	8.5	0.2 0.2	0.2	61.8 61.5	61.7	5.2 5.2	5.2	9.2 9.3	9.3	14 16	15.0	11 12	11.5
18-Mar-22	Fine	11:21	Middle	0.2	25.1 25.1	25.1	8.6 8.6	8.6	0.1 0.1	0.1	72.8 72.1	72.5	6.0 6.0	6.0	9.4 9.5	9.5	14 14	14.0	9 9	9.0
21-Mar-22	Cloudy	09:43	Middle	0.2	22.8 22.8	22.8	7.8 7.8	7.8	0.4 0.4	0.4	57.9 58.0	58.0	5.0 5.0	5.0	13.5 13.8	13.7	18 15	16.5	9 9	9.0
23-Mar-22	Rainy	12:54	Middle	0.3	19.9 19.8	19.9	7.5 7.4	7.5	0.2 0.2	0.2	71.1 71.0	71.1	6.5 6.5	6.5	11.8 11.7	11.8	20 21	20.5	8 8	8.0
25-Mar-22	Cloudy	10:54	Middle	0.2	21.3 21.4	21.4	7.5 7.5	7.5	0.1 0.1	0.1	62.0 61.9	62.0	5.5 5.5	5.5	5.7 5.8	5.8	8 10	9.0	10 10	10.0
28-Mar-22	Rainy	11:43	Middle	0.2	18.6 18.6	18.6	7.4 7.4	7.4	0.2 0.2	0.2	83.8 83.7	83.8	7.8 7.8	7.8	53.5 53.1	53.3	30 34	32.0	10 10	10.0
30-Mar-22	Sunny	12:01	Middle	0.2	23.3 23.4	23.4	7.9 7.9	7.9	0.1 0.1	0.1	86.0 86.1	86.1	7.3 7.3	7.3	13.3 13.2	13.3	36 36	36.0	4 4	4.0

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
2-Mar-22	Sunny	10:53	Middle	0.5	22.5 22.5	22.5	7.8 7.8	7.8	0.2 0.2	0.2	63.6 63.3	63.5	5.5 5.5	5.5	18.6 18.3	18.5	20 22	21.0	6 7	6.5
4-Mar-22	Sunny	13:01	Middle	0.2	24.8 24.8	24.8	7.9 7.9	7.9	0.2 0.2	0.2	92.2 92.1	92.2	7.6 7.6	7.6	22.5 22.4	22.5	32 33	32.5	6 6	6.0
7-Mar-22	Sunny	12:32	Middle	0.2	25.6 25.6	25.6	8.5 8.5	8.5	0.2 0.2	0.2	142.2 142.1	142.2	11.6 11.6	11.6	36.2 34.8	35.5	73 72	72.5	5 4	4.5
9-Mar-22	Sunny	14:17	Middle	0.4	23.7 23.9	23.8	7.7 7.7	7.7	0.3 0.3	0.3	94.0 94.1	94.1	7.9 7.9	7.9	18.9 19.2	19.1	27 29	28.0	4 4	4.0
11-Mar-22	Sunny	11:21	Middle	0.5	21.5 21.5	21.5	8.5 8.4	8.5	0.2 0.2	0.2	73.8 71.9	72.9	6.5 6.3	6.4	13.2 13.1	13.2	11 10	10.5	9 8	8.5
14-Mar-22	Sunny	13:47	Middle	0.5	29.4 29.3	29.4	8.7 8.7	8.7	0.2 0.2	0.2	99.1 99.1	99.1	7.6 7.6	7.6	36.2 36.0	36.1	53 52	52.5	6 6	6.0
16-Mar-22	Cloudy	11:19	Middle	0.5	24.3 24.3	24.3	8.3 8.3	8.3	0.3 0.3	0.3	91.1 91.1	91.1	7.6 7.6	7.6	21.1 21.5	21.3	46 45	45.5	5 5	5.0
18-Mar-22	Fine	11:40	Middle	0.5	26.0 26.0	26.0	8.4 8.4	8.4	0.3 0.3	0.3	137.8 138.3	138.1	11.2 11.2	11.2	24.9 24.9	24.9	14 11	12.5	9 9	9.0
21-Mar-22	Cloudy	09:56	Middle	0.3	24.6 24.6	24.6	7.7 7.7	7.7	0.3 0.3	0.3	76.8 76.4	76.6	6.4 6.4	6.4	42.1 42.2	42.2	65 60	62.5	6 7	6.5
23-Mar-22	Rainy	13:21	Middle	0.4	20.4 20.4	20.4	7.5 7.5	7.5	0.2 0.2	0.2	69.5 69.4	69.5	6.3 6.3	6.3	32.5 32.7	32.6	35 42	38.5	5 5	5.0
25-Mar-22	Cloudy	11:17	Middle	0.2	21.4 21.4	21.4	7.6 7.6	7.6	0.2 0.2	0.2	71.4 71.2	71.3	6.3 6.3	6.3	24.3 24.6	24.5	18 21	19.5	10 10	10.0
28-Mar-22	Rainy	12:00	Middle	0.2	19.0 19.0	19.0	7.5 7.5	7.5	0.1 0.1	0.1	88.1 88.1	88.1	8.2 8.2	8.2	42.1 42.2	42.2	60 56	58.0	11 11	11.0
30-Mar-22	Sunny	12:18	Middle	0.2	23.8 23.8	23.8	7.9 7.9	7.9	0.2 0.2	0.2	73.6 74.4	74.0	6.2 6.3	6.3	14.5 14.5	14.5	16 18	17.0	4 4	4.0

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

Location: NTR-CS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Mar-22	Sunny	12:19	Middle	0.2	22.1 22.1	22.1	8.1 8.1	8.1	0.1 0.1	0.1	141.2 141.2	141.2	12.3 12.3	12.3	5.0 5.1	5.1	4 3	3.5
4-Mar-22	Sunny	12:10	Middle	0.3	24.1 24.1	24.1	8.4 8.4	8.4	0.1 0.1	0.1	131.4 131.6	131.5	11.0 11.0	11.0	6.8 6.8	6.8	4 4	4.0
7-Mar-22	Sunny	16:56	Middle	0.2	24.4 24.5	24.5	8.1 8.1	8.1	0.1 0.1	0.1	98.7 98.6	98.7	8.2 8.2	8.2	2.5 2.5	2.5	7 8	7.5
9-Mar-22	Sunny	13:16	Middle	0.1	23.2 23.2	23.2	7.5 7.5	7.5	0.1 0.1	0.1	122.1 123.0	122.6	10.4 10.5	10.5	12.9 13.0	13.0	11 11	11.0
11-Mar-22	Sunny	14:21	Middle	0.1	24.9 24.9	24.9	8.2 8.2	8.2	0.1 0.1	0.1	113.7 113.7	113.7	9.4 9.4	9.4	7.9 7.9	7.9	12 10	11.0
14-Mar-22	Sunny	15:00	Middle	0.1	26.6 26.6	26.6	8.4 8.4	8.4	0.1 0.1	0.1	104.5 104.5	104.5	8.4 8.4	8.4	8.4 8.1	8.3	17 19	18.0
16-Mar-22	Cloudy	14:23	Middle	0.1	24.1 24.1	24.1	8.4 8.4	8.4	0.1 0.1	0.1	100.1 100.2	100.2	8.4 8.4	8.4	8.5 8.7	8.6	16 17	16.5
18-Mar-22	Fine	10:50	Middle	0.1	24.0 23.9	24.0	8.5 8.5	8.5	0.1 0.1	0.1	89.5 89.4	89.5	7.5 7.5	7.5	9.4 8.7	9.1	15 15	15.0
21-Mar-22	Cloudy	11:15	Middle	0.2	24.1 24.1	24.1	7.4 7.4	7.4	0.1 0.1	0.1	90.4 90.2	90.3	7.6 7.6	7.6	12.5 12.6	12.6	14 14	14.0
23-Mar-22	Rainy	16:15	Middle	0.5	18.9 18.9	18.9	7.3 7.3	7.3	0.1 0.1	0.1	77.0 76.9	77.0	7.2 7.2	7.2	32.4 32.7	32.6	37 44	40.5
25-Mar-22	Cloudy	11:46	Middle	0.2	22.2 22.2	22.2	7.6 7.6	7.6	0.1 0.1	0.1	87.3 87.3	87.3	7.6 7.6	7.6	5.3 5.4	5.4	6 6	6.0
28-Mar-22	Rainy	13:28	Middle	0.2	19.3 19.3	19.3	7.1 7.1	7.1	0.1 0.1	0.1	87.8 87.7	87.8	8.1 8.1	8.1	33.9 33.4	33.7	27 27	27.0
30-Mar-22	Sunny	17:05	Middle	0.2	23.4 23.4	23.4	7.6 7.6	7.6	0.1 0.1	0.1	89.0 88.9	89.0	7.6 7.6	7.6	22.5 22.6	22.6	12 13	12.5

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-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
2-Mar-22	Sunny	11:16	Middle	0.6	22.2 22.2	22.2	8.0 8.0	8.0	0.1 0.1	0.1	57.2 57.1	57.2	5.0 5.0	5.0	10.5 10.4	10.5	5 4	4.5
4-Mar-22	Sunny	11:46	Middle	0.4	22.1 22.1	22.1	7.6 7.6	7.6	0.1 0.1	0.1	84.0 84.0	84.0	7.3 7.3	7.3	4.6 4.5	4.6	8 7	7.5
7-Mar-22	Sunny	16:31	Middle	0.3	24.7 24.8	24.8	8.4 8.3	8.4	0.1 0.1	0.1	101.9 101.7	101.8	8.5 8.4	8.5	5.7 5.8	5.8	7 8	7.5
9-Mar-22	Sunny	12:25	Middle	0.6	21.6 21.6	21.6	7.9 7.8	7.9	0.2 0.2	0.2	77.9 77.1	77.5	6.9 6.8	6.9	11.2 11.2	11.2	11 12	11.5
11-Mar-22	Sunny	13:12	Middle	0.7	22.9 22.9	22.9	9.0 9.0	9.0	0.2 0.2	0.2	72.3 72.1	72.2	6.2 6.2	6.2	8.4 8.6	8.5	9 10	9.5
14-Mar-22	Sunny	14:10	Middle	0.7	26.2 26.2	26.2	9.1 9.0	9.1	0.1 0.1	0.1	72.7 72.1	72.4	5.9 5.8	5.9	5.6 5.7	5.7	6 5	5.5
16-Mar-22	Cloudy	13:16	Middle	0.7	24.1 24.1	24.1	8.8 8.8	8.8	0.1 0.1	0.1	71.1 71.3	71.2	6.0 6.0	6.0	9.4 9.4	9.4	11 12	11.5
18-Mar-22	Fine	09:34	Middle	0.7	25.1 25.1	25.1	8.5 8.5	8.5	0.1 0.1	0.1	76.3 76.2	76.3	6.3 6.3	6.3	10.6 10.6	10.6	12 13	12.5
21-Mar-22	Cloudy	10:25	Middle	1.1	23.1 23.1	23.1	7.6 7.6	7.6	0.2 0.2	0.2	69.3 70.4	69.9	5.9 6.0	6.0	12.3 12.3	12.3	12 10	11.0
23-Mar-22	Rainy	14:32	Middle	0.4	18.8 18.8	18.8	7.7 7.7	7.7	0.1 0.1	0.1	87.0 86.9	87.0	8.1 8.1	8.1	63.4 62.7	63.1	140 110	125.0
25-Mar-22	Cloudy	14:26	Middle	0.3	22.6 22.6	22.6	7.7 7.7	7.7	0.1 0.1	0.1	75.5 75.2	75.4	6.5 6.5	6.5	5.2 5.1	5.2	3 3	3.0
28-Mar-22	Rainy	12:26	Middle	0.4	18.7 18.7	18.7	7.4 7.4	7.4	0.1 0.1	0.1	86.3 86.1	86.2	8.1 8.0	8.1	37.6 37.4	37.5	24 21	22.5
30-Mar-22	Sunny	12:40	Middle	0.4	23.1 23.1	23.1	7.9 7.9	7.9	0.1 0.1	0.1	75.6 75.5	75.6	6.5 6.5	6.5	24.4 24.6	24.5	14 12	13.0

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: SHST-IS2

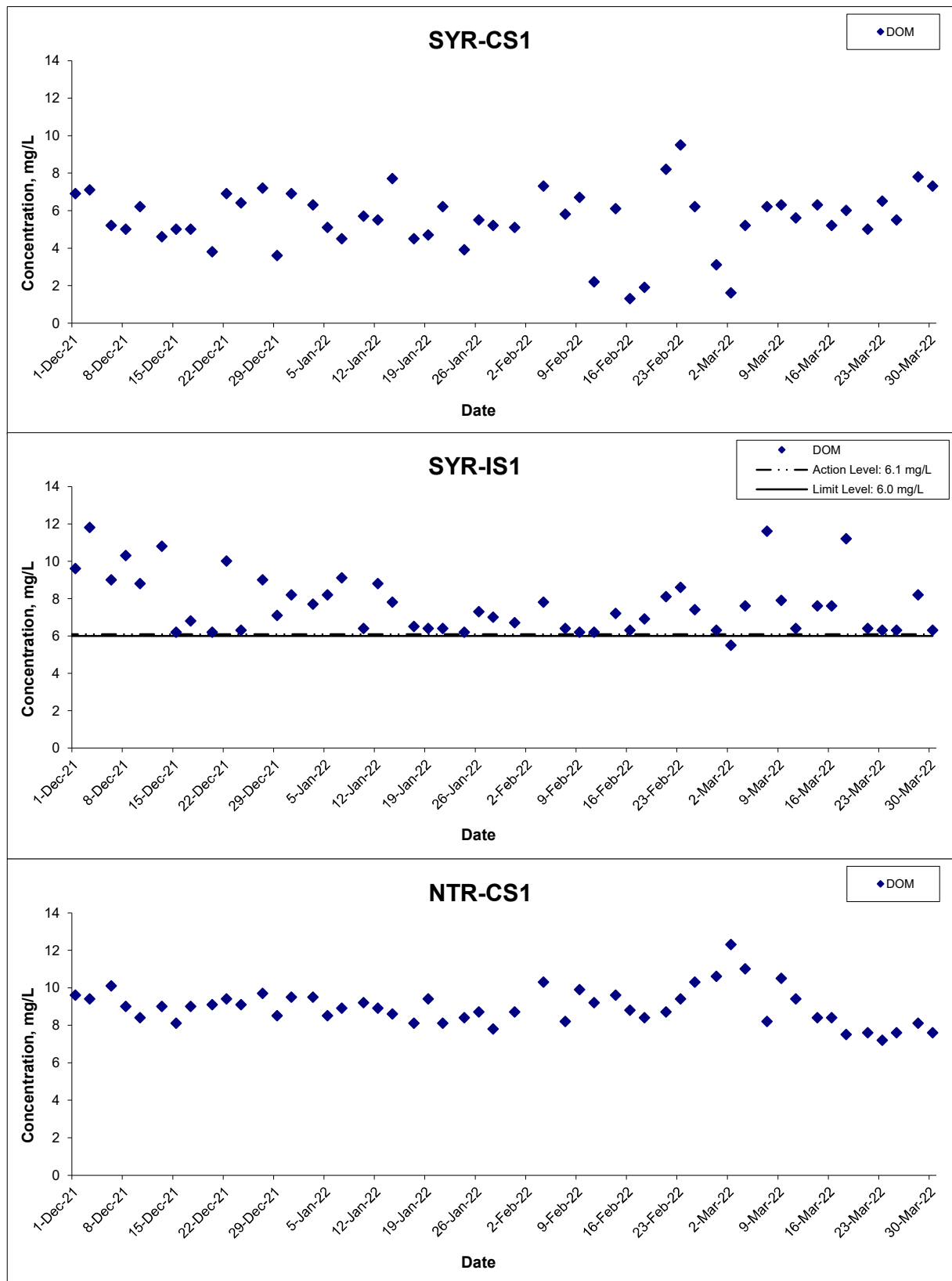
Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Mar-22	Sunny	11:36	Middle	0.1	21.1 21.1	21.1	7.9 7.9	7.9	0.1 0.1	0.1	80.3 80.3	80.3	7.2 7.2	7.2	11.3 11.5	11.4	6 5	5.5
4-Mar-22	Sunny	12:37	Middle	0.4	22.6 22.6	22.6	7.9 7.9	7.9	0.1 0.1	0.1	97.4 97.4	97.4	8.4 8.4	8.4	7.6 7.5	7.6	5 4	4.5
7-Mar-22	Sunny	17:19	Middle	0.3	23.7 23.7	23.7	8.0 8.0	8.0	0.1 0.1	0.1	88.9 89.1	89.0	7.5 7.5	7.5	4.1 4.2	4.2	8 7	7.5
9-Mar-22	Sunny	12:41	Middle	0.1	22.6 22.6	22.6	8.1 8.0	8.1	0.1 0.1	0.1	97.6 97.5	97.6	8.4 8.4	8.4	12.3 12.6	12.5	10 10	10.0
11-Mar-22	Sunny	13:36	Middle	0.1	22.3 22.3	22.3	8.3 8.3	8.3	0.1 0.1	0.1	84.1 84.1	84.1	7.3 7.3	7.3	7.1 7.1	7.1	5 5	5.0
14-Mar-22	Sunny	14:33	Middle	0.1	27.4 27.5	27.5	9.0 9.0	9.0	0.1 0.1	0.1	96.3 96.2	96.3	7.6 7.6	7.6	8.1 8.1	8.1	10 9	9.5
16-Mar-22	Cloudy	13:34	Middle	0.1	24.1 24.1	24.1	8.5 8.5	8.5	0.1 0.1	0.1	85.4 85.2	85.3	7.2 7.2	7.2	8.3 8.3	8.3	6 7	6.5
18-Mar-22	Fine	09:54	Middle	0.1	23.9 23.9	23.9	8.6 8.6	8.6	0.1 0.1	0.1	87.0 87.0	87.0	7.3 7.3	7.3	9.2 9.1	9.2	7 6	6.5
21-Mar-22	Cloudy	10:40	Middle	0.1	24.0 24.0	24.0	7.5 7.5	7.5	0.1 0.1	0.1	85.1 85.3	85.2	7.2 7.2	7.2	12.7 12.7	12.7	10 9	9.5
23-Mar-22	Rainy	14:52	Middle	0.4	18.6 18.6	18.6	7.5 7.5	7.5	0.1 0.1	0.1	90.9 90.8	90.9	8.5 8.5	8.5	67.5 67.2	67.4	73 66	69.5
25-Mar-22	Cloudy	12:03	Middle	0.2	22.5 22.6	22.6	7.9 7.9	7.9	0.2 0.2	0.2	89.7 89.8	89.8	7.8 7.8	7.8	6.1 6.0	6.1	7 6	6.5
28-Mar-22	Rainy	12:43	Middle	0.3	19.0 19.0	19.0	7.4 7.4	7.4	0.1 0.1	0.1	89.6 89.3	89.5	8.3 8.3	8.3	37.2 37.0	37.1	21 20	20.5
30-Mar-22	Sunny	12:50	Middle	0.3	23.3 23.3	23.3	7.8 7.8	7.8	0.1 0.1	0.1	89.3 89.2	89.3	7.6 7.6	7.6	10.4 10.6	10.5	6 7	6.5


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

Location: MWR-IS3

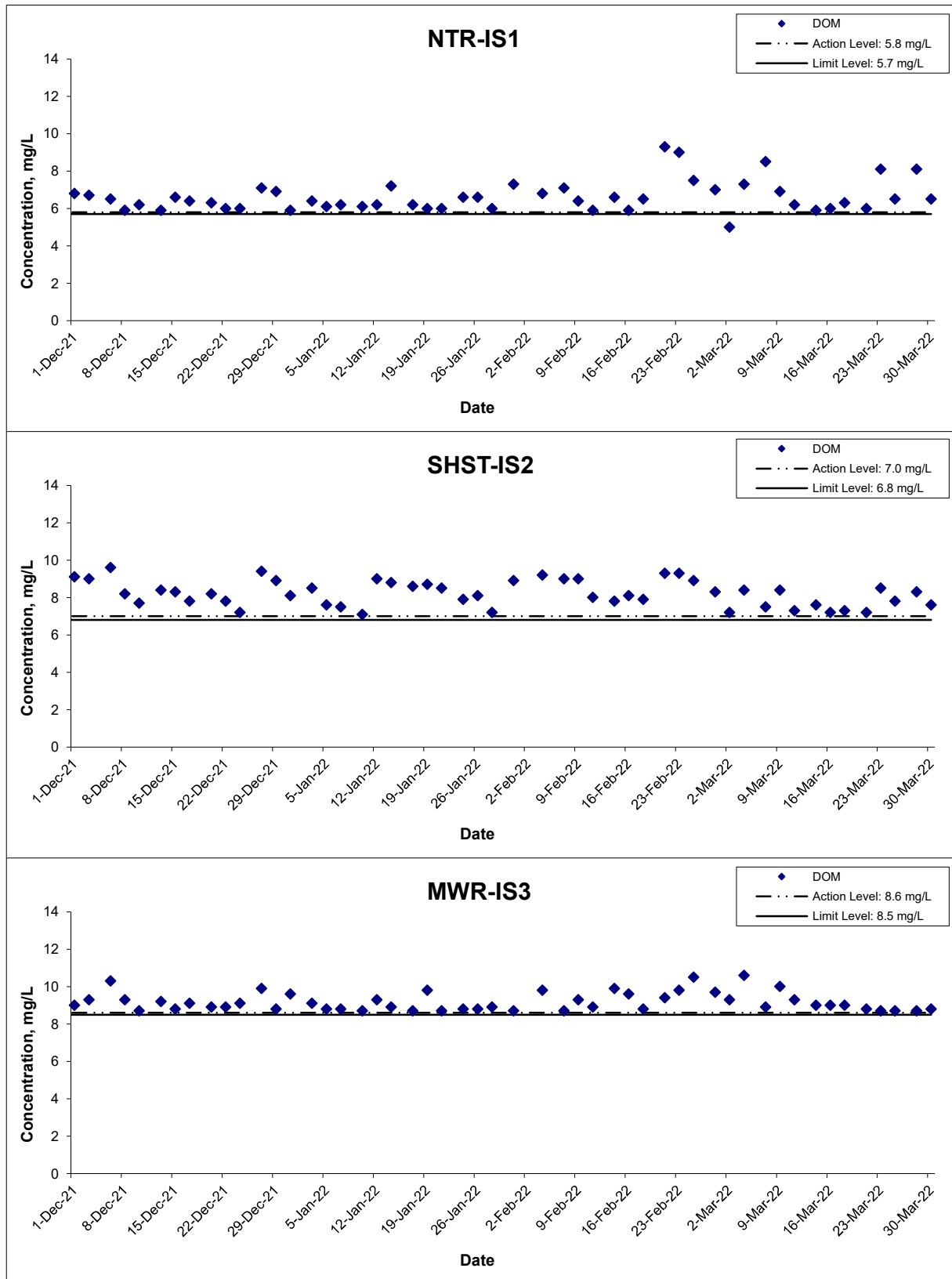
Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Mar-22	Sunny	12:07	Middle	0.1	24.6 24.6	24.6	8.4 8.4	8.4	0.1 0.1	0.1	111.6 111.6	111.6	9.3 9.3	9.3	55.1 54.4	54.8	15 15	15.0
4-Mar-22	Sunny	12:20	Middle	0.3	23.7 23.7	23.7	8.2 8.2	8.2	0.1 0.1	0.1	124.9 125.2	125.1	10.6 10.6	10.6	6.9 6.8	6.9	5 6	5.5
7-Mar-22	Sunny	17:09	Middle	0.2	23.8 23.9	23.9	8.2 8.2	8.2	0.1 0.1	0.1	105.8 106.0	105.9	8.9 8.9	8.9	9.9 9.8	9.9	11 12	11.5
9-Mar-22	Sunny	13:04	Middle	0.1	23.3 23.3	23.3	7.7 7.7	7.7	0.1 0.1	0.1	116.5 116.8	116.7	9.9 10.0	10.0	12.8 12.9	12.9	13 13	13.0
11-Mar-22	Sunny	14:08	Middle	0.1	24.4 24.4	24.4	8.6 8.6	8.6	0.1 0.1	0.1	111.2 111.2	111.2	9.3 9.3	9.3	9.9 10.0	10.0	13 13	13.0
14-Mar-22	Sunny	14:47	Middle	0.1	27.5 27.6	27.6	8.7 8.7	8.7	0.1 0.1	0.1	113.6 113.6	113.6	9.0 9.0	9.0	9.0 8.8	8.9	19 19	19.0
16-Mar-22	Cloudy	14:13	Middle	0.1	23.7 23.7	23.7	8.7 8.7	8.7	0.1 0.1	0.1	106.3 106.4	106.4	9.0 9.0	9.0	9.3 9.4	9.4	12 13	12.5
18-Mar-22	Fine	10:41	Middle	0.1	24.7 24.7	24.7	8.6 8.6	8.6	0.1 0.1	0.1	107.7 107.8	107.8	9.0 9.0	9.0	10.2 10.2	10.2	18 15	16.5
21-Mar-22	Cloudy	11:04	Middle	0.2	24.1 24.1	24.1	7.8 7.8	7.8	0.1 0.1	0.1	105.2 105.1	105.2	8.8 8.8	8.8	15.0 14.5	14.8	12 14	13.0
23-Mar-22	Rainy	15:48	Middle	0.4	18.4 18.4	18.4	7.6 7.6	7.6	0.1 0.1	0.1	92.5 92.4	92.5	8.7 8.7	8.7	33.1 33.2	33.2	64 68	66.0
25-Mar-22	Cloudy	14:04	Middle	0.3	22.4 22.4	22.4	8.1 8.0	8.1	0.1 0.1	0.1	100.7 100.6	100.7	8.7 8.7	8.7	8.7 8.8	8.8	14 13	13.5
28-Mar-22	Rainy	13:12	Middle	0.3	19.6 19.6	19.6	7.5 7.5	7.5	0.1 0.1	0.1	94.9 94.8	94.9	8.7 8.7	8.7	38.8 38.9	38.9	30 30	30.0
30-Mar-22	Sunny	17:20	Middle	0.3	23.4 23.4	23.4	7.7 7.7	7.7	0.1 0.1	0.1	102.7 102.5	102.6	8.8 8.7	8.8	17.8 17.5	17.7	12 10	11.0


Dissolved Oxygen (Middle)



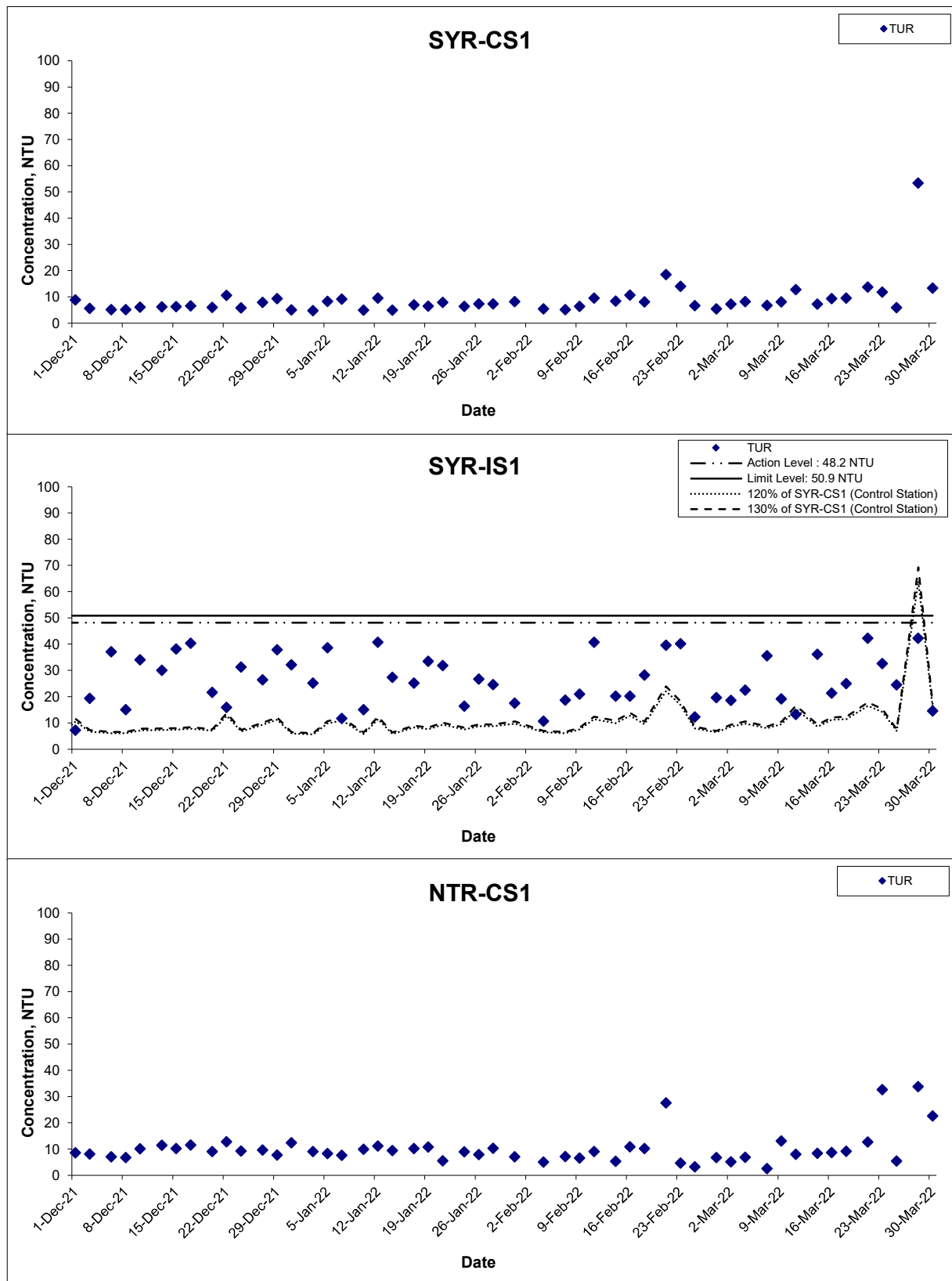
Title Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA20002	
	Date Mar 22	Appendix G	


Dissolved Oxygen (Middle)



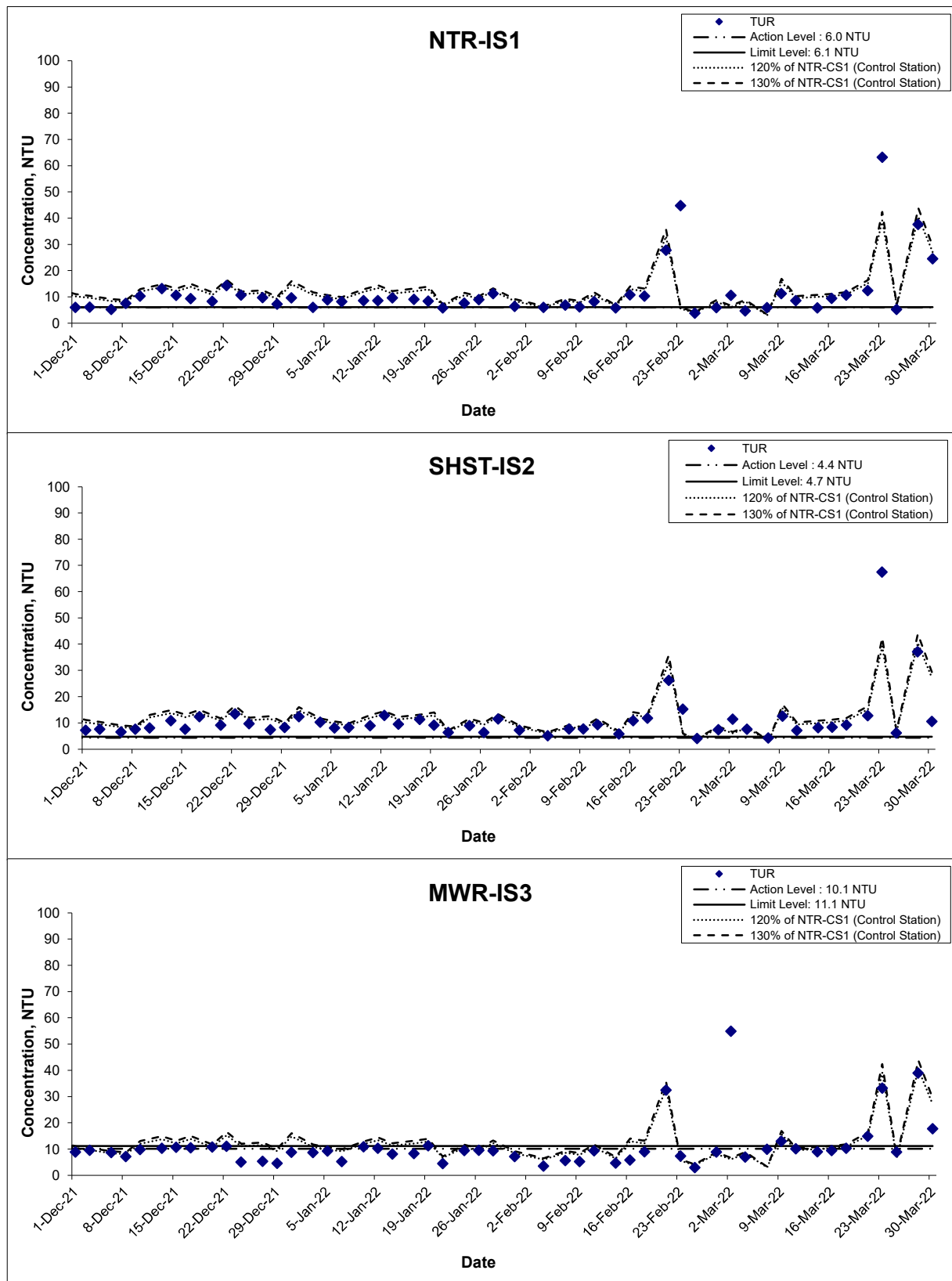
Title Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA20002	 consulting . testing . research
	Date Mar 22	Appendix G	

Turbidity (Depth-averaged)



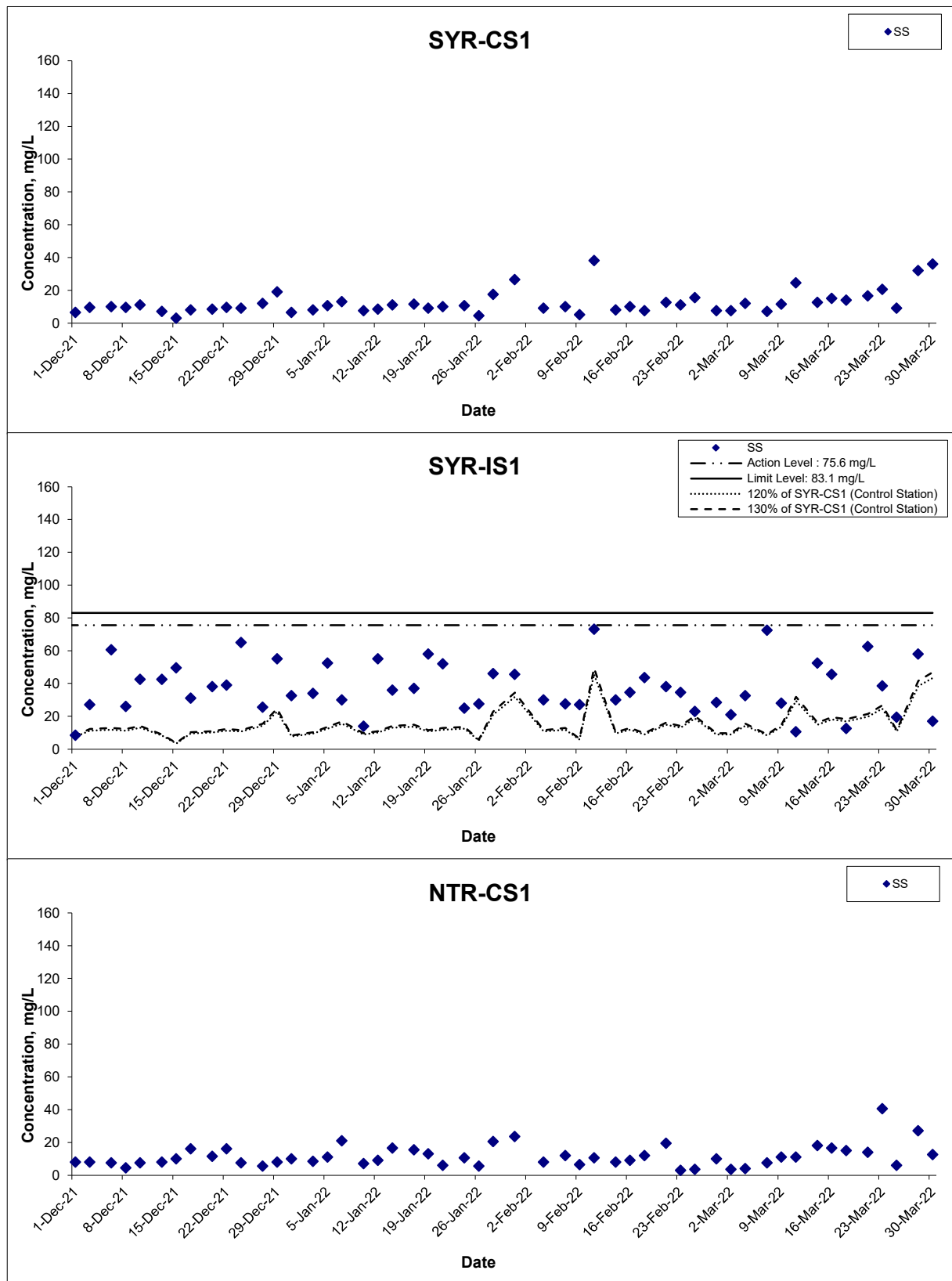
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	Advance and First Stage Works of Kwu Tung North and Fanling	N.T.S	No. WMA20002	
	North New Development Areas			
	Graphical Presentation of Water Quality Monitoring Results	Date	Appendix	
		Mar 22	G	


Turbidity (Depth-averaged)



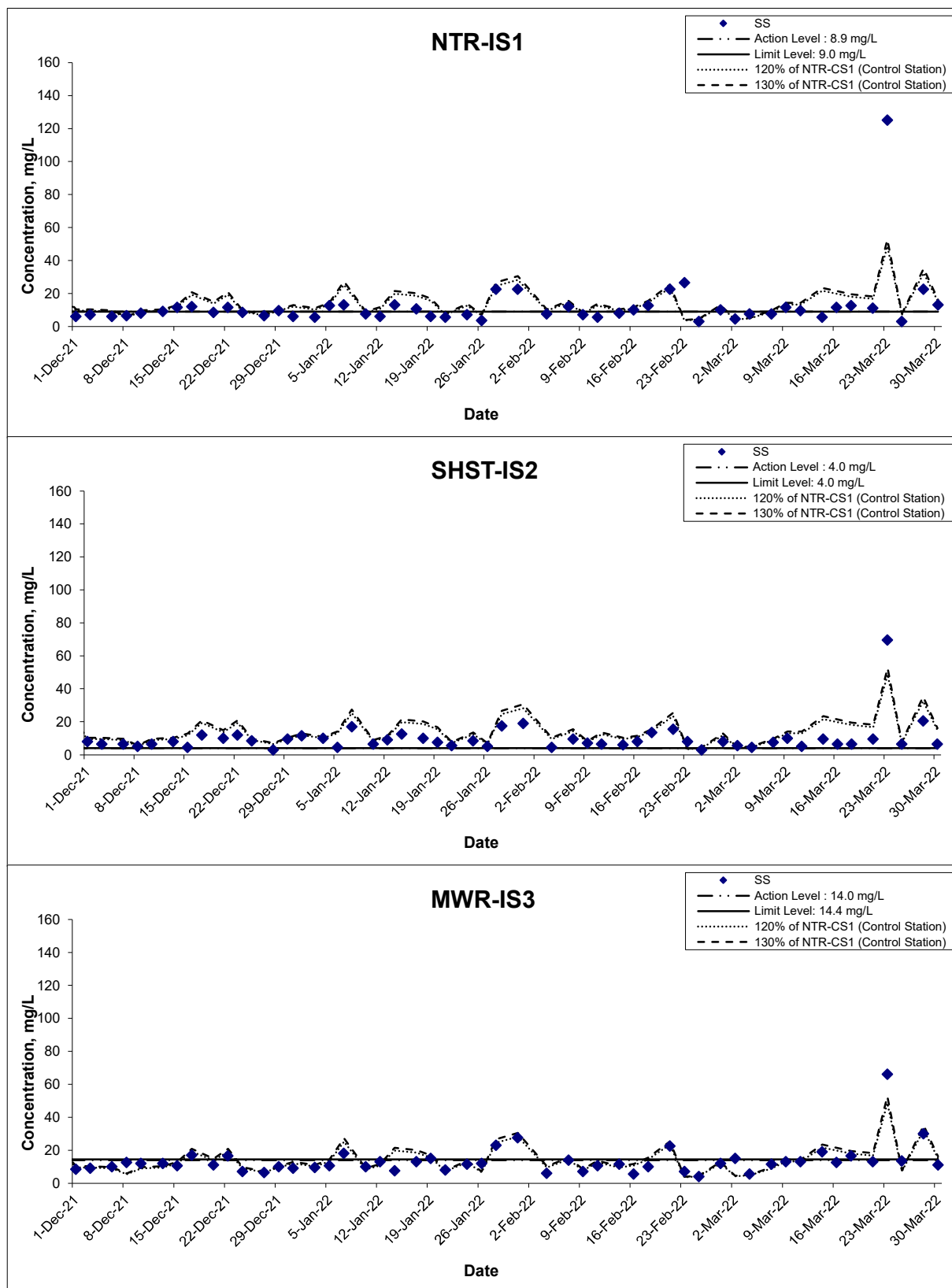
Title Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA20002	WELLAB 匯力 consulting . testing . research
	Date Mar 22	Appendix G	


Suspended Solids (Depth-averaged)



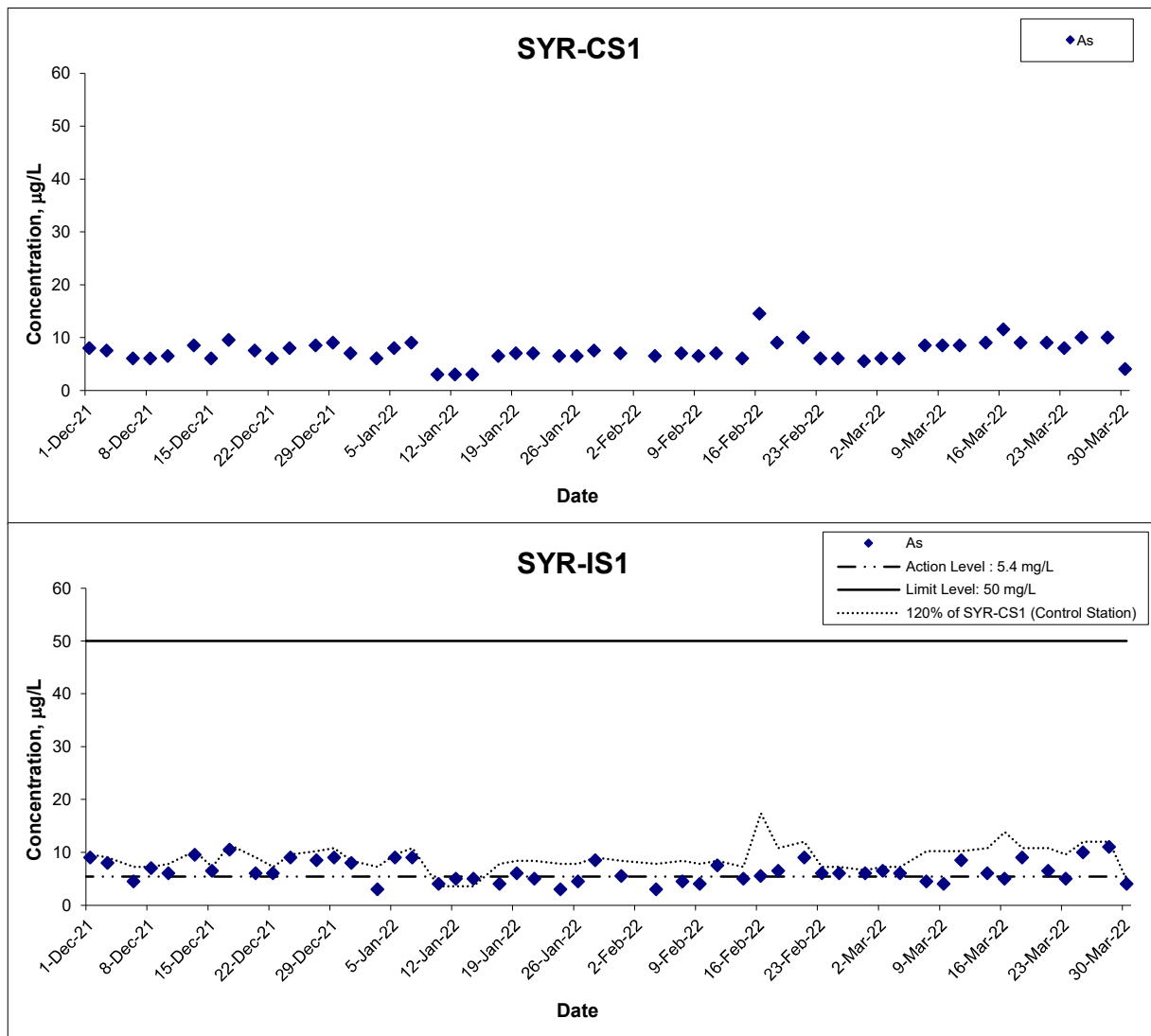
Title Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA20002	 consulting . testing . research
	Date Mar 22	Appendix G	

Suspended Solids (Depth-averaged)



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

Arsenic (Depth-averaged)



Title Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA20002	WELLAB 匯力 consulting . testing . research
	Date Mar 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.:	36389
Date of Issue:	2022-03-08
Date Received:	2022-03-02
Date Tested:	2022-03-02
Date Completed:	2022-03-08

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36389
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. : WMA20002/220302
Sampling Date : 2022-03-02

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.	36389-2	36389-3	36389-5	36389-6
Total Suspended Solids dried at 103-105°C (mg/L)	7	8	20	22
Arsenic (µg/L)	6	6	6	7

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36389A
Date of Issue:	2022-03-08
Date Received:	2022-03-02
Date Tested:	2022-03-02
Date Completed:	2022-03-08

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36389A
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. : WMA20002/220302
Sampling Date : 2022-03-02

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.	36389-8	36389-9	36389-11	36389-12
Total Suspended Solids dried at 103-105°C (mg/L)	4	3	5	4

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36389-14	36389-15	36389-17	36389-18
Total Suspended Solids dried at 103-105°C (mg/L)	6	5	15	15

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.:	36393
Date of Issue:	2022-03-09
Date Received:	2022-03-04
Date Tested:	2022-03-04
Date Completed:	2022-03-09

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36393
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. : WMA20002/220304
Sampling Date : 2022-03-04

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-095°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.	36393-2	36393-3	36393-5	36393-6
Total Suspended Solids dried at 103-095°C (mg/L)	11	13	32	33
Arsenic (µg/L)	6	6	6	6

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36393A
Date of Issue:	2022-03-09
Date Received:	2022-03-04
Date Tested:	2022-03-04
Date Completed:	2022-03-09

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36393A
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. : WMA20002/220304
Sampling Date : 2022-03-04

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-095°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.	36393-8	36393-9	36393-11	36393-12
Total Suspended Solids dried at 103-095°C (mg/L)	4	4	8	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36393-14	36393-15	36393-17	36393-18
Total Suspended Solids dried at 103-095°C (mg/L)	5	4	5	6

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36397
Date of Issue:	2022-03-11
Date Received:	2022-03-07
Date Tested:	2022-03-07
Date Completed:	2022-03-11

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36397
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. : WMA20002/220307
Sampling Date : 2022-03-07

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-115°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.	36397-2	36397-3	36397-5	36397-6
Total Suspended Solids dried at 103-115°C (mg/L)	7	7	73	72
Arsenic (µg/L)	8	9	5	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.:	36397A
Date of Issue:	2022-03-11
Date Received:	2022-03-07
Date Tested:	2022-03-07
Date Completed:	2022-03-11

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36397A
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. : WMA20002/220307
Sampling Date : 2022-03-07

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-115°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.	36397-8	36397-9	36397-11	36397-12
Total Suspended Solids dried at 103-115°C (mg/L)	7	8	7	8

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36397-14	36397-15	36397-17	36397-18
Total Suspended Solids dried at 103-115°C (mg/L)	7	7	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.:	36408
Date of Issue:	2022-03-15
Date Received:	2022-03-09
Date Tested:	2022-03-09
Date Completed:	2022-03-15

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36408
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. : WMA20002/220309
Sampling Date : 2022-03-09

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-155°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.	36408-2	36408-3	36408-5	36408-6
Total Suspended Solids dried at 103-155°C (mg/L)	12	11	27	29
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.:	36408A
Date of Issue:	2022-03-15
Date Received:	2022-03-09
Date Tested:	2022-03-09
Date Completed:	2022-03-15

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36408A
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. : WMA20002/220309
Sampling Date : 2022-03-09

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-155°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.	36408-8	36408-9	36408-11	36408-12
Total Suspended Solids dried at 103-155°C (mg/L)	11	11	11	12

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36408-14	36408-15	36408-17	36408-18
Total Suspended Solids dried at 103-155°C (mg/L)	10	10	13	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.:	36415
Date of Issue:	2022-03-17
Date Received:	2022-03-11
Date Tested:	2022-03-11
Date Completed:	2022-03-17

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36415
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. : WMA20002/220311
Sampling Date : 2022-03-11

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-175°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.	36415-2	36415-3	36415-5	36415-6
Total Suspended Solids dried at 103-175°C (mg/L)	26	23	11	10
Arsenic (µg/L)	9	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.:	36415A
Date of Issue:	2022-03-17
Date Received:	2022-03-11
Date Tested:	2022-03-11
Date Completed:	2022-03-17

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36415A
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. : WMA20002/220311
Sampling Date : 2022-03-11

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-175°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.	36415-8	36415-9	36415-11	36415-12
Total Suspended Solids dried at 103-175°C (mg/L)	12	10	9	10

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36415-14	36415-15	36415-17	36415-18
Total Suspended Solids dried at 103-175°C (mg/L)	5	5	13	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.:	36424
Date of Issue:	2022-03-17
Date Received:	2022-03-14
Date Tested:	2022-03-14
Date Completed:	2022-03-17

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36424
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. : WMA20002/220314
Sampling Date : 2022-03-14

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-175°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.	36424-2	36424-3	36424-5	36424-6
Total Suspended Solids dried at 103-175°C (mg/L)	11	14	53	52
Arsenic (µg/L)	9	9	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.:	36424A
Date of Issue:	2022-03-17
Date Received:	2022-03-14
Date Tested:	2022-03-14
Date Completed:	2022-03-17

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36424A
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. : WMA20002/220314
Sampling Date : 2022-03-14

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-175°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.	36424-8	36424-9	36424-11	36424-12
Total Suspended Solids dried at 103-175°C (mg/L)	17	19	6	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36424-14	36424-15	36424-17	36424-18
Total Suspended Solids dried at 103-175°C (mg/L)	10	9	19	19

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.:	36433
Date of Issue:	2022-03-17
Date Received:	2022-03-16
Date Tested:	2022-03-16
Date Completed:	2022-03-17

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36433
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. : WMA20002/220316
Sampling Date : 2022-03-16

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-175°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.	36433-2	36433-3	36433-5	36433-6
Total Suspended Solids dried at 103-175°C (mg/L)	14	16	46	45
Arsenic (µg/L)	11	12	5	5

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36433A
Date of Issue:	2022-03-17
Date Received:	2022-03-16
Date Tested:	2022-03-16
Date Completed:	2022-03-17

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36433A
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. : WMA20002/220316
Sampling Date : 2022-03-16

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-175°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.	36433-8	36433-9	36433-11	36433-12
Total Suspended Solids dried at 103-175°C (mg/L)	16	17	11	12

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36433-14	36433-15	36433-17	36433-18
Total Suspended Solids dried at 103-175°C (mg/L)	6	7	12	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.:	36438
Date of Issue:	2022-03-23
Date Received:	2022-03-18
Date Tested:	2022-03-18
Date Completed:	2022-03-23

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36438
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. : WMA20002/220318
Sampling Date : 2022-03-18

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-235°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.	36438-2	36438-3	36438-5	36438-6
Total Suspended Solids dried at 103-235°C (mg/L)	14	14	14	11
Arsenic (µg/L)	9	9	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.:	36438A
Date of Issue:	2022-03-23
Date Received:	2022-03-18
Date Tested:	2022-03-18
Date Completed:	2022-03-23

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36438A
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. : WMA20002/220318
Sampling Date : 2022-03-18

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-235°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.	36438-8	36438-9	36438-11	36438-12
Total Suspended Solids dried at 103-235°C (mg/L)	15	15	12	13

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36438-14	36438-15	36438-17	36438-18
Total Suspended Solids dried at 103-235°C (mg/L)	7	6	18	15

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.:	36448
Date of Issue:	2022-03-23
Date Received:	2022-03-21
Date Tested:	2022-03-21
Date Completed:	2022-03-23

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36448
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. : WMA20002/220321
Sampling Date : 2022-03-21

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-235°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:

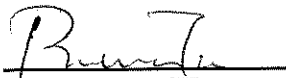
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36448-2	36448-3	36448-5	36448-6
Total Suspended Solids dried at 103-235°C (mg/L)	18	15	65	60
Arsenic (µg/L)	9	9	6	7

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36448A
Date of Issue:	2022-03-23
Date Received:	2022-03-21
Date Tested:	2022-03-21
Date Completed:	2022-03-23

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36448A
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. : WMA20002/220321
Sampling Date : 2022-03-21

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-235°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.	36448-8	36448-9	36448-11	36448-12
Total Suspended Solids dried at 103-235°C (mg/L)	14	14	12	10

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36448-14	36448-15	36448-17	36448-18
Total Suspended Solids dried at 103-235°C (mg/L)	10	9	12	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.:	36452
Date of Issue:	2022-03-29
Date Received:	2022-03-23
Date Tested:	2022-03-23
Date Completed:	2022-03-29

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36452
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. : WMA20002/220323
Sampling Date : 2022-03-23

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.	36452-2	36452-3	36452-5	36452-6
Total Suspended Solids dried at 103-105°C (mg/L)	20	21	35	42
Arsenic (µg/L)	8	8	5	5

Remarks: 1) < = less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36452A
Date of Issue:	2022-03-29
Date Received:	2022-03-23
Date Tested:	2022-03-23
Date Completed:	2022-03-29

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36452A
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. : WMA20002/220323
Sampling Date : 2022-03-23

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.	36452-8	36452-9	36452-11	36452-12
Total Suspended Solids dried at 103-105°C (mg/L)	37	44	140	110

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36452-14	36452-15	36452-17	36452-18
Total Suspended Solids dried at 103-105°C (mg/L)	73	66	64	68

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.:	36455
Date of Issue:	2022-03-31
Date Received:	2022-03-25
Date Tested:	2022-03-25
Date Completed:	2022-03-31

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36455
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. : WMA20002/220325
Sampling Date : 2022-03-25

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:

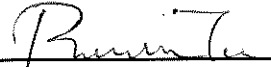
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36455-2	36455-3	36455-5	36455-6
Total Suspended Solids dried at 103-105°C (mg/L)	8	10	18	21
Arsenic (µg/L)	10	10	10	10

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

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

Report No.:	36455A
Date of Issue:	2022-03-31
Date Received:	2022-03-25
Date Tested:	2022-03-25
Date Completed:	2022-03-31

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36455A
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. : WMA20002/220325
Sampling Date : 2022-03-25

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.	36455-8	36455-9	36455-11	36455-12
Total Suspended Solids dried at 103-105°C (mg/L)	6	6	3	3

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36455-14	36455-15	36455-17	36455-18
Total Suspended Solids dried at 103-105°C (mg/L)	7	6	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.:	36483
Date of Issue:	2022-04-01
Date Received:	2022-03-28
Date Tested:	2022-03-28
Date Completed:	2022-04-01

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36483
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. : WMA20002/220328
Sampling Date : 2022-03-28

Tests Requested & Methodology:

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

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36483-2	36483-3	36483-5	36483-6
Total Suspended Solids dried at 103-105°C (mg/L)	30	34	60	56
Arsenic (µg/L)	10	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.:	36483A
Date of Issue:	2022-04-01
Date Received:	2022-03-28
Date Tested:	2022-03-28
Date Completed:	2022-04-01

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36483A
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. : WMA20002/220328
Sampling Date : 2022-03-28

Tests Requested & Methodology:

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

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36483-8	36483-9	36483-11	36483-12
Total Suspended Solids dried at 103-105°C (mg/L)	27	27	24	21

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36483-14	36483-15	36483-17	36483-18
Total Suspended Solids dried at 103-105°C (mg/L)	21	20	30	30

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.:	36486
Date of Issue:	2022-04-06
Date Received:	2022-03-30
Date Tested:	2022-03-30
Date Completed:	2022-04-06

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36486
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. : WMA20002/220330
Sampling Date : 2022-03-30

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.	36486-2	36486-3	36486-5	36486-6
Total Suspended Solids dried at 103-105°C (mg/L)	36	36	16	18
Arsenic (µg/L)	4	4	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.:	36486A
Date of Issue:	2022-04-06
Date Received:	2022-03-30
Date Tested:	2022-03-30
Date Completed:	2022-04-06

ATTN: Mr. Antony Leung

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36486A
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. : WMA20002/220330
Sampling Date : 2022-03-30

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.	36486-8	36486-9	36486-11	36486-12
Total Suspended Solids dried at 103-105°C (mg/L)	12	13	14	12

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36486-14	36486-15	36486-17	36486-18
Total Suspended Solids dried at 103-105°C (mg/L)	6	7	12	10

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.: QC36389
Date of Issue: 2022-03-08
Date Received: 2022-03-02
Date Tested: 2022-03-02
Date Completed: 2022-03-08

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	104	80-120
Arsenic (%)	101	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	93	N/A	80-120

Sample Duplicate

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

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36389.

*****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.:	QC36393
Date of Issue:	2022-03-09
Date Received:	2022-03-04
Date Tested:	2022-03-04
Date Completed:	2022-03-09

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 (%)	100	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 (%)	96	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	5	4	RPD ≤ 5%
Arsenic (%)	8	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 36393.

*****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.:	QC36397
Date of Issue:	2022-03-11
Date Received:	2022-03-07
Date Tested:	2022-03-07
Date Completed:	2022-03-11

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 (%)	95	100	80-120
Arsenic (%)	105	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	112	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	4	1	RPD≤5%
Arsenic (%)	3	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36397.

*****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.:	QC36408
Date of Issue:	2022-03-15
Date Received:	2022-03-09
Date Tested:	2022-03-09
Date Completed:	2022-03-15

Page: 1 of 1

ATTN: Mr. Antony Leung

QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (µg/L)	<0.2	N/A	<0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	101	101	80-120
Arsenic (%)	119	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 (%)	5	1	RPD≤5%
Arsenic (%)	7	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36408.

*****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.:	QC36415
Date of Issue:	2022-03-17
Date Received:	2022-03-11
Date Tested:	2022-03-11
Date Completed:	2022-03-17

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 (%)	106	101	80-120
Arsenic (%)	108	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	88	N/A	80-120

Sample Duplicate

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

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36415.

*****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.:	QC36424
Date of Issue:	2022-03-17
Date Received:	2022-03-14
Date Tested:	2022-03-14
Date Completed:	2022-03-17

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 (%)	103	103	80-120
Arsenic (%)	111	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	108	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	0	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 36424.

*****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.:	QC36433
Date of Issue:	2022-03-17
Date Received:	2022-03-16
Date Tested:	2022-03-16
Date Completed:	2022-03-17

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 (%)	103	98	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 (%)	96	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	0	RPD ≤ 5%
Arsenic (%)	1	N/A	RPD ≤ 20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36433.

*****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.:	QC36438
Date of Issue:	2022-03-23
Date Received:	2022-03-18
Date Tested:	2022-03-18
Date Completed:	2022-03-23

Page: 1 of 1

ATTN: Mr. Antony Leung

QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (µg/L)	<0.2	N/A	<0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	100	97	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 (%)	10	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	2	RPD≤5%
Arsenic (%)	96	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 36438.

*****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.: QC36448
Date of Issue: 2022-03-23
Date Received: 2022-03-21
Date Tested: 2022-03-21
Date Completed: 2022-03-23

Page: 1 of 1

ATTN: Mr. Antony Leung

QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (µg/L)	<0.2	N/A	<0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	100	89	80-120
Arsenic (%)	98	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	98	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	2	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 36448.

*****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.:	QC36452
Date of Issue:	2022-03-29
Date Received:	2022-03-23
Date Tested:	2022-03-23
Date Completed:	2022-03-29

Page: 1 of 1

ATTN: Mr. Antony Leung

QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (µg/L)	<0.2	N/A	<0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	92	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 (%)	102	N/A	80-120

Sample Duplicate

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

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36452.

*****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.:	QC36455
Date of Issue:	2022-03-31
Date Received:	2022-03-25
Date Tested:	2022-03-25
Date Completed:	2022-03-31

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 (%)	110	82	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 (%)	90	N/A	80-120

Sample Duplicate

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

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36455.

*****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.:	QC36483
Date of Issue:	2022-04-01
Date Received:	2022-03-28
Date Tested:	2022-03-28
Date Completed:	2022-04-01

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	101	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 (%)	97	N/A	80-120

Sample Duplicate

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

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36483.

*****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.:	QC36486
Date of Issue:	2022-04-06
Date Received:	2022-03-30
Date Tested:	2022-03-30
Date Completed:	2022-04-06

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 (%)	101	104	80-120
Arsenic (%)	101	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	101	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	4	RPD≤5%
Arsenic (%)	4	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36486.

*****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%
09-03-2022 10:01	CZ PT 1		19.76	0.04	0.01
09-03-2022 10:03	CZ container 1		19.86	0.03	0.01
09-03-2022 10:05	CZ container 2		19.78	0.03	0.01
09-03-2022 10:07	CZ container 3		19.77	0.00	0.02
09-03-2022 10:09	CZ container 4		19.77	0.00	0.02
09-03-2022 9:58	CZ container 5		19.82	0.01	0.01

Prepared by : Y L Chan (Safety Officer)

Date : 09-03-2022

**APPENDIX K
BUILT HERITAGE MONITORING
RESULTS**

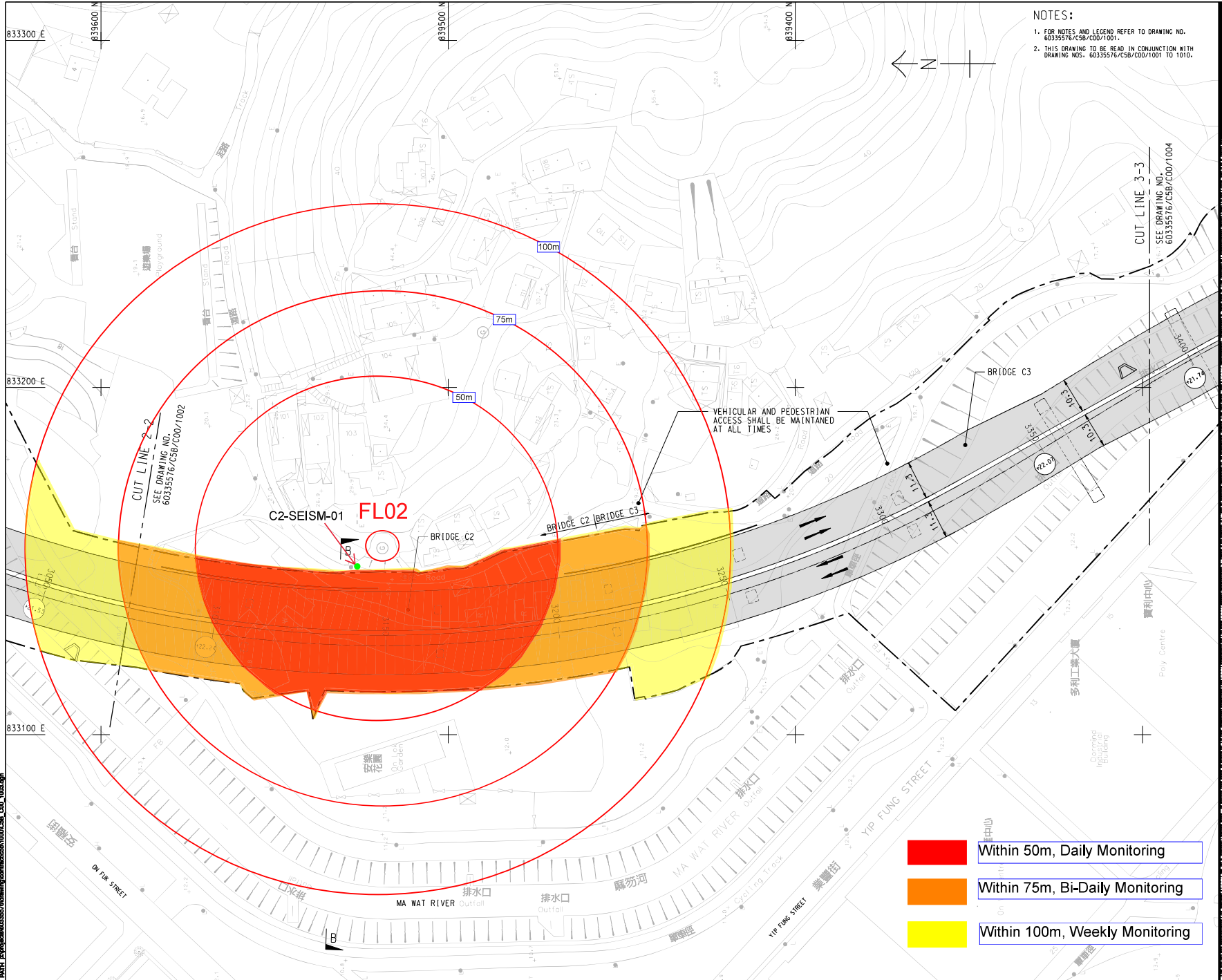
Summary of vibration readings at FL02 (C2-SEISM-01)



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)
01 Mar 2022	0.157	UM17121
02 Mar 2022	0.091	UM17126
03 Mar 2022	0.138	UM17126
04 Mar 2022	0.104	UM17121
05 Mar 2022	0.141	UM17126
07 Mar 2022	0.074	UM17124
08 Mar 2022	0.067	UM17124
09 Mar 2022	0.180	UM17121
10 Mar 2022	0.084	UM17121
11 Mar 2022	0.059	UM17121
12 Mar 2022	0.137	UM17126
14 Mar 2022	0.062	UM17124
15 Mar 2022	0.203	UM17121
16 Mar 2022	0.254	UM17124
17 Mar 2022	0.181	UM17121
18 Mar 2022	0.153	UM17126
19 Mar 2022	0.186	UM17121
21 Mar 2022	0.186	UM17121
22 Mar 2022	0.123	UM17126
23 Mar 2022	0.083	UM17121
24 Mar 2022	0.060	UM17126
25 Mar 2022	0.105	UM17121
26 Mar 2022	0.105	UM17121
28 Mar 2022	0.090	UM17124
29 Mar 2022	0.071	UM17126
30 Mar 2022	0.161	UM17126
31 Mar 2022	0.064	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

AECOM

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

CONTRACT TITLE:
 FANLING NORTH NEW
 DEVELOPMENT AREA, PHASE 1:
 FANLING BYPASS
 EASTERN SECTION
 (SHUNG HIM TONG TO
 KAU LUNG HANG)

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

CONSULTANT
 AECOM Asia Company Ltd.
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SUB-CONSULTANTS
 2017/06/24

ISSUE/REVISION		
NO.	DATE	DESCRIPTION
1	JUN-19	TENDER DRAWING

STATUS
 TENDER DRAWING

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)



CRCC – Paul Y. Joint Venture

Table 2.3: Vibration Limit from PNAP APP-137 & PS 34.01(2)

TYPE OF BUILDING	GUIDE VALUES OF MAXIMUM PPV* (MM/SEC)	
	TRANSIENT VIBRATION	CONTINUOUS VIBRATION
Vibration-sensitive / dilapidated buildings#	7.5	3.0

Date	Max. PPV recorded (mm/s)	Serial no. of device (Micromate/ Supergraph)
01 Mar 2022	0.091	UM17124
02 Mar 2022	0.086	UM17121
03 Mar 2022	0.194	UM17121
04 Mar 2022	0.438	UM17124
05 Mar 2022	0.175	UM17126
07 Mar 2022	0.097	UM17121
08 Mar 2022	0.105	UM17124
09 Mar 2022	0.114	UM17126
10 Mar 2022	0.087	UM17121
11 Mar 2022	0.154	UM17124
12 Mar 2022	0.268	UM17126
14 Mar 2022	0.119	UM17124
15 Mar 2022	0.125	UM17126
16 Mar 2022	0.146	UM17121
17 Mar 2022	0.118	UM17126
18 Mar 2022	0.096	UM17124
19 Mar 2022	0.08	UM17121
21 Mar 2022	0.141	UM17126
22 Mar 2022	0.104	UM17121
23 Mar 2022	0.097	UM17124
24 Mar 2022	0.346	UM17126
25 Mar 2022	0.15	UM17121
26 Mar 2022	0.069	UM17126
28 Mar 2022	0.066	UM17124
29 Mar 2022	0.309	UM17124
30 Mar 2022	0.061	UM17126
31 Mar 2022	0.082	UM17124



60335576/C5B/C00/1002

APPENDIX L
ECOLOGICAL MONITORING RESULTS

Appendix L1a. Avifauna Species Recorded for Water Birds Monitoring, 3 & 4 March 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			3/3/2022 (T1 & T2), 4/3/2022 (T3 & T5)					
					Weather Condition			Overcast / Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.54, 1.81					
					Start Time			1000, 1100					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV		2								
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC						19			
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	5				1	1			
Cinereous Tit	<i>Parus cinereus</i>	蒼背山雀	R				1						
Common Kestrel	<i>Falco tinnunculus</i>	紅隼	CaM, WV	Cap. 586					1				
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R			2			2				
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)			2		14				
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鷀	CWV	PRC	1	1							
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	1	3	3		2				
Greater Coucal	<i>Centropus sinensis</i>	褐翅鴉鵂	R	(VU)					1				
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC			5		1				
Grey Wagtail	<i>Motacilla cinerea</i>	灰鵲鵒	WV						2				
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鷀	R	LC	1								
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	5	4	4						
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鴝	WV, PM	LC				4					

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date					3/3/2022 (T1 & T2), 4/3/2022 (T3 & T5)				
					Weather Condition					Overcast / Sunny				
					Tidal Condition					High				
					Tide Level (m)					1.54, 1.81				
					Start Time					1000, 1100				
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
			WAL	DAL	SWH	P	Heard	Flight						
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R					11						
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV			2		13						
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鵲	R					1						
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC					10					
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	UR	(LC)		1								
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM				4							
Rock Dove	<i>Columba livia</i>	原鴿	R					2						
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R					8						
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵲	WV				1	4						
Swinhoe's White-eye	<i>Zosterops simplex</i>	暗綠繡眼鳥	R		3									
White Wagtail	<i>Motacilla alba</i>	白鵲鵲	PM, WV		1	2	1	9						
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R					4						
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC				2	3					
Zitting Cisticola	<i>Cisticola juncidis</i>	棕扇尾鶯	PM, WV	LC				2						
Total No. of Species					7	7	9	1	18	4	0	0	0	
Total No. of Conservation Interest Species					5	4	4	1	8	4	0	0	0	
Note:														

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		3/3/2022 (T1 & T2), 4/3/2022 (T3 & T5)						
					Weather Condition		Overcast / Sunny						
					Tidal Condition		High						
					Tide Level (m)		1.54, 1.81						
					Start Time		1000, 1100						
					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; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor</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>CR: Rare in China Red Data Book Status</p> <p>VU: Vulnerable in IUCN Red List Status</p> <p>(VU): Vulnerable in China Red Data Book Status</p> <p>EN: Endangered in IUCN Red List Status</p> <p>(EN): Endangered in China Red Data Book Status</p> <p>NT: Near Threatened in IUCN Red List Status</p> <p>CR: Critically Endangered in IUCN Red List Status</p> <p>RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002))</p> <p>WAL: Wet Agricultural Land</p> <p>DAL: Dry Agricultural Land</p> <p>SWH: Shallow Water Habitat</p> <p>P: Pond</p>													

Appendix L1b. Avifauna Species Recorded for Water Birds Monitoring, 3 & 4 March 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			3/3/2022 (T1 & T2), 4/3/2022 (T3 & T5)					
					Weather Condition			Sunny / Fine					
					Tidal Condition			Low					
					Tide Level (m)			1.11, 0.82					
					Start Time			1500, 1500					
					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									3	
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV									1	
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R				3	59			9	2	
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC				10		17			6
Bluethroat	<i>Luscinia svecica</i>	藍喉歌鵲	CWV					1					
Brown Shrike	<i>Lanius cristatus</i>	紅尾伯勞	CPM, SWV					1					
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵲	R					5			6		
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)		2	2		4	1			2
Collared Crow	<i>Corvus torquatus</i>	白頸鵲	UR	LC, VU			5						
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			1	1		2			
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R								1		
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR						32				3
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM				3						
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM							1	1		2
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R						90			10	10

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				3/3/2022 (T1 & T2), 4/3/2022 (T3 & T5)				
					Weather Condition				Sunny / Fine				
					Tidal Condition				Low				
					Tide Level (m)				1.11, 0.82				
					Start Time				1500, 1500				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)					18				1
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV					1		4			
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC							11		
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鷀	CWV	PRC	2								
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	1	2					1		
Greater Coucal	<i>Centropus sinensis</i>	褐翅鴉鵂	R	(VU)					2				
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷸	UPM, WV				3			1			
Little Bunting	<i>Emberiza pusilla</i>	小鵲	CPM, WV						8				
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	3	5	3		3	2			3
Little Grebe	<i>Tachybaptus ruficollis</i>	小鷺鵐	R	LC	1								
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鷸	WV, PM	LC			2	5		1			
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R						5				
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV				11		1				
Oriental Magpie	<i>Pica serica</i>	喜鵲	R										1
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鴝	R						2				
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC						15	1		

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				3/3/2022 (T1 & T2), 4/3/2022 (T3 & T5)				
					Weather Condition				Sunny / Fine				
					Tidal Condition				Low				
					Tide Level (m)				1.11, 0.82				
					Start Time				1500, 1500				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Plain Prinia	<i>Prinia inornata</i>	純色鷦鶯	R					4			4		
Red-billed Starling	<i>Spodiopsar sericeus</i>	絲光椋鳥	WV	GC				3	10				
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鸲	R					11				8	
Richard's Pipit	<i>Anthus richardi</i>	理氏鸲	WV, PM										
Rock Dove	<i>Columba livia</i>	原鴿	R			14	1	3				5	
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R					40	7				
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R				3	9					
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鸲	WV					4					
Swinhoe's White-eye	<i>Zosterops simplex</i>	暗綠繡眼鳥	R		7								
White Wagtail	<i>Motacilla alba</i>	白鶺鴒	PM, WV				2	7	10	7		4	
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R					2	4		4	1	
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)					1			1	
Wood Sandpiper	<i>Tringa glareola</i>	林鸲	PM, WV	LC						23		2	
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R					1			4		
Total No. of Species					5	4	11	8	25	12	5	7	17
Total No. of Conservation Interest Species					4	3	5	3	6	8	3	0	6

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			3/3/2022 (T1 & T2), 4/3/2022 (T3 & T5)				
					Weather Condition			Sunny / Fine				
					Tidal Condition			Low				
					Tide Level (m)			1.11, 0.82				
					Start Time			1500, 1500				
					Abundance							
					Transect Walk							
					T1	T2	T3	T5				
WAL	DAL	SWH	P	Heard				Flight				

Note:

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor

Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)

Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance

Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)

CR: Rare in China Red Data Book Status

VU: Vulnerable in IUCN Red List Status

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CR: Critically Endangered in IUCN Red List Status

RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002))

WAL: Wet Agricultural Land

DAL: Dry Agricultural Land

SWH: Shallow Water Habitat

P: Pond

Appendix L1c. Avifauna Species Recorded for Water Birds Monitoring, 7 & 11 March 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				7/3/2022 (T1 & T2), 11/3/2022 (T3 & T5)				
					Weather Condition				Overcast, Overcast				
					Tidal Condition				High				
					Tide Level (m)				2.02, 2.03				
					Start Time				1400, 1500				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R		2		1					4	
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv										10
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R		2				49				3
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鵲	PM	RC			1	3	1	12	15		1
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵲	R						5				
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	3	4		4	4				3
Cinereous Tit	<i>Parus cinereus</i>	蒼背山雀	R		1				2				
Common Greenshank	<i>Tringa nebularia</i>	青腳鵲	PM, WV	RC			2			2			
Common Kestrel	<i>Falco tinnunculus</i>	紅隼	CaM, WV	Cap. 586									2
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R								1		
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR						11				1
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鵲	WV, PM								1		
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					3		1			4
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R						40			2	
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV						2				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				7/3/2022 (T1 & T2), 11/3/2022 (T3 & T5)				
					Weather Condition				Overcast, Overcast				
					Tidal Condition				High				
					Tide Level (m)				2.02, 2.03				
					Start Time				1400, 1500				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)					22				1
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC							5		
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)		2					1		6
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC									1
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	2	4	7						3
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R			4			8			6	
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV						10				
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鵲	R						2			1	
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC					9				
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R						3				1
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵲	CPM, WV	RC					3				
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵲	R						1				
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM						1				
Rock Dove	<i>Columba livia</i>	原鴿	R						5				
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R				4		12				
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵲	WV						4				
Swinhoe's White-eye	<i>Zosterops simplex</i>	暗綠繡眼鳥	R		2								

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				7/3/2022 (T1 & T2), 11/3/2022 (T3 & T5)					
					Weather Condition				Overcast, Overcast					
					Tidal Condition				High					
					Tide Level (m)				2.02, 2.03					
					Start Time				1400, 1500					
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
			WAL	DAL	SWH	P	Heard	Flight						
White Wagtail	<i>Motacilla alba</i>	白鵲鴿	PM, WV				2	1	6				3	
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R						4	1				
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC				2	4		15	1		2
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷓鴣	R										4	
Zitting Cisticola	<i>Cisticola juncidis</i>	棕扇尾鶯	PM, WV	LC						1				
Total No. of Species					6	4	7	5	23	5	6	5	14	
Total No. of Conservation Interest Species					2	3	4	3	6	3	4	0	8	
Note:														

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			7/3/2022 (T1 & T2), 11/3/2022 (T3 & T5)					
					Weather Condition			Overcast, Overcast					
					Tidal Condition			High					
					Tide Level (m)			2.02, 2.03					
					Start Time			1400, 1500					
					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; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net) Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586) CR: Rare in China Red Data Book Status VU: Vulnerable in IUCN Red List Status (VU): Vulnerable in China Red Data Book Status EN: Endangered in IUCN Red List Status (EN): Endangered in China Red Data Book Status NT: Near Threatened in IUCN Red List Status CR: Critically Endangered in IUCN Red List Status RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002) WAL: Wet Agricultural Land DAL: Dry Agricultural Land SWH: Shallow Water Habitat P: Pond													

Appendix L1d. Avifauna Species Recorded for Water Birds Monitoring, 7 & 11 March 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				7/3/2022 (T1 & T2), 11/3/2022 (T3 & T5)				
					Weather Condition				Overcast, Sunny				
					Tidal Condition				Low				
					Tide Level (m)				0.79, 1.29				
					Start Time				0900, 0900				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R		2		3					7	
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv										5
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R				4		3			8	
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC						17	6		2
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵲	R			2			4				
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	1	3	4	1	13	1			
Cinereous Tit	<i>Parus cinereus</i>	蒼背山雀	R						1	7		5	
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU			2						
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			1	1		5	1		
Common Kestrel	<i>Falco tinnunculus</i>	紅隼	CaM, WV	Cap. 586									2
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR						1				
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM				1						
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					3		1			
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R				5		40				2
Eastern Buzzard	<i>Buteo japonicus</i>	普通鵟	WV	Cap.586									1

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			7/3/2022 (T1 & T2), 11/3/2022 (T3 & T5)					
					Weather Condition			Overcast, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			0.79, 1.29					
					Start Time			0900, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)					36				3
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV				3		4				4
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)		1	1				1		
Greater Coucal	<i>Centropus sinensis</i>	褐翅鴉鵂	R	(VU)					1				
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鵲	UPM, WV				5						
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC			1						
Little Bunting	<i>Emberiza pusilla</i>	小鵲	CPM, WV						8				
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	1	4	6			2	1		
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鵲	WV, PM	LC			1			1			
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R						11			8	
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV				6		2				
Oriental Magpie	<i>Pica serica</i>	喜鵲	R						3				
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鵲	WV	RC						10			
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R						2			1	
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵲	CPM, WV	RC					2				
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵲	R		3				8			3	
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM						5				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			7/3/2022 (T1 & T2), 11/3/2022 (T3 & T5)					
					Weather Condition			Overcast, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			0.79, 1.29					
					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			8			5				4
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		2	3	3		5				
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵯	WV					1	3				
White Wagtail	<i>Motacilla alba</i>	白鵲鵯	PM, WV			2	2		13	1			3
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R					1	1			5	
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC				1		12			1
Total No. of Species					5	7	16	6	22	10	4	7	10
Total No. of Conservation Interest Species					2	3	7	3	4	7	4	0	5
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			7/3/2022 (T1 & T2), 11/3/2022 (T3 & T5)					
					Weather Condition			Overcast, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			0.79, 1.29					
					Start Time			0900, 0900					
					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; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net) Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586) CR: Rare in China Red Data Book Status VU: Vulnerable in IUCN Red List Status (VU): Vulnerable in China Red Data Book Status EN: Endangered in IUCN Red List Status (EN): Endangered in China Red Data Book Status NT: Near Threatened in IUCN Red List Status CR: Critically Endangered in IUCN Red List Status RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002) WAL: Wet Agricultural Land DAL: Dry Agricultural Land SWH: Shallow Water Habitat P: Pond													

Appendix L1e. Avifauna Species Recorded for Water Birds Monitoring, 15 & 18 March 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			15/3/2022 (T1 & T2), 18/3/2022 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.58, 1.82					
					Start Time			0900, 1000					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R									1	
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						24			
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵲	R					2					
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	4	3	3		3	6			
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC						7			
Common Kestrel	<i>Falco tinnunculus</i>	紅隼	CaM, WV	Cap. 586					1				
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM							3			
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R						13				
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)					15	2			
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV						1				
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	1	4	2						
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷸	UPM, WV				3						
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC			2		1				
Grey Wagtail	<i>Motacilla cinerea</i>	灰鵲鴝	WV						3				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			15/3/2022 (T1 & T2), 18/3/2022 (T3 & T5)					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.58, 1.82					
					Start Time			0900, 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)	3	5							
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV					4					
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鴝	R					1					
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R					1					
Rock Dove	<i>Columba livia</i>	原鴿	R					10					
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R					20					
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R			1		17					
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵲	WV				1	3					
White Wagtail	<i>Motacilla alba</i>	白鵲鴝	PM, WV				4	1	1				
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R					6					
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC					9				
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷓鴣	R								1		
Zitting Cisticola	<i>Cisticola juncidis</i>	棕扇尾鶯	PM, WV	LC				1					
Total No. of Species					3	4	6	0	19	7	0	2	0
Total No. of Conservation Interest Species					3	3	2	0	5	4	0	0	0
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			15/3/2022 (T1 & T2), 18/3/2022 (T3 & T5)						
					Weather Condition			Sunny, Sunny						
					Tidal Condition			High						
					Tide Level (m)			1.58, 1.82						
					Start Time			0900, 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; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net) Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586) CR: Rare in China Red Data Book Status VU: Vulnerable in IUCN Red List Status (VU): Vulnerable in China Red Data Book Status EN: Endangered in IUCN Red List Status (EN): Endangered in China Red Data Book Status NT: Near Threatened in IUCN Red List Status CR: Critically Endangered in IUCN Red List Status RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002) WAL: Wet Agricultural Land DAL: Dry Agricultural Land SWH: Shallow Water Habitat P: Pond														

Appendix L1f. Avifauna Species Recorded for Water Birds Monitoring, 15 & 18 March 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				15/3/2022 (T1 & T2), 18/3/2022 (T3 & T5)				
					Weather Condition				Fine, Sunny				
					Tidal Condition				Low				
					Tide Level (m)				1.23, 1.07				
					Start Time				1400, 1500				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R								3	1	
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv									13	
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV									1	
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領椋鳥	R			3		12					
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC			1	26		4	2		
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵲	R					4				1	
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	1	2		7	4	4			
Cinereous Tit	<i>Parus cinereus</i>	蒼背山雀	R					2					
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU								1	
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			1			5			
Common Kestrel	<i>Falco tinnunculus</i>	紅隼	CaM, WV	Cap. 586					1				
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM				1						
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR						1				
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					2				5	
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R				2		120				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			15/3/2022 (T1 & T2), 18/3/2022 (T3 & T5)					
					Weather Condition			Fine, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.23, 1.07					
					Start Time			1400, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Curlew Sandpiper	<i>Calidris ferruginea</i>	彎嘴濱鷸	PM	NT				2					
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)					2				5
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV				1		2	2			2
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC	4	2							
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)		1	2						
Greater Coucal	<i>Centropus sinensis</i>	褐翅鴉鵂	R	(VU)					1				1
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鵲	UPM, WV				3						
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC					1				
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	3	5	11			1			6
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鵲	WV, PM	LC					1	1			
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R						8				
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV				12		3				
Peregrine Falcon	<i>Falco peregrinus</i>	遊隼	SR, WV	Cap.586, LC									1
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	UR	(LC)	1								
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵲	CPM, WV	RC					8				
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鶇	R						3				
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM						1				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				15/3/2022 (T1 & T2), 18/3/2022 (T3 & T5)				
					Weather Condition				Fine, Sunny				
					Tidal Condition				Low				
					Tide Level (m)				1.23, 1.07				
					Start Time				1400, 1500				
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Rock Dove	<i>Columba livia</i>	原鴿	R			2							
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R			4	3		15				2
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵯	WV						1				
Swinhoe's White-eye	<i>Zosterops simplex</i>	暗綠繡眼鳥	R			1			1				
White Wagtail	<i>Motacilla alba</i>	白鵲鴿	PM, WV		2	4	3		1	1			1
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R					2		1		6	3
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC				11		16			
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R								4		
Total No. of Species					5	8	12	6	21	9	2	2	14
Total No. of Conservation Interest Species					4	4	4	4	7	6	1	0	5
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			15/3/2022 (T1 & T2), 18/3/2022 (T3 & T5)					
					Weather Condition			Fine, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.23, 1.07					
					Start Time			1400, 1500					
					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; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net) Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586) CR: Rare in China Red Data Book Status VU: Vulnerable in IUCN Red List Status (VU): Vulnerable in China Red Data Book Status EN: Endangered in IUCN Red List Status (EN): Endangered in China Red Data Book Status NT: Near Threatened in IUCN Red List Status CR: Critically Endangered in IUCN Red List Status RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002) WAL: Wet Agricultural Land DAL: Dry Agricultural Land SWH: Shallow Water Habitat P: Pond													

Appendix L1i. Avifauna Species Recorded for Water Birds Monitoring, 21 & 25 March 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/3/2022 (T1 & T2), 25/3/2022 (T3 & T5)					
					Weather Condition			Overcast, Rainy					
					Tidal Condition			High					
					Tide Level (m)			1.71, 2.40					
					Start Time			1000, 1400					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R				1					4	
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv				4						37
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV		1								
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R				2		16			2	
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC					66				
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵲	R						1				
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	1	1		3					18
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU		1	7						
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC					11				
Common Kestrel	<i>Falco tinnunculus</i>	紅隼	CaM, WV	Cap. 586					1				
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR						13				
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					2					
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R					3					
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R						26				
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)			4	3	1				1

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/3/2022 (T1 & T2), 25/3/2022 (T3 & T5)					
					Weather Condition			Overcast, Rainy					
					Tidal Condition			High					
					Tide Level (m)			1.71, 2.40					
					Start Time			1000, 1400					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵪鶉	PM, WV				1						
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)			1						
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷸	UPM, WV				5						
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC			1						1
Little Bunting	<i>Emberiza pusilla</i>	小鵪鶉	CPM, WV						3				
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	2	3	2						2
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鶿	R	LC							2		
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵪	R						4				
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵪鶉	WV				13						
Oriental Magpie	<i>Pica serica</i>	喜鵪	R						2				
Plain Prinia	<i>Prinia inornata</i>	純色鵪鶉	R						1			2	
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵪鶉	CPM, WV	RC					16				
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R						24				28
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R			2	5		4			4	23
Swinhoe's White-eye	<i>Zosterops simplex</i>	暗綠繡眼鳥	R						1				
White Wagtail	<i>Motacilla alba</i>	白鵪鶉	PM, WV		1								
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R					2	1			1	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/3/2022 (T1 & T2), 25/3/2022 (T3 & T5)					
					Weather Condition			Overcast, Rainy					
					Tidal Condition			High					
					Tide Level (m)			1.71, 2.40					
					Start Time			1000, 1400					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)					1				
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC				45					
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷓鴣	R						5				
Total No. of Species					4	6	10	7	18	0	1	5	7
Total No. of Conservation Interest Species					2	5	3	4	5	0	1	0	4
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/3/2022 (T1 & T2), 25/3/2022 (T3 & T5)					
					Weather Condition			Overcast, Rainy					
					Tidal Condition			High					
					Tide Level (m)			1.71, 2.40					
					Start Time			1000, 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; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net) Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586) CR: Rare in China Red Data Book Status VU: Vulnerable in IUCN Red List Status (VU): Vulnerable in China Red Data Book Status EN: Endangered in IUCN Red List Status (EN): Endangered in China Red Data Book Status NT: Near Threatened in IUCN Red List Status CR: Critically Endangered in IUCN Red List Status RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)) WAL: Wet Agricultural Land DAL: Dry Agricultural Land SWH: Shallow Water Habitat P: Pond													

Appendix L1j. Avifauna Species Recorded for Water Birds Monitoring, 21 & 25 March 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date				21/3/2022 (T1 & T2), 25/3/2022 (T3 & T5)					
					Weather Condition				Rainy, Rainy					
					Tidal Condition				Low					
					Tide Level (m)				1.35, 1.29					
					Start Time				1600, 0900					
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						Heard
WAL	DAL	SWH	P											
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R								4	1		
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv			4						16		
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV					1						
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領椋鳥	R					6			6	10		
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC				60				11		
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵲	R					2						
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	4	4		1	2			1		
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU		5								
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC				8						
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					7				1		
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)			4		12			14		
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV						14					
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC								2		
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)		2	1		1			1		
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC					1					

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/3/2022 (T1 & T2), 25/3/2022 (T3 & T5)					
					Weather Condition			Rainy, Rainy					
					Tidal Condition			Low					
					Tide Level (m)			1.35, 1.29					
					Start Time			1600, 0900					
					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										2
Large Hawk-Cuckoo	<i>Hierococcyx sparverioides</i>	大鷹鵒	Sv									1	
Little Bunting	<i>Emberiza pusilla</i>	小鵒	CPM, WV					2					
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	7	3	3						1
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R					1	5			2	
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵒	CPM, WV	RC					8				
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵒	R										1
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R						56				35
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		1	3			8				6
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵒	WV						4				
White Wagtail	<i>Motacilla alba</i>	白鵒鵒	PM, WV		2				4				
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R					2					
Wood Sandpiper	<i>Tringa glareola</i>	林鵒	PM, WV	LC				13	1				3
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷓鴣	R						6			7	
Zitting Cisticola	<i>Cisticola juncidis</i>	棕扇尾鵒	PM, WV	LC					1				
Total No. of Species					4	5	4	7	18	0	0	5	15
Total No. of Conservation Interest Species					2	4	3	4	7	0	0	0	7

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/3/2022 (T1 & T2), 25/3/2022 (T3 & T5)					
					Weather Condition			Rainy, Rainy					
					Tidal Condition			Low					
					Tide Level (m)			1.35, 1.29					
					Start Time			1600, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
WAL	DAL	SWH	P	Heard				Flight					
Note: R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net) Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586) CR: Rare in China Red Data Book Status VU: Vulnerable in IUCN Red List Status (VU): Vulnerable in China Red Data Book Status EN: Endangered in IUCN Red List Status (EN): Endangered in China Red Data Book Status NT: Near Threatened in IUCN Red List Status CR: Critically Endangered in IUCN Red List Status RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002) WAL: Wet Agricultural Land DAL: Dry Agricultural Land SWH: Shallow Water Habitat P: Pond													

Appendix L1k. Avifauna Species Recorded for Water Birds Monitoring, 29 March 2022, High Tide*

(*Note that the survey of T3 & T5 of the week were scheduled to be conducted within the month of April, as such, the data will be presented in the next Monthly EM&A Report)

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			29/3/2022 (T1 & T2)					
					Weather Condition			Fine					
					Tidal Condition			High					
					Tide Level (m)			1.72					
					Start Time			0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R		3								
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	1	4							
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R		2								
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R			5							
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)		2							
Large Hawk-Cuckoo	<i>Hierococcyx sparverioides</i>	大鷹鵲	Sv		1								
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	2	3							
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R			6							
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV		3								
Plaintive Cuckoo	<i>Cacomantis merulinus</i>	八聲杜鵲	USV		2								
Rock Dove	<i>Columba livia</i>	原鴿	R			6							
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		1	3							
Swinhoe's White-eye	<i>Zosterops simplex</i>	暗綠繡眼鳥	R		2								
White Wagtail	<i>Motacilla alba</i>	白鵲鵲	PM, WV			1							

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			29/3/2022 (T1 & T2)					
					Weather Condition			Fine					
					Tidal Condition			High					
					Tide Level (m)			1.72					
					Start Time			0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Total No. of Species					9	8							
Total No. of Conservation Interest Species					2	3							
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		29/3/2022 (T1 & T2)						
					Weather Condition		Fine						
					Tidal Condition		High						
					Tide Level (m)		1.72						
					Start Time		0900						
					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; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor
 Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
 Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
 Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)
 CR: Rare in China Red Data Book Status
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 (EN): Endangered in China Red Data Book Status
 NT: Near Threatened in IUCN Red List Status
 CR: Critically Endangered in IUCN Red List Status
 RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
 WAL: Wet Agricultural Land
 DAL: Dry Agricultural Land
 SWH: Shallow Water Habitat
 P: Pond

Appendix L11. Avifauna Species Recorded for Water Birds Monitoring, 29 March 2022 Low Tide*

(*Note that the survey of T3 & T5 of the week were scheduled to be conducted within the month of April, as such, the data will be presented in the next Monthly EM&A Report)

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			29/3/2022 (T1 & T2)					
					Weather Condition			Fine					
					Tidal Condition			Low					
					Tide Level (m)			1.38					
					Start Time			1300					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R		4	2							
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv			50							
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R		2	1							
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	1	2							
Cinereous Tit	<i>Parus cinereus</i>	蒼背山雀	R		2								
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R		2	7							
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R			3							
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	1	1							
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R			50							
Large Hawk-Cuckoo	<i>Hierococcyx sparverioides</i>	大鷹鵲	Sv		4								
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)		1							
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R		3								
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV		4								
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	UR	(LC)		1							

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			29/3/2022 (T1 & T2)					
					Weather Condition			Fine					
					Tidal Condition			Low					
					Tide Level (m)			1.38					
					Start Time			1300					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Plaintive Cuckoo	<i>Cacomantis merulinus</i>	八聲杜鵑	USV		2								
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵯	R		2	5							
Rock Dove	<i>Columba livia</i>	原鴿	R			13							
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R			3							
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R		3								
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R		1								
Total No. of Species					13	13							
Total No. of Conservation Interest Species					2	4							
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		29/3/2022 (T1 & T2)						
					Weather Condition		Fine						
					Tidal Condition		Low						
					Tide Level (m)		1.38						
					Start Time		1300						
					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; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor</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>CR: Rare in China Red Data Book Status</p> <p>VU: Vulnerable in IUCN Red List Status</p> <p>(VU): Vulnerable in China Red Data Book Status</p> <p>EN: Endangered in IUCN Red List Status</p> <p>(EN): Endangered in China Red Data Book Status</p> <p>NT: Near Threatened in IUCN Red List Status</p> <p>CR: Critically Endangered in IUCN Red List Status</p> <p>RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)</p> <p>WAL: Wet Agricultural Land</p> <p>DAL: Dry Agricultural Land</p> <p>SWH: Shallow Water Habitat</p> <p>P: Pond</p>													

Appendix L1m. Waterbirds Recorded in March 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: Dry Agricultural Land	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, Dry Agricultural Land, Shallow Water Habitat, Pond	Abundant passage migrant and winter visitor. Found in Deep Bay area.
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞		T5: Wet Agricultural Land	Common winter visitor, resident and migrant. Found in Deep Bay area, Shuen Wan, Starling Inlet.
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸		T3: River bed T5: Pond	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, Pond, In flight	Common passage migrant and winter visitor. Found in Long Valley, Chau Tau, Sai Kung.
Curlew Sandpiper	<i>Calidris ferruginea</i>	彎嘴濱鷸	NT	T5: Wet Agricultural Land	Abundant spring passage migrant. Found in Deep Bay area, Cape D'Aguilar.
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.
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	RC	T5: Pond	Common winter visitor. Found in Deep Bay area, Shuen Wan, Tai Lam Chung Reservoir, Victoria Harbour, Urban Park.

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鷀	PRC	T1: River bed, In flight T2: River bed, In flight T5: In flight	Common winter visitor. Widely distributed in coastal areas throughout Hong Kong.
Greater Painted-snipe	<i>Rostratula benghalensis</i>	彩鷀	LCa	T5: Shallow Water Habitat	Locally common resident. Found in Ha Tsuen, Lok Ma Chau, Kam Tin, Long Valley, Hong Kong Wetland Park.
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, Pond, In flight	Common resident and winter visitor. Widely distributed in Hong Kong.
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷀		T2: River bank, River bed T3: River bank, River bed T5: Shallow Water Habitat	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	T1: River bank, River bed, In flight T2: River bank, River bed, In flight T3: River bank, River bed, In flight T5: Dry Agricultural Land, Shallow Water Habitat, Pond, In flight	Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, 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, Pond, In flight	Common resident. Widely distributed in coastal area throughout Hong Kong.
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鷀	LC	T1: River bed T2: River bed T5: Pond	Common resident. Found in Deep Bay area.
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鸕	(LC)	T3: River bed T5: Dry Agricultural Land, Shallow Water Habitat	Common winter visitor and passage migrant. Widely distributed in freshwater areas throughout Hong Kong.
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鸕	RC	T5: Wet Agricultural Land, Shallow Water Habitat, Pond, In flight.	Abundant winter visitor. Found in Deep Bay area.

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	(LC)	T1: River bank, In flight T2: River bank, In flight T5: 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: Dry Agricultural Land, Shallow Water Habitat, In flight	Common resident. Widely distributed in wetland throughout Hong Kong.
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	(LC)	T5: Dry Agricultural Land, In flight	Common resident. Widely distributed in coastal areas throughout Hong Kong.
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	LC	T1: River bank T2: River bank T5: Wet Agricultural Land, Shallow Water Habitat, Pond, In flight	Common passage migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
<p>Note:</p> <p>R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor</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>CR: Rare in China Red Data Book Status</p> <p>VU: Vulnerable in IUCN Red List Status</p> <p>(VU): Vulnerable in China Red Data Book Status</p> <p>EN: Endangered in IUCN Red List Status</p> <p>(EN): Endangered in China Red Data Book Status</p> <p>NT: Near Threatened in IUCN Red List Status</p> <p>CR: Critically Endangered in IUCN Red List Status</p> <p>RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)</p> <p>WAL: Wet Agricultural Land</p> <p>DAL: Dry Agricultural Land</p> <p>SWH: Shallow Water Habitat</p> <p>P: Pond</p> <p>*Source: Hong Kong Biodiversity Database, AFCD (https://www.afcd.gov.hk/English/conservation/hkbiodiversity/database/search.php)</p>					

Appendix L1n. Birds Recorded in March 2022

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R	
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv	
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV	(RC), Cap.586
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R	
Black-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
Bluethroat	<i>Luscinia svecica</i>	藍喉歌鵲	CWV	
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)
Cinereous Tit	<i>Parus cinereus</i>	蒼背山雀	R	
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC
Common Kestrel	<i>Falco tinnunculus</i>	紅隼	CaM, WV	Cap. 586
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R	
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	
Curlew Sandpiper	<i>Calidris ferruginea</i>	彎嘴濱鷸	PM	NT
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Eastern Buzzard	<i>Buteo japonicus</i>	普通鵟	WV	Cap.586
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 Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R	
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鷀	CWV	PRC
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)
Greater Coucal	<i>Centropus sinensis</i>	褐翅鴉鵂	R	(VU)
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>	灰鵲鴝	WV	
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R	
Large Hawk-Cuckoo	<i>Hierococcyx sparveriioides</i>	大鷹鵂	Sv	
Little Bunting	<i>Emberiza pusilla</i>	小鵲	CPM, WV	
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鷀	R	LC
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鵲	WV, PM	(LC)
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R	
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV	
Oriental Magpie	<i>Pica serica</i>	喜鵲	R	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Oriental Magpie Robin	<i>Copsychus saularis</i>	鵲鵲	R	
Peregrine Falcon	<i>Falco peregrinus</i>	遊隼	SR, WV	Cap.586, LC
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鹮	WV	RC
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	UR	(LC)
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R	
Plaintive Cuckoo	<i>Cacomantis merulinus</i>	八聲杜鵑	USV	
Red-billed Blue Magpie	<i>Urocissa erythrorhyncha</i>	紅咀藍鵲	R	
Red-billed Starling	<i>Spodiopsar sericeus</i>	絲光椋鳥	WV	GC
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵲	CPM, WV	RC
Red-whiskered bulbul	<i>Pycnonotus jocosus</i>	紅耳鵲	R	
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM	
Rock Dove	<i>Columba livia</i>	原鴿	R	
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R	
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R	
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵲	WV	
Swinhoe's White-eye	<i>Zosterops simplex</i>	暗綠繡眼鳥	R	
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R	
White-shouldered Starling	<i>Sturnia sinensis</i>	灰背椋鳥	M, WV, Sv	LC
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)
White Wagtail	<i>Motacilla alba</i>	白鵲鵲	PM, WV	
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R	
Zitting Cisticola	<i>Cisticola juncidis</i>	棕扇尾鶯	PM, WV	LC
<p>Note:</p> <p>R – Resident; RR - Rare resident, WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common 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>(CR): Rare in China Red Data Book Status</p> <p>VU: Vulnerable in IUCN Red List Status</p> <p>(VU): Vulnerable in China Red Data Book Status</p> <p>NT: Near Threatened in IUCN Red List Status</p> <p>CR: Critically Endangered in IUCN Red List Status</p> <p>RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)</p> <p>WAL: Wet Agricultural Land</p> <p>DAL: Dry Agricultural Land</p> <p>SWH: Shallow Water Habitat</p> <p>P: Pond</p>				

Appendix L1o. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 4 March 2022, T5

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 4/3/2022					
					Start Time: 18:30					
					Abundance					
					WAL	DAL	SWH	P	Heard	Flight
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R						2	
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領椋鳥	R						8	
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			19			
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			1			
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR			10				
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM				1			
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R						30	5
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R							14
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC			13			
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R						2	
Wood Sandpiper	<i>Tringa glareola</i>	林鷸	PM, WV	LC			23			
Total No. of Species					0	1	5	0	4	3
Total No. of Conservation Interest Species					0	0	4	0	0	1
Note: R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; RR – Rare resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net) Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586) CR: Rare in China Red Data Book Status VU: Vulnerable in IUCN Red List Status (VU): Vulnerable in China Red Data Book Status										

EN: Endangered in IUCN Red List Status

(EN): Endangered in China Red Data Book Status

NT: Near Threatened in IUCN Red List Status

CR: Critically Endangered in IUCN Red List Status

RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)

WAL: Wet Agricultural Land; DAL: Dry Agricultural Land; SWH: Shallow Water Habitat; P: Pond.

Appendix L1p. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 18 March 2022, T5

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 18/3/2022					
					Start Time: 18:35					
					Abundance					
					WAL	DAL	SWH	P	Heard	Flight
Asian Koel	<i>Eudynamys scolopacea</i>	噪鵲	R						3	
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鵲	PM	RC			6			
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鵲	R	PRC(RC)	2	1				
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R						30	
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鵲	R, PM	(LC)		2				5
Greater Painted-snipe	<i>Rostratula benghalensis</i>	彩鵲	R	LC	2					
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R		2				1	
White-shouldered Starling	<i>Sturnia sinensis</i>	灰背棕鳥	M, WV, Sv	LC		22				
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC	16		9			
Total No. of Species					4	3	2	0	3	1
Total No. of Conservation Interest Species					3	3	2	0	0	1
<p>Note:</p> <p>R – Resident; WV – Winter visitor; PM – Passage migrant; CPM – Common Passage Migrant; UPM – Uncommon passage migrant; CaM – Common autumn migrant; USV – Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; RR – Rare resident; SWV – Scarce winter visitor; CWV – Common Winter Visitor; M – Spring and Autumn Migrant; OV – Occasional visitor</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>CR: Rare in China Red Data Book Status</p> <p>VU: Vulnerable in IUCN Red List Status</p> <p>(VU): Vulnerable in China Red Data Book Status</p> <p>EN: Endangered in IUCN Red List Status</p> <p>(EN): Endangered in China Red Data Book Status</p> <p>NT: Near Threatened in IUCN Red List Status</p> <p>CR: Critically Endangered in IUCN Red List Status</p> <p>RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)</p>										

WAL: Wet Agricultural Land; DAL: Dry Agricultural Land; SWH: Shallow Water Habitat; P: Pond.

Appendix L2. Mammal Species Recorded for Ecologically Sensitive Habitat Monitoring, 17 & 23 March 2022

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 17/3 /2022, 23/3/2022				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Domestic Cat	<i>Felis catus</i>	野貓	Uncommon	-	+				
Domestic Dog	<i>Canis lupus familiaris</i>	野狗	Common	-	+++		++		
Japanese Pipistrelle	<i>Pipistrellus abramus</i>	東亞家蝠	Very Common	Cap. 170	+++	+	+	+	+
Total No. of species					3	1	3	2	1
Total No. of Conservation Interest Species					1	1	1	1	1
<p>Note:</p> <p>Cap. 170: Species under protection of Wild Animals Protection Ordinance (Cap. 170)</p> <p>+: species recorded within transect routes</p> <p>++: species commonly recorded within transect routes</p> <p>+++: dominant species within transect routes</p>									

Appendix L3. Herpetofauna Species Recorded for Ecologically Sensitive Habitat Monitoring, 17 & 23 March 2022

Appendix E3: Herpetofauna Species Recorded for Ecologically Sensitive Habitat Monitoring, 17 & 23 March 2022

Common Name	Species Name	Chinese Name	Conservation Status	Date: 17/3/2022, 23/3/2022				
				Relative Abundance				
				Transect Walk				
				T1	T3	T4	T5	T6
Amphibian								
Asian Common Toad	<i>Bufo melanostictus</i>	黑眶蟾蜍	-				+++	
Gunther's Frog	<i>Hylarana guentheri</i>	沼蛙	-	+				
Paddy Frog	<i>Fejervarya limnocharis</i>	澤蛙	-	+++				
Reptile								
Bowring's Gecko	<i>Hemidactylus bowringii</i>	原尾蜥虎	-				+	
Chinese Gecko	<i>Gekko chinensis</i>	中國壁虎	-				+	
Total No. of species				2	0	0	3	0
Total No. of Conservation Interest Species				0	0	0	0	0
Note://								
+ : species recorded within transect routes								
++ : species commonly recorded within transect routes								
+++ : dominant species within transect routes								

Appendix L4. Butterfly Species Recorded Ecologically Sensitive Habitat Monitoring, 17 & 23 March 2022

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 17/3/2022, 23/3/2022				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Blue Admiral	<i>Kaniska canace</i>	琉璃蛱蝶	Blue Admiral	-		+			
Chinese Peacock	<i>Papilio bianor</i>	碧鳳蝶	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 Indian Crow	<i>Euploea core</i>	幻紫斑蝶	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	-			+	+	
Five-dot Sergeant	<i>Parathyma sulpitia</i>	殘鏢線蛱蝶	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	Paris Peacock	-			++	+	
Plum Judy	<i>Abisara echerius</i>	蛇目褐蛱蝶	Plum Judy	-			+		
Red-base Jezebel	<i>Delias pasithoe</i>	報喜斑粉蝶	Very common	-		+		+	
South China Bush Brown	<i>Mycalesis mineus</i>	平頂眉眼蝶	South China Bush Brown	-	+		++		

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 17/3/2022, 23/3/2022				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Southern Sullied Sailer	<i>Neptis clinia</i>	珂環蛺蝶	Common	-				+	
Transparent 6-line Blue	<i>Nacaduba kurava</i>	古樓娜灰蝶	Common	-		++	+		
Yellow Rajah	<i>Charaxes marmax</i>	鰲蛺蝶	Uncommon	LC				+	
Total No. of species					1	6	10	10	0
Total No. of Conservation Interest Species					0	0	0	1	0
<p>Note:</p> <p>LC=Local 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. (2002a)</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. Odonata Species Recorded for Ecologically Sensitive Habitat Monitoring 17 & 23 March 2022

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 17/3/2022 23/3/2022				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Asian Amberwing	<i>Brachythemis contaminata</i>	黃翅蜻	Abundant	-				+	
Russet Percher	<i>Neurothemis fulvia</i>	網脈蜻	Common	-				+	
Total No. of species					0	0	0	2	0
Total No. of Conservation Interest Species					0	0	0	0	0
Note: +: species recorded within transect routes ++: species commonly recorded within transect routes +++: dominant species within transect routes									

APPENDIX M
WEATHER CONDITION

**APPENDIX M –
GENERAL WEATHER CONDITIONS DURING THE MONITORING PERIOD**

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1 March 2022	22	77	-
2 March 2022	20.7	83	-
3 March 2022	19.5	76	-
4 March 2022	21.3	77	-
5 March 2022	20.6	84	-
6 March 2022	19.1	77	-
7 March 2022	19.8	70	4.8
8 March 2022	17.5	53	-
9 March 2022	18.7	57	-
10 March 2022	20.7	60	-
11 March 2022	22.1	71	-
12 March 2022	22.3	68	-
13 March 2022	23.6	75	0.1
14 March 2022	24.1	78	-
15 March 2022	23.8	80	-

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
16 March 2022	22.3	79	Trace
17 March 2022	24.3	85	Trace
18 March 2022	24.4	84	-
19 March 2022	23.3	85	-
20 March 2022	21	88	Trace
21 March 2022	22.1	89	Trace
22 March 2022	23	93	Trace
23 March 2022	17.7	94	54.8
24 March 2022	17.6	91	1.8
25 March 2022	23.1	90	0.7
26 March 2022	26.4	86	0.1
27 March 2022	21.9	83	Trace
28 March 2022	17.5	89	30.3
29 March 2022	19.1	82	0.1
30 March 2022	22.4	74	-
31 March 2022	24.4	69	Trace

* The above information was extracted from the daily weather summary by Hong Kong Observatory.

APPENDIX N
EVENT ACTION PLANS

Appendix N:**Table N-1: Event / Action Plan for Air Quality**

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; and 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Notify Contractor.	1. Identify source, investigate the causes of exceedance and propose remedial measures 2. Rectify any unacceptable practice and implement remedial measures; and 3. Amend working methods agreed with ER if appropriate.
2. Exceedance for two or more consecutive samples	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Advise the ER and Contractor on the effectiveness of the proposed remedial measures; 4. Repeat measurements	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and 5. Supervise	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Identify source, investigate the causes of exceedance and propose remedial measures 2. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 3. Implement the

	to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC, ER and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; and 8. If exceedance stops, cease additional monitoring.	Implementation of remedial measures.		agreed proposals; and 4. Amend proposal if appropriate.
LIMIT LEVEL				
1.Exceedance for one sample	Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor, IEC and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET, ER and Contractor on possible remedial measures; 4. Advise the ER and ET on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; and 5. Amend proposal if appropriate.

		measures.		
2.Exceedance for two or more consecutive samples	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC, Contractor and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and 5. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise and ensure remedial measures properly implemented; and 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; 5. Resubmit proposals if problem still not under control; 6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

Table N-2: Event / Action Plan for Construction Noise

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level	1. Notify IEC, ER and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss jointly with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the monitoring data submitted by the ET; 2. Review the construction methods and proposed remedial measures by the Contractor, and advise the ET and ER if the proposed remedial measures would be sufficient; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify the Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented	1. Submit noise mitigation proposals to ER and copy to the IEC and ET; 2. Implement noise mitigation proposals.
Limit Level	1. Identify source; 2. Inform IEC, ER and Contractor; 3. Repeat measurements to confirm findings; 4. Increase the monitoring frequency; 5. Carry out analysis of Contractor's working procedures with the ER and Contractor to determine possible mitigation to be implemented; 6. Inform IEC, ER and Contractor the causes and actions taken for the exceedances;	1. Discuss amongst the ER, ET, and Contractor on the potential remedial actions; 2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify the Contractor; 3. Require the Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to the ER and copy to the ET and IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problems still not under control; 5. Stop the relevant portion of works as

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	7. Assess effectiveness of Contractor's remedial actions and keep IEC informed of the results; 8. If exceedance stops, cease additional monitoring.		Contractor to stop that portion of work until the exceedance is abated.	determined by the ER until the exceedance is abated.

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

Table N-3: Event / Action Plan for Water Quality

EVENT	ACTION				
	ET		IEC	ER	CONTRACTOR
Action level being exceeded by one sampling day	1. Conduct addition site investigation on the same day;	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.

	<p>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>			
LIMIT LEVEL				
1.Exceedance for one sample	<p>1. 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 measures.</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>
2.Exceedance for two or more consecutive samples	<p>1. Notify IEC, ER, Contractor and EPD;</p> <p>2. Identify source;</p> <p>3. Repeat measurement to confirm findings;</p> <p>4. Increase monitoring frequency to daily;</p> <p>5. Carry out analysis of Contractor's working</p>	<p>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</p> <p>2. Review Contractor's remedial actions whenever necessary to assure</p>	<p>1. Confirm receipt of notification of failure in writing;</p> <p>2. Notify Contractor;</p> <p>3. In consultation with the ET and IEC, agree with the Contractor on the</p>	<p>1. Take immediate action to avoid further exceedance;</p> <p>2. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification;</p>

	<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 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 disturbance.	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 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.

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

Table N-6.2 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 N-6.3 Action and Limit Levels and Responses to Evidence of Declines in non-aquatic Fauna

Action Level	Response	Limit Level	Response
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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 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	$L_{eq}(30 \text{ min.})$ 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	2	0	0
	Turbidity	0	5	0	0
	SS	0	5	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	220301
Date	1 March 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	
220301-R01	• Construction waste shall be disposed of regularly.	E 1i
	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.:220222), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		1 March 2022
Checked by	Dr. Priscilla Choy		1 March 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	220308
Date	8 March 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.:220301), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		9 March 2022
Checked by	Dr. Priscilla Choy		9 March 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	220316
Date	16 March 2022 (Wednesday)
Time	14:00-15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
220316-R01	• Access road should be kept clean and free from dust.	B9
	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.:220308), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		18 March 2022
Checked by	Dr. Priscilla Choy		18 March 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	220322
Date	22 March 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.:220316), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		22 March 2022
Checked by	Dr. Priscilla Choy		22 March 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	220331
Date	31 March 2022 (Thursday)
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.:220322), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		31 March 2022
Checked by	Dr. Priscilla Choy		31 March 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	220302
Date	2 March 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	
220302-R01	• Dusty haul road should be sprayed with water regularly.	B1
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
220302-R02	• To erect 2m dull green barrier fences around active work area. (3 locations shown in the photo)	G2
	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.:220223), all environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		2 March 2022
Checked by	Dr. Priscilla Choy		2 March 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	220309
Date	9 March 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>	
220309-R01	• To erect 2m dull green barrier fences around active work area.	G2
	<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>L. Others</i>	
	• Follow-up on previous audit section (Ref. No.:220302), item 220302-R02 was remarked as 220309-R01. Other environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		9 March 2022
Checked by	Dr. Priscilla Choy		9 March 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	220318
Date	18 March 2022 (Friday)
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. 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>	
220318-R01	• To erect 2m dull green barrier fences around active work area.	G2
	<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>L. Others</i>	
	• Follow-up on previous audit section (Ref. No.:220309), item 220309-R01 was remarked as 220318-R01.	

	Name	Signature	Date
Recorded by	Antony Leung		18 March 2022
Checked by	Dr. Priscilla Choy		18 March 2022


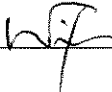
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	220323
Date	23 March 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	
220323-R01	• Enhance water mitigation measures to prevent muddy stagnant water runoff.	D4
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:220318), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		25 March 2022
Checked by	Dr. Priscilla Choy		25 March 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	220330
Date	30 March 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>	
220330-R01	• Remove the stagnant water inside U-channel.	D6
	<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>L. Others</i>	
	• Follow-up on previous audit section (Ref. No.:220323), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		31 March 2022
Checked by	Dr. Priscilla Choy		31 March 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	220304
Date	4 March 2022 (Friday)
Time	14:00 – 14:30

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>	
220304-O01	• To enhance water mitigation measures around water stream near 巨賓, exposed slope of the stream should be covered to prevent further debris from entering irrigation water channels.	D 7
220304-R01	• Wheel-washing bay should be cleared and cleaned regularly.	D 12iv
	<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.:220225), follow-up action was required for item 220225-O01 and 220225-R01, which was remarked as 220304-O01 & 220304-R01.	

	Name	Signature	Date
Recorded by	Adrian Lam		8 March 2022
Checked by	Dr. Priscilla Choy		8 March 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	220311
Date	11 March 2022 (Friday)
Time	14:00 – 14:30

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.:220304), all environmental deficiency have been rectified/ improved by the contractor.	

	Name	Signature	Date
Recorded by	Adrian Lam		15 March 2022
Checked by	Dr. Priscilla Choy		15 March 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	220315
Date	15 March 2022 (Tuesday)
Time	14:00 – 14:30

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.:220311), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		20 March 2022
Checked by	Dr. Priscilla Choy		20 March 2022

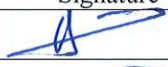

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	220325
Date	25 March 2022 (Friday)
Time	14:00 – 14:30

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.:220315), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		28 March 2022
Checked by	Dr. Priscilla Choy		28 March 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	220303
Date	3 March 2022 (Thursday)
Time	14:00-15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220303-O01	• Direct the muddy stagnant water to de-silting facility before discharge to drainage and U-channel. (Portion B)	D13i, D13ii
220303-R02	• Dusty stockpile should be covered by impervious sheeting.	B2, D7
220303-R03	• To enhance the drainage system and the capacity of de-silting facility to prevent surface runoff.	D13i, D13ii
	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.: 220223), item 220223-O01 was remarked as 220303-O01. Follow-up action is needed to be reviewed.	

	Name	Signature	Date
Recorded by	Antony Leung		3 March 2022
Checked by	Dr. Priscilla Choy		3 March 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	220310
Date	10 March 2022 (Thursday)
Time	14:00-15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220310-O01	• Provide de-silting facility for settling runoff prior to disposal. (Portion B)	D5i
220310-R02	• To enhance the drainage system and the capacity of de-silting facility to prevent surface runoff.	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.: 220303), item 220303-O01 and 220303-R03 were remarked as 220310-O01 and 220310-R02. Other environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		11 March 2022
Checked by	Dr. Priscilla Choy		11 March 2022


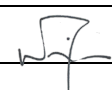
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	220316
Date	16 March 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	
220316-R01	• To enhance the drainage system and the capacity of de-silting facility to prevent surface runoff.	D13i
	E. Waste / Chemical Management	
220316-R02	• To clear the oil stain on the ground.	E11, 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.: 220310), item 220310-R02 was remarked as 220316-R01. Other environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		18 March 2022
Checked by	Dr. Priscilla Choy		18 March 2022

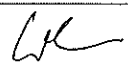
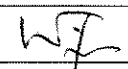
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	220324
Date	24 March 2022 (Thursday)
Time	14:00-15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220324-R01	• To enhance the drainage system and the capacity of de-silting facility to prevent surface runoff.	D13i
220324-R02	• To clear the U-channel regularly.	D6
	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.: 220310), item 220310-R02 was remarked as 220316-R01. Other environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		25 March 2022
Checked by	Dr. Priscilla Choy		25 March 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	220331
Date	31 March 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	
220331-R01	• To enhance the drainage system and the capacity of de-silting facility to prevent surface runoff.	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	
220331-R02	• Silt curtain was observed oversized and bulky. Please rectify to make sure the silt curtain function properly.	H5
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 220324), item 220324-R01 was remarked as 220331-R01. Other environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		31 March 2022
Checked by	Dr. Priscilla Choy		31 March 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	220307
Date	7 March 2022 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
220307-R01	• NRMM label shall be displayed on regulated machine.	B24
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
220307-R02	• 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.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 220228), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		7 March 2022
Checked by	Dr. Priscilla Choy		7 March 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	220317
Date	17 March 2022 (Thursday)
Time	09:00 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
220317-R01	• Dusty haul road shall be watered regularly.	B3
	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	
220317-R02	• General refuse shall be disposed of regularly.	E6ii
	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.: 220307), all environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		18 March 2022
Checked by	Dr. Priscilla Choy		18 March 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	220321
Date	21 March 2022 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
220321-R01	• Dusty stockpile shall be covered properly by impervious sheeting.	B2
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220321-R02	• Replace broken sandbags 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	
	• 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.: 220317), all environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		21 March 2022
Checked by	Dr. Priscilla Choy		21 March 2022


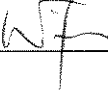
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	220328
Date	28 March 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	
220328-R01	• Site entrance should be kept clean and free from dust.	B9
	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.: 220321), all environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		29 March 2022
Checked by	Dr. Priscilla Choy		29 March 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	220303
Date	3 March 2022 (Thursday)
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. 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>	
220303-R01	• Drip tray should be provided for chemical storage.	E 13
	<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.: 220215), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		3 March 2022
Checked by	Dr. Priscilla Choy		3 March 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	220310
Date	10 March 2022 (Thursday)
Time	09:00 – 10:00

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>	
220310-R01	• Drip tray should be provided for chemical containers.	E 14
	<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.: 220303), follow-up actions are item 220303-R01 was remarked as 220310-R01.	

	Name	Signature	Date
Recorded by	Adrian Lam		15 March 2022
Checked by	Dr. Priscilla Choy		15 March 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	220317
Date	17 March 2022 (Thursday)
Time	10:00 – 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. 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.: 220310), all environmental deficiency was improved/ rectified by the contractor.	

	Name	Signature	Date
Recorded by	Marco Ma		17 March 2022
Checked by	Dr. Priscilla Choy		17 March 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	220324
Date	24 March 2022 (Thursday)
Time	10:00 – 10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. 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.: 220317), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		24 March 2022
Checked by	Dr. Priscilla Choy		24 March 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	220331
Date	31 March 2022 (Thursday)
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. 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.: 220324), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		4 April 2022
Checked by	Dr. Priscilla Choy		4 April 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	220304
Date	4 March 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.: 220225), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		4 March 2022
Checked by	Dr. Priscilla Choy		4 March 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	220311
Date	11 March 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.: 220304), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		11 March 2022
Checked by	Dr. Priscilla Choy		11 March 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	220314
Date	14 March 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>	
	• 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.: 220304), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		15 March 2022
Checked by	Dr. Priscilla Choy		15 March 2022

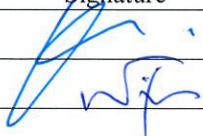

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Weekly Site Inspection Record Summary

Checklist Reference Number	220325
Date	25 March 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.: 220314), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		25 March 2022
Checked by	Dr. Priscilla Choy		25 March 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>

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<ul style="list-style-type: none"> 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 					<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>N/A</p> <p>N/A</p>

Noise Impact (Construction Phase)

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S4.9	N2	Install temporary site hoarding (approx 2.4m high) located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.	Reduce the construction noise levels at low-level zone of NSRs through partial screening.	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N3	Install movable noise barriers and full enclosure and acoustic mat, screen the noisy plants including air compressor and generator.	Screen the noisy plant items to be used at all construction sites	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N4	Use of "Quiet" Plant and Working Methods	Reduce the noise levels of plant items	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N5	Sequencing operation of construction plants where practicable.	Operate sequentially within the same work site to reduce the construction airborne noise	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N6	Implement a noise monitoring under EM&A programme.	Monitor the construction noise levels at the selected representative locations	Contractor	Selected representative noise monitoring stations	Construction phase	^
Water Quality Impact (Construction Phase)							
S5.7	W1	<u>Construction Runoff and Site Drainage</u> In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures should be provided and the Storm Water Pollution Control Plan is given below. where appropriate, should include the following: Stormwater Pollution Control Plan <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 	Control construction runoff	Contractor	All construction sites	Construction phase	#

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>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.</p> <ul style="list-style-type: none"> • 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 disposal. The system capacity shall be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped. • The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a silt/sediment trap. The silt/sediment traps should be incorporated in the permanent drainage channels to enhance deposition rates. • The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94. The detailed design of the sand/silt traps should be undertaken by the contractor prior to the commencement of construction. • Construction works should be programmed to minimize 					<p>#</p> <p>^</p> <p>^</p>

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>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.</p> <ul style="list-style-type: none"> • All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas. • Measures should be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, it should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities. • All open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m³ should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. • Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. • Precautions to be taken at any time of year when rainstorms are 					<p>^</p> <p>#</p> <p>^</p> <p>^</p> <p>^</p>

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>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.</p> <ul style="list-style-type: none"> • 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 quality impacts. • All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby. 					<p>^</p> <p>^</p> <p>N/A</p> <p>^</p> <p>^</p>

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		<ul style="list-style-type: none"> Regular environmental audit on the construction site should be carried out in order to prevent any malpractices. Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the meander, wetlands and fish ponds. 					^
S5.7	W2	<u>Stream Diversion</u> <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	<u>Groundwater from Contaminated Area</u> <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 	Minimize water quality impact due to potential groundwater from contaminated area	Contractor	All identified groundwater-contaminated areas	Construction phase	N/A N/A

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		<p>requirements of Technical Memorandum on Standards for 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</p>	Handling of site sewage	Contractor	All construction sites	Construction Phase	^

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		effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the Project would not cause water quality impact after undertaking all required measures.					
Waste Management (Construction Waste)							
S7.6	WM1	<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>

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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 management procedures and concepts of waste reduction, reuse and recycling; Provision of sufficient waste disposal points and regular collection for disposal; Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; 	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	^ ^ ^ ^ ^
S7.6	WM4	<u>Storage of Waste</u>	Minimize waste impacts from	Contractor	All construction	Construction	

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		<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; 	storage		sites	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 transportation; Obtain relevant waste disposal permits from the appropriate authorities; and Disposal of waste should be done at licensed waste disposal facilities. 	Minimize waste impact from storage	Contractor	All construction sites	Construction phase	<p>^</p> <p>^</p> <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>	Minimize waste impacts from excavated and C&D material	Contractor	All construction sites	Construction phase	<p>^</p>

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		<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> <p>Wheel wash facilities have to be provided at the site entrance before the trucks leaving the works area.</p>					<p>^</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>^</p> <p>N/A</p> <p>^</p>
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</p>	Remediate contaminated soil	Contractor	All construction sites where applicable	Construction phase	^

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		details of mitigation measures to minimize the potential environmental implications arising from the handling of contaminated materials refer to Land Contamination Section.					
S7.6	WM8	<u>Chemical Waste</u> If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producers. Chemical wastes should be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Control the chemical waste and ensure proper storage, handling and disposal	Contractor	All construction sites	Construction phase	^
S7.6	WM9	<u>General Waste</u> <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 general refuse on a daily basis. 	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction phase	^ ^ ^
S7.6	WM10	<u>Sewage</u>	Minimize production of sewage	Contractor	All construction	Construction phase	

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		<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. 	impacts		sites		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	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	N/A

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			contaminated soil and groundwater identified in the assessment if remediation is required			contamination is confirmed 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	After the land is resumed and handed over to the Project Proponent.	N/A

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					could not be accessed for visual inspection during the site survey as listed in the CAP		
S 8.7.2 and Appendix 8.4	LC6	Treatment of arsenic-containing soil “Solidification/Stabilization” (S/S) treatment method was proposed for the treatment of arsenic-containing soil. Toxicity Characteristic Leaching Procedure (TCLP) test should be undertaken after S/S in order to ensure that the contaminant will not leach to the environment. Unconfined Compressive Strength (UCS) test should be conducted, and not less than 1MPa should be met prior to the backfilling or stockpiled for future reuse within the study area.	To treat the arsenic containing soil	Government Developer/ Contractor	KTN NDA	Prior to commencement of construction works within KTN NDA	N/A
S 8.7.2 and Appendix 8.4	LC7	Excavation and Transportation <ul style="list-style-type: none"> Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety; In case the soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table; Excavation should be carried out during dry season as far as possible to minimize runoff from excavated soils; Stockpiling site(s) should be lined with impermeable sheeting and bunded. Stockpiles should be properly covered by 	To minimize the potential environmental impacts arising from the handling of contaminated materials	Contractor	KTN NDA	Prior to commencement of construction works within KTN NDA	N/A

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		<p>impermeable sheeting to reduce dust emission during dry season or contaminated run-off during rainy season.</p> <p>Watering should be avoided on stockpiles of soil to minimize runoff;</p> <ul style="list-style-type: none"> Supply of suitable backfill material after excavation, if require; <p>Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or run-off, and truck bodies and tailgates should be sealed to prevent any discharge during transport or during wet season;</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; 	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>

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		<ul style="list-style-type: none"> 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>					<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; <input type="checkbox"/> 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 	To minimize the potential adverse effects on health and safety of construction workers	Contractor	KTN NDA	The course of treatment	N/A

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		possible to minimize worker Eating, drinking and smoking should not be allowed in the excavation areas and treatment area to avoid inadvertent ingestion of arsenic containing soil.					
Landfill Gas Hazard							
S10.6	LFG1	<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 e.g. ventilation of spaces with air to dilute gas, or extraction of gas using fans or blowers. For the low risk category, the provision of barriers to the movement of gas is recommended. Measures recommended include the use of membranes in floors or walls, or in trenches, coupled with high permeability vents such as nofines gravel in trenches or voids/permeable layers below structures. The need and practicality of incorporating such measures should be reviewed in the detailed Qualitative LFG Hazards 	To minimize the risk of LFG hazards to occupants within MTLL and its 250m Consultation Zone	Government / Developer/ Detailed Design Consultant within MTLL and its 250m Consultation Zone	Buildings within MTLL and its 250m Consultation Zone	Detailed design phase	N/A

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		<p>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.</p> <ul style="list-style-type: none"> 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 adverse circumstances, should be present on all worksites throughout the works. All personnel who work on site and all visitors to the site should be made aware of the possibility of ignition of gas in the vicinity of the works, the possible presence of contaminated water and 	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>^</p>

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		<p>the need to avoid physical contact with it.</p> <ul style="list-style-type: none"> 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 potential hazards. 					<p>^</p> <p>^</p> <p>^</p> <p>^</p>

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		<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 	To minimize the risk of LFG hazards to the occupants, maintenance personnel, visitors and other users	Government / Developer within MTLL and its 250m	Buildings within MTLL and its 250m Consultation Zone	Operation phase	N/A

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		<p>QLFGHA.</p> <ul style="list-style-type: none"> The utilities companies should have a responsibility to train and ensure their staff to take appropriate precautions at all times when entering enclosed spaces or plant rooms. Should utility installation be required in site E1-1, the developers should make the utility companies aware of the potential constraints imposed by the landfill restoration facilities and aftercare works to ensure these facilities and works will remain unaffected. Appropriate precautionary measures against landfill gas should also be taken should utility installation be required within the MTLL. <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, 	<p>within MTLL and its 250m</p> <p>Consultation Zone</p>	<p>Consultation</p> <p>Zone</p>			

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		<p>Fire Services Department, Landfill Restoration Contractors and others, as necessary.</p> <ul style="list-style-type: none"> All construction and maintenance (including utilities) personnel working at the site should be made aware of the hazards of LFG and its possible presence on site. This should be achieved through a combination of posting warning signs in prominent places and also by access to detailed information on LFG hazards and the designs and procedural means by which these hazards are being minimized on site. In addition, entry to confined spaces such as refuse/store rooms, drainage manholes etc. should be preceded by a period of “airing” the space by opening the door widely allowing fresh air to enter. Where appropriate, monitoring of gas should also precede entry. Any proposed modifications or additions to the building structure should be subject to a further assessment of LFG hazard, particularly in areas where a gas membrane has been installed. Any penetrations of the membrane must be repaired as soon as possible after detection or works completion using similar products. The building management company should also make arrangement with Landfill Restoration Contractor so that they are advised of all situations which may potentially threaten the safety of the building occupants resulting from any accidents or 					

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		<p>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.</p> <ul style="list-style-type: none"> To ensure that all the above protection and precautionary measures and issues pertaining to LFG are properly and consistently addressed by future users and owners of the site, it is recommended that a comprehensive LFG hazard management system be developed by the owner of the building or its property management agency. The system should be developed by the developers of the sites as part of the QLFGHA before the occupation of the building and implemented during its operational phase. 					
Cultural Heritage (Pre-construction Phase)							
S11.6.1	CH1	<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</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,	After land resumption but before construction	N/A

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		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.			A3-6, B1-1, and B1-7,		
S11.6.1	CH2	<u>Undertaking Survey-cum-Rescue Excavation</u> A Survey-cum-Rescue Excavation should be conducted after land resumption and before the commencement of construction works to define the precise archaeological deposits extent and to preserve the archaeological resources by record. The excavation should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	In KTN NDA, for Site 3 and In FLN NDA for Site 5.	After land resumption but before construction commencement of the zone	N/A

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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 that may be encountered during ground excavation works as well as</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

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		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	<u>Undertaking Archaeological Impact Assessment before Construction at A1</u> It is recommended that an Archaeological Impact Assessment to be conducted in the impacted area in Area B1-8 and B1-9 at A1 (Sheung Shui Wa Shan Site of Archaeological Interest) after land resumption and before construction when detail construction work information is available to determine the need for further archaeological follow up actions.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	Area B1-8 and B1-9 zoned as R4 and R3 in A1	After land resumption but before construction	N/A
S11.6.1	CH6	<u>Undertaking Archaeological Impact Assessment before Construction within A1 but except Area B1-8 and B1-9</u> Should there be any development work within the Sheung Shui Wa Shan Site of Archaeological Interest, it is recommended that an Archaeological Impact Assessment is required after land resumption and before construction when detail construction work information is available to determine the need for further archaeological follow up actions.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible.	Project Proponent/ Contractor/ Qualified Archaeologist	Area within A1 except Area B1-8 and B1-9 in R4 & R3 zoning	After land resumption but before construction	N/A

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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</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

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		respectively) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report. The condition survey of graded historic building should be submitted to AMO for information.					
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	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

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		features will be carried out by the Project Proponent.					
S11.6.2	CH11	Relocation of Built Heritages Relocation of built heritages to a reasonable location nearby may be required.	To preserve the directly impacted sites by relocation	Project Proponent/ Contractor	HKT01, HKT02, Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of construction works	N/A
S11.6.2	CH12	Drainage System and Access Route Design For the retained built heritage items in developable area, drainage system and access route would be designed to prevent the persevered flooding and maintain the accessibility to the built heritage.	To prevent the persevered flooding and maintain the accessibility to the built heritage	Contractor /Detailed Design consultant	The retained built heritage items	Pre-construction phase	N/A
Cultural Heritage (Construction Phase)							
S11.6.1	CH13	<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	To minimize the potential impacts to the built heritage items by the change of	Contractor	Within NDAs	Construction phase	N/A

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		ensure that the change of watertable induced by the construction works and development activities will not result in settlement of built heritage.	watertable induced by the works during the Construction phase				
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, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed design consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as the areas become available, to achieve early establishment	N/A

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S.12.9 MM1	LV2	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A
S.12.9 MM2	LV3	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as	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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		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	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	^

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		<p>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>					
Landscape and Visual (Construction)							
S.12.9 MM3	LV5	<p>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.</p>	<p>Reprovision of open space.</p> <p>Enhance visual amenity of the area and improve the overall landscape character</p>	<p>Government</p> <p>Developer/</p> <p>Detailed Design</p> <p>Consultant/</p> <p>Contractor/</p>	<p>Onsite as stipulated in the planning documents for the formulation of the Preliminary Layout Plan</p>	<p>Prior to Construction and Construction Phase</p>	N/A
S.12.9 MM4	LV6	<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</p>	<p>Protect and Preserve Trees</p>	<p>Government /</p> <p>Detailed Design</p> <p>Consultant/</p> <p>Contractor</p>	<p>Onsite</p>	<p>Prior to Construction and Construction Phase</p>	N/A

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		detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained					
S.12.9 MM5	LV7	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible.</p> <p>A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.</p>	Transplant Trees where suitable for transplantation	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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S.12.9 MM6	LV8	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	<p>Government / Detailed Design</p> <p>Consultant/ Contractor</p>	Onsite	<p>Prior to Construction,</p> <p>Construction Phase & Maintenance in Operation Phase</p>	N/A
S.12.9 MM7	LV9	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as 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</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,</p> <p>Construction Phase & Maintenance in Operation Phase</p>	N/A

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		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.12.9 MM8	LV10	<p>Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & 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>,</p>					N/A

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		<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>Rhodomyrtus tomentosa</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.12.9 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

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S.12.9 MM10	LV12	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Developer/ Detailed Design Consultant/ Contractor	On appropriate buildings	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM11	LV13	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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S.12.9 MM12	LV14	<p>Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics.</p> <p>For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)</p>	To soften the hard, straight edges and provide greening along roads.	Government / Developer/ Detailed Design Consultant/ Contractor	On viaducts or along roads	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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S.12.9 MM13 & EIA Annex 13	LV15	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on- wetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM14.1	LV16	Reprovision of Natural Stream – Where natural streams are unavoidably affected along some of their length, they can be diverted to avoid the proposed new developments and retain the integrity of the whole stream. Detailed design of any stream diversion should follow the Guidelines in ETWB Technical Circular (Works) No. 5/2005 (Protection of natural streams/rivers from adverse impacts arising from construction works) and appropriate construction methods should be used. Two short stretches of the Ma Tso Lung Stream will be affected by Project in the KTN NDA; by the LMC Eastern Connection Road on the western border of Site F1-3 and further upstream by Site E-2.	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

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
		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)					
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> <p>For the stream at Siu Hang San Tsuen in FLN NDA, within the NDA boundary much of the stream would be located underneath the viaduct for the proposed Fanling Bypass. To the south of the viaduct the stream</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

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
		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

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
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	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S.12.9 MM17	LV21	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Developer/ Contractor	Throughout NDAs	Construction and Operation Phases	N/A
Ecology (Prior to Construction Phase or throughout the project)							
S. 13.9	E1	Egretty Habitat Creation & Management Plan (EHCMP) and Woodland Planting and Management Plan (WPMP)	Compensate for loss of Man Kam To Road egretty. Compensate for loss of secondary woodland and hillside plantation of ecological significance.	Project Proponent/ Detailed Design Consultant (EHCMP and WPMP).	FLN area A1-7 (egretty compensation). KTN areas E1-8 and G1-3 (woodland compensation).	Detailed design phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
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. Enhancement of non-wetland habitats in LVNP. Planning for the advanced provision of alternative foraging habitat along main river channels for large waterbirds.	Compensate for wetland loss arising from the project and protection of Long Valley from adverse ecological impacts including provision of additional/alternative habitat for	Project Proponent/ Detailed Design Consultant (Long Valley Nature Park Habitat Creation &	Long Valley KTN area C1-9 and any suitable areas to be identified during the planning stage	Detailed design phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
			large waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Management Plan)			
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/	Area along Ng Tung, Sheung Yue and Shek Sheung River	Detailed design, construction and operational phases.	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
			Maintain ecological linkages within NDA Project Area and between Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.	Maintenance Authority			
S13.9	E7	Building setback and mounding in locations near Long Valley. KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries).	Minimization of disturbance impacts to fauna using Long Valley.	PlanD	KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries.	Detailed design phase	N/A
S13.9	E8	Preparation and implementation of Guidelines for building design measures to minimize mortality and light and glare impacts to fauna. Guidelines to address the following measures: Use opaque, non-transparent, non-reflective noise barriers for all developments associated with the Project. Measures to include the following: • Fritting, or the placement of ceramic lines or dots on glass,	Minimize mortality and disturbance impacts on fauna, especially mammals and birds.	PlanD/ Project Proponent/ Developer/ Detailed Design Consultant	Near Long Valley	Detailed design phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>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;</p> <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	Detailed design phase	N/A

App Q - IMPLEMENTATION SCHEDULE AND RECOMMENDED MITIGATION MEASURES

March 2022

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
					secondary woodland at Ho Sheung Heung and Crest Hill		

S13.9	E11	<p>No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north or east of KTN D1-5 and east of D1-9 and C2-3, construction hours restricted to 09.00 to 17.30 during 1 March to 31 July on new pedestrian bridge over the Sheung Yue River, new pedestrian bridge over the tidal section of the Ng Tung River and existing bridge between KTN areas C2-2 and C1-8.</p> <p>Review Design and construction methods for all bridges especially those on the Sheung Yue and tidal Ng Tung Rivers and adopt methods which minimize impacts on Long Valley and the rivers, and disturbance and fragmentation impacts on fauna.</p> <p>No overlap in construction of bridges over main river channels. Measures to ensure no hydrological disruption to Long Valley Watercourse and water supply to Long Valley to be designed at the detailed design stage for the rechannelisation of the Long Valley Watercourse and the development of areas through which it passes, including KTN area B3-12. Contingency plan to address any disruption to be included in LVNP HCMP. Avoid removal or interference with screen planting undertaken under the Construction of Cycle Tracks and Associated Supporting Facilities from Sha Po Tsuen to Shek Sheung project.</p>	Minimize disturbance impacts (including cumulative impacts with cycle track project) to flight-lines of breeding ardeids.	Project Proponent/ Detailed Design Consultant Contractor	Along and within Sheung Yue and Ng Tung Rivers, Long Valley, Long Valley and watercourse upstream areas including KTN area B3-12	Detailed design/ construction phase.	^
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EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
Ecology (Construction Phase)							
S13.9	E12	Compensatory egret habitat provision and establishment. Review condition and location of egrets before commencement of works. Formulate and implement additional mitigation measures as appropriate. Phasing of works near and within Man Kam To Road Egret outside breeding season	Compensate for loss of Man Kam To Road egret habitat. Avoid mortality of breeding egrets	Project Proponent/ Detailed Design Consultant/ Contractor	FLN area A1-7 500m from Man Kam To Road Egret.	Construction phase.	^
S13.9	E13	Review design and construction methods for bridges, especially those on the Sheung Yue and tidal Ng Tung Rivers, and adopt measures which minimize impacts on rivers and disturbance and fragmentation impacts on fauna. No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north and east of KTN area D1-5 and east of D1-9 and C2-3 and restriction of working hours on new pedestrian bridges over the Sheung Yue River and tidal Ng Tung River to 09.00 to 17.30 during the ardeid breeding season (1 March to 31 July) Provision of alternative foraging habitat along main river channels for large waterbirds.	Minimize impacts on rivers and disturbance and fragmentation impacts on fauna	Project Proponent/ Detailed Design Consultant/ Contractor	Along and within the Sheung Yue, Ng Tung and Shek Sheung Rivers	Detailed design and construction phases.	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S13.9	E14	<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

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S.13.9	E15	Creation and enhancement of proposed Long Valley Nature Park and creation and enhancement of wetland and buffer planting within LVNP.	Compensate for wetland loss arising from the project	Project Proponent/ Contractor (LVNP Detailed Habitat Creation & Management Plan)	Long Valley, (KTN area C1-9).	Construction phase.	^
S13.9	E16	Creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; provision of Open Space areas and development areas along river corridors; Design and erection of 2m high solid dull green site barrier fence between river channel and any active works area along or adjacent to Ng Tung, Sheung Yue and Shek Sheung Rivers. Ng Tung, Sheung Yue and Shek Sheung Rivers screen planting.	Minimize disturbance to waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Detailed Design Consultant/ Contractor	Ng Tung, Sheung Yue and Shek Sheung Rivers	Detailed design and Construction phases.	^
S13.9	E17	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance on edge of development areas, including along any roads adjacent to or penetrating into areas/habitats of ecological importance. Erection of a 2m high dull green site barrier fence at the edge of the	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna. Measures to minimize flight- line impacts to birds, especially breeding	Contractor	Interface between areas/habitats/ fauna/ flora of ecological importance (e.g. KTN areas B1-3,	Construction phase.	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		works area or 30m from Ma Tso Lung Stream and tributaries, whichever distance is the greater.	ardeids.		C1-5, C1- 6, C1-9, C2-2, C2-4, C2-5, D1-8, E1-8, G1- 3, H1-1, Ma Tso Lung Stream and tributaries; FLN areas A1-3, A1-7 and A1-9) and works areas; and around any works areas north of the Fanling Bypass and north of the Ng Tung River west of the western terminus of the Fanling Bypass. Riparian corridor of Ma Tso Lung Stream and tributaries.		

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S13.9	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. 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,	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; including adjustments to design, timing of works, transplantation and translocation.	Government/ Developer/ Contractor/ Ecologist	All construction sites.	Prior to clearance of vegetation and structures.	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>Pre-site clearance of construction sites in Crest Hill area, KTN areas D1-7, D1-11 and G1-5 (where Eurasian Hobby was recorded) and on Cheung Po Tau, FLN area A3-1 (where Grey Nightjar was recorded) for presence of any breeding birds/breeding sites. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, translocation and translocation. 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>					
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, translocation 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 reptile species of conservation significance, capture and translocate to</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 works, translocation and translocation</p>	Government/ Developer/ Contractor/ Ecologist	All construction sites.	Prior to clearance of vegetation and structures.	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		receptor site; review translocation options in respect to species in Ma Tso Lung area and determine whether release locally or elsewhere is appropriate. Seek agreement of relevant authorities including AFCD in respect of proposed measures then implement Pre-works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of Small Snakehead and <i>Sommaniathelphusa zanklon</i> . Capture any <i>Sommaniathelphusa zanklon</i> found and translocate to Ma Tso Lung Stream/ other suitable areas including LVNP					
S13.9	E22	Prevention of dust, run-off and pollutants impacting Deep Bay catchment area and areas of ecological importance.	Avoid increase to pollution entering ecologically sensitive Deep Bay ecosystem.	Contractor	All construction sites.	Construction	N/A
Specific Mitigation Measures for Designated Projects							
DP2- Castle Peak Road Diversion (Major Improvement)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.A9	LV1-DP2	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity		Detailed Design Consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as soon as the	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		strips, and open space sites.				areas become available, to 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</p>	Protect and Preserve Trees	Government/ Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>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.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	LV7-	Slope Landscaping – Site formation should be reduced as far as possible.	To avoid substantial slope	Government	<i>Onsite</i>	Prior to	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
MM6	DP2	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.	cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Detailed Design Consultant/ Contractor		Construction, Construction Phase & Maintenance in Operation Phase	
S.12.A9 MM8	LV9- DP2	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i> , <i>Bischofia javanica</i> , <i>Castanopsis fissa</i> , <i>Celtis sinensis</i> , <i>Cinnamomum burmannii</i> , <i>Cinnamomum camphora</i> , <i>Xanthoxylum avicennae</i> , <i>Hibiscus tiliaceus</i> , <i>Liquidambar formosana</i> , <i>Sapium discolor</i> ,	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	<i>In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p><i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <p>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</p>					
S.12.A9 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	Government Detailed	<i>Along roads, around</i>	Prior to Construction,	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
			buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Design Consultant/ Contractor	<i>suitable built structures, or around VSRs to contain their view out to the NDA structures.</i>	Construction Phase & Maintenance in Operation Phase	
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 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- 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	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design	<i>Onsite where possible. Otherwise consider offsite locations</i>	Prior to Construction, Construction Phase &	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		along the embankments and beds of modified/ reprovisioned watercourses.		Consultant/ Contractor/ Maintenance Authority		Maintenance in Operation Phase	
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 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/	<i>E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA</i>	Prior to Construction, Construction Phase Maintenance	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
				Maintenance Authority		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.	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
Ecology (Construction Phase)							
S.13.9	E3-DP2	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.	Contractor.	Interface between areas/habitats of ecological importance (KTN area B1-3) and works areas.	Construction phase.	^
S13.9	E4-DP2	Compensatory native woodland planting.	Compensate for loss of 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)							

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
<i>Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)</i>							
S.12.A9	LV1- DP3	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed Design Consultant/ Contractor	<i>Throughout NDAs,</i>	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	^
S.12.A9 MM14.4	LV4- DP3	Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed. For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream. Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	<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	^

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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 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	<i>Onsite</i>	Prior to Construction and Construction Phase	N/A
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</p>	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	<i>Onsite where possible. Otherwise consider offsite locations.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>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>					
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- 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 MM7	LV8-DP3	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensate orytrees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open</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

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		areas 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.					
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>, <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</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

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<i>jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Rraphiolepis indica, and 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.					
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

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
			and 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	<i>Onsite where possible. Otherwise consider offsite locations</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
				Authority			
S.12.A9 MM14.3	LV14- DP3	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel 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- 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

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Landscape and Visual (Construction)							
S.12.A9 MM16	LV16-DP3	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological 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.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	<i>Throughout NDAs</i>	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	Compensate for wetland loss	Project	Long Valley	Construction	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		enhancement of wetland and woodland areas and buffer planting within LVNP.	arising from the project.	Proponent/ Contractor (LVNP Detailed Habitat Creation & Management Plan).		phase.	
S.13.9	E5-DP3	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance on edge of development areas, including along any roads adjacent to or penetrating into areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna. Measures to minimize flightline impacts to birds,	Contractor.	Interface between areas/habitats of ecological importance (KTN areas B1-3, H1-1) and works areas.	Construction phase.	N/A
S13.9	E6-DP3	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A
DP4- KTN NDA Road D1 to D5 (New Road)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.A9	LV1-DP4	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use,		Detailed Design Consultant/ Contractor	<u>Throughout NDAs,</u>	Prior to Construction, Construction & for	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>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 soon as the areas become available, to achieve early establishment</p>	
S.12.A9 MM1	LV2- DP4	<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.</p> <p>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>	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor/	<u>Throughout NDAs, particularly for reservoirs</u>	Prior to Construction	N/A
S.12.A9 MM2	LV3- DP4	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant/	Throughout NDAs	Prior to Construction	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>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>					
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</p>	Protect and Preserve Trees	Government / Detailed Design Consultant/	Onsite	Prior to Construction and Construction Phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>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>		Contractor			
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>	Transplant Trees where suitable for transplantation	Government / Detailed Design Consultant/ Contractor	Onsite possible. Consider locations where Otherwise offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit’ should be referred to.					
S.12.A9 MM6	LV6- DP4	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government Detailed Design Consultant/ Contractor	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM7	LV7- DP4	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.	Compensate for trees and shrubs lost due to the Project.	Government Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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
		Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i> , <i>Diospyros vaccinioides</i> , <i>Gardenia jasminoides</i> , <i>Ixora chinensis</i> , <i>Ligustrum sinense</i> , <i>Litsea rotundifolia</i> , <i>Melastoma dodecandrum</i> , <i>Atalantia buxifolia</i> , <i>Rhodomyrtus tomentosa</i> , <i>Raphiolepis indica</i> , and <i>Rhododendron simsii</i> are suggested..					
S.12.A9 MM8	LV8- DP4	<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 <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</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

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
		shrubs such as <i>Atalantia buxifolia</i> , <i>Diospyros vaccinioides</i> , <i>Gardenia jasminoides</i> , <i>Ixora chinensis</i> , <i>Ligustrum sinense</i> , <i>Litsea rotundifolia</i> , <i>Melastoma malabathricum</i> , <i>Melastoma dodecandrum</i> , <i>Rhodomyrtus tomentosa</i> , <i>Rhaphiolepis indica</i> , and <i>Rhododendron simsii</i> . The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.					
S.12.A9 MM9	LV9- DP4	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government / Detailed Design Consultant/ Contractor	On appropriate structures	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV10- DP4	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures , or around VSRs to contain their view	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
			environment		out to the NDA structures.		
S.12.A9 MM12	LV11- DP4	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	To soften the hard, straight edges and provide greening along roads.	Government Detailed Design Consultant/ Contractor	On viaducts or along roads.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM13 & EIA Annex 13	LV12- DP4	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on-wetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided 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.	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design	E1-7 and C1-9 (LVNP) in KNT	Prior to Construction,	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		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.		Consultant/ Contractor/ Maintenance Authority	NDA and generally throughout NDA	Construction Phase Maintenance in Operation Phase	
Landscape and Visual (Construction)							
S.12.A9 MM16	LV14- DP4	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor			N/A
S.12.A9 MM17	LV15- DP4	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	<u>Throughout NDAs</u>	Construction and Operation Phases	N/A
Ecology (Prior to Detailed Design Prior to Construction Phase)							
S. 13.9	E1-DP4	Egretty Habitat Creation & Management Plan (EHCMP) and Woodland Planting and Management Plan (WPMP)	Compensate for loss of Man Kam To Road egretty. Compensate for loss of	Project Proponent/ Detailed Design Consultant	FLN area A1-7 (egretty compensation).	Detailed design phase.	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
			secondary woodland and hillside plantation of ecological significance.	(EHCMP and WPMP).	KTN areas E1-8 and G1-3 (woodland compensation).		
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 plantation of ecological significance.	Maintenance Authority.	KTN areas E1-8 and G1-3.	Operation phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
<i>Cultural Heritage (Pre-construction Phase)</i>							
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	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

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
		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.					
S11.6.1	CH3-DP4	<u>Undertaking Induction Training</u> Induction training should be provided to the construction Contractor before the commencement of the excavation works in Spot E. An induction will be conducted as part of the environmental health and safety induction programme to all site staff before they are deployed on site. The induction will include an introduction on the historical development of the Site, the possible archaeological remains that may be encountered during ground excavation works as well as the reporting procedures in case suspected archaeological remains are identified. A set of the presentation material (in the form of power point presentation) with content details will be prepared by an archaeologist and submitted to AMO for reference and record purpose. The first induction briefing will be video recorded and it will be used as induction briefing material for new site staff.	To preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	Spot E	Before the commencement of the excavation works and before site staff are deployed on site	N/A
S11.6.2	CH4-DP4	<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.	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	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		Liaison with and obtaining agreement from the descendants of these features will be carried out by the Project Proponent.				works	
S11.6.2	CH5-DP4	<u>Undertaking baseline condition survey and baseline vibration impact assessment</u> In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 15mm/s could be adopted for historic buildings) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	HKT03 (Main Building) and G308	Preconstruction stage before commencement of construction works	N/A
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
Cultural Heritage (Construction Phase)							

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
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>DPS- 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 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.B9 MM1	LV2-DP5	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized	Reduce topographical changes and minimize land	Government / Detailed	Throughout NDAs, particularly for	Prior to Construction	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		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.	resumption	Design Consultant/ Contractor/	reservoirs		
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 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.	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

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
		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 design as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/or elevated, should follow the guidelines stated. Construction time frame should also be considered.					
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 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	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S.12.B9 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-</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p>	Government/ Detailed Design Consultant/	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		Technical Guidelines on Landscape Treatment for Slopes.	To ensure man-made slopes 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	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	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/	In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD	Prior to Construction, Construction Phase & Maintenance in Operation	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>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 omentosa</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</p>		Maintenance Authority		Phase	

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		shrubs which would be inappropriate for further planting.					
S.12.B9 MM9	LV9- DP5	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government / Detailed Design Consultant/ Contractor	<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	LV12-	Enhancement Planting along Embankment - For channelized watercourses,	Minimize the necessity of	Government /	<u>Channelized</u>	Prior to	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
MM14.3	DP5	<p>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>	<p>watercourse modification, protect watercourses where possible and enhance channelized watercourses</p>	<p>Detailed Design Consultant/ Contractor</p>	<p><u>watercourse, particularly the Ma Wat River Channel Diversion</u></p>	<p>Construction, Construction Phase & Maintenance in Operation Phase</p>	
Landscape and Visual (Construction)							
S.12.B9 MM16	LV13- DP5	<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. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).</p>	<p>To screen undesirable views of the works site.</p>	<p>Contractor</p>	<p><i>Throughout NDAs</i></p>	<p>Construction Phase</p>	<p>N/A</p>
S.12.B9	LV14-	<p>Light Control – Construction day and night time lighting should be</p>	<p>To minimize glare impact to</p>	<p>Government /</p>	<p><i>Throughout NDAs</i></p>	<p>Construction</p>	<p>^</p>

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MM17	DP5	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.	adjacent VSRs	Contractor		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 particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	<u>Onsite</u>	Prior to Construction and Construction Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.					
S.12.9 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	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	<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-	General Good Practice Measures - For areas unavoidably disturbed by		Detailed Design	<u>Throughout NDAs.</u>	Prior to	^

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	DP10	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.		Consultant/ Contractor		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, particularly for reservoirs</u>	Prior to Construction	N/A
S.12.D9 MM4	LV3- DP10	Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical	Protect and Preserve Trees	Government/ Detailed Design Consultant/	<u>Onsite</u>	Prior to Construction and Construction Phase	^

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		<p>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>		Contractor			
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>	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

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		For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.					
S.12.D9 MM6	LV5- DP10	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government/ Detailed Design Consultant/ Contractor	<u>Onsite</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM7	LV6- DP10	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.	Compensate for trees and shrubs lost due to the Project.	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

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		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.					
S.12.D9 MM8	LV7- DP10	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including <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	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	<u>In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		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> . <i>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</i>					
S.12.D9 MM9	LV8- DP10	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government/ Detailed Design Consultant/ Contractor	<u>On appropriate structures</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM11	LV9- DP10	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian	Government/ Detailed Design Consultant/ Contractor	<u>Along roads, around suitable built structures, or around VSRs to contain their view</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
			environment		<u>out to the NDA structures.</u>		
S.12.D9M12	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.D9MM14.3	LV11-DP10	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government/ Detailed Design Consultant/ Contractor	<u>Channelized watercourse, particularly the Ma Wat River Channel Diversion</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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		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.					
Landscape and Visual (Construction)							
S.12.D9 MM16	LV12- DP10	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	<u>Throughout NDAs</u>	Construction Phase	^
S.12.D9 MM17	LV13- DP10	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	<u>Throughout NDAs</u>	Construction and Operation phases	^

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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>	To minimize the potential impacts during Construction	Contractor.	<u>Identified potential vibration impacted</u>	Construction phase, with details	N/A

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		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.	phase on any identified potential vibration impacted built heritage features		<u>built heritage</u> <u>features</u>	specified in baseline condition survey and baseline vibration impact assessment,	
<i>DPI2-Reprovision of temporary wholesale market in FLN NDA</i>							
<i>Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)</i>							
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.	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		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.					
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</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

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>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>					
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</p>	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		include details of tree protection measures for those trees to be retained.					
S.12.D9 MM5	LV5- DP12	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.</p>	Transplant Trees where suitable for transplantation	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM6	LV6- DP12	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	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and</p>	Government / Detailed Design Consultant/	Onsite	Prior to Construction, Construction Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<p>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>subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	Contractor		& Maintenance in Operation Phase	
S.12.D9 MM7	LV7- DP12	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p> <p>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Raphiolepis indica</i>, and</p>	Compensate for trees and shrubs lost due to the Project.	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		<i>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
<i>Landscape and Visual (Construction)</i>							

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S.12.D9 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	0.000										
May	0.000										
June	0.000										
Sub-total	31.860	0.000	22.825	5.607	3.428	1.829	0.004	0.681	0.004	247.600	6.411
July	0.000										
August	0.000										
September	0.000										
October	0.000										
November	0.000										
December	0.000										
Total	31.860	0.000	22.825	5.607	3.428	1.829	0.004	0.681	0.004	247.600	6.411

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											
May											
June											
Sub-total	2,455.18	0.00	0.00	102.40	2,352.78	576.91	0.00	0.00	0.00	0.00	65.10
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	2,455.18	0.00	0.00	102.40	2,352.78	576.91	0.00	0.00	0.00	0.00	65.10

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.

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	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	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	3.46	0	0	0.73	2.72	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	0.00										
May	0.00										
June	0.00										
Sub-total	15,954.89	0.00	0.00	0.00	15,891.20	0.00	0.00	0.04	0.00	0.00	63.61
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	15,954.89	0.00	0.00	0.00	15,891.20	0.00	0.00	0.04	0.00	0.00	63.61

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	0.000	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	22.870
Apr-22												
May-22												
Jun-22												
Sub-total	13.464	0.000	0.648	0.000	12.816	0.343	95.815	1.236	0.523	168.370	0.000	197.740
Jul-22												
Aug-22												
Sep-22												
Oct-22												
Nov-22												
Dec-22												
Total in 2022	13.464	0.000	0.648	0.000	12.816	0.343	95.815	1.236	0.523	168.370	0.000	197.740
Total of the Project since 2020	43.876	0.000	4.653	0.000	39.223	3.769	113.113	4.446	2.364	669.523	24.882	2276.570

*Approx. estimation for each dump truck is 6m³/truck or 12 ton/truck

Total Quantity of Inert C&D Materials Generated: 43.876 (in '000m³) (a) = (b)+(c)+(d)+(e)

Waste Flow Table of ND/2019/06

Monthly Summary Waste Flow Table
(PS Clauses 1.101 & 1.102)

Name of Department: CEDD

Contract No.:ND/2019/06

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 the other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000kg	in '000kg	in '000kg	in '000kg	in '000m3
	A	B	C	D	E	F	G	H	I	J	K
Jan											
Feb											
Mar											
Apr											
May											
June											
Sub-total											
July											
Aug											
Sept											
Oct											
Nov	0.927	0	0	0	0.927	0	0	0	0	0	0.008
Dec	0.428	0	0	0	0.428	0	0	0	0	0	0.071
Total	1.355	0	0	0	1.355	0	0	0	0	0	0.079

Notes: (1) The performance targets are given in PS Clause 1.102(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 amount of C&D materials expected to be generated from the works is equal to or exceeding 50,000m3. [Delete Note (4) and the table above on the forecast, where inapplicable].

(5) Total Quantity Generated, A=B+C+D+E+F

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 the other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000kg	in '000kg	in '000kg	in '000kg	in '000m3
	A	B	C	D	E	F	G	H	I	J	K
Jan	1.558	0	0	0	1.558	0	0	0	0	0	0.038
Feb	0.548	0	0	0	0.548	0	0	0	0	0	0.011
Mar	0.145	0	0	0	0.145	0	0	0	0	0	0.022
Apr	1.741	0	0	0	1.741	0	0	0	0	0	0.043
May	0.063	0	0	0	0.063	0	0	0	0	0	0.035
June	0.008	0	0	0	0.008	0	0	0	0	0	0.014
Sub-total	4.062	0	0	0	4.062	0	0	0	0	0	0.162
July	1.562	0	0	0	1.562	0	0	0	0	0	0.025
Aug	1.448	0	0	0	1.448	0	0	0	0	0	0.010
Sept	1.171	0	0	0	1.171	0	0	0	0	0	0.010
Oct	1.000	0	0	0	1.000	0	0	0	0	0	0.043
Nov	3.597	0	0	0	3.597	0	0	0	0	0	0.086
Dec	1.707	0	0	0	1.707	0	0	0	0	0	0.023
Total	14.547	0.000	0.000	0.000	14.547	0.000	0.000	0.000	0.000	0.000	0.358

Notes: (1) The performance targets are given in PS Clause 1.102(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 amount of C&D materials expected to be generated from the works is equal to or exceeding 50,000m3. [Delete Note (4) and the table above on the forecast, where inapplicable].

(5) Total Quantity Generated, A=B+C+D+E+F

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 the other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000kg	in '000kg	in '000kg	in '000kg	in '000m3
	A	B	C	D	E	F	G	H	I	J	K
Jan	2.960	0	0	0	2.960	0	0	0	0	0	0.035
Feb	0.498	0	0	0	0.498	0	0	0	0.0035	0	0.006
Mar	0.427	0	0	0	0.427	0	0	0	0	0	0.014
Apr	0.314	0	0	0	0.314	0	0	0	0	0	0.011
May	0.360	0	0	0	0.360	0	0	0	0	0	0.011
June	0.336	0	0	0	0.336	0	0	0	0	0	0.012
Sub-total	4.895	0	0	0	4.89492	0	0	0	0.0035	0	0.08883
July	0.594	0	0	0	0.594	0	0	0	0	0	0.013
Aug	0.986	0	0	0	0.986	0	0	0	0	0	0.021
Sept	1.031	0	0	0	1.031	0	0	0	0	0	0.012
Oct	0.3575	0	0	0	0.358	0	0	0	0	0	0.028
Nov	1.078	0	0	0	1.078	0	0	0	0	0	0.021
Dec	1.1987	0	0	0	1.199	0	0	0	0	0	0.015
Total	10.140	0.000	0.000	0.000	10.140	0.000	0.000	0.000	0.004	0.000	0.198

Notes: (1) The performance targets are given in PS Clause 1.102(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 amount of C&D materials expected to be generated from the works is equal to or exceeding 50,000m3. [Delete Note (4) and the table above on the forecast, where inapplicable].

(5) Total Quantity Generated, A=B+C+D+E+F

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 the other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000kg	in '000kg	in '000kg	in '000kg	in '000m3
	A	B	C	D	E	F	G	H	I	J	K
Jan	0.157	0	0	0	0.157	0	0	0	0	0	0.035
Feb	0.062	0	0	0	0.062	0	0	0	0	0	0.029
Mar	0.010	0	0	0	0.010	0	0	0	0	0	0.029
Apr	0.000										
May	0.000										
June	0.000										
Sub-total	0.229	0	0	0	0.229	0	0	0	0	0	0.093
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total	0.229	0.000	0.000	0.000	0.229	0.000	0.000	0.000	0.000	0.000	0.093

Notes: (1) The performance targets are given in PS Clause 1.102(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 amount of C&D materials expected to be generated from the works is equal to or exceeding 50,000m3. [Delete Note (4) and the table above on the forecast, where inapplicable].

(5) Total Quantity Generated, A=B+C+D+E+F

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	0.453	0	0	0	0.453	0.824	0	0	0	0	0.179
Apr											
May											
Jun											
Sub-total	1.785	0.000	0.000	0.000	1.785	9.754	0.000	0.000	0.008	0.000	0.741
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	4.843	0.000	1.514	0.000	3.329	130.773	0.017	1.446	0.022	212.240	5.402

- 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 Supervisor, ET and IEC. The road condition of Ma Tso Lung Road will be closely monitored and the public road will be regularly cleaned if mud deposit was observed. Wheel washing facilities at every site entrance will be regularly monitored to ensure proper implementation of dust control measures.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2021-01-02	Ma Tso Lung Road (Near L/P VD5622) (ND/2019/01)	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
				<p>several locations of the site area;</p> <p>4. Bund/seal off works area near river and set up with dewatering system;</p> <p>5. Spare water pumps and sand bags for emergency use during heavy rain;</p> <p>6. Regular training to the operators of wastewater treatment facilities; and</p> <p>7. Regular checking and maintenance of the wastewater treatment facilities and desilting tank.</p>	
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.	<p>No obvious dust emission was observed during EPD inspection on 28th and 29th April 2021, However, potential dust impact may arise from sandy materials found on public road and exposed ground surface.</p> <p>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.</p>	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				
CEDD Contract No. ND/2019/01 - Site Formation and Infrastructural Works at KTN NDA						
Construction commencement date			12-Aug-20			
Operation commencement date			tbc			
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	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	Submitted 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	
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 Note: The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	*	
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	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	*	
		Others	For Approval - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	Deposited 13 May 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	*	
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	*	
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	
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 Construction Phase 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				
CEDD Contract No. ND/2019/01 - Site Formation and Infrastructural Works at KTN NDA						
Construction commencement date			12-Aug-20			
Operation commencement date			tbc			
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	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	Submitted 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	
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 landscape features at Locatoins KT38, KT44 and KT52	prior to the commencement of the respective removal or relocation works	Deposited 10 February 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	Deposited 13 May 2021	
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	
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 Construction Phase 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				
CEDD Contract No. ND/2019/01 - Site Formation and Infrastructural Works at KTN NDA						
Construction commencement date		1-Jun-20				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	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	Submitted by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
2.6	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	To Conduct - A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	*	
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	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	*	
		Others	For Approval - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	Deposited 13 May 2021	
2.8	Compensatory Tree Planting Plan	Before construction	For Approval	prior to the commencement of construction	*	
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	
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 Construction Phase ET Monthly	
4.2	Dedicated website	During construction	Set up and Notify in writing -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	Upload -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
 tbc:To be confirmed
 DP: Designated Project
 *tentative submission date will be supplemented once available

DP5	EP-469/2013	Sewage Pumping Stations in Kwu Tung North New Development Area				
CEDD 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-Oct-20				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	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	Submitted 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 the corresponding parts of landscape and visual mitigation measures	*	
3.1	Change in EM&A requirements/programme	Others	Seek prior approval from the Director -- justified by ET leader and verified by IEC	before implementation		
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	
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 Construction Phase 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				
CEDD Contract No. ND/2019/01 - Site Formation and Infrastructural Works at KTN NDA						
Construction commencement date		23-Mar-20				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	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	Submitted by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	
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 Construction Phase 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				
CEDD Contract No. ND/2019/03 - Development of Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park						
Construction commencement date		3-Jul-20				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	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	Submitted 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	
					Revised Version Deposited 19 February 2021	
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	*	
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	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	Deposited 13 May 2021	
		Others	For Approval - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	N/A	
2.8	Compensatory Tree Planting Plan	Before construction	For Approval	prior to the commencement of construction	N/A	
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	
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 Construction Phase 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

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DP10	EP-473/2013/A	Fanling Bypass Eastern Section				
CEDD Contract No. ND/2019/03 - Development of Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park						
Construction commencement date		6-Oct-20				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	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	Submitted 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	Egret 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	Deposited 13 May 2021	
2.9	Traffic Noise Mitigation Plan	Before construction	Approval	no later than 1 month before the commencement of construction	N/A	
2.10	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	To Conduct - A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer Note: The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	N/A	
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	
3.1	Change in EM&A requirements/ programme	Others	Seek prior approval from the Director -- justified by ET leader and verified by IEC	before implementation		
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	
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 Construction Phase 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:

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DP10	EP-473/2013/A	Fanling Bypass Eastern Section				
CEDD 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-Feb-21				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	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	Submitted 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 Mar 2021	
2.5	Location Plans	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 10 December 2021	
2.6	Relocation Plan for Rose Bitterling	Before construction	Approval	before the commencement of construction	N/A	
2.7	Egret Habitat Creation and Management Plan	Before construction	Approval	before the commencement of construction	N/A	
2.8	Detailed Design of Siu Hang San Tsuen Stream	Before construction	Deposit	before the commencement of construction	Deposited 13 May 2021	
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	*	
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	*	
		Others	For Approval - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	*	
3.1	Change in EM&A requirements/ programme	Others	Seek prior approval from the Director -- justified by ET leader and verified by IEC	before implementation		
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	
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 Construction Phase 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

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DP14	EP-546/2017	Fanling North Temporary Sewage Pumping Station				
CEDD 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-Feb-21				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	no later than 1 month prior to the commencement of construction	Notified 8 September 2020	
1.14	Commencement date of opeation	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				
CEDD 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-Aug-20				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	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
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Submitted 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	
2.6	Relocation Plan for Rose Bitterling	Before construction	Approval	before the commencement of construction	N/A	
2.7	Egretty Habitat Creation and Management Plan	Before construction	Approval	before the commencement of construction	N/A	
2.8	Detailed Design of Siu Hang San Tsuen Stream	Before construction	Deposit	before the commencement of construction	Deposited 13 May 2021	
2.9	Traffic Noise Mitigation Plan	Before construction	Approval	no later than 1 month before the commencement of construction	Submitted 11 September 2020	EPD Approved 8 October 2020
2.10	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	To Conduct - A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer Note: The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	Submitted 1 September 2020	
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	-	
		Others	For Approval - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	-	
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre-construction ET	
					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 Construction Phase 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

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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-Oct-19			
Operation commencement date			tbc			
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	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	Submitted 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	*	
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre-construction ET	
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 Construction Phase 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

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