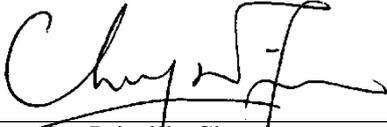


Civil Engineering and Development Department

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

**Monthly Environmental Monitoring and
Audit Report for December 2021**

(Version 1.0)

Certified By 
Dr. Priscilla Choy
(Environmental Team Leader)

REMARKS:

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

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

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Agreement No. CE 33/2019 (EP)

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

Monthly Environmental Monitoring and Audit Report No. 26 (December 2021)

21 January 2022

BY EMAIL

Dear Sir,

We refer to email of 21 January 2022 attaching the Monthly Environmental Monitoring and Audit Report No. 26 prepared by the Environmental Team (ET) of the captioned.

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

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

Yours faithfully,
For and on behalf of the
Mott MacDonald Hong Kong Limited



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EXECUTIVE SUMMARY**Introduction**

1. This is the 26th 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 December 2021.
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	2, 8, 14, 20, 24 and 30 Dec 21	2, 8, 14, 20, 24 and 30 Dec 21	N/A	N/A	N/A
	FLN-DMS3			N/A	N/A	2, 8, 14, 20, 24 and 30 Dec 21		
	FLN-DMS5			1, 7, 13, 17, 23 and 29 Dec 21	1, 7, 13, 17, 23 and 29 Dec 21	N/A		
	KTN-DMS4			1, 7, 13, 17, 23 and 29 Dec 21	N/A			
24-hr TSP Monitoring	FLN-DMS1	N/A	N/A	1, 7, 13, 17, 23 and 29 Dec 21	1, 7, 13, 17, 23 and 29 Dec 21	N/A	N/A	N/A
	FLN-DMS3			N/A	N/A	1, 7, 13, 17, 23 and 29 Dec 21		
	FLN-DMS5A			17, 23 and 29 Dec 21	17, 23 and 29 Dec 21	N/A		
	KTN-DMS4			1, 7, 13, 17, 23 and 29 Dec 21	N/A			
Noise Monitoring	CP-FLN-NMS1	N/A			2, 8, 14, 24 and 30 Dec 21		N/A	
	CP-FLN-NMS2	N/A				2, 8, 14, 24 and 30 Dec 21		N/A
	CP-KTN-NMS2	1, 7, 13, 23 and 29 Dec 21	N/A	N/A				
	CP-KTN-NMS3							
	CP-KTN-NMS5							
	CP-KTN-NMS6	N/A	1, 7, 13, 23 and 29 Dec 21					
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*	2, 3, 8, 9, 16, 23, 24, 28 and 29 Dec 21	2, 8, 16, 23 and 28 Dec 21	N/A*	N/A*	N/A*
	Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream and Siu Hang San Tsuen Stream	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*

	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	10 and 15 Dec 21	10 and 15 Dec 21	10 Dec 21	10 Dec 21	10 Dec 21	N/A*	N/A*
24-hr RSP (Ambient Arsenic) Monitoring for Land Contamination		6, 10, 16, 22 and 28 Dec 21	N/A	6, 10, 16, 22 and 28 Dec 21	N/A	N/A	N/A	N/A
Water Quality Monitoring		N/A	1, 3, 6, 8, 10, 13, 15, 17, 20, 22, 24, 27, 29 and 31 Dec 21	N/A	1, 3, 6, 8, 10, 13, 15, 17, 20, 22, 24, 27, 29 and 31 Dec 21	N/A	N/A	N/A
Landfill Gas Monitoring		31 Dec 21	N/A	N/A	N/A	N/A	N/A	N/A
Built Heritage Monitoring		N/A	N/A	N/A	N/A	Daily assessment subject to construction works conducted within assessment area	N/A	N/A
Environmental Site Inspection		7, 14, 21 and 28 Dec 21	1, 8, 17, 22 and 29 Dec 21	3, 10, 14, 24 and 31 Dec 21	2, 10, 16, 23 and 30 Dec 21	8, 13, 20 and 28 Dec 21	2, 9, 13, 23 and 30 Dec 21	3, 9, 17, 24 and 31 Dec 21

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.

[9] 24-hr TSP monitoring at FLN-DMS5 – Noble Hill was suspended since 19 Nov 2021 as the set up has been reported stolen on 19 Nov 2021. The proposal of alternative station FLN-DMS5A has been approved and operated since 17 Dec 2021.

Breaches of Action and Limit Levels

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

Table III Summary Table for Events Recorded in the Reporting Month

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

Air Quality

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

Construction Noise

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

Water Quality

7. All additional water quality monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

-
8. 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

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

Landfill Gas Monitoring

10. 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

11. 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

12. 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

13. One environmental complaint for ND/2019/05 was received in the reporting month.

Notification of Summons and Successful Prosecutions

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

Reporting Changes

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

Future Key Issues

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

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

Contract No.	Site Activities (January 2022 and February 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 remove of existing structures in Portion 1e (d) Site clearance, tree felling and temporary road construction 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 and construction of APLR in Portion 7 (j) Construction of retaining Wall, slope cutting, soil nailing, slope drainage and maintenance access construction, RC construction of flushing water service reservoir and fresh water reservoir, construction of temporary haul road 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 and road construction 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) Pre-bored Socketed H-pile (b) Tree felling (c) ELS (d) Hoarding erection (e) Pipe Jacking (f) Construction of Pile Cap
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 (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 Type 1 Storage House - Construction of Type 2 Storage House - Construction of Tea House - Construction of Composting Facility - Construction of Bird Hide - Construction of Outdoor Classroom - Construction of Storage Sheds - Wetland Creation & Restoration works

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 (g) 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) & C1-03 - Bored piling at B1(Portion I), B1&B2(Portion II), C1(Portion II), C1-03, C1-04, C2-01, C2-02, C2-03a, C2-03b, C3-02, C3-03a, C3-04a, D2-01, E2-01 - ELS and Pile cap construction at C3-03b, C3-04b, C4-03, C4-04a, C4-04b, D1-01, D1-02, D1-03, D1-04, E1-01, E1-02, E1-03 & E1-04 - Footing construction at C4-02. - Pier Construction at C4-03, C4-04a, C4-04b, D1-01, E1-01, E1-02, E1-03, E1-04 (b) Viaduct Works <ul style="list-style-type: none"> - Installation of the 4th to 5th typical segment mould and SOP mould - Fabrication of 6th to 8th typical segment mould to be completed by the end of Feb 2022 - 1st and 2nd SOP - Target to cast in 12 segments in and 16 segments - Fabrication of launching girder (LG) is in progress - Fabrication of 1st set Form Travel (FT) - Fabrication of pier bracket of Pier C4-04M - Complete ground beams of segment motorized trolley in CTC yard (c) South Team Works <ul style="list-style-type: none"> - Venton Area – Gas main laying, 11kv and 132kv cross road duct laying - Portion 13 – 132kv duct laying. DN1200 storm drain construction - Portion 17 and 18 – Construction of DN 1650 storm. DN 600 and DN450 sewer - Portion 18 – 132kv duct laying, Gas main laying - Kee Kei area – demolish boundary wall - TWSR (West) – RW06 construction - HKY FB (East) – construction of LT1, P02 - Portion 11 – DN1200 and DN600 watermain laying work - E2-02 pier – construction of tower crane foundation - E2-03 – Pile cap construction - E3-01 – Pile cap construction - E3-03 – Pier construction - D2-02 – Pile cap construction. - D2-03 – Temp. drainage diversion, access tower erection, temp. lighting, Piling works
ND/2019/06	<ul style="list-style-type: none"> (a) Finishing works for the Management Office Building (MOB) at Portion 4. (b) Rectification works for T&C of E&M installations for the steel canopy, MOB and additional water tank and pump house at Portion 3 (c) Construction of concrete carriageway at Portion 3 (d) Construction of screeding on stall area at Portion 3 (e) Construction of footings of additional covered walkway at Portion 3 (f) Finishing works for the additional water tank and pump house at Portion 3

ND/2019/07	<ul style="list-style-type: none">(a) Site clearance at Portion 4 and 5(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 and 5(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) Demolition of villager's houses at Portion 4 and 5(j) Drainage works and sewage works at Portion 1, 3 and 4(k) Main piling works and Portion 5
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1 INTRODUCTION

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

Purpose of the report

1.2 This is the 26th EM&A Report which summarises the key findings of the EM&A programme in December 2021.

Structure of the report

1.3 The structure of the report is as follows:

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

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

2 PROJECT INFORMATION

Background

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

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

Table 2.1 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

- 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**.

Project Organization

- 2.6 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)
- 2.7 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	Mr. Stephen Tsang	96860787	
<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

2.8 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 (December 2021)
ND/2019/01	<ul style="list-style-type: none"> (a) Site clearance, tree felling, demolition of existing structures in Portion 1a (b) Site clearance, sheet piling, excavation, drainage and demolition of existing structures in Portion 1b (c) Site clearance in Portion 1e (d) Site clearance, tree felling, temporary road construction in Portion 2 (e) Site clearance, excavation, backfilling in Portion 3 (f) Site clearance, construction of KW01 retaining wall, sheet piling, excavation, drainage works in Portion 5 (g) Site clearance, construction of KW01 retaining wall, drainage works in Portion 6a (h) Operation of HAC soil treatment facility in Portion 6b (i) Site clearance, sheet piling and excavation, drainage works in Portion 7 (j) Construction of retaining wall, slope cutting, soil nailing, slope drainage and maintenance access construction, excavation for fresh water service reservoir, RC construction of flushing water service reservoir in Portion 8a (k) Site clearance, excavation for jacking pit in Portion 8b (l) Sheet piling and excavation, drainage works, demolition of existing structures in Portion 9b (m) Stockpile of soil and excavation in Portion 9c (n) Excavation, sheet piling for ELS, drainage 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) Hoarding erection (b) Pre-bored Socketed H-pile (c) Tree felling (d) ELS (e) Pipe jacking
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 (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 Type 1 Storage House - Construction of Type 2 Storage House - Construction of Tea House - Construction of Composting Facility - Construction of Bird Hide - Construction of Outdoor Classroom - Construction of Storage Sheds - Wetland Creation & Restoration works
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

Contract No.	Site Activities (December 2021)
ND/2019/05	(a) Pre-drilling of B1, B2 and C2 in Portion II (b) Rotary drilling rigs at B1, C1-04, C2-01, C2-02, C2-03a and C2-03b (c) RCD rig at D2-03 (d) Portal Beam at C4-01 (e) Column at E3-03 (f) Pier head at E2-02 (g) LT1/PO2 of HKY abutment second pour (h) Excavation at TWSR-West FW06
ND/2019/06	(a) E&M installations for the Management Office Building (MOB) at Portion 4 (b) Finishing works for the Management Office Building (MOB) at Portion 4 (c) Erection of the steel members and seam roof of steel canopy at Portion 3 (d) E&M installations for the steel canopy at Portion 3 (e) Construction of concrete carriageway at Portion 3 (f) Construction of screeding on stall area at Portion 3 (g) Construction of underground utilities in the final stage market at Portion 3 (h) E&M installations for the additional water tank and pump house at Portion 3 (i) Finishing works for the additional water tank and pump house at Portion 3
ND/2019/07	(a) Site clearance at Portion 2 and 5 (b) Erection of site hoarding at Portion 2 (c) C&D waste disposal in Portion 1, 2, 4 and 5 (d) G.I. works at Portion 3 and 4 (e) Drainage works at Portion 1 and 3 (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 2, 4 and 5 (i) Construction of site haul road in Portion 4 (j) Demolition of villager's houses in Portion 4 and 5 (k) Removal of abestoes containing material at Portion 4 and 5

Construction Programme

2.9 A copy of Contractors' construction programme is provided in **Appendix A**.

Status of Environmental Licences, Notifications and Permits

2.10 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-RN0487-21	01/09/2021	31/12/2021	Expired in the reporting month
	GW-RN0654-21	13/09/2021	07/03/2022	Valid
	GW-RN0690-21	30/09/2021	29/03/2022	Valid
	GW-RN0692-21	25/09/2021	24/03/2022	Valid
	GW-RN0478-21	17/07/2021	16/01/2022	Valid
	GW-RN0413-21	23/06/2021	17/12/2021	Expired in the reporting month
ND/2019/02	GW-RN0574-21	11/08/2021	31/01/2022	Valid
ND/2019/03	GW-RN0615-21	01/09/2021	28/02/2022	Valid
ND/2019/04	GW-RN0666-21	20/09/2021	19/12/2021	Expired in the reporting month
	GW-RN0764-21	28/10/2021	27/04/2022	Valid
	GW-RN0829-21	13/11/2021	16/12/2021	Expired in the reporting month
ND/2019/05	GW-RN0782-21	27/10/2021	26/04/2022	Valid
	GW-RN0736-21	30/10/2021	31/01/2022	Valid
	GW-RN0763-21	30/10/2021	31/01/2022	Valid
	GW-RN0820-21	21/11/2021	31/12/2021	Expired in the reporting month
	GW-RN0858-21	21/01/2021	31/12/2021	Expired in the reporting month
	GW-RN0952-21	25/12/2021	23/03/2022	Valid
ND/2019/06	GW-RN0657-21	13/09/2021	12/02/2022	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation				
ND/2019/01	451792	11/12/2019	N/A	Valid
ND/2019/02	454012	05/03/2020	N/A	Valid
ND/2019/03	452216	24/12/2019	N/A	Valid
	452332	31/12/2019	N/A	Valid
	452333	31/12/2019	N/A	Valid
ND/2019/04	461184	23/10/2020	N/A	Valid
ND/2019/05	454323	13/03/2020	N/A	Valid
ND/2019/06	449369	24/09/2019	N/A	Valid
ND/2019/07	459393	28/08/2020	N/A	Valid
Billing Account for Disposal of Construction Waste				
ND/2019/01	7036265	17/01/2020	N/A	Valid
ND/2019/02	7036898	01/04/2020	N/A	Valid
ND/2019/03	7036378	22/01/2020	N/A	Valid
ND/2019/04	7038391	22/09/2020	N/A	Valid
ND/2019/05	7036901	01/04/2020	N/A	Valid
ND/2019/06	7035473	17/10/2019	N/A	Valid
ND/2019/07	7038309	14/09/2020	N/A	Valid

Contract No.	Permit / License No.	Valid Period		Status
		From	To	
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 24-hr TSP monitoring station FLN-DMS5 at Noble Hill was suspended since 19 Nov 2021 as the setup was reported stolen on 19 Nov 2021. The proposal of alternative air quality monitoring station FLN-DMS5A was approved by EPD on 15 December 2021 and the 24hr TSP monitoring has been resumed on 17 December 2021.
- 3.8 **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	8
FLN-DMS1 FLN-DMS3	Dust Monitor (1-hour TSP)			
	HVS Sampler (TSP) (24-hour TSP)	Tisch	TISCH Model: TE-5170	2

- 3.9 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.
- 3.10 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

- 3.11 **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*

- 3.12 Direct reading dust meter was deployed for the air quality monitoring as shown in **Table 3.2**.
- 3.13 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

- 3.14 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)**

- 3.15 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

3.16 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

3.17 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.

3.18 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

3.19 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

3.20 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

3.21 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	148.9	98.3 – 204.3	303	500
FLN-DMS3	162.0	112.9 – 243.8	301	500
FLN-DMS5	88.3	40.1 – 216.2	279	500
KTN-DMS4	80.3	39.8 – 158.5	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	109.7	76.7 – 126.2	150	260
FLN-DMS3	83.1	45.0 – 127.5	165	260
FLN-DMS5	113.2	81.0 – 129.6	153	260
KTN-DMS4	87.3	43.1 – 131.0	192	260

- 3.22 24-hr TSP monitoring at FLN-DMS5 – Noble Hill was suspended since 19 Nov 2021 as the setup has been reported stolen on 19 Nov 2021. The proposal of alternative air quality monitoring station, FLN-DMS5A was approved by EPD on 15 December 2021 and has been resumed on 17 December 2021. All other 1-hour and 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedances were recorded.
- 3.23 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

- 3.24 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
	SVANTEK	SVAN 957	1
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]	$L_{10(30 \text{ min.})}$ dB(A) $L_{90(30 \text{ min.})}$ dB(A) $L_{eq(30 \text{ min.})}$ 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				
ND/2019/02	CP-KTN-NMS6	Façade			

Remarks:

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

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

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

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

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

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

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

Monitoring Methodology and QA/QC Procedures

- The microphone head of the sound level meter was positioned at 1m from the exterior of the noise sensitive I and lowered sufficiently so that the building's external wall acted as a reflecting surface;
- The battery condition was checked to ensure the correct functioning of the meter;
- Parameters such as frequency weighting, 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]	67.8 – 72.7	69.9	75
ND/2019/04				
ND/2019/05	CP-FLN-NMS2 ^[2]	57.6 – 70.4	59.6	
ND/2019/01	CP-KTN-NMS2 ^[3]	52.2 – 63.0	58.6	
	CP-KTN-NMS3 ^[4]	47.6 – 67.5	51.6	
ND/2019/01	CP-KTN-NMS5	54.4 – 62.6	57.2	
ND/2019/02	CP-KTN-NMS6	54.2 – 69.5	55.1	

Remarks:

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

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

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

- 4.9 All noise monitoring was conducted as scheduled in the reporting month. No complaint on construction noise was received during the reporting month. No Action/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, 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 Equipment

Instrumentation

- 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, for 2 weeks prior to the commencement of construction works
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 Methodology

Instrumentation

- 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 Requirements

Decontamination Procedures

- 5.32 Water sampling equipment used during the course of the monitoring process was decontaminated by manual washing and rinsed with distilled water after each sampling event. All of the disposal equipment was discarded after the sampling.

Sampling Management and Supervision

- 5.33 All sampling bottles were labelled with the sample I.D (Including the sampling station), laboratory number and sampling date. Water samples were dispatched to the testing laboratory for analysis as soon as possible. All the collected samples were stored in a cool box to keep the temperature less than 4°C but without frozen. All water samples were handled under chain of custody protocols and relinquished to the laboratory representatives at locations specified by the laboratory.

Quality Control Measures for Sample Testing

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

Results and Observations

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

Event and Action Plan

- 5.38 Should any 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.

6.7 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 ±3°C; the relative humidity (RH) was < 50% and not vary by more than ±5%. A convenient working RH was 40%. Weighing results were further analysis of RSP concentrations collected by each filter.

Maintenance/Calibration

- 6.12 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 ±3 °C; the relative humidity (RH) was < 50% and not variable by more than ±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)
6/12/2021	KTN-DMS4(A)	2.38	9.36	11.7
10/12/2021		1.65		
16/12/2021		1.13		
22/12/2021		1.54		
28/12/2021		2.78		

- 6.17 All ambient arsenic monitoring was conducted as scheduled in the reporting month. During the reporting month, around 14350 tons of arsenic soil was transported to soil treatment plant and 7220 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: 2nd, 3rd, 8th, 9th, 16th, 23rd, 24th, 28th, 29th December 2021

Date of night-time monitoring: 9th, 24th December 2021

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, 67 species of birds were recorded during the bird surveys within assessment area. Among the recorded birds, there were 29 species of waterbirds. The detailed list of waterbirds and all recorded birds are shown in **Appendix L1k and L1l** respectively.
- 9.11 Among the four transects, the transect T5 had a higher species diversity and abundance due to its diverse habitat types within Long Valley. Species such as *Ardeola bacchus* and *Egretta garzetta* were commonly found roosting and foraging at wetland habitats such as agricultural lands and shallow water habitats.
- 9.12 Along the transect T5 in Long Valley, species with conservation interest such as *Himantopus himantopus*, which is a passage migrant, and *Tringa nebularia* which is a passage migrant and winter visitor, were commonly observed in shallow water habitat. In addition, winter visitor species with conservation interest such as *Recurvirostra avosetta* and *Platalea minor*, were observed in shallow water habitat 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. Noise-producing anthropogenic sources observed during avifauna monitoring includes ground investigation works of remaining phase near T1 and T2.
- 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 ValleyMonitoring 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 PollutionMonitoring 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: 10th, 15th December
2021

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 4 mammal species were recorded from transects T1, T3, T4, T5 and T6. A total of 2 species of conservation importance were recorded, namely bats *Pipistrellus abramus* and *Cynopterus sphinx*.
- 9.37 Domestic cat, *Felis catus* was found at T1 and T5. Domestic dog, *Canis lupus familiaris*, was found at T1, T5 and T6, 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, *Cynopterus sphinx* was observed roosting in the tent-shaped shelter under fronds of Chinese Fan-palm during the monitoring at T1, T4 and T6. *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 frogs, toads, lizards and geckos

were recorded near wetland habitats and watercourse. Transect T1 had higher species diversity than other transects, whereas T5 as the highest number of observations due to the dominance of *Bufo melanostictus*.

Insects (Butterfly and Dragonfly)

- 9.43 During the insect survey, a total of 15 butterfly species and 1 odonata species were recorded from the transects, with all butterfly species being common or very common. Transect T1 had higher butterfly species diversity than other transects.
- 9.44 T1 had recorded the most species among all transects. All of the dragonfly species recorded, were common and abundant in Hong Kong. No species of conservation importance was recorded.
- 9.45 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**.
- 9.46 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.
- 9.47 For the monitoring conducted on 10th December 2021 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 Observation

Details of the Influencing Factors

Major Activities

- 9.48 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.

- 9.49 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.
- 9.50 During the survey of Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, anthropogenic activities including construction works beside T2, and recreational fishing by fishing rod at both T1 and T2 were observed.
- 9.51 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

- 9.52 According to the observation during survey, temperature and the rain flow record in the Reporting Month (Reference: <http://www.weather.gov.hk/wxinfo/pastwx/metob202112.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	7, 14, 21 and 28 Dec 21	1, 8, 17, 22 and 29 Dec 21	3, 10, 14, 24 and 31 Dec 21	2, 10, 16, 23 and 30 Dec 21	8, 13, 20 and 28 Dec 21	2, 9, 13, 23 and 30 Dec 21	3, 9, 17, 24 and 31 Dec 21

Joint Site Audit with representative of the <i>Supervisor's</i> Representative, the Contractor and IEC	14 Dec 21	17 Dec 21	14 Dec 21	16 Dec 21	8 Dec 21	13 Dec 21	9 Dec 21
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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>Air Quality</i>	14/12/2021	Dusty stockpile should be covered by imperious sheeting.	Improvement/Rectification was observed during follow-up audit session on 21 December 2021.
<i>Ecology</i>	14/12/2021	Solid dull green barrier should be enhanced along river channel.	Improvement/Rectification was observed during follow-up audit session on 21 December 2021.
<i>Waste/ Chemical Management</i>	28/12/2021	Drip tray should be provided for chemical storage.	Follow-up action is needed to be reported in the following month.
Contract No.: ND/2019/02			
<i>Air Quality</i>	24/11/2021	NRMM Label was observed faded. Contractor was reminded to replace the NRMM Label.	Improvement/Rectification was observed during follow-up audit session on 1 December 2021.
	8/12/2021	Replace faded NRMM label on generator. (North Bridge)	Item was remarked as 211217-R02. Follow-up action is needed to be reviewed.
	17/12/2021	Replace faded NRMM label on generator. (North Bridge)	Improvement/Rectification was observed during follow-up audit session on 22 December 2021.
<i>Water Quality</i>	1/12/2021	Dusty slope surface should be covered. (North Bridge)	Improvement/Rectification was observed during follow-up audit session on 8 December 2021.
	1/12/2021	Remove dusty materials beside the U-channel and clear the stagnant water inside the U-channel. (South Bridge)	Item was remarked as 211208-R01. Follow-up action is needed to be reviewed.
	1/12/2021	To enhance water control measure to prevent any discharge of muddy water to Sheung Yue River. (河□)	Item was remarked as 211208-O04. Follow-up action is needed to be reviewed.
	8/12/2021	Remove dusty materials beside the U-channel and clear the stagnant water inside the U-channel. (South Bridge)	Item was remarked as 211217-R01. Follow-up action is needed to be reviewed.
	8/12/2021	To enhance water control measure to prevent any discharge of muddy water to Sheung Yue River. (河□)	Item was remarked as 211217-O03. Follow-up action is needed to be reviewed.
	8/12/2021	To clear oil leakage from generator on site. (North Bridge)	Improvement/Rectification was observed during follow-up audit session on 17 December 2021.
	17/12/2021	Remove dusty materials beside the U-channel and clear the stagnant water inside the U-channel. (South Bridge)	Item was remarked as 211222-R01. Follow-up action is needed to be reviewed.
	17/12/2021	To enhance water control measure to prevent any discharge of muddy water to Sheung Yue River. (河□)	Item was remarked as 211222-O02. Follow-up action is needed to be reviewed.

	Date	Observations and Recommendations	Follow-up
	22/12/2021	Remove dusty materials beside the U-channel and clear the stagnant water inside the U-channel. (South Bridge)	Item was remarked as 211229-R01. Follow-up action is needed to be reviewed.
	22/12/2021	To enhance water control measure to prevent any discharge of muddy water to Sheung Yue River. (河口)	Item was remarked as 211222-O02. Follow-up action is needed to be reviewed.
	22/12/2021	To enhance water control measure to prevent any discharge of muddy water to Sheung Yue River. (North Bridge)	Item was remarked as 211222-O03. Follow-up action is needed to be reviewed.
	29/12/2021	Remove dusty materials beside the U-channel and clear the stagnant water inside the U-channel. (South Bridge)	Follow-up action is needed to be reported in the following month.
	29/12/2021	To enhance water control measure to prevent any discharge of muddy water to Sheung Yue River. (河口)	Follow-up action is needed to be reported in the following month.
	29/12/2021	To enhance water control measure to prevent any discharge of muddy water to Sheung Yue River. (North Bridge)	Follow-up action is needed to be reported in the following month.
	29/12/2021	Clear and treat the stagnant muddy water inside the U-Channel with desilting facilities before discharge. (North Bridge)	Follow-up action is needed to be reported in the following month.
Contract No.: ND/2019/03			
Air Quality	3/12/2021	Dusty haul road should be sprayed with water regularly.	Improvement/Rectification was observed during follow-up audit session on 10 December 2021.
	10/12/2021	Dusty stockpile should be covered by imperious sheeting.	Item was remarked as 211214-R02. Follow-up action is needed to be reviewed.
	14/12/2021	Exposed worksite and haul road should be watered regularly.	Improvement/Rectification was observed during follow-up audit session on 24 December 2021.
	14/12/2021	Excavated or stockpile of dusty materials should be covered by impervious sheeting or sprayed with water.	Improvement/Rectification was observed during follow-up audit session on 24 December 2021.
	24/12/2021	Any portion of road leading to construction site within 30m of a vehicle exit should be kept free from dust and mud. Mud was observed along portion of road next to Sheung Yue River.	Improvement/Rectification was observed during follow-up audit session on 31 December 2021.
Water Quality	14/12/2021	To clean wheel-washing bay regularly.	Item was remarked as 211224-R01. Follow-up action is needed to be reviewed.
	24/12/2021	To clean wheel-washing bay regularly.	Item was remarked as 211231-R01. Follow-up action is needed to be reviewed.

	Date	Observations and Recommendations	Follow-up
	24/12/2021	To provide adequate wheel-washing bay facilities at every vehicle exit so as to prevent vehicles leaving site with earth mud.	Improvement/Rectification was observed during follow-up audit session on 31 December 2021.
	31/12/2021	To clean wheel-washing bay regularly.	Follow-up action is needed to be reported in the following month.
Waste/ Chemical Management	23/11/2021	Empty chemical container should be stored properly in designated area.	Item was remarked as 211203-R02. Follow-up action is needed to be reviewed.
	3/12/2021	Empty chemical container should be stored properly in designated area.	Improvement/Rectification was observed during follow-up audit session on 10 December 2021.
	14/12/2021	Empty chemical containers should be stored at designated areas.	Improvement/Rectification was observed during follow-up audit session on 24 December 2021.
Contract No.: ND/2019/04			
Air Quality	2/12/2021	Dusty stockpile should be covered by imperious sheeting.	Improvement/Rectification was observed during follow-up audit session on 10 December 2021.
Noise	2/12/2021	To enhance noise mitigation measures along Shek Wu San Tsuen.	Item was remarked as 211210-R01. Follow-up action is needed to be reviewed.
	10/12/2021	To enhance noise mitigation measures along Shek Wu San Tsuen.	Item was remarked as 211216-R01. Follow-up action is needed to be reviewed.
	16/12/2021	To enhance noise mitigation measures along Shek Wu San Tsuen.	Item was remarked as 211223-R01. Follow-up action is needed to be reviewed.
	23/12/2021	To enhance noise mitigation measures along Shek Wu San Tsuen.	Item was remarked as 211230-R01. Follow-up action is needed to be reviewed.
	30/12/2021	To enhance noise mitigation measures along Shek Wu San Tsuen.	Follow-up action is needed to be reported in the following month.
Ecology	2/12/2021	To provide 10m buffer zone along Siu Hang San Tsuen Stream.	Item was remarked as 211210-R02. Follow-up action is needed to be reviewed.
	10/12/2021	To provide 10m buffer zone along Siu Hang San Tsuen Stream.	Item was remarked as 211216-R02. Follow-up action is needed to be reviewed.
	16/12/2021	To provide 10m buffer zone along Siu Hang San Tsuen Stream.	Item was remarked as 211223-R02. Follow-up action is needed to be reviewed.
	23/12/2021	To provide 10m buffer zone along Siu Hang San Tsuen Stream.	Improvement/Rectification was observed during follow-up audit session on 30 December 2021.

	Date	Observations and Recommendations	Follow-up
<i>Water Quality</i>	30/12/2021	To ensure sediment in U-channel was cleared regularly and avoid accumulation.	Follow-up action is needed to be reported in the following month.
Contract No.: ND/2019/05			
<i>Air Quality</i>	29/11/2021	Dusty stockpile should be covered by imperious sheeting.	Improvement/Rectification was observed during follow-up audit session on 8 December 2021.
	8/12/2021	Faded NRMM label shall be replaced.	Improvement/Rectification was observed during follow-up audit session on 13 December 2021.
	20/12/2021	Display valid NRMM label on regulated machine.	Improvement/Rectification was observed during follow-up audit session on 28 December 2021.
<i>Water Quality</i>	8/12/2021	Enhance mitigation measures to prevent surface runoff to Ma Wat River.	Improvement/Rectification was observed during follow-up audit session on 13 December 2021.
	13/12/2021	Enhance mitigation measures to prevent surface runoff to Ma Wat River.	Improvement/Rectification was observed during follow-up audit session on 20 December 2021.
	28/12/2021	Enhance mitigation measures to prevent surface runoff to Ma Wat River.	Follow-up action is needed to be reported in the following month.
<i>Waste / Chemical Management</i>	29/11/2021	Remove dusty materials beside the U-Channel and enhance mitigation measure to prevent muddy water runoff to the U-Channel.	Improvement/Rectification was observed during follow-up audit session on 8 December 2021.
	20/12/2021	C&D materials should be segregated from other waste.	Improvement/Rectification was observed during follow-up audit session on 28 December 2021.
Contract No.: ND/2019/06			
<i>Waste / Chemical Management</i>	2/12/2021	General refuse should be disposed of regularly to avoid accumulation.	Improvement/Rectification was observed during follow-up audit session on 9 December 2021.
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. (Figure 12)</p>	^ _[1]
<u>EP-468/2013/Δ</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. (Figure 14)</p>	^ _[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. (Figure 15)</p>	^ _[1]
<u>EP-473/2013/Δ</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. (Figure 16)</p>	^ _[1]

<p>EP-475/2013/A</p>	<p>2.7</p>	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas. (Figure 17)</p>	<p>^_[1]</p>
<p>Implementation status:</p>		<p>^ Mitigation measure was fully implemented * Observation/reminder was made during site audit but improved/rectified by the contractor # Observation/reminder was made during site audit but not yet improved/ rectified by the contractor X Non-compliance of mitigation measure • Non-compliance but rectified by the contractor N/A Not Applicable at this stage as no such site activities were conducted in the reporting period</p>	

[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 is shown in **Figure 13**.

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	 Covering dusty stockpile
ND/2019/02	 Hard paved exposed haul road	 Hoarding not less than 2.4m tall
ND/2019/03	 Deployment of noise barriers between construction site and NSRs	 Regulated machines display with Non-road Mobile Machinery labels
ND/2019/04	 Access road watered regularly	 Dusty haul road watered regularly
ND/2019/05	 Covering dusty stockpile	 Deployment of noise barriers between construction site and NSRs

<p>ND/2019/06</p>	 <p>Grasscrete for slope protection</p>	 <p>Hard paved exposed haul road</p>
<p>ND/2019/07</p>	 <p>Covering exposed slope surface with tarpaulin</p>	 <p>Vehicle washing facilities at exit point</p>

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 on 15th December 2021 in the reporting month to share the progress of LVNP with different stakeholders, including CEDD, AFCD, CA, HKBWS, Contractor, ET, IEC and farmers.
- 10.13 Proposals on wetland creation and restoration, dry agricultural land creation, pond creation, water treatment wetland and design of irrigation channel are submitted by the Contractor to achieve the objectives stated in HCMP and accepted by the Engineer with consent from AFCD before implementation. The Contractor will consult with the stakeholders for recommendations and suggestions on mitigation measures to minimise the environmental impacts arising from construction works. The progress of works will be arranged to minimise impacts to avifauna and maintain the habitat for avifauna. The photographic records of site activities in LVNP are presented in **Table 10.5**.

Table 10.5 Photographic Records of Site Activities in LVNP

		
<p>Agricultural practice are continued in existing farmland to maintain habitats in Long Valley</p>		
		
<p><i>Lotus pond</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>	



Construction of storage sheds for farmers



an *Emberiza lathami* was recorded



Provision of wastewater treatment facilities



Provision of noise barrier for noisy works in Long Valley

11 ENVIRONMENTAL NON-CONFORMANCE

Summary of Exceedances

- 11.1 No exceedance of Action and Limit Levels of air quality, construction noise, additional water quality monitoring, ambient arsenic and landfill gas monitoring in the reporting month. The summary of exceedance record in reporting month is shown in **Appendix O**.
- 11.1 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.
- 11.2 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

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

Summary of Environmental Complaint

- 11.4 One environmental complaint for ND/2019/05 was received in the reporting month. The Cumulative Complaint Log since the commencement of the Project is presented in **Appendix S**.

Summary of Environmental Summon and Successful Prosecution

- 11.5 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 (January to February 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.
	(b) GI works	Portion 1b, 9b		
	(c) Excavation	Portion 3, 5, 6a, 7, 8a, 8b, 9b, 9c, 10a, 10b		
	(d) Construction of retaining wall	Portion 6a, 8a		
	(e) Soil nailing/ grouting	Portion		
	(f) Demolition of existing structure	Portion 1a, 1b, 1e, 9b		
	(g) Construction of temporary site haul road	Portion 2, 5, 6a, 7, 8a, 10a		
	(h) Operation of HAC treatment facility	Portion 6b		
	(i) Tree felling	Portion 1a, 2, 3		

	(j) Drainage Works	Portion 1b, 5, 6a, 7, 8a, 9b, 10a, 11b		<ul style="list-style-type: none"> - Regular inspect of construction plants in good condition - Provide temporary noise screens if necessary.
	(k) Sheetpiling	Portion 1b, 5, 6a, 7, 8b, 9b, 10a, 10b		<ul style="list-style-type: none"> - Use of Quiet plants (QPME) and working methods if possible.
				<ul style="list-style-type: none"> - 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. <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) Hoarding erection	Portion 10	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) Tree Felling	Portion 7	Air, Noise, Waste	
	(c) Pre-bored Socketed H-pile	Portion 7, 9, 10	Air, Noise, Water, Waste, Ecology	
	(d) ELS	Portion 1, 9	Air, Noise, Water, Waste, Ecology	
	(e) Construction of Pile Cap	Portion 9	Air, Noise, Water, Waste, Ecology	
	(f) Pipe Jacking	Portion 1	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	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 03, C1 04, C2 01, E3 01, C2 02, C2 03a, C2 03b, C3 02, C3 03a, C3 04a, D2 01, D2 03, E2 01		
	(c) ELS & Pile Cap Construction	C3 03b, C3 04b, C4 03, C4 04a, C4 04b, D1 01, D1 02, D1 03, D1 04, E1 01, E1 02, E1 03 &		

		E1 04 , D2 02, E3 03, E2 03		
(d)	Footing Construction	C4-02		
(e)	Utilities Diversion Works and Permanent Road Works	Venton Area, TWSR-West, D2-03		
(f)	Pier Construction	C4-03, C4-04a, C4-04b, D1-01, E1-01, E1-02, E1-03, E1-04, C4-01a, C4-01b, E2-02		
(g)	Abutment construction	LT1, PO2, AB1 of HKY		
(h)	Launching Girder & Form Traveler Fabrication	CTC Storage Yard		
(i)	Drainage & Water Mains construction	Portion XI, XIII, XVII, XVIII		
(j)	Demolition	Kee Kei area in Portion XVIII		
				<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

				final receptor site and not held in a temporary nurseway as far as possible. - Erect 2m high dull green site boundary fence.
ND/2019/06	A. Construction of finishing works and E&M works for the Management Office Building (MOB)	Portion 4	- Noise pollution - Water pollution	- Adopt noise barrier in screening noise - Wastewater generated after wheel washing of vehicles should be treated properly before discharge
	B. Erection of the seam roof and skylight frame of steel canopy	Portion 3	- Air pollution - Noise pollution	- Adopt “Approved” NRMM Label - Adopt noise barrier in screening noise
	C. Construction of concrete carriageway	Portion 3	- Air pollution - Noise pollution	- Adopt QPME for excavator - Washing the truck wheel before leaving the site
	D. Construction of screeding on stall area	Portion 3	- Noise pollution	- Adopt noise barrier in screening noise
	E. Construction of underground utilities in the final stage market	Portion 3	- Noise pollution - C&D waste - Air pollution	- Adopt QPME for excavator - Cover C&D waste by impervious sheeting - Washing the truck wheel before leaving the site
	F. Finishing works and E&M installations for the additional water tank and pump house	Portion 3	- Air pollution - Noise pollution	- Unloading materials shall be kept in minimum height and speed - Adopt “ Approved” NRMMM\Label
	G. E&M installations for the steel canopy	Portion 3	- Air pollution	- Adopt ultra-low Sulphur diesels
ND/2019/07	(a) Site clearance	Portion 2, 4, 5	- Construction Dust Impact - Noise Impact - Water Quality Impact (Construction Phase)	- 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.
	(b) Erection of site hoarding	Portion 2, 4		
	(c) C&D waste disposal	Portion 1, 2, 4, 5		
	(d) Ground investigation works	Portion 3, 4		

<p>(e) Construction of box culvert</p> <p>(f) Filing works</p> <p>(g) Tree felling/ disposal of yard waste</p> <p>(h) Construction of site haul road</p> <p>(i) Sewage works</p> <p>(j) Demolition of villager’s houses</p> <p>(k) Drainage Works</p>	<p>Portion 2</p> <p>Portion 1, 2, 4</p> <p>Portion 2, 4, 5</p> <p>Portion 1, 4</p> <p>Portion 1, 3</p> <p>Portion 4, 5</p> <p>Portion 1, 3</p>	<p>- Waste Management (Construction Waste)</p> <p>- Landscape and Visual</p>	<ul style="list-style-type: none"> - 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. - 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
---	--	--	--

				<p>recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.</p> <ul style="list-style-type: none"> - Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. - Tree Transplantation Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. - Erect 2m high dull green site boundary fence. - Light Control Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.
--	--	--	--	--

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 December 2021 in accordance with Updated EM&A Manual.

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

Contract No. ND/2019/01

13.3 Environmental site inspection were conducted on 7, 14, 21 and 28 December 21 by ET in the reporting month.

Contract No. ND/2019/02

13.4 Environmental site inspection were conducted on 1, 8, 17, 22 and 29 December 21 by ET in the reporting month.

Contract No. ND/2019/03

13.5 Environmental site inspection were conducted on 3, 10, 14, 24 and 31 December 21 by ET in the reporting month.

Contract No. ND/2019/04

13.6 Environmental site inspection were conducted on 2, 10, 16, 23 and 30 December 21 by ET in the reporting month.

Contract No. ND/2019/05

13.7 Environmental site inspections were conducted on 8, 13, 20 and 28 December 21 by ET in the reporting month.

Contract No. ND/2019/06

13.8 Environmental site inspections were conducted on 2, 9, 13, 23 and 30 December 21 by ET in the reporting month.

Contract No. ND/2019/07

13.9 Environmental site inspections were conducted on 3, 9, 17, 24 and 31 December 21 by ET in the reporting month.

13.10 There were one environmental complaint for ND/2019/05 was received, 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.

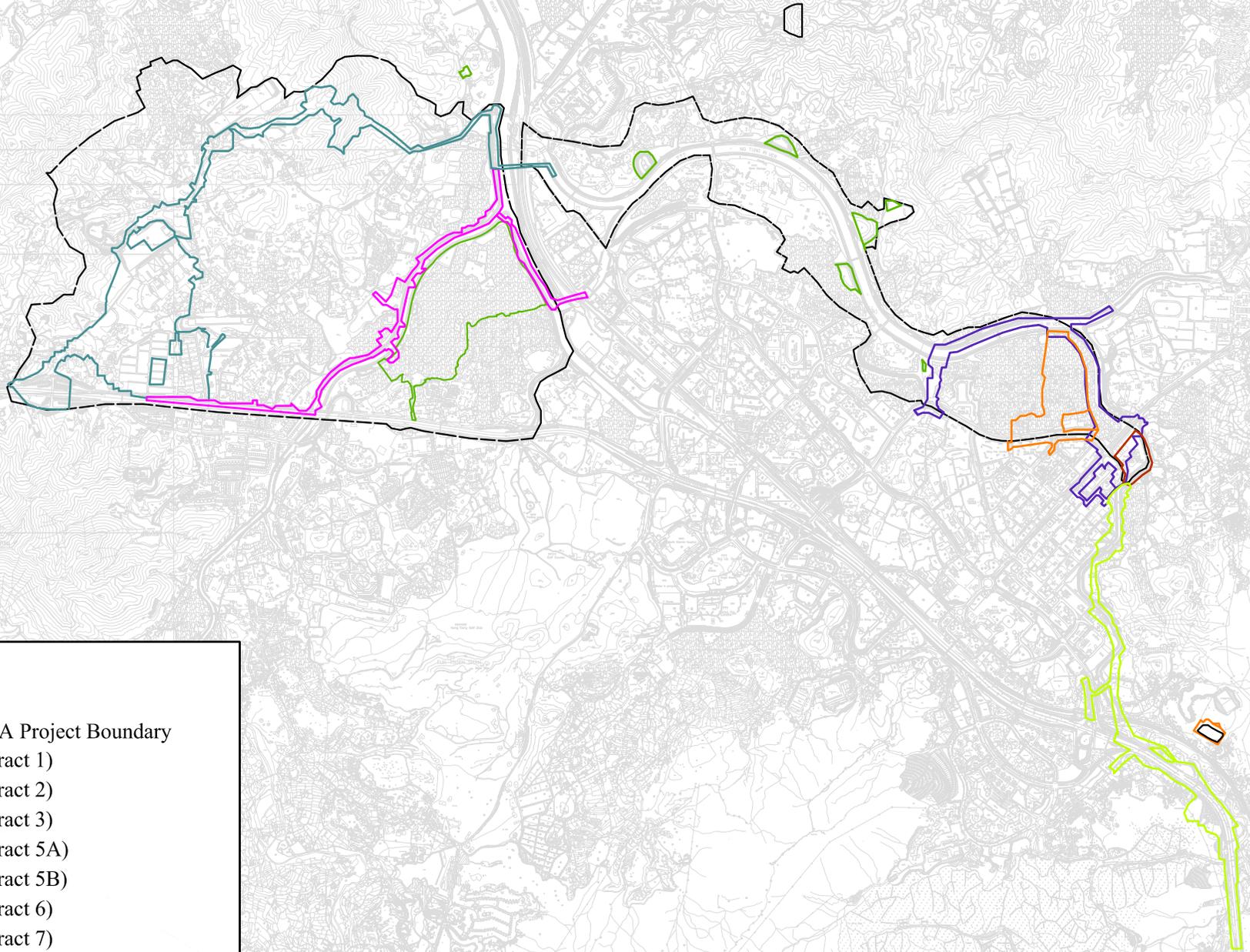
Ecology

- 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)

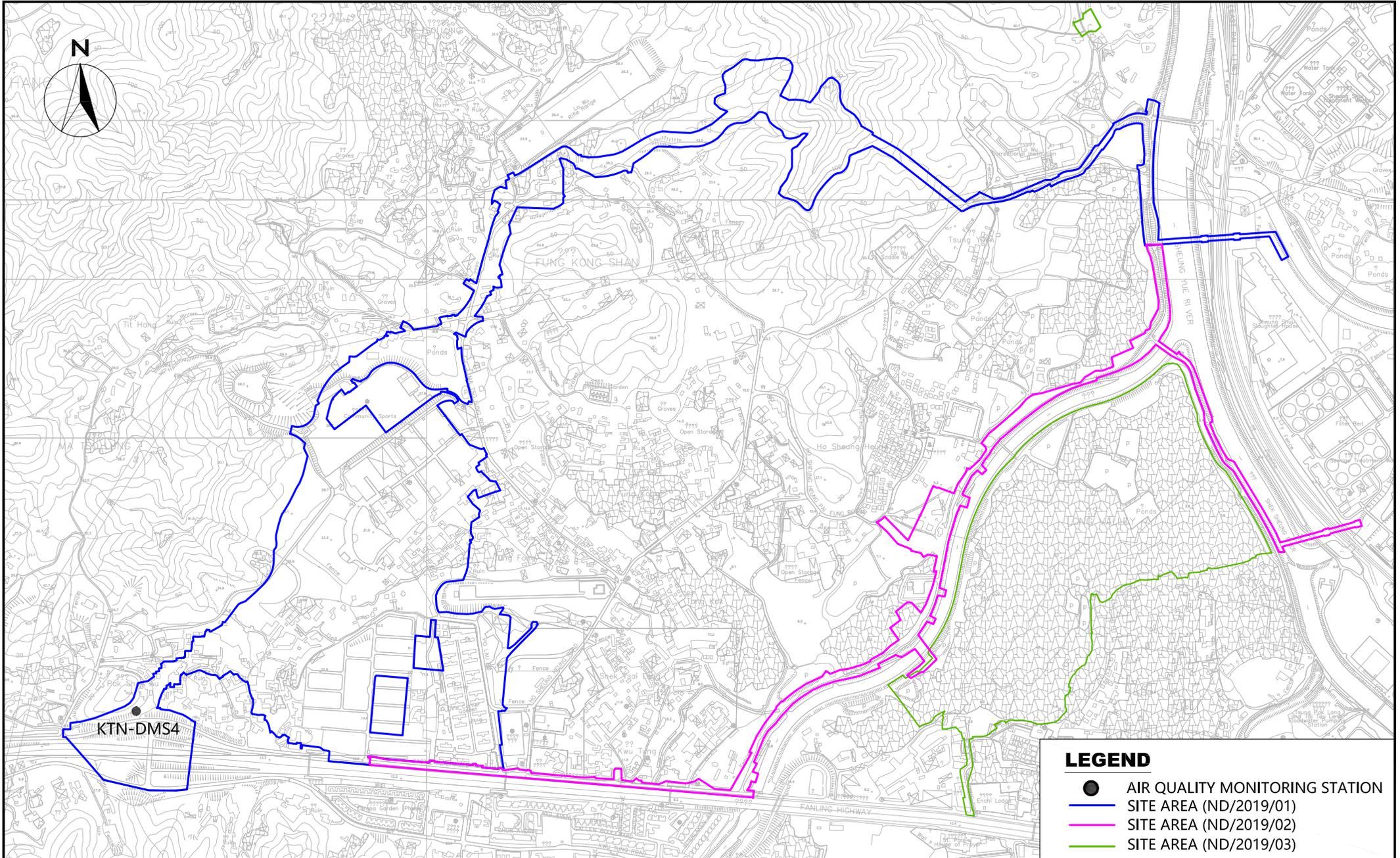


LEGEND

- 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)

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

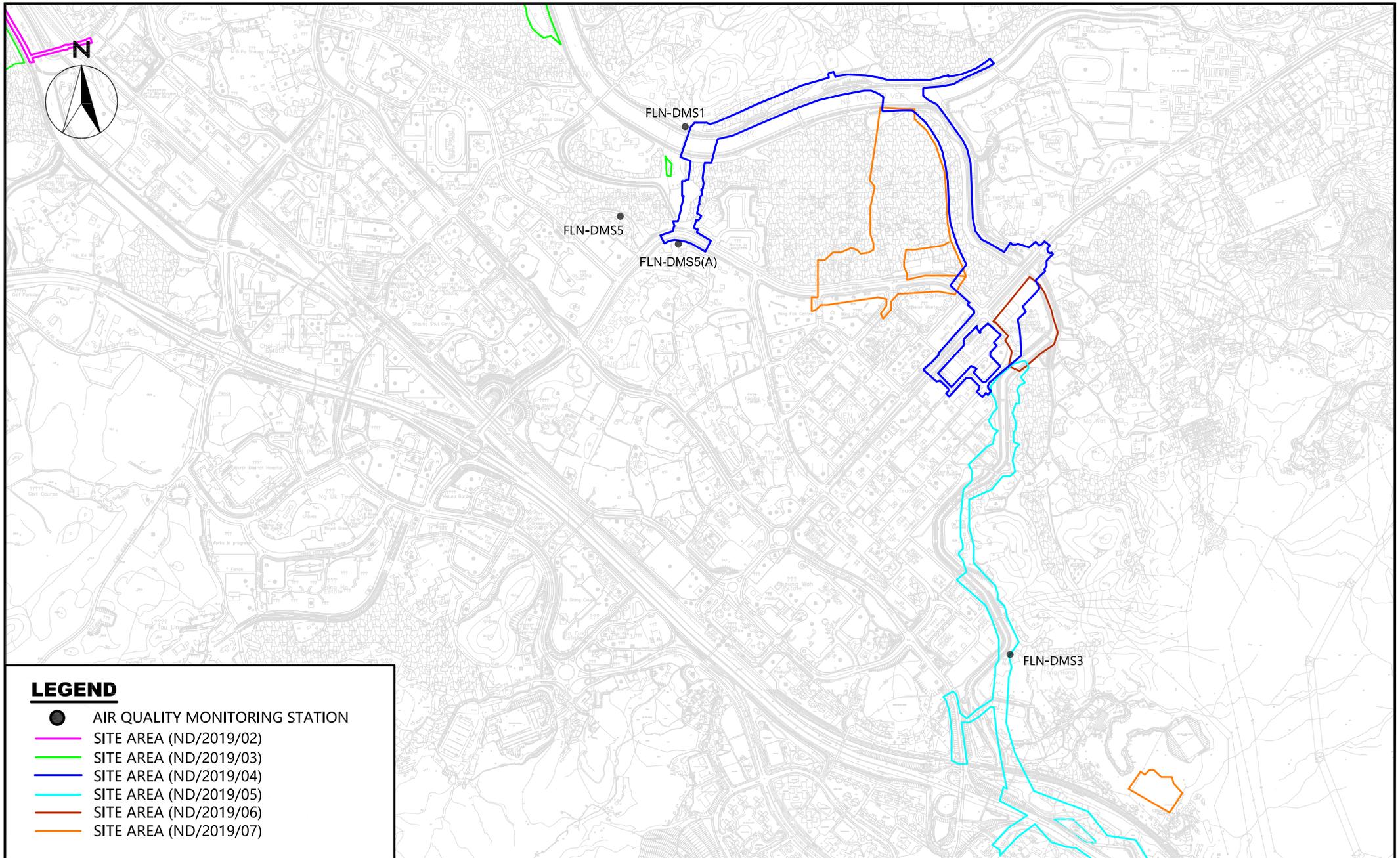
FIGURE(S)



LEGEND

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

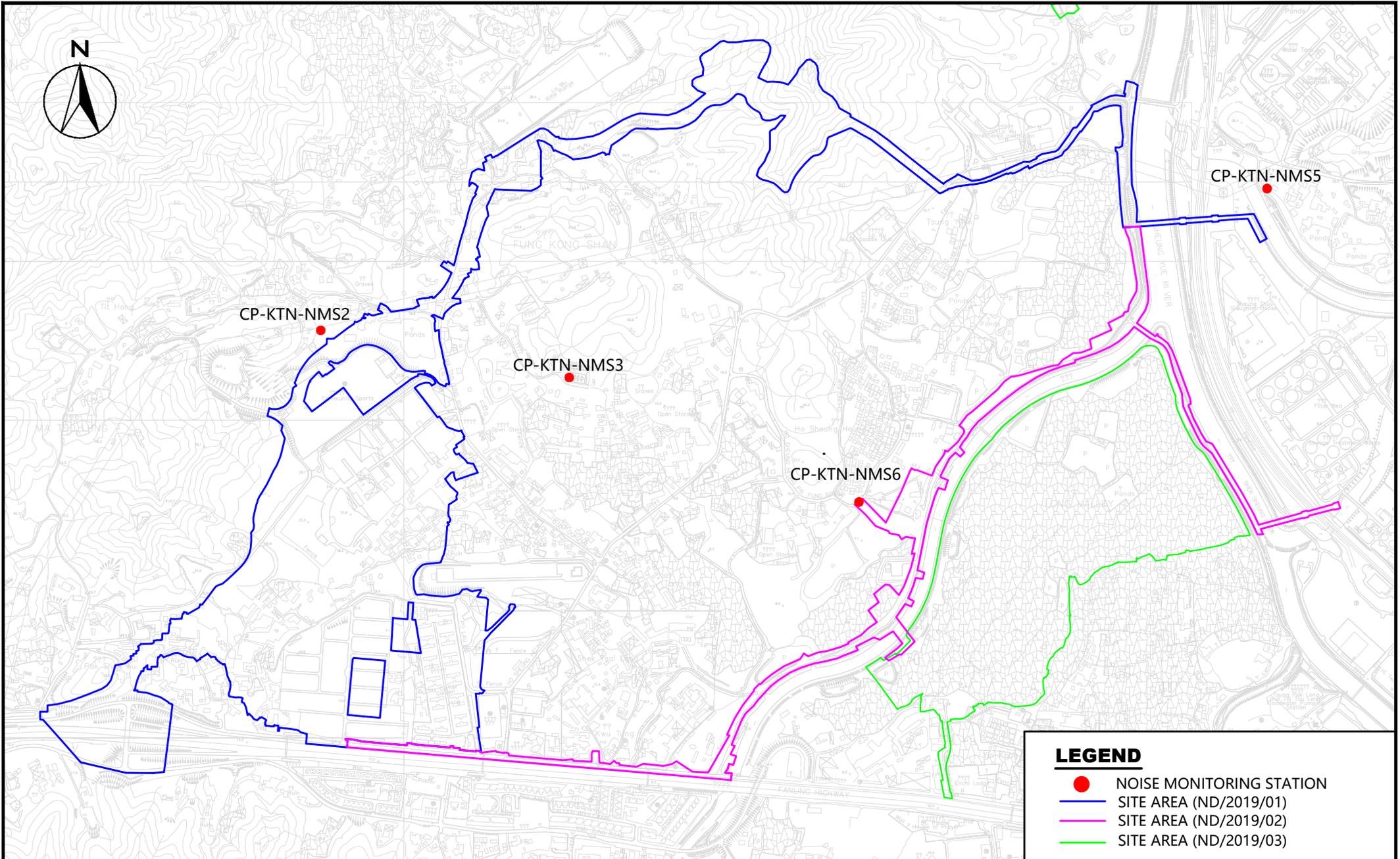
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CHECK	KL	DRAWN	NL	
PROJECT No.	WMA20002	FIGURE NO.	1	REV —



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)

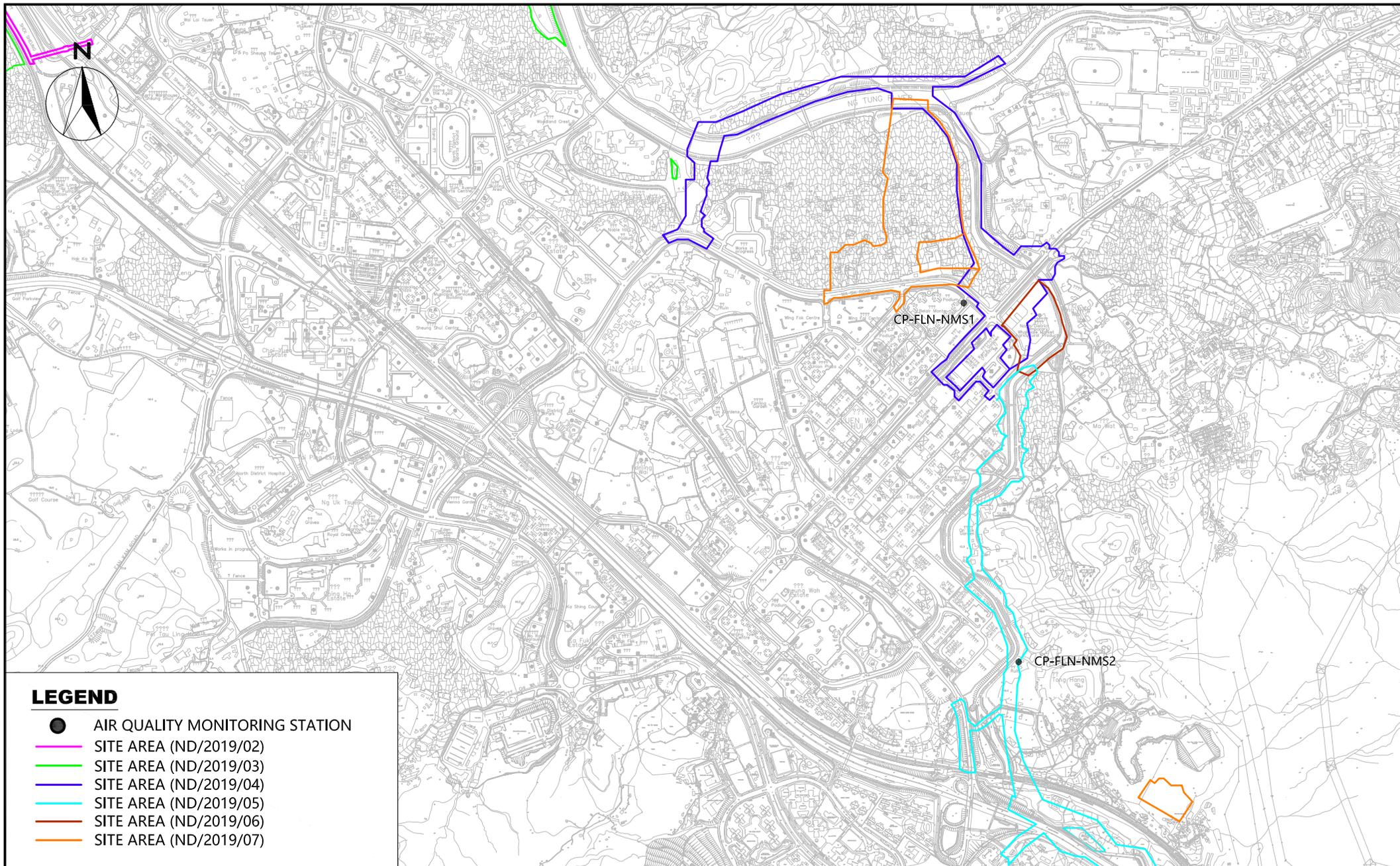
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CHECK	IT	DRAWN	ML	
PROJECT No.	WMA20002	FIGURE NO.	2	REV —



LEGEND

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

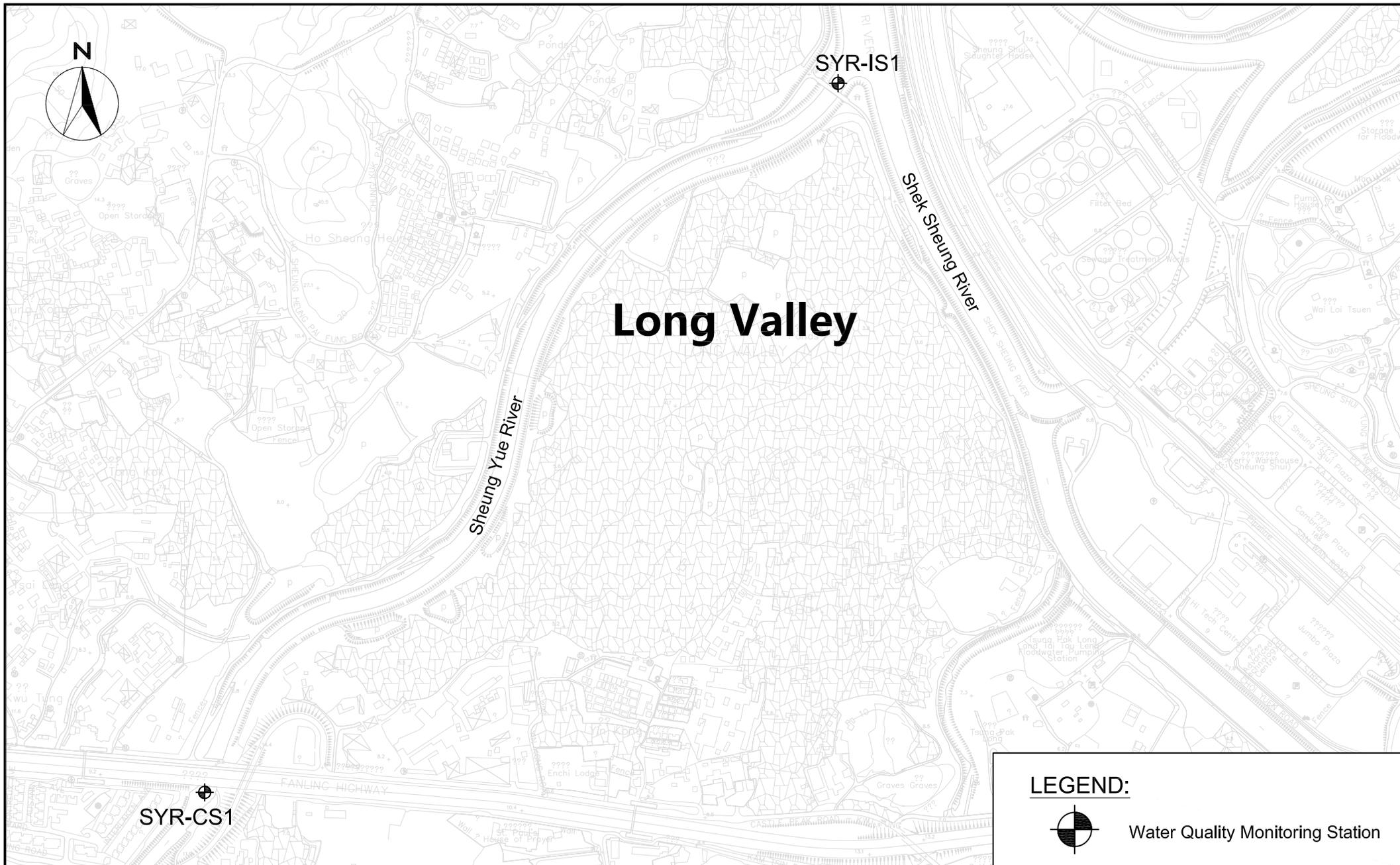
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CHECK	KL	DRAWN	NL	
PROJECT No.	WMA20002	FIGURE NO.	3	REV —



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 —



Long Valley

LEGEND:



Water Quality Monitoring Station



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 —



Siu Hang San Tsuen Stream

SHST-IS2

NTR-CS1

MWR-IS3

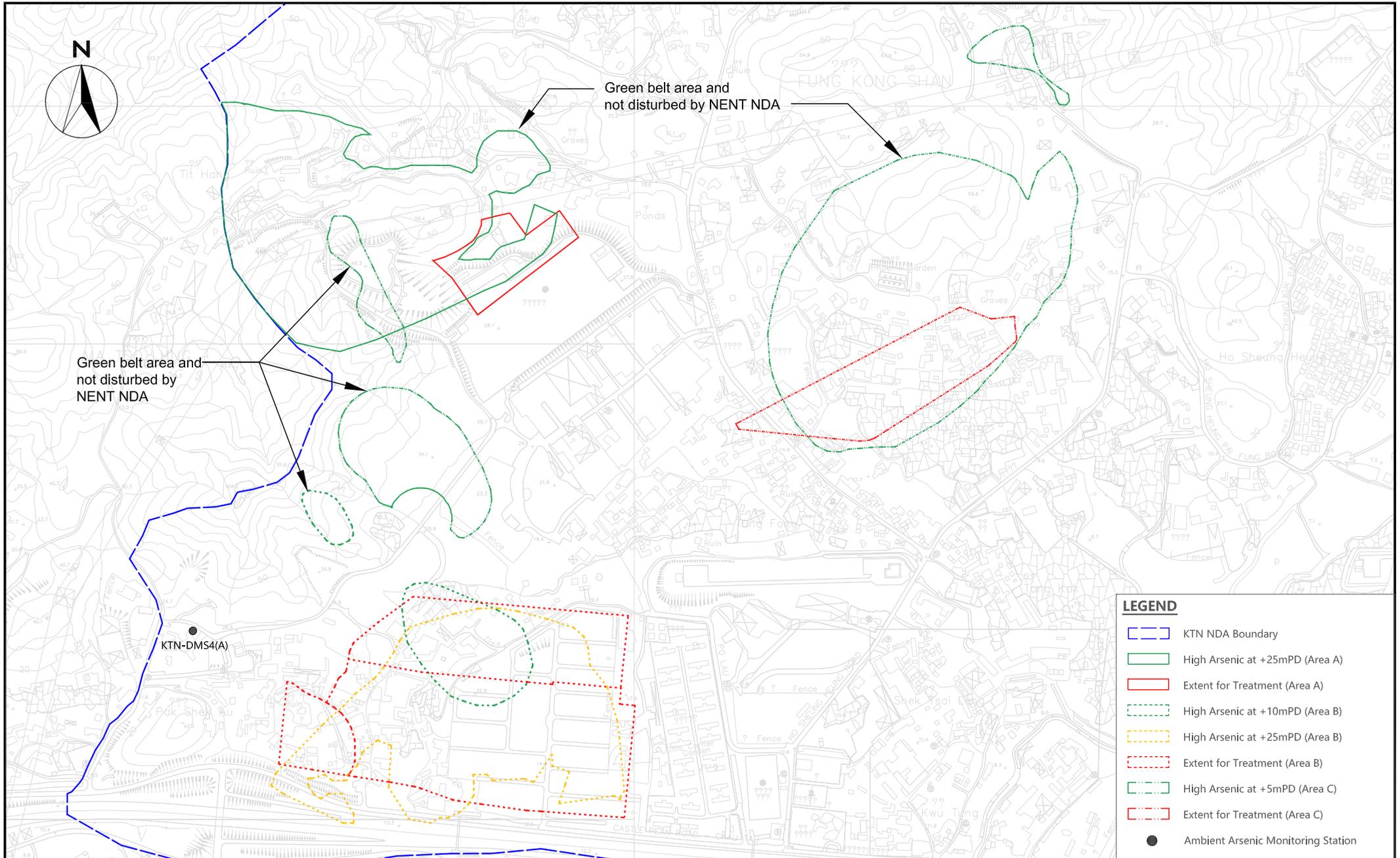
NTR-IS1

LEGEND:



Water Quality Monitoring Station

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CHECK	KL	DRAWN	NL	
PROJECT No.	WMA20002	FIGURE NO.	6	REV —

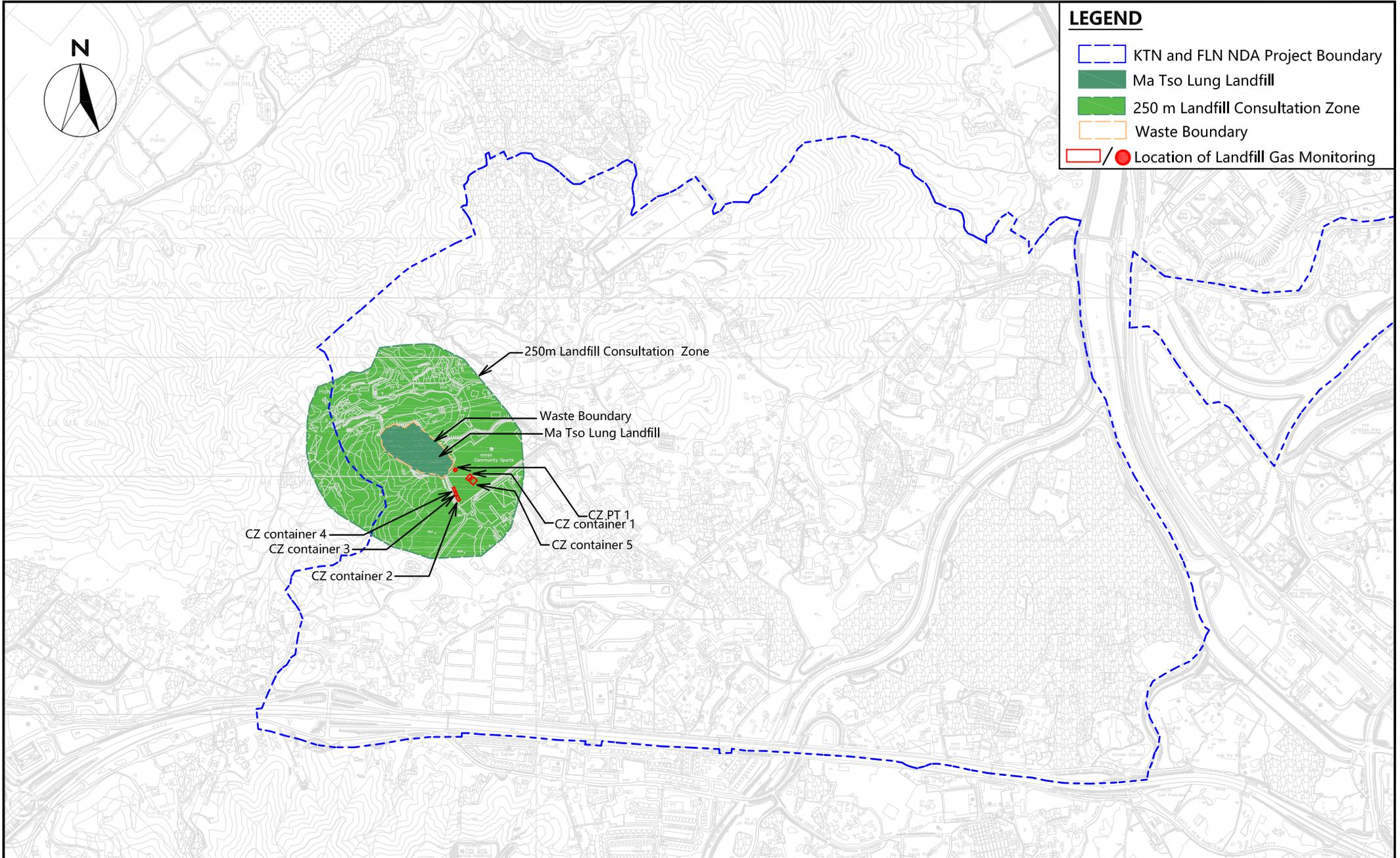


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CHECK	IT	DRAWN	ML	
PROJECT No.	WMA20002	FIGURE NO.	7	REV -



LEGEND

- KTN and FLN NDA Project Boundary
- Ma Tso Lung Landfill
- 250 m Landfill Consultation Zone
- Waste Boundary
- / ● Location of Landfill Gas Monitoring



250m Landfill Consultation Zone

Waste Boundary

Ma Tso Lung Landfill

CZ PT 1

CZ container 1

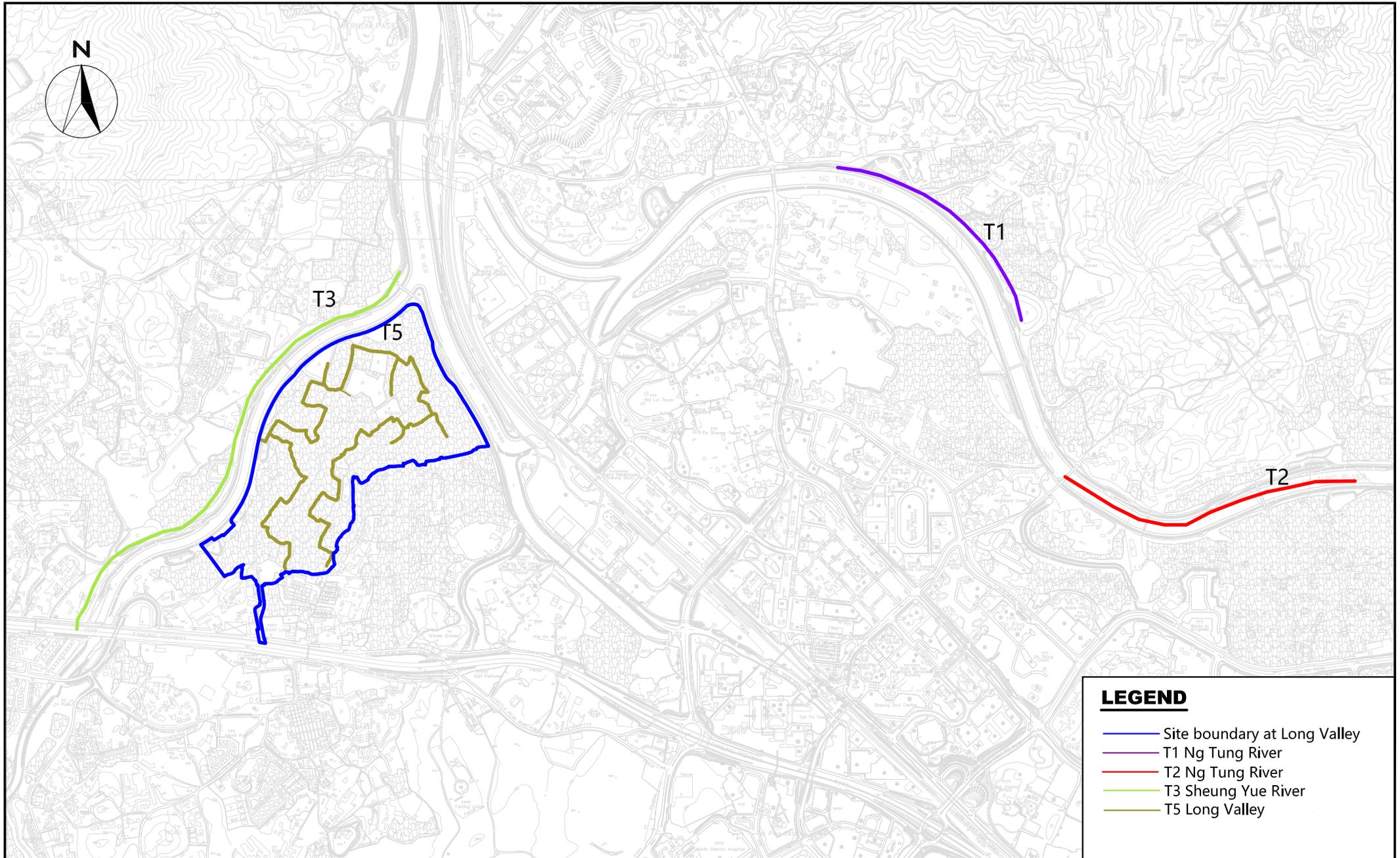
CZ container 5

CZ container 4

CZ container 3

CZ container 2

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CHECK	KL	DRAWN	NL	
PROJECT No.	WMA20002	FIGURE NO.	8	REV —



LEGEND

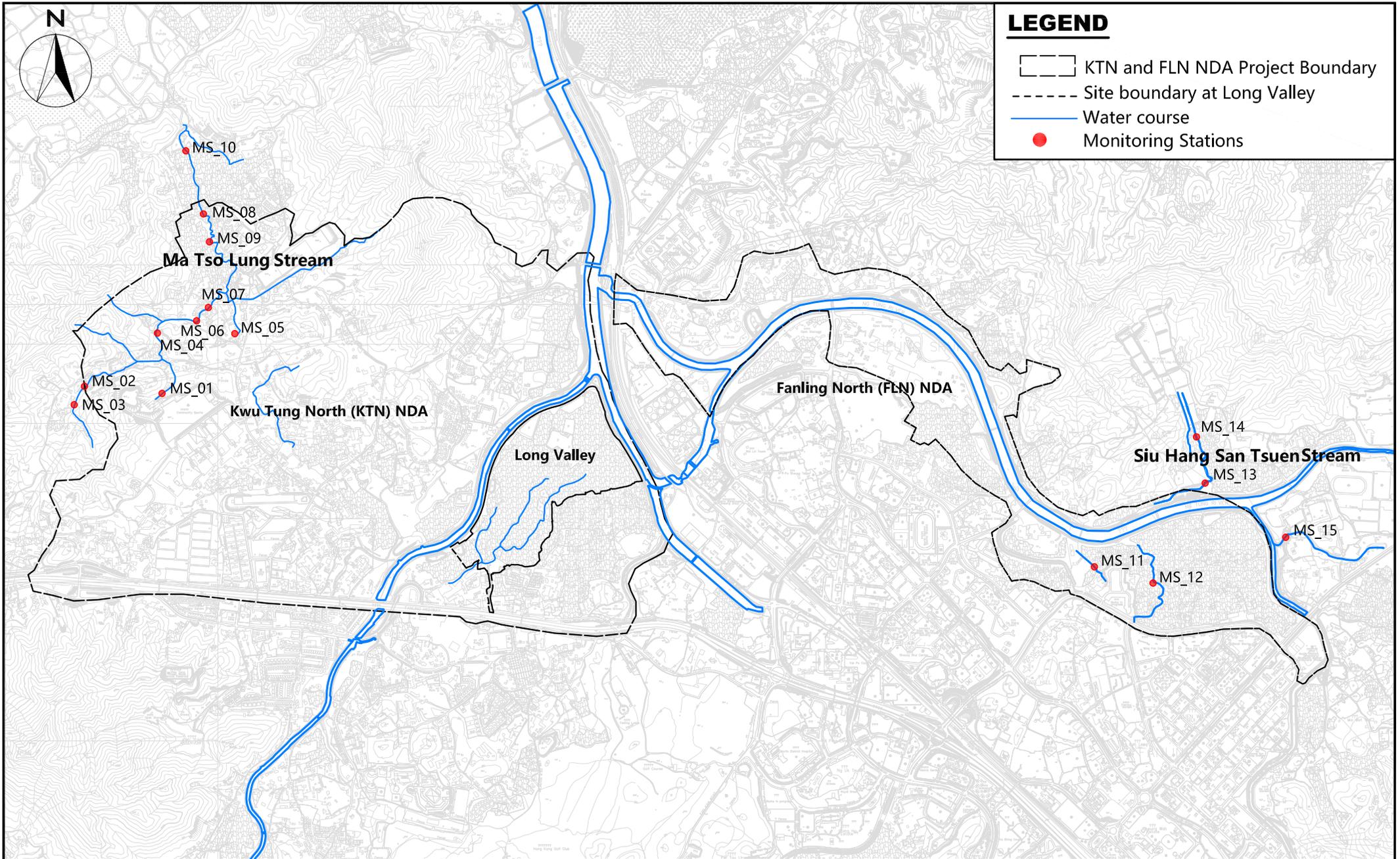
- Site boundary at Long Valley
- T1 Ng Tung River
- T2 Ng Tung River
- T3 Sheung Yue River
- T5 Long Valley

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

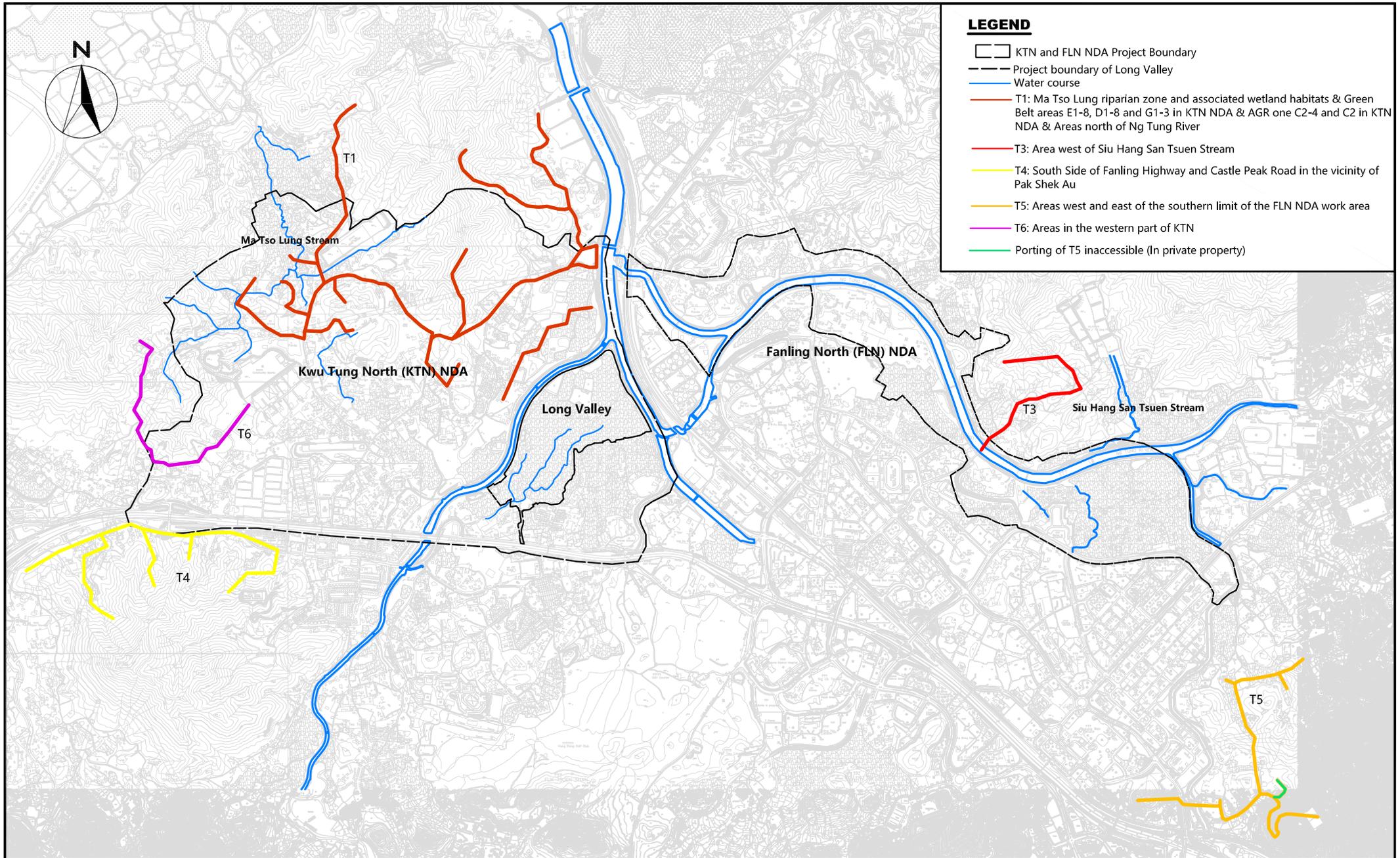


LEGEND

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



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CHECK	IT	DRAWN	KIKI	
PROJECT No.	WMA20002	FIGURE NO.	10	REV —



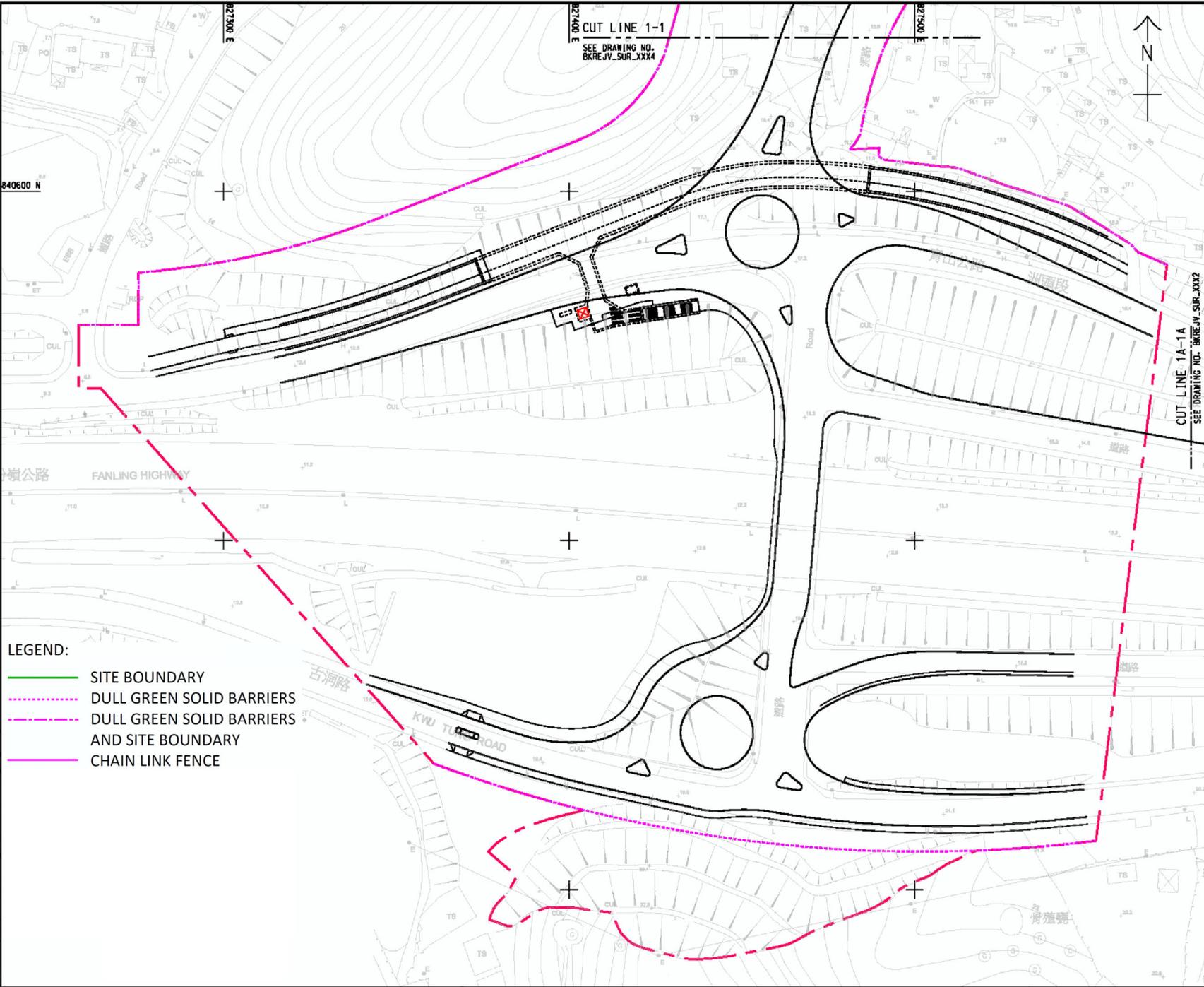
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CHECK	KL	DRAWN	ML	
PROJECT No.	WMA20002	FIGURE NO.	11	REV —

Figure 12

Hoarding Plan

EP-466/2013

4802028
 Plot File by Survey
 2021_10_28
 4802028
 Project Management Unit
 Developer: CDM
 Checked: -
 Approved: -
 BDA1/Bahrain/BK1/1m



BKREJV

TITLE OF DESIGNATED PROJECT:
 Castle Peak Road Diversion

CONTRACT TITLE:
 KWU TUNG NORTH NEW
 DEVELOPMENT AREA, PHASE 1:
 SITE FORMATION AND
 INFRASTRUCTURE WORKS

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

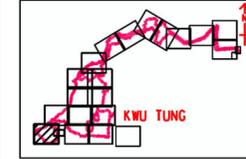
CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS

STATUS

SCALE **DIMENSION UNIT**
 比例 尺寸單位
 A3 1:1000 METRES

KEY PLAN
 索引圖



PROJECT NO. **CONTRACT NO.**
 項目編號 合約編號
 60335576 ND/2019/01

SHEET TITLE
 圖紙名稱
**DULL GREEN SOLID
 BARRIERS LAYOUT**

SHEET NUMBER
 圖紙編號
 BKREJV_SUR_XXX1

CONTRACT TITLE:
CONTRACT NO.: ND/2019/01
KWU TUNG NORTH NEW
DEVELOPMENT AREA, PHASE 1:
SITE FORMATION AND
INFRASTRUCTURE WORKS

CLIENT
土 木 工 程 拓 展 署
CEDD Civil Engineering and
Development Department

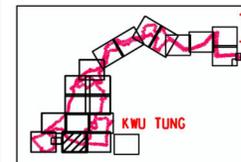
CONSULTANT
AECOM Asia Company Ltd.
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SUB-CONSULTANTS

STATUS

SCALE **DIMENSION UNIT**
A3 1:1000 METRES

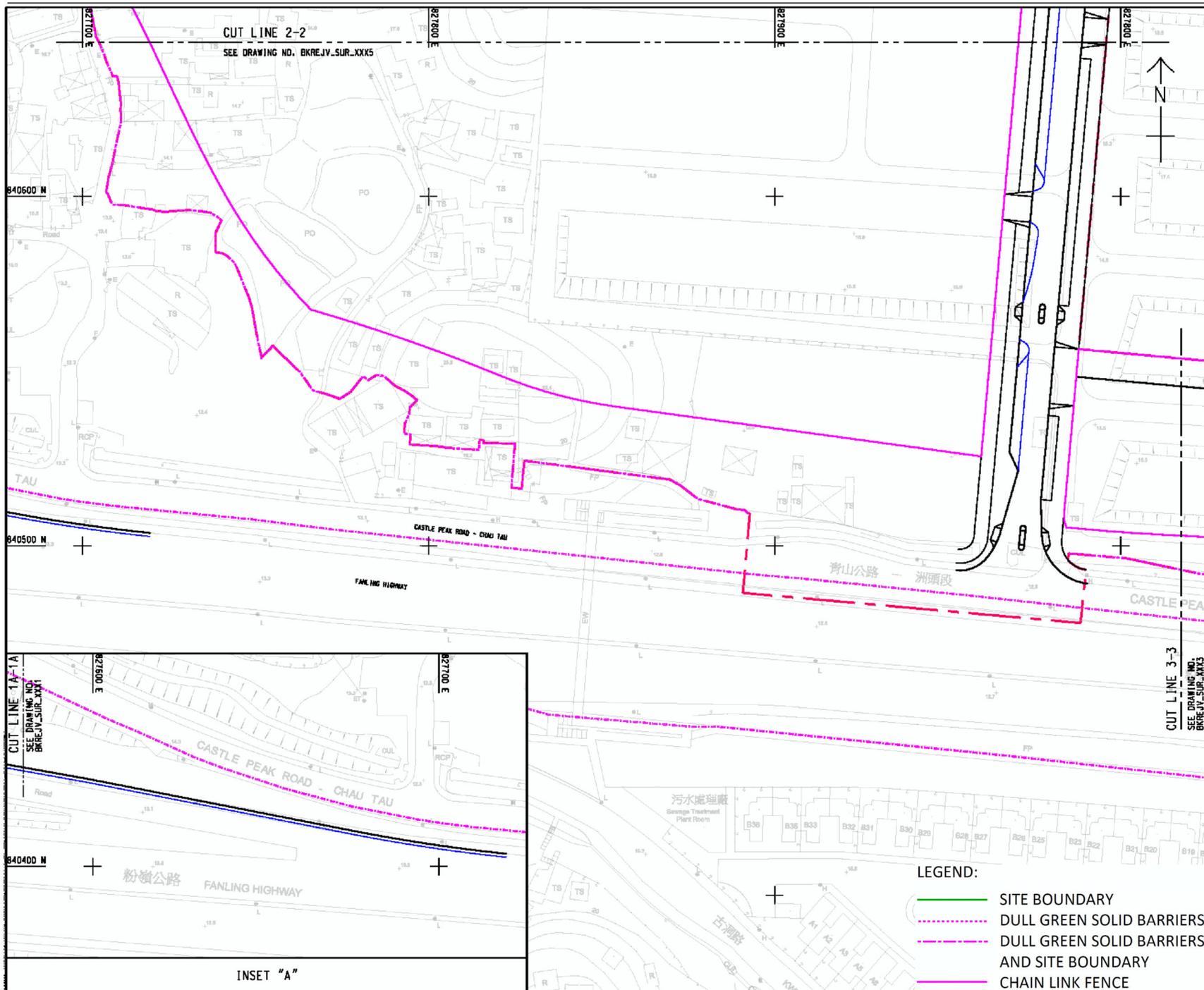
KEY PLAN



PROJECT NO. **CONTRACT NO.**
60335576 ND/2019/01

SHEET TITLE
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
BKREJV_SUR_XXX2



- LEGEND:**
- SITE BOUNDARY
 - - - - DULL GREEN SOLID BARRIERS
 - - - - DULL GREEN SOLID BARRIERS AND SITE BOUNDARY
 - - - - CHAIN LINK FENCE

Figure 13

Hoarding Plan

EP-467/2013/A

BOA1/BKREJV/1mm
 Approved -
 Designer: CDM
 Checked -
 Project Management/Issue:
 841100 N
 841000 N
 46/2020
 Plot File No: Survey
 Path: Y:\Survey\Survey Control\Management\2015 EP Layout for Development\BKREJV_SUR_XXX7.dgn

NOTES:
 1. FOR NOTES AND LEGEND REFER TO DRAWING NO. BKREJV_SUR_XXX1.
 2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. BKREJV_SUR_XXX1 TO BKREJV_SUR_XXX19.



CUT LINE 7-7
 SEE DRAWING NO. BKREJV_SUR_XXX9

CUT LINE 5-5
 SEE DRAWING NO. BKREJV_SUR_XXX5

CUT LINE 6-6
 SEE DRAWING NO. BKREJV_SUR_XXX8

- LEGEND:**
- SITE BOUNDARY
 - - - DULL GREEN SOLID BARRIERS
 - · - · - DULL GREEN SOLID BARRIERS AND SITE BOUNDARY
 - CHAIN LINK FENCE

BKREJV

TITLE OF DESIGNATED PROJECT:
 Kwu Tung North New Development Area Road P1 and P2 and Associated New Kwu Tung Interchange and Pak Shek Au Interchange Improvement

CONTRACT TITLE:
 CONTRACT NO.: ND/2019/01
 KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1:
 SITE FORMATION AND INFRASTRUCTURE WORKS

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

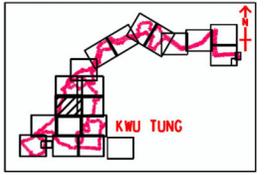
CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS
 亞細亞建築師有限公司

STATUS
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SCALE **DIMENSION UNIT**
 比例 尺寸單位
 A3 1:1000 METRES

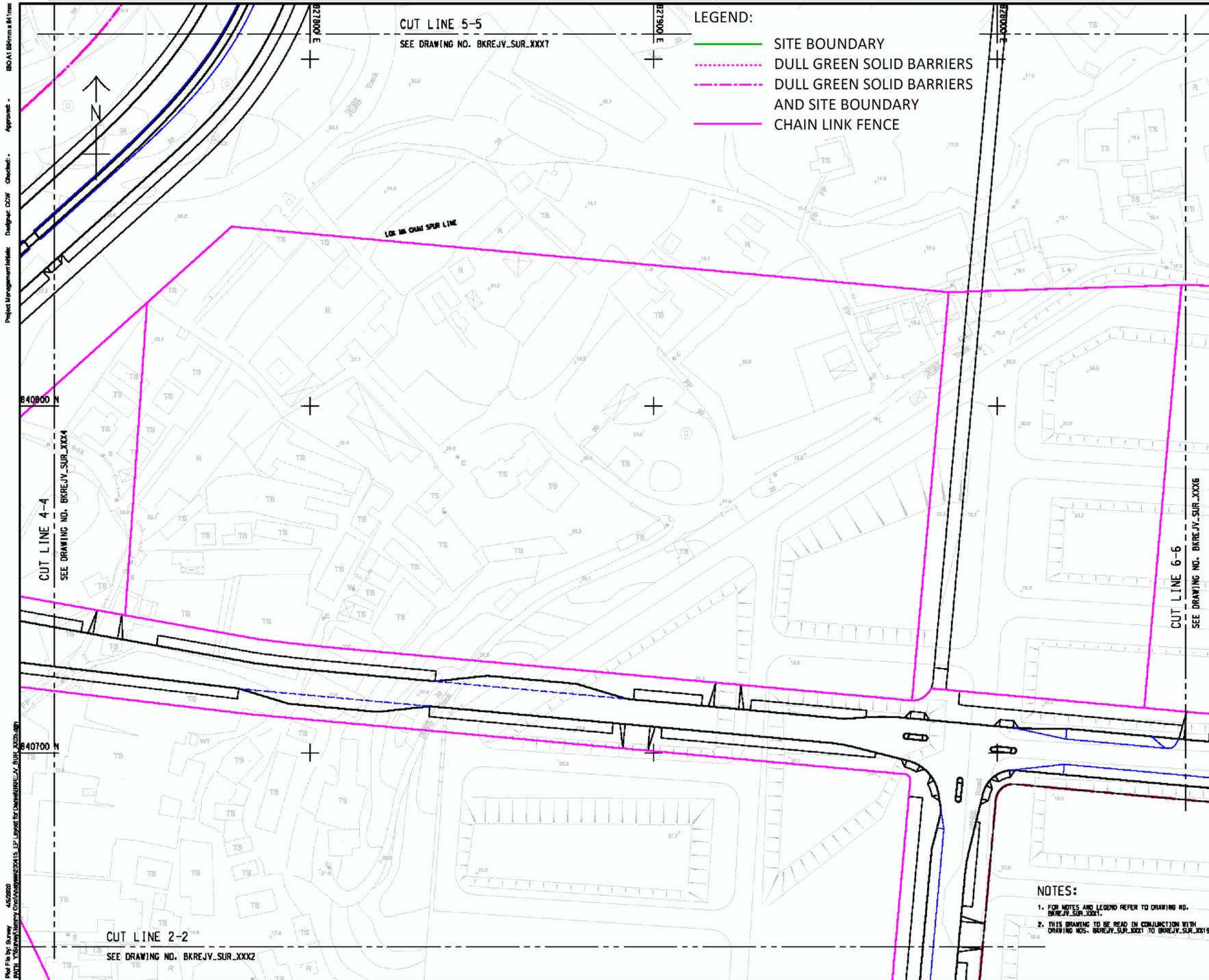
KEY PLAN
 位置圖



PROJECT NO. **CONTRACT NO.**
 項目編號 合約編號
 60335576 ND/2019/01

SHEET TITLE
 圖紙名稱
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
 圖紙編號
 BKREJV_SUR_XXX7



- LEGEND:**
- SITE BOUNDARY
 - DULL GREEN SOLID BARRIERS
 - DULL GREEN SOLID BARRIERS AND SITE BOUNDARY
 - CHAIN LINK FENCE

- NOTES:**
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. BKREJV_SUR_XXX1.
 2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. BKREJV_SUR_XXX1 TO BKREJV_SUR_XXX5.

BKREJV

TITLE OF DESIGNATED PROJECT:
Kwu Tung North New Development Area Road P1 and P2 and Associated New Kwu Tung Interchange and Pak Shek Au Interchange Improvement

CONTRACT TITLE:
 CONTRACT NO.: ND/2019/01
 KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1:
 SITE FORMATION AND INFRASTRUCTURE WORKS

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

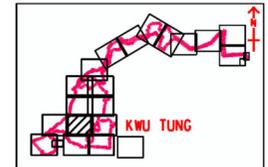
CONSULTANT
 AECOM Asia Company Ltd.
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STATUS

SCALE **DIMENSION UNIT**
 A3 1:1000 METRES

KEY PLAN



PROJECT NO. **CONTRACT NO.**
 60335576 ND/2019/01

SHEET TITLE
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
 BKREJV_SUR_XXX5

Project Management In-charge: Designer: CSW Checked: -
 Approved: -
 BDA1 (B) Area: 84.1mm
 Plot File By: Survey 4/5/2020
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Figure 14

Hoarding Plan

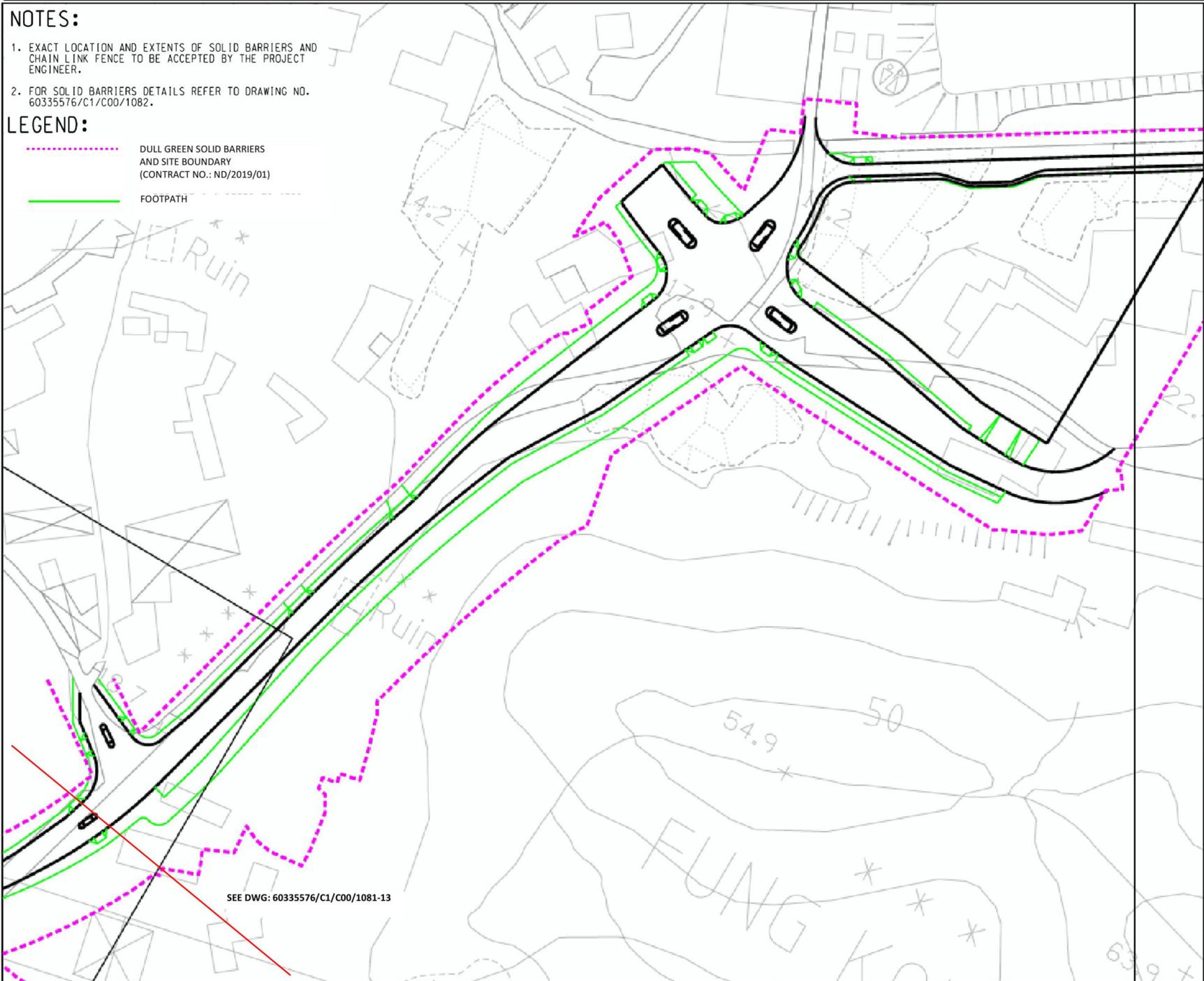
EP-468/2013/A

NOTES:

1. EXACT LOCATION AND EXTENTS OF SOLID BARRIERS AND CHAIN LINK FENCE TO BE ACCEPTED BY THE PROJECT ENGINEER.
2. FOR SOLID BARRIERS DETAILS REFER TO DRAWING NO. 60335576/C1/C00/1082.

LEGEND:

-  DULL GREEN SOLID BARRIERS AND SITE BOUNDARY (CONTRACT NO.: ND/2019/01)
-  FOOTPATH



BKREJV

TITLE OF DESIGNATED PROJECT:
 KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO D5

CONTRACT TITLE:
 CONTRACT NO.: ND/2019/01
 KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1:
 SITE FORMATION AND INFRASTRUCTURE WORKS

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

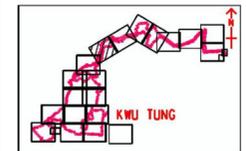
CONSULTANT
 AECOM Asia Company Ltd.
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SUB-CONSULTANTS

STATUS

SCALE **DIMENSION UNIT**
 比例 尺寸單位
 A3 1:1000 METRES

KEY PLAN
 索引圖



PROJECT NO. **CONTRACT NO.**
 項目編號 合約編號
 60335576 ND/2019/01

SHEET TITLE
 圖紙名稱
DULL GREEN SOLID BARRIERS LAYOUT

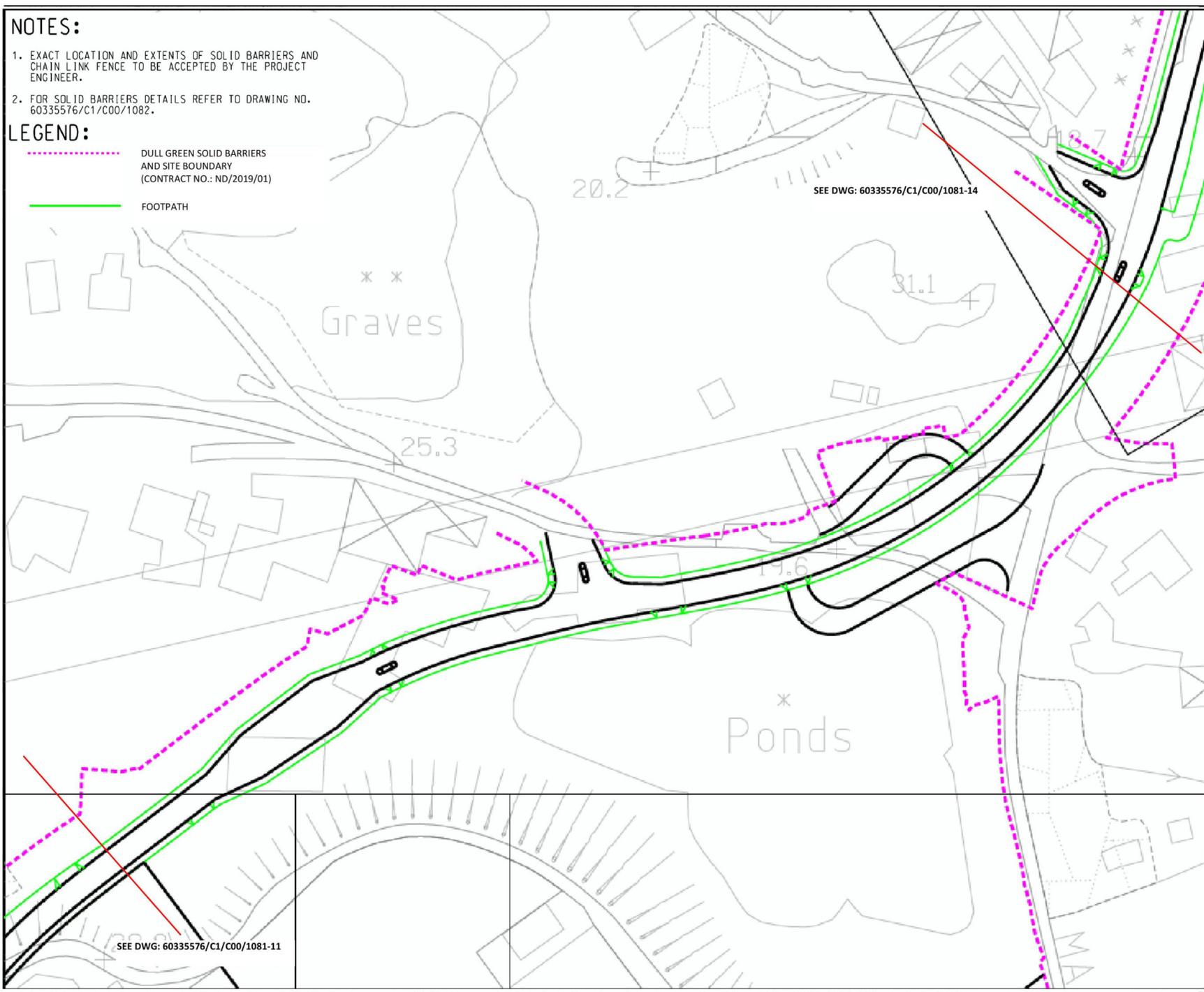
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 圖紙編號
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2. FOR SOLID BARRIERS DETAILS REFER TO DRAWING NO. 60335576/C1/C00/1082.

LEGEND:

- DULL GREEN SOLID BARRIERS AND SITE BOUNDARY (CONTRACT NO.: ND/2019/01)
- FOOTPATH



SEE DWG: 60335576/C1/C00/1081-11

SEE DWG: 60335576/C1/C00/1081-14

BKREJV

TITLE OF DESIGNATED PROJECT:
 KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO D5

CONTRACT TITLE:
 CONTRACT NO.: ND/2019/01
 KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1:
 SITE FORMATION AND INFRASTRUCTURE WORKS

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

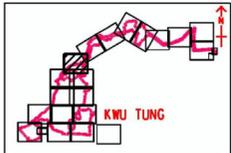
CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS

STATUS

SCALE **DIMENSION UNIT**
 比例 尺寸單位
 A3 1:1000 METRES

KEY PLAN



PROJECT NO. **CONTRACT NO.**
 項目編號 合約編號
 60335576 ND/2019/01

SHEET TITLE
 圖紙名稱
DULL GREEN SOLID BARRIERS LAYOUT

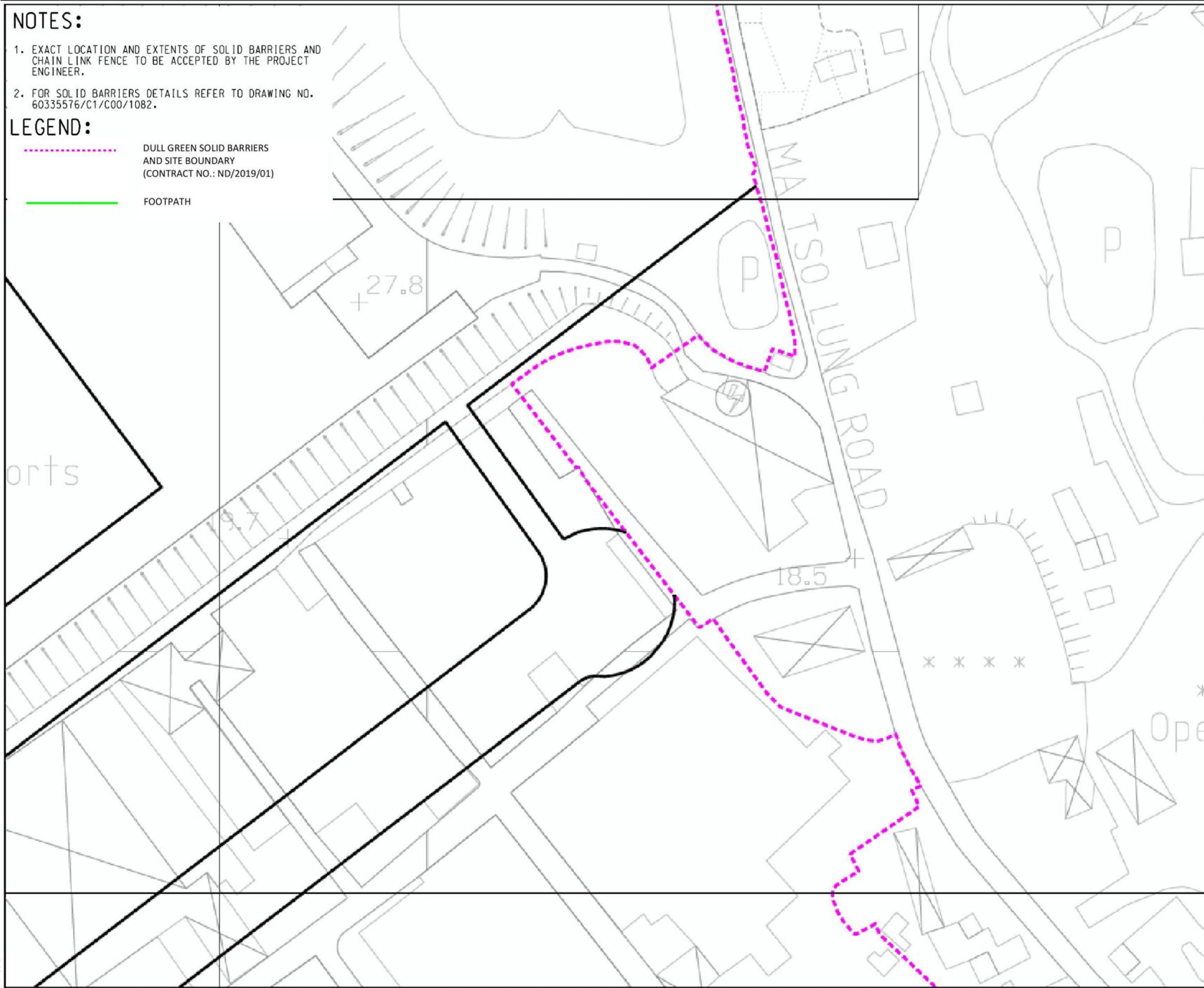
SHEET NUMBER
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 60335576/C1/C00/1081-13

NOTES:

1. EXACT LOCATION AND EXTENTS OF SOLID BARRIERS AND CHAIN LINK FENCE TO BE ACCEPTED BY THE PROJECT ENGINEER.
2. FOR SOLID BARRIERS DETAILS REFER TO DRAWING NO. 60335576/C1/C00/1082.

LEGEND:

-  DULL GREEN SOLID BARRIERS AND SITE BOUNDARY (CONTRACT NO.: ND/2019/01)
-  FOOTPATH



BKREJV

TITLE OF DESIGNATED PROJECT:
 KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO D5

CONTRACT TITLE:
 CONTRACT NO.: ND/2019/01
 KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1:
 SITE FORMATION AND INFRASTRUCTURE WORKS

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

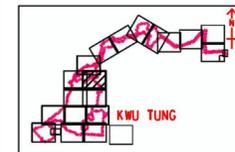
CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS

STATUS

SCALE **DIMENSION UNIT**
 比例 尺寸單位
 A3 1:1000 METRES

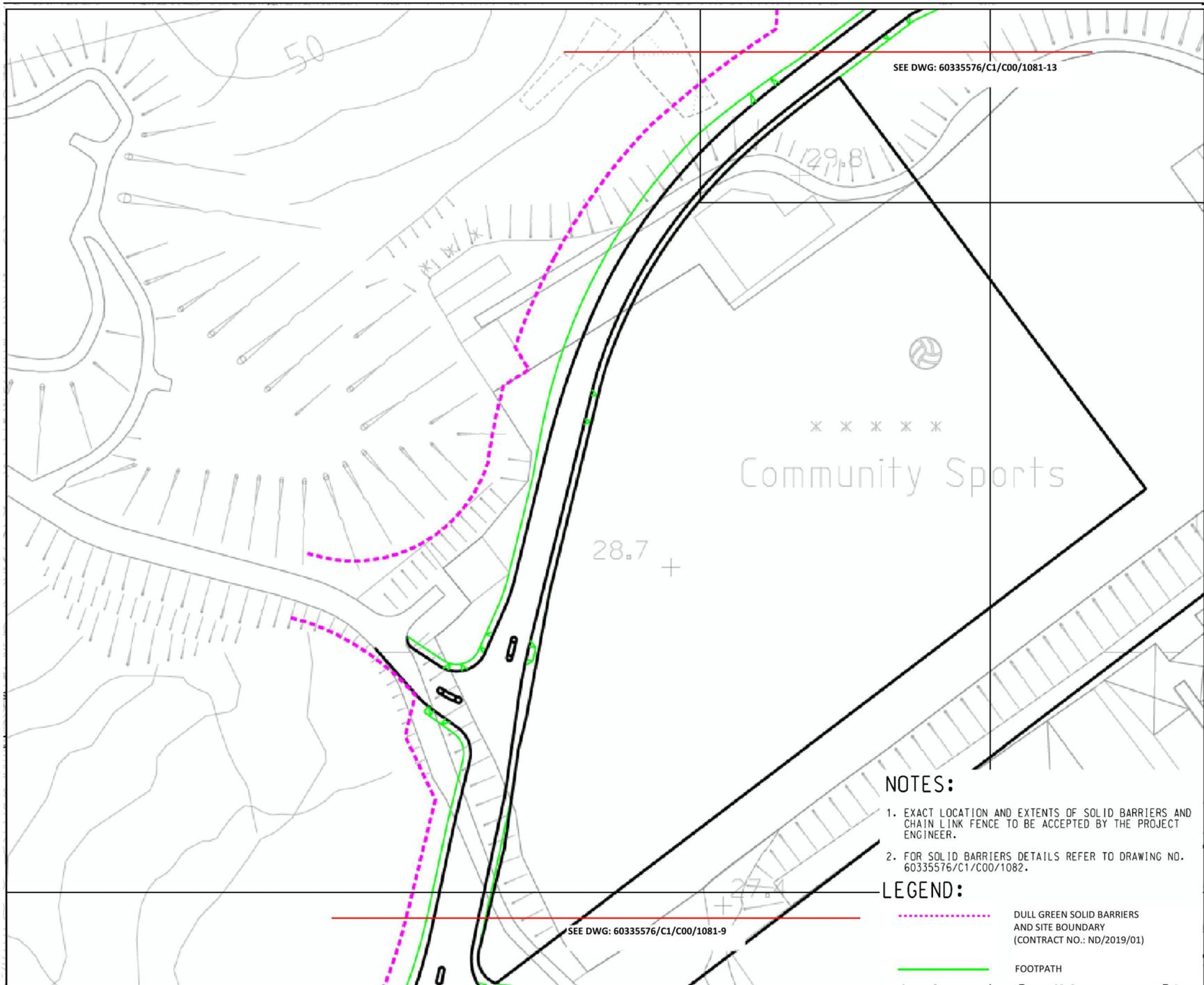
KEY PLAN



PROJECT NO. **CONTRACT NO.**
 項目編號 合約編號
 60335576 ND/2019/01

SHEET TITLE
 圖紙名稱
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
 圖紙編號
 60335576/C1/C00/1081-12



SEE DWG: 60335576/C1/C00/1081-13

SEE DWG: 60335576/C1/C00/1081-9

NOTES:

1. EXACT LOCATION AND EXTENTS OF SOLID BARRIERS AND CHAIN LINK FENCE TO BE ACCEPTED BY THE PROJECT ENGINEER.
2. FOR SOLID BARRIERS DETAILS REFER TO DRAWING NO. 60335576/C1/C00/1082.

LEGEND:

- ⋯⋯⋯ DULL GREEN SOLID BARRIERS AND SITE BOUNDARY (CONTRACT NO.: ND/2019/01)
- FOOTPATH

BKREJV

TITLE OF DESIGNATED PROJECT:
 KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO D5

CONTRACT TITLE:
 CONTRACT NO.: ND/2019/01
 KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1:
 SITE FORMATION AND INFRASTRUCTURE WORKS

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

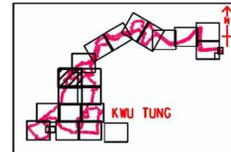
CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS

STATUS

SCALE **DIMENSION UNIT**
 比例 尺寸單位
 A3 1:1000 METRES

KEY PLAN



PROJECT NO. **CONTRACT NO.**
 項目編號 合約編號
 60335576 ND/2019/01

SHEET TITLE
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
 圖號
 60335576/C1/C00/1081-11

BKREJV

TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW
DEVELOPMENT AREA ROAD D1 TO
D5

CONTRACT TITLE:

CONTRACT NO.: ND/2019/01
KWU TUNG NORTH NEW
DEVELOPMENT AREA, PHASE 1:
SITE FORMATION AND
INFRASTRUCTURE WORKS

CLIENT

 土木工程拓展署
Civil Engineering and
Development Department

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

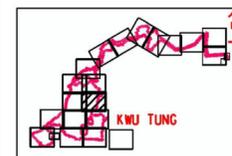
SUB-CONSULTANTS

STATUS

SCALE DIMENSION UNIT

A3 1:1000 METRES

KEY PLAN



PROJECT NO.

60335576

CONTRACT NO.

ND/2019/01

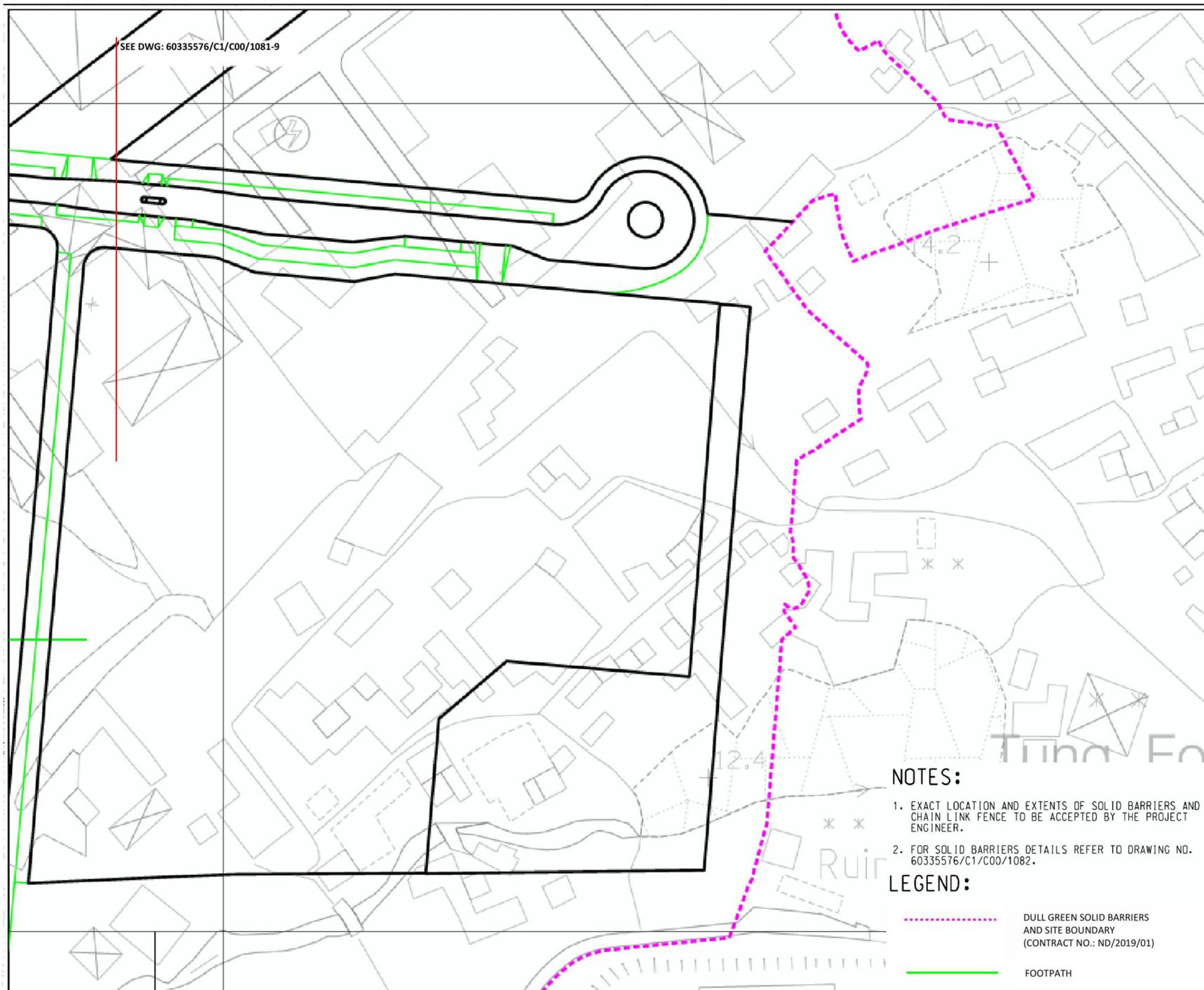
SHEET TITLE

**DULL GREEN SOLID
BARRIERS LAYOUT**

SHEET NUMBER

60335576/C1/C00/1081-10

SEE DWG: 60335576/C1/C00/1081-9

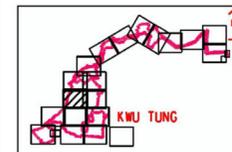


NOTES:

1. EXACT LOCATION AND EXTENTS OF SOLID BARRIERS AND CHAIN LINK FENCE TO BE ACCEPTED BY THE PROJECT ENGINEER.
2. FOR SOLID BARRIERS DETAILS REFER TO DRAWING NO. 60335576/C1/C00/1082.

LEGEND:

-  DULL GREEN SOLID BARRIERS AND SITE BOUNDARY (CONTRACT NO.: ND/2019/01)
-  FOOTPATH

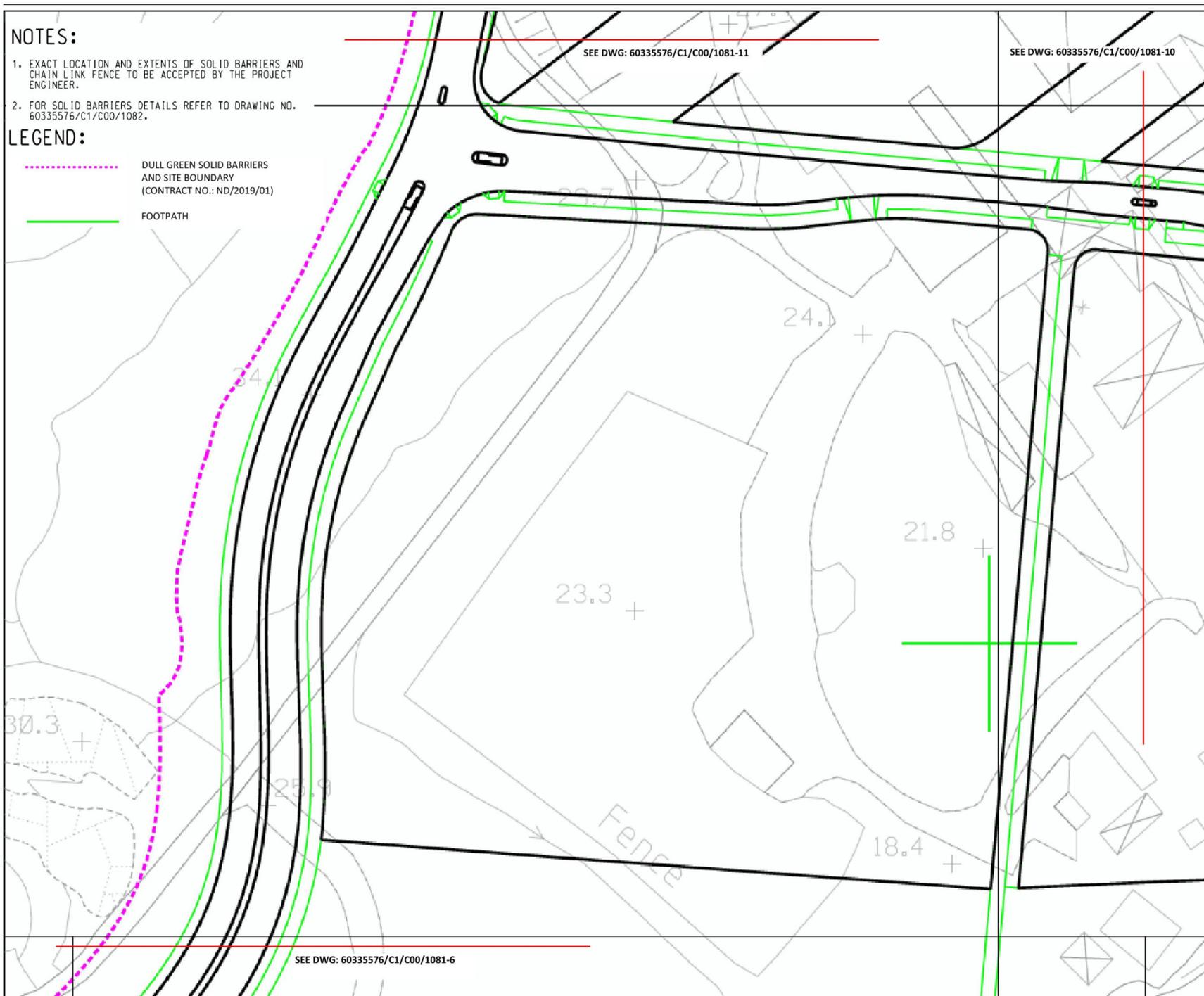


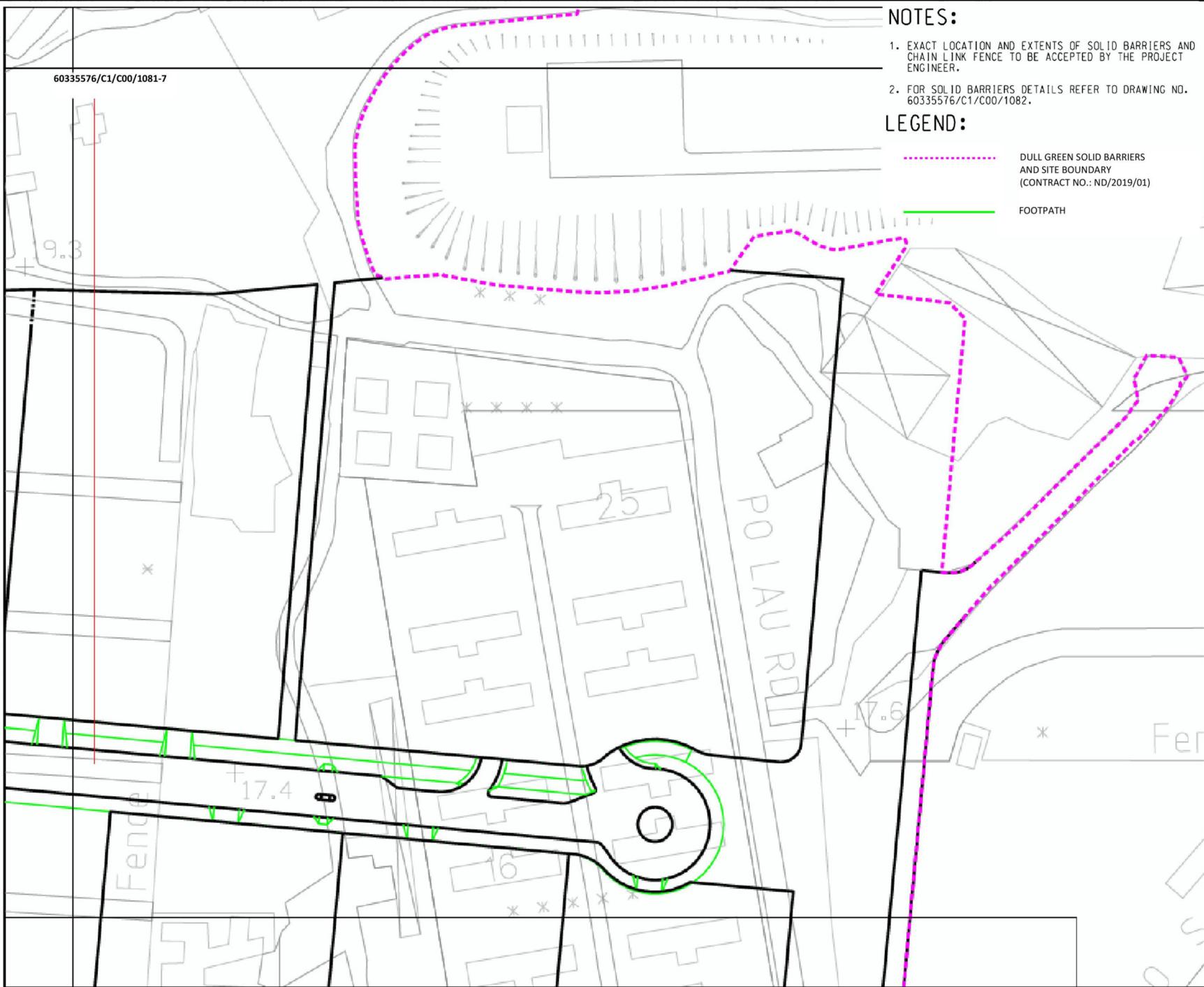
NOTES:

1. EXACT LOCATION AND EXTENTS OF SOLID BARRIERS AND CHAIN LINK FENCE TO BE ACCEPTED BY THE PROJECT ENGINEER.
2. FOR SOLID BARRIERS DETAILS REFER TO DRAWING NO. 60335576/C1/C00/1082.

LEGEND:

- DULL GREEN SOLID BARRIERS AND SITE BOUNDARY (CONTRACT NO.: ND/2019/01)
- FOOTPATH





60335576/C1/C00/1081-7

NOTES:

1. EXACT LOCATION AND EXTENTS OF SOLID BARRIERS AND CHAIN LINK FENCE TO BE ACCEPTED BY THE PROJECT ENGINEER.
2. FOR SOLID BARRIERS DETAILS REFER TO DRAWING NO. 60335576/C1/C00/1082.

LEGEND:

- - - - - DULL GREEN SOLID BARRIERS AND SITE BOUNDARY (CONTRACT NO.: ND/2019/01)
- FOOTPATH

BKREJV

TITLE OF DESIGNATED PROJECT:
 KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO D5

CONTRACT TITLE:
 CONTRACT NO.: ND/2019/01
 KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: SITE FORMATION AND INFRASTRUCTURE WORKS

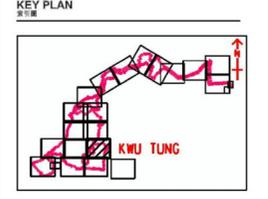
CLIENT
 土木工程拓展署
 CEDD Civil Engineering and Development Department

CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS

STATUS

SCALE **DIMENSION UNIT**
 A3 1:1000 METRES



PROJECT NO. **CONTRACT NO.**
 60335576 ND/2019/01

SHEET TITLE
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
 60335576/C1/C00/1081-8

BKREJV

TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW
DEVELOPMENT AREA ROAD D1 TO
D5

CONTRACT TITLE:

CONTRACT NO.: ND/2019/01
KWU TUNG NORTH NEW
DEVELOPMENT AREA, PHASE 1:
SITE FORMATION AND
INFRASTRUCTURE WORKS

CLIENT

 土木工程拓展署
Civil Engineering and
Development Department

CONSULTANT

AECOM Asia Company Ltd.
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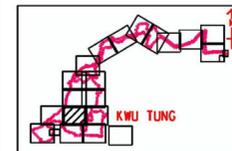
SUB-CONSULTANTS

STATUS

SCALE DIMENSION UNIT

A3 1:1000 METRES

KEY PLAN



PROJECT NO.

60335576

CONTRACT NO.

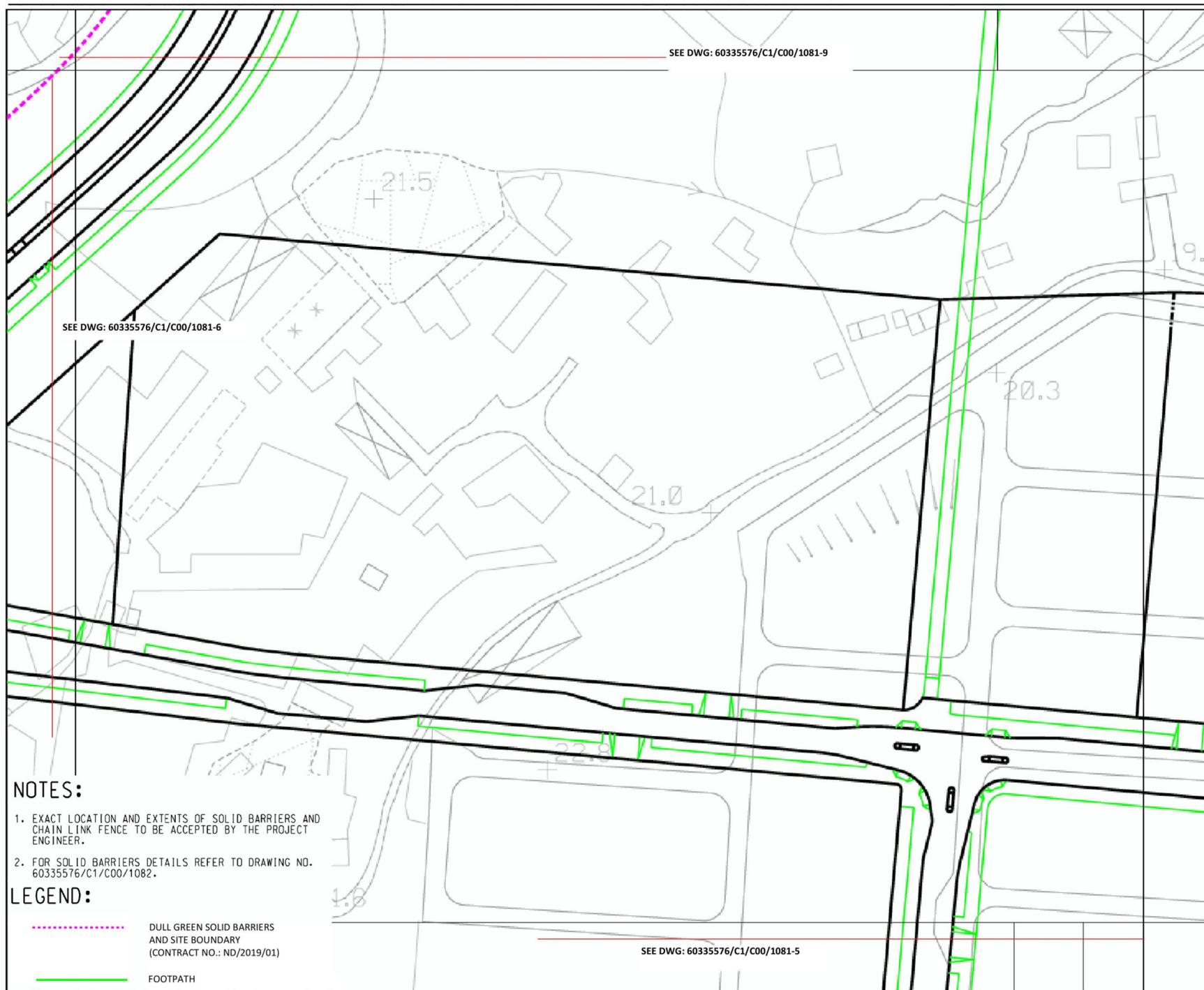
ND/2019/01

SHEET TITLE

**DULL GREEN SOLID
BARRIERS LAYOUT**

SHEET NUMBER

60335576/C1/C00/1081-7



NOTES:

1. EXACT LOCATION AND EXTENTS OF SOLID BARRIERS AND CHAIN LINK FENCE TO BE ACCEPTED BY THE PROJECT ENGINEER.
2. FOR SOLID BARRIERS DETAILS REFER TO DRAWING NO. 60335576/C1/C00/1082.

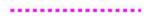
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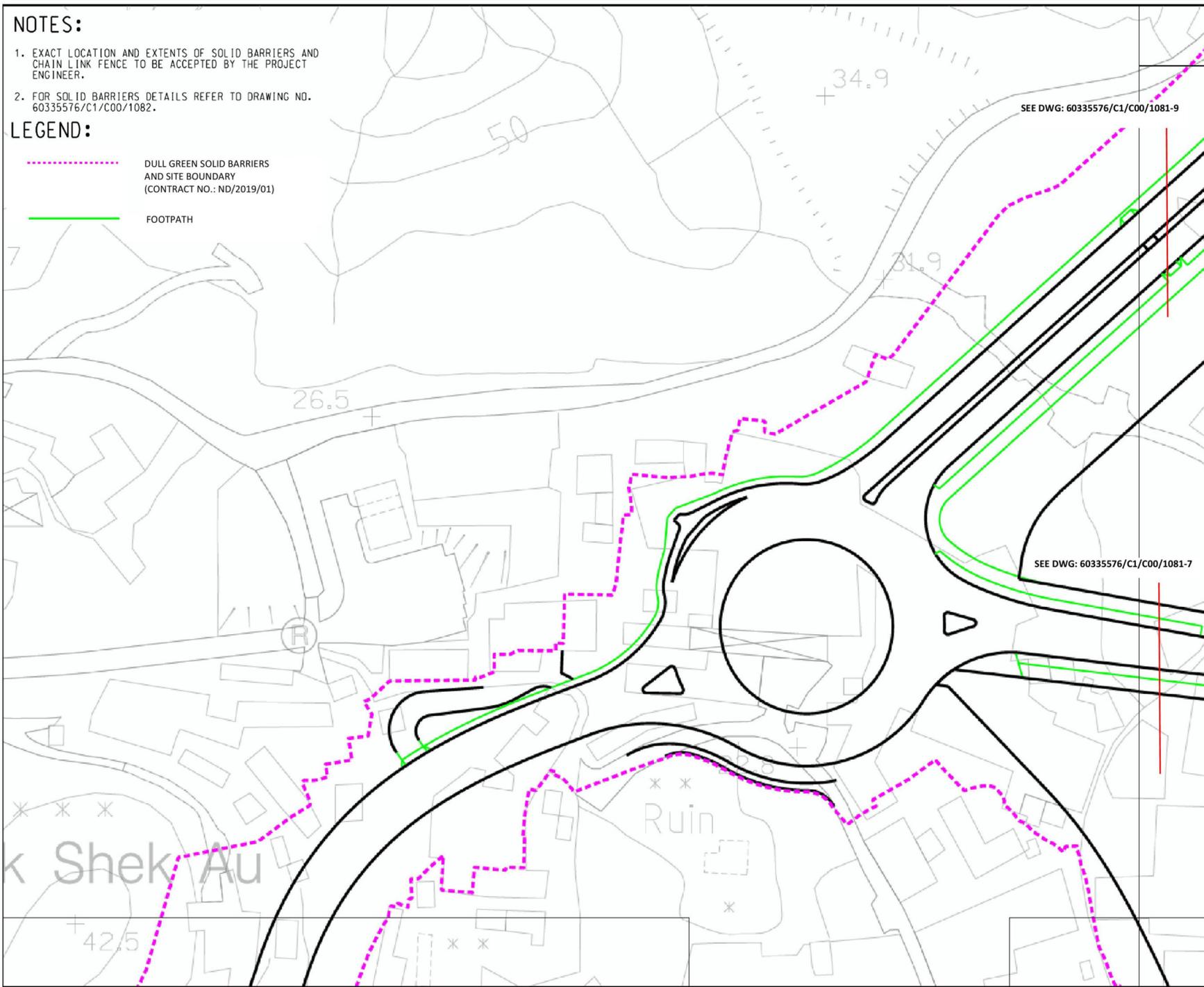
-  DULL GREEN SOLID BARRIERS AND SITE BOUNDARY (CONTRACT NO.: ND/2019/01)
-  FOOTPATH

NOTES:

1. EXACT LOCATION AND EXTENTS OF SOLID BARRIERS AND CHAIN LINK FENCE TO BE ACCEPTED BY THE PROJECT ENGINEER.
2. FOR SOLID BARRIERS DETAILS REFER TO DRAWING NO. 60335576/C1/C00/1082.

LEGEND:

-  DULL GREEN SOLID BARRIERS AND SITE BOUNDARY (CONTRACT NO.: ND/2019/01)
-  FOOTPATH



BKREJV

TITLE OF DESIGNATED PROJECT:
 KWU TUNG NORTH NEW
 DEVELOPMENT AREA ROAD D1 TO
 D5

CONTRACT TITLE:
 CONTRACT NO.: ND/2019/01
 KWU TUNG NORTH NEW
 DEVELOPMENT AREA, PHASE 1:
 SITE FORMATION AND
 INFRASTRUCTURE WORKS

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

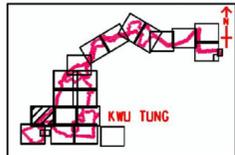
CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS

STATUS

SCALE **DIMENSION UNIT**
 比例 尺寸單位
 A3 1:1000 METRES

KEY PLAN



PROJECT NO. **CONTRACT NO.**
 項目編號 合約編號
 60335576 ND/2019/01

SHEET TITLE
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
 圖號
 60335576/C1/C00/1081-6

BKREJV

TITLE OF DESIGNATED PROJECT:
 KWU TUNG NORTH NEW
 DEVELOPMENT AREA ROAD D1 TO
 D5

CONTRACT TITLE:
 CONTRACT NO.: ND/2019/01
 KWU TUNG NORTH NEW
 DEVELOPMENT AREA, PHASE 1:
 SITE FORMATION AND
 INFRASTRUCTURE WORKS

CLIENT



CONSULTANT

AECOM Asia Company Ltd.
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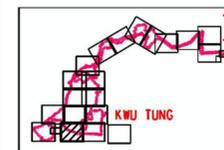
SUB-CONSULTANTS

STATUS

SCALE **DIMENSION UNIT**

A3 1:1000 METRES

KEY PLAN



PROJECT NO.

60335576

CONTRACT NO.

ND/2019/01

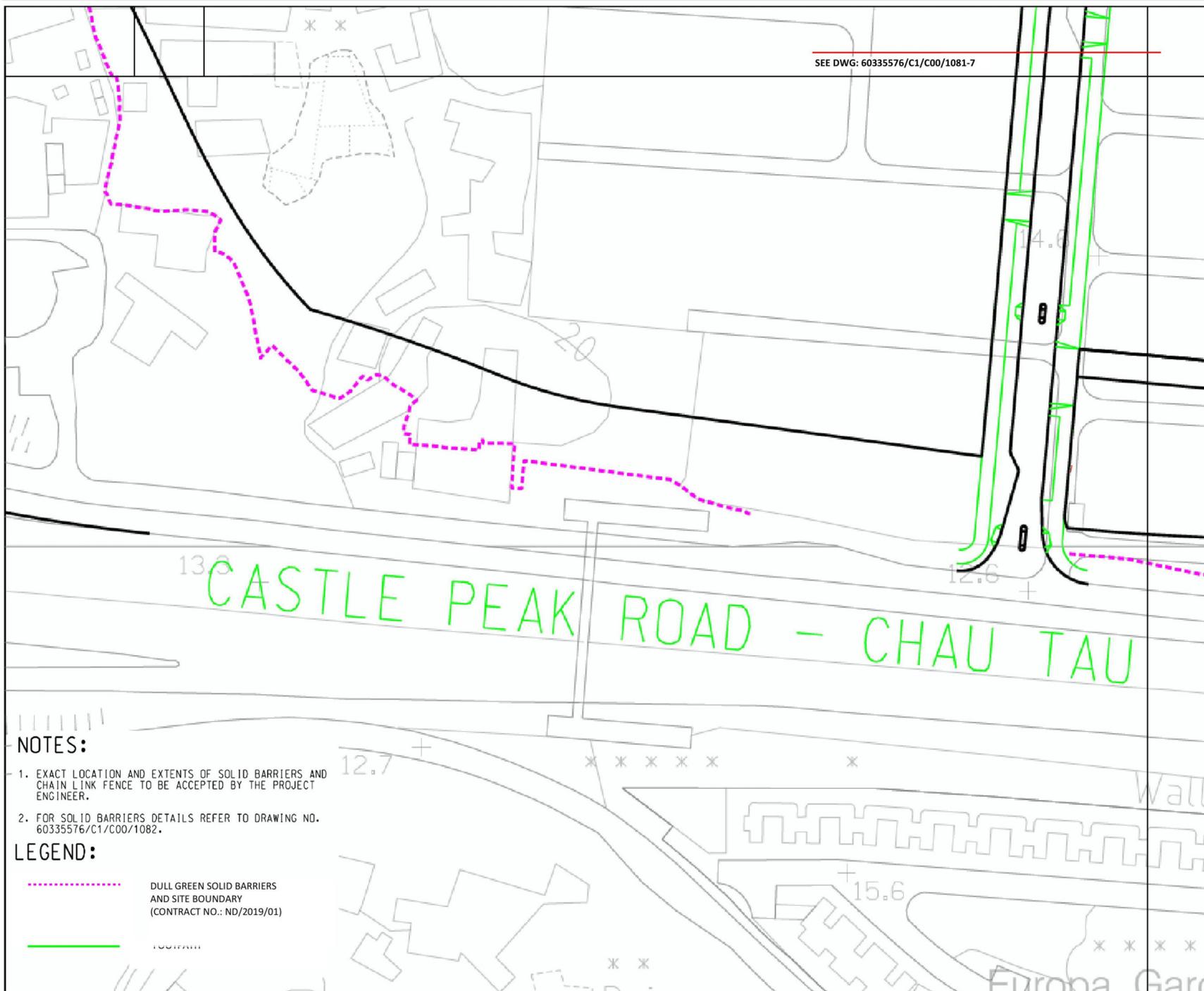
SHEET TITLE

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER

60335576/C1/C00/1081-5

SEE DWG: 60335576/C1/C00/1081-7



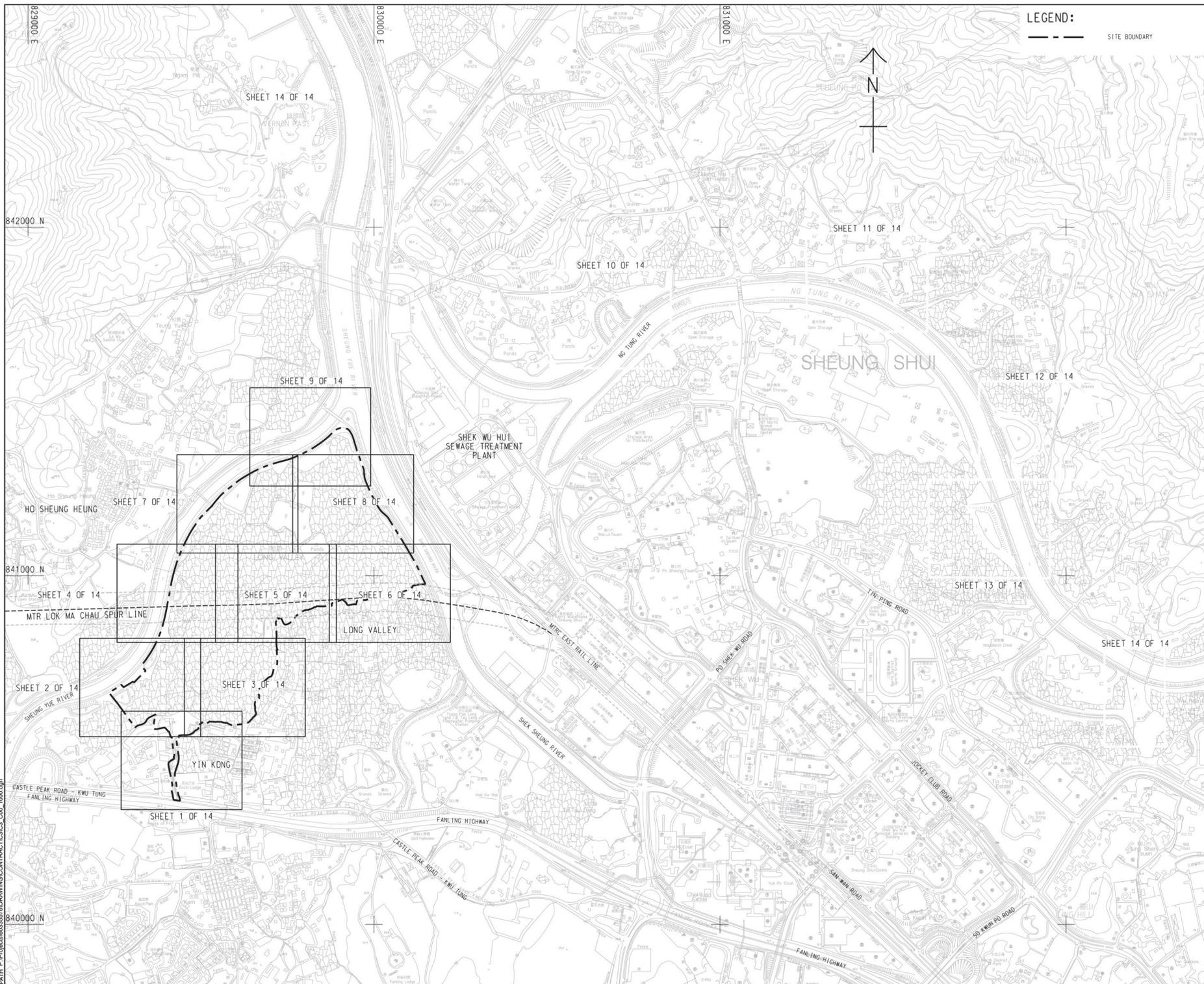
NOTES:

1. EXACT LOCATION AND EXTENTS OF SOLID BARRIERS AND CHAIN LINK FENCE TO BE ACCEPTED BY THE PROJECT ENGINEER.
2. FOR SOLID BARRIERS DETAILS REFER TO DRAWING NO. 60335576/C1/C00/1082.

LEGEND:

----- DULL GREEN SOLID BARRIERS AND SITE BOUNDARY (CONTRACT NO.: ND/2019/01)

----- LOCATION



LEGEND:
 - - - - - SITE BOUNDARY

Sang Hing - Kuly Venture

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

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

CONSULTANT
 工程顧問公司: AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS
 外判工程顧問公司:

ISSUE/REVISION
 修訂

NO.	DATE	DESCRIPTION	CHK.
-	JUN-19	TENDER DRAWING	CYCH
1R	日期	內容摘要	檢核

STATUS
 階段:

SCALE
 比例: A1 1: 5000

DIMENSION UNIT
 尺寸單位: METRES

KEY PLAN
 索引圖

PROJECT NO.
 項目編號: 60335576

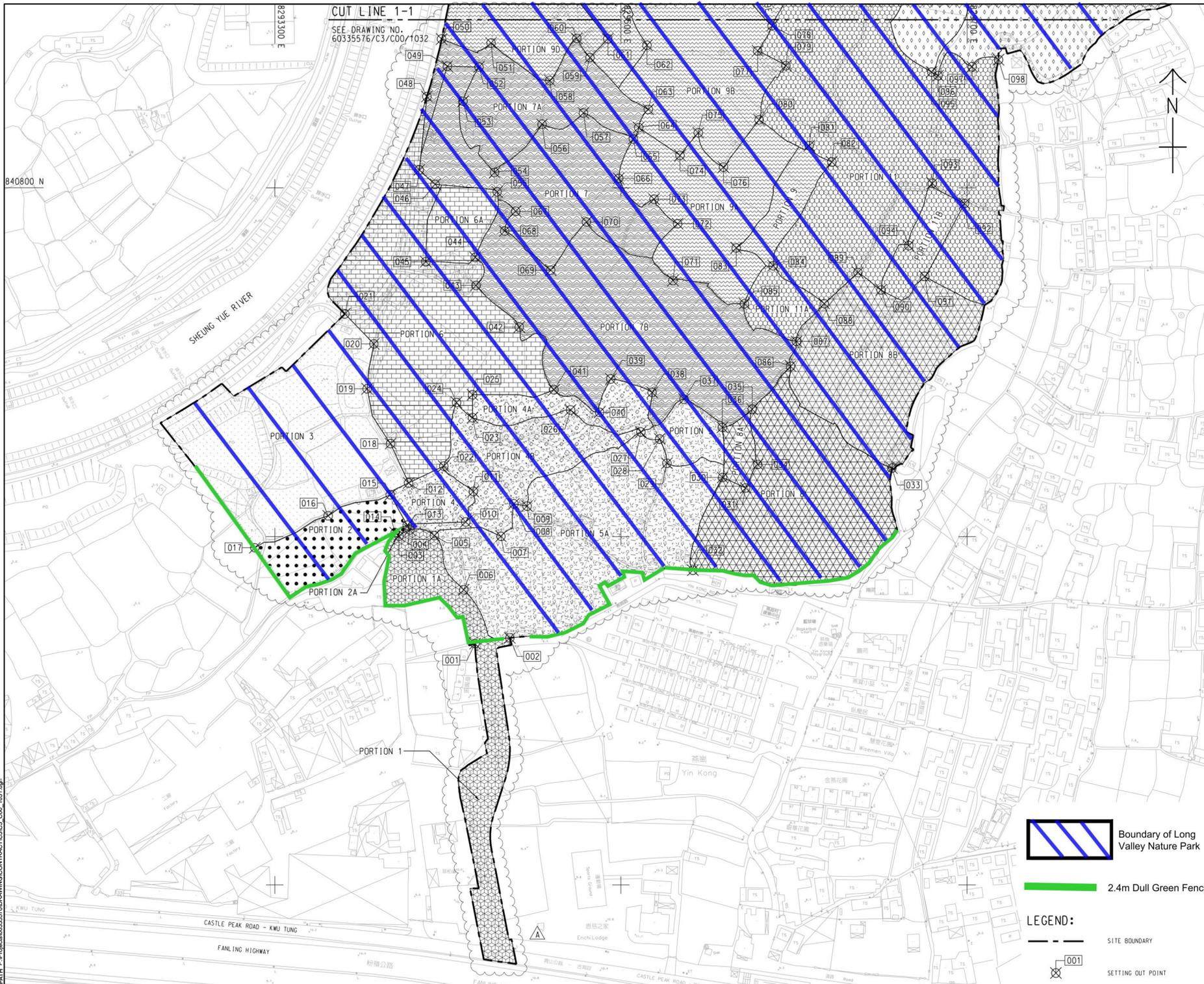
CONTRACT NO.
 合約編號: ND/2019/03

SHEET TITLE
 圖紙名稱: KEY PLAN OF GENERAL LAYOUT

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

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ISO A1 594mm x 841mm
 Project Management Initials: Designer: KCTL Checked: CYCH Approved: HWL
 29/08/2019
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Sang Hing - Kuly Joint Venture

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

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

CONSULTANT
 AECOM Asia Company Ltd.
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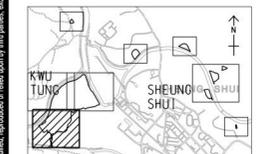
SUB-CONSULTANTS

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
A	AUG-19	TENDER ADDENDUM NO. 3	CYCH
	JUN-19	TENDER DRAWING	CYCH

SCALE
 比例: A1 1: 1000
DIMENSION UNIT
 尺寸單位: METRES

KEY PLAN
 位置圖: A1 1: 40000



- Boundary of Long Valley Nature Park
- 2.4m Dull Green Fence

- LEGEND:**
- SITE BOUNDARY
 - SETTING OUT POINT

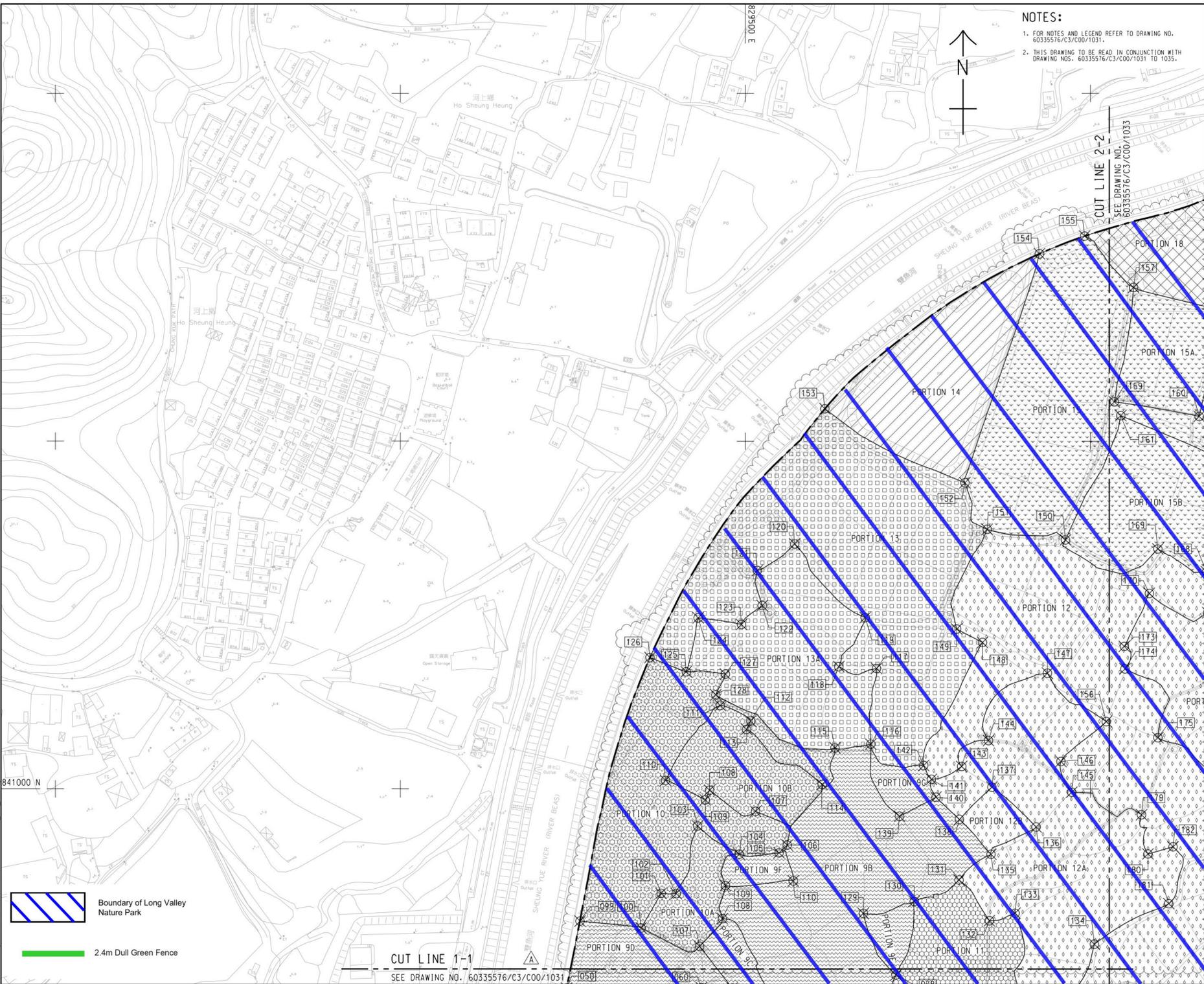
PROJECT NO.
 60335576

CONTRACT NO.
 ND/2019/03

SHEET TITLE
 圖紙名稱: PORTION OF SITE

SHEET NUMBER
 圖紙編號: 60335576/C3/C00/1031A

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NOTES:
 1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C3/C00/1031.
 2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C3/C00/1031 TO 1035.



Sang Hing - Kuly Joint Venture

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

CLIENT
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CEDD
 Civil Engineering and Development Department

CONSULTANT
 工程顧問公司
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SUB-CONSULTANTS
 測量工程顧問公司

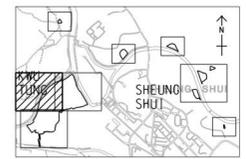
ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
A	AUG-19	TENDER ADDENDUM NO. 3	CYCH
	JUN-19	TENDER DRAWING	CYCH

STATUS
 備註

SCALE
 比例
 A1 1: 1000 METRES

KEY PLAN
 索引圖
 A1 1: 40000



PROJECT NO.
 項目編號
 60335576

CONTRACT NO.
 合約編號
 ND/2019/03

SHEET TITLE
 圖紙名稱
 PORTION OF SITE

SHEET NUMBER
 圖紙編號
 60335576/C3/C00/1032A

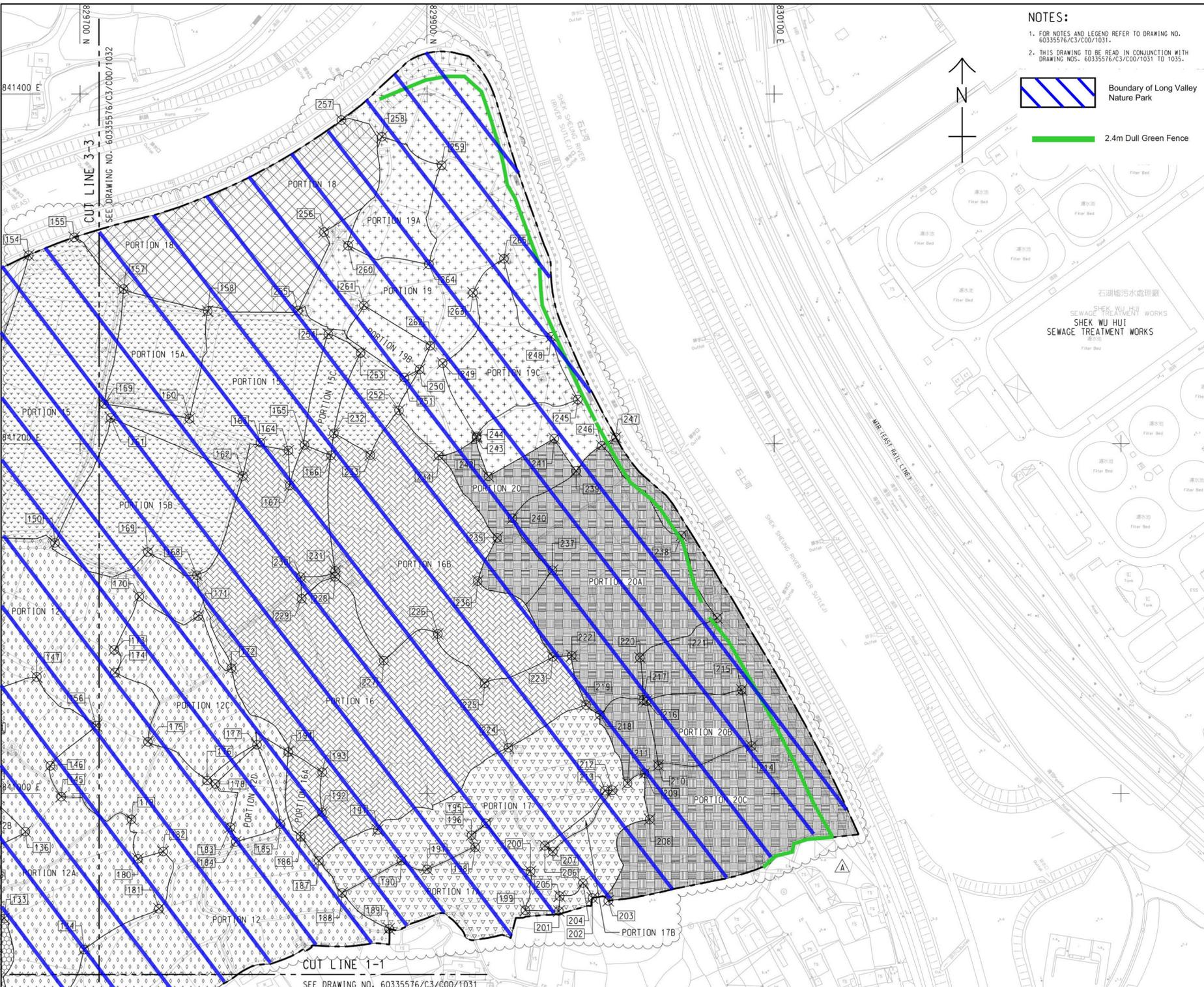
Boundary of Long Valley Nature Park

2.4m Dull Green Fence

CUT LINE 1-1
 SEE DRAWING NO. 60335576/C3/C00/1031

CUT LINE 2-2
 SEE DRAWING NO. 60335576/C3/C00/1033

Project Management Initials: Designer: KCTL Checked: CYCH Approved: HWL
 ISO A1 584mm x 841mm
 2019/02/19
 Path: D:\Programs\60335576\C3\C00\1033.dgn
 Plot File by: Yeiky
 2019/02/19
 Path: D:\Programs\60335576\C3\C00\1033.dgn



NOTES:

- FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C3/C00/1031.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C3/C00/1031 TO 1035.

 Boundary of Long Valley Nature Park
 2.4m Dull Green Fence



Sang Hing - Kuly Joint Venture

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

CLIENT
 土木 工程 拓展 署
CEDD
 Civil Engineering and Development Department

CONSULTANT
 工程顧問公司
AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS
 分判工程顧問公司

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.

SCALE
 比例 1:1000
DIMENSION UNIT
 尺寸單位 METRES

KEY PLAN
 索引圖 A1: 40000

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

SHEET TITLE
 圖紙名稱 PORTION OF SITE
SHEET NUMBER
 圖紙編號 60335576/C3/C00/1033A

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- NOTES:**
- COORDINATES ARE RELATED TO HONG KONG METRIC GRID (1980).
 - DIMENSIONS AND CHAINAGE ARE IN METRES UNLESS OTHERWISE SHOWN.
 - FOR VERTICAL PROFILE REFER TO DRAWING NO. 60335576/C3/C00/2002

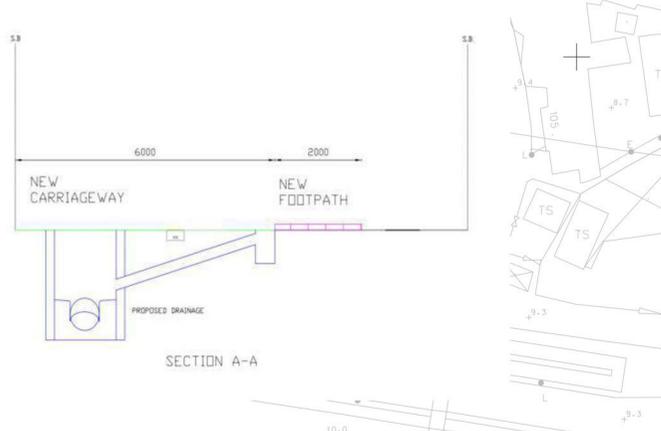
- LEGEND:**
- SITE BOUNDARY
 - PRINCIPAL SETTING OUT LINE WITH CHAINAGE
 - SETTING OUT LINE
 - SETTING OUT POINT
 - CURVE RADIUS IN METRES SETTING OUT LINE WITH NUMBER
 - ROAD WIDTH (METRE)
 - C/W CARRIAGEWAY
 - C/M CENTRAL MEDIAN
 - CT CURVE TO TANGENT
 - TC TANGENT TO CURVE

SETTING OUT DATA FOR S.O.L. YKR

POINT	CHAINAGE (m)	EASTING (m)	NORTHING (m)	ELEMENT	LENGTH (m)
P0B	100.000	829428.447	840359.536		
PI	172.832	829414.436	840431.007	STRAIGHT	60.526
PC	160.526	829416.804	840418.931		
CC	829462.926	840427.972		R = +47.000	24.072
PT	184.598	829418.291	840442.694		
PI	217.166	829428.492	840473.623	STRAIGHT	21.383
PC	205.981	829424.989	840463.001		
CC	829380.354	840477.723		R = -47.000	21.961
PT	227.942	829426.836	840484.684		
PI	299.304	829416.265	840555.259	STRAIGHT	57.195
PC	285.137	829418.364	840541.248		
CC	829375.838	840534.879		R = -43.000	27.371
PT	312.508	829406.250	840565.279		
P0E	359.637	829372.931	840598.611	STRAIGHT	47.130

SETTING OUT POINTS

POINTS	EASTING	NORTHING
101	829382.121	840589.417
102	829396.172	840570.827
103	829403.578	840563.698
104	829401.244	840574.273
105	829407.739	840568.021
106	829417.437	840472.407
107	829421.525	840467.266



Sang Hing - Kuly Venture

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

CLIENT
 土木 工程 拓展 署
CEDD
 Civil Engineering and
 Development Department

CONSULTANT
 AECOM Asia Company Ltd.
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SUB-CONSULTANTS
 分門工程顧問公司

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
1	JUN-19	TENDER DRAWING	CYCH

STATUS
 此圖 已 備 案

SCALE A3 1:1000 **DIMENSION UNIT** METRES

KEY PLAN A1 1:40000

PROJECT NO. 60335576 **CONTRACT NO.** ND/2019/03

SHEET TITLE YIN KONG ROAD - ROAD SETTING OUT PLAN

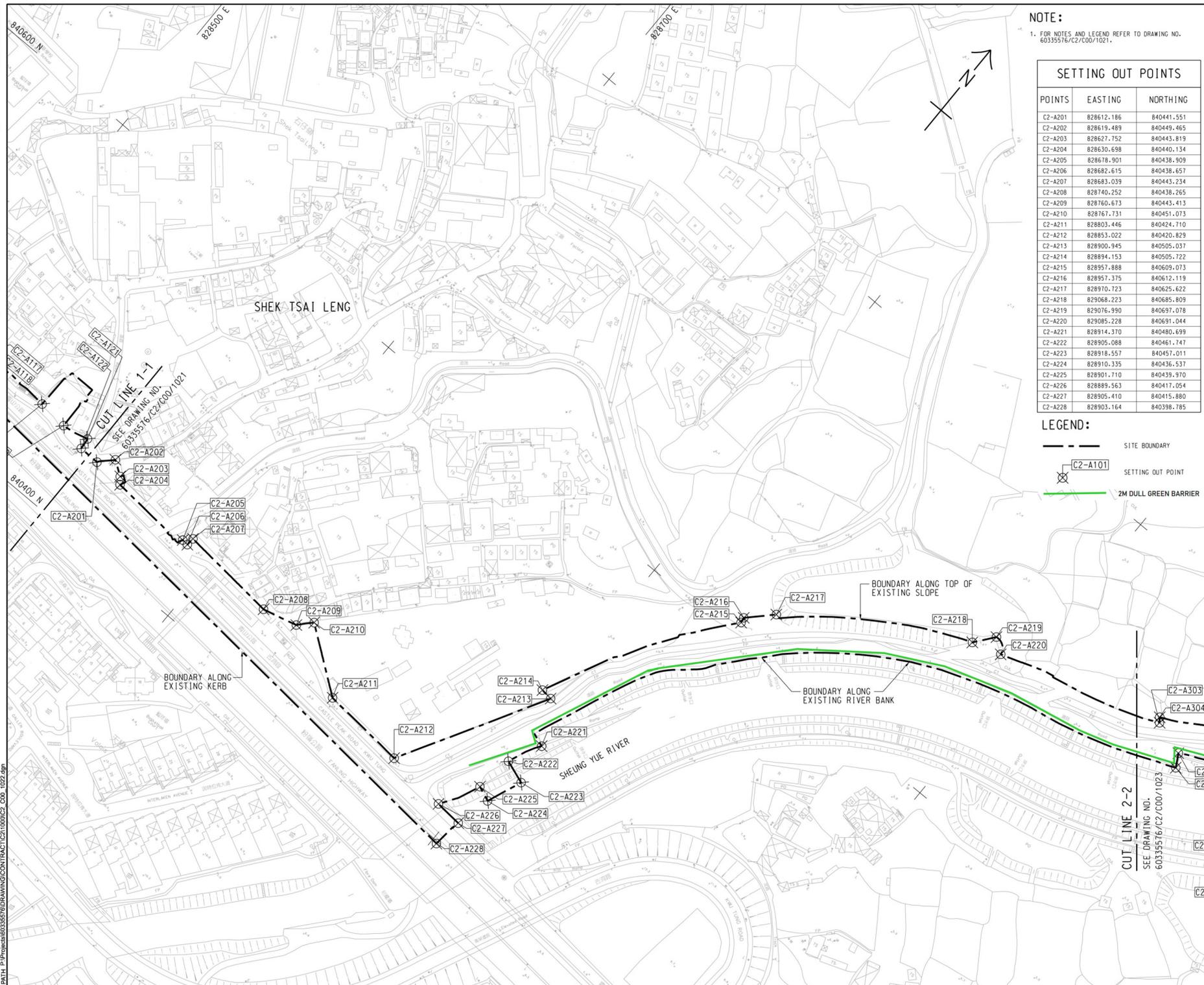
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Figure 15

Hoarding Plan

EP-469/2013



NOTE:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C2/C00/1021.

SETTING OUT POINTS		
POINTS	EASTING	NORTHING
C2-A201	828612.186	840441.551
C2-A202	828619.489	840449.465
C2-A203	828627.752	840443.819
C2-A204	828630.698	840440.134
C2-A205	828678.901	840438.909
C2-A206	828682.615	840438.657
C2-A207	828683.039	840443.234
C2-A208	828740.252	840438.265
C2-A209	828760.673	840443.413
C2-A210	828767.731	840451.073
C2-A211	828803.446	840424.710
C2-A212	828853.022	840420.829
C2-A213	828900.945	840505.037
C2-A214	828934.153	840505.722
C2-A215	828957.888	840609.073
C2-A216	828957.375	840612.119
C2-A217	828970.723	840625.622
C2-A218	829068.223	840685.809
C2-A219	829076.990	840697.078
C2-A220	829085.228	840691.044
C2-A221	828914.370	840480.699
C2-A222	828905.088	840461.747
C2-A223	828918.557	840457.011
C2-A224	828910.335	840436.537
C2-A225	828901.710	840439.970
C2-A226	828889.563	840417.054
C2-A227	828905.410	840415.880
C2-A228	828903.164	840398.785

LEGEND:

- SITE BOUNDARY
- ⊗ C2-A101 SETTING OUT POINT
- 2M DULL GREEN BARRIER

Title of Designated Project:
 Sewage Pumping Station in Kwu Tung North New Development Area

Contract No.: ND/2019/02
Contract Title: Kwu Tung North New Development Area, Phase 1: Road and Drains between Kwu Tung North New Development Area and Shek Wu Hui

CLIENT
 土木 工程 拓展 署
CEDD
 Civil Engineering and Development Department

CONSULTANT
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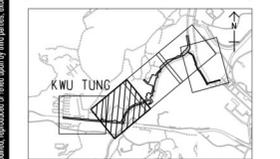
SUB-CONSULTANTS
 工程 師 樓 宇 有 限 公 司

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
1	SEP-19	TENDER DRAWING	CYCH

SCALE
 比例: A1 1:1000 DIMENSION UNIT: METRES

KEY PLAN A1 N.T.S.



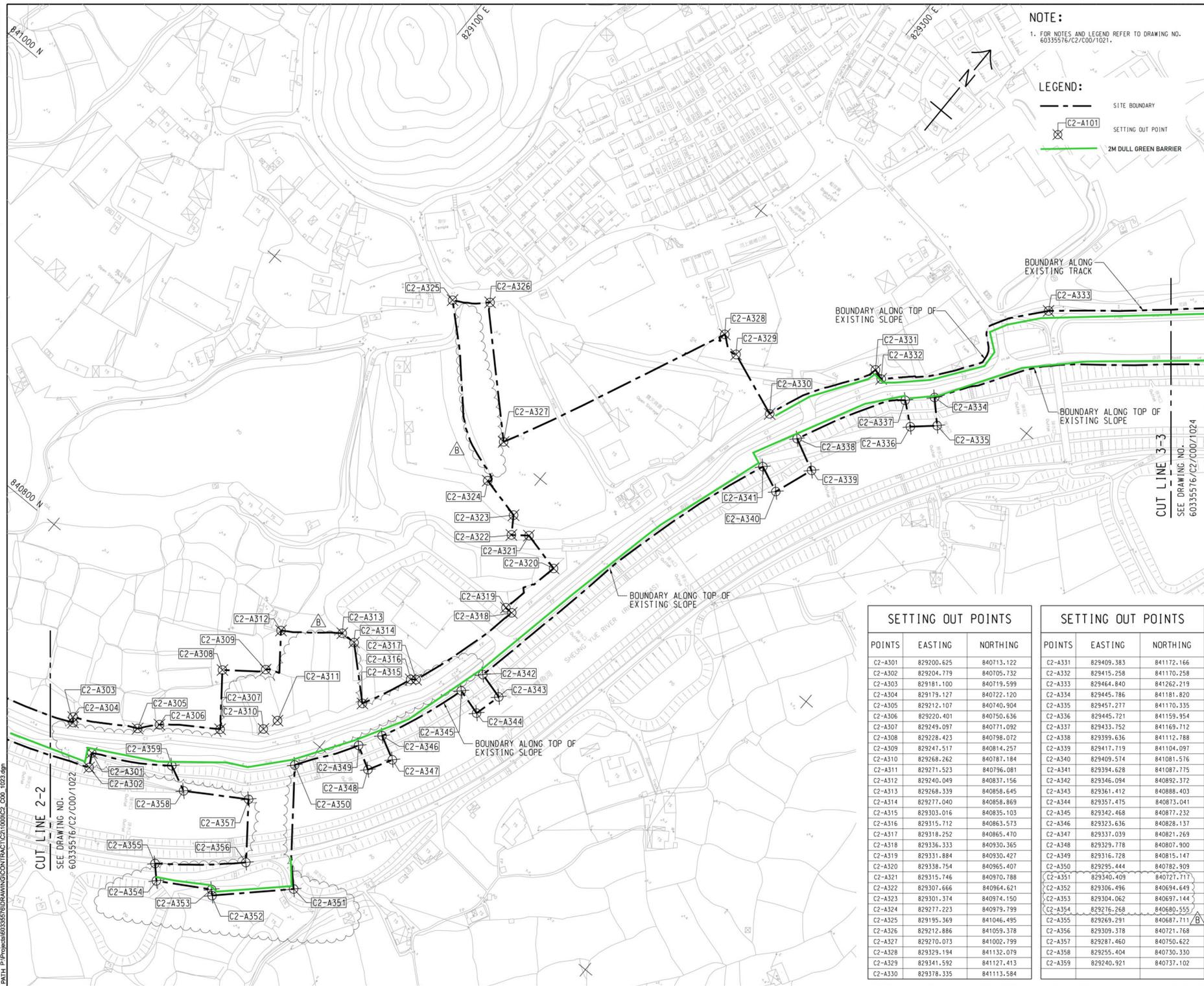
PROJECT NO. 60335576
CONTRACT NO. ND/2019/02

SHEET TITLE SITE OF WORKS

SHEET NUMBER SHEET 2 OF 5

60335576/C2/C00/1022

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NOTE:
 1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C2/C00/1021.

LEGEND:
 - - - - - SITE BOUNDARY
 ⊗ C2-A101 SETTING OUT POINT
 ——— 2M DULL GREEN BARRIER



Title of Designated Project:
 Sewage Pumping Station in Kwu Tung North New Development Area

Contract No.: ND/2019/02
Contract Title: Kwu Tung North New Development Area, Phase 1: Road and Drains between Kwu Tung North New Development Area and Shek Wu Hui

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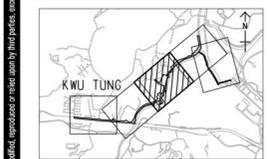
ISSUE/REVISION
 修訂

REV	DATE	DESCRIPTION	CHK
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A	OCT-19	TENDER ADDENDUM NO. 2	CYCH
-	SEP-19	TENDER DRAWING	CYCH

STATUS
 核准

SCALE
 比例: A1 : 1000
DIMENSION UNIT
 尺寸單位: METRES

KEY PLAN
 位置圖: A1 N.T.S.



PROJECT NO.
 項目編號: 60335576
CONTRACT NO.
 合約編號: ND/2019/02

SHEET TITLE
 圖紙名稱: SITE OF WORKS

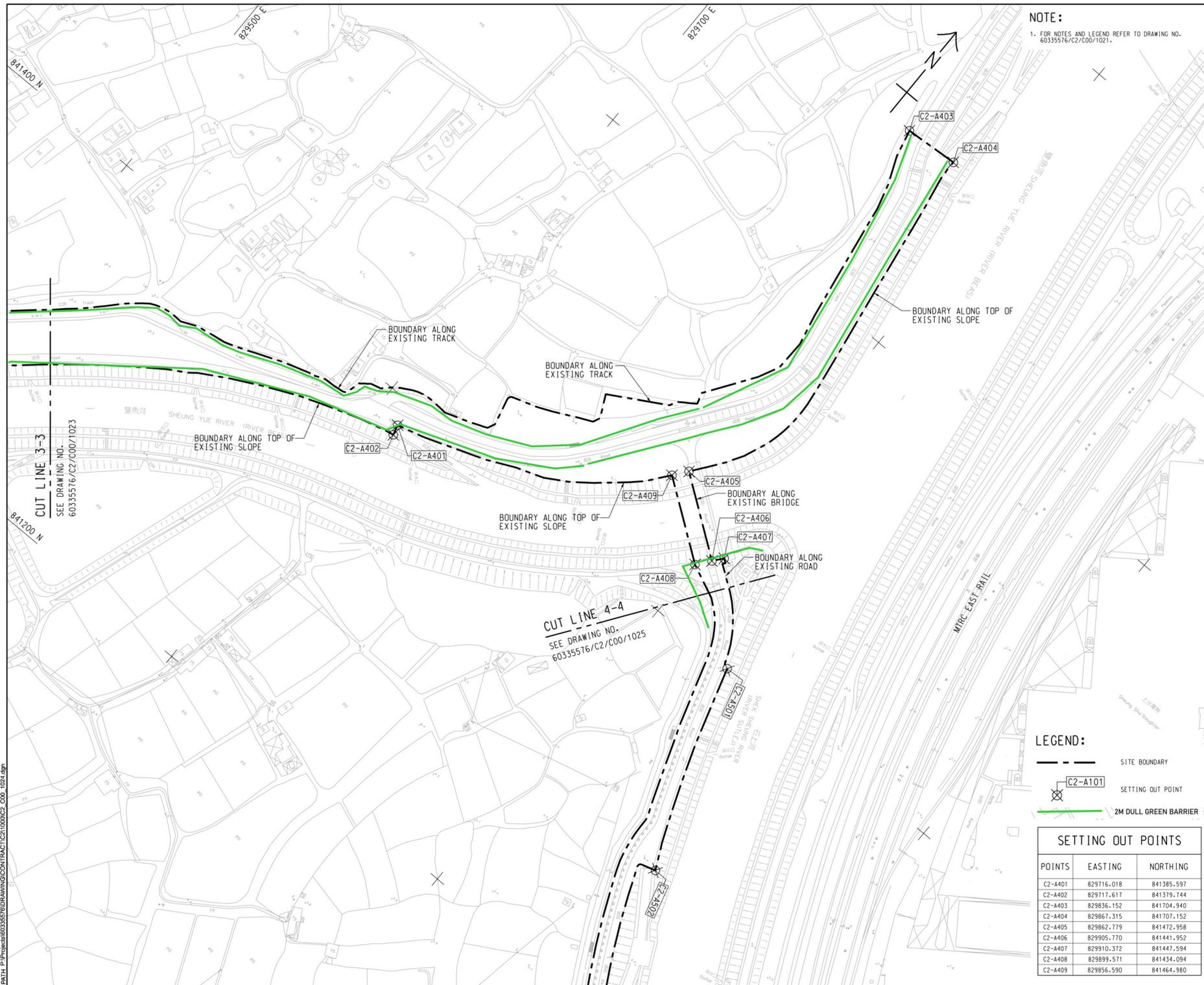
SHEET NUMBER
 圖紙編號: 60335576/C2/C00/1023B

SETTING OUT POINTS

POINTS	EASTING	NORTHING
C2-A301	829200.625	840713.122
C2-A302	829204.779	840705.732
C2-A303	829181.100	840719.599
C2-A304	829178.127	840722.120
C2-A305	829212.107	840740.904
C2-A306	829220.401	840750.636
C2-A307	829245.097	840771.092
C2-A308	829228.423	840798.072
C2-A309	829247.517	840814.257
C2-A310	829268.262	840871.184
C2-A311	829271.523	840796.081
C2-A312	829240.049	840837.156
C2-A313	829268.339	840858.645
C2-A314	829277.040	840858.869
C2-A315	829303.016	840835.103
C2-A316	829315.712	840863.573
C2-A317	829318.252	840865.470
C2-A318	829336.333	840930.365
C2-A319	829331.884	840930.427
C2-A320	829338.754	840965.407
C2-A321	829315.746	840970.788
C2-A322	829307.666	840964.621
C2-A323	829301.374	840974.150
C2-A324	829277.223	840979.799
C2-A325	829195.369	841046.495
C2-A326	829212.886	841059.378
C2-A327	829270.073	841002.799
C2-A328	829329.194	841132.079
C2-A329	829341.592	841127.413
C2-A330	829378.335	841113.584

SETTING OUT POINTS

POINTS	EASTING	NORTHING
C2-A331	829409.383	841172.166
C2-A332	829415.258	841170.258
C2-A333	829464.840	841262.219
C2-A334	829445.786	841181.820
C2-A335	829457.277	841170.335
C2-A336	829445.721	841159.954
C2-A337	829433.752	841169.712
C2-A338	829399.636	841112.788
C2-A339	829417.719	841104.097
C2-A340	829409.574	841081.576
C2-A341	829394.628	841087.775
C2-A342	829346.094	840892.372
C2-A343	829361.412	840888.403
C2-A344	829357.475	840873.041
C2-A345	829342.468	840877.232
C2-A346	829323.636	840828.137
C2-A347	829337.039	840821.269
C2-A348	829329.778	840807.900
C2-A349	829316.728	840815.147
C2-A350	829295.444	840782.909
C2-A351	829340.409	840727.717
C2-A352	829306.496	840694.649
C2-A353	829304.062	840697.144
C2-A354	829216.268	840680.555
C2-A355	829269.291	840687.711
C2-A356	829309.378	840721.768
C2-A357	829287.460	840750.622
C2-A358	829255.404	840730.330
C2-A359	829240.921	840737.102



NOTE:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C2/C00/1021.



Title of Designated Project:
Sewage Pumping Station in Kwu Tung North New Development Area

Contract No.: ND/2019/02
Contract Title: Kwu Tung North New Development Area, Phase 1: Road and Drains between Kwu Tung North New Development Area and Shek Wu Hui

CLIENT
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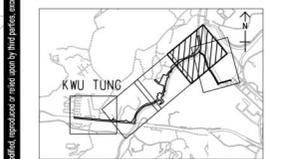
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1	SEP-19	TENDER DRAWING	CYCH

STATUS

Scale: A1 1:1000

Dimension Unit: METRES

KEY PLAN A1 N.T.S.



PROJECT NO. 60335576
CONTRACT NO. ND/2019/02

SHEET TITLE SITE OF WORKS
SHEET NUMBER SHEET 4 OF 5

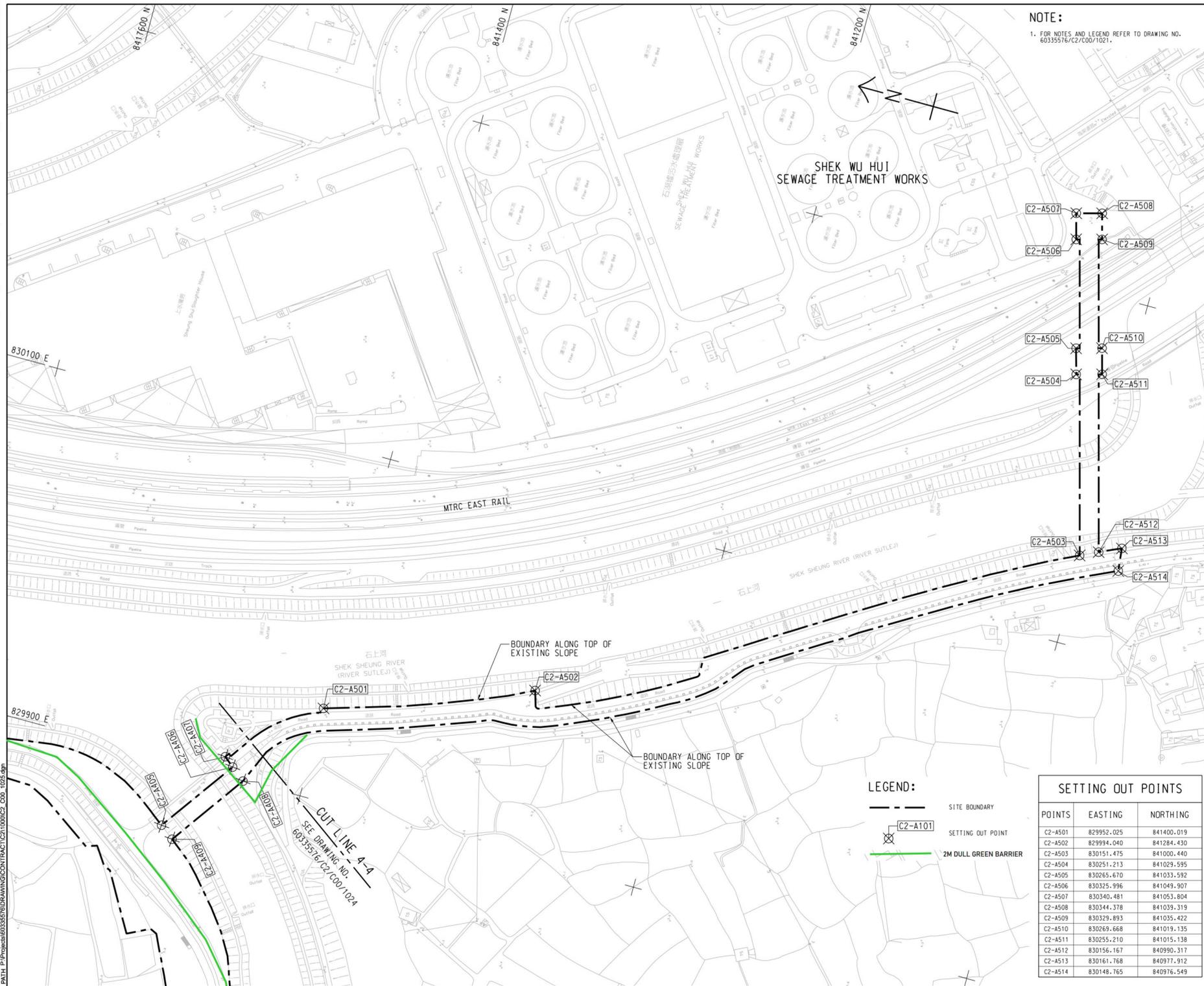
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LEGEND:

- SITE BOUNDARY
- ⊗ C2-A101 SETTING OUT POINT
- 2M DULL GREEN BARRIER

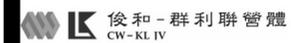
SETTING OUT POINTS		
POINTS	EASTING	NORTHING
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C2-A402	829717.617	841379.744
C2-A403	829836.152	841704.940
C2-A404	829867.315	841707.152
C2-A405	829862.779	841472.958
C2-A406	829905.770	841441.952
C2-A407	829910.372	841447.594
C2-A408	829899.571	841434.094
C2-A409	829856.590	841464.980

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NOTE:

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Title of Designated Project:
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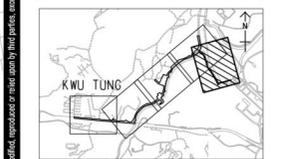
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NO.	DATE	DESCRIPTION	CHK.
1	SEP-19	TENDER DRAWING	CYCH

STATUS

SCALE: A1:1000 METRES
DIMENSION UNIT: METRES
KEY PLAN: A1 N.T.S.



PROJECT NO.: 60335576
CONTRACT NO.: ND/2019/02

SHEET TITLE: SITE OF WORKS

SHEET NUMBER: 60335576/C2/C00/1025
SHEET 5 OF 5

LEGEND:

- SITE BOUNDARY
- ⊗ C2-A101 SETTING OUT POINT
- 2M DULL GREEN BARRIER

SETTING OUT POINTS

POINTS	EASTING	NORTHING
C2-A501	829952.025	841400.019
C2-A502	829994.040	841284.430
C2-A503	830151.475	841000.440
C2-A504	830251.213	841029.595
C2-A505	830265.670	841033.592
C2-A506	830325.996	841049.907
C2-A507	830340.481	841053.804
C2-A508	830344.378	841039.319
C2-A509	830329.893	841035.422
C2-A510	830269.668	841019.135
C2-A511	830255.210	841015.138
C2-A512	830156.167	840990.317
C2-A513	830161.768	840977.912
C2-A514	830148.765	840976.549

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Figure 16

Hoarding Plan

EP-473/2013/A

Summary of submission (EP-473/2013/A)

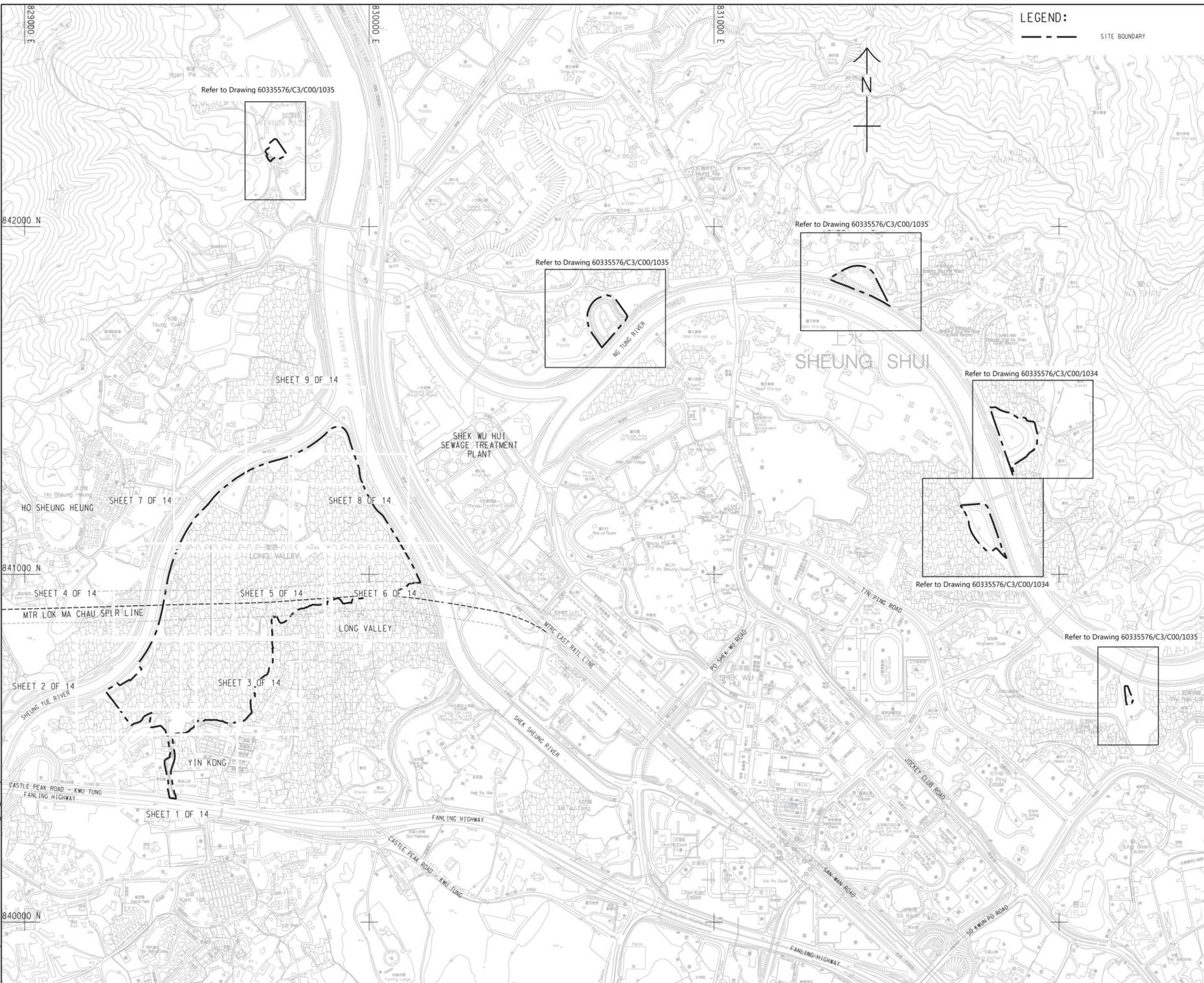
Submission of Layout Plan

EP's Condition 2.5: The Permit shall, no later than 2 weeks before the commencement of construction of the Project, deposit four hard copies and one electronic copy of location plan(s) of the Project with a scale of 1:1000 or other appropriate scale as agreed with the Director. The plans shall include the details the works boundaries, works areas, vertical and horizontal alignments of the roads and any other major facilities; and the locations of key environmental mitigation measures.

Table of Summary of Submission

EP required detail	Layout Details			
	Detail	Reference No.	Scale	Remarks
Works Boundaries and Works Areas	Key Plan	60335576/C3/C00/1000	A1 1:5000	Scale Not in 1:1000 For indication of following layout plans only
	Portion 24, 26	60335576/C3/C00/1034	A1 1:1000	
	Portion 22, 23, 25, 27	60335576/C3/C00/1035	A1 1:1000	
The location of key environmental mitigation measure	Relocation Plan for Rose Bitterling (Condition 2.6) Portion 23, 24, 25, 26, 27	60335576/C3/C00/1034 60335576/C3/C00/1035	A1 1:1000	No dull green fence shall be erected in Portion 23 and 24 advised by AFCD No construction works will be carried out in Portion 23, 24, 25, 26 and 27
	Alternative Egret site (Condition 2.7) Portion 22, 23, 24	60335576/C3/C00/1034 60335576/C3/C00/1035	A1 1:1000	No dull green fence shall be erected in Portion 23 and 24 advised by AFCD No construction works will be carried out in Portion 22, 23 and 24

11/6/2019
 Pdf File by: Yeiky
 PATH: D:\Program\60335576\DRAWING\CONTRACT\CS\CS3_C00_1000.dgn
 Project Management Initials: Designer: KCTL Checked: CYCH Approved: KCTL
 ISO A1 564mm x 841mm



LEGEND:
 - - - - - SITE BOUNDARY

Sang Hing - Kuly Venture

Title of Designated Project
 Fanling Bypass Eastern Section

CLIENT
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CEDD
 Civil Engineering and Development Department

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SUB-CONSULTANTS
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NO.	DATE	DESCRIPTION	CHK.
-	JUN-19	TENDER DRAWING	CYCH
1/1			
2/2			
3/3			

STATUS
 圖 樣

SCALE
 比例
 A1 1 : 5000

DIMENSION UNIT
 尺寸單位
 METRES

KEY PLAN
 位置圖

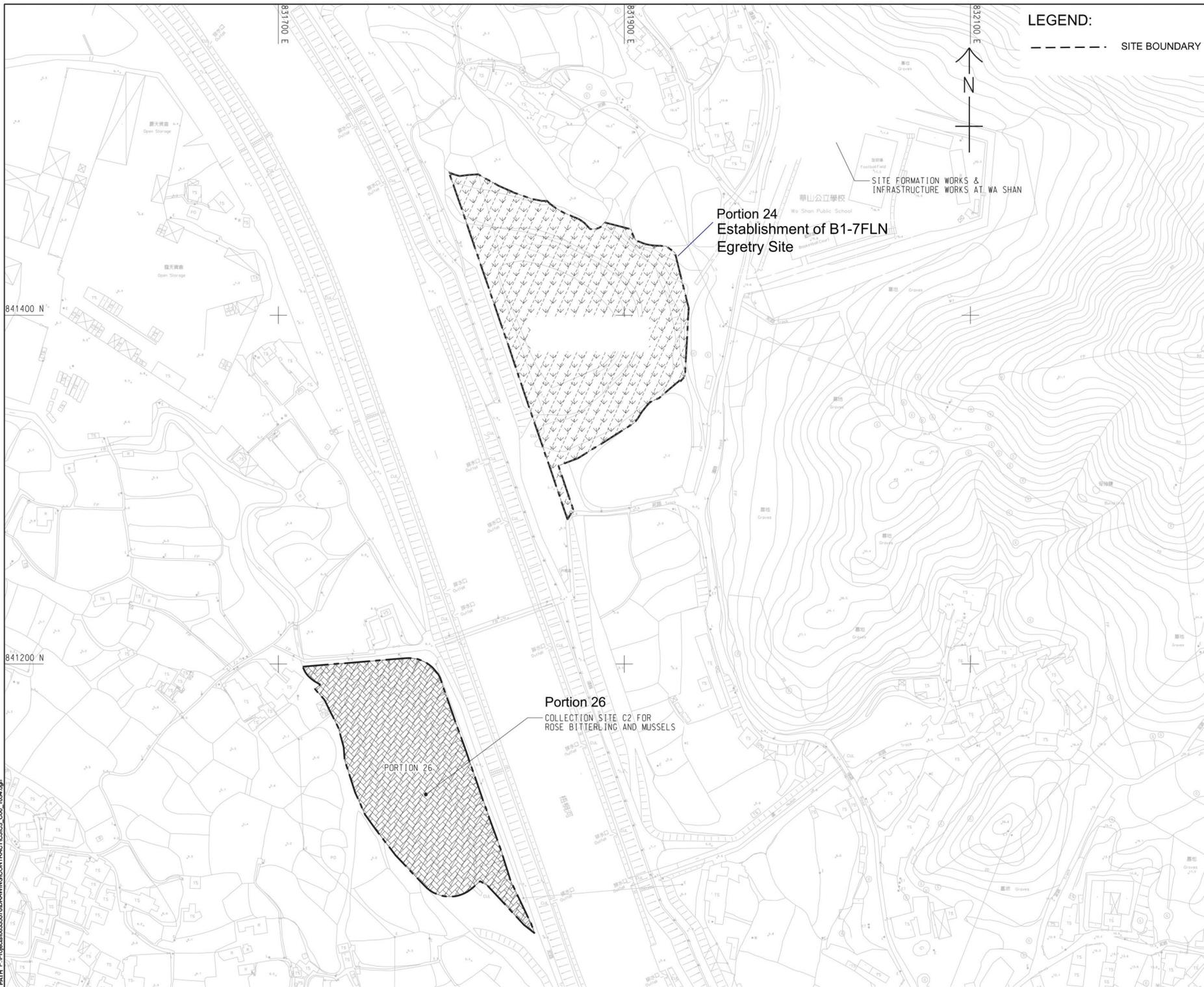
PROJECT NO.
 項目編號
 60335576

CONTRACT NO.
 合約編號
 ND/2019/03

SHEET TITLE
 圖 樣 名 稱
 KEY PLAN OF GENERAL LAYOUT

SHEET NUMBER
 圖 樣 號
 60335576/C3/C00/1000

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LEGEND:
 - - - - - SITE BOUNDARY

Sang Hing - Kuly Venture

Title of Designated Project
 Fanling Bypass Eastern Section

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

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 工程顧問公司: **AECOM Asia Company Ltd.**
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 分門工程顧問公司:

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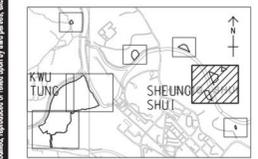
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修訂	日期	內容摘要	校核
-	JUN-19	TENDER DRAWING	CYCH

STATUS
 階段:

SCALE
 比例: A1 1 : 1000

DIMENSION UNIT
 尺寸單位: METRES

KEY PLAN A1 1 : 4000



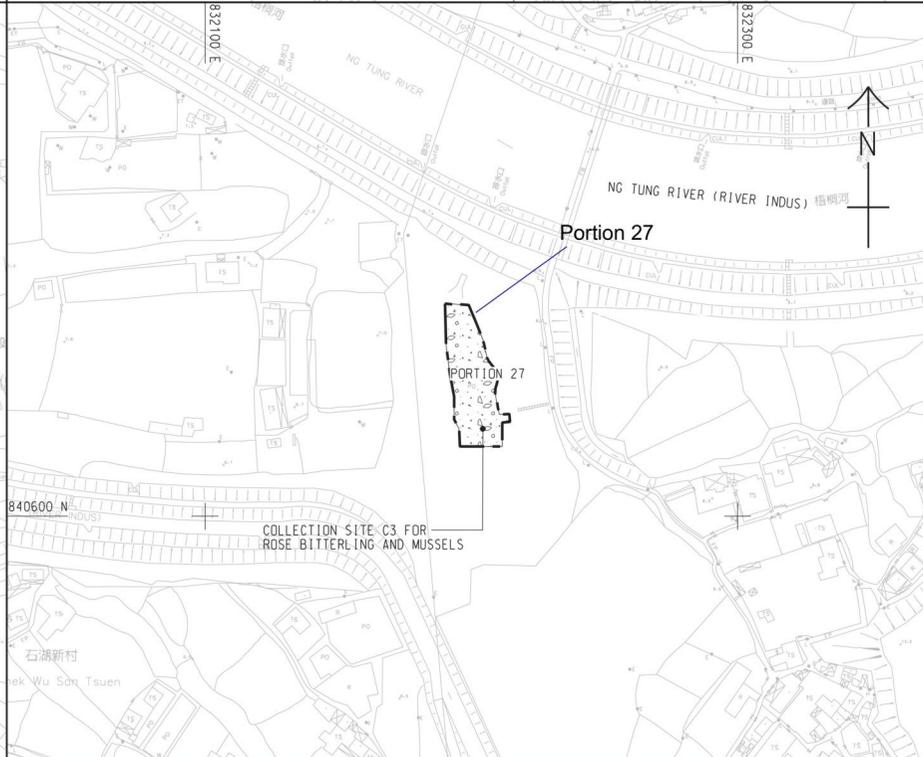
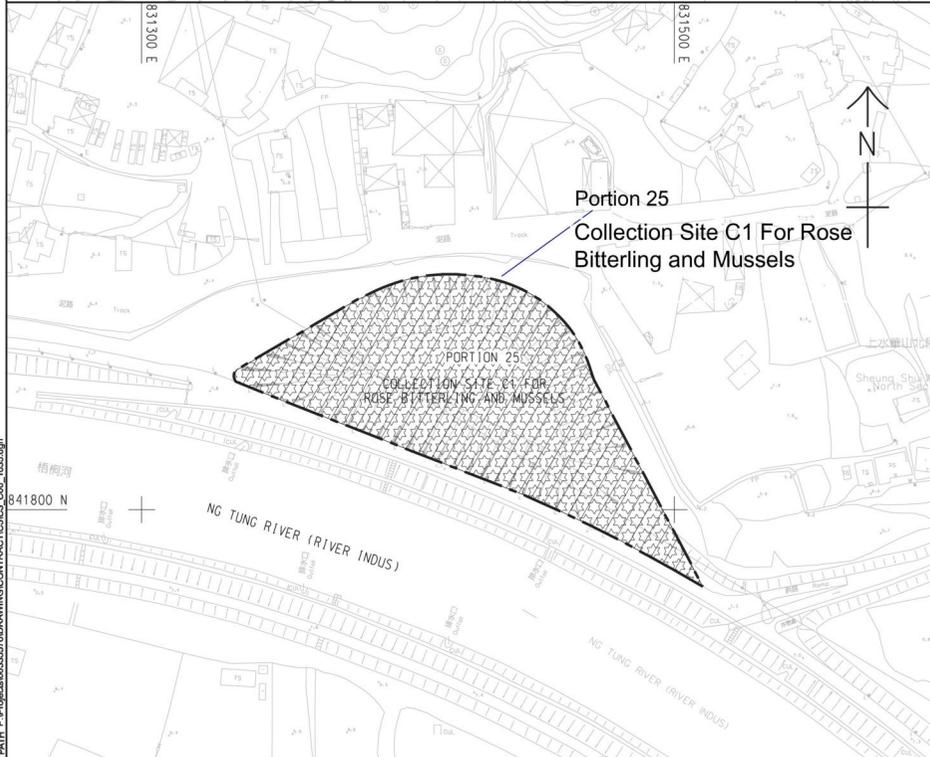
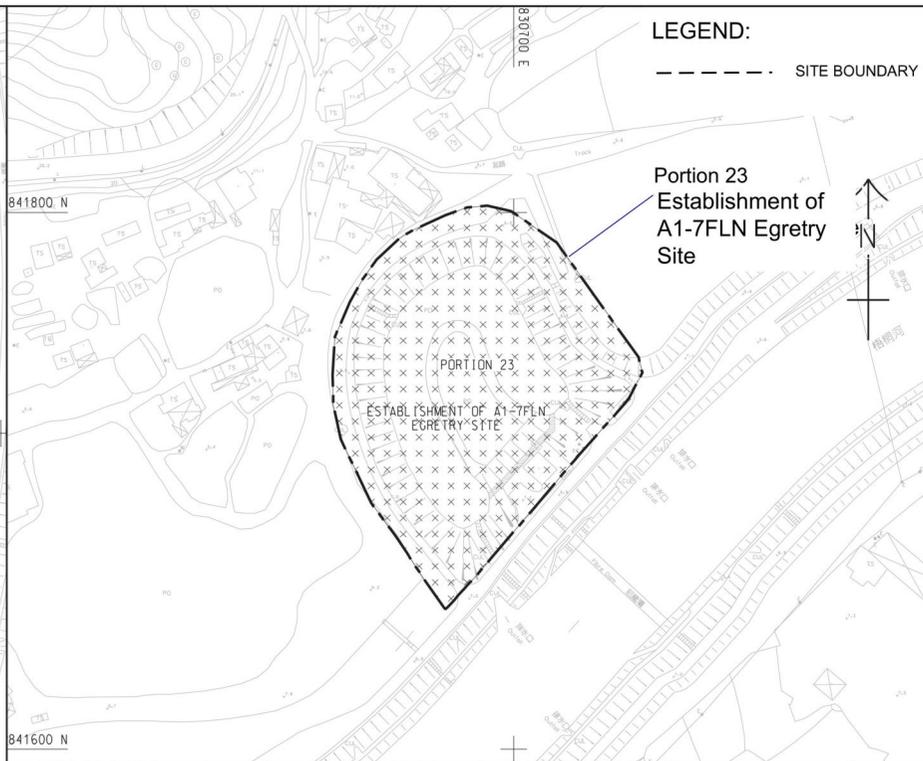
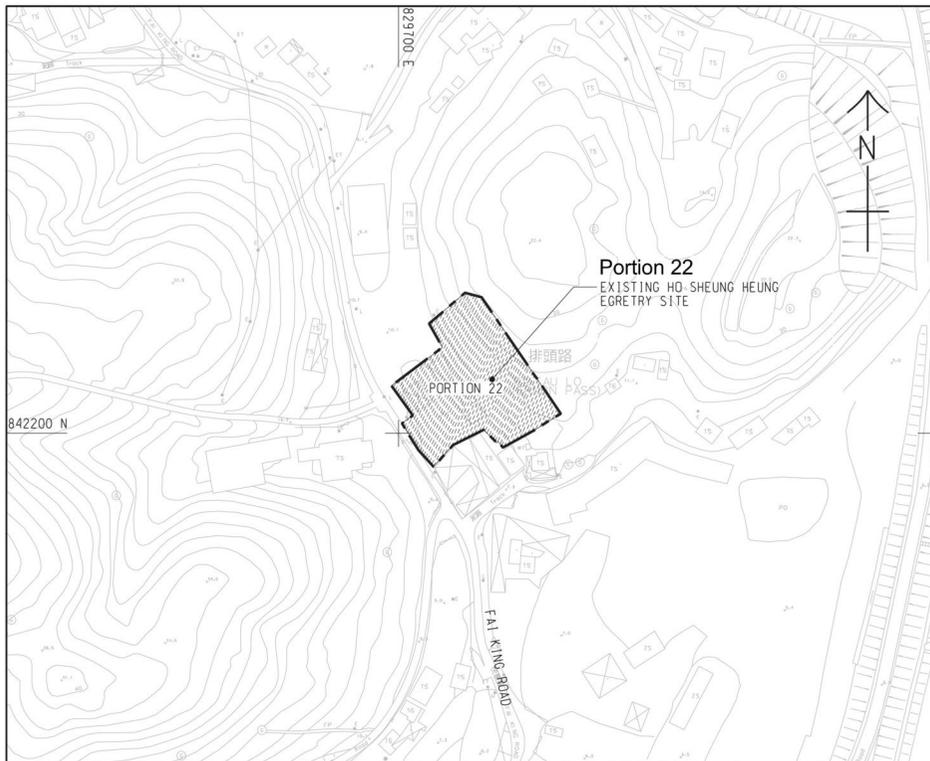
PROJECT NO.
 項目編號: 60335576

CONTRACT NO.
 合約編號: ND/2019/03

SHEET TITLE
 圖紙名稱: PORTION OF SITE

SHEET NUMBER
 圖紙編號: 60335576/C3/C00/1034

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LEGEND:
 - - - - - SITE BOUNDARY

Portion 23
 Establishment of
 A1-7FLN Egret
 Site

Portion 22
 EXISTING HO SHEUNG HEUNG
 EGRETRY SITE

Portion 25
 Collection Site C1 For Rose
 Bitterling and Mussels

Portion 27

Sang Hing - Kuly Venture

Title of Designated Project
 Fanling Bypass Eastern Section

CLIENT
 業主: 土木工程拓展署
CEDD
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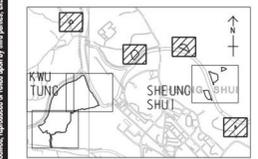
ISSUE/REVISION
 修訂

NO.	DATE	DESCRIPTION	CHK.
-	JUN-19	TENDER DRAWING	CYCH
1/1	16/06/19	內務修訂	CYCH

STATUS
 階段

SCALE
 比例: A1 1 : 1000
DIMENSION UNIT
 尺寸單位: METRES

KEY PLAN A1 1 : 4000



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

SHEET TITLE
 圖紙名稱: PORTION OF SITE

SHEET NUMBER
 圖紙編號: 60335576/C3/C00/1035

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T LINE 1-1
DRAWING NO. 60335576/C5A/C00/1051

GENERAL NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE SITE BOUNDARY SETTING OUT AND HOARDING PLAN IN DRAWING NOS. 60335576/C5A/C00/1021 TO 1026 AND 1051 TO 1058.
2. REFER TO CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT STANDARD DRAWINGS NOS. C1022/1A AND C1022/2A FOR DETAILS OF HOARDING.
3. REFER TO CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT STANDARD DRAWING NOS. C1007 AND C1008 FOR DETAILS OF GATES.
4. EXACT LOCATION AND EXTENTS OF HOARDING TO BE CONFIRMED BY THE SUPERVISOR.
5. THE SETTING OUT OF THE HOARDING IS INDICATIVE ONLY. THE CONTRACTOR SHALL VERIFY ON SITE AND PROPOSE THE EXACT SETTING OUT AND GATES' LOCATION FOR THE PROJECT MANAGER'S APPROVAL.
6. THE WORKS AREA BOUNDARY SHALL BE IN ACCORDANCE WITH THE ENGINEERING CONDITIONS FOR TEMPORARY GOVERNMENT LAND ALLOCATION NO. xxx-xxx xxxx. IN CASE OF DISCREPANCY BETWEEN THE BOUNDARY SHOWN ON THIS DRAWING AND THE BOUNDARY INDICATED ON THE ENGINEERING CONDITIONS, THE LATTER SHALL PREVAIL.
7. HOARDING TO BE ERECTED ALONG LIMITS OF WORK AND TEMPORARY WORKSITE.
8. ADDITIONAL TEMPORARY FENCING IN ACCORDANCE WITH CEDD STANDARD DRAWING NO. C1006 SHALL BE ERECTED AND RESUMED BY THE CONTRACTOR AT THE CONTRACTOR'S COST WHEN DIRECTED BY THE SUPERVISOR TO SURROUND EACH OF THE LAND USES.
9. 10 METERS BUFFER ZONE TO BE MAINTAINED ON BOTH SIDES AND FENCED WITH 2 METERS HIGH SOLID BARRIER DURING CONSTRUCTION AND OPERATION FOR SIU HANG SAN TSIEN WATERCOURSE TO THE ACCEPTANCE OF THE SUPERVISOR.

LEGEND:

- CEDD HOARDING TYPE III IN SOLID DULL GREEN COLOUR
- WATER FILLED BARRIER
- CHAIN LINK FENCE
- VEHICULAR AND PEDESTRIAN GATE
- SITE BOUNDARY
- SIU HANG SAN TSIEN WATERCOURSE

AECOM

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

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

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CEDD HOARDING TYPE III IN SOLID DULL GREEN COLOUR



CAMOUFLAGE NET OR GREEN NET TO COVER CHAIN LINK FENCE TO MINIMIZE ECOLOGICAL IMPACT



2 METRE HIGH GREEN WATER FILLED BARRIER



馬漚路污水泵房
Me Sik Road Sewage Pumping Station



Water filled barriers are proposed due to insufficient space for hoarding construction.

Water barriers will be provided during the roadworks construction under TTA submission.



ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
B	JAN-20	TENDER ADDENDUM NO. 2	RPCM
A	DEC-19	TENDER ADDENDUM NO. 1	RPCM
-	NOV-19	TENDER DRAWING	RPCM

STATUS

STATUS

SCALE: A1 1: 500 DIMENSION UNIT: METRES

KEY PLAN: A1 1: 70000



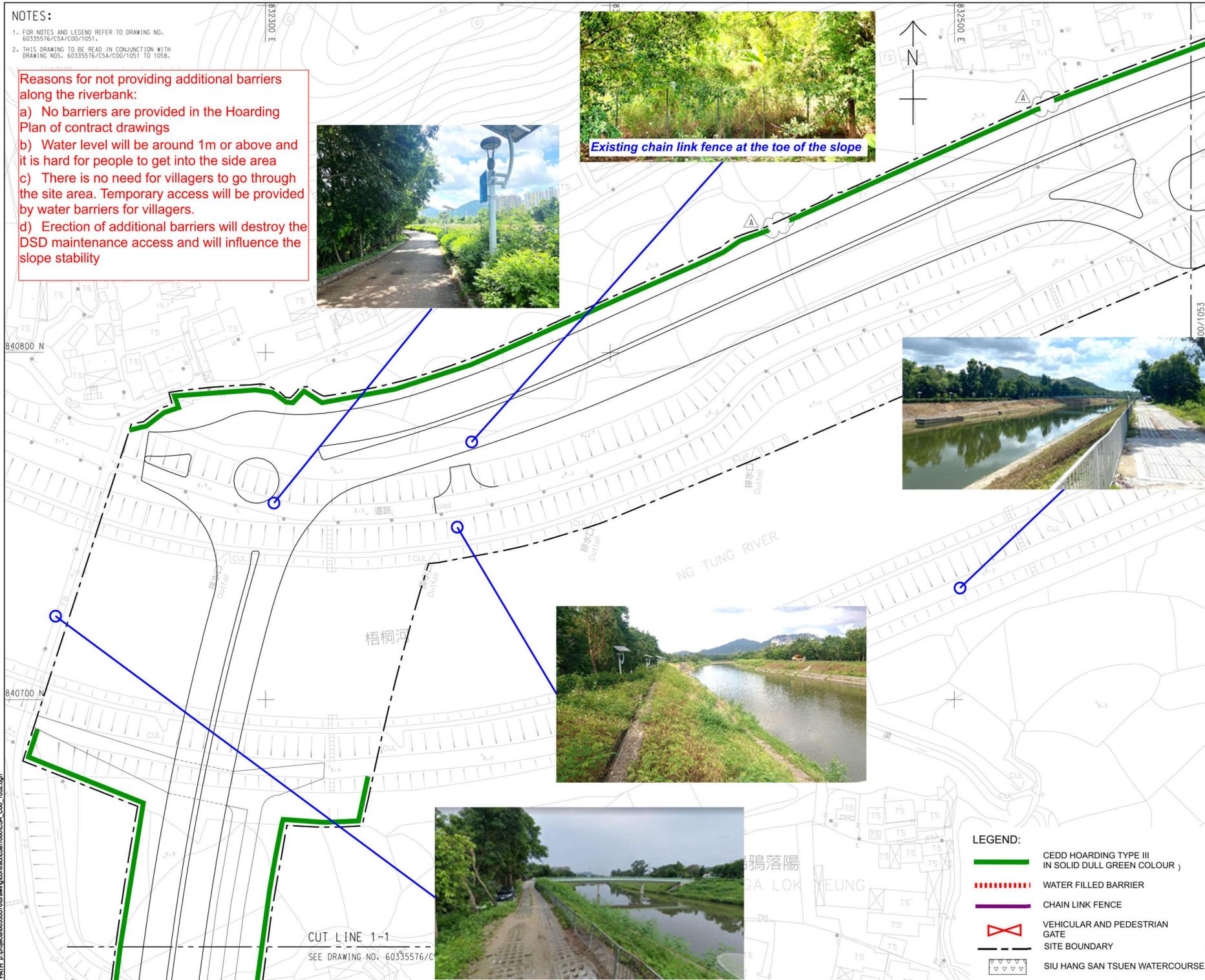
PROJECT NO.: 60335576 CONTRACT NO.: ND/2019/04

SHEET TITLE: HOARDING PLAN SHEET NUMBER: 60335576/C5A/C00/1051B

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 Checker: RPCM
 Approved: [Signature]
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NOTES:
 1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/CSA/CDD/1051.
 2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/CSA/CDD/1051 TO 1058.

Reasons for not providing additional barriers along the riverbank:
 a) No barriers are provided in the Hoarding Plan of contract drawings
 b) Water level will be around 1m or above and it is hard for people to get into the side area
 c) There is no need for villagers to go through the site area. Temporary access will be provided by water barriers for villagers.
 d) Erection of additional barriers will destroy the DSD maintenance access and will influence the slope stability



LEGEND:

- CEDD HOARDING TYPE III IN SOLID DULL GREEN COLOUR)
- - - - - WATER FILLED BARRIER
- CHAIN LINK FENCE
- VEHICULAR AND PEDESTRIAN GATE
- SITE BOUNDARY
- SIU HANG SAN TSUEN WATERCOURSE

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

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

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

CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS
 另外工程顧問公司

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
A	DEC-19	TENDER ADDENDUM NO. 1	RPCM
-	NOV-19	TENDER DRAWING	RPCM
WR	日期	內容摘要	檢核

SCALE
 比例
 A1 : 500
DIMENSION UNIT
 尺寸單位
 METRES



PROJECT NO.
 項目編號
 60335576

CONTRACT NO.
 合約編號
 ND/2019/04

SHEET TITLE
 圖紙名稱
 HOARDING PLAN

SHEET NUMBER
 圖紙編號
 SHEET 2 OF 8

SHEET NUMBER
 圖紙編號
 60335576/CSA/CDD/1052A

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NO.	DATE	DESCRIPTION	CHK.
A	JAN-20	TENDER ADDENDUM NO. 2	RPCM
-	NOV-19	TENDER DRAWING	RPCM
NR	DATE	DESCRIPTION	CHK.



NOTES:

- FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/CSA/C00/1051.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/CSA/C00/1051 TO 1058.

Reasons for not providing additional barriers along the riverbank:

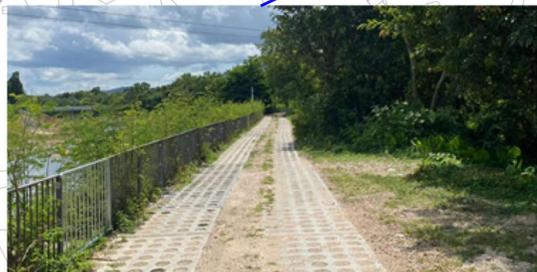
- No barriers are provided in the Hoarding Plan of contract drawings
- Water level will be around 1m or above and it is hard for people to get into the side area
- There is no need for villagers to go through the site area. Temporary access will be provided by water barriers for villagers.
- Erection of additional barriers will destroy the DSD maintenance access and will influence the slope stability

2m high green water filled barriers are proposed to enclose the site area

2m high green water filled barriers are provided on both sides of the watercourse.

Chain link fence is provided, and will be covered by camouflage net or green net.

Siu Hang San Tsuen Watercourse



LEGEND:

- CEDD HOARDING TYPE III IN SOLID DULL GREEN COLOUR
- WATER FILLED BARRIER
- CHAIN LINK FENCE
- VEHICULAR AND PEDESTRIAN GATE
- SITE BOUNDARY
- SIU HANG SAN TSUEN WATERCOURSE
- 10M BUFFER ZONE BOUNDARY

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NOTE:
 1. FOR GENERAL NOTES AND LEGEND REFER TO DRAWING NO. 60335576/CSA/CDD/1051.

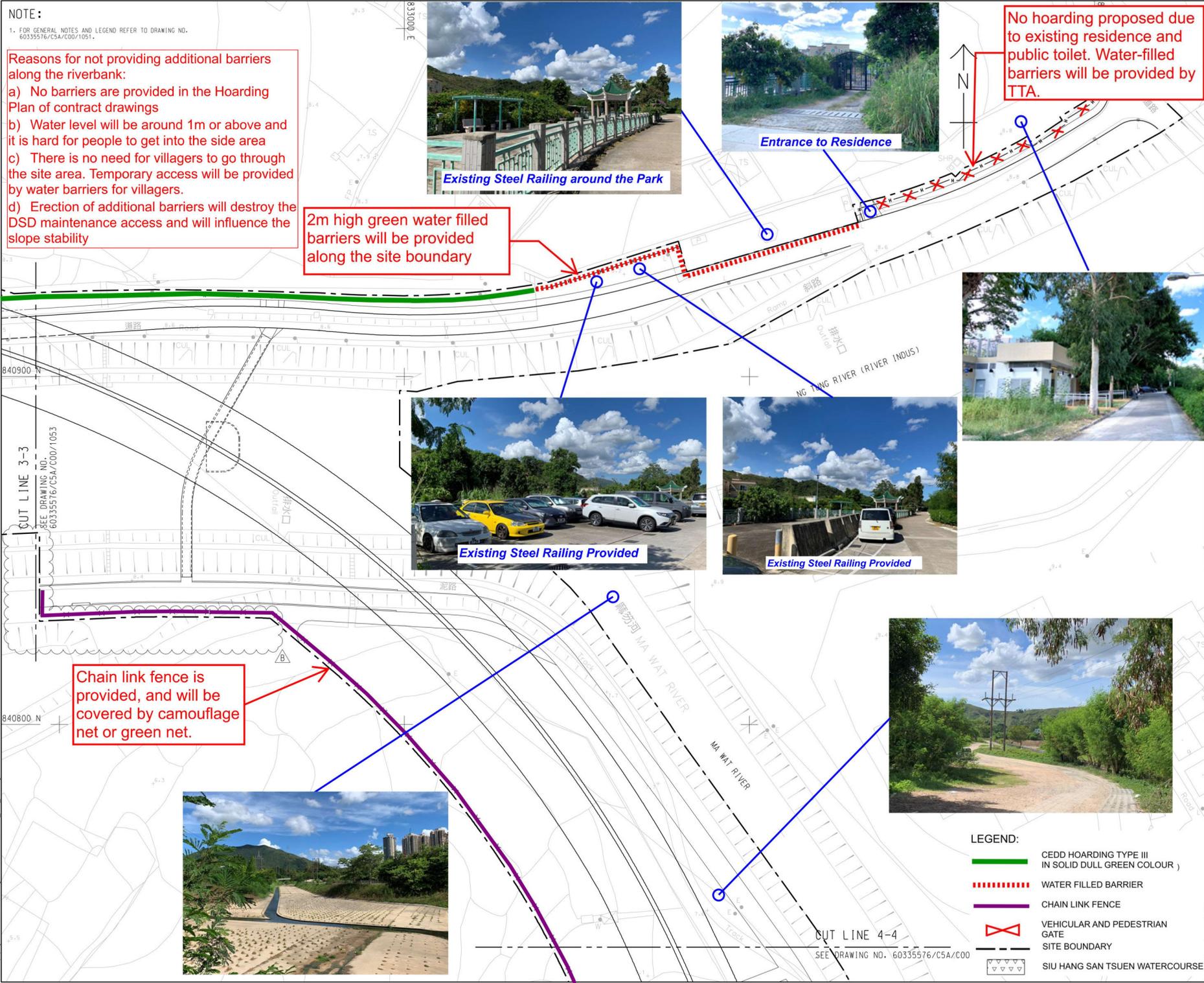
Reasons for not providing additional barriers along the riverbank:
 a) No barriers are provided in the Hoarding Plan of contract drawings
 b) Water level will be around 1m or above and it is hard for people to get into the side area
 c) There is no need for villagers to go through the site area. Temporary access will be provided by water barriers for villagers.
 d) Erection of additional barriers will destroy the DSD maintenance access and will influence the slope stability

2m high green water filled barriers will be provided along the site boundary

Chain link fence is provided, and will be covered by camouflage net or green net.



No hoarding proposed due to existing residence and public toilet. Water-filled barriers will be provided by TTA.



AECOM

PROJECT NO. 60335576/CSA/CDD/1054

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

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

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

CONSULTANT: AECOM Asia Company Ltd. www.aecom.com

SUB-CONSULTANTS: 土木工程有限公司

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
B	JAN-20	TENDER ADDENDUM NO. 2	RPCM
A	DEC-19	TENDER ADDENDUM NO. 1	RPCM
-	NOV-19	TENDER DRAWING	RPCM

STATUS

SCALE	DIMENSION UNIT
A1 : 500	METRES



PROJECT NO. 60335576 CONTRACT NO. ND/2019/04

SHEET TITLE: HOARDING PLAN SHEET 4 OF 8

SHEET NUMBER: 60335576/CSA/CDD/1054B

LEGEND:

- SOLID GREEN LINE: CEDD HOARDING TYPE III IN SOLID DULL GREEN COLOUR
- DOTTED RED LINE: WATER FILLED BARRIER
- PURPLE LINE: CHAIN LINK FENCE
- RED X: VEHICULAR AND PEDESTRIAN GATE
- DASHED LINE: SITE BOUNDARY
- WAVE LINE: SIU HANG SAN TSUEN WATERCOURSE

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Reasons for not providing additional barriers along the riverbank:

- No barriers are provided in the Hoarding Plan of contract drawings
- Water level will be around 1m or above and it is hard for people to get into the side area
- There is no need for villagers to go through the site area. Temporary access will be provided by water barriers for villagers.
- Erection of additional barriers will destroy the DSD maintenance access and will influence the slope stability



NOTES:

- FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/CSA/CDD/1054.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/CSA/CDD/1051 TO 1058.

AECOM

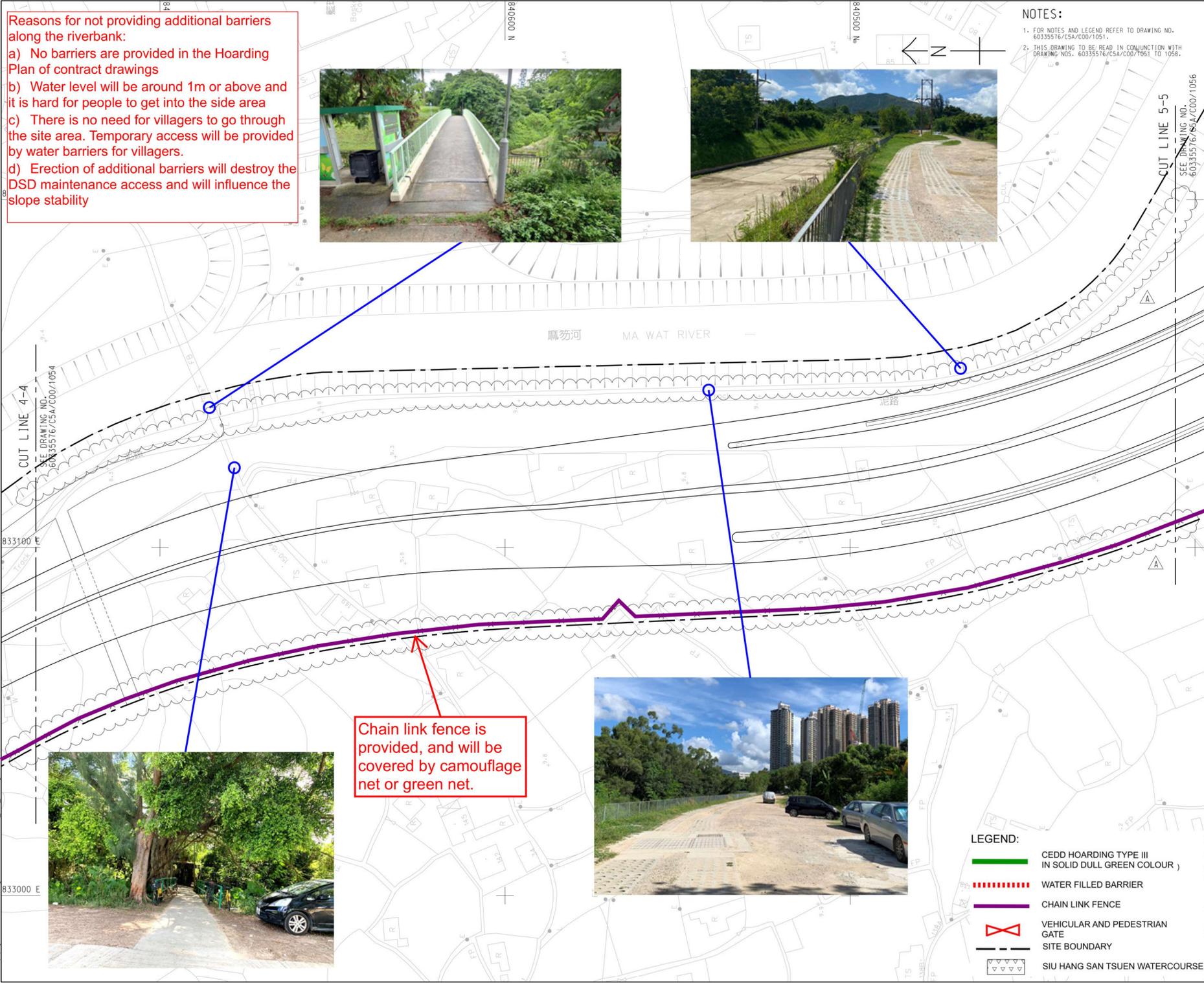
PROJECT
 DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

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

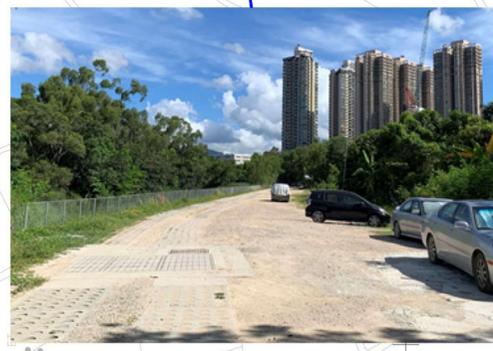
CLIENT
 土木工程拓展署
 Civil Engineering and Development Department

CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS



Chain link fence is provided, and will be covered by camouflage net or green net.



LEGEND:

- CEDD HOARDING TYPE III IN SOLID DULL GREEN COLOUR
- WATER FILLED BARRIER
- CHAIN LINK FENCE
- VEHICULAR AND PEDESTRIAN GATE
- SITE BOUNDARY
- SIU HANG SAN TSUEN WATERCOURSE

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
A	DEC-19	TENDER ADDENDUM NO. 1	RPCM
-	NOV-19	TENDER DRAWING	RPCM
VR	DATE	DESCRIPTION	CHK.
制訂	日期	內容摘要	檢核

STATUS

SCALE
 比例: A1 : 500 尺寸單位: METRES

KEY PLAN A1 : 70000

PROJECT NO.
 項目編號: 60335576

CONTRACT NO.
 合約編號: ND/2019/04

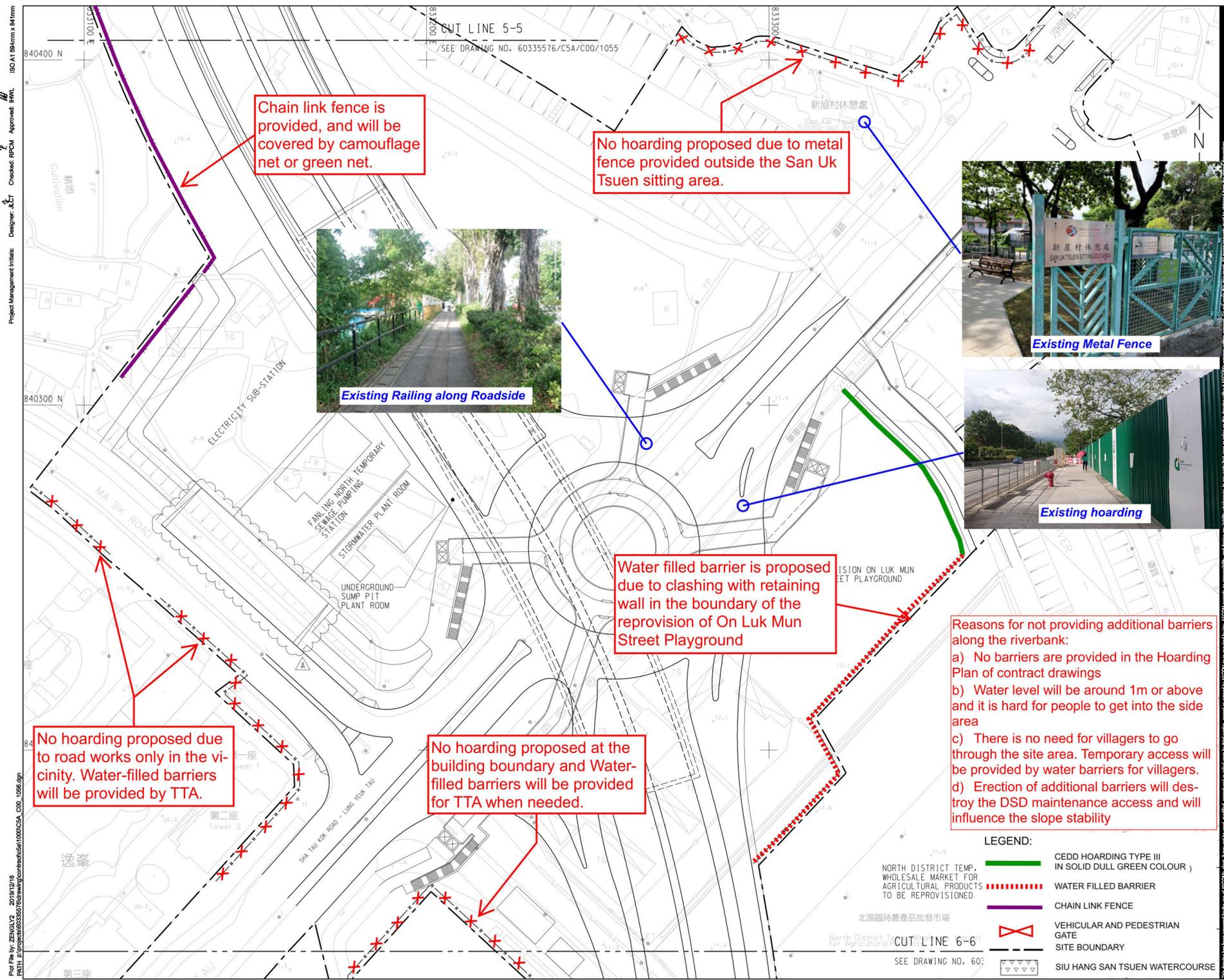
SHEET TITLE
 圖紙名稱: HOARDING PLAN

SHEET NUMBER
 圖紙編號: 60335576/CSA/CDD/1055A

SHEET 5 OF 8

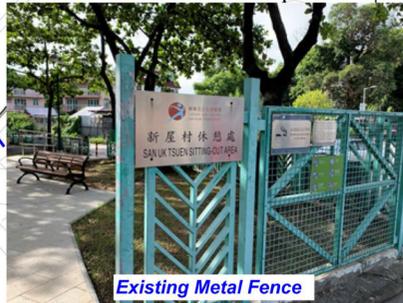
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NO.	DATE	DESCRIPTION	CHK.
A	DEC-19	TENDER ADDENDUM NO. 1	RPCM
-	NOV-19	TENDER DRAWING	RPCM
UR	DATE	DESCRIPTION	CHK.



Chain link fence is provided, and will be covered by camouflage net or green net.

No hoarding proposed due to metal fence provided outside the San Uk Tsuen sitting area.



Water filled barrier is proposed due to clashing with retaining wall in the boundary of the reposition of On Luk Mun Street Playground

No hoarding proposed due to road works only in the vicinity. Water-filled barriers will be provided by TTA.

No hoarding proposed at the building boundary and Water-filled barriers will be provided for TTA when needed.

Reasons for not providing additional barriers along the riverbank:
 a) No barriers are provided in the Hoarding Plan of contract drawings
 b) Water level will be around 1m or above and it is hard for people to get into the side area
 c) There is no need for villagers to go through the site area. Temporary access will be provided by water barriers for villagers.
 d) Erection of additional barriers will destroy the DSD maintenance access and will influence the slope stability

- LEGEND:**
- CEDD HOARDING TYPE III IN SOLID DULL GREEN COLOUR
 - WATER FILLED BARRIER
 - CHAIN LINK FENCE
 - VEHICULAR AND PEDESTRIAN GATE
 - SITE BOUNDARY
 - SIU HANG SAN TSUEN WATERCOURSE

Project Management In-charge: [Name] Designer: [Name] Checker: [Name] Approved: [Name] ISO A1 58mm x 84mm
 Pod File by: ZENGLU2 201912/16 PATH: P:\projects\60335576\main\contract\C5A\C00\1056.dgn
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No hoarding proposed at the building boundary and Water-filled barriers will be provided by TTA.

No hoarding proposed due to road works only in the vicinity. Water-filled barriers will be provided by TTA.

Water-filled barriers will be included in the TTA submissions and not shown in the Hoarding Plan



NOTES:
 1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/CSA/CDD/1051.
 2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/CSA/CDD/1051 TO 1058.

AECOM
 PROJECT NO. 60335576
DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

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

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

CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
1	NOV-19	TENDER DRAWING	RPCM
2			
3			
4			
5			

SCALE
 比例: A1 : 500
 DIMENSION UNIT
 尺寸單位: METRES



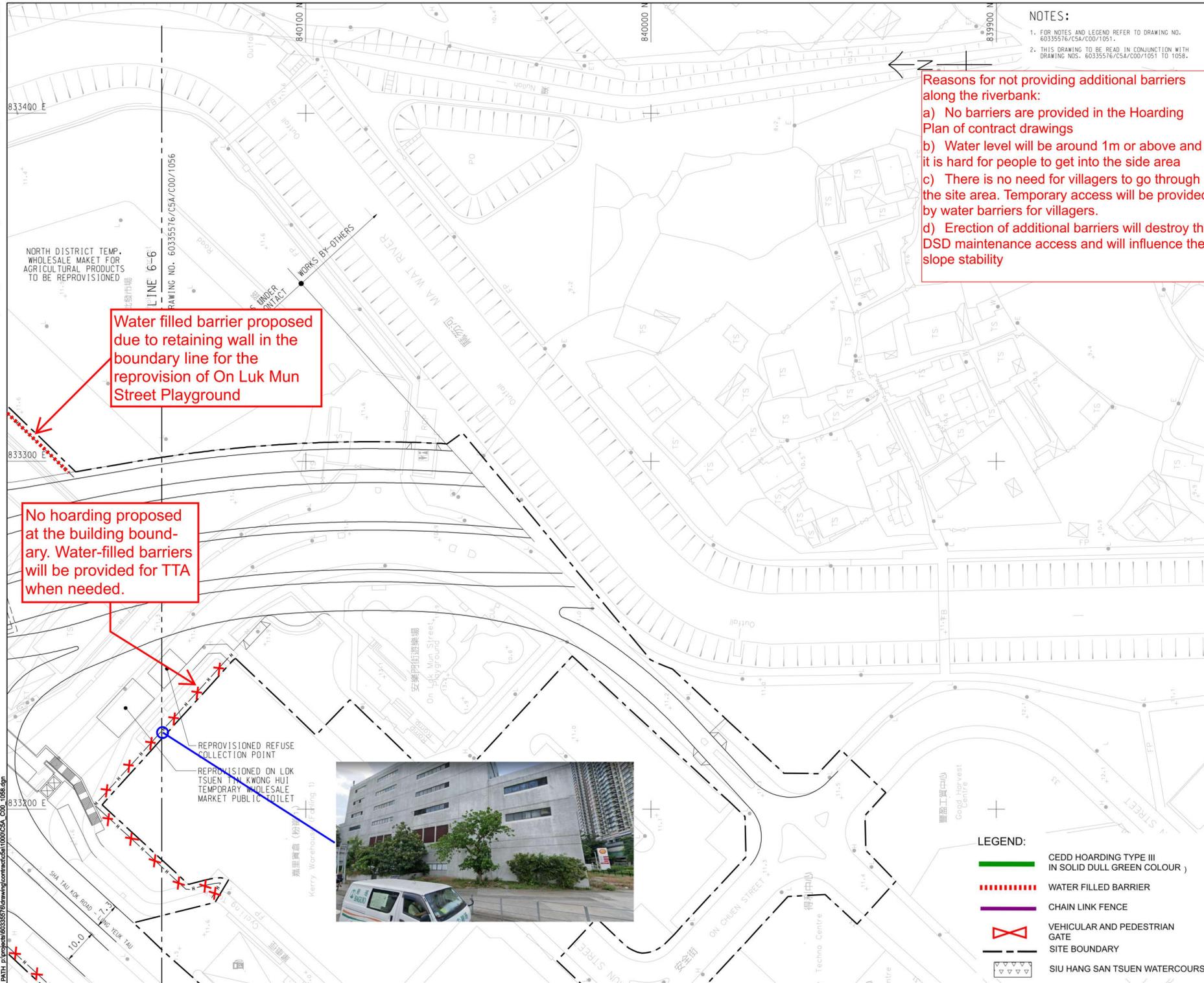
PROJECT NO. 60335576
 CONTRACT NO. ND/2019/04

SHEET TITLE
 HOARDING PLAN

SHEET NUMBER
 60335576/CSA/CDD/1057

- LEGEND:
- CEDD HOARDING TYPE III IN SOLID DULL GREEN COLOUR
 - WATER FILLED BARRIER
 - CHAIN LINK FENCE
 - VEHICULAR AND PEDESTRIAN GATE
 - SITE BOUNDARY
 - SIU HANG SAN TSUEN WATERCOURSE

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Water filled barrier proposed due to retaining wall in the boundary line for the reprovision of On Luk Mun Street Playground

No hoarding proposed at the building boundary. Water-filled barriers will be provided for TTA when needed.

REPROVISIONED REFUSE COLLECTION POINT
 REPROVISIONED ON LOK TSUEN TUNG KWONG HUI TEMPORARY WHOLESALE MARKET PUBLIC TOILET



NOTES:
 1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/CSA/C00/1051.
 2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/CSA/C00/1051 TO 1058.

Reasons for not providing additional barriers along the riverbank:
 a) No barriers are provided in the Hoarding Plan of contract drawings
 b) Water level will be around 1m or above and it is hard for people to get into the side area
 c) There is no need for villagers to go through the site area. Temporary access will be provided by water barriers for villagers.
 d) Erection of additional barriers will destroy the DSD maintenance access and will influence the slope stability

AECOM

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

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

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

CONSULTANT
 AECOM Asia Company Ltd.
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SUB-CONSULTANTS
 外判工程師名單

ISSUE/REVISION			
NO.	DATE	DESCRIPTION	CHK.
1	NOV-19	TENDER DRAWING	RPCM

STATUS
 發行

SCALE
 比例: A1 1: 500
DIMENSION UNIT
 尺寸單位: METRES

KEY PLAN A1: 70000

PROJECT NO. 60335576
CONTRACT NO. ND/2019/04

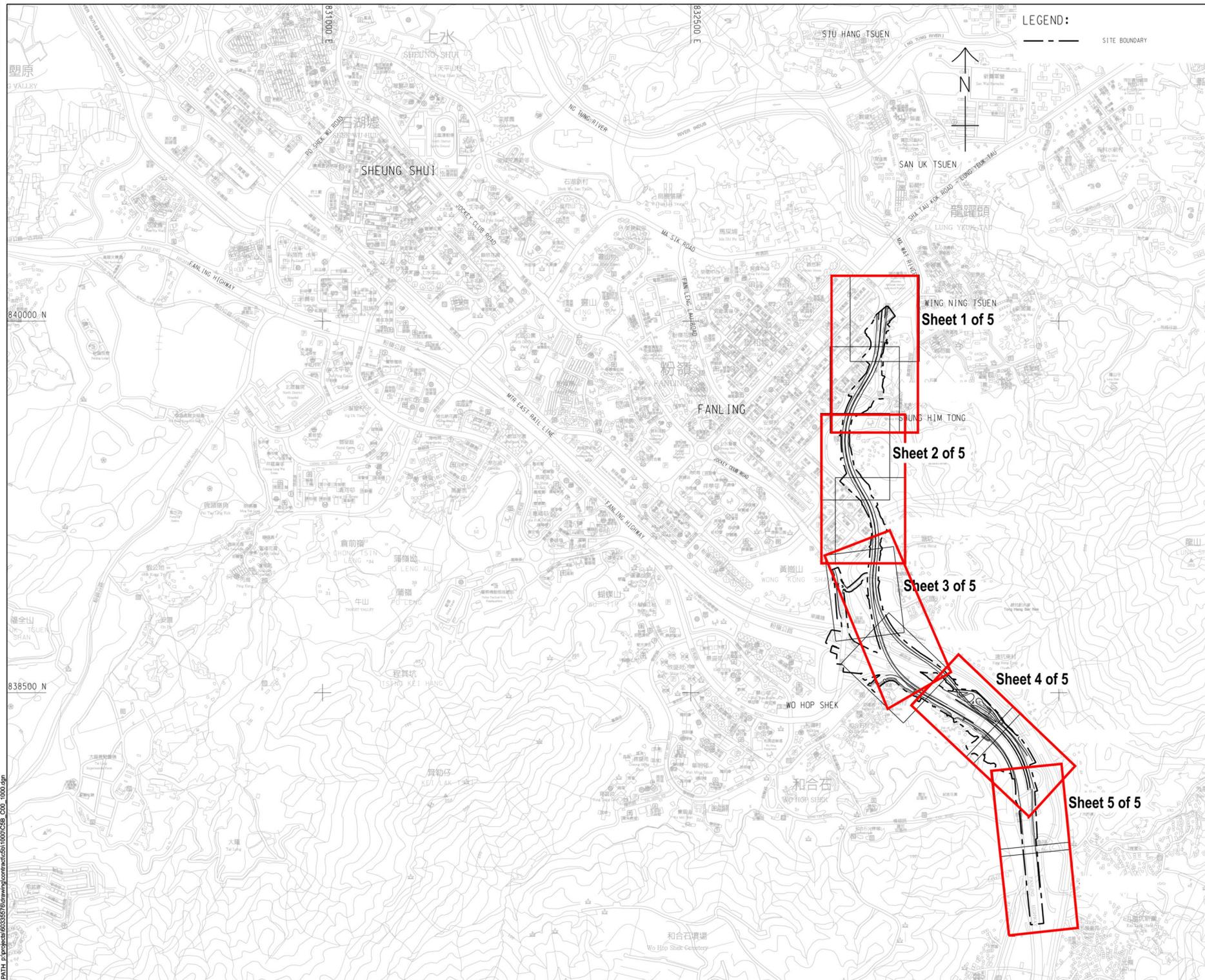
SHEET TITLE HOARDING PLAN

SHEET NUMBER 60335576/CSA/C00/1058

SHEET 8 OF 8

- LEGEND:**
- CEDD HOARDING TYPE III IN SOLID DULL GREEN COLOUR
 - WATER FILLED BARRIER
 - CHAIN LINK FENCE
 - VEHICULAR AND PEDESTRIAN GATE
 - SITE BOUNDARY
 - SIU HANG SAN TSUEN WATERCOURSE

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CRCC - Paul Y Joint Venture

Title of Designated Project:
**Fanling Bypass Eastern
 Section**

CONTRACT TITLE: ND/2019/05

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

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

CONSULTANT
 工程顧問公司: **AECOM Asia Company Ltd.**
 www.aecom.com

SUB-CONSULTANTS
 分包工程顧問公司:

ISSUE/REVISION
 修訂

NO.	DATE	DESCRIPTION	CHK.
1	JUN-19	TENDER DRAWING	RPCM
2			
3			
4			
5			

STATUS
 狀態

SCALE
 比例: A1 : 7000

DIMENSION UNIT
 尺寸單位: METRES

KEY PLAN
 關鍵圖

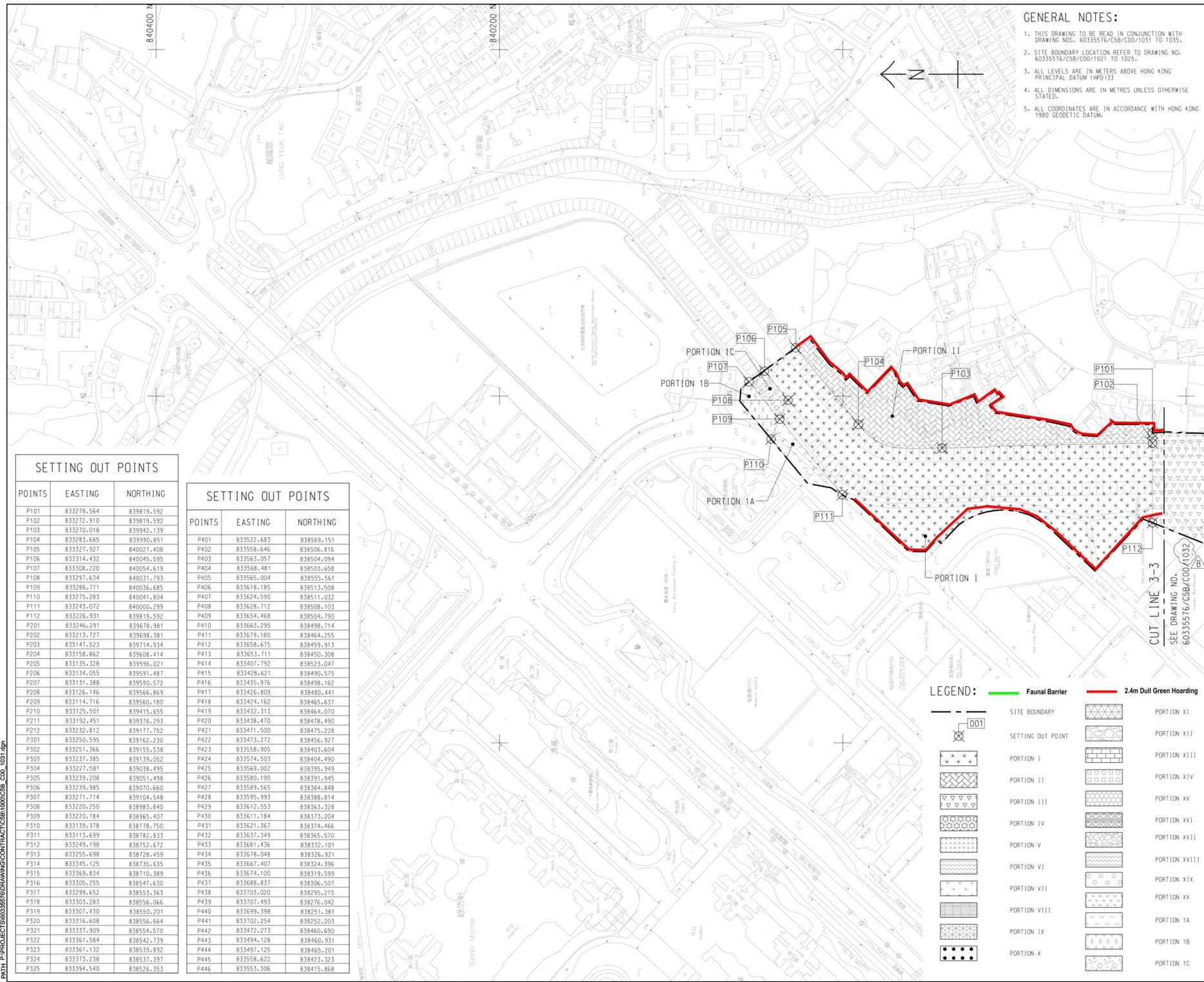
PROJECT NO.
 項目編號: 60335576

CONTRACT NO.
 合約編號: ND/2019/05

SHEET TITLE
 圖紙名稱: KEY PLAN AND LOCATION PLAN

SHEET NUMBER
 圖紙編號: 60335576/C5B/C00/1000

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GENERAL NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/CSB/COO/1031 TO 1035.
2. SITE BOUNDARY LOCATION REFER TO DRAWING NO. 60335576/CSB/COO/1021 TO 1025.
3. ALL LEVELS ARE IN METERS ABOVE HONG KONG PRINCIPAL DATUM (HPD) 133
4. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
5. ALL COORDINATES ARE IN ACCORDANCE WITH HONG KONG 1980 GEODETIC DATUM.

SETTING OUT POINTS

POINTS	EASTING	NORTHING
P101	833278.564	839819.592
P102	83272.910	839819.592
P103	83270.018	839942.139
P104	83283.665	83990.851
P105	83327.927	840027.408
P106	833314.432	840045.595
P107	833308.220	840054.619
P108	83297.634	840031.793
P109	83286.711	840036.685
P110	83325.283	840017.804
P111	83243.072	840000.299
P112	83226.931	839819.592
P201	83246.291	839678.981
P202	83213.727	839698.381
P203	833147.523	839714.934
P204	833158.862	839608.414
P205	833135.328	839596.021
P206	833134.055	839591.487
P207	833131.388	839590.572
P208	833126.146	839566.869
P209	833114.716	839560.180
P210	833125.501	839415.655
P211	83392.451	839376.293
P212	83325.812	839177.752
P301	833250.595	839162.230
P302	833251.366	839155.538
P303	83327.385	839139.052
P304	83227.581	839038.495
P305	83239.208	839051.498
P306	83239.985	839070.660
P307	83271.714	839104.548
P308	83220.250	838983.840
P309	83220.184	838965.407
P310	83319.378	838778.750
P311	833115.699	838782.833
P312	83249.198	838752.672
P313	83325.698	838728.459
P314	83345.125	838735.635
P315	83369.834	838710.389
P316	83305.255	838547.630
P317	83299.652	838553.363
P318	83303.283	838556.066
P319	83307.430	838550.201
P320	83316.608	838556.664
P321	83337.909	838554.570
P322	83361.584	838542.739
P323	83361.132	838539.892
P324	83373.238	838537.397
P325	83394.540	838526.353

SETTING OUT POINTS

POINTS	EASTING	NORTHING
P401	83322.683	838569.151
P402	83358.646	838506.816
P403	83363.057	838504.094
P404	83368.481	838503.658
P405	83365.004	838555.561
P406	83361.185	838513.508
P407	83364.500	838511.032
P408	83362.712	838508.103
P409	83364.468	838504.190
P410	83363.295	838498.714
P411	833679.180	838464.255
P412	83368.675	838459.913
P413	83363.711	838450.308
P414	833407.792	838523.047
P415	833428.621	838490.575
P416	833435.976	838498.162
P417	833426.809	838480.441
P418	833424.162	838465.637
P419	833432.313	838464.070
P420	833436.470	838478.490
P421	83364.500	838475.228
P422	833473.272	838456.927
P423	83358.905	838403.604
P424	83374.503	838404.490
P425	83368.002	838395.949
P426	83380.190	838391.945
P427	83389.565	838384.848
P428	83395.993	838388.814
P429	83362.553	838363.328
P430	83361.184	838373.204
P431	833621.367	838374.466
P432	833637.349	838365.570
P433	833681.436	838332.101
P434	833679.048	838326.321
P435	83367.407	838324.396
P436	833674.100	838319.599
P437	833688.837	838306.507
P438	833703.020	838295.215
P439	833707.493	838276.042
P440	833699.398	838251.381
P441	833702.254	838252.203
P442	833472.273	838460.690
P443	833494.128	838460.931
P444	833497.125	838465.201
P445	83358.622	838423.323
P446	833553.306	838415.868

LEGEND:

	Faunal Barrier		2.4m Dull Green Hoarding
	SITE BOUNDARY		PORTION XI
	SETTING OUT POINT		PORTION XII
	PORTION I		PORTION XIII
	PORTION II		PORTION XIV
	PORTION III		PORTION XV
	PORTION IV		PORTION XVI
	PORTION V		PORTION XVII
	PORTION VI		PORTION XVIII
	PORTION VII		PORTION XIX
	PORTION VIII		PORTION XX
	PORTION IX		PORTION 1A
	PORTION X		PORTION 1B
			PORTION 1C

**CRCC - Paul Y
Joint Venture**

Title of Designated Project:
Fanling Bypass Eastern Section

CONTRACT TITLE: ND/2019/05
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
CEDD
Civil Engineering and Development Department

CONSULTANT
AECOM Asia Company Ltd.
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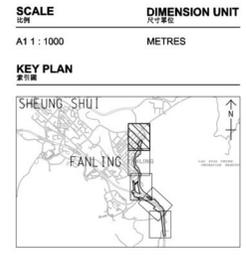
SUB-CONSULTANTS
分 子 土 建 師 事 務 所

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
B	AUG-19	TENDER ADDENDUM NO.3	RPCM
A	JUL-19	TENDER ADDENDUM NO.2	RPCM
-	JUN-19	TENDER DRAWING	RPCM

STATUS

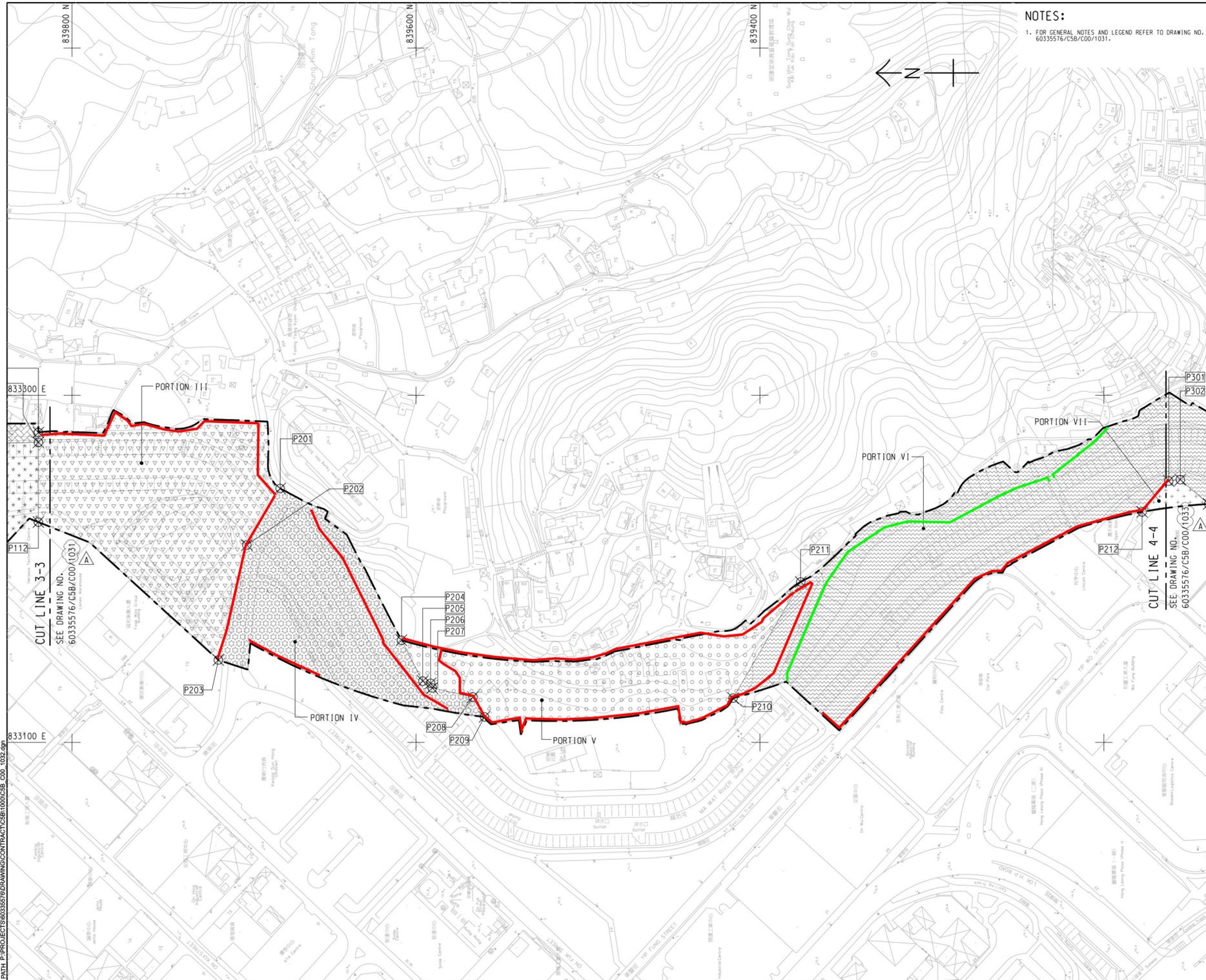
SCALE	DIMENSION UNIT
比例	尺寸單位
A1 : 1000	METRES



PROJECT NO. 60335576
CONTRACT NO. ND/2019/05

SHEET TITLE
PORTION OF SITE

SHEET NUMBER
60335576/CSB/COO/1031B



NOTES:

1. FOR GENERAL NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C5B/C00/1031.

CRCC - Paul Y Joint Venture

Title of Designated Project:
Fanling Bypass Eastern Section

CONTRACT TITLE: ND/2019/05

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

CLIENT



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IR	DATE	DESCRIPTION	CHK
A	AUG-19	TENDER ADDENDUM NO.3	RPCM
-	JUN-19	TENDER DRAWING	RPCM
IR	DATE	DESCRIPTION	CHK

STATUS

SCALE **DIMENSION UNIT**

A1 1:1000 METRES

KEY PLAN A1 1:70000



PROJECT NO. **CONTRACT NO.**

60335576 ND/2019/05

SHEET TITLE

PORTION OF SITE

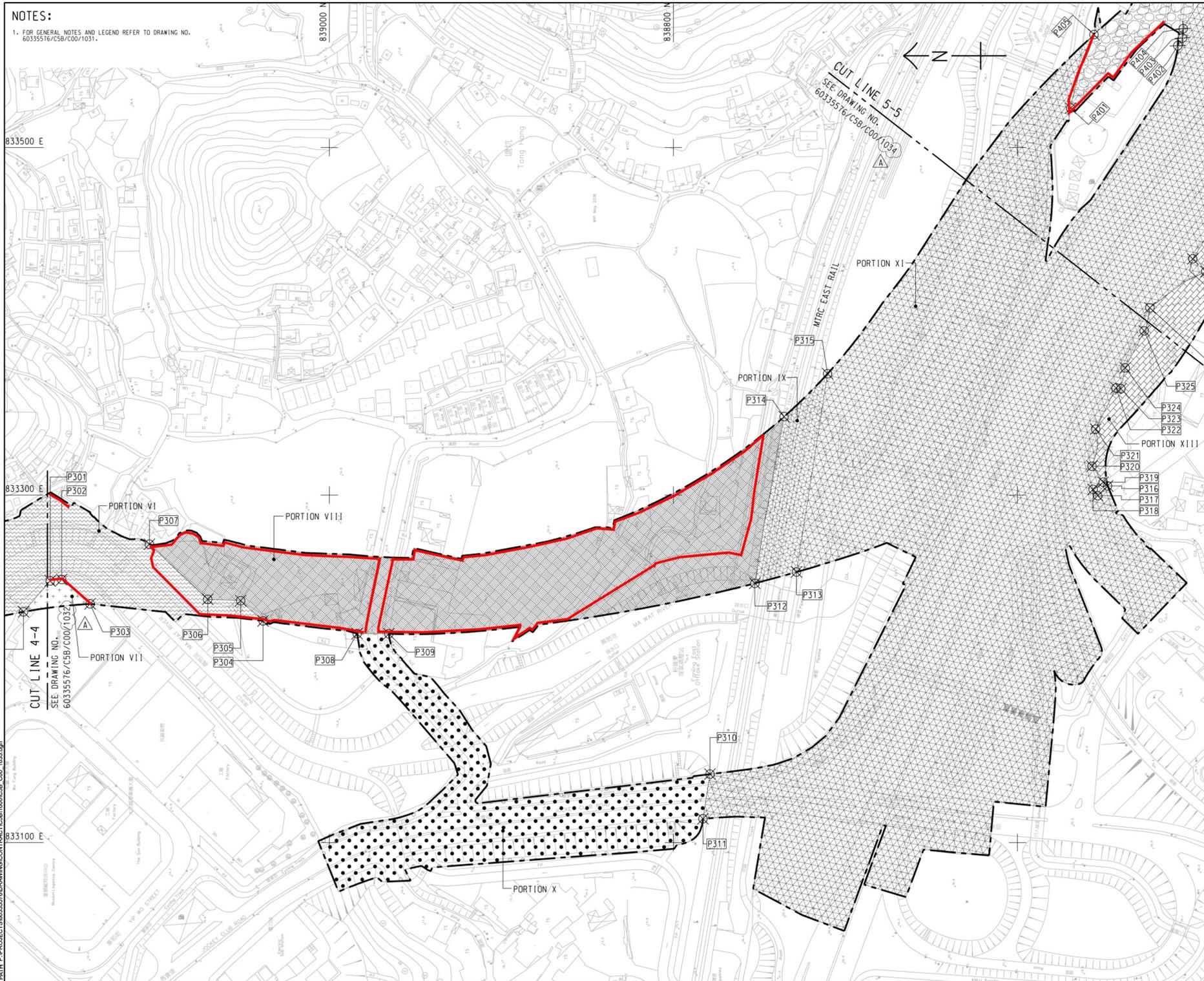
SHEET NUMBER

60335576/C5B/C00/1032A

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Project Management Initials: Designer: WHWY Checked: RPCM Approved: RHWL
 ISO A1 584mm x 841mm
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 Plot File by: XAODP 2018/8/8
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NOTES:
 1. FOR GENERAL NOTES AND LEGEND REFER TO DRAWING NO. 60335576/CSB/C00/1031.



CRCC - Paul Y Joint Venture

Title of Designated Project:
Fanling Bypass Eastern Section

CONTRACT TITLE: ND/2019/05

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

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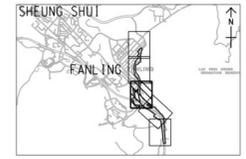
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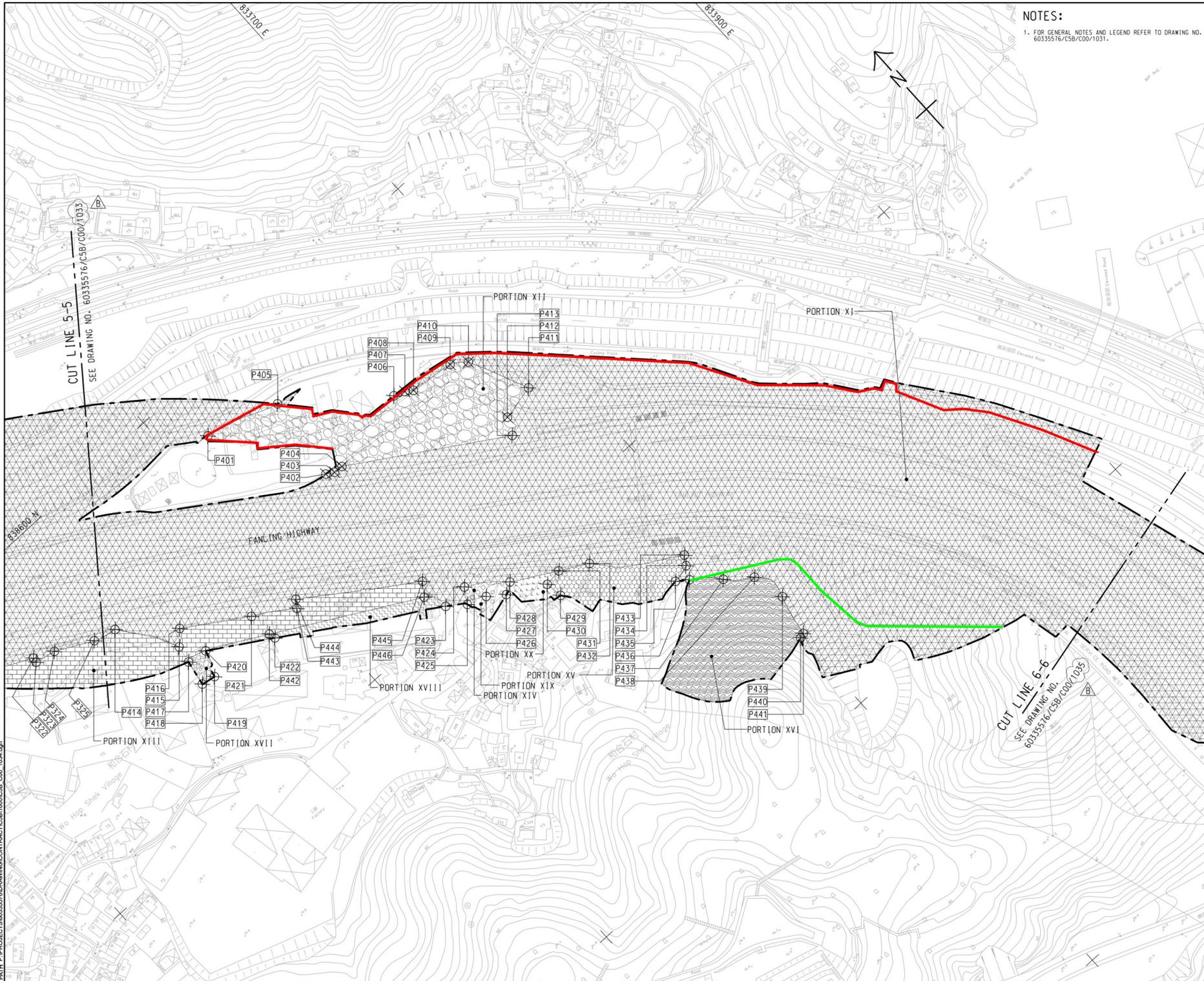
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NO.	DATE	DESCRIPTION	CHK.
A	AUG-19	TENDER ADDENDUM NO.3	RPCM
-	JUN-19	TENDER DRAWING	RPCM
IR	DATE	DESCRIPTION	CHK.

STATUS
SCALE
 A1 1:1000 DIMENSION UNIT METRES
KEY PLAN A1 1:70000



PROJECT NO. 60335576
CONTRACT NO. ND/2019/05
SHEET TITLE PORTION OF SITE
SHEET NUMBER 60335576/CSB/C00/1033A
 SHEET 3 OF 5



NOTES:
 1. FOR GENERAL NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C5B/C00/1031.

CRCC - Paul Y Joint Venture

Title of Designated Project:
 Fanling Bypass Eastern Section

CONTRACT TITLE: ND/2019/05
FANLING NORTH NEW DEVELOPMENT AREA, PHASE 1: FANLING BYPASS EASTERN SECTION (SHUNG HIM TONG TO KAU LUNG HANG)

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B	AUG-19	TENDER ADDENDUM NO.3	RPCM
A	JUL-19	TENDER ADDENDUM NO.2	RPCM
-	JUN-19	TENDER DRAWING	RPCM

STATUS

SCALE A1 1:1000
DIMENSION UNIT METRES
KEY PLAN A1 1:70000



PROJECT NO. 60335576
CONTRACT NO. ND/2019/05

SHEET TITLE PORTION OF SITE

SHEET NUMBER 60335576/C5B/C00/1034B
 SHEET 4 OF 5

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CRCC - Paul Y Joint Venture

Title of Designated Project:
Fanling Bypass Eastern Section

CONTRACT TITLE: ND/2019/05

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

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A	AUG-19	TENDER ADDENDUM NO.3	RPCM
-	JUN-19	TENDER DRAWING	RPCM
IR	DATE	DESCRIPTION	CHK.
	日期	內容摘要	

STATUS

SCALE DIMENSION UNIT

A1 1: 1000 METRES

KEY PLAN A1 1: 70000



PROJECT NO.

60335576

CONTRACT NO.

ND/2019/05

SHEET TITLE

PORTION OF SITE

SHEET 5 OF 5

SHEET NUMBER

60335576/C5B/C00/1035A

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Figure 17

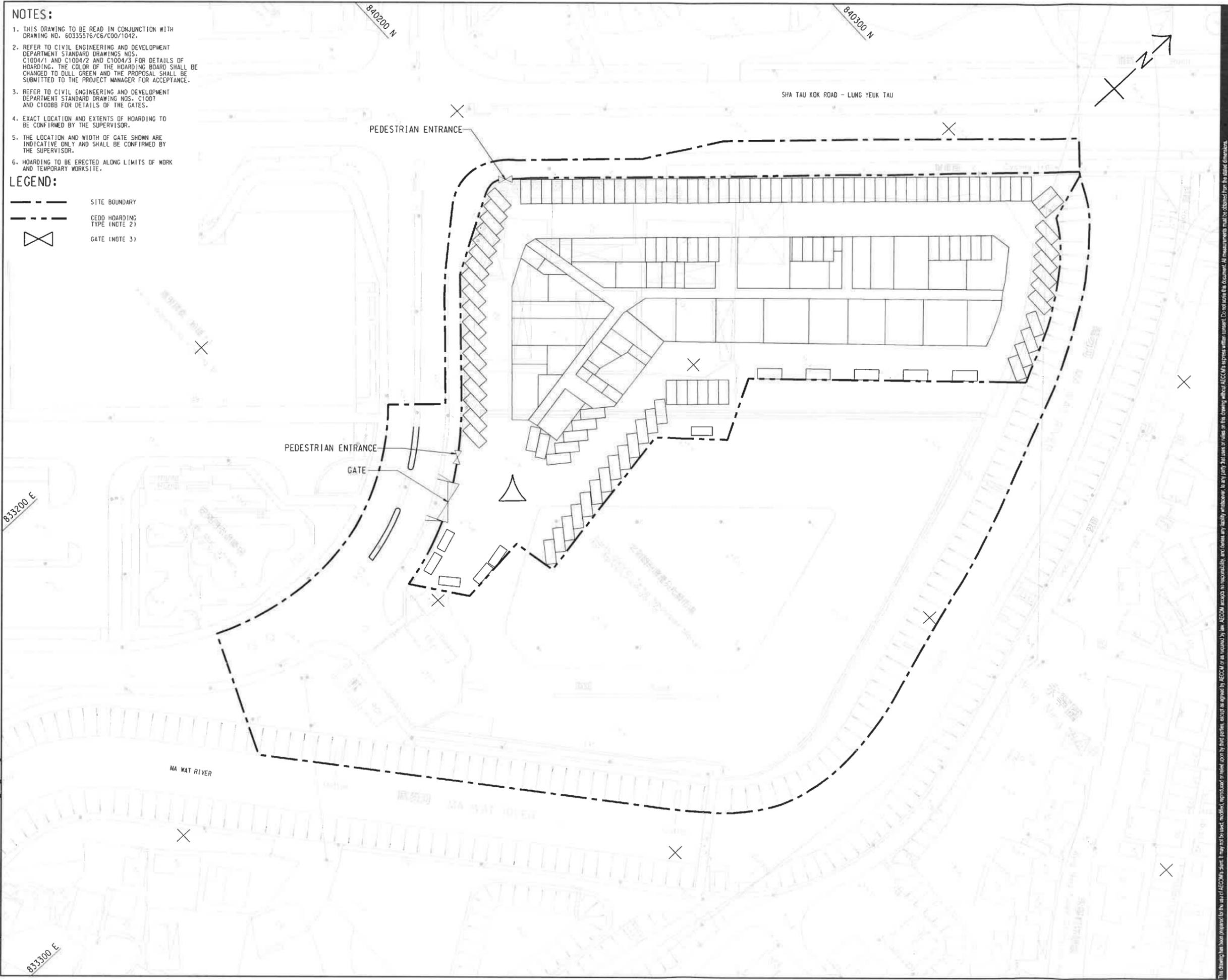
Hoarding Plan

EP-475/2013/A

Project Management Initials: Designer: DMCH Checked: ALUI
 ISO A1 841mm x 841mm
 Approved: IRWL
 2014/09/18
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- NOTES:**
- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NO. 60335576/C6/C00/1042.
 - REFER TO CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT STANDARD DRAWINGS NOS. C1004/1 AND C1004/2 AND C1004/3 FOR DETAILS OF HOARDING. THE COLOR OF THE HOARDING BOARD SHALL BE CHANGED TO DULL GREEN AND THE PROPOSAL SHALL BE SUBMITTED TO THE PROJECT MANAGER FOR ACCEPTANCE.
 - REFER TO CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT STANDARD DRAWING NOS. C1007 AND C1008B FOR DETAILS OF THE GATES.
 - EXACT LOCATION AND EXTENTS OF HOARDING TO BE CONFIRMED BY THE SUPERVISOR.
 - THE LOCATION AND WIDTH OF GATE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISOR.
 - HOARDING TO BE ERRECTED ALONG LIMITS OF WORK AND TEMPORARY WORKSITE.

- LEGEND:**
-  SITE BOUNDARY
 -  CEDD HOARDING TYPE (NOTE 2)
 -  GATE (NOTE 3)



AECOM

PROJECT

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

CONTRACT TITLE:

FANLING NORTH NEW DEVELOPMENT AREA, PHASE 1: REPROVISIONING OF NORTH DISTRICT TEMPORARY WHOLESALE MARKET FOR AGRICULTURAL PRODUCTS

CLIENT

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

CONSULTANT

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ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
-	FEB-19	TENDER DRAWING	ALUI

STATUS

圖則

SCALE 比例: A1: 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖

PROJECT NO. 項目編號: 60335576

CONTRACT NO. 合約編號: ND/2019/06

SHEET TITLE 圖則名稱: HOARDING PLAN (INTERIM STAGE)

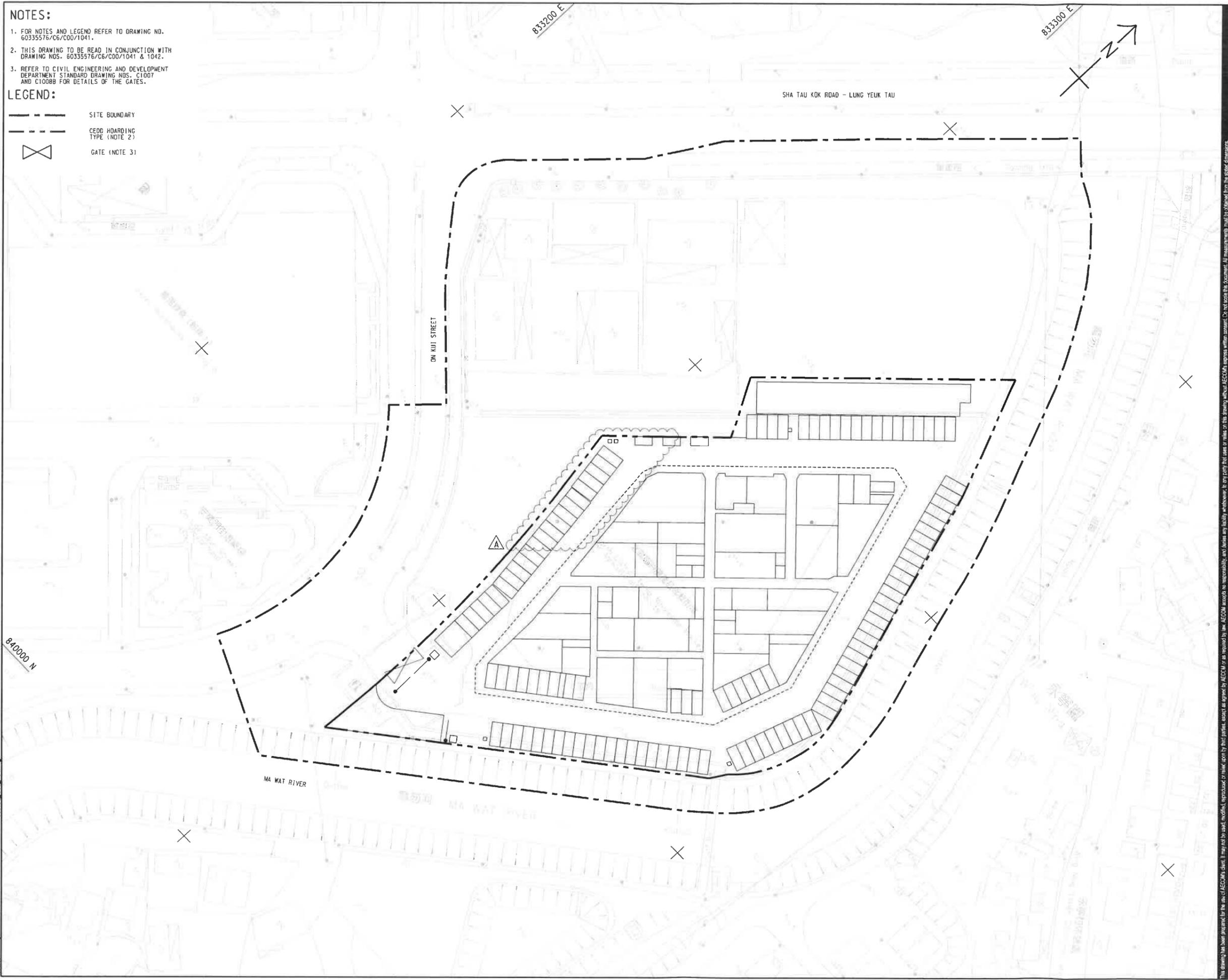
SHEET NUMBER 圖則編號: 60335576/C6/C00/1041

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ISO A1 594mm x 841mm
 Approved: IHML
 Checked: ALU
 Designer: DMCH
 Project Management Initials:
 2018/2019
 P:\Projects\60335576\60335576\CONTRACT\081000\08_C00_1042.dwg
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- NOTES:**
- FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C6/C00/1041.
 - THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C6/C00/1041 & 1042.
 - REFER TO CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT STANDARD DRAWING NOS. C1007 AND C1008B FOR DETAILS OF THE GATES.

- LEGEND:**
-  SITE BOUNDARY
 -  CEDD HOARDING TYPE (NOTE 2)
 -  GATE (NOTE 3)



AECOM

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

CONTRACT TITLE:
 FANLING NORTH NEW DEVELOPMENT AREA, PHASE 1: REPROVISIONING OF NORTH DISTRICT TEMPORARY WHOLESALE MARKET FOR AGRICULTURAL PRODUCTS

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

CONSULTANT
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ISSUE/REVISION

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A	JUN-19	TENDER ADDENDUM NO. 2	ALU
-	FEB-19	TENDER DRAWING	ALU

STATUS
 狀態

SCALE
 比例
 A1 1 : 500

DIMENSION UNIT
 尺寸單位
 METRES

KEY PLAN
 索引圖

PROJECT NO.
 項目編號
 60335576

CONTRACT NO.
 合約編號
 ND/2019/06

SHEET TITLE
 圖紙名稱
 HOARDING PLAN (FINAL STAGE)

SHEET NUMBER
 圖紙編號
 60335576/C6/C00/1042A

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**APPENDIX A
CONSTRUCTION PROGRAMME**

Construction Programme of ND/2019/01

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2021					January 2022					February 2022					March 2022				
							28	05	12	19	26	02	09	16	23	30	06	13	20	27	06	13	20	27		
Revised Programme (2021-12-25) Rev.0 Portion 2 draft																										
2.0 - Site Access Dates																										
AD-1000	Portion 1a	0	25-Dec-21*		-172	CD(7d)																				
AD-1010	Portion 1b - (Minor Area Handovered on 7 May 2020)	0	25-Dec-21*		-172	CD(7d)																				
AD-1020	Portion 1c	0	06-Jan-22*		0	CD(7d)																				
AD-1150	Portion 9a	0	06-Jan-22*		0	CD(7d)																				
AD-1230	Portion 12	0	25-Dec-21*		-172	CD(7d)																				
AD-1240	Portion 13	0	06-Jan-22*		0	CD(7d)																				
3.0 - Site Completion Dates																										
3.1 Sectional Work Completion (Original Contract Completion Date)																										
SC0-1010	Section 2A - all works in Area C1	0		06-Feb-22*	0	CD(7d)																				
SC0-1030	Section 3 - all works in Area E	0		21-Feb-22*	0	CD(7d)																				
4.0 - Key Dates																										
4.2 Planned Key Date Completion																										
KD-1000	KD1 609 days after starting date	0		31-Jan-22*	-178	CD(7d)																				
KD-1060	KD7 517 days after starting date	0		31-Jan-22*	-270	CD(7d)																				
6.0 - Preliminaries and General Requirements																										
6.2 - General Submissions																										
GS-1230	Submission of Major Method Statements	42	06-Dec-19 A	04-Feb-22	349	CD(7d)																				
GS-1290	Preparation and Submission of Fully Corrodated BIM	1496	21-Aug-20 A	28-Jan-26*	8	CD(7d)																				
7.0 Construction																										
Section 1																										
S1-1022	Potential Delay on Production and Supply of Precast Concrete Pipes (EWN 040) (CNE 047)	0		25-Dec-21	-434	CD(7d)																				
S1-1024	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0		25-Dec-21	-376	CD(7d)																				
S1-1026	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0		25-Dec-21	-376	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																										
S1K1-1000	Planned Completion KD1	0		31-Jan-22	-178	CD(7d)																				
Civil Works																										
Road D1 (Stage 1)																										
S1K1-2000	Construct & maintain Temporary drainage	29	28-Dec-21	31-Jan-22	-146	WD(6d)																				
S1K1-2009	Underground Fresh & Flushing watermain (under footpath)	16	14-Aug-21 A	15-Jan-22	-306	WD(6d)																				
S1K1-2010	Pressure test for Fresh & Flushing watermain (around 190m)	12	17-Jan-22	29-Jan-22	-238	WD(6d)																				
S1K1-2014	Underground utilities (under footpath)	30	03-May-21 A	04-Feb-22	-240	WD(6d)																				
S1K1-2014.01	Underground utilities (under carriageway)	8	25-Sep-21 A	06-Jan-22	-180	WD(6d)																				
S1K1-2016	Road works - Formation & Sub base	11	27-Oct-21 A	10-Jan-22	-180	WD(6d)																				
S1K1-2018	Road works - Road kerb	12	15-Nov-21 A	24-Jan-22	-155	WD(6d)																				
S1K1-2020	Road works - Laying bituminous paving	6	25-Jan-22	31-Jan-22	-146	WD(6d)																				
Road D1 (Stage 2) Castle Peak road junction																										
S1K1-2024	Construct & maintain Temporary drainage	306	28-Dec-21	07-Jan-23	-378	WD(6d)																				
S1K1-2026	Underground Drainage ELS & Excavation (around 40m)	20	18-Oct-21 A	20-Jan-22	-374	WD(6d)																				
S1K1-2028	Underground Drainage (around 40m)	38	20-Dec-21 A	09-Mar-22	-374	WD(6d)																				
S1K1-2030	Underground Sewerage (around 40m)	38	20-Dec-21 A	27-Apr-22	-374	WD(6d)																				
S1K1-2032	Underground Fresh & Flushing watermain (around 40m)	66	22-Mar-22	14-Jun-22	-374	WD(6d)																				
Road L1																										

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2021					January 2022					February 2022					March 2022				
							28	05	12	19	26	02	09	16	23	30	06	13	20	27	06	13	20	27		
Portion 7 in Area E (Soil Treatment & Interface with HKHS's Contractors)																										
Soil Treatment																										
S3P7-2000	Construct & maintain Temporary drainage	44	28-Dec-21	21-Feb-22	0	WD(6d)																				
S3P7-2010	Remove soil (original assumed 15718m3) (3 / 4 EGI completed, interim soil to be excavated / treated : 6300m3 / 2000m3)	24	20-Apr-21 A	25-Jan-22	0	WD(6d)																				
S3P7-2020	Backfilling to the formation levels & Construct Chain Link Fence	44	25-Oct-21 A	21-Feb-22	0	WD(6d)																				
Interface with HKHS's contractor to carry out GI																										
S3P7-3010	HKHS Contractor to carry out GI in Area E	12	02-Oct-21 A	11-Jan-22	32	WD(6d)																				
Section 4A																										
S4-1002	Delay in the Access to and Use of Portion 1b of the Site (EWN 034) (CNE 033)	0		25-Dec-21	-172	CD(7d)																				
Portion 1b in Area D1 (Soil Treatment & Interface with HD's Contractors)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S4AP1b-1010	Tree survey and prepare tree felling and transplant report	30	03-Sep-21 A	04-Feb-22	65	WD(6d)																				
S4AP1b-1012	Approval & Acceptance of Tree Felling Application	30	05-Feb-22	06-Mar-22	81	CD(7d)																				
S4AP1b-1020	Site Clearance & Tree Felling	60	12-Mar-22	27-May-22	63	WD(6d)																				
Soil Treatment																										
S4AP1b-2002	Remove soil (Grid SA4AG6)	68	22-Dec-21 A	21-Mar-22	260	WD(6d)																				
Section 4B																										
S4B-1002	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)	0		25-Dec-21	245	CD(7d)																				
Portion 1c in Area D2 (Soil Treatment & Interface with HD's Contractors)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S4BP1c-1010	Tree survey and prepare tree felling and transplant report	30	06-Jan-22	12-Feb-22	189	WD(6d)																				
S4BP1c-1012	Approval & Acceptance of Tree Felling Application	30	13-Feb-22	14-Mar-22	234	CD(7d)																				
S4BP1c-1020	Site Clearance & Tree Felling	60	21-Mar-22	06-Jun-22	189	WD(6d)																				
Section 4C																										
S4C-1002	Delay in the Access to and Use of Portion 1b of the Site (EWN 034) (CNE 033)	0		25-Dec-21	-172	CD(7d)																				
Portion 1b in Area D3 (Soil Treatment & Interface with ArchSD's Contractors)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S4CP1b-1010	Tree survey and prepare tree felling and transplant report	26	03-Sep-21 A	27-Jan-22	59	WD(6d)																				
S4CP1b-1012	Approval & Acceptance of Tree Felling Application	30	28-Jan-22	26-Feb-22	74	CD(7d)																				
S4CP1b-1020	Site Clearance & Tree Felling	60	28-Feb-22	14-May-22	57	WD(6d)																				
Interface with ArchSD's Wet Market Contractor to carry out GI																										
S4CP1b-3010	ArchSD's Wet Market Contractor to carry out GI in Area D3	24	28-Dec-21	25-Jan-22	304	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	26	11-Nov-21 A	19-Jan-22	32	CD(7d)																				
S6AP1e-1020	Site Clearance & Tree Felling	60	27-Jan-22	11-Apr-22	24	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-Jan-22	898	CD(7d)																				
S6BP1e-1020	Site Clearance & Tree Felling	60	27-Jan-22	11-Apr-22	726	WD(6d)																				
Section 7 (Subject to excision)																										
Portion 14 in Area K (Complete TSPS with Associated Sewerage)																										
KD2 - Complete Temporary Sewage Pumping Station and associated rising mains and sewers, and connect																										
Sewerage Works																										
S7P14-4000	Construct & maintain Temporary drainage	72	28-Dec-21	25-Mar-22	280	WD(6d)																				



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

ND/2019/01 - 3 Month Rolling Programme (2021-12)

Data Date: 25-Dec-21

Run Date: 30-Dec-21

Project ID: ND201901-RP-22.0.3
 Layout: ND201901-3MRP with logo
 Page 3 of 12

THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
30-Dec-21	Rev.0	SC	BY

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2021					January 2022					February 2022					March 2022				
							28	05	12	19	26	02	09	16	23	30	06	13	20	27	06	13	20	27		
Portion 8a in Area A (Soil Treatment, Reservoirs, Slope, Drainage & Roadwork)																										
S8P8a-1104	Unforeseen Ground Condition (Possible High Bedrock Level Encountered) at Portion 8a (EWN 022)	0		04-Dec-21 A		CD(7d)	◆ Unforeseen Ground Condition (Possible High Bedrock Level Encountered) at Portion 8a (EWN 022)																			
S8P8a-1106	Design Change on Road W1 (EWN 025)	0		25-Dec-21	-119	CD(7d)	◆ Design Change on Road W1 (EWN 025)																			
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	11-Jan-22	37	WD(6d)	[Green bar from Dec 21 to Jan 11]																			
S8P8a-1046	Verification of Ground Condition & Design Review by Project Manager (to Fresh Water Service Reservoir)	60	12-Jan-22	12-Mar-22	46	CD(7d)	[Green bar from Jan 12 to Mar 12]																			
Forming Site Access and Site Formation																										
Stage 1 General Excavation near Flushing Water Service Reservoir (Excavation Volume 52834 m3)																										
S8P8a-1105	Construct & maintain Temporary drainage	39	28-Dec-21	15-Feb-22	-99	WD(6d)	[Red bar from Dec 28 to Feb 15]																			
S8P8a-1160	General excavation for remaining of Road W1	39	11-Jun-20 A	15-Feb-22	-99	WD(6d)	[Red bar from Jun 11 to Feb 15]																			
Stage 2 General Excavation near Fresh Water Service Reservoir (Excavation Volume 299396 m3)																										
S8P8a-1208	Construct & maintain Temporary drainage	13	28-Dec-21	12-Jan-22	-72	WD(6d)	[Red bar from Dec 28 to Jan 12]																			
S8P8a-1220	General excavation for New Feature KS47 and adjacent road	13	01-Dec-20 A	12-Jan-22	-72	WD(6d)	[Red bar from Dec 01 to Jan 12]																			
S8P8a-1230	General excavation for New Feature KS49 and adjacent road	13	11-Jan-21 A	12-Jan-22	-72	WD(6d)	[Red bar from Jan 11 to Jan 12]																			
S8P8a-1240	General excavation for area surrounding Fresh Water Service Reservoir	13	01-Dec-20 A	12-Jan-22	-72	WD(6d)	[Red bar from Dec 01 to Jan 12]																			
S8P8a-1250	General excavation for remaining of Road W2	13	14-Dec-20 A	12-Jan-22	-72	WD(6d)	[Red bar from Dec 14 to Jan 12]																			
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-Dec-21	-126	CD(7d)	◆ Temporary Stockpile at Portion 5 and Additional Land D (EWN No. 020) (CNE No. 020, 037, 038)																			
S8K8-6002	Strong Objection on the Construction of Fresh and Flushing Reservoirs (EWN 031) Maintenance Access beside KS47	0		25-Dec-21	-69	CD(7d)	◆ Strong Objection on the Construction of Fresh and Flushing Reservoirs (EWN 031) Maintenance Access beside KS47																			
Construction of Kwu Tung North Flushing Water Service Reservoir (KTN FLWSR)																										
Civil Works																										
S8K8-1005	Construct & maintain Temporary drainage	295	28-Dec-21	23-Dec-22	23	WD(6d)	[Green bar from Dec 28 to Dec 23]																			
S8K8-1030.052	Construction of Outlet Chamber	19	07-Jun-21 A	19-Jan-22	23	WD(6d)	[Green bar from Jun 07 to Jan 19]																			
S8K8-1030.06	Construction of Base Slab bay 7 (GL 12 - 15 & GL A - G)	4	06-Dec-21 A	31-Dec-21	38	WD(6d)	[Green bar from Dec 06 to Dec 31]																			
S8K8-1030.07	Construction of Base Slab bay 8 (GL 2 - 3 & GL E - F & B - C) (GL 12 - 14 & GL E - F & B - C)	24	03-Jan-22	29-Jan-22	74	WD(6d)	[Green bar from Jan 03 to Jan 29]																			
S8K8-1030.212	Construction of Retaining wall at GL 1, GL 1 - 2 at GL G, GL 1 - 2 at GL D & GL 1 - 2 at GL A (Stage 2)	0	25-Sep-21 A	26-Nov-21 A		WD(6d)	[Blue bar from Sep 25 to Nov 26]																			
S8K8-1030.25	Construction of Retaining wall at GL 15	30	20-Jan-22	26-Feb-22	23	WD(6d)	[Green bar from Jan 20 to Feb 26]																			
S8K8-1030.26	Construction of Retaining wall GL 12 - 15 at GL G	30	28-Feb-22	02-Apr-22	23	WD(6d)	[Green bar from Feb 28 to Apr 02]																			
S8K8-1030.27	Construction of Retaining wall GL 12 - 15 at GL A	30	28-Feb-22	02-Apr-22	23	WD(6d)	[Green bar from Feb 28 to Apr 02]																			
S8K8-1030.30	Construction of Columns Stage 2 (0 / 8 Nos)	36	31-Jan-22	16-Mar-22	74	WD(6d)	[Green bar from Jan 31 to Mar 16]																			
S8K8-1030.44	Construction of Roof Slab bay 3a (GL 1 - 4 & GL A - D)	0	15-Nov-21 A	29-Nov-21 A		WD(6d)	[Blue bar from Nov 15 to Nov 29]																			
S8K8-1030.45	Construction of Roof Slab bay 3 (GL 1 - 4 & GL D - G)	0	30-Nov-21 A	13-Dec-21 A		WD(6d)	[Blue bar from Nov 30 to Dec 13]																			
E&M Works																										
S8K8-2010	Design and Approval for E&M works for KTN FLWSR	30	01-Feb-21 A	23-Jan-22	217	CD(7d)	[Green bar from Feb 01 to Jan 23]																			
S8K8-2020	Submission and Approval of E&M plants & materials for KTN FLWSR	70	01-Feb-21 A	04-Mar-22	177	CD(7d)	[Green bar from Feb 01 to Mar 04]																			
S8K8-2030	Procurement of E&M equipment for KTN FLWSR	60	05-Mar-22	03-May-22	177	CD(7d)	[Green bar from Mar 05 to May 03]																			
Construction of Kwu Tung North Freshwater Service Reservoir (KTN FWSR)																										
Civil Works																										
S8K8-3000	Construct & maintain Temporary drainage	594	28-Dec-21	28-Dec-23	0	WD(6d)	[Red bar from Dec 28 to Dec 28]																			
S8K8-3004	Erection of Tower Crane	6	08-Jan-22	14-Jan-22	399	WD(6d)	[Green bar from Jan 08 to Jan 14]																			
S8K8-3020	Excavation in rock (238167m3)	0	01-Dec-20 A	04-Dec-21 A		WD(6d)	[Blue bar from Dec 01 to Dec 04]																			
S8K8-3025	Construction of Sub soil drainage (Stage 1)	29	06-Dec-21 A	31-Jan-22	-59	WD(6d)	[Red bar from Dec 06 to Jan 31]																			
S8K8-3030	RC structure (Conc. 9700m3, 4 gangs)	473	13-Jan-22	18-Aug-23	-72	WD(6d)	[Red bar from Jan 13 to Aug 18]																			
E&M Works																										
S8K8-4010	Design and Approval for E&M works for KTN FWSR	160	25-Dec-21	02-Jun-22	-90	CD(7d)	[Red bar from Dec 25 to Jun 02]																			
Remaining Civil Work in Portion 8a Area A																										
S8P8a-2208	Construct & maintain Temporary drainage	12	28-Dec-21	11-Jan-22	-71	WD(6d)	[Red bar from Dec 28 to Jan 11]																			
S8P8a-2290	Slopeworks for KS47 - Slope cutting and soil nail installation Row J + Row K (87 Nos Soil nails) + Berm & U channel	0	12-Apr-21 A	15-Dec-21 A		WD(6d)	[Blue bar from Apr 12 to Dec 15]																			
S8P8a-2310	Slopeworks for KS47 - Slope cutting and soil nail installation Row F + Row G (125 Nos Soil nails) + Berm & U channel	12	07-Jun-21 A	11-Jan-22	-71	WD(6d)	[Blue bar from Jun 07 to Jan 11]																			
S8P8a-2336	Construct & maintain Temporary drainage	8	28-Dec-21	06-Jan-22	-67	WD(6d)	[Red bar from Dec 28 to Jan 06]																			
S8P8a-2338	Slopeworks for KS49 - Slope cutting and soil nail Row P + Row Q + Row R (11 Nos Soil nails) + Berm & U channel	0	03-May-21 A	13-Dec-21 A		WD(6d)	[Blue bar from May 03 to Dec 13]																			



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

ND/2019/01 - 3 Month Rolling Programme (2021-12)

Data Date: 25-Dec-21

Run Date: 30-Dec-21

Project ID: ND201901-RP-22.0.3
 Layout: ND201901-3MRP with logo
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THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
30-Dec-21	Rev.0	SC	BY

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	December 2021					January 2022				February 2022				March 2022			
							28	05	12	19	26	02	09	16	23	30	06	13	20	27	06	13	20
EC-1055	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0	16-Oct-21 A	25-Dec-21	-376	CD(7d)	[Gantt bar: 16-Oct-21 to 25-Dec-21]																
EC-1056	Inclement Weather on 8th October 2021 (CNE 036)	0	08-Oct-21 A	25-Dec-21	1839	CD(7d)	[Gantt bar: 08-Oct-21 to 25-Dec-21]																
EC-1057	Tropical Cyclone Warning Signal No.8 on 9th October 2021 (CNE 039)	0	09-Oct-21 A	25-Dec-21	1839	CD(7d)	[Gantt bar: 09-Oct-21 to 25-Dec-21]																
EC-1058	Tropical Cyclone Warning Signal No.8 on 13th October 2021 (CNE 040)	0	13-Oct-21 A	25-Dec-21	1839	CD(7d)	[Gantt bar: 13-Oct-21 to 25-Dec-21]																
EC-1059	The footing detail for Roadside Directional Sign ADS30 at Portion 5 (EWN 043)	0	22-Oct-21 A	25-Dec-21	-47	CD(7d)	[Gantt bar: 22-Oct-21 to 25-Dec-21]																
EC-1060	Design Review for the Construction of Road D5 and L-Shape Retaining Walls KW02, KW03 & KW04 (EWN 044) (CNE 045)	0	26-Oct-21 A	23-Dec-21 A		CD(7d)	[Gantt bar: 26-Oct-21 to 23-Dec-21]																
EC-1061	Suspension of Concretes Supply due to Cement Shortage (EWN 045) (CNE 046)	0	02-Nov-21 A	25-Dec-21	1839	CD(7d)	[Gantt bar: 02-Nov-21 to 25-Dec-21]																
EC-1062	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)	0	13-Dec-21 A	25-Dec-21	-47	CD(7d)	[Gantt bar: 13-Dec-21 to 25-Dec-21]																
EC-1063	Potential Late Access to and Use of the Site (Portions 13) (EWN 50)	0	13-Dec-21 A	25-Dec-21	1839	CD(7d)	[Gantt bar: 13-Dec-21 to 25-Dec-21]																
EC-1064	Extra Time on Production and Delivery of Road Lighting Products (EWN 51)	0	13-Dec-21 A	25-Dec-21	1839	CD(7d)	[Gantt bar: 13-Dec-21 to 25-Dec-21]																



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

ND/2019/01 - 3 Month Rolling Programme (2021-12)

Data Date: 25-Dec-21

Run Date: 30-Dec-21

Project ID: ND201901-RP-22.0.3
 Layout: ND201901-3MRP with logo
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THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
30-Dec-21	Rev.0	SC	BY

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

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

Portion 7
1. Site Clearance
2. Construction of APLR
3. Sheet piling & Excavation
4. Pipe laying

Portion 8a
1. Construction of Retaining Wall
2. Slope Cutting
3. Soil nailing
4. Slope Drainage & maintenance access construction
5. Excavation for Fresh water service Reservoir
6. RC construction of Flushing/ Fresh water service Reservoir
7. Construction of temp Haul road

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

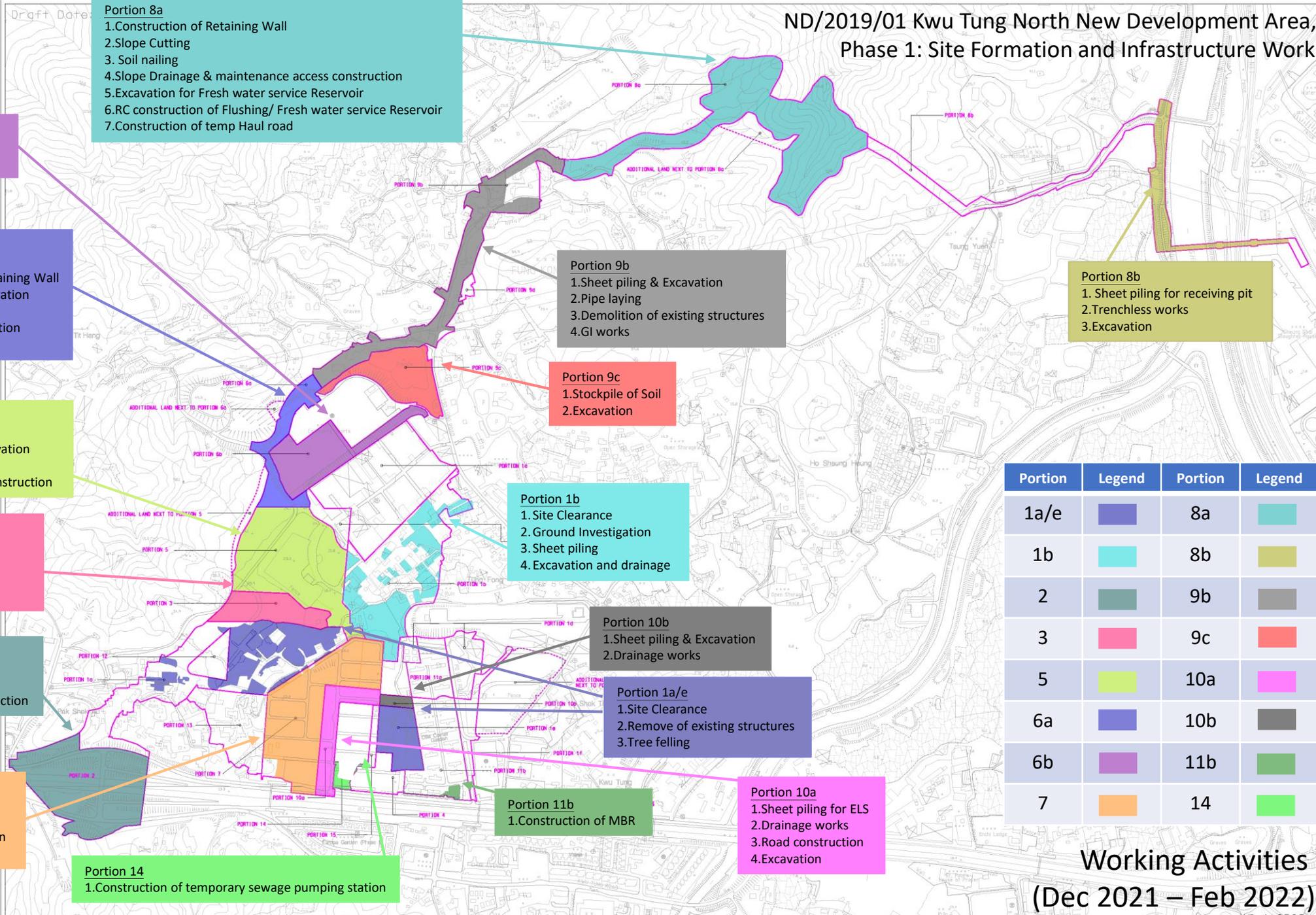
Portion 10a
1. Sheet piling for ELS
2. Drainage works
3. Road construction
4. Excavation

Portion 14
1. Construction of temporary sewage pumping station

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
(Dec 2021 – Feb 2022)



Construction Programme of ND/2019/02

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

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance	2021		2022			
										Nov	Dec	Jan	Feb	Mar	
ND-2019-02 KTNDA Phase 1: Roads and Drains between Kwu Tong North New Development Area and Shek Wu Hui															
Contract Data															
Access Dates															
CD-1210	WA 1 (365 d after Starting Date) (16 Feb 21)	0	0	27-Feb-21	27-Feb-21	30-Nov-21*	30-Nov-21	-287	0						
Programme Data															
Compensation Event															
CE-023 Revised Alignment for Drainage and Sewerage Pipes outside Future CLP ESS Site															
CE0023-2	CE-023 Revised Alignment for Drainage and Sewerage Pipe Outside Future CLP ESS Site	0	201			12-Apr-21 A	18-Jun-22	-133							
Preliminaries															
Statutory Submission															
HyD															
XP-1010	Excavation permit (XP) application for Portion 4 & 5 (On Hold due to Drainage Installation)	70	14	30-Sep-20	08-Dec-20	16-Jun-20 A	06-Feb-23	-297	0						
Site Offices & Preliminaries															
Site Offices & Preliminaries															
Temporary office for RE															
SP-1000b	Maintenance of container office	1739	1399	30-Sep-20	04-Jul-25	25-Mar-20 A	28-Sep-25	449	0						
Contractor's Design															
Temporary Works Design															
Sewage Pumping Station															
TWD-1020	ELS Design - 2nd submission to PM & Approval	21	21			30-Nov-21	20-Dec-21	1836							
Footbridge FK2															
TWD-1160	Formwork and Falsework Design - Review and Resubmission	14	0			20-Aug-21 A	08-Feb-22	-15							
TWD-1170	Formwork and Falsework Design - 2nd submission to PM & Approval	21	21			08-Feb-22	01-Mar-22	-15							
Visitor Centre															
TWD-1090	Formwork and Falsework Design - 1st submission to PM & review	21	21			30-Nov-21	20-Dec-21	51							
TWD-1100	Formwork and Falsework Design - Review and Resubmission	14	14			21-Dec-21	03-Jan-22	51							
TWD-1110	Formwork and Falsework Design - 2nd submission to PM & Approval	21	21			04-Jan-22	24-Jan-22	51							
Road lighting															
RD-1000	Preparation of Road Lighting system (PS section 30)	90	90	27-Feb-21	15-Jun-21	30-Nov-21	19-Mar-22	-43	0						
Irrigation System															
IS-1000	Preparation of Irrigation System (PS section 3)	90	90	04-Mar-22	21-Jun-22	25-Feb-22	14-Jun-22	98	0						
E&M and BS															
Sewage Pumping Station															
ConD-1090	Preparation of E&M and BS works for Sewage Pumping Station (PS section 13,29,30,31,32)	60	60	30-Sep-21	11-Dec-21	14-Dec-21	28-Feb-22	159	0						
Works in Section 1															
Portion 1 - Road & Drains															
Pre-construction works															
P1-1580	Removal of Existing Stormwater Drains / channels next to Dill Corner Garden	16	16	13-Apr-21	04-May-21	03-Jan-22*	20-Jan-22	0	6						
Sewer Installation from KT1.23 to KT1.26A by Pipejacking (By CE-023)															
Pipe-Jacking (KT1.26A to KT1.23)															
P1-1320	Set up Pipe jacking TBM (For DN800 Pipe)	19	23	09-Jul-21	30-Aug-21	24-Nov-21 A	27-Dec-21	-111	2						
P1-1330	Jacking from FMH_KT1.26A to FMH_KT1.23 (DN800 Pipe) (~3m / day)	25	25	31-Aug-21	20-Dec-21	28-Dec-21	26-Jan-22	-111	2						
P1-1340	Removal of TBM at KT1.23	7	7	21-Dec-21	20-Jan-22	27-Jan-22	07-Feb-22	-111	0						
Drainage Installation from KT2003 to KT6003A by Pipejacking (By CE-023)															
Shaft at SMH_KT2003															
ELS															

▶ Primary Baseline ◆ Critical ...
▬ Actual Work ◆ Non-Crit...
▬ Remaining Work
▬ Critical Remaining Work
◆ Baseline Milestone

Data Date: 30-Nov-21
 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 (Nov 2021 to Feb 2022)

Date	Revision	Checked	Approved
30-Nov-21	Rev 0 (Three Months Rolling Progr...	TW	ZL

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

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance	2021		2022		
										Nov	Dec	Jan	Feb	Mar
P1-1585	ELS for Receiving Pit	53	6			05-Jun-21 A	06-Dec-21	-59	7					
Pipe Jacking (KT6003A to KT2003)		36	36	02-Jun-21	04-Jun-21	08-Feb-22	21-Mar-22	-111						
P1-1155	Set Up Concrete Block Platform for Pipe Jacking	3	3			08-Feb-22	10-Feb-22	-111	2					
P1-1160	Set Up Pipe Jacking TBM	4	4	02-Jun-21	04-Jun-21	11-Feb-22	15-Feb-22	-111	0					
P1-1190	Pipe Jacking with 2.1m dia. Precast Concrete Pipe (Direct Jack) (~3m/day)	29	29			16-Feb-22	21-Mar-22	-111	5					
Works in Section 2		452	102	30-Sep-20	21-Oct-23	08-Sep-20 A	02-Apr-22	608						
Portion 2 - Road & Drains		452	102	30-Sep-20	02-Jul-22	08-Sep-20 A	02-Apr-22	608						
Pre-construction works		418	68	30-Sep-20	28-Apr-21	08-Sep-20 A	22-Feb-22	-138						
P2-1030	Inspection Pit	36	14	30-Sep-20	18-Nov-20	08-Sep-20 A	15-Dec-21	-138	4					
P2-1040	Coordination with UU owner to arrange diversion / abandon	54	54	24-Mar-21	28-Apr-21	16-Dec-21	22-Feb-22	-138	3					
Sewer Installation from KT1.29A to KT1.30A by pipejacking		96	96			07-Dec-21	02-Apr-22	549						
Launching shaft at FMH_KT1.30A		96	96			07-Dec-21	02-Apr-22	549						
ELS		96	96			07-Dec-21	02-Apr-22	549						
P2-3125	Tree Felling Proposal Submission and Approval	96	96			07-Dec-21*	02-Apr-22	549	0					
Sewer Installation from KT1.30A to KT1.32A by pipejacking		32	32			23-Feb-22	31-Mar-22	610						
Launching shaft at FMH_KT1.32A		32	32			23-Feb-22	31-Mar-22	610						
ELS		32	32			23-Feb-22	31-Mar-22	610						
P2-7190	Set up TTA at Castle Peak Road Carriageway (westbound)	3	3			23-Feb-22	25-Feb-22	610	0					
P2-7200	ELS for inspection shaft at FMH_KT1.32A	29	29			25-Feb-22	31-Mar-22	610	6					
Sewer Installation from KT1.33A to KT1.32A by pipejacking		32	32	29-Jun-22	02-Jul-22	23-Feb-22	31-Mar-22	431						
Launching shaft at FMH_KT1.33A		32	32	29-Jun-22	02-Jul-22	23-Feb-22	31-Mar-22	431						
ELS		32	32	29-Jun-22	02-Jul-22	23-Feb-22	31-Mar-22	431						
P2-4000	Set up TTA at Castle Peak Road Footpath	3	3	29-Jun-22	02-Jul-22	23-Feb-22	25-Feb-22	431	0					
P2-7250	ELS for inspection shaft at FMH_KT1.33A	29	29			25-Feb-22	31-Mar-22	431	6					
Portion 3 - Road & Drains		84	84	11-Apr-22	03-Sep-22	30-Nov-21	12-Mar-22	105						
Pre-construction works		14	14	11-Apr-22	06-May-22	30-Nov-21	15-Dec-21	-16						
P3-1050	Circulation & Approval of TTAs	14	14	11-Apr-22	06-May-22	30-Nov-21	15-Dec-21	-16	0					
Sewer Pipeline Installation (KT1.33A to KT1.41A)		70	70	06-May-22	03-Sep-22	16-Dec-21	12-Mar-22	105						
KT1.33A - KT1.36A (23m) (Open Cut by CE-068)		16	16			22-Feb-22	12-Mar-22	-16						
P3-5030	Sheet Pile Installation	16	16			22-Feb-22	12-Mar-22	-16	2					
KT1.36A - KT1.37A (90m) (Open Cut by CE-068)		53	53	06-May-22	07-Jun-22	04-Jan-22	10-Mar-22	74						
P3-2000	Expose Utilites by Hand excavation	7	7	06-May-22	25-May-22	04-Jan-22	12-Jan-22	0	2					
P3-2005	Sheet Pile Installation	16	16	11-May-22	01-Jun-22	31-Jan-22	22-Feb-22	-16	2					
P3-2010	Soft Excavation to 1st strut level & Installation of strut S1	16	16	16-May-22	07-Jun-22	19-Feb-22	10-Mar-22	74	2					
KT1.37A - KT1.38A (99m) (Open Cut by CE-075)		53	53	15-Jul-22	23-Aug-22	04-Jan-22	10-Mar-22	101						
P3-2200	Expose Utilites by Hand excavation	7	7	15-Jul-22	03-Aug-22	04-Jan-22	12-Jan-22	-16	2					
P3-2210	Sheet Pile Installation	16	16	19-Jul-22	09-Aug-22	12-Jan-22	31-Jan-22	-16	2					
P3-2220	Soft Excavation to 1st strut level & Installation of strut S1	16	16	23-Jul-22	13-Aug-22	28-Jan-22	19-Feb-22	101	2					
P3-2230	Soft Excavation to 2nd strut level & Installation of strut S2	18	18	30-Jul-22	23-Aug-22	17-Feb-22	10-Mar-22	101	2					
KT1.38A - KT1.39A (99m) (Pipe Jacking by CE-074)		61	61	06-May-22	29-Jun-22	16-Dec-21	02-Mar-22	114						
P3-2300	Expose Utilites by Hand excavation	6	6	06-May-22	25-May-22	16-Dec-21	22-Dec-21	-16	2					
P3-2310	Sheet Pile Installation for receiving pit KT1.38A	21	21	10-May-22	31-May-22	18-Dec-21	14-Jan-22	-16	2					
P3-2320	Soft Excavation to 1st strut level & Installation of strut S1	16	16	13-May-22	04-Jun-22	14-Jan-22	05-Feb-22	114	2					
P3-2330	Soft Excavation to 2nd strut level & Installation of strut S2	18	18	20-May-22	14-Jun-22	21-Jan-22	14-Feb-22	114	2					

▶ Primary Baseline ◆ Critical ...
▬ Actual Work ◆ Non-Crit...
▬ Remaining Work
▬ Critical Remaining Work
◆ Baseline Milestone

Data Date: 30-Nov-21
 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
(Nov 2021 to Feb 2022)**

Date	Revision	Checked	Approved
30-Nov-21	Rev 0 (Three Months Rolling Progr...	TW	ZL

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

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance	2021		2022		
										Nov	Dec	Jan	Feb	Mar
P3-2340	Soft Excavation to 3rd strut level & Installation of strut S3	20	20	26-May-22	22-Jun-22	26-Jan-22	21-Feb-22	114	2					
P3-2350	Soft Excavation to F.L ; (approx. 8.5m depth)	24	24	31-May-22	29-Jun-22	31-Jan-22	02-Mar-22	114	2					
KT1.39A - KT1.40A (81m) (Pipe Jacking by CE-074)		60	60	17-Jun-22	03-Sep-22	16-Dec-21	01-Mar-22	3						
P3-2500	Expose Utilites by Hand excavation	6	6	17-Jun-22	12-Jul-22	16-Dec-21	22-Dec-21	3	2					
P3-2510	Sheet Pile Installation for launching shaft KT1.39A	21	21	24-Jun-22	23-Jul-22	18-Dec-21	14-Jan-22	3	2					
P3-2520	Soft Excavation to 1st strut level & Installation of strut S1	16	16	02-Jul-22	30-Jul-22	22-Dec-21	11-Jan-22	3	2					
P3-2530	Soft Excavation to 2nd strut level & Installation of strut S2	18	18	12-Jul-22	11-Aug-22	29-Dec-21	19-Jan-22	3	2					
P3-2540	Soft Excavation to 3rd strut level & Installation of strut S3	20	20	21-Jul-22	23-Aug-22	05-Jan-22	27-Jan-22	3	2					
P3-2550	Soft Excavation to F.L ; (approx. 8.5m depth)	24	24	30-Jul-22	03-Sep-22	07-Jan-22	07-Feb-22	3	2					
P3-2552	Set up concrete block platform for Pipe Jacking	5	5			08-Feb-22	12-Feb-22	3	2					
P3-2554	Set up Pipe Jacking TBM	14	14			14-Feb-22	01-Mar-22	3	2					
Portion 4 - Road & Drains		53	53	27-Feb-21	10-May-21	30-Nov-21	05-Feb-22	224						
Pre-construction works		53	53	27-Feb-21	10-May-21	30-Nov-21	05-Feb-22	224						
P4-1050	Trial Pit (3nos.), Submission & Approval of GI Report	53	53	27-Feb-21	10-May-21	30-Nov-21	05-Feb-22	224	3					
Portion 5 - Sewage Rising Main		85	85	29-Jun-23	21-Oct-23	30-Nov-21	15-Mar-22	408						
Sewage Rising Main Installation across Sheung Yue River by Pipejacking		85	85	29-Jun-23	21-Oct-23	30-Nov-21	15-Mar-22	408						
P5-3000	Site Setup, Set up TTA & Plant Mobilization	53	53	29-Jun-23	07-Sep-23	30-Nov-21	05-Feb-22	408	6					
P5-3010	Instrumentation Installation and Mointoring Works for existing footbridge	16	16	18-Aug-23	07-Sep-23	14-Jan-22	05-Feb-22	408	3					
P5-3020	ELS for Receiving Pit (4.5m x 3.5m; 5 layers of strut)	32	32	08-Sep-23	21-Oct-23	05-Feb-22	15-Mar-22	408	3					
Portion 7 - Kwu Tung North Sewage Pumping station		73	78			09-Oct-21 A	07-Mar-22	159						
Sewage Pumping Station		73	78			09-Oct-21 A	07-Mar-22	159						
Excavation		73	78			09-Oct-21 A	07-Mar-22	159						
P7-3110	Sheetpile installation (~135m; approx. 675nos;)	26	25			09-Oct-21 A	29-Dec-21	159	2					
P7-3115	Soft Excavation to 1st strut level (Area 1 & 2) (~950cu.m)	10	10			30-Dec-21	11-Jan-22	159	1					
P7-3117	Installation of strut S1 for Area 1 & 2	5	5			12-Jan-22	18-Jan-22	159	1					
P7-3119	Soft Excavation to 2nd strut level (Area 1 & 2, ~1000cu.m)	11	11			19-Jan-22	31-Jan-22	159	1					
P7-3120	Installation of strut S2 for Area 1 & 2	5	5			04-Feb-22	10-Feb-22	159	1					
P7-3125	Soft Excavation to -0.3mPD (Area 1 & 2, ~2563cu.m)	20	20			10-Feb-22	07-Mar-22	159	5					
Works in Section 3		74	74	26-Apr-21	23-Sep-22	22-Nov-21 A	01-Mar-22	68						
Portion 9 - Footbridge		74	74	26-Apr-21	23-Sep-22	22-Nov-21 A	01-Mar-22	68						
Footbridge Construction		74	74	26-Apr-21	23-Sep-22	22-Nov-21 A	01-Mar-22	68						
North River Embankment		65	65	26-Apr-21	23-Sep-22	09-Dec-21	01-Mar-22	-13						
Piling works in Existing Feature: 2SE-B/FR107 (North River Embankment)		4	4			09-Dec-21	15-Dec-21	16						
P9-1095	Proof Drill	4	4			09-Dec-21	15-Dec-21	16	1					
Abutment FK2-01M		32	32	26-Apr-21	17-May-21	19-Jan-22	01-Mar-22	-13						
P9-1110	ELS from +5.2 mPD to -0.7mPD (approx. 1000m3; 100m3/day)	27	27	26-Apr-21	10-May-21	19-Jan-22	23-Feb-22	-13	1					
P9-1120	Pile cutting to Pile Cut-Off level & Install Capping Plate (-0.09mPD)	5	5	11-May-21	17-May-21	23-Feb-22	01-Mar-22	-13	0					
Piling Works for Footway Ramp		19	19	12-Sep-22	23-Sep-22	28-Dec-21	19-Jan-22	-13						
P9-1450	Pile Load Test (including set up)	19	19	12-Sep-22	23-Sep-22	28-Dec-21*	19-Jan-22	-13	0					
South River Embankment		73	73	24-May-21	06-Nov-21	22-Nov-21 A	28-Feb-22	69						
Abutment FK2-04M		36	36	24-May-21	06-Nov-21	22-Nov-21 A	12-Jan-22	69						
P9-1270	Formwork and falsework for Pile Cap	5	5	24-May-21	05-Jun-21	22-Nov-21 A	06-Dec-21	71	1					
P9-1280	Rebar fixing for Pile Cap	9	9	31-May-21	18-Jun-21	25-Nov-21 A	09-Dec-21	69	2					

▶ Primary Baseline ◆ Critical ...
▶ Actual Work ◆ Non-Crit...
▶ Remaining Work
▶ Critical Remaining Work
◆ Baseline Milestone

Data Date: 30-Nov-21
 Project Start: 03-Feb-20
 Project End: 30-Dec-26
 Baseline: Monthly Markup Programme (Feb 2021) (Accepted on 15 April 2021)
 Page : 3 of 4

Three Months Rolling Programme (Nov 2021 to Feb 2022)

Date	Revision	Checked	Approved
30-Nov-21	Rev 0 (Three Months Rolling Progr...)	TW	ZL

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

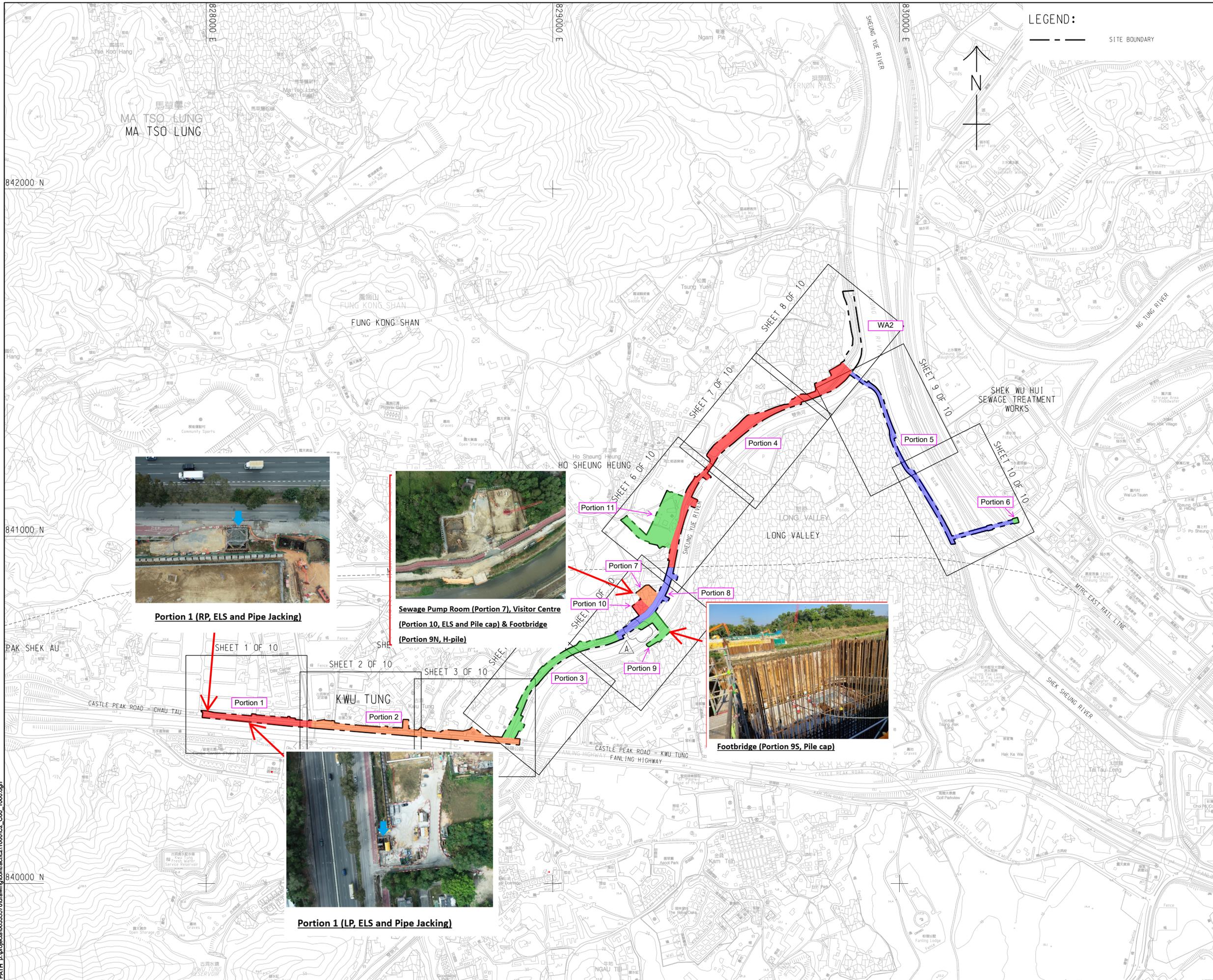
Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance	2021		2022		
										Nov	Dec	Jan	Feb	Mar
P9-1290	Concreting the Pile Cap (approx. 200m3)	1	1	19-Jun-21	19-Jun-21	09-Dec-21	10-Dec-21	69	0					
P9-1300	Erection of falsework for Abutment Wall	5	5	21-Jun-21	26-Jun-21	18-Dec-21	27-Dec-21	69	1					
P9-1310	Rebar fixing for Abutment wall	9	9	24-Jun-21	03-Jul-21	22-Dec-21	04-Jan-22	69	2					
P9-1320	Concreting the Abutment wall (approx. 70m3)	1	1	05-Jul-21	05-Jul-21	04-Jan-22	05-Jan-22	69	0					
P9-1330	Curing & Remove Formwork & Falsework	6	6	01-Nov-21	01-Nov-21	05-Jan-22	12-Jan-22	69	2					
P9-1350	Backfill to Pile Cap top level	7	7	01-Nov-21	06-Nov-21	10-Dec-21	18-Dec-21	69	1					
Superstructure		37	37			12-Jan-22	28-Feb-22	69						
P9-1630	Erection of Falsework and Soffit Formwork for Bridge Deck	18	18			26-Jan-22	18-Feb-22	69	5					
P9-1640	Falsework & formwork erection of Pier	12	12			12-Jan-22	26-Jan-22	69	3					
P9-1650	Rebar Fixing of Pier	7	7			26-Jan-22	07-Feb-22	79	2					
P9-1660	Concreting the Pier	1	1			07-Feb-22	08-Feb-22	79	0					
P9-1670	Rebar Fixing of Bridge Deck	8	8			18-Feb-22	28-Feb-22	69	2					
Works in Section 4		151	151	21-Sep-21	20-May-22	07-Oct-21 A	01-Jun-22	42						
Portion 10 - Visitor Centre		151	151	21-Sep-21	20-May-22	07-Oct-21 A	01-Jun-22	42						
Visitor Centre		151	151	21-Sep-21	20-May-22	07-Oct-21 A	01-Jun-22	42						
Excavation		38	38	21-Sep-21	23-Oct-21	07-Oct-21 A	14-Jan-22	49						
P10-2040	Sheetpile installation (~85m; approx. 425nos;)	6	0	21-Sep-21	28-Sep-21	07-Oct-21 A	01-Dec-21 A		1					
P10-2050	Soil Excavation to F.L. (~3840cu.m)	27	27	29-Sep-21	13-Oct-21	18-Nov-21 A	31-Dec-21	49	3					
P10-2060	Pile Head treatment and Capping Plate Installation	12	12	15-Oct-21	23-Oct-21	30-Dec-21	14-Jan-22	49	2					
Substructure and Retaining Wall		105	105	24-Dec-21	20-May-22	24-Jan-22	01-Jun-22	42						
P10-2110	Pile Cap & Base slab Construction	53	53	24-Dec-21	09-Mar-22	24-Jan-22	31-Mar-22	42	1					
P10-2120	Basewall construction to +7.5mPD (incl. Backfill)	80	80	31-Jan-22	20-May-22	25-Feb-22	01-Jun-22	42	2					
Works in Section 5		650	562	30-Dec-20	10-Oct-22	01-Dec-20 A	14-Jun-23	-135						
Portion 11 - Village Resite Area		650	562	30-Dec-20	10-Oct-22	01-Dec-20 A	14-Jun-23	-135						
P11-1005	Temporary Storage Area	650	562	30-Dec-20	10-Oct-22	01-Dec-20 A	14-Jun-23	-135	0					

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

Data Date: 30-Nov-21
 Project Start: 03-Feb-20
 Project End: 30-Dec-26
 Baseline: Monthly Markup Programme (Feb 2021) (Accepted on 15 April 2021)
 Page : 4 of 4

**Three Months Rolling Programme
(Nov 2021 to Feb 2022)**

Date	Revision	Checked	Approved
30-Nov-21	Rev 0 (Three Months Rolling Progr...	TW	ZL



Portion 1 (RP, ELS and Pipe Jacking)



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



Footbridge (Portion 9S, Pile cap)



Portion 1 (LP, ELS and Pipe Jacking)

AECOM

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

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

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

CONSULTANT
 工程顧問公司
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 www.aecom.com

SUB-CONSULTANTS
 分判工程顧問公司

ISSUE/REVISION
 修訂

I/R	DATE	DESCRIPTION	CHK.
A	OCT-19	TENDER ADDENDUM NO. 2	CYCH
-	SEP-19	TENDER DRAWING	CYCH

STATUS
 階段

SCALE
 比例
 A1 1 : 5000

DIMENSION UNIT
 尺寸單位
 METRES

KEY PLAN
 索引圖

PROJECT NO.
 項目編號
 60335576

CONTRACT NO.
 合約編號
 ND/2019/02

SHEET TITLE
 圖紙名稱
 KEY PLAN

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

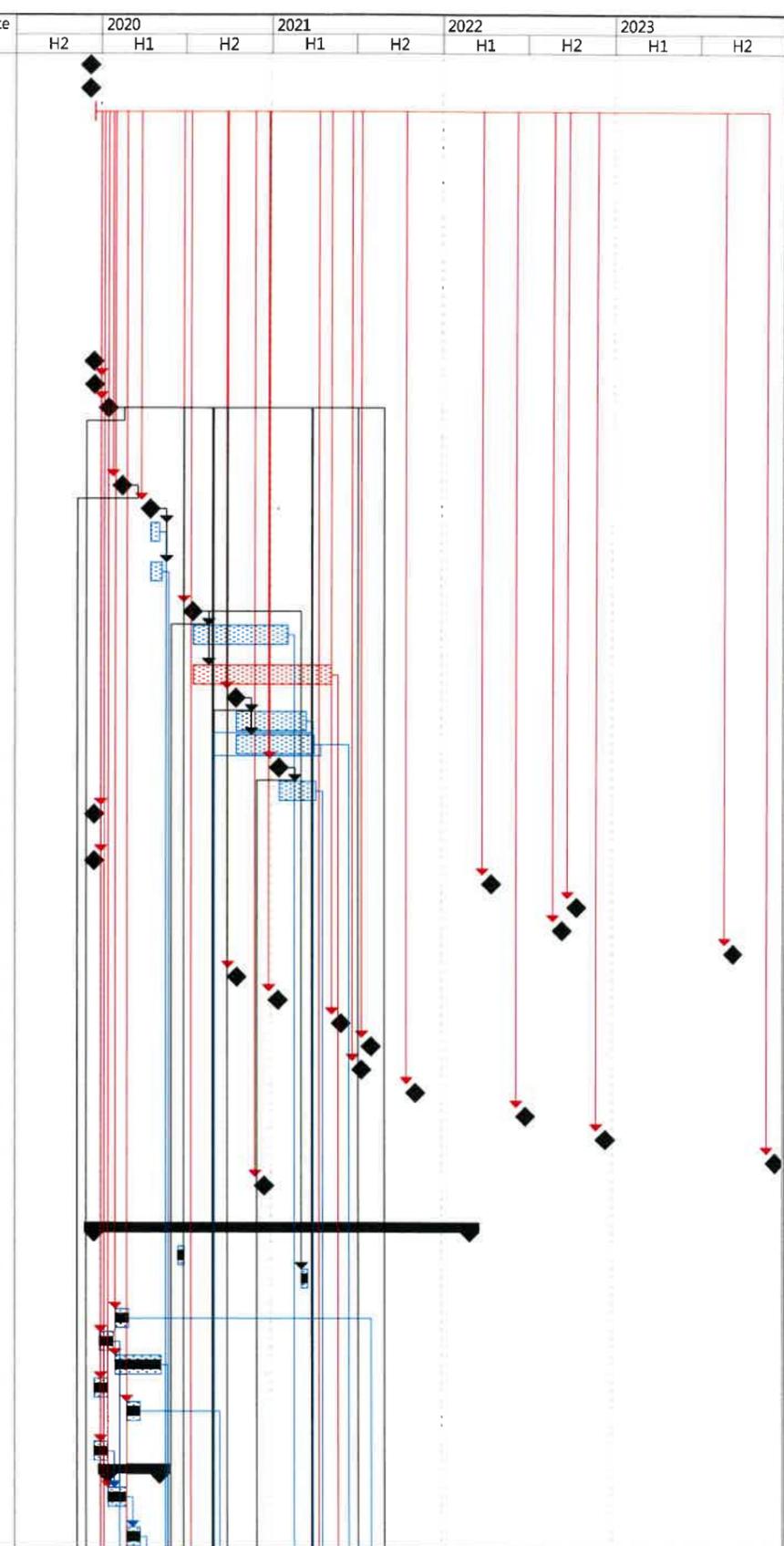
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Construction Programme of ND/2019/03

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	2020		2021		2022		2023	
										H2	H1	H2	H1	H2	H1	H2	H1
1	Contract Key Dates	0 days	Tue 19/12/10	Tue 19/12/10			1516 days	0%									
2	1.1 Contract Date	0 days	Tue 19/12/10	Tue 19/12/10			1516 days	0%									
3	1.2 Starting Date	1 day	Thu 19/12/19	Thu 19/12/19		.59,61,62,63,42,5,57,45,47,44,43,3 days,6FS+30 days,7FS+60 days,8FS+121 days,11FS+212 days,14FS+304 days,19,17FS+396 days,55,56,22FS+851 days,23FS+1034 days,24FS+1003 days,26FS+273 days,27FS+394 days,28FS+528 days,29FS+592 days,30FS+572 ...	-309 days	0%									
4	1.3 Site Access Dates	0 days	Thu 19/12/19	Thu 19/12/19			1507 days	0%									
5	Portions 25, 26, 27	0 days	Thu 19/12/19	Thu 19/12/19	3		1506 days	0%									
6	Portions 1, 5, 6A, 7, 8A, 9A, 9C, 9E, 9F, 9G, 10A, 10B, 11A, 11B, 12A, 12C, 12D, 13A, 15B, 15C, 16, 17, 19A, 19B, 19C, 20A, 20B	0 days	Sat 20/1/18	Sat 20/1/18	3FS+30 days	1,70,71,73,82,137,220,237,255,281,8 days,77FS+30 days,78,79	332 days	0%									
7	Portions 23, 24	0 days	Mon 20/2/17	Mon 20/2/17	3FS+60 days	315	1446 days	0%									
8	Portions 15A, 18, 19, 20, 20C, 22	0 days	Sat 20/4/18	Sat 20/4/18	3FS+121 days	9,10	1360 days	0%									
9	Delay of Site Access Dates: Portion 15A, 18, 19, 20 (Structure has not been handed over)	19 days	Sun 20/4/19	Thu 20/5/7	8	201,256,282	1366 days	0%									
10	Delay of Site Access Dates: Portion 22 (Structure has not been handed over)	25 days	Sun 20/4/19	Wed 20/5/13	8	316	1360 days	0%									
11	Portions 1A, 2, 2A, 3, 4, 4A, 4B, 5A, 6, 8, 7A, 7B	0 days	Sat 20/7/18	Sat 20/7/18	3FS+212 days	83,122,138,221,257,39,12,13	-138 days	0%									
12	Delay of Site Access for Area with Structure & Tudigong in Portion 1A	203 days	Sun 20/7/19	Sat 21/2/6	11	113	1091 days	0%									
13	Delay of Site Access Dates: 4B,5A	296 days	Sun 20/7/19	Mon 21/5/10	11	141	-138 days	0%									
14	Portions 8B, 9, 9B, 9D, 10, 11, 12, 12B, 13, 14	0 days	Sun 20/10/18	Sun 20/10/18	3FS+304 days	213,238,283,15,16	245 days	0%									
15	Delay of Site Access Date: Portion 9D	151 days	Mon 20/10/19	Thu 21/3/18	14	222,225	1051 days	0%									
16	Delay of Site Access for Area with Structure in Portion 8B, 9B	167 days	Mon 20/10/19	Sat 21/4/3	14	222,229	245 days	0%									
17	Portions 15, 16A, 16B, 17A, 17B, 21	0 days	Mon 21/1/18	Mon 21/1/18	3FS+396 days	300,239,258,284,18	-309 days	0%									
18	Delay of Site Access for Area with Structure in Portion 16B	79 days	Tue 21/1/19	Wed 21/4/7	17	246	1031 days	0%									
19	Works Area WA1	0 days	Thu 19/12/19	Thu 19/12/19	3		1506 days	0%									
20																	
21	1.4 Completion of the works	0 days	Thu 19/12/19	Thu 19/12/19	3		1506 days	0%									
22	Section 1	0 days	Mon 22/4/18	Mon 22/4/18	3FS+851 days		655 days	0%									
23	Section 2	0 days	Tue 22/10/18	Tue 22/10/18	3FS+1034 days		472 days	0%									
24	Section 3	0 days	Sat 22/9/17	Sat 22/9/17	3FS+1003 days		503 days	0%									
25	Section 3A	0 days	Sun 23/9/17	Sun 23/9/17	3FS+1368 days		138 days	0%									
26	Section 4	0 days	Wed 20/10/21	Wed 20/10/21	3FS+273 days		0 days	100%									
27	Section 5	0 days	Sat 21/1/16	Sat 21/1/16	3FS+394 days		0 days	100%									
28	Section 6	0 days	Sun 21/5/30	Sun 21/5/30	3FS+528 days		978 days	0%									
29	Section 7	0 days	Mon 21/8/2	Mon 21/8/2	3FS+592 days		914 days	0%									
30	Section 8	0 days	Tue 21/7/13	Tue 21/7/13	3FS+572 days		934 days	0%									
31	Section 9	0 days	Sat 21/11/6	Sat 21/11/6	3FS+688 days		818 days	0%									
32	Section 10	0 days	Thu 22/6/30	Thu 22/6/30	3FS+924 days		582 days	0%									
33	Section 11	0 days	Sun 22/12/18	Sun 22/12/18	3FS+1095 days		411 days	0%									
34	Section 11A	0 days	Mon 23/12/18	Mon 23/12/18	3FS+1460 days		46 days	0%									
35	Section 12	0 days	Fri 20/12/18	Fri 20/12/18	3FS+365 days		1141 days	0%									
36																	
37	2. Preliminary works	805 days	Fri 19/12/20	Thu 22/3/3			701 days	79%									
38	Set up Project Manager's Accommodation in WA1 (1st part)	14 days	Wed 20/6/17	Tue 20/6/30			0 days	100%									
39	Set up Project Manager's Accommodation in Portion 3 (2nd part)	14 days	Mon 21/3/8	Sun 21/3/21	11		0 days	100%									
40	Prepare, submit & Approve ICE	30 days	Mon 20/2/3	Tue 20/3/3	3	171	0 days	100%									
41	Prepare, submit & Approve Traffic Consultant	30 days	Wed 20/1/1	Thu 20/1/30	3	85	0 days	100%									
42	Prepare, submit & Approve Landscape Team Leader	100 days	Mon 20/2/3	Tue 20/5/12	3	75	0 days	100%									
43	Prepare, submit & Approve Agricultural Specialist	30 days	Fri 19/12/20	Sat 20/1/18	3		0 days	100%									
44	Prepare, submit & Approve Constructed / Treatment Wetland Specialist	30 days	Fri 20/2/28	Sat 20/3/28	3	64	0 days	100%									
45	Prepare, submit & Approve Ecological Team Leader	30 days	Fri 19/12/20	Sat 20/1/18	3	47	0 days	100%									
46	Habitat Survey	112 days	Sun 20/1/19	Sat 20/5/9			0 days	100%									
47	Submission/approval of Habitat Surveys Method Statement and Programme	40 days	Sun 20/1/19	Thu 20/2/27	3,45	48	0 days	100%									
48	Habitat Surveys	30 days	Fri 20/2/28	Sat 20/3/28	47	49	0 days	100%									



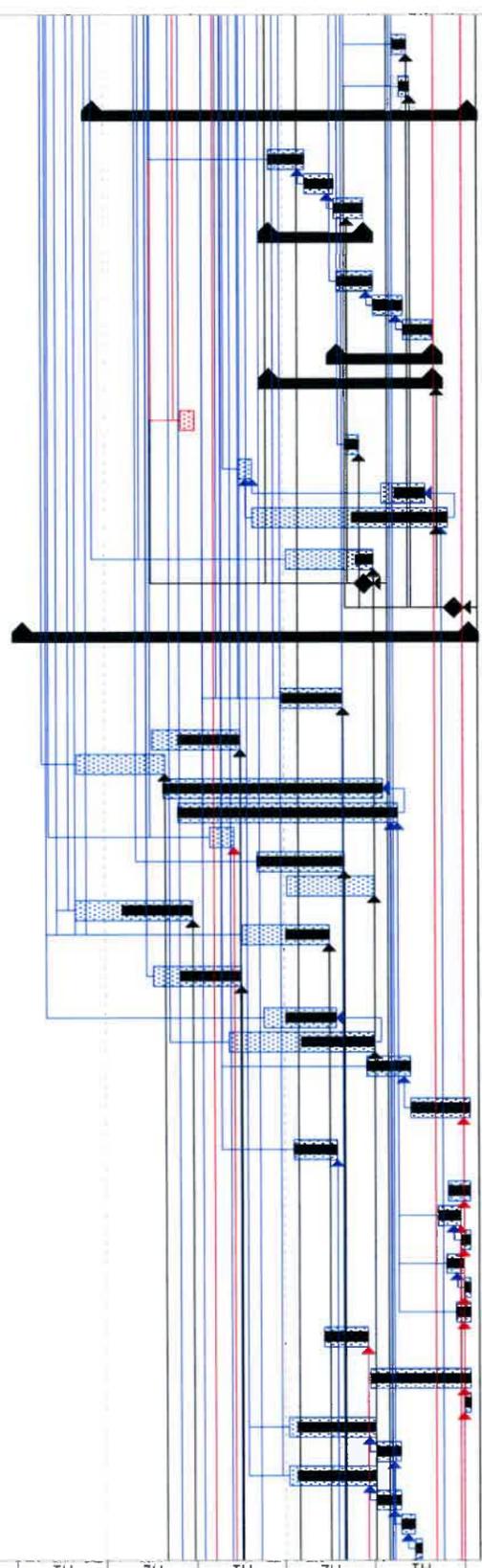
Revised Programme: December 2021
Data Date : 2021-12-3

Task Summary Rolled Up Milestone External Tasks Progress Deadline

Critical Task Rolled Up Task Rolled Up Progress Project Summary Deadline

Milestone Rolled Up Critical Task Split Group By Summary

ID	Task Name	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
49	Submission of Habitat Record	Sun 20/3/29	Sat 20/4/11	50		48	100%	H2
50	Approval of Habitat Survey Record	Sun 20/4/12	Sat 20/5/9	53,51		49	100%	H2
51	Prepare and Submit Wetland Restoration Proposal	Sun 20/5/10	Sun 20/6/28	50		50	100%	H2
52	Approval of Wetland Restoration Proposal	Mon 20/6/29	Fri 20/12/25	51	225,242,261,287	51	90%	H2
53	Prepare and Submit Wetland Creation Proposal	Sun 20/5/10	Sun 20/6/28	54		50	100%	H2
54	Approval of Wetland Creation Proposal	Mon 20/6/29	Fri 20/12/25	53	225,242,261,287	53	90%	H2
55	Prepare and Submit Ecological Protection Plan	Fri 19/12/20	Thu 20/1/2	3		3	100%	H2
56	Prepare, Submit and Approval of Maintenance Proposal for Stage 1 Maintenance Works	Fri 19/12/20	Fri 20/7/10	3		3	100%	H2
57	Prepare, submit & Approve GI, Contractor	Mon 20/10/12	Mon 20/10/12	3		3	100%	H2
58	Prepare and submit Smart Card System	Fri 19/12/20	Sat 20/1/18	3		3	100%	H2
59	Prepare, submit Draft Safety Plan	Fri 19/12/20	Thu 20/1/2	3		3	100%	H2
60	Review & Approve Safety Plan	Fri 20/1/3	Thu 20/2/6	59		75	100%	H2
61	Prepare, Submit Draft Environmental Management Plan	Fri 19/12/20	Thu 20/1/9	3		62	100%	H2
62	Review & Approve Environmental Management Plan	Fri 20/1/10	Sun 20/2/23	3,61		75	100%	H2
63	Prepare, submit & Approve Site Management Plan for Trip Ticket System	Fri 19/12/20	Sun 20/2/2	3		3	100%	H2
64	Submission and Approval of Construction Method for water treatment wetland	Tue 20/9/15	Sun 20/12/13	44		141	100%	H2
65	Submission of Proposal for Source of Water for Water Treatment Wetland	Fri 19/12/20	Fri 20/4/17	3		66	100%	H2
66	Approval of Source of Water for Water Treatment Wetland	Sat 20/4/18	Thu 20/7/16	65	141	19	100%	H2
67	Design/submit/prepare/Approval of Lodging Facilities	Tue 20/6/30	Sun 21/4/25	6	127,685,126	130	50%	H2
68	Design / Submission / approval of Sewerage System of Lodging Facilities	Fri 21/2/12	Fri 21/2/12	67SS		155	70%	H2
69	Design/submit/prepare/Approval of aluminium roofing system, timber for wall/floor/soffit for Birdhide	Tue 21/3/30	Sat 21/9/25	6		155	70%	H2
70	Design/submit/prepare/Approval of E&M works for Facilities	Wed 20/9/30	Sun 21/3/28	6	130,176,167,132,158,157	158,167	50%	H2
71	Design/submit/prepare/Approval of Plumbing works for Facilities	Wed 21/7/7	Thu 22/3/3	6		161	60%	H2
72	Design/submit/prepare/Approval and supply of Lighting	Tue 20/6/30	Sat 20/12/26	6		133	0%	H2
73	Design/submit/prepare/Approval and supply of park facilities	Sun 20/8/30	Thu 21/2/25	6		142	100%	H2
74	Submission and Approval for Fire Extinguisher	Wed 21/4/14	Wed 21/6/2	3	157,167,183,190,270,176	1	0%	H2
75	Tree survey and submission	Wed 20/5/13	Thu 21/8/5	42,60,62,58	76SS+30 days	0	100%	H2
76	Tree felling / Site clearance	Fri 20/6/12	Sat 21/9/4	7SS+30 days	169	0	100%	H2
77	Design/submit/prepare/Approval of Entrance gantry signage	Wed 21/9/1	Sun 22/2/27	6		142	0%	H2
78	Design/submit/prepare/Approval of Irrigation system for landscape softworks	Thu 21/4/1	Mon 21/9/27	6		858	70%	H2
79	Design/submit/prepare/Approval of Irrigation Channel and other associated facilities	Tue 20/9/1	Fri 21/1/8	6	232,249,275,294	178	97%	H2
80	3. Section 1 of the works (Portions 1 and 1A)	Fri 19/12/20	Wed 22/6/15	6	85,104,90FS+30 days,103,102,88	-58	52%	H2
81	Site Access in Portion 1	Sat 20/1/18	Sat 20/7/18	11	115,113,97	0	100%	H2
82	Site Access in Portion 1A	Sat 20/7/18	Sat 20/12/26	6FS+30 days	107,116	302	20%	H2
84	Design/submit/prepare/Approval and supply of Road Lighting System along Yin Kong Road	Tue 20/6/30	Sat 20/12/26	41,82	86SS+45 days,87	158	49%	H2
85	Application for XP for construction of Yin Kong Road	Fri 20/1/31	Fri 21/3/5	85SS+45 days	87	423	70%	H2
86	Prepare TTA for TMLG and approval from TD and RMO	Mon 20/3/16	Sat 20/6/13	85SS+45 days	106	158	0%	H2
87	Application of Traffic Advice and Road Work Advice	Sat 21/3/6	Sun 21/4/4	85,86		158	0%	H2
88	Submission of Utilities Detection Report	Wed 20/7/29	Thu 20/8/27	82	104	0	100%	H2
89	Additional Widening works for Yin Kong Road (to be approved by Relevant Department)	Thu 21/7/1	Fri 21/7/30	82FS+30 days	105,115,114	-58	0%	H2
90	Relocation of Utilities (by Others)	Sun 20/3/1	Fri 21/1/29	82FS+30 days		0	100%	H2
91	Relocation of CLP Pole at Yin Kong Road in (Portion 1)	Sun 20/3/1	Fri 20/9/11	93	104	0	100%	H2
92	Planning for Relocation	Wed 20/4/30	Thu 20/6/29	92	94	0	100%	H2
93	Construction of New Pole	Thu 20/4/30	Mon 20/6/29	92	94	0	100%	H2
94	Outage and Diversion of Underground Cable	Mon 20/6/29	Fri 20/9/11	93	104	0	100%	H2
95	Relocation of CLP Pole at Yin Kong Road (Portion 1A)	Sun 20/7/19	Fri 21/1/29	83	98	0	100%	H2
96	Planning for Relocation	Sun 20/7/19	Wed 20/9/16	83	99	0	100%	H2
97	Construction of New Pole	Thu 20/9/17	Sun 20/11/15	97	99	0	100%	H2
98	Outage and Diversion of Underground Cable	Mon 20/11/16	Fri 21/1/29	98	115	0	100%	H2
99	Relocation of CLP Pole at Yin Kong Road (Portion 1)	Fri 19/12/20	Sat 22/1/22	82	104	86	54%	H2
100	Relocation of CLP Pole at Yin Kong Road (Portion 1)	Fri 19/12/20	Sat 22/1/22	82	104	86	54%	H2
101	Relocation of CLP Pole at Yin Kong Road (Portion 1)	Fri 19/12/20	Sat 22/1/22	82	104	86	54%	H2
102	Fence and Gate adjacent to Yin Kong Road	Thu 20/4/16	Wed 20/5/6	82	104	0	100%	H2
103	Compensation Event No.003 - Reprovision of Hoarding and gate at Enchi Lodge	Wed 20/4/22	Thu 20/5/21	82	104	0	100%	H2



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	2020	2021	2022	2023					
										H2	H1	H2	H1	H2	H1	H2	H1	H2
104	Remove existing fencing and site clearance	30 days	Fri 20/8/28	Sat 20/9/26	82,88,94,102,103		0 days	100%										
105	Road widening	120 days	Sat 21/7/31	Sat 21/11/27	89	106FS-80 days	1 day	0%										
106	Drainage works	150 days	Wed 21/5/5	Mon 21/11/22	105FS-80 days,87	107FS-30 days	1 day	50%	7 days									
107	Lighting and installation of street furniture	76 days	Sun 21/10/24	Fri 22/1/7	106FS-30 days,84	117,310	1 day	0%	4 days									
108	Construction of Pai Lau	765 days	Fri 19/12/20	Sat 22/1/22			86 days	63%										
109	Instruction from PM	365 days	Fri 19/12/20	Fri 20/12/18	3	110	0 days	100%										
110	Design/Submission/approval	150 days	Sat 20/12/19	Mon 21/5/17	109	111	86 days	80%										
111	Construction of Pai Lau	250 days	Tue 21/5/18	Sat 22/1/22	110	119	86 days	0%	7 days									
112	Site Works (under Portion 1A)	394 days	Sun 21/2/7	Mon 22/3/7			-58 days	30%										
113	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	120 days	Sun 21/2/7	Sun 21/6/6	83,12	114	0 days	100%										
114	Road Widening	120 days	Sat 21/7/31	Sat 21/11/27	113,89	115FS-60 days	-58 days	0%										
115	Drainage works	120 days	Wed 21/9/29	Wed 22/1/26	83,99,89,114FS-60 days	116	-58 days	0%	7 days									
116	Lighting and installation of street furniture	40 days	Thu 22/1/27	Mon 22/3/7	115,84	117,310	-58 days	0%	4 days									
117	Paving block on footway	60 days	Tue 22/3/8	Fri 22/5/6	107,116	118	-58 days	0%										
118	bituminous pavement on carriageway	40 days	Sat 22/5/7	Wed 22/6/15	117	119	-58 days	0%										
119	Completion of Section 1 of the works	0 days	Mon 22/4/18	Mon 22/4/18	118,111		-58 days	0%										
120																		
121	4. Section 2 of the works (Portions 2 and 2A)	803 days	Sat 20/7/18	Thu 22/9/29			491 days	5%										
122	Site Access in Portions 2 and 2A	0 days	Sat 20/7/18	Sat 20/7/18	11	123	1294 days	0%										
123	General site clearance / demolition work / Removal of Asbesto Containing Material	60 days	Sun 20/7/19	Wed 20/9/16	122	125	0 days	100%										
124	Construction of lodging facility & associated facilities	743 days	Thu 20/9/17	Thu 22/9/29			19 days	0%										
125	Excavation and formation preparation	120 days	Thu 20/9/17	Thu 21/1/14	123	126	120 days	0%										
126	Construction of foundation / pavement	120 days	Mon 21/4/26	Mon 21/8/23	125,67	127	19 days	0%										
127	Supply of logging units	200 days	Tue 21/8/24	Fri 22/3/11	126,67	128FS-50 days	19 days	0%										
128	Installation of lodging units	100 days	Fri 22/1/21	Sat 22/4/30	127FS-50 days	129,130,131,132	19 days	0%	3 days									
129	Installation of furniture / facility	120 days	Sun 22/5/1	Sun 22/8/28	128	133	24 days	0%										
130	Installation of E&M works	125 days	Sun 22/5/1	Fri 22/9/2	70,68,128	133	19 days	0%	5 days									
131	Installation of Fire Services	125 days	Sun 22/5/1	Fri 22/9/2	128	133	19 days	0%										
132	Installation of plumbing works	125 days	Sun 22/5/1	Fri 22/9/2	70,128	133	19 days	0%	5 days									
133	Testing and commissioning	27 days	Sat 22/9/3	Thu 22/9/29	132,130,131,129	134	19 days	0%										
134	Completion of Section 2 of the works	0 days	Thu 22/9/29	Thu 22/9/29	133		19 days	0%										
135																		
136	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	15%										
137	Site Access in Portions 5 and 6A	0 days	Sat 20/1/18	Sat 20/1/18	6	141,139SS	0 days	100%										
138	Site Access in Portions 3, 4, 4A, 4B, 5A and 6	0 days	Sat 20/7/18	Sat 20/7/18	11	152,141,139FF+20 days	0 days	100%										
139	General site clearance / demolition work / Removal of Asbesto Containing Material	300 days	Sun 20/1/19	Fri 20/11/13	137SS,138FF+20 days	161,152	1176 days	90%										
140	Construction of water treatment wetland	588 days	Tue 21/5/11	Mon 22/12/19			-138 days	0%										
141	Excavation for sedimentation pond	120 days	Tue 21/5/11	Tue 21/9/7	64,137,138,66,13	142	-138 days	0%										
142	Excavation for macophyte zones - down stream	71 days	Wed 21/9/8	Wed 21/11/17	141	143,149	-138 days	0%										
143	Bedding preparation	45 days	Thu 21/11/18	Sat 22/1/1	142	144,146	-138 days	0%										
144	Excavation for macophyte zones - mid stream	72 days	Sun 22/1/2	Mon 22/3/14	143	145	645 days	0%										
145	Bedding preparation	45 days	Tue 22/3/15	Thu 22/4/28	144		645 days	0%										
146	Excavation for macophyte zones - upstream	72 days	Sun 22/1/2	Mon 22/3/14	143	147	-138 days	0%										
147	Bedding preparation	45 days	Tue 22/3/15	Thu 22/4/28	146	148,193	-138 days	0%										
148	Excavation for open water zone	115 days	Fri 22/4/29	Sun 22/8/21	147	150	-93 days	0%										
149	Construction of wetland broadwalk	205 days	Thu 21/11/18	Fri 22/6/10	142	194	99 days	0%										
150	Construction of Inlet and outlet structures	120 days	Mon 22/8/22	Mon 22/12/19	148	194	-93 days	0%										
151	Construction of birdhide	528 days	Mon 20/12/21	Wed 22/6/1			611 days	15%										
152	Excavation and formation preparation	21 days	Mon 20/12/21	Sun 21/1/10	138,139	153	0 days	100%										
153	Construction of base slab	120 days	Mon 21/4/12	Mon 21/8/9	152	154	134 days	60%										
154	Installation of steel structural frame	60 days	Tue 21/8/10	Fri 21/10/8	153	155,178,157,185	134 days	0%										
155	Installation of timber wall / roof	120 days	Sat 21/10/9	Sat 22/2/5	154,69	156	627 days	0%	4 days									
156	Installation of timber raised flooring	100 days	Sun 22/2/6	Mon 22/5/16	155		627 days	0%										
157	Installation of E&M, Fire Services System	120 days	Sat 21/10/9	Sat 22/2/5	154,70,74	158	134 days	0%										
158	Testing & commissioning	90 days	Fri 22/3/4	Wed 22/6/1	70,71,157	194	108 days	0%										
159	Construction of farmer's forum / open area	251 days	Sun 21/10/31	Fri 22/7/8			71 days	5%										
160	Construction of tea house pavilion	251 days	Sun 21/10/31	Fri 22/7/8			71 days	7%										
161	Construction of base slab	21 days	Sun 21/10/31	Sat 21/11/20	139,173,73	162	0 days	100%										
162	Construction of walls with columns	35 days	Sun 21/11/21	Sat 21/12/25	161	163	71 days	0%										
163	Installation of roof steel structure	45 days	Sun 21/12/26	Tue 22/2/8	162	164,168	71 days	0%										
164	Installation of recycled timber strip for roof	30 days	Wed 22/2/9	Thu 22/3/10	163	165	71 days	0%										

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

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
165	Installation of recycled timber strip for walls	30 days	Fri 22/3/11	Sat 22/4/9	164	166SS	71 days	0%	
166	Supply and installation of bench	30 days	Fri 22/3/11	Sat 22/4/9	165SS	167	71 days	0%	
167	Installation of plumbing works / E&M works with testing & commissioning	90 days	Sun 22/4/10	Fri 22/7/8	166,70,71,74	194	71 days	0%	
168	Construction of paving slab for open area	90 days	Wed 22/2/9	Mon 22/5/9	163	169	71 days	0%	4 days
169	Construction of entrance gantry signages	60 days	Fri 22/7/8	Fri 22/7/8	168,77	194	71 days	0%	4 days
170	Construction of Type 1 storage house	280 days	Tue 21/8/3	Mon 22/5/9	168,77	194	131 days	4%	
171	Excavation and formation preparation	21 days	Tue 21/8/3	Mon 21/8/23	40,188	172	71 days	50%	
172	Construction of base slab	28 days	Tue 21/8/24	Mon 21/9/20	171	173	71 days	0%	
173	Construction of walls and roof	40 days	Tue 21/9/21	Sat 21/10/30	172	174,161,192	71 days	0%	
174	Installation of aluminium louvre / GMS door	28 days	Sun 21/10/31	Sat 21/11/27	173	175	71 days	0%	
175	Installation of recycled timber strip / external finishing	73 days	Sun 21/11/28	Tue 22/2/8	174	176,182	71 days	0%	3 days
176	Installation of E&M works & Fire Services with testing & commissioning	90 days	Wed 22/2/9	Mon 22/5/9	175,70,74	194	131 days	0%	
177	Construction of outdoor classroom shelter	455.2 days	Mon 21/4/26	Mon 22/7/25	154	179	54.8 days	21%	
178	Excavation and formation preparation	21 days	Wed 21/10/13	Wed 21/11/24	178	180	0 days	100%	
179	Construction of base slab	42 days	Wed 21/10/13	Wed 21/11/24	178	180	0 days	100%	
180	Construction of concrete columns	63 days	Wed 21/11/24	Wed 22/1/26	179	181	54.8 days	0%	3 days
181	Installation of steel roof frame with corrugated sheet	30 days	Wed 22/1/26	Fri 22/2/25	180	182	54.8 days	0%	
182	Installation of recycled timber strip roofing	60 days	Fri 22/2/25	Tue 22/4/26	181,175	183	54.8 days	0%	
183	Installation of E&M works and Fire Services with testing & commissioning	90 days	Tue 22/4/26	Mon 22/7/25	182,74	194	54.8 days	0%	
184	Construction of storage composting facility	319 days	Mon 21/12/30	Thu 21/12/30	154	186	261 days	34%	
185	Excavation and formation preparation	22 days	Mon 21/12/15	Mon 21/12/15	185	187	0 days	100%	
186	Construction of base slab	54 days	Tue 21/3/9	Sat 21/5/1	186	187	0 days	100%	
187	Construction of concrete columns	65 days	Sun 21/7/3	Sat 21/7/3	186	188	81.5 days	50%	
188	Installation of steel roof frame with corrugated sheet	30 days	Sun 21/7/4	Mon 21/8/2	187	189,171	81.5 days	0%	3 days
189	Installation of recycled timber strip roofing	60 days	Tue 21/8/3	Fri 21/10/1	188	190,191	261 days	0%	
190	Installation of E&M works & Fire Services with testing & commissioning	90 days	Sat 21/10/2	Thu 21/12/30	189,74	194	261 days	0%	
191	Construction of entry landing with drop bar	90 days	Sat 21/10/2	Thu 21/12/30	189	194	261 days	0%	
192	Construction of walkway	210 days	Sun 21/10/31	Sat 22/5/28	173	194	112 days	0%	
193	Landscaping softworks	280 days	Fri 22/4/29	Thu 23/2/2	147	194,197	-138 days	0%	
194	Completion of Section 3 of the works	0 days	Sat 22/9/17	Sat 22/9/17	158,167,169,176,183,190,191		-138 days	0%	
195									
196	6. Section 3A of the works (Establishment works for Section 2 and 3)	365 days	Fri 23/2/3	Fri 24/2/2			-138 days	0%	
197	Establishment works for landscape softworks	365 days	Fri 23/2/3	Fri 24/2/2	193	198FF	-138 days	0%	
198	Completion of Section 3A of the Works	0 days	Sun 23/9/17	Sun 23/9/17	197FF		-138 days	0%	
199									
200	7. Section 4 of the works (Portion 18)	167 days	Thu 20/5/7	Wed 20/10/21			0 days	100%	
201	Site Access in Portion 18	0 days	Thu 20/5/7	Thu 20/5/7	9	202,203,208,209,204	0 days	100%	
202	General site clearance / demolition work / Removal of Asbestos Containing Material & Dioxin Contaminated	20 days	Fri 20/5/8	Wed 20/5/27	201	203	0 days	100%	
203	General maintenance to existing wetland	80 days	Thu 20/5/28	Sat 20/8/15	201,202	210	0 days	100%	7 days
204	Compensation Event No.020 - Inclement Weather Conditions in August 2020	8.5 days	Fri 20/9/18	Sat 20/9/26	201	205	0 days	100%	
205	Compensation Event No.021 - Inclement Weather Conditions in September 2020	14.5 days	Sat 20/9/26	Sat 20/10/10	204	206	0 days	100%	
206	Compensation Event No.028 - Inclement Weather Conditions in October 2020	3 days	Sun 20/10/11	Tue 20/10/13	205	210	0 days	100%	
207	Compensation Event No.026 - Provision of Root Barriers behind Gabion Walls of Irrigation Channel	8 days	Wed 20/10/14	Wed 20/10/21	208	210	0 days	100%	
208	Construction of Irrigation Channel	56 days	Wed 20/8/19	Tue 20/10/13	201	207	0 days	100%	
209	Construction of Metal Wire Railing	65 days	Mon 20/8/10	Tue 20/10/13	201	210	0 days	100%	
210	Completion of Section 4 of the works	0 days	Wed 20/10/21	Wed 20/10/21	203,209,206,207		0 days	100%	
211									
212	8. Section 5 of the works (Portion 14)	90 days	Sun 20/10/18	Sat 21/1/16			0 days	100%	
213	Site Access in Portion 14	0 days	Sun 20/10/18	Sun 20/10/18	14	216,214,215	0 days	100%	
214	General site clearance / demolition work / Removal of Asbestos Containing Material	60 days	Mon 20/10/19	Thu 20/12/17	213	217	0 days	100%	
215	General maintenance to existing wetland	45 days	Mon 20/10/19	Wed 20/12/2	213	217FF	0 days	100%	
216	Boundary Structure - Metal Wire Railing	90 days	Mon 20/10/19	Sat 21/1/16	213	217FF	0 days	100%	
217	Completion of Section 5 of the works	0 days	Sat 21/1/16	Sat 21/1/16	216FF,215FF,214		0 days	0%	
218									
219	9. Section 6 of the works (Portions 8,8A,8B and 9,9A-9G)	705 days	Sat 20/1/18	Thu 21/12/23			0 days	93%	

Legend: Task (solid black), Critical Task (dotted black), Milestone (diamond), Summary (dotted blue), Rolled Up Task (dotted red), Rolled Up Milestone (dotted blue), Rolled Up Progress (dotted black), Split (dotted red), External Tasks (dotted black), Project Summary (dotted black), Group By Summary (dotted black), Progress (solid black), Deadline (solid black).

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

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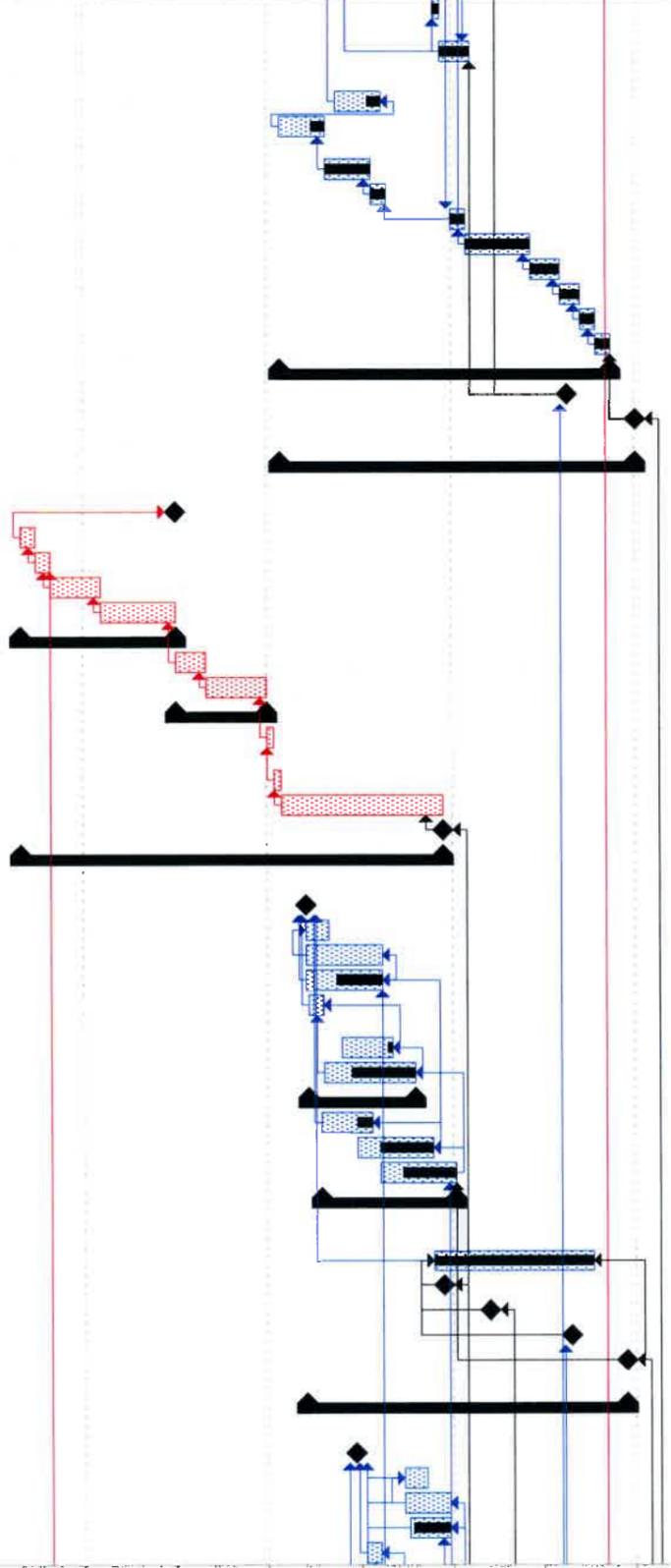
ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance	Timeline											
										2020	2021	2022	2023								
220	Site Access in Portions 8A, 9A, 9C, 9E, 9F, 9G	0 days	Sat 20/1/18	Sat 20/1/18	6	225,223SS	0 days	100%		H2	H1	H2	H1	H2	H1	H2	H1	H2			
221	Site Access in Portion 8	0 days	Sat 20/7/18	Sat 20/7/18	11	223FF+10 days,225	0 days	100%													
222	Site Access in Portions 8B, 9, 9B, 9D	0 days	Sun 20/10/18	Sun 20/10/18	15,16	223FF+10 days,225,229	0 days	100%													
223	General site clearance / demolition work / Removal of Asbestos Containing Material & Dioxin Contaminated	150 days	Fri 20/7/3	Sun 20/11/29	220SS,221FF+10 days,222FF+10 days	234	0 days	100%													
224	Wetland Restoration / Wetland Creation	200 days	Fri 21/3/19	Mon 21/10/4			0 days	100%													
225	Excavation	90 days	Fri 21/3/19	Wed 21/6/16	220,54,52,221,222,15	226SS+30 days	0 days	100%													
226	Backfilling	60 days	Sun 21/4/18	Wed 21/6/16	225SS+30 days	227SS+90 days,229,232,233	0 days	100%													
227	Agricultural Planting	80 days	Sat 21/7/17	Mon 21/10/4	226SS+90 days	234	0 days	100%													
228	Construction of Storage Sheds	190 days	Thu 21/6/17	Thu 21/12/23			0 days	90%													
229	Construction of concrete structure	150 days	Thu 21/6/17	Sat 21/11/13	226,222,16	230FS-30 days,231	36 days	90%	4 days												
230	Installation of Alluminium Window/Louvre and GMS Door with recycle timber decoration	60 days	Fri 21/10/15	Mon 21/12/13	229FS-30 days	234	-197 days	90%													
231	Installation of GMS roofing structure with recycle timber	40 days	Sun 21/11/14	Thu 21/12/23	229	234	-207 days	90%													
232	Construction of Channel	70 days	Thu 21/6/17	Wed 21/8/25	226,79	234	0 days	100%	7 days												
233	Construction of walkway	100 days	Thu 21/6/17	Fri 21/9/24	226	234	-117 days	70%	7 days												
234	Completion of Section 6 of the works	0 days	Sun 21/5/30	Sun 21/5/30	227,231,232,233,223,230		-207 days	0%													
235																					
236	10. Section 7 of the works (Portions 10,10A,10B, 13,13A and 16,16A,16B)	620 days	Sat 20/1/18	Wed 21/9/29			856 days	82%													
237	Site Access in Portions 10A, 10B, 13A, 16	0 days	Sat 20/1/18	Sat 20/1/18	6	242,240SS	0 days	100%													
238	Site Access in Portions 10, 13	0 days	Sun 20/10/18	Sun 20/10/18	14	240FF+20 days	0 days	100%													
239	Site Access in Portions 16A, 16B	0 days	Mon 21/1/18	Mon 21/1/18	17	240FF+20 days	0 days	100%													
240	General site clearance / demolition work / Removal of Asbestos Containing Material & Dioxin Contaminated	300 days	Tue 20/4/14	Sun 21/2/7	237SS,238FF+20 days,239FF+20 days	252	0 days	100%													
241	Wetland Restoration / Wetland Creation	167 days	Sat 20/12/26	Thu 21/6/10			53 days	97%													
242	Excavation	100 days	Sat 20/12/26	Sun 21/4/4	237,54,52	243SS+47 days,249	0 days	100%													
243	Backfilling	60 days	Thu 21/2/11	Sun 21/4/11	242SS+47 days	244SS+60 days	0 days	100%													
244	Agricultural Planting	60 days	Mon 21/4/12	Thu 21/6/10	243SS+60 days	252	53 days	90%													
245	Construction of storage sheds	180 days	Sat 21/4/3	Wed 21/9/29			856 days	89%													
246	Construction of concrete structure	150 days	Sat 21/4/3	Mon 21/8/30	18	247SS+90 days,248	0 days	100%													
247	Installation of Alluminium Window/Louvre and GMS Door with recycle timber decoration	30 days	Fri 21/7/2	Sat 21/7/31	246SS+90 days	248SS+30 days	916 days	50%													
248	Installation of GMS roofing structure with recycle timber	30 days	Tue 21/8/31	Wed 21/9/29	247SS+30 days,246	252	-58 days	70%													
249	Construction of Channel	80 days	Mon 21/4/5	Wed 21/6/23	79,242	250SS,252	40 days	95%	7 days												
250	Construction of walkway	90 days	Mon 21/4/5	Sat 21/7/3	249SS	251FF-15 days,252	30 days	0%	6 days												
251	Construction of entry landing with drop bar	45 days	Wed 21/5/5	Fri 21/6/18	250FF-15 days	252	45 days	0%													
252	Completion of Section 7 of the works	0 days	Mon 21/8/2	Mon 21/8/2	244,248,249,250,251,240		-58 days	0%													
253																					
254	11. Section 8 of the works (Portions 7,7A,7B, 17,17A,17B, 19,19A,19B,19C, 20,20A,20B&20C)	541 days	Sat 20/1/18	Mon 21/7/12			935 days	73%													
255	Site Access in Portions 7, 17, 19A, 19B, 19C, 20A, 20B	0 days	Sat 20/1/18	Sat 20/1/18	6	261,259SS	0 days	100%													
256	Site Access in Portions 19, 20, 20C	0 days	Thu 20/5/7	Thu 20/5/7	9	259FF+20 days	0 days	100%													
257	Site Access in Portions 7A, 7B	0 days	Sat 20/7/18	Sat 20/7/18	11	259FF+20 days	0 days	100%													
258	Site Access in Portions 17A, 17B	0 days	Mon 21/1/18	Mon 21/1/18	17	259FF+20 days	0 days	100%													
259	General site clearance / demolition work / Removal of Asbestos Containing Material & Dioxin Contaminated	350 days	Mon 20/2/24	Sun 21/2/7	255SS,256FF+20 days,257FF+20 days,258FF+20 days		0 days	100%													
260	Wetland Restoration / Wetland Creation	135 days	Sat 20/12/26	Sun 21/5/9			65 days	99%													
261	Excavation	80 days	Sat 20/12/26	Mon 21/3/15	255,54,52	262SS+25 days,272SS+60 days,265SS,275SS	0 days	100%													
262	Backfilling	80 days	Wed 21/1/20	Fri 21/4/9	261SS+25 days	263SS+60 days	0 days	100%													
263	Agricultural Planting	50 days	Sun 21/3/21	Sun 21/5/9	262SS+60 days	278	65 days	95%													
264	Construction of Type 2 storage house	199 days	Sat 20/12/26	Mon 21/7/12			935 days	56%													
265	Excavation and formation preparation	21 days	Sat 20/12/26	Fri 21/1/15	261SS	266	0 days	100%													
266	Construction of base slab	28 days	Sat 21/1/16	Fri 21/2/12	265	267	0 days	100%													
267	Construction of walls and roof	70 days	Sat 21/2/13	Fri 21/4/23	266	268,269	0 days	100%													
268	Installation of aluminium louvre / GMS door	30 days	Sat 21/4/24	Sun 21/5/23	267	270	11 days	70%													
269	Installation of recycled timber strip / external finishing	60 days	Sat 21/4/24	Tue 21/6/22	267		955 days	0%													
270	Installation of E&M works with testing & commissioning	40 days	Thu 21/6/3	Mon 21/7/12	268,74	278	1 day	0%													
271	Construction of storage sheds	120 days	Wed 21/2/24	Wed 21/6/23			954 days	60%													
272	Construction of concrete structure	90 days	Wed 21/2/24	Mon 21/5/24	261SS+60 days	273SS+60 days,274	20 days	80%													
273	Installation of Alluminium Window/Louvre and GMS Door with recycle timber decoration	30 days	Sun 21/4/25	Mon 21/5/24	272SS+60 days	274SS+21 days	984 days	60%													

Revised Programme: December 2021

Data Date : 2021-12-3

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

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
274	Installation of GMS roofing structure with recycle timber	30 days	Tue 21/5/25	Wed 21/6/23	273SS+21 days,272	278	20 days	0%	
275	Construction of Channel	80 days	Sat 21/1/9	Thu 21/4/8	79,261SS	276SS,278	106 days	90%	7 days
276	Construction of walkway	90 days	Sat 21/1/9	Thu 21/4/8	275SS	277FF,278	96 days	0%	7 days
277	Construction of entry landing with drop bar	45 days	Tue 21/2/23	Thu 21/4/8	276FF	278	96 days	0%	
278	Completion of Section 8 of the works	0 days	Mon 21/7/12	Mon 21/7/12	263,270,274,275,276,277		1 day	0%	
279									
280	12. Section 9 of the works (Portions 11,11A,11B, 12,12A~12D, and 15, 15A~15C)	637 days	Sat 20/1/18	Sat 21/10/16		287,285SS	839 days	57%	
281	Site Access in Portions 11A, 11B, 12A, 12C, 12D, 15B, 15C	0 days	Sat 20/1/18	Sat 20/1/18	6		0 days	100%	
282	Site Access in Portion 15A	0 days	Thu 20/5/7	Thu 20/5/7	9		0 days	100%	
283	Site Access in Portions 11, 12, 12B	0 days	Sun 20/10/18	Sun 20/10/18	14		0 days	100%	
284	Site Access in Portion 15	0 days	Mon 21/1/18	Mon 21/1/18	17		0 days	100%	
285	General site clearance / demolition work / Removal of Asbestos	320 days	Wed 20/3/25	Sun 21/2/7	281SS,282FF+20	297	0 days	100%	
286	Wetland Restoration / Wetland Creation	265 days	Sat 20/12/26	Thu 21/9/16	281,54,52	288SS+45 days,291SS+80 days	869 days	60%	
287	Excavation	150 days	Sat 20/12/26	Mon 21/5/24	281,54,52	288SS+45 days,291SS+80 days	984 days	70%	
288	Backfilling	150 days	Tue 21/2/9	Thu 21/7/8	287SS+45 days	288SS+120 days,294SS+100 days	939 days	70%	
289	Agricultural Planting	100 days	Wed 21/9/16	Thu 21/9/16	288SS+120 days		51 days	30%	
290	Construction of storage sheds	210 days	Tue 21/3/16	Mon 21/10/11	287SS+80 days	292SS+45 days,293	844 days	44%	
291	Construction of concrete structure	180 days	Tue 21/3/16	Sat 21/9/11	287SS+80 days	292SS+45 days,293	26 days	70%	
292	Installation of Aluminium Window/Louvre and GMS Door with recycle timber decoration	100 days	Fri 21/4/30	Sat 21/8/7	291SS+45 days	293SS+21 days	909 days	10%	
293	Installation of GMS roofing structure with recycle timber	30 days	Sun 21/9/12	Mon 21/10/11	292SS+21 days,291	297	26 days	0%	3 days
294	Construction of Channel	150 days	Thu 21/5/20	Sat 21/10/16	288SS+100 days,79	295SS,297	21 days	60%	4 days
295	Construction of walkway	150 days	Thu 21/5/20	Sat 21/10/16	294SS	296FF,297	21 days	0%	4 days
296	Construction of entry landing with drop bar	45 days	Thu 21/9/2	Sat 21/10/16	295FF	297	21 days	0%	
297	Completion of Section 9 of the works	0 days	Sat 21/10/16	Sat 21/10/16	289,293,294,295,296,285		21 days	0%	
298									
299	13. Section 10 of the works (Portion 21)	837 days	Mon 21/1/18	Fri 23/5/5			-309 days	0%	
300	Site Access in Portion 21	0 days	Mon 21/1/18	Mon 21/1/18	17		-309 days	0%	
301	Local Objection for commencement of Works	319 days	Tue 21/1/19	Fri 21/12/3	300		-309 days	0%	
302	Containing Material	14 days	Sat 21/12/4	Fri 21/12/17	301		-309 days	0%	
303	Erect site hoarding	14 days	Sat 21/12/18	Fri 21/12/31	302		-309 days	0%	
304	Archaeological Impacts Mitigation Measures	180 days	Sat 22/1/1	Wed 22/6/29	303		-309 days	0%	
305	Archaeological survey	120 days	Sat 22/1/1	Sat 22/4/30	303		-309 days	0%	
306	Archaeological impact assessment	60 days	Sun 22/5/1	Wed 22/6/29	305		-309 days	0%	
307	Site formation work and infrastructure works at Wa Shan	310 days	Thu 22/6/30	Fri 23/5/5	306		-309 days	0%	
308	Site formation / slope works	150 days	Thu 22/6/30	Sat 22/11/26	306		-309 days	0%	
309	Drainage works	100 days	Sun 22/11/27	Mon 23/3/6	308		-309 days	0%	
310	Paving block on footway	30 days	Tue 23/3/7	Wed 23/4/5	310		-309 days	0%	
311	bituminous pavement on carriageway	30 days	Thu 23/4/6	Fri 23/5/5	311		-309 days	0%	
312	Completion of Section 10 of the works	0 days	Thu 22/6/30	Thu 22/6/30	311FF		-309 days	0%	
313									
314	14. Section 11 of the works (Portions 22, 23, 24 and remainder works)	706 days	Tue 19/12/31	Sun 21/12/5			515 days	83%	
315	Site Access in Portions 23, 24	0 days	Tue 19/12/31	Tue 19/12/31	7		0 days	100%	
316	Site Access in Portion 22	0 days	Wed 20/5/13	Wed 20/5/13	10		0 days	100%	
317	Egretway Site Portion 23 & 24	657 days	Tue 20/2/18	Sun 21/12/5	315		515 days	80%	
318	General site clearance	30 days	Tue 20/2/18	Wed 20/3/18	315		0 days	100%	
319	Erect site hoarding (Deleted)	30 days	Thu 20/3/19	Fri 20/4/17	318		0 days	100%	
320	Preliminary survey	40 days	Sat 20/4/18	Wed 20/5/27	319		0 days	100%	
321	Submission of methodology for translocation	60 days	Thu 20/5/28	Sun 20/7/26	320		0 days	100%	
322	Approval of Methodology for Translocation	130 days	Mon 20/7/27	Thu 20/12/3	321		0 days	100%	
323	Translocation works	30 days	Fri 20/12/4	Sat 21/1/2	323,342		0 days	100%	
324	Planting in Portion 23 & 24	30 days	Mon 21/5/10	Tue 21/6/8	323		0 days	100%	
325	Provision of Railing and Gate at Portion 23 (Under PM1 026 / CE 019)	90 days	Wed 21/6/9	Mon 21/9/6	324		0 days	100%	
326	Establishment of A1-7FLN Egretway Site (Portion 23)	90 days	Tue 21/9/7	Sun 21/12/5	325		515 days	30%	10 days
327	Establishment of B1-7FLN Egretway Site (Portion 24)	90 days	Thu 21/5/20	Tue 21/8/17	326FS-200 days	332	488 days	30%	10 days
328									
329	Preparation Works for Landscaping work at existing Ho Sheung Heung Egretway Site (Portion 22)	60 days	Wed 20/11/25	Sat 21/1/23	316,331	332,330	0 days	100%	
330	Planting for Ho Sheung Heung Egretway Site	14 days	Sun 21/1/24	Sat 21/2/6			0 days	100%	

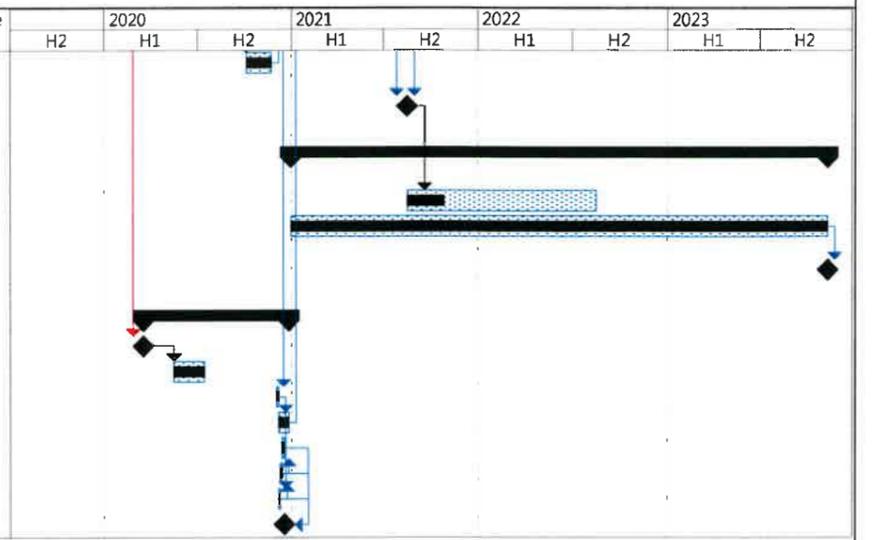


Revised Programme: December 2021
 Data Date : 2021-12-3
 Legend:
 Task: Solid black bar
 Milestone: Diamond symbol
 Summary: Dotted pattern bar
 Rolled Up Milestone: Solid black bar with diamond
 Rolled Up Progress: Solid black bar with diamond
 Split: Dotted pattern bar with diamond
 External Tasks: Solid black bar
 Project Summary: Solid black bar
 Group By Summary: Solid black bar
 Progress: Solid black bar
 Deadline: Solid black bar with red arrow

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

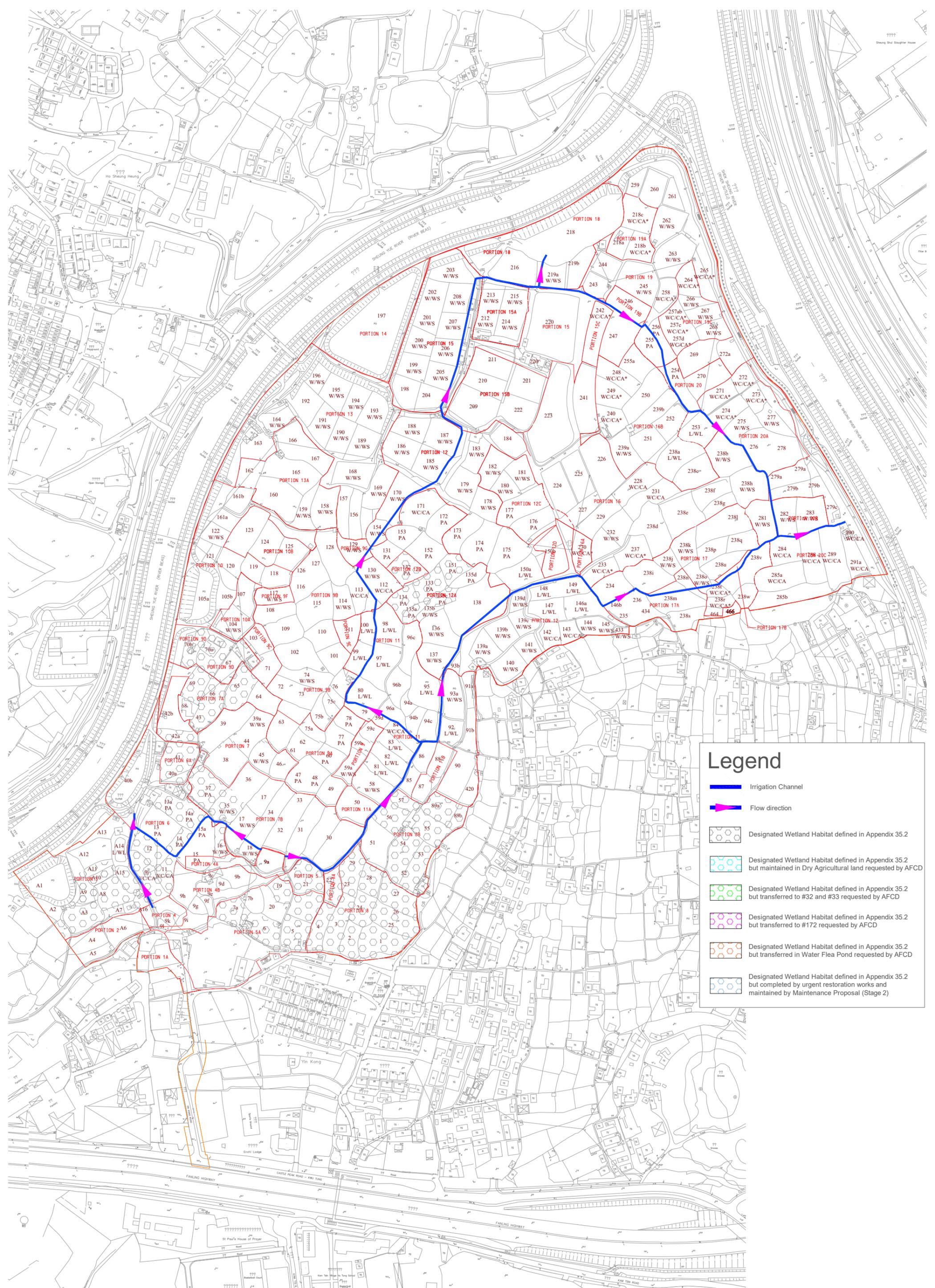
Project Programme of the Works

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance	Gantt Chart													
										2020	2021	2022	2023										
331	Compensation Event No. 017 - Removal of Existing Unsafe Sheds	50 days	Tue 20/10/6	Tue 20/11/24	316	329	0 days	100%															
332	Completion of Section 11 of the works	0 days	Tue 21/8/17	Tue 21/8/17	329,327	335	488 days	0%															
333																							
334	15. Section 11A of the works (Establishment works for Section 11)	1050 days	Fri 21/1/1	Thu 23/11/16			78 days	79%															
335	Establishment works	365 days	Wed 21/8/18	Wed 22/8/17	332		534 days	20%															
336	Compensation Event No. 15 Provision of Decoys and Broadcast of Bird Sound in Portions 23 & 24	1050 days	Fri 21/1/1	Thu 23/11/16		337	0 days	100%															
337	Completion of Section 11A of the works	0 days	Thu 23/11/16	Thu 23/11/16	336		32 days	0%															
338																							
339	16. Section 12 of the works (Portions 25, 26 and 27)	284 days	Wed 20/3/18	Sun 20/12/27			0 days	100%															
340	Site Access in Portions 25, 26, 27	0 days	Wed 20/3/18	Wed 20/3/18	3FS+90 days	341FS+60 days	0 days	100%															
341	Boundary Site Area	60 days	Mon 20/5/18	Thu 20/7/16	340FS+60 days		0 days	100%															
342	Preparation for translocation works	4 days	Fri 20/12/4	Mon 20/12/7	322	346,343	0 days	100%															
343	Compensation Event No. 11 - Translocation of Rose Bitterling	20 days	Tue 20/12/8	Sun 20/12/27	342	323	0 days	100%															
344	Collection site C1 (Portion 25)	5 days	Mon 20/12/14	Fri 20/12/18	345	347FF	0 days	100%															
345	Collection site C2 (Portion 26)	3 days	Fri 20/12/11	Sun 20/12/13	346	347FF,344	0 days	100%															
346	Collection site C3 (Portion 27)	3 days	Tue 20/12/8	Thu 20/12/10	342	347FF,345	0 days	100%															
347	Completion of Section 12 of the works	0 days	Fri 20/12/18	Fri 20/12/18	344FF,345FF,346FF		0 days	100%															



Revised Programme: December 2021
Data Date : 2021-12-3

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



Legend

- Irrigation Channel
- ▶
 Flow direction
- Designated Wetland Habitat defined in Appendix 35.2
- Designated Wetland Habitat defined in Appendix 35.2 but maintained in Dry Agricultural land requested by AFCD
- Designated Wetland Habitat defined in Appendix 35.2 but transferred to #32 and #33 requested by AFCD
- Designated Wetland Habitat defined in Appendix 35.2 but transferred to #172 requested by AFCD
- Designated Wetland Habitat defined in Appendix 35.2 but transferred in Water Flea Pond requested by AFCD
- Designated Wetland Habitat defined in Appendix 35.2 but completed by urgent restoration works and maintained by Maintenance Proposal (Stage 2)

Figure 3c. Designated wetland habitats in Appendix 35.2

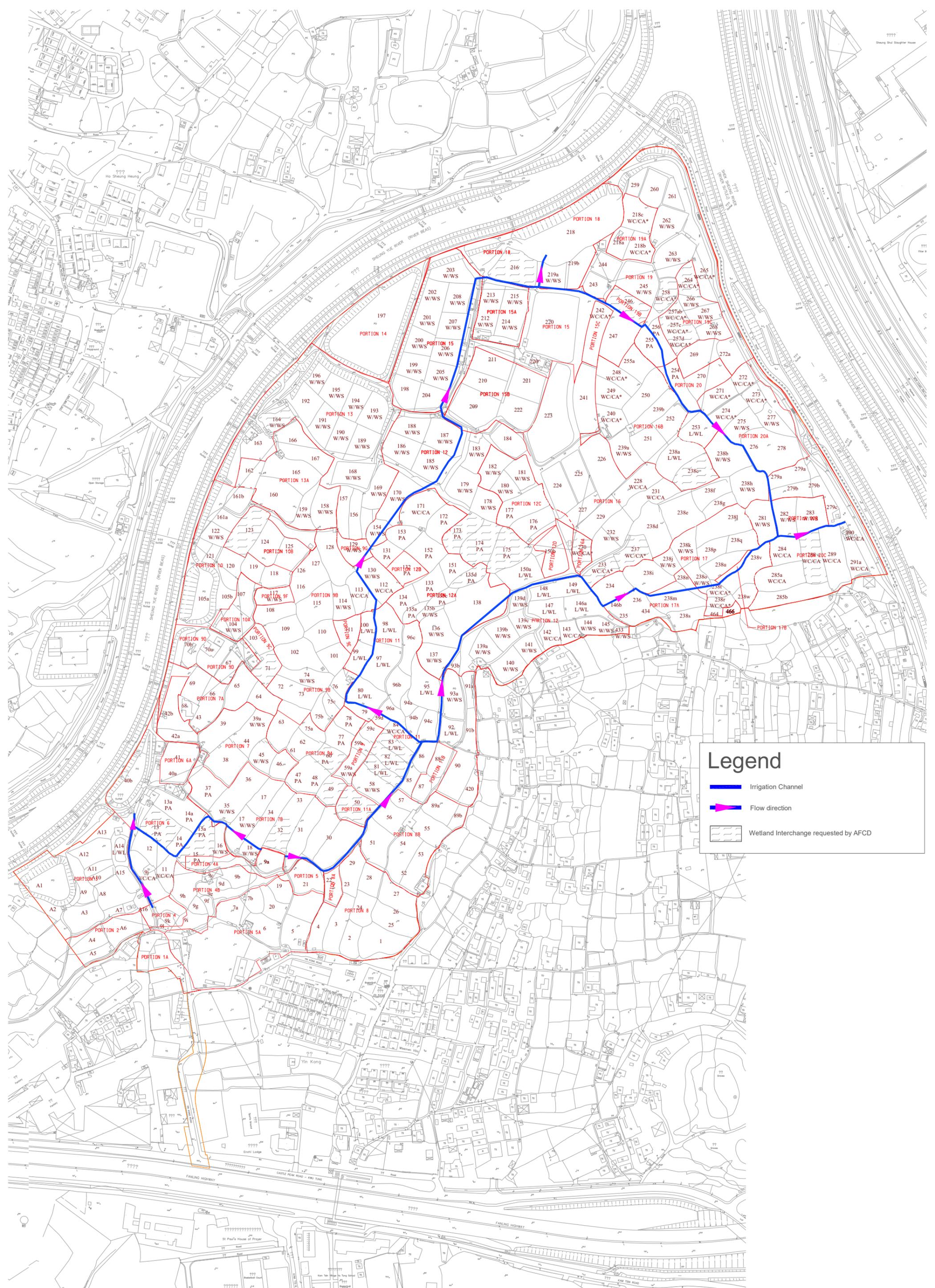
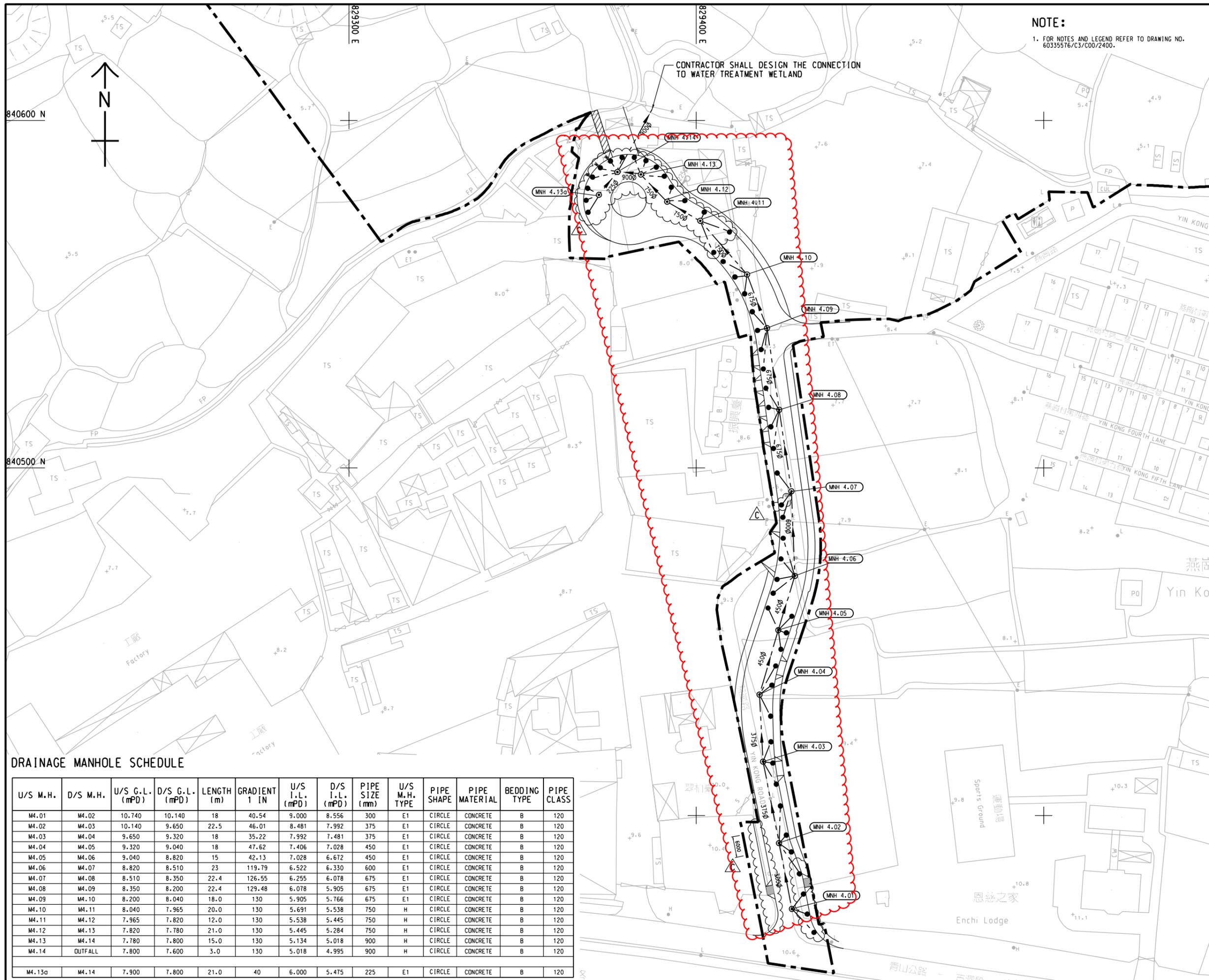


Figure 3d. Wetland interchange requested by AFCD



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

CONTRACTOR SHALL DESIGN THE CONNECTION TO WATER TREATMENT WETLAND

DRAINAGE MANHOLE SCHEDULE

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

REV.	DATE	DESCRIPTION	DRAWN	PREP.	APP.
C	21/05/21	LAYOUT AMENDED	HLH	DT	WT
B	7/12/20	ROAD ALIGNMENT AMENDED	KLC	DT	WT
A	15/07/20	RUN IN ADDED AND MANHOLE RE-ARRANGED	KLC	DF	PY

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

CONSULTANT
AECOM

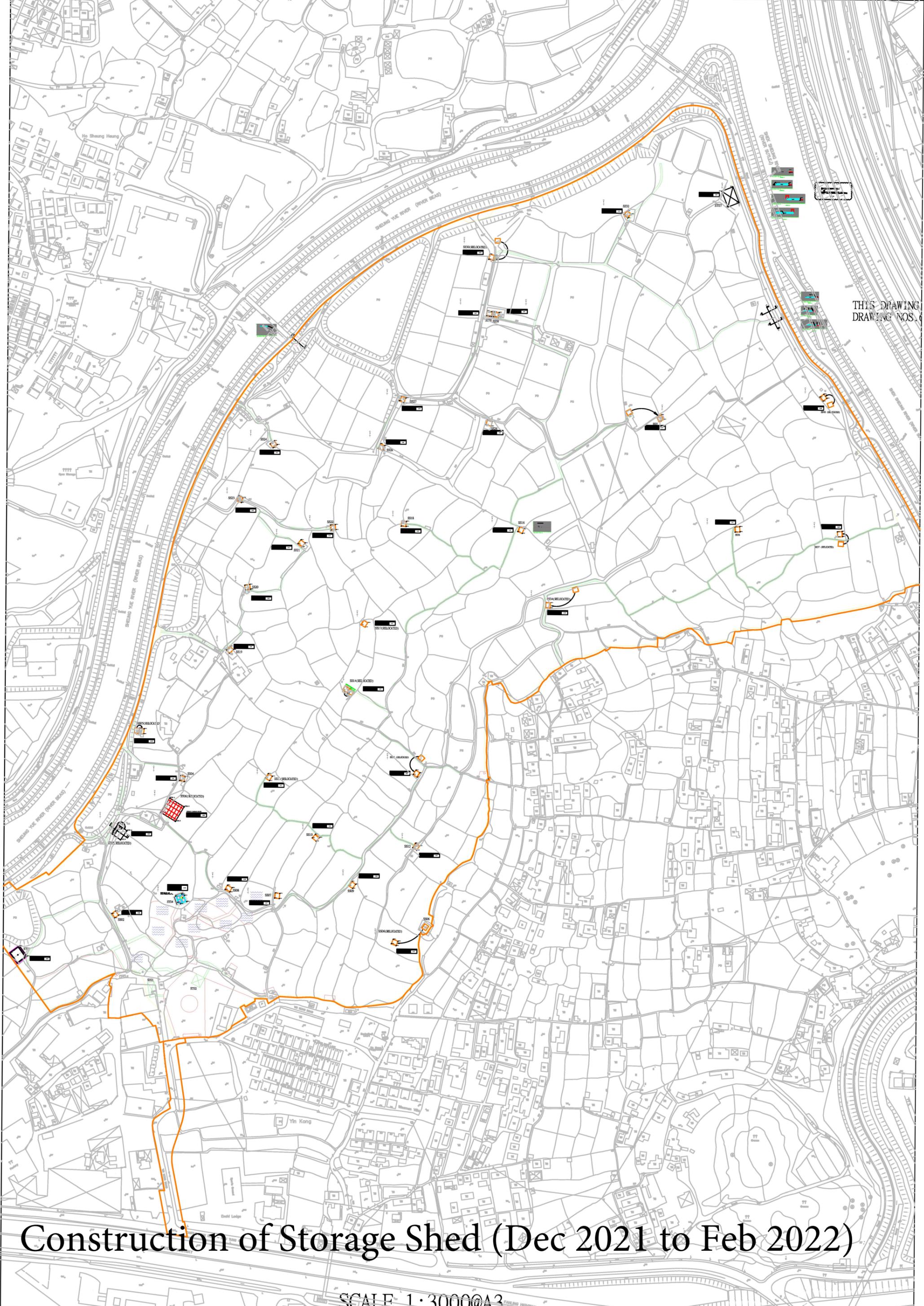
PROJECT
DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

CONTRACT TITLE
KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1: DEVELOPMENT OF LONG VALLEY NATURE PARK

REMARK:
1. SUPERSEDE DRG NO. 60335576/C3/C00/2410

TITLE
YIN KONG ROAD - ROAD DRAINAGE LAYOUT

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



Construction of Storage Shed (Dec 2021 to Feb 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	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							
								1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73
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*		0	◆ 12-Mar-21*																																																																							
CD-1200	Contract KD2: Completion of sewage pumping station and associated rising mains and sew	0				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*		0	◆ 12-Sep-24*																																																																							
CD-1250	Contract KD4: Completion of all works necessary for underpass and associated Stormwater	0				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*		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*		0	◆ 12-Mar-21*																																																																							
CD-1110	S2 All works within Portion W excluding landscape softworks (365 days)	0				13-Aug-21*		0	◆ 13-Aug-21*																																																																							
CD-1170	S3 All works within Portion K1 including landscape softworks (1125 days)	0				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*		0	◆ 07-Oct-23*																																																																							
CD-1210	S5 All works within Portion N including landscape softworks (1490 days)	0				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*		0	◆ 11-Sep-24*																																																																							
CD-1230	S10A Establishment works for landscape softworks in Portion K1 (1490 days)	0				11-Sep-24*		0	◆ 11-Sep-24*																																																																							
CD-1270	S8 Preservation and Protection of existing trees (1790 days)	0				09-Jul-25*		0	◆ 09-Jul-25*																																																																							
CD-1280	S7 All works necessary for the commissioning of traffic detection system along Fanling By	0				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*		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*		0	◆ 09-Jul-25*																																																																							
CD-1310	S10B Establishment works for landscape softworks in Portion N (1855 days)	0				12-Sep-25*		0	◆ 12-Sep-25*																																																																							
CD-1320	S10C Establishment works for landscape softworks in Section 9(2155 days)	0				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*		3	◆ 09-Mar-21*																																																																							
PD-1050	Planned KD2: Completion of sewage pumping station and associated rising mains (1400 da	0				26-Jan-24*		140	◆ 26-Jan-24*																																																																							
PD-1090	Planned KD3: Completion of all works necessary for opening between Interchange and Far	0				05-Sep-24*		7	◆ 05-Sep-24*																																																																							
PD-1100	Planned KD4: Completion of all works necessary for underpass and associated Stormwater	0				14-Feb-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*		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*		0	◆ 11-Mar-21*																																																																							
PD-1020	S2 All works within Portion W excluding landscape softworks (365 days)	0				13-Aug-21*		0	◆ 13-Aug-21*																																																																							
PD-1030	S3 All works within Portion K1 including landscape softworks (1125 days)	0				30-Dec-22*		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*		20	◆ 16-Sep-23*																																																																							
PD-1060	S5 All works within Portion N including landscape softworks (1490 days)	0				26-Jan-24*		229	◆ 26-Jan-24*																																																																							
PD-1070	S10A Establishment works for landscape softworks in Portion K1 (1490 days)	0				25-Mar-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*		69	◆ 04-Jul-24*																																																																							
PD-1120	S7 All works necessary for the commissioning of traffic detection system along Fanling By	0				08-Apr-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*		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*		17	◆ 21-Jun-25*																																																																							
PD-1150	S8 Preservation and Protection of existing trees (1790 days)	0				30-May-25*		40	◆ 30-May-25*																																																																							
PD-1160	S10B Establishment works for landscape softworks in Portion N (1855 days)	0				11-Sep-25*		1	◆ 11-Sep-25*																																																																							
PD-1170	S10C Establishment works for landscape softworks in Section 9(2155 days)	0				21-Jun-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 Pre-drilling	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	SU-1140, 18-Aug-21, 29-Oct-21																																																																							
SU-1150	Subletting for road lighting works	60	10-Nov-21	21-Jan-22	31-Dec-22	15-Mar-23		338	SU-1150, 10-Nov-21, 21-Jan-22																																																																							

<ul style="list-style-type: none"> Actual Work Remaining Work Critical Remaining Work 	<ul style="list-style-type: none"> ◆ Milestone 	Data Date: 30-Jul-20 Project Start: 30-Jul-20 Project End: 09-Jul-26 Page 1 of 7	ND/2019/04 Preliminary Works Programme	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Date</th> <th>Revision</th> <th>Checked</th> <th>Approved</th> </tr> <tr> <td>12-Aug-20</td> <td>Rev. 0</td> <td>JS</td> <td>JS</td> </tr> <tr> <td>09-Sep-20</td> <td>Rev. 1</td> <td>JS</td> <td>JS</td> </tr> <tr> <td>5-Nov-20</td> <td>Rev. 2</td> <td>TL</td> <td>TL</td> </tr> </table>	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
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	2021							2022							2023							2024							2025							2026																						
								J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A
SU-1160	Subletting for bituminous works	60	08-Jan-21	22-Mar-21	16-Jan-21	02-Apr-21	7	SU-1160, 08-Jan-21 to 22-Mar-21																																																									
Submission																																																																	
Statutory submission																																																																	
SUB-1000	Prepare, submit & accept design for ELS works and Temp Works	80	14-Aug-20	18-Nov-20	15-Mar-21	23-Jun-21	173	SUB-1000, 18-Nov-20 to 23-Jun-21																																																									
SUB-1010	Prepare, submit & obtain consent from DSD for CDIA	107	14-Aug-20	19-Dec-20	17-May-21	23-Sep-21	222	SUB-1010, 19-Dec-20 to 23-Sep-21																																																									
SUB-1020	Submit & Approval for Excavation Permit on Footpath	60	14-Aug-20	24-Oct-20	17-Feb-21	03-May-21	151	SUB-1020, 24-Oct-20 to 03-May-21																																																									
SUB-1030	Submit & Approval for Excavation Permit on Carriageway	180	14-Aug-20	22-Mar-21	22-Aug-20	02-Apr-21	7	SUB-1030, 22-Mar-21 to 02-Apr-21																																																									
SUB-1060	Prepare, submit & accept Tree Preservation and Removal Plan	80	25-Aug-20	28-Nov-20	21-Dec-20	02-Apr-21	98	SUB-1060, 28-Nov-20 to 02-Apr-21																																																									
SUB-1080	Prepare, submit, processing & approval for TTA (Major TTA preparation)	60	02-Dec-20	16-Feb-21	02-Dec-20	16-Feb-21	0	SUB-1080, 02-Dec-20 to 16-Feb-21																																																									
SUB-1130	Notice to CIC, Labour Dept, PCFB, EPD	7	30-Jul-20	06-Aug-20	07-Aug-21	16-Aug-21	303	SUB-1130, 06-Aug-20 to 16-Aug-21																																																									
SUB-1140	Request UU drawings	120	30-Jul-20	19-Dec-20	03-Dec-21	04-May-22	401	SUB-1140, 19-Dec-20 to 04-May-22																																																									
SUB-1150	Apply waste producer Licence	7	30-Jul-20	06-Aug-20	18-Aug-21	26-Aug-21	312	SUB-1150, 06-Aug-20 to 26-Aug-21																																																									
SUB-1220	Irrigation system and design submissions to WSD	120	26-May-21	18-Oct-21	29-Sep-22	24-Feb-23	401	SUB-1220, 26-May-21 to 24-Feb-23																																																									
SUB-1390	Interfacing Management plan and Detail interface document	60	06-Aug-21	18-Oct-21	10-Dec-22	24-Feb-23	401	SUB-1390, 06-Aug-21 to 24-Feb-23																																																									
Insurance & Guarantee																																																																	
SUB-1160	Receipts of payment for the insurance policy - Contractors All Risks Policy	14	30-Jul-20	14-Aug-20	30-Jul-20	14-Aug-20	0	SUB-1160, 14-Aug-20 to 14-Aug-20																																																									
Contractor's management																																																																	
SUB-1170	Arrangement with a bank to implement payment of wages and written declaration for workers	14	14-Aug-20*	29-Aug-20	24-Sep-20	13-Oct-20	36	SUB-1170, 29-Aug-20 to 13-Oct-20																																																									
SUB-1180	Sub-contractor Management Plan (SMP)	30	30-Jul-20	02-Sep-20	05-Sep-20	13-Oct-20	33	SUB-1180, 02-Sep-20 to 13-Oct-20																																																									
SUB-1190	Proposal on process of the selection of suppliers (Plant, Materials, Equipment, insurance)	21	30-Jul-20	22-Aug-20	19-Aug-20	12-Sep-20	17	SUB-1190, 22-Aug-20 to 12-Sep-20																																																									
Staffing Organization																																																																	
SUB-1200	Name, qualifications and experience of Key Persons	7	30-Jul-20	06-Aug-20	30-May-26	06-Jun-26	1726	SUB-1200, 06-Aug-20 to 06-Jun-26																																																									
SUB-1210	Submission for the Contractor's key people	14	21-Aug-20	05-Sep-20	23-Jun-26	09-Jul-26	1726	SUB-1210, 05-Sep-20 to 09-Jul-26																																																									
Programme																																																																	
SUB-1230	1st Programme	14	30-Jul-20	14-Aug-20	22-Apr-21	08-May-21	215	SUB-1230, 14-Aug-20 to 08-May-21																																																									
SUB-1380	Revised Program	30	15-Aug-20	18-Sep-20	10-May-21	15-Jun-21	215	SUB-1380, 18-Sep-20 to 15-Jun-21																																																									
SUB-1530	Monthly progress program (every month)	1500	19-Sep-20	14-Oct-25	16-Jun-21	09-Jul-26	215	SUB-1530, 19-Sep-20 to 14-Oct-25																																																									
BIM model																																																																	
SUB-1240	Propose and establish a BIM team	14	14-Aug-20*	29-Aug-20	17-Sep-20	05-Oct-20	29	SUB-1240, 29-Aug-20 to 05-Oct-20																																																									
Safety, Health & Environmental																																																																	
SUB-1250	Construction Health and Safety Plan	30	30-Jul-20	02-Sep-20	25-Aug-21	30-Sep-21	318	SUB-1250, 02-Sep-20 to 30-Sep-21																																																									
SUB-1260	Environmental Management Plan	45	30-Jul-20	19-Sep-20	07-Aug-21	30-Sep-21	303	SUB-1260, 19-Sep-20 to 30-Sep-21																																																									
SUB-1270	Waste Management Plan (WMP)	30	17-Aug-20	19-Sep-20	04-Sep-21	12-Oct-21	312	SUB-1270, 19-Sep-20 to 12-Oct-21																																																									
SUB-1280	Construction Noise Mitigation Plan(s) to EPD	30	17-Aug-20	19-Sep-20	04-Sep-21	12-Oct-21	312	SUB-1280, 19-Sep-20 to 12-Oct-21																																																									
SUB-1290	Trip ticket system (TTS) proposal	21	17-Aug-20	09-Sep-20	04-Sep-21	30-Sep-21	312	SUB-1290, 09-Sep-20 to 30-Sep-21																																																									
SUB-1300	Site Management Plan for implementation of trip ticket system (TTS) for the contract	45	30-Jul-20	19-Sep-20	07-Aug-21	30-Sep-21	303	SUB-1300, 19-Sep-20 to 30-Sep-21																																																									
SUB-1310	Risk assessment for working in hot weather	60	30-Jul-20	09-Oct-20	21-Jul-21	30-Sep-21	288	SUB-1310, 09-Oct-20 to 30-Sep-21																																																									
Access/ TTA																																																																	
SUB-1320	Site Traffic Safety Management Plan (STSMP)	42	14-Aug-20	03-Oct-20	20-Oct-20	08-Dec-20	55	SUB-1320, 03-Oct-20 to 08-Dec-20																																																									
SUB-1400	Proposal Security system for the site	60	14-Aug-20	24-Oct-20	21-Jul-21	30-Sep-21	275	SUB-1400, 24-Oct-20 to 30-Sep-21																																																									
Record Photos and Project Video																																																																	
SUB-1330	Propose a professional photographer	7	15-Aug-20	22-Aug-20	25-Sep-20	05-Oct-20	35	SUB-1330, 22-Aug-20 to 05-Oct-20																																																									
SUB-1340	Propose a professional video production Company and a competent Video Director	14	30-Jul-20	14-Aug-20	09-Sep-20	24-Sep-20	35	SUB-1340, 14-Aug-20 to 24-Sep-20																																																									
Preparation for relevant works																																																																	
SUB-1040	Liaison with Villagers (e.g. Siu Hang San Tsuen)	100	25-Aug-20	22-Dec-20	27-Nov-20	02-Apr-21	78	SUB-1040, 22-Dec-20 to 02-Apr-21																																																									
SUB-1050	Condition Survey & CIA	100	25-Aug-20	22-Dec-20	27-Nov-20	02-Apr-21	78	SUB-1050, 22-Dec-20 to 02-Apr-21																																																									
SUB-1070	Prepare, submit, processing & approval for Alternative Design (including Acabas)	150	28-Oct-20	03-May-21	28-Oct-20	03-May-21	0	SUB-1070, 28-Oct-20 to 03-May-21																																																									
SUB-1090	Prepare, submit & accept work submission for design for RC and MiC works	80	24-Mar-21	03-Jul-21	07-Jul-21	09-Oct-21	82	SUB-1090, 24-Mar-21 to 09-Oct-21																																																									
SUB-1100	Prepare, submit & accept work submission for watermain diversion Works	80	24-Mar-21	03-Jul-21	15-Jun-21	16-Sep-21	64	SUB-1100, 24-Mar-21 to 16-Sep-21																																																									
SUB-1110	Prepare, submit & accept work submission for Noise Barrier Works	80	04-May-21	07-Aug-21	11-Jul-22	15-Oct-22	352	SUB-1110, 04-May-21 to 15-Oct-22																																																									
SUB-1120	Prepare, submit & accept work submission for erect NB steel post & panel	80	04-May-21	07-Aug-21	11-Jul-22	15-Oct-22	352	SUB-1120, 04-May-21 to 15-Oct-22																																																									
SUB-1350	The brand and model of underground services detection equipment	7	30-Jul-20	06-Aug-20	30-Jul-20	06-Aug-20	0	SUB-1350, 06-Aug-20 to 06-Aug-20																																																									
SUB-1360	Hoarding Plan	14	30-Jul-20	14-Aug-20	30-Jul-20	14-Aug-20	0	SUB-1360, 14-Aug-20 to 14-Aug-20																																																									
SUB-1370	Weather protection schedule	30	15-Aug-20	18-Sep-20	15-Aug-20	18-Sep-20	0	SUB-1370, 18-Sep-20 to 18-Sep-20																																																									
SUB-1410	Electrical and Mechanical Works for Lift Installation	90	13-Aug-21	29-Nov-21	09-Apr-22	30-Jul-22	195	SUB-1410, 13-Aug-21 to 30-Jul-22																																																									
SUB-1420	Road lighting system	90	22-Jan-22	17-May-22	16-Mar-23	07-Jul-23	338	SUB-1420, 22-Jan-22 to 07-Jul-23																																																									
SUB-1430	Electrical System for Public toilet and pumping station	90	05-Jul-21	20-Oct-21	14-Jun-23	28-Sep-23	576	SUB-1430, 05-Jul-21 to 28-Sep-23																																																									
SUB-1440	Building Services System	90	05-Jul-21	20-Oct-21	14-Jun-23	28-Sep-23	576	SUB-1440, 05-Jul-21 to 28-Sep-23																																																									
SUB-1450	Bio-treatment Plant for Public Toilet	90	21-Oct-21	09-Feb-22	29-Sep-23	18-Jan-24	576	SUB-1450, 21-Oct-21 to 18-Jan-24																																																									
SUB-1460	Pump systems and associated E&M Plants	90	21-Oct-21	09-Feb-22	29-Sep-23	18-Jan-24	576	SUB-1460, 21-Oct-21 to 18-Jan-24																																																									
SUB-1470	Traffic Control and Surveillance System (TCSS)	90	05-May-22	20-Aug-22	26-Jun-23	11-Oct-23	338	SUB-1470, 05-May-22 to 11-Oct-23																																																									
SUB-1480	Traffic Detector System	90	05-May-22	20-Aug-22	26-Jun-23	11-Oct-23	338	SUB-1480, 05-May-22 to 11-Oct-23																																																									
SUB-1490	Skateboard Park and Ancillary Block of On Lok Road	90	30-Jul-20	14-Nov-20	21-May-21	04-Sep-21	238	SUB-1490, 14-Nov-20 to 04-Sep-21																																																									
SUB-1500	Park layout and facilities at San Uk Tsuen Sitting	90	16-Nov-20	06-Mar-21	06-Sep-21	22-Dec-21	238	SUB-1500, 16-Nov-20 to 22-Dec-21																																																									
SUB-1510	Crash cushion system.	90	11-Jun-22	26-Sep-22	13-Jun-22	28-Sep-22	1	SUB-1510, 11-Jun-22 to 26-Sep-22																																																									
SUB-1520	Access facilities	90	18-Jul-22	02-Nov-22	19-Jul-22	04-Nov-22	1	SUB-1520, 18-Jul-22 to 02-Nov-22																																																									
Construction Works																																																																	
CW-0000	Initial Tree Survey	945	03-Oct-20*	09-Dec-23	06-Oct-20	12-Dec-23	2	CW-0000, 03-Oct-20 to 12-Dec-23																																																									
CW-1000	Tree Felling and Protection	960	03-Dec-20	02-Mar-24	10-Feb-22	10-May-25	349	CW-1000, 03-Dec-20 to 10-May-25																																																									
Civil Works around Interchange																																																																	
Stage 1																																																																	
INTS1-1105	Design, submit, processing & approval for the application of TTA no.1	90	01-Dec-20	22-Mar-21	09-Dec-20	02-Apr-21	7	INTS1-1105, 01-Dec-20 to 02-Apr-21																																																									
INTS1-1110	Road works for Major TTA No.1 (Implementation of Road realignment works for shift traffic	90	23-Mar-21	14-Jul-21	03-Apr-21	22-Jul-21	7	INTS1-1110, 23-Mar-21 to 22-Jul-21																																																									
INTS1-1340	Implementation of Major TTA no.1 (shift traffic Isnd og Ma Sik road)	7	15-Jul-21	22-Jul-21	23-Jul-21	30-Jul-21	7	INTS1-1340, 15-Jul-21 to 30-Jul-21																																																									
Construction of Utrough/ Underpass (Portion H)																																																																	
INTS1-1160	Piling Works for Underpass Bay C5 to C8 (total 36 nos. socket-H, 4d/pile, 2no. workfronts)	72	24-Mar-21	23-Jun-21	24-Mar-21	23-Jun-21	0	INTS1-1160, 24-Mar-21 to 23-Jun-21																																																									
INTS1-1230	ELS and Excavation	90	24-Jun-21	09-Oct-21	24-Jun-21	09-Oct-21	0	INTS1-1230, 24-Jun-21 to 09-Oct-21																																																									
INTS1-1240	Piling Works for Underpass Bay C1 to C4 (total 36 nos. socket-H, 4d/pile, 2no. workfronts)	72	24-Jun-21	16-Sep-21	25-May-22	18-Aug-22	271	INTS1-1240, 24-Jun-21 to 18-Aug-22																																																									
INTS1-1270	Structure Works for Bay C5 to C8 (13m/bay, 60days/bay, 2no. workfronts)	120	11-Oct-21	07-Mar-22	11-Oct-21	07-Mar-22	0	INTS1-1270, 11-Oct-21 to 07-Mar-22																																																									
INTS1-1280	ELS and Excavation Bay C1 to C4	90	11-Oct-21	27-Jan-22	19-Aug-22	05-Dec-22	253	INTS1-1280, 11-Oct-21 to 05-Dec-22																																																									

■ Actual Work ◆ Milestone
■ Remaining Work
■ Critical Remaining Work

Data Date: 30-Jul-20
 Project Start: 30-Jul-20
 Project End: 09-Jul-26
 Page 2 of 7

ND/2019/04
Preliminary Works Programme

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

Construction Programme of ND/2019/05

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	November 2021					December 2021					January 2022				February 2022					
					31	07	14	21	28	05	12	19	26	02	09	16	23	30	06	13	20	27		
3MRP No. 21 - December 2021																								
1.0 - Contract Data Part 1																								
1.3 - Completion Date																								
1.3.1 - Key Dates																								
Key Date KD1																								
KD1-1	Achieve Keydate KD1	0		16-Dec-21*																◆ Achieve Keydate KD1				
Key Date KD2																								
KD2-1	Achieve Keydate KD2	0		11-Jan-22*																◆ Achieve Keydate KD2				
2.0 - Preliminary Works																								
2.3 - Contractor's Design (PS 1,109)																								
2.3.3 - (c) Lift Installation E&M																								
CDc-100	Lift Install E&M - Prep/Submit Design	120	01-Jan-22	30-Apr-22																				
2.3.4 - (d) Lighting System																								
CDD-135	Road Lighting System - Manufacturing and Delivery	48	09-Jan-22	25-Feb-22																				
CDD-150	HKY Footbridge Lighting System - Design ICE	24	01-Dec-21	24-Dec-21																				
CDD-160	HKY Footbridge Lighting System - Design Approval	36	25-Dec-21	29-Jan-22																				
CDD-170	BBI Lighting System - Prep/Submit Design	102	01-Dec-21	12-Mar-22																				
CDD-180	BBI Lighting System - Design ICE	42	30-Jan-22	12-Mar-22																				
CDD-190	BBI Lighting System - Design Approval	60	30-Jan-22	30-Mar-22																				
2.3.5 - (e) BBI Public Toilet Electrical System																								
CDe-100	Public Toilet Electrical System - Procurement	72	24-Dec-21	05-Mar-22																				
2.3.6 - (f) BBI Public Toilet BS System																								
CDf-100	Public Toilet BS System - Procurement	72	24-Dec-21	05-Mar-22																				
2.3.7 - (g) BBI Public Toilet Bio-treatment Plant																								
CDg-100	Public Toilet Bio-treatment Plant - Procurement	78	01-Jan-22	19-Mar-22																				
2.4 - Cost Saving Design																								
2.4.4 - Bridge C1																								
AD-063	Bridge C1 AD/CSD Approval	0	20-Oct-21 A	04-Nov-21 A																				
2.4.6 - Bridge D2																								
AD-105	Bridge D2 Revised Design ICE	0	13-Aug-21 A	10-Nov-21 A																				
2.4.10 - Bridge E4																								
AD-121	Bridge E4 AD/CSD Preparation	12	22-Apr-21 A	12-Dec-21																				
AD-122	Bridge E4 AD/CSD ICE	60	13-Dec-21	10-Feb-22																				
AD-123	Bridge E4 AD/CSD Approval	90	13-Dec-21	12-Mar-22																				
2.5 - Segment Erection Design and Calculation																								
2.5.1 - Geometry Control																								
AD-150	MS Geometry Control for Segment Erection	38	25-Apr-21 A	07-Jan-22																				
AD-152	MS Geometry Control for Segment Erection PM Review	48	08-Jan-22	24-Feb-22																				
2.5.3 - Temporary Works																								
AD-762	Temp Prestress Design Preparation	12	01-Jun-21 A	12-Dec-21																				
AD-763	Temp Prestress Design ICE	12	01-Sep-21 A	12-Dec-21																				
AD-782	Temp Prestress Design PM Review	36	13-Dec-21	17-Jan-22																				
AD-812	Balance Cantilever Erection Stabilization Design PM Review	12	07-May-21 A	12-Dec-21																				
AD-832	Clamping Beam and Stitch Formwork Design ICE	12	01-Jun-21 A	12-Dec-21																				
AD-842	Clamping Beam and Stitch Formwork Design PM Review	12	01-Jun-21 A	12-Dec-21																				
AD-852	False Balance Cantilever Temp Prestress Design Preparation	12	01-Jun-21 A	12-Dec-21																				
AD-872	False Balance Cantilever Temp Prestress Design PM Review	36	06-Jan-22	10-Feb-22																				
2.5.4 Method Statement																								
AD-882	Segment Erection Method Statement Preparation	30	25-Apr-21 A	30-Dec-21																				

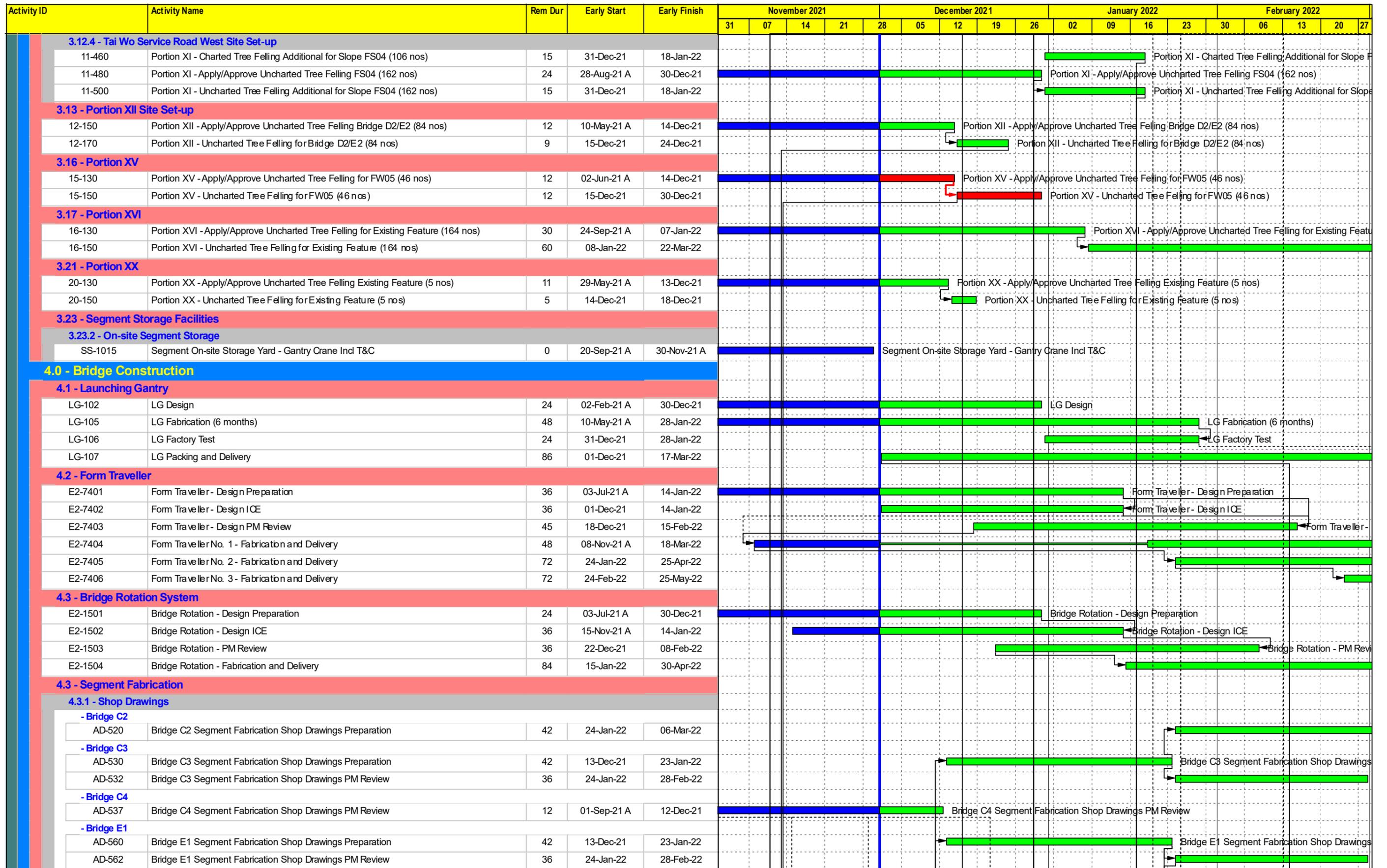


- Remaining Level of Ef...
- Actual Work
- Remaining Work
- Critical Remaining Work
- ◆ Milestone

Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)
3-Month Rolling Programme - Dec 2021

Proj ID : 3MRP-21
 Layout : ND201905 3MRP
 Date : Page 1 of 10

3-Month Rolling Programme			
Date	Revision	Checked	Approved
01-Dec-21	December 2021		

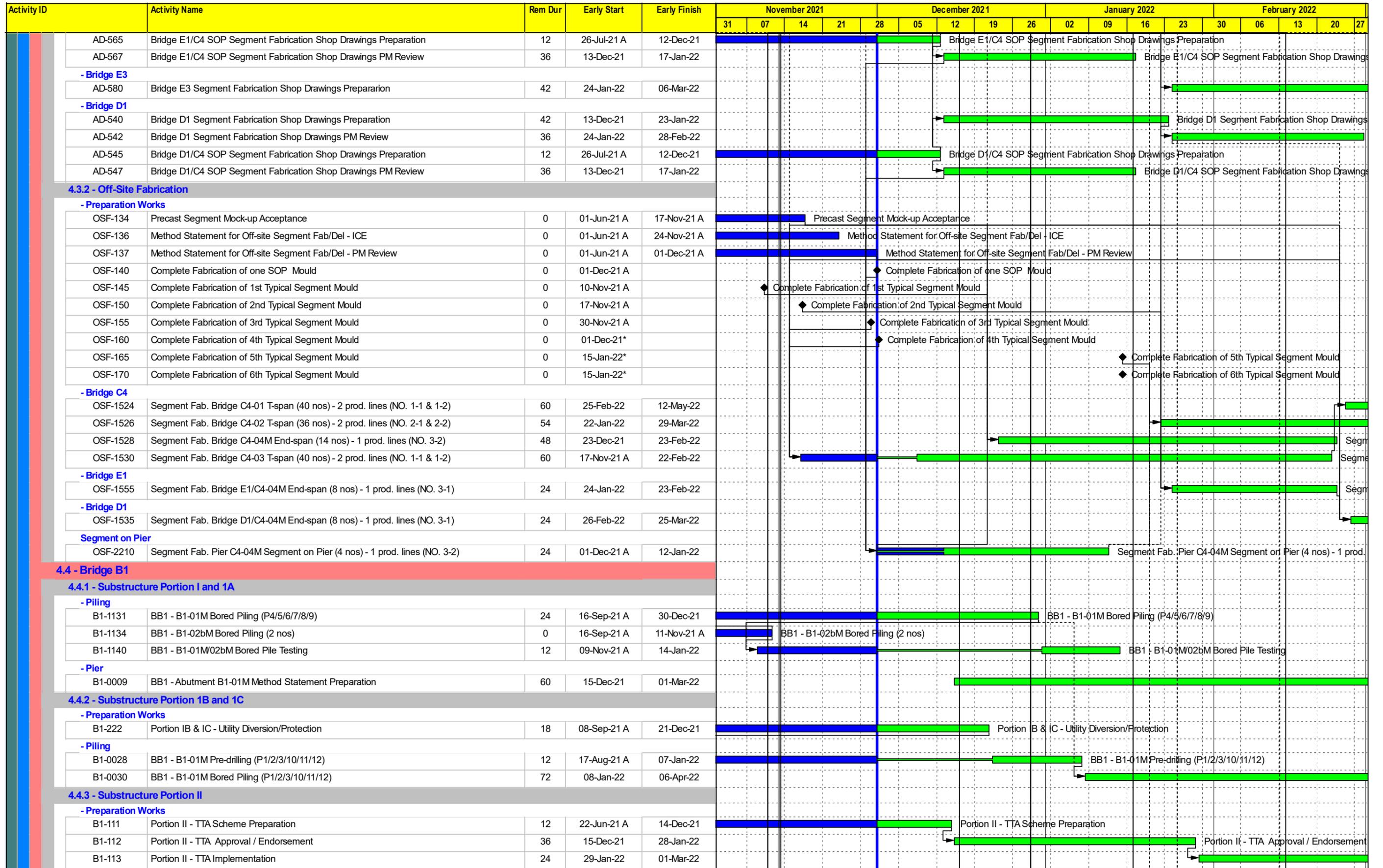


- █ Remaining Level of Effort
- █ Actual Work
- █ Remaining Work
- █ Critical Remaining Work
- ◆ Milestone

Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)
3-Month Rolling Programme - Dec 2021

Proj ID : 3MRP-21
 Layout : ND201905 3MRP
 Date : Page 3 of 10

3-Month Rolling Programme			
Date	Revision	Checked	Approved
01-Dec-21	December 2021		

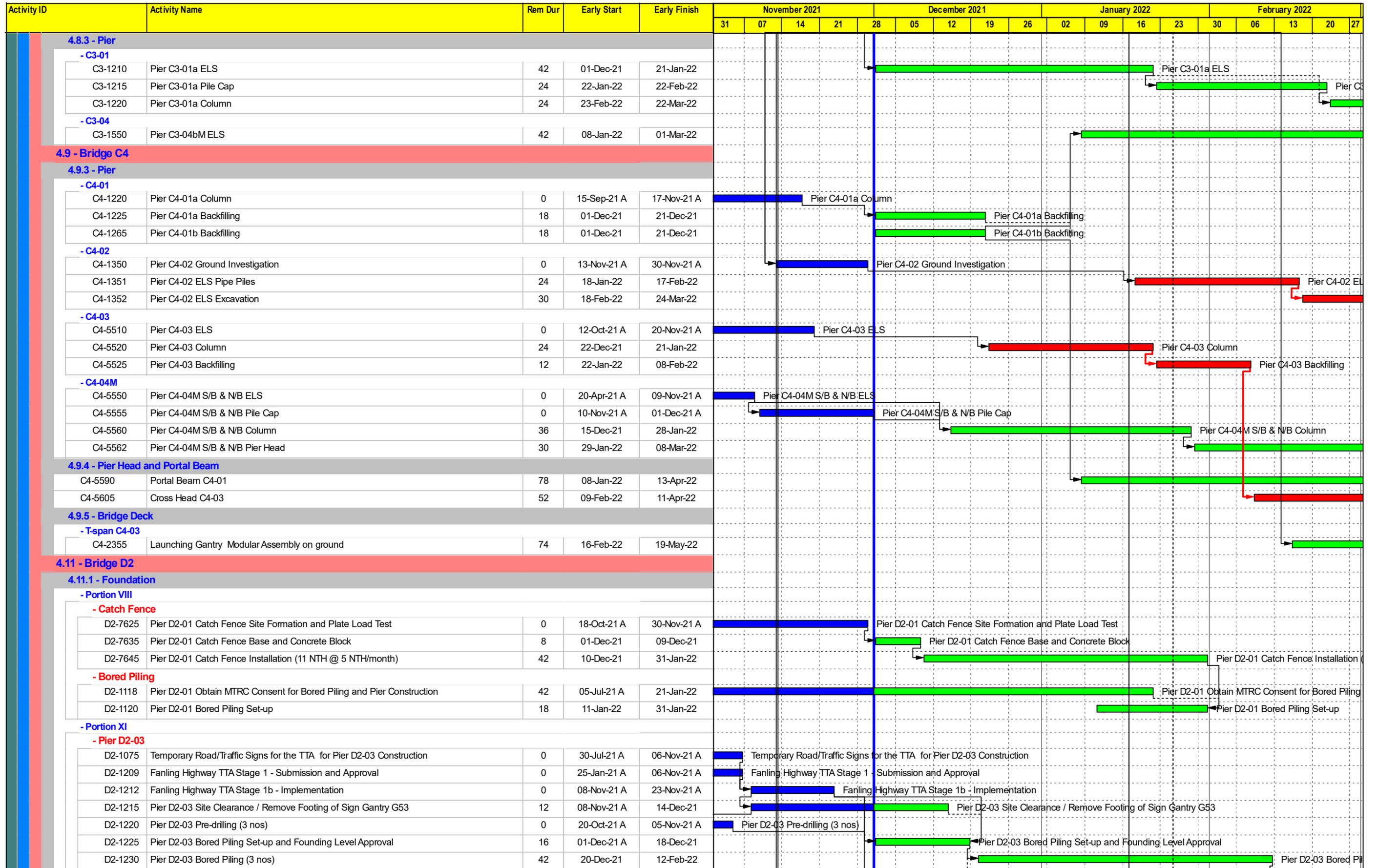


■ Remaining Level of Ef...
■ Actual Work
■ Remaining Work
■ Critical Remaining Work
◆ Milestone

Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)
3-Month Rolling Programme - Dec 2021

Proj ID : 3MRP-21
 Layout : ND201905 3MRP
 Date : Page 4 of 10

3-Month Rolling Programme			
Date	Revision	Checked	Approved
01-Dec-21	December 2021		



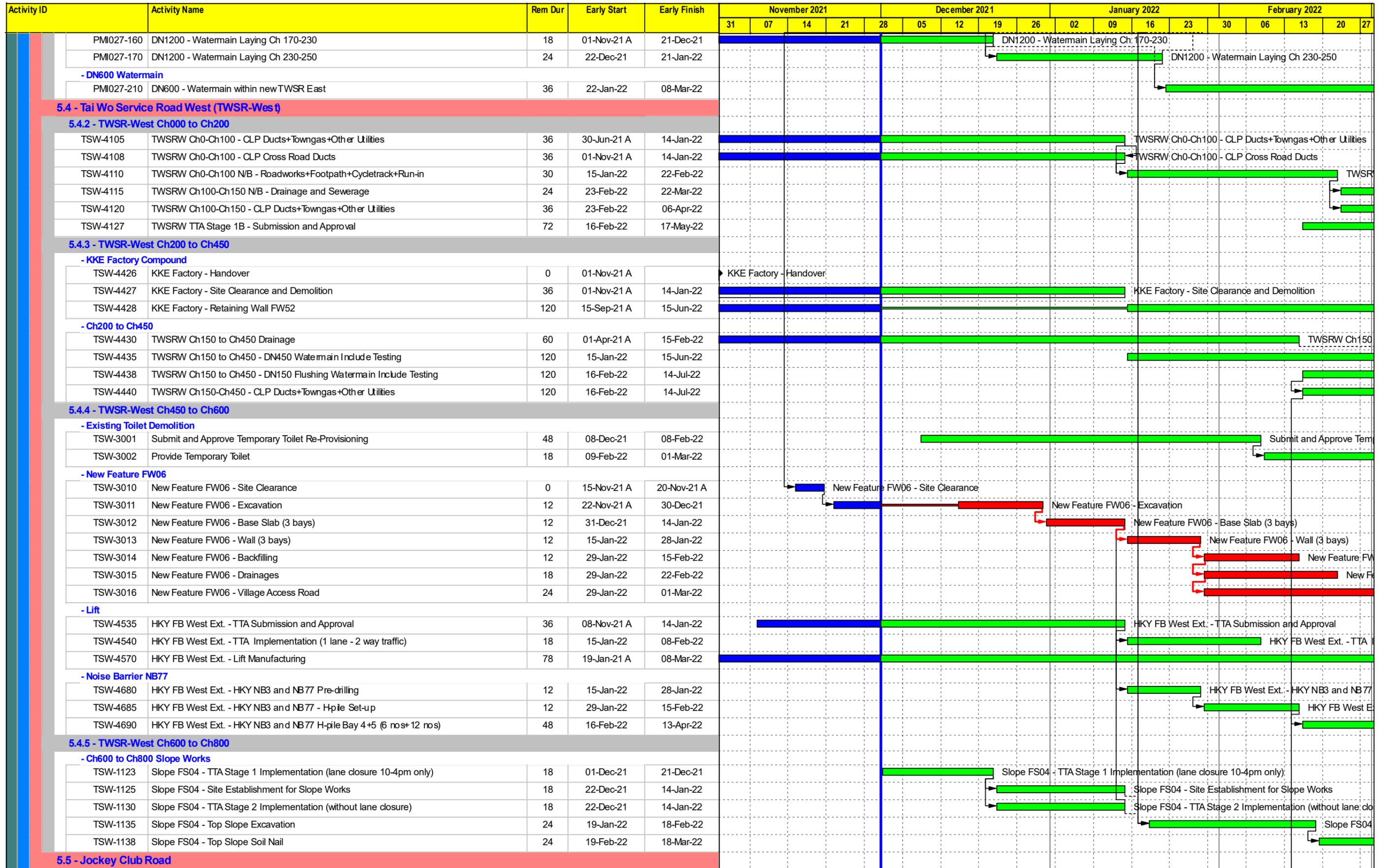
CRCC - Paul Y.
Joint Venture

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

Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)
3-Month Rolling Programme - Dec 2021

Proj ID : 3MRP-21
Layout : ND201905 3MRP
Date : Page 6 of 10

3-Month Rolling Programme			
Date	Revision	Checked	Approved
01-Dec-21	December 2021		



5.5 - Jockey Club Road



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

**Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)
3-Month Rolling Programme - Dec 2021**

Proj ID : 3MRP-21
Layout : ND201905 3MRP
Date : Page 9 of 10

3-Month Rolling Programme			
Date	Revision	Checked	Approved
01-Dec-21	December 2021		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	November 2021					December 2021					January 2022				February 2022			
					31	07	14	21	28	05	12	19	26	02	09	16	23	30	06	13	20	27
5.5.2 - Tong Hang Village Road (THV Road)																						
JCR-2180	THV TTA Stage 1 Implementation	72	08-Feb-22	07-May-22																		
JCR-2181	THV Road N/B - Application for Lighting Removal	72	08-Feb-22	07-May-22																		
JCR-2190	THV Road N/B - Issue PMI for Ret Wall FW51	0	08-Feb-22																			
JCR-2192	THV Road N/B - Ret Wall FW51 Ground Investigation and Design	11	01-Apr-21 A	13-Dec-21																		
JCR-2193	THV Road N/B - Ret Wall FW51 Preparation Work	42	08-Feb-22	28-Mar-22																		
5.5.3 - North Bound																						
JCR-2340	JCR TTA Stage 1 Implementation	42	01-Dec-21	21-Jan-22																		
JCR-2350	JCR N/B - Application for Lighting Removal	60	01-Dec-21	15-Feb-22																		
JCR-2360	JCR N/B - Lighting Removal/Install Temporary Lighting	30	16-Feb-22	22-Mar-22																		
JCR-2390	JCR N/B - Site Clearance / Tree felling	24	22-Jan-22	22-Feb-22																		
JCR-2400	JCR N/B - Existing Featur 3SW-C/F63 - Excavate Loose Fill	42	23-Feb-22	13-Apr-22																		
6.0 - TCSS Works																						
6.1 - Key Date 1																						
6.1.1 - TWSRW & FH N/B																						
TCS-124	TCSS Ducts - TWSRW Ch150-Ch450	36	16-Feb-22	29-Mar-22																		
6.2 - Key Date 3A and Section 9A																						
TCS-300	Tolo/Fanling Highway Section 4 - Submit /Approve Interface Management Plan	120	01-Dec-21	30-Apr-22																		
6.3 - Key Date 3B and Section 9B																						
TCS-370	Traffic Defector System - Submit /Approve Interface Management Plan	72	01-Dec-21	01-Mar-22																		
7.0 - Miscellaneous Works																						
MIS-100	Preservation and Protection of Trees	150	28-Oct-20 A	08-Jun-22																		

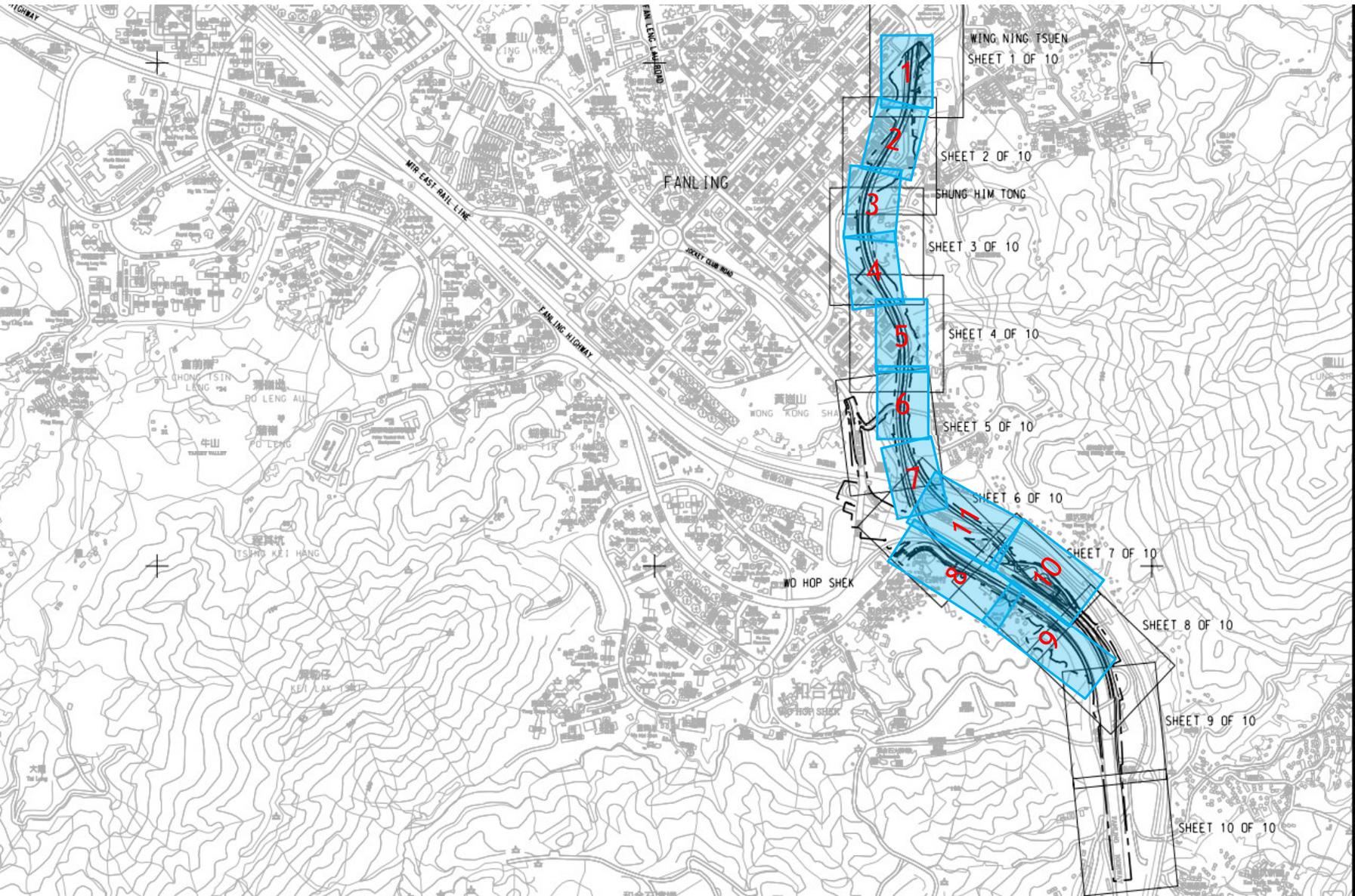


- Remaining Level of Ef...
- Actual Work
- Remaining Work
- Critical Remaining Work
- ◆ Milestone

**Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)
3-Month Rolling Programme - Dec 2021**

Proj ID : 3MRP-21
Layout : ND201905 3MRP
Date : Page 10 of 10

3-Month Rolling Programme			
Date	Revision	Checked	Approved
01-Dec-21	December 2021		



CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK'D BY
-	JUN-19	TENDER DRAWING	RPCM

STATUS

SCALE
 A1 1 : 7000

DIMENSION UNIT
 METRES

KEY PLAN

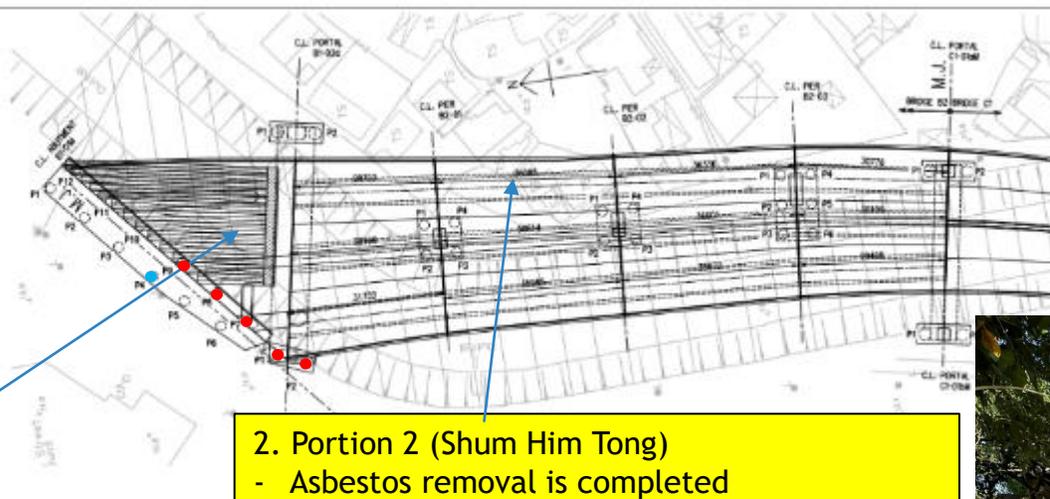
PROJECT NO.
 80335576

CONTRACT NO.
 ND/2019/05

SHEET TITLE
 KEY PLAN AND LOCATION PLAN

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North Team



Legend:

- Bored Pile in progress
- Bored Pile Completed

NOTES:

- FOR NOTES, REFER TO DRAWING NO. 2002/YM/FA/0001 ONWARDS
- TYPICAL BORED PILE DETAILS SHALL REFER TO DWG. NO. 2002/YM/FA/0001-0002
- 5.1M ROCKHEAD LEVEL IS ESTIMATED FROM ROCKING CONTOUR

COMPLETED BEFORE COMMENCEMENT OF PILING EXCAVATION.

1. Portion 1 (On Kui St)

- Bored piling at B1-01 and B1-02b in progress
- **Bored Piling - ES:16/9/21 EF:8/4/22**
- **Target completion 9 Mar 22. Still on track against R9**

2. Portion 2 (Shum Him Tong)

- Asbestos removal is completed
- Demolition is completed. Clearance in progress
- CLP meeting for OHL pole removal on 3/12/21
- Bailey bridge design, DSD approval & construction
- **Bored Piling - ES:20/4/22 EF:2/11/22**
- **Target commencement 17 Mar 22. Still on track against R9**

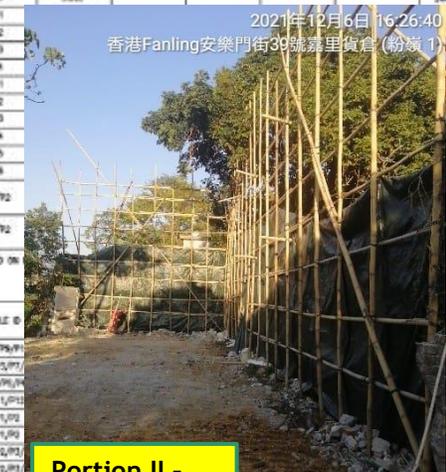


Portion II - asbestos removal completed

Grid	Pile No.	Depth (m)	Length (m)	Area (sqm)	Volume (cu m)	Weight (kg)
B1-02b	P1/P2	5.400	172.43	0.33302	1.1	94002.69
	P1/P2	5.400	4725.74	0.33257	5.3	94011.46
	P1	5.500				
	P2	5.500				
B1-01	P2	5.500	945.19	0.33276	2.9	85907.52
	P3	5.500				
	P4	5.500				



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



Portion II - Demolition completed



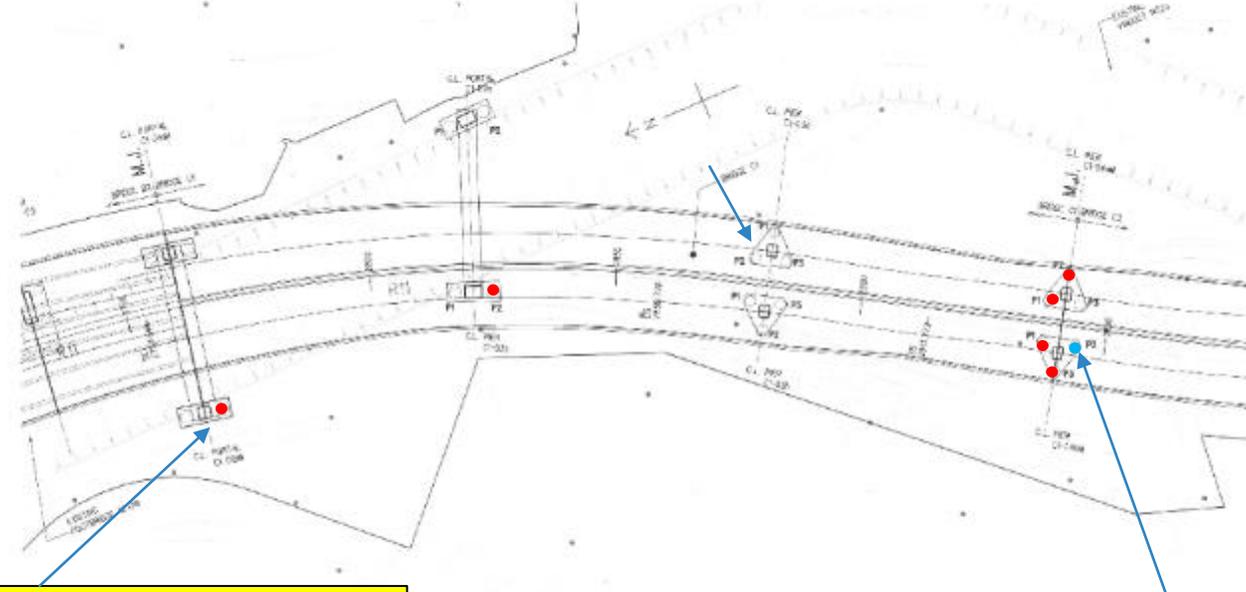
Portion II - Demolition completed



Portion II - Demolition completed

North Team

2



- NOTES:**
1. ALL LEVELS REFER TO MEAN SEA LEVEL UNLESS OTHERWISE SPECIFIED.
 2. TYPICAL BORED PILE DETAIL SHALL REFER TO DRAINAGE DESIGN SPECIFICATION.
 3. TYPICAL PILECAP GENERAL ARRANGEMENT SHALL REFER TO DRAINAGE DESIGN SPECIFICATION.
 4. TYPICAL PILECAP REINFORCEMENT DETAILS SHALL REFER TO DRAINAGE DESIGN SPECIFICATION.
 5. THE ROCKING LEVEL IS DETERMINED FROM RECORDS CONTROL PLAN SHOWN IN DRAWING NO. DR-01/2018/01-000.
 6. AFTER PILING BEING SET POINT AND ACCEPTED SETTING OUT WORKS, REFER TO DRAWING NO. DR-01/2018/01-000 FOR PILE CAP DETAIL. ALL PILES WITH A PILECAP SHALL BE COMPLETED BEFORE COMMENCEMENT OF PILING REVISION.

3. C1-01b
 - Pile piling at C1-01b for piling platform in progress

5. Portion 3 (C1-04)
 - Bored piling at C1-04a and C1-04b in progress
 - Bored Piling - ES:6/9/21 EF:28/12/21
 - Target completion 10 Dec 21. Still on track against R9

FOUNDATION SCHEDULE

PILE NO.	PILE CL.	PILECAP REF. (SEE DRAWING)	NUMBER OF PILES	PILECAP SETTING OUT POINT (REFER TO NOTE 3)	PILECAP TYPE	PILE MARKING LONG AT COLL. (METER) REF. 100	REF. 100	PILE MARKING SHORT AT COLL. (METER) REF. 100	REF. 100	PILE MARKING POINT (METER) REF. 100	REF. 100	PILE MARKING POINT (METER) REF. 100	REF. 100
C1-01b			1										
C1-04a			1										
C1-04b			1										

+15.000	17.000	15.0	8.00	19.25
+2.000	-25.000	15.0	8.00	19.10
+4.000	-14.000	15.0	8.00	19.15
+10.000	-22.000	15.0	8.00	19.20
+20.000	-32.000	15.0	8.00	19.25
+23.750	27.300	15.0	8.00	19.00
+22.500	-19.500	15.0	8.00	19.25

PROJECT NO. 10-000000

CLIENT: PUBLIC WORKS DEPARTMENT

AECOM

YWL

PROJECT TITLE: FAHUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: FAHUNG BRIDGE EASTERN SECTION (SHANG HUI TONG TO KAU LUNG HANG)

BRIDGE C1 - FOUNDATION SCHEDULE

DATE: 10/12/2021

DESIGNED BY: [Signature]

CHECKED BY: [Signature]

APPROVED BY: [Signature]

CECO 中土工程控股有限公司



C1-01b
 Piling platform in progress

Legend:

- Bored Pile in progress
- Bored Pile Completed

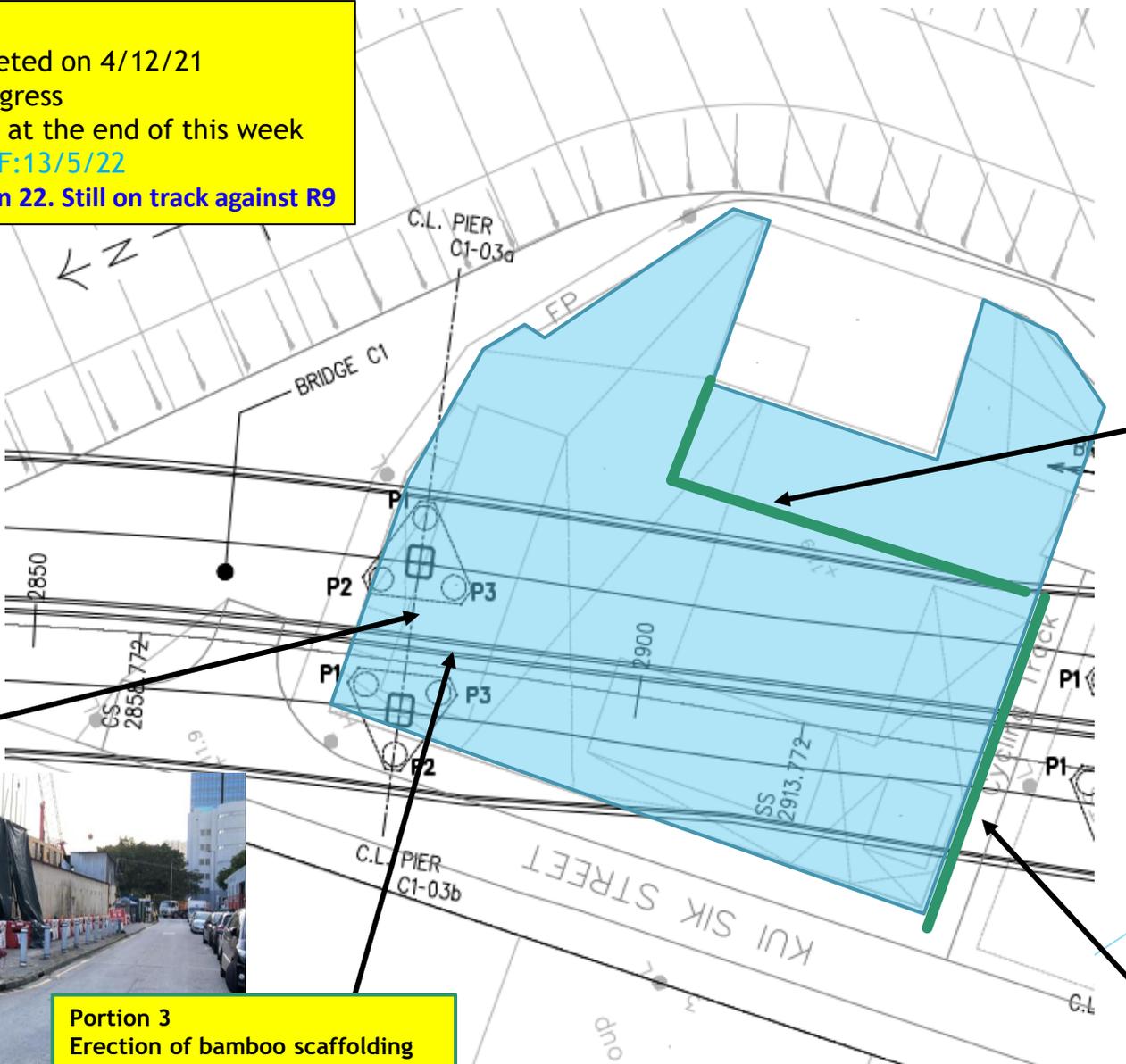
2 North Team

Area Highlighted - Tong Shun Hing

4. Portion 3 (C1-03)
- Asbestos removal is completed on 4/12/21
 - Hoarding erection is in progress
 - Demolition will commence at the end of this week
 - Bored Piling- ES:12/2/22 EF:13/5/22
 - Target commencement 26 Jan 22. Still on track against R9



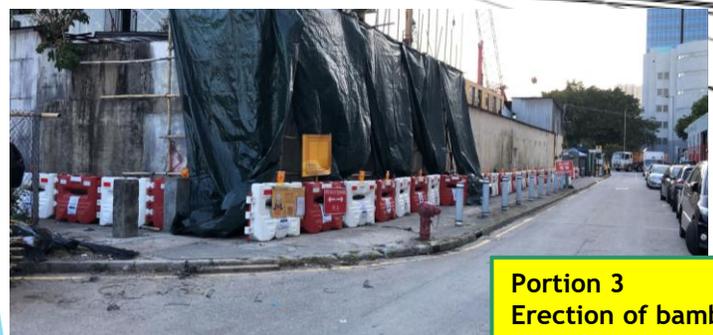
Portion 3
Asbestos removed



Portion 3
Hoarding erection



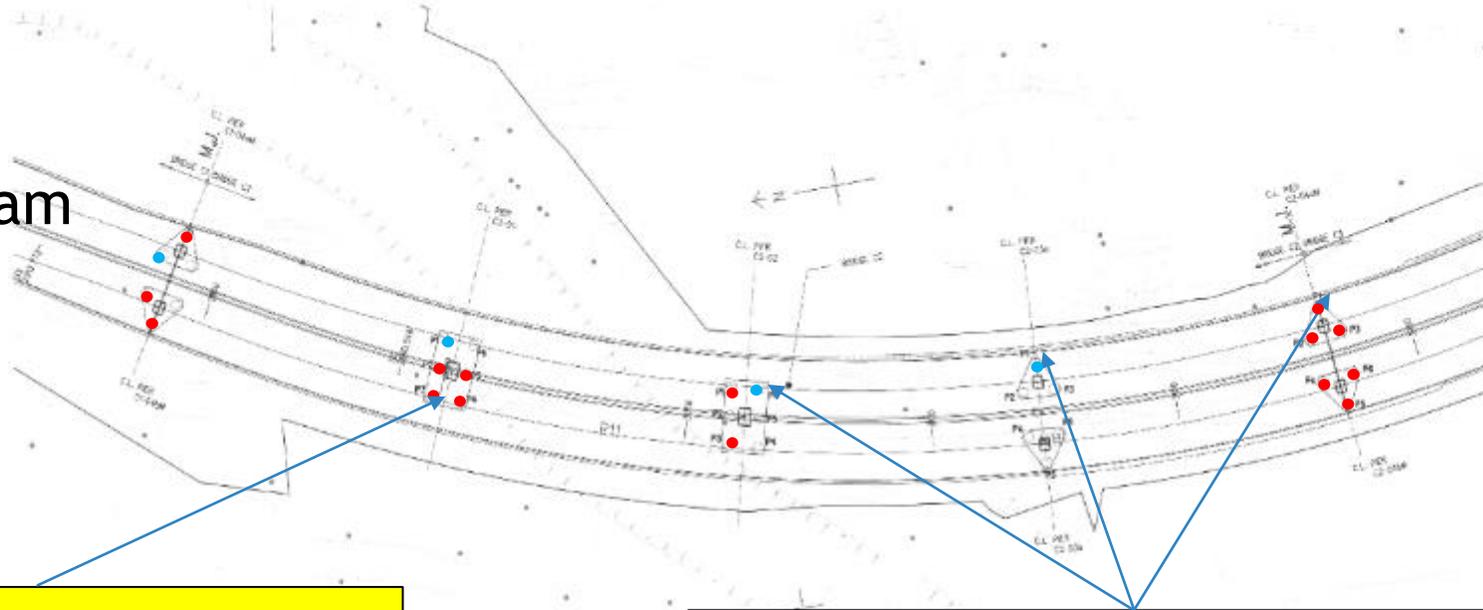
Portion 3
Hoarding erection



Portion 3
Erection of bamboo scaffolding

3

▶ North Team



- NOTES:**
1. FOR NOTES, REFER TO DRAWING NOS. 2005/PA/04/001-000/0000
 2. TYPICAL BORED PILE DETAILS SHALL REFER TO DWG. NO. 2005/PA/04/002/0000
 3. TYPICAL PILECAP GENERAL ARRANGEMENT SHALL REFER TO DWG. NO. 2005/PA/04/003/0000
 4. TYPICAL PILECAP REINFORCEMENT DETAILS SHALL REFER TO DWG. NO. 2005/PA/04/004/0000
 5. ALL DIMENSIONS (UNLESS OTHERWISE SPECIFIED) SHALL BE IN METERS
 6. FOR PILECAP SETTING OUT POINT AND ANCHOR SETTING OUT POINTS, REFER TO DRAWING NO. 2005/PA/04/005/0000
 7. PREDRILL FOR ALL TEST WITH A PILECAP SHALL BE COMPLETED BEFORE COMMENCEMENT OF PILING OPERATION

Legend:

- Bored Pile in progress
- Bored Pile Completed

6. Portion 4 (C2-01)

- 5th bored pile construction in progress
- Bored Piling - ES:8/6/21 EF:5/3/22
- Target completion 24 Dec 21. Still on track against R9

7. Portion 5 (On Lok Garden)

- Bored piling at Portion 5 in progress
- Additional predrill to verify rock head at C2-03a and C2-03b are completed
- Bored Piling - ES:20/1/21 EF:21/4/22
- Target completion 8 Mar 22. Still on track against R9

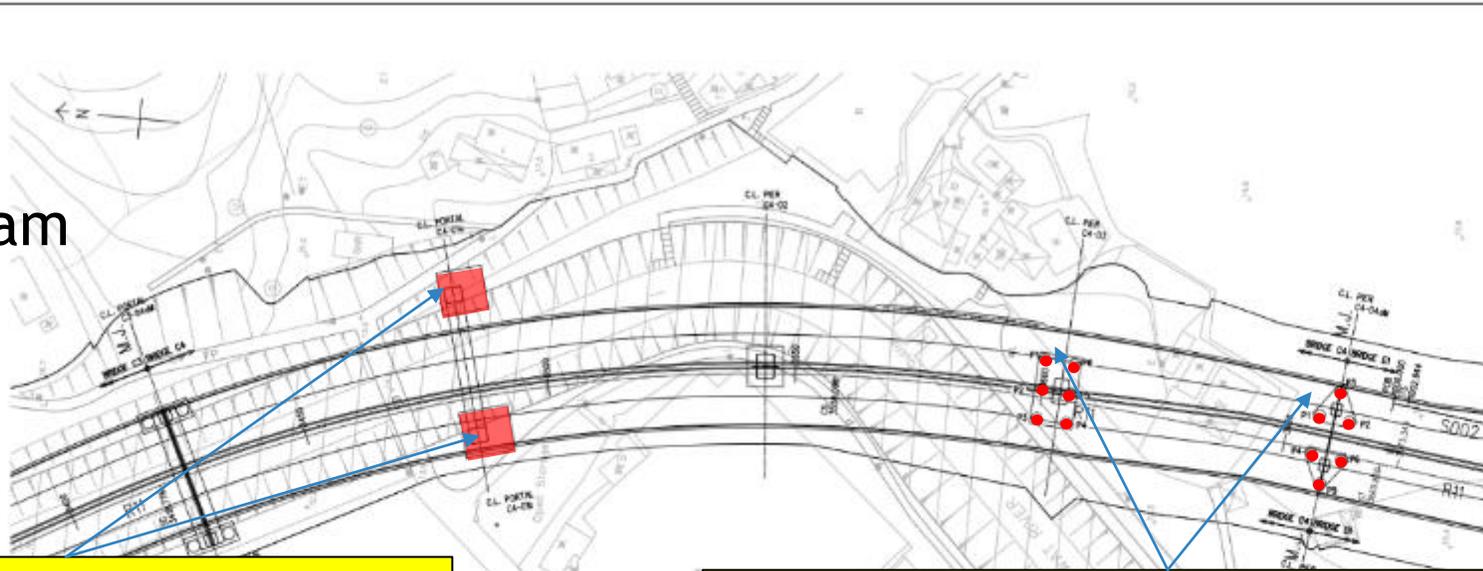


Portion 4 (C2-01)
Bored pile in progress



Portion 5
Bored pile in progress

North Team



- NOTES:**
- FOR NOTES, REFER TO DRAWING NO. 2010/TK/DA/001 DRAWING.
 - TYPICAL BORED PILE DETAILS SHALL REFER TO DWG. NO. 2010/TK/DA/001 & 002/2A.
 - TYPICAL PILECAP GENERAL ARRANGEMENT SHALL REFER TO DWG. NO. 2010/TK/DA/001 DRAWING.
 - TYPICAL PILECAP REINFORCEMENT DETAILS SHALL REFER TO DWG. NO. 2010/TK/DA/001 DRAWING.
 - TYPICAL FOOTING GENERAL ARRANGEMENT SHALL REFER TO DWG. NO. 2010/TK/DA/001.
 - TYPICAL FOOTING REINFORCEMENT DETAILS SHALL REFER TO DWG. NO. 2010/TK/DA/001 DRAWING.
 - 1" RISE/HEAD LEVEL IS ESTIMATED FROM ROADHEAD CONTOUR PLAN DRAWING IS DRAWING NO. 003/2A/05/001-004.
 - FOR PILECAP AND FOOTING SETTING OUT POINT AND KERNAL SETTING OUT PRINCIPLE, REFER TO DRAWING NO. 2010/TK/DA/001 DRAWING.
 - PREPARE FOR ALL PILES WITHIN A PILECAP SHALL BE COMPLETED BEFORE COMMENCEMENT OF PILING EXCAVATION.

Legend:

- Bored Pile in progress
- Bored Pile Completed

10. Portion 6 (Hong Kee)

- C4-01b: Pier construction completed. Preparation for portal construction is in progress
- C4-01a: Pier construction completed. Preparation for portal construction is in progress
- Pre-drilling at C4-02 are completed
- **On track against R9**

11. Portion 8 (CTC yard)

- Cap C4-04a and C4-04b are completed
- Cap C4-03 construction is in progress
- **Cap - ES:29/11/21 EF:18/12/21**
- **Target completion of Cap on 18 Dec 22. Still on track against R9**

PILECAP TYPE	FOOTING TYPE	PILE WORKING LOAD AT COLL.				DESIGN	MDF (kN)	DIAMETER (mm)	SLEEVE DIA. (mm)	OFF LEVEL (mm)	REINFORC. LEVEL (mm)	FOOTING LEVEL (mm)	PILE LENGTH (m)	PILE LENGTH (m)
		SLS	ULS	SLS	ULS									
		REFER TO DESIGN DRAWING NO. 2010/TK/DA/001												
C4-01b	PT2	+1.26	16478.24	833253.001	838024.707									
C4-02	PT1	+3.200	17470.14	833252.306	838148.903									
C4-03	PT	11.00	6311"	833252.942	838030.000	FC3								
	P2													
	P3													
	P4													
	P5													
C4-04a	PT	+12.80	277130"	833254.417	838034.128	FC1a								
	P2													
	P3													
C4-04b	PT	+12.80	97130"	833343.061	838035.041	FC1a								
	P2													
	P3													



NOTES: ROCK LEVEL BASED ON PREDRILL RECORD.
 DERIVED FOOTING FOUNDING LEVEL DERIVED BASED ON PREDRILL RECORD AND VERIFIED BY PROJECT MANAGER AFTER COMPLETION OF FOOTING EXCAVATION. THE FOOTING FOUNDING LEVEL INCLUDES 150mm BLINDING LAYER AND CONCRETE GRADE. C33/40 SHALL BE ADOPTED FOR THE BLINDING LAYER.

PILE SCHEDULE

COGNAM ID	PILE ID	REINFORCEMENT TYPE	ELEMENT 1 (S1)	ELEMENT 2 (S2)	ELEMENT 3 (S3)	REMARK	TYPICAL BORED PILE REFERENCE NUMBER
C4-03	P1/S1/S	TYPE 1			TO TOE		20102/TK/DA/0001
	P4	TYPE 1		8	TO TSE		20102/TK/DA/0001
	P5			8	TO TSE		20102/TK/DA/0001
	P6			8	TO TSE		20102/TK/DA/0001
C4-04a	P1/S1/S	TYPE 1			TO TOE	20102/TK/DA/0001	
C4-04b	P4/S1/S	TYPE 1			TO TOE	20102/TK/DA/0001	

Contractor's Design Drawing
 in compliance with Contract No. 304281904

Preparation by: [Signature]
 Date: 2022/11/21

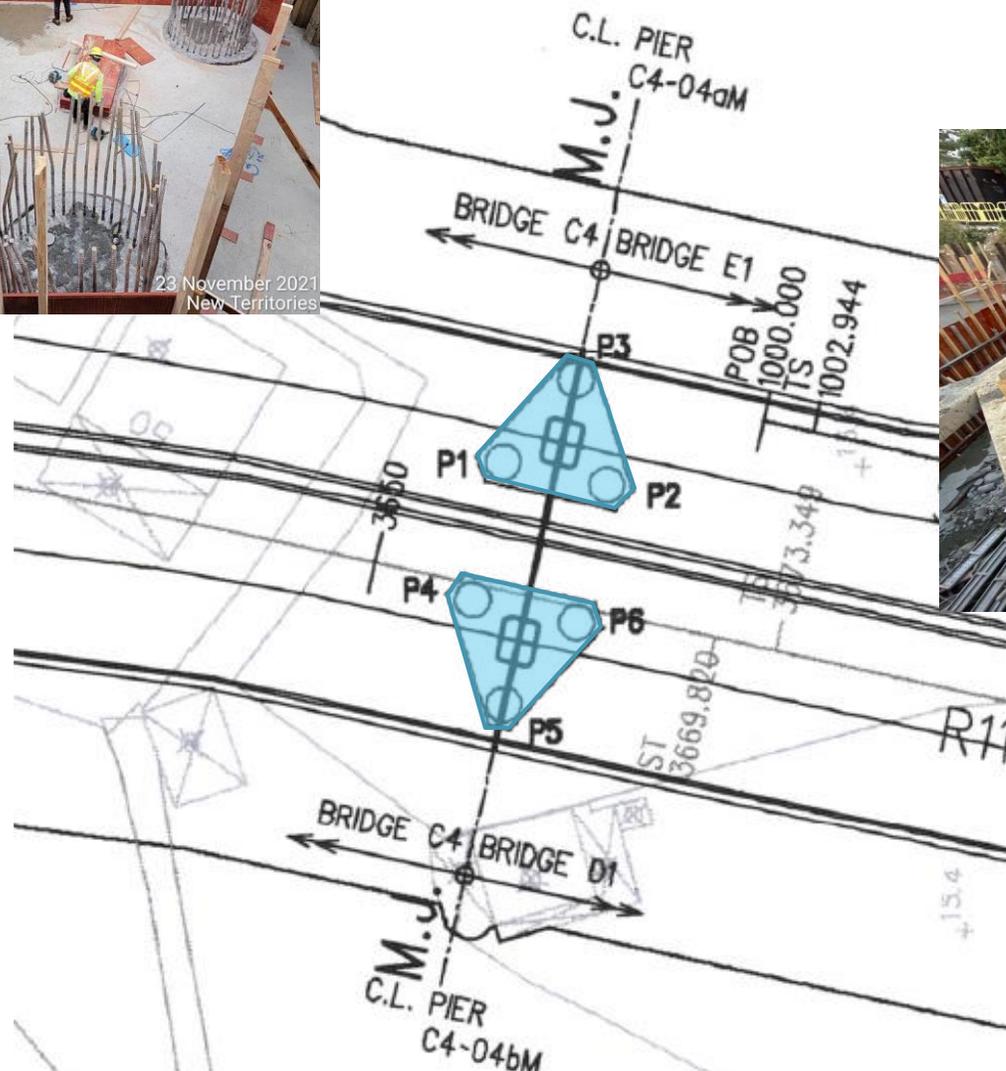
Independent Checking Engineer at Contractor's Design
 Mr. [Signature]
 2010/TK/DA/001, 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6

North Team Area Highlighted - C4-04

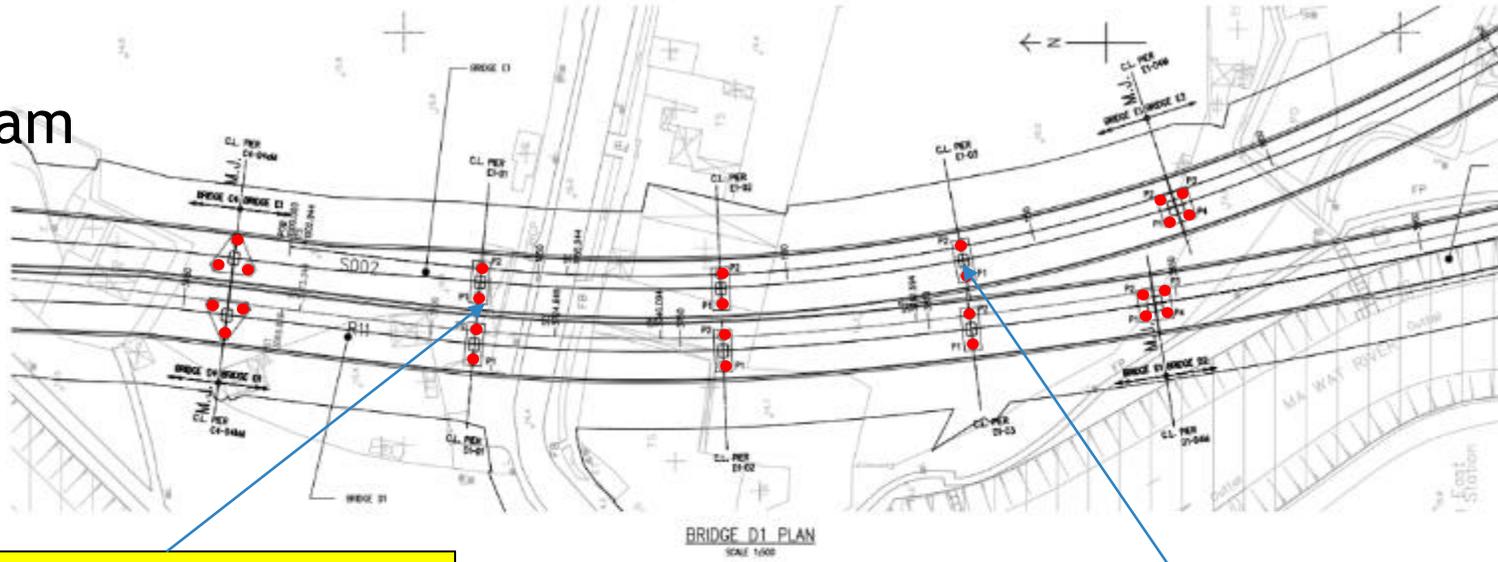


- 11. Portion 8 (CTC yard)
- Cap C4-04a and C4-04b are completed
- Cap - ES:19/11/21 EF:13/12/21
- Completion of Cap on 30 Nov 21



6

North Team



- NOTES:**
1. FOR NOTES, REFER TO DRAWING NO. 2002/YML/EA/0001 ONWARDS.
 2. TYPICAL BRIDGE PILE DETAILS SHALL REFER TO Dwg. NO. 2002/YML/EA/0001 & 0002.
 3. TYPICAL PILE CAP GENERAL ARRANGEMENT SHALL REFER TO Dwg. NO. 2002/YML/EA/0001 ONWARDS.
 4. TYPICAL PILECAP REINFORCEMENT DETAILS SHALL REFER TO Dwg. NO. 2002/YML/EA/0001 ONWARDS.
 5. 1" ROOFHEAD LEVEL IS ESTIMATED FROM ROOFHEAD CONTOUR PLAN SHOWN IN DRAWING NO. 03/2007/DE/100-800.
 6. FOR PILECAP SETTING OUT POINT AND ADMATH SETTING OUT PARTICULARS REFER TO DRAWING NO. 2002/YML/EA/0001 ONWARDS.

Legend:

- Bored Pile in progress
- Bored Pile Completed

12. Portion 8 (CTC yard)

- Pipe piling at D1-01 & E1-01 are in progress.
- ELS - ES:12/5/22 EF:9/6/22
- on track against R9

13. Portion 8 (Man Young yard)

- Pipe piling at E1-02 and E1-03 are in progress.
- ELS - ES:10/6/22 EF:5/8/22
- On track against R9

NO.	DESCRIPTION	UNIT	QTY	AMOUNT	DATE
1	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
REFER TO DESIGN DRAWING NO. 2012/YML/EA/0001					
NO.	DESCRIPTION	UNIT	QTY	AMOUNT	DATE
1	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
2	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
3	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
4	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
5	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
6	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
7	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
8	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
9	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
10	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
11	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
12	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
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14	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
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47	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
48	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
49	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		
50	PILE WORKING LONG AT COLL. EXHIBIT REF. (M)	COMPRESSION	ENGINEER		



D1-01/ E1-01



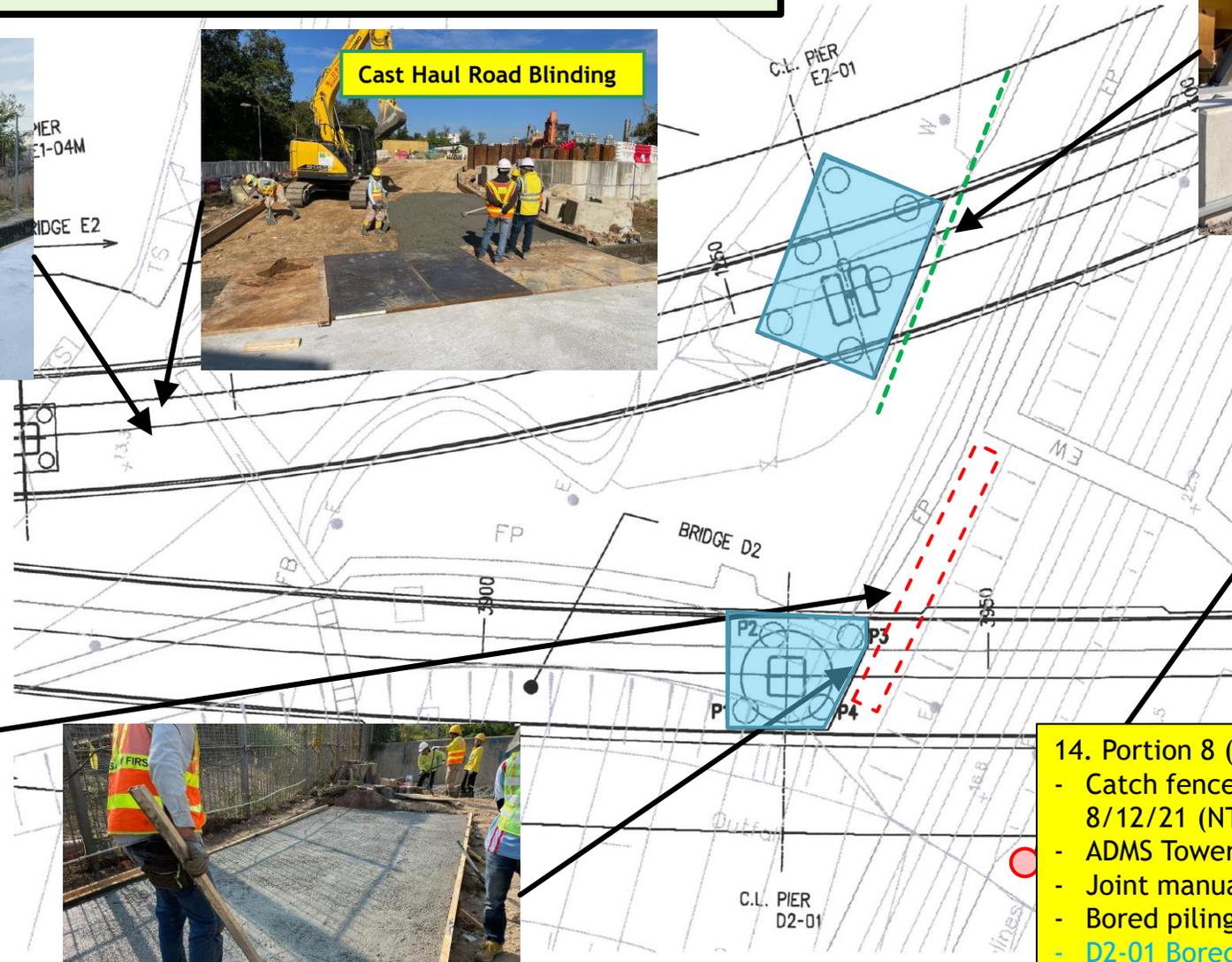
E1-02



E1-03

7 North Team

Area Highlighted - E2-01 and Catch Fence for D2-01



14. Portion 8 (MTR trackside)
- Catch fence base installation is scheduled on 8/12/21 (NTH)
 - ADMS Tower construction is completed
 - Joint manual survey is completed on 2/12/21
 - Bored piling at E2-01 will commence on 10/12/21
 - 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 commencement of E2-01 in mid-Dec 21. Slight slippage against R9

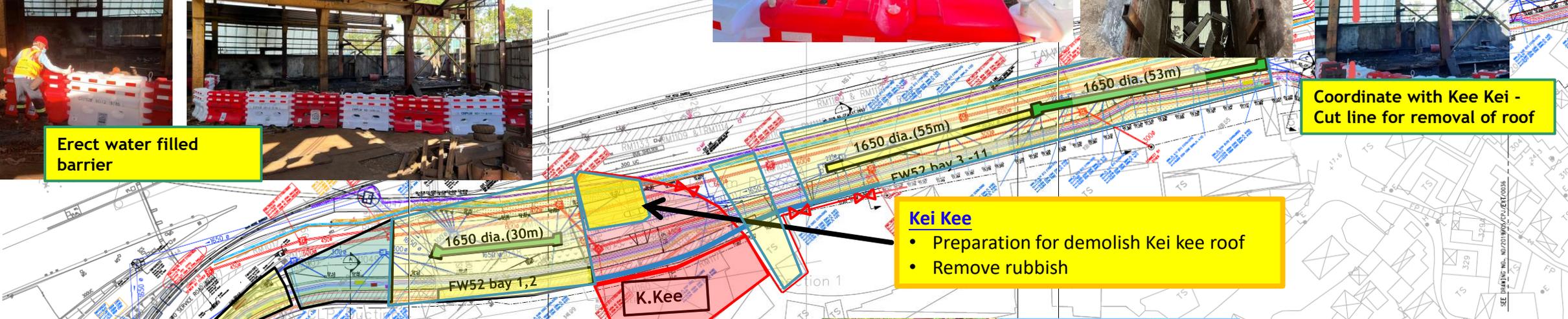
8 South Team
Area Highlighted - Kei Kee



Erect water filled barrier



Coordinate with Kee Kee - Cut line for removal of roof



- Kei Kee**
- Preparation for demolish Kei kee roof
 - Remove rubbish



Remove hoarding



Removal of rubbish



Cutting protruded steel



Removal of rubbish and Erect upper panel



▶ South Team

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



DN600 Sewer trench excavation in progress



DN450 sewer pipe laying in progress



DN1650 storm trench excavation in progress

3. Portion 18
TSW-4430 (R9) ES: 1/4/21 EF: 12/01/22
 DN1650 dia. Drain:
 • ELS in progress (55m) **Target completed 11 Dec 21**

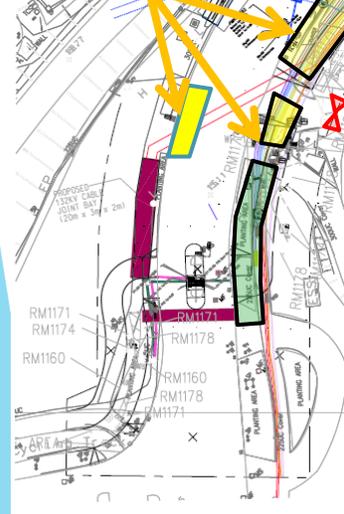


2. Portion 13 FW52 bay 1 and 2

- Rebar fixing in progress
- Temp Relocate hoarding of Venton Factory
- **To overcome insufficient working space for construction of Bay 1, JV was requested to temp relocate hoarding and subsequent reinstate after wall construction completed**

1. Venton area

- Gas main work in progress
- Cross Rd section, 132kv and 11kv stage 1 completed
- Next stage to be commenced 08/12/21**



▶ South Team

1. FW06 - Excavation

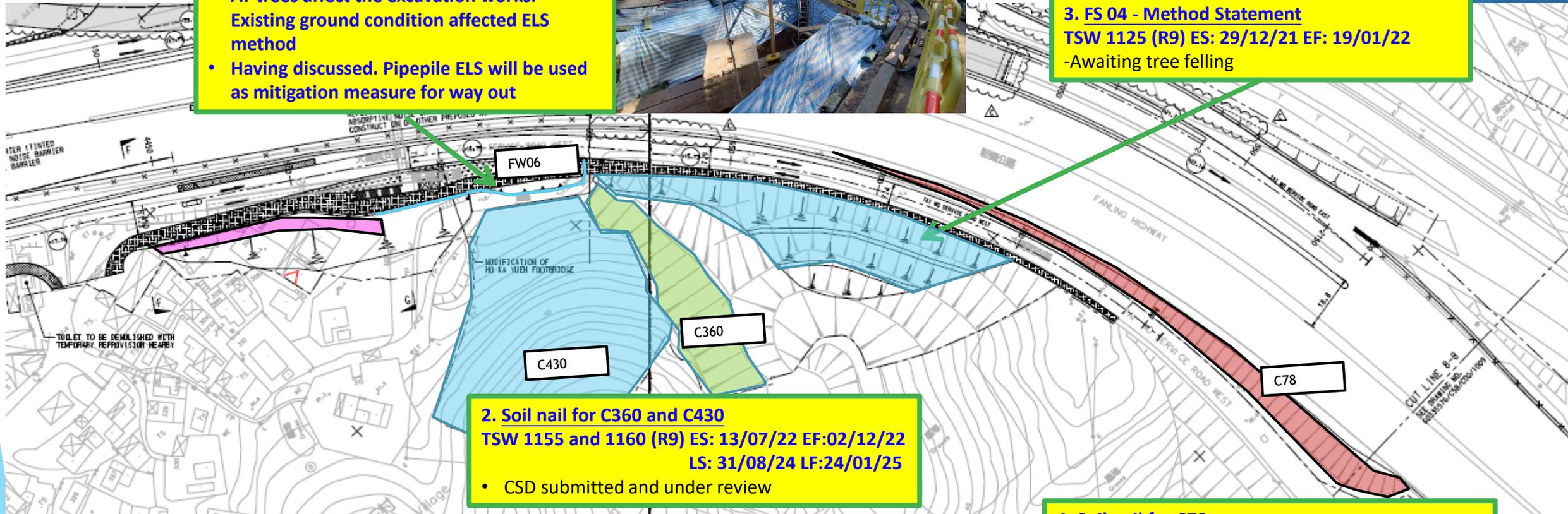
TSW 3011 (R9) ES: 22/11/21 EF:11/12/21
LS: 29/11/21 LF:18/12/21

- Plate load test in progress
- ELS design in progress
- AT trees affect the excavation works. Existing ground condition affected ELS method
- Having discussed. Pipepile ELS will be used as mitigation measure for way out



3. FS 04 - Method Statement

TSW 1125 (R9) ES: 29/12/21 EF: 19/01/22
-Awaiting tree felling



2. 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

- CSD submitted and under review

4. Soil nail for C78

TSW 9010 (R9) ES: 10/04/24 EF:06/07/24
LS: 30/09/24 LF:24/12/24

2. 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



3. HKY FB AB1 (RC Abutment)
 FBE-1260 (R9) ES:22/11/21 EF:11/12/21
 • Completed on 27/11/21.

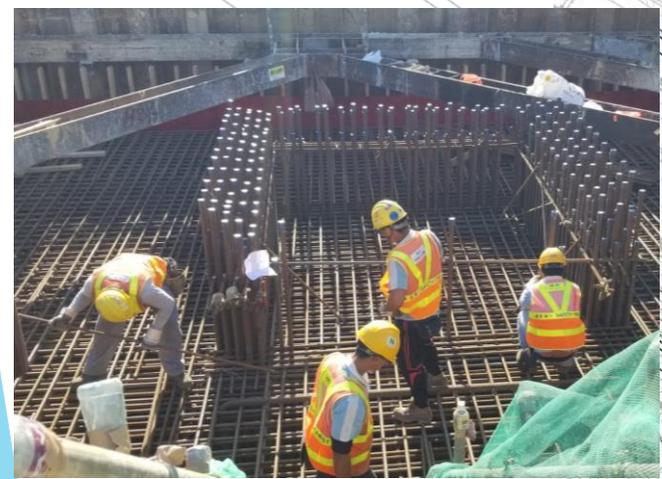


4. HKY FB Lift Shaft LT1 (2nd pour)
 FBE-1225 (R9) ES:15/11/21 EF:04/12/21
 LS:17/01/22 LF:09/02/22
 • Modification of scaffolding in progress.
 Target completed Lift shaft 17/12/21.

▶ South Team



5. DN1200 and DN600 water main laying
 PMI027 (R9) ES:04/10/21 EF:25/03/22
 • Green line – completed
 • Yellow line – backfilling in progress
 • Black rectangle – next section
 • On Track



1. E3-03 Pile Cap
 E3-5535(R9) ES:13/11/21 EF:30/11/21
 LS:20/11/21 LF:07/12/21
 • Rebar fixing in progress.
 Target completed 08/12/21. 1 day behind programme



1 South Team Area Highlighted - D2-02



Pre-core concrete slab at river side



Provide Banksman for plant delivery crossing cycling track



Pre-work briefing



Lift up plant



D2-02



Unloading to river side

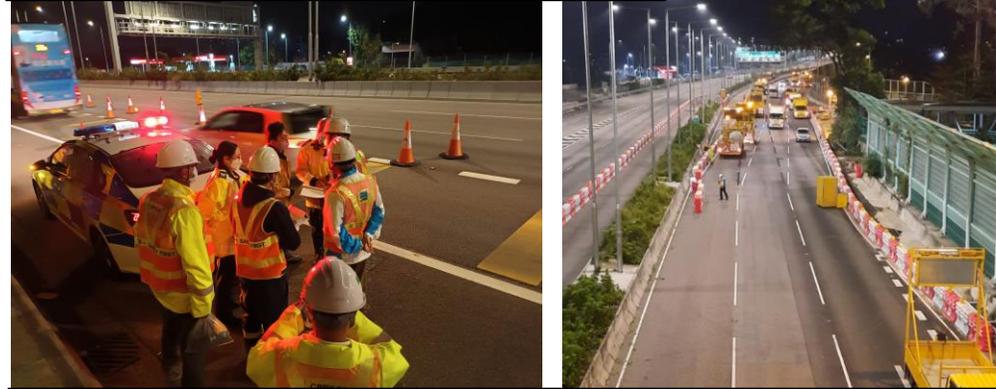


Erect jib

1 South Team

Area Highlighted - D2-03

Fanling Highway shift lane (NB)
• Successful completed on 24 Nov 21



Briefing to RMO and Full lane closure

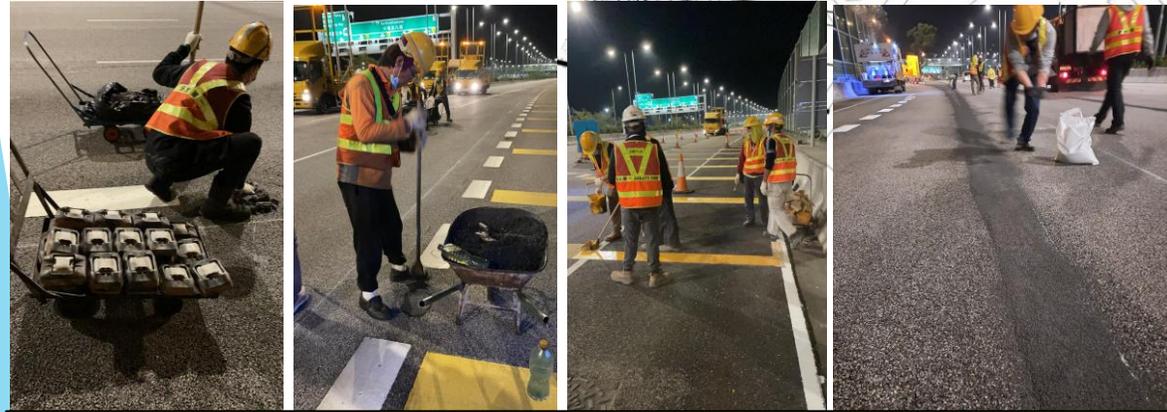


Erection of Access tower



1. D2-03 Bored Pilling Works
D2-1230 (R9) ES: 16/12/21 EF: 09/02/22
• Demolition of existing Gantry footing and central barriers in progress
• Relocation of existing lighting target completed on 14 Dec 21

D2-03



Removal of road stud, fill up hole, new marking, cover existing marking



Spirit of mutual trust and cooperation



Resume traffic

11 South Team

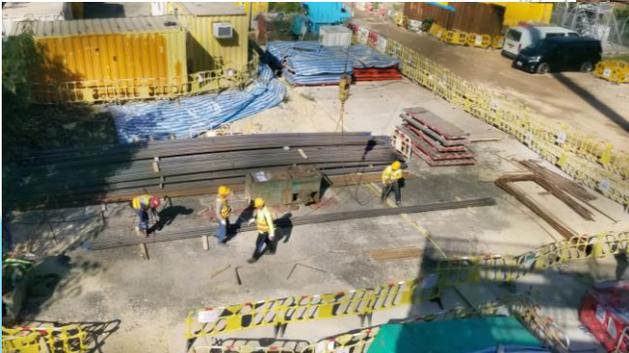
1. E2-02 Pier Head

E2-1572 (R9) ES: 15/11/21 EF: 11/12/21
LS: 29/01/22 LF: 01/03/22

- Rebar fixing in progress
- Predrilling for tower crane foundation
- Target 1st pour cast on 20 Dec 21
- Target 2nd pour cast on 30 Dec 21



Predrilling for tower crane foundation next to E2-02



Rebar bending for pier head at E2-02



2. E2-03 ELS:

E2-6020 (R9) ES: 29/11/21 EF: 12/01/22

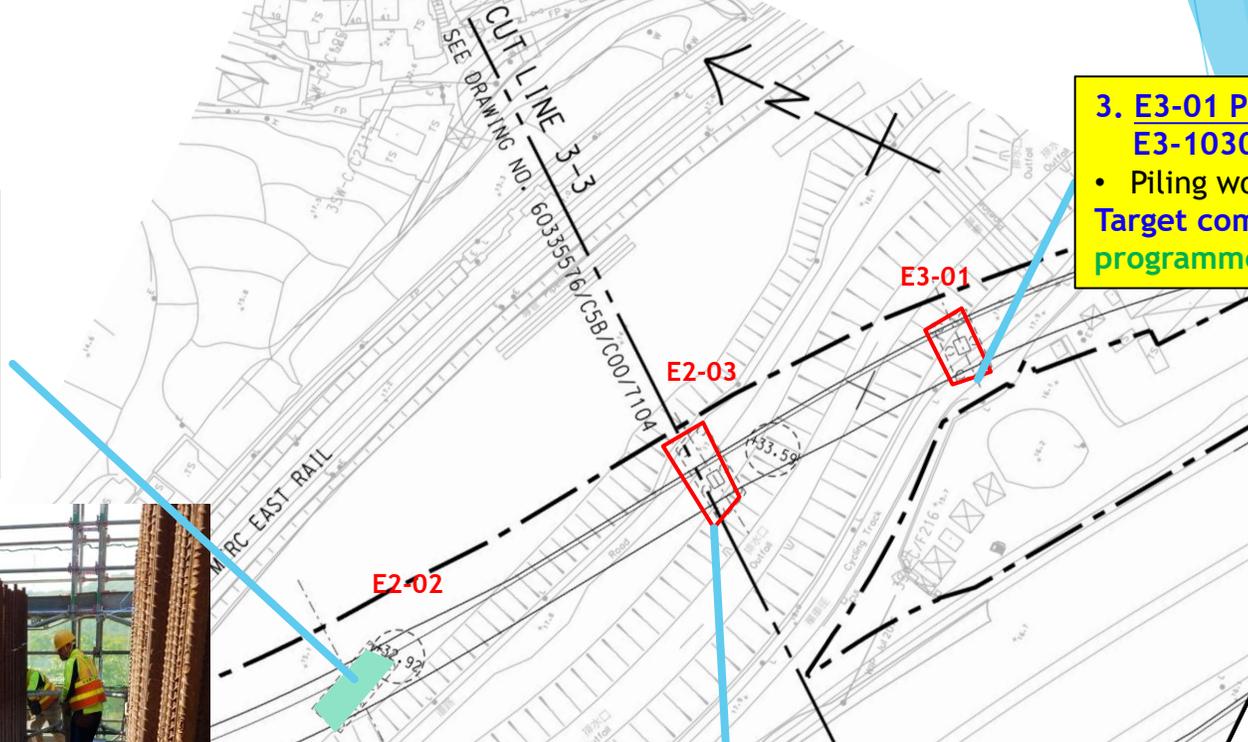
- ELS in progress
- Encounter ground difficult, only 12m sheetpile installed instead of design length 14m. Reviewing ELS with Design Team



3. E3-01 Piling

E3-1030 (R9) ES: 27/10/21 EF: 09/12/21

- Piling work (P1) in progress
- Target completed 7 Dec 21. 2 days advance programme



Construction Programme of ND/2019/06

ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors	2020												2021												2022											
									Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4												
1		ND/2019/06 Contract Period	1071 days	Fri 27/9/19	Thu 1/9/22	0 days			[Gantt chart bars for 2020-2022]																																			
2		Starting Date	0 days	Fri 27/9/19	Fri 27/9/19	1228 days		9	[Gantt chart bars for 2020-2022]																																			
3		Preliminaries	944 days	Fri 27/9/19	Wed 27/4/22	127 days			[Gantt chart bars for 2020-2022]																																			
4		Project Manager and Supervisor's site accommodation	944 days	Fri 27/9/19	Wed 27/4/22	127 days			[Gantt chart bars for 2020-2022]																																			
5		Refurnishing the existing site office and provision of furniture and equipment	30 days	Fri 27/9/19	Sat 26/10/19	1198 days			[Gantt chart bars for 2020-2022]																																			
6		Provision of regular service to the accommodation (up to completion of DLP)	944 days	Fri 27/9/19	Wed 27/4/22	284 days			[Gantt chart bars for 2020-2022]																																			
7		Contractor's site accommodation	59 days	Fri 27/9/19	Sun 24/11/19	1012 days			[Gantt chart bars for 2020-2022]																																			
8		Searching and rental arrangement	45 days	Fri 27/9/19	Sun 10/11/19	0 days		9	[Gantt chart bars for 2020-2022]																																			
9		Set up of site office	14 days	Mon 11/11/19	Sun 24/11/19	1169 days	8		[Gantt chart bars for 2020-2022]																																			
10		Maintenance of land traffic flow	579 days	Fri 27/9/19	Tue 27/4/21	492 days			[Gantt chart bars for 2020-2022]																																			
11		Arrangement of TMLG in different stages	210 days	Fri 27/9/19	Thu 23/4/20	1018 days			[Gantt chart bars for 2020-2022]																																			
12		Application of TTA/ XP	180 days	Fri 27/9/19	Tue 24/3/20	0 days		13	[Gantt chart bars for 2020-2022]																																			
13		Implementation of TTA/ XP in different stages	399 days	Wed 25/3/20	Tue 27/4/21	649 days	12		[Gantt chart bars for 2020-2022]																																			
14		Maintenance of traffic flow in interim construction stage	184 days	Fri 27/9/19	Sat 28/3/20	0 days		15	[Gantt chart bars for 2020-2022]																																			
15		Maintenance of traffic flow in final construction stage	395 days	Sun 29/3/20	Tue 27/4/21	649 days	14		[Gantt chart bars for 2020-2022]																																			
16		Provision of insurances	60 days	Fri 27/9/19	Mon 25/11/19	1011 days			[Gantt chart bars for 2020-2022]																																			
17		Third party insurance	30 days	Fri 27/9/19	Sat 26/10/19	1198 days			[Gantt chart bars for 2020-2022]																																			
18		PII for the works	60 days	Fri 27/9/19	Mon 25/11/19	1168 days			[Gantt chart bars for 2020-2022]																																			
19		Land transport for the use of the Project Manager and Supervisor	944 days	Fri 27/9/19	Wed 27/4/22	127 days			[Gantt chart bars for 2020-2022]																																			
20		Provision of vehicles	30 days	Fri 27/9/19	Sat 26/10/19	0 days		21	[Gantt chart bars for 2020-2022]																																			
21		Provision of transportation service with drivers (including DLP)	914 days	Sun 27/10/19	Wed 27/4/22	284 days	20		[Gantt chart bars for 2020-2022]																																			
22		Miscellaneous items	579 days	Fri 27/9/19	Tue 27/4/21	492 days			[Gantt chart bars for 2020-2022]																																			
23		Contract computer facilities for the Project Manager and Supervisor	60 days	Fri 27/9/19	Mon 25/11/19	1168 days			[Gantt chart bars for 2020-2022]																																			
24		Provision of progress photographs	579 days	Fri 27/9/19	Tue 27/4/21	649 days			[Gantt chart bars for 2020-2022]																																			
25		Installation of security system for the site	45 days	Fri 27/9/19	Sun 10/11/19	1183 days			[Gantt chart bars for 2020-2022]																																			
26		Interface management and public relation works	579 days	Fri 27/9/19	Tue 27/4/21	649 days			[Gantt chart bars for 2020-2022]																																			
27		BIM works	579 days	Fri 27/9/19	Tue 27/4/21	649 days			[Gantt chart bars for 2020-2022]																																			
28		Upkeep of the employer's store	579 days	Fri 27/9/19	Tue 27/4/21	649 days			[Gantt chart bars for 2020-2022]																																			
29		Emergency unit and weather protection scheme	579 days	Fri 27/9/19	Tue 27/4/21	649 days			[Gantt chart bars for 2020-2022]																																			
30		General site clearance	21 days	Fri 27/9/19	Thu 17/10/19	1207 days			[Gantt chart bars for 2020-2022]																																			
31		Headings, temporary fences and signboards	384 days	Sun 17/11/19	Fri 4/12/20	636 days			[Gantt chart bars for 2020-2022]																																			
32		Headings, temporary fences and signboards at Interim stage	45 days	Sun 17/11/19	Tue 31/12/19	975 days	864		[Gantt chart bars for 2020-2022]																																			
33		Headings, temporary fences and signboards at Final stage	30 days	Thu 5/11/20	Fri 4/12/20	636 days	138		[Gantt chart bars for 2020-2022]																																			
34		Environmental management, mitigation and monitoring	579 days	Fri 27/9/19	Tue 27/4/21	492 days			[Gantt chart bars for 2020-2022]																																			
35		Environmental management measures	579 days	Fri 27/9/19	Tue 27/4/21	649 days			[Gantt chart bars for 2020-2022]																																			
36		Environmental mitigation measures	579 days	Fri 27/9/19	Tue 27/4/21	649 days			[Gantt chart bars for 2020-2022]																																			
37		Environmental monitoring measures	579 days	Fri 27/9/19	Tue 27/4/21	649 days			[Gantt chart bars for 2020-2022]																																			
38		Site Management plan for trip ticket system	21 days	Fri 27/9/19	Thu 17/10/19	1207 days			[Gantt chart bars for 2020-2022]																																			
39		Air pollution abatement	579 days	Fri 27/9/19	Tue 27/4/21	649 days			[Gantt chart bars for 2020-2022]																																			
40		Noise pollution abatement	579 days	Fri 27/9/19	Tue 27/4/21	649 days			[Gantt chart bars for 2020-2022]																																			
41		Wastewater pollution abatement	579 days	Fri 27/9/19	Tue 27/4/21	649 days			[Gantt chart bars for 2020-2022]																																			
42		Waste Management	579 days	Fri 27/9/19	Tue 27/4/21	649 days			[Gantt chart bars for 2020-2022]																																			
43		Monitoring the use of ultra low sulphur diesel	579 days	Fri 27/9/19	Tue 27/4/21	649 days			[Gantt chart bars for 2020-2022]																																			
44		Temporary drainage management plan	30 days	Fri 27/9/19	Sat 26/10/19	1198 days			[Gantt chart bars for 2020-2022]																																			
45		Survey of the Site	579 days	Fri 27/9/19	Tue 27/4/21	492 days			[Gantt chart bars for 2020-2022]																																			
46		Initial survey	30 days	Fri 27/9/19	Sat 26/10/19	0 days		864	[Gantt chart bars for 2020-2022]																																			
47		Conditional survey	30 days	Fri 27/9/19	Sat 26/10/19	0 days		48,864	[Gantt chart bars for 2020-2022]																																			
48		Monitoring survey	549 days	Sun 27/10/19	Tue 27/4/21	492 days	47		[Gantt chart bars for 2020-2022]																																			

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

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

ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors	2020				2021				2022			
									4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter
672		Site formation and excavation works	17 days	Sun 31/10/21	Tue 16/11/21	252 days														
673		ELS design for footing construction	7 days	Sun 31/10/21	Sat 6/11/21	299 days	668													
674		Removal and demolish of the constructed underground utilities	3 days	Thu 4/11/21	Sat 6/11/21	299 days	670													
675		Hand dig excavation near the CLP cable	4 days	Thu 4/11/21	Sun 7/11/21	298 days	670													
676		Driven of sheet pile	4 days	Sun 7/11/21	Wed 10/11/21	0 days	670SS+4 days	677SS+4 days												
677		Installation of structing	3 days	Thu 11/11/21	Sat 13/11/21	0 days	676SS+4 days	678												
678		Welding test	1 day	Sun 14/11/21	Sun 14/11/21	0 days	677	679												
679		Excavation to the formation level	2 days	Mon 15/11/21	Tue 16/11/21	0 days	678	681												
680		Construction of footing on carriageway	39 days	Wed 17/11/21	Sat 25/12/21	245 days														
681		Blinding layer for footing	1 day	Wed 17/11/21	Wed 17/11/21	0 days	679	682												
682		Formwork erection	3 days	Thu 18/11/21	Sat 20/11/21	0 days	681	683SS+2 days												
683		Trimming to reserve opening for ducting to CLP draw pit at sheet pile	2 days	Sat 20/11/21	Sun 21/11/21	0 days	682SS+2 days	685,684												
684		Steel fixing for footing	3 days	Mon 22/11/21	Wed 24/11/21	0 days	683	686												
685		Laying of re-construction ELV ducting with supporting	2 days	Mon 22/11/21	Tue 23/11/21	282 days	683													
686		Installation of holding down bolts	2 days	Thu 25/11/21	Fri 26/11/21	0 days	684	687												
687		Casting concrete	1 day	Sat 27/11/21	Sat 27/11/21	0 days	686	688,689,690												
688		Removal of formwork	2 days	Sun 28/11/21	Mon 29/11/21	276 days	687													
689		Curing to the concrete	28 days	Sun 28/11/21	Sat 25/12/21	250 days	687													
690		Removal of ELS system	7 days	Sun 28/11/21	Sat 4/12/21	0 days	687	691												
691		Reinstatement to the cut structing	2 days	Sun 5/12/21	Mon 6/12/21	0 days	690	692,694												
692		Backfilling to the formation level	7 days	Tue 7/12/21	Mon 13/12/21	262 days	691													
693		Construction of footings against MOB	17 days	Tue 7/12/21	Thu 23/12/21	245 days														
694		Excavation to the formation level by open cut method	3 days	Tue 7/12/21	Thu 9/12/21	0 days	691	695												
695		Blinding layer for footings	1 day	Fri 10/12/21	Fri 10/12/21	0 days	694	696												
696		Concrete coring of MOB footing for installation of anchorage bars	5 days	Sat 11/12/21	Wed 15/12/21	0 days	695	697												
697		Steel fixing for footings	2 days	Thu 16/12/21	Fri 17/12/21	0 days	696	698												
698		Installation of holding down bolts	2 days	Sat 18/12/21	Sun 19/12/21	0 days	697	699												
699		Casting concrete	1 day	Mon 20/12/21	Mon 20/12/21	0 days	698	700												
700		Backfilling to the formation level	3 days	Tue 21/12/21	Thu 23/12/21	0 days	699	702												
701		Construction of carriageway concrete	7 days	Fri 24/12/21	Thu 30/12/21	245 days														
702		Forming to the formation level and complete sampling of formation level	3 days	Fri 24/12/21	Sun 26/12/21	0 days	700	703												
703		Concrete works for the carriageway	4 days	Mon 27/12/21	Thu 30/12/21	245 days	702													
704		Additional Fire Service Water Tank	141 days	Wed 25/8/21	Wed 12/1/22	232 days														
705		Issue of PMI for additional fire service water tank	1 day	Wed 25/8/21	Wed 25/8/21	0 days		760,706,785												
706		Materials preparation for structure works	14 days	Thu 26/8/21	Wed 8/9/21	0 days	705	707SS+3 days												
707		Mobilization of works	1 day	Sun 29/8/21	Sun 29/8/21	0 days	706SS+3 days	710												
708		Construction of Water Tank	65 days	Sat 28/8/21	Sun 31/10/21	249 days														
709		Site formation of water tank	6 days	Sat 28/8/21	Thu 2/9/21	249 days														
710		Breaking up existing concrete surface for water tank	3 days	Mon 30/8/21	Wed 1/9/21	0 days	707,472	711SS+1 day												
711		Excavation for construction of water tank and pump house	3 days	Tue 31/8/21	Thu 2/9/21	0 days	710SS+1 day	714,712FF												
712		Disposal of excavated materials	6 days	Sat 28/8/21	Thu 2/9/21	364 days	711FF													
713		Construction of base slab	37 days	Fri 3/9/21	Sat 9/10/21	247 days														
714		Blinding layer for base slab	1 day	Fri 3/9/21	Fri 3/9/21	0 days	711	715												
715		Steel fixing for base slab	5 days	Sat 4/9/21	Wed 8/9/21	0 days	714	716												
716		Formwork erection	2 days	Thu 9/9/21	Fri 10/9/21	0 days	715	717												
717		Casting concrete	1 day	Sat 11/9/21	Sat 11/9/21	0 days	716	718,719,721												

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

Task Milestone Project Summary Inactive Milestone Manual Task Manual Summary Rollup Start-only External Tasks Deadline Critical Split Manual Progress Slack

Split Summary Inactive Task Inactive Summary Duration-only Manual Summary Finish-only External Milestone Critical Progress Slack

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

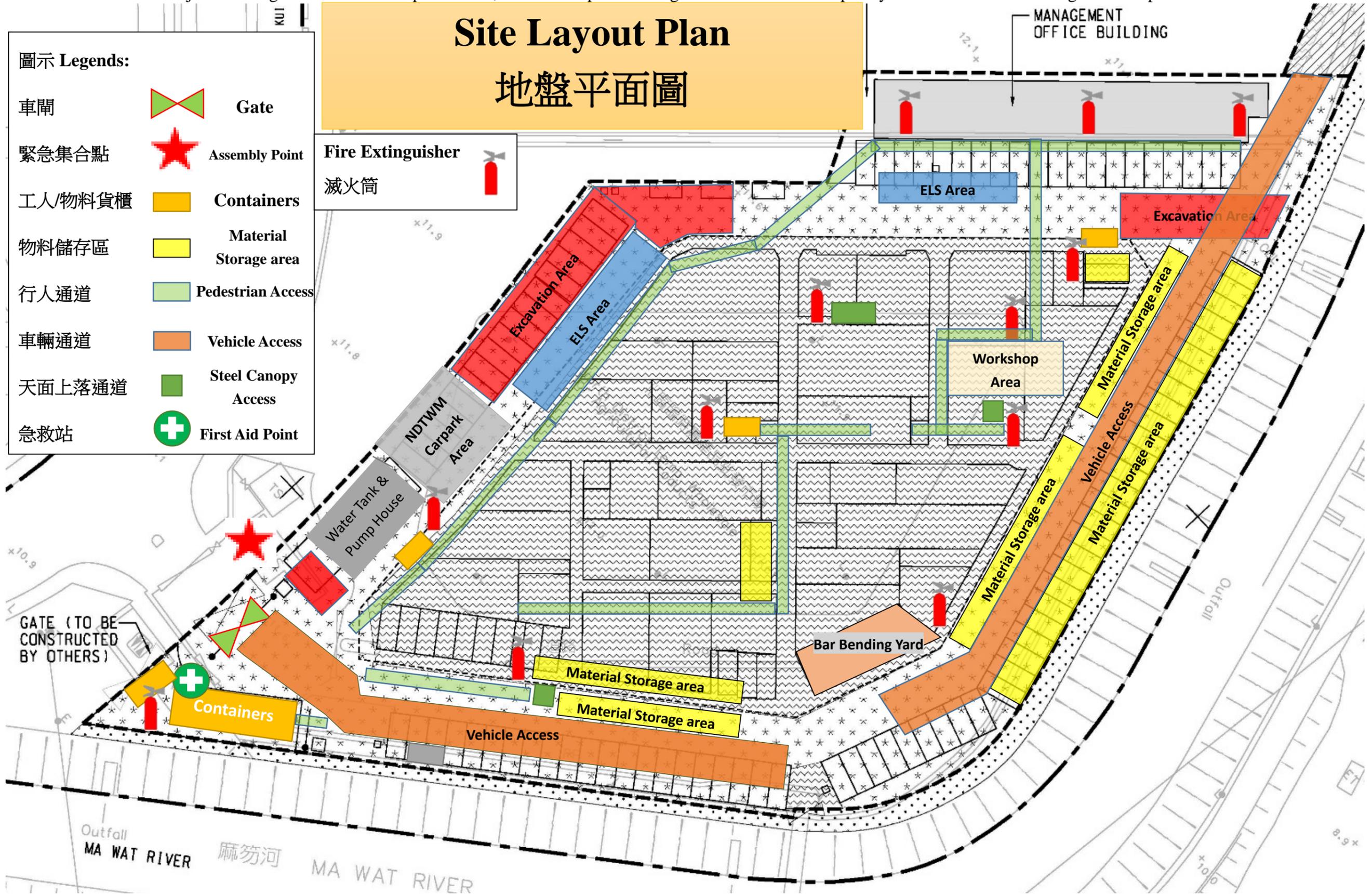
Site Layout Plan

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	2021	2022	2023	2024	
					Dec	Jan	Feb	Mar	Apr
Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works									
Actual Access Date		0	08-Dec-21	08-Dec-21	-146				
ACD1030	Possession of Portion IV (Possession date TBC)	0	08-Dec-21	08-Dec-21	-146				
* Possession of Portion IV (Possession date TBC)									
Preliminaries, Contractor's Design, Method Statement Submission and Approval		508	30-Dec-20	21-May-22	589				
General Submission		388	30-Dec-20	05-Feb-22	694				
PGS1200	Preparation and approval of TTA scheme and traffic impact assessment(PS1.16)	290	30-Dec-20	05-Feb-22	-113				
PGS1230	Submission of construction impact assessment (CIA) (PS 1.108)	45	08-Dec-21	21-Jan-22	709				
Contractor's Design Submission and Approval		168	09-Oct-21	21-May-22	162				
Permanent Works Design		122	31-Dec-21	21-May-22	162				
PWD1030	Design for irrigation system	75	31-Dec-21	28-Mar-22	209				
PWD1040	Design for noise barrier panel	90	07-Feb-22	21-May-22	60				
Major Temporary Works Design		93	09-Oct-21	23-Feb-22	70				
TWD1030	ELS design for pipe laying works on Ma Sik Road	60	09-Oct-21	30-Dec-21	-52				
TWD1035	Time risk allowance for ELS design for pipe laying works on Ma Sik Road	7	31-Dec-21	07-Jan-22	-52				
TWD1050	ELS design for construction of foundation of noise barrier	60	08-Dec-21	15-Feb-22	70				
TWD1055	Time risk allowance for ELS design for construction of foundation of noise barrier	7	16-Feb-22	23-Feb-22	70				
TWD1060	Formwork design for construction of noise barrier	45	24-Dec-21	14-Feb-22	71				
TWD1065	Time risk allowance for Formwork design for construction of noise barrier	7	15-Feb-22	22-Feb-22	71				
Major Construction Works Method Statement		95	08-Dec-21	28-Mar-22	42				
MS1570	Method statement submission and approval for piling works	35	08-Dec-21	17-Jan-22	42				
MS1580	Method statement submission and approval for construction of noise barrier	60	18-Jan-22	28-Mar-22	42				
Tendering and Procurement for Major Subcontractor		259	16-Mar-21	30-Dec-21	209				
TDS1067	Subletting for piling works	140	16-Mar-21	08-Dec-21	A				
TDS1070	Subletting for road works	120	26-Mar-21	24-Dec-21	173				
TDS1110	Subletting for irrigation system works	100	05-May-21	30-Dec-21	209				
TDS1140	Subletting for supply and installation of noise barrier post and panels	30	01-Dec-21	30-Dec-21	60				
Tree Works and Submission of the tree survey report and tree preservation and removal prop		161	15-Sep-21	17-Mar-22	148				
Tree Works in Area FL-G14.7		108	15-Sep-21	10-Feb-22	44				
TWS0920	Tree felling works (FL-G14.7) (Partial) 63nos	30	08-Dec-21	14-Jan-22	-10				
TWS0940	Prepare & submit the tree survey report and tree preservation and removal proposal (TPRP) (FL-G14.7) (Remaining)	108	15-Sep-21	03-Jan-22	44				
TWS0950	Tree felling works (FL-G14.7) (Remaining)	30	04-Jan-22	10-Feb-22	44				
Tree Works on Ma Sik Road		100	08-Dec-21	17-Mar-22	148				
TWS1200	Tree felling works (Ma Sik Road) (before Noise Barrier Construction)	80	08-Dec-21	17-Mar-22	119				
TWS1210	Tree transplanting works at the side of road (8nos) (before noise barrier construction)	80	08-Dec-21	25-Feb-22	152				
Tree Works in Area FL-G14.3		75	04-Nov-21	14-Jan-22	-185				
TWS1250	Prepare & submit the tree survey report and tree preservation and removal proposal (TPRP) (FL-G14.3)	75	04-Nov-21	03-Jan-22	-185				
TWS1280	Tree felling works (FL-G14.3)	10	04-Jan-22	14-Jan-22	-185				
Section 1- Site Formation and Infrastructure Works in Area A		695	09-Aug-21	08-Jun-22	937				
Site Formation (Portion I- Area A 11042m2)		143	09-Aug-21	15-Mar-22	532				
Remaining Site Formation Works after trees felled in FL-G14.1 & FL-G14.2		143	09-Aug-21	15-Mar-22	532				
S1-SF1011	Erection of hoarding along the site boundary (326m) (after tree felled in FL-G14.2)	100	09-Aug-21	17-Feb-22	554				
S1-SF1051	Ground investigation works (2nos) and trial pit(2nos) (PMI005)	80	30-Oct-21	22-Feb-22	285				
S1-SF1181	Site formation works and Removal of temporary works, haul road and temporary accesses (after tree felled)	30	15-Oct-21	03-Jan-22	132				
S1-SF1185	Removal of temporary works, haul road and temporary accesses	30	04-Jan-22	10-Feb-22	532				
S1-SF1190	Construction of open channel (45m)	28	11-Feb-22	15-Mar-22	532				
Site Formation (Portion II- Area A 21900m2)		245	09-Aug-21	08-Jun-22	937				
Site Formation Works in South Part of Portion II		245	09-Aug-21	08-Jun-22	937				
S1-SF1392	Erection of hoarding along the site boundary (339m) (After tree felled)	50	09-Aug-21	11-Dec-21	1077				
S1-SF1394	Site clearance (Southern part)	72	04-Sep-21	03-Jan-22	-70				
S1-SF1396	Construction of haul road (Southern part)	72	04-Sep-21	08-Dec-21	A				
S1-SF1410	Site formation works part 1 and Removal of temporary works, haul road and temporary accesses	75	17-Nov-21	04-Mar-22	-31				
S1-SF1415	Site formation works part 2 and Removal of temporary works, haul road and temporary accesses	75	05-Mar-22	08-Jun-22	-31				
Site Formation (Portion III- Area A 4900m2)		75	08-Dec-21	11-Mar-22	536				
S1-SF1450	Erection of hoarding along the site boundary (173m)	30	08-Dec-21	14-Jan-22	146				
S1-SF1546	Removal of existing feature 3SW-A/F85	15	08-Dec-21	24-Dec-21	221				
S1-SF1640	Site formation works and Removal of temporary works, haul road and temporary accesses	15	15-Jan-22	04-Feb-22	146				
S1-SF1650	Removal of temporary works, haul road and temporary accesses	30	05-Feb-22	11-Mar-22	535				
Site Formation (Portion IV- Area A 3800m2)		141	25-Nov-21	20-Apr-22	130				
S1-SF1765	Erection of hoarding along the site boundary (515m)	40	08-Dec-21	26-Jan-22	195				
S1-SF1768	Prepare & submit the tree preservation and removal proposal (TPRP)	75	08-Dec-21	11-Mar-22	69				
S1-SF1770	Diversion of existing utilities and services (59m LV Cables to be abandon)	60	08-Dec-21	22-Feb-22	175				
S1-SF1773	Tree felling works	30	12-Mar-22	20-Apr-22	69				
S1-SF1810	Ground investigation works (2nos) (PMI005)	21	25-Nov-21	20-Dec-21	174				
Box Culvert BC3 and Outfall 10		136	08-Sep-21	04-May-22	-95				
Box Culvert BC3 (CH168 to CH216)		41	08-Dec-21	27-Jan-22	-76				
S1-BC0880	Construction of the box culvert side wall and top slab Bay 18 (CH214 to CH216)	20	08-Dec-21	03-Jan-22	-76				
S1-BC0890	Backfilling from Bay 15 to Bay 18	31	20-Dec-21	27-Jan-22	-76				
Box Culvert BC3 (CH0 to CH168)		127	08-Sep-21	04-May-22	-95				
S1-BC0900	Excavation and construction of the box culvert Bay 14 (CH156 to CH168)	40	08-Sep-21	13-Dec-21	-95				
S1-BC0910	Excavation and construction of the box culvert Bay 13 and inspection chamber (CH144 to CH156)	30	08-Sep-21	08-Jan-22	-95				
S1-BC0920	Excavation and construction of the box culvert Bay 12 (CH132 to CH144)	30	09-Nov-21	04-Feb-22	-95				
S1-BC0930	Excavation and construction of the box culvert Bay 11 (CH120 to CH132)	30	17-Nov-21	22-Feb-22	-95				
S1-BC0940	Backfilling from Bay 11 to Bay 14	31	23-Feb-22	30-Mar-22	-95				
S1-BC0950	Excavation and construction of the box culvert Bay 10 (CH108 to CH120)	30	10-Nov-21	18-Mar-22	-95				
S1-BC0960	Excavation and construction of the box culvert Bay 9 (CH96 to CH108)	30	12-Nov-21	06-Apr-22	-95				
S1-BC0970	Excavation and construction of the box culvert Bay 8 (CH84 to CH96)	30	12-Nov-21	04-May-22	-95				

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中國路橋工程有限責任公司

CHINA ROAD AND BRIDGE CORPORATION

Three Month Rolling Programme (Data Date : 08-Dec-21)

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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	New Start	2021				2022			
						Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Noise Barrier NB63													
		14	26-Feb-22	14-Mar-22	122								
Noise Barrier NB63(Bay 1 to Bay 6)													
		14	26-Feb-22	14-Mar-22	122								
S1-NB1020	UU detection and trial pit	14	26-Feb-22	14-Mar-22	122								UU detection and trial pit
Drainage, Sewerage, Waterworks and Road Works													
Along Ma Sik Road													
		80	07-Feb-22	17-May-22	-91								
TTA Closure of Ma Sik Road Eastbound Slow Lane between Wo Tai Street and Site Boundary													
		80	07-Feb-22	17-May-22	-91								
S1-CS1240	Implement TTA	10	07-Feb-22	17-Feb-22	-91								Implement TTA
S1-CS1260	UU detection and trial pit	10	18-Feb-22	01-Mar-22	-91								UU detection and trial pit
S1-CS1265	Sheetpile works and excavation	60	02-Mar-22	17-May-22	-91								
Along Proposed Cycletrack and Footpath													
		594	27-Sep-21 A	20-May-22	391								
Works in Portion I													
		140	27-Sep-21 A	16-May-22	217								
S1-CS1460	Irrigation system (utility service by others)(CT71 Ch369.376 to Ch429 total 59m)	20	04-Jan-22	26-Jan-22	132								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	04-Jan-22	26-Jan-22	132								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	04-Jan-22	26-Jan-22	132								Flushing water main works (CT71 Ch369.376 to Ch429 total 59m)
S1-CS1470	Drainage work (utility service by others) (3nos Manholes) (CT73 Ch400 to Ch649 total 249m)	85	27-Sep-21 A	06-Jan-22	172								Drainage work (utility service by others) (3nos Manholes) (CT73 Ch400 to Ch649 total 249m)
S1-CS1472	Irrigation system (CT73 Ch100 to Ch400 total 300m)	85	27-Jan-22	16-May-22	132								
S1-CS1473	Fresh water main works (CT73 Ch100 to Ch400 total 300m)	85	27-Jan-22	16-May-22	132								
S1-CS1474	Flushing water main works (CT73 Ch100 to Ch400 total 300m)	85	27-Jan-22	16-May-22	132								
S1-CS1475	U-Channel along the Cycletrack (CT73 Ch100 to Ch400 total 300m)	85	08-Dec-21	23-Mar-22	172								U-Channel along the Cycletrack (CT73 Ch100 to Ch400 total 300m)
S1-CS1477	Drainage work (utility service by others) (3nos Manholes) (CT73 Ch100 to Ch400 total 300m)	85	07-Jan-22	23-Apr-22	234								
Works in Portion II(CT76 Ch100 to Ch298.277)													
		532	02-Oct-21 A	20-May-22	391								
S1-CS1570	Drainage work(3nos Manhole and 200m 1500m pipe) (CE027 Original:1nos Manhole)	80	02-Oct-21 A	24-Feb-22	391								Drainage work(3nos Manhole and 200m 1500m pipe) (CE027 Original:1nos Manhole)
S1-CS1580	Irrigation system (utility service by others)(198m)	67	25-Feb-22	20-May-22	391								
S1-CS1590	Fresh water main works (198m)	67	25-Feb-22	20-May-22	391								
S1-CS1600	Flushing water main works (198m)	67	25-Feb-22	20-May-22	391								
Section 2- Site Formation and Infrastructure Works in Area B													
		80	06-Nov-21 A	23-Mar-22	7								
Site Formation and Infrastructure Works in Area B1 & B2													
		80	06-Nov-21 A	23-Mar-22	7								
Site Formation Works after trees felled in FL-G14.9													
		80	06-Nov-21 A	23-Mar-22	7								
S2-SF2375	Site formation works Area B part 3 (16624m3)	80	06-Nov-21 A	30-Dec-21	7								Site formation works Area B part 3 (16624m3)
S2-SF2380	Construction of open channel (53m)	35	21-Dec-21	05-Feb-22	7								Construction of open channel (53m)
S2-SF2390	Erection of chain link fence (670m) and Removal of temporary works, haul road and temporary accesses	43	29-Jan-22	23-Mar-22	7								Erection of chain link fence (670m) and
Section 3- Site Formation and Infrastructure Works in Area C													
		101	05-Nov-21 A	27-Apr-22	-16								
Site Formation and Infrastructure Works in Portion I Area C (13990m2)													
		75	05-Nov-21 A	27-Apr-22	-16								
Site Formation Works after trees felled in FL-G14.7 partial and FL-G14.2													
		75	05-Nov-21 A	27-Apr-22	-16								
S3-SF1120	Site formation works and Removal of temporary works, haul road and temporary accesses	75	05-Nov-21 A	27-Apr-22	-16								
Site Formation and Infrastructure Works in Portion IV Area C (10730m2)													
		36	09-Nov-21 A	21-Jan-22	58								
S3-SF1195	Site clearance	25	09-Nov-21 A	24-Dec-21	58								Site clearance
S3-SF1200	Construction of haul road	21	28-Dec-21	21-Jan-22	58								Construction of haul road
Section 4- Site Formation and Infrastructure Works in Area D													
		115	08-Dec-21	03-May-22	76								
S4-SF1000	Erection of hoarding (515m)	40	08-Dec-21	26-Jan-22	-67								Erection of hoarding (515m)
S4-SF1015	Prepare & submit the tree preservation and removal proposal (TPRP)	75	08-Dec-21	11-Mar-22	-102								Prepare & submit the tree preservation and removal proposal (TPRP)
S4-SF1025	Diversion of existing utilities and services (410m LV Cables to be abandon)	60	08-Dec-21	22-Feb-22	131								Diversion of existing utilities and services (410m LV Cables to be abandon)
S4-SF1030	Diversion of existing utilities and services (165m PCCW Ducts to be abandon)	60	08-Dec-21	22-Feb-22	131								Diversion of existing utilities and services (165m PCCW Ducts to be abandon)
S4-SF1040	Tree felling works	40	12-Mar-22	03-May-22	-102								
Section 5- Site Formation and Infrastructure Works in Area E and Remainder of the Works													
		171	08-Nov-21 A	09-Jun-22	48								
Road L1													
		139	08-Nov-21 A	11-Apr-22	93								
Road L1 in Portion I (P700 CH 175 to CH245)													
		126	12-Nov-21 A	11-Apr-22	93								
S5-RD1038	Site formation works	20	12-Nov-21 A	18-Dec-21	93								Site formation works
S5-RD1040	Construction of drainage (5nos Manholes)	70	08-Dec-21	05-Mar-22	93								Construction of drainage (5nos Manholes)
S5-RD1042	Construction of sewerage (2nos Manholes)	70	08-Dec-21	05-Mar-22	93								Construction of sewerage (2nos Manholes)
S5-RD1045	Construction of Irrigation system (168m)	70	15-Jan-22	11-Apr-22	93								
S5-RD1060	Fresh water main works (168m)	70	15-Jan-22	11-Apr-22	93								
S5-RD1070	Flushing water main works (168m)	70	15-Jan-22	11-Apr-22	93								
Road L1 in Portion IV (P600 CH 194 to CH393, P700 CH100 to CH175)													
		133	08-Nov-21 A	17-Mar-22	77								
S5-RD1142	Prepare & submit the tree preservation and removal proposal (TPRP)	80	08-Dec-21	17-Mar-22	48								Prepare & submit the tree preservation and removal proposal (TPRP)
S5-RD1148	Diversion of existing utilities and services (112m LV Cables to be abandon)	60	08-Dec-21	22-Feb-22	82								Diversion of existing utilities and services (112m LV Cables to be abandon)
S5-RD1149	Diversion of existing utilities and services (17m PCCW Ducts to be abandon)	60	08-Dec-21	22-Feb-22	82								Diversion of existing utilities and services (17m PCCW Ducts to be abandon)
S5-RD1160	Ground investigation works(2nos) and Trial pit (2nos) (PMI005)	35	08-Nov-21 A	17-Dec-21	133								Ground investigation works(2nos) and Trial pit (2nos) (PMI005)
S5-RD1177	Site formation works	30	09-Nov-21 A	11-Jan-22	130								Site formation works
Road L1 in Portion V (P600 CH 100 to CH194)													
		84	08-Dec-21	22-Mar-22	-165								
S5-RD1275	Site clearance (after tree felled in FL-G14.3)	14	15-Jan-22	31-Jan-22	-185								Site clearance (after tree felled in FL-G14.3)
S5-RD1278	Diversion of existing utilities and services (139m PCCW Ducts to be abandon)	50	08-Dec-21	10-Feb-22	-151								Diversion of existing utilities and services (139m PCCW Ducts to be abandon)
S5-RD1300	Demolition of existing structure (7nos 301m2)	40	04-Feb-22	22-Mar-22	-185								Demolition of existing structure (7nos 301m2)
Road L2													
		145	08-Dec-21	09-Jun-22	19								
S5-RD1480	Site clearance and tree felling works	50	08-Dec-21	10-Feb-22	-21								Site clearance and tree felling works
S5-RD1485	Diversion of existing utilities and services (83m PCCW Ducts to be abandon)	60	08-Dec-21	22-Feb-22	-31								Diversion of existing utilities and services (83m PCCW Ducts to be abandon)
S5-RD1487	Ground investigation works (1nos) (PMI005)	15	08-Dec-21	24-Dec-21	149								Ground investigation works (1nos) (PMI005)
S5-RD1490	Demolition of existing structure (7nos 730m2)	85	23-Feb-22	09-Jun-22	-31								
Section 6- Completion of Preservation And Protection Of Existing Trees													
		1146	31-Aug-20 A	29-Apr-24	-95								
S6-CS1000	Preservation and protection of trees	1146	31-Aug-20 A	29-Apr-24	-95								

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Portion	Legend
I	
II	
III	
IV	
V	

PORTION II

1. Site Clearance
2. Erection of site hoarding
3. C&D waste disposal
4. Construction of box culvert
5. Filling works
6. Tree felling / disposal of yard waste
7. Construction of box culvert

PORTION I

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

PORTION IV

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

PORTION 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

PORTION III

1. Drainage works
2. Sewage works

ND/2019/07

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

Working Activities (Dec 2021 – Feb 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
CERTIFICATES**

TEST REPORT

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

Test Report No.:	35994A
Date of Issue:	2021-11-08
Date Received:	2021-11-05
Date Tested:	2021-11-05
Date Completed:	2021-11-08
Next Due Date:	2022-01-07

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

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

Test Conditions:

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

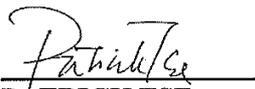
Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.080
-------------------------	-------

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:	5-Nov-21	5-Nov-21
Location:	Wellab Office (Calibration Room)	

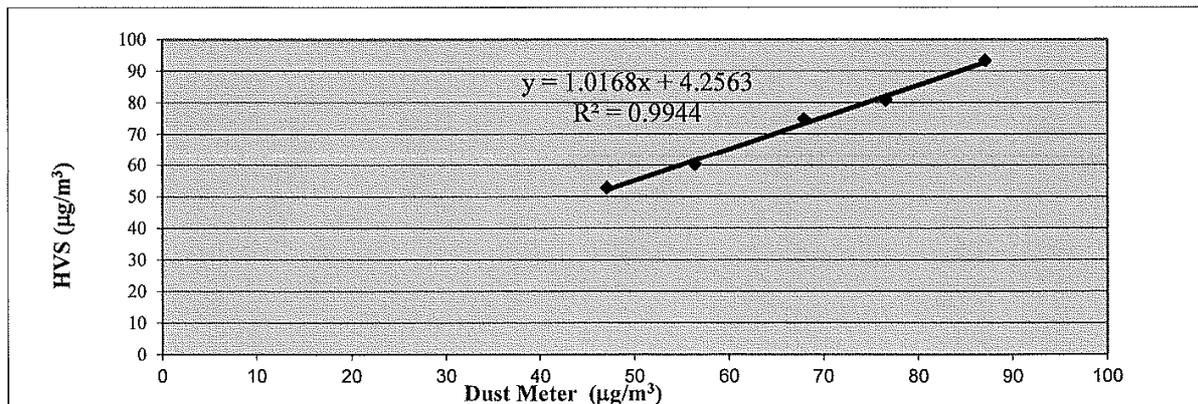
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	47	53
2	56	60
3	68	75
4	77	81
5	87	93
Average	67.0	72.4

By Linear Regression of Y on X
 Slope, mw = 1.0168 Intercept, bw = 4.2563
 Correlation coefficient* = 0.9972

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	72.4
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	67.0
Measuring time, (min)	60

Set Correlation Factor, SCF
 $\text{SCF} = \left[K = \frac{\text{High Volume Sampler}}{\text{Dust Meter, } (\mu\text{g}/\text{m}^3)} \right]$ 1.080



QC Reviewer: LEE MAN LEE Signature: Lee Date: 5/11/2021

TEST REPORT

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

Test Report No.:	35994B
Date of Issue:	2021-11-08
Date Received:	2021-11-05
Date Tested:	2021-11-05
Date Completed:	2021-11-08
Next Due Date:	2022-01-07

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

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

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:	5-Nov-21	5-Nov-21
Location:	Wellab Office (Calibration Room)	

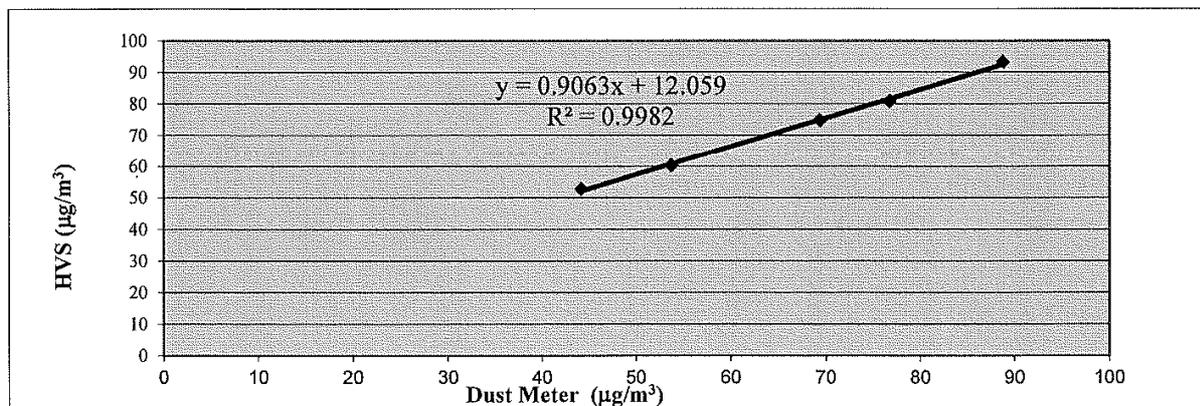
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	44	53
2	54	60
3	69	75
4	77	81
5	89	93
Average	66.6	72.4

By Linear Regression of Y on X
 Slope, $m_w =$ 0.9063 Intercept, $b_w =$ 12.0589
 Correlation coefficient* = 0.9991

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	72.4
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	66.6
Measuring time, (min)	60

Set Correlation Factor, SCF
 $\text{SCF} = | K = \text{High Volume Sampler} / \text{Dust Meter, } (\mu\text{g}/\text{m}^3) |$ 1.087



QC Reviewer: LET MAN HEZ Signature: hei Date: 5/11/2021

TEST REPORT

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

Test Report No.:	35994C
Date of Issue:	2021-11-08
Date Received:	2021-11-05
Date Tested:	2021-11-05
Date Completed:	2021-11-08
Next Due Date:	2022-01-07

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

Description : Dust Monitor
Manufacturer : Met One Instruments
Model No. : AEROCET-831
Serial No. : 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)	1.093
-------------------------	-------

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:	5-Nov-21	5-Nov-21
Location:	Wellab Office (Calibration Room)	

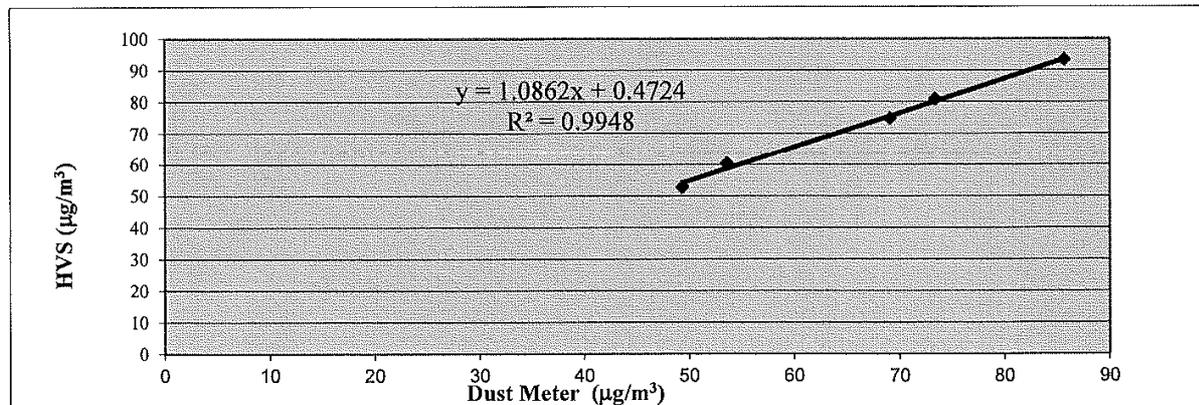
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	49	53
2	54	60
3	69	75
4	73	81
5	86	93
Average	66.2	72.4

By Linear Regression of Y on X
 Slope, mw = 1.0862 Intercept, bw = 0.4724
 Correlation coefficient* = 0.9974

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	72.4
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	66.2
Measuring time, (min)	60

Set Correlation Factor, SCF
 SCF = [K=High Volume Sampler / Dust Meter, ($\mu\text{g}/\text{m}^3$)] 1.093



QC Reviewer: LEE MAN HEZ Signature: lee Date: 5/11/2021

TEST REPORT

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

Test Report No.:	35993
Date of Issue:	2021-11-01
Date Received:	2021-10-29
Date Tested:	2021-10-29
Date Completed:	2021-11-01
Next Due Date:	2021-12-31

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)	1.070
-------------------------	-------

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:	29-Oct-21	29-Oct-21
Location:	Wellab Office (Calibration Room)	

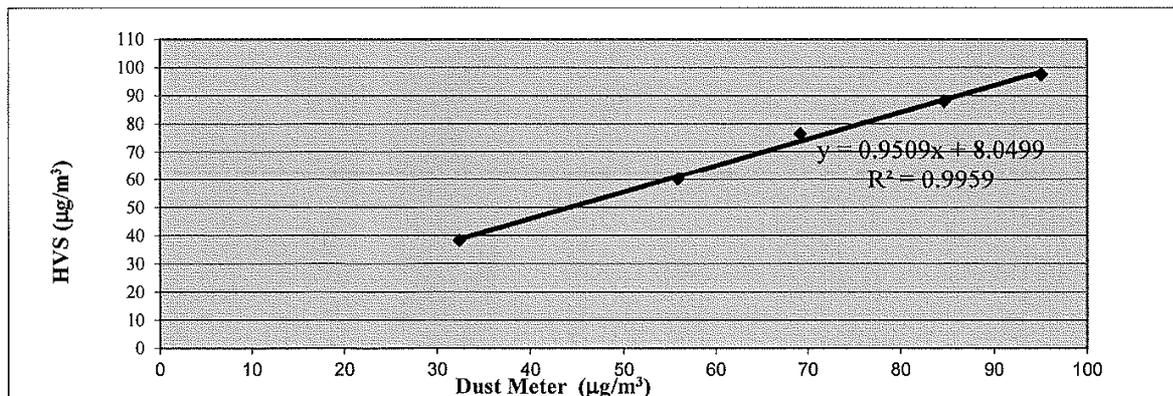
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	32	38
2	56	60
3	69	77
4	85	88
5	95	98
Average	67.5	72.2

By Linear Regression of Y on X
 Slope, mw = 0.9509 Intercept, bw = 8.0499
 Correlation coefficient* = 0.9980

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	72.2
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	67.5
Measuring time, (min)	60

Set Correlation Factor, SCF
 SCF = [K=High Volume Sampler / Dust Meter, ($\mu\text{g}/\text{m}^3$)] 1.070



QC Reviewer: CE MAN HEV Signature: Ken Date: 29/10/2021

TEST REPORT

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

Test Report No.:	35993A
Date of Issue:	2021-11-01
Date Received:	2021-10-29
Date Tested:	2021-10-29
Date Completed:	2021-11-01
Next Due Date:	2021-12-31
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)	1.078
-------------------------	-------

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:	29-Oct-21	29-Oct-21
Location:	Wellab Office (Calibration Room)	

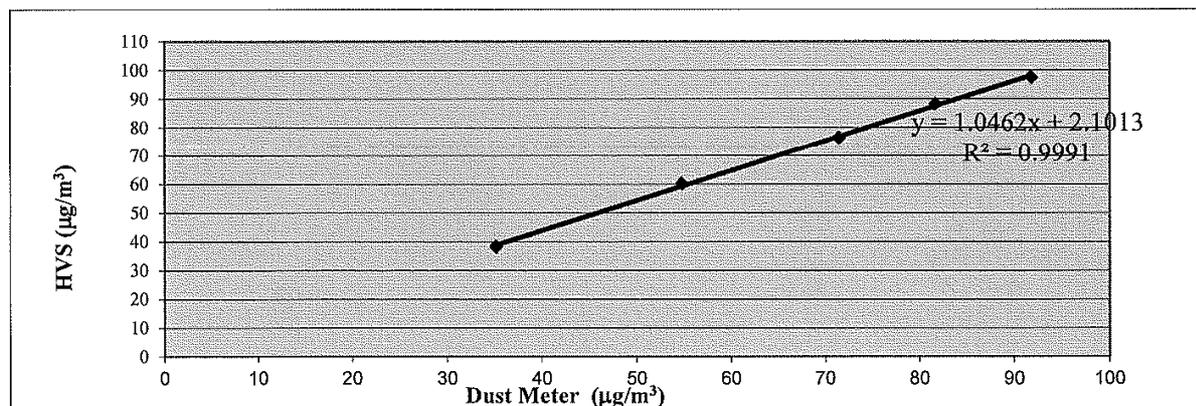
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	35	38
2	55	60
3	72	77
4	82	88
5	92	98
Average	67.0	72.2

By Linear Regression of Y on X
 Slope, $m_w =$ 1.0462 Intercept, $b_w =$ 2.1013
 Correlation coefficient* = 0.9996

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	72.2
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	67.0
Measuring time, (min)	60

Set Correlation Factor, SCF
 SCF = [K=High Volume Sampler / Dust Meter, ($\mu\text{g}/\text{m}^3$)] 1.078



QC Reviewer: LEE PAW HIZ Signature: Lei Date: 29/10/2021

TEST REPORT

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

Test Report No.:	35994D
Date of Issue:	2021-11-08
Date Received:	2021-11-05
Date Tested:	2021-11-05
Date Completed:	2021-11-08
Next Due Date:	2022-01-07

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

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

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.080
-------------------------	-------

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:	5-Nov-21	5-Nov-21
Location:	Wellab Office (Calibration Room)	

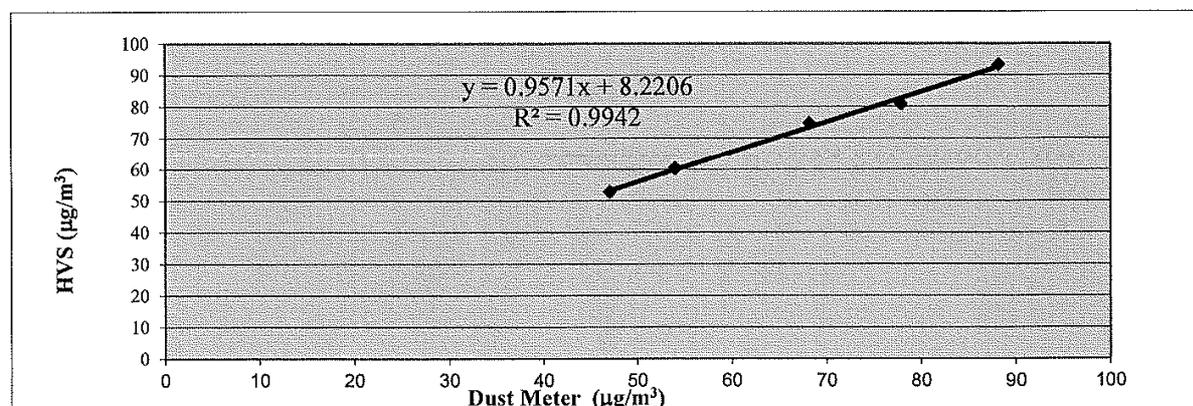
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	47	53
2	54	60
3	68	75
4	78	81
5	88	93
Average	67.1	72.4

By Linear Regression of Y on X
 Slope, mw = 0.9571 Intercept, bw = 8.2206
 Correlation coefficient* = 0.9971

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	72.4
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	67.1
Measuring time, (min)	60

Set Correlation Factor, SCF
 $\text{SCF} = [K = \text{High Volume Sampler} / \text{Dust Meter}, (\mu\text{g}/\text{m}^3)]$ 1.080



QC Reviewer: LEE MAW HEE Signature: lee Date: 5/10/2021

TEST REPORT

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

Test Report No.:	35993B
Date of Issue:	2021-11-01
Date Received:	2021-10-29
Date Tested:	2021-10-29
Date Completed:	2021-11-01
Next Due Date:	2021-12-31

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)	1.119
-------------------------	-------

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


PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-08	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24479	2203
Calibration Date:	29-Oct-21	29-Oct-21
Location:	Wellab Office (Calibration Room)	

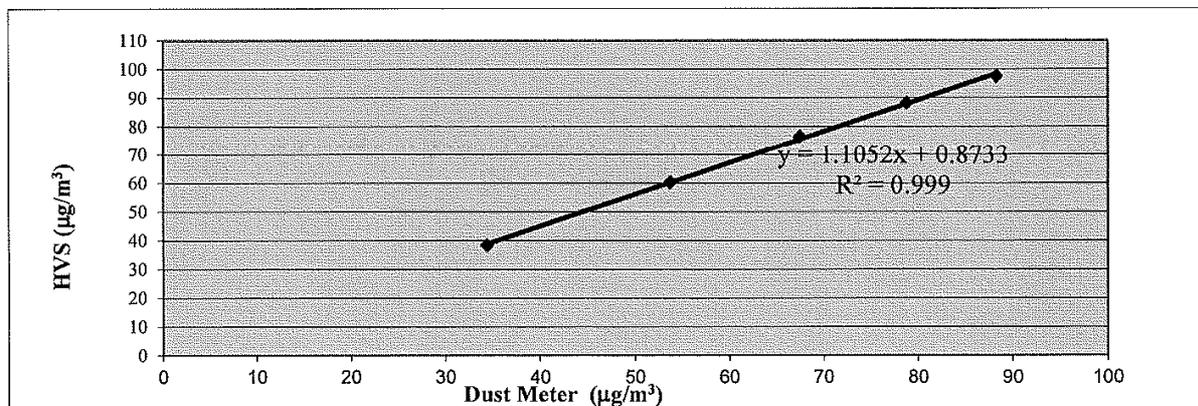
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	34	38
2	54	60
3	68	77
4	79	88
5	88	98
Average	64.5	72.2

By Linear Regression of Y on X
 Slope, $m_w =$ 1.1052 Intercept, $b_w =$ 0.8733
 Correlation coefficient* = 0.9995

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	72.2
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	64.5
Measuring time, (min)	60

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



QC Reviewer: LBB MAN HEB Signature: ku Date: 29/10/2021

TEST REPORT

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

Test Report No.:	35993D
Date of Issue:	2021-11-01
Date Received:	2021-10-29
Date Tested:	2021-10-29
Date Completed:	2021-11-01
Next Due Date:	2021-12-31

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%

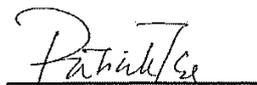
Test Specifications & Methodology:

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

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-01-10	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24478	2203
Calibration Date:	29-Oct-21	29-Oct-21
Location:	Wellab Office (Calibration Room)	

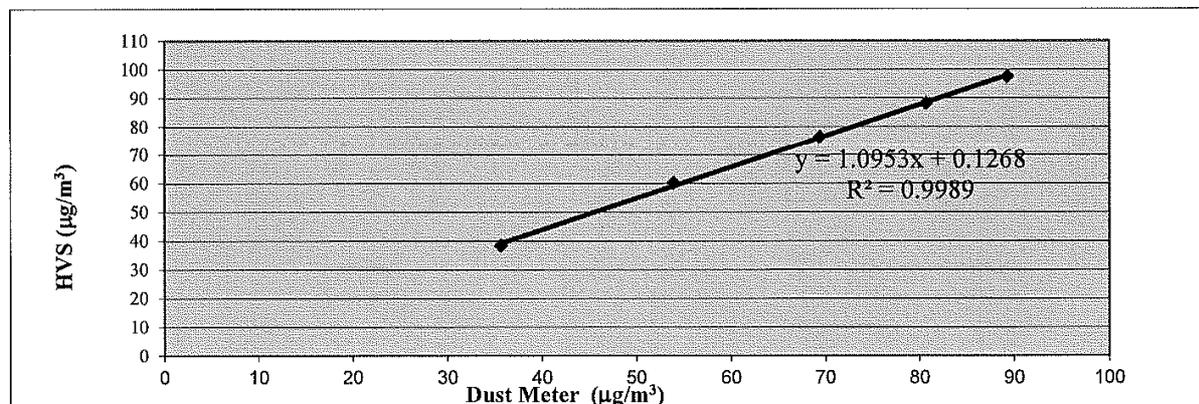
Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu\text{g}/\text{m}^3$) X-axis	Mass concentration ($\mu\text{g}/\text{m}^3$) Y-axis
1	36	38
2	54	60
3	69	77
4	81	88
5	89	98
Average	65.8	72.2

By Linear Regression of Y on X
 Slope , mw = 1.0953 Intercept, bw = 0.1268
 Correlation coefficient* = 0.9995

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particulate Concentration by High Volume Sampler ($\mu\text{g}/\text{m}^3$)	72.2
Particulate Concentration by Dust Meter ($\mu\text{g}/\text{m}^3$)	65.8
Measureing time, (min)	60

Set Correlation Factor , SCF
 SCF = [K=High Volume Sampler / Dust Meter, ($\mu\text{g}/\text{m}^3$)] 1.097



QC Reviewer: LEE MAN HEE Signature: lee Date: 29/10/2021

High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

Station FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark
Date: 16-Nov-21
Equipment No.: WA-12-20

File No. WMA20002/20/0009
Operator: HL
Next Due Date: 15-Jan-22
Serial No. 3223

Ambient Condition			
Temperature, Ta (K)	294	Pressure, Pa (mmHg)	766.8

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

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	12.2	3.53	62.34	9.4	3.10
2	10.4	3.26	57.58	7.8	2.82
3	7.8	2.82	49.90	6.2	2.52
4	5.5	2.37	41.94	4.4	2.12
5	3.7	1.95	34.44	2.8	1.69

By Linear Regression of Y on X

Slope, mw = 0.0492 Intercept, bw : 0.0268

Correlation coefficient* = 0.9982

*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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 4.49

Remarks: _____

Conducted by: Lee Man Ho Signature: _____
Checked by: Ho Ka Chun Signature: _____

Date: 16/11/2021
Date: 16/11/2021

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

Station KTN-DMS4A - Temporary Structure at Pak Shek Au File No. WMA20002/03/0009
Date: 1-Dec-21 Operator: KC
Equipment No.: WA-11-03 Next Due Date: 31-Jan-22
Serial No. 3225

Ambient Condition			
Temperature, Ta (K)	290.2	Pressure, Pa (mmHg)	770.4

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	8.9	9.26	53.76	51.64	1.46	9.1	1.94
2	7.5	7.81	49.37	47.43	1.34	8.1	1.83
3	5.1	5.31	40.75	39.15	1.11	6.4	1.63
4	3.6	3.75	34.28	32.93	0.93	5.2	1.47
5	2.8	2.91	30.26	29.07	0.82	4.7	1.40

By Linear Regression of Y on X

Slope, mw = 0.0245 Intercept, bw = 0.6737
Correlation coefficient* = 0.9994

- (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 x (Ta / Pa) x (760 / 298) (m³/min)

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation	
Set Point Flow Rate., SFR	SFR = $1.13 \times (760/Pa) \times (Ta/298) =$ <u>38.36</u>
Sampler Well - Type Manometer Set Point, SSP	SSP = $[(mw \times SFR + bw)^2 \times Pa] / (Ta + 30) =$ <u>6.27</u>

Remarks: _____

Conducted by: H. Ka Chan Signature: [Signature] Date: 1/12/2021
Checked by: [Signature] Signature: [Signature] Date: 1-12-2021



RECALIBRATION
DUE DATE:
January 28, 2022

Certificate of Calibration

Calibration Certification Information			
Cal. Date: January 28, 2021	Rootsmer 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)	$\sqrt{\Delta H (Ta/Pa)}$ (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:	
$Qstd = 1/m \left(\left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} \right) - b \right)$	$Qa = 1/m \left(\left(\sqrt{\Delta H (Ta/Pa)} \right) - b \right)$

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg
Key	
ΔH: calibrator manometer reading (in H2O)	
ΔP: rootsmer manometer reading (mm Hg)	
Ta: actual absolute temperature (°K)	
Pa: actual barometric pressure (mm Hg)	
b: intercept	
m: slope	

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

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

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

TEST REPORT

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

Test Report No.:	35809
Date of Issue:	2021-08-16
Date Received:	2021-08-13
Date Tested:	2021-08-13
Date Completed:	2021-08-16
Next Due Date:	2022-08-15

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

Description : 'SVANTEK' Integrating Sound Level
Meter
Manufacturer : SVANTEK
Model No. : SVAN 957
Serial No. : 21460
Microphone No. : 43679
Equipment No. : N-08-09

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 Reading, 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.:	34872
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. : 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:

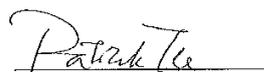
In-house method, according to manufacturer instruction manual

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

Test Report No.:	34872B
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.	: 580005
Equipment No.	: WN-01-03

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.:	34872E
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.	: 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

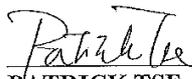
Methodology:

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

Test Report No.:	34873
Date of Issue:	2021-03-15
Date Received:	2021-03-12
Date Tested:	2021-03-12
Date Completed:	2021-03-15
Next Due Date:	2022-03-14

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.	: 580011
Equipment No.	: WN-01-08

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.:	34873A
Date of Issue:	2021-03-15
Date Received:	2021-03-12
Date Tested:	2021-03-12
Date Completed:	2021-03-15
Next Due Date:	2022-03-14

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

Test Report No.:	34873B
Date of Issue:	2021-03-15
Date Received:	2021-03-12
Date Tested:	2021-03-12
Date Completed:	2021-03-15
Next Due Date:	2022-03-14

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.	: 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:

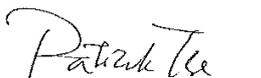
In-house method, according to manufacturer instruction manual

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:

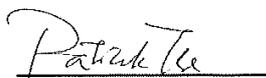
The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

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

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

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for calibration:

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

Test conditions:

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

Methodology:

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

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

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.:	35917
Date of Issue:	2021-09-21
Date Received:	2021-09-20
Date Tested:	2021-09-20 to 2021-09-21
Date Completed:	2021-09-21

ATTN: Miss Mei Ling Tang

Page: 1 of 2

Certificate of Calibration

Item for calibration:

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

Test conditions:

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

Test Specifications:

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

Methodology:

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

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


PATRICK TSE
General Manager

TEST REPORT

Test Report No.:	35917
Date of Issue:	2021-09-21
Date Received:	2021-09-20
Date Tested:	2021-09-20 to 2021-09-21
Date Completed:	2021-09-21
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	20.004	-0.004	N/A

pH performance checking

	Instrument Readings (pH unit)	Acceptance Criteria	Comment
pH QC buffer 4.00	4.00	4.00 ± 0.10	Pass
pH QC buffer 6.86	6.87	6.86 ± 0.10	Pass
pH QC buffer 9.18	9.25	9.18 ± 0.10	Pass

D.O. performance checking

	Instrument Readings (mg/L)	Acceptance Criteria	Comment
Zero DO solution	0.07	<0.1mg/L	Pass

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Acceptance Criteria	Comment
7.86	7.99	Difference between Titration value and instrument reading <0.2mg/L	Pass

Turbidity performance checking

Turbidity stock solution	Instrument Readings (NTU)	Acceptance Criteria	Comment
10 NTU	10.04	9.0-11.0	Pass
50 NTU	50.27	45.0-55.0	Pass
100 NTU	101.3	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.:	36157
Date of Issue:	2021-12-07
Date Received:	2021-12-06
Date Tested:	2021-12-06 to 2021-12-07
Date Completed:	2021-12-07

ATTN: Miss Mei Ling Tang

Page: 1 of 2

Certificate of Calibration

Item for calibration:

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

Test conditions:

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

Test Specifications:

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

Methodology:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Test Report No.:	36157
Date of Issue:	2021-12-07
Date Received:	2021-12-06
Date Tested:	2021-12-06 to 2021-12-07
Date Completed:	2021-12-07

Page: 2 of 2

Certificate of Calibration

Results:

Conductivity performance checking

	Instrument Readings ($\mu\text{S}/\text{cm}$)	Acceptance Criteria	Comment
KCl stock solution (12890 $\mu\text{S}/\text{cm}$)	13100	12246-13534	Pass

Temperature performance checking

Reference thermometer- E431 Readings ($^{\circ}\text{C}$)	Instrument Readings ($^{\circ}\text{C}$)	Correction ($^{\circ}\text{C}$)	Comment
20.0	19.998	+0.002	N/A

pH performance checking

	Instrument Readings (pH unit)	Acceptance Criteria	Comment
pH QC buffer 4.00	4.04	4.00 + 0.10	Pass
pH QC buffer 6.86	6.87	6.86 + 0.10	Pass
pH QC buffer 9.18	9.21	9.18 + 0.10	Pass

D.O. performance checking

	Instrument Readings (mg/L)	Acceptance Criteria	Comment
Zero DO solution	0.09	<0.1mg/L	Pass

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Acceptance Criteria	Comment
7.84	8.02	Difference between Titration value and instrument reading <0.2mg/L	Pass

Turbidity performance checking

Turbidity stock solution	Instrument Readings (NTU)	Acceptance Criteria	Comment
10 NTU	10.13	9.0-11.0	Pass
50 NTU	48.66	45.0-55.0	Pass
100 NTU	101.4	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/O2 Cylinder-nr. 88772 NO Cylinder-nr. 72126
CO/H2/O2 Cylinder-nr. D5CPTH5 NO2 Cylinder-nr. 88778
CO2/CH4/H2S 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
O2 in Vol. %	0,00	+/- 0,2	0.02
O2 in Vol. %	2.01	+/- 0,2	2.02
O2 in Vol. %	10.00	+/-0,3	10.03
NDIR:			
CH4 in Vol%	60.0	+/-1.8	60.0
CO2 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: 8 January 2021
Next Calibration Date: 8 January 2022
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
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Agilent Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
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: _____



(Wong, Keefe Solomon)

Date: 8 January 2021

CALIBRATION CERTIFICATE

Calibration Item: TRIAXIAL GEOPHONE (Calibration with
main unit UM17121)
Part Number: 721A2901
Serial No.: UM17121
Calibration Date: 8 January 2021
Next Calibration Date: 8 January 2022
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
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Agilent Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
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: _____

(Wong, Keefe Solomon)

Date: 8 January 2021

CALIBRATION CERTIFICATE

Calibration Item: Micromate System ISEE (Calibration with Geophone UM17124)
Model No.: 721A2501
Serial No.: UM17124
Calibration Date: 8 January 2021
Next Calibration Date: 8 January 2022
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
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
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: _____



(Wong, Keefe Solomon)
Date: 8 January 2021

CALIBRATION CERTIFICATE

Calibration Item: TRIAXIAL GEOPHONE (Calibration with
main unit UM17124)
Part Number: 721A2901
Serial No.: UM17124
Calibration Date: 8 January 2021
Next Calibration Date: 8 January 2022
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
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
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: _____



(Wong, Keefe Solomon)

Date: 8 January 2021

CALIBRATION CERTIFICATE

Calibration Item: Micromate System ISEE (Calibration with Geophone UM17126)
Model No.: 721A2501
Serial No.: UM17126
Calibration Date: 8 January 2021
Next Calibration Date: 8 January 2022
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
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
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Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
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: _____



(Wong, Keefe Solomon)

Date: 8 January 2021

CALIBRATION CERTIFICATE

Calibration Item: TRIAXIAL GEOPHONE (Calibration with main unit UM17126)
Part Number: 721A2901
Serial No.: UM17126
Calibration Date: 8 January 2021
Next Calibration Date: 8 January 2022
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
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
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Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
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: _____



(Wong, Keefe Solomon)

Date: 8 January 2021

**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 (December 2021)**

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

Remarks:

*Monitoring session would be conducted by portable TSP monitor.

(1) 24-hr TSP monitoring at FLN-DMS5 – Noble Hill was suspended since 19 Nov 2021 as the set up has been reported stolen on 19 Nov 2021. The proposal of alternative air quality monitoring station, FLN-DMS5A was approved by EPD on 15 December 2021 and 24hr TSP at FLN-DMS5A monitoring will be resumed on 17 December 2021

Environmental Permit(s)	Contract No.	Air Quality Stations	Noise Stations
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	1hr TSP and 24hr TSP 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	24hr RSP (Arsenic) KTN-DMS4A - Temporary Structure at Pak Shek Au	--
EP-468/2013/A	ND/2019/03		
EP-467/2013/A EP-468/2013/A ⁽¹⁾	ND/2019/01	--	CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung
EP-468/2013/A ⁽²⁾	ND/2019/01	--	CP-KTN-NMS3 -Fung Kong Garden
EP-469/2013 ⁽³⁾	ND/2019/02	--	CP-KTN-NMS6 - Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery
EP-470/2013	ND/2019/01	--	CP-KTN-NMS5 - N/A
EP-473/2013/A ⁽⁴⁾	ND/2019/03	1hr TSP and 24hr TSP FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark	--
	ND/2019/04		--
EP-473/2013/A ⁽⁵⁾	ND/2019/05	1hr TSP and 24hr TSP FLN-DMS3 - House near Tong Hang	--
EP-473/2013/A ⁽⁶⁾	ND/2019/03	1hr TSP FLN-DMS5 - Noble Hill	--
	ND/2019/04	24hr TSP 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 (December 2021)

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

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 (December 2021)

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

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
Weekly Site Inspection Schedule for December 2021

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

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

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

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

Remarks:

*Monitoring session would be conducted by portable TSP monitor.

Environmental Permit(s)	Contract No.	Air Quality Stations	Noise Stations
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	1hr TSP and 24hr TSP 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	24hr RSP (Arsenic) KTN-DMS4A - Temporary Structure at Pak Shek Au	--
EP-468/2013/A	ND/2019/03		
EP-467/2013/A EP-468/2013/A ⁽¹⁾	ND/2019/01	--	CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung
EP-468/2013/A ⁽²⁾	ND/2019/01	--	CP-KTN-NMS3 -Fung Kong Garden
EP-469/2013 ⁽³⁾	ND/2019/02	--	CP-KTN-NMS6 - Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery
EP-470/2013	ND/2019/01	--	CP-KTN-NMS5 - N/A
EP-473/2013/A ⁽⁴⁾	ND/2019/03	1hr TSP and 24hr TSP FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark	--
	ND/2019/04		--
EP-473/2013/A ⁽⁵⁾	ND/2019/05	1hr TSP and 24hr TSP FLN-DMS3 - House near Tong Hang	--
EP-473/2013/A ⁽⁶⁾	ND/2019/03	1hr TSP FLN-DMS5 - Noble Hill	--
	ND/2019/04	24hr TSP 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 (January 2022)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1-Jan
2-Jan	3-Jan	4-Jan	5-Jan	6-Jan	7-Jan	8-Jan
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream	
9-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream	
16-Jan	17-Jan	18-Jan	19-Jan	20-Jan	21-Jan	22-Jan
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream	
23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream	
30-Jan	31-Jan					
	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 (January 2022)

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

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)
#Night-time avifauna monitoring in Long Valley

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

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

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

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 ($\mu\text{g}/\text{m}^3$)
2-Dec-21	8:45	Sunny	136.0
2-Dec-21	9:45	Sunny	167.4
2-Dec-21	10:45	Sunny	175.4
8-Dec-21	9:00	Sunny	164.7
8-Dec-21	10:00	Sunny	128.7
8-Dec-21	11:00	Sunny	98.3
14-Dec-21	8:20	Cloudy	150.6
14-Dec-21	9:20	Cloudy	166.3
14-Dec-21	10:20	Cloudy	146.3
20-Dec-21	9:00	Cloudy	136.4
20-Dec-21	10:00	Cloudy	125.7
20-Dec-21	11:00	Cloudy	143.5
24-Dec-21	13:00	Cloudy	202.8
24-Dec-21	14:00	Cloudy	196.6
24-Dec-21	15:00	Cloudy	204.3
30-Dec-21	9:00	Sunny	101.3
30-Dec-21	10:00	Sunny	114.8
30-Dec-21	11:00	Sunny	121.7
		Minimum	98.3
		Maximum	204.3
		Average	148.9

Location FLN-DMS3 - House near Tong Hang			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
2-Dec-21	13:00	Sunny	139.1
2-Dec-21	14:00	Sunny	177.4
2-Dec-21	15:00	Sunny	163.1
8-Dec-21	10:00	Sunny	231.2
8-Dec-21	11:00	Sunny	227.9
8-Dec-21	13:00	Sunny	243.8
14-Dec-21	13:30	Sunny	152.4
14-Dec-21	14:30	Sunny	181.8
14-Dec-21	15:30	Sunny	175.9
20-Dec-21	9:00	Cloudy	151.2
20-Dec-21	10:00	Cloudy	124.1
20-Dec-21	11:00	Cloudy	142.7
24-Dec-21	10:00	Cloudy	141.2
24-Dec-21	11:00	Cloudy	126.7
24-Dec-21	13:00	Cloudy	167.1
30-Dec-21	13:00	Sunny	112.9
30-Dec-21	14:00	Sunny	124.1
30-Dec-21	15:00	Sunny	133.7
		Minimum	112.9
		Maximum	243.8
		Average	162.0

Appendix E - 1-hour TSP Monitoring Results

Location FLN-DMS5 - Noble Hill			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
1-Dec-21	9:00	Sunny	54.4
1-Dec-21	10:00	Sunny	67.6
1-Dec-21	11:00	Sunny	73.1
7-Dec-21	9:00	Sunny	41.3
7-Dec-21	10:00	Sunny	47.2
7-Dec-21	11:00	Sunny	40.1
13-Dec-21	9:00	Sunny	216.2
13-Dec-21	10:00	Sunny	140.6
13-Dec-21	11:00	Sunny	134.0
17-Dec-21	13:00	Cloudy	62.6
17-Dec-21	14:00	Cloudy	69.1
17-Dec-21	15:00	Cloudy	72.6
23-Dec-21	8:50	Cloudy	49.7
23-Dec-21	9:50	Cloudy	44.3
23-Dec-21	10:50	Cloudy	52.4
29-Dec-21	9:00	Sunny	136.5
29-Dec-21	10:00	Sunny	142.1
29-Dec-21	11:00	Sunny	145.6
		Minimum	40.1
		Maximum	216.2
		Average	88.3

Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
1-Dec-21	13:00	Sunny	56.0
1-Dec-21	14:00	Sunny	63.7
1-Dec-21	15:00	Sunny	76.8
7-Dec-21	9:00	Sunny	108.8
7-Dec-21	10:00	Sunny	119.3
7-Dec-21	11:00	Sunny	120.2
13-Dec-21	9:00	Sunny	69.4
13-Dec-21	10:00	Sunny	64.2
13-Dec-21	11:00	Sunny	51.3
17-Dec-21	13:00	Fine	80.7
17-Dec-21	14:00	Fine	100.6
17-Dec-21	15:00	Fine	158.5
23-Dec-21	8:30	Cloudy	61.7
23-Dec-21	9:30	Cloudy	45.8
23-Dec-21	10:30	Cloudy	39.8
29-Dec-21	9:00	Sunny	50.2
29-Dec-21	10:00	Sunny	76.2
29-Dec-21	11:00	Sunny	101.7
		Minimum	39.8
		Maximum	158.5
		Average	80.3

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			
1-Dec-21	Sunny	288.4	2.6777	2.9017	0.2240	5527.4	5551.4	24.0	1.23	1.23	1.23	1774.5	126.2
7-Dec-21	Sunny	288.6	2.6511	2.8438	0.1927	5551.4	5575.4	24.0	1.24	1.22	1.23	1773.6	108.6
13-Dec-21	Cloudy	290.3	2.6551	2.8663	0.2112	5575.4	5599.4	24.0	1.22	1.23	1.23	1768.3	119.4
17-Dec-21	Cloudy	291.8	3.5358	3.7415	0.2057	5599.4	5623.4	24.0	1.22	1.23	1.22	1762.2	116.7
23-Dec-21	Cloudy	291.6	2.7732	2.9083	0.1351	5623.4	5647.4	24.0	1.22	1.22	1.22	1760.5	76.7
29-Dec-21	Sunny	287.6	3.3130	3.5091	0.1961	5647.4	5671.4	24.0	1.23	1.24	1.24	1779.3	110.2
												Min	76.7
												Max	126.2
												Average	109.7

Location FLN-DMS3 - House near Tong Hang

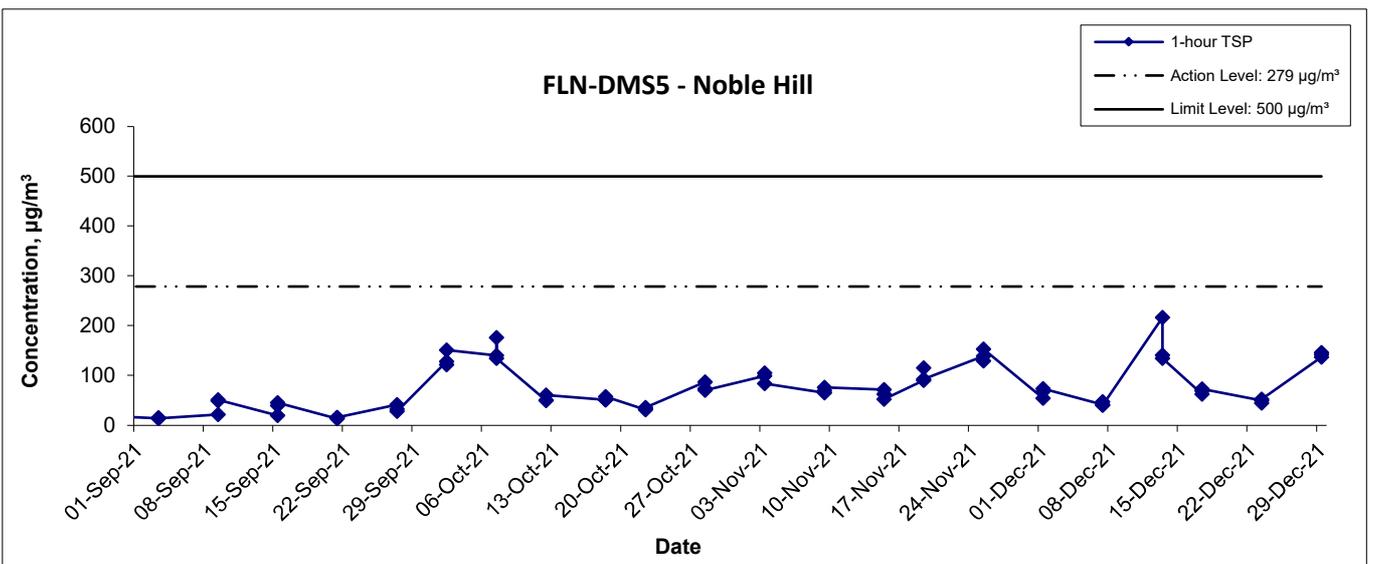
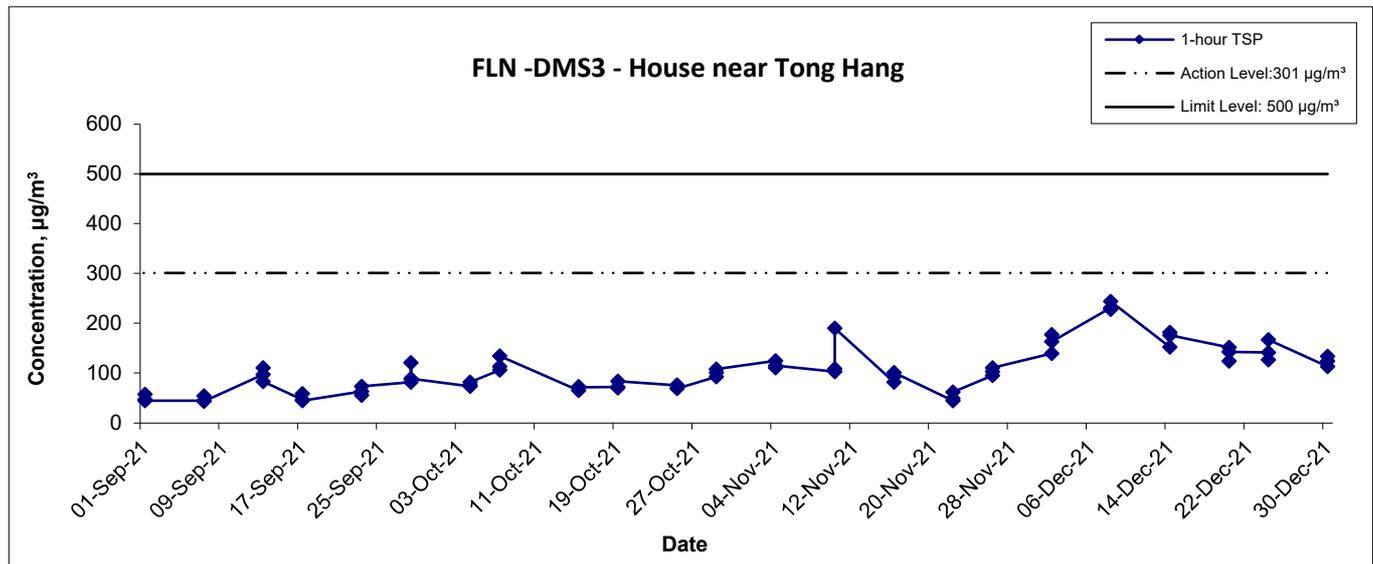
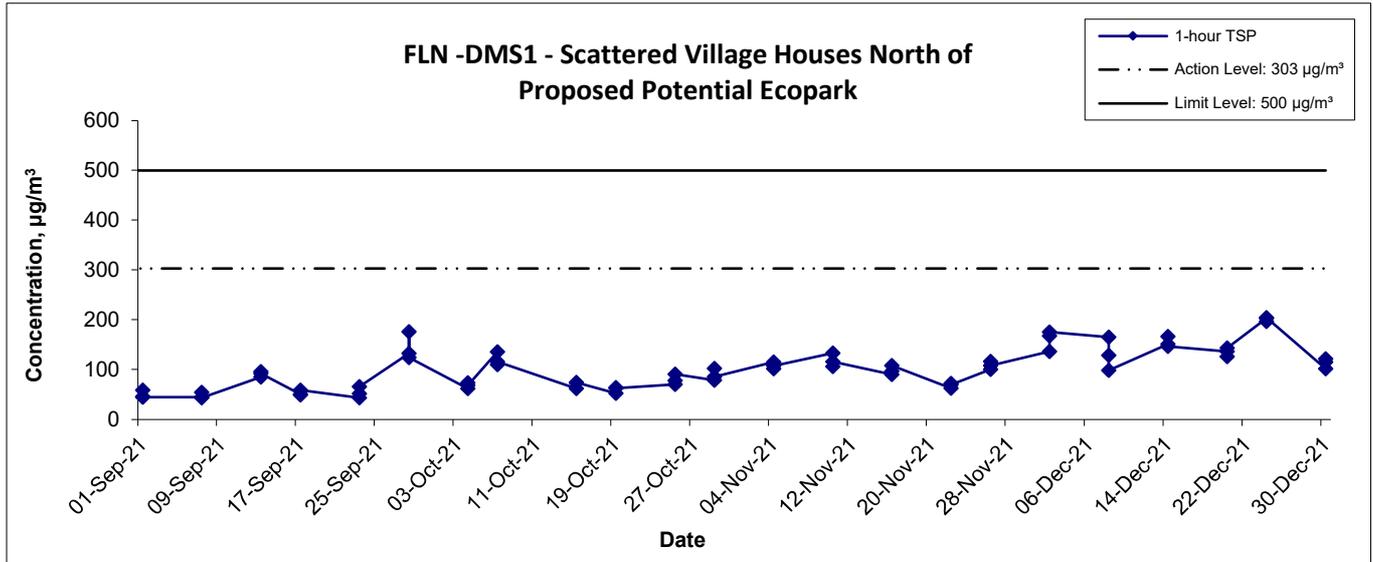
Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m ³ /min.)		Av. flow (m ³ /min)	Total vol. (m ³)	Conc. (µg/m ³)
			Initial	Final		Initial	Final		Initial	Final			
1-Dec-21	Sunny	288.4	2.6388	2.7653	0.1265	6570.7	6594.7	24.0	1.23	1.24	1.24	1779.6	71.1
7-Dec-21	Sunny	288.6	2.6494	2.8135	0.1641	6594.7	6618.7	24.0	1.24	1.23	1.24	1778.8	92.3
13-Dec-21	Cloudy	290.3	2.6502	2.8764	0.2262	6618.7	6642.7	24.0	1.23	1.24	1.23	1773.5	127.5
17-Dec-21	Cloudy	291.8	3.5320	3.6603	0.1283	6642.7	6666.7	24.0	1.22	1.23	1.23	1767.4	72.6
23-Dec-21	Cloudy	291.6	2.7777	2.8571	0.0794	6666.7	6690.7	24.0	1.23	1.23	1.23	1765.7	45.0
29-Dec-21	Sunny	287.6	3.3526	3.5140	0.1614	6690.7	6714.7	24.0	1.24	1.24	1.24	1784.5	90.4
												Min	45.0
												Max	127.5
												Average	83.1

Appendix E - 24-hour TSP Monitoring Results

Location FLN-DMS5A - Good View New Village			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
17-Dec-21	14:35	Fine	128.9
23-Dec-21	9:00	Cloudy	129.6
29-Dec-21	11:00	Sunny	81.0
		Minimum	81.0
		Maximum	129.6
		Average	113.2

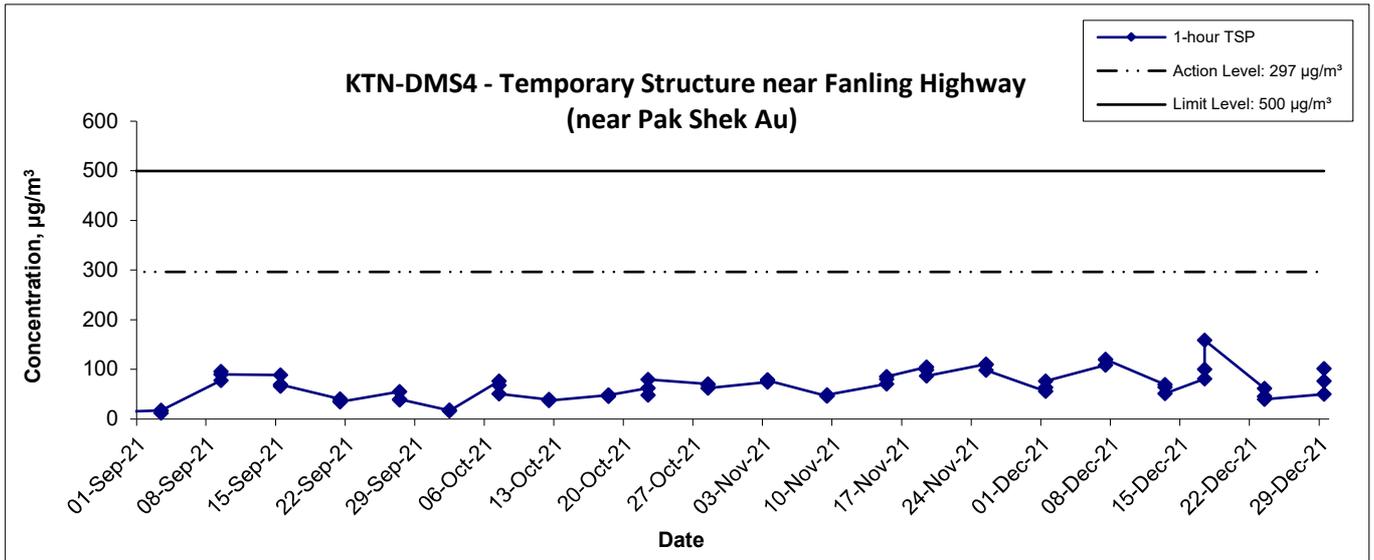
Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
1-Dec-21	12:00	Sunny	74.3
7-Dec-21	9:00	Sunny	111.6
13-Dec-21	9:00	Sunny	43.1
17-Dec-21	11:00	Fine	131.0
23-Dec-21	8:30	Cloudy	111.9
29-Dec-21	9:00	Sunny	52.1
		Minimum	43.1
		Maximum	131.0
		Average	87.3

1-hr TSP Concentration Levels



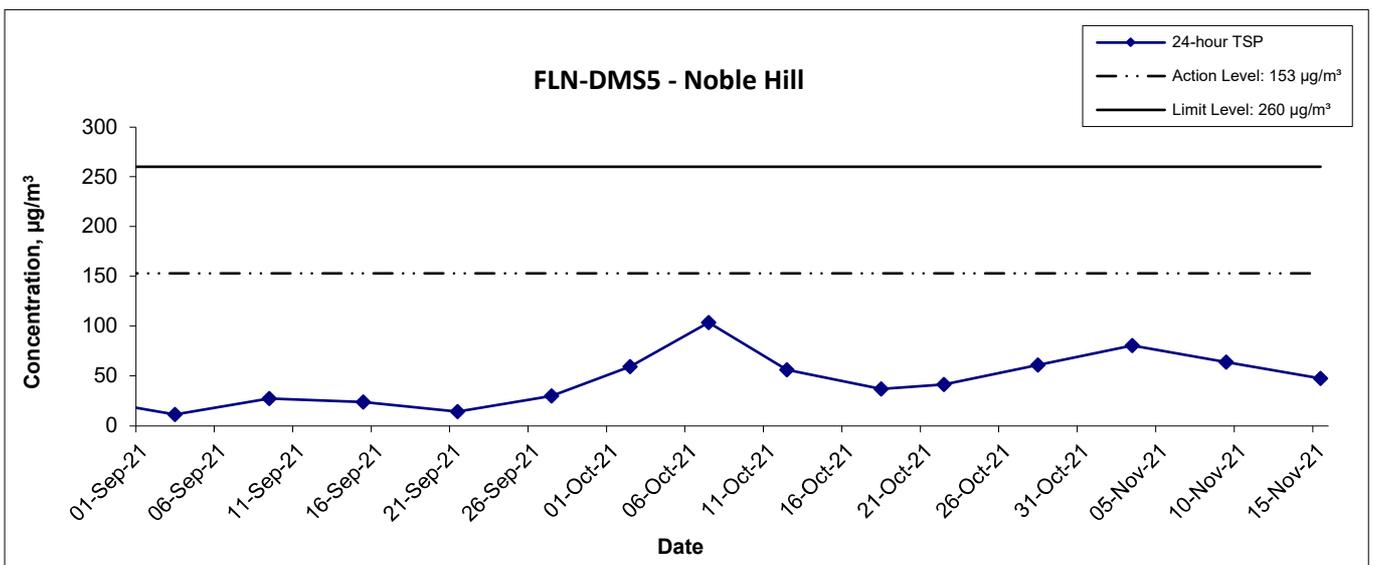
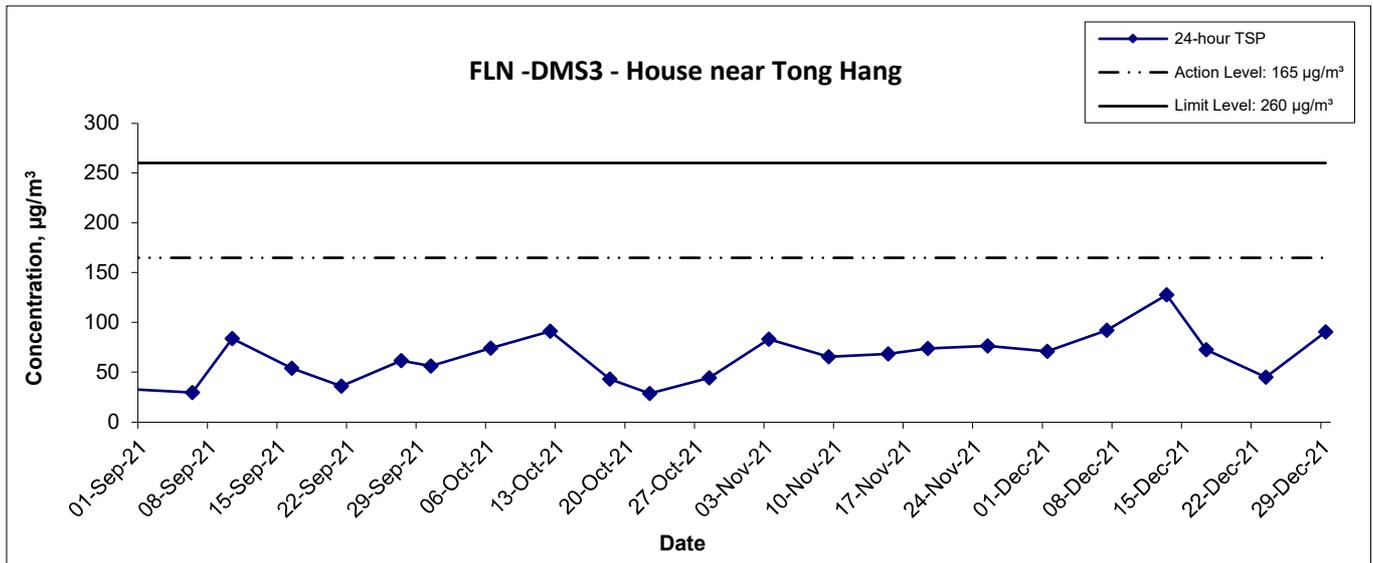
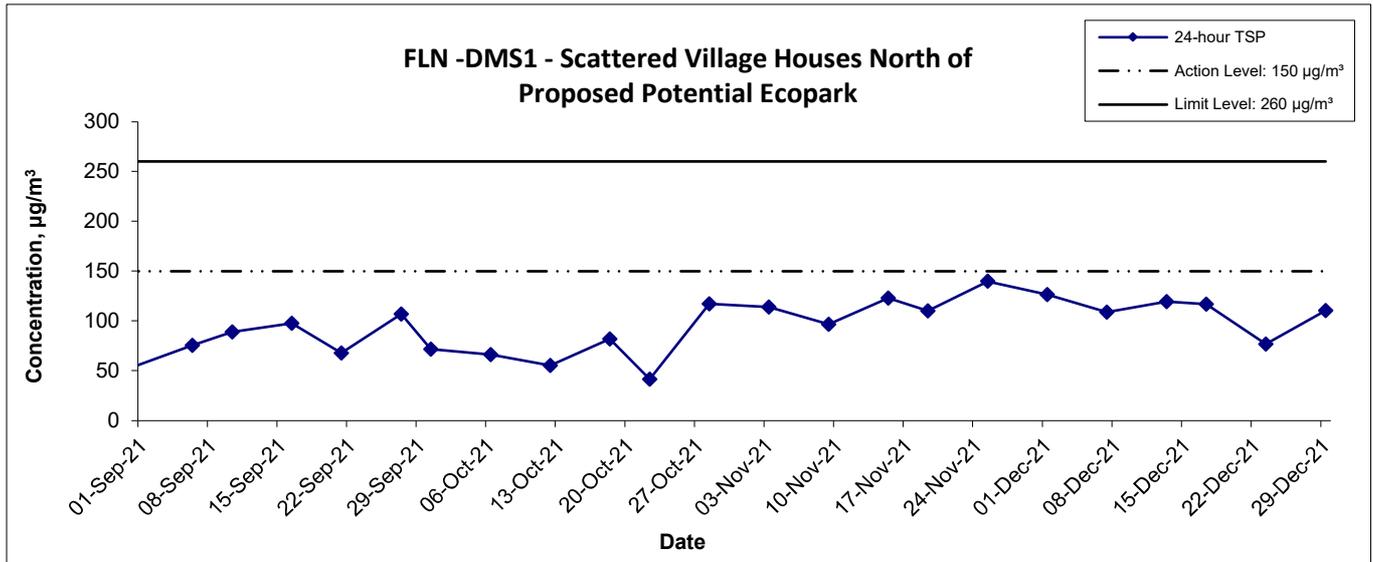
Title Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	Scale	Project No.	 consulting . testing . research
	Date	Appendix	
	N.T.S	WMA20002	
	Dec 21	E	

1-hr TSP Concentration Levels



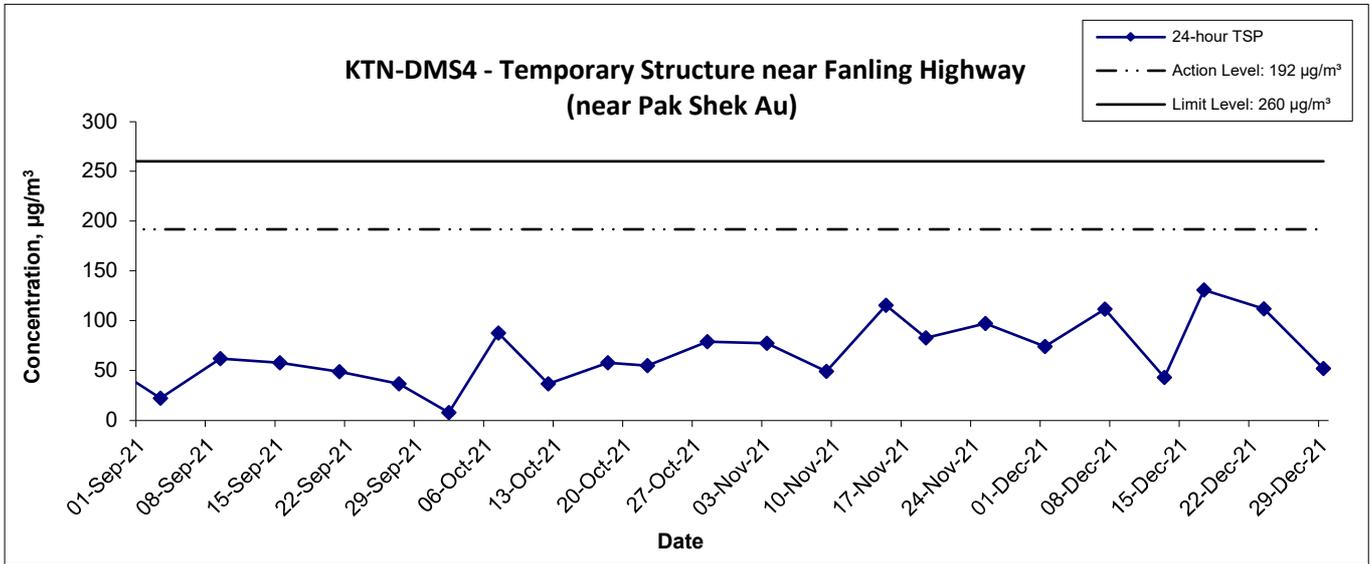
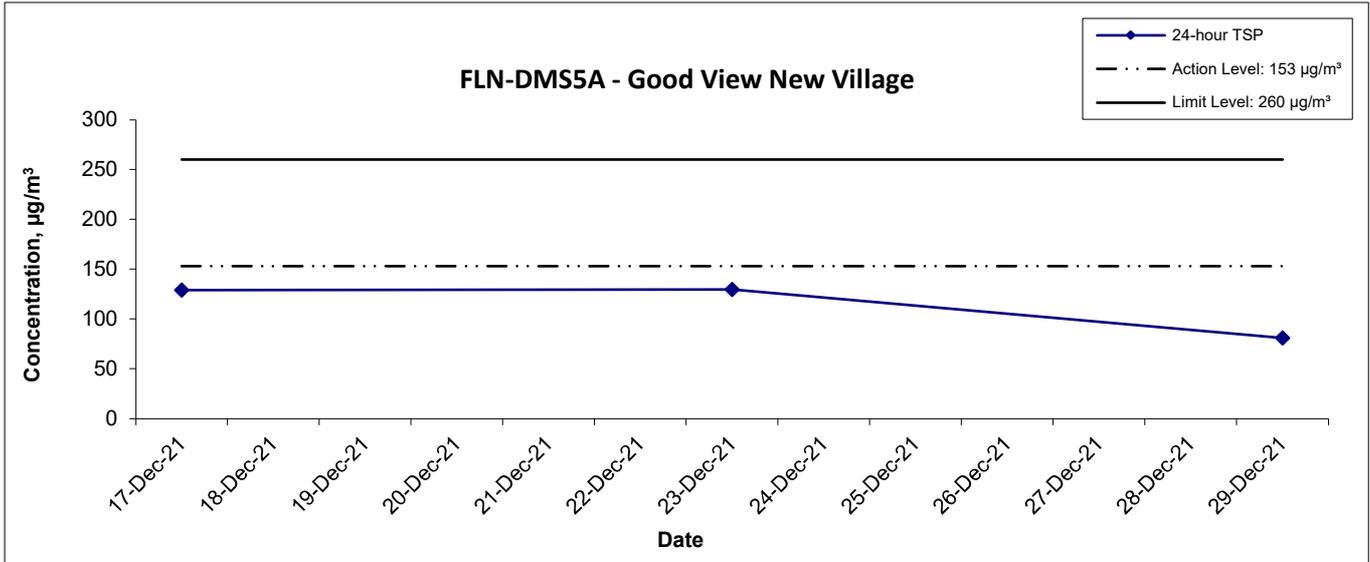
Title Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	Scale N.T.S	Project No. WMA20002	consulting . testing . research
	Date Dec 21	Appendix E	

24-hr TSP Concentration Levels



Title Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 24-hour TSP Monitoring Results	Scale	Project No.	
	Date	Appendix	
	N.T.S	WMA20002	
	Dec 21	E	

24-hr TSP Concentration Levels

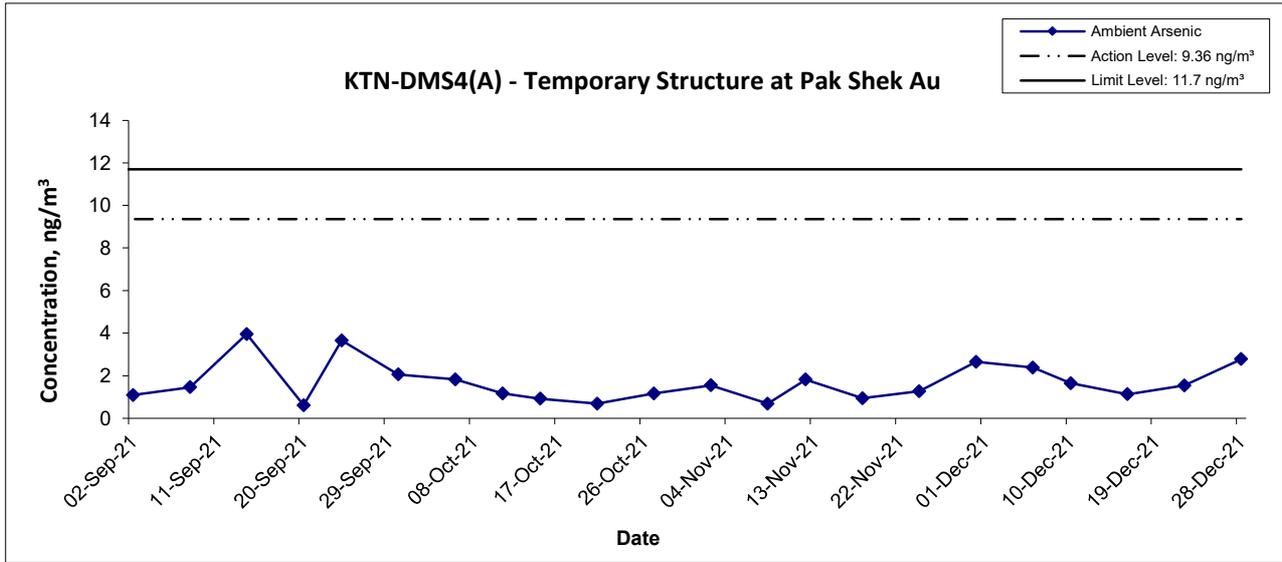


Title Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 24-hour TSP Monitoring Results	Scale	Project No.	
	N.T.S	WMA20002	
	Date	Appendix	
	Dec 21	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)
6-Dec-21	3.7	1553.2	2.38
10-Dec-21	2.6	1577.9	1.65
16-Dec-21	1.8	1596.4	1.13
22-Dec-21	2.4	1557.6	1.54
28-Dec-21	4.3	1548.9	2.78

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 Dec 21	Appendix E	

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



Table I - Ambient Arsenic Concentration on 6th December 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 36093)	Standard Volume, Vstd = Qstd _{avg} x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m ³	KTN-DMS4(A) - Temporary Structure at Pak Shek Au	3.7 µg	1553.2 m ³	2.38 ng/m ³	No

Table II – Action and Limit Levels for Ambient Arsenic Monitoring

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

	Name	Signature	Date
Prepared by:	Meiling Tang		13 th January 2022
Checked by:	Ivy Tam		13 th January 2022

TEST REPORT

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

Report No.:	36093
Date of Issue:	2021-12-10
Date Received:	2021-12-07
Date Tested:	2021-12-07
Date Completed:	2021-12-10

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36093
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	210906/009
Sample No.	36093-1
Arsenic (µg)	3.7

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

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

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



PATRICK TSE
 General Manager

TEST REPORT

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

Report No.:	QC 36093
Date of Issue:	2021-12-10
Date Received:	2021-12-07
Date Tested:	2021-12-07
Date Completed:	2021-12-10

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 (%)	102	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	96	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	96	70-130

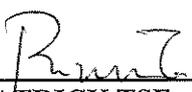
Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36093

PREPARED AND CHECKED BY:

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



PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 36093
Date of Issue:	2021-12-10
Date Received:	2021-12-07
Date Tested:	2021-12-07
Date Completed:	2021-12-10
Page:	2 of 2

**QC report:
Matrix Spike**

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

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	3	RPD \leq 20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	105	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 36093

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

Contract No. NDO 04/2019
Advance and First Stage Works of
Kwu Tung North and Fanling North New Development Areas
24-hr RSP Air Quality Monitoring (Project No.: WMA20002)
Field Operation Data Log Sheet

WELLAB 匯力
 consulting . testing . research

Station: KTN-DMS4A - Temporary Structure at Pak Shek Au

Sampling Date & Time: From: 6/12/2011 (0 : 00) Collection Date: 7/12/2011

Operators: Tim Weather: Sunny Cloudy Windy Rainy
 Wind: Strong Mild Calm

High Volume Sampler	Model no.	TE-6070X
	Blower Motor Serial no.	3225

RSP - Respirable Suspended Particulates Sampler			
Equipment No.	<u>WA-11.03</u>	Set Point	<u>6.27</u>
Slope, m	<u>0-0.245</u>	Intercept, b	<u>0.6737</u>
	Initial, I	Final, f	
Ambient Pressure (mmHg), Pa	<u>768.0</u>	<u>768.5</u>	
Ambient Temperature (K), Ta	<u>285.0</u>	<u>285.0</u>	
Delta (in. of Water), W	<u>6.3</u>	<u>6.3</u>	
$Y = [W \times (Ta+30)/Pa]^{1/2}$	<u>1.607</u>	<u>1.607</u>	
Standard flow, Qstd (m ³ /min) = (Y - b)*0.0283/m	<u>1.078</u>	<u>1.078</u>	
Elapsed Timer Indicator (Hours), T	<u>13706.18</u>	<u>13730.8</u>	
Filter Identification no.	<u>210906/008</u>		
Weight of Filter (g)	<u>4.3386</u>	<u>4.3338</u>	
Weight of Particulate (g)	<u>0.6452</u>		
Mean Standard Flow, Qstd _{avg} = (Qstd _i + Qstd _f)/2	<u>1.078</u>		
Total Time, Total Time = (Tf - Ti) x 60	<u>1440.00</u>		
Standard Volume, Vstd (m ³) = Qstd _{avg} x Total Time	<u>1553.2</u>		
Particulate Concentration (µg/m ³)	<u>29.1</u>		
Observed Construction Activities	Main Construction Site	<u>N/A</u>	
	Other Construction Site	<u>Fishwater pump N/A</u>	

Remarks: Road traffic

Conducted by: Ho Ka Au Signature: Ho Ka Au Date: 7/12/2011
 Checked by: Meky Tang Signature: Meky Tang Date: 8/1/2011

Project No. WMA20002

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



Table I - Ambient Arsenic Concentration on 10th December 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 36125)	Standard Volume, Vstd = Qstd _{avg} x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m ³	KTN-DMS4(A) - Temporary Structure at Pak Shek Au	2.6 µg	1577.9 m ³	1.65 ng/m ³	No

Table II – Action and Limit Levels for Ambient Arsenic Monitoring

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

	Name	Signature	Date
Prepared by:	Meiling Tang		13 th January 2022
Checked by:	Ivy Tam		13 th January 2022

TEST REPORT

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

Report No.:	36125
Date of Issue:	2021-12-17
Date Received:	2021-12-13
Date Tested:	2021-12-13
Date Completed:	2021-12-17

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36125
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

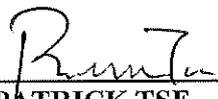
Results:

Sample ID	210906/010
Sample No.	36125-1
Arsenic (µg)	2.6

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

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

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


 PATRICK TSE
 General Manager

TEST REPORT

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

Report No.:	QC 36125
Date of Issue:	2021-12-17
Date Received:	2021-12-13
Date Tested:	2021-12-13
Date Completed:	2021-12-17

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 (%)	102	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 (%)	103	70-130

Remarks: 1) <= less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36125

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 36125
Date of Issue:	2021-12-17
Date Received:	2021-12-13
Date Tested:	2021-12-13
Date Completed:	2021-12-17
Page:	2 of 2

**QC report:
Matrix Spike**

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

Filter Duplicate

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

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	94	90-110

Remarks: 1) <= less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36125

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

Contract No. NDO 04/2019
Advance and First Stage Works of
Kwu Tung North and Fanling North New Development Areas
24-hr RSP Air Quality Monitoring (Project No.: WMA20002)
Field Operation Data Log Sheet



Station: KTN-DMS4A - Temporary Structure at Pak Shek Au

Sampling Date & Time: From: 10/12/2011 (05:00) Collection Date: 13/12/2011

Operators: lea chu Weather: Sunny Cloudy Windy Rainy
ka chu Wind: Strong Mild Calm

High Volume Sampler	Model no.	TE-6070X
	Blower Motor Serial no.	3225

RSP - Respirable Suspended Particulates Sampler			
Equipment No.	<u>WA. 11-03</u>	Set Point	<u>6.25</u>
Slope, m	<u>0.0245</u>	Intercept. b	<u>0.635</u>
	Initial, I	Final, f	
Ambient Pressure (mmHg), Pa	<u>768.9</u>	<u>768.1</u>	
Ambient Temperature (K), Ta	<u>288.9</u>	<u>283.2</u>	
Delta (in. of Water), W	<u>6.3</u>	<u>6.3</u>	
$Y = [W \times (Ta+30)/Pa]^{1/2}$	<u>1.616</u>	<u>1.628</u>	
Standard flow, Qstd (m ³ /min) = (Y - b)*0.0283/m	<u>1.088</u>	<u>1.102</u>	
Elapsed Timer Indicator (Hours), T	<u>13730.18</u>	<u>13754.18</u>	
Filter Identification no.	<u>210906/010</u>		
Weight of Filter (g)	<u>4.4038</u>	<u>4.4314</u>	
Weight of Particulate (g)	<u>0.0276</u>	<u>0.027 u</u>	
Mean Standard Flow, Qstd _{avg} = (Qstd _i + Qstd _f)/2	<u>1.086</u>		
Total Time, Total Time = (Tf - Ti) x 60	<u>1440.00</u>		
Standard Volume, Vstd (m ³) = Qstd _{avg} x Total Time	<u>1577.9</u>		
Particulate Concentration (µg/m ³)	<u>17.5</u>		
Observed Construction Activities	Main Construction Site	<u>N/A</u>	
	Other Construction Site	<u>N/A</u>	

Remarks: Road traffic

Conducted by: LEE MON HEE Signature: lee Date: 13/12/2011
 Checked by: Marilyn Tay Signature: Marilyn Date: 14/12/2011

Project No. WMA20002

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



Table I - Ambient Arsenic Concentration on 16th December 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 36149)	Standard Volume, Vstd = Qstd _{avg} x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m ³	KTN-DMS4(A) - Temporary Structure at Pak Shek Au	1.8 µg	1596.4 m ³	1.13 ng/m ³	No

Table II – Action and Limit Levels for Ambient Arsenic Monitoring

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

	Name	Signature	Date
Prepared by:	Meiling Tang		13 th January 2022
Checked by:	Ivy Tam		13 th January 2022

TEST REPORT

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

Report No.:	36149
Date of Issue:	2021-12-23
Date Received:	2021-12-17
Date Tested:	2021-12-17
Date Completed:	2021-12-23

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36149
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	210906/011
Sample No.	36149-1
Arsenic (µg)	1.8

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

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

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



PATRICK TSE
 General Manager

TEST REPORT

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

Report No.:	QC 36149
Date of Issue:	2021-12-23
Date Received:	2021-12-17
Date Tested:	2021-12-17
Date Completed:	2021-12-23

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 (%)	108	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	105	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	99	70-130

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36149

PREPARED AND CHECKED BY:

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



PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 36149
Date of Issue:	2021-12-23
Date Received:	2021-12-17
Date Tested:	2021-12-17
Date Completed:	2021-12-23
Page:	2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	87	75-125

Filter Duplicate

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

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	101	90-110

Remarks: 1) <= less than
 2) N/A = Not applicable
 3) This report is the summary of quality control data for report number 36149

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

Contract No. NDO 04/2019
Advance and First Stage Works of
Kwu Tung North and Fanling North New Development Areas
24-hr RSP Air Quality Monitoring (Project No.: WMA20002)
Field Operation Data Log Sheet



Station: KTN-DMS4A - Temporary Structure at Pak Shek Au

Sampling Date & Time: From: 16/11/2018 (00:00) Collection Date: 17/12/2018

Operators: Camus Weather: Sunny Cloudy Windy Rainy
 Wind: Strong Mild Calm

High Volume Sampler	Model no.	TE-6070X
	Blower Motor Serial no.	3725

RSP - Respirable Suspended Particulates Sampler			
Equipment No.	<u>WA. 11. 03</u>	Set Point	<u>6.25</u>
Slope, m	<u>0.0245</u>	Intercept. b	<u>0.6737</u>
	Initial, I	Final, f	
Ambient Pressure (mmHg), Pa	<u>764.5</u>	<u>765.3</u>	
Ambient Temperature (K), Ta	<u>283.8</u>	<u>284.1</u>	
Delta (in. of Water), W	<u>6.3</u>	<u>6.3</u>	
$Y = [W \times (Ta+30)/Pa]^{1/2}$	<u>1.634</u>	<u>1.633</u>	
Standard flow, Qstd (m ³ /min) = (Y - b)*0.0283/m	<u>1.108</u>	<u>1.108</u>	
Elapsed Timer Indicator (Hours), T	<u>13734.18</u>	<u>13778.18</u>	
Filter Identification no.	<u>2109061011</u>		
Weight of Filter (g)	<u>4.4085</u>	<u>4.4317</u>	
Weight of Particulate (g)	<u>0.0232</u>		
Mean Standard Flow, Qstd _{avg} = (Qstd _i + Qstd _f)/2	<u>1.108</u>		
Total Time, Total Time = (Tf - Ti) x 60	<u>1440.00</u>		
Standard Volume, Vstd (m ³) = Qstd _{avg} x Total Time	<u>1586.4</u>		
Particulate Concentration (µg/m ³)	<u>14.5</u>		
Observed Construction Activities	Main Construction Site	<u>N/A</u>	
	Other Construction Site	<u>N/A</u>	

Remarks: Road traffic

Conducted by: Chun Man Hei Signature: he Date: 17/11/2018

Checked by: Marilyn Tay Signature: mtay Date: 20/11/2018

Project No. WMA20002

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



Table I - Ambient Arsenic Concentration on 22nd December 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 36156)	Standard Volume, Vstd = Qstd _{avg} x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m ³	KTN-DMS4(A) - Temporary Structure at Pak Shek Au	2.4 µg	1557.6 m ³	1.54 ng/m ³	No

Table II – Action and Limit Levels for Ambient Arsenic Monitoring

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

	Name	Signature	Date
Prepared by:	Meiling Tang		13 th January 2022
Checked by:	Ivy Tam		13 th January 2022

TEST REPORT

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

Report No.:	36156
Date of Issue:	2021-12-30
Date Received:	2021-12-23
Date Tested:	2021-12-23
Date Completed:	2021-12-30

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36156
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	210906/012
Sample No.	36156-1
Arsenic (µg)	2.4

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 36156
Date of Issue:	2021-12-30
Date Received:	2021-12-23
Date Tested:	2021-12-23
Date Completed:	2021-12-30

ATTN: Ms Ivy Tam

Page: 1 of 2

QC report:

Method Blank

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

Filter Lot Blank

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

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	106	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 (%)	96	70-130

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36156

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 36156
Date of Issue:	2021-12-30
Date Received:	2021-12-23
Date Tested:	2021-12-23
Date Completed:	2021-12-30
Page:	2 of 2

QC report:

Matrix Spike

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

Filter Duplicate

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

Serial dilution check

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

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36156

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

Contract No. NDO 04/2019
Advance and First Stage Works of
Kwu Tung North and Fanling North New Development Areas
24-hr RSP Air Quality Monitoring (Project No.: WMA20002)
Field Operation Data Log Sheet



Station: KTN-DMS4A - Temporary Structure at Pak Shek Au

Sampling Date & Time: From: 22/12/2021 (0 : 00) Collection Date: 23/12/2021

Operators: Ka Chi Weather Sunny Cloudy Windy Rainy
 Wind: Strong Mild Calm

High Volume Sampler	Model no.	TE-6070X
	Blower Motor Serial no.	3225

RSP - Respirable Suspended Particulates Sampler			
Equipment No.	<u>WA.11.03</u>	Set Point	<u>6.27</u>
Slope, m	<u>0.0245</u>	Intercept. b	<u>0.6737</u>
	Initial, I		Final, f
Ambient Pressure (mmHg), Pa	<u>765.0</u>		<u>765.4</u>
Ambient Temperature (K), Ta	<u>287.8</u>		<u>282.0</u>
Delta (in. of Water), W	<u>6.3</u>		<u>6.3</u>
$Y = [W \times (Ta+30)/Pa]^{1/2}$	<u>1.618</u>		<u>1.603</u>
Standard flow, Qstd (m ³ /min) = (Y - b)*0.0283/m	<u>1.080</u>		<u>1.073</u>
Elapsed Timer Indicator (Hours), T	<u>13778.8</u>		<u>13802.18</u>
Filter Identification no.	<u>290906/12</u>		
Weight of Filter (g)	<u>43963</u>		<u>44237</u>
Weight of Particulate (g)	<u>0.6274</u>		
Mean Standard Flow, Qstd _{avg} = (Qstd _i + Qstd _f)/2	<u>1.082</u>		
Total Time, Total Time = (Tf - Ti) x 60	<u>1440 sec</u>		
Standard Volume, Vstd (m ³) = Qstd _{avg} x Total Time	<u>1557.6</u>		
Particulate Concentration (µg/m ³)	<u>17.6</u>		
Observed Construction Activities	Main Construction Site	<u>N/A</u>	
	Other Construction Site	<u>N/A</u>	

Remarks: Road traffic

Conducted by: [Signature] Signature: [Signature] Date: 23/12/2021
 Checked by: [Signature] Signature: [Signature] Date: 24/12/2021

Project No. WMA20002

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



Table I - Ambient Arsenic Concentration on 28th December 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 36179)	Standard Volume, Vstd = Qstd _{avg} x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m ³	KTN-DMS4(A) - Temporary Structure at Pak Shek Au	4.3 µg	1548.9 m ³	2.78 ng/m ³	No

Table II – Action and Limit Levels for Ambient Arsenic Monitoring

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

	Name	Signature	Date
Prepared by:	Meiling Tang		13 th January 2022
Checked by:	Ivy Tam		13 th January 2022

TEST REPORT

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

Report No.:	36179
Date of Issue:	2022-01-04
Date Received:	2021-12-29
Date Tested:	2021-12-29
Date Completed:	2022-01-04

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36179
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

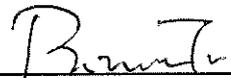
Results:

Sample ID	210906/014
Sample No.	36179-1
Arsenic (µg)	4.3

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 36179
Date of Issue:	2022-01-04
Date Received:	2021-12-29
Date Tested:	2021-12-29
Date Completed:	2022-01-04

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 (%)	111	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	102	90-110

Interference check solution A

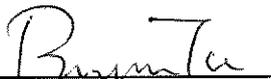
Parameter	ICS A	Acceptance
Arsenic (µg)	<0.036	<0.036

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	96	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36179

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 36179
Date of Issue:	2022-01-04
Date Received:	2021-12-29
Date Tested:	2021-12-29
Date Completed:	2022-01-04
Page:	2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	95	75-125

Filter Duplicate

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

Serial dilution check

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

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 36179

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

Contract No. NDO 04/2019
Advance and First Stage Works of
Kwu Tung North and Fanling North New Development Areas
24-hr RSP Air Quality Monitoring (Project No.: WMA20002)
Field Operation Data Log Sheet



Station: KTN-DMS4A - Temporary Structure at Pak Shek Au

Sampling Date & Time: From: 28/12/21 (00:00) Collection Date: 29/12/21

Operators: KA Chan Weather: Sunny Cloudy Windy Rainy
 Wind: Strong (Mild) Calm

High Volume Sampler	Model no.	TE-6070X
	Blower Motor Serial no.	322

RSP - Respirable Suspended Particulates Sampler			
Equipment No.	WA-11.03	Set Point	6.25
Slope, m	0.0245	Intercept. b	0.6737
	Initial, I	Final, f	
Ambient Pressure (mmHg), Pa	773.5	770.5	
Ambient Temperature (K), Ta	283.3	288.0	
Delta (in. of Water), W	6.3	6.3	
$Y = [W \times (Ta+30)/Pa]^{1/2}$	1.54	1.61	
Standard flow, Qstd (m ³ /min) = (Y - b)*0.0283/m	1.067	1.084	
Elapsed Timer Indicator (Hours), T	13802.18	13826.18	
Filter Identification no.	210906/014		
Weight of Filter (g)	4.3813	4.4567	
Weight of Particulate (g)	0.0654		
Mean Standard Flow, Qstd _{avg} = (Qstd _i + Qstd _f)/2	1.076		
Total Time, Total Time = (Tf - Ti) x 60	1440.00		
Standard Volume, Vstd (m ³) = Qstd _{avg} x Total Time	1548.9		
Particulate Concentration (µg/m ³)	42.2		
Observed Construction Activities	Main Construction Site	70 MA Excavator,	
	Other Construction Site	N/A	

Remarks: Road Traffic

Conducted by: Abson Tang Signature: [Signature] Date: 29/12/21

Checked by: Melby Tang Signature: [Signature] Date: 30/12/2021

Project No. WMA20002

**APPENDIX F
NOISE MONITORING RESULTS AND
GRAPHICAL PRESENTATION**

Appendix F - Noise Monitoring Results

Location CP-FLN-NMS1 - Belair Monte (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
2-Dec-21	Sunny	10:30	62.2	66.4	54.3	68.0	69.9
		10:35	62.7	66.9	54.0		
		10:40	62.8	67.3	52.9		
		10:45	68.3	72.9	55.4		
		10:50	70.6	73.6	62.1		
10:55	71.6	75.0	62.5				
8-Dec-21	Sunny	13:40	73.9	78.8	65.0	72.7	
		13:45	72.7	77.0	64.9		
		13:50	72.6	77.5	64.5		
		13:55	73.4	78.3	65.1		
		14:00	72.8	77.7	64.5		
14-Dec-21	Cloudy	13:20	71.3	74.9	65.8	72.3	
		13:25	71.5	74.8	65.6		
		13:30	70.4	72.4	64.5		
		13:35	72.5	75.1	65.8		
		13:40	74.1	75.9	63.9		
24-Dec-21	Cloudy	13:45	73.2	75.9	64.6	67.8	
		11:20	70.2	72.0	67.5		
		11:25	71.2	72.9	68.7		
		11:30	67.6	71.5	55.0		
		11:35	63.5	65.8	57.2		
30-Dec-21	Sunny	11:40	62.9	66.2	54.2	70.4	
		11:45	64.2	66.2	56.2		
		10:00	69.7	73.2	62.5		
		10:05	68.7	70.7	63.4		
		10:10	71.2	75.0	63.1		
		10:15	70.2	74.0	62.9		
		10:20	70.8	72.5	67.7		
		10:25	71.5	74.3	67.4		

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}
2-Dec-21	Sunny	13:00	72.2	75.2	58.0	70.4	59.6
		13:05	71.8	75.5	61.7		
		13:10	72.3	74.7	63.5		
		13:15	68.4	72.9	60.4		
		13:20	60.4	61.9	59.7		
8-Dec-21	Sunny	13:25	69.5	71.9	60.3	69.3	
		09:15	71.3	74.8	62.0		
		09:20	72.3	75.1	67.3		
		09:25	69.1	71.6	62.4		
		09:30	64.2	69.6	60.2		
14-Dec-21	Cloudy	09:35	66.5	70.8	60.1	65.9	
		09:40	67.1	70.3	61.2		
		13:25	63.2	64.7	57.3		
		13:30	64.4	67.0	59.0		
		13:35	64.3	66.6	58.4		
24-Dec-21	Cloudy	13:40	65.0	67.4	59.3	57.6	
		13:45	66.8	70.0	59.2		
		13:50	68.9	72.2	61.0		
		10:10	55.8	57.0	54.1		
		10:15	55.4	56.8	53.8		
30-Dec-21	Sunny	10:20	54.1	55.0	53.0	63.9	
		10:25	55.2	55.7	52.4		
		10:30	58.2	61.3	54.3		
		10:35	61.7	66.9	52.6		
		14:00	62.3	64.9	56.4		
		14:05	63.8	65.5	61.8		
		14:10	59.7	62.6	54.7		
		14:15	60.9	63.2	57.9		
		14:20	64.5	65.5	63.7		
		14:25	67.4	70.3	64.7		

Appendix F - Noise Monitoring Results

Location CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
1-Dec-21	Sunny	10:05	53.2	55.4	48.6	52.2	58.6
		10:10	51.5	53.0	49.7		
		10:15	51.5	53.3	49.0		
		10:20	51.1	52.7	48.3		
		10:25	52.6	54.0	49.0		
10:30	53.0	55.0	49.2				
7-Dec-21	Sunny	15:00	63.4	65.5	58.4	63.0	
		15:05	62.0	65.0	56.4		
		15:10	63.4	66.9	55.9		
		15:15	63.9	66.1	54.9		
		15:20	62.6	65.6	55.4		
15:25	62.6	65.5	55.1				
13-Dec-21	Cloudy	09:35	67.1	72.2	53.5	62.3	
		09:40	65.0	70.8	46.3		
		09:45	59.9	63.5	47.2		
		09:50	56.5	59.4	49.6		
		09:55	53.7	57.3	47.4		
10:00	53.6	56.4	46.8				
23-Dec-21	Cloudy	13:50	56.2	60.2	50.8	56.3	
		13:55	55.3	58.7	49.3		
		14:00	55.5	57.6	51.0		
		14:05	57.8	61.8	49.7		
		14:10	56.7	59.8	50.3		
14:15	56.1	59.5	50.1				
29-Dec-21	Sunny	09:13	57.6	59.6	52.9	58.5	
		09:15	57.3	57.9	56.3		
		09:17	58.4	59.8	55.7		
		09:19	61.3	62.7	56.0		
		09:21	57.1	59.1	53.6		
09:23	57.9	60.5	53.8				

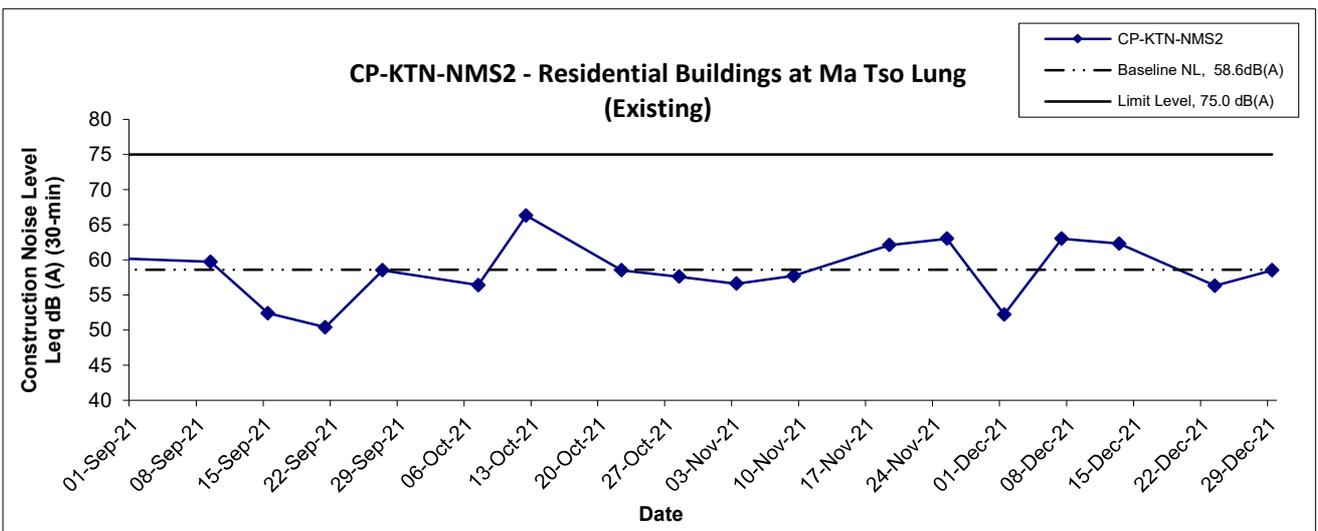
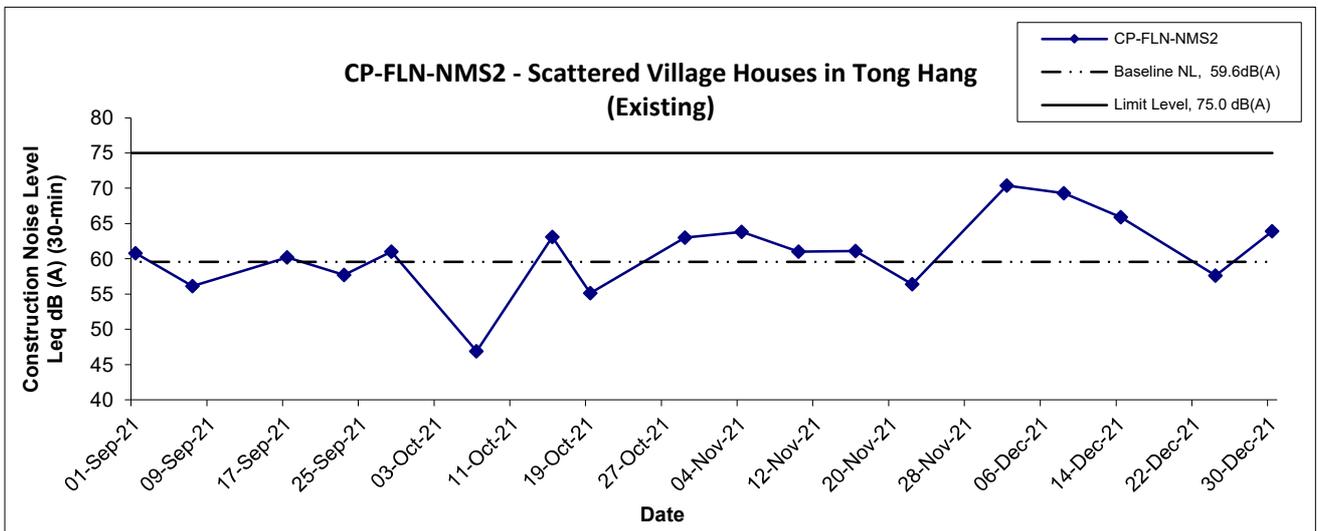
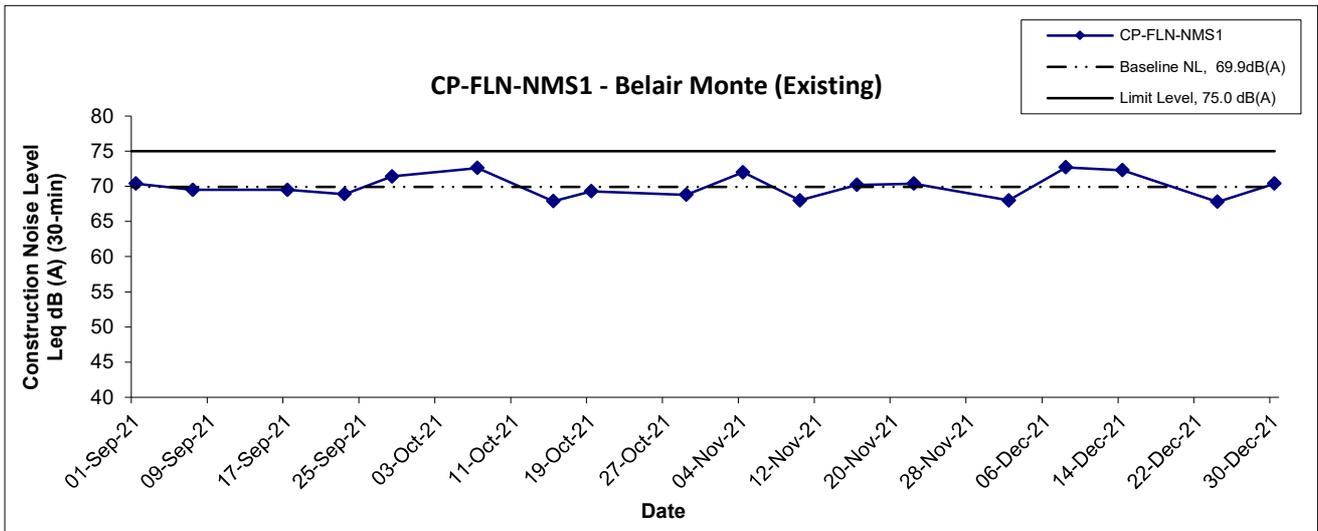
Location CP-KTN-NMS3 - Fung Kong Garden (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
1-Dec-21	Sunny	09:25	57.3	56.9	55.7	57.4	51.6
		09:30	56.3	56.7	56.0		
		09:35	57.9	57.1	55.9		
		09:40	56.8	57.7	55.9		
		09:45	57.6	58.9	55.5		
09:50	58.3	60.1	54.3				
7-Dec-21	Sunny	14:10	66.4	68.5	61.4	67.5	
		14:15	65.0	68.4	60.4		
		14:20	68.4	70.9	60.9		
		14:25	68.9	69.2	61.9		
		14:30	67.6	69.5	61.4		
14:35	67.8	69.9	60.7				
13-Dec-21	Cloudy	10:20	46.4	49.5	42.2	47.6	
		10:25	49.4	51.9	43.3		
		10:30	50.7	53.9	41.9		
		10:35	45.5	47.7	41.7		
		10:40	44.3	47.3	41.3		
10:45	45.5	47.7	43.7				
23-Dec-21	Cloudy	14:35	46.0	49.1	42.1	55.0	
		13:40	59.6	61.3	42.4		
		12:45	59.3	58.6	42.1		
		11:50	45.2	48.3	41.0		
		10:55	46.2	48.0	41.9		
10:00	45.2	46.2	41.4				
29-Dec-21	Sunny	09:54	50.4	51.5	42.9	51.8	
		09:59	55.1	56.8	43.0		
		10:04	49.1	51.5	42.8		
		10:09	46.8	46.7	42.7		
		10:14	45.4	47.0	42.9		
10:19	54.9	58.7	43.2				

Appendix F - Noise Monitoring Results

Location CP-KTN-NMS5 - N/A							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
1-Dec-21	Sunny	11:30	64.2	65.1	63.1	62.6	57.2
		11:35	63.1	64.2	61.9		
		11:40	62.8	64.1	61.1		
		11:45	61.4	62.5	60.5		
		11:50	61.4	62.2	60.4		
11:55	61.7	62.4	60.7				
7-Dec-21	Sunny	11:02	57.8	58.3	56.0	59.4	
		11:07	57.3	58.3	56.2		
		11:12	60.0	61.8	56.3		
		11:17	62.2	65.5	58.9		
		11:22	59.0	60.2	57.8		
11:27	57.6	59.4	53.0				
13-Dec-21	Sunny	11:30	54.6	61.0	51.7	54.4	
		11:30	56.9	59.8	51.9		
		11:30	55.1	57.0	51.0		
		11:30	53.0	55.9	51.5		
		11:30	52.4	53.7	51.0		
11:30	52.9	53.4	50.8				
23-Dec-21	Cloudy	15:25	56.7	57.5	55.9	61.1	
		15:30	59.5	62.5	56.2		
		15:35	59.0	60.7	56.8		
		15:40	60.0	60.9	56.7		
		15:45	59.8	60.3	58.0		
15:50	65.5	69.8	58.9				
29-Dec-21	Sunny	11:24	62.8	68.7	55.7	62.1	
		11:29	64.6	68.8	55.7		
		11:34	65.7	69.6	55.7		
		11:39	56.5	58.6	54.2		
		11:44	54.4	55.6	52.6		
11:49	56.0	58.8	52.2				

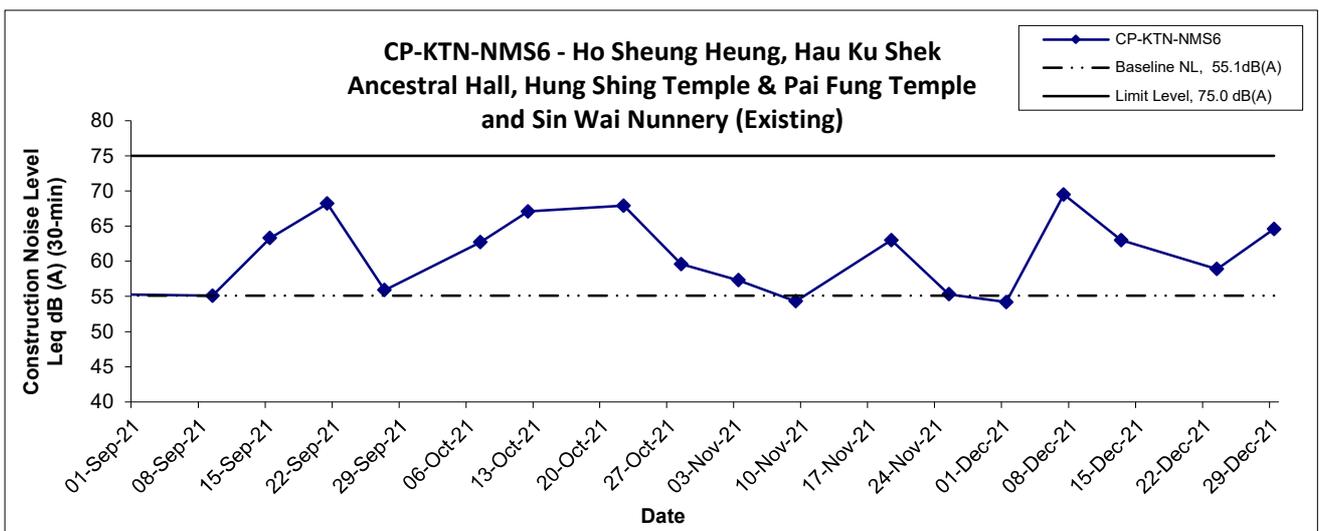
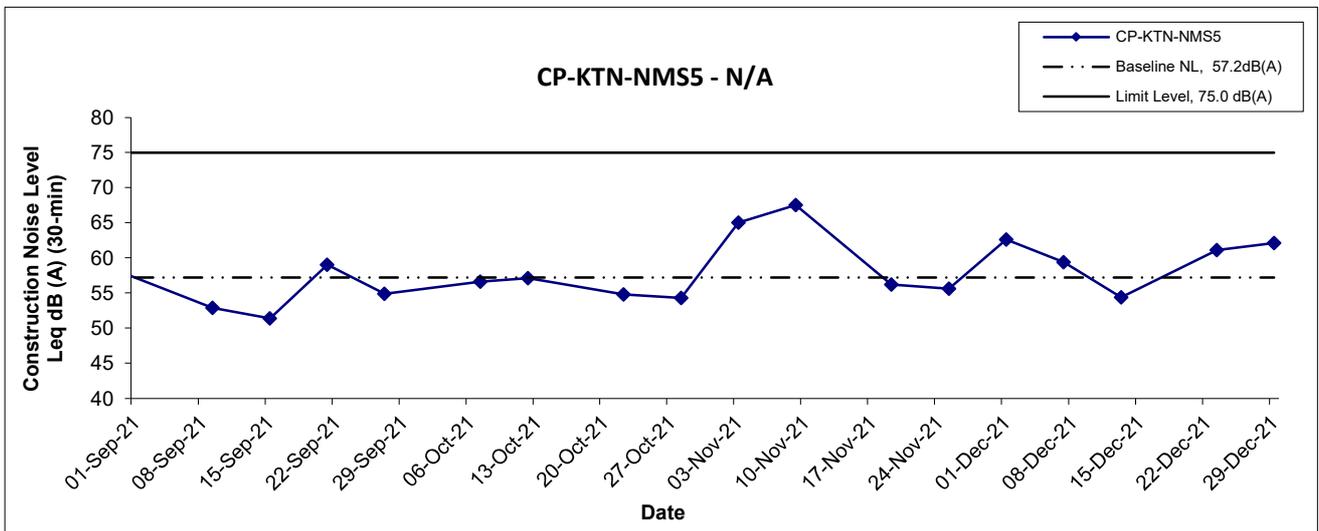
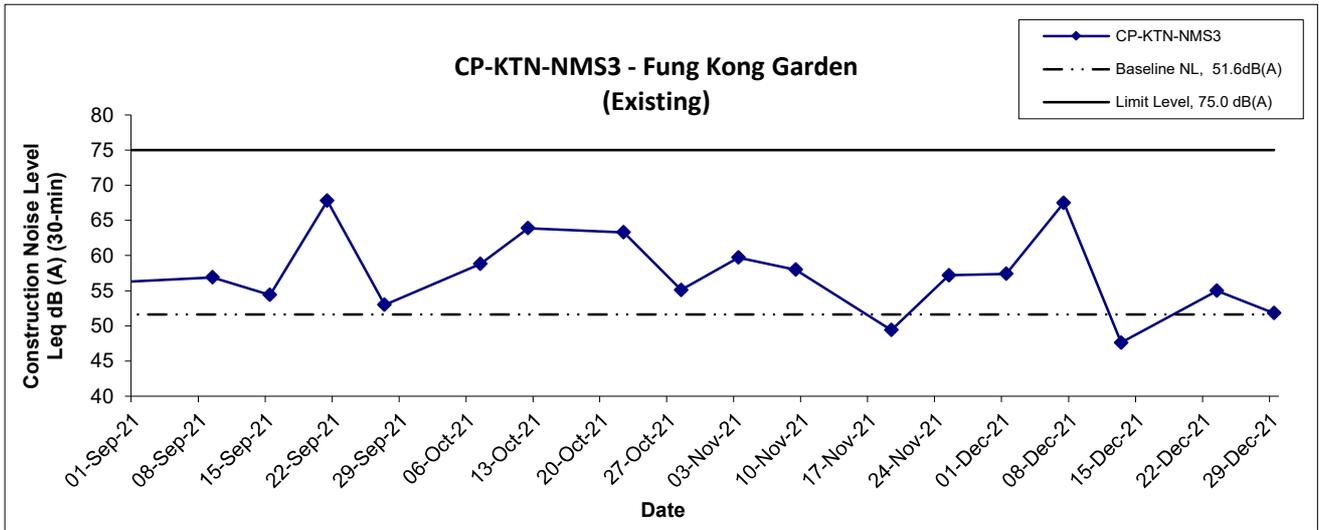
Location CP-KTN-NMS6 - Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
1-Dec-21	Sunny	10:45	52.1	54.0	49.5	54.2	55.1
		10:50	51.2	52.7	49.5		
		10:55	53.4	52.9	49.6		
		11:00	58.5	62.1	51.4		
		11:05	51.9	54.6	49.5		
11:10	53.1	53.9	49.9				
7-Dec-21	Sunny	13:30	68.3	72.4	47.3	69.5	
		13:35	68.4	73.4	50.6		
		13:40	68.1	72.7	47.8		
		13:45	70.8	74.9	58.5		
		13:50	70.1	74.2	54.2		
13:55	70.3	74.3	49.2				
13-Dec-21	Cloudy	10:55	64.0	63.3	56.1	63.0	
		11:00	58.8	59.0	55.2		
		11:05	64.0	63.1	54.9		
		11:10	65.0	66.0	54.7		
		11:15	63.0	63.6	53.7		
11:20	59.9	62.7	51.0				
23-Dec-21	Cloudy	13:00	61.4	64.1	57.1	58.9	
		13:05	59.1	60.9	55.6		
		13:10	59.0	61.1	55.8		
		13:15	59.7	60.6	55.5		
		13:20	55.8	58.0	53.6		
13:25	55.3	57.2	53.1				
29-Dec-21	Sunny	10:31	66.1	68.1	63.5	64.6	
		10:36	65.9	67.3	62.9		
		10:41	62.9	64.1	58.2		
		10:46	61.2	63.8	58.1		
		10:51	64.6	64.5	58.1		
10:56	64.8	67.1	59.6				

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 Dec 21	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	匯力 consulting . testing . research
	Date Dec 21	Appendix F	

**APPENDIX G
WATER QUALITY MONITORING
RESULTS AND GRAPHICAL
PRESENTATIONS**

Contract No. NDO 04/2019

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

Water Quality Monitoring Results

Location: SYR-CS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)		Arsenic (µg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Dec-21	Sunny	12:16	Middle	0.2	19.6 19.6	19.6	7.3 7.3	7.3	0.1 0.1	0.1	75.2 74.9	75.1	6.9 6.9	6.9	8.8 8.8	8.8	7 6	6.5	8 8	8.0
3-Dec-21	Sunny	13:23	Middle	0.1	17.0 17.0	17.0	8.2 8.1	8.2	0.1 0.1	0.1	73.5 73.4	73.5	7.1 7.1	7.1	5.5 5.7	5.6	10 9	9.5	8 7	7.5
6-Dec-21	Sunny	10:57	Middle	0.1	17.7 17.7	17.7	7.4 7.4	7.4	0.1 0.1	0.1	54.7 54.7	54.7	5.2 5.2	5.2	5.2 5.0	5.1	9 11	10.0	6 6	6.0
8-Dec-21	Sunny	10:42	Middle	0.2	18.7 18.7	18.7	7.5 7.5	7.5	0.2 0.2	0.2	53.3 53.2	53.3	5.0 5.0	5.0	5.1 5.1	5.1	10 9	9.5	6 6	6.0
10-Dec-21	Sunny	10:25	Middle	0.2	20.3 20.3	20.3	7.4 7.4	7.4	0.1 0.1	0.1	69.1 68.9	69.0	6.2 6.2	6.2	5.9 6.1	6.0	12 10	11.0	6 7	6.5
13-Dec-21	Fine	12:38	Middle	0.3	20.8 20.8	20.8	7.5 7.5	7.5	0.8 0.8	0.8	51.1 50.9	51.0	4.6 4.5	4.6	6.1 6.1	6.1	7 7	7.0	8 9	8.5
15-Dec-21	Fine	12:11	Middle	0.2	22.4 22.4	22.4	7.5 7.5	7.5	0.7 0.7	0.7	58.3 58.1	58.2	5.0 5.0	5.0	6.2 6.1	6.2	3 3	3.0	6 6	6.0
17-Dec-21	Cloudy	11:06	Middle	0.2	22.6 22.6	22.6	7.5 7.5	7.5	0.2 0.2	0.2	57.6 57.5	57.6	5.0 5.0	5.0	6.4 6.5	6.5	8 8	8.0	10 9	9.5
20-Dec-21	Rainy	11:32	Middle	0.2	18.5 18.5	18.5	7.4 7.4	7.4	0.1 0.1	0.1	40.0 39.3	39.7	3.8 3.7	3.8	5.9 5.8	5.9	9 8	8.5	7 8	7.5
22-Dec-21	Cloudy	10:30	Middle	0.2	18.0 18.0	18.0	7.5 7.5	7.5	0.1 0.1	0.1	72.4 72.3	72.4	6.9 6.8	6.9	10.3 10.6	10.5	10 9	9.5	6 6	6.0
24-Dec-21	Cloudy	13:01	Middle	0.2	21.1 21.0	21.1	7.8 7.8	7.8	0.1 0.1	0.1	71.5 71.3	71.4	6.4 6.4	6.4	5.6 5.7	5.7	8 10	9.0	8 8	8.0
27-Dec-21	Rainy	13:06	Middle	0.2	15.7 15.7	15.7	7.5 7.5	7.5	0.1 0.1	0.1	72.2 72.2	72.2	7.2 7.2	7.2	7.7 7.8	7.8	13 11	12.0	9 8	8.5
29-Dec-21	Cloudy	14:46	Middle	0.2	19.2 19.1	19.2	8.5 8.5	8.5	0.2 0.2	0.2	39.4 38.5	39.0	3.6 3.6	3.6	9.3 9.2	9.3	19 19	19.0	9 9	9.0
31-Dec-21	Sunny	13:02	Middle	0.2	19.5 19.4	19.5	8.3 8.2	8.3	0.1 0.1	0.1	74.8 73.4	74.1	6.9 6.8	6.9	5.1 4.9	5.0	6 7	6.5	7 7	7.0

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
1-Dec-21	Sunny	12:30	Middle	0.2	20.5 20.5	20.5	7.6 7.5	7.6	0.1 0.1	0.1	106.9 107.0	107.0	9.6 9.6	9.6	7.2 7.2	7.2	8 9	8.5	9 9	9.0
3-Dec-21	Sunny	13:47	Middle	0.4	20.2 20.2	20.2	7.8 7.8	7.8	0.1 0.1	0.1	130.6 130.7	130.7	11.8 11.8	11.8	19.4 19.1	19.3	27 27	27.0	8 8	8.0
6-Dec-21	Sunny	11:19	Middle	0.2	20.5 20.5	20.5	7.5 7.5	7.5	0.2 0.2	0.2	100.6 100.5	100.6	9.0 9.0	9.0	37.5 36.6	37.1	59 62	60.5	4 5	4.5
8-Dec-21	Sunny	11:07	Middle	0.2	20.9 20.9	20.9	7.7 7.7	7.7	0.1 0.1	0.1	115.5 115.6	115.6	10.3 10.3	10.3	15.0 15.0	15.0	24 28	26.0	7 7	7.0
10-Dec-21	Sunny	09:51	Middle	0.1	20.5 20.5	20.5	7.6 7.6	7.6	0.2 0.2	0.2	98.1 98.1	98.1	8.8 8.8	8.8	33.6 34.3	34.0	45 40	42.5	6 6	6.0
13-Dec-21	Fine	12:59	Middle	0.4	22.8 22.8	22.8	7.8 7.8	7.8	0.2 0.2	0.2	124.5 124.9	124.7	10.7 10.8	10.8	30.5 29.5	30.0	42 43	42.5	10 9	9.5
15-Dec-21	Fine	12:38	Middle	0.2	22.5 22.5	22.5	7.6 7.6	7.6	0.2 0.2	0.2	71.3 71.1	71.2	6.2 6.2	6.2	38.2 38.0	38.1	48 51	49.5	7 6	6.5
17-Dec-21	Cloudy	11:23	Middle	0.2	22.4 22.4	22.4	7.5 7.5	7.5	0.2 0.2	0.2	78.3 78.2	78.3	6.8 6.8	6.8	40.3 40.3	40.3	34 28	31.0	10 11	10.5
20-Dec-21	Rainy	11:50	Middle	0.5	18.6 18.6	18.6	7.5 7.5	7.5	0.2 0.2	0.2	66.1 66.3	66.2	6.2 6.2	6.2	21.3 21.8	21.6	37 39	38.0	6 6	6.0
22-Dec-21	Cloudy	10:51	Middle	0.1	19.1 19.1	19.1	7.7 7.7	7.7	0.1 0.1	0.1	107.7 107.7	107.7	10.0 10.0	10.0	16.7 15.1	15.9	40 38	39.0	6 6	6.0
24-Dec-21	Cloudy	13:20	Middle	0.4	23.4 23.4	23.4	7.6 7.6	7.6	0.2 0.2	0.2	73.5 73.1	73.3	6.3 6.2	6.3	31.1 31.2	31.2	64 66	65.0	9 9	9.0
27-Dec-21	Rainy	13:28	Middle	0.4	16.9 16.9	16.9	7.4 7.4	7.4	0.1 0.1	0.1	92.8 92.7	92.8	9.0 9.0	9.0	26.6 26.2	26.4	24 27	25.5	9 8	8.5
29-Dec-21	Cloudy	15:09	Middle	0.3	22.7 22.7	22.7	7.9 7.9	7.9	0.1 0.1	0.1	82.1 82.1	82.1	7.1 7.1	7.1	37.6 38.0	37.8	61 49	55.0	9 9	9.0
31-Dec-21	Sunny	13:26	Middle	0.4	20.5 20.5	20.5	7.7 7.7	7.7	0.1 0.1	0.1	91.2 91.2	91.2	8.2 8.2	8.2	32.2 32.0	32.1	29 36	32.5	8 8	8.0

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

Location: NTR-CS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Dec-21	Sunny	10:16	Middle	0.3	17.6 17.6	17.6	7.5 7.5	7.5	0.9 0.9	0.9	101.0 100.3	100.7	9.6 9.5	9.6	8.5 8.4	8.5	8 8	8.0
3-Dec-21	Sunny	15:13	Middle	0.2	19.8 19.8	19.8	7.8 7.8	7.8	0.1 0.1	0.1	103.3 103.4	103.4	9.4 9.4	9.4	8.0 8.0	8.0	8 8	8.0
6-Dec-21	Sunny	12:46	Middle	0.2	20.0 20.0	20.0	7.3 7.3	7.3	0.1 0.1	0.1	110.6 110.7	110.7	10.1 10.1	10.1	6.9 7.0	7.0	7 8	7.5
8-Dec-21	Sunny	13:35	Middle	0.2	20.8 20.8	20.8	7.9 7.8	7.9	0.1 0.1	0.1	100.8 100.8	100.8	9.0 9.0	9.0	6.8 6.6	6.7	5 4	4.5
10-Dec-21	Sunny	11:07	Middle	0.2	20.8 20.8	20.8	7.2 7.2	7.2	0.1 0.1	0.1	94.1 94.0	94.1	8.4 8.4	8.4	10.0 10.0	10.0	8 7	7.5
13-Dec-21	Fine	13:52	Middle	0.2	22.5 22.5	22.5	7.5 7.5	7.5	0.2 0.2	0.2	103.9 103.9	103.9	9.0 9.0	9.0	11.5 11.3	11.4	8 8	8.0
15-Dec-21	Fine	13:47	Middle	0.2	22.4 22.4	22.4	7.4 7.4	7.4	0.1 0.1	0.1	92.8 92.7	92.8	8.1 8.0	8.1	10.0 10.2	10.1	10 10	10.0
17-Dec-21	Cloudy	12:10	Middle	0.4	22.6 22.6	22.6	7.4 7.4	7.4	0.1 0.1	0.1	104.3 104.4	104.4	9.0 9.0	9.0	11.6 11.3	11.5	16 16	16.0
20-Dec-21	Rainy	14:39	Middle	0.2	18.2 18.2	18.2	7.7 7.7	7.7	0.1 0.1	0.1	96.9 96.6	96.8	9.1 9.1	9.1	8.9 9.0	9.0	12 11	11.5
22-Dec-21	Cloudy	14:32	Middle	0.2	22.0 22.0	22.0	7.6 7.6	7.6	0.1 0.1	0.1	107.0 107.0	107.0	9.4 9.4	9.4	12.7 12.6	12.7	16 16	16.0
24-Dec-21	Cloudy	14:51	Middle	0.2	22.4 22.4	22.4	7.7 7.7	7.7	0.1 0.1	0.1	104.9 105.0	105.0	9.1 9.1	9.1	9.2 9.1	9.2	7 8	7.5
27-Dec-21	Rainy	15:09	Middle	0.2	16.5 16.5	16.5	7.4 7.4	7.4	0.1 0.1	0.1	99.3 99.3	99.3	9.7 9.7	9.7	9.6 9.6	9.6	5 6	5.5
29-Dec-21	Cloudy	16:23	Middle	0.2	20.4 20.4	20.4	7.9 7.9	7.9	0.1 0.1	0.1	93.8 93.5	93.7	8.5 8.4	8.5	7.6 7.7	7.7	8 8	8.0
31-Dec-21	Sunny	15:02	Middle	0.2	21.7 21.7	21.7	7.6 7.6	7.6	0.03 0.03	0.03	108.4 108.4	108.4	9.5 9.5	9.5	12.2 12.3	12.3	10 10	10.0

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

Location: NTR-IS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Dec-21	Sunny	11:41	Middle	0.4	19.4 19.4	19.4	7.4 7.4	7.4	0.1 0.1	0.1	74.4 74.3	74.4	6.8 6.8	6.8	5.9 5.8	5.9	6 6	6 6.0
3-Dec-21	Sunny	14:10	Middle	0.4	18.7 18.7	18.7	7.6 7.6	7.6	0.1 0.1	0.1	71.5 71.5	71.5	6.7 6.7	6.7	6.0 5.9	6.0	7 7	7 7.0
6-Dec-21	Sunny	11:58	Middle	0.5	19.5 19.5	19.5	7.3 7.3	7.3	0.1 0.1	0.1	70.7 70.6	70.7	6.5 6.5	6.5	5.1 5.2	5.2	6 6	6 6.0
8-Dec-21	Sunny	11:27	Middle	0.5	20.0 20.0	20.0	7.6 7.6	7.6	0.1 0.1	0.1	64.7 64.5	64.6	5.9 5.9	5.9	7.4 7.5	7.5	6 7	6 6.5
10-Dec-21	Sunny	10:46	Middle	0.4	21.2 21.2	21.2	7.3 7.3	7.3	0.1 0.1	0.1	70.3 70.2	70.3	6.2 6.2	6.2	10.1 10.3	10.2	8 8	8 8.0
13-Dec-21	Fine	13:22	Middle	0.2	21.3 21.3	21.3	7.5 7.5	7.5	0.1 0.1	0.1	66.2 65.9	66.1	5.9 5.8	5.9	13.1 13.1	13.1	9 9	9 9.0
15-Dec-21	Fine	13:04	Middle	0.3	21.8 21.8	21.8	7.4 7.4	7.4	0.1 0.1	0.1	74.8 74.7	74.8	6.6 6.6	6.6	10.5 10.4	10.5	12 11	11 11.5
17-Dec-21	Cloudy	11:45	Middle	0.3	22.6 22.6	22.6	7.3 7.3	7.3	0.1 0.1	0.1	74.0 74.2	74.1	6.4 6.4	6.4	9.3 9.3	9.3	13 11	11 12.0
20-Dec-21	Rainy	13:25	Middle	0.5	18.6 18.6	18.6	7.5 7.5	7.5	0.1 0.1	0.1	66.9 66.7	66.8	6.3 6.2	6.3	8.1 8.2	8.2	9 8	8 8.5
22-Dec-21	Cloudy	13:13	Middle	0.5	19.6 19.6	19.6	7.6 7.6	7.6	0.1 0.1	0.1	65.6 65.6	65.6	6.0 6.0	6.0	14.4 14.0	14.2	12 11	11 11.5
24-Dec-21	Cloudy	13:41	Middle	0.5	21.2 21.2	21.2	7.6 7.6	7.6	0.1 0.1	0.1	67.3 67.5	67.4	6.0 6.0	6.0	10.6 10.6	10.6	8 9	8 8.5
27-Dec-21	Rainy	13:55	Middle	0.6	15.9 15.9	15.9	7.5 7.5	7.5	0.1 0.1	0.1	72.2 71.5	71.9	7.1 7.1	7.1	9.6 9.7	9.7	6 7	6 6.5
29-Dec-21	Cloudy	15:32	Middle	0.5	19.6 19.6	19.6	8.2 8.1	8.2	0.1 0.1	0.1	75.0 74.3	74.7	6.9 6.8	6.9	7.1 7.2	7.2	9 10	9 9.5
31-Dec-21	Sunny	13:59	Middle	0.6	20.4 20.4	20.4	7.9 7.8	7.9	0.1 0.1	0.1	65.0 64.8	64.9	5.9 5.8	5.9	9.6 9.6	9.6	6 6	6 6.0

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

Location: SHST-IS2

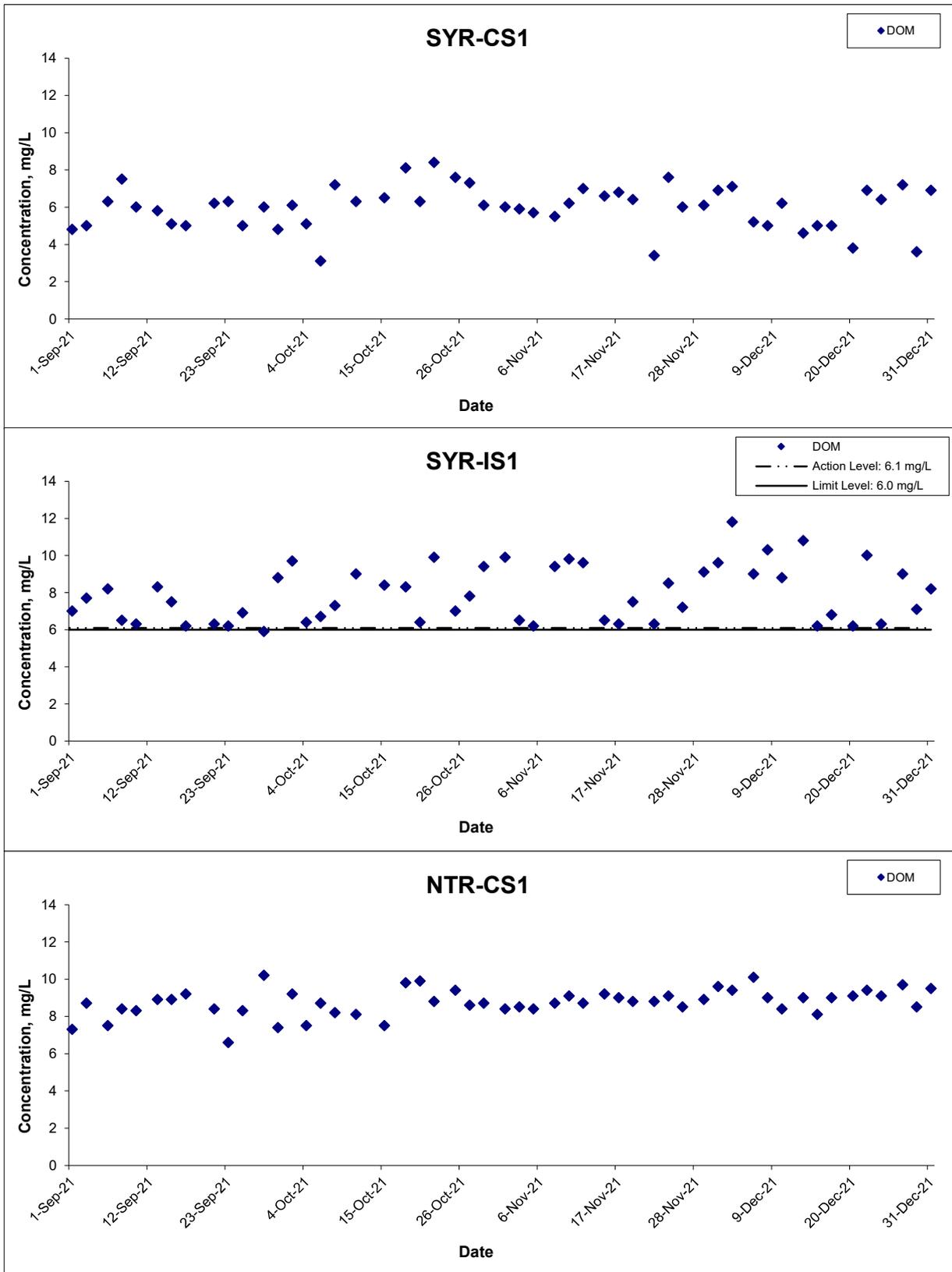
Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Dec-21	Sunny	11:07	Middle	0.3	17.4	17.4	7.5	7.5	0.1	0.1	95.2	95.2	9.1	9.1	7.2	7.2	8	8.0
					17.4		7.5		0.1		95.1		9.1		7.2		8	
3-Dec-21	Sunny	14:30	Middle	0.1	17.0	17.0	7.9	7.9	0.04	0.04	93.5	93.5	9.0	9.0	7.6	7.6	6	6.5
					17.0		7.9		0.04		93.5		9.0		7.6		7	
6-Dec-21	Sunny	12:12	Middle	0.1	19.1	19.1	7.8	7.8	0.1	0.1	103.2	103.2	9.6	9.6	6.4	6.5	6	6.5
					19.1		7.8		0.1		103.2		9.6		6.5		7	
8-Dec-21	Sunny	11:39	Middle	0.1	19.0	19.0	7.7	7.7	0.1	0.1	88.0	88.0	8.2	8.2	7.6	7.6	5	5.0
					19.0		7.7		0.1		88.0		8.2		7.6		5	
10-Dec-21	Sunny	11:40	Middle	0.3	20.5	20.5	7.4	7.4	0.1	0.1	85.3	85.2	7.7	7.7	8.0	8.0	7	6.5
					20.5		7.4		0.1		85.0		7.7		7.9		6	
13-Dec-21	Fine	15:09	Middle	0.3	21.4	21.4	7.8	7.8	0.1	0.1	94.6	94.6	8.4	8.4	10.7	10.8	8	8.0
					21.4		7.7		0.1		94.6		8.4		10.8		8	
15-Dec-21	Fine	14:39	Middle	0.3	21.2	21.2	7.7	7.7	0.1	0.1	93.1	93.0	8.3	8.3	7.6	7.6	4	4.5
					21.2		7.7		0.1		92.9		8.3		7.5		5	
17-Dec-21	Cloudy	12:47	Middle	0.3	21.6	21.6	7.5	7.5	0.1	0.1	89.0	89.0	7.8	7.8	12.2	12.3	11	12.0
					21.6		7.5		0.1		89.0		7.8		12.3		13	
20-Dec-21	Rainy	13:44	Middle	0.1	17.5	17.5	8.0	8.0	0.1	0.1	85.6	85.3	8.2	8.2	9.2	9.1	9	10.0
					17.5		8.0		0.1		85.0		8.1		8.9		11	
22-Dec-21	Cloudy	13:30	Middle	0.1	19.3	19.4	7.8	7.8	0.1	0.1	84.7	84.7	7.8	7.8	13.4	13.4	13	12.0
					19.4		7.7		0.1		84.7		7.8		13.3		11	
24-Dec-21	Cloudy	13:59	Middle	0.1	20.3	20.3	7.6	7.6	0.1	0.1	80.2	80.0	7.2	7.2	9.9	9.7	8	8.5
					20.3		7.6		0.1		79.7		7.2		9.5		9	
27-Dec-21	Rainy	14:19	Middle	0.1	14.1	14.1	8.0	8.0	0.1	0.1	91.3	91.2	9.4	9.4	7.4	7.4	3	3.0
					14.1		8.0		0.1		91.1		9.4		7.4		3	
29-Dec-21	Cloudy	15:40	Middle	0.1	19.0	19.0	8.4	8.4	0.1	0.1	96.2	96.1	8.9	8.9	8.1	8.2	10	9.5
					19.0		8.4		0.1		96.0		8.9		8.2		9	
31-Dec-21	Sunny	14:16	Middle	0.1	19.4	19.4	7.9	7.9	0.1	0.1	88.4	88.4	8.1	8.1	12.2	12.3	11	11.5
					19.4		7.9		0.1		88.4		8.1		12.4		12	

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

Location: MWR-IS3

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
1-Dec-21	Sunny	10:38	Middle	0.3	18.4	18.4	7.9	7.9	0.2	0.2	96.0	96.0	9.0	9.0	9.0	8.8	8	8.5
					18.4		7.9		0.2		96.0		9.0		8.5		9	
3-Dec-21	Sunny	14:59	Middle	0.2	20.7	20.7	7.9	7.9	0.1	0.1	103.4	103.5	9.3	9.3	9.5	9.5	9	9.0
					20.7		7.9		0.1		103.6		9.3		9.4		9	
6-Dec-21	Sunny	12:33	Middle	0.1	20.7	20.7	7.5	7.5	0.1	0.1	114.2	114.3	10.3	10.3	8.5	8.6	10	10.0
					20.7		7.5		0.1		114.3		10.3		8.7		10	
8-Dec-21	Sunny	13:19	Middle	0.2	21.9	21.9	8.0	8.0	0.1	0.1	105.9	106.0	9.3	9.3	7.1	7.1	13	12.5
					21.9		8.0		0.1		106.0		9.3		7.0		12	
10-Dec-21	Sunny	11:20	Middle	0.3	20.9	20.9	7.2	7.2	0.1	0.1	97.7	97.7	8.7	8.7	9.8	9.8	11	12.0
					20.9		7.2		0.1		97.7		8.7		9.8		13	
13-Dec-21	Fine	14:31	Middle	0.3	22.7	22.8	7.6	7.6	0.2	0.2	107.0	107.1	9.2	9.2	10.2	10.2	12	12.0
					22.8		7.6		0.2		107.1		9.2		10.1		12	
15-Dec-21	Fine	14:07	Middle	0.2	22.4	22.4	7.4	7.4	0.1	0.1	101.1	101.2	8.8	8.8	10.6	10.6	10	10.5
					22.4		7.4		0.1		101.3		8.8		10.5		11	
17-Dec-21	Cloudy	12:27	Middle	0.2	22.4	22.4	8.4	8.4	0.1	0.1	104.5	104.5	9.1	9.1	10.4	10.4	15	17.0
					22.4		8.4		0.1		104.5		9.1		10.4		19	
20-Dec-21	Rainy	14:24	Middle	0.2	18.0	18.0	7.6	7.6	0.1	0.1	94.4	94.4	8.9	8.9	10.5	10.7	10	11.0
					18.0		7.6		0.1		94.3		8.9		10.9		12	
22-Dec-21	Cloudy	14:21	Middle	0.2	22.5	22.5	7.7	7.7	0.1	0.1	102.8	102.9	8.9	8.9	10.8	11.0	15	16.5
					22.5		7.7		0.1		102.9		8.9		11.1		18	
24-Dec-21	Cloudy	14:40	Middle	0.2	22.6	22.7	7.7	7.7	0.1	0.1	105.0	105.1	9.1	9.1	5.0	5.0	7	7.0
					22.7		7.7		0.1		105.1		9.1		5.0		7	
27-Dec-21	Rainy	14:56	Middle	0.2	16.1	16.1	7.6	7.6	0.1	0.1	100.5	100.5	9.9	9.9	5.3	5.3	6	6.5
					16.1		7.6		0.1		100.5		9.9		5.2		7	
29-Dec-21	Cloudy	16:09	Middle	0.2	21.2	21.3	7.9	7.9	0.1	0.1	98.9	99.0	8.8	8.8	4.5	4.5	9	10.0
					21.3		7.9		0.1		99.1		8.8		4.5		11	
31-Dec-21	Sunny	14:49	Middle	0.2	21.8	21.8	7.9	7.9	0.1	0.1	108.9	109.0	9.6	9.6	8.6	8.7	9	9.0
					21.8		7.9		0.1		109.0		9.6		8.7		9	

Dissolved Oxygen (Middle)



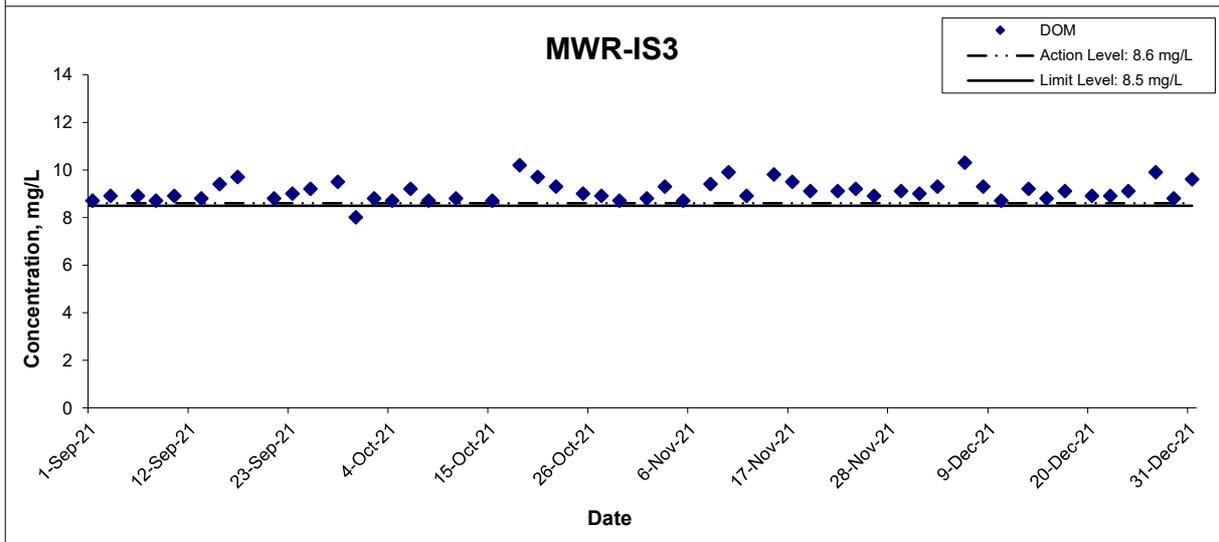
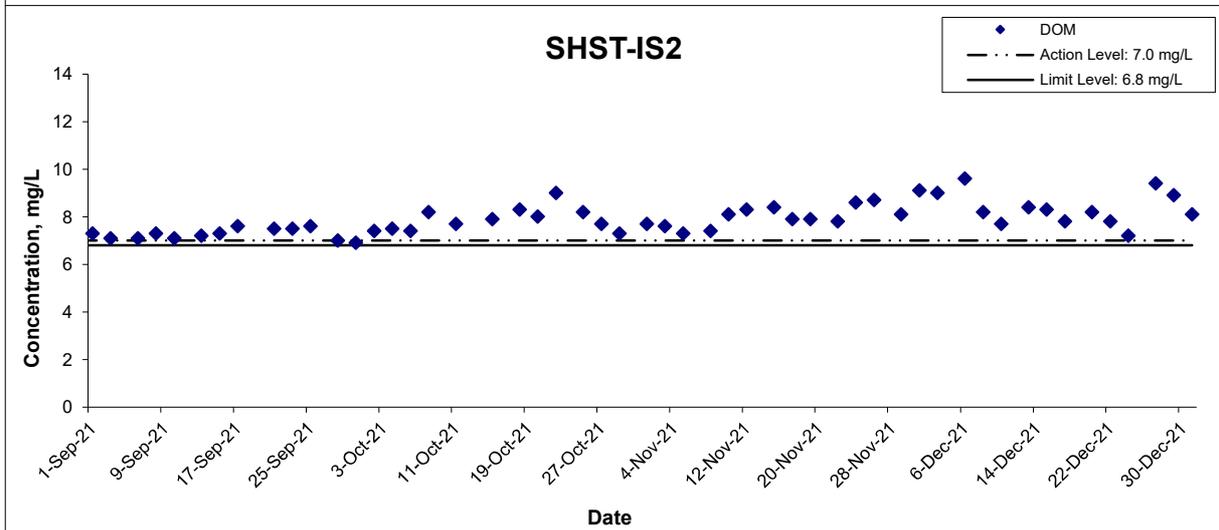
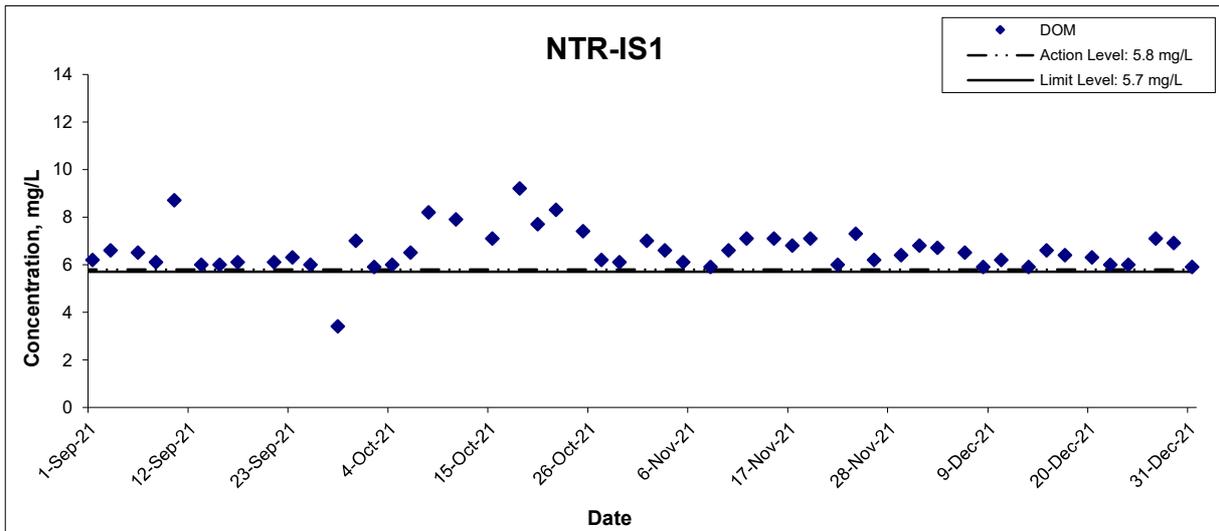
Title
 Contract No. NDO 04/2019
 Advance and First Stage Works of Kwu Tung North and Fanling
 North New Development Areas
 Graphical Presentation of Water Quality Monitoring
 Results

Scale
 N.T.S
Date
 Dec 21

Project No.
 WMA20002
Appendix
 G

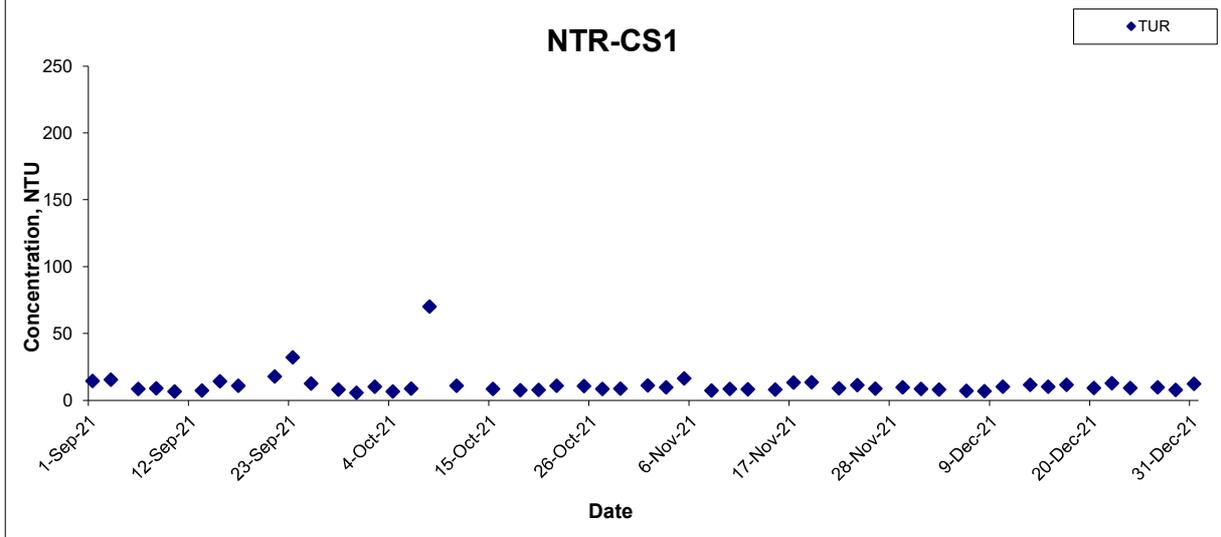
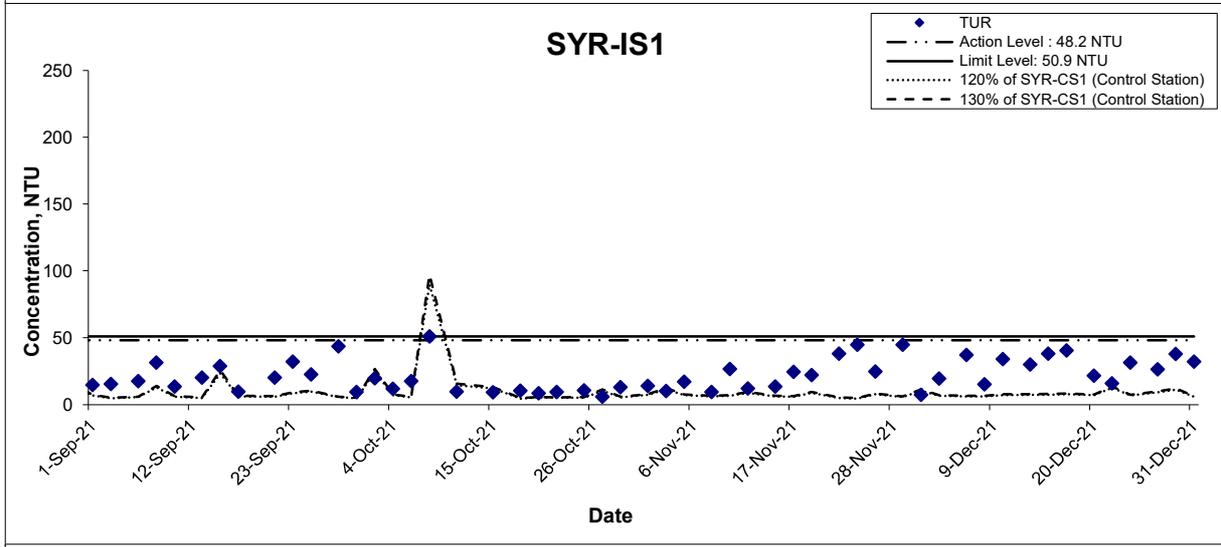
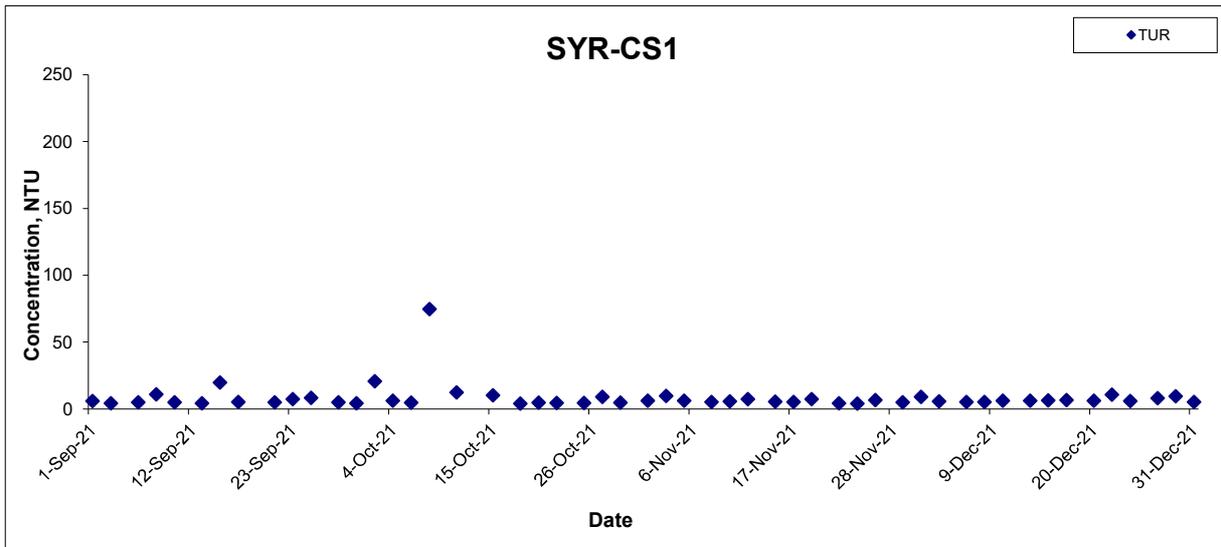


Dissolved Oxygen (Middle)



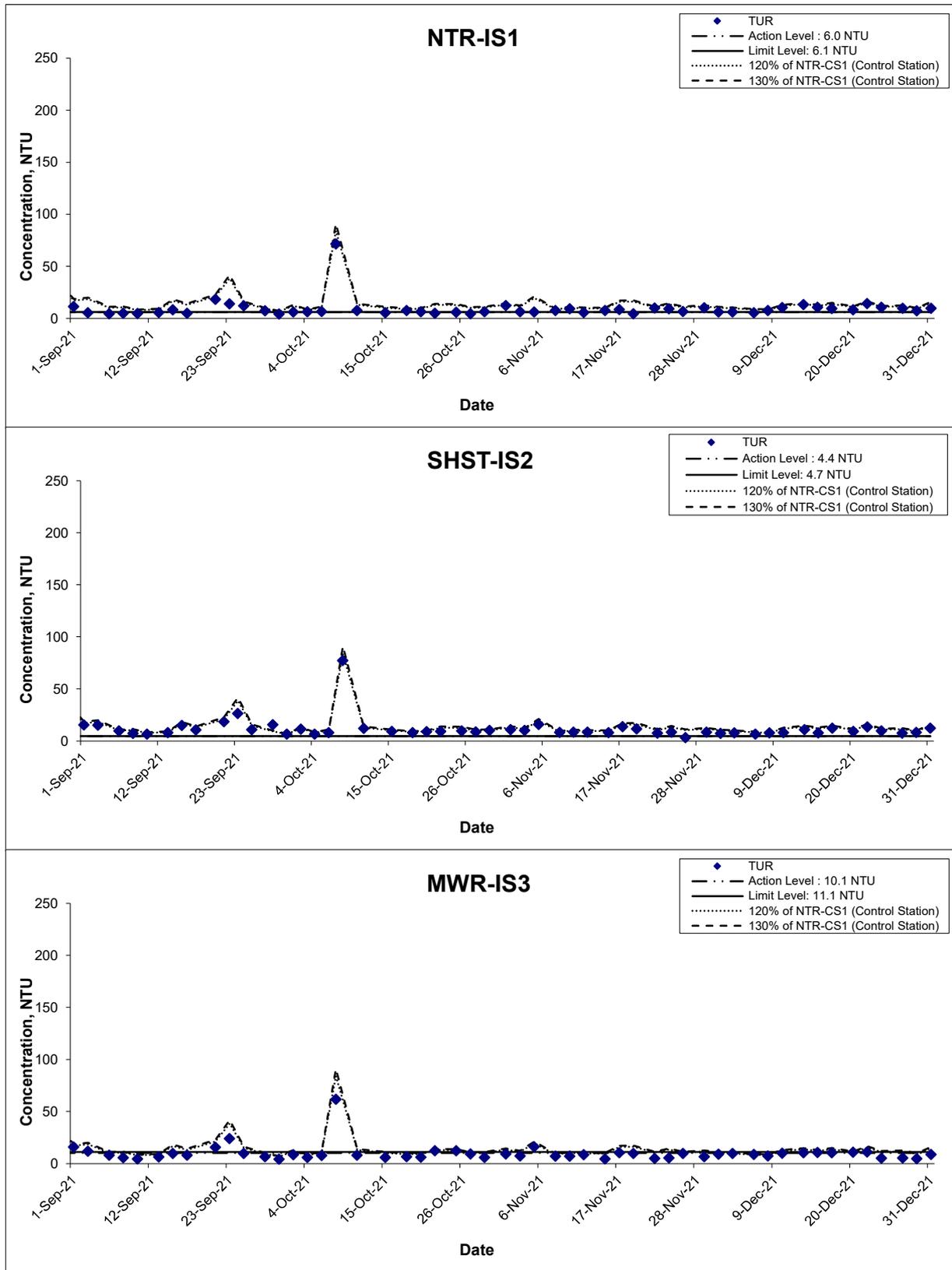
Title Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA20002	consulting . testing . research
	Date Dec 21	Appendix G	

Turbidity (Depth-averaged)



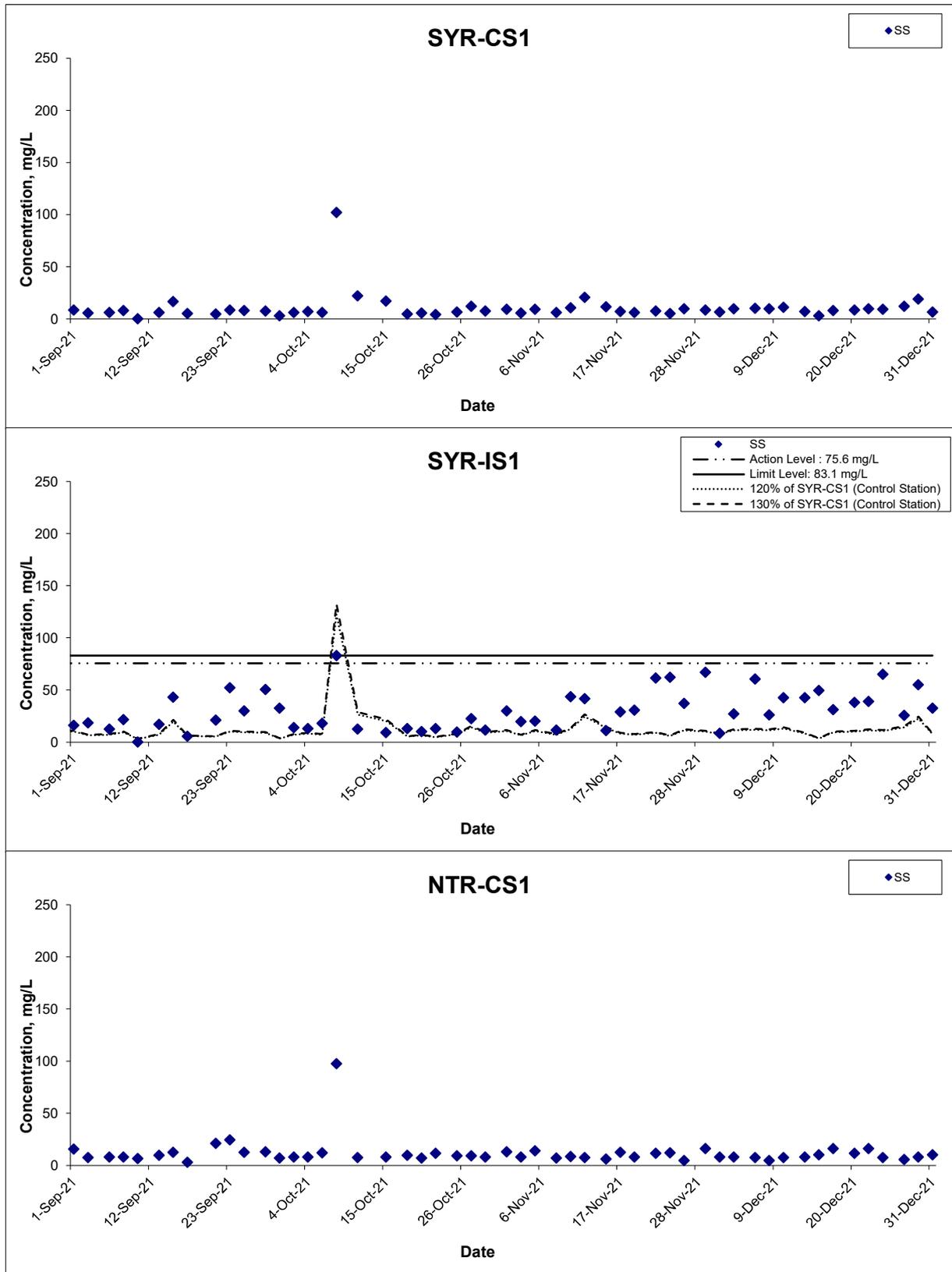
Title Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA20002	consulting . testing . research
	Date Dec 21	Appendix G	

Turbidity (Depth-averaged)



Title Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA20002	consulting . testing . research
	Date Dec 21	Appendix G	

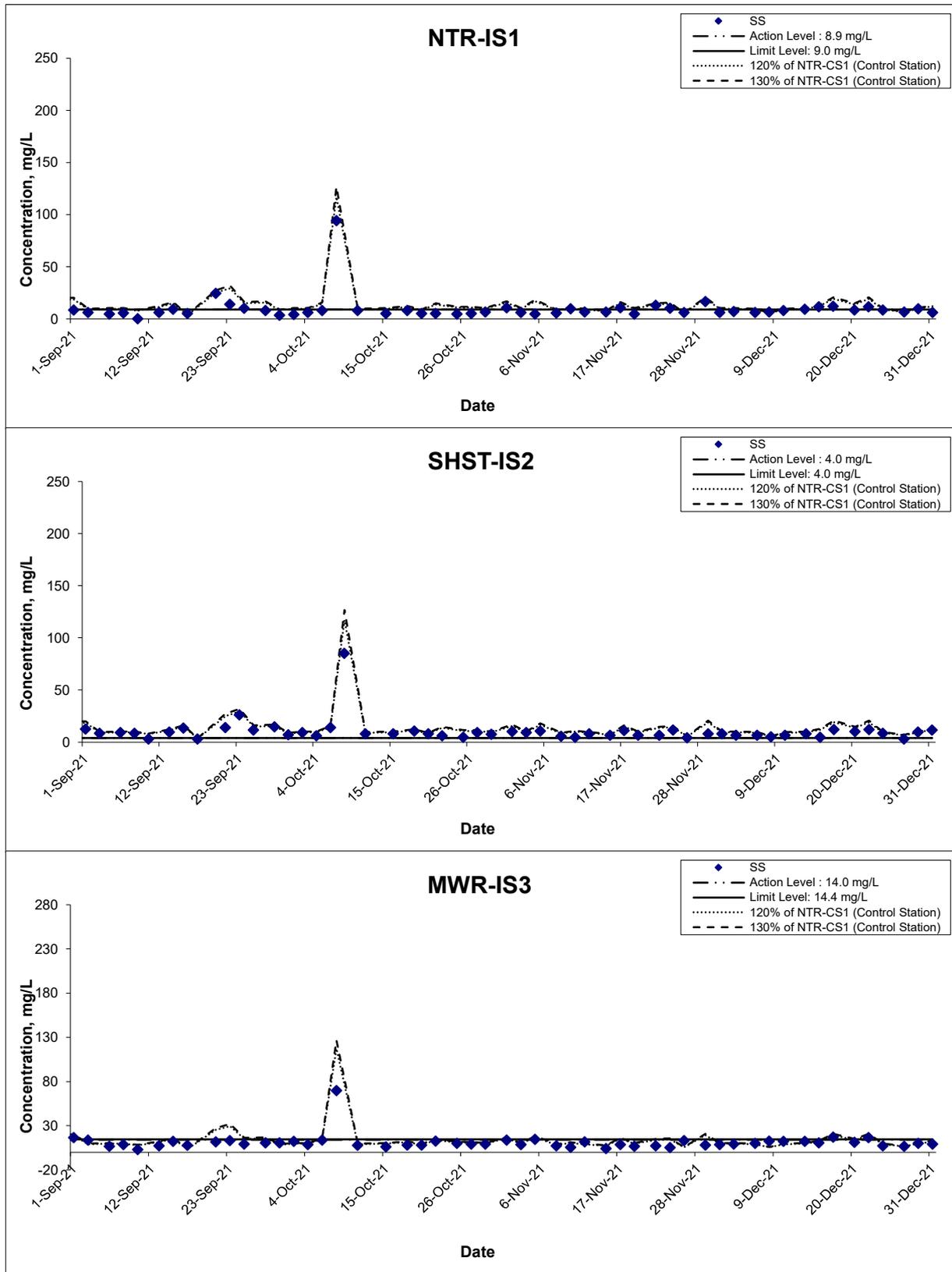
Suspended Solids (Depth-averaged)



Remark: The graphical point at zero concentration is presented as <2.5 mg/L

Title Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA20002	WELLAB 匯力 consulting . testing . research
	Date Dec 21	Appendix G	

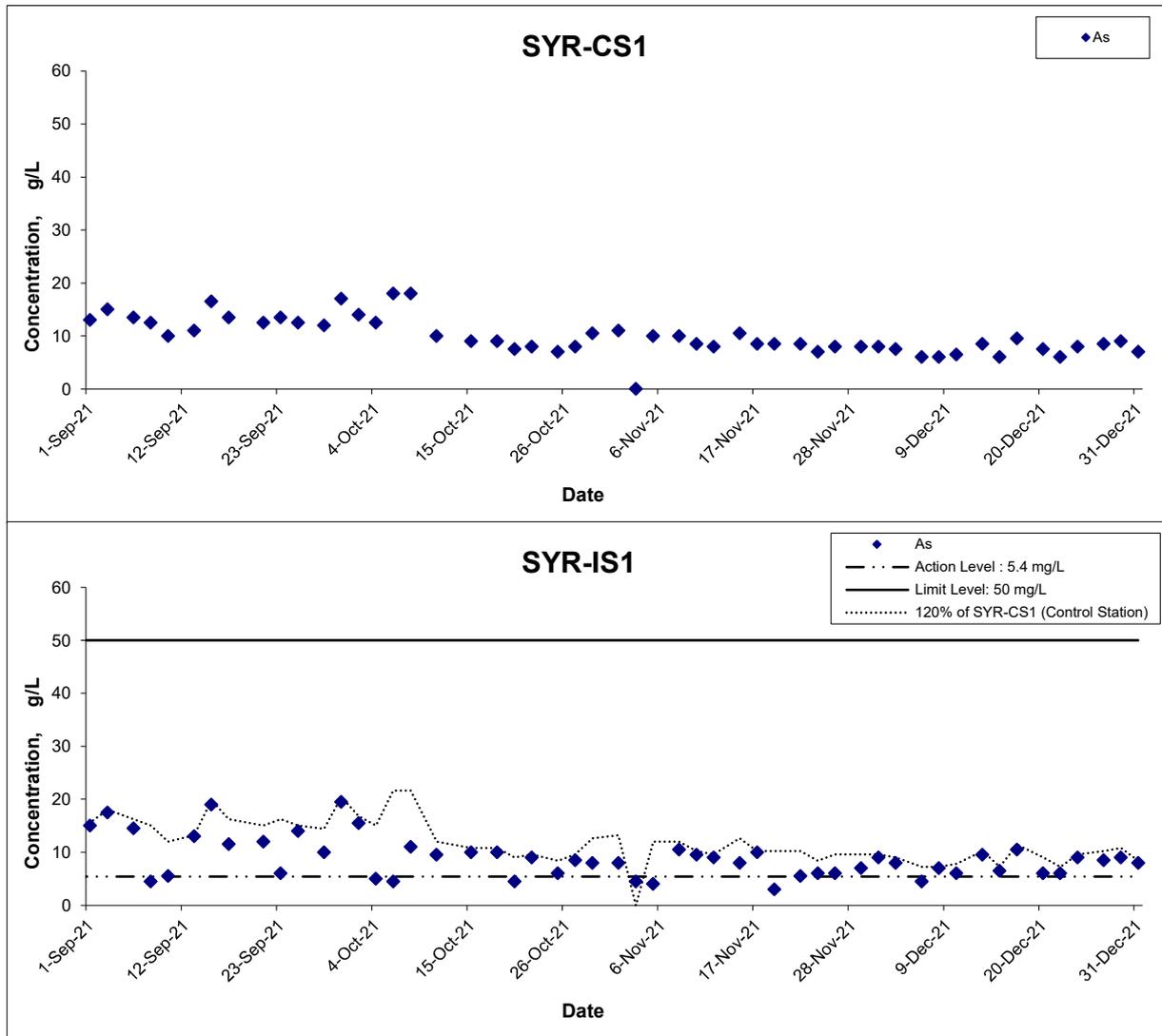
Suspended Solids (Depth-averaged)



Remark: The graphical point at zero concentration is presented as <2.5 mg/L

Title Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA20002	consulting . testing . research
	Date Dec 21	Appendix G	

Arsenic (Depth-averaged)



Remark: The graphical point at zero concentration is presented as <1 µg/L

Title Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA20002	consulting . testing . research
	Date Dec 21	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.:	36061
Date of Issue:	2021-12-03
Date Received:	2021-12-01
Date Tested:	2021-12-01
Date Completed:	2021-12-03

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36061
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. : WMA20002/211201
Sampling Date : 2021-12-01

Tests Requested & Methodology:

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

Results:

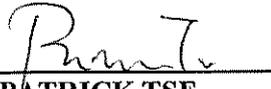
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36061-2	36061-3	36061-5	36061-6
Total Suspended Solids (mg/L)	7	6	8	9
Arsenic (µg/L)	8	8	9	9

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
 General Manager

TEST REPORT

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

Report No.:	36061A
Date of Issue:	2021-12-03
Date Received:	2021-12-01
Date Tested:	2021-12-01
Date Completed:	2021-12-03

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36061A
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. : WMA20002/211201
Sampling Date : 2021-12-01

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	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.	36061-8	36061-9	36061-11	36061-12
Total Suspended Solids (mg/L)	8	8	6	6

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36061-14	36061-15	36061-17	36061-18
Total Suspended Solids (mg/L)	8	8	8	9

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
 General Manager

TEST REPORT

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

Report No.:	36066
Date of Issue:	2021-12-09
Date Received:	2021-12-03
Date Tested:	2021-12-03
Date Completed:	2021-12-09

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36066
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. : WMA20002/211203
Sampling Date : 2021-12-03

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	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.	36066-2	36066-3	36066-5	36066-6
Total Suspended Solids (mg/L)	10	9	27	27
Arsenic (µg/L)	8	7	8	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.:	36066A
Date of Issue:	2021-12-09
Date Received:	2021-12-03
Date Tested:	2021-12-03
Date Completed:	2021-12-09

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36066A
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. : WMA20002/211203
Sampling Date : 2021-12-03

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	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.	36066-8	36066-9	36066-11	36066-12
Total Suspended Solids (mg/L)	8	8	7	7

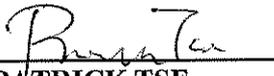
Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36066-14	36066-15	36066-17	36066-18
Total Suspended Solids (mg/L)	6	7	9	9

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36074
Date of Issue:	2021-12-09
Date Received:	2021-12-06
Date Tested:	2021-12-06
Date Completed:	2021-12-09

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36074
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. : WMA20002/211206
Sampling Date : 2021-12-06

Tests Requested & Methodology:

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

Results:

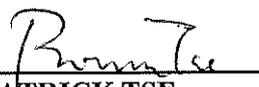
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36074-2	36074-3	36074-5	36074-6
Total Suspended Solids (mg/L)	9	11	59	62
Arsenic (µg/L)	6	6	4	5

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.:	36074A
Date of Issue:	2021-12-09
Date Received:	2021-12-06
Date Tested:	2021-12-06
Date Completed:	2021-12-09

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36074A
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. : WMA20002/211206
Sampling Date : 2021-12-06

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	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.	36074-8	36074-9	36074-11	36074-12
Total Suspended Solids (mg/L)	7	8	6	6

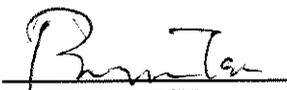
Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36074-14	36074-15	36074-17	36074-18
Total Suspended Solids (mg/L)	6	7	10	10

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.:	36087
Date of Issue:	2021-12-09
Date Received:	2021-12-08
Date Tested:	2021-12-08
Date Completed:	2021-12-09

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36087
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. : WMA20002/211208
Sampling Date : 2021-12-08

Tests Requested & Methodology:

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

Results:

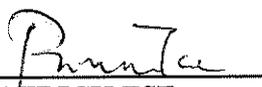
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36087-2	36087-3	36087-5	36087-6
Total Suspended Solids (mg/L)	10	9	24	28
Arsenic (µg/L)	6	6	7	7

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36087A
Date of Issue:	2021-12-09
Date Received:	2021-12-08
Date Tested:	2021-12-08
Date Completed:	2021-12-09

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36087A
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. : WMA20002/211208
Sampling Date : 2021-12-08

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	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.	36087-8	36087-9	36087-11	36087-12
Total Suspended Solids (mg/L)	5	4	6	7

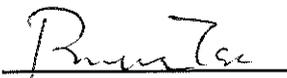
Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36087-14	36087-15	36087-17	36087-18
Total Suspended Solids (mg/L)	5	5	13	12

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36100
Date of Issue:	2021-12-16
Date Received:	2021-12-10
Date Tested:	2021-12-10
Date Completed:	2021-12-16

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36100
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. : WMA20002/211210
Sampling Date : 2021-12-10

Tests Requested & Methodology:

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

Results:

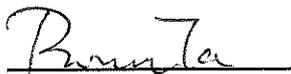
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36100-2	36100-3	36100-5	36100-6
Total Suspended Solids (mg/L)	12	10	45	40
Arsenic (µg/L)	6	7	6	6

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.:	36100A
Date of Issue:	2021-12-16
Date Received:	2021-12-10
Date Tested:	2021-12-10
Date Completed:	2021-12-16

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36100A
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. : WMA20002/211210
Sampling Date : 2021-12-10

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	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.	36100-8	36100-9	36100-11	36100-12
Total Suspended Solids (mg/L)	8	7	8	8

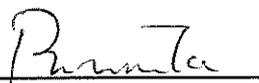
Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36100-14	36100-15	36100-17	36100-18
Total Suspended Solids (mg/L)	7	6	11	13

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36104
Date of Issue:	2021-12-16
Date Received:	2021-12-13
Date Tested:	2021-12-13
Date Completed:	2021-12-16

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36104
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. : WMA20002/211213
Sampling Date : 2021-12-13

Tests Requested & Methodology:

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

Results:

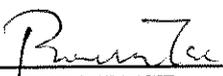
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36104-2	36104-3	36104-5	36104-6
Total Suspended Solids (mg/L)	7	7	42	43
Arsenic (µg/L)	8	9	10	9

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36104A
Date of Issue:	2021-12-16
Date Received:	2021-12-13
Date Tested:	2021-12-13
Date Completed:	2021-12-16

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36104A
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. : WMA20002/211213
Sampling Date : 2021-12-13

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	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.	36104-8	36104-9	36104-11	36104-12
Total Suspended Solids (mg/L)	8	8	9	9

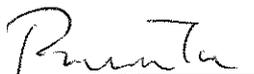
Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36104-14	36104-15	36104-17	36104-18
Total Suspended Solids (mg/L)	8	8	12	12

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36116
Date of Issue:	2021-12-16
Date Received:	2021-12-15
Date Tested:	2021-12-15
Date Completed:	2021-12-16

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36116
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. : WMA20002/211215
Sampling Date : 2021-12-15

Tests Requested & Methodology:

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

Results:

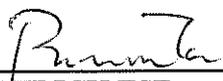
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36116-2	36116-3	36116-5	36116-6
Total Suspended Solids (mg/L)	3	3	48	51
Arsenic (µg/L)	6	6	7	6

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
 General Manager

TEST REPORT

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

Report No.:	36116A
Date of Issue:	2021-12-16
Date Received:	2021-12-15
Date Tested:	2021-12-15
Date Completed:	2021-12-16

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36116A
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. : WMA20002/211215
Sampling Date : 2021-12-15

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	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.	36116-8	36116-9	36116-11	36116-12
Total Suspended Solids (mg/L)	10	10	12	11

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36116-14	36116-15	36116-17	36116-18
Total Suspended Solids (mg/L)	4	5	10	11

Remarks: 1) <= less than 1

*****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.:	36121
Date of Issue:	2021-12-23
Date Received:	2021-12-17
Date Tested:	2021-12-17
Date Completed:	2021-12-23

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36121
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. : WMA20002/211217
Sampling Date : 2021-12-17

Tests Requested & Methodology:

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

Results:

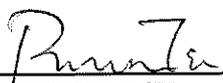
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36121-2	36121-3	36121-5	36121-6
Total Suspended Solids (mg/L)	8	8	34	28
Arsenic (µg/L)	10	9	10	11

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36121A
Date of Issue:	2021-12-23
Date Received:	2021-12-17
Date Tested:	2021-12-17
Date Completed:	2021-12-23

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36121A
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. : WMA20002/211217
Sampling Date : 2021-12-17

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	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.	36121-8	36121-9	36121-11	36121-12
Total Suspended Solids (mg/L)	16	16	13	11

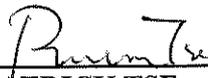
Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36121-14	36121-15	36121-17	36121-18
Total Suspended Solids (mg/L)	11	13	15	19

Remarks: 1) <= less than 1

*****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.:	36134
Date of Issue:	2021-12-24
Date Received:	2021-12-20
Date Tested:	2021-12-20
Date Completed:	2021-12-24

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36134
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. : WMA20002/211220
Sampling Date : 2021-12-20

Tests Requested & Methodology:

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

Results:

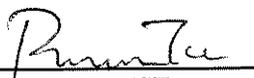
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36134-2	36134-3	36134-5	36134-6
Total Suspended Solids (mg/L)	9	8	37	39
Arsenic (µg/L)	7	8	6	6

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36134A
Date of Issue:	2021-12-24
Date Received:	2021-12-20
Date Tested:	2021-12-20
Date Completed:	2021-12-24

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36134A
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. : WMA20002/211220
Sampling Date : 2021-12-20

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	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.	36134-8	36134-9	36134-11	36134-12
Total Suspended Solids (mg/L)	12	11	9	8

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36134-14	36134-15	36134-17	36134-18
Total Suspended Solids (mg/L)	9	11	10	12

Remarks: 1) <= less than 1

*****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.:	36139
Date of Issue:	2021-12-24
Date Received:	2021-12-22
Date Tested:	2021-12-22
Date Completed:	2021-12-24

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36139
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. : WMA20002/211222
Sampling Date : 2021-12-22

Tests Requested & Methodology:

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

Results:

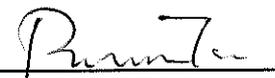
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36139-2	36139-3	36139-5	36139-6
Total Suspended Solids (mg/L)	10	9	40	38
Arsenic (µg/L)	6	6	6	6

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.:	36139A
Date of Issue:	2021-12-24
Date Received:	2021-12-22
Date Tested:	2021-12-22
Date Completed:	2021-12-24

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36139A
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. : WMA20002/211222
Sampling Date : 2021-12-22

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	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.	36139-8	36139-9	36139-11	36139-12
Total Suspended Solids (mg/L)	16	16	12	11

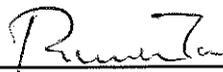
Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36139-14	36139-15	36139-17	36139-18
Total Suspended Solids (mg/L)	13	11	15	18

Remarks: 1) <= less than 1

*****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.:	36144
Date of Issue:	2021-12-31
Date Received:	2021-12-24
Date Tested:	2021-12-24
Date Completed:	2021-12-31

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36144
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. : WMA20002/211224
Sampling Date : 2021-12-24

Tests Requested & Methodology:

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

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36144-2	36144-3	36144-5	36144-6
Total Suspended Solids dried at 103-105°C (mg/L)	8	10	64	66
Arsenic (µg/L)	8	8	9	9

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
 General Manager

TEST REPORT

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

Report No.:	36144A
Date of Issue:	2021-12-31
Date Received:	2021-12-24
Date Tested:	2021-12-24
Date Completed:	2021-12-31

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36144A
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. : WMA20002/211224
Sampling Date : 2021-12-24

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	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.	36144-8	36144-9	36144-11	36144-12
Total Suspended Solids dried at 103-105°C (mg/L)	7	8	8	9

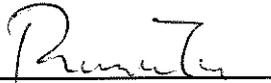
Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36144-14	36144-15	36144-17	36144-18
Total Suspended Solids dried at 103-105°C (mg/L)	8	9	7	7

Remarks: 1) <= less than 1

*****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.:	36162
Date of Issue:	2021-12-31
Date Received:	2021-12-27
Date Tested:	2021-12-27
Date Completed:	2021-12-31

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36162
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. : WMA20002/211227
Sampling Date : 2021-12-27

Tests Requested & Methodology:

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

Results:

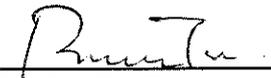
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36162-2	36162-3	36162-5	36162-6
Total Suspended Solids dried at 103-105°C (mg/L)	13	11	24	27
Arsenic (µg/L)	9	8	9	8

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.:** 36162A
Date of Issue: 2021-12-31
Date Received: 2021-12-27
Date Tested: 2021-12-27
Date Completed: 2021-12-31**ATTN: Ms. Ivy Tam****Page:** 1 of 1**Sample Description :** 8 liquid samples as received from client said to be water
Laboratory No. : 36162A
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. : WMA20002/211227
Sampling Date : 2021-12-27**Tests Requested & Methodology:**

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L

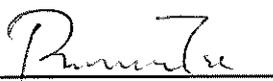
Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36162-8	36162-9	36162-11	36162-12
Total Suspended Solids dried at 103-105°C (mg/L)	5	6	6	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36162-14	36162-15	36162-17	36162-18
Total Suspended Solids dried at 103-105°C (mg/L)	3	3	6	7

Remarks: 1) <= less than 1

*****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.:	36169
Date of Issue:	2022-01-04
Date Received:	2021-12-29
Date Tested:	2021-12-29
Date Completed:	2022-01-04

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36169
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. : WMA20002/211229
Sampling Date : 2021-12-29

Tests Requested & Methodology:

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

Results:

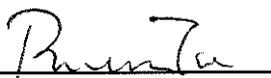
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36169-2	36169-3	36169-5	36169-6
Total Suspended Solids dried at 103-105°C (mg/L)	19	19	61	49
Arsenic (µg/L)	9	9	9	9

Remarks: 1) <= less than

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	36169A
Date of Issue:	2022-01-04
Date Received:	2021-12-29
Date Tested:	2021-12-29
Date Completed:	2022-01-04

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36169A
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. : WMA20002/211229
Sampling Date : 2021-12-29

Tests Requested & Methodology:

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

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36169-8	36169-9	36169-11	36169-12
Total Suspended Solids dried at 103-105°C (mg/L)	8	8	9	10

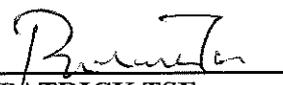
Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36169-14	36169-15	36169-17	36169-18
Total Suspended Solids dried at 103-105°C (mg/L)	10	9	9	11

Remarks: 1) <= less than 1

*****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.:	36184
Date of Issue:	2022-01-04
Date Received:	2021-12-31
Date Tested:	2021-12-31
Date Completed:	2022-01-04

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36184
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. : WMA20002/211231
Sampling Date : 2021-12-31

Tests Requested & Methodology:

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

Results:

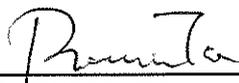
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36184-2	36184-3	36184-5	36184-6
Total Suspended Solids dried at 103-105°C (mg/L)	6	7	29	36
Arsenic (µg/L)	7	7	8	8

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.:	36184A
Date of Issue:	2022-01-04
Date Received:	2021-12-31
Date Tested:	2021-12-31
Date Completed:	2022-01-04

ATTN: Ms. Ivy Tam

Page: 1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36184A
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. : WMA20002/211231
Sampling Date : 2021-12-31

Tests Requested & Methodology:

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

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36184-8	36184-9	36184-11	36184-12
Total Suspended Solids dried at 103-105°C (mg/L)	10	10	6	6

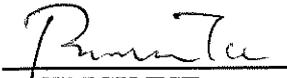
Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36184-14	36184-15	36184-17	36184-18
Total Suspended Solids dried at 103-105°C (mg/L)	11	12	9	9

Remarks: 1) <= less than 1

*****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.:	QC36061
Date of Issue:	2021-12-03
Date Received:	2021-12-01
Date Tested:	2021-12-01
Date Completed:	2021-12-03

Page: 1 of 1

ATTN: Ms. Ivy Tam

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 (%)	112	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	87	N/A	80-120

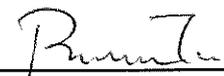
Sample Duplicate

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 36061.

*****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.:	QC36066
Date of Issue:	2021-12-09
Date Received:	2021-12-03
Date Tested:	2021-12-03
Date Completed:	2021-12-09

Page: 1 of 1

ATTN: Ms. Ivy Tam

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	99	91	80-120
Arsenic (%)	100	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	113	N/A	80-120

Sample Duplicate

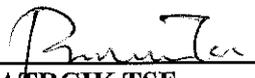
Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	4	RPD≤5%
Arsenic (%)	4	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36066.

*****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.:	QC36074
Date of Issue:	2021-12-09
Date Received:	2021-12-06
Date Tested:	2021-12-06
Date Completed:	2021-12-09

Page: 1 of 1

ATTN: Ms. Ivy Tam

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	104	102	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 (%)	97	N/A	80-120

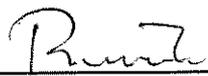
Sample Duplicate

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36074.

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

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


PATRCIK TSE
General Manager

TEST REPORT

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

Report No.:	QC36087
Date of Issue:	2021-12-09
Date Received:	2021-12-08
Date Tested:	2021-12-08
Date Completed:	2021-12-09

Page: 1 of 1

ATTN: Ms. Ivy Tam

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	104	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 (%)	96	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 36087.

*****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.:	QC36100
Date of Issue:	2021-12-16
Date Received:	2021-12-10
Date Tested:	2021-12-10
Date Completed:	2021-12-16

Page: 1 of 1

ATTN: Ms. Ivy Tam

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	92	102	80-120
Arsenic (%)	113	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 (%)	2	4	RPD≤5%
Arsenic (%)	7	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36100.

*****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.:	QC36104
Date of Issue:	2021-12-16
Date Received:	2021-12-13
Date Tested:	2021-12-13
Date Completed:	2021-12-16

ATTN: Ms. Ivy Tam

Page: 1 of 1

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	97	96	80-120
Arsenic (%)	113	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	105	N/A	80-120

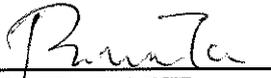
Sample Duplicate

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36104.

*****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.:	QC36116
Date of Issue:	2021-12-16
Date Received:	2021-12-15
Date Tested:	2021-12-15
Date Completed:	2021-12-16

Page: 1 of 1

ATTN: Ms. Ivy Tam

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	108	98	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 (%)	96	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	5	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 36116.

*****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.:	QC36121
Date of Issue:	2021-12-23
Date Received:	2021-12-17
Date Tested:	2021-12-17
Date Completed:	2021-12-23

Page: 1 of 1

ATTN: Ms. Ivy Tam

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	102	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 (%)	110	N/A	80-120

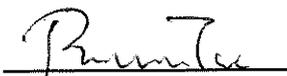
Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	3	RPD≤5%
Arsenic (%)	15	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36121.

*****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.:	QC36134
Date of Issue:	2021-12-24
Date Received:	2021-12-20
Date Tested:	2021-12-20
Date Completed:	2021-12-24

Page: 1 of 1

ATTN: Ms. Ivy Tam

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	97	100	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 (%)	106	N/A	80-120

Sample Duplicate

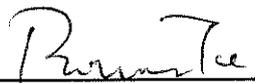
Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	2	RPD≤5%
Arsenic (%)	1	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36134.

*****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.:	QC36139
Date of Issue:	2021-12-24
Date Received:	2021-12-22
Date Tested:	2021-12-22
Date Completed:	2021-12-24

Page: 1 of 1

ATTN: Ms. Ivy Tam

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	98	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 (%)	116	N/A	80-120

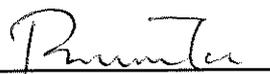
Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	5	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 36139.

*****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.:	QC36144
Date of Issue:	2021-12-31
Date Received:	2021-12-24
Date Tested:	2021-12-24
Date Completed:	2021-12-31

Page: 1 of 1

ATTN: Ms. Ivy Tam

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	98	99	80-120
Arsenic (%)	113	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	118	N/A	80-120

Sample Duplicate

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36144.

*****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.:	QC36162
Date of Issue:	2021-12-31
Date Received:	2021-12-27
Date Tested:	2021-12-27
Date Completed:	2021-12-31

Page: 1 of 1

ATTN: Ms. Ivy Tam

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	104	80-120
Arsenic (%)	106	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	109	N/A	80-120

Sample Duplicate

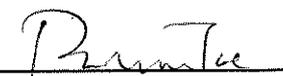
Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	1	RPD≤5%
Arsenic (%)	5	N/A	RPD≤20%

Remarks: 1) <= less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36162.

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

PREPARED AND CHECKED BY:

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


PATRCIK TSE
General Manager

TEST REPORT

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

Report No.:	QC36169
Date of Issue:	2022-01-04
Date Received:	2021-12-29
Date Tested:	2021-12-29
Date Completed:	2022-01-04

Page: 1 of 1

ATTN: Ms. Ivy Tam

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	99	101	80-120
Arsenic (%)	106	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	103	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	1	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 36169.

*****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.:	QC36184
Date of Issue:	2022-01-04
Date Received:	2021-12-31
Date Tested:	2021-12-31
Date Completed:	2022-01-04

Page: 1 of 1

ATTN: Ms. Ivy Tam

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	102	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 (%)	111	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	2	RPD≤5%
Arsenic (%)	7	N/A	RPD≤20%

Remarks: 1) <= less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36184.

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

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


PATRCIK 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%
31-12-2021 15:16	CZ PT 1		20.17	0.09	0.02
31-12-2021 15:07	CZ container 1		20.35	0.12	0.02
31-12-2021 15:10	CZ container 2		20.27	0.10	0.02
31-12-2021 15:12	CZ container 3		20.25	0.12	0.03
31-12-2021 15:14	CZ container 4		20.24	0.12	0.03
31-12-2021 15:04	CZ container 5		20.84	0.05	0.02

Prepared by : Y L Chan (Safety Officer)

Date : 31-12-2021

**APPENDIX K
BUILT HERITAGE MONITORING
RESULTS**

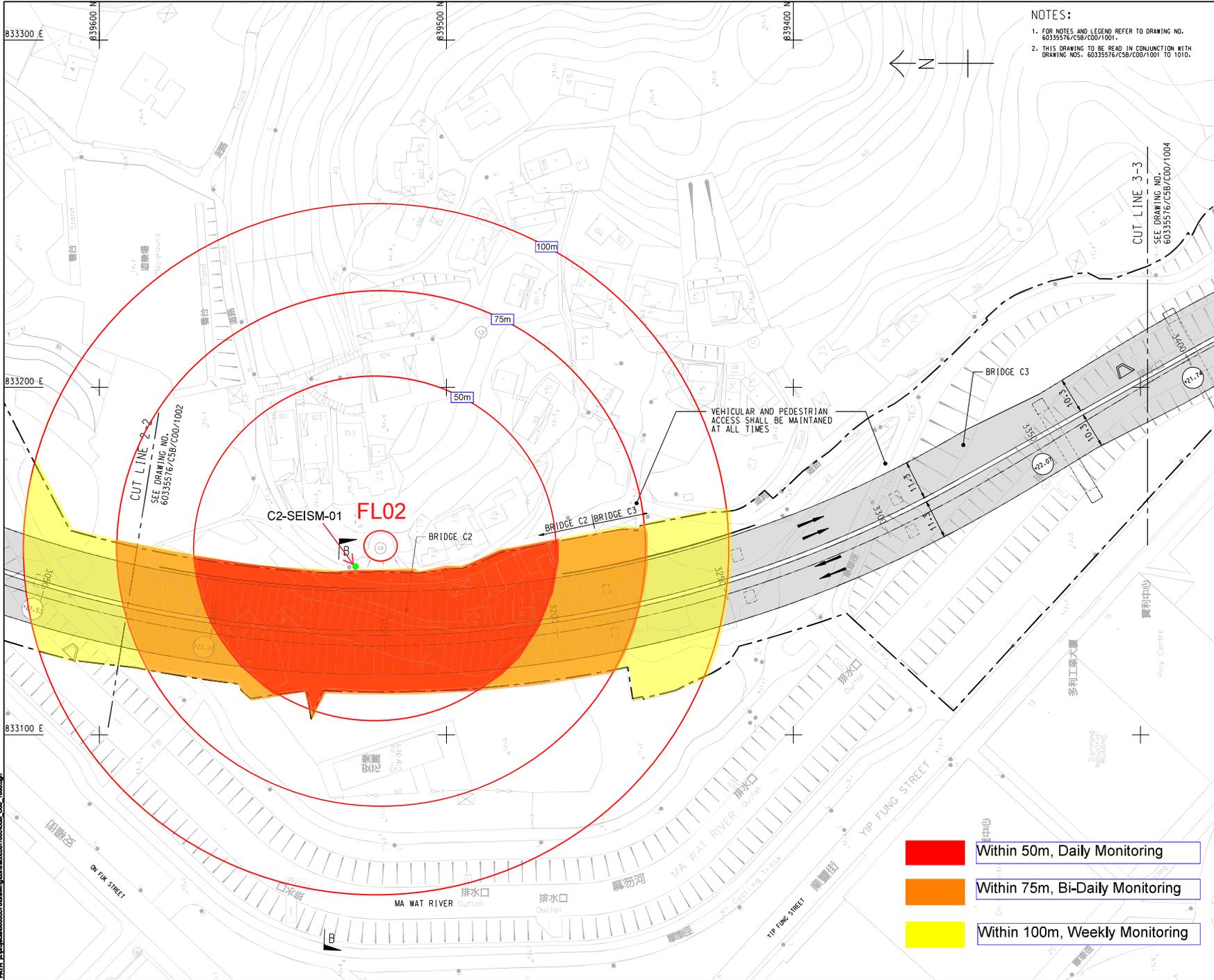
Summary of vibration readings at FL02 (C2-SEISM-01)



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 Dec 2021	0.106	UM17124
02 Dec 2021	0.09	UM17126
03 Dec 2021	0.065	UM17126
04 Dec 2021	0.061	UM17124
06 Dec 2021	0.067	UM17121
07 Dec 2021	0.079	UM17126
08 Dec 2021	0.111	UM17124
09 Dec 2021	0.098	UM17121
10 Dec 2021	0.436	UM17121
11 Dec 2021	0.439	UM17124
13 Dec 2021	0.637	UM17126
14 Dec 2021	0.131	UM17126
15 Dec 2021	0.103	UM17121
16 Dec 2021	0.114	UM17124
17 Dec 2021	0.101	UM17121
18 Dec 2021	0.147	UM17126
20 Dec 2021	0.146	UM17124
21 Dec 2021	0.085	UM17121
22 Dec 2021	0.079	UM17126
23 Dec 2021	0.152	UM17121
24 Dec 2021	0.079	UM17121
28 Dec 2021	0.076	UM17126
29 Dec 2021	0.097	UM17124
30 Dec 2021	0.126	UM17126
31 Dec 2021	0.688	UM17126



NOTES:
 1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/CSB/C00/1001.
 2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/CSB/C00/1001 TO 1010.



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

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

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

CONSULTANT
 AECOM Asia Company Ltd.
 www.aecom.com

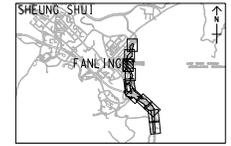
SUB-CONSULTANTS
 24/11/2018

ISSUE/REVISION

NO.	DATE	DESCRIPTION	BY	CHECKED
1	JUN-19	TENDER DRAWING		

STATUS

SCALE
 A1: 800 METRES
KEY PLAN A1: 70000



- Within 50m, Daily Monitoring
- Within 75m, Bi-Daily Monitoring
- Within 100m, Weekly Monitoring

PROJECT NO. 60335576
CONTRACT NO. ND/2018/05

SHEET TITLE
 GENERAL LAYOUT

SHEET NUMBER
 60335576/CSB/C00/1003

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 Dec 2021	0.207	UM17124
02 Dec 2021	0.216	UM17121
03 Dec 2021	0.255	UM17126
04 Dec 2021	0.454	UM17124
06 Dec 2021	0.479	UM17121
07 Dec 2021	0.639	UM17126
08 Dec 2021	0.339	UM17124
09 Dec 2021	0.311	UM17121
10 Dec 2021	0.473	UM17126
11 Dec 2021	0.576	UM17126
13 Dec 2021	0.385	UM17121
14 Dec 2021	0.358	UM17124
15 Dec 2021	0.375	UM17126
16 Dec 2021	0.127	UM17121
17 Dec 2021	0.15	UM17124
18 Dec 2021	0.081	UM17121
20 Dec 2021	0.072	UM17124
21 Dec 2021	0.069	UM17126
22 Dec 2021	0.085	UM17121
23 Dec 2021	0.081	UM17124
24 Dec 2021	0.068	UM17126
28 Dec 2021	0.067	UM17121
29 Dec 2021	0.072	UM17124
30 Dec 2021	0.088	UM17126
31 Dec 2021	0.078	UM17121

APPENDIX L
ECOLOGICAL MONITORING RESULTS

Appendix L1a. Avifauna Species Recorded for Water Birds Monitoring, 2 & 3 December 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		2/12/2021 (T1 & T2), 3/12/2021 (T3 & T5)								
					Weather Condition		Fine, Overcast								
					Tidal Condition		High								
					Tide Level (m)		2.01, 1.90								
					Start Time		0900, 0900								
					Abundance										
					Transect Walk										
					T1	T2	T3	T5					Heard	Flight	
			WAL	DAL	SWH	P									
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv										18		
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R					12							
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC			6	2	17						
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	3	5	1	3	5						
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		4						
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM						1						
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM						1						
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R					5							
Daurian Redstart	<i>Phoenicurus aureoreus</i>	北紅尾鴝	WV				4								
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)				10	1						
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	1	1	2	3						
Greater Coucal	<i>Centropus sinensis</i>	褐翅鴉鶇	R	(VU)			2								
Little Bunting	<i>Emberiza pusilla</i>	小鵪	CPM, WV			4									

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		2/12/2021 (T1 & T2), 3/12/2021 (T3 & T5)							
					Weather Condition		Fine, Overcast							
					Tidal Condition		High							
					Tide Level (m)		2.01, 1.90							
					Start Time		0900, 0900							
					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	1			3				
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鶿	R	LC		1								
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鸻	WV, PM	(LC)		10	1			4				
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV				8							
Oriental Magpie	<i>Pica serica</i>	喜鵲	R				2							
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鹮	WV	RC						7				
Red-rumped Swallow	<i>Cecropis daurica</i>	金腰燕	UPM										4	
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鶇	R				4		2					
Rock Dove	<i>Columba livia</i>	原鴿	R			2								
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R						37					
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R						4					
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鶇	WV				1		2					
White Wagtail	<i>Motacilla alba</i>	白鶇鶇	PM, WV			8	7		10	1				
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R				1							
Wood Sandpiper	<i>Tringa glareola</i>	林鶇	PM, WV	LC		1	1			5				
Total No. of Species					2	10	15	0	12	12	0	0	2	
Total No. of Conservation Interest Species					2	7	8	0	4	9	0	0	0	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		2/12/2021 (T1 & T2), 3/12/2021 (T3 & T5)									
					Weather Condition		Fine, Overcast									
					Tidal Condition		High									
					Tide Level (m)		2.01, 1.90									
					Start Time		0900, 0900									
					Abundance											
					Transect Walk											
					T1			T2			T3			T5		
					WAL		DAL		SWH		P		Heard		Flight	

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; 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 (Fellows et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix L1b. Avifauna Species Recorded for Water Birds Monitoring, 2 & 3 December 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		2/12/2021 (T1 & T2), 3/12/2021 (T3 & T5)							
					Weather Condition		Sunny, Fine							
					Tidal Condition		Low							
					Tide Level (m)		0.87, 0.99							
					Start Time		1500, 1600							
					Abundance									
					Transect Walk									
					T1	T2	T3	T5					Heard	Flight
					WAL	DAL	SWH	P						
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv										45	
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R					1						
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鵞	PM	RC			5	10		2	15			
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	2	7	4	1	2	6	6			
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU			1						1	
Common Greenshank	<i>Tringa nebularia</i>	青腳鵞	PM, WV	RC						2				
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥	R						1					
Common Redshank	<i>Tringa totanus</i>	紅腳鵞	PM	RC				5		22				
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM							6				
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R		2							1	2	
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)			2			1			9	
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R		3									
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC	2									
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	1	1	1			7			2	
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鵞	UPM, WV							9				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		2/12/2021 (T1 & T2), 3/12/2021 (T3 & T5)							
					Weather Condition		Sunny, Fine							
					Tidal Condition		Low							
					Tide Level (m)		0.87, 0.99							
					Start Time		1500, 1600							
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
			WAL	DAL	SWH	P	Heard	Flight						
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC	3	5	3		1				3	
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鶿	R	LC	2	1								
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	2	4			2	1				
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鷓	R								3			
Northern Lapwing	<i>Vanellus vanellus</i>	鳳頭麥雞	SWV	NT, LC				2						
Northern Shoveler	<i>Spatula clypeata</i>	琵嘴鴨	WV	RC					3	3				
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鴝	R		1			1						
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷗	WV	RC						12				
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	UR	(LC)				1						
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R					1						
Red-rumped Swallow	<i>Cecropis daurica</i>	金腰燕	UPM										5	
Rock Dove	<i>Columba livia</i>	原鴿	R			7								
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R					41						
Sooty-headed Bulbul	<i>Pycnonotus aurigaster</i>	白喉紅臀鶇	UR		2	2								
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		3	5		1						
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鶇	WV					3						

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		2/12/2021 (T1 & T2), 3/12/2021 (T3 & T5)							
					Weather Condition		Sunny, Fine							
					Tidal Condition		Low							
					Tide Level (m)		0.87, 0.99							
					Start Time		1500, 1600							
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
			WAL	DAL	SWH	P	Heard	Flight						
White Wagtail	<i>Motacilla alba</i>	白鵲鴿	PM, WV		4	4			5				6	
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R						1					
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)			1		1					
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC			2			14				
Total No. of Species					12	9	8	3	14	11	5	2	8	
Total No. of Conservation Interest Species					6	5	8	3	5	9	5	0	4	
Note:														

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		2/12/2021 (T1 & T2), 3/12/2021 (T3 & T5)									
					Weather Condition		Sunny, Fine									
					Tidal Condition		Low									
					Tide Level (m)		0.87, 0.99									
					Start Time		1500, 1600									
					Abundance											
					Transect Walk											
					T1	T2	T3	T5								
					WAL	DAL	SWH	P	Heard	Flight						
<p>R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; 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 (Fellows et al. (2002))</p> <p>WAL: Wet Agricultural Land</p> <p>DAL: Dry Agricultural Land</p> <p>SWH: Shallow Water Habitat</p> <p>P: Pond</p>																

Appendix L1c. Avifauna Species Recorded for Water Birds Monitoring, 8 & 9 December 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		8/12/2021 (T1 & T2), 9/12/2021 (T3 & T5)									
					Weather Condition		Sunny, Sunny									
					Tidal Condition		High									
					Tide Level (m)		1.65, 1.47									
					Start Time		1400, 1400									
					Abundance											
					Transect Walk											
					T1	T2	T3	T5					Heard	Flight		
			WAL	DAL	SWH	P										
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv											2		
Black Drongo	<i>Dicrurus macrocercus</i>	黑卷尾	Sv					4								
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV											4		
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領椋鳥	R					33								
Black-faced Spoonbill	<i>Platalea minor</i>	黑臉琵鷺	CWV	EN, (EN), PGC										18		
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鸕	PM	RC			2	6		18	8					
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	7	4	4	3	12	4				1		
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU			4									
Common Greenshank	<i>Tringa nebularia</i>	青腳鸕	PM, WV	RC			1			5						
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥	R				1		1							
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R							1						
Common Redshank	<i>Tringa totanus</i>	紅腳鸕	PM	RC			1									
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鸕	WV, PM						1	1						
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					5		5						
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R						120					100		

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		8/12/2021 (T1 & T2), 9/12/2021 (T3 & T5)						
					Weather Condition		Sunny, Sunny						
					Tidal Condition		High						
					Tide Level (m)		1.65, 1.47						
					Start Time		1400, 1400						
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					Heard
			WAL	DAL	SWH	P							
Daurian Redstart	<i>Phoenicurus aureus</i>	北紅尾鶇	WV			1							
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鶇	R, PM	(LC)			2		11				
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC						1			
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R						9				
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	RC							4		
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC								2	
Great Egret	<i>Ardea alba</i>	大白鶇	R, WV	PRC(RC)	1	2	3		3	2			
Greater Coucal	<i>Centropus sinensis</i>	褐翅鴉鵂	R	(VU)					1				
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鶇	UPM, WV				3			1			
Grey Heron	<i>Ardea cinerea</i>	蒼鶇	WV	PRC	2	3	2		2	1			
Grey Wagtail	<i>Motacilla cinerea</i>	灰鶇鶇	WV				2		1				
Kentish Plover	<i>Charadrius alexandrinus</i>	環頸鶇	WV	RC						1			
Little Bunting	<i>Emberiza pusilla</i>	小鶇	CPM, WV						1				
Little Egret	<i>Egretta garzetta</i>	小白鶇	R	PRC(RC)	1	5	4		5	6		2	
Little Grebe	<i>Tachybaptus ruficollis</i>	小鶇鶇	R	LC		1							
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鶇	WV, PM	(LC)			6	1		8			
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R						1				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		8/12/2021 (T1 & T2), 9/12/2021 (T3 & T5)						
					Weather Condition		Sunny, Sunny						
					Tidal Condition		High						
					Tide Level (m)		1.65, 1.47						
					Start Time		1400, 1400						
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Marsh Sandpiper	<i>Tringa stagnatilis</i>	澤鵲	PM, WV	RC			1			1			
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV						5				
Oriental Turtle dove	<i>Streptopelia orientalis</i>	山斑鳩	WV, PM						1				
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鵲	WV	RC			1			16			
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	UR	(LC)		1							
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM						2				
Rock Dove	<i>Columba livia</i>	原鴿	R			7	2						
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R						90				
Sooty-headed Bulbul	<i>Pycnonotus aurigaster</i>	白喉紅臀鵲	UR				2						
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		3	2	1		5				
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵲	WV						5				
Swinhoe's White-eye	<i>Zosterops simplex</i>	暗綠繡眼鳥	R			1	2						
White Wagtail	<i>Motacilla alba</i>	白鵲鴿	PM, WV		2	2	4						
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R						4				
White-headed Munia	<i>Lonchura maja</i>	白頭文鳥	R						15				
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)	1		1		2				
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC		1	1			15			

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		8/12/2021 (T1 & T2), 9/12/2021 (T3 & T5)						
					Weather Condition		Sunny, Sunny						
					Tidal Condition		High						
					Tide Level (m)		1.65, 1.47						
					Start Time		1400, 1400						
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Total No. of Species					7	12	21	5	24	16	2	0	7
Total No. of Conservation Interest Species					5	7	13	4	7	12	2	0	4
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		8/12/2021 (T1 & T2), 9/12/2021 (T3 & T5)									
					Weather Condition		Sunny, Sunny									
					Tidal Condition		High									
					Tide Level (m)		1.65, 1.47									
					Start Time		1400, 1400									
					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 L1d. Avifauna Species Recorded for Water Birds Monitoring, 8 & 9 December 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		8/12/2021 (T1 & T2), 9/12/2021 (T3 & T5)								
					Weather Condition		Sunny, Fine								
					Tidal Condition		Low								
					Tide Level (m)		0.11, 0.26								
					Start Time		0900, 0900								
					Abundance										
					Transect Walk										
					T1	T2	T3	T5				Heard	Flight		
			WAL	DAL	SWH	P									
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv										17		
Black Drongo	<i>Dicrurus macrocercus</i>	黑卷尾	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					5							
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鸕	PM	RC			8		25						
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	7	2	2	2	3	7			3		
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU			1								
Common Greenshank	<i>Tringa nebularia</i>	青腳鸕	PM, WV	RC			2			3					
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鸕	WV, PM			1	1								
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM							3			1		
Common Tailorbird	<i>Orthotomus sutorius</i>	長尾縫葉鶯	R						2						
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R						5				5		
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV						1						
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鶯	R, PM	(LC)		1	1		2				1		
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鸕鶉	PM, WV				1								

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		8/12/2021 (T1 & T2), 9/12/2021 (T3 & T5)						
					Weather Condition		Sunny, Fine						
					Tidal Condition		Low						
					Tide Level (m)		0.11, 0.26						
					Start Time		0900, 0900						
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					Heard
			WAL	DAL	SWH	P							
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC					3				
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	RC					1				
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)			2		16		3		
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鵝	UPM, WV			1							
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC	2	4	5		1		1		
Grey Wagtail	<i>Motacilla cinerea</i>	灰鶺鴒	WV					7					
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R								1		
Intermediate Egret	<i>Egretta intermedia</i>	中白鷺	CPM	RC					1				
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)		2	6	2	8				
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鶿	R	LC	1								
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鸕	WV, PM	LC			3						
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鶿	R			3		10					
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鶺鴒	WV					6					
Oriental Magpie	<i>Pica serica</i>	喜鵲	R					1					
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鴝	R					1					
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鶺鴒	WV	RC					10				
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	UR	(LC)		1							

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		8/12/2021 (T1 & T2), 9/12/2021 (T3 & T5)							
					Weather Condition		Sunny, Fine							
					Tidal Condition		Low							
					Tide Level (m)		0.11, 0.26							
					Start Time		0900, 0900							
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						Heard
			WAL	DAL	SWH	P								
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R					1						
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鶇	R		4			10						
Richard's Pipit	<i>Anthus richardi</i>	理氏鶇	WV, PM					5				2		
Rock Dove	<i>Columba livia</i>	原鴿	R		3			3						
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R					83						
Sooty-headed Bulbul	<i>Pycnonotus aurigaster</i>	白喉紅臀鶇	UR					10						
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R	1	1			4				1		
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鶇	WV		1	1		3						
White Wagtail	<i>Motacilla alba</i>	白鶇鶇	PM, WV	1	2	1	1	3	3			3		
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)				1						
Wood Sandpiper	<i>Tringa glareola</i>	林鶇	PM, WV	LC					9					
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷓鴣	R								3			
Total No. of Species					5	13	13	3	22	13	0	1	12	
Total No. of Conservation Interest Species					3	5	9	2	3	11	0	0	4	
Note:														

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		8/12/2021 (T1 & T2), 9/12/2021 (T3 & T5)									
					Weather Condition		Sunny, Fine									
					Tidal Condition		Low									
					Tide Level (m)		0.11, 0.26									
					Start Time		0900, 0900									
					Abundance											
					Transect Walk											
					T1	T2	T3	T5								
					WAL	DAL	SWH	P	Heard	Flight						
<p>R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; 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 AFCDB biodiversity website (www.hkbiobiodiversity.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</p>																

Appendix L1e. Avifauna Species Recorded for Water Birds Monitoring, 16 December 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		16/12/2021 (T1, T2 & T3, T5)						
					Weather Condition		Sunny						
					Tidal Condition		High						
					Tide Level (m)		1.62						
					Start Time		0900						
Abundance													
Transect Walk													
			T1	T2	T3	T5					Heard	Flight	
						WAL	DAL	SWH	P				
Black Drongo	<i>Dicrurus macrocercus</i>	黑卷尾	Sv					2					
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV		1							3	
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R					5					
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鸕	PM	RC			3			30			
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鶇	R										
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鶯	R	PRC(RC)	2	7	3	1	1	8			
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU		1							
Common Greenshank	<i>Tringa nebularia</i>	青腳鸕	PM, WV	RC			2			2			
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鸕	WV, PM				2						
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM							3			
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R				2						
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鶯	R, PM	(LC)			3		11	4			
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC						2			
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	RC						2			
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC	1								

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		16/12/2021 (T1, T2 & T3, T5)							
					Weather Condition		Sunny							
					Tidal Condition		High							
					Tide Level (m)		1.62							
					Start Time		0900							
					Abundance									
					Transect Walk									
T1	T2	T3	T5					Heard	Flight					
			WAL	DAL	SWH	P								
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)		1	4	2		2				
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鶺	UPM, WV				1							
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC	3	1	7		1	4			2	
Intermediate Egret	<i>Egretta intermedia</i>	中白鷺	CPM	RC	1									
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	2	1	11	1		3			3	
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R						1					
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV						4					
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鴝	R						1					
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鶺	WV	RC						11				
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	UR	(LC)	1	1								
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵲	R				8		10					
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM						3					
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R					25						
Sooty-headed Bulbul	<i>Pycnonotus aurigaster</i>	白喉紅臀鵲	UR										2	
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		1		3		6				3	
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		1	2	1		5	8			4	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		16/12/2021 (T1, T2 & T3, T5)							
					Weather Condition		Sunny							
					Tidal Condition		High							
					Tide Level (m)		1.62							
					Start Time		0900							
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
			WAL	DAL	SWH	P	Heard	Flight						
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)	1									
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷓鴣	R				1					2		
Total No. of Species					10	8	13	5	13	12	0	1	6	
Total No. of Conservation Interest Species					7	6	7	3	3	10	0	0	2	
Note:														

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		16/12/2021 (T1, T2 & T3, T5)									
					Weather Condition		Sunny									
					Tidal Condition		High									
					Tide Level (m)		1.62									
					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

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, 16 December 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		16/12/2021 (T1, T2 & T3, T5)						
					Weather Condition		Sunny						
					Tidal Condition		Low						
					Tide Level (m)		1.11						
					Start Time		1400						
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV					1					2
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R					6					
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	夜鷺	R, WV	LC		1							
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷗	PM	RC			2	25	1	26	16		
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鶇	R					7					
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	2	2	4			5			
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU	1				2				
Common Greenshank	<i>Tringa nebularia</i>	青腳鷗	PM, WV	RC				1		2			
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥	R				1						
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R							1			
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷗	WV, PM		1	1	2			2			
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					1	1	9			
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R						50				2
Daurian Redstart	<i>Phoenicurus auroreus</i>	北紅尾鴉	WV			1	1						
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)					6	1			3
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鸚鵡	PM, WV				2			1			

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		16/12/2021 (T1, T2 & T3, T5)						
					Weather Condition		Sunny						
					Tidal Condition		Low						
					Tide Level (m)		1.11						
					Start Time		1400						
					Abundance								
					Transect Walk								
					T1	T2	T3	T5				Heard	Flight
			WAL	DAL	SWH	P							
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC						3			
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	RC				2		1			
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC		1							
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	2	1	2			1		1	
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC	1	4	3	1		2	1	1	
Little Bunting	<i>Emberiza pusilla</i>	小鵪	CPM, WV					1					
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	1		3	1	2	2			
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鶿	R	LC		1							
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鸕	WV, PM	(LC)			4						
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R				1		1				
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鶿	R		3				4				
Northern Lapwing	<i>Vanellus vanellus</i>	鳳頭麥雞	SWV	NT, LC						2			
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵪	WV			6							
Oriental Magpie	<i>Pica serica</i>	喜鵪	R						4				
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵪鵉	R						1				
Oriental Turtle dove	<i>Streptopelia orientalis</i>	山斑鳩	WV, PM						3				
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鵪	WV	RC						13		10	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		16/12/2021 (T1, T2 & T3, T5)									
					Weather Condition		Sunny									
					Tidal Condition		Low									
					Tide Level (m)		1.11									
					Start Time		1400									
					Abundance											
					Transect Walk											
					T1	T2	T3	T5				Heard	Flight			
			WAL	DAL	SWH	P										
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	UR	(LC)			1									
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鸛	R					12								
Rock Dove	<i>Columba livia</i>	原鴿	R		4		6		3				1			
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R					230								
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R			2			8							
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鸛	WV		1				3							
White Wagtail	<i>Motacilla alba</i>	白鶺鴒	PM, WV		1	2		5	14	2						
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R						1							
White-headed Munia	<i>Lonchura maja</i>	白頭文鳥	R						3							
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)		1										
Wood Sandpiper	<i>Tringa glareola</i>	林鶺鴒	PM, WV	LC			2	2		9	1					
Total No. of Species					7	13	14	4	20	12	1	0	4			
Total No. of Conservation Interest Species					3	4	7	4	9	8	1	0	3			

Note:

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		16/12/2021 (T1, T2 & T3, T5)									
					Weather Condition		Sunny									
					Tidal Condition		Low									
					Tide Level (m)		1.11									
					Start Time		1400									
					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 L1i. Avifauna Species Recorded for Water Birds Monitoring, 23 & 24 December 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		23/12/2021 (T1 & T2), 24/12/2021 (T3 & T5)						
					Weather Condition		Fine, Fine						
					Tidal Condition		High						
					Tide Level (m)		1.53, 1.58						
					Start Time		1300, 1400						
					Abundance								
					Transect Walk								
					T1	T2	T3	T5				Heard	Flight
WAL	DAL	SWH	P										
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv										20
Black Drongo	<i>Dicrurus macrocercus</i>	黑卷尾	Sv					3					
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R			2		82					16
Black-faced Spoonbill	<i>Platalea minor</i>	黑臉琵鷺	CWV	EN, (EN), PGC					3				
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC			3	21		30	1		
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	2	2	3	3	5	3			1
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			
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR						30				
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM		1		5						
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					2		4			
Crested Bunting	<i>Emberiza lathami</i>	鳳頭鵲	RR	Cap.170, LC					1				
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R						120				
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)			2		5				
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鶉	PM, WV						1				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		23/12/2021 (T1 & T2), 24/12/2021 (T3 & T5)							
					Weather Condition		Fine, Fine							
					Tidal Condition		High							
					Tide Level (m)		1.53, 1.58							
					Start Time		1300, 1400							
					Abundance									
					Transect Walk									
					T1	T2	T3	T5					Heard	Flight
			WAL	DAL	SWH	P								
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	Cap.170, RC							2			
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	1	1	2		2	3				
Greater Coucal	<i>Centropus sinensis</i>	褐翅鴉鵂	R	(VU)					1					
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC		2	7							
Grey Wagtail	<i>Motacilla cinerea</i>	灰鵲鴿	WV			1								
Large-billed Crow	<i>Corvus macrorhynchus</i>	大嘴烏鴉	R				1							
Little Bunting	<i>Emberiza pusilla</i>	小鵲	CPM, WV						7					
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鷀	R	LC	1	1								
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	1	1	4			3			1	
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鸕	WV, PM	(LC)			1							
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R						1					
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R						4					
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV						3					
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鴿	R						2					
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鵲	WV	RC				2		37				
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	UR	(LC)			2		1					
Red-billed Blue Magpie	<i>Urocissa erythrorhyncha</i>	紅咀藍鵲	R						1					

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		23/12/2021 (T1 & T2), 24/12/2021 (T3 & T5)							
					Weather Condition		Fine, Fine							
					Tidal Condition		High							
					Tide Level (m)		1.53, 1.58							
					Start Time		1300, 1400							
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
			WAL	DAL	SWH	P	Heard	Flight						
Red-rumped Swallow	<i>Cecropis daurica</i>	金腰燕	UPM									20		
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鶇	R					4						
Rock Dove	<i>Columba livia</i>	原鴿	R		8									
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R					90						
Sooty-headed Bulbul	<i>Pycnonotus aurigaster</i>	白喉紅臀鶇	UR					4						
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		3	3	5		7			5		
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鶇	WV				1		4					
White Wagtail	<i>Motacilla alba</i>	白鶇鶇	PM, WV		2	1	9		4	1		3		
Wood Sandpiper	<i>Tringa glareola</i>	林鶇	PM, WV	LC				23		9				
Total No. of Species					7	9	14	4	23	9	2	0	8	
Total No. of Conservation Interest Species					4	5	8	2	6	7	2	0	3	
Note:														

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		23/12/2021 (T1 & T2), 24/12/2021 (T3 & T5)									
					Weather Condition		Fine, Fine									
					Tidal Condition		High									
					Tide Level (m)		1.53, 1.58									
					Start Time		1300, 1400									
					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 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</p>																

Appendix L1j. Avifauna Species Recorded for Water Birds Monitoring, 23 & 24 December 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		23/12/2021 (T1 & T2), 24/12/2021 (T3 & T5)					
					Weather Condition		Fine, Fine					
					Tidal Condition		Low					
					Tide Level (m)		0.3, 0.32					
					Start Time		0900, 0900					
					Abundance							
					Transect Walk							
					T1	T2	T3	T5				Heard
			WAL	DAL	SWH	P						
Black Drongo	<i>Dicrurus macrocercus</i>	黑卷尾	Sv					1				
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R					2				
Black-faced Spoonbill	<i>Platalea minor</i>	黑臉琵鷺	CWV	EN, (EN), PGC					5			
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷗	PM	RC			6		50			
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	6	6	2		2			
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU					2			
Common Greenshank	<i>Tringa nebularia</i>	青腳鷗	PM, WV	RC					1			
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷗	WV, PM			2	1		2			
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R		10				70			
Daurian Redstart	<i>Phoenicurus aureoreus</i>	北紅尾鴝	WV				1					
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)					7	8		
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鸚鵡	PM, WV						1			
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鷀	CWV	PRC	1							
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	1	3	4		1	3		

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		23/12/2021 (T1 & T2), 24/12/2021 (T3 & T5)					
					Weather Condition		Fine, Fine					
					Tidal Condition		Low					
					Tide Level (m)		0.3, 0.32					
					Start Time		0900, 0900					
					Abundance							
					Transect Walk							
					T1	T2	T3	T5				Heard
			WAL	DAL	SWH	P						
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC	5	3	3		3	2		
Little Bunting	<i>Emberiza pusilla</i>	小鵪鶉	CPM, WV						1			
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	1	2	1			2		
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鶿	R	LC		1						
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鸻	WV, PM	LC						2		
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R						1			
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鶇	R						3			
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV						4			
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鴝	R						2			
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鹮	WV	RC						24		
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	UR	(LC)		1						
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鶇	R						4			
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM						1			
Rock Dove	<i>Columba livia</i>	原鴿	R			2			8			
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R				11	60				
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R			1	2		3			
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鶇	WV						2			

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		23/12/2021 (T1 & T2), 24/12/2021 (T3 & T5)						
					Weather Condition		Fine, Fine						
					Tidal Condition		Low						
					Tide Level (m)		0.3, 0.32						
					Start Time		0900, 0900						
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Swinhoe's White-eye	<i>Zosterops simplex</i>	暗綠繡眼鳥	R			1							
White Wagtail	<i>Motacilla alba</i>	白鵲鴿	PM, WV			2	2		13				
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R						1				
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)			1		1				
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC		1	2		4				
Total No. of Species					6	12	11	1	22	12	0	0	0
Total No. of Conservation Interest Species					5	7	7	0	6	10	0	0	0
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		23/12/2021 (T1 & T2), 24/12/2021 (T3 & T5)									
					Weather Condition		Fine, Fine									
					Tidal Condition		Low									
					Tide Level (m)		0.3, 0.32									
					Start Time		0900, 0900									
					Abundance											
					Transect Walk											
					T1	T2	T3	T5								
					WAL	DAL	SWH	P	Heard	Flight						
<p>R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; 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 L1k. Avifauna Species Recorded for Water Birds Monitoring, 28 & 29 December 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		28/12/2021 (T1 & T2), 29/12/2021 (T3 & T5)			
					Weather Condition		Overcast, Fine			
					Tidal Condition		High			
					Tide Level (m)		1.77, 1.74			
					Start Time		1600, 1600			
					Abundance					
					Transect Walk					
					T1	T2	T3	T5		
			WAL	DAL	SWH	P				
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv							20
Black Drongo	<i>Dicrurus macrocercus</i>	黑卷尾	Sv		2					
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV							1
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			4		42	5
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	1		2	1	3	
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU			1		1	
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			1		3	
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥	R		1					
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM			8	2			
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R		7					
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)				3	16	6
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC						2
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)		2	2			
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷸	UPM, WV						1	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		28/12/2021 (T1 & T2), 29/12/2021 (T3 & T5)							
					Weather Condition		Overcast, Fine							
					Tidal Condition		High							
					Tide Level (m)		1.77, 1.74							
					Start Time		1600, 1600							
					Abundance									
					Transect Walk									
					T1	T2	T3	T5				Heard	Flight	
			WAL	DAL	SWH	P								
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC	3	2	4		3	1				
Grey Wagtail	<i>Motacilla cinerea</i>	灰鵲鴿	WV		2			1	3					
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R									10		
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鶿	R	LC	1	1								
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	1	2	2		2	3		1		
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R						1					
Marsh Sandpiper	<i>Tringa stagnatilis</i>	澤鵲	PM, WV	RC						1				
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R				2		9					
Northern Lapwing	<i>Vanellus vanellus</i>	鳳頭麥雞	SWV	NT, LC				5						
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV						1					
Oriental Magpie	<i>Pica serica</i>	喜鵲	R				2							
Oriental Magpie-Robin	<i>Copsychus saularis</i>	鵲鴿	R						2					
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鵲	WV	RC						28				
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	UR	(LC)	1									
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	紅耳鶇	R		5				4					
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM						1					
Rock Dove	<i>Columba livia</i>	原鴿	R				4		1			2		

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		28/12/2021 (T1 & T2), 29/12/2021 (T3 & T5)						
					Weather Condition		Overcast, Fine						
					Tidal Condition		High						
					Tide Level (m)		1.77, 1.74						
					Start Time		1600, 1600						
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R				63						
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R			3	17						
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵯	WV			1	5						
Swinhoe's White-eye	<i>Zosterops simplex</i>	暗綠繡眼鳥	R				4						
White Wagtail	<i>Motacilla alba</i>	白鵲鶉	PM, WV		2	5	1	15					
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC		1		10					
Total No. of Species					10	6	15	5	19	9	2	0	6
Total No. of Conservation Interest Species					5	5	8	3	5	8	2	0	2
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		28/12/2021 (T1 & T2), 29/12/2021 (T3 & T5)				
					Weather Condition		Overcast, Fine				
					Tidal Condition		High				
					Tide Level (m)		1.77, 1.74				
					Start Time		1600, 1600				
					Abundance						
					Transect Walk						
					T1	T2	T3	T5			
					WAL	DAL	SWH	P	Heard	Flight	
<p>R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; 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 L1j. Avifauna Species Recorded for Water Birds Monitoring, 28 & 29 December 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		28/12/2021 (T1 & T2), 29/12/2021 (T3 & T5)					
					Weather Condition		Overcast, Fine					
					Tidal Condition		Low					
					Tide Level (m)		0.9, 1.19					
					Start Time		1000, 1000					
					Abundance							
					Transect Walk							
					T1	T2	T3	T5				Heard
			WAL	DAL	SWH	P						
Black Drongo	<i>Dicrurus macrocercus</i>	黑卷尾	Sv					1				
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R					21				
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鵞	PM	RC					43			
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鶇	R					2				
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	6	5	2		5			
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU		1						
Common Greenshank	<i>Tringa nebularia</i>	青腳鵞	PM, WV	RC					2			
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鵞	WV, PM		1							
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM						1			
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R						40			
Daurian Redstart	<i>Phoenicurus auroreus</i>	北紅尾鴝	WV						1			
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)	2				16			
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC					2			
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC	12	5						
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)		2	2		1			

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		28/12/2021 (T1 & T2), 29/12/2021 (T3 & T5)							
					Weather Condition		Overcast, Fine							
					Tidal Condition		Low							
					Tide Level (m)		0.9, 1.19							
					Start Time		1000, 1000							
					Abundance									
					Transect Walk									
					T1	T2	T3	T5					Heard	Flight
			WAL	DAL	SWH	P								
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC	1	2	2		2				1	
Grey Wagtail	<i>Motacilla cinerea</i>	灰鵲鴿	WV							1				
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	2	4	5			5				
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R						1					
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鹮	WV	RC						29				
Red-rumped Swallow	<i>Cecropis daurica</i>	金腰燕	UPM										20	
Richard's Pipit	<i>Anthus richardi</i>	理氏鷦	WV, PM				4		3					
Rock Dove	<i>Columba livia</i>	原鴿	R			8			2					
Scaly-breasted Munia	<i>Lonchura punctulata</i>	斑文鳥	R						150					
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		3	2			2					
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵲	WV										1	
White Wagtail	<i>Motacilla alba</i>	白鵲鴿	PM, WV		2	3	1		3	4				
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R						1					
Total No. of Species					8	9	6	0	16	8	0	0	3	
Total No. of Conservation Interest Species					5	6	4	0	4	5	0	0	1	
Note:														

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		28/12/2021 (T1 & T2), 29/12/2021 (T3 & T5)									
					Weather Condition		Overcast, Fine									
					Tidal Condition		Low									
					Tide Level (m)		0.9, 1.19									
					Start Time		1000, 1000									
					Abundance											
					Transect Walk											
					T1	T2	T3	T5								
								WAL	DAL	SWH	P	Heard	Flight			
<p>R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; 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 L1k. Waterbirds Recorded in December 2021

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	T2: River bank, River bed, In flight	Common resident and winter visitor. Widely distributed in Hong Kong.
Black-faced Spoonbill	<i>Platalea minor</i>	黑臉琵鷺	EN, (EN), PGC	T5: Shallow Water Habitat, In flight	Common winter visitor. Found in Deep Bay area.
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷺	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>	青腳鷺	RC	T3: River bed T5: Wet Agricultural Land, Shallow Water Habitat	Abundant passage migrant and winter visitor. Found in Deep Bay area.
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥		T1: River bank, In flight T3: River bank, In flight T5: Dry Agricultural Land	Common passage migrant and winter visitor. Widely distributed in wetland habitat throughout Hong Kong.
Common Redshank	<i>Tringa totanus</i>	紅腳鷺	RC	T3: River bed T5: Wet Agricultural Land, Shallow Water Habitat	Common passage migrant. Found in Deep Bay area.
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷺		T1: River bed T2: River bed T3: River bed T5: Dry Agricultural Land, Shallow Water Habitat	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, Dry Agricultural Land, Shallow Water Habitat	Common passage migrant and winter visitor. Found in Long Valley, Chau Tau, Sai Kung.
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	(LC)	T1: River bank T2: River bank T3: River bank T5: Wet Agricultural Land, Dry	Resident and common passage migrant. Widely distributed in Hong Kong.

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
				Agricultural Land, Shallow Water Habitat, In flight	
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	RC	T5: Shallow Water Habitat, Pond	Common winter visitor. Found in Deep Bay area, Shuen Wan, Tai Lam Chung Reservoir, Victoria Harbour, Urban Park.
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	RC	T5: Shallow Water Habitat, Pond	Common winter visitor. Found in Deep Bay area, Tai Lam Chung.
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	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.
Great Egret	<i>Ardea alba</i>	大白鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, In flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common resident and winter visitor. Widely distributed in Hong Kong.
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鶿		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, In flight	Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, Cape D'Aguilar.
Intermediate Egret	<i>Egretta intermedia</i>	中白鷺	RC	T1: River bank T5, Shallow Water Habitat	Common passage migrant. Found in Deep Bay area, Tai Long Wan, Starling Inlet, Tai O, Cape D'Aguilar.
Kentish Plover	<i>Charadrius alexandrinus</i>	環頸鴉	RC	T5: Shallow Water Habitat	Abundant winter visitor. Found in Deep Bay area, Chek Lap Kok, Shuen Wan, Sai Kung, Lantau Island.
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	Common resident. Widely distributed in coastal area throughout Hong Kong.

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
				Habitat, Pond, In flight	
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鶿	LC	T1: River bed T2: River bed	Common resident. Found in Deep Bay area.
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鸻	(LC)	T2: River bank, River bed T3: River bank, River bed T5: Wet Agricultural Land, Shallow Water Habitat	Common winter visitor and passage migrant. Widely distributed in freshwater areas throughout Hong Kong.
Marsh Sandpiper	<i>Tringa stagnatilis</i>	澤鵠	RC	T3: River bank, River bed T5: Shallow Water Habitat	Common winter visitor and passage migrant. Found in Deep Bay area, Shuen Wan, Long Valley, Kam Tin, Sai Kung.
Northern Lapwing	<i>Vanellus vanellus</i>	鳳頭麥雞	NT, LC	T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat	-
Northern Shoveler	<i>Spatula clypeata</i>	琵嘴鴨	RC	T5: Shallow Water Habitat, Pond	Abundant winter visitor. Found in Deep Bay area.
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鵠	RC	T5: Wet Agricultural Land, Shallow Water Habitat, Pond, In flight.	Abundant winter visitor. Found in Deep Bay area.
Pied Kingfisher	<i>Ceryle rudis</i>	斑魚狗	(LC)	T1: River bank T2: River bank T3: River bank T5: Dry Agricultural Land	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	Common resident. Widely distributed in wetland throughout Hong Kong.
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	(LC)	T1: River bank T2: River bank T3: River bank T5: Dry Agricultural Land	Common resident. Widely distributed in coastal areas throughout Hong Kong.
Wood Sandpiper	<i>Tringa glareola</i>	林鵠	LC	T2: River bed T3: River bed T5: Wet Agricultural Land, Shallow Water Habitat, Pond	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: 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 *Source: Hong Kong Biodiversity Database, AFCD (https://www.afcd.gov.hk/English/conservation/hkbiodiversity/database/search.php)</p>					

Appendix L1I. Birds Recorded in December 2021

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv	
Black Drongo	<i>Dicrurus macrocercus</i>	黑卷尾	Sv	
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV	(RC), Cap.586
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	夜鷺	R, WV	(LC)
Black-collared Starling	<i>Gracupica nigricollis</i>	黑領棕鳥	R	
Black-faced Spoonbill	<i>Platalea minor</i>	黑臉琵鷺	CWV	EN, (EN), PGC
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷗	PM	RC
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鶇	R	
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU
Common Greenshank	<i>Tringa nebularia</i>	青腳鷗	PM, WV	RC
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥	R	
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR	
Common Redshank	<i>Tringa totanus</i>	紅腳鷗	PM	RC
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷗	WV, PM	
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM	
Common Tailorbird	<i>Orthotomus sutorius</i>	長尾縫葉鶯	R	
Crested Bunting	<i>Emberiza lathami</i>	鳳頭鶇	RR	LC
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R	
Daurian Redstart	<i>Phoenicurus aureoreus</i>	北紅尾鶇	WV	
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鶺鴒	PM, WV	
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC
Eurasian Wigeon	<i>Mareca penelope</i>	赤頸鴨	CWV	RC
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R	
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	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)
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鶺	UPM, WV	
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC
Grey Wagtail	<i>Motacilla cinerea</i>	灰鶺鴒	WV	
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R	
Intermediate Egret	<i>Egretta intermedia</i>	中白鷺	CPM	RC
Kentish Plover	<i>Charadrius alexandrinus</i>	環頸鴉	WV	RC
Large-billed Crow	<i>Corvus macrorhynchus</i>	大嘴烏鴉	R	
Little Bunting	<i>Emberiza pusilla</i>	小鶺	CPM, WV	
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鶿	R	LC
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鴉	WV, PM	(LC)
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R	
Marsh Sandpiper	<i>Tringa stagnatilis</i>	澤鶺	CPM, CWV	RC

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	黑臉噪鵲	R	
Northern Lapwing	<i>Vanellus vanellus</i>	鳳頭麥雞	SWV	NT, LC
Northern Shoveler	<i>Spatula clypeata</i>	琵嘴鴨	WV	RC
Olive-backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV	
Oriental Magpie	<i>Pica serica</i>	喜鵲	R	
Oriental Magpie Robin	<i>Copsychus saularis</i>	鵲鳩	R	
Oriental Turtle dove	<i>Streptopelia orientalis</i>	山斑鳩	WV, PM	
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	
Red-rumped Swallow	<i>Cecropis daurica</i>	金腰燕	UPM	
Red-whiskered bulbul	<i>Pycnonotus jocosus</i>	紅耳鶇	R	
Richard's Pipit	<i>Anthus richardi</i>	理氏鵲	WV, PM	
Rock Dove	<i>Columba livia</i>	原鴿	R	
Sooty-headed Bulbul	<i>Pycnonotus aurigaster</i>	白喉紅臀鶇	UR	
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R	
Spotted Munia	<i>Lonchura punctulata</i>	斑文鳥	R	
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鶇	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-headed Munia	<i>Lonchura maja</i>	白頭文鳥	R	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)
White Wagtail	<i>Motacilla alba</i>	白鵲鴿	PM, WV	
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	PM, WV	LC
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R	

Note:

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

Status was decided according to AFCDB 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

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. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)

WAL: Wet Agricultural Land

DAL: Dry Agricultural Land

SWH: Shallow Water Habitat

P: Pond

Appendix L1m. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 9 December 2021, T5

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 9/12/2021					
					Start Time: 18:00					
					Abundance					
				WAL	DAL	SWH	P	Heard	Flight	
Black-faced Spoonbill	<i>Platalea minor</i>	黑臉琵鷺	CWV	EN, (EN), PGC			36			
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鸕	PM	RC			24			
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)		1				
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC		2				
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鸕	WV	RC			12			
Total No. of Species					0	2	3	0	0	0
Total No. of Conservation Interest Species					0	2	3	0	0	0
<p>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 W</p>										

Appendix L1n. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 24 December 2021, T5

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 24/12/2021						
					Start Time: 18:00						
					Abundance						
						WAL	DAL	SWH	P	Heard	Flight
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC				36	7		
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)		1	2				
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC		1	1				
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC				23			
Total No. of Species					0	2	4	1	0	0	
Total No. of Conservation Interest Species					0	2	4	1	0	0	
<p>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 W</p>											

Appendix L2. Mammal Species Recorded for Ecologically Sensitive Habitat Monitoring, 10 & 15 December 2021

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 10/12/2021, 15/12/2021				
					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	+	+	+	+	+
Short-nosed Fruit Bat	<i>Cynopterus sphinx</i>	短吻果蝠	Very Common	Cap. 170, I, NT	+		+		+
Total No. of species					4	1	3	1	3
Total No. of Conservation Interest Species					3	1	2	1	2
<p>Note:</p> <p>Cap. 170: Species under protection of Wild Animals Protection Ordinance (Cap. 170)</p> <p>NT: Near Threatened in the Red List of China's Vertebrates</p> <p>I: Indeterminate in China Red Data Book Status</p> <p>+: 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, 10 & 15 December 2021

Common Name	Species Name	Chinese Name	Conservation Status	Date: 10/12/2021, 15/12/2021				
				Relative Abundance				
				Transect Walk				
				T1	T3	T4	T5	T6
Amphibian								
Asian Common Toad	<i>Bufo melanostictus</i>	黑眶蟾蜍	-	+			+++	+
Asian Painted Frog	<i>Kaloula pulchra</i>	花狹口蛙	-				+	
Brown Tree Frog	<i>Polypedates megacephalus</i>	斑腿泛樹蛙	-	+				
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				4	1	1	2	1
Total No. of Conservation Interest Species				0	0	0	0	0
Note:// NT: Near Threatened in the Red List of China's Vertebrates +: 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, 10 & 15 December 2021

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 10/12/2021, 15/12/2021				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Common Bluebottle	<i>Graphium sarpedon</i>	青鳳蝶	Common	-			+		
Common Grass Yellow	<i>Eurema hecabe</i>	寬邊黃粉蝶	Very common	-	+	+	+		
Common Jay	<i>Graphium doson axion</i>	木蘭青鳳蝶	Common	-	+				
Common Mormon	<i>Papilio polytes</i>	玉帶鳳蝶	Very common	-			+	+	
Common Sailer	<i>Neptis hylas</i>	中環蛺蝶	Very common	-				+	
Dark Brand Bush Brown	<i>Mycalesis mineus</i>	小眉眼蝶	Very common	-					+
Indian Cabbage White	<i>Pieris canidia</i>	東方菜粉蝶	Very common	-	+++	+	++	+	++
Indian Fritillary	<i>Argyreus hyperbius</i>	斐豹蛺蝶	Common	-	+			+	
Pale Grass Blue	<i>Pseudozizeeria maha</i>	酢漿灰蝶	Very common	-	+	+	+++	+	++
Paris Peacock	<i>Papilio paris</i>	巴黎翠鳳蝶	Very common	-	+				
Plum Judy	<i>Abisara echerius</i>	蛇目褐蛺蝶	Very Common	-	++		++	+	
Red-base Jezebel	<i>Delias pasithoe</i>	報喜斑粉蝶	Very common	-	+		+		
South China Bush Brown	<i>Mycalesis zonata</i>	平頂眉眼蝶	Very Common	-	+				
Southern Sullied Sailer	<i>Neptis clinia</i>	珂環蛺蝶	Common	-				++	
Transparent 6-line	<i>Nacaduba kurava</i>	古樓娜灰蝶	Common	-	+++				

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 10/12/2021, 15/12/2021				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Blue									
Total No. of species					10	3	7	7	3
Total No. of Conservation Interest Species					0	0	0	0	0
<p>Note:</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 10 & 15 December 2021

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 10/12/2021, 15/12/2021				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Wandering Glider	<i>Pantala flavescens</i>	黃蜻	Abundant	-	+	+	++		+
Total No. of species					1	1	1	0	1
Total No. of Conservation Interest Species					0	0	0	0	0
<p>Note: LC: Local Concern (Fellowes et al., 2002) +: species recorded within transect routes ++: species commonly recorded within transect routes +++: dominant species within transect routes</p>									

APPENDIX M
WEATHER CONDITION

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

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1 December 2021	17.3	40	-
2 December 2021	17.4	42	-
3 December 2021	18	35	-
4 December 2021	18.1	46	-
5 December 2021	19.1	55	-
6 December 2021	19.2	59	-
7 December 2021	19.9	65	-
8 December 2021	20.1	67	-
9 December 2021	20.2	72	-
10 December 2021	20.9	73	-
11 December 2021	21.4	74	-
12 December 2021	21.5	75	-
13 December 2021	19.4	67	-
14 December 2021	20.5	72	Trace
15 December 2021	21.5	78	0.2

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
16 December 2021	23.2	81	Trace
17 December 2021	21.7	69	-
18 December 2021	18.1	58	-
19 December 2021	17.9	51	-
20 December 2021	17.2	78	9.4
21 December 2021	17.3	88	2.4
22 December 2021	19.3	80	Trace
23 December 2021	19.9	77	0.8
24 December 2021	19.9	84	1.7
25 December 2021	19.6	75	Trace
26 December 2021	15	78	3.5
27 December 2021	12	81	1.3
28 December 2021	15.3	74	0.2
29 December 2021	18.4	74	-
30 December 2021	18.1	77	-
31 December 2021	18	78	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

	<p>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.</p>	<p>Implementation of remedial measures.</p>		<p>agreed proposals; and 4. Amend proposal if appropriate.</p>
LIMIT LEVEL				
<p>1.Exceedance for one sample</p>	<p>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.</p>	<p>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</p>	<p>1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.</p>	<p>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.</p>

		measures.		
2.Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to ER and copy to the IEC and ET; 2. Implement noise mitigation proposals.
Limit Level	<ol style="list-style-type: none"> 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; 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. Conduct addition site investigation on the same day; 2. Inform IEC, Contractor and ER; 3. Check monitoring data, all plant, equipment, Contractor's working methods and other relative information; 4. Review proposals on remedial measures submitted by Contractor; 5. Discuss remedial measures with IEC and Contractor and ER; and 6. Review submit proposal and ensure the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with ET, ER and Contractor on the implemented mitigation measures; 2. Review proposals on remedial measures submitted by Contractor and advise the ER accordingly; and 3. Review submit proposal and advise the ET and ER on the Effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Review proposals on remedial measures submitted by Contractor; 2. Discuss with IEC, ET and Contractor on the Implemented mitigation measures; 3. Make agreement on the remedial measures to be implemented; and 4. Supervise the implementation of agreed remedial measures. 	<ol style="list-style-type: none"> 1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the noncompliance in writing; 3. Rectify unacceptable practice; 4. Check all plant and equipment; 5. Consider changes of working methods; 6. Discuss with ER, ET and IEC and submit proposal of remedial measures to ER and IEC; and 7. Implement the agreed mitigation measures.
Action level being exceeded by more than one consecutive sampling days	<ol style="list-style-type: none"> 1. Conduct addition site investigation on the same day; 2. Inform IEC, Contractor and ER; 3. Check monitoring data, all plant, equipment, 	<ol style="list-style-type: none"> 1. Discuss with ET, Contractor and ER on the implemented mitigation measures; 2. Review the proposed remedial measures submitted by Contractor and advise 	<ol style="list-style-type: none"> 1. Discuss with ET, IEC and Contractor on the proposed mitigation measures; 2. Make agreement on the remedial measures to be implemented; and 	<ol style="list-style-type: none"> 1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the non-compliance in writing; 3. Rectify unacceptable

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	<p>Contractor's working methods and other relative information;</p> <p>4. Discuss remedial measures with IEC, contractor and ER; and</p> <p>5. Review submit proposal and ensure the agreed remedial measures are implemented</p>	<p>the ER accordingly; and</p> <p>3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.</p>	<p>3. Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures</p>	<p>practice;</p> <p>4. Check all plant and equipment and consider changes of working methods;</p> <p>5. Discuss with ET, IEC and ER and submit proposal of remedial measures to ER and IEC within 3 working days of notification; and</p> <p>6. Implement the agreed mitigation measures.</p>
Limit level being exceeded by one sampling day	<p>1. Conduct addition site investigation on the same day;</p> <p>2. Inform IEC, Contractor and ER;</p> <p>3. Rectify unacceptable practice;</p> <p>4. Check monitoring data, all plant, equipment, Contractor's working methods and other relative information;</p> <p>5. Consider changes of working methods;</p> <p>6. Discuss mitigation measures with IEC, ER and Contractor;</p> <p>7. Review the submit</p>	<p>1. Discuss with ET, Contractor and ER on the implemented mitigation measures;</p> <p>2. Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and</p> <p>3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.</p>	<p>1. Discuss with ET, IEC and Contractor on the implemented remedial measures;</p> <p>2. Request Contractor to critically review the working methods;</p> <p>3. Make agreement on the remedial measures to be implemented; and</p> <p>4. Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures.</p>	<p>1. Identify source(s) of impact;</p> <p>2. Inform the ER and confirm notification of the noncompliance in writing;</p> <p>3. Rectify unacceptable practice;</p> <p>4. Check all plant and equipment and consider changes of working methods;</p> <p>5. Discuss with ET, IEC and ER and submit proposal of additional mitigation measures to ER and IEC within 3 working days of</p>

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	proposal and ensure the agreed remedial measures are implemented;			notification; and 6. Implement the agreed remedial measures.
Limit level being exceeded by more than one consecutive sampling days	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the noncompliance in writing; 3. Rectify Unacceptable practice; 4. Check all plant and equipment and consider changes of working methods; 5. Discuss with ET, IEC and ER and submit proposal of additional mitigation measures to ER and IEC within 3 working days of notification; and 6. Implement the agreed remedial measures. 7. As directed by the ER, to slow down or stop all or part of the dredging activities until no exceedance of Limit level.

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

Table N-4: Actions in the event of LFG being detected

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

Note: Depending on the results of the measurements, actions required will vary and should be set down by the Safety Officer or another appropriately qualified person. As a minimum these should encompass those actions specified in the above table.

Table N-5: Event / Action Plan for Ambient Arsenic Monitoring

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; and 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate
2. Exceedance for two or more consecutive samples	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Advise the ER and Contractor on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC, ER and Contractor on remedial	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 2. Implement the agreed proposals; and 3. Amend proposal if appropriate.

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

	<p>procedures to determine possible mitigation to be implemented;</p> <p>6. Arrange meeting with IEC, Contractor and ER to discuss the remedial actions to be taken;</p> <p>7. Assess effectiveness of Contractor’s remedial actions and keep IEC, EPD and ER informed of the results;</p> <p>8. If exceedance stops, cease additional monitoring.</p>	<p>their effectiveness and advise the ER accordingly;</p> <p>3. Supervise the implementation of remedial measures</p>	<p>remedial measures to be implemented;</p> <p>4. Supervise and ensure remedial measures properly implemented; and</p> <p>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</p>	<p>3. Implement the agreed proposals;</p> <p>4. Resubmit proposals if problem still not under control;</p> <p>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</p>
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Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer’s Representative

Table N-6.1 Action and Limit Levels and Responses 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	0	0	0
	Turbidity	0	0	0	0
	SS	0	0	0	0
	Arsenic	0	0	0	0

(D) Exceedance Report for Landfill Gas

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Landfill Gas	O ₂ (% v/v) CH ₄ (% LEL) CO ₂ (% v/v)	0	0	0	0

(E) Exceedance Report for Built Heritage Monitoring

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Cultural Heritage	Built Heritage Monitoring	0	0	0	0

APPENDIX P
SITE AUDIT SUMMARY

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

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

Weekly Site Inspection Record Summary

Checklist Reference Number	211207
Date	7 December 2021 (Tuesday)
Time	09:30-11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• No environmental deficiency was identified during site inspection.	
	G. Landfill Gas Hazard	
	• No environmental deficiency was identified during site inspection.	
	H. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	I. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	J. Ecology	
	• No environmental deficiency was identified during site inspection.	
	K. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:211130), no major environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		7 December 2021
Checked by	Dr. Priscilla Choy		7 December 2021

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	211214
Date	14 December 2021 (Tuesday)
Time	09:30-11:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
211214-R02	• Dusty stockpile should be covered by imperious sheeting.	B 2
	<i>C. Noise</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. 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>	
211214-R01	• Solid dull green barrier should be erected along river channel.	J 7
	<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.:211207), no major environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		14 December 2021
Checked by	Dr. Priscilla Choy		14 December 2021

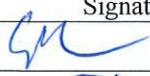
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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

Weekly Site Inspection Record Summary

Checklist Reference Number	211221
Date	21 December 2021 (Tuesday)
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. 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.:211214), all environmental deficiencies were observed improved/ rectified by Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		21 December 2021
Checked by	Dr. Priscilla Choy		21 December 2021

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	211228
Date	28 December 2021 (Tuesday)
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. 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>	
211228-R01	• Drip tray should be provided for chemical storage.	E 14
	<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.:211221), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		28 December 2021
Checked by	Dr. Priscilla Choy		28 December 2021

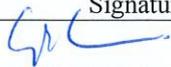
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	211201
Date	1 December 2021 (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	
211201-R01	• Dusty slope surface should be covered. (North Bridge)	D 6
211201-R02	• Remove dusty materials beside the U-channel and clear the stagnant water inside the U-channel. (South Bridge)	D 7
211201-O03	• To enhance water control measure to prevent any discharge of muddy water to Sheung Yue River. (河□)	D 2i, D 3
	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.:211124), all identified environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		1 December 2021
Checked by	Dr. Priscilla Choy		1 December 2021

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	211208
Date	8 December 2021 (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	
211208-R02	• To replace faded NRMM label on generator. (North Bridge)	B 24
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
211208-R01	• Remove dusty materials beside the U-channel and clear the stagnant water inside the U-channel. (South Bridge)	D 6
211208-O04	• To enhance water control measure to prevent any discharge of muddy water to Sheung Yue River. (河口)	D 2i, D 3
	E. Waste / Chemical Management	
211208-O03	• To clear oil leakage from generator on site. (North Bridge)	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.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:211201), follow-up actions were required for item 211201-R02 and 211201-O03, which were remarked as 211208-R01 and 211208-O04 respectively.	

	Name	Signature	Date
Recorded by	Adrian Lam		13 December 2021
Checked by	Dr. Priscilla Choy		13 December 2021

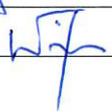
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	211217
Date	17 December 2021 (Friday)
Time	14:00 – 15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
211217-R02	• To replace faded NRMM label on generator.	B 24
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
211217-R01	• Remove dusty materials beside the U-channel and clear the stagnant water inside the U-channel. (South Bridge)	D 6
211217-O03	• To enhance water control measure to prevent any discharge of muddy water to Sheung Yue River. (河可口)	D 2i, D 3
	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.:211208), follow-up actions were required for item 211208-R01, 211208-R02 and 211208-O04, which were remarked as 211217-R01, 211217-R02 and 211217-O03 respectively.	

	Name	Signature	Date
Recorded by	Adrian Lam		20 December 2021
Checked by	Dr. Priscilla Choy		20 December 2021

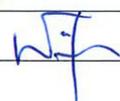
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	211222
Date	22 December 2021 (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	
211222-001	• Remove dusty materials beside the U-channel and clear the stagnant water inside the U-channel. (South Bridge)	D 6
211222-002	• To enhance water control measure to prevent any discharge of muddy water to Sheung Yue River. (河口)	D 2i, D 3, D 7
211222-003	• To enhance water control measure to prevent any discharge of muddy water to Sheung Yue River. (North Bridge)	D 2i, D 3, D 7
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• 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.:211217), item 211217-R01 and 211217-002 were remarked as 211222-001 and 211222-002. Follow-up action is needed to be reviewed. Other environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		28 December 2021
Checked by	Dr. Priscilla Choy		28 December 2021

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	211229
Date	29 December 2021 (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	
211229-001	• Remove dusty materials beside the U-channel and clear the stagnant water inside the U-channel. (South Bridge)	D 6
211229-002	• To enhance water control measure to prevent any discharge of muddy water to Sheung Yue River. (河口)	D 2i, D 3, D 7
211229-003	• To enhance water control measure to prevent any discharge of muddy water to Sheung Yue River. (North Bridge)	D 2i, D 3, D 7
211229-004	• Clear and treat the stagnant muddy water inside the U-Channel with desilting facilities before discharge.	D 6
	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.:211217), item 211222-O01, 211222-O02 and 211222-O03 were remarked as 211229-O01, 211229-O02 and 211229-O03. Follow-up action is needed to be reviewed.	

	Name	Signature	Date
Recorded by	Antony Leung		30 December 2021
Checked by	Dr. Priscilla Choy		30 December 2021

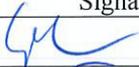
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	211203
Date	3 December 2021 (Friday)
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>	
211203-R01	• Dusty haul road should be sprayed with water regularly.	B 1
	<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>	
211203-R02	• Empty chemical container should be stored properly in designated area.	E 2i
	<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.:211123), items 211123-R01 was remarked as 211203-R02. Follow-up action is needed to be reviewed.	

	Name	Signature	Date
Recorded by	Antony Leung		6 December 2021
Checked by	Dr. Priscilla Choy		6 December 2021

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	211210
Date	10 December 2021 (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>	
211210-R01	• Dusty stockpile should be covered by imperious sheeting.	B 2 & B 5
	<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.:211203), all environmental deficiencies were observed improved/ rectified by Contractor..	

	Name	Signature	Date
Recorded by	Antony Leung		13 December 2021
Checked by	Dr. Priscilla Choy		13 December 2021

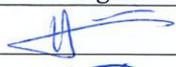
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	211214
Date	14 December 2021 (Tuesday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
211214-R01	• Exposed worksite and haul road should be watered regularly.	B 1
211214-R02	• Excavated or stockpile of dusty material should be covered by impervious sheetings or sprayed with water.	B 2 & E 5
	<i>C. Construction Noise Impact</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
211214-R03	• To clean wheel-washing bay regularly.	D 12iii & 12iv
	<i>E. Waste / Chemical Management</i>	
211214-R04	• Empty chemical containers should be stored at designated area.	E 2i
	<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.:211210), item 211210-R01 was remarked as 211214-R02, follow-up actions are needed to be reviewed.	

	Name	Signature	Date
Recorded by	Adrian Lam		20 December 2021
Checked by	Dr. Priscilla Choy		20 December 2021

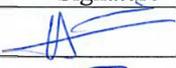
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	211224
Date	24 December 2021 (Friday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
211224-001	<ul style="list-style-type: none"> Any portion of road leading to construction site within 30m of a vehicle exit should be kept free from dust and mud. Mud was observed along portion of road next to Sheung Yue River. 	B 6 & 9
	C. Construction Noise Impact	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	D. Water Quality	
211224-R01	<ul style="list-style-type: none"> To clean wheel-washing bay regularly. 	D 12iii & 12iv
211224-R02	<ul style="list-style-type: none"> To provide adequate wheel-washing bay facilities at every vehicle exit so as to prevent vehicles leaving site with earth and mud. 	D 11 & 12i
	E. Waste / Chemical Management	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	F. Landscape & Visual	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	G. Ecology	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	H. Permits/Licences	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	I. Others	
	<ul style="list-style-type: none"> Follow-up on previous audit section (Ref. No.:211214), item 211214-R03 was remarked as 211224-R01, follow-up actions are needed to be reviewed. 	

	Name	Signature	Date
Recorded by	Adrian Lam		28 December 2021
Checked by	Dr. Priscilla Choy		28 December 2021

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	211231
Date	31 December 2021 (Friday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
211231-R01	• To clean wheel-washing bay regularly.	D 12iii & 12iv
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.:211224), item 211224-R01 was remarked as 211231-R01, follow-up actions are needed to be reviewed.	

	Name	Signature	Date
Recorded by	Adrian Lam		4 January 2022
Checked by	Dr. Priscilla Choy		4 January 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	211202
Date	2 December 2021 (Thursday)
Time	14:00-16:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
211202-R01	• Dusty stockpile should be covered by imperious sheeting.	B 2 & E 5
	C. Noise	
211202-R02	• To enhance noise mitigation measures along Shek Wu San Tsuen.	C 7
	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	
211202-O03	• To provide 10m buffer zone along Siu Hang San Tsuen Stream.	H 3
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 211118), no major environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		6 December 2021
Checked by	Dr. Priscilla Choy		6 December 2021

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	211210
Date	10 December 2021 (Friday)
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	
211210-R01	• To enhance noise mitigation measures along Shek Wu San Tsuen.	C 7
	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	
211210-O02	• To provide 10m buffer zone along Siu Hang San Tsuen Stream.	H 3
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 211202), item 211202-R02 and 211202-O03 were remarked as 211210-R01 and 211210-O02. Other environmental deficiency was observed improved/ rectified by Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		13 December 2021
Checked by	Dr. Priscilla Choy		13 December 2021

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	211216
Date	16 December 2021 (Thursday)
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	
211216-R01	• To enhance noise mitigation measures along Shek Wu San Tsuen.	C 7
	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	
211216-O02	• To provide 10m buffer zone along Siu Hang San Tsuen Stream.	H 3
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 211202), item 211210-R01 and 211210-O02 were remarked as 211216-R01 and 211216-O02. Follow-up actions are needed to be reviewed.	

	Name	Signature	Date
Recorded by	Antony Leung		20 December 2021
Checked by	Dr. Priscilla Choy		20 December 2021

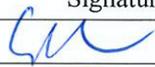
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	211223
Date	23 December 2021 (Thursday)
Time	14:30-16:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
211223-R01	• To enhance noise mitigation measures along Shek Wu San Tsuen.	C 7
	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	
211223-O02	• To provide 10m buffer zone along Siu Hang San Tsuen Stream.	H 3
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 211216), item 211216-R01 and 211216-O02 were remarked as 211223-R01 and 211223-O02. Follow-up actions are needed to be reviewed.	

	Name	Signature	Date
Recorded by	Antony Leung		28 December 2021
Checked by	Dr. Priscilla Choy		28 December 2021

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	211230
Date	30 December 2021 (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	
211230-R01	• To enhance noise mitigation measures along Shek Wu San Tsuen.	C 7
	D. Water Quality	
211230-R02	• To ensure sediment in U-channel was cleared regularly and avoid accumulation.	D 6
	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.: 211223), item 211223-R01 was remarked as 211230-R01. Follow-up actions are needed to be reviewed. Other environmental deficiency was observed improved/ rectified by the Contractor.	

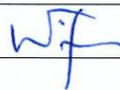
	Name	Signature	Date
Recorded by	Antony Leung		3 January 2022
Checked by	Dr. Priscilla Choy		3 January 2022

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	211208
Date	8 December 2021 (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	
211208-R01	<ul style="list-style-type: none"> Faded NRMM label shall be replaced. 	B 24
	C. Noise	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	D. Water Quality	
211208-R02	<ul style="list-style-type: none"> Enhance mitigation measure to prevent surface runoff to Ma Wat River. 	D 3
	E. Waste / Chemical Management	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	F. Cultural Heritage	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	G. Landscape and Visual	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	H. Ecology	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	I. Permits/Licences	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	J. Others	
	<ul style="list-style-type: none"> Follow-up on previous audit section (Ref. No.: 211129), all environmental deficiencies were observed improved/ rectified by the Contractor.. 	

	Name	Signature	Date
Recorded by	Antony Leung		9 December 2021
Checked by	Dr. Priscilla Choy		9 December 2021

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	211213
Date	13 December 2021 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
211213-R01	• Enhance mitigation measure to prevent surface runoff to Ma Wat River.	D 3
	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.: 211208), all environmental deficiencies were observed improved/ rectified by the Contractor..	

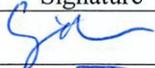
	Name	Signature	Date
Recorded by	Antony Leung		14 December 2021
Checked by	Dr. Priscilla Choy		14 December 2021

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	211220
Date	20 December 2021 (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	
211220-R01	<ul style="list-style-type: none"> Display valid NRMM label on regulated mechine. 	B 24
	C. Noise	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	D. Water Quality	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	E. Waste / Chemical Management	
211220-R02	<ul style="list-style-type: none"> C&D materials should be segregated from other waste. 	E 9
	F. Cultural Heritage	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	G. Landscape and Visual	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	H. Ecology	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	I. Permits/Licences	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	J. Others	
	<ul style="list-style-type: none"> Follow-up on previous audit section (Ref. No.: 211213), all environmental deficiency was observed improved/ rectified by the Contractor. 	

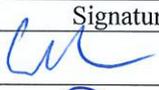
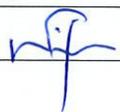
	Name	Signature	Date
Recorded by	Antony Leung		20 December 2021
Checked by	Dr. Priscilla Choy		20 December 2021

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	211228
Date	28 December 2021 (Tuesday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
211228-R01	• Enhance mitigation measure to prevent surface runoff to Ma Wat River.	D 3
	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.: 211220), all environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		28 December 2021
Checked by	Dr. Priscilla Choy		28 December 2021

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: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products

Weekly Site Inspection Record Summary

Checklist Reference Number	211202
Date	2 December 2021 (Thursday)
Time	10:00 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
211202 – R01	• General refuse should be disposed of regularly to avoid accumulation.	E 1i & 1iii
	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.: 211125), no major environmental deficiency was identified during site inspection.	

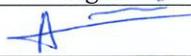
	Name	Signature	Date
Recorded by	Adrian Lam		6 December 2021
Checked by	Dr. Priscilla Choy		6 December 2021

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: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products

Weekly Site Inspection Record Summary

Checklist Reference Number	211209
Date	9 December 2021 (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.: 211202), all major environmental deficiency was rectified/ improved by the contractor.	

	Name	Signature	Date
Recorded by	Adrian Lam		13 December 2021
Checked by	Dr. Priscilla Choy		13 December 2021

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	211213
Date	13 December 2021 (Monday)
Time	9:00 – 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>	
	• 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.: 211209), no major environmental deficiency was identified during site inspection.	

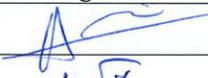
	Name	Signature	Date
Recorded by	Adrian Lam		13 December 2021
Checked by	Dr. Priscilla Choy		13 December 2021

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	211223
Date	23 December 2021 (Thursday)
Time	10:00 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. 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.: 211213), no major environmental deficiency was identified during site inspection.	

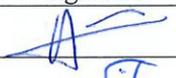
	Name	Signature	Date
Recorded by	Adrian Lam		28 December 2021
Checked by	Dr. Priscilla Choy		28 December 2021

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	211230
Date	30 December 2021 (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.: 211223), no major environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		30 December 2021
Checked by	Dr. Priscilla Choy		30 December 2021

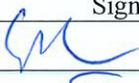
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Weekly Site Inspection Record Summary

Checklist Reference Number	211203
Date	3 December 2021 (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.: 211126), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		6 December 2021
Checked by	Dr. Priscilla Choy		6 December 2021

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	211209
Date	9 December 2021 (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. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 211203), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		13 December 2021
Checked by	Dr. Priscilla Choy		13 December 2021

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	211217
Date	17 December 2021 (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.: 211209), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Camus Yeung		20 December 2021
Checked by	Dr. Priscilla Choy		20 December 2021

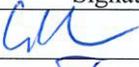
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Weekly Site Inspection Record Summary

Checklist Reference Number	211224
Date	24 December 2021 (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.: 211217), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		28 December 2021
Checked by	Dr. Priscilla Choy		28 December 2021

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	211231
Date	31 December 2021 (Friday)
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. 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.: 211224), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		3 January 2022
Checked by	Dr. Priscilla Choy		3 January 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	* ^ ^ ^ ^

		<ul style="list-style-type: none"> • When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period. • The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials; • Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously; • Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; • Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; • Any skip hoist for material transport should be totally enclosed by impervious sheeting; • Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides; • Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed; • Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and • Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser 					<p style="text-align: center;">^</p> <p style="text-align: center;">N/A</p> <p style="text-align: center;">N/A</p> <p style="text-align: center;">^</p>
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		within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.					^
S3.8	D4	Implement regular dust monitoring under EM&A programme during the construction stage.	Monitoring of dust impact	Contractor	Selected representative dust monitoring station	Construction phase	^
Noise Impact (Construction Phase)							
S4.9	N1	<p>Implement the following good site management practices:</p> <ul style="list-style-type: none"> • Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; • Machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; • Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works; • Mobile plant should be sited as far away from NSRs as possible and practicable; • Material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. 	Control construction airborne noise	Contractor	All construction sites	Construction phase	^ ^ ^ ^ ^
S4.9	N2	Install temporary site hoarding (approx 2.4m high) located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.	Reduce the construction noise levels at low-level zone of NSRs through partial screening.	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N3	Install movable noise barriers and full enclosure and acoustic mat, screen the noisy plants including air compressor and generator.	Screen the noisy plant items to be used at all construction sites	Contractor	All construction sites where practicable	Construction phase	#
S4.9	N4	Use of "Quiet" Plant and Working Methods	Reduce the noise levels of plant items	Contractor	All construction sites where	Construction phase	^

					practicable		
S4.9	N5	Sequencing operation of construction plants where practicable.	Operate sequentially within the same work site to reduce the construction airborne noise	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N6	Implement a noise monitoring under EM&A programme.	Monitor the construction noise levels at the selected representative locations	Contractor	Selected representative noise monitoring stations	Construction phase	^
Water Quality Impact (Construction Phase)							
S5.7	W1	<p><u>Construction Runoff and Site Drainage</u> In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures should be provided and the Storm Water Pollution Control Plan is given below. where appropriate, should include the following:</p> <p>Stormwater Pollution Control Plan</p> <ul style="list-style-type: none"> At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities. The design of the temporary on-site drainage system will be undertaken by the Contractor prior to the commencement of construction. Diversion of natural stormwater should be provided as far as possible. The design of temporary on-site drainage should prevent runoff going through site surface, construction machinery and equipments in order to avoid or minimize polluted runoff. Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8m³ capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to 	Control construction runoff	Contractor	All construction sites	Construction phase	#

		<p>disposal. The system capacity shall be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped.</p> <ul style="list-style-type: none"> • The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a silt/sediment trap. The silt/sediment traps should be incorporated in the permanent drainage channels to enhance deposition rates. • The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94. The detailed design of the sand/silt traps should be undertaken by the contractor prior to the commencement of construction. • Construction works should be programmed to minimize surface excavation works during the rainy seasons (April to September). All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means. • All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas. • Measures should be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, it should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities. • All open stockpiles of construction materials (for example, 					<p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">#</p> <p style="text-align: center;">#</p> <p style="text-align: center;">^</p>
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		<p>aggregates, sand and fill material) of more than 50m³ should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.</p> <ul style="list-style-type: none"> • Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. • Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events. • All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities should be provided at every construction site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. • Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources. The oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for the oil interceptors to prevent flushing during heavy rain. • Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water 					<p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">#</p> <p style="text-align: center;">N/A</p> <p style="text-align: center;">^</p>
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		<p>quality impacts.</p> <ul style="list-style-type: none"> All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby. Regular environmental audit on the construction site should be carried out in order to prevent any malpractices. Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the meander, wetlands and fish ponds. 					<p>^</p> <p>^</p>
S5.7	W2	<p><u>Stream Diversion</u></p> <ul style="list-style-type: none"> In order to prevent sediment transport during riverbank works, deployment of silt curtain should be implemented, especially when construction works encroach or occur in close distance to water body. It is recommended to carry out all the riverbank works and diversion works within a cofferdam or diaphragm wall and the work areas on riverbed should be kept in dry condition. 	Minimize water quality impact due to stream diversion	Contractor	All streams that required diversion	Construction phase	N/A
S5.7	W3	<p><u>Groundwater from Contaminated Area</u></p> <ul style="list-style-type: none"> For other inaccessible sites, site investigation is required when they are resumed and handed over to the Project Proponent to identify if contaminated groundwater is found. If the investigation results indicated that the groundwater to be generated from construction works would be contaminated, the contaminated groundwater should be either discharged into recharged wells, or properly treated in compliance with the requirements of Technical Memorandum on Standards for 	Minimize water quality impact due to potential groundwater from contaminated area	Contractor	All identified groundwater-contaminated areas	Construction phase	<p>N/A</p> <p>N/A</p>

		<p>Effluents Discharged into Drainage on Sewerage Systems, Inland and Coastal Waters.</p> <ul style="list-style-type: none"> • If recharged well method were used, the groundwater quality in the recharged well should not be affected by recharging operation, i.e. the pollution levels of the recharged groundwater should not be higher than that in the recharging wells. • If treatment and discharge method were used, the design of wastewater treatment facilities, such as active carbon and petrol interceptor, should be submitted to the EPD and a discharge license should be obtained under the WPCO through the Regional Offices of EPD. 					<p>N/A</p> <p>N/A</p>
S5.7	W4	<p><u>Sewage from Workforce</u></p> <p>Portable chemical toilets and sewage holding tanks should be provided for handling the construction sewage generated by the workforce. A licensed Contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.</p> <p>Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. Regular environmental audit on the construction site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the Project would not cause water quality impact after undertaking all required measures.</p>	Handling of site sewage	Contractor	All construction sites	Construction Phase	^
<p>Waste Management (Construction Waste)</p>							

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 style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">N/A</p> <p style="text-align: center;">^</p>
S7.6	WM2	Prepare Waste Management Plan and submit to the Engineer for approval	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	<p style="text-align: center;">^</p>
S7.6	WM3	<p><u>Good Site Practice</u></p> <p>The following good site practices are recommended throughout the construction activities:</p> <ul style="list-style-type: none"> • Nomination of an approved personnel, such as a site manager, to be responsible for the implementation of good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; • Training of site personnel in site cleanliness, appropriate waste 	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p>

		<p>management procedures and concepts of waste reduction, reuse and recycling;</p> <ul style="list-style-type: none"> • Provision of sufficient waste disposal points and regular collection for disposal; • Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; • Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; 					<p>^</p> <p>^</p> <p>#</p>
S7.6	WM4	<p><u>Storage of Waste</u></p> <p>The following recommendation should be implemented to minimize the impacts:</p> <ul style="list-style-type: none"> • Waste such as soil should be handled and stored well to ensure secure containment; • Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; • Different locations should be designated to stockpile each material to enhance reuse; 	Minimize waste impacts from storage	Contractor	All construction sites	Construction phase	<p>^</p> <p>*</p> <p>^</p>
S7.6	WM5	<p><u>Collection and Transportation of Waste</u></p> <p>The following recommendation should be implemented to minimize the impacts:</p> <ul style="list-style-type: none"> • Remove waste in timely manner; • Employ the trucks with cover or enclosed containers for waste 	Minimize waste impact from storage	Contractor	All construction sites	Construction phase	<p>*</p> <p>^</p>

		<p>transportation;</p> <ul style="list-style-type: none"> Obtain relevant waste disposal permits from the appropriate authorities; and Disposal of waste should be done at licensed waste disposal facilities. 					<p>^</p> <p>^</p>
S7.6	WM6	<p><u>Excavated and C&D Material</u></p> <p>Wherever practicable, C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at Public Fill Reception Facilities areas or reclamation sites. The following mitigation measures should be implemented in handling the excavated and C&D materials:</p> <ul style="list-style-type: none"> Maintain temporary stockpiles and reuse excavated fill material for backfilling; Carry out on-site sorting; Deliver surplus artificial hard materials to Tuen Mun Area 38 recycling plant or its successor for recycling into subsequent useful products; Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; and Implement a recording system for the amount of waste generated, recycled and disposed of for checking; <p>Standard formwork should be used as far as practicable in order to minimize the arising of C&D waste. The use of more durable formwork (e.g. metal hoarding) or plastic facing should be encouraged in order to enhance the possibility of recycling. The purchasing of construction materials should be carefully planned in order to avoid over ordering and wastage.</p>	Minimize waste impacts from excavated and C&D material	Contractor	All construction sites	Construction phase	<p>^</p> <p>^</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>^</p> <p>N/A</p>

		Wheel wash facilities have to be provided at the site entrance before the trucks leaving the works area.					^
S7.6	WM7	<p><u>Contaminated Soil</u></p> <p>As a precaution, it is recommended that standard good site practice should be implemented during the construction phase to minimize any potential exposure to contaminated soils or groundwater. The details of mitigation measures to minimize the potential environmental implications arising from the handling of contaminated materials refer to Land Contamination Section.</p>	Remediate contaminated soil	Contractor	All construction sites where applicable	Construction phase	*
S7.6	WM8	<p><u>Chemical Waste</u></p> <p>If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producers. Chemical wastes should be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.</p>	Control the chemical waste and ensure proper storage, handling and disposal	Contractor	All construction sites	Construction phase	^
S7.6	WM9	<p><u>General Waste</u></p> <ul style="list-style-type: none"> • General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling. • Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean. • A reputable waste collector should be employed to remove 	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction phase	^

		general refuse on a daily basis.					^
S7.6	WM10	<p><u>Sewage</u></p> <ul style="list-style-type: none"> The WMP should document the locations and number of portable chemical toilets depending on the number of workers, land availability, site condition and activities. Regularly collection by licensed collectors should be arranged to minimize potential environmental impacts. 	Minimize production of sewage impacts	Contractor	All construction sites	Construction phase	N/A
S7.6	WM11	Topsoil reuse – Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical. This is considered a general measure for good site practice.	Good site practice	Contractor/ Project Proponent	Onsite	Construction phase	N/A
Land Contamination							
S 8.4	LC2	Detailed site investigation (SI) for all inaccessible potentially contaminated sites in 2 NDAs	Verify the land contamination potential before the commencement of construction	Project Proponent Detailed Design Consultant Contractor	All inaccessible potentially contaminated sites in 2 NDAs as listed in the CAP	After the land is resumed and handed over to the Project Proponent	N/A
S 8.5	LC3	Preparation and submission of supplementary Contamination Assessment Report (CAR) and Remediation Action Plan (RAP) for all inaccessible potentially contaminated sites in 2 NDAs to EPD for agreement if land contamination is confirmed	Present the findings of SI and evaluate the potential environmental and human health impacts Recommend appropriate mitigation measures for the contaminated soil and groundwater identified in	Project Proponent/ Detailed Design Consultant	All inaccessible potentially contaminated sites in 2 NDAs as listed in the CAP	Prior to the commencement of any proposed construction works if land contamination is confirmed	N/A

			the assessment if remediation is required			and remediation is required	
S 8.5	LC4	Preparation and submission of Remediation Report to EPD for agreement	Demonstrate that the decontamination work is adequate and is carried out in accordance with the endorsed supplementary CAR and RAP	Project Proponent/ Detailed Design Consultant	All inaccessible potentially contaminated sites in 2 NDAs as listed in the CAP	Prior to the commencement of any proposed construction works if land contamination is confirmed and remediation is required	N/A
S 8.6	LC5	Re-appraisal of surveyed sites (if they become part of the land requirement for NDA development) that were not identified as potentially contaminated or could not be accessed for visual inspection during the site survey	Verify the land contamination potential due to potential change of land uses before the commencement of construction	Project Proponent/ Detailed Design Consultant	All surveyed sites (if they become part of the land requirement for NDA development (that were not identified as potentially contaminated or could not be accessed for visual inspection during the site survey as	After the land is resumed and handed over to the Project Proponent.	N/A

					listed in the CAP		
S 8.7.2 and Appendix 8.4	LC6	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 banded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or contaminated run-off during rainy season. Watering should be avoided on stockpiles of soil to minimize runoff; • Supply of suitable backfill material after excavation, if require; Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or run-off, and 	To minimize the potential environmental impacts arising from the handling of contaminated materials	Contractor	KTN NDA	Prior to commencement of construction works within KTN NDA	N/A ^

		<p>truck bodies and tailgates should be sealed to prevent any discharge during transport or during wet season;</p> <ul style="list-style-type: none"> Speed control for the trucks carrying excavated materials should be enforced; and Vehicle wheel washing facilities at the site's exit points should be established and used. 					
S 8.7.2 and Appendix 8.4	LC8	<p>Solidification/Stabilization</p> <ul style="list-style-type: none"> The loading, unloading, handling, transfer or storage of cement should be carried out in an enclosed system; Mixing process and other associated material handling activities should be properly scheduled to minimize potential noise impact and dust emission; The mixing facilities should be sited as far apart as practicable from the nearby noise sensitive receivers; Mixing of soil and cement / water / other additive(s) should be undertaken at a solidification plant to minimize the potential for leaching; Runoff from the solidification / stabilization area should be prevented by constructing a concrete bund along the perimeter of the solidification / stabilization area; If stockpile of treated soil is required, the stockpiling site(s) should be lined with impermeable sheeting and banded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or site run-off during rainy season; and <p>If necessary, there should be clear and separated areas for stockpiling of untreated and treated materials.</p>	To minimize the potential environmental impacts arising from the handling of contaminated materials	Contractor	KTN NDA	The course of treatment	<p>N/A</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>

<p>S 8.7.2 and Appendix 8.4</p>	<p>LC9</p>	<p><u>Safety Measures</u></p> <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 possible to minimize worker <p>Eating, drinking and smoking should not be allowed in the excavation areas and treatment area to avoid inadvertent ingestion of arsenic containing soil.</p>	<p>To minimize the potential adverse effects on health and safety of construction workers</p>	<p>Contractor</p>	<p>KTN NDA</p>	<p>The course of treatment</p>	<p>N/A</p>
<p>Landfill Gas Hazard</p>							
<p>S10.6</p>	<p>LFG1</p>	<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 	<p>To minimize the risk of LFG hazards to occupants within MTLL and its 250m Consultation Zone</p>	<p>Government / Developer/ Detailed Design Consultant within MTLL and its 250m Consultation Zone</p>	<p>Buildings within MTLL and its 250m Consultation Zone</p>	<p>Detailed design phase</p>	<p>N/A</p>

		<p>adverse circumstances, should be present on all worksites throughout the works.</p> <ul style="list-style-type: none"> • All personnel who work on site and all visitors to the site should be made aware of the possibility of ignition of gas in the vicinity of the works, the possible presence of contaminated water and the need to avoid physical contact with it. • Those staff who work in, or have responsibility for “at risk” areas, including bore pilling and excavation works, should receive appropriate training on working in areas susceptible to LFG. • Enhanced personal hygiene practices including washing thoroughly after working and eating only in “clean” areas should be adopted where contact may have been made with any groundwater which is thought to be contaminated with leachate. • Any offices / quarters set up on site should take precautions against LFG ingress, such as being raised off the ground. Other storage premises, e.g. shipping containers, where this is not possible should be well ventilated prior to entry. • Adequate precautions to prevent the accumulation of LFG under site buildings and within storage shed should be taken by raising buildings off the ground where appropriate and “airing” storage containers prior to entry by personnel and ensuring adequate ventilation at all times. • Smoking and naked flames should be prohibited within confined spaces. “No Smoking” and “No Naked Flame” notices in Chinese and English should be posted prominently around the construction site. Safety notices should be posted warning of the 					<p style="text-align: center;">^</p>
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		<p>potential hazards.</p> <ul style="list-style-type: none"> Welding, flame-cutting or other hot works may only be carried out in confined spaces when controlled by a “permit to work” procedure, properly authorized by the Safety Officer. The permit to work procedure should set down clearly the requirements for continuous monitoring of methane, carbon dioxide and oxygen throughout the period during which the hot works are in progress. The procedure should also require the presence of an appropriately qualified person who shall be responsible for reviewing the gas measurements as they are made, and who shall have executive responsibility for suspending the work in the event of unacceptable or hazardous conditions. Only those workers who are appropriately trained and fully aware of the potentially hazardous conditions which may arise should be permitted to carry out hot works in confined areas. During the construction works, adequate fire extinguishers and breathing apparatus sets should be made available on site and appropriate training given in their use. Ongoing gas monitoring should be considered for offices, stores etc set up on site. 					<p>^</p> <p>N/A</p> <p>^</p> <p>^</p>
S10.6	LFG3	<p>Utility Companies</p> <ul style="list-style-type: none"> The developers should make the utility companies aware of the location and features of the site within the Consultation Zone during the respective detailed design stage as part of the QLFGHA. The utilities companies should have a responsibility to train and ensure their staff to take appropriate precautions at all times 	To minimize the risk of LFG hazards to the occupants, maintenance personnel, visitors and other users within MTLL and its 250m Consultation Zone	Government / Developer within MTLL and its 250m Consultation Zone	Buildings within MTLL and its 250m Consultation Zone	Operation phase	N/A

		<p>when entering enclosed spaces or plant rooms.</p> <ul style="list-style-type: none"> Should utility installation be required in site E1-1, the developers should make the utility companies aware of the potential constraints imposed by the landfill restoration facilities and aftercare works to ensure these facilities and works will remain unaffected. Appropriate precautionary measures against landfill gas should also be taken should utility installation be required within the MTL. <p>Building Management</p> <ul style="list-style-type: none"> The management committee of the building estate will hold a special responsibility to ensure that the occupants of the building, its staff and maintenance workers are protected from LFG and that visitors to the site are also made aware as to the dangers and the precautions required to be taken. Of primary importance to satisfactorily upholding this responsibility will be to ensure that strict procedures for maintaining control over all temporary and /or permanent works proposed at the site are reviewed with regard to the LFG hazard. This needs to be accompanied by a comprehensive contingency plan in case of incidents, including liaison with EPD officers, Fire Services Department, Landfill Restoration Contractors and others, as necessary. All construction and maintenance (including utilities) personnel working at the site should be made aware of the hazards of LFG and its possible presence on site. This should be achieved through a combination of posting warning signs in prominent places and also by access to detailed information on LFG 					
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		<p>hazards and the designs and procedural means by which these hazards are being minimized on site. In addition, entry to confined spaces such as refuse/store rooms, drainage manholes etc. should be preceded by a period of “airing” the space by opening the door widely allowing fresh air to enter. Where appropriate, monitoring of gas should also precede entry.</p> <ul style="list-style-type: none"> • Any proposed modifications or additions to the building structure should be subject to a further assessment of LFG hazard, particularly in areas where a gas membrane has been installed. Any penetrations of the membrane must be repaired as soon as possible after detection or works completion using similar products. • The building management company should also make arrangement with Landfill Restoration Contractor so that they are advised of all situations which may potentially threaten the safety of the building occupants resulting from any accidents or failures at the landfill site. The building management company should also have available suitable gas monitoring equipment for any ad hoc investigations necessary relating to LFG and be in a position to undertake any future routine monitoring of gas which may be considered necessary soloing completion of the defects correction period. • To ensure that all the above protection and precautionary measures and issues pertaining to LFG are properly and consistently addressed by future users and owners of the site, it is recommended that a comprehensive LFG hazard management system be developed by the owner of the building or its property 					
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		management agency. The system should be developed by the developers of the sites as part of the QLFGHA before the occupation of the building and implemented during its operational phase.					
Cultural Heritage (Pre-construction Phase)							
S11.6.1	CH1	<p><u>Undertaking Further Archaeological Survey to Cover the Outstanding Areas</u></p> <p>Further archaeological surveys to cover the outstanding areas of the not-yet-surveyed-area with medium archaeological potential located in the areas with proposed development as presented in Figure 11.9 should be implemented after land resumption to confirm and verify the findings of the EIA. The survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance. It should be noted that the scope of further archaeological survey is based on the current proposed alignment. Any additional works areas which have not been covered by the current archaeological impact assessment should be covered as soon as possible. Subject to the findings of the archaeological survey to be conducted after land resumption, additional mitigation measures would be designed and implemented before the commencement of construction works to mitigate the adverse impact.</p>	To confirm and verify the findings of the EIA	Project Proponent/ Contractor/ Qualified Archaeologist	In the not-yet-surveyed-areas with medium archaeological potential located in the areas within Areas D1-11, A3-5, A3-6, B1-1, and B1-7,	After land resumption but before construction	N/A
S11.6.1	CH2	<p><u>Undertaking Survey-cum-Rescue Excavation</u></p> <p>A Survey-cum-Rescue Excavation should be conducted after land resumption and before the commencement of construction works to define the precise archaeological deposits extent and to preserve the</p>	To define the precise archaeological deposits extent and to preserve the archaeological resources as far	Project Proponent/ Contractor/ Qualified Archaeologist	In KTN NDA, for Site 3 and In FLN NDA for Site 5.	After land resumption but before construction commencement of	N/A

		archaeological resources by record. The excavation should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance.	as possible			the zone	
S11.6.1	CH3	<p><u>Undertaking Preservation in-situ for Site 7</u></p> <p>Preservation in-situ of the cultivation deposits in Site 7 is proposed. If disturbance to the site by the design of the Central Park is unavoidable, further archaeological survey should be conducted after land resumption prior to the pre-construction stage to assess the feasibility to incorporate Site 7 into the design of the development plan of the proposed zone. Appropriate followup actions, including preservation of the significant archaeological deposits in-situ in the Central Park, would then be considered with the consent of AMO.</p> <p>The recommended mitigation measure of preservation in-situ with further archaeological survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance.</p>	To preserve the archaeological resources as far as possible.	Project Proponent/ Contractor/ Qualified Archaeologist	Site 7 in FLN NDA	After land resumption prior to preconstruction stage of the proposed Central Park (Area C2-8, Zoning O)	N/A
S11.6.1	CH4	<p><u>Undertaking Induction Training</u></p> <p>Induction training should be provided to the construction Contractor before the commencement of the excavation works in Spots A, D, F to H. An induction will be conducted as part of the environmental health and safety induction programme to all site staff before they are deployed on site. The induction will include an introduction on the historical development of the Site, the possible archaeological remains</p>	To preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	Spots A, D, F to H	Before the commencement of the excavation works and before site staff are deployed on site	N/A

		that may be encountered during ground excavation works as well as the reporting procedures in case suspected archaeological remains are identified. A set of the presentation material (in the form of power point presentation) with content details will be prepared by an archaeologist and submitted to AMO for reference and record purpose. The first induction briefing will be video recorded and it will be used as induction briefing material for new site staff.					
S11.6.1	CH5	<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

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>	<p>To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted built heritage features</p>	<p>Project Proponent/ Contractor</p>	<p>G303 and G308</p>	<p>Preconstruction stage before commencement of construction works during Schedule 3 study</p>	<p>N/A</p>
S11.6.2	CH8	<p><u>Undertaking baseline condition survey and baseline vibration impact assessment</u></p> <p>In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 7.5mm/s and 15mm/s could be adopted for graded historic buildings and historic buildings respectively) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report. The condition survey of</p>	<p>To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted built heritage features</p>	<p>Project Proponent/ Contractor</p>	<p>KT57, FL05, FL18, and FL2</p>	<p>Preconstruction stage before commencement of construction works</p>	<p>N/A</p>

		graded historic building should be submitted to AMO for information.					
S11.6.2	CH9	<p><u>Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages</u></p> <p>Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out the Project Proponent.</p>	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	<p><u>Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages</u></p> <p>Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out by the Project Proponent.</p>	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	KT12 and KT61	Prior to Removal / Relocation of features before commencement of construction works	N/A
S11.6.2	CH11	Relocation of Built Heritages Relocation of built heritages to a reasonable location nearby may be required.	To preserve the directly impacted sites by relocation	Project Proponent/ Contractor	HKT01, HKT02, Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of construction works	N/A

S11.6.2	CH12	Drainage System and Access Route Design For the retained built heritage items in developable area, drainage system and access route would be designed to prevent the persevered flooding and maintain the accessibility to the built heritage.	To prevent the persevered flooding and maintain the accessibility to the built heritage	Contractor /Detailed Design consultant	The retained built heritage items	Pre-construction phase	N/A
<i>Cultural Heritage (Construction Phase)</i>							
S11.6.1	CH13	<u>Inform Upon Archaeological Discovery</u> Pursuant to the Antiquities and Monuments Ordinance, the construction Contractor should inform the AMO immediately in case of discovery of antiquities or supposed antiquities in the course of excavation works in construction phase.	Special attention should be given to areas evaluated to have archaeological potential or significance.	Contractor	All soil excavation works	Immediately upon discovery during excavation works	N/A
S11.6.2	CH14	<u>Watertable Monitoring</u> Since the construction works and development activities may induce change in the watertable. It is recommended the Contractor should ensure that the change of watertable induced by the construction works and development activities will not result in settlement of built heritage.	To minimize the potential impacts to the built heritage items by the change of watertable induced by the works during the Construction phase	Contractor	Within NDAs	Construction phase	N/A
S11.6.2	CH15	<u>Conducting Construction Vibration Monitoring and Structural Strengthening Measures</u> Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment	^
<i>Landscape and Visual Impact (Detailed Design, Prior to Construction, Construction and Operation Phases)</i>							
S.12.9	LV1	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use,		Detailed design consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for	N/A

		<p>should be adhered to.</p> <p>With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.</p>				<p>all planting, this should be installed as the areas become available, to achieve early establishment</p>	
S.12.9 MM1	LV2	<p>Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.</p>	<p>Reduce topographical changes and minimize land resumption</p>	<p>Government / Detailed Design Consultant/ Contractor</p>	<p>Throughout NDAs, particularly for reservoirs</p>	<p>Prior to Construction</p>	<p>N/A</p>
S.12.9 MM2	LV3	<p>Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural</p>	<p>Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape</p>	<p>Detailed Design Consultant</p>	<p>Throughout NDAs</p>	<p>Prior to Construction</p>	<p>N/A</p>

		<p>building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines. All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated. Construction time frame should also be considered and designs seek to keep it to a practical minimum.</p>					
S12.9 MM14.4	LV 4	<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.</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	*

		Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.					
Landscape and Visual (Construction)							
S.12.9 MM3	LV5	Open Space Provision - the principles adopted in the RODP planning ensure that public open space systems are incorporated. All requirements for open space areas stipulated in the planning documents for the formulation of the Preliminary Layout Plan should be adhered to.	Reprovision of open space. Enhance visual amenity of the area and improve the overall landscape character	Government Developer/ Detailed Design Consultant/ Contractor/	Onsite as stipulated in the planning documents for the formulation of the Preliminary Layout Plan	Prior to Construction and Construction Phase	N/A
S.12.9 MM4	LV6	Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor’s works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A
S.12.9 MM5	LV7	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be	Transplant Trees where suitable for transplantation	Government / Detailed Design	Onsite where possible.	Prior to Construction,	N/A

		<p>transplanted straight to their final receptor site and not held in a temporary nursery as far as possible.</p> <p>A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.</p>		<p>Consultant/ Contractor</p>	<p>Otherwise consider offsite locations</p>	<p>Construction Phase & Maintenance in Operation Phase</p>	
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</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	<p>Government / Detailed Design Consultant/ Contractor</p>	<p>Onsite</p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	<p>N/A</p>

		No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.					
S.12.9 MM7	LV9	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p> <p>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested.</p>	Compensate for trees and shrubs lost due to the Project.	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM8	LV10	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.					N/A

		<p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <p>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</p>					
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S.12.9 MM9	LV11	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. building edges, piers).	Soften hard surfaces and facilities	Government / Developer/ Detailed Design Consultant/ Contractor	On appropriate structures	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM10	LV12	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Developer/ Detailed Design Consultant/ Contractor	On appropriate buildings	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM11	LV13	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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<p>S.12.9 MM12</p>	<p>LV14</p>	<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>	<p>To soften the hard, straight edges and provide greening along roads.</p>	<p>Government / Developer/ Detailed Design Consultant/ Contractor</p>	<p>On viaducts or along roads</p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	<p>N/A</p>
<p>S.12.9 MM13 & EIA Annex 13</p>	<p>LV15</p>	<p>Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on- wetland areas within the LVNP. (See E4,E15 and E25 also)</p> <p>Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.</p>	<p>Compensate for Marsh/ Wetland lost due to the Project.</p>	<p>Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority</p>	<p>Onsite where possible. Otherwise consider offsite locations</p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	<p>N/A</p>

<p>S.12.9 MM14.1</p>	<p>LV16</p>	<p>Reprovision of Natural Stream – Where natural streams are unavoidably affected along some of their length, they can be diverted to avoid the proposed new developments and retain the integrity of the whole stream. Detailed design of any stream diversion should follow the Guidelines in ETWB Technical Circular (Works) No. 5/2005 (Protection of natural streams/rivers from adverse impacts arising from construction works) and appropriate construction methods should be used.</p> <p>Two short stretches of the Ma Tso Lung Stream will be affected by Project in the KTN NDA; by the LMC Eastern Connection Road on the western border of Site F1-3 and further upstream by Site E-2.</p> <p>At both these locations, the stream will be reprovisioned and maintain the flow between unaffected sections of the stream. The reprovisioned stream will be provided with a natural bed and banks, as well as having an area of marsh/ pool next to it and trees and shrubs further from the banks. (See E2, E14 and E24 also)</p>	<p>Achieve a natural stream, similar to existing, including wetland planting provision for embankments</p>	<p>Government / Developer/ Detailed Design Consultant/ Contractor</p>	<p>Streams and channelized watercourses e.g. a Ma Tso Lung and Siu Han San Tsuen</p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	<p>N/A</p>
<p>S12.9 MM14.2</p>	<p>LV17</p>	<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>Protect natural streams</p>	<p>Government / Developer/ Detailed Design Consultant/ Contractor</p>	<p>Streams and channelized watercourses e.g. a Ma Tso Lung and Siu Han San Tsuen</p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	<p>N/A</p>

		For the stream at Siu Hang San Tsuen in FLN NDA, within the NDA boundary much of the stream would be located underneath the viaduct for the proposed Fanling Bypass. To the south of the viaduct the stream flows through an Open Space area D1-3. In this Open Space zone a 10m buffer is proposed in which natural vegetation will be retained and enhanced and human activities will be limited in order to avoid direct impacts to the stream bed and to minimize potential indirect impacts to the stream and riparian corridor. (See E3 also)					
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

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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>	<p>Reprovision for ponds lost due to the Project.</p>	<p>Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority</p>	<p>E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA</p>	<p>Prior to Construction, Construction Phase Maintenance in Operation Phase</p>	<p>N/A</p>
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>	<p>To screen undesirable views of the works site.</p>	<p>Contractor</p>	<p>Throughout NDAs</p>	<p>Construction Phase</p>	<p>^</p>
S.12.9 MM17	LV21	<p>Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.</p> <p>Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.</p>	<p>To minimize glare impact to adjacent VSRs</p>	<p>Government / Developer/ Contractor</p>	<p>Throughout NDAs</p>	<p>Construction and Operation Phases</p>	<p>N/A</p>

<i>Ecology (Prior to Construction Phase or throughout the project)</i>							
S. 13.9	E1	Egretry Habitat Creation & Management Plan (EHCMP) and Woodland Planting and Management Plan (WPMP)	Compensate for loss of Man Kam To Road egretry. Compensate for loss of secondary woodland and hillside plantation of ecological significance.	Project Proponent/ Detailed Design Consultant (EHCMP and WPMP).	FLN area A1-7 (egretry compensation). KTN areas E1-8 and G1-3 (woodland compensation).	Detailed design phase	N/A
S. 13.9	E2	Detailed design of development along lower reaches of Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream in OU zones F1-2 and F1-3 and detailed design of LMC Loop Eastern Connection Road with restoration of diverted stream and riparian corridor, permanent barrier and underpass on the at-grade section Compensation for the loss of seasonally wet grassland at Ma Tso Lung by habitat restoration and enhancement along diverted section of Ma Tso Lung Stream	Minimize impacts on Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream and riparian corridor of importance to species of conservation significance.	Project Proponent/ Detailed Design Consultant. (design of Ma Tso Lung Stream diversion and buffer zone habitat restoration measures)	KTN areas F1-2 and F1-3 and LMC Loop Eastern Connection Road.	Detailed design and construction phases.	N/A
S13.9	E3	Detailed design, implementation and management of Siu Hang San Tsuen Stream to have 10m wide vegetated buffer in Open Space zone D1-3, Fanling Bypass to cross stream on viaduct.	Minimize impacts on Siu Hang San Tsuen Stream and stream fauna.	PlanD, Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	FLN area D1-3.	Detailed design, construction and operation phases.	N/A
S.13.9	E4	Long Valley Nature Park (LVNP) designation, design and implementation.	Compensate for wetland loss arising from the project and protection of Long Valley from	Project Proponent/ Detailed Design Consultant (Long	Long Valley KTN area C1-9 and any suitable areas to be	Detailed design phase	N/A

		Enhancement of non-wetland habitats in LVNP. Planning for the advanced provision of alternative foraging habitat along main river channels for large waterbirds.	adverse ecological impacts including provision of additional/alternative habitat for large waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Valley Nature Park Habitat Creation & Management Plan)	identified during the planning stage		
S13.9	E5	Stringent planning control requirements in Long Valley north and west of Sheung Yue River, including Ho Sheung Heung egretty.	Protect these wetland areas from indirect impacts to habitats and fauna especially breeding ardeids foraging in these areas and utilizing flight-lines from Ho Sheung Heung egretty. Avoid habitat loss and disturbance to fauna of conservation significance, especially nesting ardeids Maintenance of ecological linkages with Deep Bay ecosystem and avoidance of severance of these linkages, especially for waterbirds	PlanD.	KTN areas C2-1 and C2-2 , Ho Sheung Heung egretty and areas north of Long Valley along the Ng Tung River to the Shenzhen River	Detailed design phase	N/A
S13.9	E6	Planning for creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; and detailed design of Open Space areas and development areas along river corridors.	Minimize disturbance to large waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance	Area along Ng Tung, Sheung Yue and Shek Sheung River	Detailed design, construction and operational phases.	N/A

			Maintain ecological linkages within NDA Project Area and between Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.	Authority			
S13.9	E7	Building setback and mounding in locations near Long Valley. KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries).	Minimization of disturbance impacts to fauna using Long Valley.	PlanD	KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries.	Detailed design phase	N/A
S13.9	E8	Preparation and implementation of Guidelines for building design measures to minimize mortality and light and glare impacts to fauna. Guidelines to address the following measures: Use opaque, non-transparent, non-reflective noise barriers for all developments associated with the Project. Measures to include the following: • Fritting, or the placement of ceramic lines or dots on glass, which creates a visual barrier to birds and reduces air conditioning loads by lowering heat gain, while still allowing light transmission for interior spaces. It is most successful when the frits are applied on the outside surface. Frosted glass has similar effects;	Minimize mortality and disturbance impacts on fauna, especially mammals and birds.	PlanD/ Project Proponent/ Developer/ Detailed Design Consultant	Near Long Valley	Detailed design phase	N/A

		<ul style="list-style-type: none"> Angled glass to be used only for smaller panes in buildings with a limited amount of glass; The use of glass that reflects UV light (primarily visible to birds, but not to humans) to reduce collisions; Film and art treatment allow glass surfaces to be used a medium of expression, often related to the nature and use of the building, as well indicating to birds their impenetrability; Lightweight external screens can be added to windows or become a façade element of larger buildings, and are suitable where non-operable windows are prevalent, which is often the case in modern buildings in HK 					
	E9	Not used					N/A
S13.8	E10	Review development footprint and layout of proposed developments in KTN areas D1-11a and G1-5 to avoid/minimize direct and indirect impacts on secondary woodland at Ho Sheung Heung and shrubland at Crest Hill.	Minimize loss of secondary woodland and shrubland of ecological value.	Project Proponent/Detail Design Consultant	KTN areas D1-11a and G1-5 to avoid/minimize direct and indirect impacts on secondary woodland at Ho Sheung Heung and Crest Hill	Detailed design phase	N/A

S13.9	E11	<p>No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north or east of KTN D1-5 and east of D1-9 and C2-3, construction hours restricted to 09.00 to 17.30 during 1 March to 31 July on new pedestrian bridge over the Sheung Yue River, new pedestrian bridge over the tidal section of the Ng Tung River and existing bridge between KTN areas C2-2 and C1-8.</p> <p>Review Design and construction methods for all bridges especially those on the Sheung Yue and tidal Ng Tung Rivers and adopt methods which minimize impacts on Long Valley and the rivers, and disturbance and fragmentation impacts on fauna.</p> <p>No overlap in construction of bridges over main river channels. Measures to ensure no hydrological disruption to Long Valley Watercourse and water supply to Long Valley to be designed at the detailed design stage for the rechannelisation of the Long Valley Watercourse and the development of areas through which it passes, including KTN area B3-12. Contingency plan to address any disruption to be included in LVNP HCMP. Avoid removal or interference with screen planting undertaken under the Construction of Cycle Tracks and Associated Supporting Facilities from Sha Po Tsuen to Shek Sheung project.</p>	<p>Minimize disturbance impacts (including cumulative impacts with cycle track project) to flight-lines of breeding ardeids.</p>	<p>Project Proponent/ Detailed Design Consultant Contractor</p>	<p>Along and within Sheung Yue and Ng Tung Rivers, Long Valley, Long Valley and watercourse upstream areas including KTN area B3-12</p>	<p>Detailed design/ construction phase.</p>	<p>^</p>
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<i>Ecology (Construction Phase)</i>							
S13.9	E12	<p>Compensatory egret habitat provision and establishment.</p> <p>Review condition and location of egretries before commencement of works. Formulate and implement additional mitigation measures as appropriate.</p> <p>Phasing of works near and within Man Kam To Road Egret habitat outside breeding season</p>	<p>Compensate for loss of Man Kam To Road egret habitat.</p> <p>Avoid mortality of breeding egrets</p>	<p>Project Proponent/ Detailed Design Consultant/ Contractor</p>	<p>FLN area A1-7 500m from Man Kam To Road Egret habitat.</p>	<p>Construction phase.</p>	<p>^</p>
S13.9	E13	<p>Review design and construction methods for bridges, especially those on the Sheung Yue and tidal Ng Tung Rivers, and adopt measures which minimize impacts on rivers and disturbance and fragmentation impacts on fauna.</p> <p>No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north and east of KTN area D1-5 and east of D1-9 and C2-3 and restriction of working hours on new pedestrian bridges over the Sheung Yue River and tidal Ng Tung River to 09.00 to 17.30 during the ardeid breeding season (1 March to 31 July)</p> <p>Provision of alternative foraging habitat along main river channels for large waterbirds.</p>	<p>Minimize impacts on rivers and disturbance and fragmentation impacts on fauna</p>	<p>Project Proponent/ Detailed Design Consultant/ Contractor</p>	<p>Along and within the Sheung Yue, Ng Tung and Shek Sheung Rivers</p>	<p>Detailed design and construction phases.</p>	<p>^</p>

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>	<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>	<p>PlanD/ Project Proponent/ Developer/ Detailed Design Consultant/ Contractor. (Design of Ma Tso Lung Stream diversion and buffer zone habitat restoration measures)</p>	<p>KTN areas H1-1, F12 and F1-3 and Lok Ma Chau Loop Eastern Connection Road.</p>	<p>Detailed design and construction phases.</p>	<p>N/A</p>
S.13.9	E15	<p>Creation and enhancement of proposed Long Valley Nature Park and creation and enhancement of wetland and buffer planting within LVNP.</p>	<p>Compensate for wetland loss arising from the project</p>	<p>Project Proponent/ Contractor (LVNP Detailed Habitat Creation & Management Plan)</p>	<p>Long Valley, (KTN area C1-9).</p>	<p>Construction phase.</p>	<p>^</p>

S13.9	E16	<p>Creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; provision of Open Space areas and development areas along river corridors;</p> <p>Design and erection of 2m high solid dull green site barrier fence between river channel and any active works area along or adjacent to Ng Tung, Sheung Yue and Shek Sheung Rivers.</p> <p>Ng Tung, Sheung Yue and Shek Sheung Rivers screen planting.</p>	<p>Minimize disturbance to waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.</p>	<p>Detailed Design Consultant/ Contractor</p>	<p>Ng Tung, Sheung Yue and Shek Sheung Rivers</p>	<p>Detailed design and Construction phases.</p>	<p>^</p>
S13.9	E17	<p>Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance on edge of development areas, including along any roads adjacent to or penetrating into areas/habitats of ecological importance.</p> <p>Erection of a 2m high dull green site barrier fence at the edge of the works area or 30m from Ma Tso Lung Stream and tributaries, whichever distance is the greater.</p>	<p>Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna. Measures to minimize flight- line impacts to birds, especially breeding ardeids.</p>	<p>Contractor</p>	<p>Interface between areas/habitats/ fauna/ flora of ecological importance (e.g. KTN areas B1-3, C1-5, C1- 6, C1-9, C2-2, C2-4, C2-5, D1-8, E1-8, G1- 3, H1-1, Ma Tso Lung Stream and tributaries; FLN areas A1-3, A1-7 and A1-9) and works areas; and around any works areas north of the</p>	<p>Construction phase.</p>	<p>*</p>

					Fanling Bypass and north of the Ng Tung River west of the western terminus of the Fanling Bypass. Riparian corridor of Ma Tso Lung Stream and tributaries.		
S13.9	E18	Compensatory woodland planting, management and maintenance.	Compensate for loss of secondary woodland and hillside plantation of ecological significance.	Project Proponent/ Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A
S13.9	E19	Use opaque, non-transparent, non-reflective noise barriers for all construction sites. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Contractor	All construction sites	Construction phase.	^
S13.9	E20	Pre-site clearance check for presence of flora or fauna of conservation significance and bat roosts. If any are found, measures should be proposed and implemented to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement.	Minimize impacts to flora and fauna of conservation significance. Minimize impacts to protected fauna and flora species. Formulate and implement mitigation measures to avoid, minimize and/or compensate for impacts;	Government/ Developer/ Contractor/ Ecologist	All construction sites.	Prior to clearance of vegetation and structures.	N/A

		<p>Pre-site clearance check on all construction sites and pre –works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of protected plant species/specimens of conservation significance. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works,</p> <p>Pre-site clearance of construction sites in Crest Hill area, KTN areas D1-7, D1-11 and G1-5 (where Eurasian Hobby was recorded) and on Cheung Po Tau, FLN area A3-1 (where Grey Nightjar was recorded) for presence of any breeding birds/breeding sites. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement.</p> <p>Pre-site clearance check on all construction sites for presence of Chinese Bullfrog, translocation to suitable areas including LVNP.</p>	<p>including adjustments to design, timing of works, transplantation and translocation.</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, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement.</p>	<p>Minimize impacts to flora and fauna of conservation significance. Minimize impacts to protected fauna and flora species. Consider and implement adjustments to avoid, minimize or compensate for impacts; including adjustments to design, timing of</p>	<p>Government/ Developer/ Contractor/ Ecologist</p>	<p>All construction sites.</p>	<p>Prior to clearance of vegetation and structures.</p>	<p>N/A</p>

		<p>Pre-site clearance check on all construction sites for presence of reptile species of conservation significance, capture and translocate to receptor site; review translocation options in respect to species in Ma Tso Lung area and determine whether release locally or elsewhere is appropriate. Seek agreement of relevant authorities including AFCD in respect of proposed measures then implement</p> <p>Pre-works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of Small Snakehead and <i>Sommaniathelphusa zanklon</i>. Capture any <i>Sommaniathelphusa zanklon</i> found and translocate to Ma Tso Lung Stream/ other suitable areas including LVNP</p>	works, transplantation and translocation				
S13.9	E22	Prevention of dust, run-off and pollutants impacting Deep Bay catchment area and areas of ecological importance.	Avoid increase to pollution entering ecologically sensitive Deep Bay ecosystem.	Contractor	All construction sites.	Construction	N/A
<i>Specific Mitigation Measures for Designated Projects</i>							
<i>DP2- Castle Peak Road Diversion (Major Improvement)</i>							
<i>Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)</i>							
S.12.A9	LV1-DP2	<p>General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to.</p> <p>With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.</p>		Detailed Design Consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to	N/A

						achieve early establishment	
S.12.A9 MM14.4	LV4- DP2	<p>Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed.</p> <p>For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream. Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.</p>	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	All watercourses, particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern Section	Prior to Construction and Construction Phase	N/A
S.12.A9 MM4	LV5- DP2	<p>Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction.</p> <p>In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor’s works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will</p>	Protect and Preserve Trees	Government/ Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A

		include details of tree protection measures for those trees to be retained.					
S.12.A9 MM5	LV6- DP2	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit" should be referred to.</p>	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	<i>Onsite where possible, otherwise consider offsite locations</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM6	LV7- DP2	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	Government Detailed Design Consultant/ Contractor	<i>Onsite</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM8	LV9- DP2	Woodland Compensatory Planting – Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably	Reprovide areas of woodland to compensate for	Project Proponent/	<i>In areas identified in</i>	Prior to Construction,	N/A

	<p>affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <p>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</p>	<p>those areas of quality woodland lost.</p>	<p>Detailed Design Consultant/ Contractor/ Maintenance Authority</p>	<p><i>the EIA Landscape Mitigation Plans and as agreed with AFCD</i></p>	<p>Construction Phase & Maintenance in Operation Phase</p>	
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S.12.A9 MM9	LV10- DP2	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government Detailed Design Consultant/ Contractor	<i>On appropriate structures</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV11- DP2	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government Detailed Design Consultant/ Contractor	<i>Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM12	LV12- DP2	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered	To soften the hard, straight edges and provide greening along roads.	Government Detailed Design Consultant/ Contractor	<i>On viaducts or along roads.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		part of Screen Planting)					
S.12.A9 MM13 & EIA Annex 13	LV13- DP2	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance onwetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	<i>Onsite where possible. Otherwise consider offsite locations</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM14.3	LV14- DP2	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Detailed Design Consultant/ Contractor	<i>Channelized watercourse, particularly the Ma Wat River Channel Diversion</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM15	LV15- DP2	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/	<i>EI-7 and CI-9 (LVNP) in KNT NDA and generally</i>	Prior to Construction, Construction Phase	N/A

		Kong Shan Park in E1-7 of KNT ND) should be adhered to.		Contractor/ Maintenance Authority	<i>throughout NDA</i>	Maintenance in Operation Phase	
Landscape and Visual (Construction)							
S.12.A9 MM16	LV16- DP2	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	<i>Throughout NDAs</i>	Construction Phase	^
S.12.A9 MM17	LV17- DP2	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	<i>Throughout NDAs</i>	Construction and Operation Phases	^
Ecology (Detailed Design, Construction and Operational Phases)							
S13.9	E2-DP2	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor/ Maintenance Authority	Within NDA.	Detailed design phase, Construction phase and Operation phase.	^
Ecology (Construction Phase)							
S.13.9	E3-DP2	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse	Contractor.	Interface between areas/habitats of	Construction phase.	*

			ecological impacts on habitats, flora and fauna.		ecological importance (KTN area B1-3) and works areas.		
S13.9	E4-DP2	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN NDA areas E1-8 and G1-3.	Construction phase.	N/A
Cultural Heritage (Construction Phase)							
S11.6.2	CH5-DP2	Conducting Construction Vibration Monitoring and Structural Strengthening Measures Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment,	N/A
DP3- KTN NDA Road P1 and P2 (New Road) and associated new Kwu Tung Interchange (New Road) and Pak Shek Au Interchange Improvement (Major Improvement)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.A9	LV1-DP3	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity		Detailed Design Consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as	^

		strips, and open space sites.				soon as the areas become available, to achieve early establishment	
S.12.A9 MM14.4	LV4- DP3	<p>Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc.</p> <p>Guidelines stated should be followed.</p> <p>For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream.</p> <p>Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.</p>	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	<i>All watercourses, particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern Section</i>	Prior to Construction and Construction Phase	*
S.12.A9 MM4	LV5- DP3	<p>Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction.</p> <p>In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor’s works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later</p>	Protect and Preserve Trees	Government Detailed Design Consultant/ Contractor	<i>Onsite</i>	Prior to Construction and Construction Phase	N/A

		detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.					
S.12.A9 MM5	LV6- DP3	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit“ should be referred to.</p>	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	<i>Onsite where possible. Otherwise consider offsite locations.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM6	LV7- DP3	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as</p>	Government Detailed Design Consultant/ Contractor	<i>Onsite</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		Technical Guidelines on Landscape Treatment for Slopes.	possible.				
S.12.A9 MM7	LV8- DP3	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments.</p> <p>Required numbers and locations of compensate orytrees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested.</p>	Compensate for trees and shrubs lost due to the Project.	Government Detailed Design Consultant/ Contractor	<i>Onsite where possible. Otherwise consider offsite locations</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM8	LV9- DP3	<p>Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>,</p>	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	<i>In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		<p><i>Cinnamomum camphora, Xanthoxylum avicennae, Hibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda.</i> In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia, Diospyros vaccinioides, Gardenia 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.</p>					
S.12.A9 MM9	LV10- DP3	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government Detailed Design Consultant/ Contractor	<i>On appropriate structures</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV11- DP3	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment	Government Detailed Design Consultant/ Contractor	<i>Along roads, around suitable built structures, or around</i>	Prior to Construction, Construction Phase & Maintenance	N/A

			and create a pleasant pedestrian environment		<i>VSRs to contain their view out to the NDA structures.</i>	in Operation Phase	
S.12.A9 MM12	LV12- DP3	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	To soften the hard, straight edges and provide greening along roads.	Government Detailed Design Consultant/ Contractor	<i>On viaducts or along roads.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM13 EIA Annex 13	LV13- DP3	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance onwetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	<i>Onsite where possible. Otherwise consider offsite locations</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM14.3	LV14- DP3	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River	Minimize the necessity of watercourse modification, protect watercourses where	Government / Detailed Design	<i>Channelized watercourse, particularly the Ma</i>	Prior to Construction, Construction	N/A

		Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.	possible and enhance channelized watercourses	Consultant/ Contractor	<i>Wat River Channel Diversion</i>	Phase & Maintenance in Operation Phase	
S.12.A9 MM15	LV15- DP3	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.		Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	<i>E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA</i>	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
<i>Landscape and Visual (Construction)</i>							
S.12.A9 MM16	LV16- DP3	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological	To screen undesirable views of the works site.	Contractor	<i>Throughout NDAs</i>	Construction Phase	N/A

		impact assessment (Chapter 13 of the EIA report).					
S.12.A9 MM17	LV17- DP3	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	Throughout NDAs	Construction and Operation Phases	N/A
Ecology (Detailed Design, Construction and Operational Phases)							
S13.9	E3-DP3	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor Maintenance Authority.	Throughout.	Detailed design, Construction and Operation phases.	^
Ecology (Construction Phase)							
S.13.9	E4-DP3	Creation of proposed Long Valley Nature Park and creation and enhancement of wetland and woodland areas and buffer planting within LVNP.	Compensate for wetland loss arising from the project.	Project Proponent/ Contractor (LVNP Detailed Habitat Creation & Management Plan).	Long Valley	Construction phase.	N/A
S.13.9	E5-DP3	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance on edge of development areas, including along any roads adjacent to or penetrating into areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.	Contractor.	Interface between areas/habitats of ecological importance (KTN	Construction phase.	N/A

			Measures to minimize flightline impacts to birds,		areas B1-3, H1-1) and works areas.		
S13.9	E6-DP3	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A
DP4- KTN NDA Road D1 to D5 (New Road)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.A9	LV1-DP4	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed Design Consultant/ Contractor	<u>Throughout NDAs,</u>	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	N/A
S.12.A9 MM1	LV2-DP4	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor/	<u>Throughout NDAs,</u> <u>particularly for</u> <u>reservoirs</u>	Prior to Construction	N/A

		continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.					
S.12.A9 MM2	LV3- DP4	<p>Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines.</p> <p>All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated.</p> <p>Construction time frame should also be considered and designs seek to keep it to a practical minimum.</p>	<p>Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape</p>	<p>Detailed Design Consultant/</p>	<p>Throughout NDAs</p>	<p>Prior to Construction</p>	<p>N/A</p>

<p>S.12.A9 MM4</p>	<p>LV4- DP4</p>	<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>	<p>Protect and Preserve Trees</p>	<p>Government / Detailed Design Consultant/ Contractor</p>	<p>Onsite</p>	<p>Prior to Construction and Construction Phase</p>	<p>^</p>
<p>S.12.A9 MM5</p>	<p>LV5- DP4</p>	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along</p>	<p>Transplant Trees where suitable for transplantation</p>	<p>Government / Detailed Design Consultant/ Contractor</p>	<p>Onsite possible. Consider locations where Otherwise offsite locations</p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	<p>N/A</p>

		highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit’ should be referred to.					
S.12.A9 MM6	LV6- DP4	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	<p>Government Detailed Design Consultant/ Contractor</p>	<p>Onsite</p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	<p>N/A</p>
S.12.A9 MM7	LV7- DP4	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p> <p>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and</p>	<p>Compensate for trees and shrubs lost due to the Project.</p>	<p>Government Detailed Design Consultant/ Contractor</p>	<p>Onsite where possible. Otherwise consider offsite locations</p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	<p>N/A</p>

		Rhododendron simsii are suggested..					
S.12.A9 MM8	LV8- DP4	<p>Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxylum avicennae, Hibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda.</p> <p>In addition some understory vegetation may be planted including shrubs such as Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Rhapsiolepis indica, and Rhododendron simsii.</p> <p>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of</p>	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.					
S.12.A9 MM9	LV9- DP4	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government / Detailed Design Consultant/ Contractor	On appropriate structures	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV10- DP4	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures , or around VSRs to contain their view out to the NDA structures.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM12	LV11- DP4	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts.	To soften the hard, straight edges and provide greening along roads.	Government Detailed Design Consultant/ Contractor	On viaducts or along roads.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		(Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)					
S.12.A9 MM13 & EIA Annex 13	LV12- DP4	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on-wetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ re-provisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM15	LV13- DP4	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
Landscape and Visual (Construction)							
S.12.A9 MM16	LV14- DP4	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor			N/A
S.12.A9 MM17	LV15- DP4	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	<u>Throughout NDAs</u>	Construction and Operation Phases	N/A

		Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.					
Ecology (Prior to Detailed Design Prior to Construction Phase)							
S. 13.9	E1-DP4	Egretry Habitat Creation & Management Plan (EHCMP) and Woodland Planting and Management Plan (WPMP)	Compensate for loss of Man Kam To Road egretry. Compensate for loss of secondary woodland and hillside plantation of ecological significance.	Project Proponent/ Detailed Design Consultant (EHCMP and WPMP).	FLN area A1-7 (egretry compensation). KTN areas E1-8 and G1-3 (woodland compensation).	Detailed design phase.	N/A
Ecology (Detailed Design, Construction and Operational Phases)							
S13.9	E2-DP4	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor Maintenance Authority.	Throughout.	Throughout.	N/A
Ecology (Construction Phase)							
S.13.9	E3-DP4	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.	Contractor.	Interface between areas/habitats of ecological importance (KTN areas B1-3, E1-8, G1-3 and H1-1) and works areas	Construction phase.	N/A
S13.9	E4-DP4	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A
S13.8	E5-DP4	Maintenance of compensatory native woodland planting.	Compensate for loss of	Maintenance	KTN areas E1-8 and	Operation	N/A

			plantation of ecological significance.	Authority.	G1-3.	phase	
Cultural Heritage (Pre-construction Phase)							
S11.6.1	CH1-DP4	<p><u>Undertaking Survey-cum-Rescue Excavation</u></p> <p>A Survey-cum-Rescue Excavation should be conducted after land resumption and before the commencement of construction works to define the precise archaeological deposits extent and to preserve the 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.</p>	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	<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 with areas with proposed development as presented in Figure 11.9 should be implemented after land resumption to confirm and verify the findings of the EIA. The survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance. It should be noted that the scope of further archaeological survey is based on the current proposed alignment. Any additional works areas which have not been covered by the current archaeological impact assessment should be covered as soon as possible. Subject to the findings of the archaeological survey to be conducted after land resumption, additional mitigation measures</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 within the work extent of DP4	After land resumption but before construction	N/A

		would be designed and implemented before the commencement of construction works to mitigate the adverse impact.					
S11.6.1	CH3-DP4	<p><u>Undertaking Induction Training</u></p> <p>Induction training should be provided to the construction Contractor before the commencement of the excavation works in Spot E. An induction will be conducted as part of the environmental health and safety induction programme to all site staff before they are deployed on site. The induction will include an introduction on the historical development of the Site, the possible archaeological remains that may be encountered during ground excavation works as well as the reporting procedures in case suspected archaeological remains are identified. A set of the presentation material (in the form of power point presentation) with content details will be prepared by an archaeologist and submitted to AMO for reference and record purpose. The first induction briefing will be video recorded and it will be used as induction briefing material for new site staff.</p>	To preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	Spot E	Before the commencement of the excavation works and before site staff are deployed on site	N/A
S11.6.2	CH4-DP4	<p><u>Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages</u></p> <p>Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out by the Project Proponent.</p>	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	Entrance Gate of HKT03, KT16, KT17 and KT18	Prior to Removal / Relocation of features before commencement of construction works	N/A
S11.6.2	CH5-DP4	<p><u>Undertaking baseline condition survey and baseline vibration impact assessment</u></p> <p>In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project,</p>	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted	Project Proponent/ Contractor	HKT03 (Main Building) and G308	Preconstruction stage before commencement of construction works	N/A

		prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 15mm/s could be adopted for historic buildings) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	built heritage features				
S11.6.2	CH6-DP4	<u>Relocation of Built Heritages</u> Relocation of built heritages to a reasonable location nearby may be required.	To preserve the directly impacted sites by relocation	Project Proponent/ Contractor	Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of construction works	N/A
Cultural Heritage (Construction Phase)							
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
DP5- New sewage pumping stations (SPSs) in KTN NDA							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.B9	S.12.B9	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try		Detailed Design	Throughout NDAs,	Prior to Construction,	N/A

		and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Consultant/ Contractor/		Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	
S.12.B9 MM1	LV2- DP5	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor/	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A
S.12.B9 MM2	LV3- DP5	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant/	Throughout NDAs	Throughout NDAs	N/A

		<p>structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines.</p> <p>All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated Construction time frame should also be considered.</p>					
S.12.B9 MM4	LV4- DP5	<p>Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor’s works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of</p>	Protect and Preserve Trees	Government Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	^

		the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.					
S.12.B9 MM5	LV5- DP5	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit“ should be referred to.</p>	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite location.	Prior to Construction,, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM6	LV6- DP5	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011- Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes</p>	Government/ Detailed Design Consultant/	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

			are as visually amenable as possible.				
S.12.B9 MM7	LV7- DP5	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments.</p> <p>Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p> <p>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Raphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested.</p>	<p>Compensate for trees and shrubs lost due to the Project.</p>	<p>Government/ Detailed Design Consultant/ Contractor</p>	<p>Onsite where possible.</p> <p>Otherwise consider offsite locations</p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	N/A
S.12.B9 MM8	LV8- DP5	<p>Woodland Compensatory Planting – Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like</p>	<p>Reprovide areas of woodland to compensate for those areas of quality woodland lost.</p>	<p>Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority</p>	<p>In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD</p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	N/A

		<p>for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus omentosa</i>, <i>Raphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <p>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</p>					
S.12.B9 MM9	LV9- DP5	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government / Detailed Design Consultant/ Contractor	On appropriate structures	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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S.12.B9 MM10	LV10- DP5	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Detailed Design Consultant/ Contractor	<i>On appropriate buildings</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM11	LV11- DP5	Screen Planting – Tall screen/buffer trees and shrubs should be implanted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	<i>Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM14.3	LV12- DP5	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Detailed Design Consultant/ Contractor	<i><u>Channelized watercourse, particularly the Ma Wat River Channel Diversion</u></i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		Eastern Section. This measure will be particularly relevant in this area.					
Landscape and Visual (Construction)							
S.12.B9 MM16	LV13- DP5	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	<i>Throughout NDAs</i>	Construction Phase	N/A
S.12.B9 MM17	LV14- DP5	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	<i>Throughout NDAs</i>	Construction and Operation Phases	^
Ecology (Construction Phase)							
S.13.9	E1-DP5	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.	Contractor.	<i>Interface between areas/habitats of ecological importance and works areas (all sides of KTN area F1-2).</i>	Construction phase.	N/A
DP7-Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works (SWHSTW)							
Landscape and Visual (Construction Phase and Operational Phase)							
S.12.9 MM4	LV1- DP7	Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In	Protect and Preserve Trees	Government / Detailed	<i>Onsite</i>	Prior to Construction and	N/A

		<p>particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor’s works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</p>		<p>Design Consultant/ Contractor</p>		<p>Construction Phase</p>	
S.12.9 MM9	LV2- DP7	<p>Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. building edges, piers).</p>	<p>Soften hard surfaces and facilities</p>	<p>Government / Detailed Design Consultant/ Contractor</p>	<p><i>On appropriate structures</i></p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	<p>N/A</p>
S.12.9 MM10	LV3- DP7	<p>Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated.</p> <p>These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.</p>	<p>Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.</p>	<p>Government / Detailed Design Consultant/ Contractor</p>	<p><i>On appropriate buildings</i></p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	<p>N/A</p>

DP10- Fanling Bypass Eastern Section (New Road)

Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)

S.12.D9	LV1- DP10	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed Design Consultant/ Contractor	<u>Throughout NDAs,</u>	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	^
S.12.D9 MM1	LV2- DP10	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	Reduce topographical changes and minimize land resumption	Government/ Detailed Design Consultant/ Contractor	<u>Throughout NDAs,</u> <u>particularly for</u> <u>reservoirs</u>	Prior to Construction	N/A
S.12.D9 MM4	LV3- DP10	Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification	Protect and Preserve Trees	Government/ Detailed Design Consultant/ Contractor	<u>Onsite</u>	Prior to Construction and Construction Phase	^

		<p>shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor’s works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</p>					
S.12.D9 MM5	LV4- DP10	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 ‘Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit’ should be referred to.</p>	Transplant Trees where suitable for transplantation	Government/ Detailed Design Consultant/ Contractor	<u>Onsite where possible. Otherwise consider offsite locations</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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S.12.D9 MM6	LV5- DP10	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	<p>Government/ Detailed Design Consultant/ Contractor</p>	<p><u>Onsite</u></p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	<p>N/A</p>
S.12.D9 MM7	LV6- DP10	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p> <p>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested.</p>	<p>Compensate for trees and shrubs lost due to the Project.</p>	<p>Government/ Detailed Design Consultant/ Contractor</p>	<p><u>Onsite where possible. Otherwise consider offsite locations</u></p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	<p>N/A</p>
S.12.D9 MM8	LV7- DP10	<p>Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the</p>	<p>Reprovide areas of woodland to compensate for those areas of quality woodland lost.</p>	<p>Project Proponent/ Detailed Design Consultant/</p>	<p><u>In areas identified in the EIA Landscape Mitigation Plans</u></p>	<p>Prior to Construction, Construction Phase</p>	<p>N/A</p>

	<p>woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>.</p> <p>In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <p><i>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</i></p>		<p>Contractor/ Maintenance Authority</p>	<p><i>and as agreed with</i> <u>AFCD</u></p>	<p>& Maintenance in Operation Phase</p>	
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S.12.D9 MM9	LV8- DP10	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government/ Detailed Design Consultant/ Contractor	<u>On appropriate structures</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM11	LV9- DP10	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government/ Detailed Design Consultant/ Contractor	<u>Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9M M12	LV10- DP10	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	To soften the hard, straight edges and provide greening along roads.	Government/ Detailed Design Consultant/ Contractor	<u>On viaducts or along roads.</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM14.3	LV11- DP10	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department	Minimize the necessity of watercourse modification,	Government/ Detailed Design	<u>Channelized watercourse.</u>	Prior to Construction,	N/A

		<p>Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc.</p> <p>For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.</p>	<p>protect watercourses where possible and enhance channelized watercourses</p>	<p>Consultant/ Contractor</p>	<p><u>particularly the Ma Wat River Channel Diversion</u></p>	<p>Construction Phase & Maintenance in Operation Phase</p>	
<p><i>Landscape and Visual (Construction)</i></p>							
S.12.D9 MM16	LV12- DP10	<p>Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used.</p> <p>Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).</p>	<p>To screen undesirable views of the works site.</p>	<p>Contractor</p>	<p><u>Throughout NDAs</u></p>	<p>Construction Phase</p>	<p>^</p>
S.12.D9 MM17	LV13- DP10	<p>Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.</p>	<p>To minimize glare impact to adjacent VSRs</p>	<p>Government / Contractor</p>	<p><u>Throughout NDAs</u></p>	<p>Construction and Operation phases</p>	<p>^</p>

		Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.					
Ecology (Detailed Design, Construction and Operational Phases)							
S13.8	E1-DP10	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor Maintenance Authority.	<u>Throughout NDAs</u>	Detailed design, construction and Operation phases.	^
Ecology (Construction Phase)							
S13.9	E3-DP10	Lower reaches of Siu Hang San Tsuen Stream to have 10m wide vegetated buffer in Open Space Zone D1-3 and Fanling Bypass to cross stream on viaduct.	Minimize impacts on Siu Hang San Tsuen Stream and stream fauna.	Contractor.	<u>FLN area D1-3.</u>	Construction phase.	N/A
S.13.9	E4-DP10	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna. Measures to minimize flight-line impacts to birds, especially breeding ardeids.	Contractor.	<u>Interface between areas/habitats of ecological importance and works areas (all of the north side of the Bypass works areas west of interchange with Sha Tau Kok Road).</u>	Construction phase.	N/A
Cultural Heritage (Construction Phase)							
S11.6.2	CH4-DP10	<u>Conducting Construction Vibration Monitoring and Structural Strengthening Measures</u> Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the	To minimize the potential impacts during Construction phase on any identified potential vibration impacted	Contractor.	<u>Identified potential vibration impacted built heritage features</u>	Construction phase, with details specified in baseline condition survey and	N/A

		assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	built heritage features			baseline vibration impact assessment,	
<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	<p>General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to.</p> <p>With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.</p>		Detailed design consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	N/A
S.12.D9 MM1	LV2-DP12	<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	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A

<p>S.12.D9 MM2</p>	<p>LV3- DP12</p>	<p>Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines.</p> <p>All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated.</p> <p>Construction time frame should also be considered and designs seek to keep it to a practical minimum.</p>	<p>Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape</p>	<p>Detailed Design Consultant</p>	<p>Throughout NDAs</p>	<p>Prior to Construction</p>	<p>N/A</p>
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<p>S.12.D9 MM4</p>	<p>LV4- DP12</p>	<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>	<p>Protect and Preserve Trees</p>	<p>Government / Detailed Design Consultant/ Contractor</p>	<p>Onsite</p>	<p>Prior to Construction and Construction Phase</p>	<p>N/A</p>
<p>S.12.D9 MM5</p>	<p>LV5- DP12</p>	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be</p>	<p>Transplant Trees where suitable for transplantation</p>	<p>Government / Detailed Design Consultant/ Contractor</p>	<p>Onsite where possible. Otherwise consider offsite locations</p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	<p>N/A</p>

		<p>agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.</p>					
S.12.D9 MM6	LV6- DP12	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow.</p> <p>All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	<p>Government / Detailed Design Consultant/ Contractor</p>	<p>Onsite</p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	<p>N/A</p>
S.12.D9 MM7	LV7- DP12	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p>	<p>Compensate for trees and shrubs lost due to the Project.</p>	<p>Government / Detailed Design Consultant/ Contractor</p>	<p>Onsite where possible. Otherwise consider offsite locations</p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	<p>N/A</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.					
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>							

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 2021

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	43.303	0.000	0.000	43.303	0.000	0.000	0.002	0.120	0.002	0.000	0.220
February	40.246	0.000	0.000	39.933	0.313	0.000	0.000	0.000	0.000	0.000	0.068
March	50.606	0.000	1.664	46.312	0.258	2.372	0.003	0.000	0.002	0.033	0.185
April	30.900	0.000	0.529	29.004	0.315	1.052	0.000	0.000	0.000	0.000	0.066
May	31.720	0.000	2.719	28.328	0.057	0.616	0.000	0.004	0.000	0.000	0.468
June	29.813	0.000	0.155	29.028	0.331	0.299	0.000	0.000	0.000	0.000	0.193
Sub-total	226.588	0.000	5.067	215.908	1.274	4.339	0.005	0.124	0.004	0.033	1.200
July	29.065	0.000	1.354	27.279	0.347	0.085	0.000	0.147	0.002	6.500	0.139
August	26.476	0.000	0.559	25.567	0.282	0.068	0.000	0.031	0.002	0.234	0.459
September	60.995	0.000	0.351	60.333	0.311	0.000	0.000	0.090	0.002	4.250	0.709
October	22.524	0.000	11.639	8.723	2.046	0.116	0.004	0.043	0.012	2.910	1.308
November	18.002	0.000	1.242	15.473	1.120	0.167	0.000	0.295	0.000	0.000	0.795
December	13.562	0.000	6.937	4.879	0.496	1.250	0.005	0.045	0.003	0.540	1.367
Total	397.212	0.000	27.149	358.162	5.876	6.025	0.014	0.775	0.025	14.467	5.977

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+e

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 2021

Waste Flow Table

Month	Total Quantity Generated (a) = (b)+(c)+(d)+(e)	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of Non-Inert C&D Wastes Generated Monthly				
		Hard Rock and Large Broken Concrete (b)	Reused in the Contract (c)	Reused in other Projects (d)	Disposed as Public Fill* (e)	Imported Fill (f)	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse#
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
Jan	288.53	0.00	0.00	0.00	288.53	0.00	0.00	0.00	0.00	31.68	
Feb	439.77	0.00	0.00	0.00	439.77	0.00	0.01	0.13	0.00	11.51	
Mar	1,333.82	0.00	0.00	0.00	1,333.82	0.00	0.00	0.00	0.00	3.79	
Apr	1,160.76	0.00	0.00	0.00	1,160.76	0.00	0.00	0.00	0.00	3.02	
May	1,301.40	0.00	0.00	0.00	1,301.40	0.00	0.01	0.00	0.00	4.30	
June	1,061.46	0.00	0.00	0.00	1,061.46	0.00	0.00	0.00	0.00	2.60	
Sub-total	5,585.74	0.00	0.00	0.00	5,585.74	0.00	0.02	0.13	0.00	56.90	
July	800.27	0.00	0.00	0.00	800.27	0.00	0.01	0.00	0.00	7.82	
Aug	2,368.20	0.00	2,080.00	0.00	288.20	446.34	0.00	0.01	0.00	7.92	
Sept	1,013.82	0.00	0.00	0.00	1,013.82	100.0	0.004	0.00	0.00	8.13	
Oct	465.41	0.00	0.00	0.00	465.41	0.00	0.00	0.00	0.00	0.00	
Nov	2,734.79	0.00	0.00	0.00	2,734.79	0.00	0.00	0.00	0.00	4.09	
Dec	2,340.26	0.00	0.00	0.00	2,340.26	0.00	0.00	0.00	0.00	73.21	
Sub-total	9,722.75	0.00	2,080.00	0.00	7,642.75	546.34	0.01	0.01	0.00	101.17	
Total	15,308.49	0.00	2,080.00	0.00	13,228.49	546.34	0.03	0.14	0.00	158.07	

Notes:

- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) Broken concrete for recycling into aggregates.

Forecast of Total Quantities of C&D Materials to be Generated from the ND/2009/02

Forecast Made at the End of the Project	Total Quantity Generated	Hard Rock & Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemicals Waste	Others, e.g. general refuse
									(see Note 2)		
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
Total:	39,900	8,400	2,500	0	29,000	600	100	1.0	3	0.5	200

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

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

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)
5	2	1	1	5	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 2021 (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)
Jan	1,705.91	0.00	0.00	0.00	0.00	1,439.86	0.00	0.00	0.00	0.00	266.05
Feb	2,033.63	0.00	0.00	0.00	159.19	1,700.35	0.00	0.00	0.00	0.00	174.09
Mar	508.67	0.00	0.00	0.00	236.63	68.57	0.00	0.00	0.00	0.00	203.47
Apr	1,227.09	0.00	0.00	0.00	1,222.37	0.00	0.00	0.00	0.00	0.00	4.72
May	3,904.76	0.00	0.00	0.00	3,290.41	588.64	0.00	0.00	0.00	0.00	25.71
June	1,552.26	0.00	0.00	0.00	316.89	1,228.66	0.00	0.00	0.00	0.00	6.71
Sub-total	10,932.32	0.00	0.00	0.00	5,225.49	5,026.08	0.00	0.00	0.00	0.00	680.75
July	1,405.56	0.00	0.00	0.00	1,371.79	0.00	11.64	0.00	0.00	0.00	22.13
Aug	974.13	0.00	0.00	0.00	953.84	0.00	0.00	0.00	0.00	0.00	20.29
Sept	658.96	0.00	0.00	0.00	521.29	0.00	0.00	0.00	0.00	0.00	137.67
Oct	253.83	0.00	0.00	0.00	121.21	0.00	0.01	0.25	0.00	0.00	132.36
Nov	11,203.79	0.00	0.00	0.00	11,001.81	0.00	0.00	0.00	0.00	0.00	201.98
Dec	11,179.35	0.00	0.00	0.00	11,151.10	0.00	0.00	0.00	0.00	0.00	28.25
Sub-total	25,675.62	0.00	0.00	0.00	25,121.04	0.00	11.65	0.25	0.00	0.00	542.68
Total	36,607.94	0.00	0.00	0.00	30,346.53	5,026.08	11.65	0.25	0.00	0.00	1,223.43

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 2021 (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-21	2.025	0.000	0.300	0.000	1.725	0.564	0.000	0.419	0.065	55.020	3.482	99.590
Feb-21	0.874	0.000	0.066	0.000	0.808	0.000	0.000	0.137	0.000	33.194	0.000	162.010
Mar-21	2.676	0.000	0.582	0.000	2.094	0.000	0.002	0.088	0.002	24.670	0.000	221.160
Apr-21	2.811	0.000	0.546	0.000	2.265	0.282	0.002	0.000	1.678	0.002	0.000	201.690
May-21	2.129	0.000	0.492	0.000	1.637	1.158	0.002	0.170	0.001	3.800	12.000	108.040
Jun-21	1.664	0.000	0.252	0.000	1.412	0.000	0.001	0.000	0.000	3.750	1.700	43.360
Sub-total	12.179	0.000	2.238	0.000	9.941	2.004	0.008	0.814	1.747	120.436	17.182	835.850
Jul-21	2.055	0.000	0.012	0.000	2.044	0.060	5.667	0.296	0.007	6.910	0.000	36.530
Aug-21	2.069	0.000	0.090	0.000	1.979	0.156	1.031	0.320	0.021	8.168	0.000	90.700
Sep-21	1.350	0.000	0.180	0.000	1.170	0.174	8.994	0.111	0.024	0.000	0.000	133.950
Oct-21	2.982	0.000	0.132	0.000	2.850	0.000	0.950	0.541	0.010	15.180	0.000	108.440
Nov-21	3.735	0.000	0.456	0.000	3.279	0.090	0.010	0.398	0.009	3.600	7.700	62.940
Dec-21	3.080	0.000	0.306	0.000	2.774	0.000	0.256	0.562	0.013	29.935	0.000	233.200
Total in 2021	27.450	0.000	3.414	0.000	24.036	2.484	16.914	3.041	1.831	184.229	24.882	1501.610
Total of the Project	30.346	0.000	3.939	0.000	26.407	3.426	16.918	3.210	1.841	501.153	24.882	2078.830

*Approx. estimation for each dump truck is 6m³/truck or 12 ton/truck

Total Quantity of Inert C&D Materials Generated: 30.346 (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	0.0035	0	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	0.004	0.000	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

Waste Flow Table of ND/2019/07

Monthly Summary Waste Flow Table for 2021 (year)

Name of Person completing the record: KM LUI (EO)

Project : Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Contract No.: ND/2019/07

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete (a)	Reused in the Contract (b)	Reused in other Projects (c)	Disposed as Public Fill (d)	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000T)	(in '000T)	(in '000T)	(in '000T)	(in '000T)	(in '000T)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 T)
Jan	0	0	0	0	0	0	0	0	0	13.400	0.695
Feb	0	0	0	0	0	0	0	0.401	0	28.760	0.412
Mar	0.023	0	0	0	0.023	0.191	0	0.311	0	8.600	0.165
Apr	0.244	0	0	0	0.244	2.488	0	0	0	26.000	0.207
May	0	0	0	0	0	10.883	0	0	0	13.000	0.197
Jun	0.805	0	0.801	0	0.004	13.445	0	0.394	0	0	0.047
Sub-total	1.072	0.000	0.801	0.000	0.271	27.007	0.000	1.106	0.000	89.760	1.723
Jul	0.135	0	0.128	0	0.007	20.837	0	0	0	0	0.286
Aug	0.585	0	0.585	0	0	11.221	0	0	0.005	0	0.012
Sep	0.044	0	0	0	0.044	10.659	0	0.340	0	43.620	0.419
Oct	0	0	0	0	0	15.732	0	0	0	42.400	0.309
Nov	0.125	0	0	0	0.125	28.068	0.017	0	0.009	27.440	1.030
Dec	1	0	0	0	1.097	7.495	0	0	0	9.200	0.882
Total	3.058	0.000	1.514	0.000	1.544	121.019	0.017	1.446	0.014	212.420	4.661

- Notes:
- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
 - (2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.
 - (3) Broken concrete for recycling into aggregates.
 - (4) Total Quantity Generated = a+b+c+d..

**APPENDIX S
COMPLAINT LOG**

Appendix S - Complaint Log

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2020-07-01	Public Road at Portion 6a (ND/2019/01)	13 th July 2020	The EPD visit on 13 July 2020 was to respond the complaint received from the 2nd week in July regarding the dust problem in public road of Portion 6a. Mr. Tse (EPD) observed muddy wheel track on the public road, and he expressed that the public road should keep free of mud even it was inside the project area. He also advised BKRWJV (the Contractor) to clean up the muddy wheel track and provide rectified photos to him.	A designated person is provided at the ingress/egress for vehicle washing before the wheel washing facility is in use, this is to make sure all vehicle are free of mud before leaving the site. And, the designated person is also responsible for cleaning the public road if any mud is found on it.	Closed
COM-2020-11-01	Portion 4 and Portion 7 near Dills Corner Garden (ND/2019/01)	11 th November 2020	The EPD inspection at Portion 4 on 11 November 2020 was to respond the complaint regarding the dust problem near Dills Corner Garden referred by a District Council Member. No construction activities was carried out and no obvious dust emission was observed. EPD advised BKRWJV (the Contractor) to increase the height of temporary water barrier and install sprinklers on bare ground. Another EPD inspection was conducted on 26 November 2020 at	The height of temporary water barrier was increased at Portion 4. Sprinklers were installed on bare ground at Portion 4 and on top soil at Portion 7. Manual water spraying were provided regularly. Hydroseeding will be provided on soil surface at Portion 4 for long-term measures. Proper implementation of dust mitigation measures will be continuously reviewed and monitored to avoid potential dust impact on site.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			Portion 7 for the dust complaint. During inspection, no obvious dust emission was observed and potential dust may generate from top soil which appear to be dry. EPD advised the Contractor to install sprinklers on top soil for dust suppression.		
COM-2020-11-02	Works Area A & B (ND/2019/05)	27 th November 2020	The complainant complained about the noise generated from the alarm of scissors platform during works for PM's site accommodation on Sunday and called the police force. Police officer has checked that Construction Noise Permit has been applied for the construction work. Also, the complainant complained about the reflective blue color of roof material of site office.	Permit-to-Work system was properly implemented for works at restricted hours. The PME used have been checked in compliance with the valid Construction Noise Permit (CNP No.: GW-RN0788-20). Acoustics mats were erected between works area and noise sensitive receivers. Scissor platform or noisy work activities will be arranged and minimized to be used on Sunday or evening time on weekdays. Specific training for the quieter works arrangement was provided to workers. Also, the blue roof will be covered by non-reflective green roof material.	Closed
COM-2021-01-01	Ma Tso Lung Road (ND/2019/01)	7 th January 2021	A complaint regarding soil deposited on Ma Tso Lung Road was referred by EPD verbally.	No soil / mud deposit or mud track were observed along the Ma Tso Lung Road during investigation and site inspection between Contractor, the <i>Supervisor</i> , ET and IEC. The road condition of Ma Tso Lung Road will be closely monitored and the public road will be regularly cleaned if mud deposit was observed. Wheel washing facilities at every site entrance will be regularly monitored to ensure proper implementation of dust control measures.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2021-01-02	Ma Tso Lung Road (Near L/P VD5622) (ND/2019/01)	13 th January 2021	A complaint was received from 1823 regarding the suspected odour emitted from muddy water discharged.	Water sample collected from the wastewater treatment facility was clear and no odour was detected. Sewage from chemical toilet was collected on a regular basis by licensed collector. Brownish wastewater was observed discharging upstream of the site from an unknown factory to the uncharted channel which may be potential source of the odour.	Closed
COM-2021-01-03	CTC Storage Yard (ND/2019/05)	22 nd January 2021	A complaint was referred from EPD regarding the noise generated before 7 a.m. on weekdays and machinery noise generated on Sunday from CTC Storage Yard.	No attendance record of workers working for CTC Storage Yard earlier than 8 a.m. and on Sunday (day of complaint) was recorded. To ensure strict compliance to Noise Control Ordinance and prevent noise nuisance to the nearby villages, the Contractor has implemented the following enhancement measures: 1. Issue a memo to the relevant sub-contractor on restricted working hour. 2. Conduct specific training to sub-contractor frontline supervisor and works. 3. Apply a construction noise permit for the suspected location.	Closed
COM-2021-01-04	Ho Sheung Heung (ND/2019/02)	28 th January 2021	A complaint was received from 1823 regarding an idling construction vehicle near Ho Sheung Heung to operate the engine for over 10	Ad-hoc training was provided to workers on switching off idling engines when awaiting on site. Poster for “Switching off idling engines” was posted at site entrance to alert workers on the	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			minutes. Also, the complainant complained on noise nuisance from the speaker during meeting.	issue. For noise nuisance from the meeting, the speaker volume in the future event will be lower as much as possible.	
COM-2021-02-01	CTC Storage Yard (ND/2019/05)	4 th February 2021	A complaint was received from EPD call on 2 nd February 2021 regarding a noise complaint from a Tong Hang villager about noise from CTC storage yard at around 19:00 – 20:00 on 1 st February 2021.	The suspected cause of the complaint was the delivery of a rotary drilling rig by a tractor lorry arrived at CTC Storage Yard at around 19:00 at 1 st February 2021. The delivery time was restricted due to the oversized tractor lorry (width >2.4m and length protruded >1.4m at tractor tail). No loading and unloading was conducted during the time of complaint. For follow up action, the Contractor will apply Construction Noise Permit for any foreseeable delivery that may not be finished before restricted hours and will notify possible affected village representatives in advance.	Closed
COM-2021-02-02	CTC Storage Yard (ND/2019/05)	16 th February 2021	A complaint was received from EPD call on 10 th February 2021 regarding a noise complaint from a Tong Hang villager about some impact noise from CTC Storage yard at Sunday's daytime (7 th February 2021).	Under investigation, erection of chain link fence for separating works area and adjacent village house was conducted by a sub-contractor on 7 th February 2021 without notification to the Contractor. Sub-contractor has been reminded that any work within site area shall be conducted after instruction by the Contractor and permit-to-work system on restricted hours works shall be strictly followed.	Closed
COM-2021-02-03	CTC Storage Yard (ND/2019/05)	2 nd March 2021	A complaint was received from EPD call on 24 th February 2021 regarding a noise complaint from a Tong Hang villagers about some machinery noise	Further enhancement on erection of acoustics mats and mobile acoustics mat panels was conducted at strategic location at E1-01 for mitigation of the noise impact to the nearby	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			and dust from CTC Storage yard. Joint site inspection of the Contractor, the <i>supervisor</i> and EPD was conducted on the same day for the bored piling at CTC Storage Yard and check on the noise and dust mitigation measures. EPD requested to enhance noise and dust mitigation measures for grabbing operation of the Rotary Drill Rig for construction of piles of E1-01.	sensitive receivers. Regular water spraying has been applied to suppress the dust from grabbing procedure and the skip.	
COM-2021-03-01	Ma Tso Lung Shun Yee San Tsuen (ND/2019/01)	1 st March 2021	A complaint was referred from EPD regarding fly-tipping of C&D waste near Ma Tso Lung Shun Yee San Tsuen and muddy public road.	Under investigation, the suspected site near Shun Yee San Tsuen was out of project site boundary. Internal trip ticket system was properly implemented for dump trucks transported from project site to other approved alternative disposal ground. Also, dump trucks were properly washed and mechanical cover of dump trucks were closed while leaving the site. For follow up action, banners and flags were displayed on site to promote the environmental protection awareness. Regular training was provided to remind the dump truck drivers that illegal dumping is strictly prohibited.	Closed
COM-2021-03-02	CTC Storage Yard (ND/2019/05)	15 th March 2021	A complaint was received from EPD call and an inspection by EPD was conducted on 9 th March 2021 regarding a dust complaint from a Tong Hang villager. The complainant	For follow up action, the Contractor provided training to remind frontline supervisors and workers to wet the auger before movement when it was dried for preventing any occasional situation that the auger was dried.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			complained that rotary drill rig shall be equipped with enclosure for dust control and rotary drill rig had exhaust disturbance. Also, the complainant requested to improve wheel washing at site entrance.	The Contractor provided training to brief frontline supervisor and the operators to prevent exhaust disturbance. Also, the drill rigs exhaust pipe shall not face to the public area. If it is avoidable, screens shall be arranged to divert the exhaust gas. An additional cut-off drain was constructed and notice signs were erected for notifying drivers to give wheel washing in front of the cut-off drains.	
COM-2021-03-03	Ma Tso Lung Road (ND/2019/01)	9 th April 2021	A complaint was referred from EPD on 23 March 2021 regarding muddy public access road along Ma Tso Lung Road.	The muddy access road was found generated from a nearby private factory where the access road is not hard paved. The Contractor arranged water browser to help clean up the section of road on 24 th and 25 th March 2021 respectively. Also, dump truck were properly washed at project site exit near Ma Tso Lung Road.	Closed
COM-2021-04-01	Long Valley, Kwu Tung (ND/2019/03)	9 th April 2021	A complaint was referred from EPD regarding to associated impacts arising from construction works at Long Valley Nature Park, causing nuisance and affecting the habitat and ecological value in Long Valley.	Construction works for development of Long Valley Nature Park are conducted according to the recommended mitigation measures stated in Habitat Creation and Management Plan. Wetland creation and restoration works are in progress which include provision of paddy field, turning abandoned agricultural lands into wet agricultural land and provision of open water habitat with bird island. Irrigation channel is under construction for provision of reliable water supply to farmland. For construction works, the following significant mitigation measures are implemented: 1. Provide noise barriers to minimize noise nuisance to adjacent field where Greater Painted-	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				<p>snipe was found;</p> <ol style="list-style-type: none"> 2. Arrange concrete pump for concreting works to minimise noise impact; 3. Provide water spraying on the exposed earth to dampen the dusty surface; 4. Provide shade cloth to separate works area and marsh where Greater Painted-snipe were found; 5. Demarcation of temporary vehicle access to prohibit vehicle across the farmland; 6. Provide 2m dull green site boundary fence along Long Valley work areas; and 7. Block the main accesses by temporary barrier to avoid human disturbance. 	
COM-2021-04-02	Close to junction of Ma Wat River and Ng Tung River (ND/2019/04, ND/2019/05, ND/2019/06)	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> <ol style="list-style-type: none"> 1. Installation of silt curtain, geotextiles and concrete blocks for excavation works at Ng Tung River with regular inspection; 2. Exposed slope paved with concrete to prevent muddy runoff; 3. Setting up wastewater treatment plants at 	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				<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 	On-going

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 	

**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	Before construction			Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	EPD Approved 25 August 2020
2.6	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	To Conduct - A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	*	
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
2.2	Employment of IEC				Established 23 January 2020	Construction Phase ET
					Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	EPD Approved 25 August 2020
2.6	Traffic Noise Mitigation Plan	Before construction	For Approval	no later than 1 month before the commencement of construction	Deposited 31 July 2019	EPD Approved 9 August 2019
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records	Others	Deposit - A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at Locations KT38, KT44 and KT52	prior to the commencement of the respective removal or relocation works	Deposited 10 February 2021	Pending Approval
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

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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	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	Pending approval
2.6	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	To Conduct - A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer 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 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

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	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	Pending approval
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre- Construction ET	
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	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 17 September 2020	
2.5	Location Plans	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 15 October 2020	
2.6	Landscape Plan	Before construction	Deposit	at least 6 weeks before the commencement of 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	Deposited 13 May 2021	by Fugro
3.4	Monthly EM&A Report	During construction	Submit	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by 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
2.2	Employment of IEC				Established 23 January 2020	Construction Phase ET
					Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 18 June 2020	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 18 June 2020	EPD Approval 29 June 2020
					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 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 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:
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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
2.2	Employment of IEC				Established 23 January 2020	Construction Phase ET
					Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 18 September 2020	
2.5	Location Plans	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 18 September 2020	
2.6	Relocation Plan for Rose Bitterling	Before construction	Approval	before the commencement of construction	Submitted 5 November 2020	EPD approved 9 November 2020
2.7	Egretty 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	by Fugro
3.4	Monthly EM&A Report	During construction	Submit	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by 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	

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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
2.2	Employment of IEC				Established 23 January 2020	Construction Phase ET
					Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 17 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	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	*	
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 operation	Before operation	Notify in writing	no later than 1 month prior to the commencement of operation	N/A	
2.4	IEC Audit Report	After construction	Deposit	within one month upon completion of the construction works	N/A	

DP10	EP-473/2013/A	Fanling Bypass Eastern Section				
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	Before construction			Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 28 May 2020	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 28 May 2020	EPD Approval 29 June 2020
2.6	Relocation Plan for Rose Bitterling	Before construction	Approval	before the commencement of construction	N/A	
2.7	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	Pending Approval
2.11	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	Deposit - A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at FL19	prior to the commencement of the respective removal or relocation works	-	
		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	

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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	Before construction			Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 14 October 2019	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 14 October 2019	
2.6	Landscape Plan	Others	Deposit	at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures of the Project	*	
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	

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