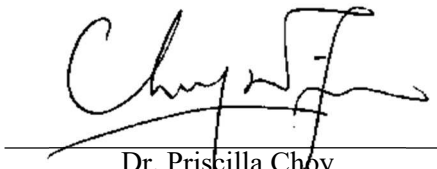
Civil Engineering and Development Department

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 October 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.

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

MOTT MACDONALD

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

Attention: Mr. Ryan Chau

Your Reference

Our Reference
EC/TC/df/414202/L0091

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

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

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

Monthly Environmental Monitoring and Audit Report No. 24 (October 2021)

17 November 2021
BY EMAIL

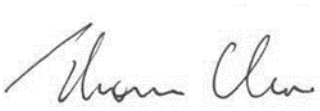
Dear Sir,

We refer to email of 17 November 2021 attaching the Monthly Environmental Monitoring and Audit Report No. 24 prepared by the Environmental Team (ET) of the captioned.

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

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

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



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

c.c.

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

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EXECUTIVE SUMMARY

Introduction

1. This is the 24th 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 October 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	12th 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	12th August 2020
	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5	1st June 2020
	EP-470/2013	Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works	23rd 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	28th 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	3rd July 2020
	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	6th October 2020
Contract No. ND/2019/04 –	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	23rd 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	16th 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)	1st 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	29th 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.		1st March 2021

Environmental Monitoring and Audit Progress

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

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

EM&A Activities	Monitoring Station (s)	Works Contracts						
		ND/2019/01	ND/2019/02	ND/2019/03	ND/2019/04	ND/2019/05	ND/2019/06	ND/2019/07
1-hr Total Suspended Particulates (TSP) Monitoring	FLN-DMS1	N/A	N/A	4, 7, 15, 19, 25 and 29 Oct 21	4, 7, 15, 19, 25 and 29 Oct 21	N/A	N/A	N/A
	FLN-DMS3			N/A	N/A	4, 7, 15, 19, 25 and 29 Oct 21		
	FLN-DMS5			2, 7, 12, 18, 22 and 28 Oct 21	2, 7, 12, 18, 22 and 28 Oct 21	N/A		
	KTN-DMS4	2, 7, 12, 18, 22 and 28 Oct 21		2, 7, 12, 18, 22 and 28 Oct 21	N/A			
24-hr TSP Monitoring	FLN-DMS1	N/A	N/A	6, 12, 18, 22, and 28 Oct 21	6, 12, 18, 22, and 28 Oct 21	N/A	N/A	N/A
	FLN-DMS3			N/A	N/A	6, 12, 18, 22, and 28 Oct 21		
	FLN-DMS5			2, 7, 12, 18, 22 and 28 Oct 21	2, 7, 12, 18, 22 and 28 Oct 21	N/A		
	KTN-DMS4	2, 7, 12, 18, 22, and 28 Oct 21		2, 7, 12, 18, 22, and 28 Oct 21	N/A			
Noise Monitoring	CP-FLN-NMS1	N/A			7, 15, 19 and 29 Oct 21			N/A
	CP-FLN-NMS2	N/A				7, 15, 19 and 29 Oct 21	N/A	
	CP-KTN-NMS2	7, 12, 22 and 28 Oct 21	N/A	N/A				
	CP-KTN-NMS3							
	CP-KTN-NMS5							
	CP-KTN-NMS6	N/A	7, 12, 22 and 28 Oct 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*	6, 8, 11, 15, 21, 22,27 and 28 Oct 21	6, 11, 21 and 28 Oct 21	N/A*	N/A*	N/A*
	Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream and Siu Hang San Tsuen Stream	26 Oct 21	N/A*	26 Oct 21	26 Oct 21	N/A*	N/A*	N/A*

	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	12 and 20 Oct 21	20 Oct 21	20 Oct 21	20 Oct 21	20 Oct 21	N/A*	N/A*
24-hr RSP (Ambient Arsenic) Monitoring for Land Contamination		6, 11, 15, 21, and 27 Oct 21	N/A	6, 11, 15, 21, and 27 Oct 21	N/A	N/A	N/A	N/A
Water Quality Monitoring		N/A	2, 4, 6, 8, 11, 15, 18, 20, 22, 25, 27 and 29 Oct 21	N/A	2, 4, 6, 8, 11, 15, 18, 20, 22, 25, 27 and 29 Oct 21	N/A	N/A	N/A
Landfill Gas Monitoring		30 Oct 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		5, 12, 19 and 25 Oct 21	6, 12, 22 and 27 Oct 21	8, 15, 19 and 29 Oct 21	7, 15, 22 and 28 Oct 21	4, 15, 18 and 25 Oct 21	7, 15, 18 and 28 Oct 21	8, 15, 19, and 29 Oct 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 exceeds500m. The monitoring station is not applicable to ND/2019/05

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

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

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

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

[9]Due to the No.8 Northeast Gale or Storm Signal was in force on 13 Oct 2021, the proposed 1hr TSP* X3 monitoring at FLN-DMS1 and FLN-DMS3, and the noise monitoring at CP-FLN-NMS1 and CP-FLN-NMS2 were rearranged to 15 Oct 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	$L_{eq(30min)}$	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. No environmental complaints 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 (November 2021 and December 2021)
ND/2019/01	(a) Site Clearance and remove of existing structure in Portion 1a (b) Site clearance, ground investigation in Portion 1b (c) Site Clearance and remove of existing structure in Portion 1e (d) Site clearance, ground investigation, tree felling and temporary road construction in Portion 2 (e) Site clearance, backfilling, excavation and tree felling in Portion 3 (f) Site clearance, stockpile of soil, construction of KW01 retaining wall, sheetpiling and excavation, drainage works, tree felling, backfilling and temporary road construction in Portion 5 (g) Site Clearance, sheetpiling and excavation, pipes laying, backfilling, construction of KW01 retaining wall, construction of KB01 retaining wall, and 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, excavation for Fresh Water Service Reservoir, RC construction of Flushing Water Service Reservoir in Portion 8a (k) Sheetpiling for receiving pit, trenchless works, Sub soil drain, excavation, EGI, drill and grouting for jacking pit and site clearance in Portion 8b (l) Sheetpiling and excavation, pipes laying, GI works and demolition of existing structures 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, pipes laying in Portion 10b (p) Construction of MBR at 11b (q) Construction of temporary sewage pumping station in Portion 14
ND/2019/02	(a) Pre-bored Socketed H-pile (b) Tree felling (c) ELS (d) Pipe Jacking (e) Construction of Pile Cap
ND/2019/03	(a) Portion 1 - Demolition of concrete warehouse 巨賓 - Road work and drainage work at Yin Kong Road (b) Portion 2 to Portion 20C - Erection of Permanent Boundary Structure - Construction of Irrigation Channel - Construction of Type 1 Storage House - Construction of Type 2 Storage House - Construction of Composting Facility - Construction of Bird Hide - Construction of Outdoor Classroom - Construction of Storage Sheds - Wetland Creation & Restoration works

ND/2019/04	(a) Site clearance (b) Tree felling (c) Predrill (d) Bored piling (e) Excavation (f) Sheet piling (g) ELS
ND/2019/05	(a) North Team Works - Pre-drilling for bored piles at B1-01(Portion I), B1 & B2 (Portion II), C1 (Portion II), C1-03 - Bored piling at B1 (Portion 1), 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 - Abrication of the 2nd and 3rd typical segment mould - Fabrication of SOP segment mould - Fabrication of temporary support for SOP erection at Pier C4-04M and temporary falsework for1st pair segment erection - Fabrication of launching girder (LG) main truss and main support beams - Fabrication of 1st set Form Travel (FT) - Bearing test in Taiwan for the 1st batch (Bridge C4, C3 and C2) - E&M installation for the gantry crane in CTC yard (c) South Team Works - Venton Area – UU diversion, 11kv and 132kv cross road duct laying - Portion 13 – Construction of FW 52 bay 1 and 2. 132kv duct laying - Portion 17 and 18 – DN 1650 pipe and MH construction. - FLHY (NB) – Setback for lane shifting - HKY FB (West) – ELS for LT2 - HKY FB (East) – construction of LT1, P02 and AB1 - Portion 11 – DN1200 watermain laying work - E2-02 pier – pier construction. - E2-03 – ELS for pile cap. Pile cap construction. - E3-01 – Piling works - E3-03 – Pile cap and pier - D2-02 – ELS for pile cap - D2-03 – Pre-drilling and Piling works.
ND/2019/06	(a) Finishing works and E&M installations for the Management Office Building (MOB) at Portion 4. (b) Erection of seam roof of steel canopy at Portion 3. (c) E&M installations for the steel canopy at Portion 3. (d) Construction of concrete carriageway at Portion 3. (e) Construction of underground utilities in the final stage market at Portion 3. (f) Installation of sheet piles for ELS for footings of additional carriageway steel cover at Portion 3. (g) Construction of footings of additional carriageway steel cover at Portion 3. (h) Construction of walls and columns of additional water tank and pump house at Portion 3.

ND/2019/07	(a) Site clearance at Portion 1 and 2. (b) Erection of site hoarding at Portion 1. (c) C&D waste disposal at Portion 1 and 2. (d) G.I. works at Portion 1. (e) Construction of box culvert at Portion 2. (f) Filling works at Portion1 and 2. (g) Tree felling/ Disposal of yard waste at Portion 1, 2 and 3. (h) Construction of site haul road at Portion 1. (i) Trial pit at Ma Sik Road. (j) Demolition of villager's houses at Portion 1, 2 and 4. (k) Removal of asbestoses containing material at Portion 1, 2 and 4. (l) Drainage Works at Portion 1 and 3.

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 24th EM&A Report which summarises the key findings of the EM&A programme in October 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 - s**ummarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels and Event / Action Plans.

Section 6: **Land Contamination (Ambient Arsenic Monitoring) -** summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.

Section 7: **Landfill Gas Monitoring -** summarises the monitoring requirement, monitoring parameters and frequency, monitoring locations, Action and Limit Levels, monitoring results and observation, and Event / Action Plans.

Section 8: **Built Heritage Monitoring –** summarises the monitoring requirement, monitoring parameters and frequency, monitoring locations, Action and Limit Levels, monitoring results and observation.

Section 9: **Ecological Monitoring –** summarises the details of monitoring of measures to minimise disturbance to waterbirds in Ng Tung River, Sheung Yue River, Shek Sheung River and Long Valley, monitoring of measures to minimise impacts on ecological sensitive habitats from disturbance and pollution during the reporting month.

Section 10: **Environmental Site Inspection -** summarises the audit findings of the weekly site inspections undertaken within the reporting month.

Section 11: **Environmental Non-conformance -** summarises any monitoring exceedance, environmental complaints, environmental summons and successful prosecutions within the reporting month.

Section 12: **Future Key Issues -** summarises the impact forecast, proposed mitigation measures and monitoring schedule for the upcoming months.

Section 13: **Conclusions and Recommendations**

2 PROJECT INFORMATION

Background

2.1 The Kwu Tung North (KTN) and Fanling North (FLN) New Development Areas (NDAs) are one of the important sources of land and housing supply in the medium and long term. The development of the KTN and FLN NDAs will be implemented in phase for full completion by 2031. The Phase 1 of the NDAs development, comprising the Advance Works and First Stage Works, is targeted to be implemented from the second half of 2019 progressively. The Advance and First Stage Works would include site formation, engineering infrastructure works (including roads, drainage, sewerage, waterworks, landscaping works, pumping stations, and fresh water and flushing water service reservoirs), soil remediation, reprovisioning of North District Temporary Wholesale Market, development of a nature park at Long Valley and implementation of environmental mitigation measures.

2.2 The scope of works under the Advance and First Stage Works comprises the following:

a) The Advance Works (PWP item No. 7747CL-2) consist of:
   i) site formation of land (including soil remediation) in KTN and FLN NDAs for housing, community facilities and engineering infrastructure;
   ii) construction of roads including the eastern section of Fanling Bypass (FLBP(E)) connecting the FLN NDA to Fanling Highway and other roads with footpaths and cycle tracks, and associated junction/ road improvements;
   iii) engineering infrastructure works including drainage. Sewerage (including two sewage pumping stations), waterworks (including a fresh water service reservoir and a flushing water service reservoir in the KTN NDA), landscape works and slopeworks;
   iv) part expansion and upgrading of Shek Wu Hui Sewage Treatment Works (SWHSTW);
   v) reprovisioning works; and
   vi) implementation of environmental mitigation measures and environmental monitoring and audit (EM&A) programme for the works mentioned in (i) to (v) above.

b) The First Stage Works (PWP item No. 7759CL) consist of:
   i) development of a nature park at Long Valley including provision of a visitor centre and a footbridge spanning across Sheung Yue River for connection between these two facilities;
   ii) reprovisioning of two egretry sites in the FLN NDA and enhancement works to an existing egretry site in the KTN NDA;
   iii) site formation of land for a village resite area and a district police station in the KTN NDA;
   iv) engineering infrastructure works including roads, drainage, sewerage, waterbirds, and landscape works; and
   v) implementation of environmental mitigation measures and environmental monitoring and audit (EM&A) programme for the works mentioned in (i) to (iv) above.

2.3 The Project which covers KTN and FLN NDAs is a designated project (DP) under Schedule 3 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). In October 2013, the EIA Report (AEIAR-175/2013) for the Project was approved by the Director of Environmental Protection pursuant to the EIA Ordinance. The relevant EPs under the Project and the respective Work Contracts are 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
Supervisor / Supervisor's Representative (AECOM)	Chief Resident Engineer	Mr. Alan Lee	6398 5982	2645 3900
Environmental Team (Wellab Limited)	Environmental Team Leader	Dr. Priscilla Choy	2898 7388	2898 7076
Independent Environmental Checker (MottMac)	Independent Environmental Checker	Mr. Thomas Chan	2828 5967	2827 1823
Contract No. ND/2019/01 Contractor (Build King – Richwell Engineering Joint Venture)	Site Agent	Mr. Ivan Leung	9640 8340	--
	Environmental Officer	Mr. Edward Tam	9287 8270	
Contract No. ND/2019/02 Contractor (Chun Wo – Kwan Lee Joint Venture.)	Site Agent	Mr. Andy Chan	3485 9780	--
	Environmental Officer	Mr. Stephen Tsang	96860787	
Contract No. ND/2019/03 Contractor (Sang Hing Kuly Joint Venture)	Site Agent	Mr. Tang Wing Kai	9300 7037	--
	Environmental Officer	Mr. Jackey Tam	6742 5596	
Contract No. ND/2019/04 Contractor (Daewoo – Chun Wo – Kwan Lee Joint Venture)	Site Agent	Mr. Bear Ding	6483 6198	--
	Environmental Officer	Ms. Donna Tso	9283 7167	
	Environmental Supervisor	Ms. Peggie Hon	9714 3308	
Contract No. ND/2019/05 Contractor (CRCC – Paul Y. Joint Venture)	Site Agent	Mr. Darvin Lo	9467 5891	--
	Environmental Manager	Mr. Pan Fong	9436 9435	
	Environmental Officer	Ms. Louise Poon	5272 5709	
Contract No. ND/2019/06 Contractor (New Concepts Engineering Development Ltd.)	Site Agent	Mr. Anson Chan	9349 1320	2363 2162
	Environmental Officer	Mr. Alex Choy	9409 9608	
	Environmental Coordinator	Ms. Gloria Wong	64398946	
Contract No. ND/2019/07 Contractor (China Road and Bridge Corporation)	Site Agent	Mr. Daniel Wong	5335 9572	--
	Environmental Officer	Mr. K. M. Lui	5113 8223	
	Environmental Supervisor	Mr. Attlee Chau	6386 9018	

Summary of Construction Works Undertaken During Reporting Month

2.8 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 (October 2021)
ND/2019/01	(a) Site clearance in Portion 1a, 1b and 1e (b) Site clearance and tree felling in Portion 2 (c) Site clearance, excavation and backfilling in Portion 3 (d) Site Clearance, stockpile of soil, construction of KW01 retaining wall, sheetpiling and excavation, pipes laying and drainage workd in Portion 5 (e) Site Clearance, excavation, construction of KW01 retaining wall and drainage worksin Portion 6a (f) Operation of HAC soil treatment facility in Portion 6b (g) Site Clearance, Construction of temporary road for alternative Po Lau Road, Construction of site accommodation in Area T2 and T3, sheetpiling and excavation, pipes laying, footing of Noise Barriers in Portion 7 (h) 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 (i) Drill and grouting for jacking pit, site clearance and excavation in Portion 8b (j) Sheetpiling and excavation, drainage work, GI works and demolition of existing structures in Portion 9b (k) Stockpile of soil and excavation in Portion 9c (l) Excavation, sheetpiling for ELS, drainage work and noise barriers footing in Portion 10a (m) Sheetpiling and excavation in Portion 10b (n) Laying of rising mains, construction of MBR in Portion 11b (o) Sheetpiling and excavation , Construction of temporary sewage pumping station in Portion 14 (p) Construction of CLC in Portion 16
ND/2019/02	(a) Tree felling (b) ELS (c) Hoarding erection (d) Construction of pile cap
ND/2019/03	(a) Portion 1 - Demolition of Existing Structure in Portion 1A “巨賓” - Demolition of concrete warehouse “巨賓” - Road work and drainage work at Yin Kong Road (b) Portion 2 to Portion 20C - Erection of Permanent Boundary Structure - Construction of Irrigation Channel - Construction of Type 1 Storage House - Construction of Type 2 Storage House - Construction of Composting Facility - Construction of Bird Hide - Construction of Outdoor Classroom - Construction of Storage Sheds - Wetland Creation & Restoration works
ND/2019/04	(a) Site clearance (b) Tree felling (c) Predrill (d) Bored piling (e) Excavation

Contract No.	Site Activities (October 2021)
	(f) Sheet piling
ND/2019/05	(a) Pre-drilling of B1, B2 and C1 in Portion II. (b) Bored Piles of C3-04b, C2-04, C3-04b (c) C4-01a, C4-01 and E2-02 pile cap concreting (d) Abutment rebar fixing work for LT1, PO2 and AB1 (e) TWSR-West widening road works for the pier D2-03 construction
ND/2019/06	(a) Finishing works and E&M installations for the Management Office Building (MOB) at Portion 4. (b) Erection of the steel members and seam roof of steel canopy at Portion 3. (c) E&M installations for the steel canopy at Portion 3. (d) Construction of concrete carriageway at Portion 3. (e) Construction of underground utilities in the final stage market at Portion 3. (f) Installation of sheet piles for ELS for footings of additional carriageway steel cover at Portion 3. (g) Construction of footings of additional carriageway steel cover at Portion 3. (h) Construction of walls and columns of additional water tank and pump house at Portion 3.
ND/2019/07	(a) Site clearance at Portion 1 and 2 (b) Erection of site hoarding at Portion 1 (c) C&D waste disposal in Portion 1 and 2 (d) G.I. works at Portion 3, 4 and 5 (e) Construction of box culvert in Portion 2 (f) Filling works in Portion 1 and 2 (g) Tree felling / Disposal of yard waste in Portion 1 and 2 (h) Construction of site haul road in Portion 1 (i) Demolition of villager's houses in Portion 4 (j) Drainage Works, Sewage Works in Portion 1 and 3

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	Valid
	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	Valid
	GW-RN0224-21	07/04/2021	06/10/2021	Expired in the reporting period
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-RN0564-21	16/08/2021	15/10/2021	Expired in the reporting period
	GW-RN0608-21	18/08/2021	21/10/2021	Expired in the reporting period
	GW-RN0666-21	20/09/2021	19/12/2021	Valid
	GW-RN0764-21	28/10/2021	27/04/2022	Valid
ND/2019/05	GW-RN0497-21	30/07/2021	29/10/2021	Expired in the reporting period
	GW-RN0476-21	05/07/2021	04/10/2021	Expired in the reporting period
	GW-RN0782-21	27/10/2021	26/04/2022	Valid
	GW-RN0773-21	27/10/2021	30/11/2021	Valid
	GW-RN0736-21	30/10/2021	31/01/2022	Valid
	GW-RN0275-21	05/05/2021	02/11/2021	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

Contract No.	Permit / License No.	Valid Period		Status
		From	To	
ND/2019/06	7035473	17/10/2019	N/A	Valid
ND/2019/07	7038309	14/09/2020	N/A	Valid
Registration of Chemical Waste Producer				
ND/2019/01	5213-545-B2578-01	10/01/2020	N/A	Valid
ND/2019/02	5213-548-C4439-01	06/05/2020	N/A	Valid
ND/2019/03	5213-623-S4231-01	14/04/2020	N/A	Valid
ND/2019/04	5211-624-D2709-01	26/11/2020	N/A	Valid
ND/2019/05	5213-625-C4464-01	20/05/2020	N/A	Valid
ND/2019/06	5213-625-N2716-01	02/10/2019	N/A	Valid
ND/2019/07	5213-625-C4498-01	21/09/2020	N/A	Valid
Effluent Discharge License under Water Pollution Control Ordinance				
ND/2019/01	WT00036071-2020	22/06/2020	30/06/2025	Valid
	WT00036073-2020	22/06/2020	30/06/2025	Valid
	WT00036067-2020	22/06/2020	30/06/2025	Valid
	WT00036075-2020	22/06/2020	30/06/2025	Valid
	WT00036076-2020	22/06/2020	30/06/2025	Valid
	WT00037191-2020	02/02/2021	28/02/2025	Valid
	WT00037204-2020	02/02/2021	28/02/2025	Valid
	WT00037412-2021	15/04/2021	30/04/2026	Valid
	WT00037564-2021	19/04/2021	30/04/2026	Valid
	WT00037886-2021	28/06/2021	30/06/2026	Valid
ND/2019/02	WT00036584-2020	21/10/2020	31/10/2025	Valid
	WT00036952-2020	17/12/2020	31/12/2025	Valid
ND/2019/03	WT00035847-2020	12/08/2020	31/08/2025	Valid
	WT00036414-2020	25/02/2021	28/02/2026	Valid
	WT00037771-2021	08/07/2021	31/07/2026	Valid
	WT00035984-2020	25/02/2021	28/02/2026	Valid
ND/2019/04	WT00037539-2021	16/04/2021	30/04/2026	Valid
ND/2019/05	WT00036996-2020	22/12/2020	31/12/2025	Valid
ND/2019/06	WT00035415-2019	20/03/2020	31/03/2025	Valid
ND/2019/07	WT00037526-2021	04/05/2021	31/05/2026	Valid

3 AIR QUALITY MONITORING

Monitoring Requirements

3.1 In accordance with the Updated EM&A Manual, impact 1-hour TSP and 24-hr TSP monitoring were conducted to monitor the air quality for the Works Contracts. **Appendix B** shows the established Action/Limit Levels for the air quality monitoring works.

3.2 Impact 1-hour TSP monitoring was conducted for at least three times every 6 days, while the impact 24-hour TSP monitoring was conducted for at least once every 6 days at one air quality monitoring station.

Monitoring Location

3.3 Impact air quality monitoring was conducted at the monitoring stations under the Works Contracts, as shown in **Figure 1 and Figure 2** according to Table 1.1 of Updated EM&A Manual and Baseline Air Quality Monitoring Report (KTN & FLN NDA). **Table 3.1** describes the location of the air quality monitoring station.

Table 3.1 Location for Air Quality Monitoring Locations

EP No.	Contract No.	Monitoring Station	Location
EP-473/2013/A	ND/2019/03	FLN-DMS1[2]	Scattered Village Houses North of Proposed Potential Ecopark
	ND/2019/04		
	ND/2019/05	FLN-DMS3[3]	House near Tong Hang
	ND/2019/03	FLN-DMS5[4]	Noble Hill
	ND/2019/04		
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 5 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 5 and KTN-DMS 4.

3.7 **Table 3.2** summarizes the equipment used in the impact air monitoring programme. Copies of calibration certificates are attached in **Appendix C**.

Table 3.2 Air Quality Monitoring Equipment

Monitoring Station	Equipment	Manufacturer	Model and Make	Quantity
FLN-DMS5 KTN-DMS4	Dust Monitor (1-hour and 24-hou TSP)	Met One Instruments	AEROCET-831	10
FLN-DMS1 FLN-DMS3	Dust Monitor (1-hour TSP)			
	HVS Sampler (TSP) (24-hour TSP)	Tisch	TISCH Model: TE-5170	2

3.8 Meteorological information extracted from "Hong Kong Observatory - Ta Kwu Ling Weather Station" was proposed as the alternative method to obtain representative wind data. For Ta Kwu Ling Weather Station, it is located nearby the Project site and situated at approximately 15m above mean sea level. The station's wind data monitoring equipment is set above the existing ground ten meters in compliance with the general setting up requirement. Furthermore, this station also provides other meteorological information, such as the humidity, rainfall, air pressure and temperature etc.

3.9 The general weather conditions (i.e. sunny, cloudy or rainy) were recorded by the field staffs during the monitoring day.

Monitoring Parameters, Frequency and Duration

3.10 **Table 3.3** summarizes the monitoring parameters and frequencies of impact dust monitoring during the Works Contracts activities. The air quality monitoring schedule for the reporting month is shown in **Appendix D**.

Table 3.3 Impact Dust Monitoring Parameters, Frequency and Duration

Parameters	Frequency
1-hr TSP	Three times/ 6 days
24-hr TSP	Once / 6 days

Monitoring Methodology and QA/QC Procedure

1-hour and 24-hour TSP Air Quality Monitoring

Instrumentation

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

3.12 The measuring procedures of the dust meter are in accordance with the Manufacturer's Instruction Manual as follows:

(AEROCET-831)

- The 1-hour dust meter is placed at least 1.3 meters above ground.
- Press and hold the Power key momentarily to power on the unit and make sure that the battery level was not flash or in low level.
- Allow the instrument to stand for about 3 second to display the Sample Screen minutes.
- Press the START / STOP key to run the internal vacuum pump for 1 minute and ready to use.
- Use the select dial to select the PM range and press the START / STOP key to start a measurement.
- Finally, push the START/STOP key to stop the measuring after 1 hour sampling.
- Information such as sampling date, time, value and site condition were recorded during the monitoring period.
- All data were recorded in the data logger for further data processing.

Maintenance/Calibration

3.13 The following maintenance/calibration was required for the direct dust meters:

- Check and calibrate the meter by HVS to check the validity and accuracy of the results measured by direct reading method at 2-month intervals throughout all stages of the air quality monitoring.

24-hour TSP Air Quality Monitoring

Instrumentation

(TISCH Model: TE-5170)

3.14 High volume Samplers (HVS) completed with appropriate sampling inlets were employed for 24-hour TSP monitoring. Each sampler was composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complies with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50).

HVS Installation

3.15 The following guidelines were adopted during the installation of HVS:

- A horizontal platform with appropriate support was provided to secure the samplers against gusty wind.
- No two samplers were placed less than 2 meters apart.
- The distance between the sampler and an obstacle, such as buildings, was at least twice the height that the obstacle protrudes above the sampler.
- A minimum of 2 meters of separation from walls, parapets and penthouses was required for rooftop samples.
- A minimum of 2 meters separation from any supporting structure, measured horizontally was required.
- No furnaces or incineration flues were nearby.
- Airflow around the sampler was unrestricted.
- The samplers were more than 20 meters from the drip line.
- Any wire fence and gate, to protect the sampler, should not cause any obstruction during monitoring.
- Permission and access to the monitoring stations have been obtained to set up the samplers; and
- A secured supply of electricity was provided to operate the samplers.

Filters Preparation

3.16 Wellab Limited (HOKLAS Registration No.083) is the HOKLAS accredited laboratory and responsible for the preparation of 24-hr conditioned and pre-weighed filter papers for monitoring team.

3.17 All filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than ±3 °C; the relative humidity (RH) was < 50% and not variable by more than ±5%. A convenient working RH was 40%.

Operating/Analytical Procedures

3.18 Operating/analytical procedures for the air quality monitoring were highlighted as follows:

- Prior to the commencement of the dust sampling, the flow rate of the HVS was properly set (between 1.1 m^3/min. and 1.4 m^3/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50;
- The power supply was checked to ensure the sampler worked properly;
- On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air quality monitoring station;
- The filter holding frame was then removed by loosening the four nuts and carefully a weighted and conditioned filter was centered with the stamped number upwards, on a supporting screen;
- The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. 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 ±3°C; the RH should be < 50% and not vary by more than ±5%. A convenient working RH is 40%. Weighing results were returned for further analysis of TSP concentrations collected by each filter.

Maintenance/Calibration

3.19 The following maintenance/calibration was required for the HVS:

- The high volume motors and their accessories were properly maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking were made to ensure that the equipment and necessary power supply are in good working condition; and
- All HVS were calibrated (five point calibration) using Calibration Kit prior to the commencement of the baseline monitoring and thereafter at bi-monthly intervals.

Results and Observations

3.20 The monitoring results for 1-hour TSP and 24-hour TSP are summarized in **Table 3.4** and **3.5,** respectively. Detailed monitoring results and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendix E**.

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

Monitoring Station	Concentration ($\mu g/m^3$)		Action Level, $\mu g/m^3$	Limit Level, $\mu g/m^3$
	Average	Range		
FLN-DMS1	80.9	52.2 – 135.8	303	500
FLN-DMS3	85.6	65.0 – 134.5	301	500
FLN-DMS5	83.3	30.8 – 176.1	279	500
KTN-DMS4	50.0	16.9 – 79.7	297	500

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

Monitoring Station	Concentration (µg/m³)		Action Level, µg/m³	Limit Level, µg/m³
	Average	Range		
FLN-DMS1	72.4	41.5 – 117.0	150	260
FLN-DMS3	56.3	28.7 – 91.3	165	260
FLN-DMS5	59.9	37.1 – 103.6	153	260
KTN-DMS4	54.0	7.9 – 87.7	192	260

3.21 Due to the No.8 Northeast Gale or Storm Signal was in force on 13 Oct 2021, the proposed 1hr TSP* X3 monitoring at FLN-DMS1 and FLN-DMS3, and the noise monitoring at CP-FLN-NMS1 and CP-FLN-NMS2 were rearranged to 15 Oct 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.

3.22 According to our field observations, the major dust source identified at the designated air quality monitoring stations in the reporting month are shown in **Table 3.6**:

Table 3.6 Observation at Dust Monitoring Stations

Monitoring Station	Major Dust Source
FLN DMS1	Mobile crane, Excavator, piling, road traffic
FLN-DMS3	Excavator, piling, mobile crane, road traffic
FLN-DMS5	Road traffic
KTN-DMS4	Excavator, piling, mobile crane, dump truck, road traffic

Event and Action Plan

3.23 Should project-related non-compliance of the criteria occur, action in accordance with the Action Plan in **Appendix N** shall be carried out.

4 NOISE MONITORING

Monitoring Requirements

4.1 In accordance with Updated EM&A Manual, construction noise monitoring was conducted in terms of the A-weighted equivalent continuous sound pressure level (L_{eq}) to monitor the construction noise arising from the construction activities. The regular monitoring frequency for each monitoring station shall be on a weekly basis and conduct one set of measurements between 0700 and 1900 hours on normal weekdays. **Appendix B** shows the established Action and Limit Levels for the environmental monitoring works.

Monitoring Location

4.2 Impact noise monitoring was conducted at the monitoring stations, as shown in **Figure 3** and **4** according to Table 1.1 of Updated EM&A Manual. **Table 4.1** describes the locations of the noise monitoring stations.

Table 4.1 Location of Noise Monitoring Stations

Contract No.	Monitoring Station(s)	Location(s)
ND/2019/06	CP-FLN-NMS1[2]	Belair Monte
ND/2019/04		
ND/2019/05		
	CP-FLN-NMS2[3]	Scattered Village Houses in Tong Hang
ND/2019/01	CP-KTN-NMS2[4]	Residential Buildings at Ma Tso Lung
	CP-KTN-NMS3[5]	Fung Kong Garden
ND/2019/01	CP-KTN-NMS5	N/A
ND/2019/02	CP-KTN-NMS6	Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery

Remarks:
[1]: Noting that construction phase noise monitoring at the other proposed monitoring stations (e.g. planned), where access is permitted, will be conducted during the relevant works contract(s).
[2]: Since the distance between monitoring station and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.
[3]: Since the distance between monitoring station and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04.
[4],[5]: Since the distance between monitoring station and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.

Monitoring Equipment

4.3 Integrating Sound Level Meter was used for impact noise monitoring. The meters are Type 1 sound level meter capable of giving a continuous readout of the noise level readings including equivalent continuous sound pressure level (L_{eq}) and percentile sound pressure level (L_x) that also complied with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications. **Table 4.2** summarizes the noise monitoring equipment being used. Copies of calibration certificates are attached in **Appendix C**.

Table 4.2 Noise Monitoring Equipment

Equipment	Manufacturer	Model	Quantity
Sound Level Meter	BSWA	BSWA 308	6
Acoustical Calibrator	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]	$L_{10(30\ min.)}$ dB(A) $L_{90(30\ min.)}$ dB(A) $L_{eq(30\ min.)}$dB(A) (as six consecutive $L_{eq,\ 5min}$ 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 min.) dB(A) (as six consecutive $L_{eq, 5min}$ 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]	67.9 – 72.6	69.9	75
ND/2019/04				
ND/2019/05				
	CP-FLN-NMS2[2]	46.9 – 63.1	59.6	
ND/2019/01	CP-KTN-NMS2[3]	56.4 – 66.3	58.6	
	CP-KTN-NMS3[4]	55.1 – 63.9	51.6	
ND/2019/01	CP-KTN-NMS5	54.3 – 57.1	57.2	
ND/2019/02	CP-KTN-NMS6	59.6 – 67.9	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 Due to the No.8 Northeast Gale or Storm Signal was in force on 13 Oct 2021, the proposed 1hr TSP* X3 monitoring at FLN-DMS1 and FLN-DMS3, and the noise monitoring at CP-FLN-NMS1 and CP-FLN-NMS2 were rearranged to 15 Oct 2021 All other 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 QUALTY 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
• Temperature(°C) • pH(pH unit) • turbidity (NTU) • water depth (m) • salinity (ppt) • DO (mg/L and % of saturation) • SS (mg/L) • Ammonia Nitrogen (NH_3-N) (mg NH_3-N/L) • Unionized Ammonia (UIA) (mg/L) • Nitrate-nitrogen (NO_3-N) (mg NO_3^--N/L) • Ortho-phosphate (PO_4) (mg PO_4^{3-}-P/L)	• 3 water depths: 1m below water surface, mid-depth and 1m above river bed. • If the water depth was less than 3m, mid-depth sampling only. • If water depth was less than 6m, mid-depth may be omitted.	3 days per week during construction of channel

Results and Observations

5.5 According to 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	1

Monitoring Parameters and Frequency

5.27 **Table 5.4** summarizes the monitoring parameters and frequencies of the additional water quality monitoring. The water quality monitoring schedule for the reporting month is shown in **Appendix D**.

Table 5.4 Additional Water Quality Monitoring Parameters and Frequency

Monitoring Station(s)		Parameters, unit	Depth	Frequency
River Beas	SYR-CS1 SYR-IS1	• Temperature (°C) • pH (pH unit) • Turbidity (NTU) • Water depth (m) • Salinity (ppt) • Dissolved Oxygen (DO) (mg/L and % of saturation) • Suspended Solids (SS) (mg/L) • Arsenic (As) (µg/L)	• 3 water depths: 1m below water surface, mid-depth and 1m above river bed. • If the water depth was less than 3m, mid-depth sampling only. • If water depth was less than 6m, mid-depth might be omitted.	3 days per week, for 2 weeks prior to the commencement of construction works
River Indus and near Siu Hang San Tsuen Stream	NTR-CS1 NTR-IS1 SHST-IS2 MWR-IS3	• Temperature (°C) • pH (pH unit) • Turbidity (NTU) • Water depth (m) • Salinity (ppt) • Dissolved Oxygen (DO) (mg/L and % of saturation) • Suspended Solids (SS) (mg/L)		

5.28 Monitoring location and position, time, sampling depth, weather conditions and any special phenomena or work underway nearby was also 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 1O-3.1 Selection, Preparation and Extraction of Filter Material, Center for Environmental Research Information, Office of Research and Development, USEPA, June 1999; and
- Compendium Method 1O-3.5 determination of Metals in Ambient Particulate Matter using Inductively Coupled Plasma/Mass Spectrometry (ICP/MS., Center for Environmental Research Information, Office of Research and Development, USEPA, June 1999.

Monitoring Location

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

Table 6.1 Location of Ambient Arsenic Monitoring station

EP. No	Contract No.	Monitoring Stations	Location
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	KTN-DMS-4A[1]	Temporary Structure at Pak Shek Au
EP-468/2013/A	ND/2019/03		

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

Monitoring Equipment

6.6 **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

6.7 **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

6.8 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).

6.9 The following guidelines were adopted during the installation of HVS:

- a horizontal platform with appropriate support to secure the samplers against gusty wind was provided;
- no two samplers was placed less than 2 meters apart;
- the distance between the sampler and an obstacle, such as buildings, was at least twice the height that the obstacle protrudes above the sampler;
- a minimum of 2 meters of separation from walls, parapets and penthouses was required for rooftop samplers;
- a minimum of 2 meters separation from any supporting structure, measured horizontally was required;
- no furnace or incinerator flue was nearby;
- airflow around the sampler was unrestricted;
- the sampler was more than 20 meters from the dripline;
- any wire fence and gate, to protect the sampler, were not cause any obstruction during monitoring;
- permission was obtained to set up the samplers and to obtain access to the
- monitoring stations; and
- a secured supply of electricity was needed to operate the samplers.

Operating/analytical procedures for the operation of HVS

- Prior to the commencement of the dust sampling, the flow rate of the high volume sampler will be properly set (between 1.1 m^3/min. and 1.4 m^3/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.
- The power supply was checked to ensure the sampler worked properly. On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.
- The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter 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

6.10 The following maintenance/calibration was required for the HVS:

- The high volume motors and their accessories were properly maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking were made to ensure that the equipment and necessary power supply were in good working condition.
- High volume samplers were calibrated at bi-monthly intervals using TE-5025A Calibration Kit throughout all stages of the ambient arsenic monitoring.

Laboratory Measurement / Analysis

6.11 Quartz filters of size 8" x 10" were labelled before sampling. A HOKLAS accredited laboratory, Wellab Ltd., 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.

6.12 All filters, which were prepared by Wellab Ltd., were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than ±3 °C; the relative humidity (RH) was < 50% and not variable by more than ±5%. A convenient working RH was 40%.

6.13 Wellab Ltd. (HOKLAS Registration No. 083), is responsible for the extraction and testing procedure for Arsenic and comprehensive quality assurance and quality control programmes were conducted.

Results and Observations

6.14 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)
6/10/2021	KTN-DMS4(A)	1.82	9.36	11.7
11/10/2021		1.16		
15/10/2021		0.92		
21/10/2021		0.68		
27/10/2021		1.17		

6.15 All ambient arsenic monitoring was conducted as scheduled in the reporting month. During the reporting month, around 2180 tons of arsenic soil was transported to soil treatment plant and 6400 tons were treated. No Action/Limit Level exceedances were recorded.

Event and Action Plan

6.16 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 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

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 Station (s)	Distance with Construction Works	Monitoring Plan
EP-473/2013/A	ND/2019/05	FL02	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 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: 6th , 8th , 11th, 15th, 21st , 22nd , 27th and 28th October 2021

Date of night-time monitoring: 15th and 27th October 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, 64 species of birds were recorded during the bird surveys within assessment area. Among the recorded birds, there were 25 species of waterbirds. The detailed list of waterbirds and all recorded birds are shown in **Appendix L1k and L1l** respectively.

9.11 Among the four transects, the transect T5 had a higher species diversity and abundance due to its diverse habitat types within Long Valley. Species such as *Ardeola bacchus* and *Egretta garzetta* were commonly found roosting and foraging at wetland habitats such as agricultural lands and shallow water habitats.

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

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.

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

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

Monitoring Requirements and Protocol

9.17 As required under Section 12.3.2.14 of Updated EM&A Manual, aquatic faunal monitoring should be carried out during the construction phase.

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

Monitoring Frequency

9.19 Quantitative aquatic fauna replicate surveys of stream fauna is required to be carried out on monthly basis during wet season. Three replicates for invertebrates sampling and direct counting of fish fauna should be performed respectively.

Date of aquatic fauna monitoring: 26th October 2021

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 In the survey of aquatic fauna, a total of 14 aquatic invertebrate species were recorded in Ma Tso Lung Stream and Siu Hang San Tsuen Stream. There were 4 fish species recorded in the reporting month. No species of conservation importance was recorded.

9.25 For the monitoring on 26th October 2021, the two monitoring stations, MS_01 & MS_05, were found to be dried-up. No aquatic invertebrate nor fish species were recorded in those stations as a result.

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

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

Monitoring Requirements and Protocol

9.27 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.

9.28 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

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

9.30 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)

9.31 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.

9.32 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)

9.33 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

9.34 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: 12th , 20th October 2021

Monitoring Location

9.35 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

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

Monitoring Parameters

9.37 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

9.38 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*.

9.39 Domestic cat, *Felis catus* was found at T1. Domestic dog, *Canis lupus familiaris*, was found at T1, T5 and T6, where associated with human settlements.

9.40 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).

9.41 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).

9.42 *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).

9.43 Bat species, *Cynopterus sphinx* was observed roosting in the tent-shaped shelter under fronds of Chinese Fan-palm at daytime and also found in flight near area with Chinese Fan-palm at nighttime during the monitoring at T1. *Pipistrellus abramus* was recorded in flight at nighttime at T1.

Herpetofauna (Amphibians and Reptiles)

9.44 Along the transects, a total of 8 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 and abundance than other transects.

Insects (Butterfly and Dragonfly)

9.45 During the insect survey, a total of 27 butterfly species and 6 odonata species were recorded from the transects, with all butterfly species being common or very common except *Hypolimnas misippus,* species of butterfly. Transect T5 had higher butterfly species diversity than other transects.

9.46 All transects except T3 had the same number of dragonfly species recorded in the reporting month. All of the dragonfly species recorded, were common and abundant in Hong Kong. Species of conservation importance, *Potamarcha congener* (Comment, Local Concern by Fellows et al. (2002)), was recorded on T5.

9.47 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**.

9.48 For the monitoring conducted on 20th October 2021 on Transect T5, a section of the transect route was found located within private property, and was not accessible. Another section on transect T5 was found blocked by new accumulation of fallen trees. The inaccessible part are shown in **Photo 1** and **Photo 2** below. The adjusted accessible transect route is shown in **Figure 11**.

	
Photo 1. Inaccessible part of transect T5 located within private property	Photo 2. Imaccessible part of transect T5 blocked by the fallen trees.

Results and Observation

Details of the Influencing Factors

Major Activities

9.49 During the survey of Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley, anthropogenic activities including soil turning with excavator and other construction activities were observed in Long Valley. Construction works were observed beside Sheung Yue River.

9.50 The anthropogenic activities affected only a small area of habitat in Long Valley during the monitoring and would only pose minor disturbances to the birds. *Acridotheres cristatellus* and *Bubulcus coromandus* were observed foraging near the excavators.

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

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/metob202110.htm), weather condition might pose influence towards the monitoring result.

9.53 Since the Final Baseline Ecological Monitoring Report has not been issued yet during the Reporting Month, the Action and Limit Level of ecological monitoring will be compared with the monitoring results in the Reporting Month and track back exceedance reporting (if any) after the Final Baseline Ecological Monitoring Report has been issued.

9.54 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 *Supervisor's* Representative and the Contractor	5, 12, 19 and 25 Oct 21	6, 12, 22 and 27 Oct 21	8, 15, 19 and 29 Oct 21	7, 15, 22 and 28 Oct 21	4, 15, 18 and 25 Oct 21	7, 15, 18 and 28 Oct 21	8, 15, 19, and 29 Oct 21
Joint Site Audit with representative of the *Supervisor's* Representative, the Contractor and IEC	25 Oct 21	22 Oct 21	19 Oct 21	22 Oct 21	15 Oct 21	18 Oct 21	19 Oct 21

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			
Waste/ Chemical Management	5/10/2021	Drip trays should be provided for chemical storage.	Improvement/Rectification was observed during follow-up audit session on 12 October 2021.
Contract No.: ND/2019/02			
Air Quality	22/10/2021	Dusty haul road should be watered regularly.	Improvement/Rectification was observed during follow-up audit session on 27 October 2021.
Water Quality	29/9/2021	Contractor was reminded to provide sandbags along the cycle track to prevent muddy water flow offsite. (North Bridge)	Improvement/Rectification was observed during follow-up audit session on 6 October 2021.
	29/9/2021	To remove general refuse inside the drainage.	Improvement/Rectification was observed during follow-up audit session on 6 October 2021.
	29/9/2021	To provide wheel washing facilities at every site exit. (South Bridge)	Improvement/Rectification was observed during follow-up audit session on 6 October 2021.
	29/9/2021	Clear the stagnant muddy water and provide sufficient wastewater treatment before discharge.	Improvement/Rectification was observed during follow-up audit session on 6 October 2021.
	6/10/2021	Clear the stagnant muddy water and provide sufficient wastewater treatment before discharge. (North bridge)	Improvement/Rectification was observed during follow-up audit session on 12 October 2021.
	6/10/2021	Clear the sediment and stagnant water in the U-channel and provide sufficient wastewater treatment before discharge. (South bridge)	Improvement/Rectification was observed during follow-up audit session on 12 October 2021.
	12/10/2021	To clear the stagnant water in drip tray.	Improvement/Rectification was observed during follow-up audit session on 22 October 2021.
Contract No.: ND/2019/03			
Waste/ Chemical Management	30/9/2021	Clear the rubbish at near the storage area to 巨寶.	Item was remarked as 211008-R01. Follow-up action is needed to be reviewed.
	8/10/2021	Clear the rubbish at near the storage area to 巨寶.	Improvement/Rectification was observed during follow-up audit session on 15 October 2021.
Contract No.: ND/2019/04			
Air Quality	30/9/2021	To replace the faded NRMM Label for the air compressor.	Improvement/Rectification was observed during follow-up audit session on 7 October 2021.
Water Quality	30/9/2021	Properly erect and maintain the desilting materials along green barriers at Bridge A2.	Improvement/Rectification was observed during follow-up audit session on 7 October 2021.
	30/9/2021	Regularly clear the U-channel and provide desilting materials as sediment control measure at Bridge A2 and Portion H.	Item was remarked as 211007-O03. Follow-up action is needed to be reviewed.

	Date	Observations and Recommendations	Follow-up
	30/9/2021	Regularly clear the U-channel and provide the desilting materials as a sediment control measure at Bridge F.	Improvement/Rectification was observed during follow-up audit session on 7 October 2021.
	7/10/2021	Regularly clear the U-channel and provide desilting materials as sediment control measure at Bridge A2 and Portion H.	Improvement/Rectification was observed during follow-up audit session on 15 October 2021.
	7/10/2021	Regularly clear the U-channel and provide the desilting materials as a sediment control measure at Portion E.	Item was remarked as 211015-O01. Follow-up action is needed to be reviewed.
	15/10/2021	To ensure sediment in U-Channel was cleared regularly and avoid accumulation.	Improvement/Rectification was observed during follow-up audit session on 22 October 2021.
	22/10/2021	To provide desilting materials at U-Channel.	Improvement/Rectification was observed during follow-up audit session on 28 October 2021.
Waste/Chemical Management	30/9/2021	To avoid oil leakage from drip tray at Bridge A3.	Item was remarked as 211007-O01. Follow-up action is needed to be reviewed.
	30/9/2021	Drip tray should be provided for chemical storage.	Item was remarked as 211007-O02. Follow-up action is needed to be reviewed.
	7/10/2021	To avoid oil leakage from drip tray at Bridge A3.	Improvement/Rectification was observed during follow-up audit session on 15 October 2021.
	7/10/2021	Drip tray should be provided for chemical storage.	Improvement/Rectification was observed during follow-up audit session on 15 October 2021.
	15/10/2021	Oil, grease and litters were observed in the water of nearby drainage at Portion H, Contractor was reminded to avoid any foam, oil, grease or litter in any watercourse.	Improvement/Rectification was observed during follow-up audit session on 22 October 2021.
	22/10/2021	Drip tray should be provided for chemical storage.	Improvement/Rectification was observed during follow-up audit session on 28 October 2021.
	22/10/2021	To clear the oil stain at temporary drainage.	Improvement/Rectification was observed during follow-up audit session on 28 October 2021.
	28/10/2021	Drip tray should be provided for chemical storage.	Follow-up action is needed to be reported in the following month.
	28/10/2021	To avoid oil leakage during maintenance.	Follow-up action is needed to be reported in the following month.
Construction Noise Impact	22/10/2021	Compressor should be operated with doors closed.	Improvement/Rectification was observed during follow-up audit session on 28 October 2021.
Ecology	30/9/2021	Properly erect and maintain 2m high solid barriers for lower reaches of Siu Hang San Tsuen Stream.	Improvement/Rectification was observed during follow-up audit session on 7 October 2021.
Permit / Licences	28/10/2021	To display valid Construction Noise Permit at site entrance.	Follow-up action is needed to be reported in the following month.

	Date	Observations and Recommendations	Follow-up
Contract No.: ND/2019/05			
Air Quality	4/10/2021	Faded NRMM Labels shall be replaced on regulated machines.	Improvement/Rectification was observed during follow-up audit session on 15 October 2021.
	15/10/2021	Display valid NRMM Labels on regulated machine.	Improvement/Rectification was observed during follow-up audit session on 18 October 2021.
	15/10/2021	Stockpile should be covered properly by imperious sheeting.	Improvement/Rectification was observed during follow-up audit session on 18 October 2021.
Water Quality	4/10/2021	Desilting materials should be provided along the site barriers to prevent surface runoff to Ma Wat River.	Improvement/Rectification was observed during follow-up audit session on 15 October 2021.
	4/10/2021	Desilting materials should be provided along the site barriers to prevent surface runoff to On Kui Street.	Improvement/Rectification was observed during follow-up audit session on 15 October 2021.
	25/10/2021	Enhance mitigation measures to prevent surface runoff to Ma Wat River.	Follow-up action is needed to be reported in the following month.
Waste / Chemical Management	15/10/2021	Remove the stagnant water in the drip tray.	Improvement/Rectification was observed during follow-up audit session on 18 October 2021.
Contract No.: ND/2019/06			
Air Quality	30/9/2021	Dusty stockpile should be covered by impervious sheeting.	Improvement/Rectification was observed during follow-up audit session on 7 October 2021.
	28/10/2021	The exposed worksite and haul road should be watered regularly.	Follow-up action is needed to be reported in the following month.
	28/10/2021	Wheel washing facilities should be available at every designated vehicle exit point.	Follow-up action is needed to be reported in the following month.
Contract No.: ND/2019/07			
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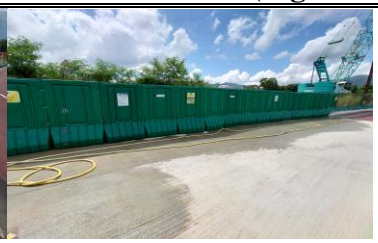
Implementation Status of Environmental Mitigation Measures

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
EP-466/2013	2.9	  To minimise adverse impacts on habitats of ecological imprtance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(**Figure 12**)	^[1]
EP-468/2013/A	2.11	  To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(**Figure 14**)	^[1]
EP-469/2013	2.7	  To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(**Figure 15**)	^[1]
EP-473/2013/A	2.13	  To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(**Figure 16**)	^[1]

EP-475/2013/A	2.7	 To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(**Figure 17**)	^[1]

Implementation status:	^	Mitigation measure was fully implemented
	*	Observation/reminder was made during site audit but improved/rectified by the contractor
	#	Observation/reminder was made during site audit but not yet improved/ rectified by the contractor
	X	Non-compliance of mitigation measure
	•	Non-compliance but rectified by the contractor
	N/A	Not Applicable at this stage as no such site activities were conducted in the reporting period

[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 Water Quality Mitigation Measures

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

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

Works Contracts	Photographic Records	
ND/2019/01	 Hard paved exposed slope surface	 Hydroseeding for slope area
ND/2019/02	 Hard paved exposed slope surface	 Temporary ditches to direct storm water to wastewater treatment facilities
ND/2019/03	 Wastewater from wheel washing was directed to wastewater treatment facility	 Regular clearance of water for wheel washing facility
ND/2019/04	 Surface channels and earth bunds to direct storm water to wastewater treatment facilities for works area near Siu Hang San Tsuen Stream	 Deployment of silt curtain around works area in Ng Tung Rive

ND/2019/05	 Provision of sand bags around works area	 Temporary ditches to direct storm water to wastewater treatment facilities
ND/2019/06	 Grasscrete for slope protection	 Provision of concrete berm around site area
ND/2019/07	 Covering exposed slope surface with tarpaulin	 Temporary rainwater storage area for rainstorm event

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 29th October 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




Agricultural practice are continued in existing farmland to maintain habitats in Long Valley



Lotus pond



Open water Habitat



Chinese arrowhead pond

Creation of wetland with designated habitat for biodiversity conservation




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



Retention of washing bay for amphibians breeding



Enhancement of irrigation channel to provide reliable water source for farmland in Long Valley

 Provision of bird island (hidden area)	 Restoring of water flea pond to provide food source to water birds
 Construction of storage sheds for farmers	 a *Elanus caerileus* 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.**

11.2 Ecological monitoring was carried out in the reporting month. The Action and Limit Level will be compared after the issue of Final Baseline Ecological Report.

11.3 Should the monitoring results of the environmental monitoring parameters at any designated monitoring stations indicate that the Action / Limit Levels are exceeded, the actions in accordance with the Event and Action Plans in **Appendix N** would be carried out.

Summary of Environmental Non-Compliance

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

Summary of Environmental Complaint

11.5 No environmental complaints was received in the reporting month. The Cumulative Complaint Log since the commencement of the Project is presented in **Appendix S**.

Summary of Environmental Summon and Successful Prosecution

11.6 There was no successful environmental prosecution or notification of summons received since the Project commencement. The Cumulative Log for environmental summon and successful prosecution since the commencement of the Project is presented in **Appendix T**.

12 FUTURE KEY ISSUES

Key Issues in the Coming Two Months

12.1 The major site activities, potential environmental impacts and recommended mitigation measures for the coming two months are shown in **Table 12.1.**

Table 12.1 Summary Table for Site Activities, Potential Environmental Impacts and Recommended Mitigation Measures in the coming Months

Contract No.	Major Site Activities (November to December 2021)	Location/ Working Period	Potential Environmental Impact	Recommended Mitigation Measures
ND/2019/01	(a) Site clearance	Portion 1a, 1b, 1e, 2, 3, 5, 6a, 7,8b	- Construction Dust impact - Noise Impact (Construction Phase) - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste)	**Air** - Watering on exposed earth and haul road. - Cover the stockpiles or dusty materials. - Deploy water browsers to water the haul road. - Deploy mist-cannon on site - Install sprinkler system for dust suppression. - Provide shelter with top and 3-sides for cement production activities. - Entirely cover the Arsenic-containing soil. - Store the bulk cement in enclosed silo tank for Solidification / Stabilization treatment. - Close the mechanical cover of the vehicles used for transporting dusty materials. - Establish vehicle wheel washing facilities at vehicle exit points. - Speed control of site vehicles. - Erect solid site hoarding. **Noise**
	(b) GI works	Portion 1b, 2, 8b, 9b		
	(c) Excavation	Portion 3, 5, 6a, 7, 8a, 9b, 9c, 10a, 10b		
	(d) Construction of retaining wall	Portion 5, 6a, 8a		
	(e) Soil nailing/ grouting	Portion 8a, 8b		
	(f) Demolition of existing structure	Portion 1a, 1e, 9b		
	(g) Construction of temporary site haul road	Portion 2, 6a, 7, 10a		
	(h) Operation of HAC treatment facility	Portion 6b		
	(i) Tree felling	Portion 2, 3, 5		

	(j) Drainage Works	Portion 5, 7, 8a, 9b, 11a, 11b		- Regular inspect of construction plants in good condition - Provide temporary noise screens if necessary. - Use of Quiet plants (QPME) and working methods if possible. - Sequencing operation of construction plants where practicable. - Shut down the machines and plant if not in use. - Only well-maintained plant to be operated on-site. - Mobile plant to be sited as far away from NSRs as possible and practicable. - Conduct noise monitoring regularly. - Erect silent-up noise barrier at Portion 6b. **Water** - Set up wastewater treatment system (AquaSed) on site. - Erect soil bund / temporary drain to divert /collect surface runoff. - Maintain the drainage and wastewater treatment facilities. **Waste / Chemical Management** - Sort out demolition debris and excavated materials from demolition works to recover reusable / recyclable portions. - Provide recycling 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.
	(k) Sheetpiling	Portion 3, 5, 7, 6a, 7, 8b, 9b, 10a, 10b		

ND/2019/02	(a) Hoarding erection	Portion 10	Air, Noise, Waste	- 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	- C&D waste - Air pollution - Noise pollution	- 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	- C&D waste - Air pollution - Noise pollution - Water pollution	- 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	- C&D material - Air Pollution	- Cover C&D material by tarpaulin - Watering while demolish the structure
	(d) Construction works of storage shed and Type 2 Storage House	Long Valley	- C&D material - Air Pollution	- Watering exposed earth regularly - Cover C&D material by tarpaulin

ND/2019/04	(a) Sheet piling	Portion H	- Air, Noise, Waste	- Dusty works should be sprayed with water or stockpile should be covered by tarpaulin properly. - Plants should have maintenance to prevent dark smoke and oil leakage. Idle plant should be turned off. - Drip tray should be provided for all chemical and stationary plants. - No construction works shall be carried out in restricted hours (7:00 pm to 7:00 am) unless CNP is granted. - Waste should be sorted and disposed according to Waste Management Plan. - No direct discharge of wastewater into storm water drains is allowed. Wastewater must be desilted before discharging according to water discharge license.
	(b) Bored piling	Bridge A2, A3, F	- Air, Noise, Water, Waste	
	(c) Predrill	Bridge A2, A3, Portion E, H	- Air, Noise, Water, Waste	
	(d) Excavation	Bridge F	- Air, Noise, Waste	
	(e) Site clearance	Portion A, B, E	- Air, Noise, Waste	
	(f) Tree felling	Portion A, B, E	- Air, Noise, Waste	
ND/2019/05	(a) Pre drilling for bored piles	B1-01(Portion I), B1 & B2(Portion II), C1(Portion II) & C1-03	- Construction Dust Impact - Noise Impact - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste) - Landscape and Visual - Cultural Heritage	- Regular watering on exposed worksites and haul road - Stockpiling area should be provided with covers and water spraying system - Only well-maintained plant to be operated on-site - Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; - Mobile plant to be sited as far away from NSRs as possible practicable - All open stockpiles of construction materials of more than $50m^3$ to be covered with tarpaulin - Manholes to be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system - All vehicles and plant to be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. - Segregate and store different types of waste in different containers, skip or stockpiles to enhance
	(b) Bored piling	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		
	(c) Soil Nail	Jockey Club Road		
	(d) 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, LT2		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 – Exiting trees to be retained within the Project site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. - Tree Transplantation – 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 nursey as far as possible.
	(e) Footing Construction	C4-02		
	(f) Utitilies Diversion Works and Permanent Road Works	Venton Area		
	(g) Pier Construction	C4-03, C4-04a, C4-04b, D1-01, E1-01, E1-02, E1-03, E1-04, E2-02		
	(h) Launching Girder & Form Traveler Fabrication	CTC Storage Yard		
	(i) Drainage & Water Mains construction	TWSRE, Portion XI, XVII, XVIII		
	(j) UU diversion	Tai Wo Service Road West		
	(k) Construction of LT1, P02 & AB1	Ho Ka Yuen Footbridge (East		

				- Erect 2m high dull green site boundary fence. - Light Control – Construction day and night time should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.
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 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
	E. Installation of sheet piles for ELS for footing od additional carriageway steel cover	Portion 3	- Noise pollution - Air pollution	- Adopt “ Approved” NRMM Label - Water Spraying to the dusty materials
	F. Construction of footing of additional carriageway steel cover	Portion 3	- Noise pollution - C&D waste - Air pollution	- Adopt QPME for excavator - Disposal to Fill bank - Washing the truck wheel before leaving the site
	G. Construction of walls and columns of additional water tank and pump house	Portion3	- Air pollution - Noise pollution	- Unloading materials shall be kept in minimum height and speed - Adopt “ Approved” NRMMM\Label
	H. E&M installations for the steel canopy	Portion 3	- Air pollution	- Adopt ultra-low Sulphur diesels

ND/2019/07	(a) Site clearance	Portion 1, 2	- Construction Dust Impact - Noise Impact - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste) - Landscape and Visual	- Regular watering on exposed worksites and haul road. - Stockpiling area should be provided with covers and water s praying system. - Only well maintained plant to be operated on site. - Plant known to emit noise strongly in one direction, where possible; be orientated so that the noise is directed away from nearby NSRs. - Mobile plant to be sited as far away from NSRs as possible practicable. - All open stockpiles of construction materials of more than $50m^3$ to be covered with tarpaulin. - Manholes to be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system. - 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.
	(b) Erection of site hoarding	Portion 1		
	(c) C&D waste disposal	Portion 1, 2		
	(d) Ground investigation works	Portion 1		
	(e) Construction of box culvert	Portion 2		
	(f) Filing works	Portion 1, 2		
	(g) Tree felling/ disposal of yard waste	Portion 1, 2, 3		
	(h) Construction of site haul road	Portion 1		
	(i) Sewage works	Portion 1, 3		
	(j) Demolition of villager's houses	Portion 4		
	(k) Drainage Works	Portion 1, 3		

				- Chemical wastes to be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. - Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. - 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 October 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 5, 12, 19 and 25 October 2021 by ET in the reporting month.

Contract No. ND/2019/02

13.4 Environmental site inspection were conducted on 6, 12, 22 and 27 October 2021 by ET in the reporting month.

Contract No. ND/2019/03

13.5 Environmental site inspection were conducted on 8, 15, 19 and 29 October 2021 by ET in the reporting month.

Contract No. ND/2019/04

13.6 Environmental site inspection were conducted on 7, 15, 22 and 28 October 2021 by ET in the reporting month.

Contract No. ND/2019/05

13.7 Environmental site inspections were conducted on 4, 15, 18 and 25 October 2021 by ET in the reporting month.

Contract No. ND/2019/06

13.8 Environmental site inspections were conducted on 7, 15, 18 and 28 October 2021 by ET in the reporting month.

Contract No. ND/2019/07

13.9 Environmental site inspections were conducted on 8, 15, 19, and 29 October 2021 by ET in the reporting month.

13.10 There were no environmental complaint, 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.

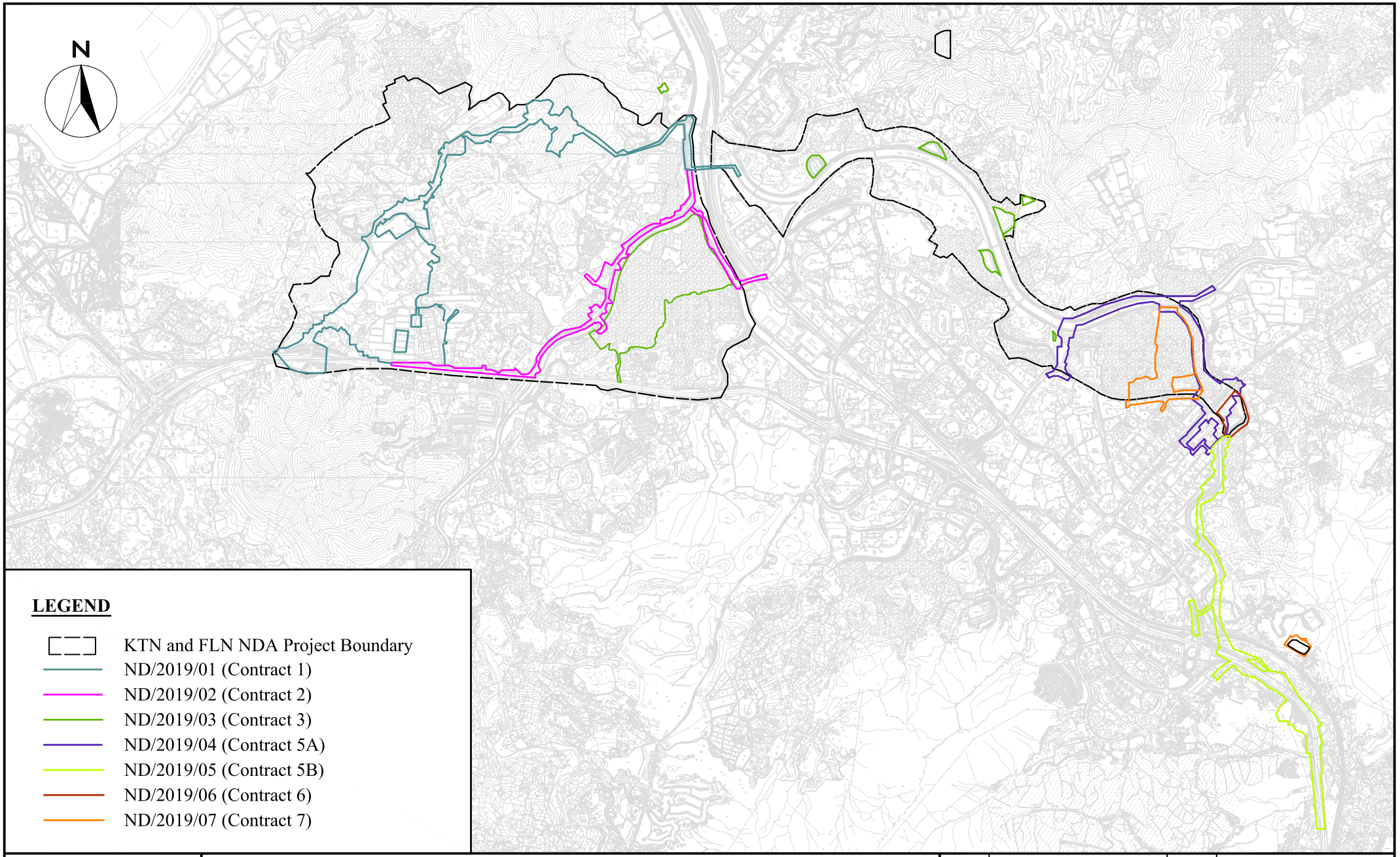
Ecology

- 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)



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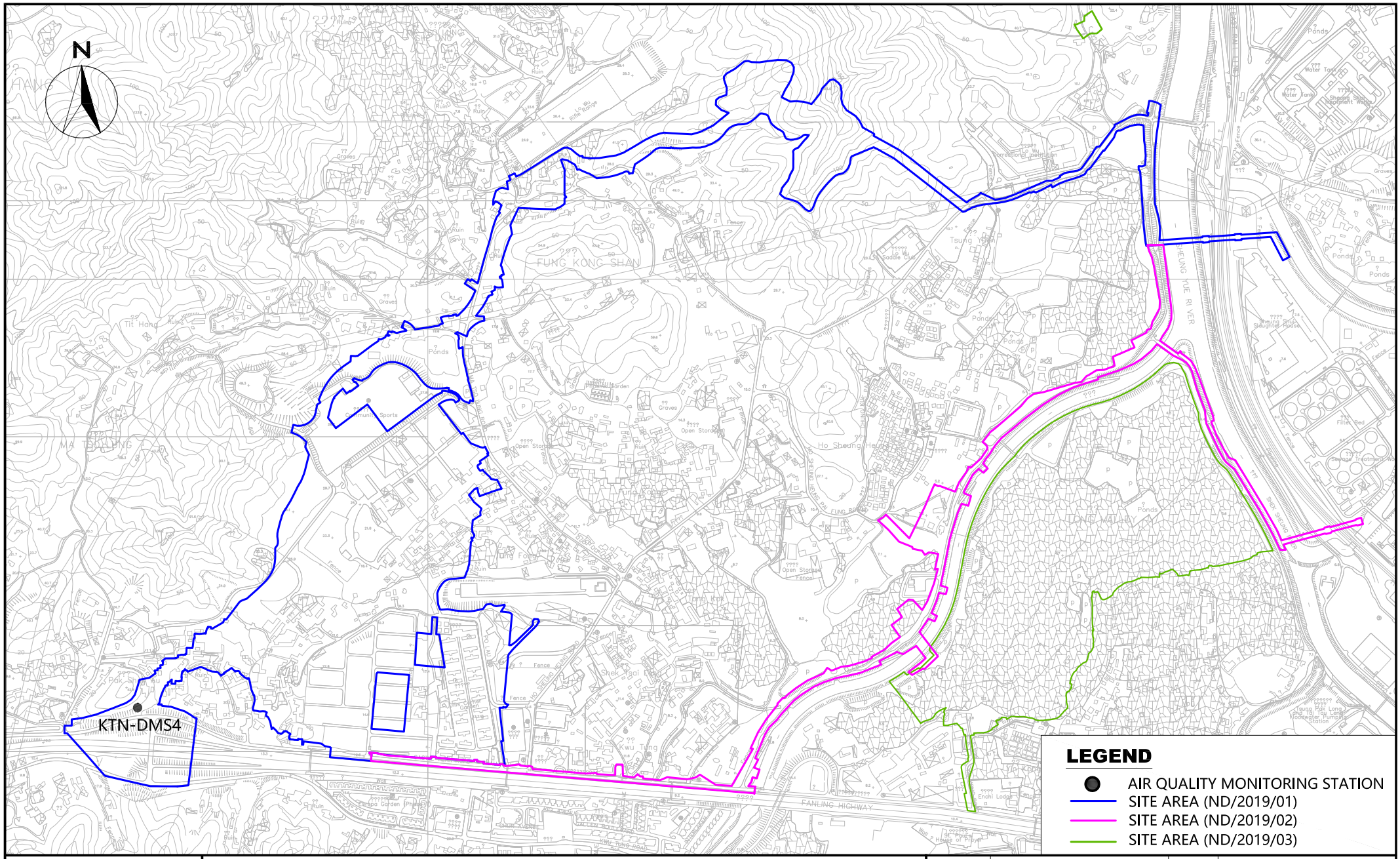
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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

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

FIGURE(S)



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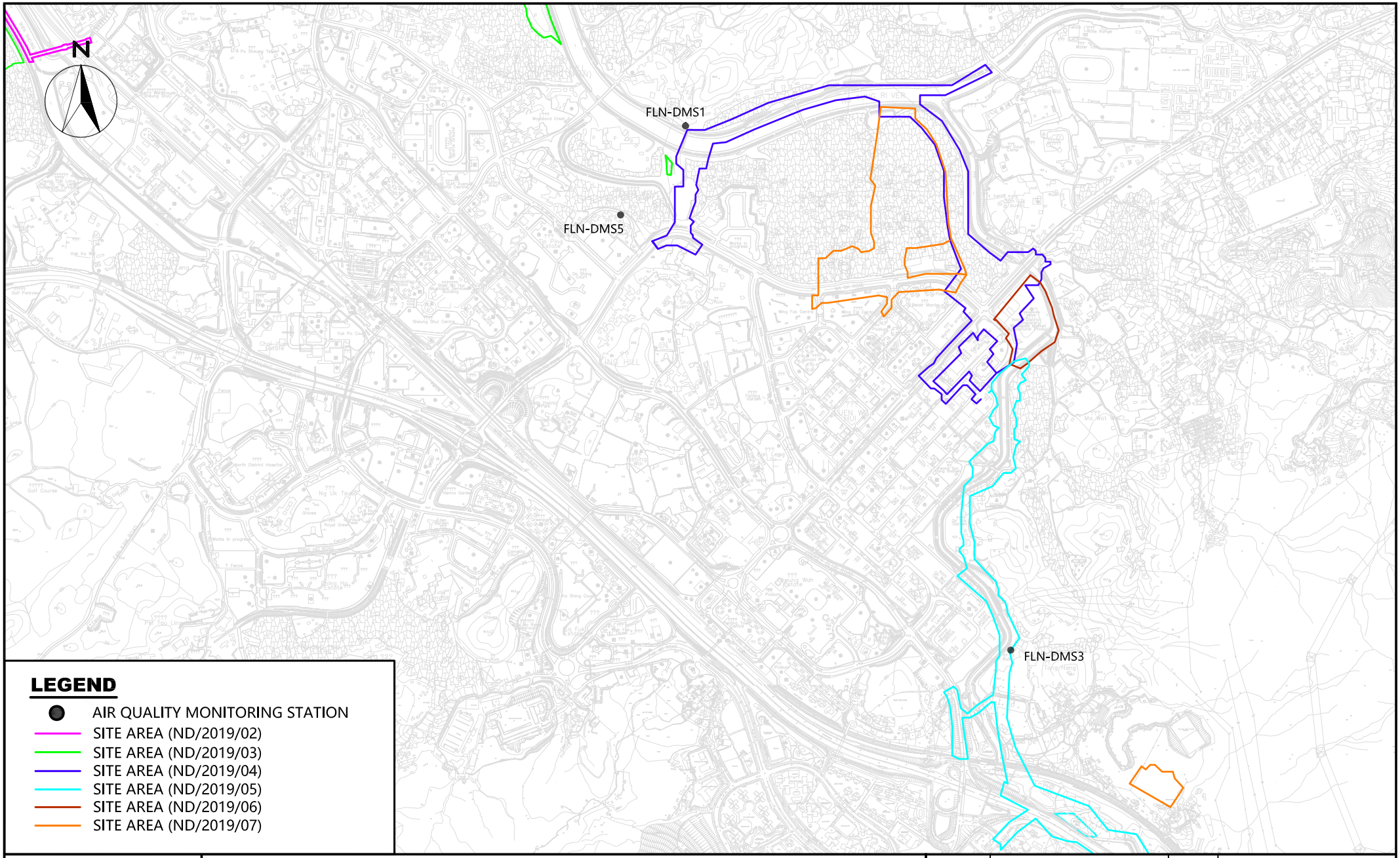
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Air Quality Monitoring Station (KTN)

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



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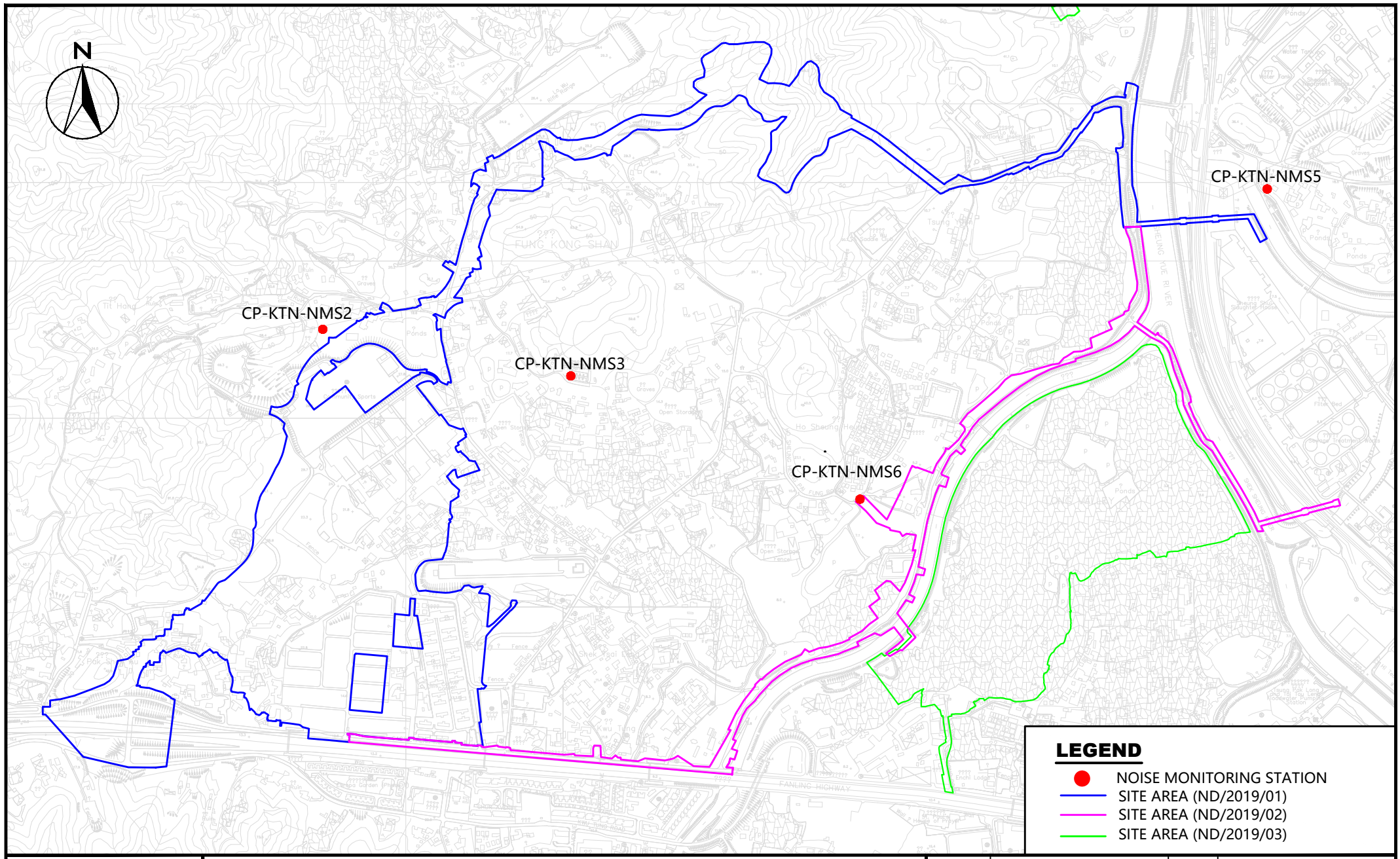
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Air Quality Monitoring Station (FLN)

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



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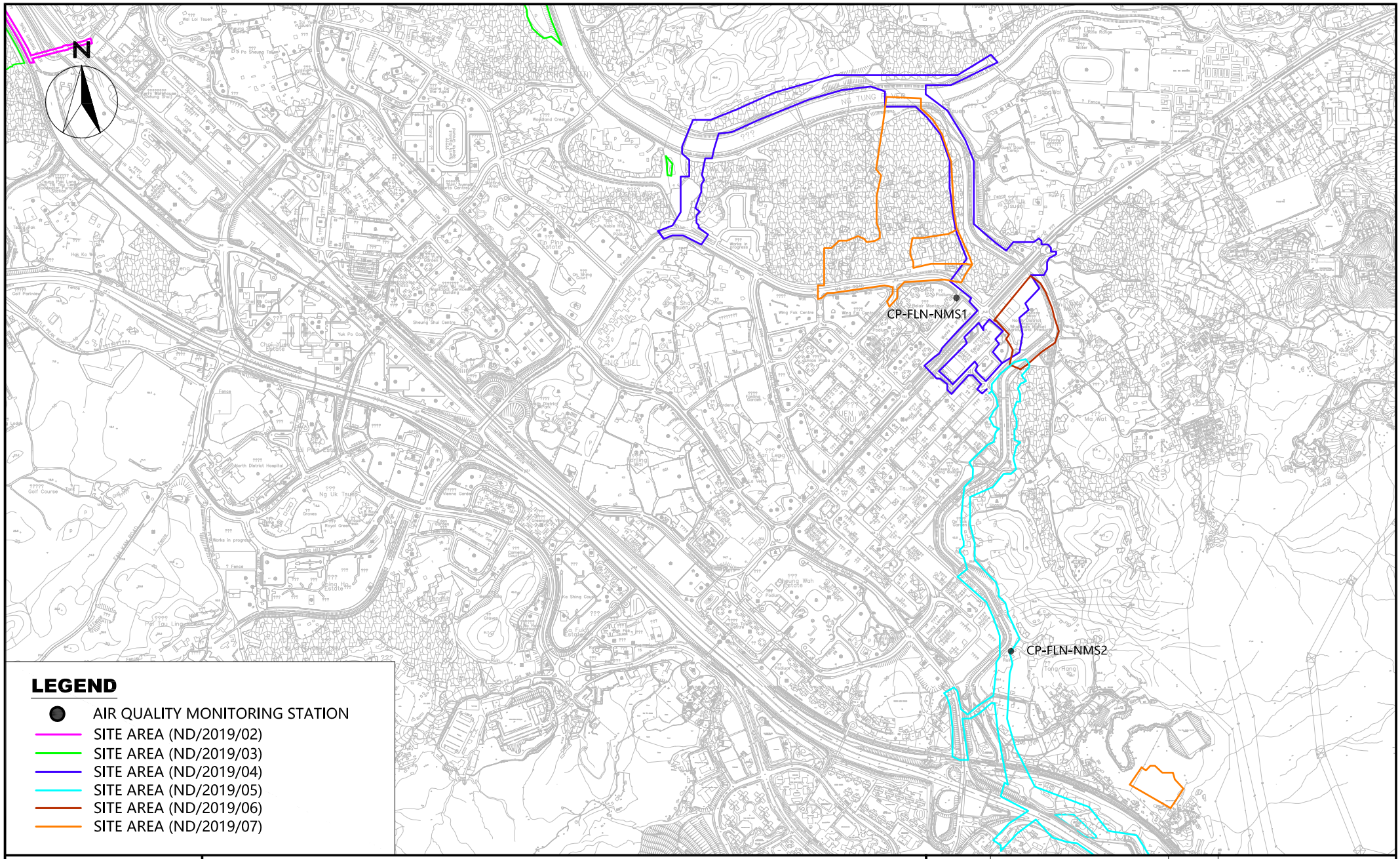
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Noise Monitoring Station (KTN)

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



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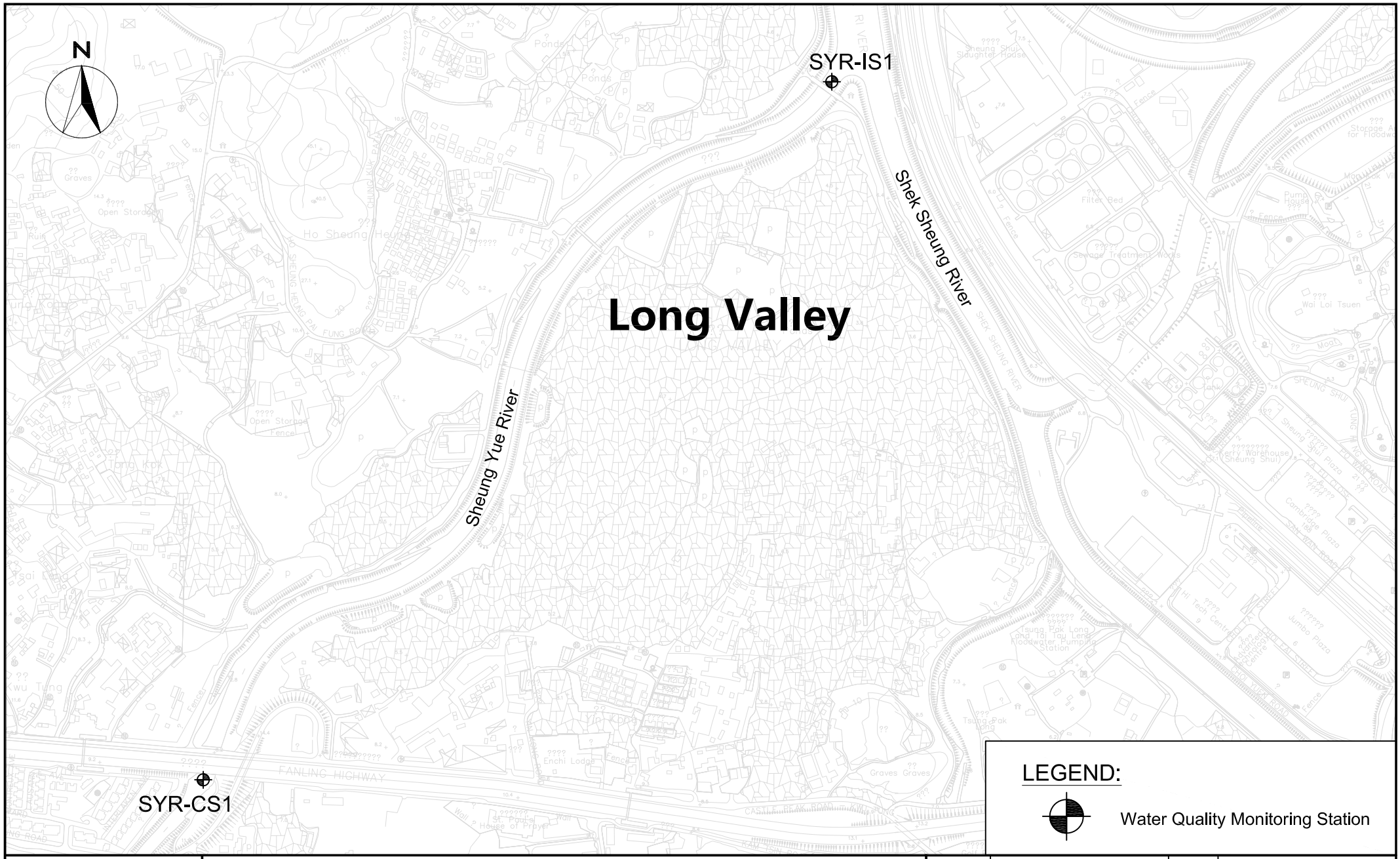
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Noise Monitoring Stations (FLN)

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



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

Location of Additional Water Quality Monitoring Stations at River Beas

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



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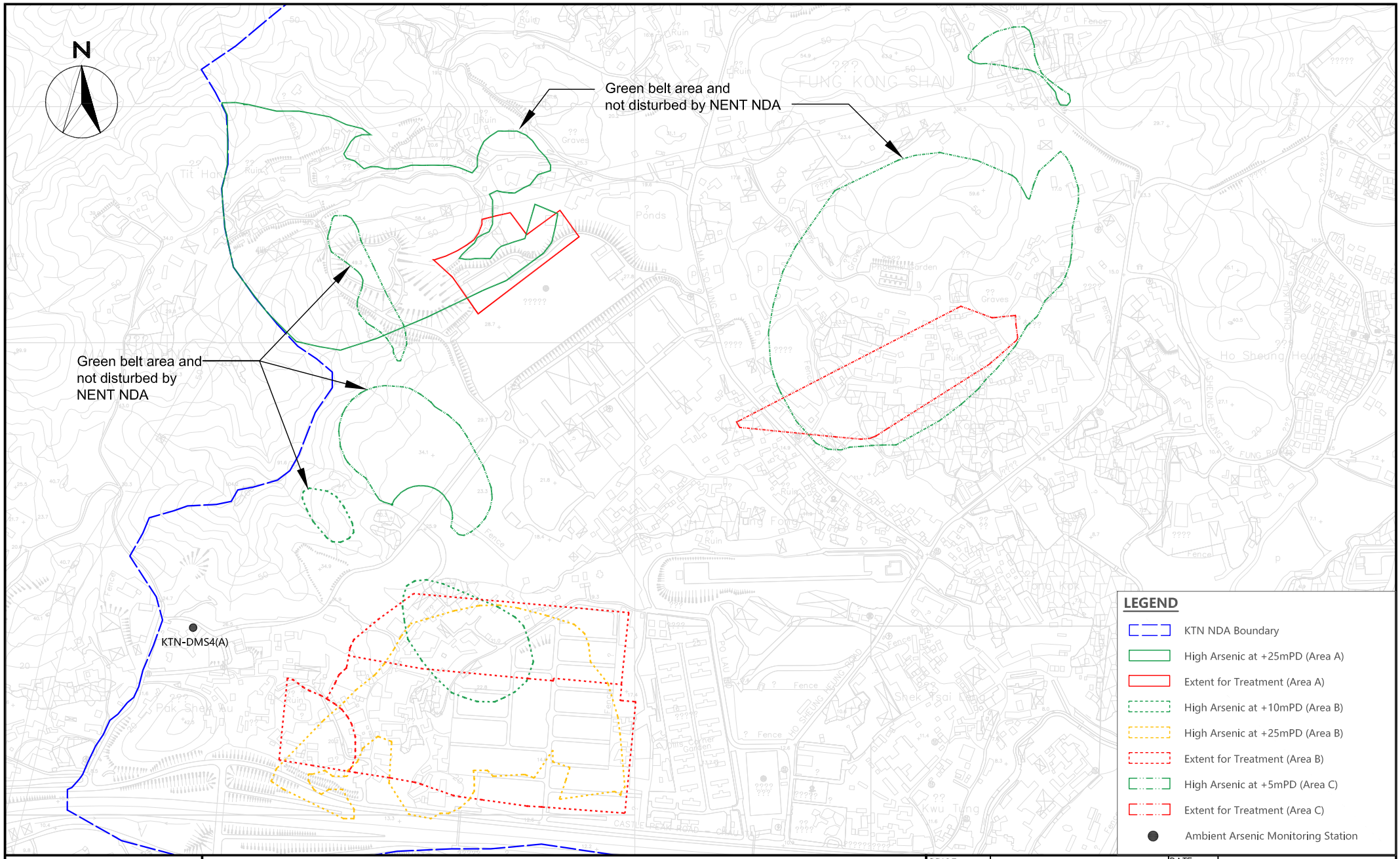
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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

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



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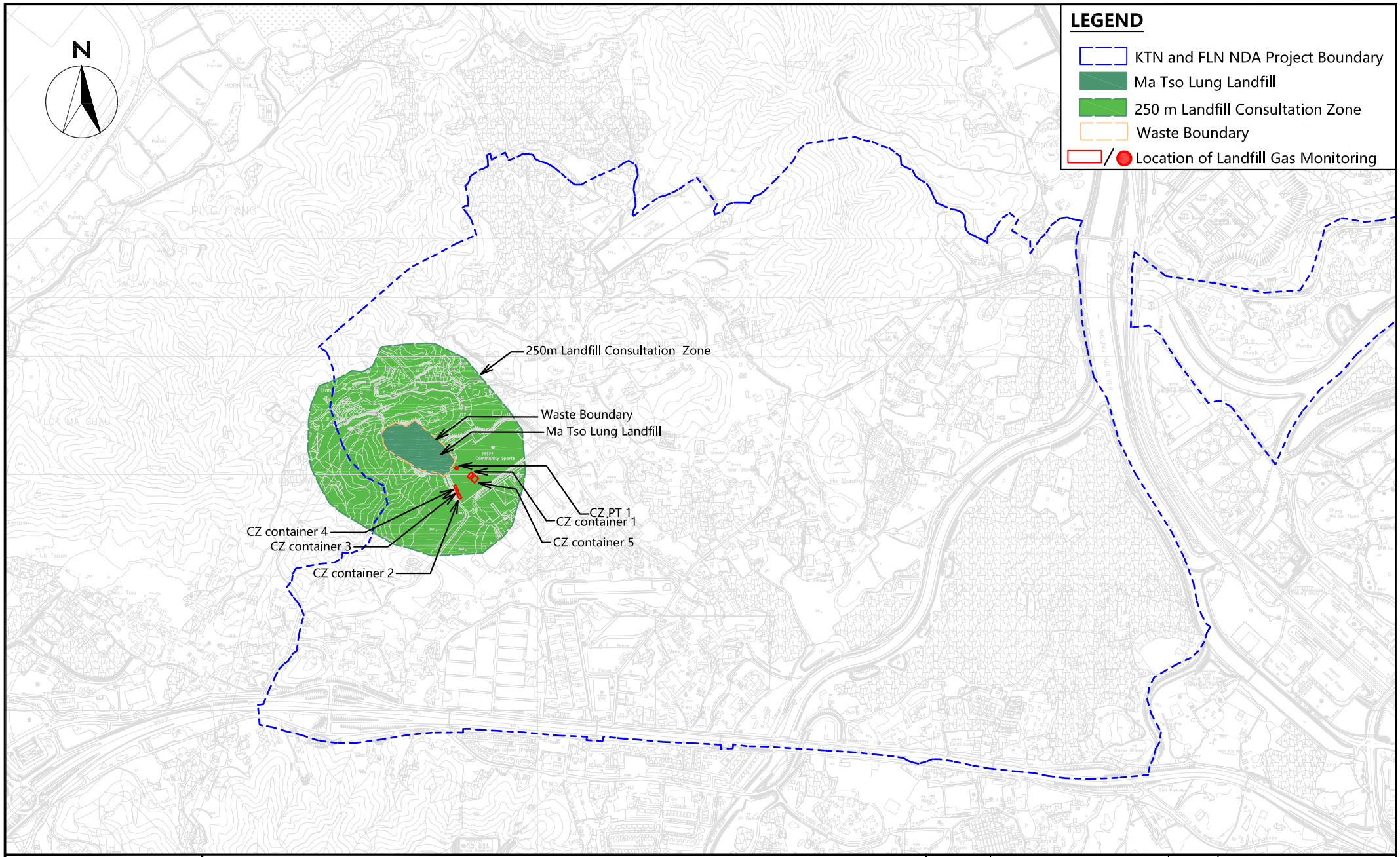
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Ambient Arsenic Monitoring Station

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



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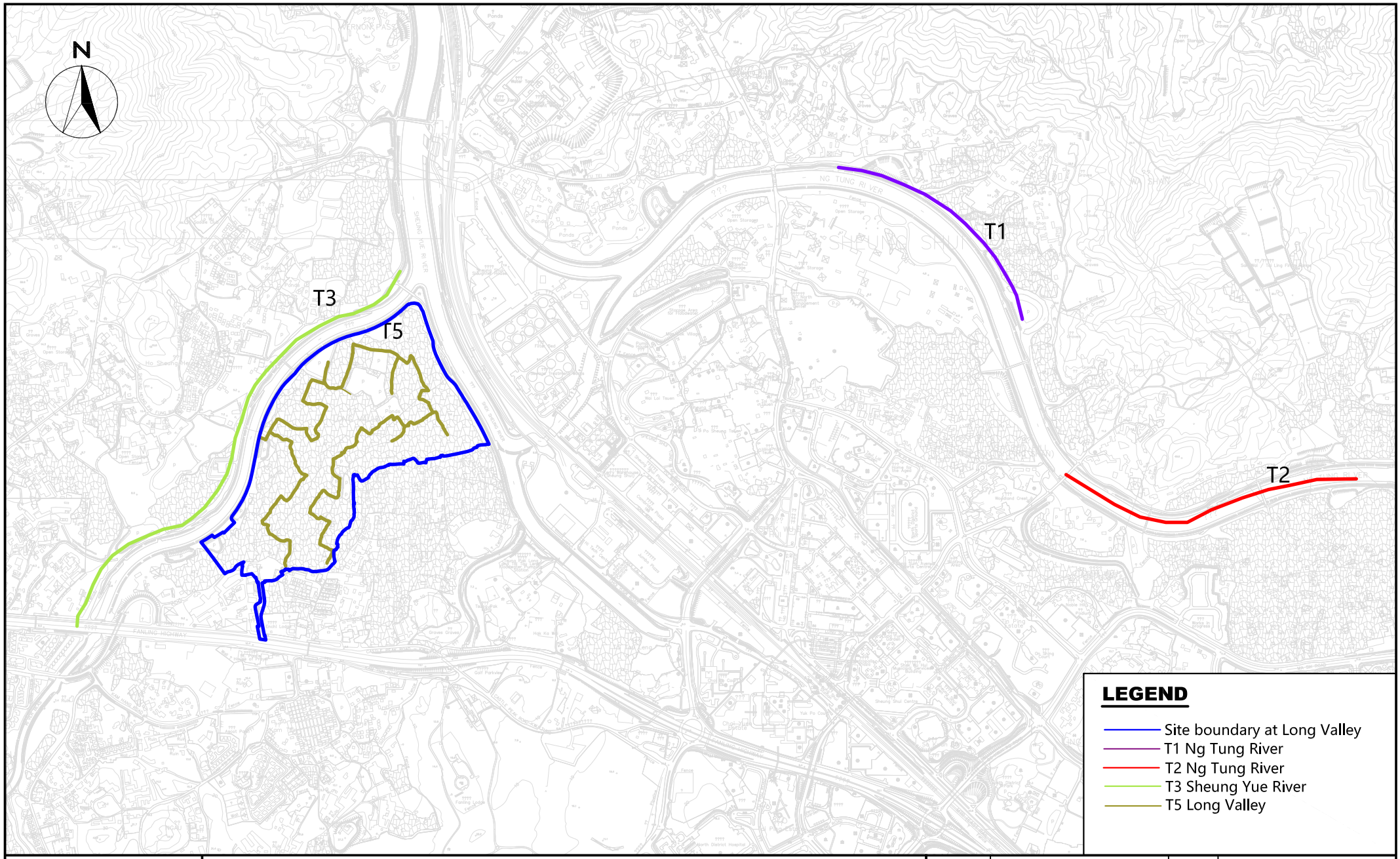
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Landfill Gas Monitoring

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



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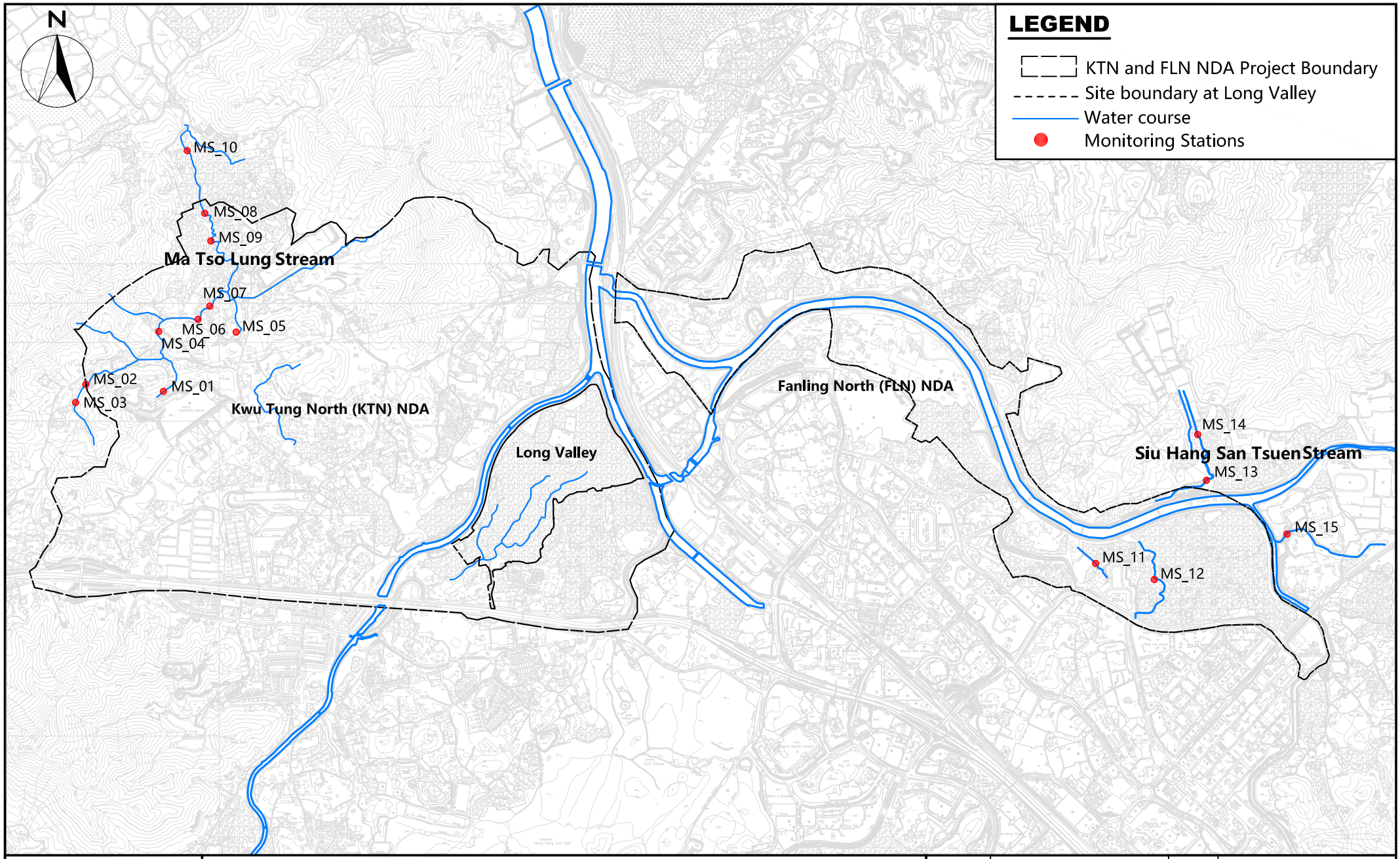
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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

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



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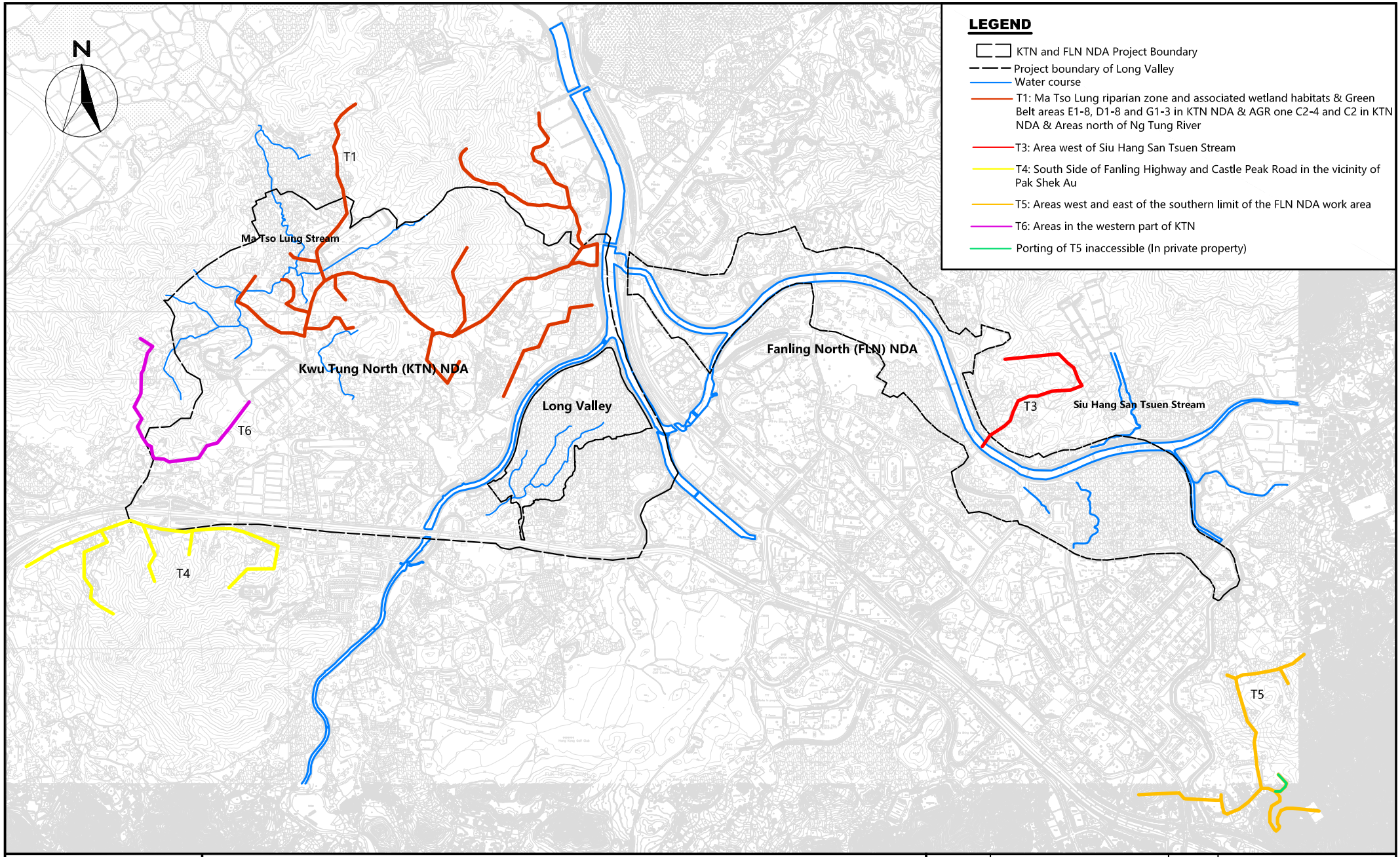
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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

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



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

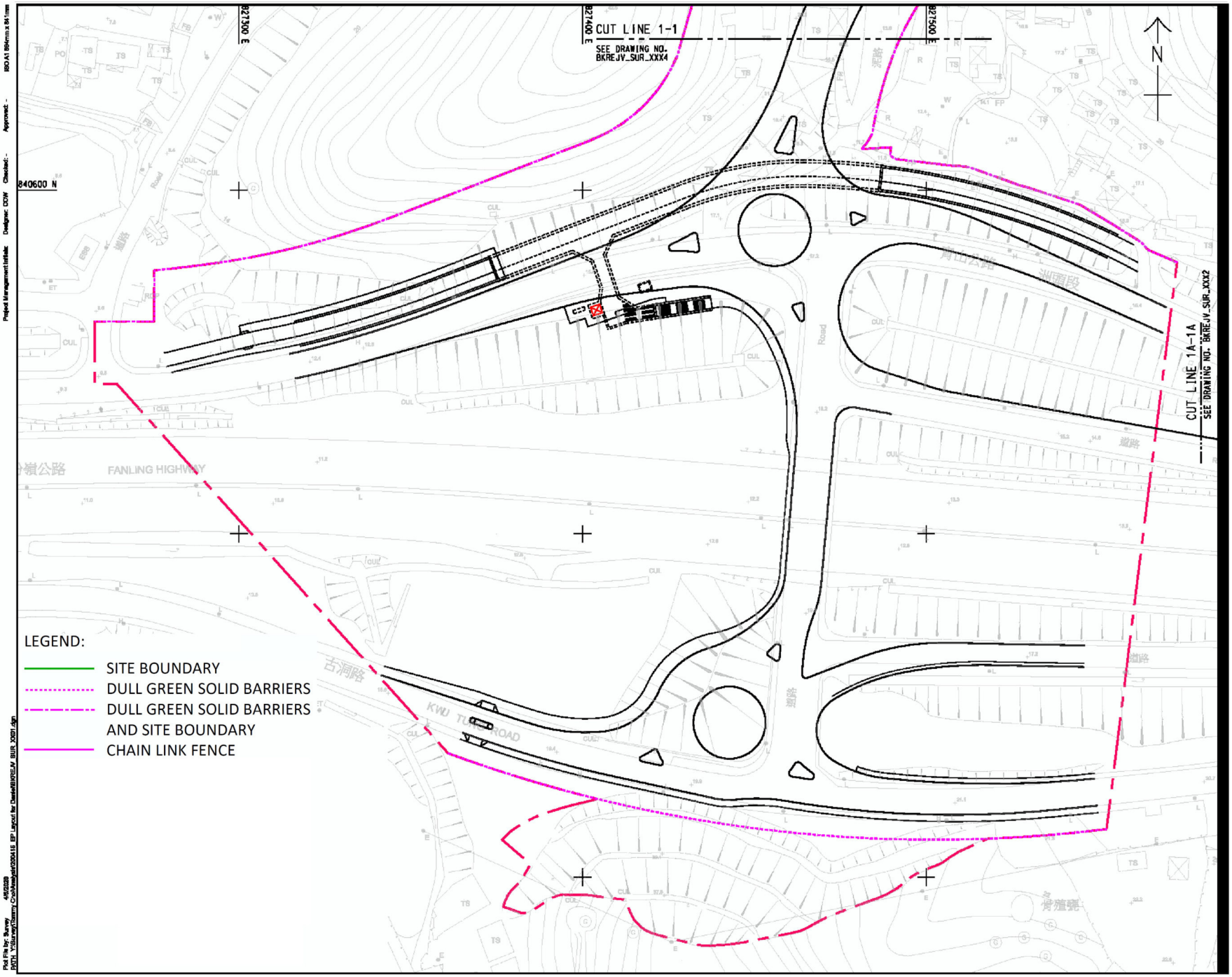
Location of Transect Route of Ecological Sensitive Habitats (Non-Aquatic Fauna) Transects (T1, T3-T6)

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

Figure 12

Hoarding Plan

EP-466/2013



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
業主

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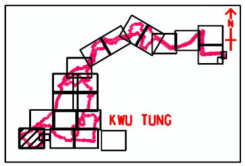
STATUS
階段

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

KEY PLAN
索引圖



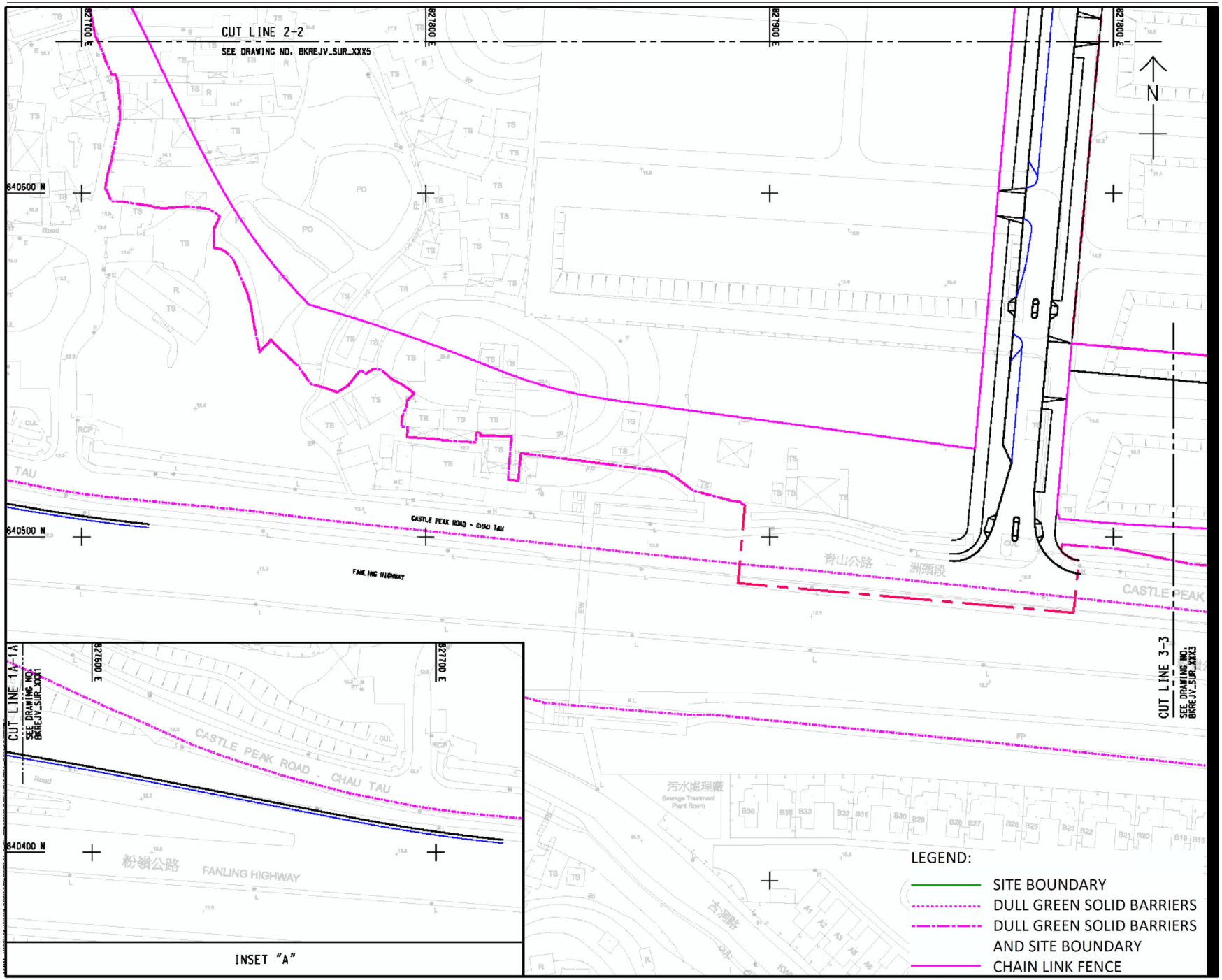
PROJECT NO. 項目編號	CONTRACT NO. 合約編號
60335576	ND/2019/01

SHEET TITLE
圖紙名稱

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
圖紙編號

BKREJV_SUR_XXX1



BKREJV

TITLE OF DESIGNATED PROJECT:
Castle Peak Road Diversion

CONTRACT TITLE:

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

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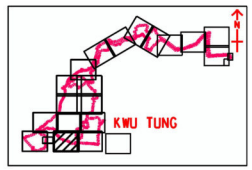
SCALE 比例
A3 1:1000

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/2019/01

SHEET TITLE
圖紙名稱

DULL GREEN SOLID BARRIERS LAYOUT

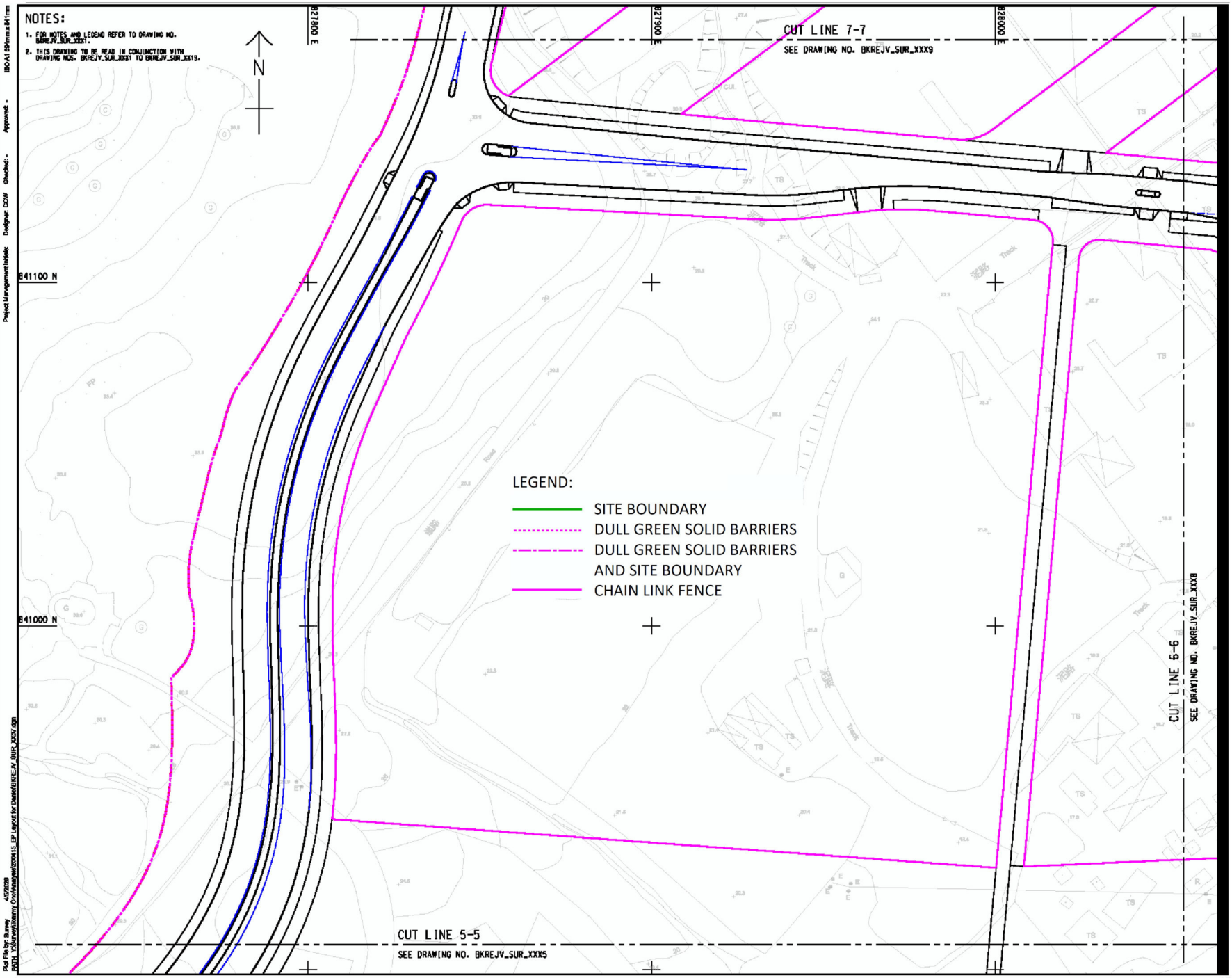
SHEET NUMBER
圖紙編號

BKREJV_SUR_XXX2

Figure 13

Hoarding Plan

EP-467/2013/A



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

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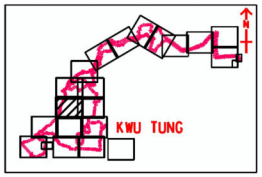
階段

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

KEY PLAN
索引圖



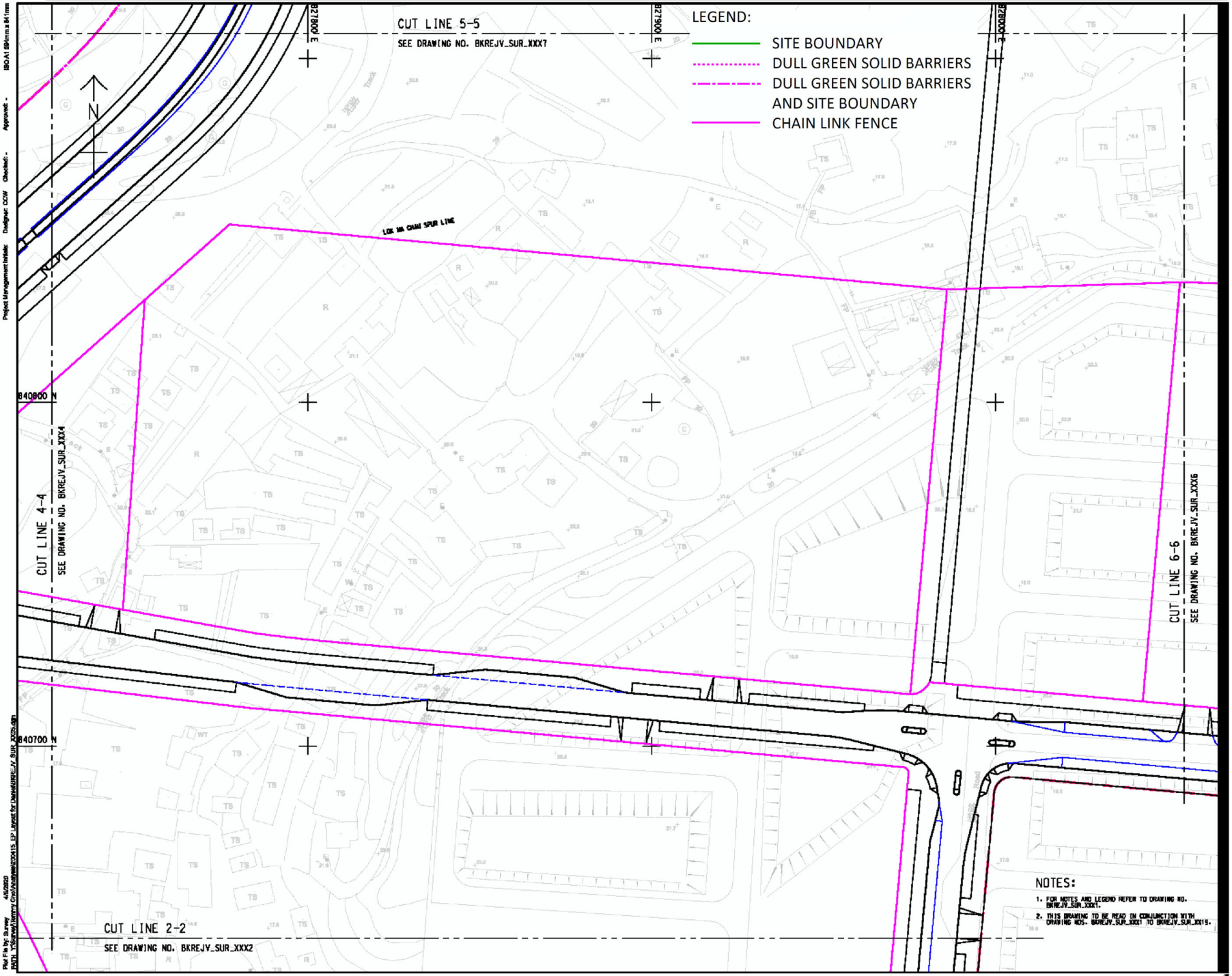
PROJECT NO. 項目編號	**CONTRACT NO.** 合約編號
60335576	ND/2019/01

SHEET TITLE
圖紙名稱

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
圖紙編號

BKREJV_SUR_XXX7



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

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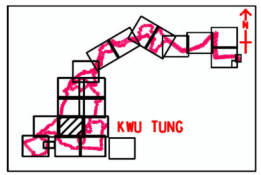
SCALE
比例

A3 1:1000

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

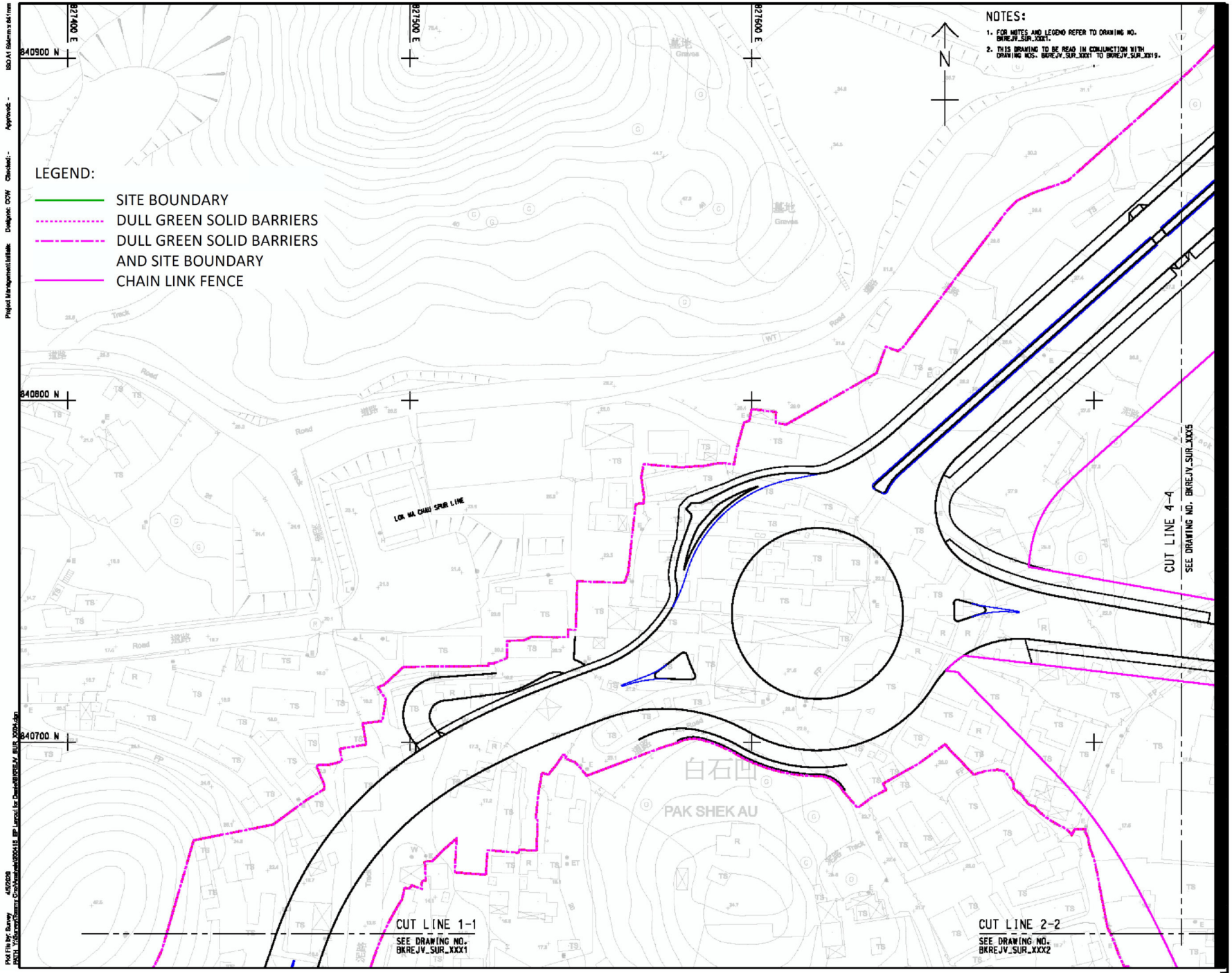
ND/2019/01

SHEET TITLE
圖紙名稱

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
圖紙編號

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

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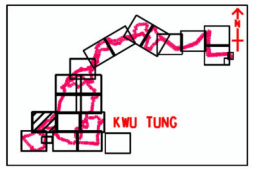
SCALE
比例
A3 1:1000

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖



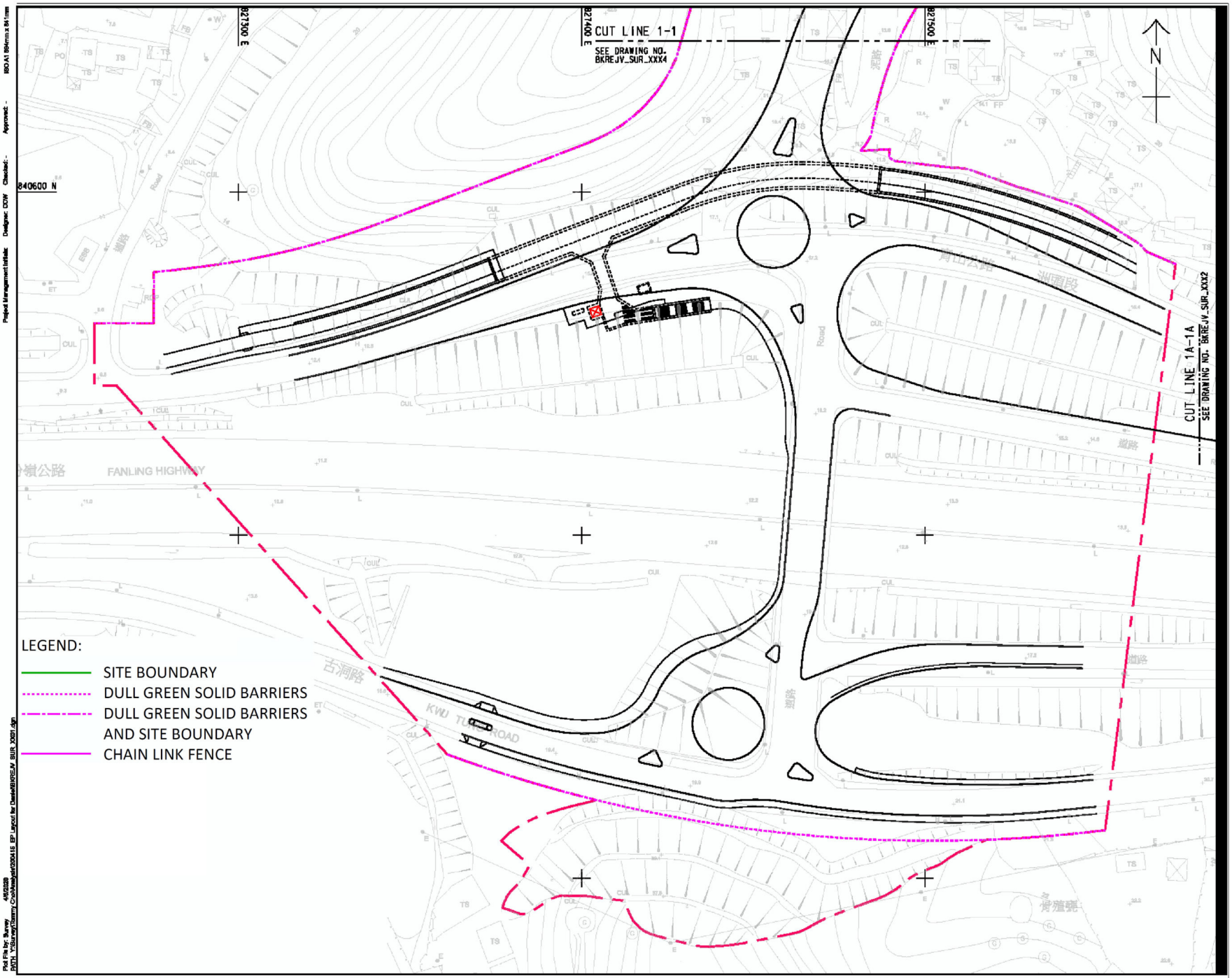
PROJECT NO.
項目編號
60335576

CONTRACT NO.
合約編號
ND/2019/01

SHEET TITLE
圖紙名稱

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
圖紙編號
BKREJV_SUR_XXX4



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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

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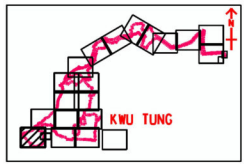
階段

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

KEY PLAN
索引圖



PROJECT NO. 項目編號	CONTRACT NO. 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

Figure 14

Hoarding Plan

EP-468/2013/A

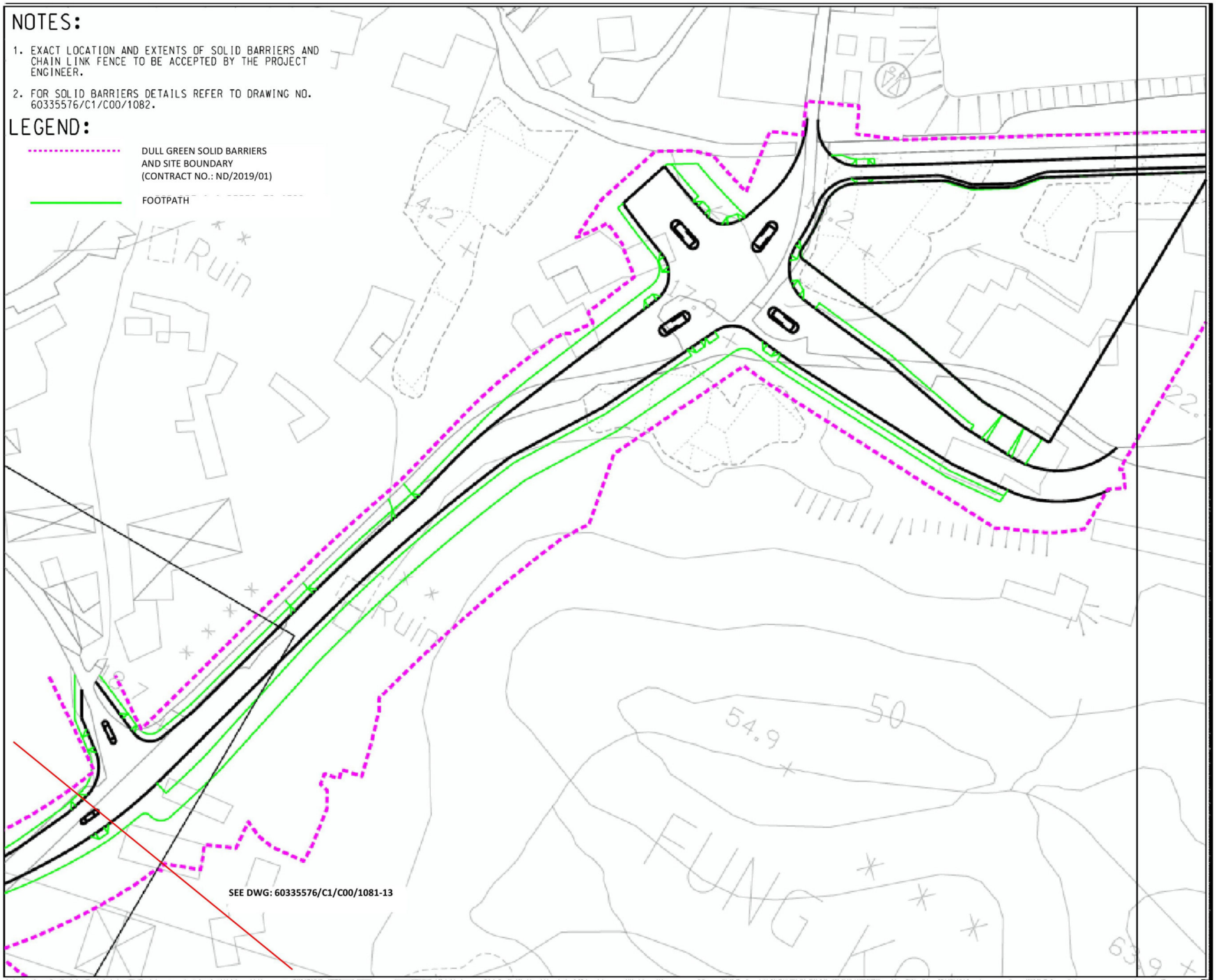
NOTES:

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

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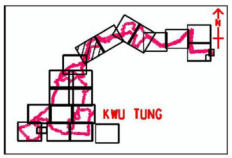
STATUS

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/C00/1081-14

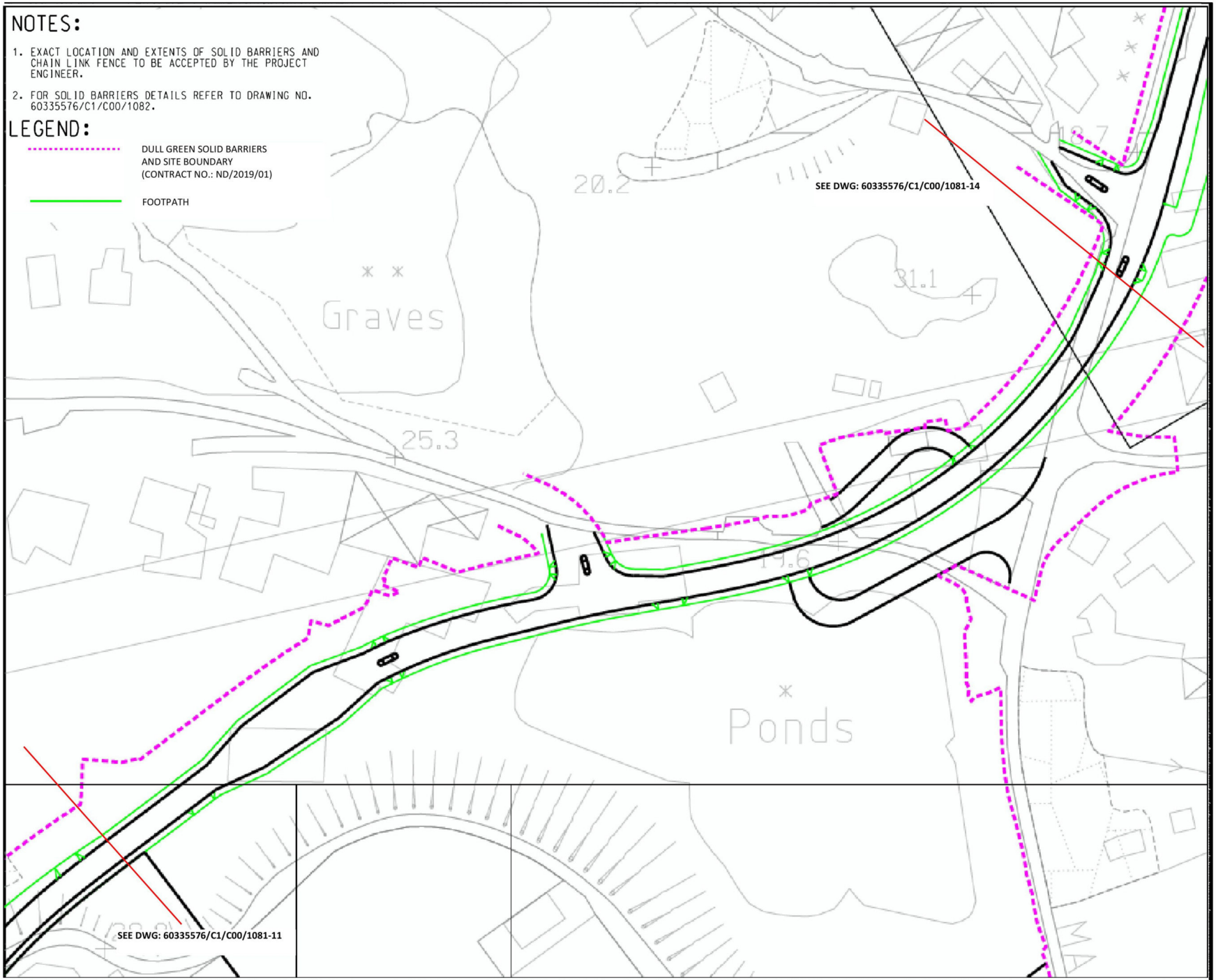
NOTES:

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

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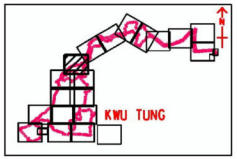
STATUS

SCALE A3 1:1000

DIMENSION UNIT METRES

KEY PLAN



PROJECT NO. 60335576

CONTRACT NO. ND/2019/01

SHEET TITLE

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER

60335576/C1/C00/1081-13

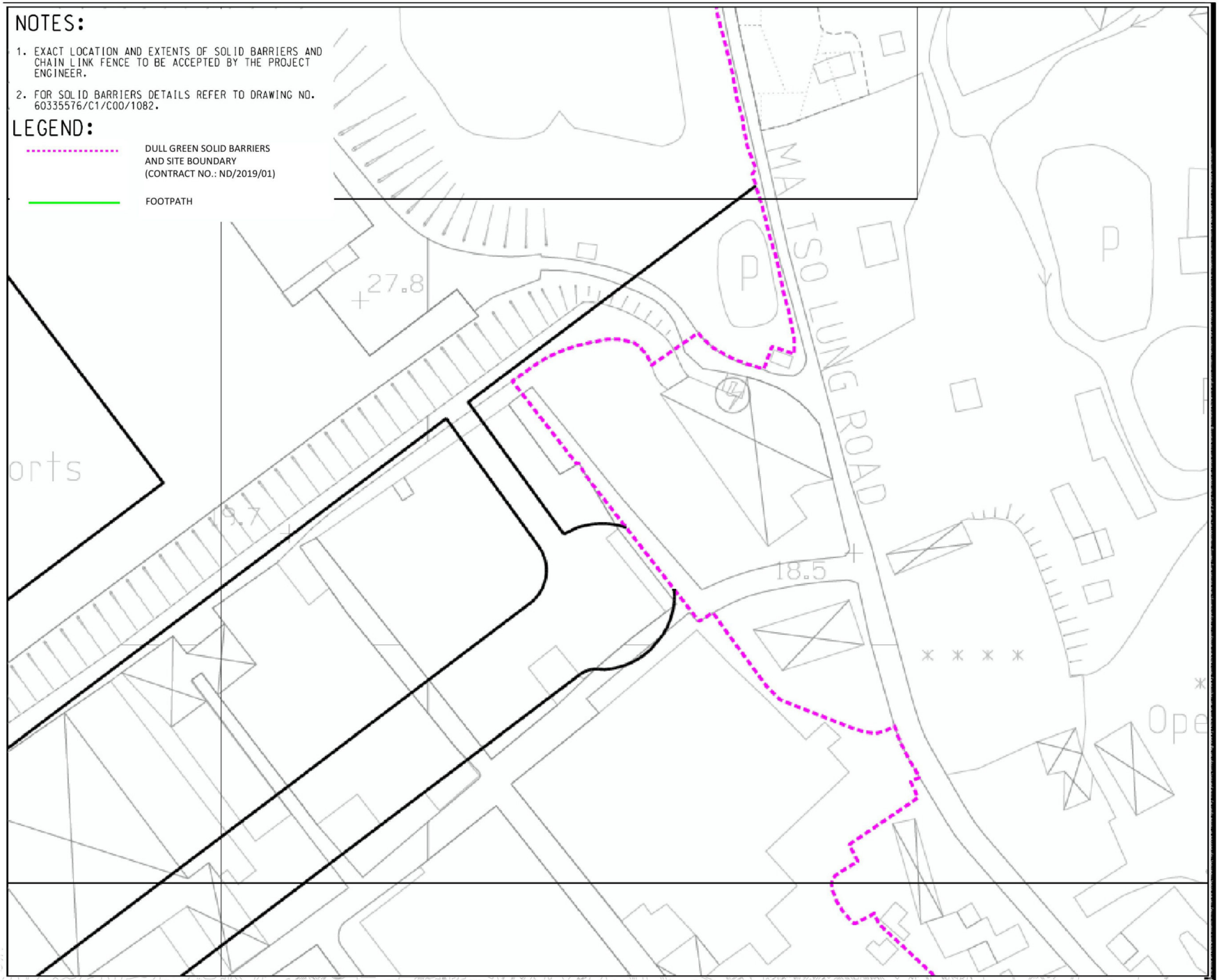
NOTES:

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

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

CONSULTANT

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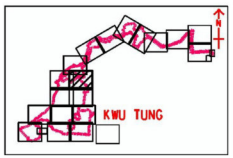
SUB-CONSULTANTS

STATUS

SCALE 比例 — A3 1:1000

DIMENSION UNIT 尺寸單位 — METRES

KEY PLAN



PROJECT NO. 項目編號 — 60335576

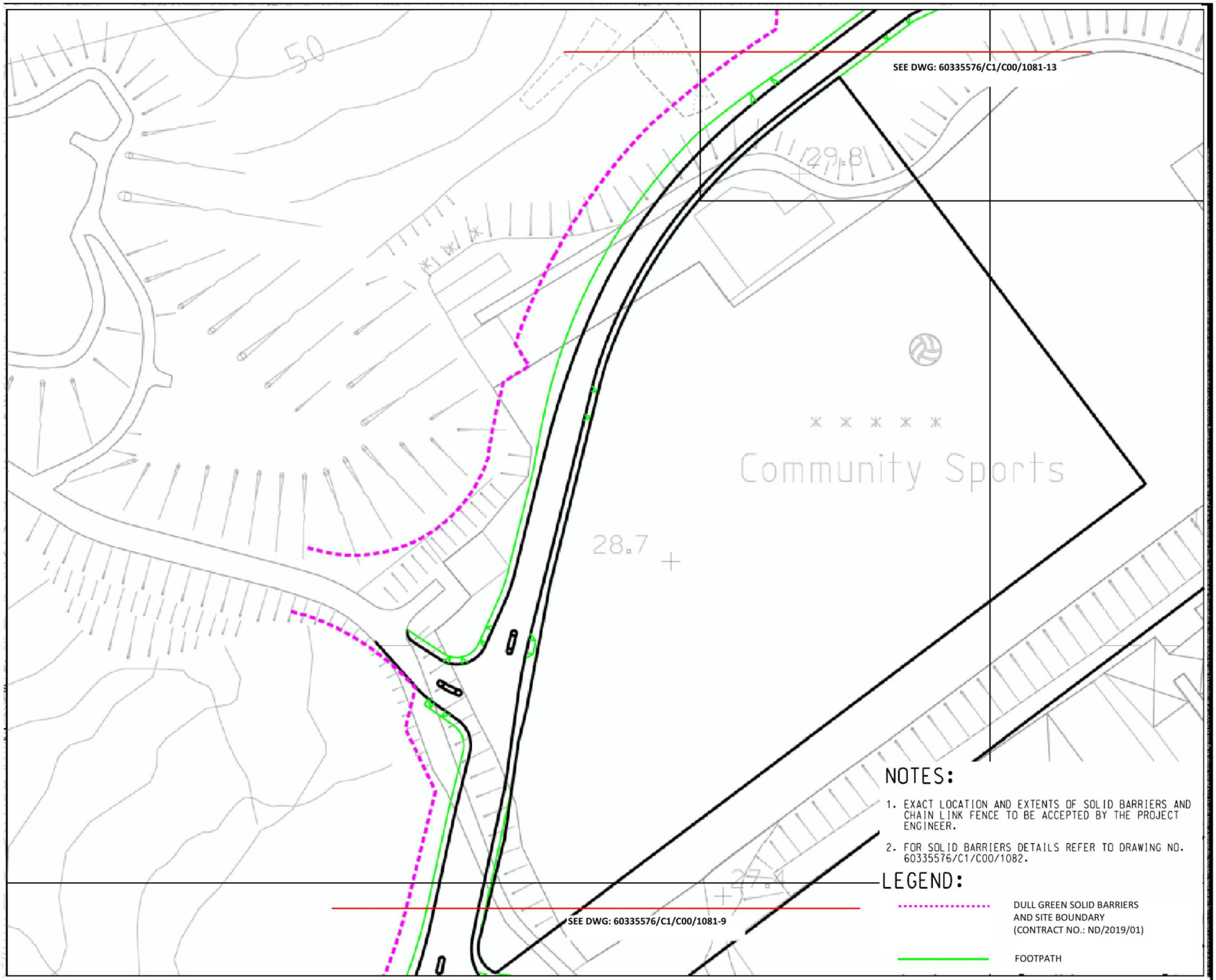
CONTRACT NO. 合約編號 — ND/2019/01

SHEET TITLE

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER

60335576/C1/C00/1081-12



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
業主

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CONSULTANT
工程顧問公司

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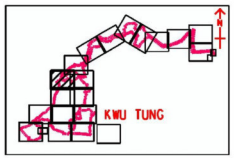
SUB-CONSULTANTS
分判工程顧問公司

STATUS
階段

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

KEY PLAN
索引圖



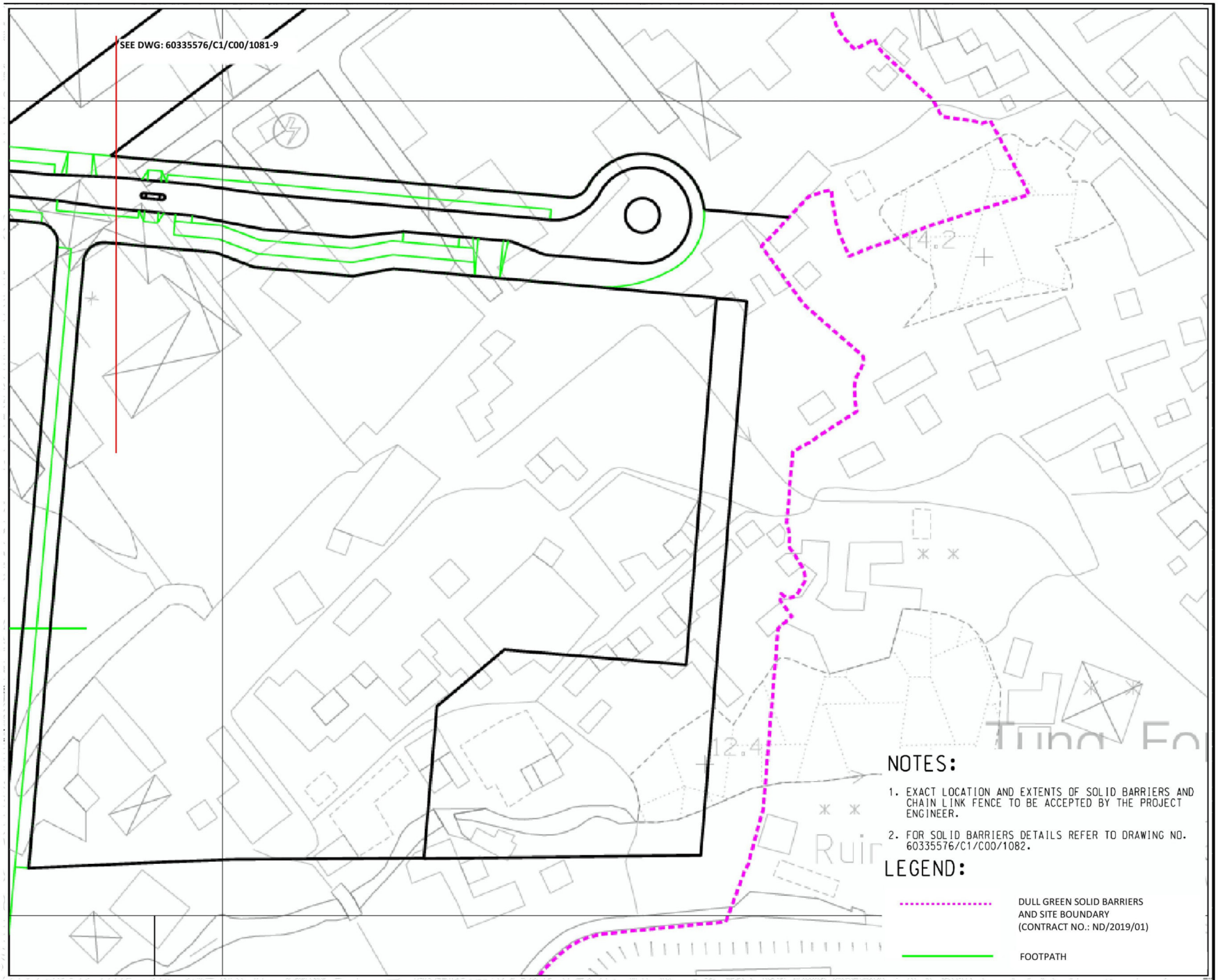
PROJECT NO. 項目編號	**CONTRACT NO.** 合約編號
60335576	ND/2019/01

SHEET TITLE
圖紙名稱

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
圖紙編號

60335576/C1/C00/1081-11



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

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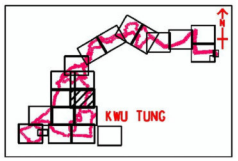
STATUS

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

60335576/C1/C00/1081-10

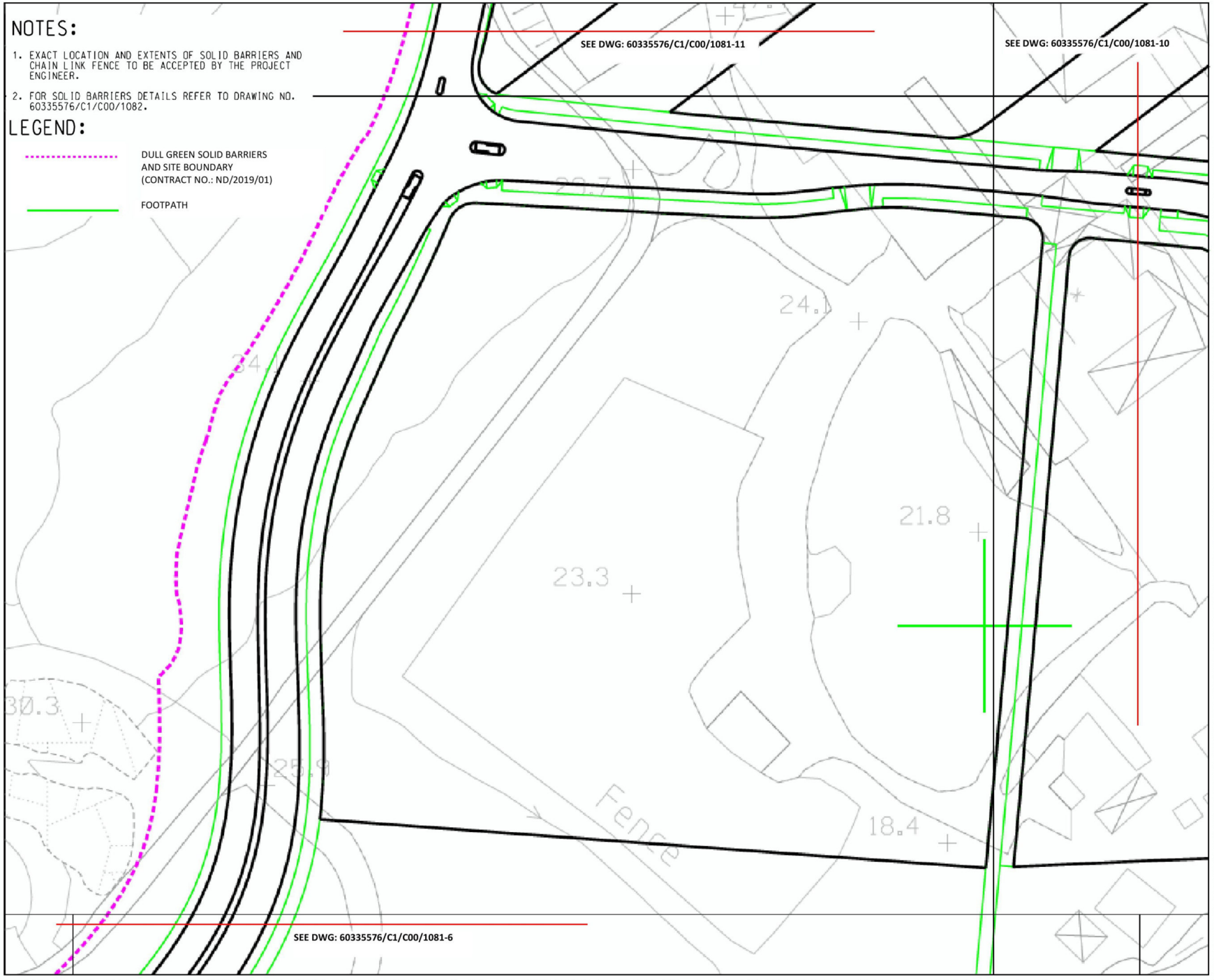
NOTES:

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

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CONSULTANT
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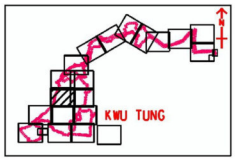
STATUS

SCALE A3 1:1000
DIMENSION UNIT METRES

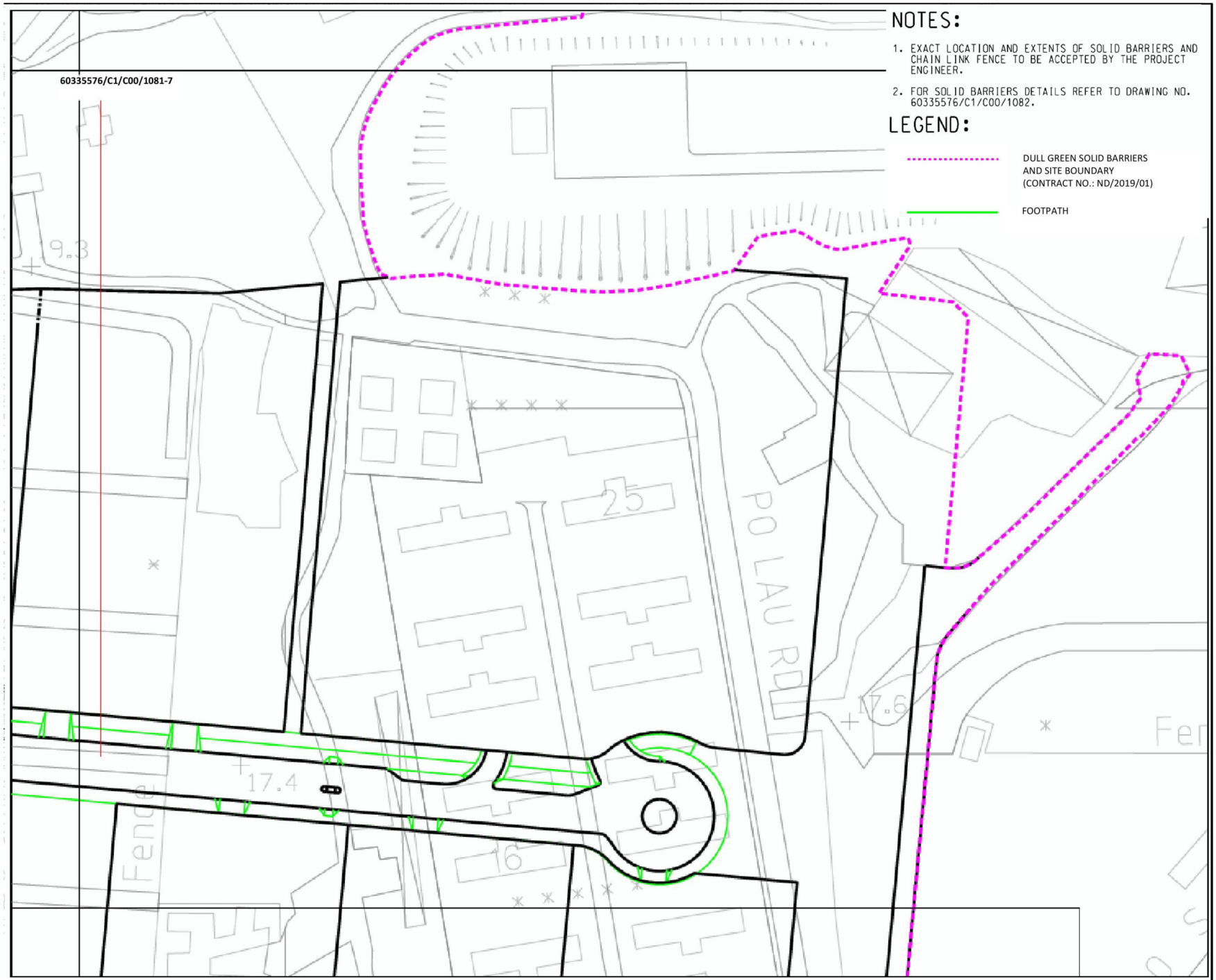
KEY PLAN



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

SHEET TITLE
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
60335576/C1/C00/1081-9



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

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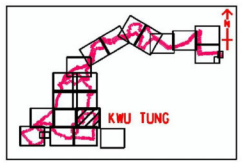
SUB-CONSULTANTS

STATUS

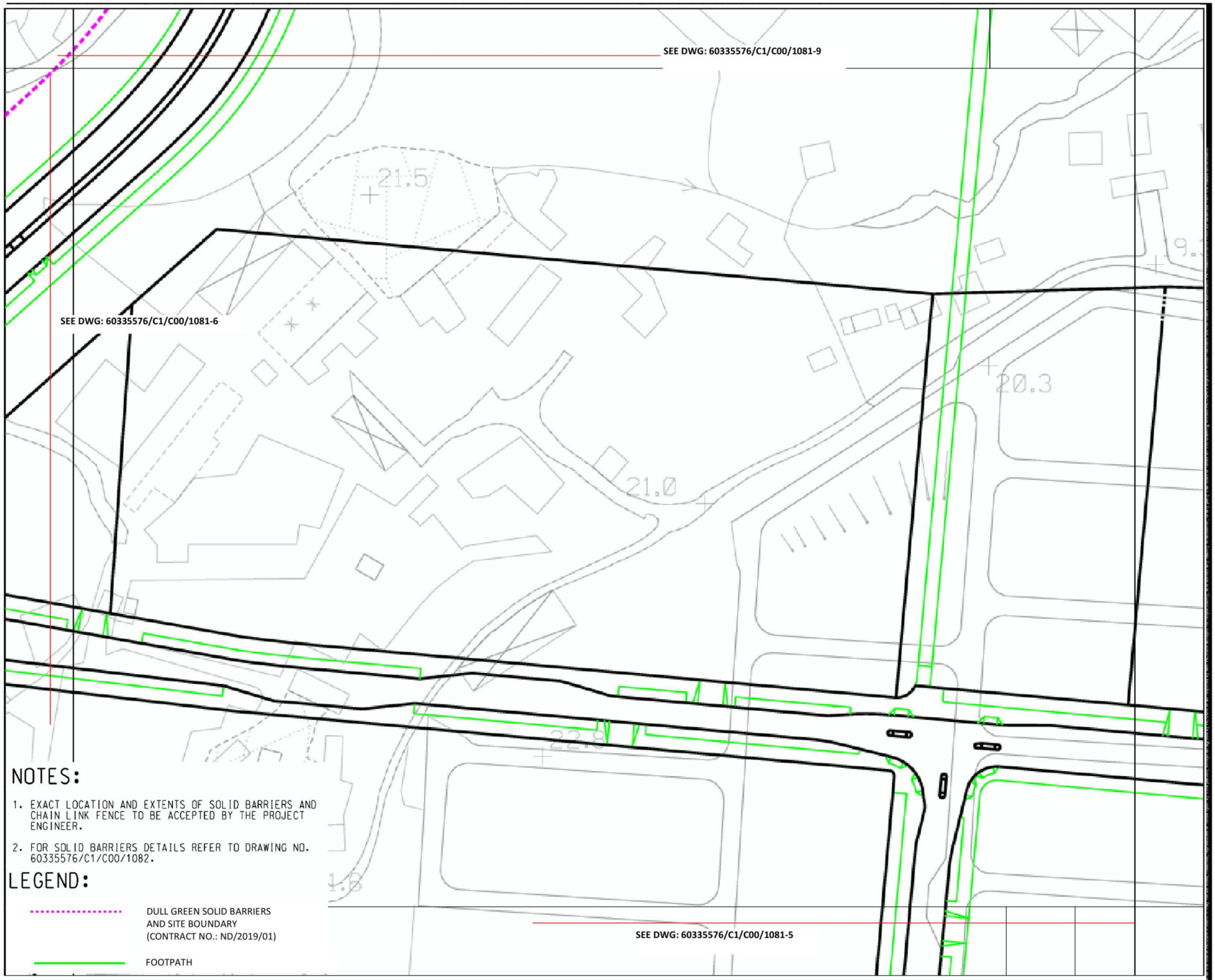
SCALE A3 1:1000
DIMENSION UNIT METRES

KEY PLAN


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

SHEET TITLE
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
60335576/C1/C00/1081-8



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
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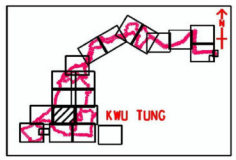
STATUS

SCALE A3 1:1000
DIMENSION UNIT 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

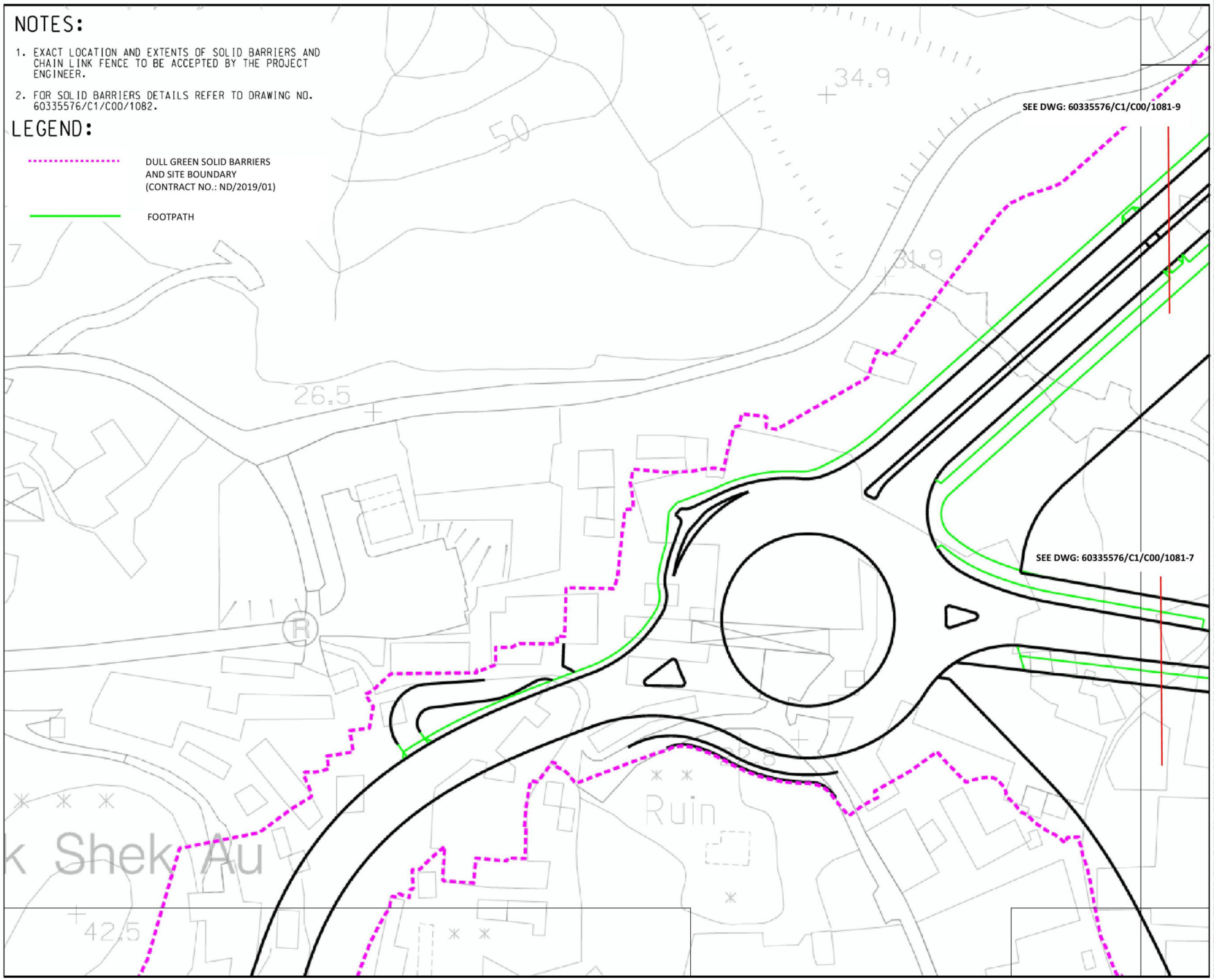
NOTES:

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.

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

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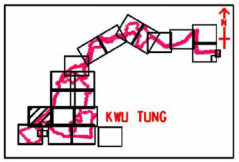
STATUS

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

KEY PLAN



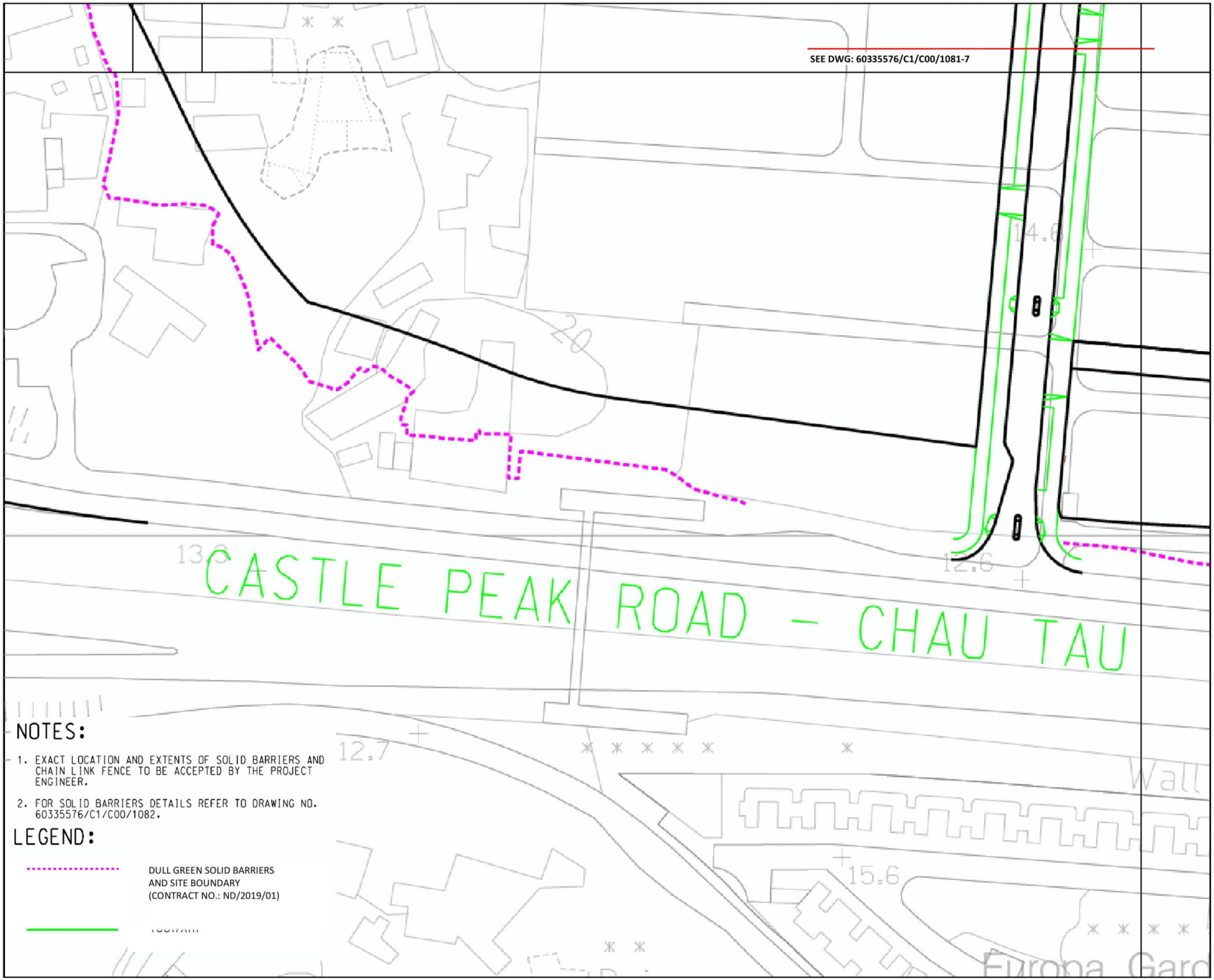
PROJECT NO.	**CONTRACT NO.**
60335576	ND/2019/01

SHEET TITLE

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER

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

CONSULTANT
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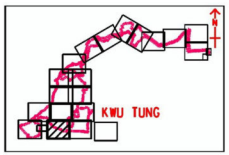
STATUS

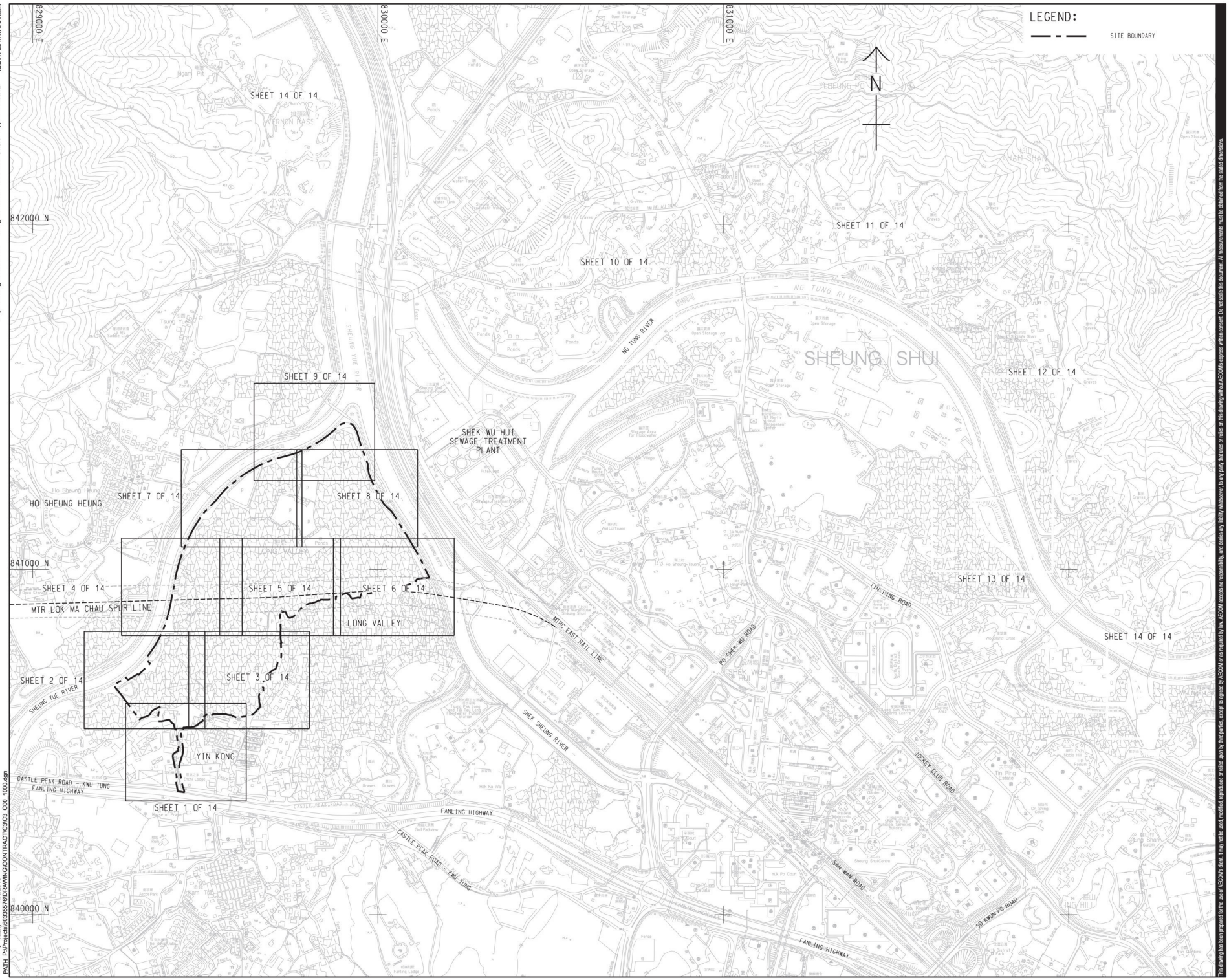
SCALE A3 1:1000
DIMENSION UNIT METRES

KEY PLAN


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

SHEET TITLE
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
60335576/C1/C00/1081-5



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

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

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
CEDD Civil Engineering and Development Department

CONSULTANT
工程顧問公司

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ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	JUN-19	TENDER DRAWING	CYCH

STATUS
階段

SCALE 比例
A1 1 : 5000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/03

SHEET TITLE
圖紙名稱
KEY PLAN OF
GENERAL LAYOUT

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

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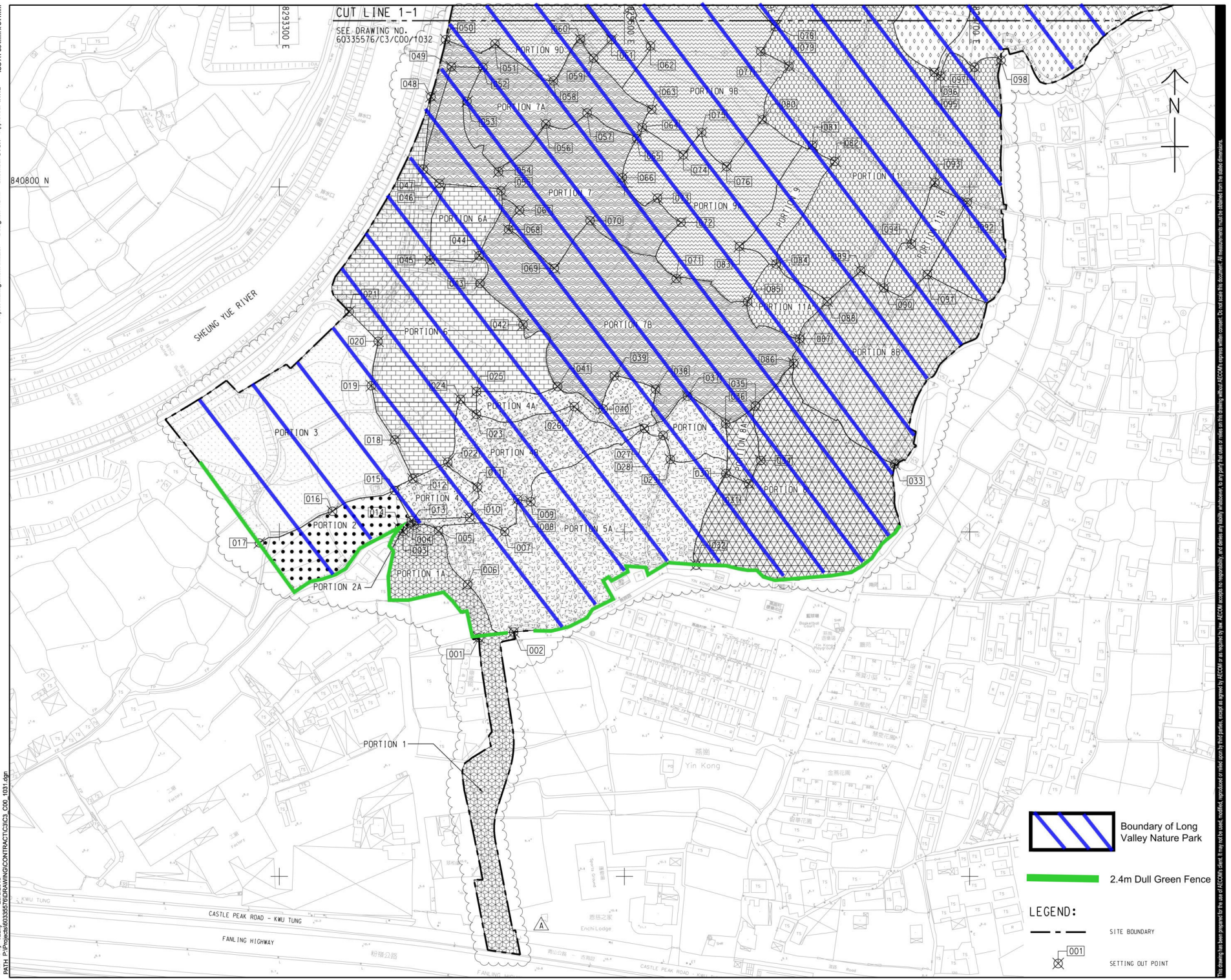

Sang Hing - Kuly Joint Venture

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

CLIENT
業主

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

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ISSUE/REVISION
修訂

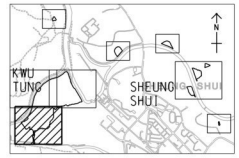
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	AUG-19	TENDER ADDENDUM NO. 3	CYCH
-	JUN-19	TENDER DRAWING	CYCH

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
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 1 OF 5

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

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

Plot File by: Yauky
29/8/2019
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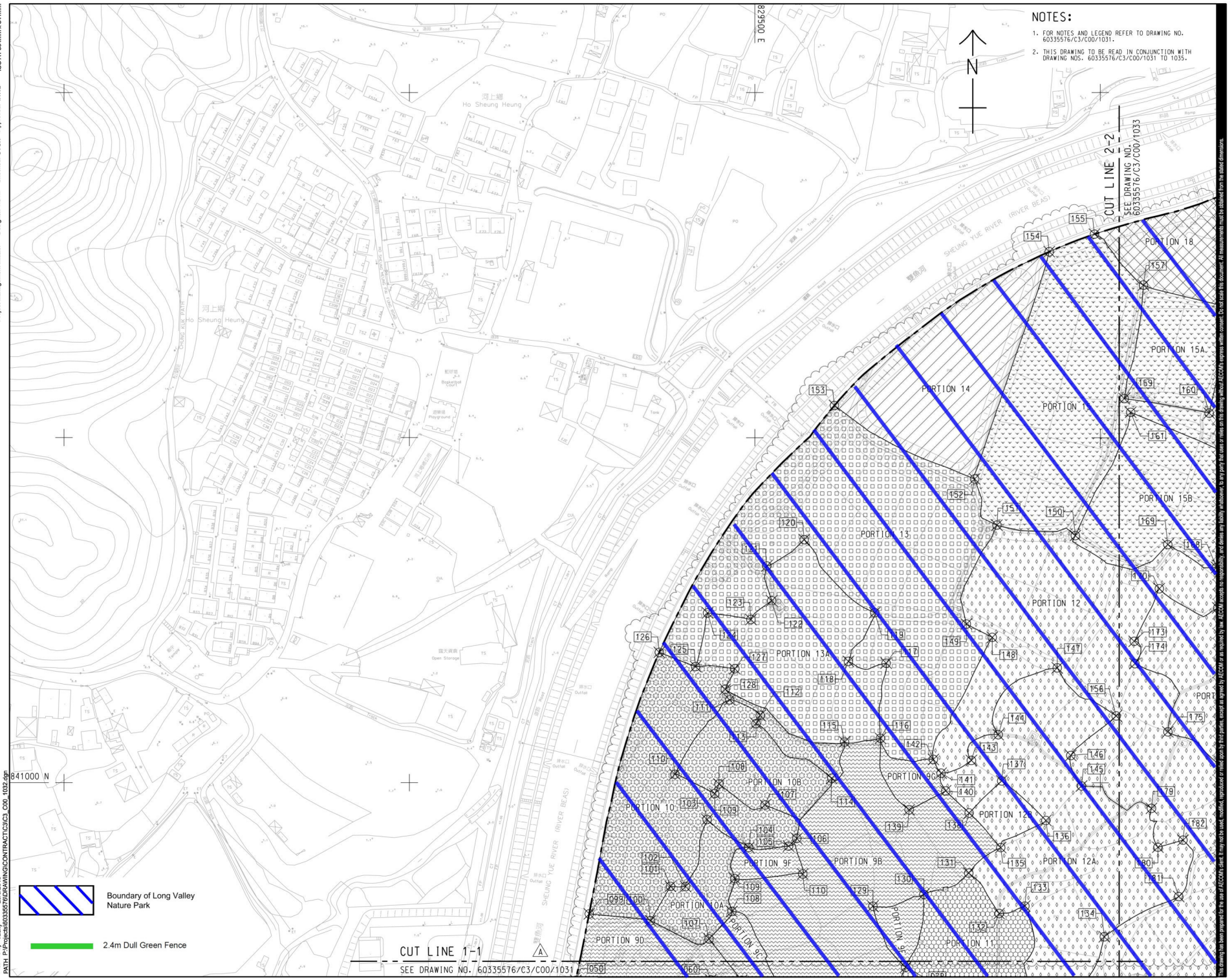

Sang Hing - Kuly Joint Venture

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

CLIENT
業主

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

CONSULTANT
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ISSUE/REVISION
修訂

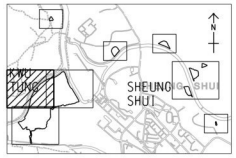
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	AUG-19	TENDER ADDENDUM NO. 3	CYCH
-	JUN-19	TENDER DRAWING	CYCH

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
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 2 OF 5

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

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

Plot File by: Yauky 29/8/2019
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C3\C3_C00_1032.dgn

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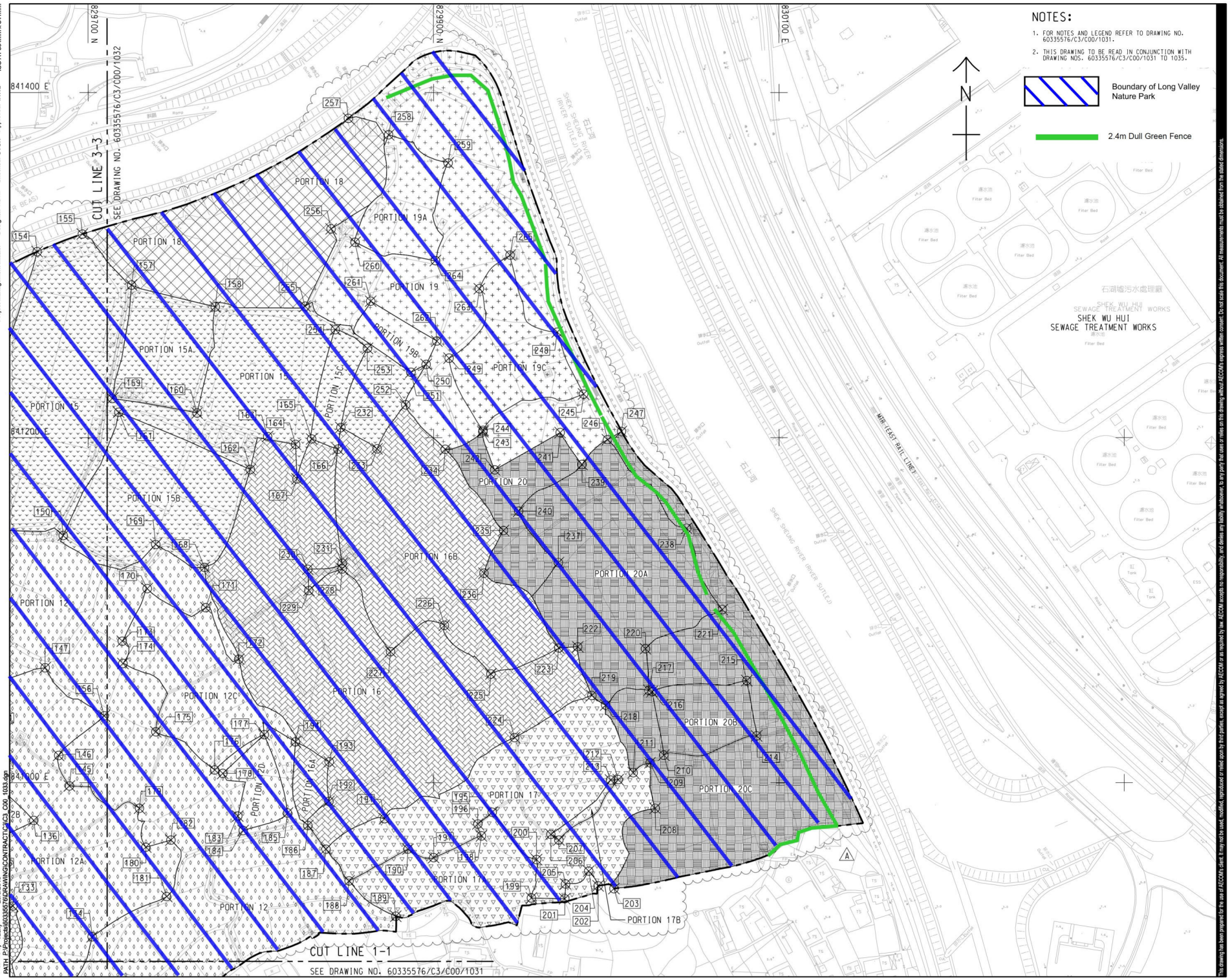

Project Management Initials: Designer: KCTL Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm

Plot File by: Yauky
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29/8/2019

Sang Hing - Kuly Joint Venture

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

CLIENT
業主

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

CONSULTANT
工程顧問公司

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ISSUE/REVISION
修訂

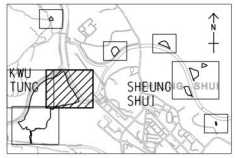
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	AUG-19	TENDER ADDENDUM NO. 3	CYCH
-	JUN-19	TENDER DRAWING	CYCH

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
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 3 OF 5

SHEET NUMBER 圖紙編號
60335576/C3/C00/1033A

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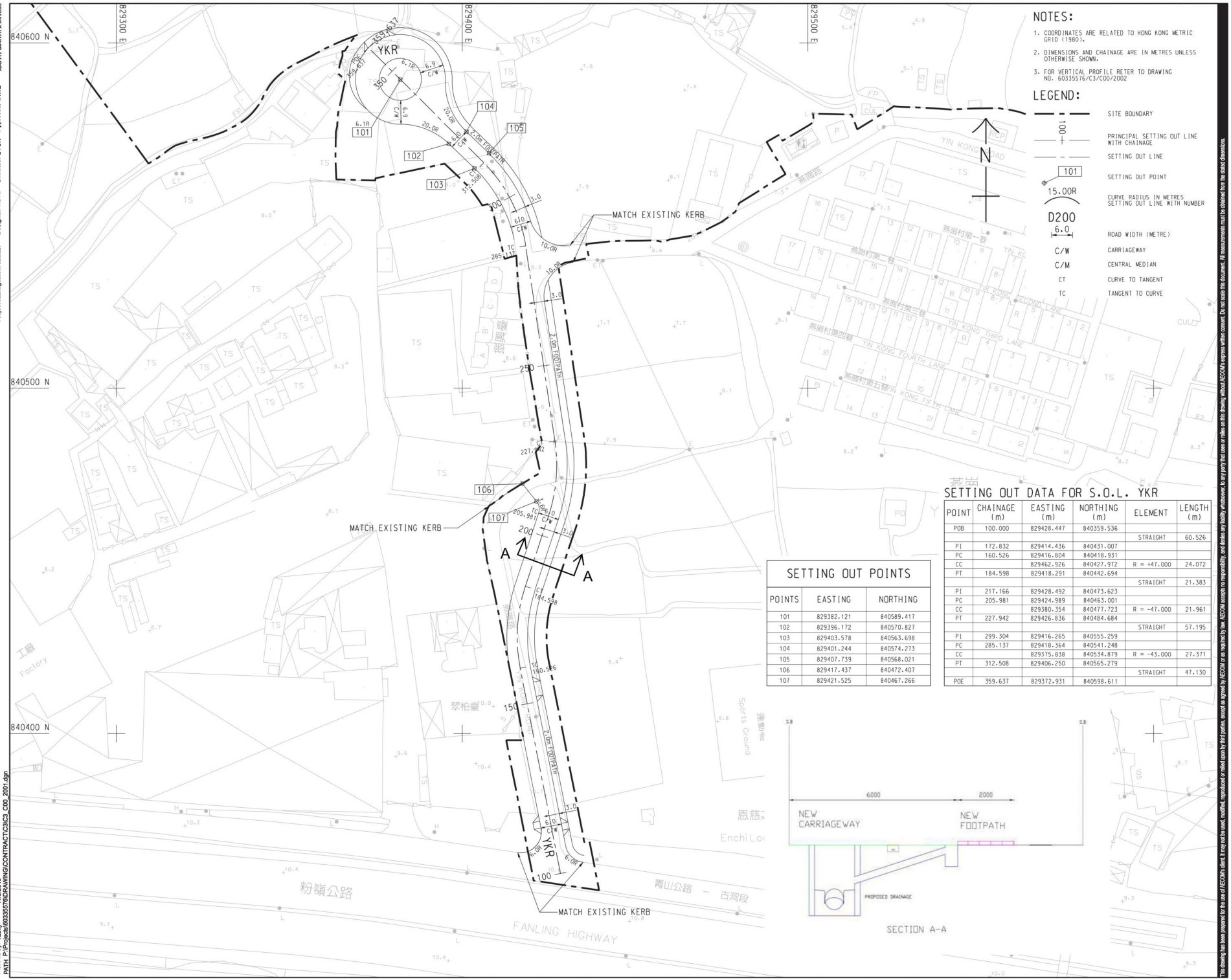

NOTES:

1. COORDINATES ARE RELATED TO HONG KONG METRIC GRID (1980).
2. DIMENSIONS AND CHAINAGE ARE IN METRES UNLESS OTHERWISE SHOWN.
3. FOR VERTICAL PROFILE RETER TO DRAWING NO. 60335576/C3/C00/2002

LEGEND:

	SITE BOUNDARY
100	PRINCIPAL SETTING OUT LINE WITH CHAINAGE
	SETTING OUT LINE
101	SETTING OUT POINT
15.00R	CURVE RADIUS IN METRES SETTING OUT LINE WITH NUMBER
D200	
6.0	ROAD WIDTH (METRE)
C/W	CARRIAGEWAY
C/M	CENTRAL MEDIAN
CT	CURVE TO TANGENT
TC	TANGENT TO CURVE

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

SETTING OUT DATA FOR S.O.L. YKR

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

SECTION A-A

Sang Hing - Kuly Venture

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

CLIENT 業主

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

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-	JUN-19	TENDER DRAWING	CYCH

STATUS 階段

SCALE 比例 A3 1:1000

DIMENSION UNIT 尺寸單位 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
YIN KONG ROAD -
ROAD SETTING OUT PLAN

SHEET NUMBER 圖紙編號
60335576/C3/C00/2001

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

Plot File by: Yauky 11/6/2019
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C3\C3_C00_2001.dgn

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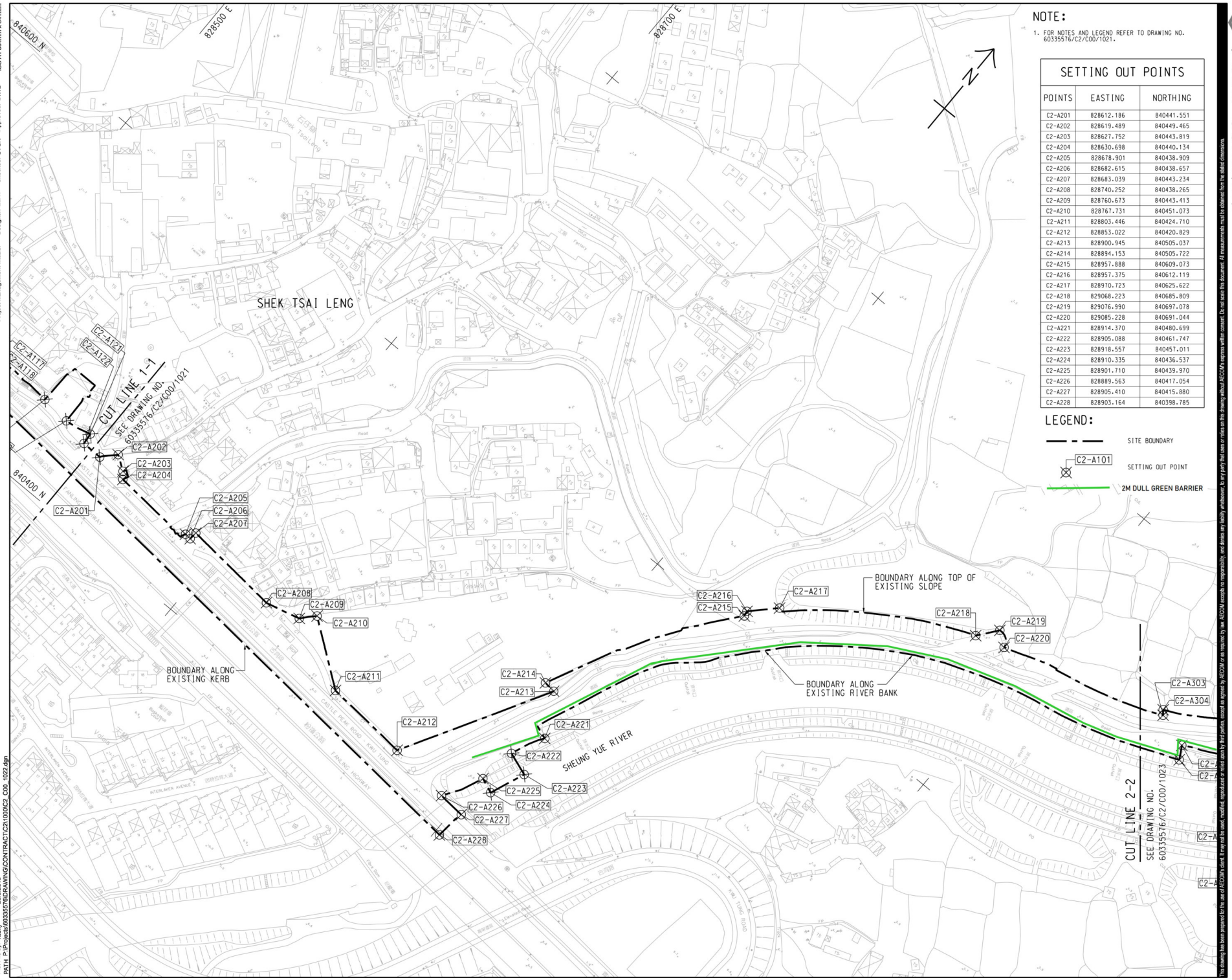
Figure 15

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	828894.153	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

俊和－群利聯營體
CW－KL IV

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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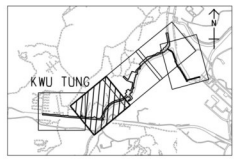
-	SEP-19	TENDER DRAWING	CYCH

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 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 2 OF 5

SHEET NUMBER 圖紙編號
60335576/C2/C00/1022

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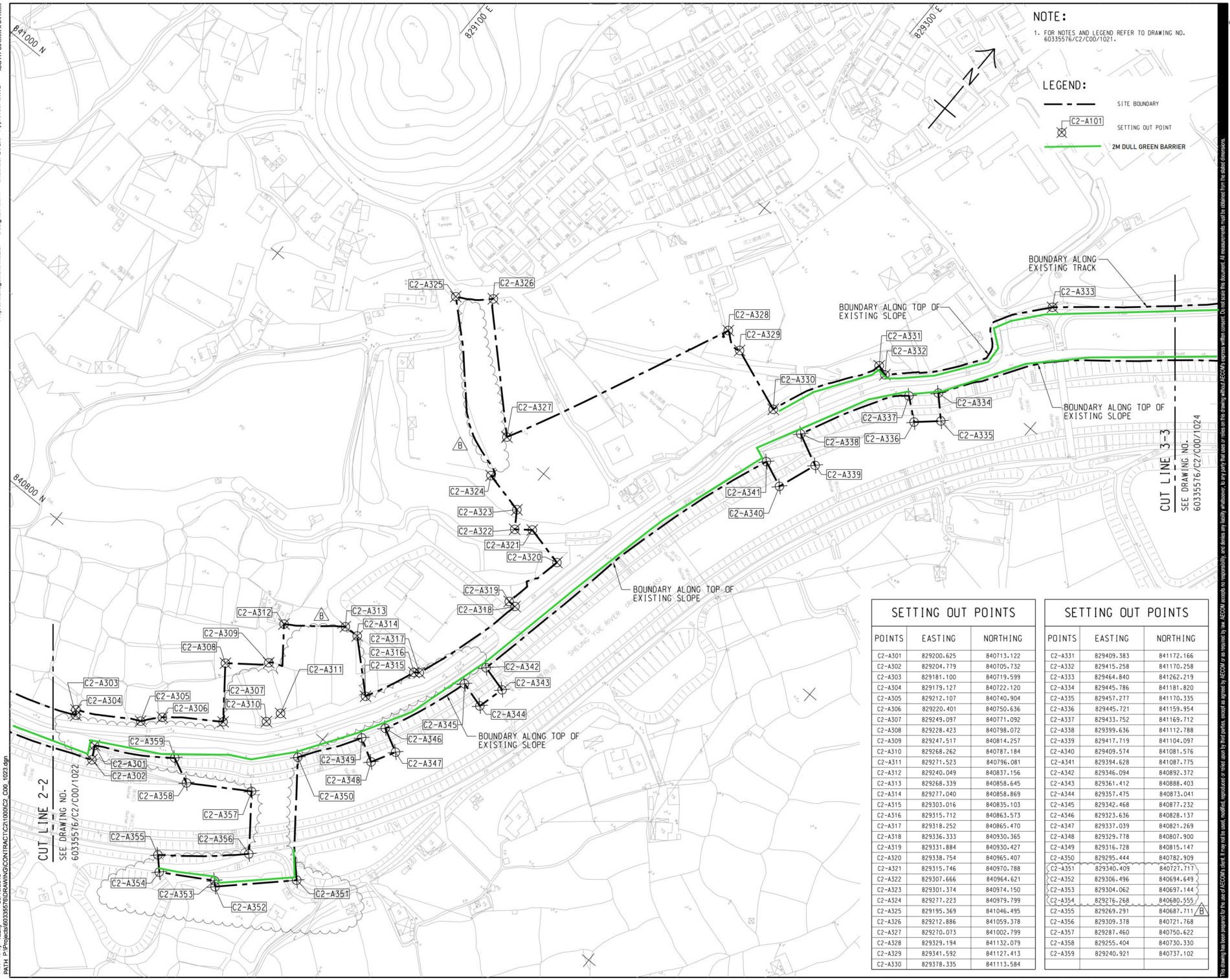
Project Management Initials: Designer: ECHY Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm

Plot File by: Yauky 20/9/2019
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C2\1000\C2_C00_1022.dgn



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	829179.127	840722.120
C2-A305	829212.107	840740.904
C2-A306	829220.401	840750.636
C2-A307	829249.097	840771.092
C2-A308	829228.423	840798.072
C2-A309	829247.517	840814.257
C2-A310	829268.262	840787.184
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	829276.268	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

俊和－群利聯營體
CW－KL IV

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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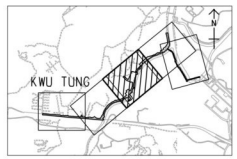
B	NOV-19	TENDER ADDENDUM NO. 3	CYCH
A	OCT-19	TENDER ADDENDUM NO. 2	CYCH
-	SEP-19	TENDER DRAWING	CYCH

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 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 3 OF 5

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

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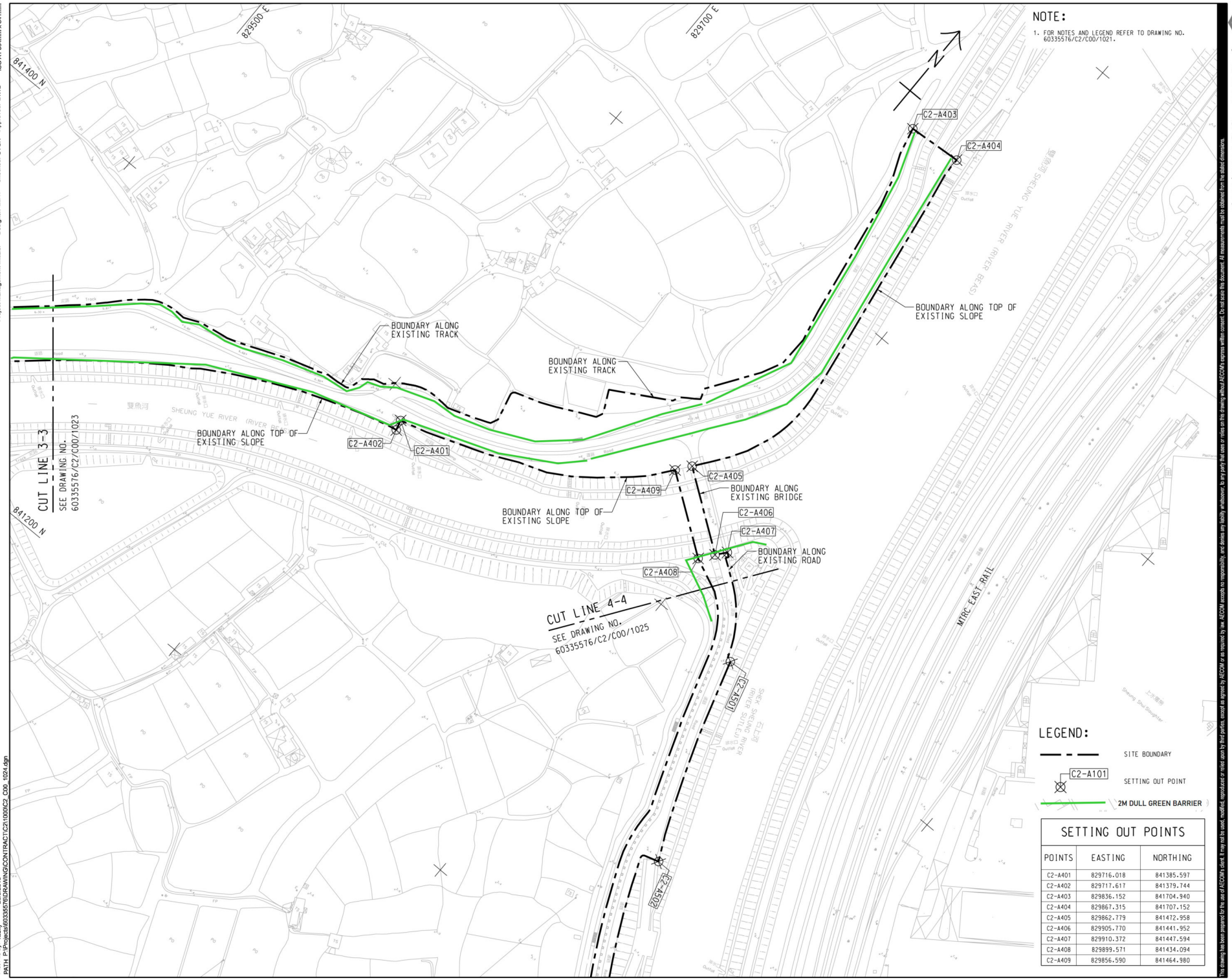
Project Management Initials: Designer: ELHY Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm
Plot File by: Yauky 30/10/2019
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C2\1000\C2_C00_1023.dgn



SETTING OUT POINTS

POINTS	EASTING	NORTHING
C2-A401	829716.018	841385.597
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

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

Plot File by: Yauky 20/9/2019
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C2\1000\C2_C00_1024.dgn

俊和－群利聯營體
CW－KL IV

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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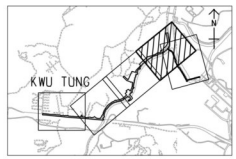
STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 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 4 OF 5

SHEET NUMBER 圖紙編號
60335576/C2/C00/1024

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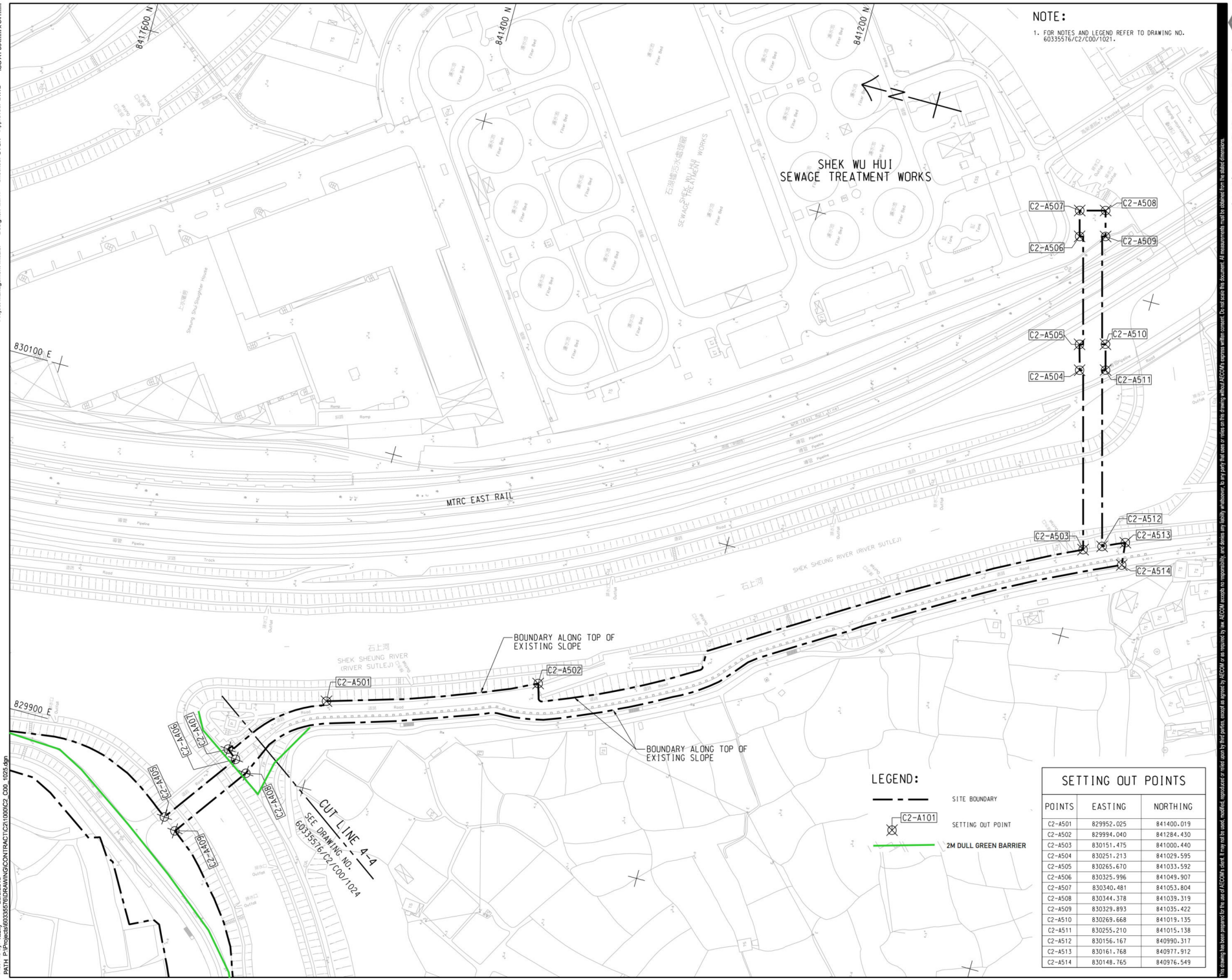

SETTING OUT POINTS

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

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

Plot File by: Yauky 20/9/2019
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C2\1000\C2_C00_1025.dgn

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俊和－群利聯營體
CW－KL IV

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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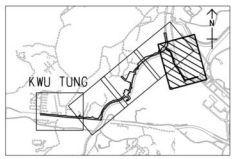
STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 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 5 OF 5

SHEET NUMBER 圖紙編號
60335576/C2/C00/1025

Figure 16

Hoarding Plan

EP-473/2013/A

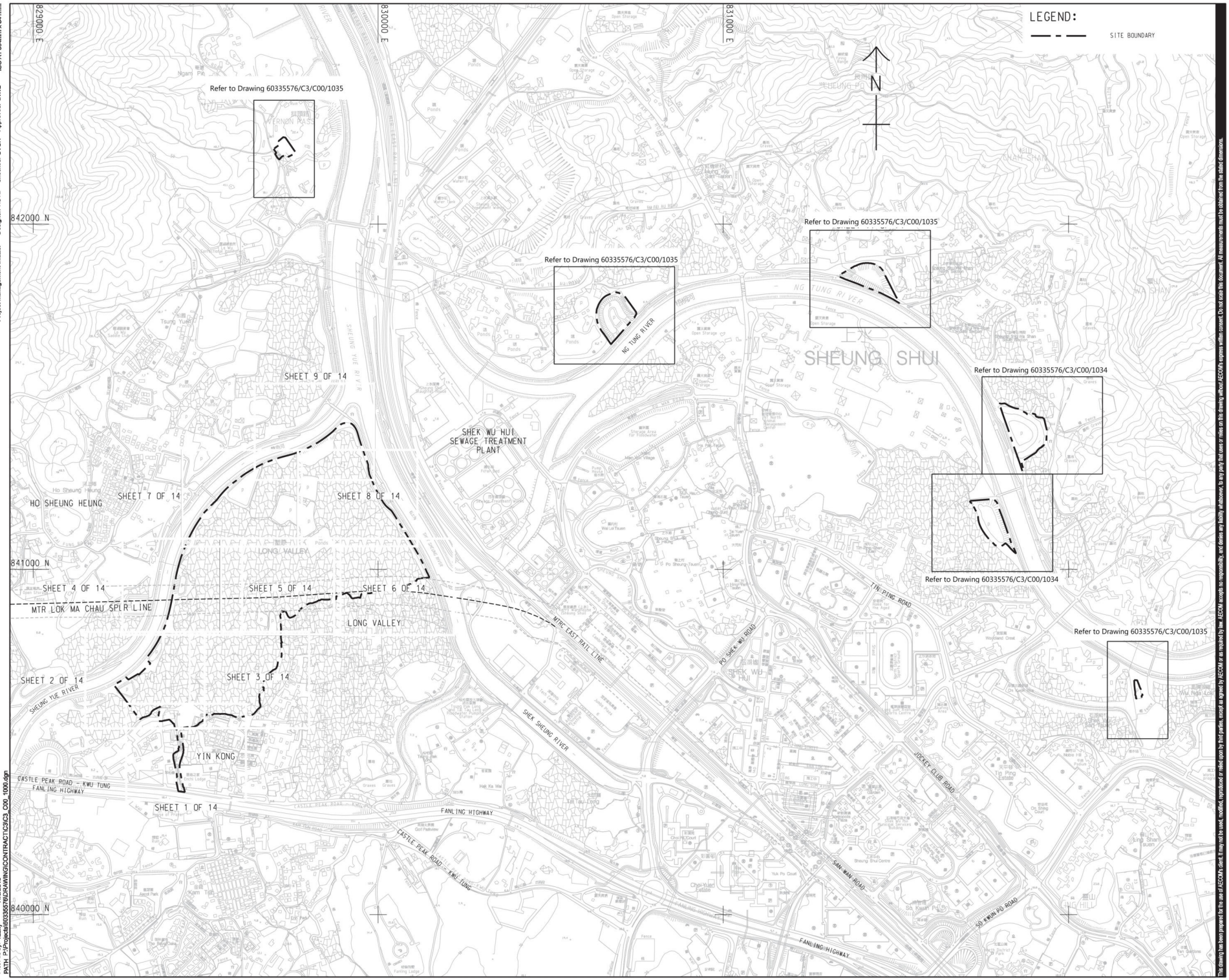
Summary of submission (EP-473/2013/A)

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 Egretry 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



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

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

Sang Hing - Kuly Venture

Title of Designated Project
Fanling Bypass Eastern Section

CLIENT
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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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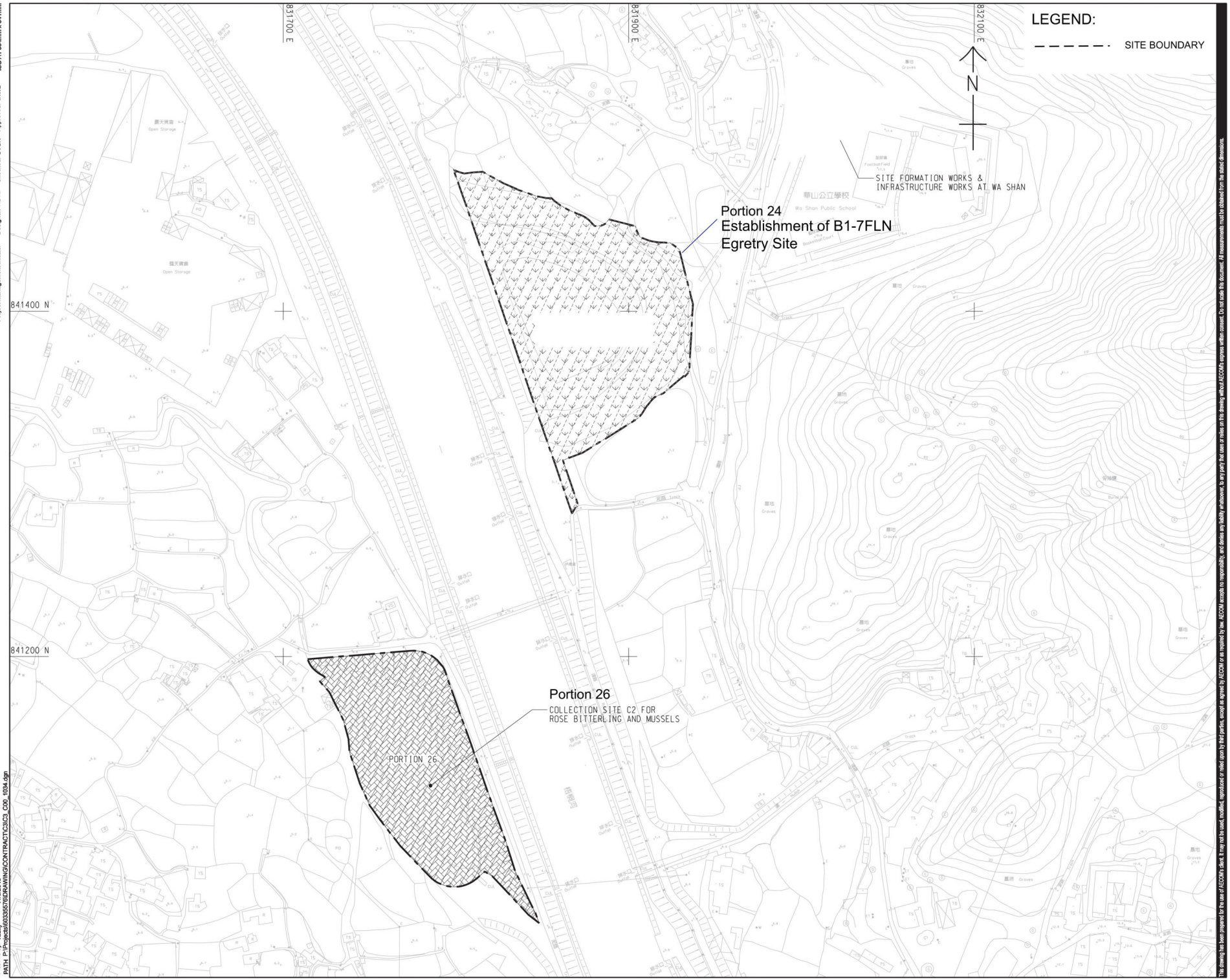

Sang Hing - Kuly Venture

Title of Designated Project
Fanling Bypass Eastern Section

CLIENT
業主

土木工程拓展署
Civil Engineering and Development Department

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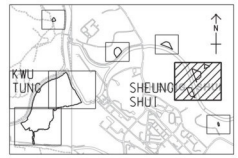
I/R 修訂	DATE 日期	DESCRIPTION 內容簡要	CHK. 複核
-	JUN-19	TENDER DRAWING	CYCH

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
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 4 OF 5

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

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

Plot File by: Yauky 11/6/2019
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C3\C3_C00_1034.dgn

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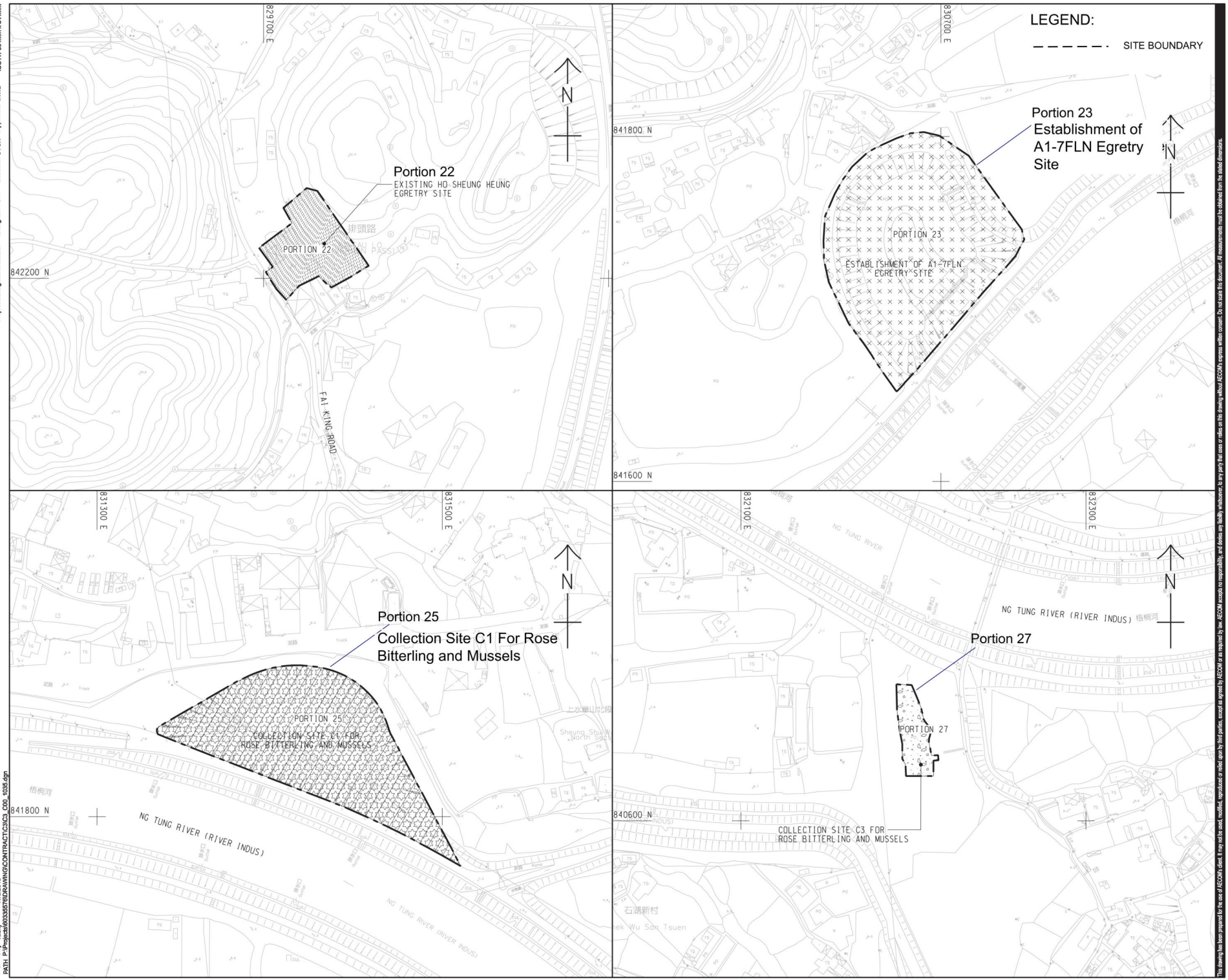

Sang Hing - Kuly Venture

Title of Designated Project
Fanling Bypass Eastern Section

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業主

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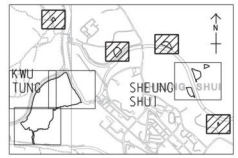
STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
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 5 OF 5

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

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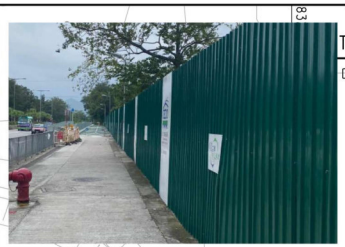
Project Management Initials: Designer: KCTL Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm

Plot File by: Yauky 11/6/2019
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C3\C3_C00_1035.dgn



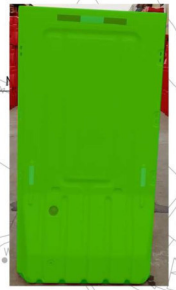


CEDD HOARDING TYPE III IN SOLID DULL GREEN COLOUR





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





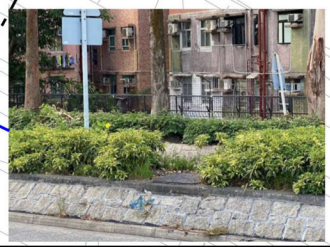
2 METRE HIGH GREEN WATER FILLED BARRIER











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

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

T LINE 1-1

DRAWING NO. 60335576/C5A/C00/1052

N

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 REVAIL.
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 LOT.
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 SANTSUEN 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 TSUEN WATERCOURSE

Ma Sik Road Sewage Pumping Station

馬適路污水泵房

Cycling Track

Good View

美景路

Road

ROAD

AECOM

PROJECT
項目

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

CONTRACT TITLE:

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

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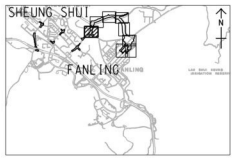
A	DEC-19	TENDER ADDENDUM NO. 1	RPCM
-	NOV-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 70000



PROJECT NO. 項目編號: 60335576

CONTRACT NO. 合約編號: ND/2019/04

SHEET TITLE 圖紙名稱: HOARDING PLAN

SHEET 1 OF 8

SHEET NUMBER 圖紙編號: 60335576/C5A/C00/1051B

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Plot File by: ZENGLY2 2020/1/11
PATH: P:\projects\60335576\Drawing\CONTRACT\C5A\1000\C5A_C00_1051.dgn

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C5A/C00/1051.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C5A/C00/1051 TO 1058.

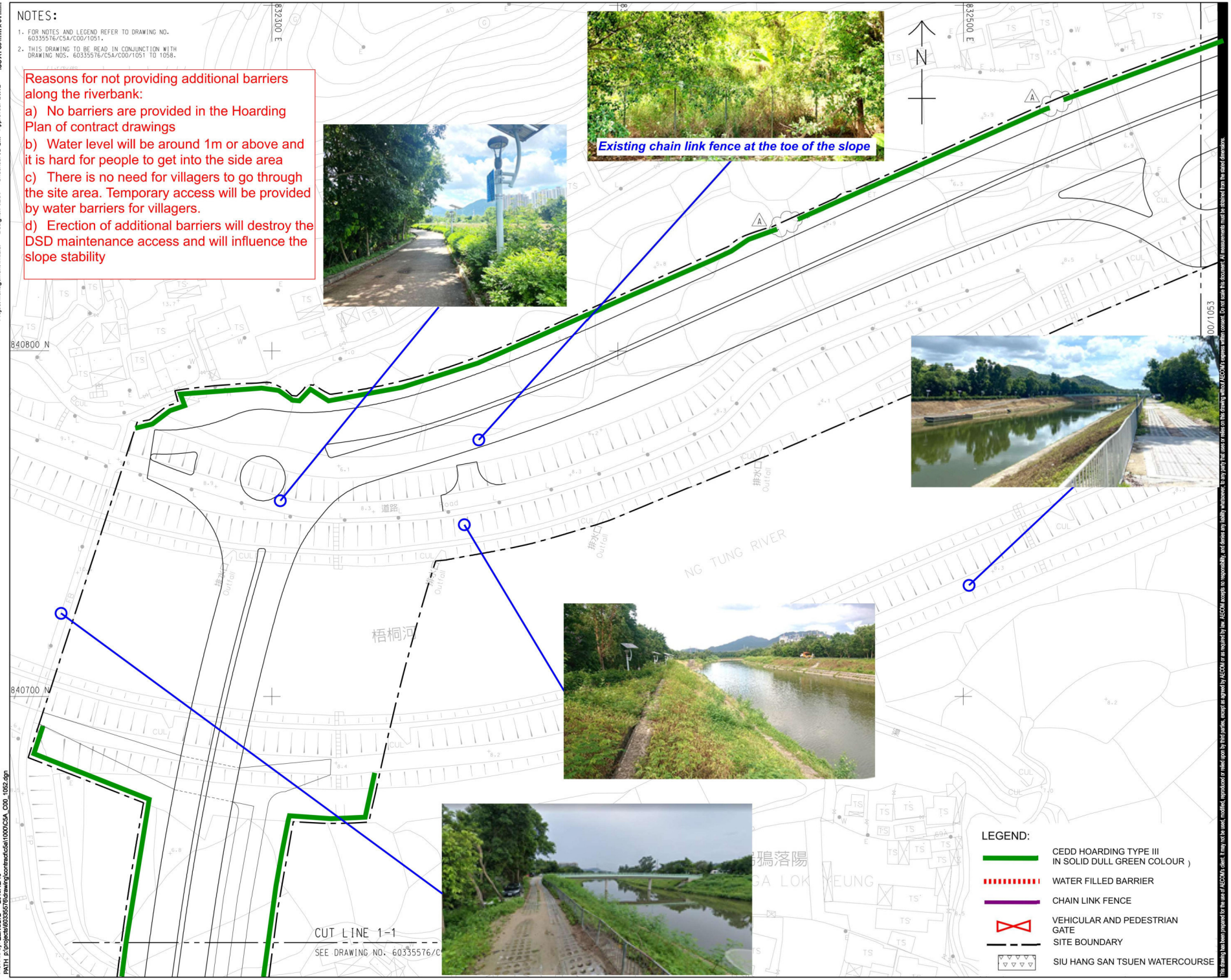
Reasons for not providing additional barriers along the riverbank:

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



Existing chain link fence at the toe of the slope

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 項目

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

CONTRACT TITLE:

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

CLIENT 業主

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

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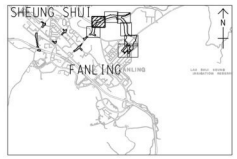
-	NOV-19	TENDER DRAWING	RPCM

STATUS 階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 70000



PROJECT NO. 項目編號: 60335576

CONTRACT NO. 合約編號: ND/2019/04

SHEET TITLE 圖紙名稱: HOARDING PLAN

SHEET 2 OF 8

SHEET NUMBER 圖紙編號: 60335576/C5A/C00/1052A

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ISO A1 594mm x 841mm

Project Management Initials: Designer: JLCT Checked: RPCM Approved: IHWL

Plot File by: ZENGLY2 2019/12/13
PATH p:\projects\60335576\drawing\contract\c5a\1000\C5A_C00_1052.dgn



Siu Hang San Tsuen Watercourse

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.



NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C5A/C00/1051.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C5A/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

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

CUT LINE 3-3

SEE DRAWING NO. 60335576/C5A/C00/1054

832600 E

832700 E

832800 E

840900 N

840800 N

5576/C5A/C00/1052

AECOM

PROJECT
項目

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

CONTRACT TITLE:

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

CLIENT
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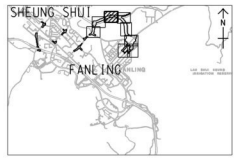
-	NOV-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE
比例
A1 1 : 500

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖
A1 1 : 70000



PROJECT NO.
項目編號
60335576

CONTRACT NO.
合約編號
ND/2019/04

SHEET TITLE
圖紙名稱
HOARDING PLAN

SHEET 3 OF 8

SHEET NUMBER
圖紙編號
60335576/C5A/C00/1053A

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

NOTE:

1. FOR GENERAL NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C5A/C00/1051.

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

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



Existing Steel Railing around the Park



Entrance to Residence





Existing Steel Railing Provided



Existing Steel Railing Provided

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





CUT LINE 3-3
SEE DRAWING NO. 60335576/C5A/C00/1053

CUT LINE 4-4
SEE DRAWING NO. 60335576/C5A/C00

NG TUNG RIVER (RIVER INDUS)

MA WAT RIVER

840900 N

840800 N

833000 E

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
項目

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

CONTRACT TITLE:

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

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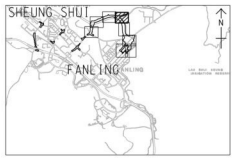
-	NOV-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 70000



PROJECT NO. 項目編號: 60335576

CONTRACT NO. 合約編號: ND/2019/04

SHEET TITLE 圖紙名稱: HOARDING PLAN

SHEET 4 OF 8

SHEET NUMBER 圖紙編號: 60335576/C5A/C00/1054B

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Plot File by: ZENGLY2 2020/1/8
PATH: p:\projects\60335576\drawing\contract\c5a\a1\000\C5A_C00_1054.dgn

Reasons for not providing additional barriers along the riverbank:

a) No barriers are provided in the Hoarding Plan of contract drawings

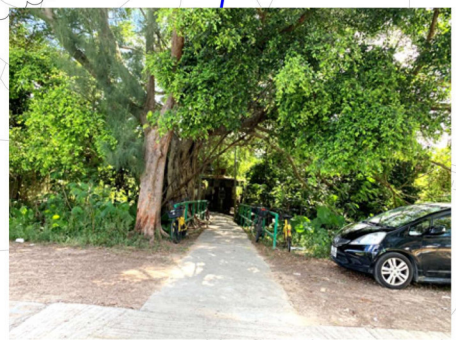
b) Water level will be around 1m or above and it is hard for people to get into the side area

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







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



NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C5A/C00/1051.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C5A/C00/1051 TO 1058.

CUT LINE 4-4 SEE DRAWING NO. 60335576/C5A/C00/1054

CUT LINE 5-5 SEE DRAWING NO. 60335576/C5A/C00/1056

麻笏河 MA WAT RIVER

840600 N

840500 N

833100 E

833000 E

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

ISO A1 594mm x 841mm

Approved: IHWL

Checked: RPCM

Designer: JLCT

Project Management Initials:

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

CONTRACT TITLE:

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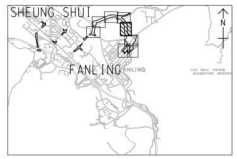
階段

SCALE
比例
A1 1 : 500

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖
A1 1 : 70000



PROJECT NO.
項目編號
60335576

CONTRACT NO.
合約編號
ND/2019/04

SHEET TITLE
圖紙名稱
HOARDING PLAN

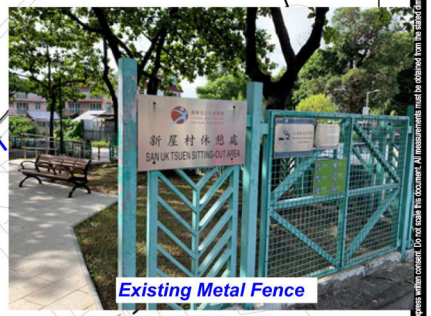
SHEET 5 OF 8

SHEET NUMBER
圖紙編號
60335576/C5A/C00/1055A

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 reprovision 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

NORTH DISTRICT TEMP. WHOLESALE MARKET FOR AGRICULTURAL PRODUCTS TO BE REPROVISIONED

CUT LINE 5-5
SEE DRAWING NO. 60335576/C5A/C00/1055

CUT LINE 6-6
SEE DRAWING NO. 60

ELECTRICITY SUB-STATION
FANLING NORTH TEMPORARY SEWAGE PUMPING STATION
STORMWATER PLANT ROOM
UNDERGROUND SUMP PIT PLANT ROOM
MA SIK ROAD
SHA TAU KOK ROAD - LUNG YEUK TAU
ISION ON LUK MUN ET PLAYGROUND

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.
www.aecom.com

SUB-CONSULTANTS

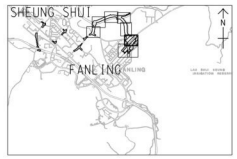
ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.
A	DEC-19	TENDER ADDENDUM NO. 1	RPCM
-	NOV-19	TENDER DRAWING	RPCM

STATUS

SCALE A1 1 : 500
DIMENSION UNIT

KEY PLAN A1 1 : 70000



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

SHEET TITLE
HOARDING PLAN

SHEET 6 OF 8

SHEET NUMBER
60335576/C5A/C00/1056A

ISO A1 594mm x 841mm
Approved: IHWL
Checked: RPCM
Designer: JLCT
Project Management Initials:
Plot File by: ZENGLY2 2019/12/16
PATH: P:\projects\60335576\drawing\contract\c5a\c1000\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/C5A/C00/1051.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C5A/C00/1051 TO 1058.

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
項目

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

CONTRACT TITLE:

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

CLIENT
業主

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

CONSULTANT
工程顧問公司

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SUB-CONSULTANTS
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ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對
-	NOV-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 70000



PROJECT NO. 項目編號: 60335576

CONTRACT NO. 合約編號: ND/2019/04

SHEET TITLE 圖紙名稱: HOARDING PLAN

SHEET 7 OF 8

SHEET NUMBER 圖紙編號: 60335576/C5A/C00/1057

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

Plot File by: ZENGLY2 2019/11/23
PATH: p:\projects\60335576\drawing\contract\c5a\1000\C5A_C00_1057.dgn

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C5A/C00/1051.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C5A/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

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.

NORTH DISTRICT TEMP. WHOLESALE MAKET FOR AGRICULTURAL PRODUCTS TO BE REPROVISIONED

WORKS BY OTHERS

REPROVISIONED REFUSE COLLECTION POINT

REPROVISIONED ON LOK TSUEN TIN KWONG HUI TEMPORARY WHOLESALE MARKET PUBLIC TOILET



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
項目

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

CONTRACT TITLE:

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

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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ISSUE/REVISION
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I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對
-	NOV-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE
比例
A1 1 : 500

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 70000



PROJECT NO.
項目編號
60335576

CONTRACT NO.
合約編號
ND/2019/04

SHEET TITLE
圖紙名稱
HOARDING PLAN

SHEET 8 OF 8

SHEET NUMBER
圖紙編號
60335576/C5A/C00/1058

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

Plot File by: ZENGLY2 2019/11/23
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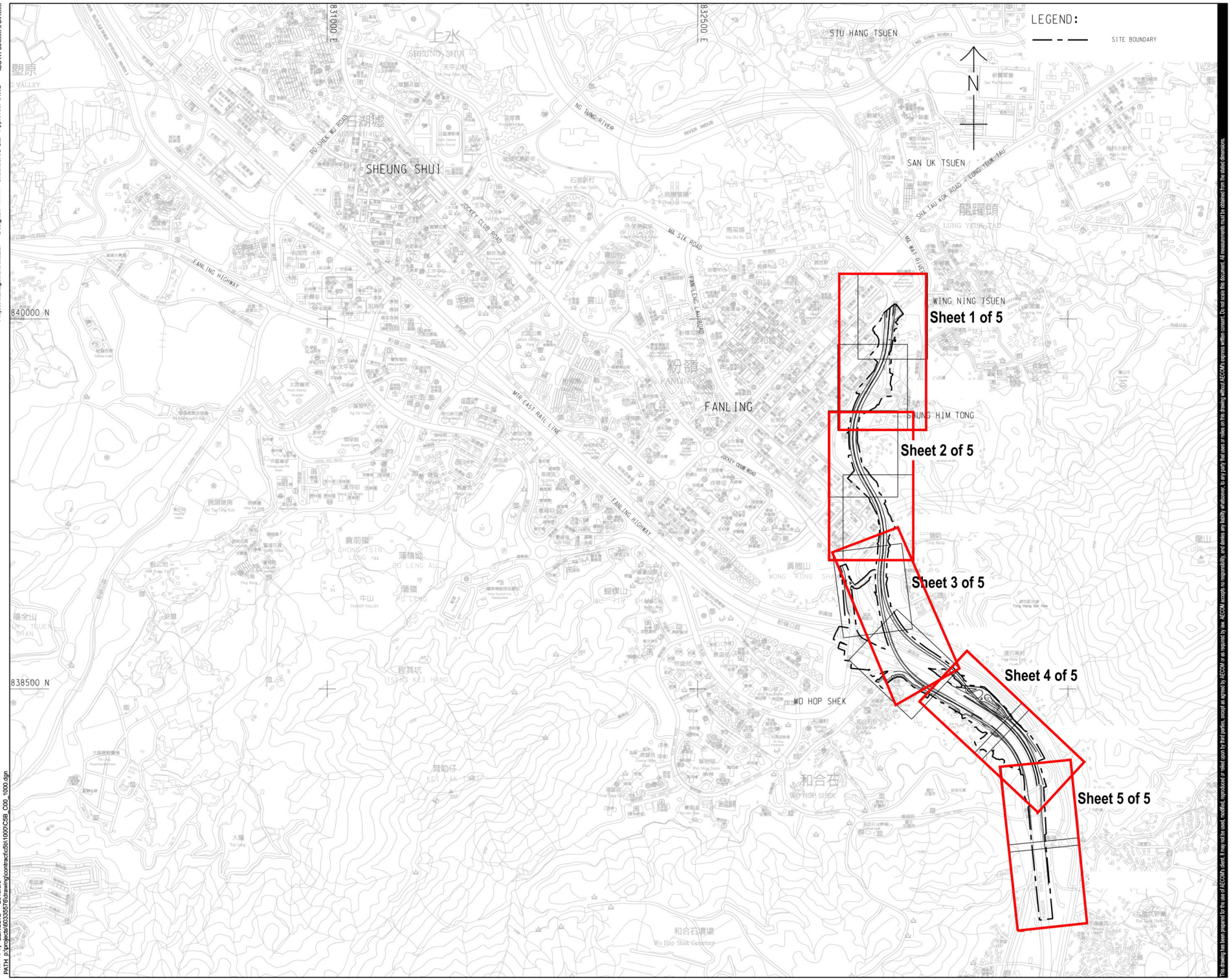

CRCC - Paul Y Joint Venture

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

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I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	JUN-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例
A1 1 : 7000

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/2019/05

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

Plot File by: ZENGLY2 2019/6/9
PATH: p:\projects\60335576\drawing\contract\c5b\1000\C5B_C00_1000.dgn

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

Plot File by: ZENGLY2 2019/8/19
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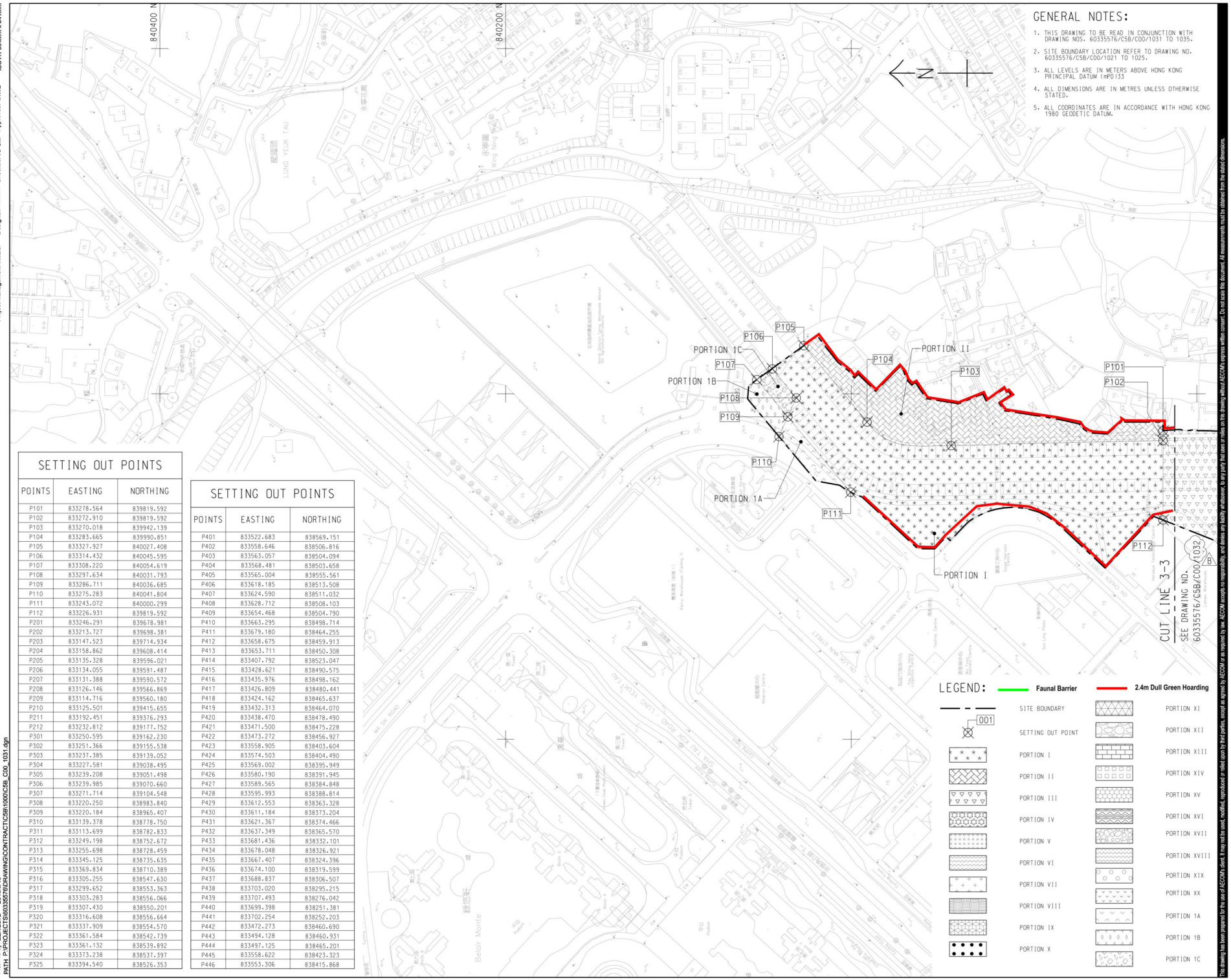

SETTING OUT POINTS

POINTS	EASTING	NORTHING
P101	833278.564	839819.592
P102	833272.910	839819.592
P103	833270.018	839942.139
P104	833283.665	839990.851
P105	833327.927	840027.408
P106	833314.432	840045.595
P107	833308.220	840054.619
P108	833297.634	840031.793
P109	833286.711	840036.685
P110	833275.283	840041.804
P111	833243.072	840000.299
P112	833226.931	839819.592
P201	833246.291	839678.981
P202	833213.727	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	833192.451	839376.293
P212	833232.812	839177.752
P301	833250.595	839162.230
P302	833251.366	839155.538
P303	833237.385	839139.052
P304	833227.581	839038.495
P305	833239.208	839051.498
P306	833239.985	839070.660
P307	833271.714	839104.548
P308	833220.250	838983.840
P309	833220.184	838965.407
P310	833139.378	838778.750
P311	833113.699	838782.833
P312	833249.198	838752.672
P313	833255.698	838728.459
P314	833345.125	838735.635
P315	833369.834	838710.389
P316	833305.255	838547.630
P317	833299.652	838553.363
P318	833303.283	838556.066
P319	833307.430	838550.201
P320	833316.608	838556.664
P321	833337.909	838554.570
P322	833361.584	838542.739
P323	833361.132	838539.892
P324	833373.238	838537.397
P325	833394.540	838526.353

SETTING OUT POINTS

POINTS	EASTING	NORTHING
P401	833522.683	838569.151
P402	833558.646	838506.816
P403	833563.057	838504.094
P404	833568.481	838503.658
P405	833565.004	838555.561
P406	833618.185	838513.508
P407	833624.590	838511.032
P408	833628.712	838508.103
P409	833654.468	838504.790
P410	833663.295	838498.714
P411	833679.180	838464.255
P412	833658.675	838459.913
P413	833653.711	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	833438.470	838478.490
P421	833471.500	838475.228
P422	833473.272	838456.927
P423	833558.905	838403.604
P424	833574.503	838404.490
P425	833569.002	838395.949
P426	833580.190	838391.945
P427	833589.565	838384.848
P428	833595.993	838388.814
P429	833612.553	838363.328
P430	833611.184	838373.204
P431	833621.367	838374.466
P432	833637.349	838365.570
P433	833681.436	838332.101
P434	833678.048	838326.921
P435	833667.407	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	833558.622	838423.323
P446	833553.306	838415.868

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

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT
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ISSUE/REVISION
修訂

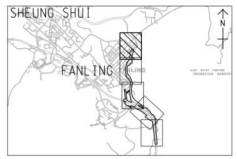
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
B	AUG-19	TENDER ADDENDUM NO.3	RPCM
A	JUL-19	TENDER ADDENDUM NO.2	RPCM
-	JUN-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例
A1 1 : 1000

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/2019/05

SHEET TITLE
圖紙名稱
PORTION OF SITE

SHEET 1 OF 5

SHEET NUMBER
圖紙編號
60335576/C5B/C00/1031B

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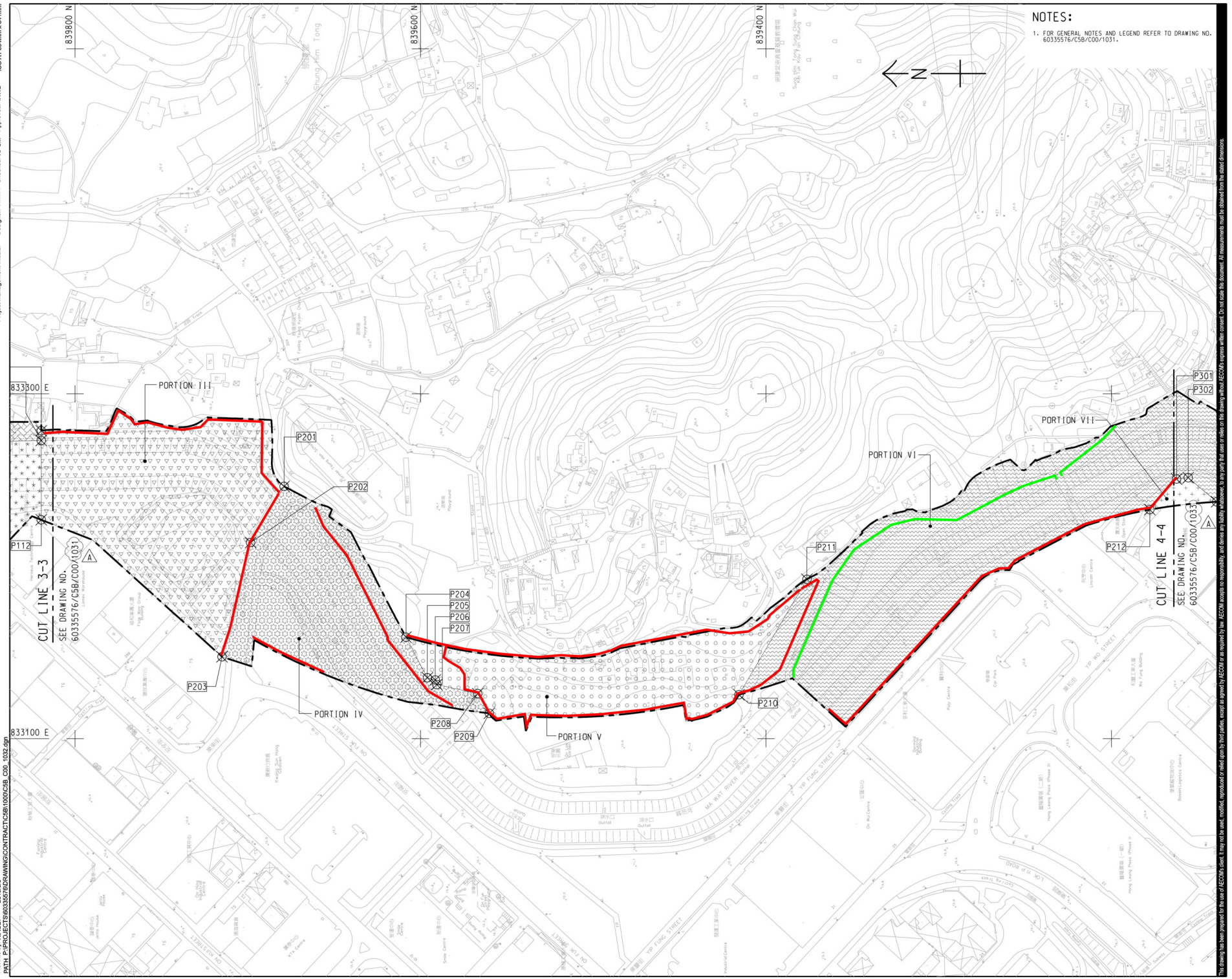
NOTES:
1. FOR GENERAL NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C5B/C00/1031.
839800 N
839600 N
839400 N
833300 E
833100 E
PORTION III
PORTION IV
PORTION V
PORTION VI
PORTION VII
P112
P201
P202
P203
P204
P205
P206
P207
P208
P209
P210
P211
P212
P301
P302
CUT LINE 3-3
SEE DRAWING NO. 60335576/C5B/C00/1031
CUT LINE 4-4
SEE DRAWING NO. 60335576/C5B/C00/1033
A
Shung Him Tong
Fanling Bypass
Ma Wat River
Yip Fung Street
Kau Lung Hang
Sheung Shui Wa Shan Cheung Wu
Fanling Town Hall Children's Playground
Fanling Town Hall Extension
Fanling Town Hall
Fanling Centre
Fanling Square
Fanling Garden
Fanling Plaza
Fanling Plaza (Phase II)
Hong Leong Plaza (Phase II)
Hong Leong Plaza
Kwong Sang Hong Centre
Kwong Sang Hong Garden
Kwong Sang Hong Industrial Centre
Kwong Sang Hong Square
Kwong Sang Hong Square Phase II
Kwong Sang Hong Square Phase III
Kwong Sang Hong Square Phase IV
Kwong Sang Hong Square Phase V
Kwong Sang Hong Square Phase VI
Kwong Sang Hong Square Phase VII
Kwong Sang Hong Square Phase VIII
Kwong Sang Hong Square Phase IX
Kwong Sang Hong Square Phase X
Kwong Sang Hong Square Phase XI
Kwong Sang Hong Square Phase XII
Kwong Sang Hong Square Phase XIII
Kwong Sang Hong Square Phase XIV
Kwong Sang Hong Square Phase XV
Kwong Sang Hong Square Phase XVI
Kwong Sang Hong Square Phase XVII
Kwong Sang Hong Square Phase XVIII
Kwong Sang Hong Square Phase XIX
Kwong Sang Hong Square Phase XX
Kwong Sang Hong Square Phase XXI
Kwong Sang Hong Square Phase XXII
Kwong Sang Hong Square Phase XXIII
Kwong Sang Hong Square Phase XXIV
Kwong Sang Hong Square Phase XXV
Kwong Sang Hong Square Phase XXVI
Kwong Sang Hong Square Phase XXVII
Kwong Sang Hong Square Phase XXVIII
Kwong Sang Hong Square Phase XXIX
Kwong Sang Hong Square Phase XXX
Kwong Sang Hong Square Phase XXXI
Kwong Sang Hong Square Phase XXXII
Kwong Sang Hong Square Phase XXXIII
Kwong Sang Hong Square Phase XXXIV
Kwong Sang Hong Square Phase XXXV
Kwong Sang Hong Square Phase XXXVI
Kwong Sang Hong Square Phase XXXVII
Kwong Sang Hong Square Phase XXXVIII
Kwong Sang Hong Square Phase XXXIX
Kwong Sang Hong Square Phase XL
Kwong Sang Hong Square Phase XLI
Kwong Sang Hong Square Phase XLII
Kwong Sang Hong Square Phase XLIII
Kwong Sang Hong Square Phase XLIV
Kwong Sang Hong Square Phase XLV
Kwong Sang Hong Square Phase XLVI
Kwong Sang Hong Square Phase XLVII
Kwong Sang Hong Square Phase XLVIII
Kwong Sang Hong Square Phase XLIX
Kwong Sang Hong Square Phase L
Kwong Sang Hong Square Phase LI
Kwong Sang Hong Square Phase LII
Kwong Sang Hong Square Phase LIII
Kwong Sang Hong Square Phase LIV
Kwong Sang Hong Square Phase LV
Kwong Sang Hong Square Phase LVI
Kwong Sang Hong Square Phase LVII
Kwong Sang Hong Square Phase LVIII
Kwong Sang Hong Square Phase LIX
Kwong Sang Hong Square Phase LX
Kwong Sang Hong Square Phase LXI
Kwong Sang Hong Square Phase LXII
Kwong Sang Hong Square Phase LXIII
Kwong Sang Hong Square Phase LXIV
Kwong Sang Hong Square Phase LXV
Kwong Sang Hong Square Phase LXVI
Kwong Sang Hong Square Phase LXVII
Kwong Sang Hong Square Phase LXVIII
Kwong Sang Hong Square Phase LXIX
Kwong Sang Hong Square Phase LXX
Kwong Sang Hong Square Phase LXXI
Kwong Sang Hong Square Phase LXXII
Kwong Sang Hong Square Phase LXXIII
Kwong Sang Hong Square Phase LXXIV
Kwong Sang Hong Square Phase LXXV
Kwong Sang Hong Square Phase LXXVI
Kwong Sang Hong Square Phase LXXVII
Kwong Sang Hong Square Phase LXXVIII
Kwong Sang Hong Square Phase LXXIX
Kwong Sang Hong Square Phase LXXX
Kwong Sang Hong Square Phase LXXXI
Kwong Sang Hong Square Phase LXXXII
Kwong Sang Hong Square Phase LXXXIII
Kwong Sang Hong Square Phase LXXXIV
Kwong Sang Hong Square Phase LXXXV
Kwong Sang Hong Square Phase LXXXVI
Kwong Sang Hong Square Phase LXXXVII
Kwong Sang Hong Square Phase LXXXVIII
Kwong Sang Hong Square Phase LXXXIX
Kwong Sang Hong Square Phase XC
Kwong Sang Hong Square Phase XCI
Kwong Sang Hong Square Phase XCII
Kwong Sang Hong Square Phase XCIII
Kwong Sang Hong Square Phase XCIV
Kwong Sang Hong Square Phase XCV
Kwong Sang Hong Square Phase XCVI
Kwong Sang Hong Square Phase XCVII
Kwong Sang Hong Square Phase XCVIII
Kwong Sang Hong Square Phase XCIX
Kwong Sang Hong Square Phase C
Kwong Sang Hong Square Phase CI
Kwong Sang Hong Square Phase CII
Kwong Sang Hong Square Phase CIII
Kwong Sang Hong Square Phase CIV
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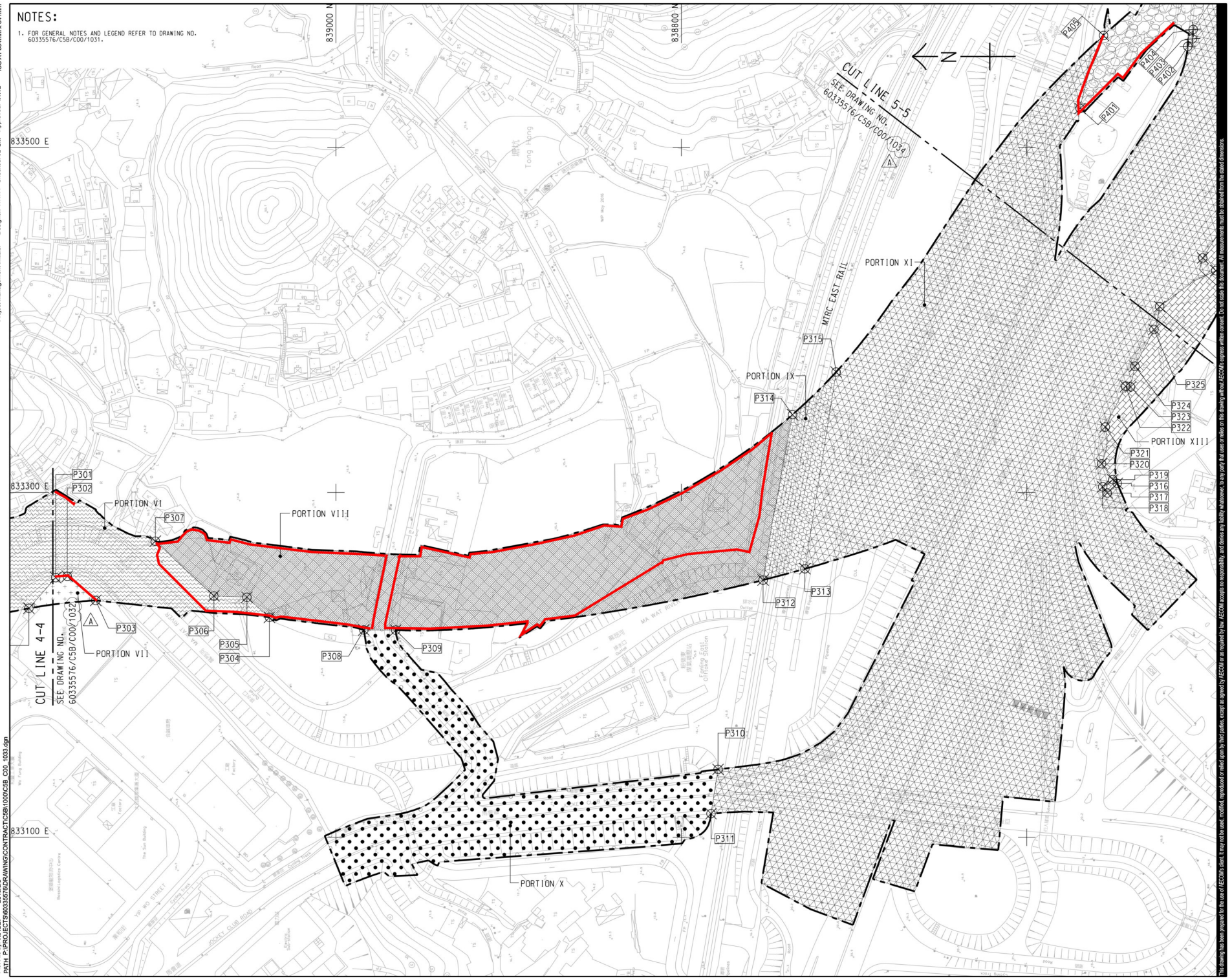

Project Management Initials: Designer: WHWY Checked: RPCM Approved: IHWL ISO A1 594mm x 841mm

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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

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

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ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	AUG-19	TENDER ADDENDUM NO.3	RPCM
-	JUN-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例
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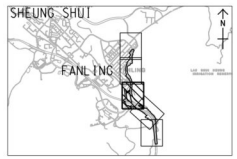
DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 70000



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/05

SHEET TITLE 圖紙名稱
PORTION OF SITE

SHEET 3 OF 5

SHEET NUMBER 圖紙編號
60335576/C5B/C00/1033A

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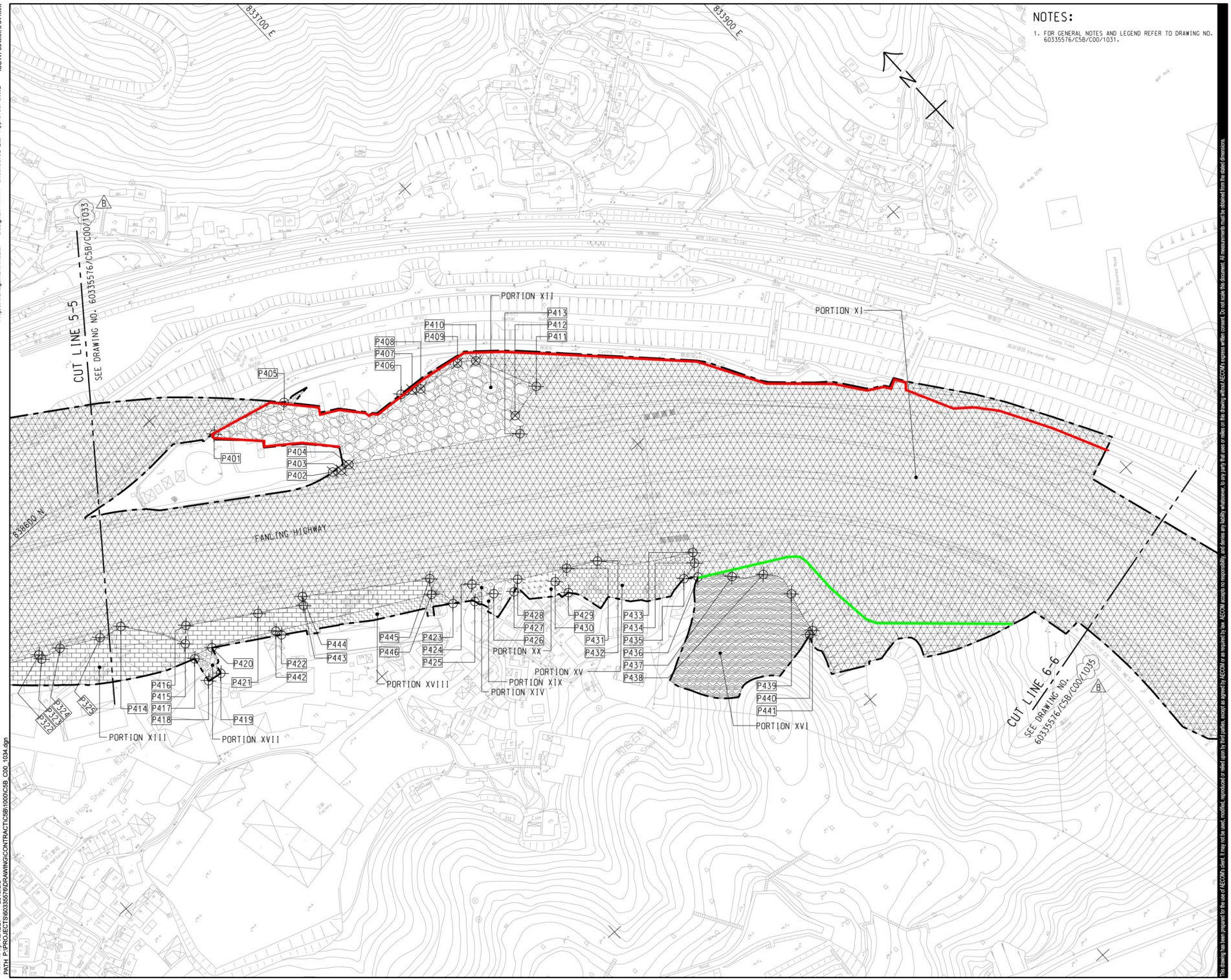

Project Management Initials: Designer: WHWY Checked: RPCM Approved: IHWL ISO A1 594mm x 841mm

Plot File by: XIAODP 2019/8/8
PATH: P:\PROJECTS\60335576\DRAWING\CONTRACT\C5B\1000\C5B_C00_1034.dgn

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

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

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
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ISSUE/REVISION
修訂

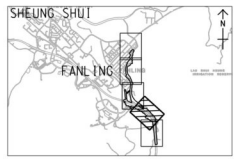
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
B	AUG-19	TENDER ADDENDUM NO.3	RPCM
A	JUL-19	TENDER ADDENDUM NO.2	RPCM
-	JUN-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 70000



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/05

SHEET TITLE 圖紙名稱
PORTION OF SITE

SHEET 4 OF 5

SHEET NUMBER 圖紙編號
60335576/C5B/C00/1034B

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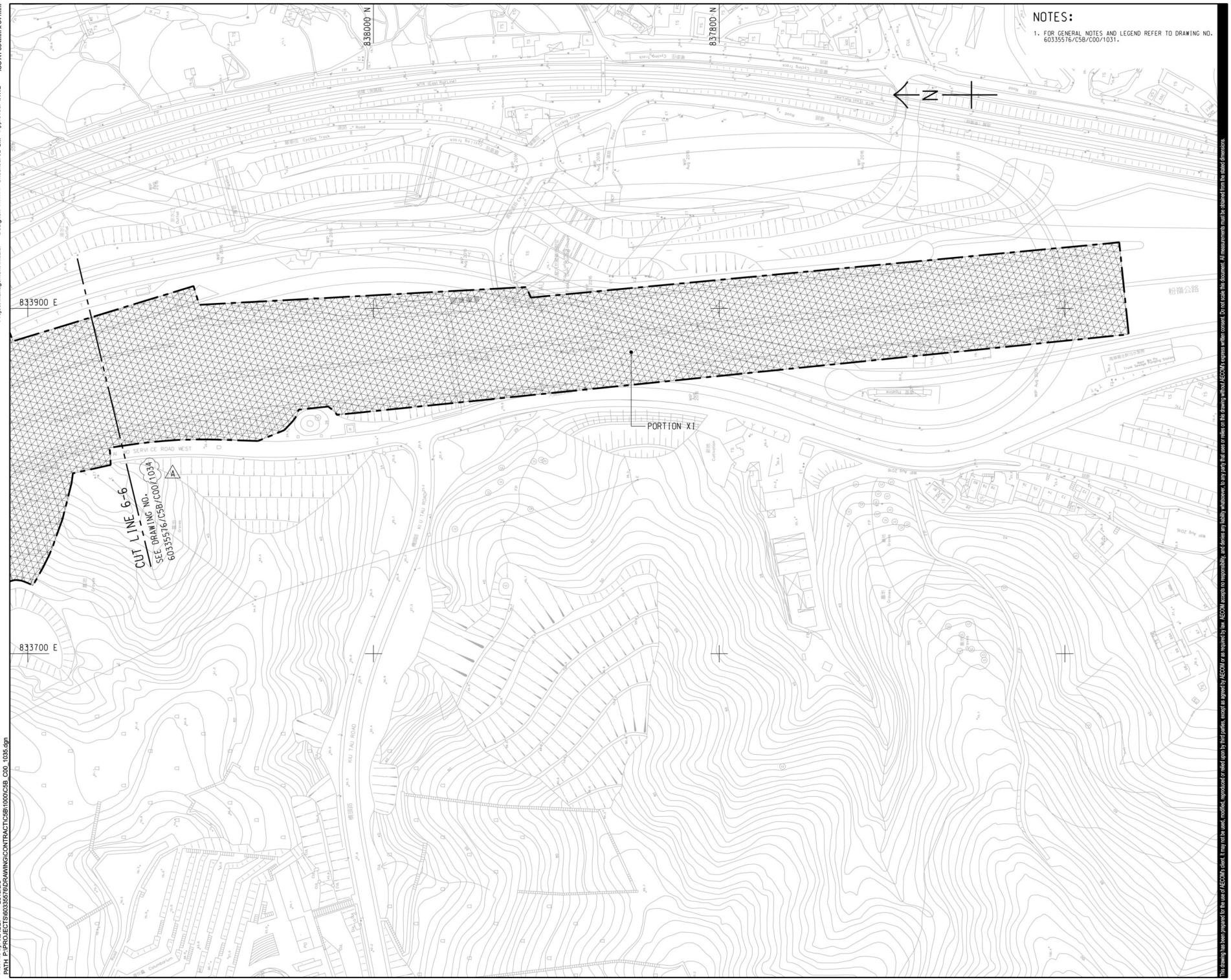

Project Management Initials: Designer: WHWY Checked: RPCM Approved: IHWL ISO A1 594mm x 841mm

Plot File by: XIAODP 2019/8/8
PATH: P:\PROJECTS\60335576\DRAWINGS\CONTRACT\C5B\1000\C5B_C00_1035.dgn

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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業主

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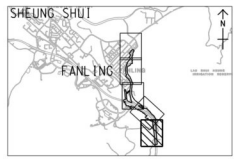
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	AUG-19	TENDER ADDENDUM NO.3	RPCM
-	JUN-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 70000



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/05

SHEET TITLE 圖紙名稱
PORTION OF SITE

SHEET 5 OF 5

SHEET NUMBER 圖紙編號
60335576/C5B/C00/1035A

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Figure 17

Hoarding Plan

EP-475/2013/A

ISO A1 594mm x 841mm

Approved: IHWL

Checked: ALUI

Designer: DMCH

Project Management Initiate:

NOTES:

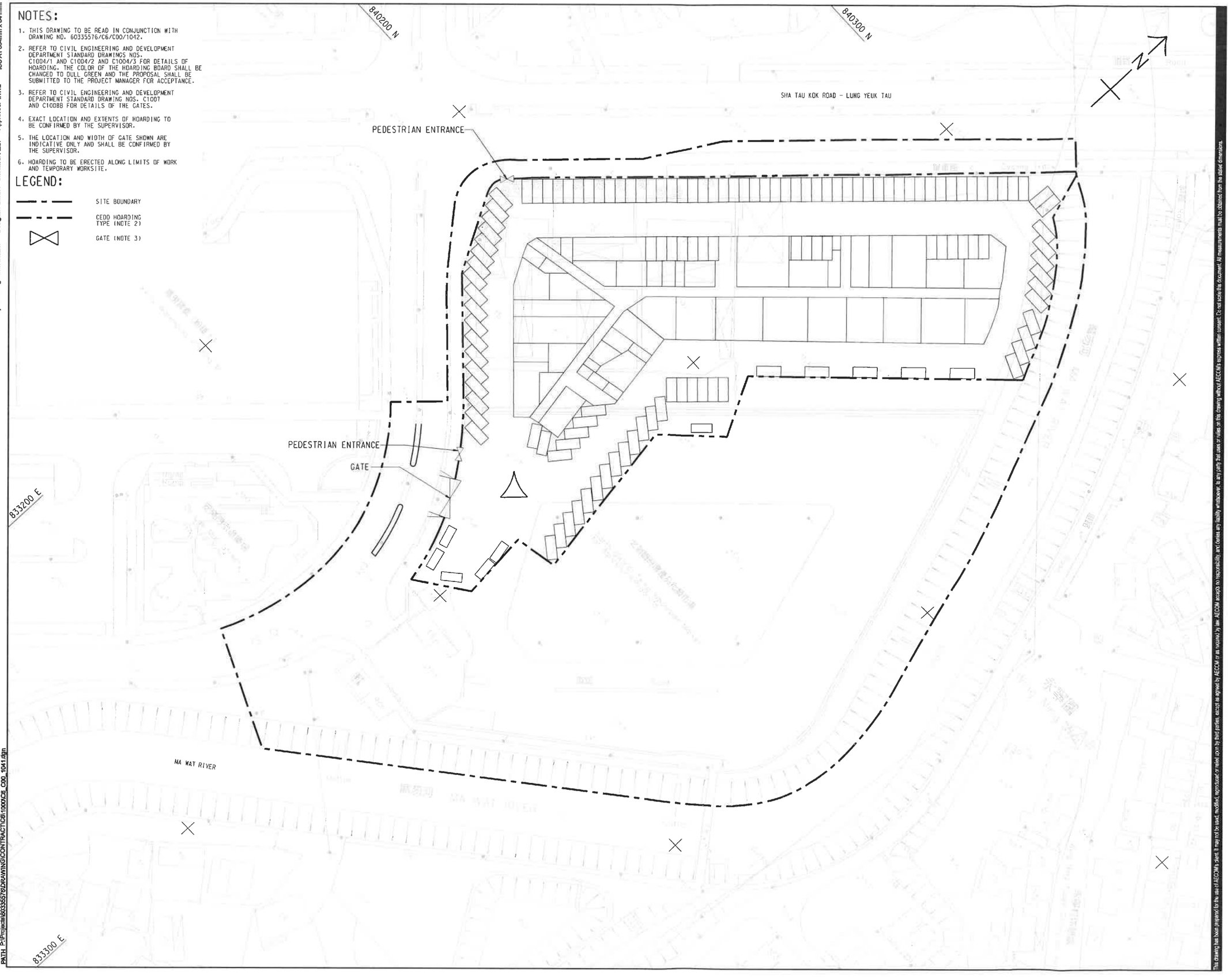
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NO. 60335576/C6/C00/1042.
2. REFER TO CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT STANDARD DRAWINGS NOS. C1004/1 AND C1004/2 AND C1004/3 FOR DETAILS OF HOARDING. THE COLOR OF THE HOARDING BOARD SHALL BE CHANGED TO DULL GREEN AND THE PROPOSAL SHALL BE SUBMITTED TO THE PROJECT MANAGER FOR ACCEPTANCE.
3. REFER TO CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT STANDARD DRAWING NOS. C1007 AND C1008B FOR DETAILS OF THE GATES.
4. EXACT LOCATION AND EXTENTS OF HOARDING TO BE CONFIRMED BY THE SUPERVISOR.
5. THE LOCATION AND WIDTH OF GATE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISOR.
6. HOARDING TO BE ERECTED ALONG LIMITS OF WORK AND TEMPORARY WORKSITE.

LEGEND:

SITE BOUNDARY

CEDD HOARDING TYPE (NOTE 2)

GATE (NOTE 3)



Plot File by: Yeuky 29/4/2019
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C6\1000\C6_C00_1041.dgn

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AECOM

PROJECT
項目

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

CONTRACT TITLE:

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

CLIENT
業主

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

CONSULTANT
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VR 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	FEB-19	TENDER DRAWING	ALUI

STATUS
階段

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
(INTERIM STAGE)

SHEET NUMBER
圖紙編號

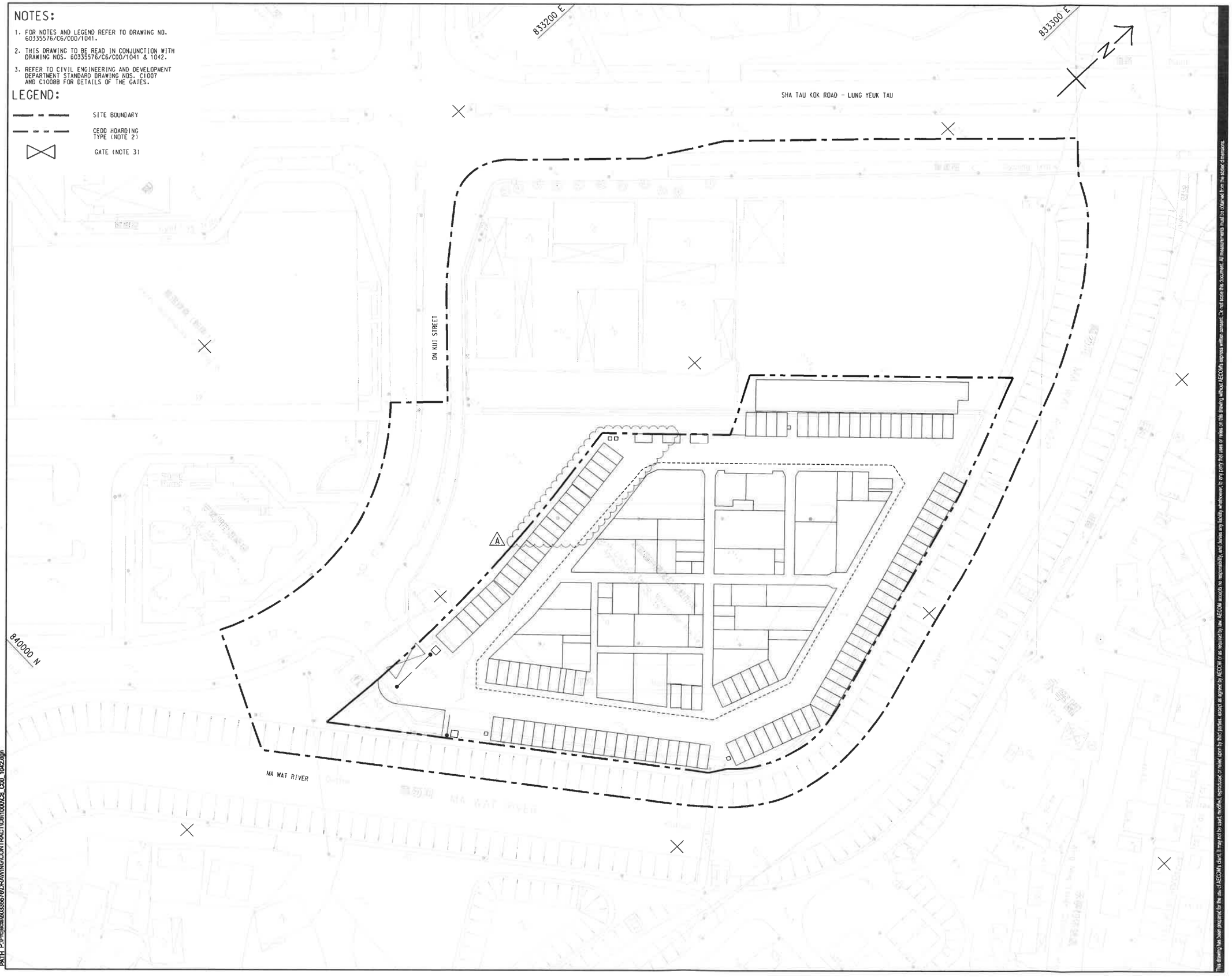
60335576/C6/C00/1041

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C6/C00/1041.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C6/C00/1041 & 1042.
3. 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
項目

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
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I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 檢查
A	JUN-19	TENDER ADDENDUM NO. 2	ALUI
-	FEB-19	TENDER DRAWING	ALUI

STATUS
階段

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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Project Management Initials: Designer: DMCH Checked: ALUI Approved: IHWL ISO A1 594mm x 841mm

Plot File by: Yauky 20/6/2019
PATH P:\Projects\60335576\DRAWING\CONTRACT\C6\1000\C8_C00_1042.dgn

APPENDIX A
CONSTRUCTION PROGRAMME

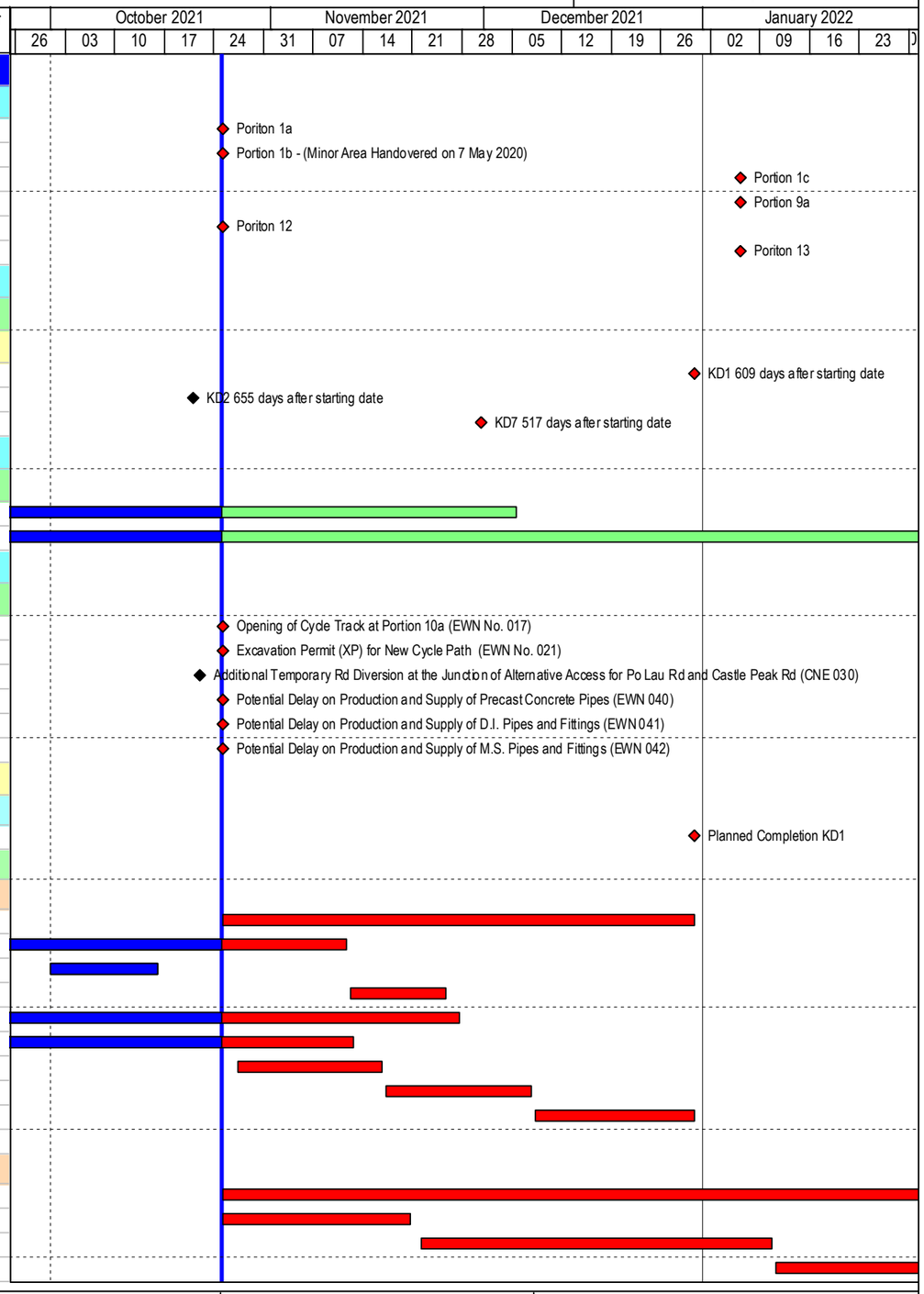
Construction Programme of ND/2019/01

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

AECOM

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
Revised Programme (2021-10-25) Rev.0						
2.0 - Site Access Dates						
AD-1000	Poriton 1a	0	25-Oct-21*		-111	CD(7d)
AD-1010	Portion 1b - (Minor Area Handovered on 7 May 2020)	0	25-Oct-21*		-111	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	Poriton 12	0	25-Oct-21*		-111	CD(7d)
AD-1240	Poriton 13	0	06-Jan-22*		0	CD(7d)
3.0 - Site Completion Dates						
4.0 - Key Dates						
4.2 Planned Key Date Completion						
KD-1000	KD1 609 days after starting date	0		30-Dec-21*	-146	CD(7d)
KD-1010	KD2 655 days after starting date	0		21-Oct-21 A		CD(7d)
KD-1060	KD7 517 days after starting date	0		30-Nov-21*	-208	CD(7d)
6.0 - Preliminaries and General Requirements						
6.2 - General Submissions						
GS-1230	Submission of Major Method Statements	42	06-Dec-19 A	05-Dec-21	1010	CD(7d)
GS-1290	Preparation and Submission of Fully Corodinated BIM	1557	21-Aug-20 A	28-Jan-26*	8	CD(7d)
7.0 Construction						
Section 1						
S1-1012	Opening of Cycle Track at Portion 10a (EWN No. 017)	0		25-Oct-21	-433	CD(7d)
S1-1018	Excavation Permit (XP) for New Cycle Path (EWN No. 021)	0		25-Oct-21	-433	CD(7d)
S1-1020	Additional Temporary Rd Diversion at the Junction of Alternative Access for Po Lau Rd and Castle Peak Rd (CNE 030)	0		22-Oct-21 A		CD(7d)
S1-1022	Potential Delay on Production and Supply of Precast Concrete Pipes (EWN 040)	0		25-Oct-21	-405	CD(7d)
S1-1024	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041)	0		25-Oct-21	-315	CD(7d)
S1-1026	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042)	0		25-Oct-21	-315	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		30-Dec-21	-146	CD(7d)
Civil Works						
Road D1 (Stage 1)						
S1K1-2000	Construct & maintain Temporary drainage	56	25-Oct-21	30-Dec-21	-120	WD(6d)
S1K1-2009	Underground Fresh & Flushing watermains (under footpath)	16	14-Aug-21 A	11-Nov-21	-253	WD(6d)
S1K1-2009.01	Underground Fresh & Flushing watermains (under carriageway)	0	01-Oct-21 A	16-Oct-21 A		WD(6d)
S1K1-2010	Pressure test for Fresh & Flushing watermains (around 190m)	12	12-Nov-21	25-Nov-21	-185	WD(6d)
S1K1-2014	Underground utilities (under footpath)	30	03-May-21 A	27-Nov-21	-187	WD(6d)
S1K1-2014.01	Underground utilities (under carriageway)	17	25-Sep-21 A	12-Nov-21	-129	WD(6d)
S1K1-2016	Road works - Formation & Sub base	18	27-Oct-21	16-Nov-21	-129	WD(6d)
S1K1-2018	Road works - Road kerb	18	17-Nov-21	07-Dec-21	-120	WD(6d)
S1K1-2020	Road works - Laying bituminous paving	18	08-Dec-21	30-Dec-21	-120	WD(6d)
S1K1-2060	Noise barrier NB35 footing Stage 2 (2 / 6 bays)	0	25-Jun-21 A	28-Aug-21 A		WD(6d)
Road D1 (Stage 2) Castle Peak road junction						
S1K1-2024	Construct & maintain Temporary drainage	332	25-Oct-21	05-Dec-22	-351	WD(6d)
S1K1-2026	Underground Drainage ELS & Excavation (around 40m)	24	25-Oct-21	20-Nov-21	-351	WD(6d)
S1K1-2028	Underground Drainage (around 40m)	40	22-Nov-21	10-Jan-22	-351	WD(6d)
S1K1-2030	Underground Sewerage (around 40m)	42	11-Jan-22	03-Mar-22	-351	WD(6d)



Build King – Richwell Engineering Joint Venture

Planned Work
Critical Work
Actual Work
Milestone
Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2021-10)

Data Date: 25-Oct-21 **Run Date: 30-Oct-21**

Project ID: ND201901-RP-20.0
Layout: ND201901-3MRP with logo

THE 3-MONTH ROLLING PROGRAMME

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
Road L1						
S1K1-2100	Construct & maintain Temporary drainage	56	25-Oct-21	30-Dec-21	-120	WD(6d)
S1K1-2106	Underground Drainage (around 120m)	0	15-Mar-21 A	09-Oct-21 A		WD(6d)
S1K1-2108	Underground Fresh & Flushing watermains (under footpath)	20	20-Aug-21 A	16-Nov-21	-120	WD(6d)
S1K1-2108.01	Underground Fresh & Flushing watermains (under carriageway)	22	25-Oct-21	18-Nov-21	-120	WD(6d)
S1K1-2109	Pressure test for Fresh & Flushing watermains (around 120m)	12	19-Nov-21	02-Dec-21	-53	WD(6d)
S1K1-2110	Underground utilities (under footpath)	72	25-Oct-21	19-Jan-22	-91	WD(6d)
S1K1-2110.01	Underground utilities (under carriageway)	18	28-Oct-21	17-Nov-21	-119	WD(6d)
S1K1-2112	Road works - Formation & Sub base	18	29-Oct-21	18-Nov-21	-120	WD(6d)
S1K1-2114	Road works - Road kerb	18	19-Nov-21	09-Dec-21	-120	WD(6d)
S1K1-2116	Road works - Laying bituminous paving	16	10-Dec-21	30-Dec-21	-120	WD(6d)
S1K1-2130	Completion of access with min. 7.3m width and EVA with min. 6m width	0		30-Dec-21	-146	CD(7d)
Smart Road Lightings System Installation						
S1K1-3010	Submissions and Approval of smart road lighting system design and shop drawings	36	10-Sep-20 A	29-Nov-21	-151	CD(7d)
S1K1-3020	Procurement and delivery of smart road lighting system	90	30-Nov-21	27-Feb-22	-151	CD(7d)
Section 2A						
S2A-1006	Temporary Stockpile at Portion 5 and Additional Land D (EWN No. 020) (CNE No.020)	0		25-Oct-21	-56	CD(7d)
S2A-1008	Temporary Stockpile in Area C1 (EWN 027)	0		25-Oct-21	-56	CD(7d)
Portion 5 in Area C1 (Soil Treatment & Interface with HD's Contractors)						
Soil Treatment						
S2AP5-2000	Construct & maintain Temporary drainage	135	25-Oct-21	07-Apr-22	-51	WD(6d)
S2AP5-2020	Remaining works (Site formation, proof rolling, chain Link fence, open channel)	72	10-Jan-22	07-Apr-22	-51	WD(6d)
S2AP5-2021	Temporary Stockpiling of excavated material	8	14-Sep-20 A	02-Nov-21	-51	WD(6d)
S2AP5-2022	Remove Temporary Stockpiling of excavated material (100,000 m3)	55	17-Jul-21 A	08-Jan-22	-51	WD(6d)
Interface with HD's Contractor to carry out GI						
S2AP5-3030	HD's Contractor to carry out GI in Area C1 Zone A (Stage 3)	60	02-Oct-21 A	23-Dec-21	45	CD(7d)
S2AP5-3040	HD's Contractor to carry out GI in Area C1 Zone B1 (Stage 3)	50	25-Oct-21*	13-Dec-21	55	CD(7d)
S2AP5-3050	HD's Contractor to carry out GI in Area C1 Zone C (Stage 3)	90	25-Oct-21*	22-Jan-22	15	CD(7d)
S2AP5-3060	HD's Contractor to carry out GI in Area C1 Zone D (Stage 3)	90	25-Oct-21*	22-Jan-22	15	CD(7d)
Section 2B						
Portion 9a in Area C2 (Soil Treatment & Interface with HD's Contractors)						
Preparation work/Tree Survey/Site Clearance/GI						
S2BP9a-1010	Tree survey and prepare tree felling and transplant report	30	06-Jan-22	12-Feb-22	201	WD(6d)
Section 3						
S3-1006	Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034)	0		25-Oct-21	-111	CD(7d)
Portion 1a in Area E (Soil Treatment & Interface with HKHS's Contractors)						
Preparation work/Tree Survey/Site Clearance/GI						
S3P1a-1010	Tree survey and prepare tree felling and transplant report	24	30-Jun-21 A	20-Nov-21	-47	WD(6d)
S3P1a-1020	Site Clearance & Tree felling	24	25-Oct-21	20-Nov-21	-92	WD(6d)
S3P1a-1025	Ground investigation (0 / 4 GI completed)	24	22-Nov-21	18-Dec-21	-92	WD(6d)
S3P1a-1040	Prepare Arsenic Assessment Report	18	17-Jan-22	09-Feb-22	-92	WD(6d)
S3P1a-1060	Archaeologiacl Survey	72	02-Dec-21	02-Mar-22	-92	WD(6d)
Interface with HKHS's contractor to carry out GI						
S3P1a-3010	HKHS Contractor to carry out GI in Area E	24	17-Jan-22	16-Feb-22	-80	WD(6d)
Portion 7 in Area E (Soil Treatment & Interface with HKHS's Contractors)						
Soil Treatment						
S3P7-2000	Construct & maintain Temporary drainage	72	25-Oct-21	19-Jan-22	25	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	20-Nov-21	73	WD(6d)
S3P7-2020	Backfilling to the formation levels	72	25-Oct-21	19-Jan-22	25	WD(6d)
Interface with HKHS's contractor to carry out GI						



Build King – Richwell Engineering Joint Venture

Planned Work
Critical Work
Actual Work
Milestone
Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2021-10)

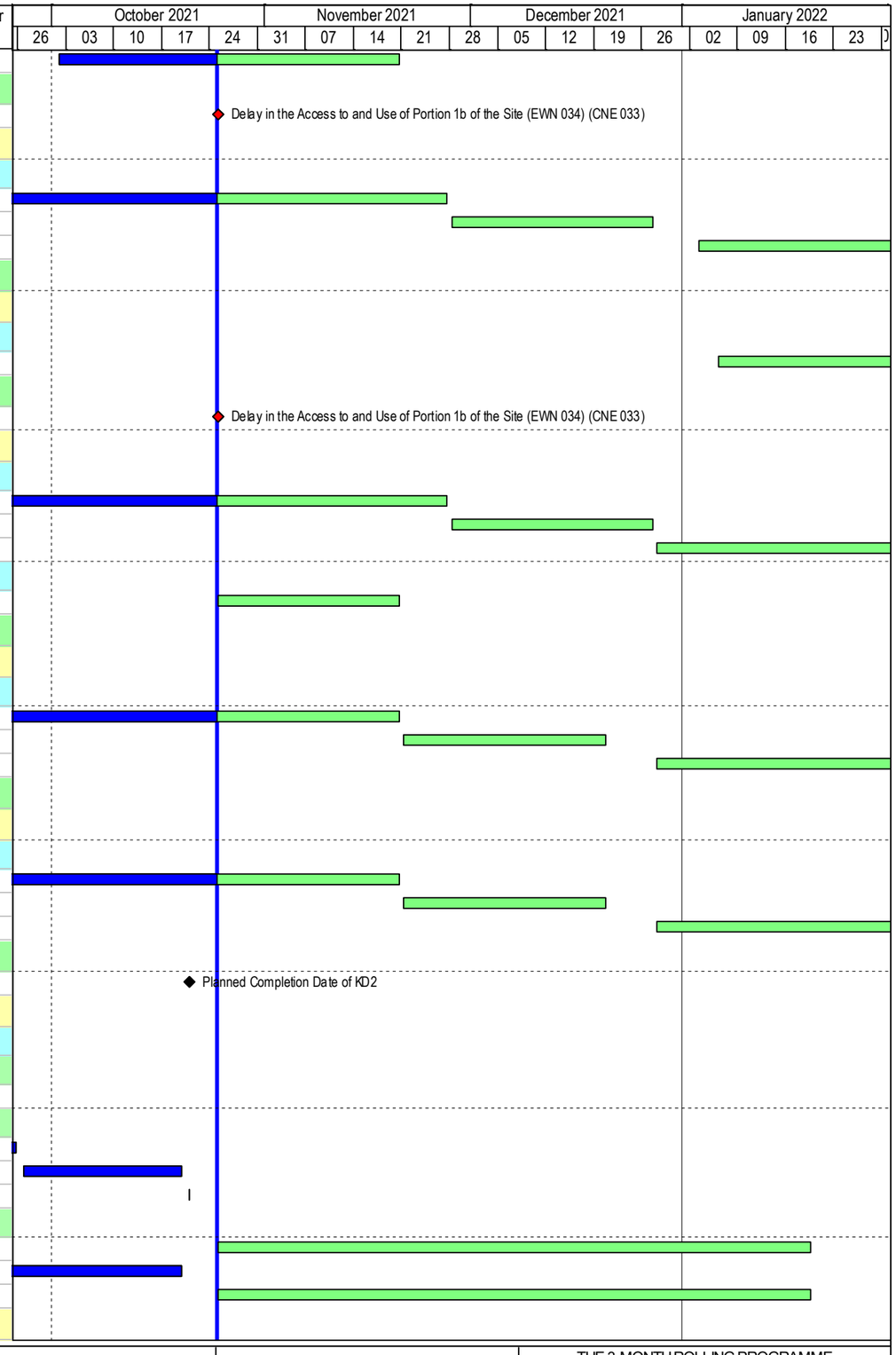
Data Date: 25-Oct-21 **Run Date: 30-Oct-21**

Project ID: ND201901-RP-20.0
Layout: ND201901-3MRP with logo

THE 3-MONTH ROLLING PROGRAMME

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
S3P7-3010	HKHS Contractor to carry out GI in Area E	24	02-Oct-21 A	20-Nov-21	73	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-Oct-21	-111	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	27-Nov-21	118	WD(6d)
S4AP1b-1012	Approval & Acceptance of Tree Felling Application	30	28-Nov-21	27-Dec-21	150	CD(7d)
S4AP1b-1020	Site Clearance & Tree Felling	60	03-Jan-22	16-Mar-22	119	WD(6d)
Section 4B						
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)
Section 4C						
S4C-1002	Delay in the Access to and Use of Portion 1b of the Site (EWN 034) (CNE 033)	0		25-Oct-21	-111	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	30	03-Sep-21 A	27-Nov-21	108	WD(6d)
S4CP1b-1012	Approval & Acceptance of Tree Felling Application	30	28-Nov-21	27-Dec-21	135	CD(7d)
S4CP1b-1020	Site Clearance & Tree Felling	60	28-Dec-21	11-Mar-22	106	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	25-Oct-21	20-Nov-21	357	WD(6d)
Section 6A						
Portion 1e in Area G1 (Soil Treatment & Forming Hammerhead)						
Preparation work/Tree Survey/Site Clearance/GI						
S6AP1e-1010	Tree survey and prepare tree felling and transplant report	24	04-Aug-21 A	20-Nov-21	50	WD(6d)
S6AP1e-1012	Approval & Acceptance of Tree Felling Application	30	21-Nov-21	20-Dec-21	62	CD(7d)
S6AP1e-1020	Site Clearance & Tree Felling	60	28-Dec-21	11-Mar-22	49	WD(6d)
Section 6B						
Portion 1e in Area G2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S6BP1e-1010	Tree survey and prepare tree felling and transplant report	24	04-Aug-21 A	20-Nov-21	750	WD(6d)
S6BP1e-1012	Approval & Acceptance of Tree Felling Application	30	21-Nov-21	20-Dec-21	928	CD(7d)
S6BP1e-1020	Site Clearance & Tree Felling	60	28-Dec-21	11-Mar-22	751	WD(6d)
Section 7 (Subject to excision)						
S7K2-1000	Planned Completion Date of KD2	0		21-Oct-21 A		CD(7d)
Portion 14 in Area K (Complete TSPS with Associated Sewerage)						
KD2 - Complete Temporary Sewage Pumping Station and associated rising mains and sewers, and connect						
Design and Civil Construction						
S7P14-2020	Construction of TSPS	0	31-Mar-21 A	25-Sep-21 A		WD(6d)
E&M Works						
S7P14-3030	Supply, Factory Acceptance Test (FAT) & Delivery of E&M equipment for TSPS	0	07-Apr-21 A	25-Sep-21 A		WD(6d)
S7P14-3040	E&M Installation for TSPS	0	27-Sep-21 A	20-Oct-21 A		WD(6d)
S7P14-3050	Testing & Commissioning (T&C) of E&M equipment for TSPS	0	21-Oct-21 A	21-Oct-21 A		CD(7d)
Sewerage Works						
S7P14-4000	Construct & maintain Temporary drainage	72	25-Oct-21	19-Jan-22	1471	WD(6d)
S7P14-4010	Laying of sewage rising mains from TSPS and connect to existing tank of MBR plant	0	15-Mar-21 A	20-Oct-21 A		WD(6d)
S7P14-4020	Construciton of sewage manhole and gravity sewer for connection of sewage from MWSC site to TSPS	72	25-Oct-21	19-Jan-22	333	WD(6d)
KD2 - Portion 11b in Area K (Laying sewer rising mains and connect to existing MBR)						



Build King – Richwell Engineering Joint Venture

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Sewerage Works						
S7P11b-1015	Construct & maintain Temporary drainage	18	25-Oct-21	13-Nov-21	362	WD(6d)
S7P11b-1060	Construction of MBR	18	08-Apr-21 A	13-Nov-21	362	WD(6d)
S7P11b-1070	E&M Installation for MBR	32	19-Jul-21 A	30-Nov-21	348	WD(6d)
S7P11b-1080	Testing & Commissioning (T&C) of E&M equipment for MBR	30	01-Dec-21	30-Dec-21	431	CD(7d)
Portion 4 in Area K (Complete Temp. Noise Barriers along Castle Peak Road)						
KD9 - Complete the temporary noise barriers along Castle Peak Road in Area I, J, K						
S7P11b-3010	Erection of temporary noise barrier in Area K, Portion 11b (115m, 1 gang)	130	14-Jan-22	25-Jun-22	208	WD(6d)
Section 8						
S8-1012	Suspension of Works at Part of Portion 2 (EWN No. 019)	0		25-Oct-21	-522	CD(7d)
S8-1016	Opening of Cycle Track at Portion 2 and 10a (EWN No. 017)	0		25-Oct-21	-522	CD(7d)
S8-1018	Excavation Permit (XP) for New Cycle Path (EWN No. 021)	0		25-Oct-21	-522	CD(7d)
Portion 2 in Area A (Soil Treatment & Construction of Pak Shek Au Junction)						
Preparation work						
S8P2-0015	Approval & Acceptance of Tree Felling Application	20	23-Jul-20 A	13-Nov-21	-542	CD(7d)
S8P2-0016	Site clearance / Tree Felling (Stage 2)	36	15-Nov-21	28-Dec-21	-443	WD(6d)
S8P2-0018	Construction of temporary road	98	29-Dec-21	30-Apr-22	-443	WD(6d)
S8P2-1010	Site clearance / Tree Felling (Stage 1)	0	21-Sep-20 A	16-Oct-20 A		WD(6d)
Civil Work						
Construction of Pak Shek Au Junction Stage 1						
S8P2-3000	Construct & maintain Temporary drainage	534	29-Dec-21	17-Oct-23	-304	WD(6d)
Portion 1a in Area A (Soil Treatment, Slope, Retaining Wall, Noise Barrier, Drainage & Roadwork)						
Preparation work						
S8P1a-0100	Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034)	0		25-Oct-21	-278	CD(7d)
S8P1a-0102	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041)	0		25-Oct-21	285	CD(7d)
S8P1a-0104	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042)	0		25-Oct-21	285	CD(7d)
S8P1a-1002	Tree survey and prepare tree felling and transplant report	60	25-Oct-21	05-Jan-22	-224	WD(6d)
S8P1a-1004	Approval & Acceptance of Tree Felling Application	30	06-Jan-22	04-Feb-22	-273	CD(7d)
Portion 3 in Area A (Soil Treatment, Drainage & Roadwork)						
Preparation work						
S8P3-0102	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041)	0		25-Oct-21	516	CD(7d)
S8P3-0104	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042)	0		25-Oct-21	516	CD(7d)
S8P3-1008	Approval & Acceptance of Tree Felling Application & Tree Felling	24	13-Apr-21 A	20-Nov-21	165	WD(6d)
S8P3-1010	Site clearance	60	22-Nov-21	05-Feb-22	165	WD(6d)
Portion 5 in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S8P5-0102	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0		25-Oct-21	0	CD(7d)
S8P5-0104	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041)	0		25-Oct-21	0	CD(7d)
S8P5-0106	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042)	0		25-Oct-21	0	CD(7d)
Construction according to CSD for Alternative on Bored Pile Wall						
S8P5-2005	Construct & maintain Temporary drainage	702	25-Oct-21	06-Mar-24	0	WD(6d)
S8P5-2036	R.C. Mass Wall construction Bay 3 - Concrete fil	8	30-Apr-21 A	02-Nov-21	4	WD(6d)
S8P5-2042	R.C. Mass Wall construction Bay 5 - Concrete fil	12	29-May-21 A	06-Nov-21	0	WD(6d)
S8P5-2048	R.C. Mass Wall construction Bay 4 - Concrete fil	12	13-Apr-21 A	06-Nov-21	0	WD(6d)
S8P5-2054	R.C. Mass Wall construction Bay 6 - Concrete fil	12	07-May-21 A	06-Nov-21	0	WD(6d)
S8P5-2060	R.C. Mass Wall construction Bay 7 - Concrete fil	0	14-Apr-21 A	20-Oct-21 A		WD(6d)
S8P5-2066	R.C. Mass Wall construction Bay 8 - Concrete fil	0	25-May-21 A	16-Oct-21 A		WD(6d)
S8P5-2072	R.C. Mass Wall construction Bay 9 - Concrete fil	0	30-Apr-21 A	20-Oct-21 A		WD(6d)
Soil Treatment						
S8P5-3050	Backfill to level of utilities laying	0	17-Feb-21 A	25-Oct-21 A		WD(6d)



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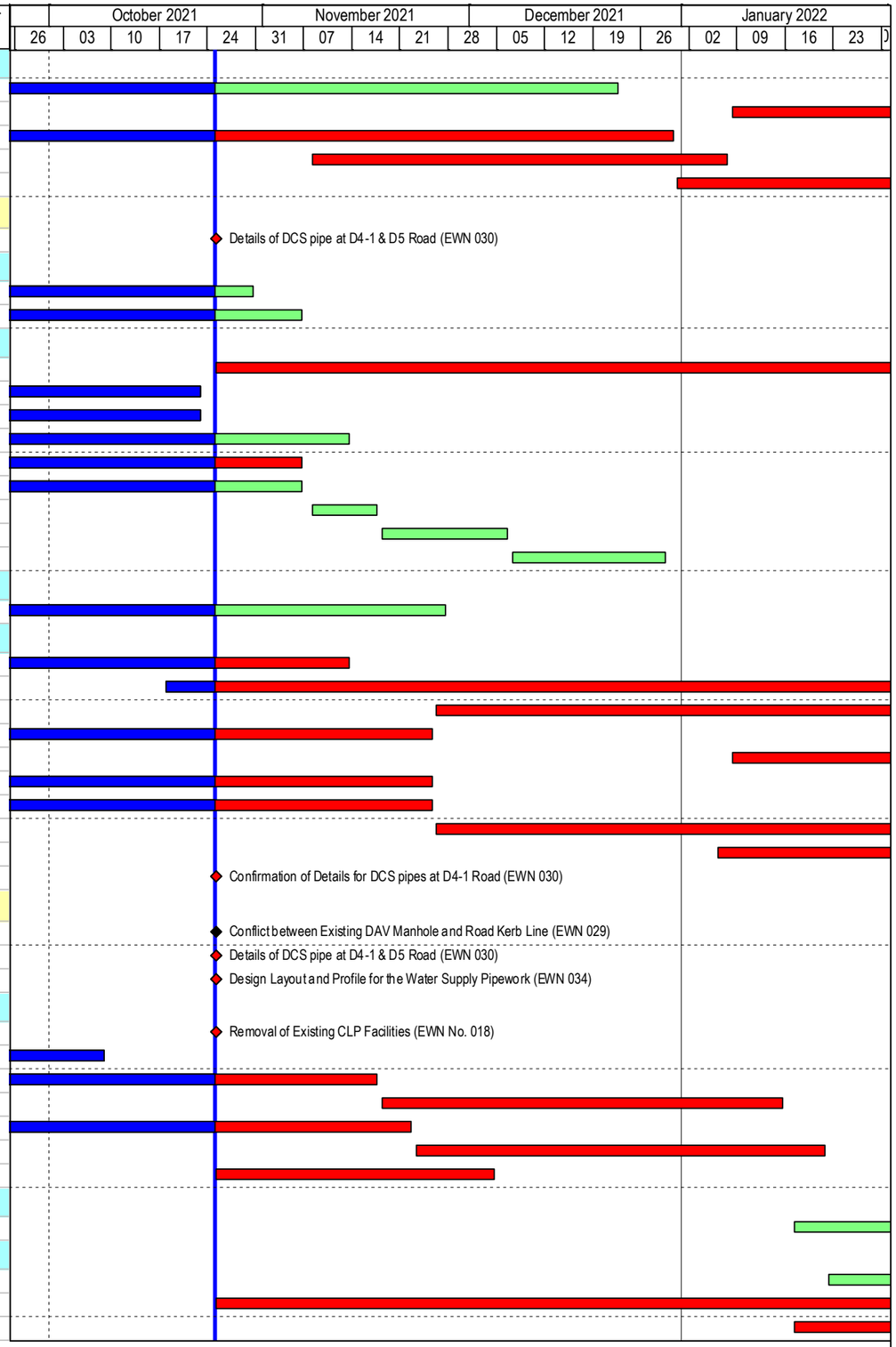
Civil Work						
S8P5-4000.02	Road P1 (SMH1006 and pipe laying to 1005) - Underground Drainage work	51	24-Sep-21 A	22-Dec-21	5	WD(6d)
S8P5-4002	Divert Local Road	399	08-Jan-22	16-May-23	0	WD(6d)
S8P5-4004	Underground Fresh watermain (North bound Carriageway)	56	20-Sep-21 A	30-Dec-21	0	WD(6d)
S8P5-4010	Underground utilities (North bound Carriageway)	50	08-Nov-21	07-Jan-22	0	WD(6d)
S8P5-4014	Drainage works across DJ watermain (SMH1006a and pipe laying to 1006)	145	31-Dec-21	30-Jun-22	0	WD(6d)
Portion 6a & 6b in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)						
S8P6a-0002	Details of DCS pipe at D4-1 & D5 Road (EWN 030)	0		25-Oct-21	-85	CD(7d)
Preparation work/Tree Survey/Site Clearance/GI						
S8P6a-1004	Approval & Acceptance of Tree Felling Application & Tree Felling	6	16-Jun-20 A	30-Oct-21	7	WD(6d)
S8P6a-1010	Site Clearance & Tree Felling	12	15-Feb-20 A	06-Nov-21	7	WD(6d)
Construction according to CSD for Alternative on Bored Pile Wall						
S8P6a-2004	Construct & maintain Temporary drainage	695	25-Oct-21	27-Feb-24	0	WD(6d)
S8P6a-2010	Slope cutting and temporary soil nail installation Row C + Row D (99 Nos Soil nails)	0	28-Oct-20 A	23-Oct-21 A		WD(6d)
S8P6a-2014	Slope cutting and temporary soil nail installation Row E + Row F (99 Nos Soil nails)	0	16-Nov-20 A	23-Oct-21 A		WD(6d)
S8P6a-2024	R.C. Mass Wall construction Bay 12a - Concrete fill	18	20-Aug-21 A	13-Nov-21	26	WD(6d)
S8P6a-2032	R.C. Mass Wall construction Bay 11 - Concrete fill	12	08-Apr-21 A	06-Nov-21	0	WD(6d)
S8P6a-2038	R.C. Mass Wall construction Bay 10 - Concrete fill	12	17-May-21 A	06-Nov-21	50	WD(6d)
S8P6a-2040	R.C. Mass Wall construction Bay 12b - Base slab	9	08-Nov-21	17-Nov-21	7	WD(6d)
S8P6a-2042	R.C. Mass Wall construction Bay 12b - Stem wall	16	18-Nov-21	06-Dec-21	7	WD(6d)
S8P6a-2044	R.C. Mass Wall construction Bay 12b - Concrete fill	18	07-Dec-21	29-Dec-21	7	WD(6d)
Soil Treatment						
S8P6a-3050	Backfill to level of utilities laying	18	24-Dec-20 A	27-Nov-21	67	WD(6d)
Civil Work						
S8P6a-4000	Road D4 (SMH1001 - 5001F) - Underground Drainage work (including Road diversion)	18	25-Mar-21 A	13-Nov-21	0	WD(6d)
S8P6a-4000.02	Road D4 Underground Drainage work (between SMH 5001F - 5001C2)	99	18-Oct-21 A	23-Feb-22	0	WD(6d)
S8P6a-4010.02	Road D4 (SMH5001B1 - 5001A) - Underground Drainage work	160	26-Nov-21	15-Jun-22	0	WD(6d)
S8P6a-4010.04	Road D4 (SMH1201 - 1002A) - Underground Drainage work	28	06-Sep-21 A	25-Nov-21	0	WD(6d)
S8P6a-4010.06	Road D4 (between SMH1002A and KT1001) - Underground Drainage work	72	08-Jan-22	06-Apr-22	0	WD(6d)
S8P6a-4012	Construct and maintain haul road to Portion 9b and 9c	28	28-Dec-20 A	25-Nov-21	0	WD(6d)
S8P6a-4018	Construction of Concrete barrier KB01 Stage 1 (Bay 1 & 2)	28	15-Sep-21 A	25-Nov-21	0	WD(6d)
S8P6a-4018.01	Excavation for Concrete barrier KB01 Stage 2 (Bay 3 to 15)	100	26-Nov-21	29-Mar-22	0	WD(6d)
S8P6a-4018.02	Construction of Concrete barrier KB01 Stage 2 (Bay 3 to 15)	220	06-Jan-22	05-Oct-22	0	WD(6d)
S8P6a-4054	Confirmation of Details for DCS pipes at D4-1 Road (EWN 030)	0		25-Oct-21*	-85	CD(7d)
Portion 9b & 9d in Area A (Soil Treatment, Slope, Retaining Wall, Drainage & Roadwork)						
S8P9b-0002	Conflict between Existing DAV Manhole and Road Kerb Line (EWN 029)	0		25-Oct-21	165	CD(7d)
S8P9b-0003	Details of DCS pipe at D4-1 & D5 Road (EWN 030)	0		25-Oct-21	-85	CD(7d)
S8P9b-0004	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0		25-Oct-21	-190	CD(7d)
Preparation work/Tree Survey/Site Clearance/GI						
S8P9b-0006	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Oct-21	-189	CD(7d)
S8P9b-0070	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	0	18-Jun-21 A	09-Oct-21 A		WD(6d)
S8P9b-1002	Submission & Acceptance of Tree Felling Application	24	05-May-21 A	17-Nov-21	-274	CD(7d)
S8P9b-1010	Site clearance & Tree Felling	48	18-Nov-21	15-Jan-22	-224	WD(6d)
S8P9b-1015	Ground investigation (10 / 13 GI completed)	25	22-Feb-21 A	22-Nov-21	-134	WD(6d)
S8P9b-1025	Verification of Ground Condition & Design Review by Project Manager	60	23-Nov-21	21-Jan-22	-162	CD(7d)
S8P9b-1040	Arsenic Treatment Plan (Stage 2)	36	25-Oct-21	04-Dec-21	-191	WD(6d)
Soil Treatment						
S8P9b-2010	Remove soil (original assumed 15758m3) (0 / 8 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	40	17-Jan-22*	07-Mar-22	355	WD(6d)
Civil Work						
S8P9b-3010	Slopeworks for new feature KS19 (with about 200 nos. of soil nails)	80	22-Jan-22	04-May-22	390	WD(6d)
S8P9b-3015	Construct & maintain Temporary drainage	914	25-Oct-21	21-Nov-24	-224	WD(6d)
S8P9b-3030	Excavation for retaining wall (4701m3)	96	17-Jan-22	18-May-22	-224	WD(6d)



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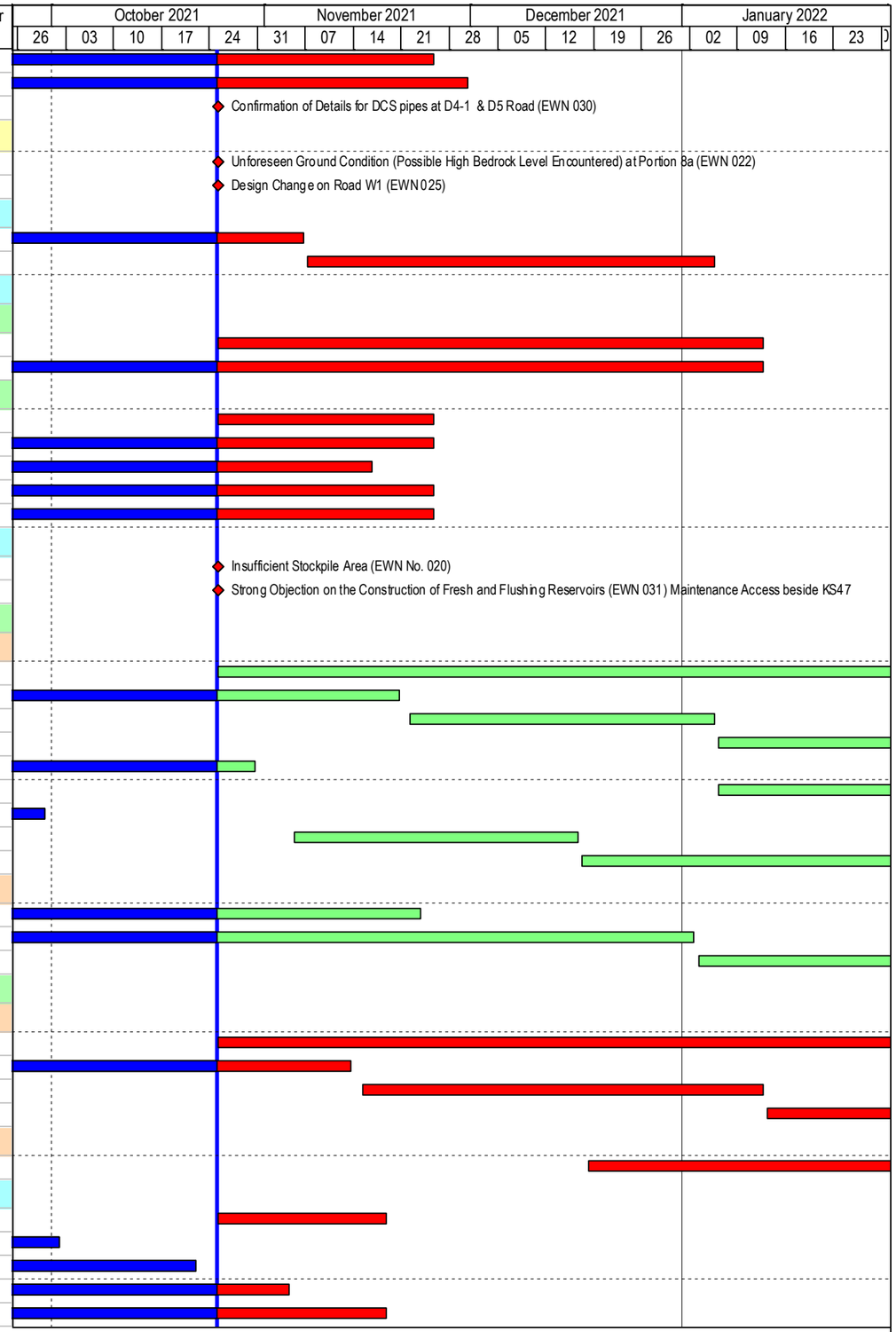
S8P9b-3057	Construction of Underground Drainage Manhole SMH KT7022A to SMH KT7021	28	21-Jul-21 A	25-Nov-21	-187	WD(6d)
S8P9b-3058	Construction of Underground Drainage Manhole SMH KT7104 to SMH KT7105	32	24-Sep-21 A	30-Nov-21	-187	WD(6d)
S8P9b-3100	Confirmation of Details for DCS pipes at D4-1 & D5 Road (EWN 030)	0		25-Oct-21*	-85	CD(7d)
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		25-Oct-21	-192	CD(7d)
S8P8a-1106	Design Change on Road W1 (EWN025)	0		25-Oct-21	-185	CD(7d)
Preparation work/Tree Survey/Site Clearance/GI						
S8P8a-1030	Ground investigation (2 / 3 GI completed) to Fresh Water Service Reservoir	12	21-Dec-20 A	06-Nov-21	-67	WD(6d)
S8P8a-1046	Verification of Ground Condition & Design Review by Project Manager (to Fresh Water Service Reservoir)	60	07-Nov-21	05-Jan-22	-81	CD(7d)
Forming Site Access and Site Formation						
Stage 1 General Excavation near Flushing Water Servie Reservior (Excavation Volume 52834 m3)						
S8P8a-1105	Construct & maintain Temporary drainage	66	25-Oct-21	12-Jan-22	-151	WD(6d)
S8P8a-1160	General excavation for remaining of Road W1	66	11-Jun-20 A	12-Jan-22	-151	WD(6d)
Stage 2 General Excavation near Fresh Water Servie Reservior (Excavation Volume 299396 m3)						
S8P8a-1208	Construct & maintain Temporary drainage	28	25-Oct-21	25-Nov-21	-34	WD(6d)
S8P8a-1220	General excavation for New Feature KS47 and adjacent road	28	01-Dec-20 A	25-Nov-21	-34	WD(6d)
S8P8a-1230	General excavation for New Feature KS49 and adjacent road	20	11-Jan-21 A	16-Nov-21	-26	WD(6d)
S8P8a-1240	General excavation for area surrounding Fresh Water Service Reservoir	28	01-Dec-20 A	25-Nov-21	-34	WD(6d)
S8P8a-1250	General excavation for remaining of Road W2	28	14-Dec-20 A	25-Nov-21	-34	WD(6d)
KD8 - complete all works for fresh water and flushing water services reservoirs, pipe laying & road						
S8K8-6000	Insufficient Stockpile Area (EWN No. 020)	0		25-Oct-21	-192	CD(7d)
S8K8-6002	Strong Objection on the Construction of Fresh and Flushing Reservoirs (EWN 031) Maintenance Access beside KS47	0		25-Oct-21	-8	CD(7d)
Construction of Kwu Tung North Flushing Water Service Reservoir (KTN FLWSR)						
Civil Works						
S8K8-1005	Construct & maintain Temporary drainage	348	25-Oct-21	23-Dec-22	23	WD(6d)
S8K8-1030.052	Construction of Outlet Chamber	24	07-Jun-21 A	20-Nov-21	23	WD(6d)
S8K8-1030.06	Construction of Base Slab bay 7 (GL 12 - 15 & GL A - G)	36	22-Nov-21	05-Jan-22	23	WD(6d)
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)	36	06-Jan-22	19-Feb-22	59	WD(6d)
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)	6	25-Sep-21 A	30-Oct-21	77	WD(6d)
S8K8-1030.25	Construction of Retaining wall at GL 15	36	06-Jan-22	19-Feb-22	23	WD(6d)
S8K8-1030.43	Construction of Roof Slab bay 2a (GL 7 - 11 & GL A - D)	0	13-Sep-21 A	30-Sep-21 A		WD(6d)
S8K8-1030.44	Construction of Roof Slab bay 3 (GL 1 - 4 & GL D - G)	36	05-Nov-21	16-Dec-21	109	WD(6d)
S8K8-1030.45	Construction of Roof Slab bay 3a (GL 1 - 4 & GL A - D)	36	17-Dec-21	31-Jan-22	109	WD(6d)
E&M Works						
S8K8-2010	Design and Approval for E&M works for KTN FLWSR	30	01-Feb-21 A	23-Nov-21	278	CD(7d)
S8K8-2020	Submission and Approval of E&M plants & materials for KTN FLWSR	70	01-Feb-21 A	02-Jan-22	238	CD(7d)
S8K8-2030	Procurement of E&M equipment for KTN FLWSR	60	03-Jan-22	03-Mar-22	238	CD(7d)
Construction of Kwu Tung North Freshwater Service Reservoir (KTN FWSR)						
Civil Works						
S8K8-3000	Construct & maintain Temporary drainage	647	25-Oct-21	28-Dec-23	0	WD(6d)
S8K8-3020	Excavation in rock (238167m3)	18	01-Dec-20 A	13-Nov-21	-157	WD(6d)
S8K8-3025	Construction of Sub soil drainage	48	15-Nov-21	12-Jan-22	-72	WD(6d)
S8K8-3030	RC structure (Conc. 9700m3, 4 gangs)	473	13-Jan-22	18-Aug-23	-72	WD(6d)
E&M Works						
S8K8-4010	Design and Approval for E&M works for KTN FWSR	160	18-Dec-21	26-May-22	-90	CD(7d)
Remaining Civil Work in Portion 8a Area A						
S8P8a-2208	Construct & maintain Temporary drainage	22	25-Oct-21	18-Nov-21	-28	WD(6d)
S8P8a-2230	Slopeworks for KS47 - Slope cutting and soil nail installation Row V + Row W (39 Nos Soil nails) + Berm & U channel	0	17-Feb-21 A	02-Oct-21 A		WD(6d)
S8P8a-2270	Slopeworks for KS47 - Slope cutting and soil nail installation Row N + Row O (68 Nos Soil nails) + Berm & U channel	0	10-Mar-21 A	22-Oct-21 A		WD(6d)
S8P8a-2290	Slopeworks for KS47 - Slope cutting and soil nail installation Row J + Row K (87 Nos Soil nails) + Berm & U channel	10	12-Apr-21 A	04-Nov-21	-28	WD(6d)
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	18-Nov-21	-28	WD(6d)



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THE 3-MONTH ROLLING PROGRAMME

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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
S8P8a-2330	Slopeworks for KS47 - Slope cutting and soil nail installation Row B + Row C (124 Nos Soil nails)	0	14-Aug-21 A	22-Oct-21 A		WD(6d)
S8P8a-2331	Slopeworks for KS47 - Slope cutting and soil nail installation Row A (23 Nos Soil nails)	0	09-Oct-21 A	22-Oct-21 A		WD(6d)
S8P8a-2336	Construct & maintain Temporary drainage	20	25-Oct-21	16-Nov-21	-26	WD(6d)
S8P8a-2338	Slopeworks for KS49 - Slope cutting and soil nail Row P + Row Q + Row R (11 Nos Soil nails) + Berm & U channel	12	03-May-21 A	06-Nov-21	-18	WD(6d)
S8P8a-2340	Slopeworks for KS49 - Slope cutting and soil nail installation Row L to Row O (62 Nos Soil nails) + Berm & U channel	12	21-May-21 A	06-Nov-21	-18	WD(6d)
S8P8a-2360	Slopeworks for KS49 - Slope cutting and soil nail installation Row I + Row J + Row K (45 Nos Soil nails) +Berm & U chann	20	03-Jun-21 A	16-Nov-21	-26	WD(6d)
S8P8a-2380	Slopeworks for KS49 - Slope cutting and soil nail installation Row E + Row F (44 Nos Soil nails)	0	02-Aug-21 A	20-Oct-21 A		WD(6d)
S8P8a-2543	Construct & maintain Temporary drainage	54	25-Oct-21	28-Dec-21	-125	WD(6d)
S8P8a-2546	Excavation for retaining wall KW06 bay 15 - bay 18 (1394m3) (4 / 4 bays complete)	0	23-Jul-21 A	04-Oct-21 A		WD(6d)
S8P8a-2548	Construction of retaining wall KW06 bay 15 - bay 18 (686m3) (1 / 4 base slab complete, 0 / 4 Stem wall complete)	54	16-Aug-21 A	28-Dec-21	-125	WD(6d)
S8P8a-2628	Construct & maintain Temporary drainage	260	15-Nov-21	30-Sep-22	-157	WD(6d)
S8P8a-2630	Excavation for retaining wall KW05 bay 1 - bay 9 (2750m3)	130	15-Nov-21	26-Apr-22	-157	WD(6d)
S8P8a-2658	Construct & maintain Temporary drainage	300	25-Oct-21	28-Oct-22	-151	WD(6d)
S8P8a-2660	Excavation for retaining wall KW11 bay 1 - bay 11 (3360m3)	120	25-Oct-21	19-Mar-22	-151	WD(6d)
Portion 8b in Area A (Soil Treatment & Install Watermains by Trenchless / Open Trench Method)						
S8P8b-1000	No Access to Part of Portion 8b near Sheung Shui Slaughter House (EWN No. 007)	0		25-Oct-21	-242	CD(7d)
S8P8b-1002	Assumed resumption date of fresh and flushing reservoirs construction due to CNE No. 006 & EWN No. 005	0		25-Oct-21	-287	CD(7d)
S8P8b-1004	Suspension of EGI works and withdrawal of TTA on Ho Sheung Heung Rd (CNE No.24)	0		25-Oct-21	-287	CD(7d)
Preparation work						
S8P8b-1010	Site clearance & Tree Felling	90	25-Oct-21	12-Feb-22	-232	WD(6d)
S8P8b-1020	Environmental ground investigation and laboratory test along Sheung Yue River (2 / 2 EGI)	0	25-Aug-21 A	31-Aug-21 A		WD(6d)
S8P8b-1022	Remaining Environmental ground investigation and laboratory test (2 / 8 EGI)	60	25-Oct-21*	05-Jan-22	-184	WD(6d)
S8P8b-1060	Tree survey and prepare tree felling and transplant report	30	03-May-21 A	27-Nov-21	-198	WD(6d)
S8P8b-1070	Approval & Acceptance of Tree Felling Application	36	28-Nov-21	02-Jan-22	-243	CD(7d)
Construction of Watermains						
Construction of watermains by trenchless method						
S8P8b-4000	Construct & maintain Temporary drainage	1027	25-Oct-21	11-Apr-25	-240	WD(6d)
S8P8b-4008	Construction of launching pit at Portion 8b near Sheung Yue River	30	29-Apr-21 A	27-Nov-21	-240	WD(6d)
S8P8b-4010	Construction of receiving pit at Portion 8b near Sheung Yue River	100	15-Dec-21	21-Apr-22	-240	WD(6d)
Section 9						
S9-1002	Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034)	0		25-Oct-21	-111	CD(7d)
Portion 12 in Area F (Soil Treatment & Interface with EMSD's Contractors)						
Preparation work/Tree Survey/Site Clearance/GI						
S9P12-1010	Tree survey and prepare tree felling and transplant report	30	25-Oct-21	27-Nov-21	-43	WD(6d)
S9P12-1012	Approval & Acceptance of Tree Felling Application	30	28-Nov-21	27-Dec-21	-51	CD(7d)
S9P12-1020	Site Clearance & Tree Felling	60	03-Jan-22	16-Mar-22	-41	WD(6d)
Section 10A						
S10A-1002	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Oct-21	181	CD(7d)
Portion 1e in Area J (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S10AP1e-1010	Tree survey and prepare tree felling and transplant report	18	04-Aug-21 A	13-Nov-21	-43	WD(6d)
S10AP1e-1012	Approval & Acceptance of Tree Felling Application	30	14-Nov-21	13-Dec-21	-53	CD(7d)
S10AP1e-1020	Site Clearance & Tree Felling	48	20-Dec-21	19-Feb-22	-45	WD(6d)
Portion 4 in Area J (Soil Treatment & Temp. Noise Barriers along Castle Peak Road)						
S10AP4-1000	Planned completion of KD9 - Portion 4	0		25-Oct-21	542	CD(7d)
Section 11						
Portion 6b in Area B (Soil Treatment & Operation of HAC Soil Treatment Plant)						
S11P6b-1002	Unstable Supply of Cement for HAC Soil Treatment (EWN 036, 038)	0		25-Oct-21	0	CD(7d)
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant						
S11P6b-2005	Construct & maintain Temporary drainage	1121	25-Oct-21	07-Aug-25	124	WD(6d)



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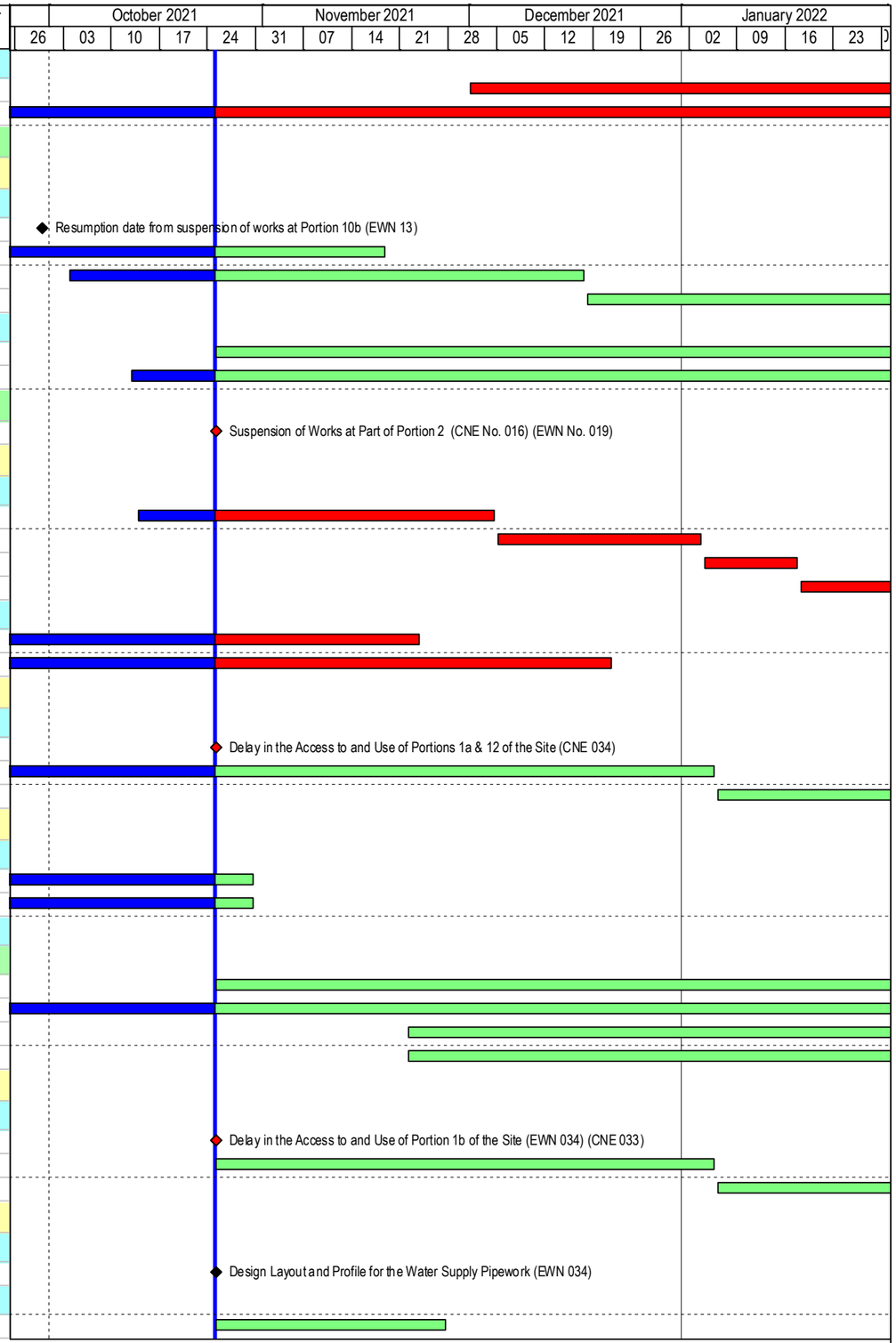
Operation and Dismantling of the Soil Treatment Plant						
S11P6b-3000	Provide treatment to Imported high arsenic-containing soil (Estimated Qty 90,000m3)	937	01-Dec-21*	28-Jan-25	0	WD(6d)
S11P6b-3010	Provide treatment to high arsenic-containing soil	975	03-Dec-20 A	08-Feb-25*	0	WD(6d)
Section 12A						
Portion 10b in Area L1 (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S12P10b-1005	Resumption date from suspension of works at Portion 10b (EWN 13)	0		30-Sep-21 A		CD(7d)
S12P10b-1012	Approval & Acceptance of Tree Felling Application	22	16-Dec-20 A	18-Nov-21	302	WD(6d)
S12P10b-1020	Site Clearance & Tree Felling	47	04-Oct-21 A	17-Dec-21	277	WD(6d)
S12P10b-1040	Prepare Arsenic Assessment Report	36	18-Dec-21	04-Feb-22	277	WD(6d)
Civil Work						
S12P10b-3000	Construct & maintain Temporary drainage	551	25-Oct-21	01-Sep-23	277	WD(6d)
S12P10b-3010	Underground utilities & Drainage work (158m drain and 5 M/H)	491	13-Oct-21 A	21-Jun-23	277	WD(6d)
Section 13						
S13-1012	Suspension of Works at Part of Portion 2 (CNE No. 016) (EWN No. 019)	0		25-Oct-21	-86	CD(7d)
Portion 2 in Area N (Soil Treatment, Slope, Drainage & Pak Shek Au Junction)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P2-1014	Tree survey and prepare tree felling and transplant report (STPRP for Portion 2-Slope)	36	14-Oct-21 A	04-Dec-21	-70	WD(6d)
S13P2-1016	Approval & Acceptance of Tree Felling Application (STPRP for Portion 2-Slope)	30	05-Dec-21	03-Jan-22	-85	CD(7d)
S13P2-1020	Implement TTMS	12	04-Jan-22	17-Jan-22	-69	WD(6d)
S13P2-1030	Site clearance	60	18-Jan-22	31-Mar-22	-69	WD(6d)
Civil Work						
S13P2-2510	Revised Slope KS38 - Approval & Acceptance of Initial Tree Survey report	30	15-Jan-21 A	23-Nov-21	-61	CD(7d)
S13P2-2530	Revised Slope KS38 - Approval & Acceptance of tree felling and transplant report	28	16-Apr-21 A	21-Dec-21	-61	CD(7d)
Portion 1a in Area N (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P1a-0900	Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034)	0		25-Oct-21	-111	CD(7d)
S13P1a-1000	Tree survey and prepare tree felling and transplant report	60	04-Aug-21 A	05-Jan-22	415	WD(6d)
S13P1a-1002	Approval & Acceptance of Tree Felling Application	30	06-Jan-22	04-Feb-22	513	CD(7d)
Portion 7 in Area N (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P7-1030	Prepare Arsenic Assessment Report	6	16-Jul-20 A	30-Oct-21	652	WD(6d)
S13P7-1040	Arsenic Treatment Plan	6	09-Nov-20 A	30-Oct-21	652	WD(6d)
Civil Work						
Underground Utilities						
S13P7-3000	Construct & maintain Temporary drainage	540	25-Oct-21	19-Aug-23	652	WD(6d)
S13P7-3011	Underground drainage (309m drain and 8 M/H)	338	18-Jun-21 A	19-Dec-22	652	WD(6d)
S13P7-3012	Underground sewage (about 150m and 3 M/H)	400	22-Nov-21	28-Mar-23	652	WD(6d)
S13P7-3013	Underground watermains	376	22-Nov-21	28-Feb-23	656	WD(6d)
Portion 1b in Area N (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P1b-0900	Delay in the Access to and Use of Portion 1b of the Site (EWN 034) (CNE 033)	0		25-Oct-21	-111	CD(7d)
S13P1b-1000	Tree survey and prepare tree felling and transplant report	60	25-Oct-21	05-Jan-22	644	WD(6d)
S13P1b-1002	Approval & Acceptance of Tree Felling Application	30	06-Jan-22	04-Feb-22	793	CD(7d)
Portion 6a & 5 in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P6a-1003	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0		25-Oct-21	751	CD(7d)
Soil Treatment						
S13P6a-2010	Remove soil (original assumed 566m3) (1 / 1 EGI completed, interim soil to be excavated / treated : 0m3 /0m3) Clean Soil	30	25-Oct-21*	27-Nov-21	681	WD(6d)



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S13P6a-2020	Backfilling to the formation levels	60	29-Nov-21	12-Feb-22	681	WD(6d)
Civil Work						
S13P6a-3000	Construct & maintain Temporary drainage	575	25-Oct-21	29-Sep-23	611	WD(6d)
S13P6a-3012	Drainage works across DJ watermain	160	25-Oct-21	12-May-22	611	WD(6d)
Portion 1c in Area N (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P1c-1010	Site clearance	60	06-Jan-22	19-Mar-22	511	WD(6d)
Portion 9a in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P9a-1010	Site clearance	60	06-Jan-22	19-Mar-22	645	WD(6d)
Section 14						
Portion 7 in Area S3 (Soil Treatment & Operation of HAC Soil Treatment Plant)						
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant						
S14P7S3-2010	Set up, testing and commissioning high arsenic-containing soil treatment plant (KD4) (CSD for Treated soil Stock pile)	4	06-Oct-20 A	28-Oct-21	0	WD(6d)
Operation and Dismantling of the Soil Treatment Plant						
S14P7S3-3010	Stock Pile of Treated Soil	858	20-Nov-20 A	19-Sep-24	0	WD(6d)
Portion 16 in Area Q (Soil Treatment & Construction of CLC)						
S14P16-1000	Planned Completion Date of KD7	0		30-Nov-21	-208	CD(7d)
KD7 - Complete the construction works of Community Liaison Centre in Area Q						
S14P16-3050	BS works / ABWF works / Internal cleaning / Moving-in furniture / FS Installation	32	10-May-21 A	30-Nov-21	-172	WD(6d)
S14P16-3060	FS Notification & Confirmation for CLC FS Plan	0		30-Nov-21	-208	CD(7d)
Portion 7 in Area T1, T2, T3 (Soil Treatment & Temp. Noise Barrier along Castle Peak Road)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P7T-1001	Late Possession of Site of Part of Portions 7 and 10a (in Area H, H1, T1, T2 & T3) (CNE No. 001)	0		25-Oct-21	472	CD(7d)
S14P7T-1010	Tree survey and prepare tree felling and transplant report (Area T1)	10	23-Nov-20 A	04-Nov-21	373	WD(6d)
S14P7T-1020	Site clearance (Area T1)	30	05-Nov-21	09-Dec-21	399	WD(6d)
S14P7T-1022	Approval & Acceptance of Tree felling Application (Area T1)	30	05-Nov-21	04-Dec-21	461	CD(7d)
S14P7T-1024	Tree felling works (Area T1)	30	06-Dec-21	12-Jan-22	373	WD(6d)
Land Contamination Assessment						
S14P7T-1063	Submit and acceptance of Contamination Assessment Report (CAR) & Remediation Action Plan (RAP)	14	04-Dec-20 A	09-Nov-21	235	WD(6d)
KD9 - Complete the temporary noise barriers along Castle Peak Road in Area T1, T2, T3, H, H1, I, J						
S14P7T-3000	Construct temporary noise barrier along Castle Peak Road in Area T2 and T3 (100m)	24	26-Apr-21 A	20-Nov-21	245	WD(6d)
Portion 1b in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P1b-0900	Delay in the Access to and Use of Portion 1b of the Site (EWN 034) (CNE 033)	0		25-Oct-21	-111	CD(7d)
S14P1b-1010	Tree survey and prepare tree felling and transplant report	18	25-Oct-21	13-Nov-21	749	WD(6d)
S14P1b-1015	Approval & Acceptance of Tree felling Application	30	14-Nov-21	13-Dec-21	927	CD(7d)
S14P1b-1020	Site Clearance & Tree Felling	48	20-Dec-21	19-Feb-22	747	WD(6d)
Portion 1c & 9a in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P1c-1010	Tree survey and prepare tree felling and transplant report	18	06-Jan-22	26-Jan-22	653	WD(6d)
Portion 6a in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P6a-1040	Prepare Arsenic Assessment Report	36	25-Oct-21	04-Dec-21	879	WD(6d)
S14P6a-1050	Arsenic Treatment Plan	36	06-Dec-21	19-Jan-22	879	WD(6d)
Portion 6b in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P6b-1017	Tree felling	30	25-Oct-21	27-Nov-21	843	WD(6d)



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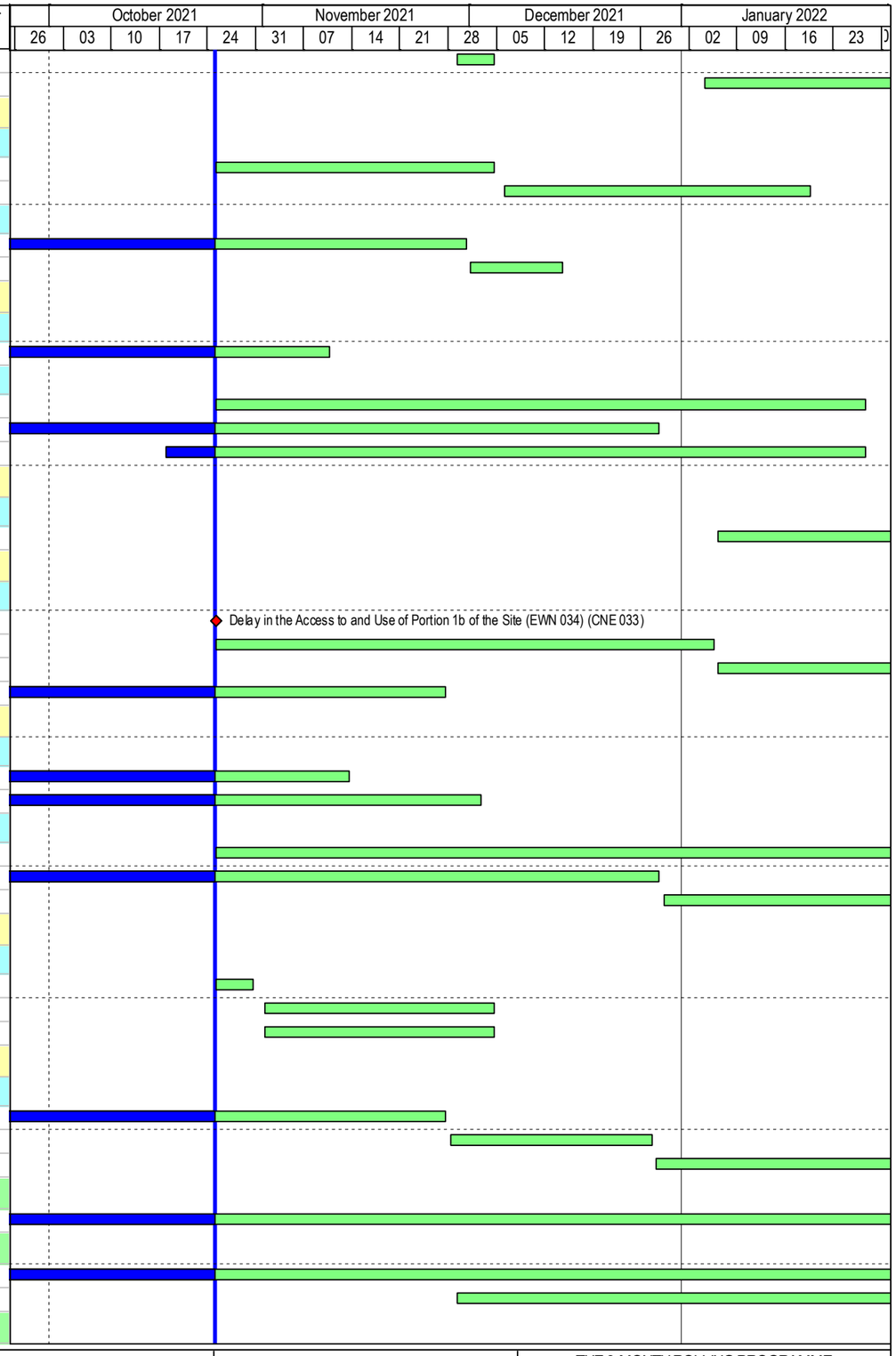
S14P6b-1025	Ground investigation (0 / 1 GI completed)	6	29-Nov-21	04-Dec-21	843	WD(6d)
S14P6b-1040	Prepare Arsenic Assessment Report	36	04-Jan-22	17-Feb-22	821	WD(6d)
Portion 1f in Area R (Soil Treatment & Construction of Interim CLC)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P1f-1040	Prepare Arsenic Assessment Report	36	25-Oct-21	04-Dec-21	939	WD(6d)
S14P1f-1050	Arsenic Treatment Plan	36	06-Dec-21	19-Jan-22	939	WD(6d)
Interim Community Liaison Centre (CLC)						
S14P1f-2030	Occupation of interim CLC	32	18-May-20 A	30-Nov-21	1116	CD(7d)
S14P1f-2040	Dismantling of interim CLC	12	01-Dec-21	14-Dec-21	907	WD(6d)
Portion 9c in Area S1 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P9c-1014	Tree felling	15	19-Jul-21 A	10-Nov-21	960	WD(6d)
Soil Treatment						
S14P9c-2000	Construct & maintain Temporary drainage	79	25-Oct-21	27-Jan-22	1166	WD(6d)
S14P9c-2010	Remove soil (original assumed 7862m3) (3 / 3 EGI completed, interim soil to be excavated / treated : 30000m3 / 30000m3)	54	07-Jun-21 A	28-Dec-21	921	WD(6d)
S14P9c-2020	Backfilling to the formation levels	25	18-Oct-21 A	27-Jan-22	1166	WD(6d)
Portion 13 in Area S4 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P13-1010	Tree survey and prepare tree felling and transplant report	60	06-Jan-22	19-Mar-22	177	WD(6d)
Portion 1b (Soil Treatment & Civil Works)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P1b-1000	Delay in the Access to and Use of Portion 1b of the Site (EWN 034) (CNE 033)	0		25-Oct-21	-111	CD(7d)
S14P1b-1100	Tree survey and prepare tree felling and transplant report	60	25-Oct-21	05-Jan-22	271	WD(6d)
S14P1b-1102	Approval & Acceptance of Tree felling Application	30	06-Jan-22	04-Feb-22	332	CD(7d)
S14P1b-1106	Ground investigation (0 / 2 GI completed)	30	25-Aug-21 A	27-Nov-21	421	WD(6d)
Portion 3 (Soil Treatment & Civil Works)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P3-1102	Approval & Acceptance of Tree felling Application	20	13-May-21 A	13-Nov-21	984	CD(7d)
S14P3-1104	Site clearance & Tree felling	34	03-Jun-21 A	02-Dec-21	785	WD(6d)
Soil Treatment						
S14P3-1200	Construct & maintain Temporary drainage	130	25-Oct-21	31-Mar-22	785	WD(6d)
S14P3-1202	Remove soil (original assumed 4061m3) (2 / 2 EGI completed, interim soil to be excavated / treated : 16200m3 / 7200m3)	54	03-Jun-21 A	28-Dec-21	771	WD(6d)
S14P3-1204	Backfilling to the formation levels	90	29-Dec-21	21-Apr-22	771	WD(6d)
Portion 5 (Soil Treatment & Civil Works)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P5-1107	Environmental ground investigation and laboratory test within MTR zone (1 / 1 EGI)	6	25-Oct-21	30-Oct-21	731	WD(6d)
S14P5-1108	Prepare Arsenic Assessment Report	30	01-Nov-21	04-Dec-21	731	WD(6d)
S14P5-1110	Arsenic Treatment Plan	30	01-Nov-21	04-Dec-21	731	WD(6d)
Portion 1e (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P1e-2000	Tree survey and prepare tree felling and transplant report	30	04-Aug-21 A	27-Nov-21	765	WD(6d)
S14P1e-2010	Approval & Acceptance of Tree felling Application	30	28-Nov-21	27-Dec-21	948	CD(7d)
S14P1e-2020	Site clearance & Tree felling	60	28-Dec-21	11-Mar-22	768	WD(6d)
Section 15						
S15-1000	Presevation and protection of tree	1508	06-Dec-19 A	10-Dec-25	27	CD(7d)
Section 18 (Subject to excision)						
S18-1040	Watermain laying work in Portion 5	314	20-Sep-21 A	17-Feb-23	70	WD(6d)
S18-1050	Watermain laying work in Portion 6a & 6b	428	29-Nov-21	12-May-23	329	WD(6d)
Section 20 (Subject to excision)						



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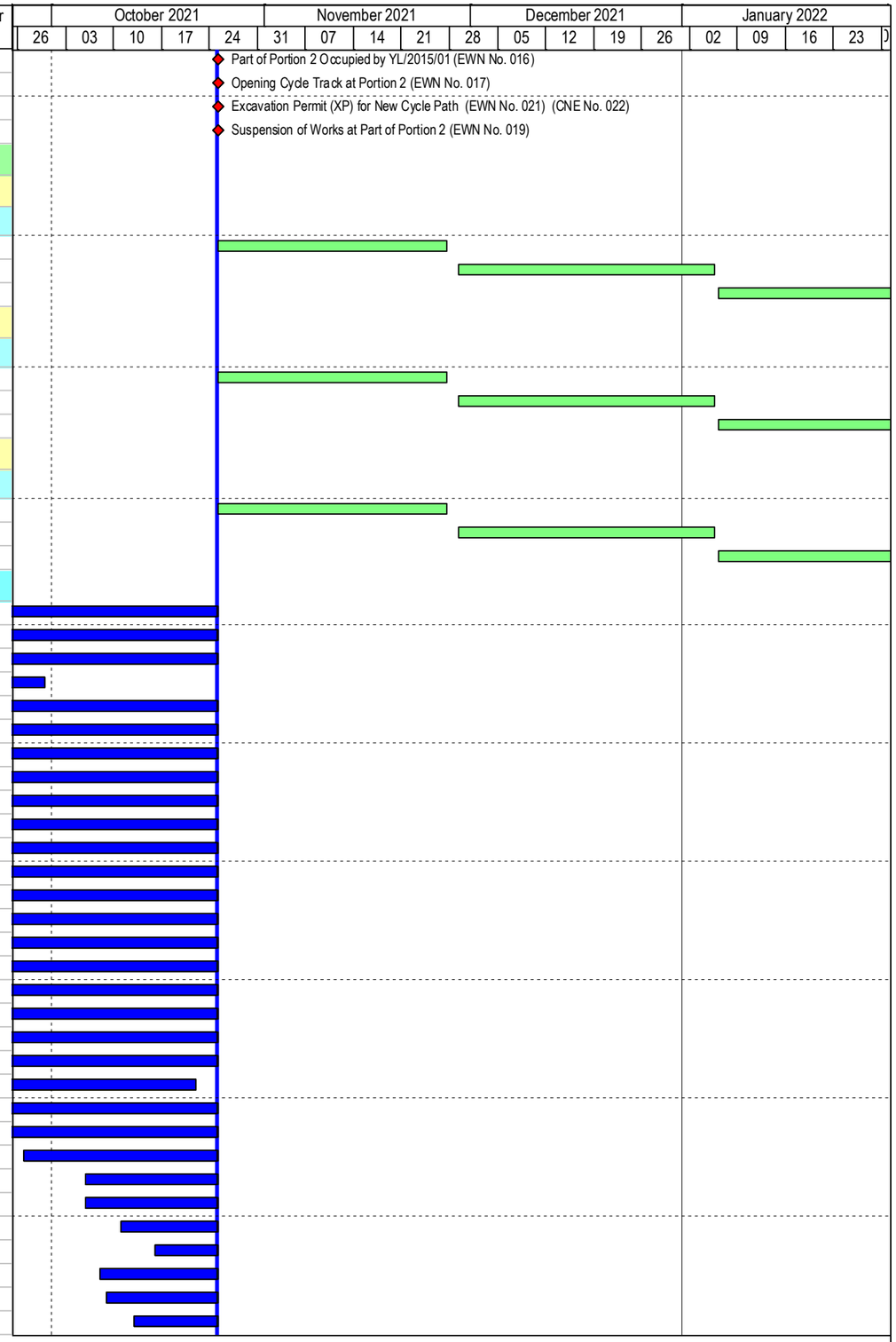
S20-1012	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016)	0		25-Oct-21	-61	CD(7d)
S20-1016	Opening Cycle Track at Portion 2 (EWN No. 017)	0		25-Oct-21	-61	CD(7d)
S20-1018	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)	0		25-Oct-21	-61	CD(7d)
S20-1020	Suspension of Works at Part of Portion 2 (EWN No. 019)	0		25-Oct-21	-61	CD(7d)
Section 21 (Subject to excision)						
Portion 1b in Area M (Soil Treatment)						
Preparation work						
S21P1b-1010	Tree survey and prepare tree felling and transplant report	30	25-Oct-21	27-Nov-21	744	WD(6d)
S21P1b-1012	Approval & Acceptance of Tree felling Application	30	29-Nov-21	05-Jan-22	744	WD(6d)
S21P1b-1020	Site Clearance & Tree Felling	60	06-Jan-22	19-Mar-22	744	WD(6d)
Portion 1d in Area M (Soil Treatment & Demolition of Existing CLC)						
Preparation work						
S21P1d-1010	Tree survey and prepare tree felling and transplant report	30	25-Oct-21	27-Nov-21	744	WD(6d)
S21P1d-1012	Approval & Acceptance of Tree felling Application	30	29-Nov-21	05-Jan-22	744	WD(6d)
S21P1d-1020	Site Clearance & Tree Felling	60	06-Jan-22	19-Mar-22	744	WD(6d)
Portion 11a in Area M (Soil Treatment)						
Preparation work						
S21P11a-1010	Tree survey and prepare tree felling and transplant report	30	25-Oct-21	27-Nov-21	739	WD(6d)
S21P11a-1012	Approval & Acceptance of Tree felling Application	30	29-Nov-21	05-Jan-22	739	WD(6d)
S21P11a-1020	Site Clearance & Tree Felling	60	06-Jan-22	19-Mar-22	739	WD(6d)
9.0 - Major EWN / CNE						
EC-1006	Strong Objection on the Construction of Service Reservoirs at Portions 8a & 8b (CNE No. 006) (EWN No. 005)	0	18-Mar-20 A	25-Oct-21	-287	CD(7d)
EC-1008	No Access to Part of Portion 8b near Sheung Shui Slaughter House (EWN No. 007)	0	06-May-20 A	25-Oct-21	-242	CD(7d)
EC-1014	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016) (CNE No. 022)	0	23-Dec-19 A	25-Oct-21	-61	CD(7d)
EC-1016	Suspension of Works at Portion 10b (EWN No. 013)	0	02-Jul-20 A	30-Sep-21 A		CD(7d)
EC-1018	Opening of Cycle Track at Portion 2 and 10a (EWN No. 017) (CNE No. 022) (CNE 030)	0	04-Aug-20 A	25-Oct-21	-522	CD(7d)
EC-1021	Removal of Existing CLP Facilities - (both Overhead and Underground) within Portion 5, 6a, 7, 9b and 10a (EWN No. 018)	0	02-Apr-20 A	25-Oct-21	-433	CD(7d)
EC-1026	Handling of Unlawful Occupied Property Affected by the Works (CNE No. 014)	0	21-Aug-20 A	25-Oct-21	1900	CD(7d)
EC-1027	Handling of Unlawful Occupied Property Affected by the Works within the SIte (CNE No. 015)	0	31-Aug-20 A	25-Oct-21	1900	CD(7d)
EC-1028	Suspension of Works at Part of Portion 2 (CNE No. 016) (EWN No. 019)	0	31-Aug-20 A	25-Oct-21	-522	CD(7d)
EC-1029	Temporary Stockpile at Portion 5 and Additional Land D (EWN No. 020) (CNE No. 020, 037)	0	15-Sep-20 A	25-Oct-21	-192	CD(7d)
EC-1030	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022, 030, 038)	0	19-Oct-20 A	25-Oct-21	-522	CD(7d)
EC-1032	Unforeseen Ground Condition (Possible High Bedrock Level Encountered) at Portion 8a (EWN 022)	0	13-Nov-20 A	25-Oct-21	-192	CD(7d)
EC-1036	Suspension of EGI works and withdrawal of TTA on Ho Sheung Heung Rd (CNE No.24)	0	08-Jan-21 A	25-Oct-21	-287	CD(7d)
EC-1039	Design Change on Road W1 (EWN 025)	0	22-Mar-21 A	25-Oct-21	-185	CD(7d)
EC-1040	Temporary Stockpile in Area C1 (EWN 027)	0	31-May-21 A	25-Oct-21	-56	CD(7d)
EC-1041	Conflict between Existing DAV Manhole and Road Kerb Line (EWN 029)	0	21-May-21 A	25-Oct-21	165	CD(7d)
EC-1042	Details of DCS pipe at D4-1 & D5 Road (EWN 030)	0	21-May-21 A	25-Oct-21	-85	CD(7d)
EC-1043	Strong Objection on the Construction of Fresh and Flushing Reservoir at Portions 8a and 8b (EWN 031) Maintenance Access	0	09-Jun-21 A	25-Oct-21	-8	CD(7d)
EC-1045	Delay in the Access to and Use of Portion 1b of the Site (CNE 033)	0	06-Jul-21 A	25-Oct-21	-111	CD(7d)
EC-1046	Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034)	0	06-Jul-21 A	25-Oct-21	-278	CD(7d)
EC-1048	Additional Temporary Rd Diversion at the Junction of Alternative Access for Po Lau Rd and Castle Peak Rd (CNE 030)	0	28-May-21 A	22-Oct-21 A		CD(7d)
EC-1049	Entrustment of Works for Installation of District Cooling System (DCS) pipelines along Road D4-1 (EWN 033)	0	18-Aug-21 A	25-Oct-21	1900	CD(7d)
EC-1050	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0	17-Sep-21 A	25-Oct-21	-190	CD(7d)
EC-1051	Unstable Supply of Cement for HAC Soil Treatment (EWN 036, 038)	0	27-Sep-21 A	25-Oct-21	0	CD(7d)
EC-1052	Shortage of Cement Supply due to "Energy Consumption Dual Control Policy" (EWN 039)	0	06-Oct-21 A	25-Oct-21	1900	CD(7d)
EC-1053	Potential Delay on Production and Supply of Precast Concrete Pipes (EWN 040)	0	06-Oct-21 A	25-Oct-21	-405	CD(7d)
EC-1054	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041)	0	11-Oct-21 A	25-Oct-21	-315	CD(7d)
EC-1055	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042)	0	16-Oct-21 A	25-Oct-21	-315	CD(7d)
EC-1056	Inclement Weather on 8th October 2021 (CNE 036)	0	08-Oct-21 A	25-Oct-21	1900	CD(7d)
EC-1057	Tropical Cyclone Warning Signal No.8 on 9th October 2021 (CNE 039)	0	09-Oct-21 A	25-Oct-21	1900	CD(7d)
EC-1058	Tropical Cyclone Warning Signal No.8 on 13th October 2021 (CNE 040)	0	13-Oct-21 A	25-Oct-21	1900	CD(7d)



Build King – Richwell Engineering Joint Venture

Planned Work
Critical Work
Actual Work
Milestone
Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2021-10)

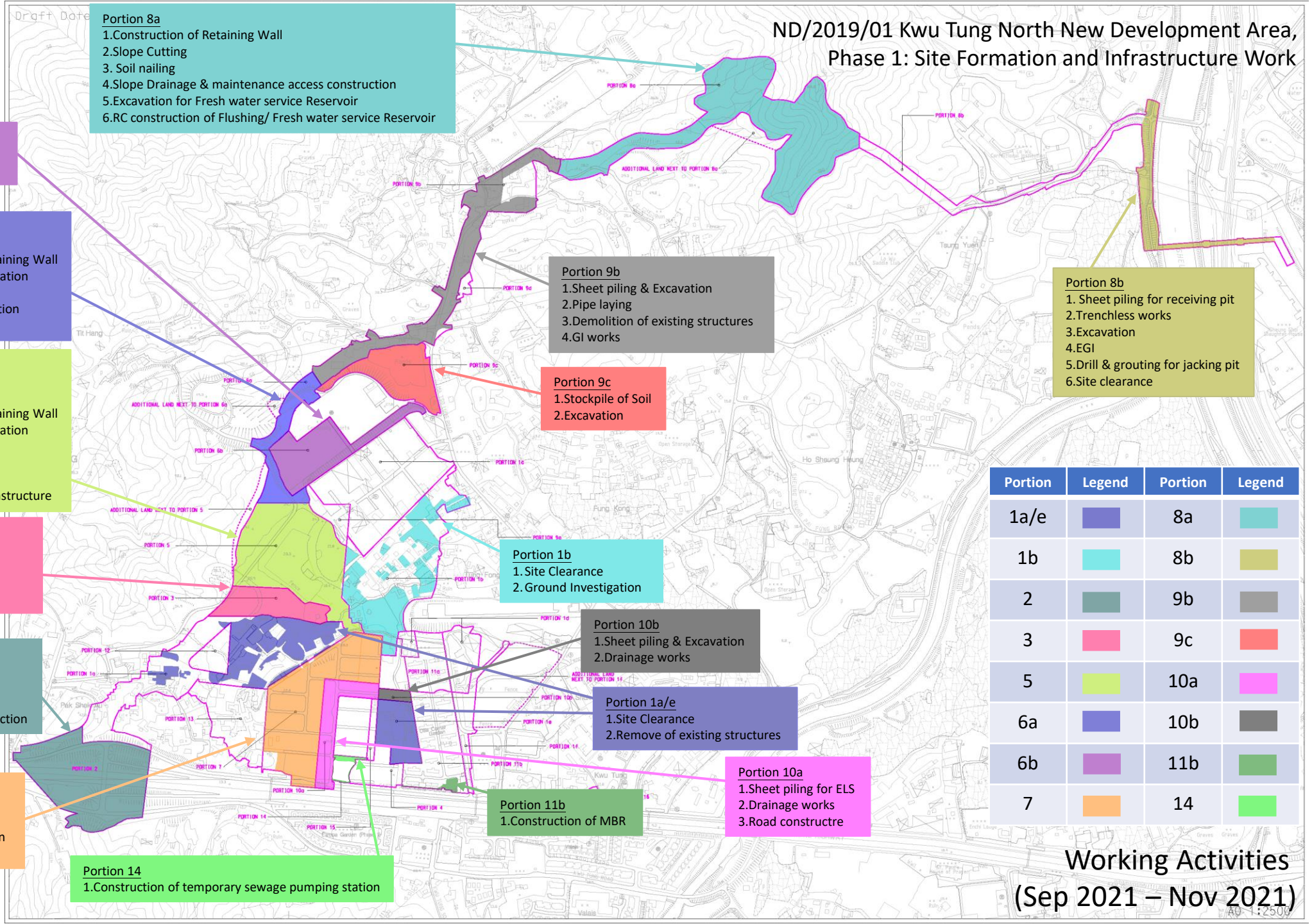
Data Date: 25-Oct-21 **Run Date: 30-Oct-21**

Project ID: ND201901-RP-20.0
Lauyout: ND201901-3MRP with logo

THE 3-MONTH ROLLING PROGRAMME

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

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



Portion 8a
1.Construction of Retaining Wall
2.Slope 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

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.Stockpile of Soil
3.Construction of Retaining Wall
4.Sheet piling & Excavation
5.Drainage works
6.Tree Felling
7.Backfilling
8.Temporary road constructure

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

Portion 2
1.Site Clearance
2.Ground Investigation
3.Tree Felling
4.Temporary road construction

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

Portion 14
1.Construction of temporary sewage pumping station

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

Portion 9c
1.Stockpile of Soil
2.Excavation

Portion 1b
1. Site Clearance
2. Ground Investigation

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

Portion 1a/e
1.Site Clearance
2.Remove of existing structures

Portion 11b
1.Construction of MBR

Portion 10a
1.Sheet piling for ELS
2.Drainage works
3.Road constructre

Portion 8b
1. Sheet piling for receiving pit
2.Trenchless works
3.Excavation
4.EGI
5.Drill & grouting for jacking pit
6.Site clearance

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

Working Activities (Sep 2021 – Nov 2021)

Construction Programme of ND/2019/02

Chun Wo - Kwan Lee JOINT VENTURE

Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish
ND-2019-02 KTNNDA Phase 1:Roads and Drains between Kwu Tong North New Development & Shek Wu Hui (Ext					
Programme Data					
Preliminaries					
Works in Section 1					
Portion 1 - Road & Drains					
Drainage Installation from KT2003 to KT6003A by Pipejacking					
Shaft at SMH_KT2003					
ELS					
P1-1530	ELS for Receiving Pit	60	49	05-Jun-21 A	27-Nov-21
Launching shaft at SMH_KT6003A					
ELS					
P1-1210	Excavation for Launching Shaft at SMH_KT6003A	87	49	16-Aug-21 A	27-Nov-21
Inspection shaft at SMH_KT6004A					
Sewer Installation from KT1.23 to KT1.26A by Pipejacking					
Pipe-Jacking (KT1.26A to KT1.23)					
P1-1320	Set up Pipe jacking TBM (For DN800 Pipe)	21	21	06-Nov-21	30-Nov-21
P1-1330	Jacking from FMH_KT1.26A to FMH_KT1.23 (DN800 Pipe) (~3m / day)	39	39	01-Dec-21	17-Jan-22
Works in Section 2					
Portion 2 - Road & Drains					
Pre-construction works					
Drainage Installation from KT6008 to KT6005 by pipejacking					
Portion 4 - Road & Drains					
Portion 5 - Sewage Rising Main					
Portion 7 - Kwu Tung North Sewage Pumping station					
Sewage Pumping Station					
Foundation					
P7-2020	Pile Load Test	32	0	17-Aug-21 A	30-Aug-21 A
P7-2030	Proof Drilling	6	0	30-Aug-21 A	01-Sep-21 A
Excavation					
P7-3000	Sheetpile installation (~135m; approx. 675nos;)	24	0	15-Sep-21 A	23-Sep-21 A
P7-3100	Stop Works Instruction from PM (MTRC Complaints Issue)	11	6	24-Sep-21 A	07-Oct-21
P7-3070	Soft Excavation to -8mPD (~1500m3)	10	10	30-Sep-21	12-Oct-21
P7-3110	Sheetpile installation (~135m; approx. 675nos;)	29	29	08-Oct-21	11-Nov-21
P7-3010	Soft Excavation to 1st strut level (Area 1 & 2) (~950cu.m)	11	11	12-Nov-21	24-Nov-21
P7-3015	Installation of strut S1 for Area 1 & 2	6	6	26-Nov-21	02-Dec-21
P7-3020	Soft Excavation to 2nd strut level (Area 1 & 2, ~1000cu.m)	12	12	03-Dec-21	16-Dec-21
P7-3025	Installation of strut S2 for Area 1 & 2	6	6	18-Dec-21	24-Dec-21
P7-3120	Soft Excavation to -0.3mPD (Area 1 & 2, ~2563cu.m)	23	23	27-Dec-21	22-Jan-22
Works in Section 3					
Portion 8 - Roads & Drains					
Portion 9 - Footbridge					
Footbridge Construction					
North River Embankment					



Actual Work
Remaining Activitiy
Milestone

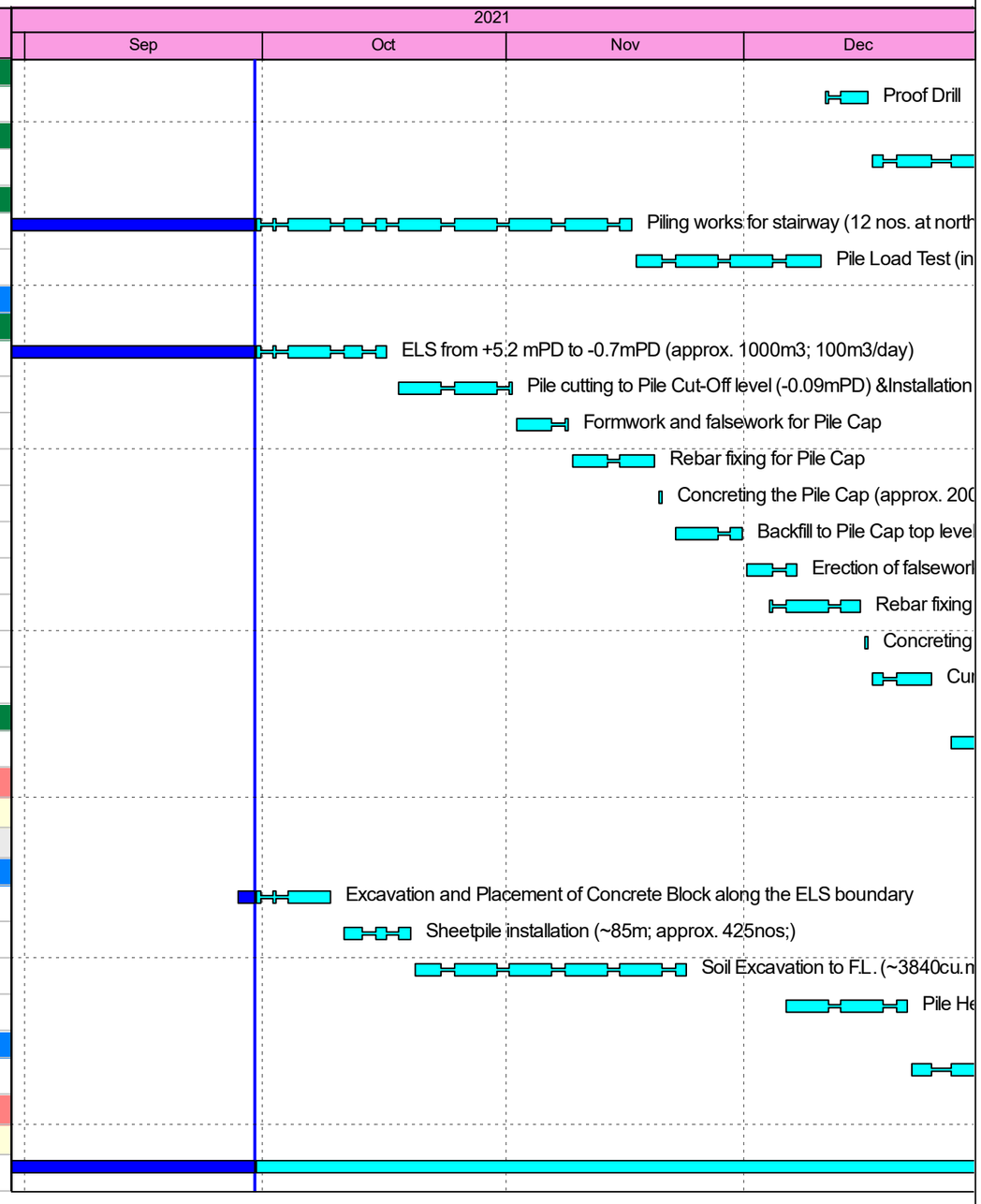
3-Months Rolling Programme (Oct to Dec 2021)

1128

Date	Revision	Checked	Approved
30-Sep-21	0	ZL	AC

Chun Wo - Kwan Lee JOINT VENTURE

Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish
Piling works in Existing Feature: 2SE-B/FR107 (North River Embankment)					
P9-1095	Proof Drill	5	5	11-Dec-21	16-Dec-21
Abutment FK2-01M					
P9-1110	ELS from +5.2 mPD to -0.7mPD (approx. 1000m3; 100m3/day)	30	30	17-Dec-21	22-Jan-22
Piling Works for Footway Ramp					
P9-1440	Piling works for stairway (12 nos. at northern bridge, 1 pile/week/rig, 1 rig)	72	39	25-Aug-21 A	16-Nov-21
P9-1450	Pile Load Test (including set up)	21	21	17-Nov-21	10-Dec-21
South River Embankment					
Abutment FK2-04M					
P9-1250	ELS from +5.2 mPD to -0.7mPD (approx. 1000m3; 100m3/day)	47	13	08-Jun-21 A	16-Oct-21
P9-1260	Pile cutting to Pile Cut-Off level (-0.09mPD) &Installation of Capping Plate	13	13	18-Oct-21	01-Nov-21
P9-1270	Formwork and falsework for Pile Cap	6	6	02-Nov-21	08-Nov-21
P9-1280	Rebar fixing for Pile Cap	10	10	09-Nov-21	19-Nov-21
P9-1290	Concreting the Pile Cap (approx. 200m3)	1	1	20-Nov-21	20-Nov-21
P9-1350	Backfill to Pile Cap top level	8	8	22-Nov-21	30-Nov-21
P9-1300	Erection of falsework for Abutment Wall	6	6	01-Dec-21	07-Dec-21
P9-1310	Rebar fixing for Abutment wall	10	10	04-Dec-21	15-Dec-21
P9-1320	Concreting the Abutment wall (approx. 70m3)	1	1	16-Dec-21	16-Dec-21
P9-1330	Curing & Remove Formwork & Falsework	7	7	17-Dec-21	24-Dec-21
Superstructure					
P9-1640	Falsework & formwork erection of Pier	13	13	27-Dec-21	11-Jan-22
Works in Section 4					
Portion 10 - Visitor Centre					
Visitor Centre					
Excavation					
P10-2030	Excavation and Placement of Concrete Block along the ELS boundary	10	8	28-Sep-21 A	09-Oct-21
P10-2040	Sheetpile installation (~85m; approx. 425nos;)	7	7	11-Oct-21	19-Oct-21
P10-2050	Soil Excavation to F.L. (~3840cu.m)	30	30	20-Oct-21	23-Nov-21
P10-2060	Pile Head treatment and Clapping Installation	14	14	06-Dec-21	21-Dec-21
Substructure and Retaining Wall					
P10-2110	Pile Cap & Base slab Construction	60	60	22-Dec-21	07-Mar-22
Works in Section 5					
Portion 11 - Village Resite Area					
P11-1005	Temporary Storage Area	650	562	01-Dec-20 A	14-Apr-23



Actual Work
Remaining Activitiy
Milestone

3-Months Rolling Programme (Oct to Dec 2021)

1128

Date	Revision	Checked	Approved
30-Sep-21	0	ZL	AC

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

LEGEND:

SITE BOUNDARY

N

WA2

SHEET 1 OF 10
SHEET 2 OF 10
SHEET 3 OF 10
SHEET 4 OF 10
SHEET 5 OF 10
SHEET 6 OF 10
SHEET 7 OF 10
SHEET 8 OF 10
SHEET 9 OF 10
SHEET 10 OF 10

Portion 1

Portion 1 (LP, ELS and Pipe Jacking)

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

Footbridge (Portion 9N, Pile cap)

Portion 1 (RP, ELS and Pipe Jacking)

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AECOM

PROJECT 項目

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

CONTRACT TITLE:

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

CLIENT 業主

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

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

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

STATUS 階段

SCALE 比例
A1 1 : 5000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖

PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/02

SHEET TITLE 圖紙名稱
KEY PLAN

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

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

Construction Programme of ND/2019/03

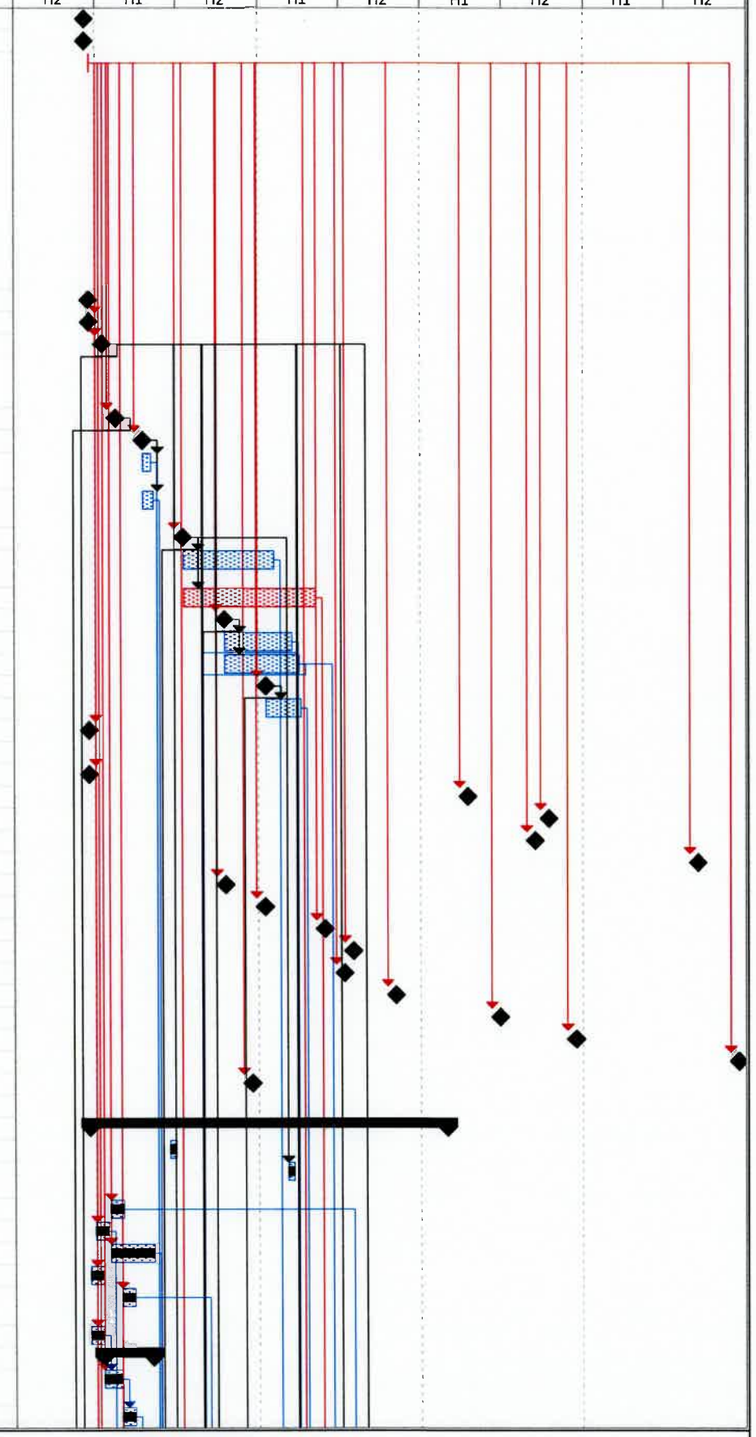
Contract No. ND/2019/03

Sang Hing - Kuly Joint Venture

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

Project Programme of the Works

ID		Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
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 ...**	-248 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	),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	36 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	211 days	0%	
15		Delay of Site Access Date: Portion 9D	151 days	Mon 20/10/19	Thu 21/3/18	14	222,225	1050.1 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	211 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	-248 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	100 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**	**75%**	
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: October 2021

Data Date : 2021-10-3

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

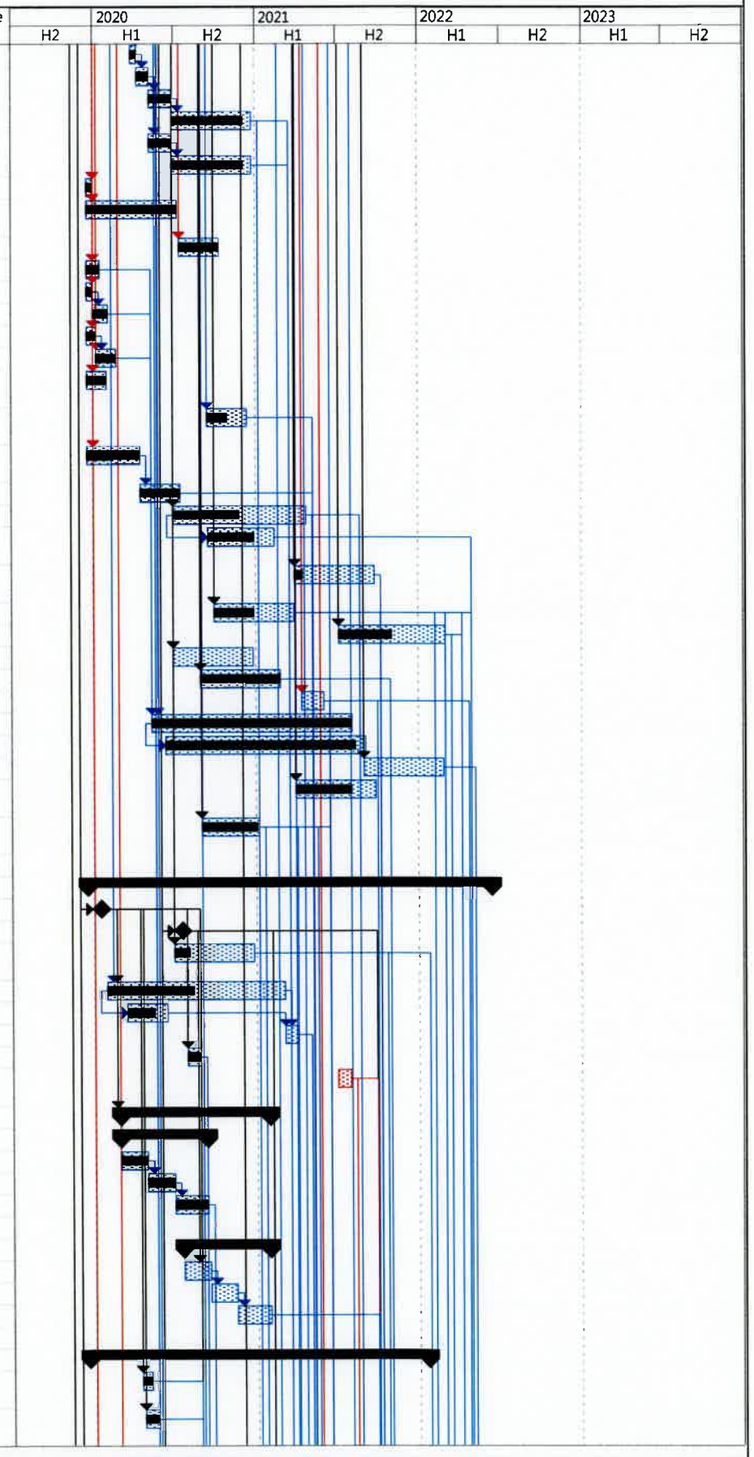
Contract No. ND/2019/03

Sang Hing - Kuly Joint Venture

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

Project Programme of the Works

ID		Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
49	✓	Submission of Habitat Record	14 days	Sun 20/3/29	Sat 20/4/11	48	50	0 days	100%	
50	✓	Approval of Habitat Survey Record	28 days	Sun 20/4/12	Sat 20/5/9	49	53,51	0 days	100%	
51	✓	Prepare and Submit Wetland Restoration Proposal	50 days	Sun 20/5/10	Sun 20/6/28	50	52	0 days	100%	
52		Approval of Wetland Restoration Proposal	180 days	Mon 20/6/29	Fri 20/12/25	51	225,242,261,287	207 days	90%	
53	✓	Prepare and Submit Wetland Creation Proposal	50 days	Sun 20/5/10	Sun 20/6/28	50	54	0 days	100%	
54		Approval of Wetland Cretation Proposal	180 days	Mon 20/6/29	Fri 20/12/25	53	225,242,261,287	207 days	90%	
55	✓	Prepare and Submit Ecological Protection Plan	14 days	Fri 19/12/20	Thu 20/1/2	3		0 days	100%	
56	✓	Prepare, Submit and Approval of Maintenance Proposal for Stage 1 Maintenance Works	204 days	Fri 19/12/20	Fri 20/7/10	3		0 days	100%	
57	✓	Prepare, submit & Approve G.I. Contractor	90 days	Wed 20/7/15	Mon 20/10/12	3		0 days	100%	
58	✓	Prepare and submit Smart Card Sysytem	30 days	Fri 19/12/20	Sat 20/1/18	3	75	0 days	100%	
59	✓	Prepare, submit Draft Safety Plan	14 days	Fri 19/12/20	Thu 20/1/2	3	60	0 days	100%	
60	✓	Review & Approve Safety Plan	35 days	Fri 20/1/3	Thu 20/2/6	59	75	0 days	100%	
61	✓	Prepare, Submit Draft Environmental Management Plan	21 days	Fri 19/12/20	Thu 20/1/9	3	62	0 days	100%	
62	✓	Review & Approve Environmental Management Plan	45 days	Fri 20/1/10	Sun 20/2/23	3,61	75	0 days	100%	
63	✓	Prepare, submit & Approve Site Management Plan for Trip Ticket System	45 days	Fri 19/12/20	Sun 20/2/2	3		0 days	100%	
64		Submission and Approval of Construction Method for water treatment wetland	90 days	Tue 20/9/15	Sun 20/12/13	44	141	10 days	50%	
65	✓	Submission of Proposal for Source of Water for Water Treatment Wetland	120 days	Fri 19/12/20	Fri 20/4/17	3	66	0 days	100%	
66	✓	Approval of Source of Water for Water Treatment Wetland	90 days	Sat 20/4/18	Thu 20/7/16	65	141	0 days	100%	
67		Design/submission/approval of Lodging Facilities	300 days	Tue 20/6/30	Sun 21/4/25	6	127,68SS,126	19 days	50%	
68		Design / Submission / approval of Sewerage System of Lodging Facilities	150 days	Wed 20/9/16	Fri 21/2/12	67SS	130	461 days	70%	
69		Design/submission/approval of alluminium roofing system, timber for wall/floor/soffit for Birdhide	180 days	Tue 21/3/30	Sat 21/9/25	6	155	640 days	10%	
70		Design/submission/approval of E&M works for Facilities	180 days	Wed 20/9/30	Sun 21/3/28	6	130,176,167,132,158,157	328 days	50%	
71		Design/submission/approval of Plumbing works for Facilities	240 days	Wed 21/7/7	Thu 22/3/3	6	158,167	108 days	50%	
72		Design/submission/approval and supply of Lighting	180 days	Tue 20/6/30	Sat 20/12/26	6		1133 days	0%	
73	✓	Design/submission/approval and supply of park facilities	180 days	Sun 20/8/30	Thu 21/2/25	6	161	0 days	100%	
74		Submission and Approval for Fire Extinguisher	50 days	Wed 21/4/14	Wed 21/6/2	3	157,167,183,190,270,176	1 day	0%	
75	✓	Tree survey and submission	450 days	Wed 20/5/13	Thu 21/8/5	42,60,62,58	76SS+30 days	0 days	100%	
76		Tree felling / Site clearance	450 days	Fri 20/6/12	Sat 21/9/4	75SS+30 days		881 days	95%	
77		Design/submission/approval of Entrance gantry signages	180 days	Wed 21/9/1	Sun 22/2/27	6FS+30 days	169	142 days	0%	
78		Design/submission/approval of Irrigation system for landscape softworks	180 days	Thu 21/4/1	Mon 21/9/27	6		858 days	70%	
79		Design/submission/approval of Irrigation Channel and other associated facilities	130 days	Tue 20/9/1	Fri 21/1/8	6	232,249,275,294	178 days	97%	
80										
81		**3. Section 1 of the works (Portions 1 and 1A)**	**909 days**	**Fri 19/12/20**	**Wed 22/6/15**			**-58 days**	**38%**	
82	✓	Site Access in Portion 1	0 days	Sat 20/1/18	Sat 20/1/18	6	85,104,90FS+30 days,103,102,88	0 days	100%	
83	✓	Site Access in Portion 1A	0 days	Sat 20/7/18	Sat 20/7/18	11	115,113,97	0 days	100%	
84		Design/submission/approval and supply of Road Lighting System along Yin Kong Road	180 days	Tue 20/6/30	Sat 20/12/26	6FS+30 days	107,116	302 days	20%	
85		Application for XP for constructionof Yin Kong Road	400 days	Fri 20/1/31	Fri 21/3/5	41,82	86SS+45 days,87	158 days	49%	
86		Prepare TTA for TMLG and approval from TD and RMO	90 days	Mon 20/3/16	Sat 20/6/13	85SS+45 days	87	423 days	70%	
87		Application of Traffic Advice and Road Work Advice	30 days	Sat 21/3/6	Sun 21/4/4	85,86	106	158 days	0%	
88	✓	Submission of Utilities Detection Report	30 days	Wed 20/7/29	Thu 20/8/27	82	104	0 days	100%	
89		Additional Widening works for Yin Kong Road (to be approved by Relevant Department)	30 days	Thu 21/7/1	Fri 21/7/30		105,115,114	-58 days	0%	
90		**Relocation of Utilities (by Others)**	**335 days**	**Sun 20/3/1**	**Fri 21/1/29**	**82FS+30 days**		**184 days**	**50%**	
91	✓	**Relocation of CLP Pole at Yin Kong Road in (Portion 1)**	**195 days**	**Sun 20/3/1**	**Fri 20/9/11**			**0 days**	**100%**	
92	✓	Planning for Relocation	60 days	Sun 20/3/1	Wed 20/4/29		93	0 days	100%	
93	✓	Construction of New Pole	60 days	Thu 20/4/30	Sun 20/6/28	92	94	0 days	100%	
94	✓	Outage and Diversion of Underground Cable	75 days	Mon 20/6/29	Fri 20/9/11	93	104	0 days	100%	
95										
96		**Relocation of CLP Pole at Yin Kong Road (Portion 1A)**	**195 days**	**Sun 20/7/19**	**Fri 21/1/29**			**184 days**	**0%**	
97		Planning for Relocation	60 days	Sun 20/7/19	Wed 20/9/16	83	98	184 days	0%	
98		Construction of New Pole	60 days	Thu 20/9/17	Sun 20/11/15	97	99	184 days	0%	
99		Outage and Diversion of Underground Cable	75 days	Mon 20/11/16	Fri 21/1/29	98	115	184 days	0%	
100										
101		**Site Works (under Portion 1)**	**765 days**	**Fri 19/12/20**	**Sat 22/1/22**			**86 days**	**45%**	
102	✓	Compensation Event No. 002 - Construction of Chain Link Fence and Gate adjacent to Yin Kong Road	21 days	Thu 20/4/16	Wed 20/5/6	82	104	0 days	100%	
103	✓	Compensation Event No. 003 - Reprovision of Hoarding and gate at Enchi Lodge	30 days	Wed 20/4/22	Thu 20/5/21	82	104	0 days	100%	



Revised Programme: October 2021

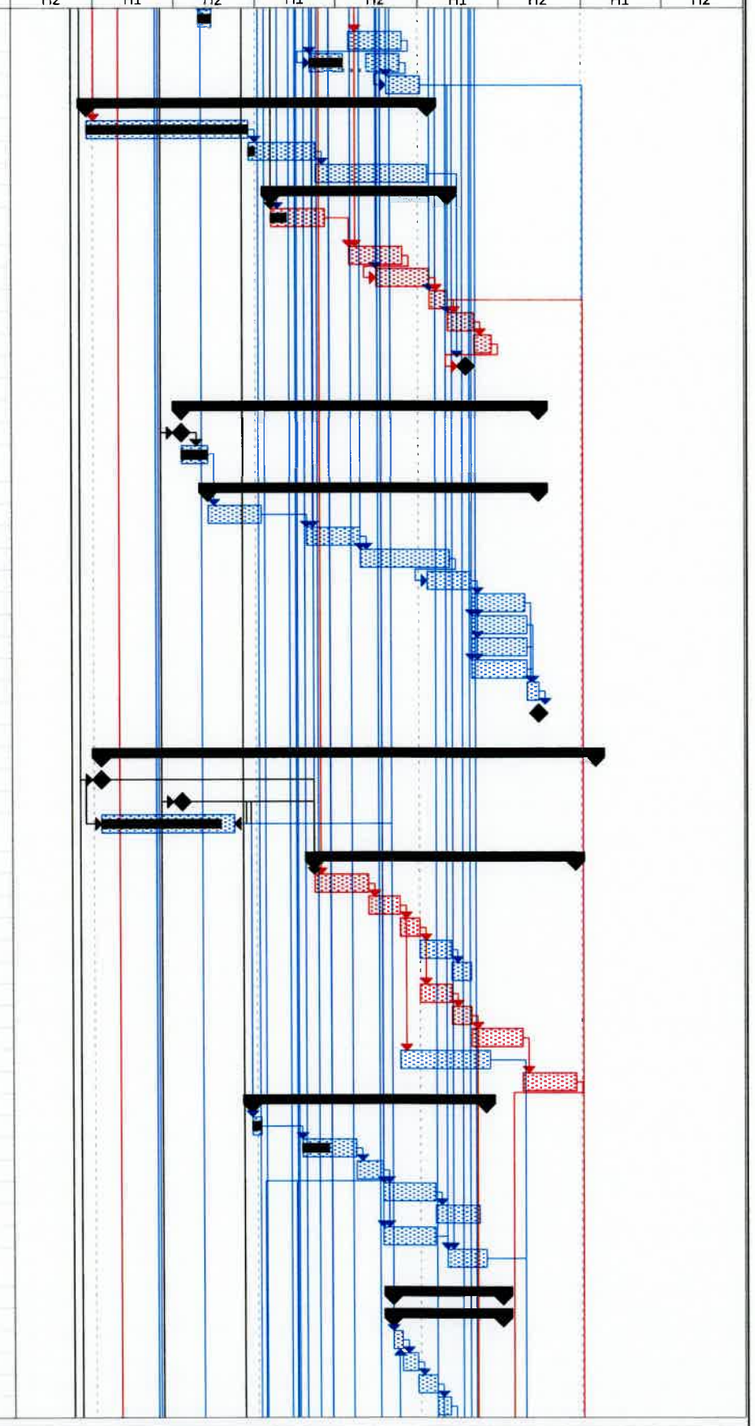
Data Date : 2021-10-3

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
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 fruniture	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**	**50%**	
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	10%	
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**	**9%**	
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	-4 days	30%	
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 fruniture	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**	**13%**	
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	422 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**	**13%**	
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	50%	
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 rised 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**	**0%**	
160	**Construction of tea house pavilion**	**251 days**	**Sun 21/10/31**	**Fri 22/7/8**			**71 days**	**0%**	
161	Construction of base slab	21 days	Sun 21/10/31	Sat 21/11/20	139,173,73	162	71 days	0%	
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
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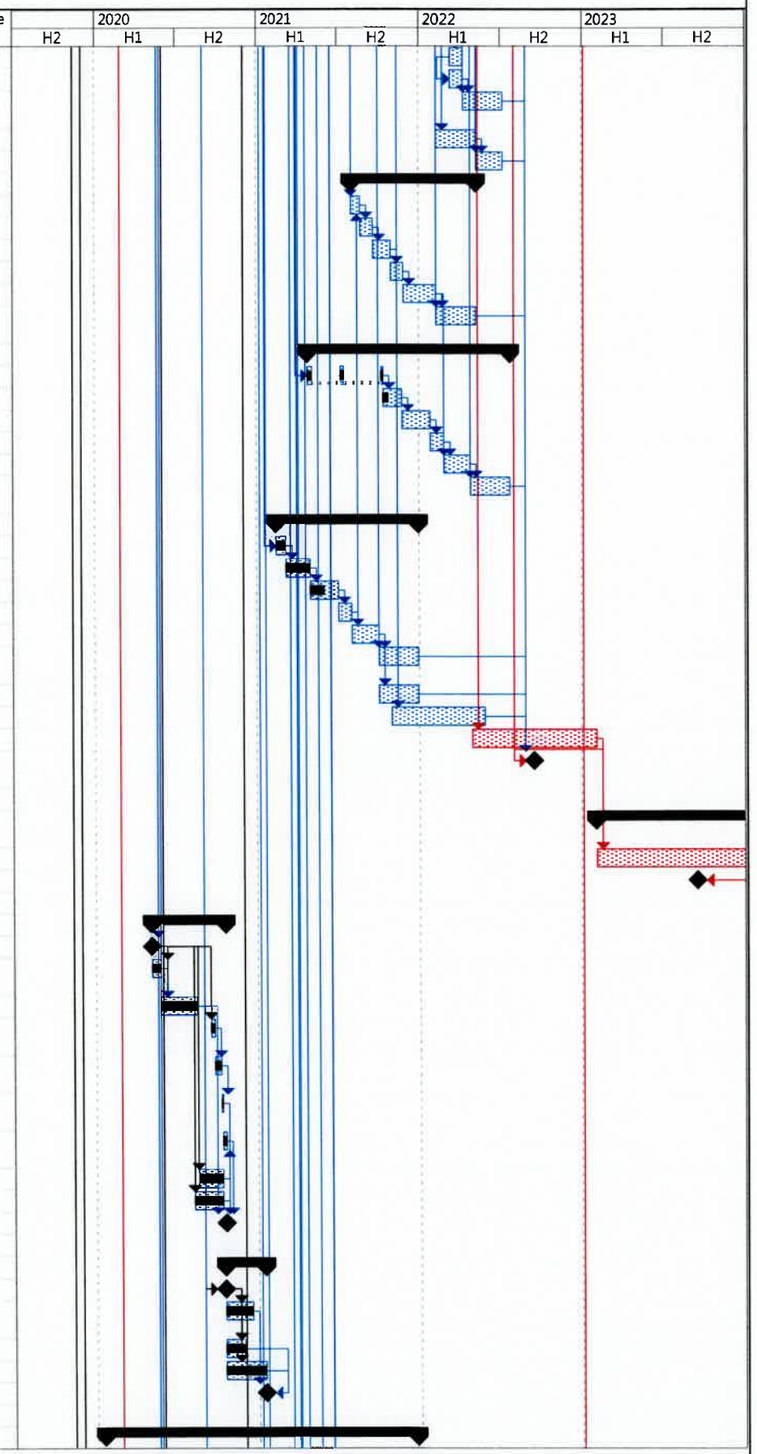
Contract No. ND/2019/03

Sang Hing - Kuly Joint Venture

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

Project Programme of the Works

ID		Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
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	Tue 22/5/10	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**			**71 days**	**0%**	
171		Excavation and formation preparation	21 days	Tue 21/8/3	Mon 21/8/23	40,188	172	71 days	0%	
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**			**54.8 days**	**11%**	
178	✓	Excavation and formation preparation	21 days	Mon 21/4/26	Wed 21/10/13	154	179	0 days	100%	
179		Construction of base slab	42 days	Wed 21/10/13	Wed 21/11/24	178	180	54.8 days	30%	
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 & comissioning	90 days	Tue 22/4/26	Mon 22/7/25	182,74	194	54.8 days	0%	
184		**Construction of storage compositing facility**	**319 days**	**Mon 21/2/15**	**Thu 21/12/30**			**261 days**	**34%**	
185	✓	Excavation and formation preparation	22 days	Mon 21/2/15	Mon 21/3/8	154	186	0 days	100%	
186	✓	Construction of base slab	54 days	Tue 21/3/9	Sat 21/5/1	185	187	0 days	100%	
187		Construction of concrete columns	63 days	Sun 21/5/2	Sat 21/7/3	186	188	71 days	50%	3 days
188		Installation of steel roof frame with corrugated sheet	30 days	Sun 21/7/4	Mon 21/8/2	187	189,171	71 days	0%	
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 Asbesto Containing Material & Dioxin Contaminated	20 days	Fri 20/5/8	Wed 20/5/27	201	203	0 days	100%	
203	✓	General maintenance to exisitng 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 Asbesto Containing Material	60 days	Mon 20/10/19	Thu 20/12/17	213	217	0 days	100%	
215	✓	General maintenance to exisiting 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**			**771 days**	**81%**	



Revised Programme: October 2021

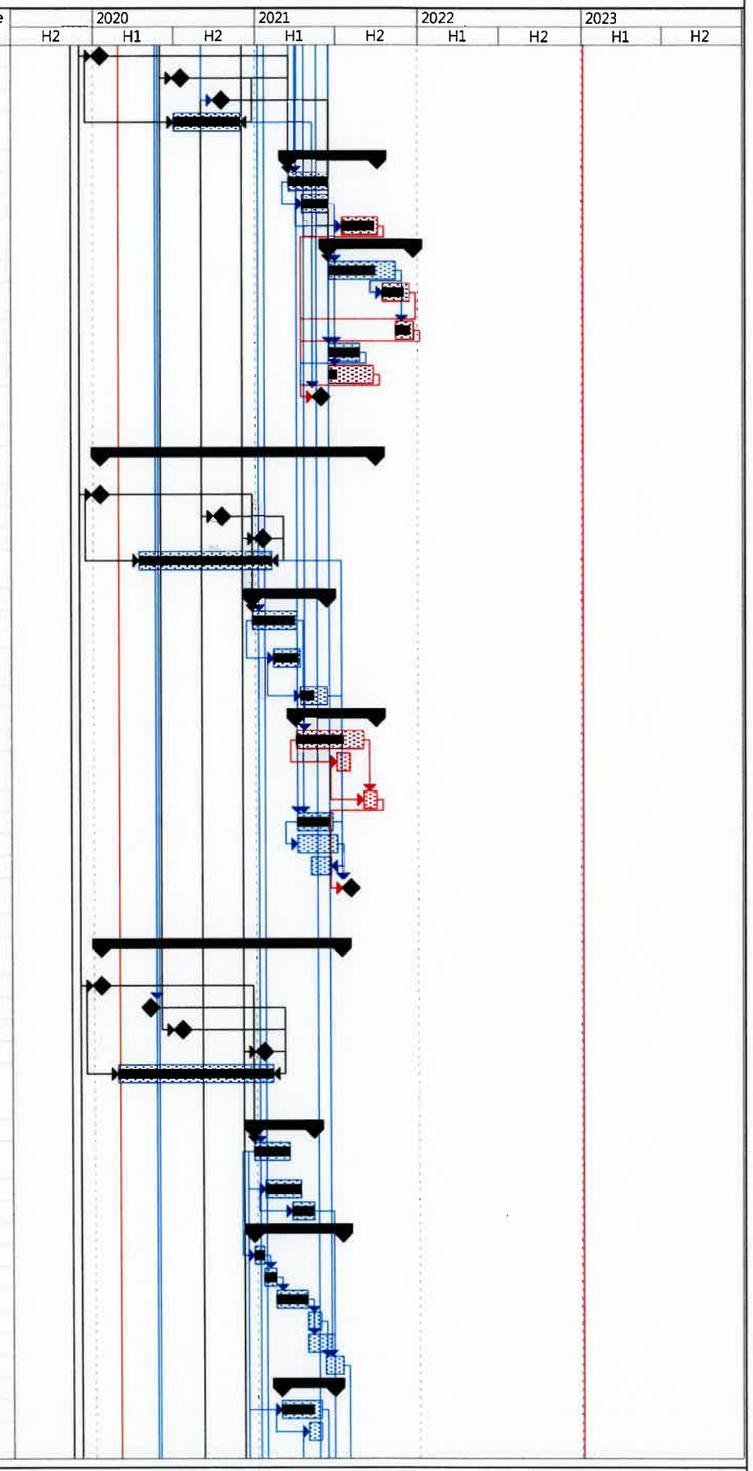
Data Date : 2021-10-3

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
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%	
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 Asbesto 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**			**851 days**	**96%**	
225	Excavation	90 days	Fri 21/3/19	Wed 21/6/16	220,54,52,221,222,15	226SS+30 days	961 days	99%	
226	Backfilling	60 days	Sun 21/4/18	Wed 21/6/16	225SS+30 days	227SS+90 days,229,232,233	20 days	99%	
227	Agricultural Planting	80 days	Sat 21/7/17	Mon 21/10/4	226SS+90 days	234	-127 days	90%	
228	**Construction of Storage Sheds**	**190 days**	**Thu 21/6/17**	**Thu 21/12/23**			**0 days**	**74%**	
229	Construction of concrete structure	150 days	Thu 21/6/17	Sat 21/11/13	226,222,16	230FS-30 days,231	32 days	70%	4 days
230	Installation of Alluminium Window/Lourvre and GMS Door with recycle timber decoration	60 days	Fri 21/10/15	Mon 21/12/13	229FS-30 days	234	-197 days	80%	
231	Installation of GMS roofing structure with recycle timber	40 days	Sun 21/11/14	Thu 21/12/23	229	234	-207 days	80%	
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	20%	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**	**70%**	
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 Asbesto 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**			**967 days**	**83%**	
242	Excavation	100 days	Sat 20/12/26	Sun 21/4/4	237,54,52	243SS+47 days,249	112 days	95%	
243	Backfilling	60 days	Thu 21/2/11	Sun 21/4/11	242SS+47 days	244SS+60 days	1027 days	95%	
244	Agricultural Planting	60 days	Mon 21/4/12	Thu 21/6/10	243SS+60 days	252	53 days	50%	
245	**Construction of storage sheds**	**180 days**	**Sat 21/4/3**	**Wed 21/9/29**			**-30 days**	**50%**	
246	Construction of concrete structure	150 days	Sat 21/4/3	Mon 21/8/30	18	247SS+90 days,248	-58 days	70%	
247	Installation of Alluminium Window/Lourvre and GMS Door with recycle timber decoration	30 days	Fri 21/7/2	Sat 21/7/31	246SS+90 days	248SS+30 days	-28 days	0%	
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	0%	
249	Construction of Channel	80 days	Mon 21/4/5	Wed 21/6/23	79,242	250SS,252	40 days	90%	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**	**70%**	
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 Asbesto 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**	**48%**	
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	0%	
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**			**20 days**	**48%**	
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/Lourvre and GMS Door with recycle timber decoration	30 days	Sun 21/4/25	Mon 21/5/24	272SS+60 days	274SS+21 days	29 days	0%	



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

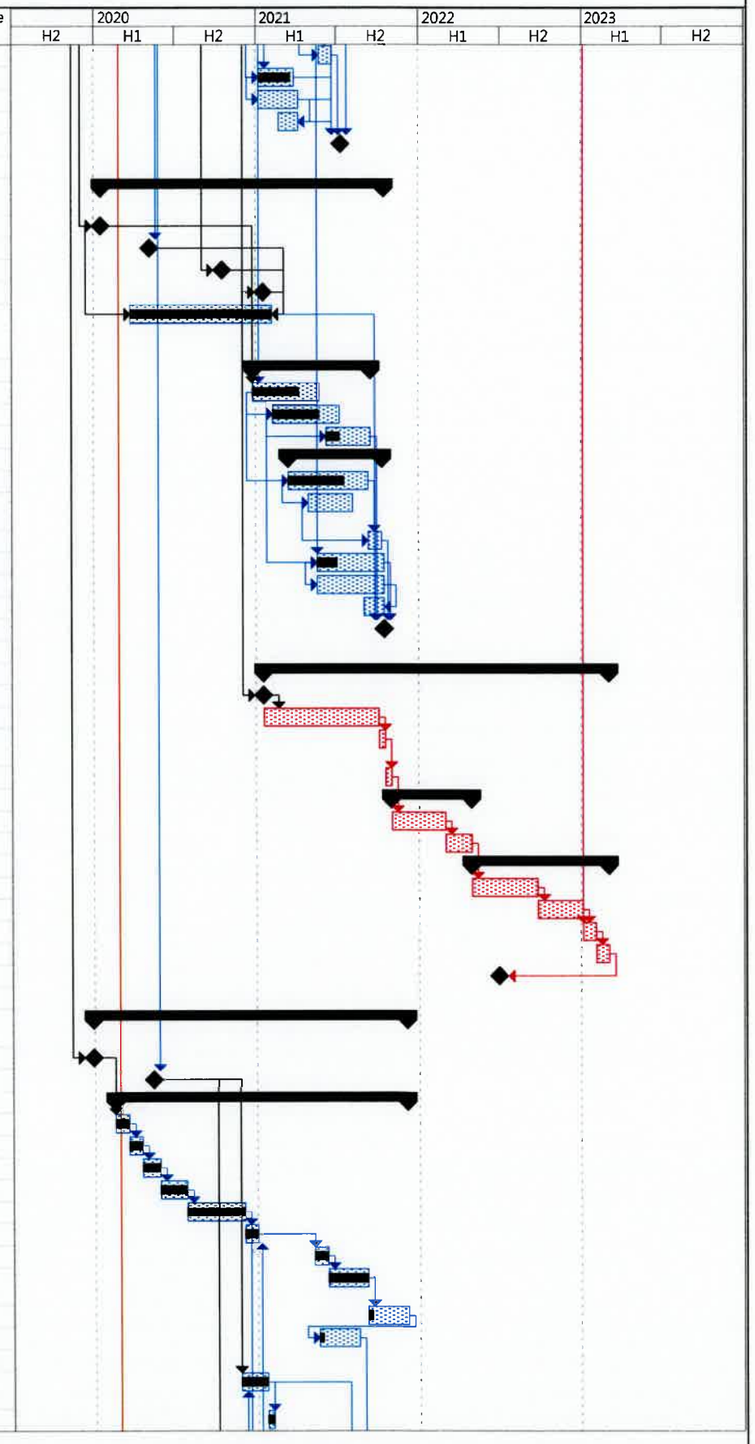
Contract No. ND/2019/03

Sang Hing - Kuly Joint Venture

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

Project Programme of the Works

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
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	Mon 21/3/29	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**			**839 days**	**53%**	
281	Site Access in Portions 11A, 11B, 12A, 12C, 12D, 15B, 15C	0 days	Sat 20/1/18	Sat 20/1/18	6	287,285SS	0 days	100%	
282	Site Access in Portion 15A	0 days	Thu 20/5/7	Thu 20/5/7	9	285FF+20 days	0 days	100%	
283	Site Access in Portions 11, 12, 12B	0 days	Sun 20/10/18	Sun 20/10/18	14	285FF+20 days	0 days	100%	
284	Site Access in Portion 15	0 days	Mon 21/1/18	Mon 21/1/18	17	285FF+20 days	0 days	100%	
285	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	320 days	Wed 20/3/25	Sun 21/2/7	281SS,282FF+20 days,283FF+20 days,284FF+20 days	297	0 days	100%	
286	**Wetland Restoration / Wetland Creation**	**265 days**	**Sat 20/12/26**	**Thu 21/9/16**			**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	289SS+120 days,294SS+100 days	939 days	70%	
289	Agricultural Planting	100 days	Wed 21/6/9	Thu 21/9/16	288SS+120 days	297	51 days	30%	
290	**Construction of storage sheds**	**210 days**	**Tue 21/3/16**	**Mon 21/10/11**			**75 days**	**41%**	
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 Alluminium Window/Lourvre and GMS Door with recycle timber decoration	100 days	Fri 21/4/30	Sat 21/8/7	291SS+45 days	293SS+21 days	140 days	0%	
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	30%	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)**	**776 days**	**Mon 21/1/18**	**Sun 23/3/5**			**-248 days**	**0%**	
300	Site Access in Portion 21	0 days	Mon 21/1/18	Mon 21/1/18	17	301	-248 days	0%	
301	Local Objection for commencement of Works	258 days	Tue 21/1/19	Sun 21/10/3	300	302	-248 days	0%	
302	General site clearance / demolition work / Removal of Asbesto Containing Material	14 days	Mon 21/10/4	Sun 21/10/17	301	303	-248 days	0%	
303	Erect site hoarding	14 days	Mon 21/10/18	Sun 21/10/31	302	305	-248 days	0%	
304	**Archaeological Impacts Mitigation Measures**	**180 days**	**Mon 21/11/1**	**Fri 22/4/29**			**-248 days**	**0%**	
305	Archaeological survey	120 days	Mon 21/11/1	Mon 22/2/28	303	306	-248 days	0%	
306	Archaeological impact assessment	60 days	Tue 22/3/1	Fri 22/4/29	305	308	-248 days	0%	
307	**Site formation work and infrastructure works at Wa Shan**	**310 days**	**Sat 22/4/30**	**Sun 23/3/5**			**-248 days**	**0%**	
308	Site formation / slope works	150 days	Sat 22/4/30	Mon 22/9/26	306	309	-248 days	0%	4 days
309	Drainage works	100 days	Tue 22/9/27	Wed 23/1/4	308	310	-248 days	0%	4 days
310	Paving block on footway	30 days	Thu 23/1/5	Fri 23/2/3	107,116,309	311	-248 days	0%	
311	bituminous pavement on carriageway	30 days	Sat 23/2/4	Sun 23/3/5	310	312FF	-248 days	0%	
312	**Completion of Section 10 of the works**	**0 days**	**Thu 22/6/30**	**Thu 22/6/30**	**311FF**		**-248 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**			**497 days**	**78%**	
315	Site Access in Portions 23, 24	0 days	Tue 19/12/31	Tue 19/12/31	7	318	0 days	100%	
316	Site Access in Portion 22	0 days	Wed 20/5/13	Wed 20/5/13	10	329,331	0 days	100%	
317	**Egretray Site Protion 23 & 24**	**657 days**	**Tue 20/2/18**	**Sun 21/12/5**			**497 days**	**74%**	
318	General site clearance	30 days	Tue 20/2/18	Wed 20/3/18	315	319	0 days	100%	
319	Erect site hoarding (Deleted)	30 days	Thu 20/3/19	Fri 20/4/17	318	320	0 days	100%	
320	Preliminary Survey	40 days	Sat 20/4/18	Wed 20/5/27	319	321	0 days	100%	
321	Submission of mehtodology for translocation	60 days	Thu 20/5/28	Sun 20/7/26	320	322	0 days	100%	
322	Approval of Methodology for Translocation	130 days	Mon 20/7/27	Thu 20/12/3	321	323,342	0 days	100%	
323	Translocation works	30 days	Fri 20/12/4	Sat 21/1/2	322,343	324	0 days	100%	
324	Planting in Portion 23 & 24	30 days	Mon 21/5/10	Tue 21/6/8	323	325	0 days	100%	
325	Provision of Railing and Gate at Portion 23 (Under PMI 026 / CE 019)	90 days	Wed 21/6/9	Mon 21/9/6	324	326	0 days	100%	
326	Establishmnet of A1-7FLN Egretray Site (Portion 23)	90 days	Tue 21/9/7	Sun 21/12/5	325	327FS-200 days	497 days	10%	10 days
327	Establishment of B1-7FLN Egretray Site (Portion 24)	90 days	Thu 21/5/20	Tue 21/8/17	326FS-200 days	332	488 days	10%	10 days
328									
329	Preparation Works for Landscaping work at existing Ho Sheung Heung Egretry Site (Portion 22)	60 days	Wed 20/11/25	Sat 21/1/23	316,331	332,330	0 days	100%	10 days
330	Planting for Ho Sheung Heung Egretry Site	14 days	Sun 21/1/24	Sat 21/2/6	329		0 days	100%	



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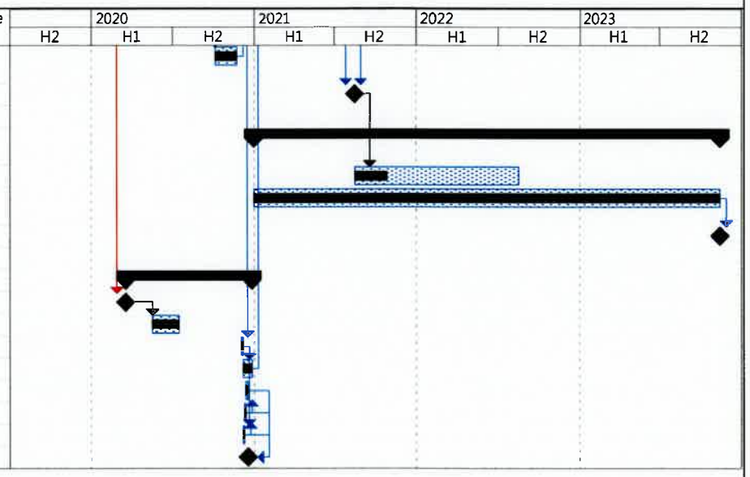
Task | Summary | Rolled Up Milestone | External Tasks | Progress

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
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 Provisionof 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	Collcetion 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%**	



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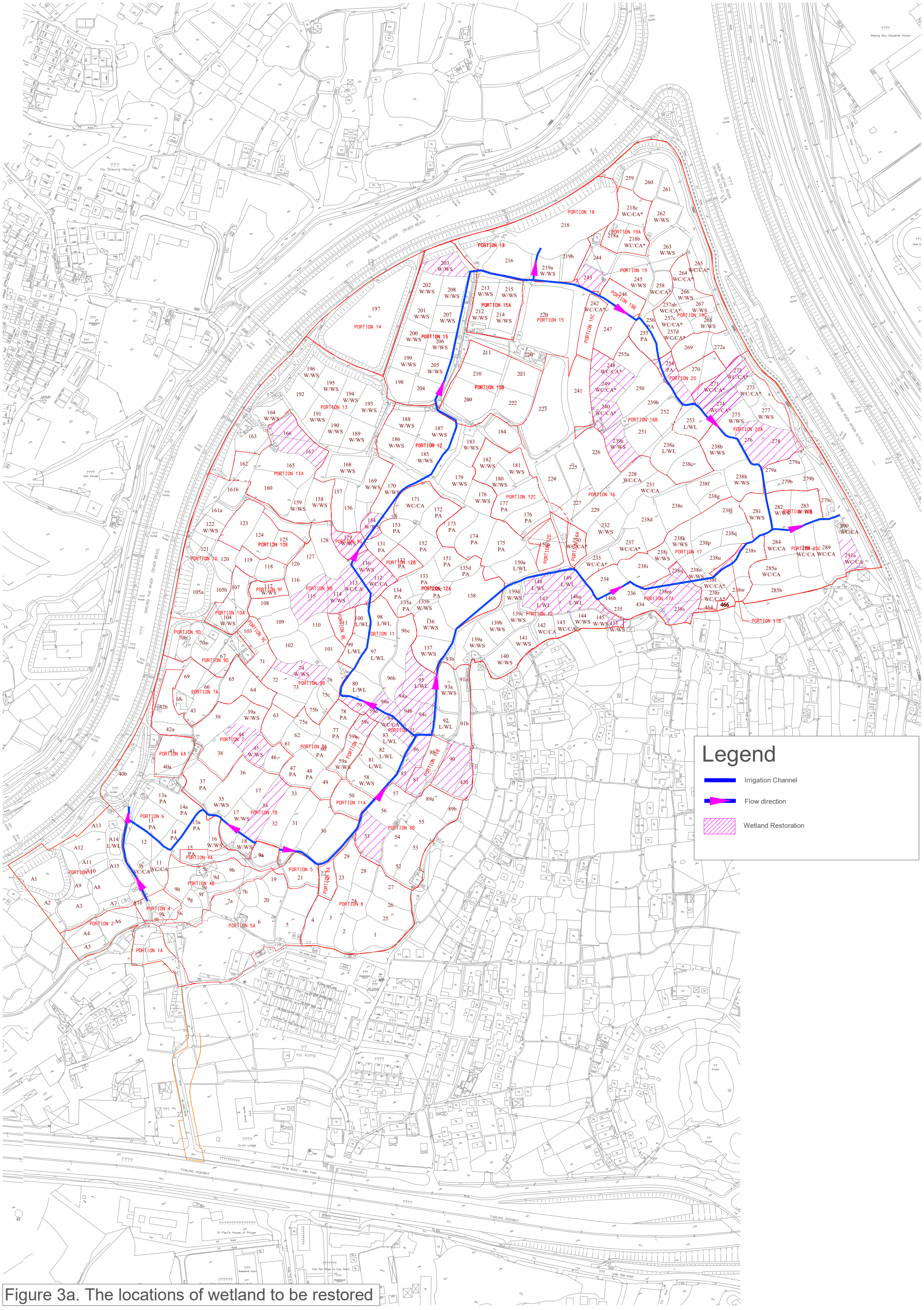


Figure 3a. The locations of wetland to be restored

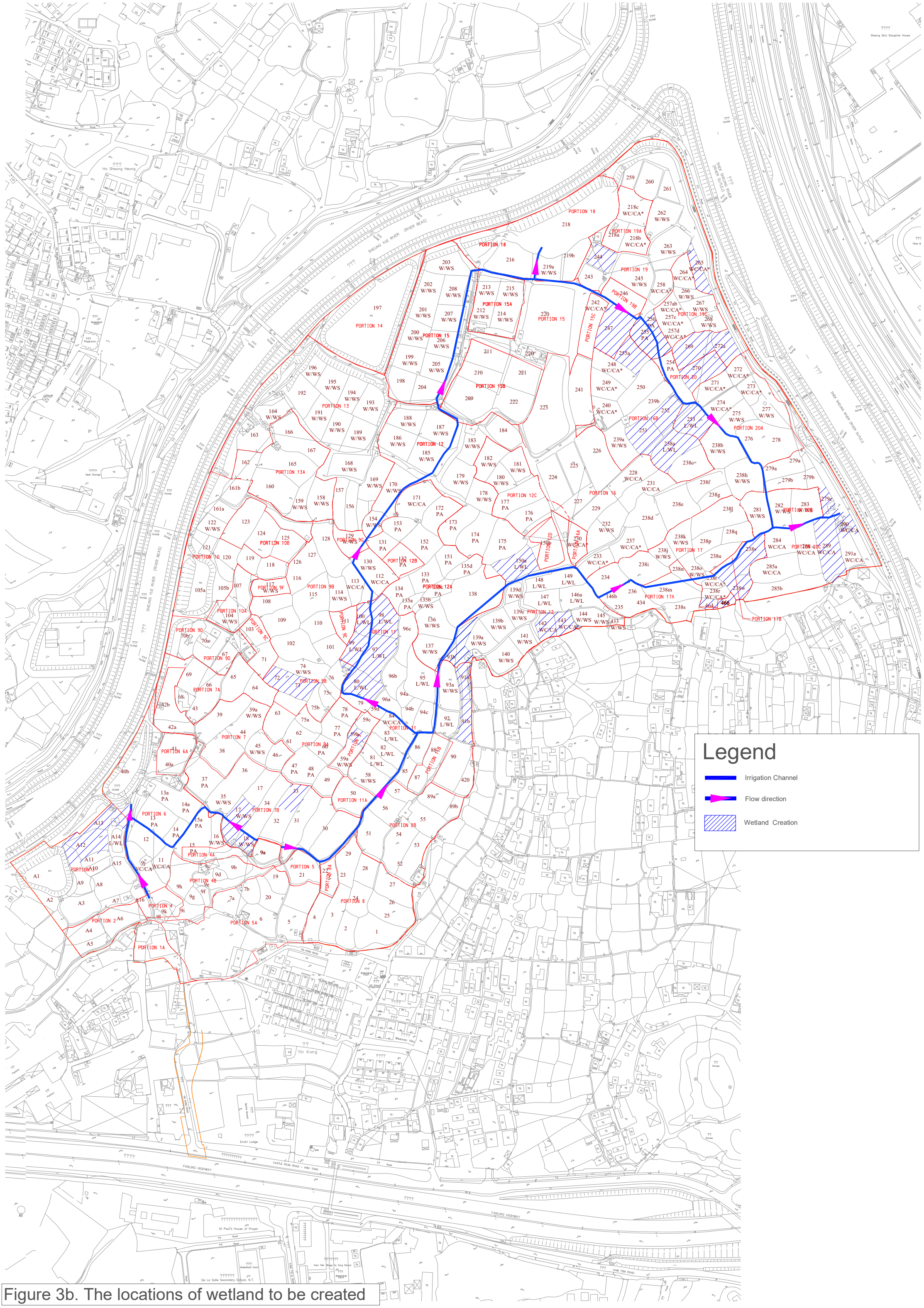
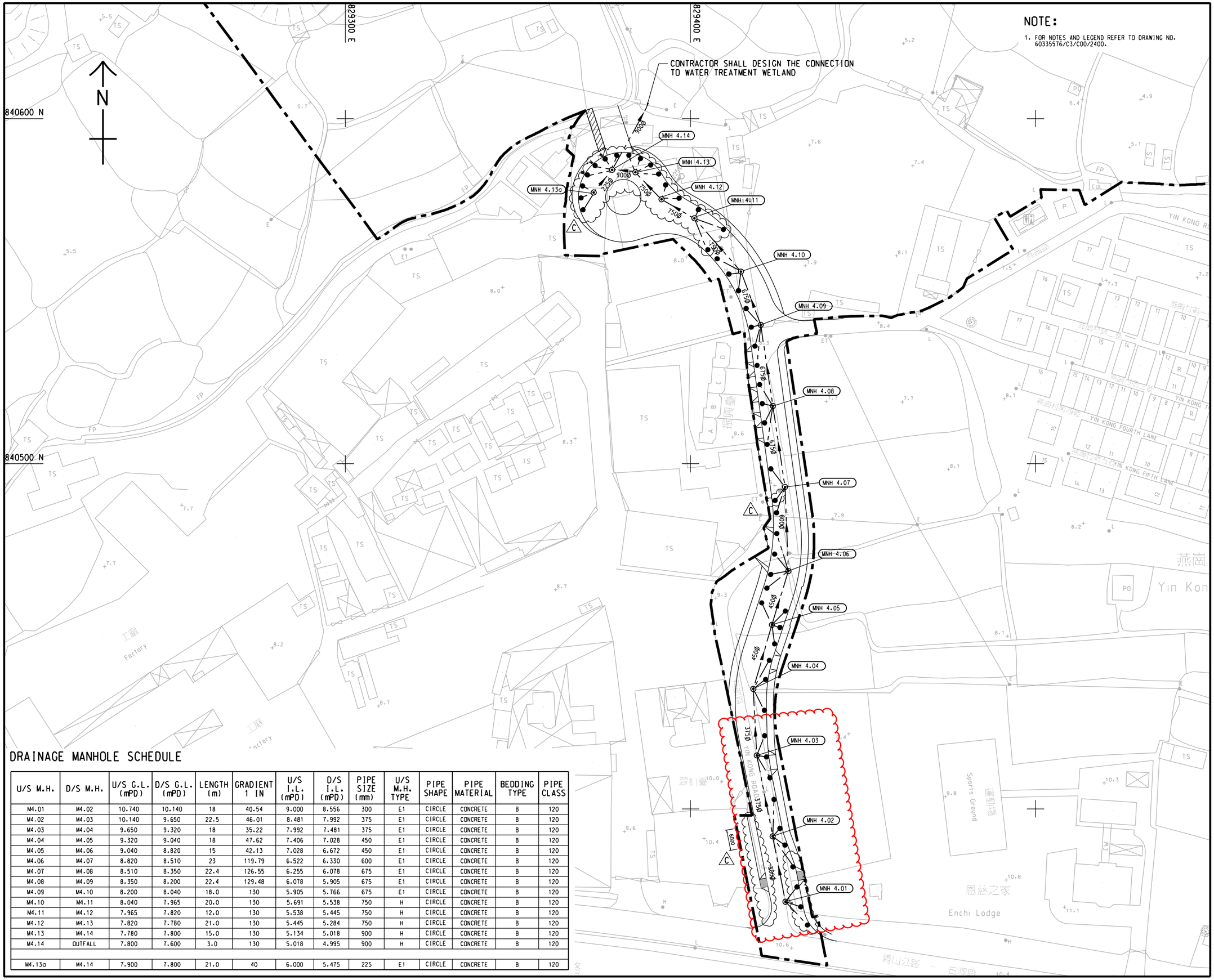


Figure 3b. The locations of wetland to be created



DRAINAGE MANHOLE SCHEDULE

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

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

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

CONSULTANT
AECOM

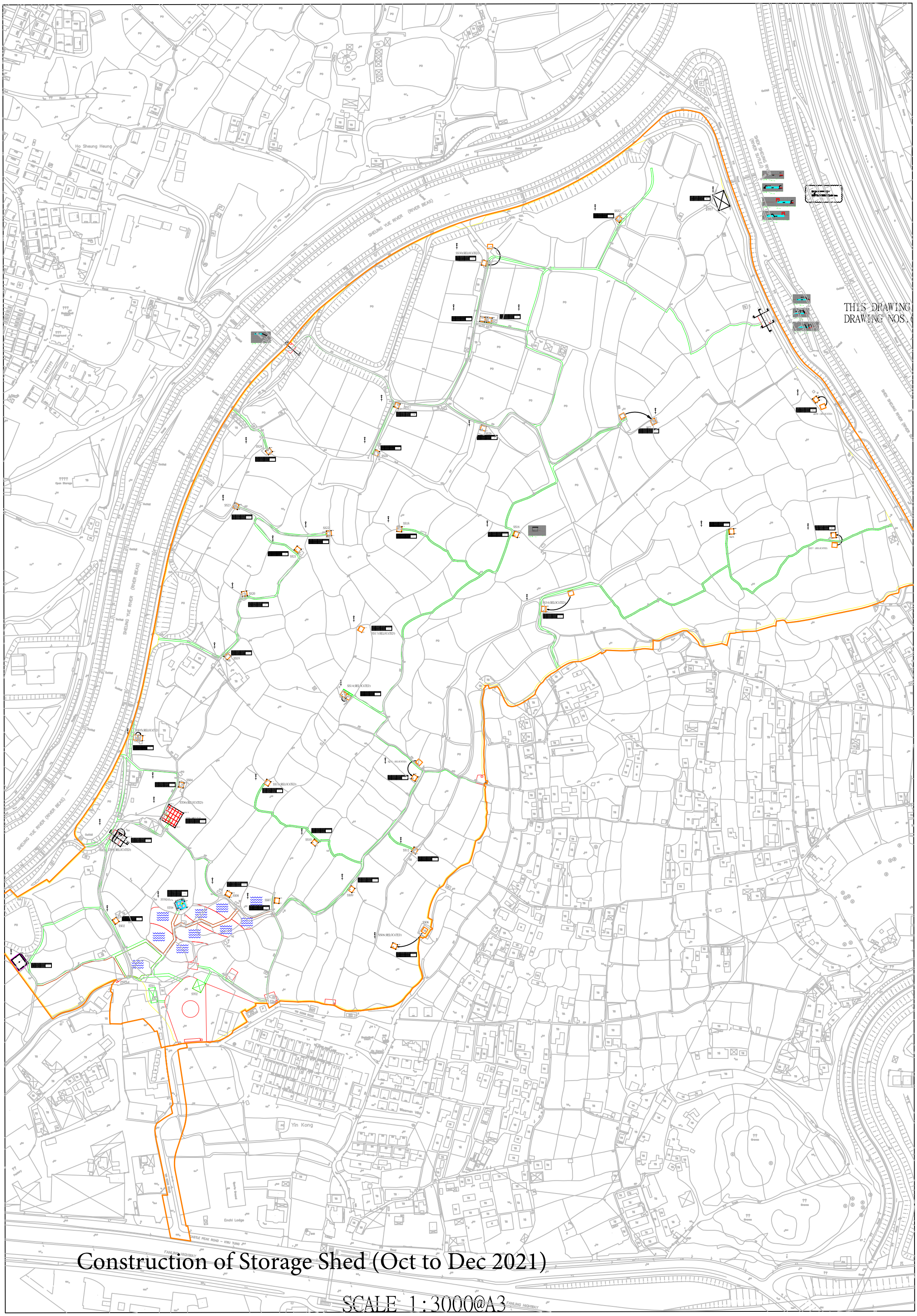
PROJECT
DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

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

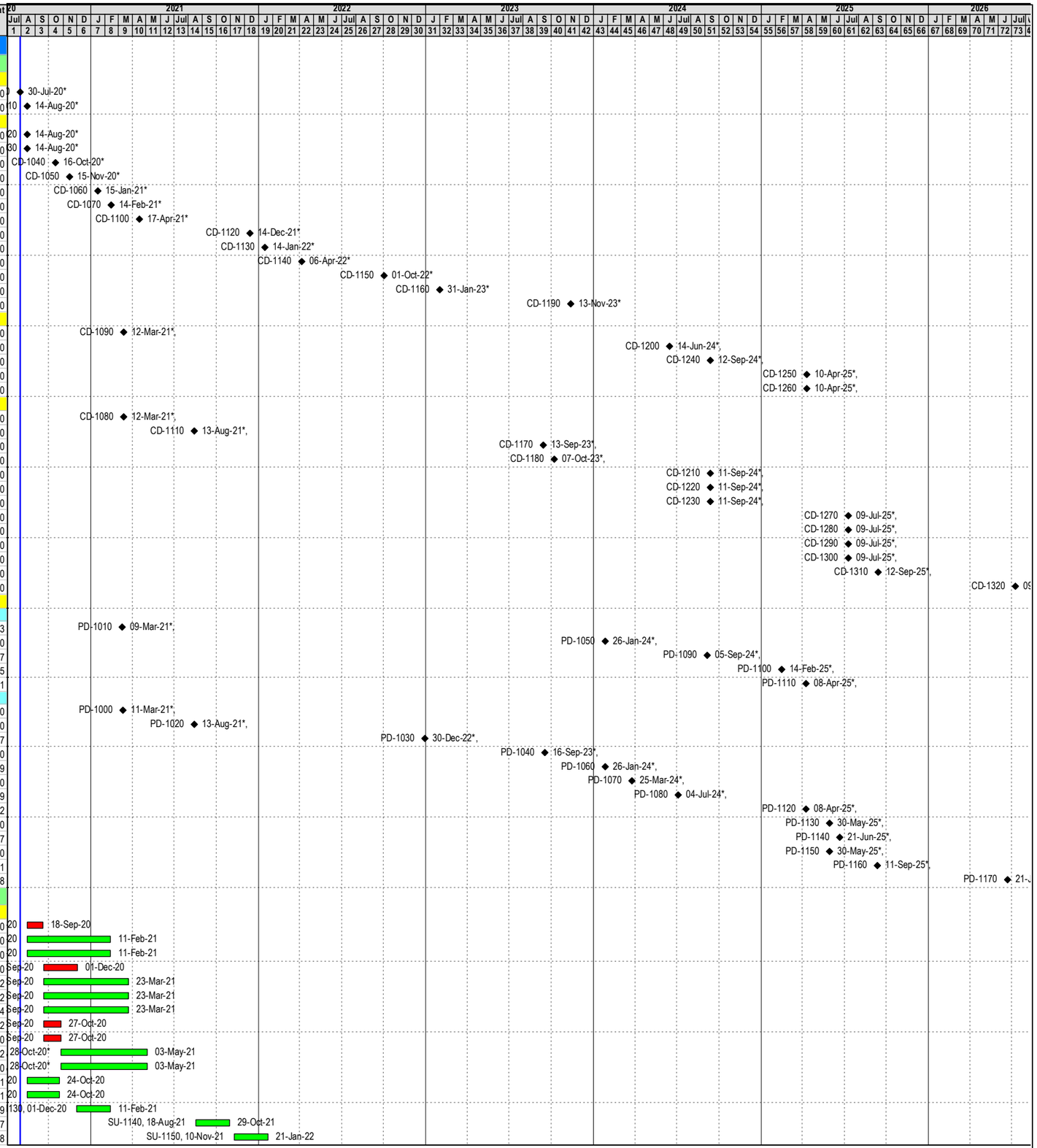


Construction of Storage Shed (Oct to Dec 2021)

SCALE 1:3000@A3

Construction Programme of ND/2019/04

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



◆ Milestone

Actual Work

Remaining Work

Critical Remaining Work

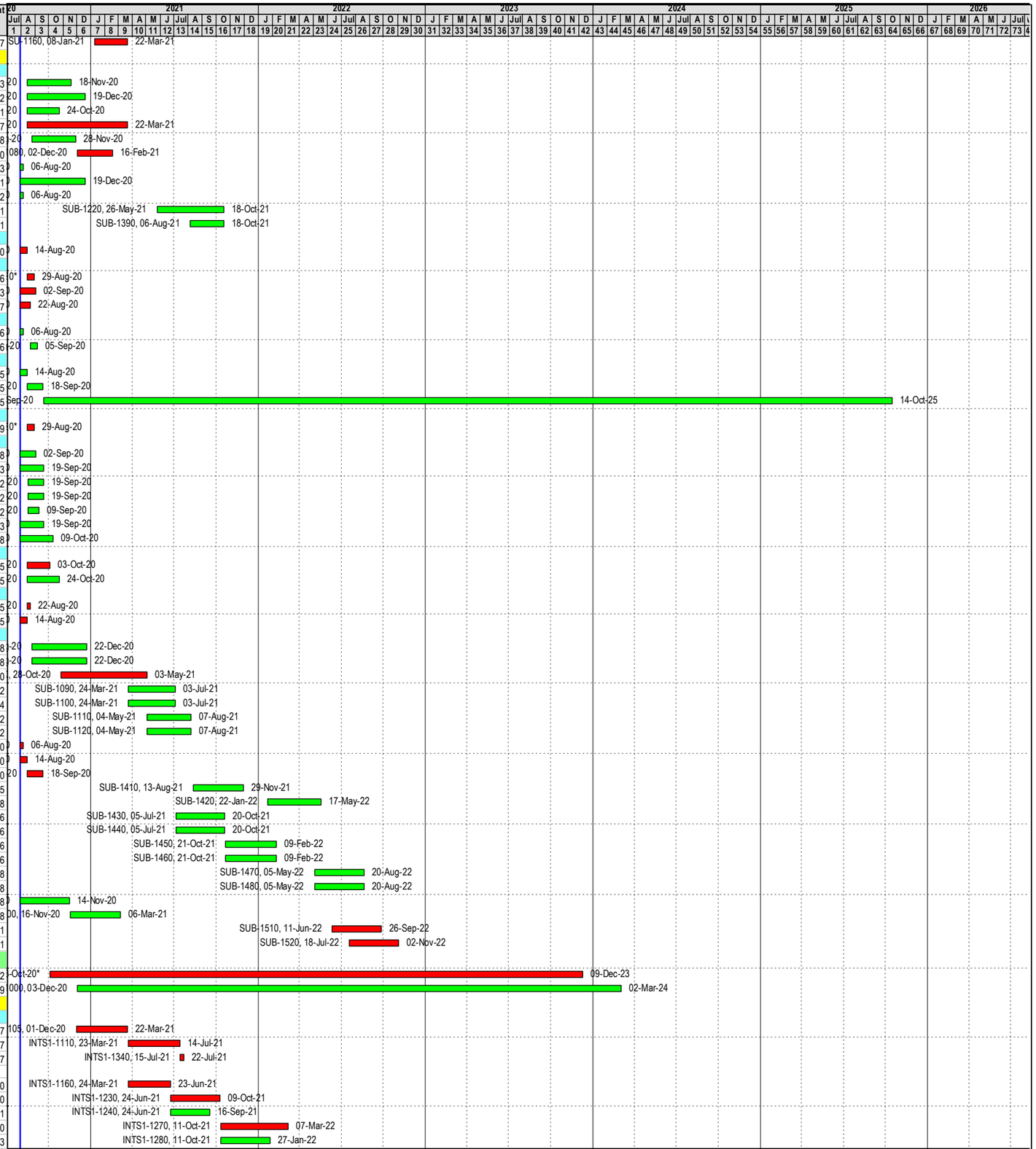
Data Date: 30-Jul-20
Project Start: 30-Jul-20
Project End: 09-Jul-26

ND/2019/04

Preliminary Works Programme

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

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



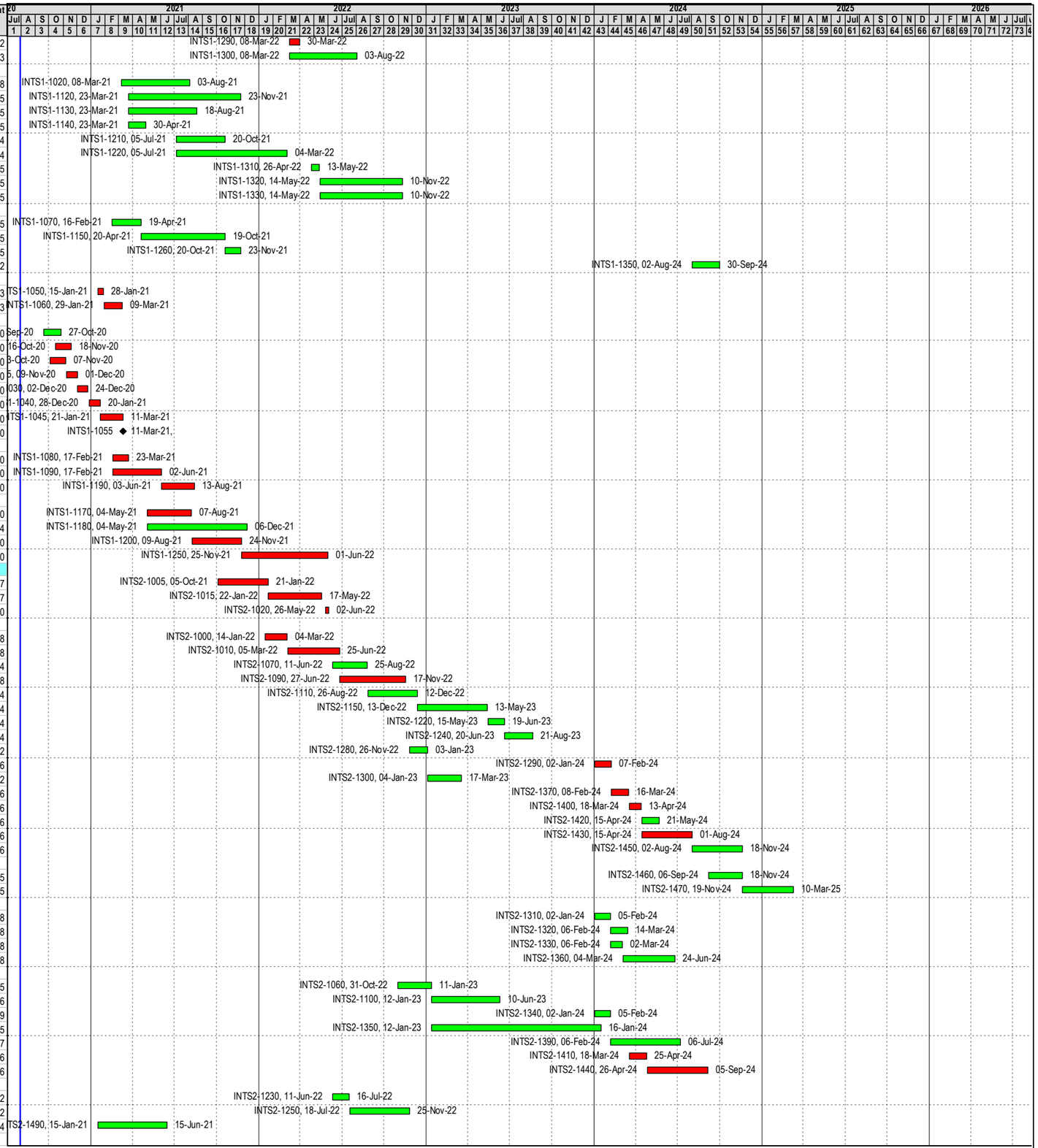
Actual Work
Remaining Work
Critical Remaining Work
◆ Milestone

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

ND/2019/04
Preliminary Works Programme

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

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



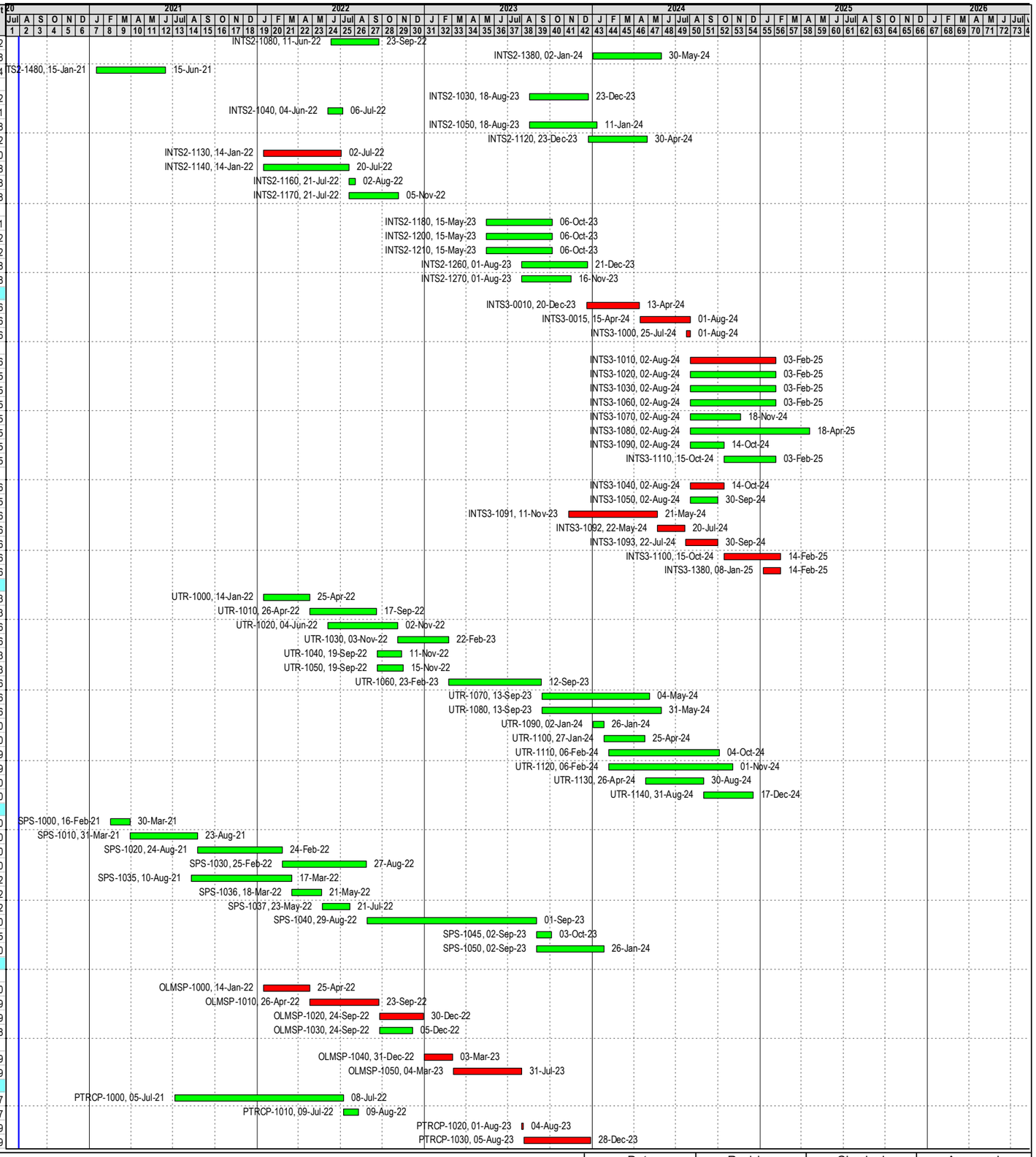
Actual Work ◆ Milestone
Remaining Work
Critical Remaining Work

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

ND/2019/04
Preliminary Works Programme

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

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



Actual Work ◆ Milestone

Remaining Work

Critical Remaining Work

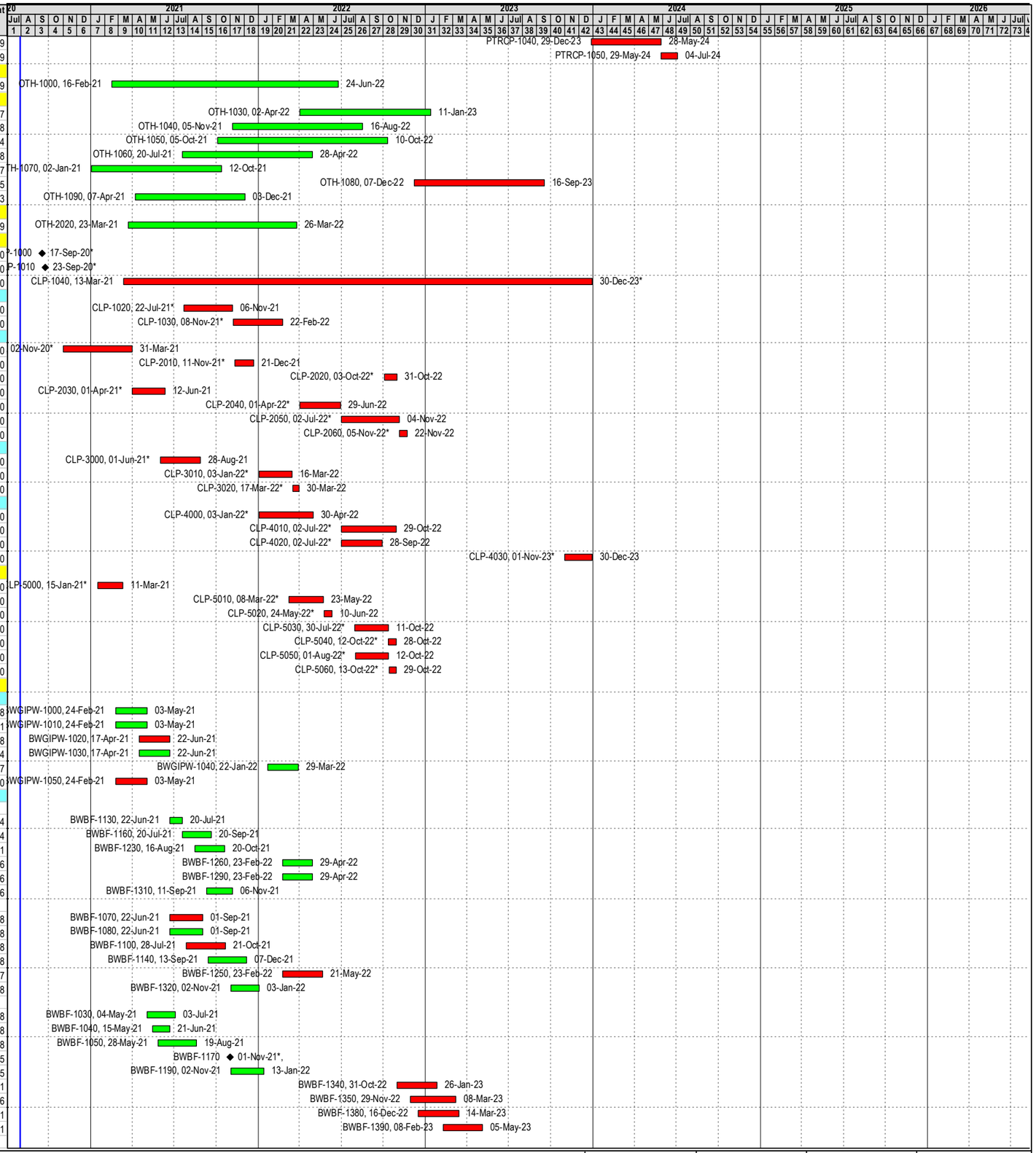
Data Date: 30-Jul-20
Project Start: 30-Jul-20
Project End: 09-Jul-26

ND/2019/04

Preliminary Works Programme

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

Activity ID	Activity Name	Original Duration	Start	Finish	Late Start	Late Finish	Total Float
PTRCP-1040	Waterproofing and other remaining works	120	29-Dec-23	28-May-24	12-Mar-24	07-Aug-24	59
PTRCP-1050	Testing and inspection	30	29-May-24	04-Jul-24	08-Aug-24	11-Sep-24	59
Works in Portion A and Portion B							
OTH-1000	Road and drainage works with UU laying	400	16-Feb-21	24-Jun-22	23-Sep-21	01-Feb-23	179
Works within Portions Q, R, S,T, U, V, X and Y							
OTH-1030	Portion Q	230	02-Apr-22	11-Jan-23	24-Dec-22	06-Oct-23	217
OTH-1040	Portion R	230	05-Nov-21	16-Aug-22	24-Dec-22	06-Oct-23	338
OTH-1050	Portion S	300	05-Oct-21	10-Oct-22	03-Oct-22	06-Oct-23	294
OTH-1060	Portion T	230	20-Jul-21	28-Apr-22	24-Dec-22	06-Oct-23	428
OTH-1070	Portion U	230	02-Jan-21	12-Oct-21	24-Dec-22	06-Oct-23	587
OTH-1080	Portion V,Y	230	07-Dec-22	16-Sep-23	24-Dec-22	06-Oct-23	15
OTH-1090	Portion X	200	07-Apr-21	03-Dec-21	04-Feb-23	06-Oct-23	543
Junction improvement works at Portion J							
OTH-2020	Relocation of Traffic System- Siu Wan Road Junctional works (Road realignment, bitumen	300	23-Mar-21	26-Mar-22	04-Jul-24	09-Jul-25	969
CLP 132kV and 11kV Cable Works at Bridge and interchange area							
CLP-1000	Early Liaison with CLP for 132kV cable laying	0	17-Sep-20*		17-Sep-20		0
CLP-1010	Meeting with CLP	0	23-Sep-20*		22-Sep-20		0
CLP-1040	ESS by CLP at portion I	830	13-Mar-21	30-Dec-23*	13-Mar-21	30-Dec-23	0
Cable A (Red) 11kV- by CLP (Bridge A1,A2) (tentative scheme)							
CLP-1020	Tentative excavation works for CLP laying duct and cabling (Around 400m, 50m/ wk)	90	22-Jul-21*	06-Nov-21	22-Jul-21	06-Nov-21	0
CLP-1030	Abandon of CLP cable A1,A2 (At portion C,G)	86	08-Nov-21*	22-Feb-22	08-Nov-21	22-Feb-22	0
Cable B (Green) Fanling to Louhu Circuit 132KV- by CLP (Bridge A2,A3 and interchange)							
CLP-2000	Diversion of CLP 320m cable B1 (Bridge A at portion C,G)	120	02-Nov-20*	31-Mar-21	02-Nov-20	31-Mar-21	0
CLP-2010	Diversion of CLP 130m cable B2 (Bridge A at portion C,G)	35	11-Nov-21*	21-Dec-21	11-Nov-21	21-Dec-21	0
CLP-2020	Diversion of CLP 100m cable B3 (Bridge F at portion B)	24	03-Oct-22*	31-Oct-22	03-Oct-22	31-Oct-22	0
CLP-2030	Diversion of CLP 200m cable B4 (At portion H,J)	60	01-Apr-21*	12-Jun-21	01-Apr-21	12-Jun-21	0
CLP-2040	Diversion of CLP 120m cable B5 (At portion C,H)	70	01-Apr-22*	29-Jun-22	01-Apr-22	29-Jun-22	0
CLP-2050	Diversion of CLP 360m cable B6 (At portion K,L)	105	02-Jul-22*	04-Nov-22	02-Jul-22	04-Nov-22	0
CLP-2060	Abandon of Cable B (At portion C,G,H,J,K,L)	15	05-Nov-22*	22-Nov-22	05-Nov-22	22-Nov-22	0
Cable C (Red) Ting Kok Road- Heung Yuen Wai Circuit 132KV- by CLP (Bridge A3 and interchange area)							
CLP-3000	Diversion of CLP 150m cable C1 (At portion H,J)	75	01-Jun-21*	28-Aug-21	01-Jun-21	28-Aug-21	0
CLP-3010	Diversion of CLP 63m cable C2 (At portion K,K1,K2)	60	03-Jan-22*	16-Mar-22	03-Jan-22	16-Mar-22	0
CLP-3020	Abandon of C1(At portion H,J,K,K1,K2)	12	17-Mar-22*	30-Mar-22	17-Mar-22	30-Mar-22	0
Cable D (Blue) Fanling- Ping Che Circuit 132KV- by CLP (Bridge A3 and Interchange Area)							
CLP-4000	Diversion of CLP 163m cable D1 (At portion H)	95	03-Jan-22*	30-Apr-22	03-Jan-22	30-Apr-22	0
CLP-4010	Diversion of CLP 270m cable D2 (At portion I,J,N)	100	02-Jul-22*	29-Oct-22	02-Jul-22	29-Oct-22	0
CLP-4020	Diversion of CLP 180m cable D3 (At portion I)	75	02-Jul-22*	28-Sep-22	02-Jul-22	28-Sep-22	0
CLP-4030	Abandon of Cable D (At portion H,I,J,N)	50	01-Nov-23*	30-Dec-23	01-Nov-23	30-Dec-23	0
CLP 11kV Cables works at Interchange area (tentative scheme)							
CLP-5000	Temp. Shift 11kV cables in F6 & underpass area (portion H)	45	15-Jan-21*	11-Mar-21	15-Jan-21	11-Mar-21	0
CLP-5010	Laying new 11kV cables(255m) F6 & underpass area (Portion J/H)	60	08-Mar-22*	23-May-22	08-Mar-22	23-May-22	0
CLP-5020	Abandon 11kV cables in F6 & underpass area (portion K/H)	15	24-May-22*	10-Jun-22	24-May-22	10-Jun-22	0
CLP-5030	Laying new 11kV cables(520m) F6 & underpass & U-Through B area (portion K)	60	30-Jul-22*	11-Oct-22	30-Jul-22	11-Oct-22	0
CLP-5040	Abandon 11kV cables in Underpass and Uthrough B area (portion K)	15	12-Oct-22*	28-Oct-22	12-Oct-22	28-Oct-22	0
CLP-5050	Laying new 11kV cables(400m) at STK Rad and MS Road (portion J)	60	01-Aug-22*	12-Oct-22	01-Aug-22	12-Oct-22	0
CLP-5060	Abandon 11kV cables at STK Rad and MS Road (portion J)	15	13-Oct-22*	29-Oct-22	13-Oct-22	29-Oct-22	0
Bridge Works							
Site Clearance & Additional Gl and Predrilling Works							
BWGIPW-1000	Site clearance & additional Gl and Pre-drilling works: Bridge A3	53	24-Feb-21	03-May-21	04-Jul-22	03-Sep-22	398
BWGIPW-1010	Site clearance & additional Gl and Pre-drilling works: Bridge F	53	24-Feb-21	03-May-21	07-Apr-22	15-Jun-22	331
BWGIPW-1020	Site clearance & additional Gl and Pre-drilling works: Bridge A2	53	17-Apr-21	22-Jun-21	03-Jun-21	06-Aug-21	38
BWGIPW-1030	Site clearance & additional Gl and Pre-drilling works: Bridge A1	53	17-Apr-21	22-Jun-21	09-Oct-21	11-Dec-21	144
BWGIPW-1040	Site clearance & additional Gl and Pre-drilling works: Bridge G	53	22-Jan-22	29-Mar-22	09-Feb-23	17-Apr-23	307
BWGIPW-1050	Site clearance & additional Gl and Pre-drilling works: Footbridge F4	53	24-Feb-21	03-May-21	24-Feb-21	03-May-21	0
Construction of Bridge Foundation							
Construction of Bridge A1 Foundation (Team 1)							
BWBF-1130	Abt 01-01M (3no. pile, 15d/pile, 2no. workfronts)	23	22-Jun-21	20-Jul-21	11-Dec-21	11-Jan-22	144
BWBF-1160	Pier A1-02a/b (3no. pile & 2no. pile cap, 15d/pile & 30d/cap, 2no. workfronts)	53	20-Jul-21	20-Sep-21	11-Jan-22	17-Mar-22	144
BWBF-1230	Pier A1-03a/b (3no. pile & 2no. pile cap, 15d/pile & 30d/cap, 2no. workfronts)	53	16-Aug-21	20-Oct-21	25-Mar-22	02-Jun-22	181
BWBF-1260	Pier A1-04a/b (3no. pile & 2no. pile cap, 15d/pile & 30d/cap, 2no. workfronts)	53	23-Feb-22	29-Apr-22	11-Jun-22	13-Aug-22	86
BWBF-1290	Pier A1-05a/b (3no. pile & 2no. pile cap, 15d/pile & 30d/cap, 2no. workfronts)	53	23-Feb-22	29-Apr-22	22-Aug-22	26-Oct-22	146
BWBF-1310	Pier A1-06a/b (2no. pile & 2no. pile cap, 15d/pile & 30d/cap, 2no. workfronts)	45	11-Sep-21	06-Nov-21	12-Nov-22	07-Jan-23	346
Construction of Bridge A2 Foundation (Team 2)							
BWBF-1070	Pier A2-01a/b (3no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	60	22-Jun-21	01-Sep-21	06-Aug-21	19-Oct-21	38
BWBF-1080	Protection Works for Pier A2-03r/l in VEP Zone	60	22-Jun-21	01-Sep-21	06-Oct-21	16-Dec-21	88
BWBF-1100	Pier A2-02a/b (4no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	70	28-Jul-21	21-Oct-21	06-Oct-21	30-Dec-21	58
BWBF-1140	Pier A2-03r/l (4no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	70	13-Sep-21	07-Dec-21	16-Dec-21	15-Mar-22	78
BWBF-1250	Pier A2-04M (4no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts for pile cap)	70	23-Feb-22	21-May-22	23-Apr-22	19-Jul-22	47
BWBF-1320	Pier A2-05M (2no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	50	02-Nov-21	03-Jan-22	24-Jun-22	23-Aug-22	188
Construction of Bridge A3 Foundation (Team 3 and Team 2)							
BWBF-1030	Pier A3-03r (2no. pile & 1 pile cap, before new 132kV cable laying at this location)	50	04-May-21	03-Jul-21	03-Sep-22	04-Nov-22	398
BWBF-1040	Abt A3-06M (3no. pile, 20d/pile, 2no. workfronts)	30	15-May-21	21-Jun-21	16-Sep-22	24-Oct-22	398
BWBF-1050	Pier A3-05a/b (4no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	70	28-May-21	19-Aug-21	28-Sep-22	21-Dec-22	398
BWBF-1170	Start of Dry Season in 2021	0		01-Nov-21*		12-Nov-22	305
BWBF-1190	Platform Erection for predrill and piling during dry season	60	02-Nov-21	13-Jan-22	12-Nov-22	28-Jan-23	305
BWBF-1340	Pier A3-01r/l (4no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	70	31-Oct-22	26-Jan-23	01-Nov-22	28-Jan-23	1
BWBF-1350	Pier A3-02 in nullah (5no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts) (team 2)	80	29-Nov-22	08-Mar-23	28-Jan-23	08-May-23	46
BWBF-1380	Pier A3-03l (4no. bored piles & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	70	16-Dec-22	14-Mar-23	17-Dec-22	16-Mar-23	1
BWBF-1390	Pier A3-04a/b (4no. pile & 2no. pile cap,20d/pile & 30d/cap, 2no. workfronts)	70	08-Feb-23	05-May-23	09-Feb-23	08-May-23	1
Construction of Bridge F Foundation (Team 1)							



Actual Work
Remaining Work
Critical Remaining Work
◆ Milestone

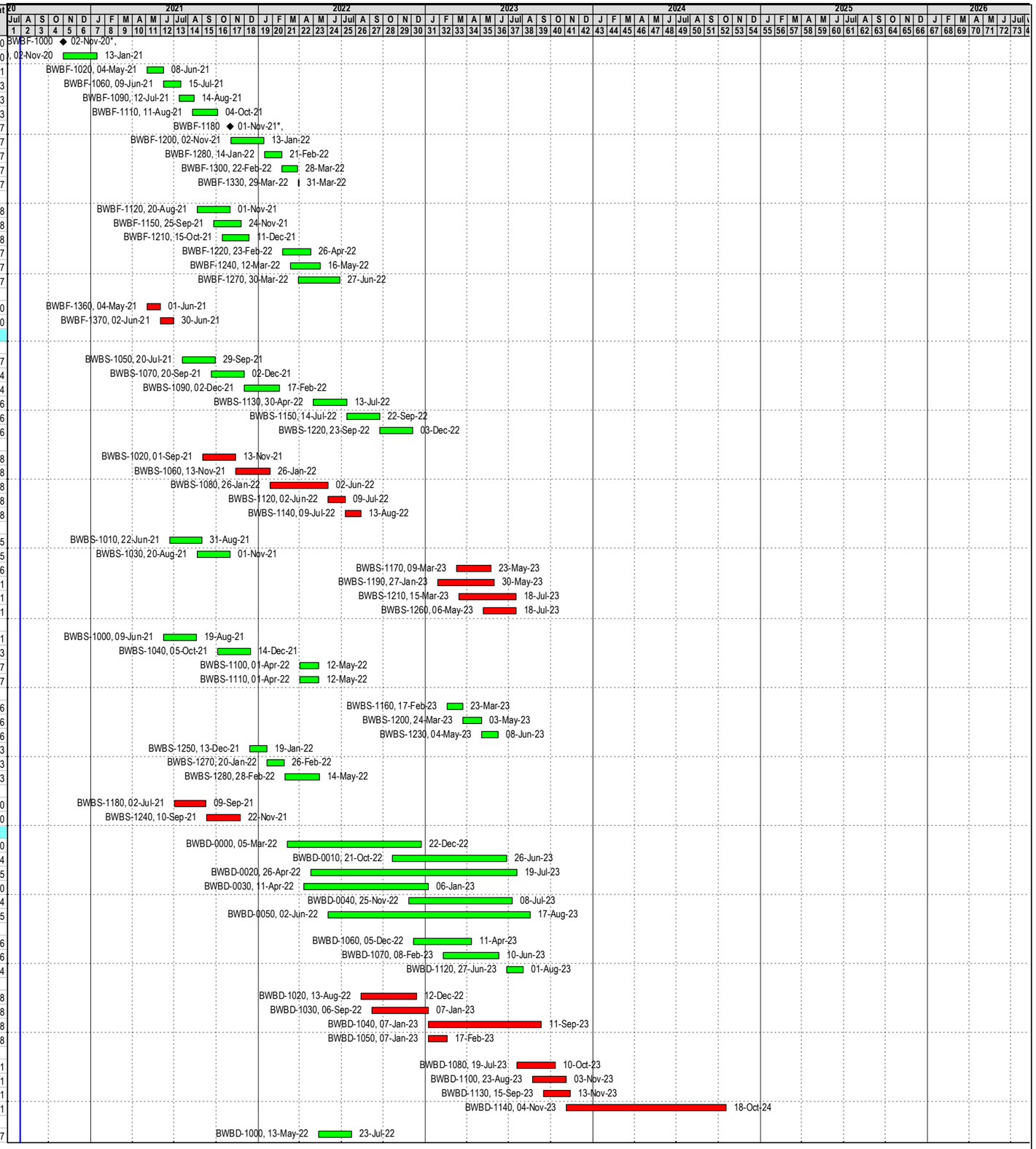
Data Date: 30-Jul-20
Project Start: 30-Jul-20
Project End: 09-Jul-26

ND/2019/04

Preliminary Works Programme

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

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



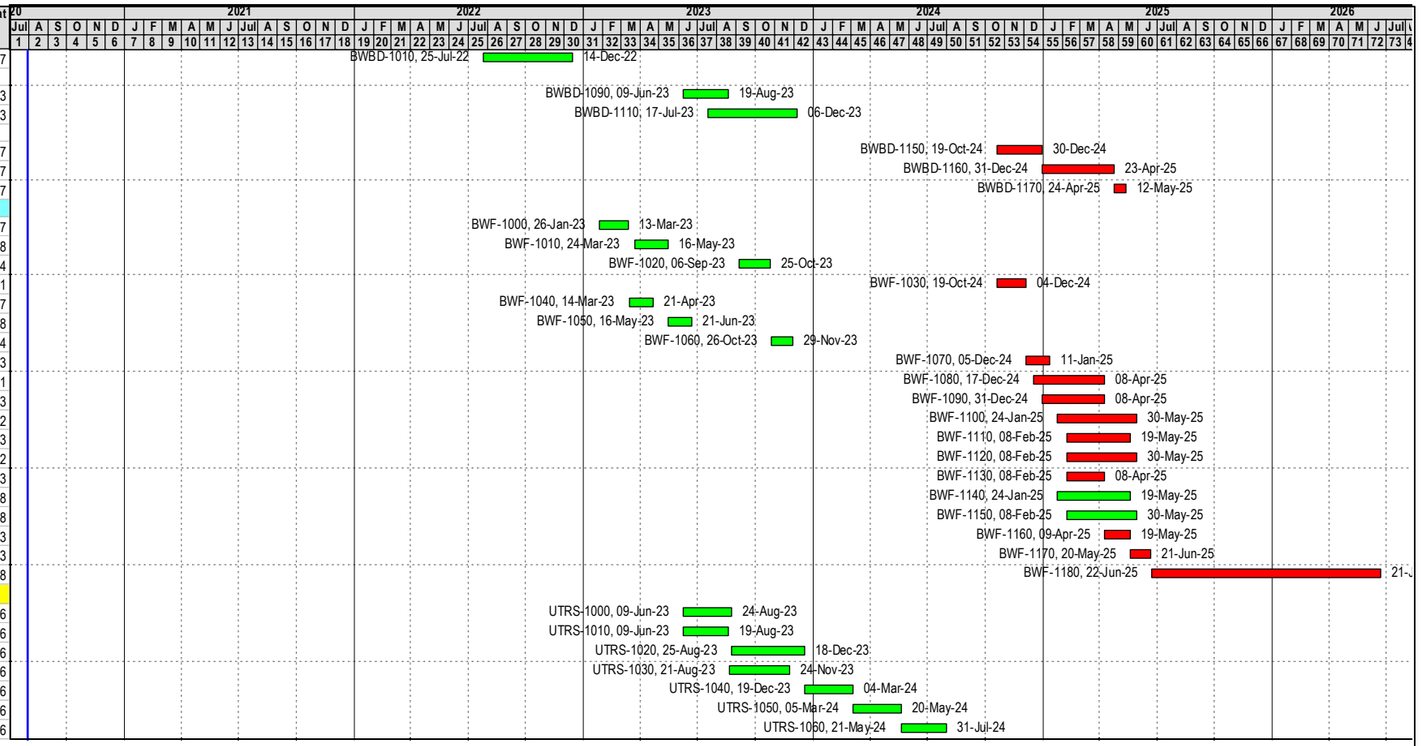
Actual Work ◆ Milestone
Remaining Work
Critical Remaining Work

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

ND/2019/04
Preliminary Works Programme

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

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



Actual Work
Remaining Work
Critical Remaining Work
◆ Milestone

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

ND/2019/04

Preliminary Works Programme

Date	Revision	Checked	Approved
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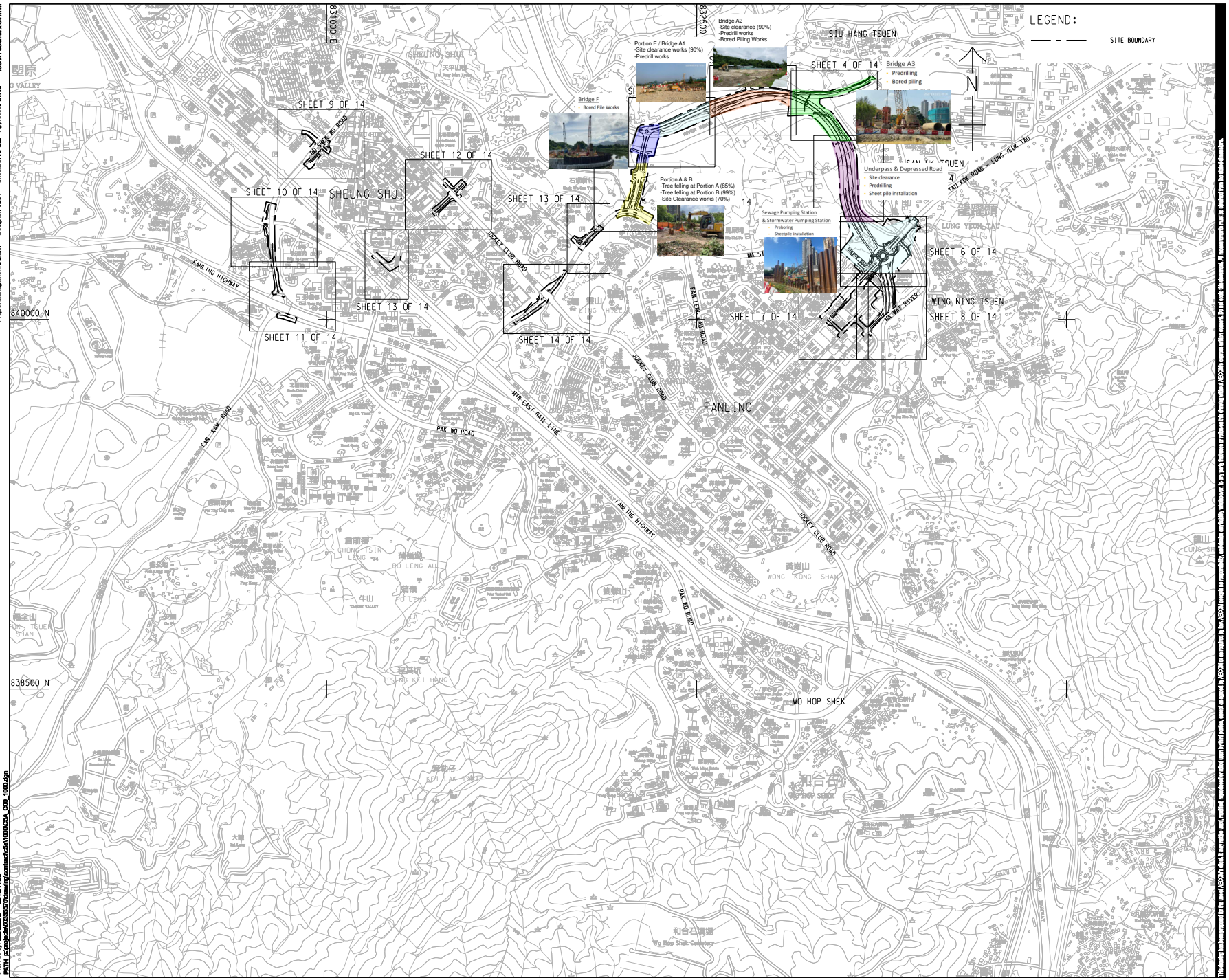


AECOM

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.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
-	NOV-19	TENDER DRAWING	RPCM

STATUS

SCALE A1 1 : 7000

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60335576

CONTRACT NO. ND/2019/04

SHEET TITLE

KEY PLAN AND LOCATION PLAN

SHEET NUMBER

60335576/C5A/C00/1000

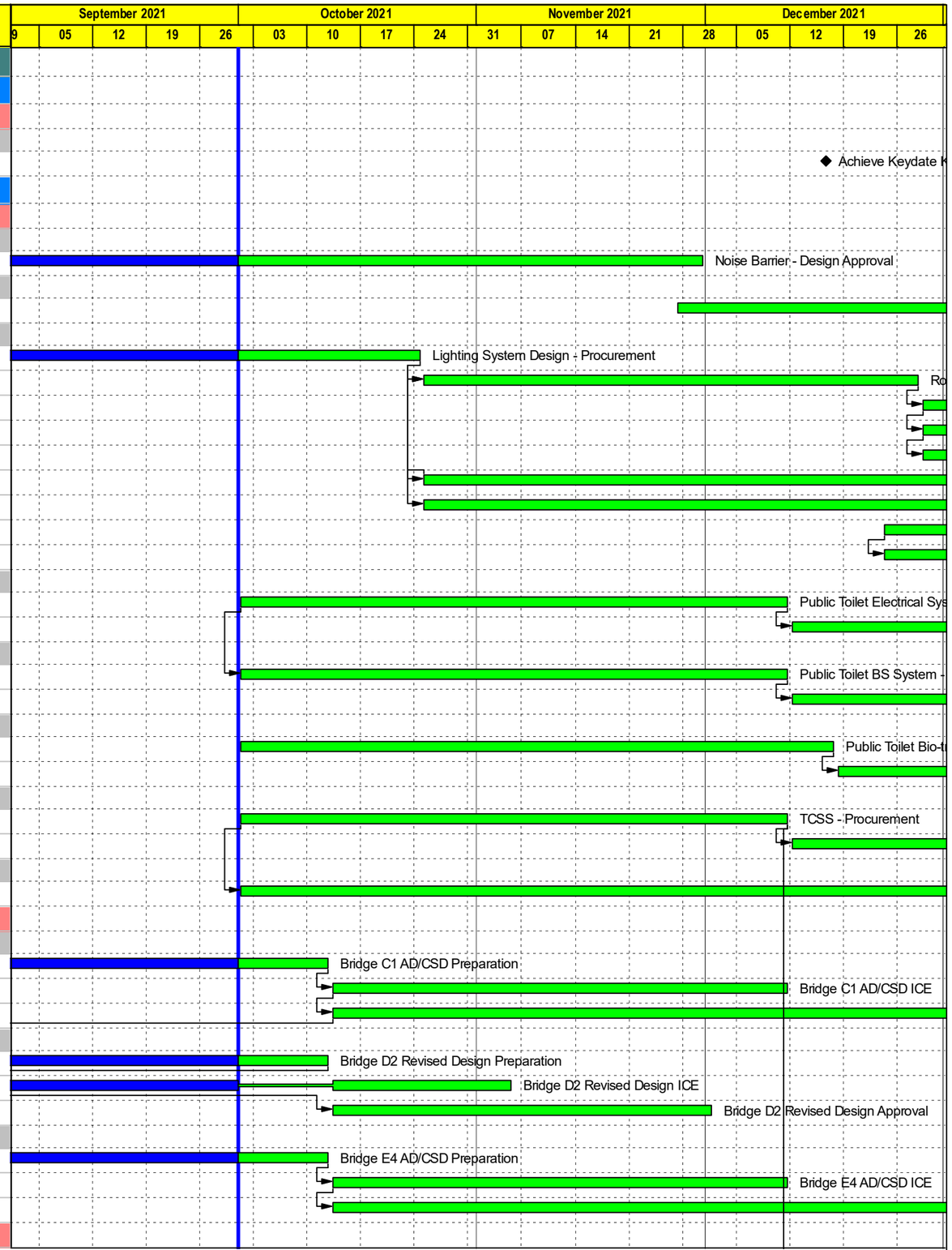
The drawing and design prepared for the use of AECOM and for the purpose of this project only and may not be used by any other parties without the written consent of AECOM. The drawing should not be scaled for dimensions and all dimensions and levels should be verified on site. Any discrepancy should be reported to AECOM immediately.

Project Management Initials: Designer: JLST Checked: RPCM Approved: WWL ISO A1 594mm x 841mm

Plot File by: ZENGXU23 2019/11/23
PATH: J:\Projects\60335576\Drawing\Commercial\ac1000\C5A_C00_1000.dgn

Construction Programme of ND/2019/05

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
Detail Programme Revision 8				
1.0 - Contract Data Part 1				
1.3 - Completion Date				
1.3.1 - Key Dates				
KD1	Achieve Keydate KD1	0		16-Dec-21*
2.0 - Preliminary Works				
2.3 - Contractor's Design (PS 1,109)				
2.3.1 - (a) Noise Barrier				
CDa-140	Noise Barrier - Design Approval	61	28-Aug-21 A	30-Nov-21
2.3.3 - (c) Lift Installation E&M				
CDc-100	Lift Install E&M - Prep/Submit Design	120	27-Nov-21	26-Mar-22
2.3.4 - (d) Lighting System				
CDd-100	Lighting System Design - Procurement	24	01-Jun-21 A	24-Oct-21
CDd-110	Road Lighting System - Prep/Submit Design	65	25-Oct-21	28-Dec-21
CDd-120	Road Lighting System - Design ICE	42	29-Dec-21	08-Feb-22
CDd-130	Road Lighting System - Design Approval	60	29-Dec-21	26-Feb-22
CDd-135	Road Lighting System - Manufacturing and Delivery	75	29-Dec-21	13-Mar-22
CDd-140	HKY Footbridge Lighting System - Prep/Submit Design	102	25-Oct-21	03-Feb-22
CDd-170	BBI Lighting System - Prep/Submit Design	102	25-Oct-21	03-Feb-22
CDd-180	BBI Lighting System - Design ICE	42	24-Dec-21	03-Feb-22
CDd-190	BBI Lighting System - Design Approval	60	24-Dec-21	21-Feb-22
2.3.5 - (e) BBI Public Toilet Electrical System				
CDe-100	Public Toilet Electrical System - Procurement	72	01-Oct-21	11-Dec-21
CDe-110	Public Toilet Electrical System - Prep/Submit Design	72	12-Dec-21	21-Feb-22
2.3.6 - (f) BBI Public Toilet BS System				
CDf-100	Public Toilet BS System - Procurement	72	01-Oct-21	11-Dec-21
CDf-110	Public Toilet BS System - Prep/Submit Design	72	12-Dec-21	21-Feb-22
2.3.7 - (g) BBI Public Toilet Bio-treatment Plant				
CDg-100	Public Toilet Bio-treatment Plant - Procurement	78	01-Oct-21	17-Dec-21
CDg-110	Public Toilet Bio-treatment Plant - Prep/Submit Design	78	18-Dec-21	05-Mar-22
2.3.8 - (h) Traffic Control and Surveillance System (TCSS)				
CDh-100	TCSS - Procurement	72	01-Oct-21	11-Dec-21
CDh-110	TCSS - Prep/Submit Design	78	12-Dec-21	27-Feb-22
2.3.9 - (i) Traffic Detector System				
CDi-100	Traffic Detector System - Procurement	150	01-Oct-21	27-Feb-22
2.4 - Cost Saving Design				
2.4.4 - Bridge C1				
AD-061	Bridge C1 AD/CSD Preparation	12	22-Jan-21 A	12-Oct-21
AD-062	Bridge C1 AD/CSD ICE	60	13-Oct-21	11-Dec-21
AD-063	Bridge C1 AD/CSD Approval	90	13-Oct-21	10-Jan-22
2.4.6 - Bridge D2				
AD-104	Bridge D2 Revised Design Preparation	12	02-Apr-21 A	12-Oct-21
AD-105	Bridge D2 Revised Design ICE	24	13-Aug-21 A	05-Nov-21
AD-106	Bridge D2 Revised Design Approval	50	13-Oct-21	01-Dec-21
2.4.10 - Bridge E4				
AD-121	Bridge E4 AD/CSD Preparation	12	22-Apr-21 A	12-Oct-21
AD-122	Bridge E4 AD/CSD ICE	60	13-Oct-21	11-Dec-21
AD-123	Bridge E4 AD/CSD Approval	90	13-Oct-21	10-Jan-22
2.5 - Segment Erection Design and Calculation				



CRCC - Paul Y. Joint Venture

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

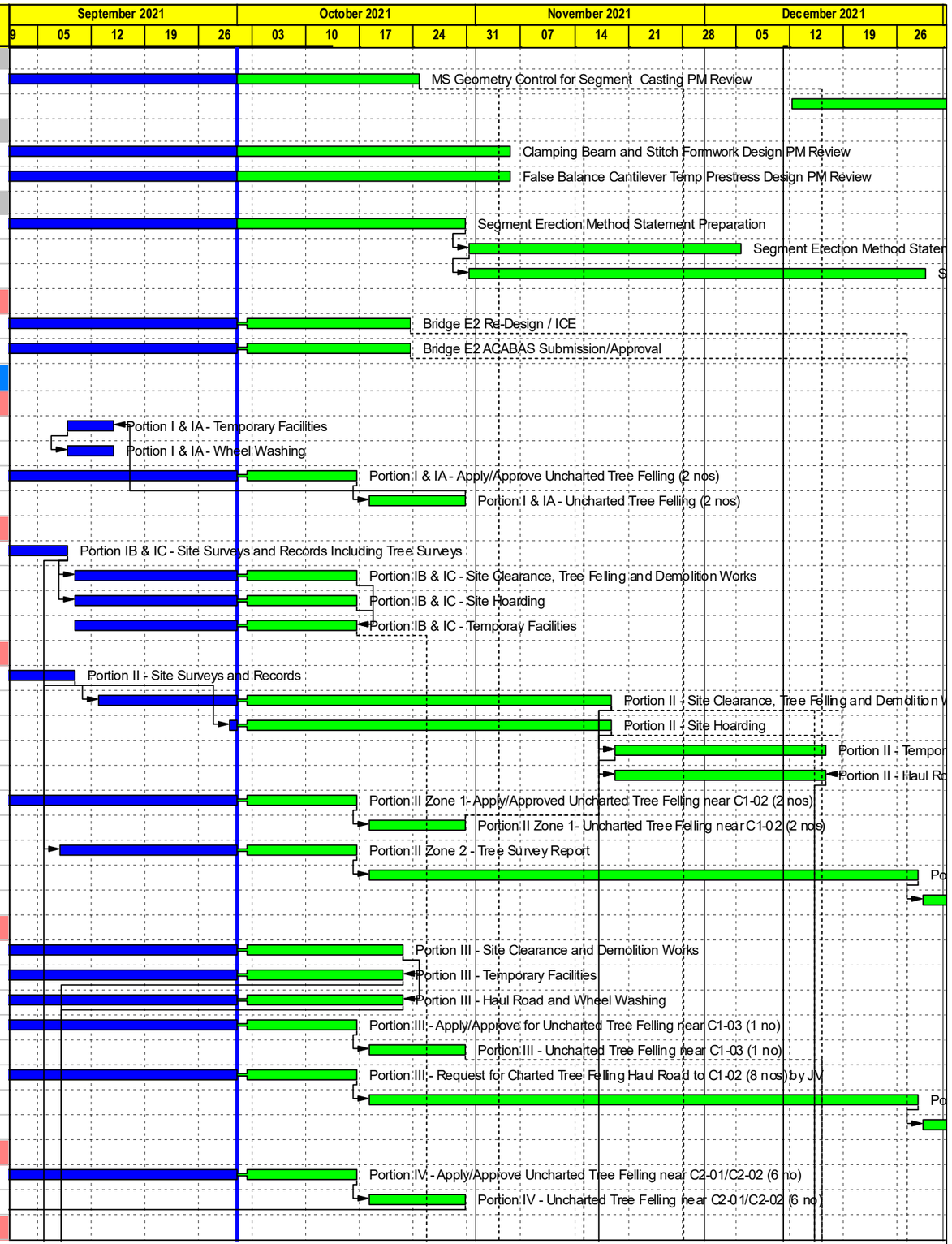
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme - Oct 2021

Proj ID : DPr8
Layout : ND201905 3MRP
Date : Page 1 of 10

3-Month Rolling Programme			
Date	Revision	Checked	Approved
15-Oct-21	October 2021		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
2.5.1 - Geometry Control				
AD-147	MS Geometry Control for Segment Casting PM Review	24	25-Apr-21 A	24-Oct-21
AD-152	MS Geometry Control for Segment Erection PM Review	48	12-Dec-21	28-Jan-22
2.5.3 - Temporary Works				
AD-842	Clamping Beam and Stitch Formwork Design PM Review	36	01-Jun-21 A	05-Nov-21
AD-872	False Balance Cantilever Temp Prestress Design PM Review	36	01-Jun-21 A	05-Nov-21
2.5.4 Method Statement				
AD-882	Segment Erection Method Statement Preparation	30	25-Apr-21 A	30-Oct-21
AD-892	Segment Erection Method Statement ICE	36	31-Oct-21	05-Dec-21
AD-902	Segment Erection Method Statement PM Review	60	31-Oct-21	29-Dec-21
2.7 - Compensation Event No. 033				
CE33-020	Bridge E2 Re-Design / ICE	18	17-Apr-21 A	23-Oct-21
CE33-030	Bridge E2 ACABAS Submission/Approval	18	25-May-21 A	23-Oct-21
3.0 - Site Establishment Works				
3.1 - Portion I & IA Site Set-up				
01-013	Portion I & IA - Temporary Facilities	0	09-Sep-21 A	15-Sep-21 A
01-014	Portion I & IA - Wheel Washing	0	09-Sep-21 A	15-Sep-21 A
01-222	Portion I & IA - Apply/Approve Uncharted Tree Felling (2 nos)	12	10-Apr-21 A	16-Oct-21
01-233	Portion I & IA - Uncharted Tree Felling (2 nos)	12	18-Oct-21	30-Oct-21
3.2 - Portion IB & IC Site Set-up				
01-210	Portion IB & IC - Site Surveys and Records Including Tree Surveys	0	26-Aug-21 A	09-Sep-21 A
01-211	Portion IB & IC - Site Clearance, Tree Felling and Demolition Works	12	10-Sep-21 A	16-Oct-21
01-212	Portion IB & IC - Site Hoarding	12	10-Sep-21 A	16-Oct-21
01-213	Portion IB & IC - Temporay Facilities	12	10-Sep-21 A	16-Oct-21
3.3 - Portion II Site Set-up				
02-101	Portion II - Site Surveys and Records	0	02-Aug-21 A	10-Sep-21 A
02-102	Portion II - Site Clearance, Tree Felling and Demolition Works	40	13-Sep-21 A	18-Nov-21
02-104	Portion II - Site Hoarding	40	30-Sep-21 A	18-Nov-21
02-105	Portion II - Temporary Facilities	24	19-Nov-21	16-Dec-21
02-106	Portion II - Haul Road and Wheel Washing	24	19-Nov-21	16-Dec-21
02-112	Portion II Zone 1- Apply/Approved Uncharted Tree Felling near C1-02 (2 nos)	12	01-Jun-21 A	16-Oct-21
02-120	Portion II Zone 1- Uncharted Tree Felling near C1-02 (2 nos)	12	18-Oct-21	30-Oct-21
02-130	Portion II Zone 2 - Tree Survey Report	12	08-Sep-21 A	16-Oct-21
02-140	Portion II Zone 2 - Apply/Approved Uncharted Tree Felling near C1-02 (21 nos)	60	18-Oct-21	28-Dec-21
02-150	Portion II Zone 2 - Uncharted Tree Felling near C1-02 (21 nos)	12	29-Dec-21	12-Jan-22
3.4 - Portion III Site Set-up				
03-102	Portion III - Site Clearance and Demolition Works	17	12-Jul-21 A	22-Oct-21
03-105	Portion III - Temporary Facilities	17	24-Jul-21 A	22-Oct-21
03-106	Portion III - Haul Road and Wheel Washing	17	24-Jul-21 A	22-Oct-21
03-112	Portion III - Apply/Approve for Uncharted Tree Felling near C1-03 (1 no)	12	20-May-21 A	16-Oct-21
03-120	Portion III - Uncharted Tree Felling near C1-03 (1 no)	12	18-Oct-21	30-Oct-21
03-130	Portion III - Request for Charted Tree Felling Haul Road to C1-02 (8 nos) by JV	12	26-Jun-21 A	16-Oct-21
03-135	Portion III - Apply/Approve Charted Tree Felling Haul Road to C1-02 (8 nos)	60	18-Oct-21	28-Dec-21
03-150	Portion III - Charted Tree Felling for Haul Road to C1-02 (8 nos)	12	29-Dec-21	12-Jan-22
3.5 - Portion IV Site Set-up				
04-112	Portion IV - Apply/Approve Uncharted Tree Felling near C2-01/C2-02 (6 no)	12	20-May-21 A	16-Oct-21
04-120	Portion IV - Uncharted Tree Felling near C2-01/C2-02 (6 no)	12	18-Oct-21	30-Oct-21
3.6 - Portion V Site Set-up				



CRCC - Paul Y. Joint Venture

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

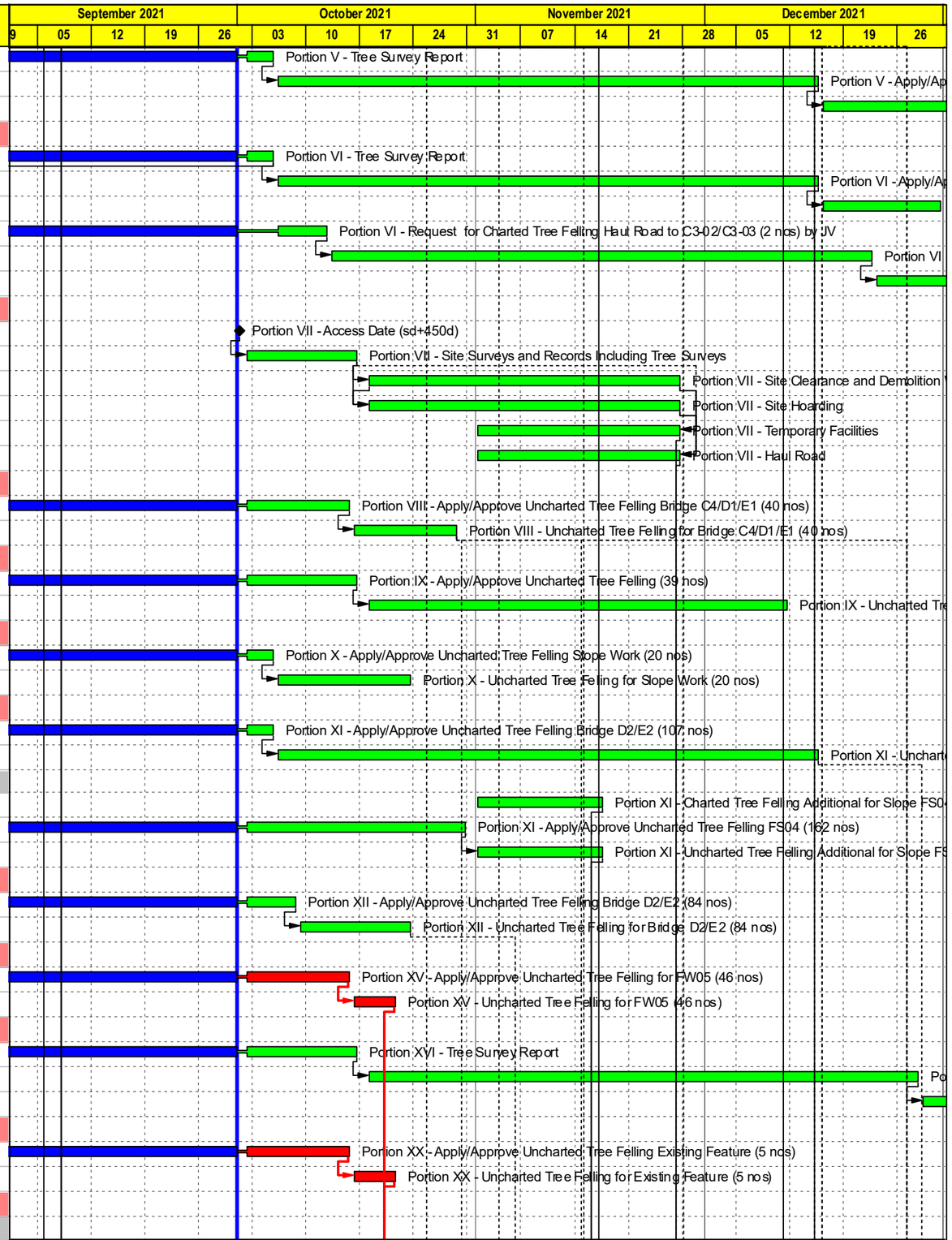
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme - Oct 2021

Proj ID : DPr8
Layout : ND201905 3MRP
Date : Page 2 of 10

3-Month Rolling Programme			
Date	Revision	Checked	Approved
15-Oct-21	October 2021		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
05-110	Portion V - Tree Survey Report	3	05-May-21 A	05-Oct-21
05-112	Portion V - Apply/Approve Uncharted Tree Felling Bridge C2/C3 (135 nos)	60	06-Oct-21	15-Dec-21
05-120	Portion V - Uncharted Tree Felling for Bridge C2/C3 (135 nos)	24	16-Dec-21	15-Jan-22
3.7 - Portion VI Site Set-up				
06-110	Portion VI - Tree Survey Report	3	14-May-21 A	05-Oct-21
06-112	Portion VI - Apply/Approve Uncharted Tree Felling Bridge C3/C4 (99 nos)	60	06-Oct-21	15-Dec-21
06-120	Portion VI - Uncharted Tree Felling for Bridge C3/C4 (99 nos)	12	16-Dec-21	31-Dec-21
06-125	Portion VI - Request for Charted Tree Felling Haul Road to C3-02/C3-03 (2 nos) by JV	6	16-Aug-21 A	12-Oct-21
06-130	Portion VI - Apply/Approve Charted Tree Felling Haul Road to C3-02/C3-03 (2 nos)	60	13-Oct-21	22-Dec-21
06-150	Portion VI - Charted Tree Felling for Haul Road to C3-02/C3-03 (2 nos)	12	23-Dec-21	08-Jan-22
3.8 - Portion VII Site Set-up				
07-100	Portion VII - Access Date (sd+450d)	0	01-Oct-21	
07-101	Portion VII - Site Surveys and Records Including Tree Surveys	12	02-Oct-21	16-Oct-21
07-102	Portion VII - Site Clearance and Demolition Works	36	18-Oct-21	27-Nov-21
07-104	Portion VII - Site Hoarding	36	18-Oct-21	27-Nov-21
07-105	Portion VII - Temporary Facilities	24	01-Nov-21	27-Nov-21
07-106	Portion VII - Haul Road	24	01-Nov-21	27-Nov-21
3.9 - Portion VIII				
08-210	Portion VIII - Apply/Approve Uncharted Tree Felling Bridge C4/D1/E1 (40 nos)	11	01-Jun-21 A	15-Oct-21
08-220	Portion VIII - Uncharted Tree Felling for Bridge C4/D1/E1 (40 nos)	12	16-Oct-21	29-Oct-21
3.10 - Portion IX Site Survey				
09-114	Portion IX - Apply/Approve Uncharted Tree Felling (39 nos)	12	26-May-21 A	16-Oct-21
09-115	Portion IX - Uncharted Tree Felling (39 nos)	48	18-Oct-21	11-Dec-21
3.11 - Portion X Site Set-up				
10-112	Portion X - Apply/Approve Uncharted Tree Felling Slope Work (20 nos)	3	10-May-21 A	05-Oct-21
10-118	Portion X - Uncharted Tree Felling for Slope Work (20 nos)	15	06-Oct-21	23-Oct-21
3.12 - Portion XI Site Set-up				
11-015	Portion XI - Apply/Approve Uncharted Tree Felling Bridge D2/E2 (107 nos)	3	27-May-21 A	05-Oct-21
11-030	Portion XI - Uncharted Tree Felling for Bridge D2/E2 (107 nos)	60	06-Oct-21	15-Dec-21
3.12.4 - Tai Wo Service Road West Site Set-up				
11-460	Portion XI - Charted Tree Felling Additional for Slope FS04 (106 nos)	15	01-Nov-21	17-Nov-21
11-480	Portion XI - Apply/Approve Uncharted Tree Felling FS04 (162 nos)	24	28-Aug-21 A	30-Oct-21
11-500	Portion XI - Uncharted Tree Felling Additional for Slope FS04 (162 nos)	15	01-Nov-21	17-Nov-21
3.13 - Portion XII Site Set-up				
12-150	Portion XII - Apply/Approve Uncharted Tree Felling Bridge D2/E2 (84 nos)	6	10-May-21 A	08-Oct-21
12-170	Portion XII - Uncharted Tree Felling for Bridge D2/E2 (84 nos)	12	09-Oct-21	23-Oct-21
3.16 - Portion XV				
15-130	Portion XV - Apply/Approve Uncharted Tree Felling for FW05 (46 nos)	11	02-Jun-21 A	15-Oct-21
15-150	Portion XV - Uncharted Tree Felling for FW05 (46 nos)	5	16-Oct-21	21-Oct-21
3.17 - Portion XVI				
16-125	Portion XVI - Tree Survey Report	12	05-May-21 A	16-Oct-21
16-130	Portion XVI - Apply/Approve Uncharted Tree Felling for Existing Feature (164 nos)	60	18-Oct-21	28-Dec-21
16-150	Portion XVI - Uncharted Tree Felling for Existing Feature (164 nos)	60	29-Dec-21	12-Mar-22
3.21 - Portion XX				
20-130	Portion XX - Apply/Approve Uncharted Tree Felling Existing Feature (5 nos)	11	29-May-21 A	15-Oct-21
20-150	Portion XX - Uncharted Tree Felling for Existing Feature (5 nos)	5	16-Oct-21	21-Oct-21
3.23 - Segment Storage Facilities				
3.23.1 - Work Area C1 and C2				



CRCC - Paul Y. Joint Venture

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Milestone

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

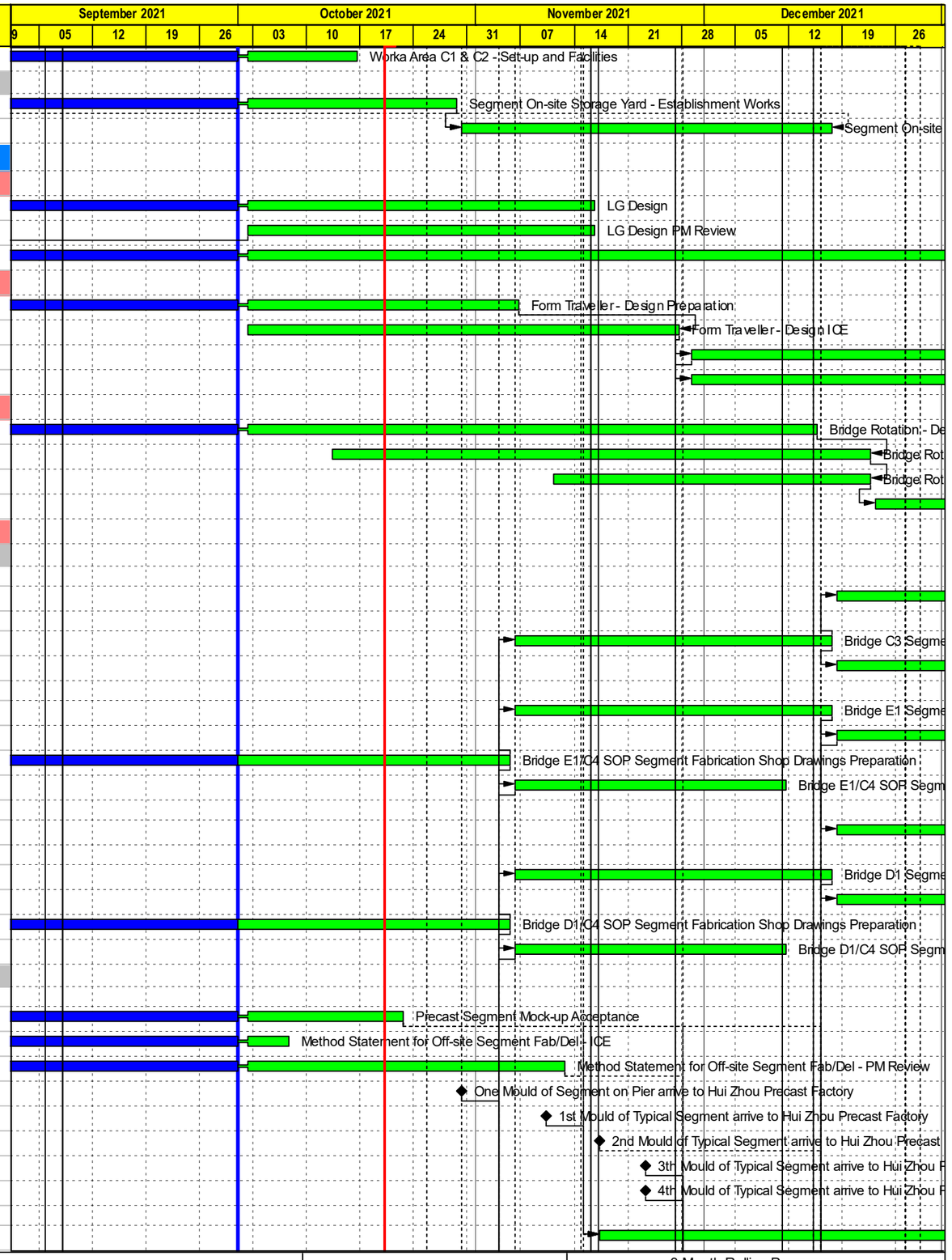
3-Month Rolling Programme - Oct 2021

Proj ID : DPr8
Layout : ND201905 3MRP
Date : Page 3 of 10

3-Month Rolling Programme

Date	Revision	Checked	Approved
15-Oct-21	October 2021		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
WA-1020	Worka Area C1 & C2 - Set-up and Facilities	12	22-May-21 A	16-Oct-21
3.23.2 - On-site Segment Storage				
SS-1010	Segment On-site Storage Yard - Establishment Works	23	10-Feb-21 A	29-Oct-21
SS-1015	Segment On-site Storage Yard - Gantry Crane Incl T&C	42	30-Oct-21	17-Dec-21
4.0 - Bridge Construction				
4.1 - Launching Gantry				
LG-102	LG Design	38	02-Feb-21 A	16-Nov-21
LG-104	LG Design PM Review	38	02-Oct-21	16-Nov-21
LG-105	LG Fabrication (6 months)	101	10-May-21 A	04-Feb-22
4.2 - Form Traveller				
E2-7401	Form Traveller - Design Preparation	30	03-Jul-21 A	06-Nov-21
E2-7402	Form Traveller - Design ICE	48	02-Oct-21	27-Nov-21
E2-7403	Form Traveller - Design PM Review	45	29-Nov-21	22-Jan-22
E2-7404	Form Traveller No. 1 - Fabrication and Delivery	78	29-Nov-21	05-Mar-22
4.3 - Bridge Rotation System				
E2-1501	Bridge Rotation - Design Preparation	63	03-Jul-21 A	15-Dec-21
E2-1502	Bridge Rotation - Design ICE	60	13-Oct-21	22-Dec-21
E2-1503	Bridge Rotation - PM Review	36	11-Nov-21	22-Dec-21
E2-1504	Bridge Rotation - Fabrication and Delivery	85	23-Dec-21	08-Apr-22
4.3 - Segment Fabrication				
4.3.1 - Shop Drawings				
- Bridge C2				
AD-520	Bridge C2 Segment Fabrication Shop Drawings Preparation	42	18-Dec-21	28-Jan-22
- Bridge C3				
AD-530	Bridge C3 Segment Fabrication Shop Drawings Preparation	42	06-Nov-21	17-Dec-21
AD-532	Bridge C3 Segment Fabrication Shop Drawings PM Review	36	18-Dec-21	22-Jan-22
- Bridge E1				
AD-560	Bridge E1 Segment Fabrication Shop Drawings Preparation	42	06-Nov-21	17-Dec-21
AD-562	Bridge E1 Segment Fabrication Shop Drawings PM Review	36	18-Dec-21	22-Jan-22
AD-565	Bridge E1/C4 SOP Segment Fabrication Shop Drawings Preparation	36	26-Jul-21 A	05-Nov-21
AD-567	Bridge E1/C4 SOP Segment Fabrication Shop Drawings PM Review	36	06-Nov-21	11-Dec-21
- Bridge E3				
AD-580	Bridge E3 Segment Fabrication Shop Drawings Prepararion	42	18-Dec-21	28-Jan-22
- Bridge D1				
AD-540	Bridge D1 Segment Fabrication Shop Drawings Preparation	42	06-Nov-21	17-Dec-21
AD-542	Bridge D1 Segment Fabrication Shop Drawings PM Review	36	18-Dec-21	22-Jan-22
AD-545	Bridge D1/C4 SOP Segment Fabrication Shop Drawings Preparation	36	26-Jul-21 A	05-Nov-21
AD-547	Bridge D1/C4 SOP Segment Fabrication Shop Drawings PM Review	36	06-Nov-21	11-Dec-21
4.3.2 - Off-Site Fabrication				
- Preparation Works				
OSF-134	Precast Segment Mock-up Acceptance	17	01-Jun-21 A	22-Oct-21
OSF-136	Method Statement for Off-site Segment Fab/Del - ICE	5	01-Jun-21 A	07-Oct-21
OSF-137	Method Statement for Off-site Segment Fab/Del - PM Review	35	01-Jun-21 A	12-Nov-21
OSF-140	One Mould of Segment on Pier arrive to Hui Zhou Precast Factory	0	30-Oct-21*	
OSF-145	1st Mould of Typical Segment arrive to Hui Zhou Precast Factory	0	10-Nov-21*	
OSF-150	2nd Mould of Typical Segment arrive to Hui Zhou Precast Factory	0	17-Nov-21*	
OSF-155	3th Mould of Typical Segment arrive to Hui Zhou Precast Factory	0	23-Nov-21*	
OSF-160	4th Mould of Typical Segment arrive to Hui Zhou Precast Factory	0	23-Nov-21*	
- Bridge C4				
OSF-1528	Segment Fab. Bridge C4-04M End-span (14 nos) - 1 production line (NO. 2-2)	48	17-Nov-21	14-Jan-22



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Remaining Level of Ef...
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Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme - Oct 2021

Proj ID : DPr8
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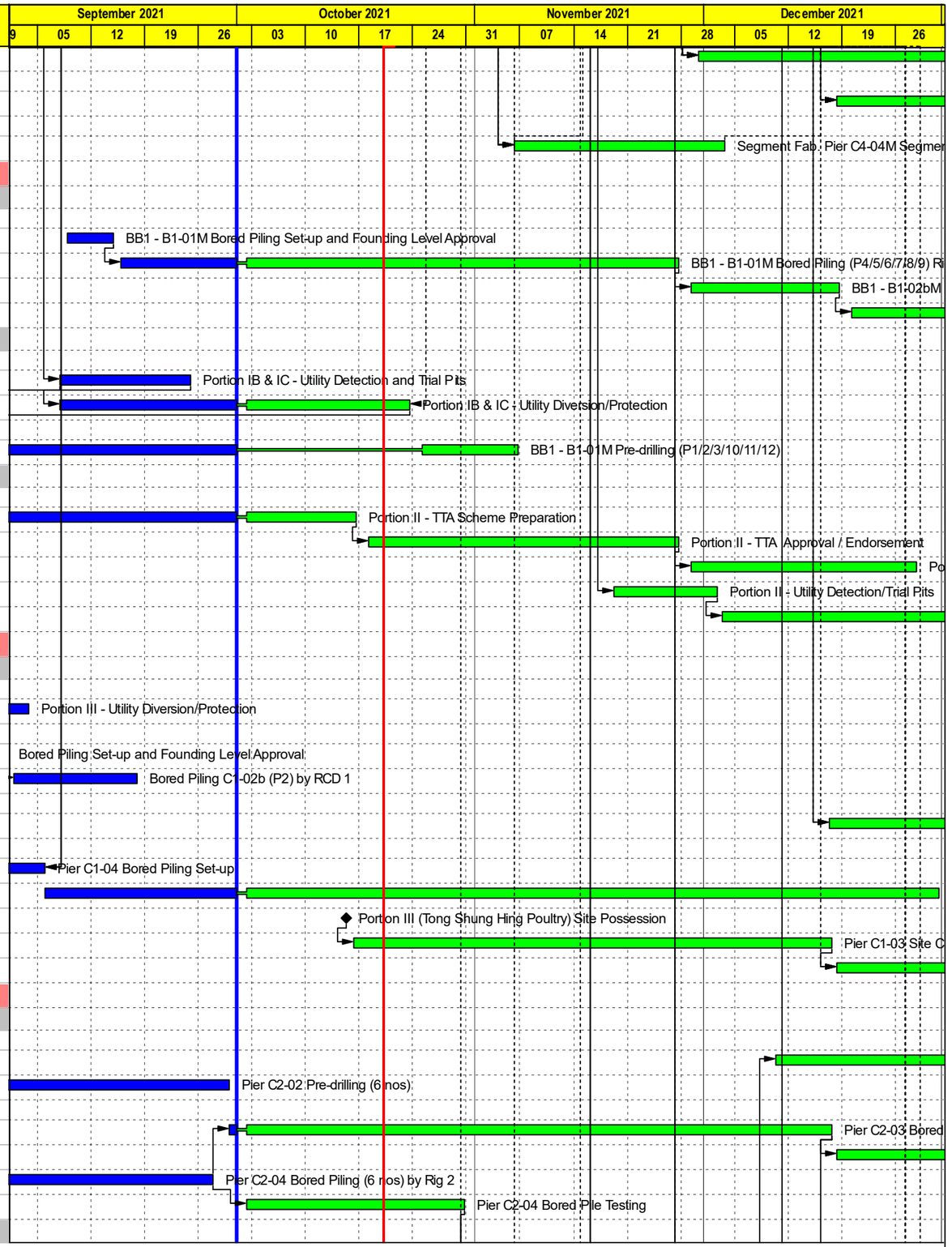
3-Month Rolling Programme

Date	Revision	Checked	Approved
15-Oct-21	October 2021		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
OSF-1530	Segment Fab. Bridge C4-03 T-span (40 nos) - 2 production lines (NO. 1-1 & 1-2)	69	30-Nov-21	24-Feb-22
- Bridge E1				
OSF-1555	Segment Fab. Bridge E1/C4-04M End-span (8 nos) - 1 production line (NO. 3-1)	24	18-Dec-21	18-Jan-22
Segment on Pier				
OSF-2210	Segment Fab. Pier C4-04M Segment on Pier (4 nos) - 1 production line (NO. 2-1)	24	06-Nov-21	03-Dec-21
4.4 - Bridge B1				
4.4.1 - Substructure Portion I and 1A				
- Piling				
B1-1120	BB1 - B1-01M Bored Piling Set-up and Founding Level Approval	0	09-Sep-21 A	15-Sep-21 A
B1-1131	BB1 - B1-01M Bored Piling (P4/5/6/7/8/9) Rig 1	48	16-Sep-21 A	27-Nov-21
B1-1134	BB1 - B1-02bM Bored Piling (2 nos) Rig 1	18	29-Nov-21	18-Dec-21
B1-1140	BB1 - B1-01M/02bM Bored Pile Testing	24	20-Dec-21	19-Jan-22
4.4.2 - Substructure Portion 1B and 1C				
- Preparation Works				
B1-221	Portion IB & IC - Utility Detection and Trial Pits	0	08-Sep-21 A	25-Sep-21 A
B1-222	Portion IB & IC - Utility Diversion/Protection	18	08-Sep-21 A	23-Oct-21
- Piling				
B1-0028	BB1 - B1-01M Pre-drilling (P1/2/3/10/11/12)	12	31-Aug-21 A	06-Nov-21
4.4.3 - Substructure Portion II				
- Preparation Works				
B1-111	Portion II - TTA Scheme Preparation	12	22-Jun-21 A	16-Oct-21
B1-112	Portion II - TTA Approval / Endorsement	36	18-Oct-21	27-Nov-21
B1-113	Portion II - TTA Implementation	24	29-Nov-21	28-Dec-21
B1-121	Portion II - Utility Detection/Trial Pits	12	19-Nov-21	02-Dec-21
B1-122	Portion II - Utility Diversion/Protection	72	03-Dec-21	03-Mar-22
4.6 - Bridge C1				
4.6.1 - Foundation				
4.6.2 - Preparation Works				
C1-122	Portion III - Utility Diversion/Protection	0	24-Aug-21 A	04-Sep-21 A
4.6.3 - Portion I				
C1-1110	Bored Piling Set-up and Founding Level Approval	0	30-Aug-21 A	01-Sep-21 A
C1-1120	Bored Piling C1-02b (P2) by RCD 1	0	02-Sep-21 A	18-Sep-21 A
4.6.4 - Portion II				
C1-1200	Pre-drilling C1-01aM (2 nos)	12	17-Dec-21	03-Jan-22
4.6.5 - Portion III				
C1-1405	Pier C1-04 Bored Piling Set-up	0	01-Sep-21 A	06-Sep-21 A
C1-1420	Bored Piling C1-04 (6 nos) by Rig 3	75	06-Sep-21 A	31-Dec-21
C1-1426	Portion III (Tong Shung Hing Poultry) Site Possession	0	15-Oct-21*	
C1-1428	Pier C1-03 Site Clearance and Demolition Works	54	16-Oct-21	17-Dec-21
C1-1430	Pre-drilling C1-03 (6 nos)	36	18-Dec-21	04-Feb-22
4.7 - Bridge C2				
4.7.1 - Foundation				
- Portion IV				
C2-1035	Pier C2-01 Bored Piling (3 nos) by RCD 2	36	10-Dec-21	24-Jan-22
C2-1050	Pier C2-02 Pre-drilling (6 nos)	0	11-Mar-21 A	30-Sep-21 A
- Portion V				
C2-1200	Pier C2-03 Bored Piling (6 nos) by Rig 2	65	30-Sep-21 A	17-Dec-21
C2-1205	Pier C2-03 Bored Pile Testing	24	18-Dec-21	18-Jan-22
C2-1220	Pier C2-04 Bored Piling (6 nos) by Rig 2	0	10-May-21 A	28-Sep-21 A
C2-1230	Pier C2-04 Bored Pile Testing	24	02-Oct-21	30-Oct-21
4.7.2 - Pier				



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

3-Month Rolling Programme - Oct 2021

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3-Month Rolling Programme			
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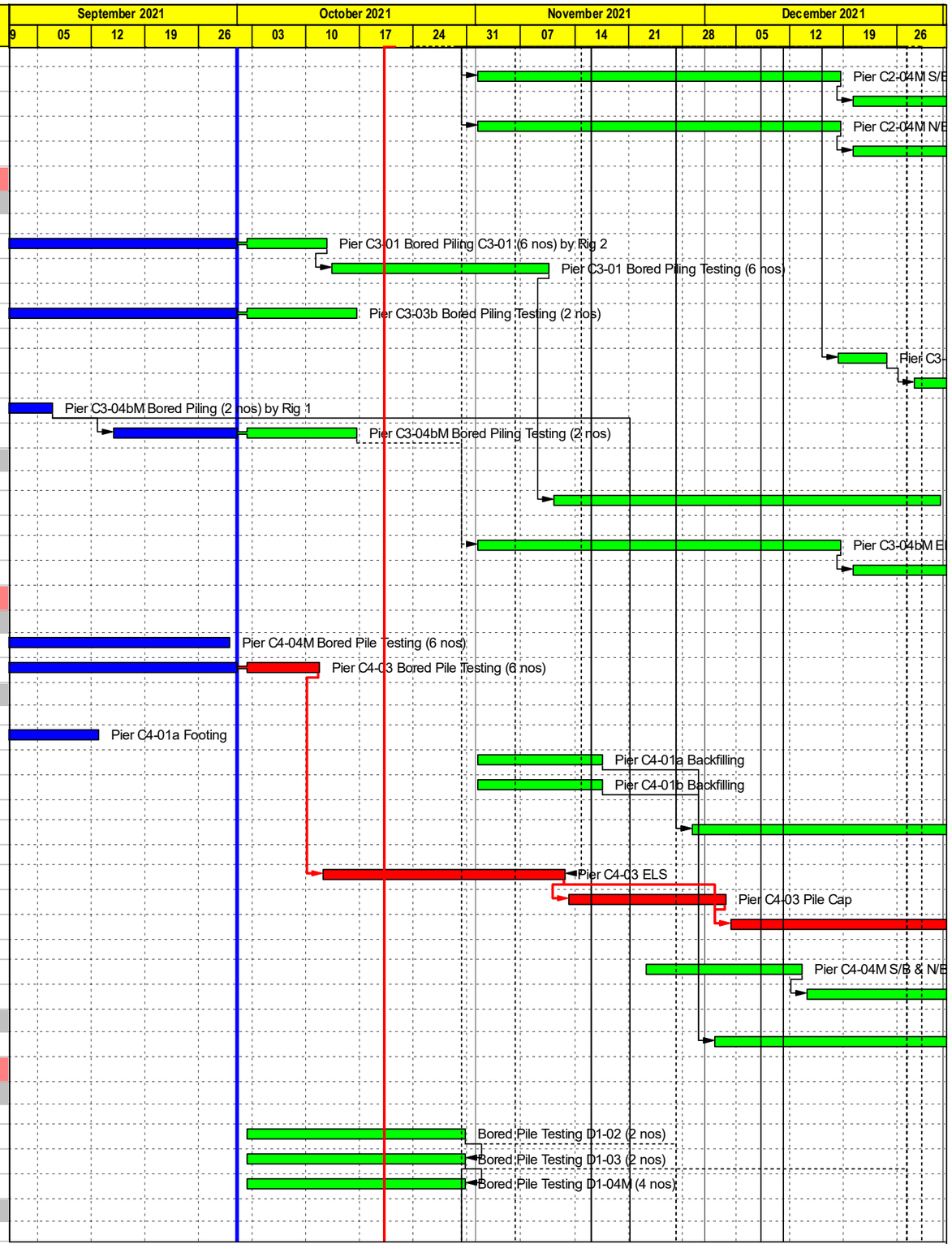
Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
- C2-04				
C2-1480	Pier C2-04M S/B ELS	42	01-Nov-21	18-Dec-21
C2-1485	Pier C2-04M S/B Pile Cap	24	20-Dec-21	19-Jan-22
C2-1500	Pier C2-04M N/B ELS	42	01-Nov-21	18-Dec-21
C2-1505	Pier C2-04M N/B Pile Cap	24	20-Dec-21	19-Jan-22
4.8 - Bridge C3				
4.8.2 - Foundation				
- C3-01				
C3-1030	Pier C3-01 Bored Piling C3-01 (6 nos) by Rig 2	9	13-May-21 A	12-Oct-21
C3-1040	Pier C3-01 Bored Piling Testing (6 nos)	24	13-Oct-21	10-Nov-21
- C3-03				
C3-1160	Pier C3-03b Bored Piling Testing (2 nos)	12	01-Sep-21 A	16-Oct-21
- C3-04M				
C3-7270	Pier C3-04aM Bored Piling Set-up Rig 2	6	18-Dec-21	24-Dec-21
C3-7280	Pier C3-04aM Bored Piling (2 nos) by Rig 2	18	28-Dec-21	18-Jan-22
C3-7320	Pier C3-04bM Bored Piling (2 nos) by Rig 1	0	02-Aug-21 A	07-Sep-21 A
C3-7330	Pier C3-04bM Bored Piling Testing (2 nos)	12	15-Sep-21 A	16-Oct-21
4.8.3 - Pier				
- C3-01				
C3-1210	Pier C3-01a ELS	42	11-Nov-21	31-Dec-21
- C3-04				
C3-1550	Pier C3-04bM ELS	42	01-Nov-21	18-Dec-21
C3-1555	Pier C3-04bM Pile Cap	18	20-Dec-21	12-Jan-22
4.9 - Bridge C4				
4.9.2 - Foundation				
C4-1025	Pier C4-04M Bored Pile Testing (6 nos)	0	18-Mar-21 A	30-Sep-21 A
C4-1045	Pier C4-03 Bored Pile Testing (6 nos)	8	12-May-21 A	11-Oct-21
4.9.3 - Pier				
- C4-01				
C4-1205	Pier C4-01a Footing	0	25-Aug-21 A	13-Sep-21 A
C4-1225	Pier C4-01a Backfilling	15	01-Nov-21	17-Nov-21
C4-1265	Pier C4-01b Backfilling	15	01-Nov-21	17-Nov-21
- C4-02				
C4-1350	Pier C4-02 ELS	90	29-Nov-21	19-Mar-22
- C4-03				
C4-5510	Pier C4-03 ELS	27	12-Oct-21	12-Nov-21
C4-5515	Pier C4-03 Pile Cap	18	13-Nov-21	03-Dec-21
C4-5520	Pier C4-03 Column	24	04-Dec-21	04-Jan-22
- C4-04M				
C4-5555	Pier C4-04M S/B & N/B Pile Cap	18	23-Nov-21	13-Dec-21
C4-5560	Pier C4-04M S/B & N/B Column	36	14-Dec-21	27-Jan-22
4.9.4 - Pier Head and Portal Beam				
C4-5590	Portal Beam C4-01	90	02-Dec-21	23-Mar-22
4.10 - Bridge D1				
4.10.1 - Foundation				
- Portion VIII				
D1-1124	Bored Pile Testing D1-02 (2 nos)	24	02-Oct-21	30-Oct-21
D1-1126	Bored Pile Testing D1-03 (2 nos)	24	02-Oct-21	30-Oct-21
D1-1145	Bored Pile Testing D1-04M (4 nos)	24	02-Oct-21	30-Oct-21
4.10.2 - Pier				
- D1-01				



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

3-Month Rolling Programme - Oct 2021

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3-Month Rolling Programme

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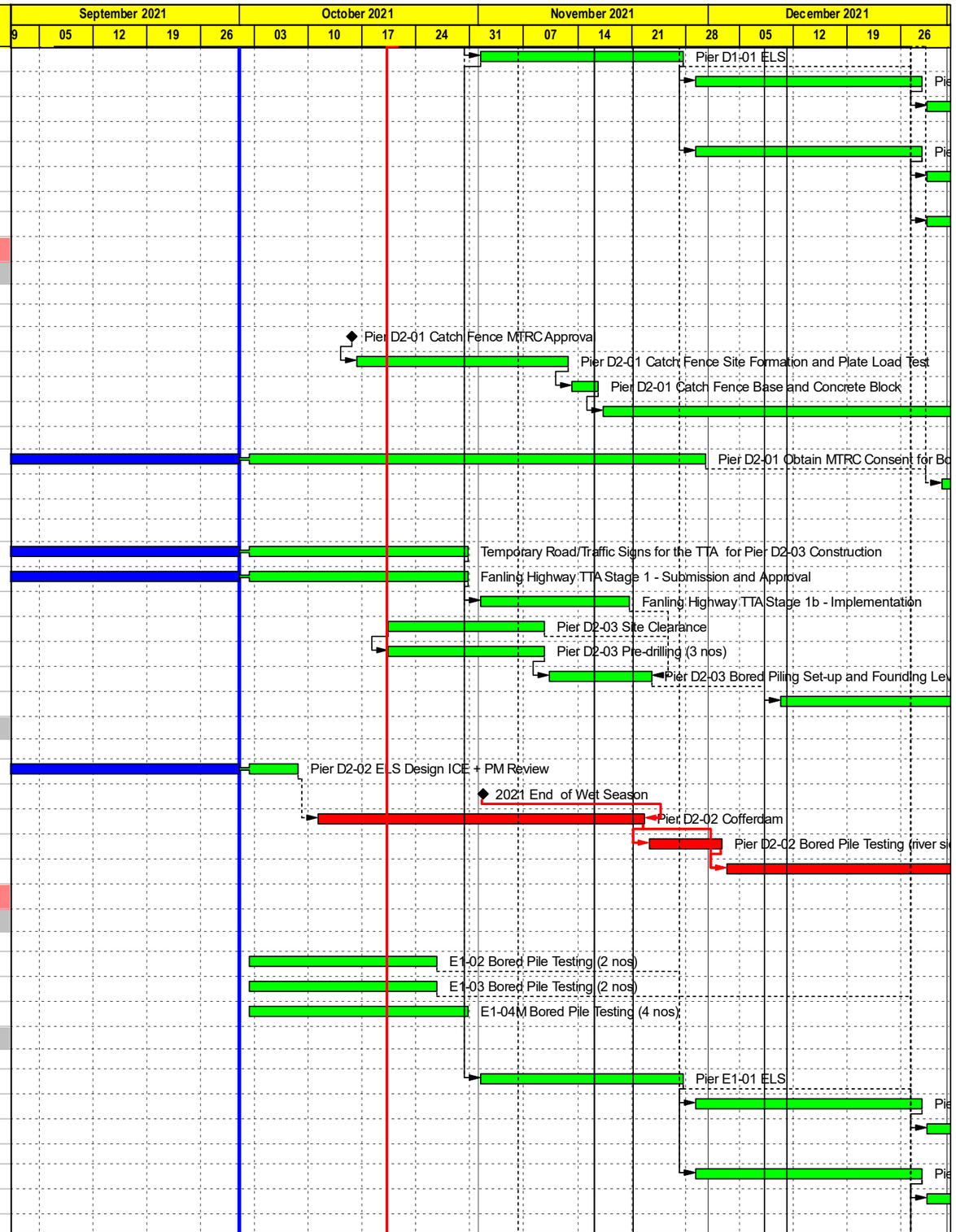
Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
D1-1250	Pier D1-01 ELS	24	01-Nov-21	27-Nov-21
D1-1255	Pier D1-01 Pile Cap	24	29-Nov-21	28-Dec-21
D1-1260	Pier D1-01 Column	36	29-Dec-21	12-Feb-22
- D1-02				
D1-1350	Pier D1-02 ELS	24	29-Nov-21	28-Dec-21
D1-1355	Pier D1-02 Pile Cap	24	29-Dec-21	26-Jan-22
- D1-03				
D1-5530	Pier D1-03 ELS	24	29-Dec-21	26-Jan-22
4.11 - Bridge D2				
4.11.1 - Foundation				
- Portion VIII				
- Catch Fence				
D2-7615	Pier D2-01 Catch Fence MTRC Approval	0		15-Oct-21*
D2-7625	Pier D2-01 Catch Fence Site Formation and Plate Load Test	24	16-Oct-21	12-Nov-21
D2-7635	Pier D2-01 Catch Fence Base and Concrete Block	3	13-Nov-21	16-Nov-21
D2-7645	Pier D2-01 Catch Fence Installation (11 NTH @ 5 NTH/month)	54	17-Nov-21	21-Jan-22
- Bored Piling				
D2-1118	Pier D2-01 Obtain MTRC Consent for Bored Piling and Pier Construction	50	05-Jul-21 A	30-Nov-21
D2-1120	Pier D2-01 Bored Piling Set-up	18	31-Dec-21	21-Jan-22
- Portion XI				
- Pier D2-03				
D2-1075	Temporary Road/Traffic Signs for the TTA for Pier D2-03 Construction	24	30-Jul-21 A	30-Oct-21
D2-1209	Fanling Highway TTA Stage 1 - Submission and Approval	24	25-Jan-21 A	30-Oct-21
D2-1212	Fanling Highway TTA Stage 1b - Implementation	18	01-Nov-21	20-Nov-21
D2-1215	Pier D2-03 Site Clearance	18	20-Oct-21	09-Nov-21
D2-1220	Pier D2-03 Pre-drilling (3 nos)	18	20-Oct-21	09-Nov-21
D2-1225	Pier D2-03 Bored Piling Set-up and Founding Level Approval	12	10-Nov-21	23-Nov-21
D2-1230	Pier D2-03 Bored Piling (3 nos) by RCD	42	10-Dec-21	31-Jan-22
4.11.2 - Pier				
- D2-02				
D2-1542	Pier D2-02 ELS Design ICE + PM Review	6	02-Aug-21 A	08-Oct-21
D2-1548	2021 End of Wet Season	0		01-Nov-21*
D2-1550	Pier D2-02 Cofferdam	36	11-Oct-21	22-Nov-21
D2-1555	Pier D2-02 Bored Pile Testing (river side 2 nos)	9	23-Nov-21	02-Dec-21
D2-1560	Pier D2-02 ELS	30	03-Dec-21	10-Jan-22
4.12 - Bridge E1				
4.12.1 - Foundation				
Portion VIII				
E1-1141	E1-02 Bored Pile Testing (2 nos)	20	02-Oct-21	26-Oct-21
E1-1146	E1-03 Bored Pile Testing (2 nos)	20	02-Oct-21	26-Oct-21
E1-1151	E1-04M Bored Pile Testing (4 nos)	24	02-Oct-21	30-Oct-21
4.12.2 - Pier				
- E1-01				
E1-1250	Pier E1-01 ELS	24	01-Nov-21	27-Nov-21
E1-1255	Pier E1-01 Pile Cap	24	29-Nov-21	28-Dec-21
E1-1260	Pier E1-01 Column	36	29-Dec-21	12-Feb-22
- E2-02				
E1-1350	Pier E1-02 ELS	24	29-Nov-21	28-Dec-21
E1-1355	Pier E1-02 Pile Cap	24	29-Dec-21	26-Jan-22
- E1-03				



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3-Month Rolling Programme			
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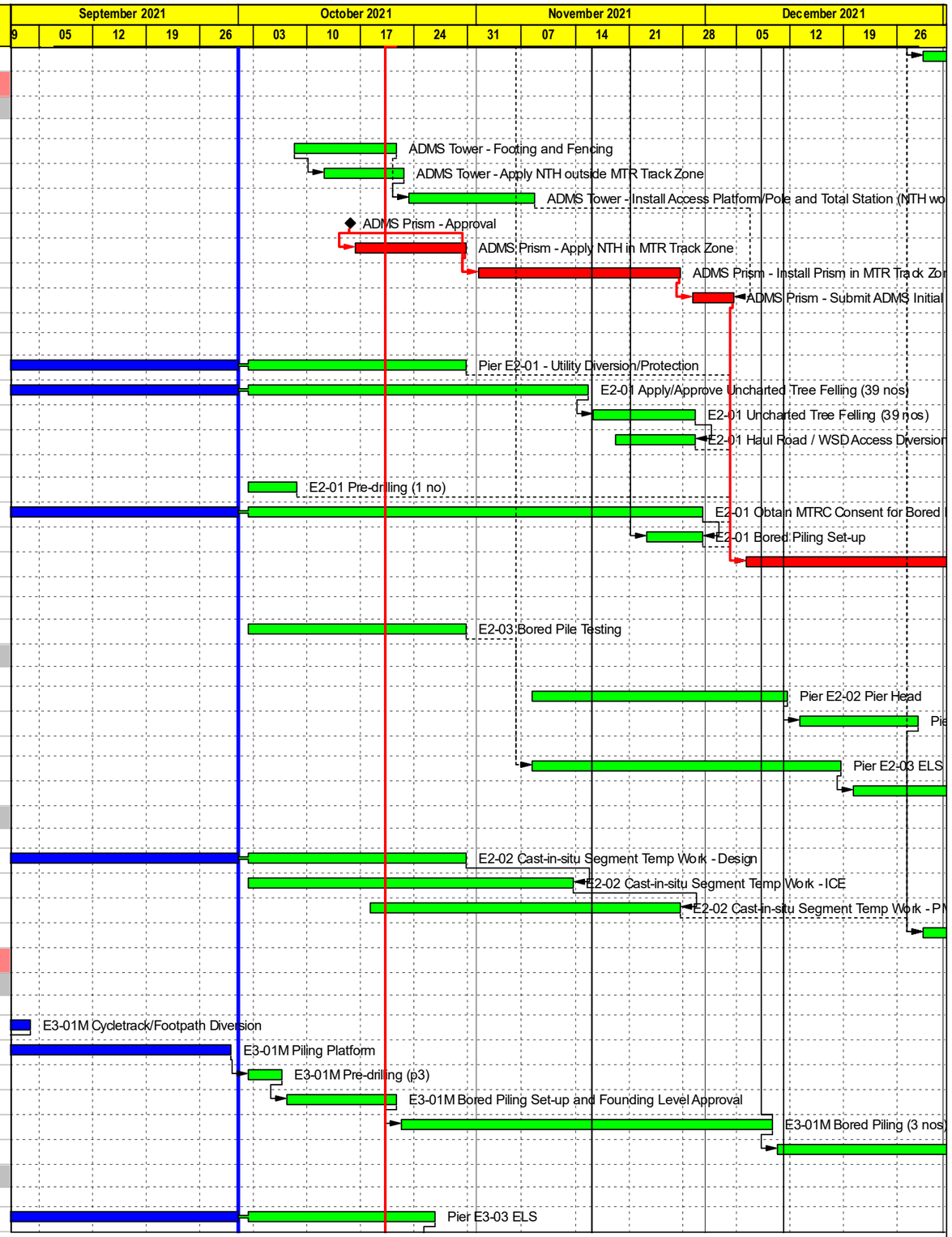
Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
E1-5530	Pier E1-03 ELS	24	29-Dec-21	26-Jan-22
4.13 - Bridge E2				
4.13.1 - Foundation				
- ADMS				
ADMS-100	ADMS Tower - Footing and Fencing	11	08-Oct-21*	21-Oct-21
ADMS-110	ADMS Tower - Apply NTH outside MTR Track Zone	9	12-Oct-21	22-Oct-21
ADMS-120	ADMS Tower - Install Access Platform/Pole and Total Station (NTH work)	14	23-Oct-21	08-Nov-21
ADMS-130	ADMS Prism - Approval	0		15-Oct-21*
ADMS-140	ADMS Prism - Apply NTH in MTR Track Zone	13	16-Oct-21	30-Oct-21
ADMS-150	ADMS Prism - Install Prism in MTR Track Zone (4 NTH work)	24	01-Nov-21	27-Nov-21
ADMS-160	ADMS Prism - Submit ADMS Initial Survey Report	6	29-Nov-21	04-Dec-21
- Portion VIII				
- Prep Work				
E2-1104	Pier E2-01 - Utility Diversion/Protection	24	19-Aug-21 A	30-Oct-21
E2-1107	E2-01 Apply/Approve Uncharted Tree Felling (39 nos)	37	31-Jul-21 A	15-Nov-21
E2-1108	E2-01 Uncharted Tree Felling (39 nos)	12	16-Nov-21	29-Nov-21
E2-1109	E2-01 Haul Road / WSD Access Diversion	9	19-Nov-21	29-Nov-21
- Bored Piling				
E2-1115	E2-01 Pre-drilling (1 no)	6	02-Oct-21	08-Oct-21
E2-1118	E2-01 Obtain MTRC Consent for Bored Piling and Pier Construction	50	05-Jul-21 A	30-Nov-21
E2-1120	E2-01 Bored Piling Set-up	7	23-Nov-21	30-Nov-21
E2-1130	E2-01 Bored Piling (6 nos) by Rotary Rig	60	06-Dec-21	19-Feb-22
- Portion XI				
- Pier E2-03				
E2-1240	E2-03 Bored Pile Testing	24	02-Oct-21	30-Oct-21
4.13.2 - Pier				
- E2-02				
E2-1572	Pier E2-02 Pier Head	30	08-Nov-21	11-Dec-21
E2-1575	Pier E2-02 Backfilling	12	13-Dec-21	28-Dec-21
- E2-03				
E2-6020	Pier E2-03 ELS	36	08-Nov-21	18-Dec-21
E2-6025	Pier E2-03 Pile Cap	18	20-Dec-21	12-Jan-22
4.13.3 - Bridge Deck				
- T-span E2-02				
E2-7410	E2-02 Cast-in-situ Segment Temp Work - Design	24	03-Jul-21 A	30-Oct-21
E2-7411	E2-02 Cast-in-situ Segment Temp Work - ICE	36	02-Oct-21	13-Nov-21
E2-7412	E2-02 Cast-in-situ Segment Temp Work - PM Review	36	18-Oct-21	27-Nov-21
E2-7415	E2-02 Cast-in-situ Segment on Pier / Table Top	90	29-Dec-21	21-Apr-22
4.14 - Bridge E3				
4.14.1 - Foundation				
- Pier E3-01M (Portion XI)				
E3-1016	E3-01M Cycletrack/Footpath Diversion	0	26-Jul-21 A	04-Sep-21 A
E3-1017	E3-01M Piling Platform	0	16-Aug-21 A	30-Sep-21 A
E3-1020	E3-01M Pre-drilling (p3)	4	02-Oct-21	06-Oct-21
E3-1025	E3-01M Bored Piling Set-up and Founding Level Approval	12	07-Oct-21	21-Oct-21
E3-1030	E3-01M Bored Piling (3 nos) by RCD 2	42	22-Oct-21	09-Dec-21
E3-1040	E3-01M Bored Pile Testing (4 nos)	24	10-Dec-21	10-Jan-22
4.14.2 - Pier				
- E3-03				
E3-5530	Pier E3-03 ELS	20	20-May-21 A	26-Oct-21



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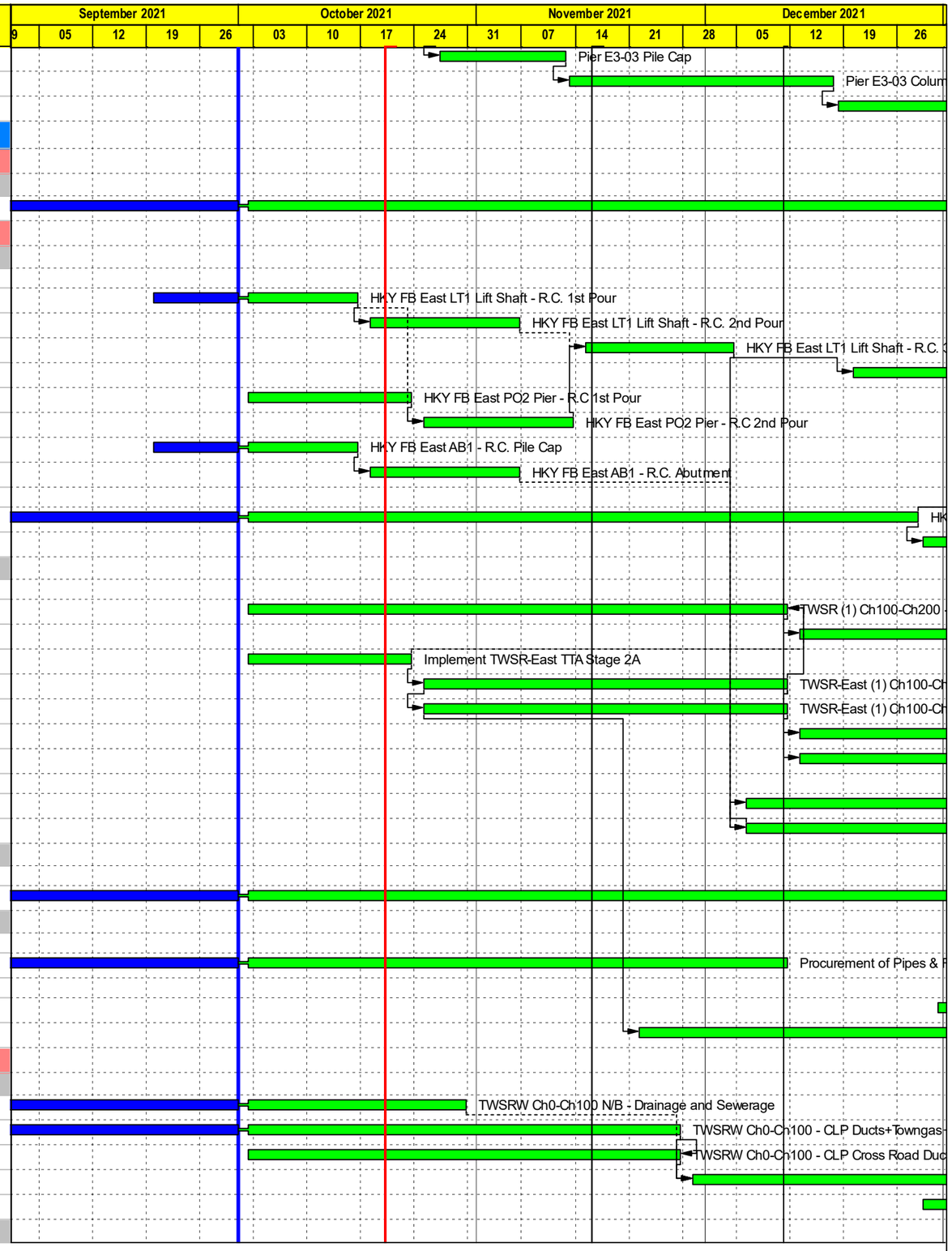
E3-5535	Pier E3-03 Pile Cap	15	27-Oct-21	12-Nov-21
E3-5540	Pier E3-03 Column	30	13-Nov-21	17-Dec-21
E3-5542	Pier E3-03 Pier Head	24	18-Dec-21	18-Jan-22
5.0 - Fanling Highway Associated Works				
5.2 - Fanling Highway Noise Barrier				
5.2.3 - Noise Barrier NB109				
FHY-1498	Fanling Highway TTA Stage 2 - Submission and Approval	270	03-Jul-21 A	30-Aug-22
5.3 - Tai Wo Service Road East (TWSR-East)				
5.3.1 - TWSR-East HKY FB Extension				
- Lift and Stairs Structure				
FBE-1220	HKY FB East LT1 Lift Shaft - R.C. 1st Pour	12	20-Sep-21 A	16-Oct-21
FBE-1225	HKY FB East LT1 Lift Shaft - R.C. 2nd Pour	18	18-Oct-21	06-Nov-21
FBE-1230	HKY FB East LT1 Lift Shaft - R.C. 3rd Pour Incl Roof	18	15-Nov-21	04-Dec-21
FBE-1235	HKY FB East LT1 Lift Shaft - Steel Works	72	20-Dec-21	19-Mar-22
FBE-1240	HKY FB East PO2 Pier - R.C 1st Pour	18	02-Oct-21	23-Oct-21
FBE-1245	HKY FB East PO2 Pier - R.C 2nd Pour	18	25-Oct-21	13-Nov-21
FBE-1255	HKY FB East AB1 - R.C. Pile Cap	12	20-Sep-21 A	16-Oct-21
FBE-1260	HKY FB East AB1 - R.C. Abutment	18	18-Oct-21	06-Nov-21
- Lift Installation				
FBE-1275	HKY FB East Lift - Manufacturing	72	17-Oct-20 A	28-Dec-21
FBE-1280	HKY FB East Lift - Delivery	30	29-Dec-21	05-Feb-22
5.3.2 - TWSR East (1) Adjacent to Cycle Track				
- Ch100 to Ch200				
TSE-2356	TWSR (1) Ch100-Ch200 - Application for Lighting Removal	60	02-Oct-21	11-Dec-21
TSE-2358	TWSR (1) Ch100-Ch200 - Lighting Removal/Install Temporary Lighting	42	13-Dec-21	05-Feb-22
TSE-2395	Implement TWSR-East TTA Stage 2A	18	02-Oct-21	23-Oct-21
TSE-2400	TWSR-East (1) Ch100-Ch200 S/B - Site Formation	42	25-Oct-21	11-Dec-21
TSE-2405	TWSR-East (1) Ch100-Ch200 S/B - New Feature FW01 (L-Shape Ret Wall)	42	25-Oct-21	11-Dec-21
TSE-2410	TWSR-East (1) Ch100-Ch200 S/B - Drainage, Sewerage and Utilities	48	13-Dec-21	12-Feb-22
TSE-2412	TWSR-East (1) Ch100-Ch200 S/B - DN150 Watermain	48	13-Dec-21	12-Feb-22
- Ch200 to Ch325				
TSE-2050	TWSR-East (1) Ch200-Ch325 - Site Formation	42	06-Dec-21	26-Jan-22
TSE-2055	TWSR-East (1) Ch200-Ch325 - Mass Concrete Wall (FW03)	42	06-Dec-21	26-Jan-22
5.3.3 - TWSR-East Bus-Bus Interchange				
- Bus-Bus Interchange Shelter				
BBI-1202	BBI Covered Walkway - Procurement	78	16-Aug-21 A	05-Jan-22
5.3.6 - PMI 027 - DN1200 and DN600 Watermain Diversion				
- Preparation Works				
PMI027-130	Procurement of Pipes & Fittings - Batch 2	60	17-Aug-21 A	11-Dec-21
- DN1200 Watermain				
PMI027-140	DN1200 - Watermain Laying Ch 000-120	60	31-Dec-21	15-Mar-22
PMI027-150	DN1200 - Watermain Laying Ch 120-170	42	22-Nov-21	12-Jan-22
5.4 - Tai Wo Service Road West (TWSR-West)				
5.4.2 - TWSR-West Ch000 to Ch200				
TSW-4100	TWSRW Ch0-Ch100 N/B - Drainage and Sewerage	24	30-Jun-21 A	30-Oct-21
TSW-4105	TWSRW Ch0-Ch100 - CLP Ducts+Towngas+Other Utilities	48	30-Jun-21 A	27-Nov-21
TSW-4108	TWSRW Ch0-Ch100 - CLP Cross Road Ducts	48	02-Oct-21	27-Nov-21
TSW-4110	TWSRW Ch0-Ch100 N/B - Roadworks+Footpath+Cycletrack+Run-in	30	29-Nov-21	05-Jan-22
TSW-4127	TWSRW TTA Stage 1B - Submission and Approval	72	29-Dec-21	26-Mar-22
5.4.3 - TWSR-West Ch200 to Ch450				



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)

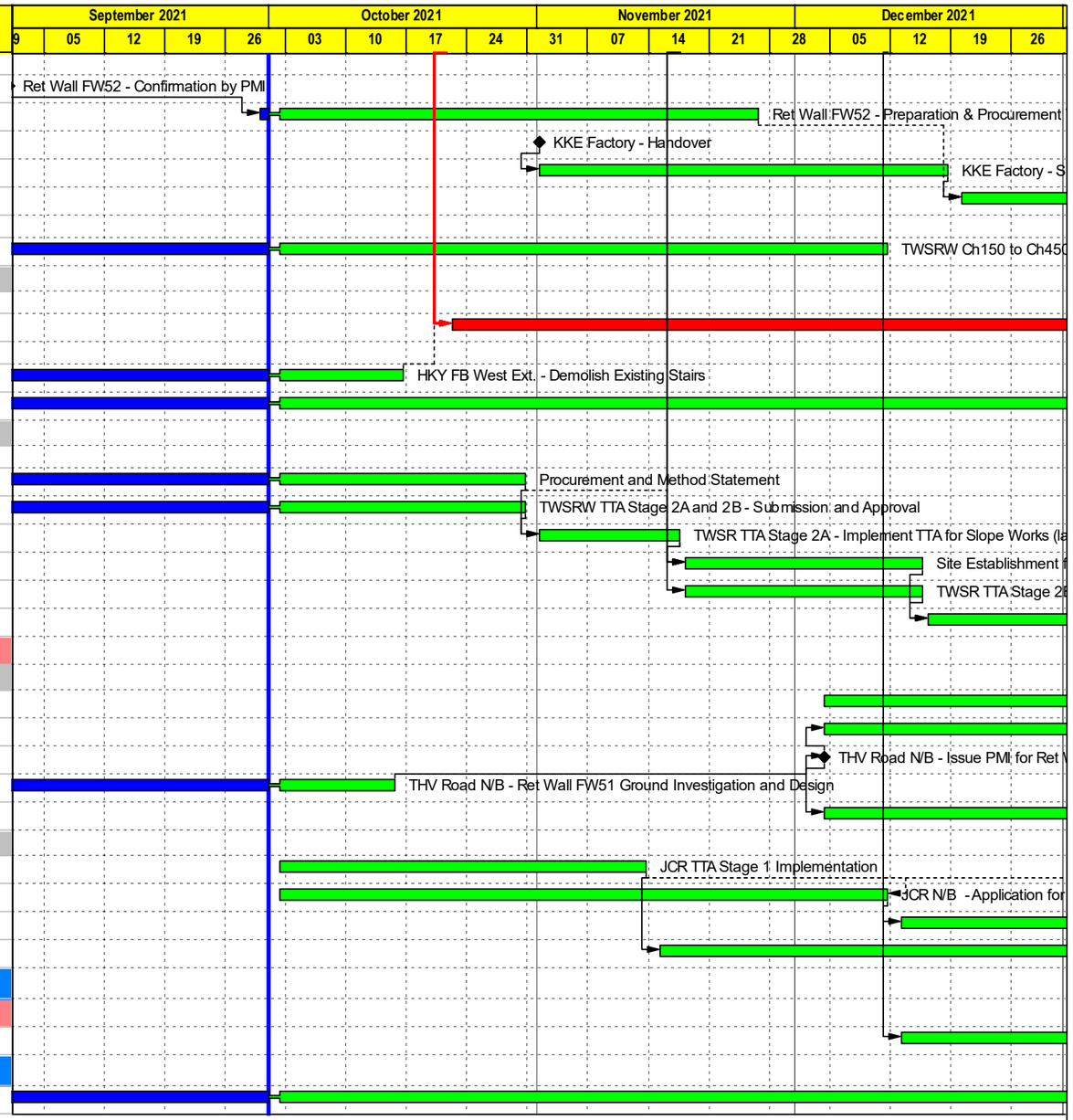
3-Month Rolling Programme - Oct 2021

Proj ID : DPr8
Layout : ND201905 3MRP
Date : Page 9 of 10

3-Month Rolling Programme

Date	Revision	Checked	Approved
15-Oct-21	October 2021		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
- KKE Factory Compound				
TSW-4418	Ret Wall FW52 - Confirmation by PMI	0	01-Sep-21 A	
TSW-4420	Ret Wall FW52 - Preparation & Procurement Works	47	30-Sep-21 A	26-Nov-21
TSW-4426	KKE Factory - Handover	0	01-Nov-21*	
TSW-4427	KKE Factory - Site Clearance and Demolition	42	01-Nov-21	18-Dec-21
TSW-4428	KKE Factory - Retaining Wall FW52	150	20-Dec-21	27-Jun-22
- Ch200 to Ch450				
TSW-4430	TWSRW Ch150 to Ch450 Drainage	60	01-Apr-21 A	11-Dec-21
5.4.4 - TWSR-West Ch450 to Ch600				
- Retaining Walls				
TSW-3015	New Feature FW06 + Access Road	72	22-Oct-21	17-Jan-22
- Lift				
TSW-4530	HKY FB West Ext. - Demolish Existing Stairs	12	30-Aug-21 A	16-Oct-21
TSW-4570	HKY FB West Ext. - Lift Manufacturing	78	19-Jan-21 A	05-Jan-22
5.4.5 - TWSR-West Ch600 to Ch800				
- Ch600 to Ch800 Slope Works				
TSW-1120	Procurement and Method Statement	24	14-Aug-21 A	30-Oct-21
TSW-1122	TWSRW TTA Stage 2A and 2B - Submission and Approval	24	14-Aug-21 A	30-Oct-21
TSW-1123	TWSR TTA Stage 2A - Implement TTA for Slope Works (lane closure 10-4pm only)	15	01-Nov-21	17-Nov-21
TSW-1125	Site Establishment for Slope Works	24	18-Nov-21	15-Dec-21
TSW-1130	TWSR TTA Stage 2B - Implement TTA for Slope Works (without lane dosure)	24	18-Nov-21	15-Dec-21
TSW-1135	Slope Work for FS04 - Top Slope Excavation	24	16-Dec-21	15-Jan-22
5.5 - Jockey Club Road				
5.5.2 - Tong Hang Village Road (THV Road)				
JCR-2180	THV TTA Stage 1 Implementation	72	04-Dec-21	04-Mar-22
JCR-2181	THV Road N/B - Application for Lighting Removal	72	04-Dec-21	04-Mar-22
JCR-2190	THV Road N/B - Issue PMI for Ret Wall FW51	0	04-Dec-21	
JCR-2192	THV Road N/B - Ret Wall FW51 Ground Investigation and Design	11	01-Apr-21 A	15-Oct-21
JCR-2193	THV Road N/B - Ret Wall FW51 Preparation Work	42	04-Dec-21	25-Jan-22
5.5.3 - North Bound				
JCR-2340	JCR TTA Stage 1 Implementation	36	02-Oct-21	13-Nov-21
JCR-2350	JCR N/B - Application for Lighting Removal	60	02-Oct-21	11-Dec-21
JCR-2360	JCR N/B - Lighting Removal/Install Temporary Lighting	30	13-Dec-21	19-Jan-22
JCR-2390	JCR N/B - Site Clearance / Tree felling	48	15-Nov-21	12-Jan-22
6.0 - TCSS Works				
6.2 - Key Date 3A and Section 9A				
TCS-300	Tolo/Fanling Highway Section 4 - Submit /Approve Interface Management Plan	120	13-Dec-21	14-May-22
7.0 - Miscellaneous Works				
MIS-100	Preservation and Protection of Trees	150	28-Oct-20 A	02-Apr-22



CRCC - Paul Y. Joint Venture

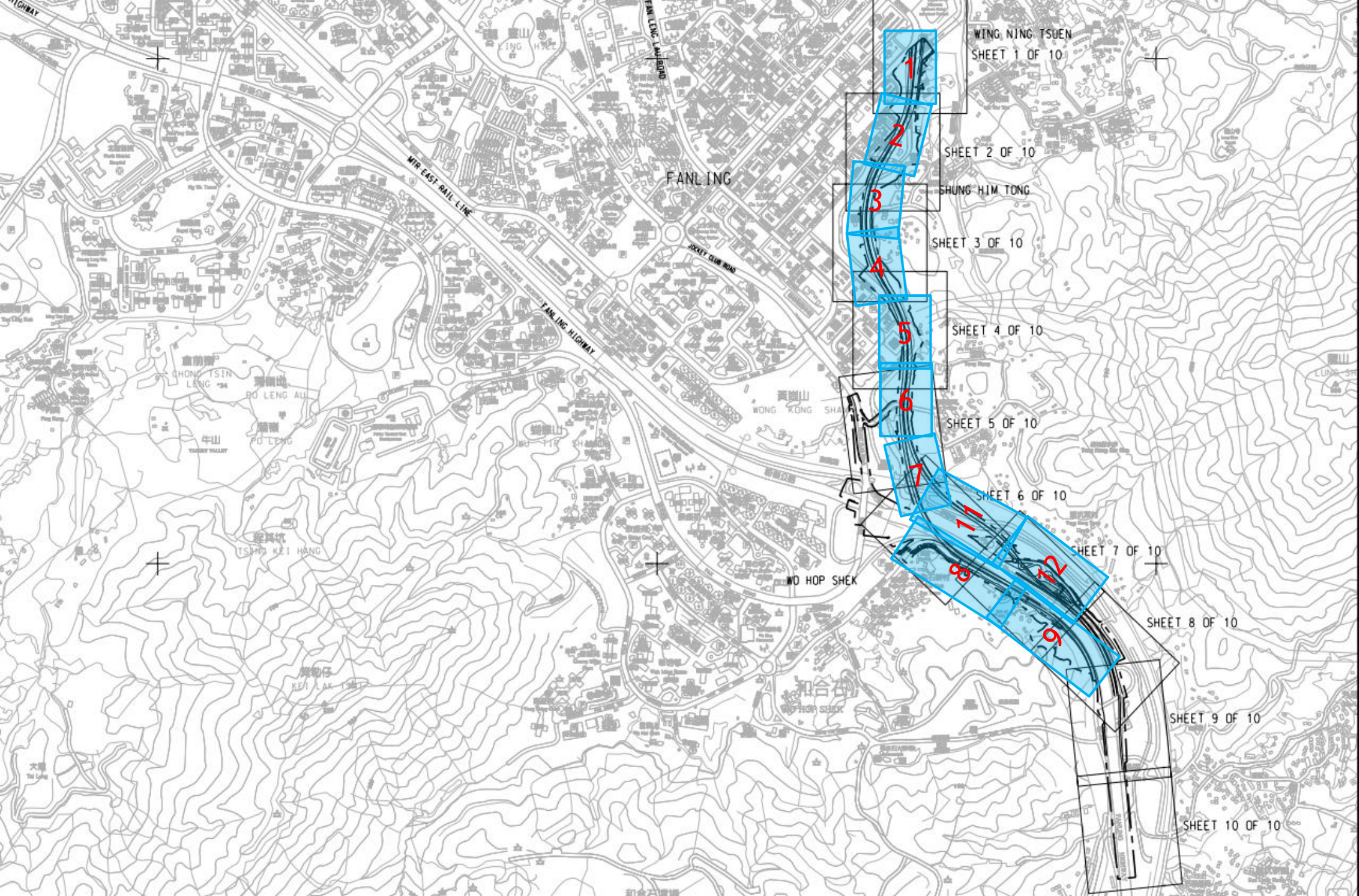
Remaining Level of Ef...
Actual Work
Remaining Work
Critical Remaining Work
Milestone

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

3-Month Rolling Programme - Oct 2021

Proj ID : DPr8
Layout : ND201905 3MRP
Date : Page 10 of 10

3-Month Rolling Programme			
Date	Revision	Checked	Approved
15-Oct-21	October 2021		



CONSULTANT

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SUB-CONSULTANTS

ISSUE/REVISION

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

STATUS

SCALE

A1 1 : 7000

DIMENSION UNIT

METRES

KEY PLAN

PROJECT NO.

60335576

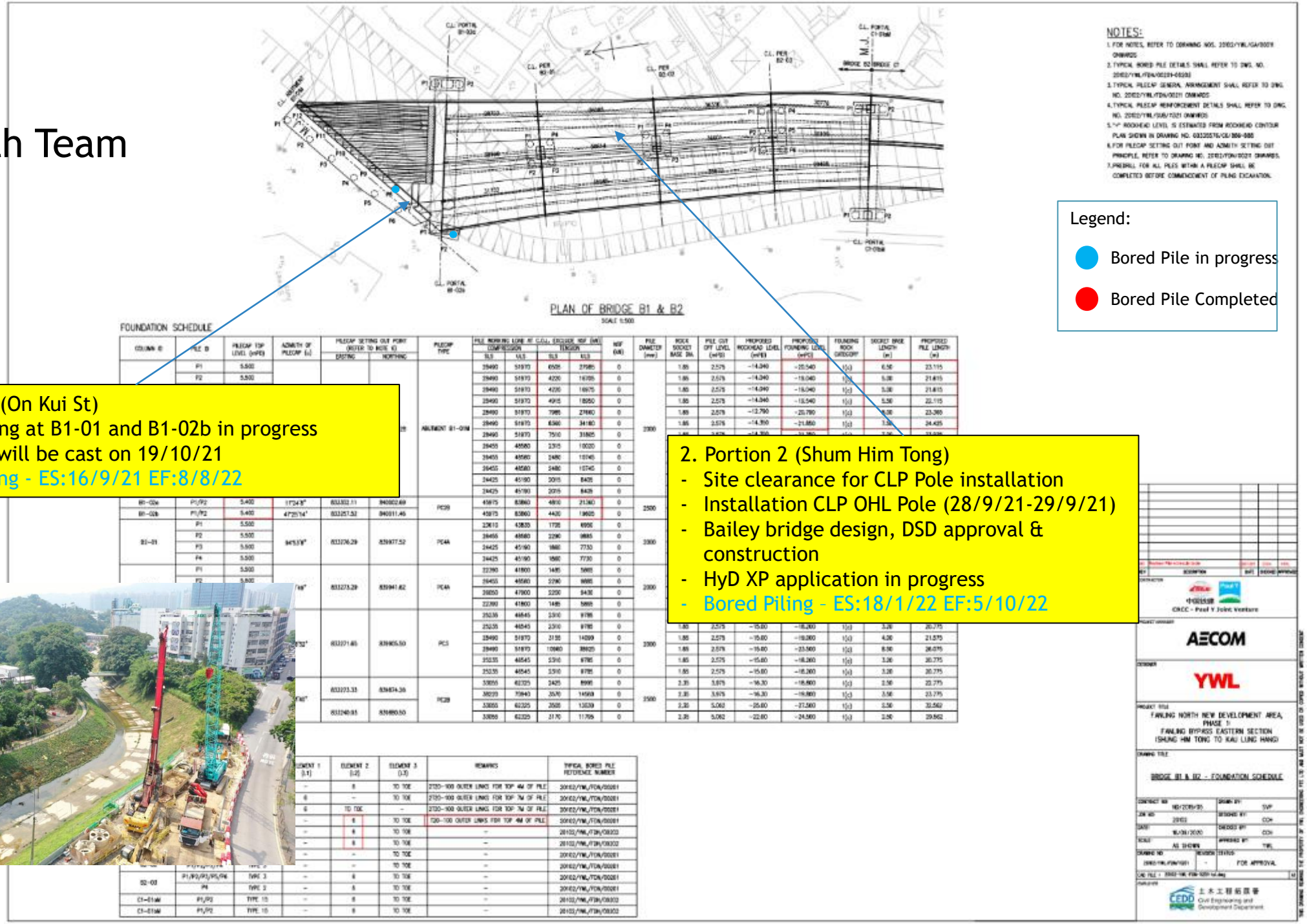
CONTRACT NO.

ND/2019/05

SHEET TITLE

KEY PLAN AND LOCATION PLAN

1 North Team



1. Portion 1 (On Kui St)
- Bored piling at B1-01 and B1-02b in progress
- B1-02-P2 will be cast on 19/10/21
- Bored Piling - ES:16/9/21 EF:8/8/22

2. Portion 2 (Shum Him Tong)
- Site clearance for CLP Pole installation
- Installation CLP OHL Pole (28/9/21-29/9/21)
- Bailey bridge design, DSD approval & construction
- HyD XP application in progress
- Bored Piling – ES:18/1/22 EF:5/10/22



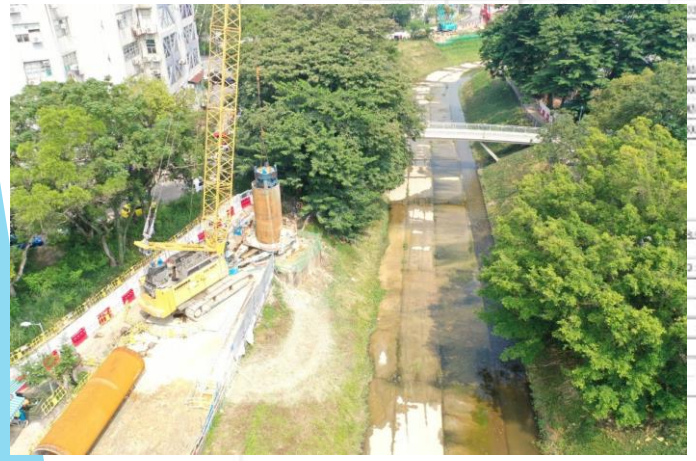
2 North Team

4. Portion 3 (C1-03)
- Partial access on 31/8/21
- Full access on 11/10/21
- Adv. assess for asbestos inspection completed
- Bored Piling- ES:12/2/22 EF:13/5/22

Legend:
- Bored Pile in progress
- Bored Pile Completed

3. Portion 1 (C1-01b & C1-02b)
- Bored piling at C1-01b and C1-02b in progress
- Bored Piling – ES:2/9/21 EF:5/9/22

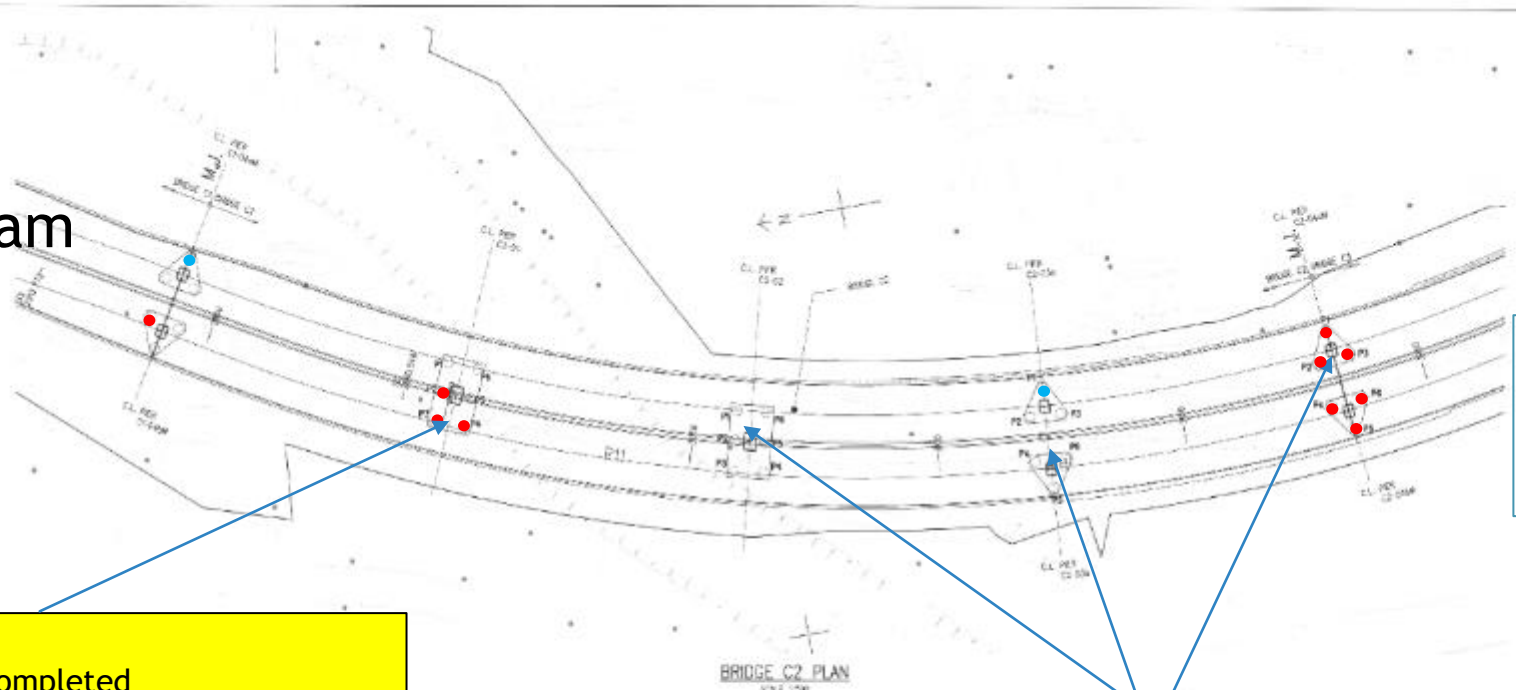
5. Portion 3 (C1-04)
- Bored piling at C1-04a and C1-04b
- C1-04b-P1 was cast on 30/9/21
- Bored Piling – ES:6/9/21 EF:31/12/21





3

North Team



Legend:

- Bored Pile in progress
- Bored Pile Completed

6. Portion 4 (C2-01)
- Three bored piles completed
- Interface coring and sonic test completed on 11/10/21
- Rotary machine mobilized for remaining piling
- Bored Piling – ES:8/6/21 EF:24/1/22

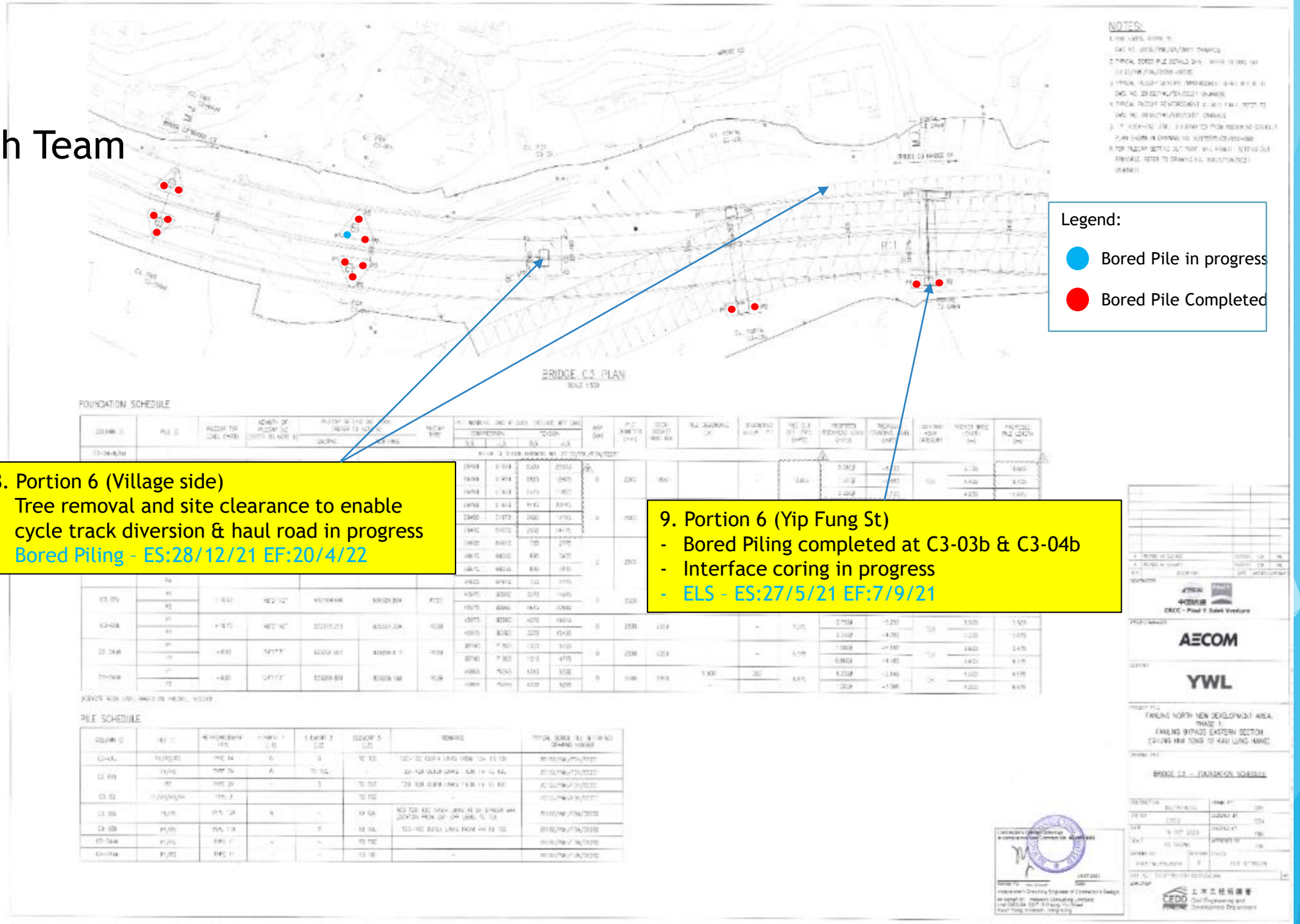
7. Portion 5 (On Lok Garden)
- Bored piling at Portion 5 in progress
- Interface coring in progress
- Bored Piling – ES:10/5/21 EF:18/6/22





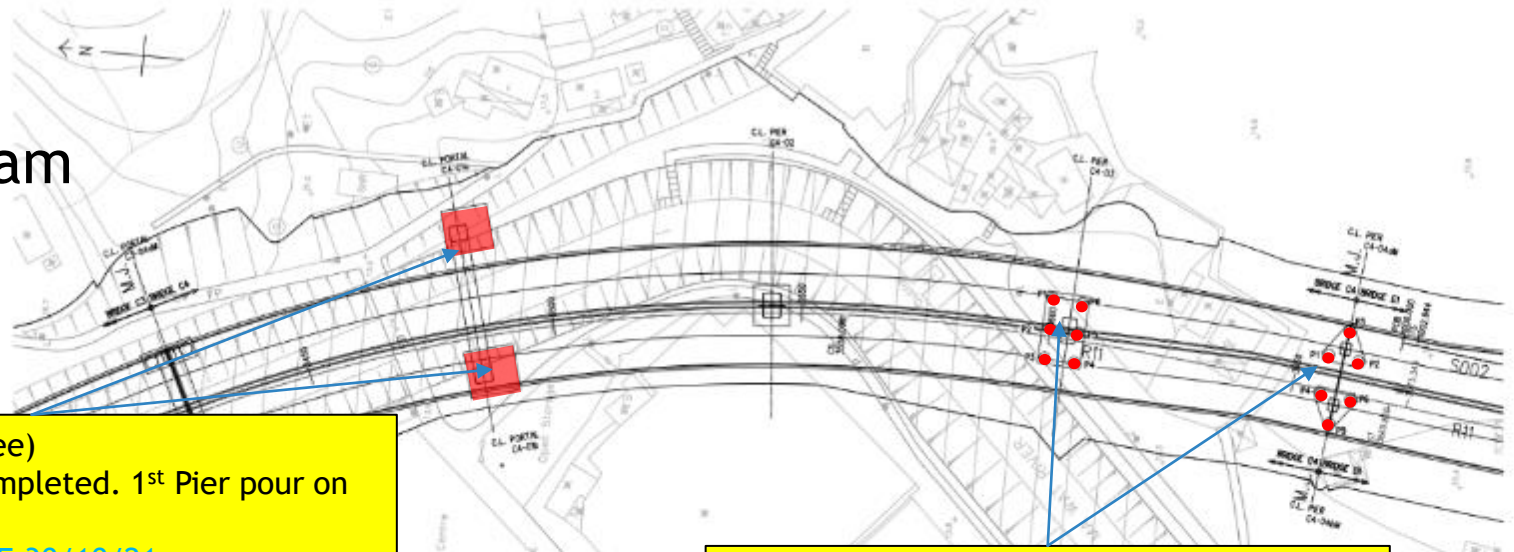
4

- North Team


NOTES:
BRIDGE C3 PLAN
FOUNDATION SCHEDULE
PILE SCHEDULE
Legend:
Bored Pile in progress
Bored Pile Completed
8. Portion 6 (Village side)
- Tree removal and site clearance to enable cycle track diversion & haul road in progress
- Bored Piling – ES:28/12/21 EF:20/4/22
9. Portion 6 (Yip Fung St)
- Bored Piling completed at C3-03b & C3-04b
- Interface coring in progress
- ELS – ES:27/5/21 EF:7/9/21
AECOM
YWL

5

North Team



10. Portion 6 (Hong Kee)
- C4-01b: Footing completed. 1st Pier pour on 8/10/21
- Pier – ES:26/8/21 EF:30/10/21
- C4-01a: Footing completed. 1st Pier pour on 20/10/21
- Pier – ES:15/9/21 EF:30/10/21

11. Portion 8 (CTC yard)
- Excavation in progress at C4-04
- Cap – ES:23/11/21 EF:13/12/21
- Excavation commencement at C4-03 on 11/10/21
- Cap – ES:13/11/21 EF:3/12/21

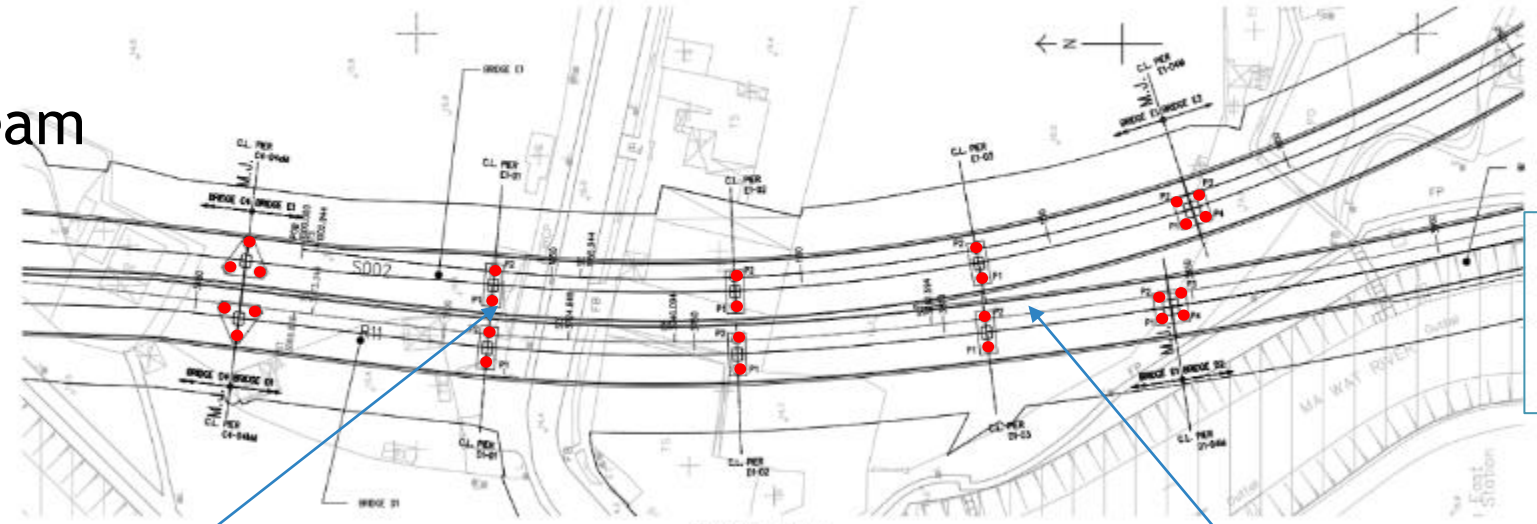






6

North Team



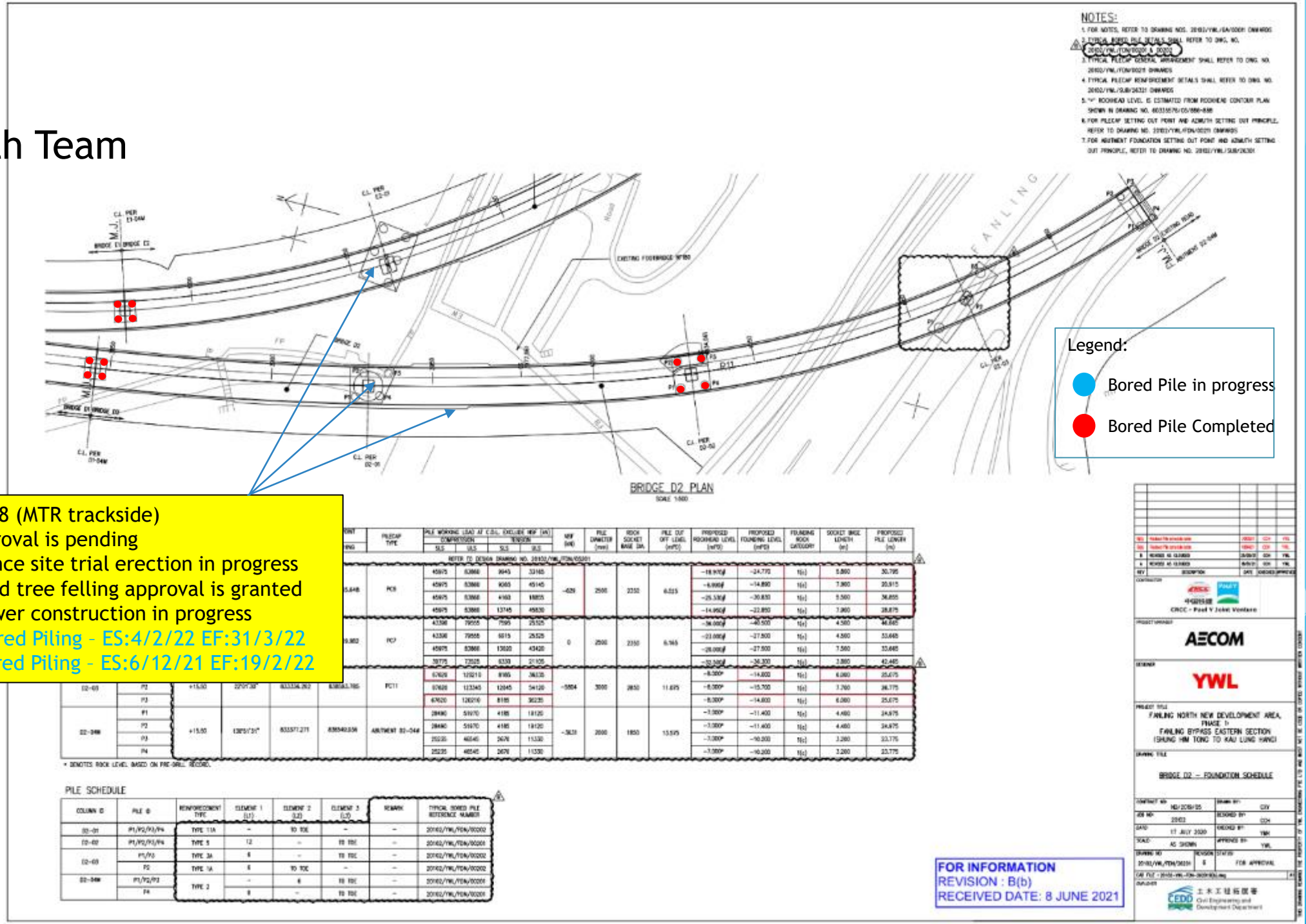
12. Portion 8 (CTC yard)
- Drainage diversion completed
- D1-01 & E1-01 ELS commencement on 11/10/21
- ELS – ES:1/11/21 EF:27/11/21

13. Portion 8 (Man Young yard)
- Interface coring in progress
- Man Young Warehouse clearance on 6/10/21
- Sheetpiling at D1-03 & D1-04
- ELS - ES:1/11/21 EF:5/3/22



7

North Team



14. Portion 8 (MTR trackside)
- MTR approval is pending
- Catch fence site trial erection in progress
- Uncharted tree felling approval is granted
- ADMS Tower construction in progress
- D2-01 Bored Piling – ES:4/2/22 EF:31/3/22
- E2-01 Bored Piling – ES:6/12/21 EF:19/2/22

South Team





Portion 18

- ELS for 1650 dia. drain and manhole in progress, target completed by **30 Oct 2021. Progress affected by inclement weather**

Temp run-in completed. Target implement TTA on 19 Oct 2021

Portion 13

- **DN1650** dia. drain and manhole complete on **06 Oct 2021**
- **FW52 bay 1 and 2 rock fill and binding layer completed. Target base slab cast 21 Oct 2021. Progress affected by revision of rebar detail and inclement weather**
- Boundary wall of **Kei Kee was demolished partly. Kei kee targeted to remove belongings by end of Oct.**

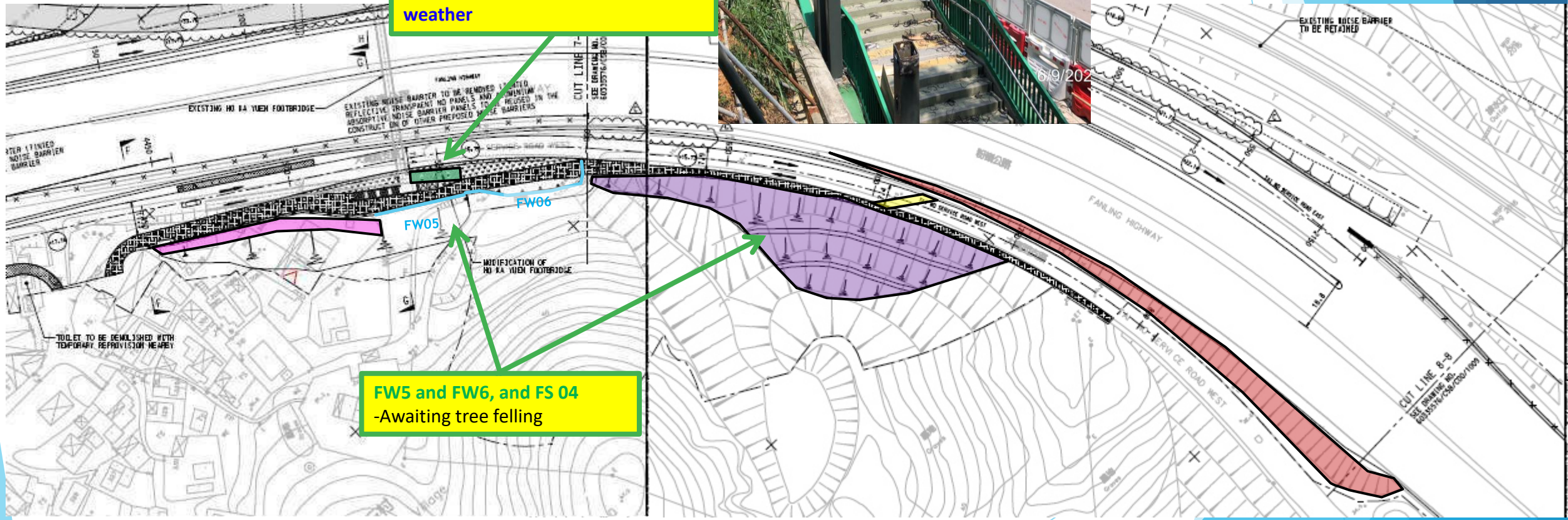




South Team

HKY footbridge
-Demolition of stair case completed
-TTA Target implement **12 Oct 21**
-**TSW-4530 ES:14/8/21 LS:28/8/21**
EF:17/9/21 LF:4/10/21
Progress delay due to late issuance of TDN and subsequent inclement weather





FW5 and FW6, and FS 04
-Awaiting tree felling

South Team

10

E3-02 ELS
- Need to maintain access for piling work of E3-01
- **E3-1350 ES:15/7/21 LS:22/2/23**
  EF:11/8/21 LF:21/3/23

E3-02



Portion 11 DN1200 water main
Target complete on 30 Oct 21
completed 1st section
Progress affected due to lack of aggregate bedding supply from mainland



E3-03



E3-03 ELS
- 2nd layer completed. 3rd layer/ binding layer target completed **30 Oct 21**
- **E3-5530 ES:20/5/21 LS:30/11/21**
  EF:14/7/21 LF:11/12/21

Drainage completed

Drainage to be carried out in Jun-Aug 2021

HKY FB Abutment LT1, P02 and AB1
Rebar fixing in progress. Target completed **30 Oct 21**.
FBE-1260 ES:19/08/21 LS:24/09/21
EF:08/09/21 LF:16/10/21
Progress affected due to revision of rebar detail, dimension and drainage details and subsequent inclement weather.

South Team

11





E2-03 ELS:
E2-6020 ES: 09/10/21
EF: 06/11/21
- Exposed existing 132 cable and install temp protective measure
- ELS to be commenced 15 Oct21



E2-02 Column
Pier in progress, target 1st pour (1m high) pouring 15 Oct 21
E2-1570 ES: 03/08/21 LS: 31/08/21
EF: 23/08/21 LF:20/09/21
Progress affected by MTRC lifting requirement and inclement weather

E3-01 Piling
- P3 predrill completed
- Piling work to be commenced 18 Oct 21

E3-1025 ES:8/6/22
EF:21/6/22



D2-03 Predrill
Target commence 18 Oct 2021
D2-1220 ES: 20/01/22
EF: 12/02/22



D2-02 ELS (Land Side)
- ELS commenced 11Oct 2021.

D2-1543 ES: 07/09/21 LS:10/09/21
EF:04/11/21 LF:08/11/21

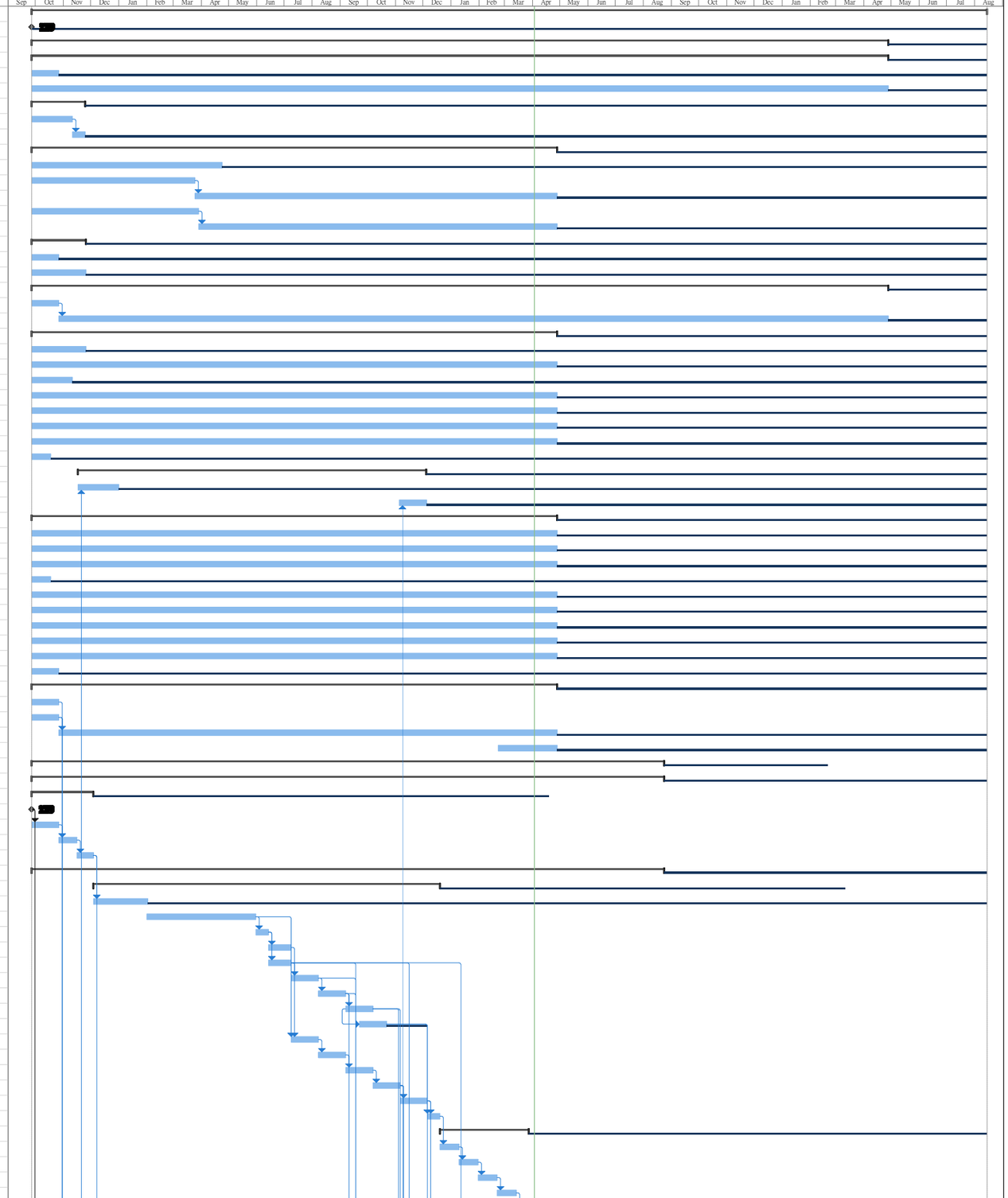
D2-02 ELS (River Side) – To be commenced in Dry Season
- ELS for river side to be commenced in 1 Nov 21)

D2-1550 ES: 02/11/21 LS:10/09/21
EF:04/11/21 LF:08/11/21

FLH (N/B)
-Road Widening (In progress)
Target complete by 30 Oct 2021
Progress affected due to RMO request on additional requirement of speed reduction

Construction Programme of ND/2019/06

ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
1		**ND/2019/06 Contract Period**	**1053 days**	**Fri 27/9/19**	**Sun 14/8/22**	**0 days**	
2		Starting Date	0 days	Fri 27/9/19	Fri 27/9/19	1053 days	
3		**Preliminaries**	**944 days**	**Fri 27/9/19**	**Wed 27/4/22**	**109 days**	
4		**Project Manager and Supervisor's site accommodation**	**944 days**	**Fri 27/9/19**	**Wed 27/4/22**	**109 days**	
5		Refurnishing the existing site office and provision of furniture and equipment	30 days	Fri 27/9/19	Sat 26/10/19	1023 days	
6		Provision of regular service to the accommodation (up to completion of DLP)	944 days	Fri 27/9/19	Wed 27/4/22	109 days	
7		**Contractor's site accommodation**	**59 days**	**Fri 27/9/19**	**Sun 24/11/19**	**994 days**	
8		Searching and rental arrangement	45 days	Fri 27/9/19	Sun 10/11/19	0 days	
9		Set up of site office	14 days	Mon 11/11/19	Sun 24/11/19	994 days	8
10		**Maintenance of land traffic flow**	**579 days**	**Fri 27/9/19**	**Tue 27/4/21**	**474 days**	
11		Arrangement of TMLG in different stages	210 days	Fri 27/9/19	Thu 23/4/20	843 days	
12		Application of TTA/ XP	180 days	Fri 27/9/19	Tue 24/3/20	0 days	
13		Implementation of TTA/ XP in different stages	399 days	Wed 25/3/20	Tue 27/4/21	474 days	12
14		Maintenance of traffic flow in interim construction stage	184 days	Fri 27/9/19	Sat 28/3/20	0 days	
15		Maintenance of traffic flow in final construction stage	395 days	Sun 29/3/20	Tue 27/4/21	474 days	14
16		**Provision of insurances**	**60 days**	**Fri 27/9/19**	**Mon 25/11/19**	**993 days**	
17		Third party insurance	30 days	Fri 27/9/19	Sat 26/10/19	1023 days	
18		PII for the works	60 days	Fri 27/9/19	Mon 25/11/19	993 days	
19		**Land transport for the use of the Project Manager and Supervisor**	**944 days**	**Fri 27/9/19**	**Wed 27/4/22**	**109 days**	
20		Provision of vehicles	30 days	Fri 27/9/19	Sat 26/10/19	0 days	
21		Provision of transportation service with drivers (including DLP)	914 days	Sun 27/10/19	Wed 27/4/22	109 days	20
22		**Miscellaneous items**	**579 days**	**Fri 27/9/19**	**Tue 27/4/21**	**474 days**	
23		Contract computer facilities for the Project Manager and Supervisor	60 days	Fri 27/9/19	Mon 25/11/19	993 days	
24		Provision of progress photographs	579 days	Fri 27/9/19	Tue 27/4/21	474 days	
25		Installation of security system for the site	45 days	Fri 27/9/19	Sun 10/11/19	1008 days	
26		Interface management and public relation works	579 days	Fri 27/9/19	Tue 27/4/21	474 days	
27		BIM works	579 days	Fri 27/9/19	Tue 27/4/21	474 days	
28		Upkeep of the employer's store	579 days	Fri 27/9/19	Tue 27/4/21	474 days	
29		Emergency unit and weather protection scheme	579 days	Fri 27/9/19	Tue 27/4/21	474 days	
30		General site clearance	21 days	Fri 27/9/19	Thu 17/10/19	1032 days	
31		**Hoadings, temporary fences and signboards**	**384 days**	**Sun 17/11/19**	**Fri 4/12/20**	**618 days**	
32		Hoadings, temporary fences and signboards at Interim stage	45 days	Sun 17/11/19	Tue 31/12/19	957 days	440
33		Hoadings, temporary fences and signboards at Final stage	30 days	Thu 5/11/20	Fri 4/12/20	618 days	138
34		**Environmental management, mitigation and monitoring**	**579 days**	**Fri 27/9/19**	**Tue 27/4/21**	**474 days**	
35		Environmental management measures	579 days	Fri 27/9/19	Tue 27/4/21	474 days	
36		Environmental mitigation measures	579 days	Fri 27/9/19	Tue 27/4/21	474 days	
37		Environmental monitoring measures	579 days	Fri 27/9/19	Tue 27/4/21	474 days	
38		Site Management plan for trip ticket system	21 days	Fri 27/9/19	Thu 17/10/19	1032 days	
39		Air pollution abatement	579 days	Fri 27/9/19	Tue 27/4/21	474 days	
40		Noise pollution abatement	579 days	Fri 27/9/19	Tue 27/4/21	474 days	
41		Wastewater pollution abatement	579 days	Fri 27/9/19	Tue 27/4/21	474 days	
42		Waste Management	579 days	Fri 27/9/19	Tue 27/4/21	474 days	
43		Monitoring the use of ultra low sulphur diesel	579 days	Fri 27/9/19	Tue 27/4/21	474 days	
44		Temporarory drainage management plan	30 days	Fri 27/9/19	Sat 26/10/19	1023 days	
45		**Survey of the Site**	**579 days**	**Fri 27/9/19**	**Tue 27/4/21**	**474 days**	
46		Initial survey	30 days	Fri 27/9/19	Sat 26/10/19	0 days	
47		Conditional survey	30 days	Fri 27/9/19	Sat 26/10/19	0 days	
48		Monitoring survey	549 days	Sun 27/10/19	Tue 27/4/21	474 days	47
49		As-build survey	65 days	Mon 22/2/21	Tue 27/4/21	474 days	
50		**Section 1 of the Works**	**697 days**	**Fri 27/9/19**	**Mon 23/8/21**	**180 days**	
51		**Works for Portion 4**	**697 days**	**Fri 27/9/19**	**Mon 23/8/21**	**356 days**	
52		**General for Portion 4**	**68 days**	**Fri 27/9/19**	**Tue 3/12/19**	**502 days**	
53		Access date of Portion 4	0 days	**Fri 27/9/19**	**Fri 27/9/19**	0 days	
54		Site clearance and tree felling	30 days	Fri 27/9/19	Sat 26/10/19	0 days	53
55		Breaking up existing paving	20 days	Sun 27/10/19	Fri 15/11/19	0 days	54
56		Excavation for management office building	18 days	Sat 16/11/19	Tue 3/12/19	0 days	55
57		**Management Office Building**	**697 days**	**Fri 27/9/19**	**Mon 23/8/21**	**356 days**	
58		**Civil and strucutral works**	**382 days**	**Wed 4/12/19**	**Sat 19/12/20**	**446 days**	
59		Construction of foundation from G.L. E-H / 1-3	60 days	Wed 4/12/19	Sat 1/2/20	925 days	56
60		Idling due to COVID-9 infection	120 days	Sat 1/2/20	Sat 30/5/20	0 days	
61		Construction of foundation from G.L. A-E / 1-3	14 days	Sun 31/5/20	Sat 13/6/20	0 days	60
62		Construction of G/F slabs from G.L. E-H / 1-3	25 days	Sun 14/6/20	Wed 8/7/20	0 days	61
63		Construction for G/F slabs from G.L. A-E/1-3	25 days	Sun 14/6/20	Wed 8/7/20	0 days	61
64		Construction for G/F to R/F columns and wall from G.L. A-E/1-3	30 days	Thu 9/7/20	Fri 7/8/20	0 days	63
65		Construction for R/F slabs and beams from G.L. A-E/1-3	30 days	Sat 8/8/20	Sun 6/9/20	0 days	64
66		Construction for transformer room upper slab, columns and walls at G.L. B-C/1-3	30 days	Mon 7/9/20	Tue 6/10/20	0 days	65
67		Construction for UR/F slabs and beams at G.L. B-C/1-3	30 days	Tue 22/9/20	Wed 21/10/20	45 days	66SS+15 days
68		Construction of columns and walls from G/F to R/F for G.L. E-H/1-3	30 days	Thu 9/7/20	Fri 7/8/20	0 days	60,62
69		Construction of slabs and beams for R/F for G.L. E-H/1-3	30 days	Sat 8/8/20	Sun 6/9/20	0 days	68
70		Construction of water tanks at R/F from G.L. E-H/1-3	30 days	Mon 7/9/20	Tue 6/10/20	0 days	69
71		Construction of R/F to UR/F columns and walls from G.L. C-H/1-3	30 days	Wed 7/10/20	Thu 5/11/20	0 days	70
72		Construction of UR/F beams and slabs from G.L. C-H/1-3	30 days	Fri 6/11/20	Sat 5/12/20	0 days	71
73		Construction of Parapet walls	14 days	Sun 6/12/20	Sat 19/12/20	0 days	67,72
74		**Roofing works**	**98 days**	**Sun 20/12/20**	**Sat 27/3/21**	**505 days**	
75		Cememt sand screeding on roof slab	21 days	Sun 20/12/20	Sat 9/1/21	0 days	73
76		Waterproofing works for roof	21 days	Sun 10/1/21	Sat 30/1/21	0 days	75
77		Construction of 40mm insulation layer	21 days	Sun 31/1/21	Sat 20/2/21	0 days	76
78		Construction of 40mm cement sand rendering	21 days	Sun 21/2/21	Sat 13/3/21	0 days	77



Project: ND/2019/06
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Task · Milestone · Project Summary · Inactive Milestone · Manual Task · Manual Summary Rollup · Start-only · External Tasks · Deadline · Critical Split · Manual Progress
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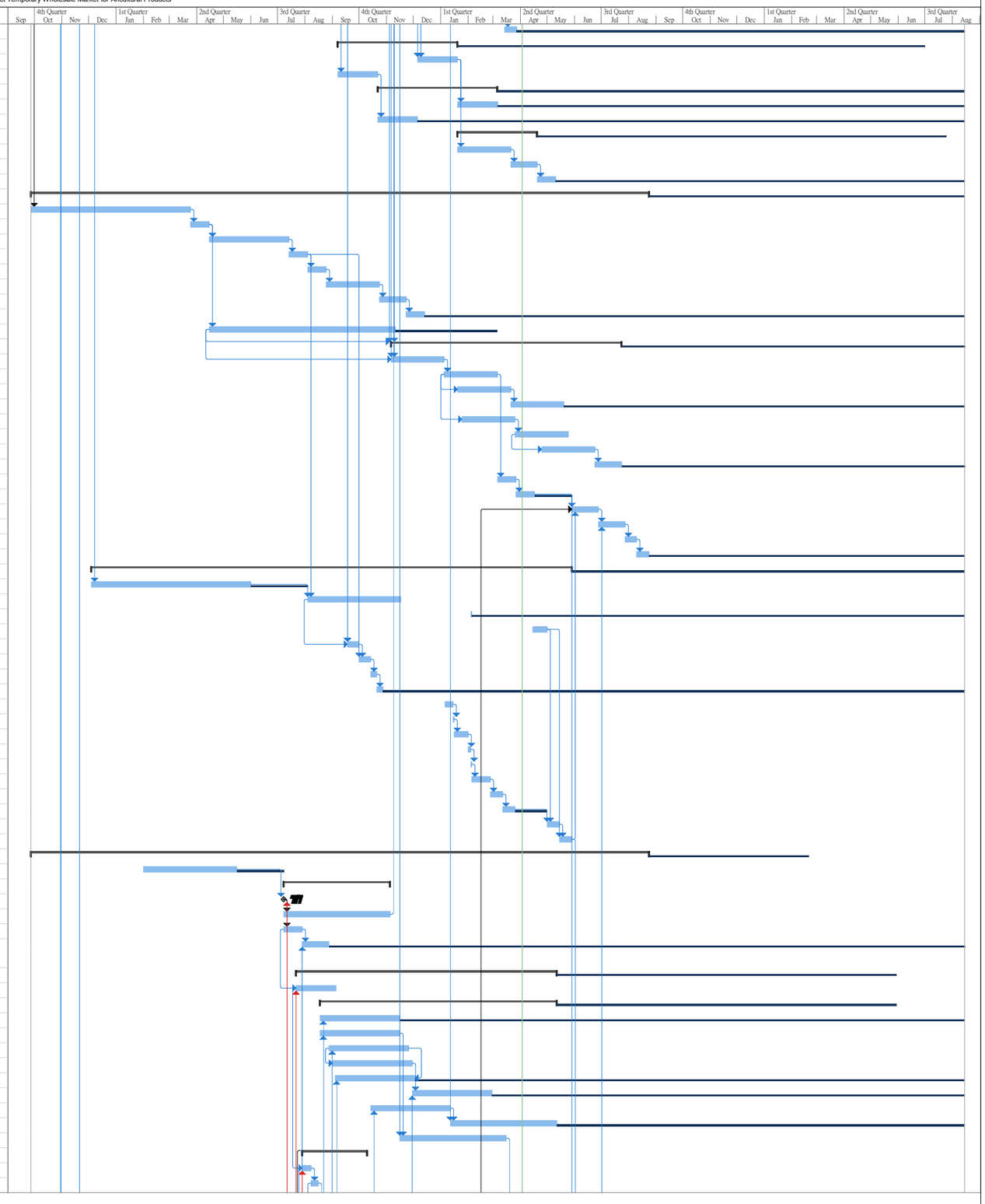
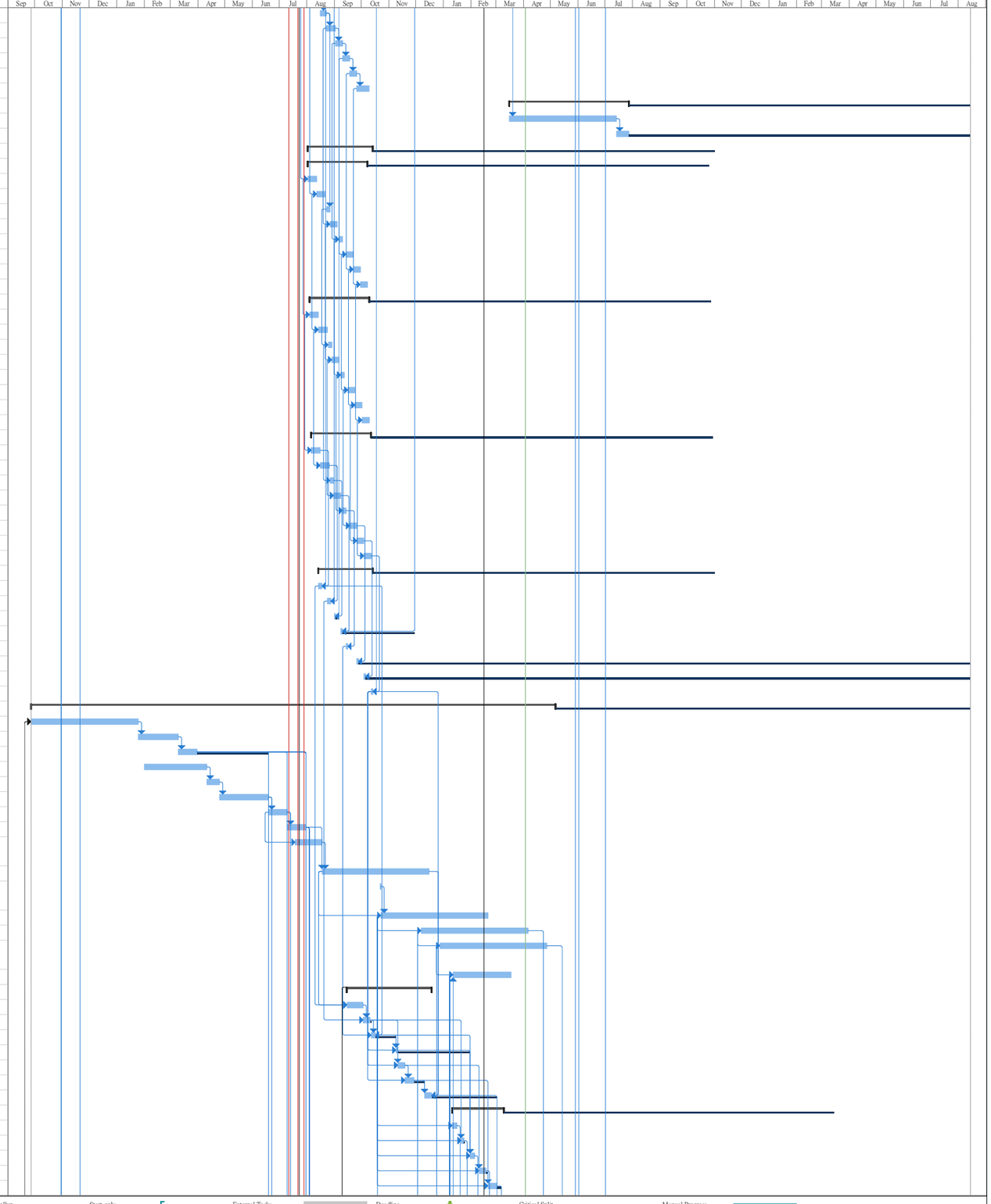
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
79		300 x 300mm roofing concrete tiles	14 days	Sun 14/3/21	Sat 27/3/21	505 days	78
80		**External walls and internal walls**	**135 days**	**Mon 7/9/20**	**Tue 19/1/21**	**527 days**	
81		External wall block work and finishing	45 days	Sun 6/12/20	Tue 19/1/21	0 days	67,72
82		Internal wall block and finishing	45 days	Mon 7/9/20	Wed 21/10/20	0 days	65
83		**Installation of windows and doors**	**135 days**	**Thu 22/10/20**	**Fri 5/3/21**	**527 days**	
84		Installation of external windows and doors	45 days	Wed 20/1/21	Fri 5/3/21	527 days	81
85		Installation of internal doors	45 days	Thu 22/10/20	Sat 5/12/20	617 days	82
86		**Interior fitting-out, finishes and fixtures**	**90 days**	**Wed 20/1/21**	**Mon 19/4/21**	**461 days**	
87		Erection of interior fitting-out and finishes	60 days	Wed 20/1/21	Sat 20/3/21	0 days	81
88		Installation of fixtures	30 days	Sun 21/3/21	Mon 19/4/21	0 days	87
89		Handrail installation for MOB	21 days	Tue 20/4/21	Mon 10/5/21	461 days	88
90		**Building services works for Wholesale Market**	**697 days**	**Fri 27/9/19**	**Mon 23/8/21**	**356 days**	
91		Submissions of BS equipment and materials (including BS items of Wholesale Market)	180 days	Fri 27/9/19	Tue 24/3/20	0 days	53
92		Approval for BS equipment and materials	21 days	Wed 25/3/20	Tue 14/4/20	0 days	91
93		Submissions of CBWD and CSD drawings	90 days	Wed 15/4/20	Mon 13/7/20	0 days	92
94		Approval for CBWD and CSD drawings	21 days	Tue 14/7/20	Mon 3/8/20	0 days	93
95		Approval and confirmed all construction drawings	21 days	Tue 4/8/20	Mon 24/8/20	0 days	94
96		Production of BIM model	60 days	Tue 25/8/20	Fri 23/10/20	0 days	95
97		Submission of BIM model	30 days	Sat 24/10/20	Sun 22/11/20	0 days	96
98		Approval for BIM model	21 days	Mon 23/11/20	Sun 13/12/20	609 days	97
99		Production and delivery of BS equipment (including BS items of Wholesale Market)	210 days	Wed 15/4/20	Tue 10/11/20	115 days	92
100		**Installation of BS equipment**	**260 days**	**Fri 6/11/20**	**Fri 23/7/21**	**387 days**	**99SS+90 days,71,66**
101		Materials preparation for MVAC box	60 days	Fri 6/11/20	Mon 4/1/21	0 days	99SS+90 days,71,66
102		MVAC box installation	60 days	Tue 5/1/21	Fri 5/3/21	0 days	101
103		Materials preparation for electical installation	60 days	Wed 20/1/21	Sat 20/3/21	0 days	102SS+15 days
104		Electical installation	60 days	Sun 21/3/21	Wed 19/5/21	452 days	103
105		Materials preparation for fire services installation	60 days	Mon 25/1/21	Thu 25/3/21	0 days	102SS+20 days
106		Fire services installation	60 days	Fri 26/3/21	Mon 24/5/21	0 days	105
107		Materials preparation for plumbing and drainage works	60 days	Sun 25/4/21	Wed 23/6/21	0 days	106SS+30 days
108		Plumbing and drainage installation	30 days	Thu 24/6/21	Fri 23/7/21	387 days	107
109		Installation of switch panel	21 days	Sat 6/3/21	Fri 26/3/21	0 days	102
110		Installation of emergency generator	21 days	Sat 27/3/21	Fri 16/4/21	42 days	109
111		Testing and commissioning of BS equipment	30 days	Sat 29/5/21	Sun 27/6/21	0 days	110,133,324SS+60 days
112		Inspection of BS installations inclunding Fire Services by Authorities	30 days	Mon 28/6/21	Tue 27/7/21	0 days	111,329
113		Remedial works after inspection	13 days	Wed 28/7/21	Mon 9/8/21	0 days	112
114		Re-insepction of BS installations by Authorities	14 days	Tue 10/8/21	Mon 23/8/21	356 days	113
115		**Transformer Room**	**542 days**	**Wed 4/12/19**	**Fri 28/5/21**	**443 days**	
116		Coordination with CLP for power supply and cable entry	180 days	Wed 4/12/19	Sun 31/5/20	64 days	56
117		Construction for power supply and cable entry	105 days	Tue 4/8/20	Mon 16/11/20	0 days	116,94
118		Inform CLP for cable laying	1 day	Thu 4/2/21	Thu 4/2/21	556 days	
119		Cable laying by CLP	16 days	Thu 15/4/21	Fri 30/4/21	0 days	
120		Interior finishing for transformer room	13 days	Fri 18/9/20	Wed 30/9/20	0 days	117SS+45 days,64,63,65
121		Fitting-out and E&M works	13 days	Thu 1/10/20	Tue 13/10/20	0 days	120,94
122		Installation of power panel	7 days	Wed 14/10/20	Tue 20/10/20	0 days	121
123		Installation check	7 days	Wed 21/10/20	Tue 27/10/20	656 days	122
124		Inform CLP for inspection	9 days	Wed 6/1/21	Thu 14/1/21	0 days	
125		Inspection for transformer room	1 day	Fri 15/1/21	Fri 15/1/21	0 days	124
126		Rectification works to the inspection results	16 days	Sat 16/1/21	Sun 31/1/21	0 days	125
127		Re-inform CLP for inspection	3 days	Mon 1/2/21	Wed 3/2/21	0 days	126
128		Re-inspection for transformer room	1 day	Thu 4/2/21	Thu 4/2/21	0 days	127
129		Confirm from CLP for transformer and switchboard delivery	21 days	Fri 5/2/21	Thu 25/2/21	0 days	128
130		Delivery of CLP transformer and switchboard	14 days	Fri 26/2/21	Thu 11/3/21	0 days	129
131		Cable testing CLP	14 days	Fri 12/3/21	Thu 25/3/21	36 days	130
132		Installation of power meter by CLP	14 days	Sat 1/5/21	Fri 14/5/21	0 days	131,119
133		Power feeding by CLP	14 days	Sat 15/5/21	Fri 28/5/21	0 days	132,119
134		**Works for Portion 3**	**697 days**	**Fri 27/9/19**	**Mon 23/8/21**	**180 days**	
135		Idling due to COVID-9 infection	105 days	Sat 1/2/20	Fri 15/5/20	53 days	
136		**General for Portion 3**	**120 days**	**Tue 7/7/20**	**Wed 4/11/20**	**0 days**	
137		Access date of Portion 3 (184 days after starting date)	0 days	Tue 7/7/20	Tue 7/7/20	0 days	494,135
138		Site clearance and tree felling	120 days	Wed 8/7/20	Wed 4/11/20	0 days	137
139		Construction for fencing to the final stage	21 days	Wed 8/7/20	Tue 28/7/20	0 days	137
140		Construction for ground investigation according to drawing no. 60335576/C6/C00/7501	30 days	Wed 29/7/20	Thu 27/8/20	717 days	393,139
141		**Site formation**	**294 days**	**Wed 22/7/20**	**Tue 11/5/21**	**383 days**	
142		Breaking up existing paving	45 days	Wed 22/7/20	Fri 4/9/20	0 days	494,139SS+14 days
143		**Excavation for underground drainage and pipeline construction**	**267 days**	**Tue 18/8/20**	**Tue 11/5/21**	**383 days**	
144		FMH-1.03 -> FMH-1.04 and FMH-1.02 - > FMH-1.01	90 days	Tue 18/8/20	Sun 15/11/20	637 days	194
145		C6_1.5 -> C6_2.2 -> C6_2.3 -> C6_2.4	90 days	Tue 18/8/20	Sun 15/11/20	0 days	194
146		FMH-2.06 -> FMH-2.05 -> FMH-2.04	90 days	Fri 28/8/20	Wed 25/11/20	0 days	195
147		C6_1.4 -> C6_1.3 -> C6_1.2	90 days	Tue 1/9/20	Sun 29/11/20	0 days	146SS+4 days
148		FMH-2.04 -> FMH-2.03 -> FMH-2.02 -> FMH-2.01	90 days	Fri 4/9/20	Wed 2/12/20	620 days	146FF+7 days,196
149		C6_1.2 -> C6_1.1B -> C6_1.1 -> C6_1.1A	90 days	Mon 30/11/20	Sat 27/2/21	533 days	147,197
150		DP2.21 -> C6_2.1 -> C6_2.1A -> C6_1.1A	90 days	Wed 14/10/20	Mon 11/1/21	0 days	201
151		DP2.21 with U-channel construction near MOB	120 days	Tue 12/1/21	Tue 11/5/21	460 days	150,63
152		C6_2.4 -> C6_2.5	120 days	Mon 16/11/20	Mon 15/3/21	0 days	145,63
153		**Excavation for footing construction**	**73 days**	**Wed 29/7/20**	**Fri 9/10/20**	**0 days**	
154		F5 -> F4 -> F3 -> F2 -> F1	10 days	Wed 29/7/20	Fri 7/8/20	0 days	142SS+7 days,494
155		F11 and F10 -> F17 and F16	8 days	Sat 8/8/20	Sat 15/8/20	0 days	154



ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
156		F28	7 days	Sun 16/8/20	Sat 22/8/20	0 days	155
157		F27 -> F26 - > F25 -> F24	10 days	Sun 23/8/20	Tue 1/9/20	0 days	156
158		F9 -> F8 -> F7	8 days	Wed 2/9/20	Wed 9/9/20	0 days	157
159		F16 -> F15 -> F14 -> F13	8 days	Thu 10/9/20	Thu 17/9/20	0 days	158
160		F22 -> F21 -> F20 -> F19	8 days	Fri 18/9/20	Fri 25/9/20	0 days	159
161		F6 -> F12 -> F18 -> F23	14 days	Sat 26/9/20	Fri 9/10/20	0 days	160
162		**Underground drainage construction**	**134 days**	**Tue 16/3/21**	**Tue 27/7/21**	**383 days**	
163		Remaining U-channel and drainage construction	120 days	Tue 16/3/21	Tue 13/7/21	0 days	152
164		Connection to the existing manhole	14 days	Wed 14/7/21	Tue 27/7/21	383 days	163
165		**Footing construction**	**73 days**	**Sun 2/8/20**	**Tue 13/10/20**	**383 days**	
166		**Vertical blinding and blind layers construction**	**67 days**	**Sun 2/8/20**	**Wed 7/10/20**	**383 days**	
167		F5 -> F4 -> F3 -> F2 -> F1	10 days	Sun 2/8/20	Tue 11/8/20	0 days	154SS+4 days
168		F11, F10 and F9 -> F17 and F16	10 days	Wed 12/8/20	Fri 21/8/20	0 days	155SS+4 days
169		F28	4 days	Sun 23/8/20	Wed 26/8/20	0 days	156
170		F27 -> F26 - > F25 -> F24	8 days	Thu 27/8/20	Thu 3/9/20	0 days	157SS+4 days
171		F8 -> F7	4 days	Sun 6/9/20	Wed 9/9/20	0 days	158SS+4 days
172		F16 -> F15 -> F14 -> F13	8 days	Mon 14/9/20	Mon 21/9/20	0 days	159SS+4 days
173		F22 -> F21 -> F20 -> F19	8 days	Tue 22/9/20	Tue 29/9/20	0 days	160SS+4 days
174		F6 -> F12 -> F18 -> F23	8 days	Wed 30/9/20	Wed 7/10/20	0 days	161SS+4 days
175		**Steel fixing for footings**	**67 days**	**Tue 4/8/20**	**Fri 9/10/20**	**383 days**	
176		F5 -> F4 -> F3 -> F2 -> F1	10 days	Tue 4/8/20	Thu 13/8/20	0 days	167SS+2 days
177		F11, F10 and F9 -> F17 and F16	10 days	Fri 14/8/20	Sun 23/8/20	0 days	168SS+2 days
178		F28	4 days	Tue 25/8/20	Fri 28/8/20	0 days	169SS+2 days
179		F27 -> F26 - > F25 -> F24	8 days	Sat 29/8/20	Sat 5/9/20	0 days	170SS+2 days
180		F8 -> F7	4 days	Tue 8/9/20	Fri 11/9/20	0 days	171SS+2 days
181		F16 -> F15 -> F14 -> F13	8 days	Wed 16/9/20	Wed 23/9/20	0 days	172SS+2 days
182		F22 -> F21 -> F20 -> F19	8 days	Thu 24/9/20	Thu 1/10/20	0 days	173SS+2 days
183		F6 -> F12 -> F18 -> F23	8 days	Fri 2/10/20	Fri 9/10/20	0 days	174SS+2 days
184		**Formwork erection for footings**	**67 days**	**Thu 6/8/20**	**Sun 11/10/20**	**383 days**	
185		F5 -> F4 -> F3 -> F2 -> F1	10 days	Thu 6/8/20	Sat 15/8/20	0 days	176SS+2 days
186		F11, F10 and F9 -> F17 and F16	10 days	Sun 16/8/20	Tue 25/8/20	0 days	177SS+2 days
187		F28	4 days	Thu 27/8/20	Sun 30/8/20	0 days	178SS+2 days
188		F27 -> F26 - > F25 -> F24	8 days	Mon 31/8/20	Mon 7/9/20	0 days	179SS+2 days
189		F8 -> F7	4 days	Thu 10/9/20	Sun 13/9/20	0 days	180SS+2 days
190		F16 -> F15 -> F14 -> F13	8 days	Fri 18/9/20	Fri 25/9/20	0 days	181SS+2 days
191		F22 -> F21 -> F20 -> F19	8 days	Sat 26/9/20	Sat 3/10/20	0 days	182SS+2 days
192		F6 -> F12 -> F18 -> F23	8 days	Sun 4/10/20	Sun 11/10/20	0 days	183SS+2 days
193		**Casting concrete for footings**	**61 days**	**Fri 14/8/20**	**Tue 13/10/20**	**383 days**	
194		F5 -> F4 -> F3 -> F2 -> F1	4 days	Fri 14/8/20	Mon 17/8/20	0 days	185FF+2 days
195		F11, F10 and F9 -> F17 and F16	4 days	Mon 24/8/20	Thu 27/8/20	0 days	186FF+2 days
196		F28	1 day	Tue 1/9/20	Tue 1/9/20	2 days	187FF+2 days
197		F27 -> F26 - > F25 -> F24	2 days	Tue 8/9/20	Wed 9/9/20	81 days	188FF+2 days
198		F8 -> F7	2 days	Mon 14/9/20	Tue 15/9/20	0 days	189FF+2 days
199		F16 -> F15 -> F14 -> F13	2 days	Sat 26/9/20	Sun 27/9/20	686 days	190FF+2 days
200		F22 -> F21 -> F20 -> F19	2 days	Sun 4/10/20	Mon 5/10/20	678 days	191FF+2 days
201		F6 -> F12 -> F18 -> F23	2 days	Mon 12/10/20	Tue 13/10/20	0 days	192FF+2 days
202		**Construction for Steel Canopy**	**588 days**	**Fri 27/9/19**	**Thu 6/5/21**	**465 days**	
203		Searching for steel fabricator	120 days	Fri 27/9/19	Fri 24/1/20	0 days	439SS
204		Preparation for shop drawing of steel canopy	45 days	Sat 25/1/20	Mon 9/3/20	0 days	203
205		Shop drawing submission for approval	21 days	Tue 10/3/20	Mon 30/3/20	80 days	204
206		Idling due to COVID-9 infection	70 days	Sat 1/2/20	Fri 10/4/20	0 days	
207		Change of steel fabricator	14 days	Sat 11/4/20	Fri 24/4/20	0 days	206
208		Re-preparation for shop drawing of steel canopy	55 days	Sat 25/4/20	Thu 18/6/20	0 days	207
209		Re-Shop drawing submission for approval	21 days	Fri 19/6/20	Thu 9/7/20	0 days	208
210		Approval of shop drawings	21 days	Fri 10/7/20	Thu 30/7/20	0 days	209
211		Material preparation for steel canopy (materials testing in Mainland China)	30 days	Sun 19/7/20	Mon 17/8/20	0 days	209SS+30 days
212		Fabrication and delivery for steel colum (under +18.1mPD)	120 days	Tue 18/8/20	Tue 15/12/20	0 days	210,211
213		Updated information provided for steel column (above +18.1mPD)	1 day	Thu 22/10/20	Thu 22/10/20	0 days	
214		Fabrication and delivery for steel colum (above +18.1mPD)	120 days	Fri 23/10/20	Fri 19/2/21	0 days	212SS+60 days,213
215		Fabrication and delivery for steel frame and truss	120 days	Mon 7/12/20	Mon 5/4/21	0 days	214SS+45 days
216		Fabrication and delivery for bracing and secondary steel member	120 days	Mon 28/12/20	Mon 26/4/21	0 days	215SS+21 days
217		Fabrication for skylight steel frame structure	65 days	Tue 12/1/21	Wed 17/3/21	0 days	216SS+15 days,264
218		**Installation for steel column (under +18.1mPD)**	**95 days**	**Tue 15/9/20**	**Fri 18/12/20**	**0 days**	
219		Area 1 - F5, F4, F3, F11, F10, F9	18 days	Tue 15/9/20	Fri 2/10/20	0 days	194SS+28 days,212SS+28 days
220		Area 2 - F17, F16, F28	8 days	Sat 3/10/20	Sat 10/10/20	1 day	195SS+30 days,219
221		Area 3 -F1, F2, F7, F8	5 days	Mon 12/10/20	Fri 16/10/20	23 days	194FF+28 days,220,198SS+28 days
222		Area 3 -F6	2 days	Mon 9/11/20	Tue 10/11/20	81 days	201SS+28 days,221
223		Area 4 -F12, F13, F14, F15	8 days	Wed 11/11/20	Wed 18/11/20	0 days	201SS+30 days,220
224		Area 5 - F18, F19, F20, F21, F22	10 days	Thu 19/11/20	Sat 28/11/20	12 days	201SS+30 days,223
225		Area 6 - F23, F24, F25, F26, F27	8 days	Fri 11/12/20	Fri 18/12/20	73 days	201FF+30 days,224,212FF+3 days
226		**Installation for steel column (above +18.1mPD)**	**58 days**	**Mon 11/1/21**	**Tue 9/3/21**	**370 days**	
227		Area 1 - F5, F4, F3, F11, F10, F9	5 days	Mon 11/1/21	Fri 15/1/21	0 days	214SS+80 days
228		Area 2 - F17, F16, F28	3 days	Thu 21/1/21	Sat 23/1/21	1 day	214SS+90 days,220
229		Area 3 -F1, F2, F6, F7, F8	5 days	Sun 31/1/21	Thu 4/2/21	0 days	214SS+100 days,221,222
230		Area 4 -F12, F13, F14, F15	8 days	Wed 10/2/21	Wed 17/2/21	2 days	214SS+110 days,223
231		Area 5 - F18, F19, F20, F21, F22	10 days	Sat 20/2/21	Mon 1/3/21	5 days	214SS+120 days,224



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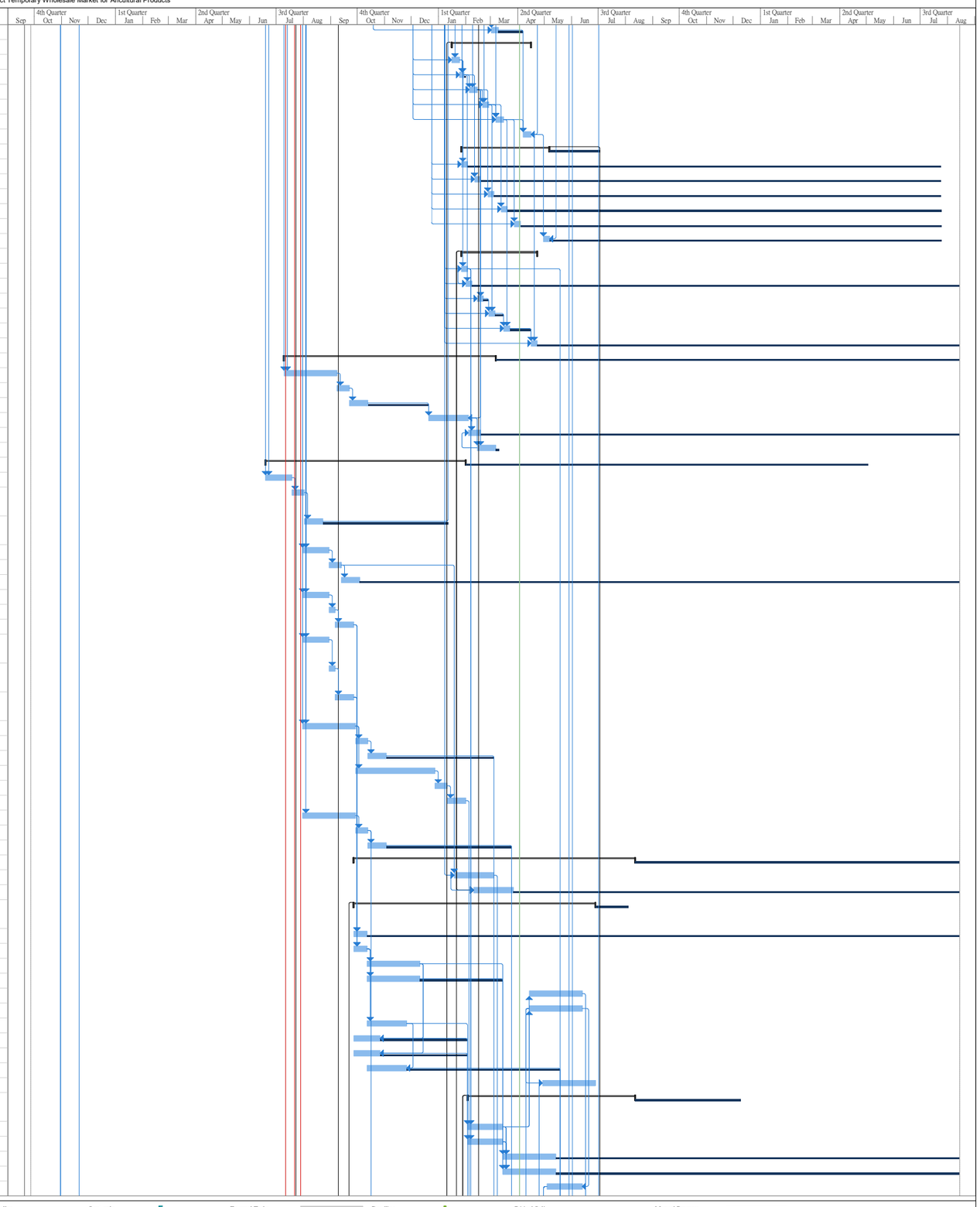
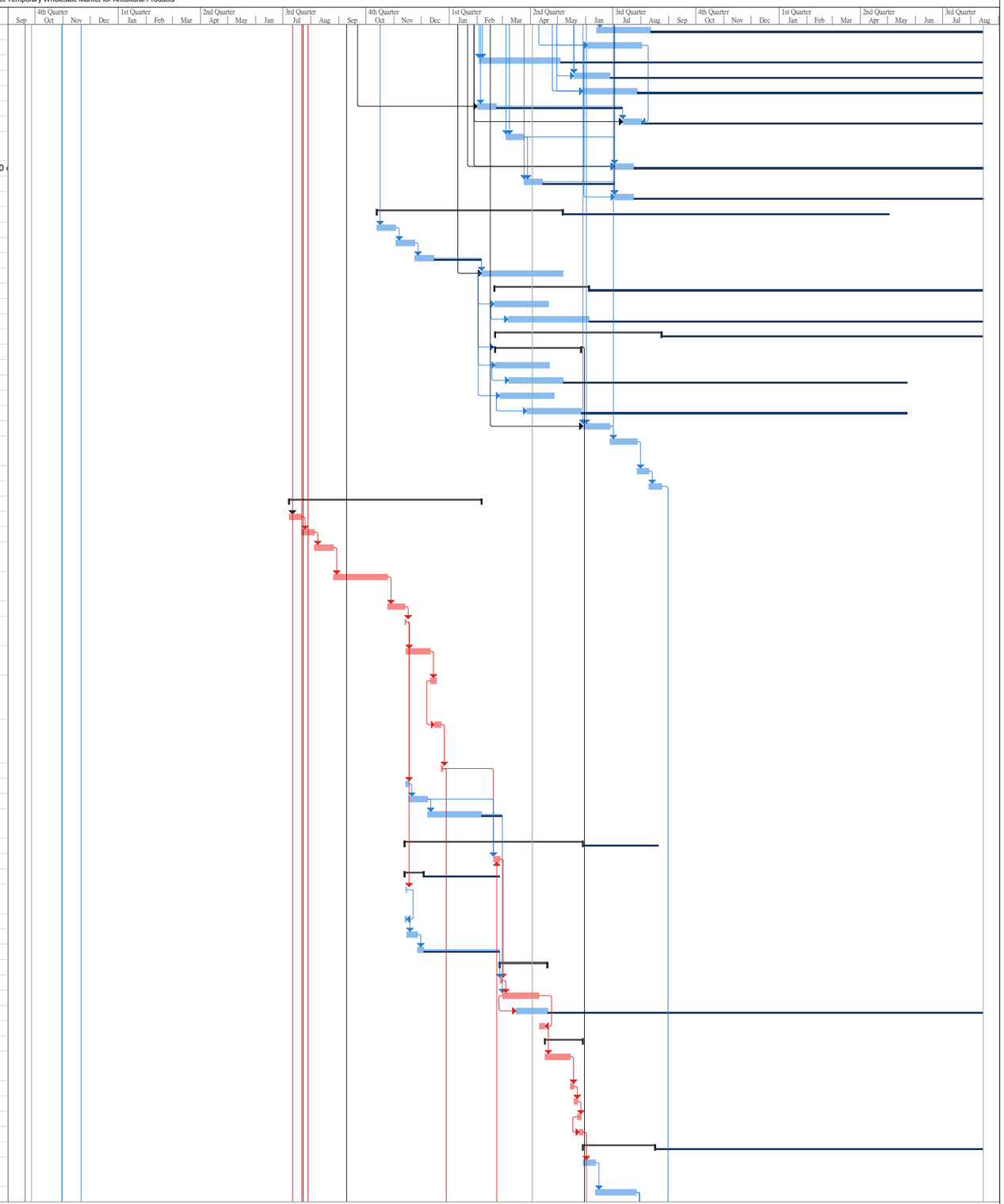
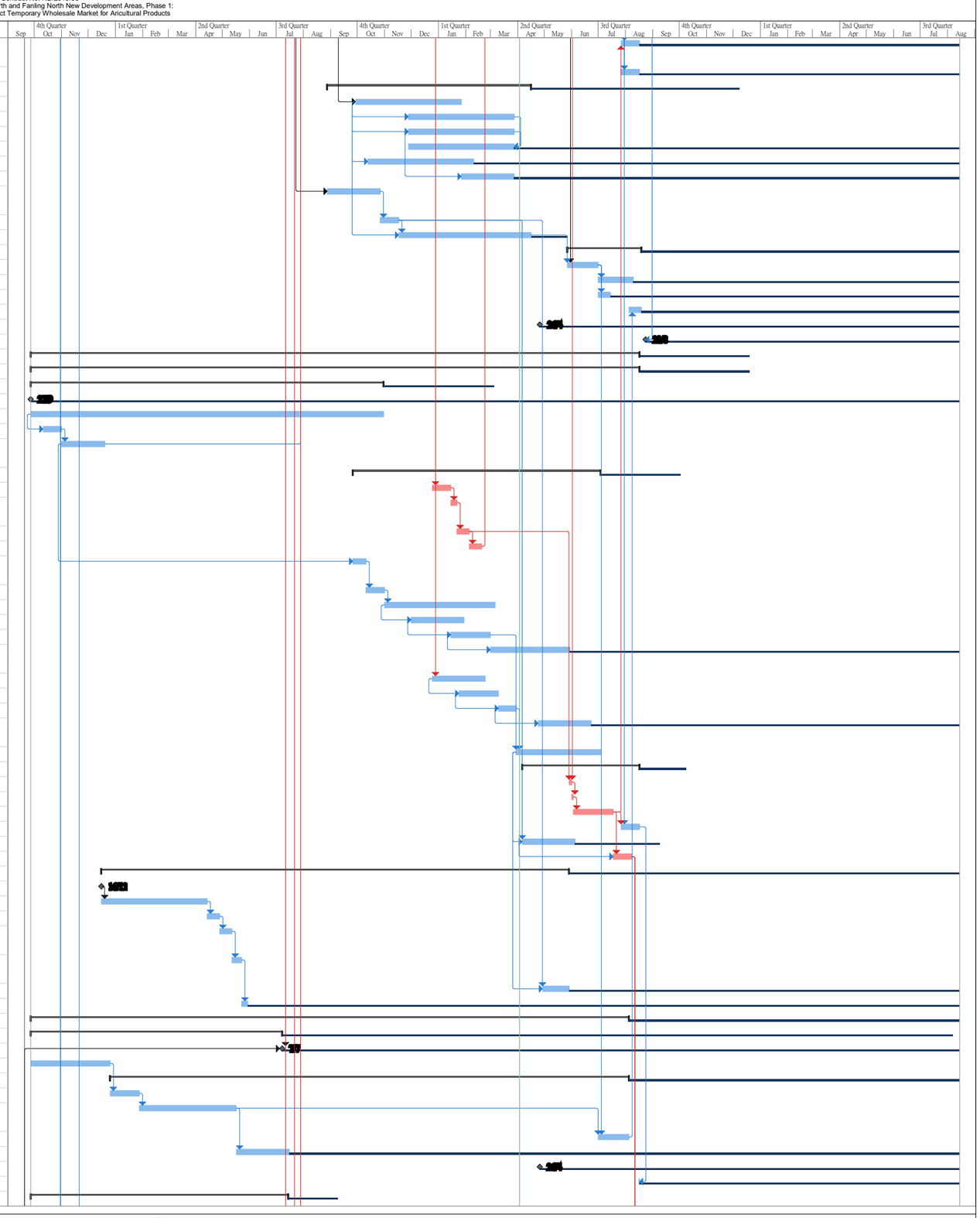
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
232		Area 6 - F23, F24, F25, F26, F27	8 days	Tue 2/3/21	Tue 9/3/21	28 days	214SS+130 days,225
233		**Installation for steel frame and truss**	**90 days**	**Sat 16/1/21**	**Thu 15/4/21**	**0 days**	
234		Area 1 - F5, F4, F3, F11, F10, F9	9 days	Sat 16/1/21	Sun 24/1/21	0 days	215SS+30 days,227
235		Area 2 - F17, F16, F28	5 days	Mon 25/1/21	Fri 29/1/21	2 days	234,228,215SS+45 days
236		Area 3 -F1, F2, F6, F7, F8	9 days	Fri 5/2/21	Sat 13/2/21	0 days	235,229,215SS+60 days
237		Area 4 -F12, F13, F14, F15	7 days	Sat 20/2/21	Fri 26/2/21	0 days	236,230,215SS+75 days
238		Area 5 - F18, F19, F20, F21, F22	9 days	Sun 7/3/21	Mon 15/3/21	0 days	237,231,215SS+90 days
239		Area 6 - F23, F24, F25, F26, F27	9 days	Wed 7/4/21	Thu 15/4/21	0 days	238,232,215FF+10 days
240		**Installation for bracing and secondary steel member**	**100 days**	**Wed 27/1/21**	**Thu 6/5/21**	**57 days**	
241		Area 1 - F5, F4, F3, F11, F10, F9	7 days	Wed 27/1/21	Tue 2/2/21	537 days	234,216SS+30 days
242		Area 2 - F17, F16, F28	7 days	Thu 11/2/21	Wed 17/2/21	522 days	235,216SS+45 days
243		Area 3 -F1, F2, F6, F7, F8	7 days	Fri 26/2/21	Thu 4/3/21	507 days	236,216SS+60 days
244		Area 4 -F12, F13, F14, F15	7 days	Sat 13/3/21	Fri 19/3/21	492 days	237,216SS+75 days
245		Area 5 - F18, F19, F20, F21, F22	7 days	Sun 28/3/21	Sat 3/4/21	477 days	238,216SS+90 days
246		Area 6 - F23, F24, F25, F26, F27	7 days	Fri 30/4/21	Thu 6/5/21	444 days	239,216FF+10 days
247		**Installation for skylight system steel frame structure**	**86 days**	**Wed 27/1/21**	**Thu 22/4/21**	**0 days**	
248		Area 1 - F5, F4, F3, F11, F10, F9	7 days	Wed 27/1/21	Tue 2/2/21	0 days	234,217SS+15 days
249		Area 2 - F17, F16, F28	7 days	Mon 1/2/21	Sun 7/2/21	553 days	235,217SS+20 days,248SS+5 days
250		Area 3 -F1, F2, F6, F7, F8	7 days	Sun 14/2/21	Sat 20/2/21	6 days	236,217SS+25 days
251		Area 4 -F12, F13, F14, F15	7 days	Sat 27/2/21	Fri 5/3/21	10 days	237,217SS+30 days,250
252		Area 5 - F18, F19, F20, F21, F22	7 days	Tue 16/3/21	Mon 22/3/21	24 days	238,217SS+35 days,251
253		Area 6 - F23, F24, F25, F26, F27	7 days	Fri 16/4/21	Thu 22/4/21	479 days	239,217SS+40 days,252
254		**Construction for steel staircase**	**240 days**	**Fri 10/7/20**	**Sat 6/3/21**	**526 days**	
255		Design for steel staircase	60 days	Fri 10/7/20	Mon 7/9/20	0 days	205,209
256		Submission for steel staircase	14 days	Tue 8/9/20	Mon 21/9/20	0 days	255
257		Approval for steel staircase	21 days	Tue 22/9/20	Mon 12/10/20	69 days	256
258		Fabrication for steel staircase	45 days	Mon 21/12/20	Wed 3/2/21	0 days	257,236FF-10 days
259		Delivery for steel staircase	14 days	Thu 4/2/21	Wed 17/2/21	543 days	260SS-14 days,258
260		Installation for steel staircase	21 days	Sun 14/2/21	Sat 6/3/21	4 days	258,236
261		**Design issues for roof of steel canopy**	**227 days**	**Fri 19/6/20**	**Sun 31/1/21**	**456 days**	
262		Skylight secondary steelwork members design and their fixing	30 days	Fri 19/6/20	Sat 18/7/20	0 days	205,208
263		Submission for skylight secondary steelwork members design and their fixing	14 days	Sun 19/7/20	Sat 1/8/20	0 days	262
264		Approval for the desing of skylight secondary steelwork members and their fixing	21 days	Sun 2/8/20	Sat 22/8/20	142 days	263
265		Design for glazing panel with Aluminum frame	30 days	Fri 31/7/20	Sat 29/8/20	0 days	205,210
266		Submission for glazing panel with Aluminum frame	14 days	Sun 30/8/20	Sat 12/9/20	0 days	265
267		Approval for design for glazing panel with Aluminum frame	21 days	Sun 13/9/20	Sat 3/10/20	680 days	266
268		Design for Purlin cleat and layout drawing	30 days	Fri 31/7/20	Sat 29/8/20	0 days	205,210
269		Submission for Purlin cleat and layout drawing	7 days	Sun 30/8/20	Sat 5/9/20	0 days	268
270		Approval for design for Purlin cleat and layout drawing	21 days	Sun 6/9/20	Sat 26/9/20	0 days	269
271		Design for metal roof cladding system and PMMA skylight system design calculation and shop drawing	30 days	Fri 31/7/20	Sat 29/8/20	0 days	205,210
272		Submission for metal roof cladding system and PMMA skylight system design calculation and shop drawing	7 days	Sun 30/8/20	Sat 5/9/20	0 days	271
273		Approval for metal roof cladding system and PMMA skylight system design calculation and shop drawing	21 days	Sun 6/9/20	Sat 26/9/20	0 days	272
274		Design for sliding roof hatch or hydraulic swing hatch door	60 days	Fri 31/7/20	Mon 28/9/20	0 days	205,210
275		Submission for sliding roof hatch or hydraulic swing hatch door	14 days	Tue 29/9/20	Mon 12/10/20	0 days	274
276		Approval for sliding roof hatch or hydraulic swing hatch door	21 days	Tue 13/10/20	Mon 2/11/20	122 days	275
277		Design for guardrail for roof	90 days	Tue 29/9/20	Sun 27/12/20	0 days	274
278		Submission for guardrail for roof	14 days	Mon 28/12/20	Sun 10/1/21	0 days	277
279		Approval for guardrail for roof	21 days	Mon 11/1/21	Sun 31/1/21	0 days	278
280		Design for solar pannel and the steel supporting frame	60 days	Fri 31/7/20	Mon 28/9/20	0 days	210
281		Submission for solar pannel and the steel supporting frame	14 days	Tue 29/9/20	Mon 12/10/20	0 days	280
282		Approval for solar pannel and the steel supporting frame	21 days	Tue 13/10/20	Mon 2/11/20	142 days	281
283		**Construction for roof of steel canopy**	**319 days**	**Sun 27/9/20**	**Wed 11/8/21**	**368 days**	
284		Fabrication and delivery for glazing panel with Aluminum frame	45 days	Tue 19/1/21	Thu 4/3/21	0 days	217SS+7 days,266
285		Installation for glazing panel with Aluminum frame	45 days	Wed 10/2/21	Fri 26/3/21	506 days	284SS+14 days,247SS+14 days
286		**Materials preparation and delivery for Purlin cleat, rockwood insulation, skylight PMMA Pannel**	**274 days**	**Sun 27/9/20**	**Sun 27/6/21**	**37 days**	
287		Purlin cleat steel raw	15 days	Sun 27/9/20	Sun 11/10/20	672 days	270,273
288		Prepare fabrication drawing	15 days	Sun 27/9/20	Sun 11/10/20	0 days	270,273
289		Under Liner	60 days	Mon 12/10/20	Thu 10/12/20	0 days	288
290		Alum Halter	60 days	Mon 12/10/20	Thu 10/12/20	94 days	288
291		Rockwool insulation	60 days	Wed 14/4/21	Sat 12/6/21	0 days	299FS+30 days
292		Top Liner (Coil)	60 days	Wed 14/4/21	Sat 12/6/21	0 days	299FS+30 days
293		Skylight PMMA Panel (expected for glazing panel)	45 days	Mon 12/10/20	Wed 25/11/20	0 days	288
294		Purlin	30 days	Sun 27/9/20	Mon 26/10/20	99 days	289FF-45 days
295		GMS. Gutter in mill finish	30 days	Sun 27/9/20	Mon 26/10/20	99 days	289FF-45 days
296		Skylight GMS edge capping w/. PE coating	45 days	Mon 12/10/20	Wed 25/11/20	174 days	293FF
297		Main Roof GMS. Edge capping w/. PE coating	60 days	Thu 29/4/21	Sun 27/6/21	0 days	292SS+15 days
298		**Installation for Purlin cleat, rockwood insulation, skylight PMMA Pannel**	**190 days**	**Wed 3/2/21**	**Wed 11/8/21**	**120 days**	
299		Install purlin	40 days	Wed 3/2/21	Sun 14/3/21	0 days	294,248
300		Install gutter	40 days	Wed 3/2/21	Sun 14/3/21	0 days	295,248
301		Install under liner	60 days	Mon 15/3/21	Thu 13/5/21	458 days	289,299,300
302		Install alum. halter	60 days	Mon 15/3/21	Thu 13/5/21	458 days	290,299,300
303		Louvre Install completer	40 days	Tue 4/5/21	Sat 12/6/21	0 days	292FF



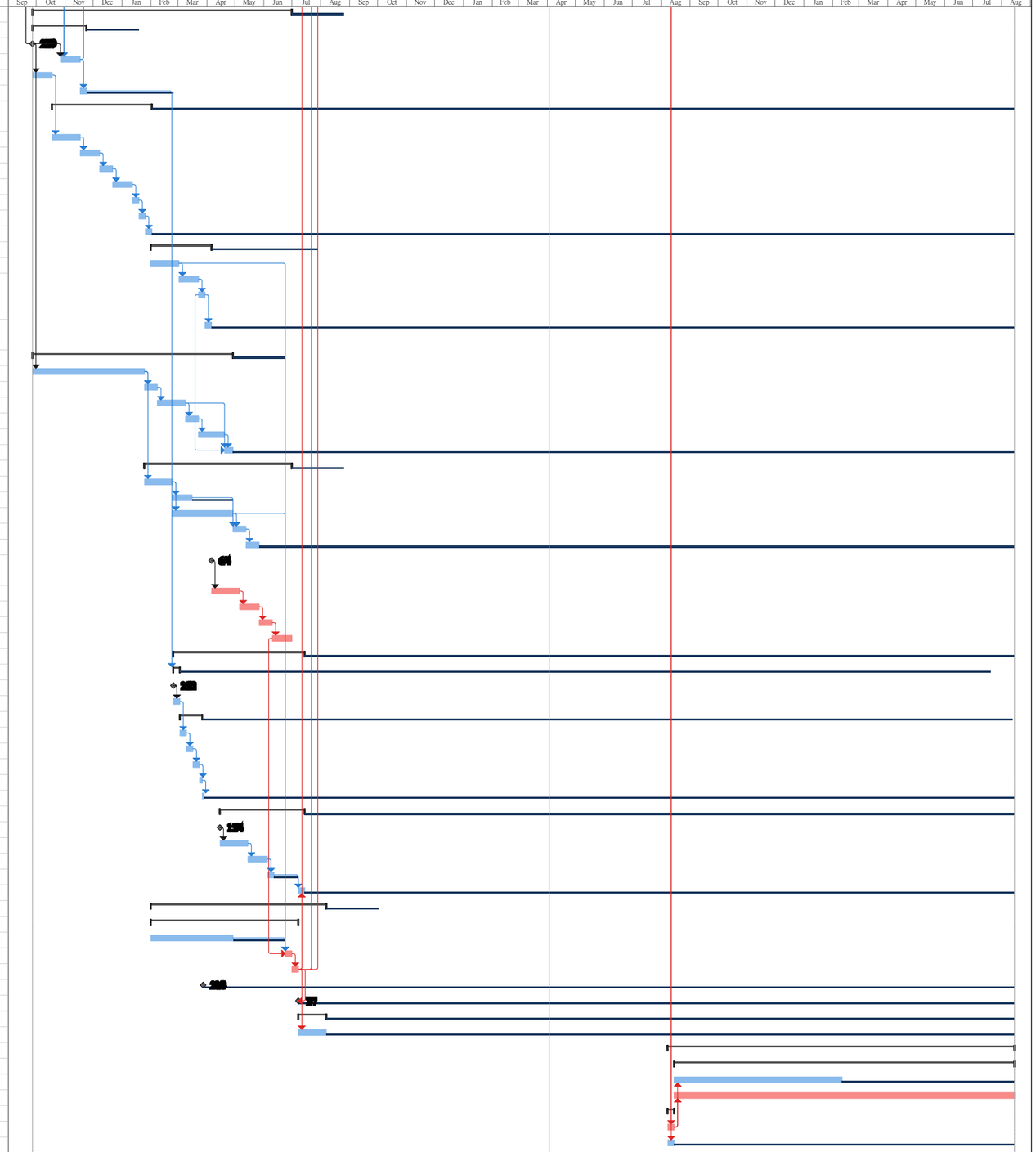
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
304		Install rockwool	60 days	Sun 13/6/21	Wed 11/8/21	368 days	291,303
305		Install top liner	60 days	Thu 3/6/21	Sun 1/8/21	0 days	292SS+30 days,303SS+30 days
306		Install skylight PMMA panel	90 days	Wed 3/2/21	Mon 3/5/21	468 days	293,248
307		Install Skylight edge capping	40 days	Wed 19/5/21	Sun 27/6/21	413 days	296,303SS+15 days,248
308		Install Main roof edge capping	60 days	Sat 29/5/21	Tue 27/7/21	383 days	297SS+30 days,303SS+15 days
309		Fabrication and delivery for guardrail for roof	21 days	Mon 1/2/21	Sun 21/2/21	140 days	279,286SS+90 days
310		Installation of guardrail for roof	21 days	Mon 12/7/21	Sun 1/8/21	378 days	298SS+7 days,309,305FF
311		Fabrication and delivery for sliding roof hatch or hydraulic swing hatch door	20 days	Fri 5/3/21	Wed 24/3/21	0 days	276,284
312		Installation for sliding roof hatch or hydraulic swing hatch door	21 days	Sat 3/7/21	Fri 23/7/21	387 days	311,247SS+14 days,298SS+30 days,305SS+30
313		Fabrication for steel supporting frame for solar pannel	20 days	Thu 25/3/21	Tue 13/4/21	80 days	282,311
314		Installation for solar pannel and the steel supporting frame	21 days	Sat 3/7/21	Fri 23/7/21	387 days	313,240,305SS+30 days
315		**Hanging fan and lighting system for steel canopy**	**206 days**	**Tue 13/10/20**	**Thu 6/5/21**	**361 days**	
316		Design for hanging fan and lighting system	21 days	Tue 13/10/20	Mon 2/11/20	0 days	281
317		Submission for hanging fan and lighting system	21 days	Tue 3/11/20	Mon 23/11/20	0 days	316
318		Approval for hanging fan and lighting system	21 days	Tue 24/11/20	Mon 14/12/20	53 days	317
319		Installation for hanging fan and lighting system	90 days	Sat 6/2/21	Thu 6/5/21	0 days	318,233SS+21 days
320		**Interior fitting-out, finishes and fixtures**	**105 days**	**Sat 20/2/21**	**Fri 4/6/21**	**436 days**	
321		Erection of interior fitting-out and finishes	60 days	Sat 20/2/21	Tue 20/4/21	0 days	319SS+14 days
322		Installation of fixtures	90 days	Sun 7/3/21	Fri 4/6/21	436 days	321SS+15 days
323		**Building services works**	**184 days**	**Sun 21/2/21**	**Mon 23/8/21**	**356 days**	
324		**Installation of BS equipment**	**95 days**	**Sun 21/2/21**	**Wed 26/5/21**	**0 days**	**319SS+14 days**
325		MVAC box installation	60 days	Sun 21/2/21	Wed 21/4/21	0 days	319SS+15 days
326		Electical installation	60 days	Mon 8/3/21	Thu 6/5/21	381 days	325SS+15 days
327		Fire services installation	60 days	Fri 26/2/21	Mon 26/4/21	0 days	319SS+20 days
328		Plumbing and drainage installation	60 days	Sun 28/3/21	Wed 26/5/21	361 days	327SS+30 days
329		Testing and commissioning of BS equipment	30 days	Sat 29/5/21	Sun 27/6/21	0 days	133,110,324SS+60 days
330		Inspection of BS installations inclunding Fire Services by Authorities	30 days	Mon 28/6/21	Tue 27/7/21	0 days	329
331		Remedial works after inspection	13 days	Wed 28/7/21	Mon 9/8/21	0 days	330
332		Re-insepction of BS installations by Authorities	14 days	Tue 10/8/21	Mon 23/8/21	0 days	331
333		**Demolision and re-provision works for toilet and RCB**	**213 days**	**Wed 8/7/20**	**Fri 5/2/21**	**0 days**	
334		Undergound Utilities detection	14 days	Wed 8/7/20	Tue 21/7/20	0 days	137
335		PR plan for relocation of toilet and RCB	14 days	Wed 22/7/20	Tue 4/8/20	0 days	334
336		Re-provision of toilet and RCB before demolish the existing toilet and RCB	21 days	Wed 5/8/20	Tue 25/8/20	0 days	335
337		TTA submission for temporary diversion of public footpath near Ma Wat River	60 days	Wed 26/8/20	Sat 24/10/20	0 days	336
338		Temporay diversion of public footpath near Ma Wat River	19 days	Sun 25/10/20	Thu 12/11/20	0 days	337
339		Re-opening of public footpath near Ma Wat River according to AECOM instruction	1 day	Fri 13/11/20	Fri 13/11/20	0 days	338
340		Instruction from AECOM for tree trimming and additional lighting provided for the footpath at Wing Ning Wai	27 days	Sat 14/11/20	Thu 10/12/20	0 days	339
341		Arrangement for trees trimming between Wing Ning Wai Footbridge and the footbridge at On Chuen Street adjacent to Shung Him Tong Village along Ma Wat River	7 days	Fri 11/12/20	Thu 17/12/20	0 days	340
342		Arrangement of temporary solar lighting between Wing Ning Wai Footbridge and the footbridge at On Chuen Street adjacent to Shung Him Tong Village along Ma Wat River	7 days	Wed 16/12/20	Tue 22/12/20	0 days	341SS+5 days
343		Re-temporary diversion of public footpath near Ma Wat River	2 days	Wed 23/12/20	Thu 24/12/20	0 days	342
344		Temporary enclosure for demolish the existing public toilet	3 days	Sat 14/11/20	Mon 16/11/20	0 days	339
345		Demolish the existing toilet	21 days	Tue 17/11/20	Mon 7/12/20	0 days	344
346		Construction of temporary 900mm dia. Stormwater drain next to the existing public toilet	60 days	Tue 8/12/20	Fri 5/2/21	23 days	345
347		**Site formation and mini-pile works**	**197 days**	**Fri 13/11/20**	**Fri 28/5/21**	**84 days**	
348		Site formation for mini-pile works	7 days	Fri 19/2/21	Thu 25/2/21	0 days	398,345,343
349		**Pre-drill works**	**21 days**	**Fri 13/11/20**	**Thu 3/12/20**	**84 days**	
350		Temporary fence off for pre-drill works due to unable for temporary diversion of public footpath near Ma Wat River	1 day	Sat 14/11/20	Sat 14/11/20	0 days	339
351		Mobilization of S.I. Drilling Rig	2 days	Fri 13/11/20	Sat 14/11/20	0 days	350FF
352		Pre-Drill works (4nos)	12 days	Sun 15/11/20	Thu 26/11/20	0 days	351
353		Completion Log Report	7 days	Fri 27/11/20	Thu 3/12/20	84 days	352
354		**Mini Pile Works**	**53 days**	**Fri 26/2/21**	**Mon 19/4/21**	**0 days**	
355		Mobilization of Percussive Drilling Rig	3 days	Fri 26/2/21	Sun 28/2/21	0 days	353,348
356		Drilling Works by 2 rigs (40nos.)	40 days	Mon 1/3/21	Fri 9/4/21	0 days	355,346
357		Grouting works (40nos.)	35 days	Tue 16/3/21	Mon 19/4/21	482 days	356SS+15 days
358		Post Drilling (2nos.)	6 days	Sun 11/4/21	Fri 16/4/21	0 days	356FF+7 days
359		**Loading test**	**42 days**	**Sat 17/4/21**	**Fri 28/5/21**	**0 days**	
360		Allow for the mini piles to gain sufficient strength of the grout selection of the test pile by AECOM	28 days	Sat 17/4/21	Fri 14/5/21	0 days	358
361		Setup loading test platform by Kentledge Method	4 days	Sat 15/5/21	Tue 18/5/21	0 days	360
362		Loading Test Reading (1nos. Of load test pile)	4 days	Wed 19/5/21	Sat 22/5/21	0 days	361
363		Demobilization of loading test platform	4 days	Sun 23/5/21	Wed 26/5/21	0 days	362
364		Site Clearance	4 days	Tue 25/5/21	Fri 28/5/21	0 days	363SS+2 days
365		**Ramp structure and road works**	**80 days**	**Sat 29/5/21**	**Mon 16/8/21**	**363 days**	
366		Cutting mini-pile and provide anchorage reinforcements from mini piles to base slab of the ramp structure (40 nos.)	14 days	Sat 29/5/21	Fri 11/6/21	0 days	364
367		Construction for ramp structure	45 days	Sat 12/6/21	Mon 26/7/21	0 days	366



ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
368		Backfilling to the adjacent road level due to revised drawings (around +11.6mPD)	21 days	Tue 27/7/21	Mon 16/8/21	363 days	367,413
369		Construction of steel vehicle parapet and thrie bear	21 days	Tue 27/7/21	Mon 16/8/21	363 days	367
370		**Road works and On-grade slab**	**231 days**	**Fri 28/8/20**	**Thu 15/4/21**	**236 days**	
371		Backfilling to the bottom of on-grade slab	120 days	Tue 29/9/20	Tue 26/1/21	0 days	218SS+14 days
372		Cable draw pits constrcution	120 days	Sat 28/11/20	Sat 27/3/21	0 days	371SS+60 days
373		Construction for Cable trough	120 days	Sat 28/11/20	Sat 27/3/21	0 days	371SS+60 days
374		Cable ducts laying	120 days	Sat 28/11/20	Sat 27/3/21	505 days	372FF,373FF
375		Construction for water trench as per revised drawings	120 days	Tue 13/10/20	Tue 9/2/21	551 days	371SS+14 days
376		Laying of the power cables	60 days	Wed 27/1/21	Sat 27/3/21	505 days	373SS+60 days
377		Submission for paneling of on-grade slab and carriageway works	60 days	Fri 28/8/20	Mon 26/10/20	0 days	153SS+30 days
378		Approval for paneling of on-grade slab and carriageway works	21 days	Tue 27/10/20	Mon 16/11/20	0 days	377
379		Casting concrete for on-grade slab and carriagewway	150 days	Tue 17/11/20	Thu 15/4/21	41 days	371SS+30 days,378
380		**Street furniture and road marking**	**84 days**	**Thu 27/5/21**	**Wed 18/8/21**	**361 days**	
381		Construction for Street furniture as per drawing no. 60335576/C6/C00/1202	35 days	Thu 27/5/21	Wed 30/6/21	0 days	324,379
382		Construction for road lighting	40 days	Thu 1/7/21	Mon 9/8/21	370 days	381
383		Road marking as per drawing no. 60335576/C6/C00/1602	14 days	Thu 1/7/21	Wed 14/7/21	396 days	381
384		Miscellouces installation such as flag posts and mail boxes	14 days	Thu 5/8/21	Wed 18/8/21	361 days	432
385		Orignal Completion date of Section 1 of the Works	0 days	Mon 26/4/21	Mon 26/4/21	476 days	
386		Revised completion date of Section 1 of the Works	0 days	Mon 23/8/21	Mon 23/8/21	356 days	332FF
387		**Section 2 of the Works**	**690 days**	**Fri 27/9/19**	**Mon 16/8/21**	**125 days**	
388		**Works for Portion 6**	**690 days**	**Fri 27/9/19**	**Mon 16/8/21**	**125 days**	
389		**General for Portion 6**	**400 days**	**Fri 27/9/19**	**Fri 30/10/20**	**125 days**	
390		Access date of Portion 6	0 days	Fri 27/9/19	Fri 27/9/19	1053 days	
391		Site clearance and tree felling	400 days	Fri 27/9/19	Fri 30/10/20	0 days	
392		Construction for geotechnical instrumentation (D57 and D37)	21 days	Fri 11/10/19	Thu 31/10/19	0 days	391SS+14 days
393		Construction for ground investigation (7 nos.) according to drawing no. 60335576/C6/C00/7501	49 days	Fri 1/11/19	Thu 19/12/19	0 days	392
394		**Slope and landscape works**	**281 days**	**Sat 26/9/20**	**Sat 3/7/21**	**90 days**	
395		Excavation from exsiting level to +5mPD by open cut method	21 days	Fri 25/12/20	Thu 14/1/21	0 days	343
396		Replacement of existing soil to Grade 200 rock fill under FW21 as per revised drawing	7 days	Fri 15/1/21	Thu 21/1/21	0 days	395
397		Rockfill to the bottom of FW21	14 days	Fri 22/1/21	Thu 4/2/21	0 days	396
398		Backfilling from bottom to Ramp structure bottom level	14 days	Fri 5/2/21	Thu 18/2/21	0 days	397
399		Trail pit construction as per drawing no. I/ND/2019/06/60335576/C6/C00/7501	15 days	Sat 26/9/20	Sat 10/10/20	0 days	393SS+330 days
400		Confirmed design review of the slope improvement	21 days	Sun 11/10/20	Sat 31/10/20	0 days	399
401		Excavation for the loose fill materials from CH 108 to CH 266	125 days	Sun 1/11/20	Fri 5/3/21	0 days	400
402		Replace the loose fill to rockfill from CH 108 to CH 266	60 days	Tue 1/12/20	Fri 29/1/21	0 days	401SS+30 days
403		Installation of grasscrete from CH 108 to CH 266	45 days	Fri 15/1/21	Sun 28/2/21	0 days	402SS+45 days
404		Construction of walkway along the slope crest from CH 108 to CH 266	90 days	Mon 1/3/21	Sat 29/5/21	442 days	403SS+45 days
405		Excavation for the loose fill materials from CH 30 to CH 100	60 days	Fri 25/12/20	Mon 22/2/21	0 days	343
406		Replace the loose fill to rockfill from CH 30 to CH 100	45 days	Sun 24/1/21	Tue 9/3/21	0 days	405SS+30 days
407		Installation of grasscrete from CH 0 to CH 108	20 days	Wed 10/3/21	Mon 29/3/21	0 days	406SS+45 days
408		Construction of walkway along the slope crest from CH 30 to CH100	60 days	Sat 24/4/21	Tue 22/6/21	418 days	407SS+45 days
409		Landscape and planting works	96 days	Tue 30/3/21	Sat 3/7/21	0 days	403,407
410		**FW21 and road works**	**133 days**	**Tue 6/4/21**	**Mon 16/8/21**	**53 days**	
411		Preparation of formation to FW21	3 days	Sat 29/5/21	Mon 31/5/21	0 days	397,364
412		Blinding concrete casting for FW21	2 days	Tue 1/6/21	Wed 2/6/21	0 days	411
413		Construction for new feature FW21	45 days	Thu 3/6/21	Sat 17/7/21	0 days	412
414		Backfilling to adjacent road level as per revised drawing (around +11.6mPD)	21 days	Tue 27/7/21	Mon 16/8/21	0 days	413,367
415		Construction of fence with footing	60 days	Tue 6/4/21	Fri 4/6/21	96 days	409SS+7 days,378
416		Construction of steel vehicle parapet and thrie bear	21 days	Sun 18/7/21	Sat 7/8/21	0 days	415SS+7 days,413
417		**Road works construction at On Kui Street**	**530 days**	**Mon 16/12/19**	**Fri 28/5/21**	**443 days**	
418		TTA and XP granted	0 days	Mon 16/12/19	Mon 16/12/19	0 days	
419		TTA set up for revising shoulder to suit for interim stage	120 days	Mon 16/12/19	Mon 13/4/20	0 days	418
420		Demolish the existing shoulder	14 days	Tue 14/4/20	Mon 27/4/20	0 days	419
421		Re-construction the shoulder as per drawing no. 60335576/C6/C00/1001	14 days	Tue 28/4/20	Mon 11/5/20	0 days	420
422		Construction for street furniture as per drawing no. 60335576/C6/C00/1201	11 days	Tue 12/5/20	Fri 22/5/20	0 days	421
423		Fence construction along Ma Wai River	30 days	Thu 29/4/21	Fri 28/5/21	443 days	409SS+30 days,378
424		Road marking as per drawing no. 60335576/C6/C00/1601	7 days	Sat 23/5/20	Fri 29/5/20	807 days	422
425		**Works for Portion 5**	**678 days**	**Fri 27/9/19**	**Wed 4/8/21**	**375 days**	
426		**General for Portion 5**	**285 days**	**Fri 27/9/19**	**Tue 7/7/20**	**760 days**	
427		Access date of Portion 5 (184 days after starting date)	0 days	Tue 7/7/20	Tue 7/7/20	768 days	439SS+184 days,137
428		Earthworks	90 days	Fri 27/9/19	Wed 25/12/19	0 days	
429		**Street furniture and road marking**	**588 days**	**Thu 26/12/19**	**Wed 4/8/21**	**375 days**	
430		Removal of exisiting gate	33 days	Thu 26/12/19	Mon 27/1/20	0 days	428
431		Construction for Street furniture as per drawing no. 60335576/C6/C00/1202	110 days	Tue 28/1/20	Sat 16/5/20	0 days	430
432		Construction of road lighting	35 days	Thu 1/7/21	Wed 4/8/21	0 days	431,381
433		Road marking as per drawing no. 60335576/C6/C00/1602	60 days	Sun 17/5/20	Wed 15/7/20	760 days	431
434		Orignal Completion date of Section 2 of the Works	0 days	Mon 26/4/21	Mon 26/4/21	476 days	
435		Revised completion date of Section 2 of the Works	1 day	Mon 16/8/21	Mon 16/8/21	363 days	414FF
436		**Section 3 of the Works**	**292 days**	**Fri 27/9/19**	**Tue 14/7/20**	**56 days**	



ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
437		**Works at Portion 1**	**278 days**	**Fri 27/9/19**	**Tue 30/6/20**	**56 days**	
438		**General for Portion 1**	**58 days**	**Fri 27/9/19**	**Sat 23/11/19**	**56 days**	
439		Access date of Portion 1	0 days	Fri 27/9/19	Fri 27/9/19	0 days	
440		Site clearance and tree felling	21 days	Sun 27/10/19	Sat 16/11/19	0 days	46,47,439
441		Construction for fencing for interim stage	21 days	Fri 27/9/19	Thu 17/10/19	0 days	439
442		Construction for the insumentation (FLN-2-SF-DH005(P))	7 days	Sun 17/11/19	Sat 23/11/19	93 days	440
443		**Earthworks / site formation, drainage, fresh water and power suuply works**	**107 days**	**Fri 18/10/19**	**Sat 1/2/20**	**925 days**	
444		Excavation for drainage works	30 days	Fri 18/10/19	Sat 16/11/19	0 days	441
445		Drainage pipelaying	21 days	Sun 17/11/19	Sat 7/12/19	0 days	444
446		Manhole construction	14 days	Sun 8/12/19	Sat 21/12/19	0 days	445
447		Backfilling to the drainage area	21 days	Sun 22/12/19	Sat 11/1/20	0 days	446
448		Connection to the existing manhole	7 days	Sun 12/1/20	Sat 18/1/20	0 days	447
449		Connection of fresh water supply	7 days	Sun 19/1/20	Sat 25/1/20	0 days	448
450		Connection of power supply	7 days	Sun 26/1/20	Sat 1/2/20	925 days	449
451		**Pavments and road marking to the ground for interim stage**	**65 days**	**Sat 1/2/20**	**Sun 5/4/20**	**114 days**	
452		Idling due to COVID-9 infection	30 days	Sat 1/2/20	Sun 1/3/20	0 days	
453		100m bituminous materials on compacted backfill	21 days	Mon 2/3/20	Sun 22/3/20	0 days	452
454		Installation of street furniture according to drawing no. 60335576/C6/C00/1201	7 days	Mon 23/3/20	Sun 29/3/20	0 days	453
455		Construction for road marking and traffic sign as per drawing no. 60335576/C6/C00/1601	7 days	Mon 30/3/20	Sun 5/4/20	861 days	454
456		**Temporary lighting installation for Portion 1 and Portion 2**	**215 days**	**Fri 27/9/19**	**Tue 28/4/20**	**56 days**	
457		Temporary lighting design	120 days	Fri 27/9/19	Fri 24/1/20	0 days	439
458		Temporary lighting design submission	14 days	Sat 25/1/20	Fri 7/2/20	0 days	457
459		Temporary lighting apprvoal	30 days	Sat 8/2/20	Sun 8/3/20	0 days	458
460		Materials preparation for temporary lighting	14 days	Mon 9/3/20	Sun 22/3/20	0 days	459
461		Idling due to COVID-9 infection	28 days	Mon 23/3/20	Sun 19/4/20	0 days	460
462		Temporary lighting installation	9 days	Mon 20/4/20	Tue 28/4/20	838 days	459,454SS+7 days,461
463		**Rain Shelter Construction**	**158 days**	**Sat 25/1/20**	**Tue 30/6/20**	**56 days**	
464		Desgin submission for foldable rain shelter	30 days	Sat 25/1/20	Sun 23/2/20	0 days	457
465		Approval for design submission for foldable rain shelter	21 days	Mon 24/2/20	Sun 15/3/20	44 days	464
466		Idling due to COVID-9 infection	65 days	Mon 24/2/20	Tue 28/4/20	0 days	464
467		Material preparation for foldable rain shelter	14 days	Wed 29/4/20	Tue 12/5/20	0 days	466,465
468		Construction for foldable rain shelter	14 days	Wed 13/5/20	Tue 26/5/20	810 days	467
469		PMI for changing part of foldable rain shelter to fixed rain shelter	0 days	Mon 6/4/20	Mon 6/4/20	0 days	
470		Design submission for fixed rain shelter	30 days	Mon 6/4/20	Tue 5/5/20	0 days	469
471		Approval for design submission for fixed rain shelter	21 days	Wed 6/5/20	Tue 26/5/20	0 days	470
472		Materials preparation for fixed rain shelter	14 days	Wed 27/5/20	Tue 9/6/20	0 days	471
473		Construction for fixed rain shelter	21 days	Wed 10/6/20	Tue 30/6/20	0 days	472
474		**Works at Portion 2**	**141 days**	**Tue 25/2/20**	**Tue 14/7/20**	**761 days**	
475		**General for Portion 2**	**7 days**	**Tue 25/2/20**	**Mon 2/3/20**	**869 days**	**442**
476		Access date for Portion 2 (152 days after starting date)	0 days	Tue 25/2/20	Tue 25/2/20	0 days	
477		Site clearance and tree felling	7 days	Tue 25/2/20	Mon 2/3/20	0 days	476
478		**Underground drainage works**	**24 days**	**Tue 3/3/20**	**Thu 26/3/20**	**869 days**	
479		Excavation for underground drainage	7 days	Tue 3/3/20	Mon 9/3/20	0 days	477
480		Underground drainage pipelaying	7 days	Tue 10/3/20	Mon 16/3/20	0 days	479
481		Construction of manhole	7 days	Tue 17/3/20	Mon 23/3/20	0 days	480
482		Connection to the existing manhole	3 days	Tue 24/3/20	Thu 26/3/20	0 days	481
483		Road marking as per drawing no. 60335576/C6/C00/1601	2 days	Fri 27/3/20	Sat 28/3/20	869 days	482
484		**Container office - Modification works**	**91 days**	**Wed 15/4/20**	**Tue 14/7/20**	**761 days**	
485		PMI for container office modification works	0 days	Wed 15/4/20	Wed 15/4/20	0 days	
486		Desgin submission for contanier office modification works	30 days	Wed 15/4/20	Thu 14/5/20	0 days	485
487		Design approval for container office modification works	21 days	Fri 15/5/20	Thu 4/6/20	0 days	486
488		Material preparation for contanier office modification works	7 days	Fri 5/6/20	Thu 11/6/20	26 days	487
489		Construction of container offices modification works	7 days	Wed 8/7/20	Tue 14/7/20	761 days	488,494
490		**Change of Market Stage**	**188 days**	**Sat 1/2/20**	**Thu 6/8/20**	**56 days**	
491		**From Existing Stage to Iterim Stage Arrangement**	**158 days**	**Sat 1/2/20**	**Tue 7/7/20**	**0 days**	
492		Idling due to COVID-9 infection	88 days	Sat 1/2/20	Tue 28/4/20	56 days	
493		Notice to stall traders for relocation to Interim Market (30 days before the key date)	7 days	Wed 24/6/20	Tue 30/6/20	0 days	492,473SS+14 days,466,452
494		Relocation of stall traders from existing NDTWM to Interim Market	7 days	Wed 1/7/20	Tue 7/7/20	0 days	493
495		Original Key Date completion of interim North District Temporary Wholesale Market for Agricultural P	0 days	Sat 28/3/20	Sat 28/3/20	870 days	
496		Revised Key Date completion of interim North District Temporary Wholesale Market for Agricultural P	0 days	Tue 7/7/20	Tue 7/7/20	768 days	494FF
497		**Completion of Reinstatement of interim NDTWM**	**30 days**	**Wed 8/7/20**	**Thu 6/8/20**	**738 days**	
498		Carrying out reinstatement works	30 days	Wed 8/7/20	Thu 6/8/20	738 days	494
499		**Maintenance Period (12 months of DLP)**	**372 days**	**Sun 8/8/21**	**Sun 14/8/22**	**0 days**	
500		**Outstanding works and defects**	**365 days**	**Sun 15/8/21**	**Sun 14/8/22**	**0 days**	
501		Completion of outstanding works	180 days	Sun 15/8/21	Thu 10/2/22	185 days	504
502		Rectification of defects	365 days	Sun 15/8/21	Sun 14/8/22	0 days	504
503		**Final handover of the site**	**7 days**	**Sun 8/8/21**	**Sat 14/8/21**	**0 days**	
504		Pre-handover inspection	7 days	Sun 8/8/21	Sat 14/8/21	0 days	416
505		Handover of the Site	7 days	Sun 8/8/21	Sat 14/8/21	365 days	416



Legend		
	Completed	Incomplete
U+Chnnel		
Water trough		
Storm		
Sewer		
Manhole		
OTG		
Petrol interceptor		

D (refer all dotted lines in this layout plan)

A

E, F

B, H

G

C

MOB

FMH-1.05

FMH-03

STG_8

FMH-1.04

FMH-1.02

FMH-1.03

FMH-1.01

SCH1001960

MNH-FL2.4

IL+10.93

DP_2.21

IL+10.24

Flag Pole Footing

C6_2.5

C6_2.4

C6_2.3

C6_2.2

C6_1.5

C6_2.1

ADDITIONAL MANHOLE (E833304.461, N840159.765) FRL+11.41 IL+9.90

FRL+11.43 IL+10.20

ADDITIONAL OTG (E833313.055, N 840111.932) FRL+11.43 IL+10.45

Fire Hydrant

CONCRETE SURROUND (BL=+10.2 approx)

CONCRETE SURROUND (BL=+10.3 approx)

Petrol Interceptor1

Petrol Interceptor2

Petrol Interceptor3

IL+11.305

IL+11.245

IL+11.40

IL+11.285

IL+11.263

IL+11.253

FMH-2.06B

FMH-2.06A

FMH-2.05A

IL+11.375

IL+11.450

IL+11.35

IL+11.255

IL+11.170

IL+11.229

IL+10.63

DP_1.22B

IL+10.95

IL+10.98

C6_1.4

DP_1.22

FMH-2.04

C6_1.3

FMH-2.03

FMH-2.02B

FMH-2.02A

FMH-2.01B

FMH-2.01A

FMH-2.01

IL+11.260

IL+11.020

IL+11.140

IL+11.295

IL+11.245

IL+11.225

IL+11.325

IL+11.390

C6_1.1B

C6_1.1A

C6_1.1

C6_1.2

C6_1.2A

DP_1.11

DP_1.11A

DP_1.11B

DP_1.21

Ramp

Water Tank

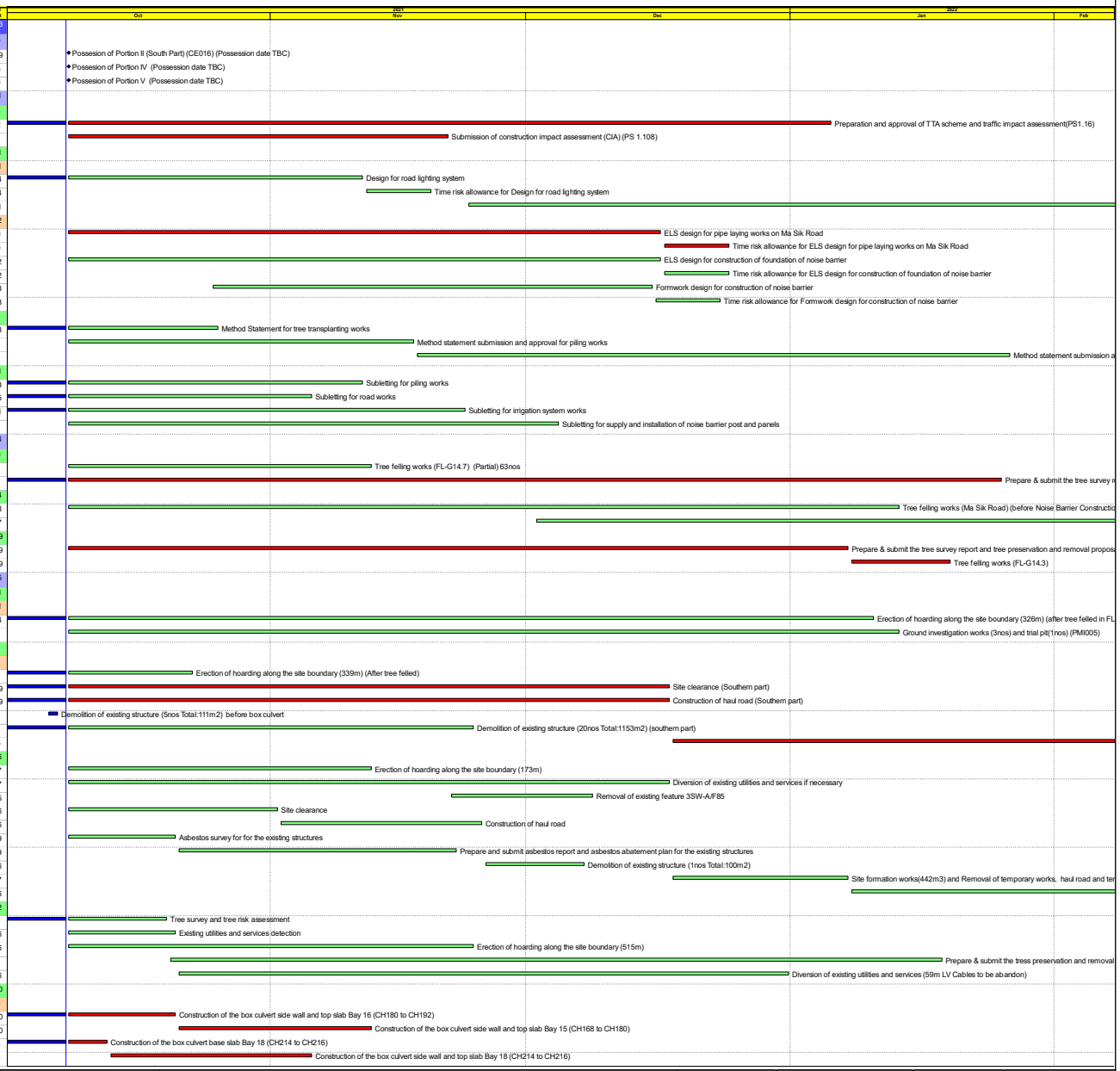
IL+10.50

C6_2.1A

Construction Programme of ND/2019/07

Contract No. ND/2019/07 Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Activity Id	Activity Name	Original Duration	Start	Finish	Total Float
Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works		1416	31-Aug-20 A	30-Jul-24	215
Actual Access Date		0	08-Oct-21	08-Oct-21	-85
ACD1010	Possesion of Portion II (South Part) (CE016) (Possession date TBC)	0	08-Oct-21*		-169
ACD1030	Possesion of Portion IV (Possession date TBC)	0	08-Oct-21*		-85
ACD1040	Possesion of Portion V (Possession date TBC)	0	08-Oct-21*		-85
Preliminaries, Contractor's Design, Method Statement Submission and Approval		416	30-Dec-20 A	18-Feb-22	281
General Submission		327	30-Dec-20 A	05-Jan-22	-54
PGS1200	Preparation and approval of TTA scheme and traffic impact assessment(PS1.16)	290	30-Dec-20 A	05-Jan-22	-82
PGS1230	Submission of construction impact assessment (CIA) (PS 1.108)	45	08-Oct-21	21-Nov-21	-9
Contractor's Design Submission and Approval		194	13-Jul-21 A	18-Feb-22	241
Permanent Works Design		194	13-Jul-21 A	18-Feb-22	241
PWD1020	Design for road lighting system	75	13-Jul-21 A	11-Nov-21	254
PWD1025	Time risk allowance for Design for road lighting system	7	12-Nov-21	19-Nov-21	254
PWD1030	Design for irrigation system	75	24-Nov-21	18-Feb-22	241
Major Temporary Works Design		67	08-Oct-21	24-Dec-21	122
TWD1030	ELS design for pipe laying works on Ma Sik Road	60	08-Oct-21	16-Dec-21	-40
TWD1035	Time risk allowance for ELS design for pipe laying works on Ma Sik Road	7	17-Dec-21	24-Dec-21	-40
TWD1050	ELS design for construction of foundation of noise barrier	60	08-Oct-21	16-Dec-21	122
TWD1055	Time risk allowance for ELS design for construction of foundation of noise barrier	7	17-Dec-21	24-Dec-21	122
TWD1060	Formwork design for construction of noise barrier	45	25-Oct-21	15-Dec-21	123
TWD1065	Time risk allowance for Formwork design for construction of noise barrier	7	16-Dec-21	23-Dec-21	123
Major Construction Works Method Statement		228	06-May-21 A	26-Jan-22	94
MS1550	Method Statement for tree transplanting works	90	06-May-21 A	25-Oct-21	143
MS1570	Method statement submission and approval for piling works	35	08-Oct-21	17-Nov-21	94
MS1580	Method statement submission and approval for construction of noise barrier	60	18-Nov-21	26-Jan-22	94
Tendering and Procurement for Major Subcontractor		227	16-Mar-21 A	04-Dec-21	231
TDS1067	Subletting for piling works	140	16-Mar-21 A	11-Nov-21	243
TDS1070	Subletting for road works	120	26-Mar-21 A	05-Nov-21	215
TDS1110	Subletting for irrigation system works	100	05-May-21 A	23-Nov-21	241
TDS1140	Subletting for supply and installation of noise barrier post and panels	50	08-Oct-21	04-Dec-21	82
Tree Works and Submission of the tree survey report and tree preservation and removal propo		135	15-Sep-21 A	19-Feb-22	184
Tree Works in Area FL-G14.7		108	15-Sep-21 A	25-Jan-22	-20
TWS0920	Tree felling works (FL-G14.7) (Partial) 63nos	30	08-Oct-21	12-Nov-21	40
TWS0940	Prepare & submit the tree survey report and tree preservation and removal proposal (TPRP) (FL-G14.7) (Remaining	108	15-Sep-21 A	25-Jan-22	-21
Tree Works on Ma Sik Road		135	08-Oct-21	19-Feb-22	184
TWS1200	Tree felling works (Ma Sik Road) (before Noise Barrier Construction)	80	08-Oct-21	13-Jan-22	178
TWS1210	Tree transplanting works at the side of road (9nos) (before noise barrier construction)	80	02-Dec-21	19-Feb-22	167
Tree Works in Area FL-G14.3		85	08-Oct-21	19-Jan-22	-189
TWS1250	Prepare & submit the tree survey report and tree preservation and removal proposal (TPRP) (FL-G14.3)	75	08-Oct-21	07-Jan-22	-189
TWS1260	Tree felling works (FL-G14.3)	10	08-Jan-22	19-Jan-22	-189
Section 1- Site Formation and Infrastructure Works in Area A		241	09-Aug-21 A	23-Mar-22	525
Site Formation (Portion I- Area A 11042m2)		100	09-Aug-21 A	13-Jan-22	581
Remaining Site Formation Works after trees felled in FL-G14.1 & FL-G14.2		100	09-Aug-21 A	13-Jan-22	581
S1-SF1011	Erection of hoarding along the site boundary (326m) (after tree felled in FL-G14.2)	100	09-Aug-21 A	10-Jan-22	584
S1-SF1051	Ground investigation works (3nos) and trial pit(1nos) (PMI005)	80	08-Oct-21	13-Jan-22	93
Site Formation (Portion II- Area A 21900m2)		229	09-Aug-21 A	22-Mar-22	-6
Site Formation Works in South Part of Portion II		229	09-Aug-21 A	22-Mar-22	-6
S1-SF1392	Erection of hoarding along the site boundary (339m) (After tree felled)	50	09-Aug-21 A	22-Oct-21	2
S1-SF1394	Site clearance (Southern part)	72	04-Sep-21 A	17-Dec-21	-139
S1-SF1396	Construction of haul road (Southern part)	72	04-Sep-21 A	17-Dec-21	-139
S1-SF1400	Demolition of existing structure (5nos Total:111m2) before box culvert	17	06-Oct-21 A	07-Oct-21 A	
S1-SF1401	Demolition of existing structure (20nos Total:1153m2) (southern part)	90	08-Sep-21 A	24-Nov-21	89
S1-SF1410	Site formation works part 1 (7285m3 of 21854m3) and Removal of temporary works, haul road and temporary acc	75	18-Dec-21	22-Mar-22	-46
Site Formation (Portion III- Area A 4900m2)		105	08-Oct-21	15-Feb-22	556
S1-SF1450	Erection of hoarding along the site boundary (173m)	30	08-Oct-21	12-Nov-21	187
S1-SF1535	Diversion of existing utilities and services if necessary	60	08-Oct-21	17-Dec-21	167
S1-SF1546	Removal of existing feature 3SW-A/F85	15	22-Nov-21	08-Dec-21	235
S1-SF1550	Site clearance	20	08-Oct-21	01-Nov-21	176
S1-SF1570	Construction of haul road	21	02-Nov-21	25-Nov-21	176
S1-SF1610	Asbestos survey for for the existing structures	10	08-Oct-21	20-Oct-21	179
S1-SF1620	Prepare and submit asbestos report and asbestos abatement plan for the existing structures	28	21-Oct-21	22-Nov-21	179
S1-SF1630	Demolition of existing structure (1nos Total:100m2)	10	26-Nov-21	07-Dec-21	176
S1-SF1640	Site formation works(442m3) and Removal of temporary works, haul road and temporary accesses	15	18-Dec-21	07-Jan-22	167
S1-SF1650	Removal of temporary works, haul road and temporary accesses	30	08-Jan-22	15-Feb-22	556
Site Formation (Portion IV- Area A 3800m2)		84	18-Aug-21 A	18-Jan-22	202
S1-SF1750	Tree survey and tree risk assessment	10	18-Aug-21 A	19-Oct-21	60
S1-SF1760	Existing utilities and services detection	10	08-Oct-21	20-Oct-21	216
S1-SF1765	Erection of hoarding along the site boundary (515m)	40	08-Oct-21	24-Nov-21	246
S1-SF1768	Prepare & submit the tress preservation and removal proposal (TPRP)	75	20-Oct-21	18-Jan-22	60
S1-SF1770	Diversion of existing utilities and services (59m LV Cables to be abandon)	60	21-Oct-21	31-Dec-21	216
Box Culvert BC3 and Outfall 10		96	08-Sep-21 A	26-Jan-22	-110
Box Culvert BC3 (CH168 to CH216)		55	28-Sep-21 A	30-Nov-21	-64
S1-BC0850	Construction of the box culvert side wall and top slab Bay 16 (CH180 to CH192)	20	28-Sep-21 A	20-Oct-21	-170
S1-BC0860	Construction of the box culvert side wall and top slab Bay 15 (CH168 to CH180)	20	21-Oct-21	12-Nov-21	-170
S1-BC0870	Construction of the box culvert base slab Bay 18 (CH214 to CH216)	15	29-Sep-21 A	12-Oct-21	-64
S1-BC0880	Construction of the box culvert side wall and top slab Bay 18 (CH214 to CH216)	20	13-Oct-21	05-Nov-21	-64



Actual Work
Remaining Work
Critical Remaining Work
Milestone

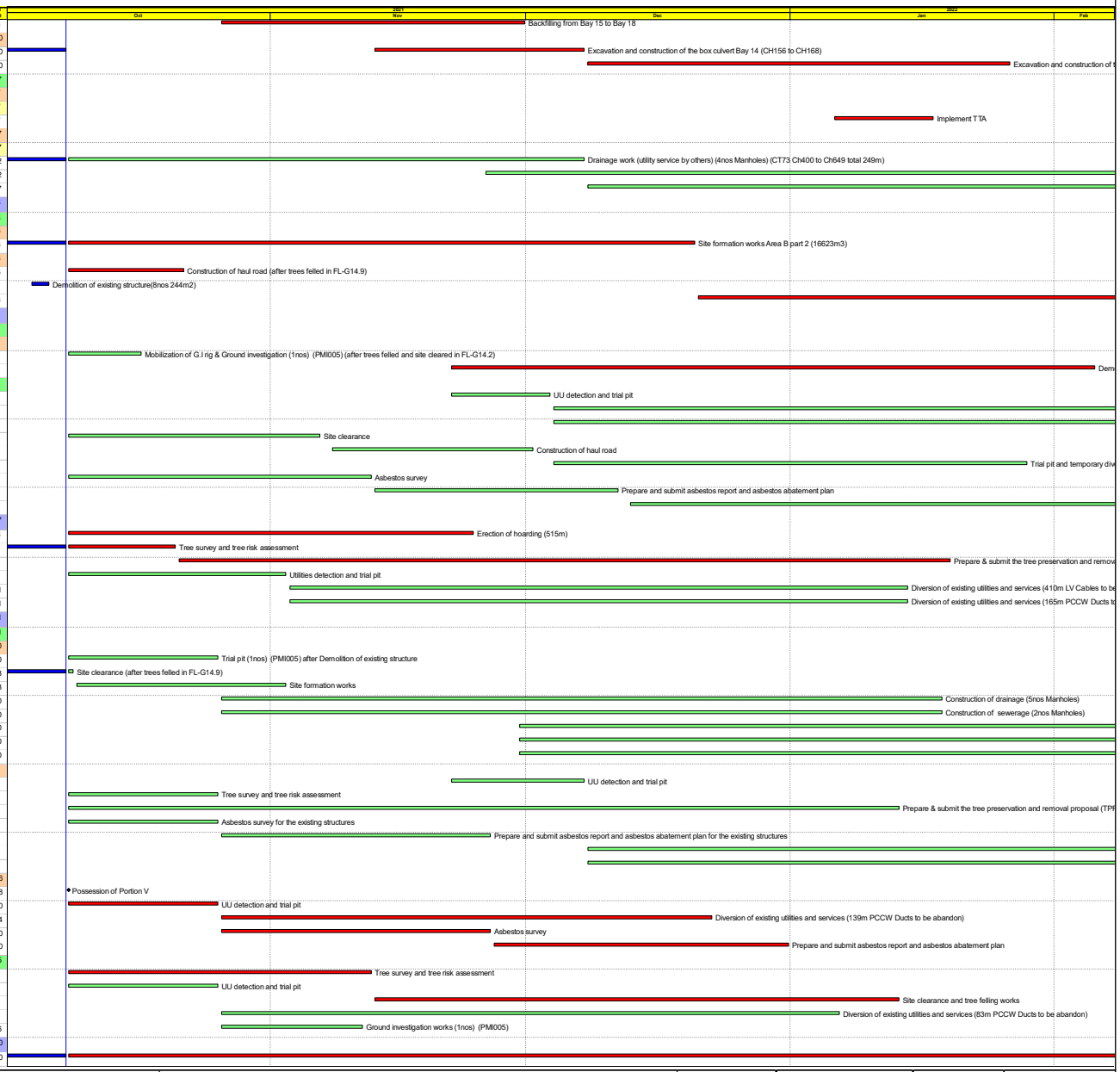
中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

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

Date	Revision	Checked	Approved
15-Oct-21	1	LDS	CLX

Contract No. ND/2019/07 Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
S1-BC0890	Backfilling from Bay 15 to Bay 18	31	26-Oct-21	30-Nov-21	-64
Box Culvert BC3 (CH0 to CH168)		45	08-Sep-21 A	26-Jan-22	-170
S1-BC0900	Excavation and construction of the box culvert Bay 14 (CH156 to CH168)	30	08-Sep-21 A	07-Dec-21	-170
S1-BC0910	Excavation and construction of the box culvert Bay 13 and inspection chamber (CH144 to CH156)	40	08-Dec-21	26-Jan-22	-170
Drainage,Sewerage, Waterworks and Road Works		150	27-Sep-21 A	23-Mar-22	257
Along Ma Sik Road		10	06-Jan-22	17-Jan-22	-67
TTA -Closure of Ma Sik Road Eastbound Slow Lane between Wo Tai Street and Site Boundary		10	06-Jan-22	17-Jan-22	-67
S1-CS1240	Implement TTA	10	06-Jan-22	17-Jan-22	-67
Along Proposed Cycletrack and Footpath		150	27-Sep-21 A	23-Mar-22	257
Works in Portion I		150	27-Sep-21 A	23-Mar-22	257
S1-CS1470	Drainage work (utility service by others) (4nos Manholes) (CT73 Ch400 to Ch649 total 249m)	85	27-Sep-21 A	07-Dec-21	182
S1-CS1475	U-Channel along the Cycletrack (CT73 Ch100 to Ch400 total 300m)	85	26-Nov-21	11-Mar-22	182
S1-CS1477	Drainage work (utility service by others) (3nos Manholes) (CT73 Ch100 to Ch400 total 300m)	85	08-Dec-21	23-Mar-22	257
Section 2- Site Formation and Infrastructure Works in Area B		185	07-Aug-21 A	30-Mar-22	-66
Site Formation and Infrastructure Works in Area B1 & B2		185	07-Aug-21 A	30-Mar-22	-66
Site Formation Works before trees felled in FL-G14.9		80	07-Aug-21 A	20-Dec-21	-66
S2-SF2370	Site formation works Area B part 2 (16623m3)	80	07-Aug-21 A	20-Dec-21	-66
Site Formation Works after trees felled in FL-G14.9		142	04-Oct-21 A	30-Mar-22	-66
S2-SF2302	Construction of haul road (after trees felled in FL-G14.9)	11	08-Oct-21	21-Oct-21	-15
S2-SF2360	Demolition of existing structure(8nos 244m2)	20	04-Oct-21 A	06-Oct-21 A	
S2-SF2375	Site formation works Area B part 3 (16624m3)	80	21-Dec-21	30-Mar-22	-66
Section 3- Site Formation and Infrastructure Works in Area C		135	08-Oct-21	22-Mar-22	30
Site Formation and Infrastructure Works in Portion I Area C (13990m2)		97	08-Oct-21	05-Feb-22	-7
Site Formation Works after trees felled in FL-G14.7 partial and FL-G14.2		97	08-Oct-21	05-Feb-22	-7
S3-SF1087	Mobilization of G.I rig & Ground investigation (1nos) (PMI005) (after trees felled and site cleared in FL-G14.2)	7	08-Oct-21	16-Oct-21	13
S3-SF1090	Demolition of existing structure	60	22-Nov-21	05-Feb-22	-7
Site Formation and Infrastructure Works in Portion IV Area C (10730m2)		135	08-Oct-21	22-Mar-22	30
S3-SF1170	UU detection and trial pit	11	22-Nov-21	03-Dec-21	37
S3-SF1173	Diversion of existing utilities and services (27m LV Cables to be abandon)	60	04-Dec-21	18-Feb-22	37
S3-SF1176	Diversion of existing utilities and services (142m PCCW Ducts to be abandon)	60	04-Dec-21	18-Feb-22	37
S3-SF1195	Site clearance	25	08-Oct-21	06-Nov-21	39
S3-SF1200	Construction of haul road	21	08-Nov-21	01-Dec-21	39
S3-SF1210	Trial pit and temporary diversion of utilities	45	04-Dec-21	28-Jan-22	52
S3-SF1220	Asbestos survey	30	08-Oct-21	12-Nov-21	30
S3-SF1230	Prepare and submit asbestos report and asbestos abatement plan	25	13-Nov-21	11-Dec-21	30
S3-SF1240	Demolition of existing structure(21nos 1465m2)	80	13-Dec-21	22-Mar-22	30
Section 4- Site Formation and Infrastructure Works in Area D		109	18-Aug-21 A	19-Jan-22	157
S4-SF1000	Erection of hoarding (515m)	40	08-Oct-21	24-Nov-21	-16
S4-SF1010	Tree survey and tree risk assessment	20	18-Aug-21 A	20-Oct-21	-61
S4-SF1015	Prepare & submit the tree preservation and removal proposal (TPRP)	75	21-Oct-21	19-Jan-22	-61
S4-SF1020	Utilities detection and trial pit	21	08-Oct-21	02-Nov-21	6
S4-SF1025	Diversion of existing utilities and services (410m LV Cables to be abandon)	60	03-Nov-21	14-Jan-22	161
S4-SF1030	Diversion of existing utilities and services (165m PCCW Ducts to be abandon)	60	03-Nov-21	14-Jan-22	161
Section 5- Site Formation and Infrastructure Works in Area E and Remainder of the Works		141	05-Aug-21 A	25-Feb-22	161
Road L1		141	05-Aug-21 A	25-Feb-22	161
Road L1 in Portion I (P700 CH 175 to CH245)		114	05-Aug-21 A	25-Feb-22	130
S5-RD1036	Trial pit (1nos) (PMI005) after Demolition of existing structure	14	08-Oct-21	25-Oct-21	130
S5-RD1037	Site clearance (after trees felled in FL-G14.9)	50	05-Aug-21 A	08-Oct-21	133
S5-RD1038	Site formation works	20	09-Oct-21	02-Nov-21	133
S5-RD1040	Construction of drainage (5nos Manholes)	70	26-Oct-21	18-Jan-22	130
S5-RD1042	Construction of sewerage (2nos Manholes)	70	26-Oct-21	18-Jan-22	130
S5-RD1045	Construction of Irrigation system (168m)	70	30-Nov-21	25-Feb-22	130
S5-RD1060	Fresh water main works (168m)	70	30-Nov-21	25-Feb-22	130
S5-RD1070	Flushing water main works (168m)	70	30-Nov-21	25-Feb-22	130
Road L1 in Portion IV (P600 CH 194 to CH393, P700 CH100 to CH175)		111	08-Oct-21	22-Feb-22	82
S5-RD1140	UU detection and trial pit	14	22-Nov-21	07-Dec-21	48
S5-RD1141	Tree survey and tree risk assessment	14	08-Oct-21	25-Oct-21	19
S5-RD1142	Prepare & submit the tree preservation and removal proposal (TPRP)	80	08-Oct-21	13-Jan-22	19
S5-RD1143	Asbestos survey for the existing structures	14	08-Oct-21	25-Oct-21	57
S5-RD1144	Prepare and submit asbestos report and asbestos abatement plan for the existing structures	28	26-Oct-21	26-Nov-21	57
S5-RD1148	Diversion of existing utilities and services (112m LV Cables to be abandon)	60	08-Dec-21	22-Feb-22	82
S5-RD1149	Diversion of existing utilities and services (17m PCCW Ducts to be abandon)	60	08-Dec-21	22-Feb-22	82
Road L1 in Portion V (P600 CH 100 to CH194)		85	08-Oct-21	31-Dec-21	-146
S5-RD1265	Possession of Portion V	0	08-Oct-21		-198
S5-RD1270	UU detection and trial pit	14	08-Oct-21	25-Oct-21	-160
S5-RD1278	Diversion of existing utilities and services (139m PCCW Ducts to be abandon)	50	26-Oct-21	22-Dec-21	-114
S5-RD1280	Asbestos survey	28	26-Oct-21	26-Nov-21	-160
S5-RD1290	Prepare and submit asbestos report and asbestos abatement plan	28	27-Nov-21	31-Dec-21	-160
Road L2		80	08-Oct-21	13-Jan-22	135
S5-RD1450	Tree survey and tree risk assessment	30	08-Oct-21	12-Nov-21	0
S5-RD1460	UU detection and trial pit	14	08-Oct-21	25-Oct-21	6
S5-RD1480	Site clearance and tree felling works	50	13-Nov-21	13-Jan-22	0
S5-RD1485	Diversion of existing utilities and services (83m PCCW Ducts to be abandon)	60	26-Oct-21	06-Jan-22	6
S5-RD1487	Ground investigation works (1nos) (PMI005)	15	26-Oct-21	11-Nov-21	186
Section 6-Completion of Preservation And Protection Of Existing Trees		1146	31-Aug-20 A	30-Jul-24	-170
S6-CS1000	Preservation and protection of trees	1146	31-Aug-20 A	30-Jul-24	-170

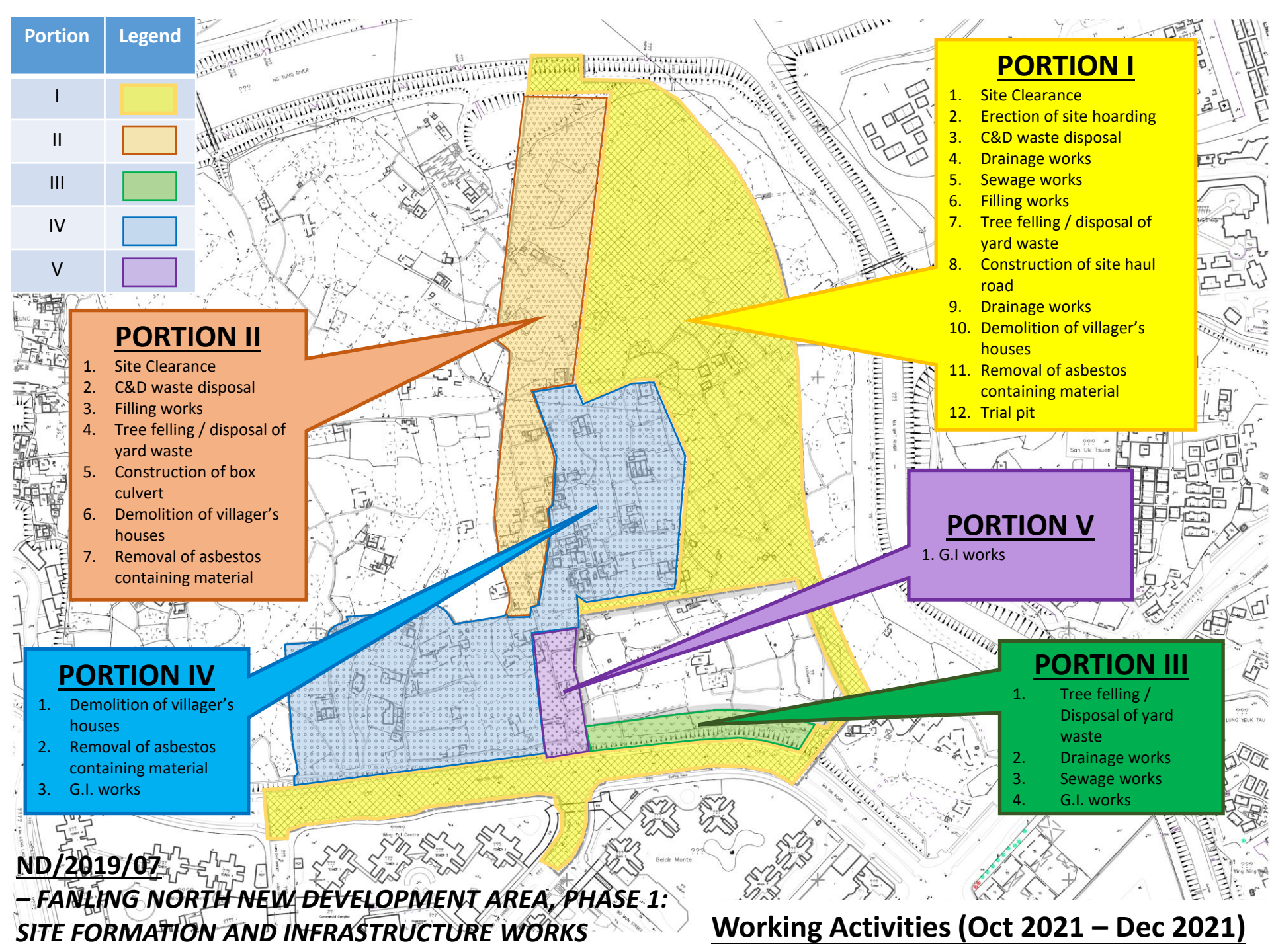


Actual Work
Remaining Work
Critical Remaining Work
Milestone

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

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

Date	Revision	Checked	Approved
15-Oct-21	1	LDS	CLX



ND/2019/07

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

Working Activities (Oct 2021 – Dec 2021)

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-DMS5	153	
KTN-DMS4	192	

Table B-3 Action and Limit Levels for Construction Noise

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

Noted:
If works are to be carried during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.
(*) reduce to 70 dB(A) for schools and 65 dB(A) during school examination periods.

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

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

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

Remarks:
AL of DO is 5 percentile of baseline data or level at control station at same tide of the same day (whichever lower) and LL of DO is 4.0 mg/L or level at control station at same tide of the same day (whichever lower);
+ 1 percentile of baseline data were adopted for LL for DO as those levels were greater than 4 mg/L;
* AL is 120% of control station's level at the same tide of the same day when depth average greater than 95 percentile of baseline data;
^ LL is 130% of control station's level at the same tide of the same day when depth average greater than 99 percentile of baseline data.
~ LL is 130% of control station's level at the same tide of the same day when depth average greater than 99 percentile of baseline data or 0.021mg/L.
& LL is 130% of control station's level at the same tide of the same day when depth average greater than 99 percentile of baseline data or 20mg/L.

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

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

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

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

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

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

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

Remarks:
[1] "Depth-averaged" is calculated by taking the arithmetic mean of reading of all three depths.
[2] For DO, non-compliance occurs when monitoring results is lower than the limits.
[3] For turbidity, SS and arsenic, non-compliance occurs when monitoring results is larger than the limits.
[4] There is no local criterion for heavy metal. Limit Level of heavy metal is adopted from Category III Surface Water Quality Standards (GB3838-2002) (地表水環境質量標準), which applicable for Shenzhen River on mainland side.

Table B-5 Action and Limit Levels for Ambient Arsenic Monitoring

Parameter	Action Level	Limit Level
Ambient Arsenic Concentration	**9.36ng/m^3** - 80% of 11.7ng/m3 – the highest ambient arsenic concentration predicted during the construction phase with mitigation measures implemented)	**11.7ng/m^3** - the highest ambient arsenic concentration predicted during the construction phase with mitigation measures implemented

Table B-6 Action level in the event of LFG being detected

Parameter	Monitoring Results	Actions
O_2	<19% v/v	Increase underground ventilation to restore O_2 to >19% v/v
	<18% v/v	Stop works, evacuate all personnel, prohibit entry, and increase ventilation to restore O_2 level to >19%
CH_4	>10% LEL	Prohibit hot works, increase ventilation to restore CH4 to <10% LEL
	>20% LEL	Stop works, evacuate all personnel, increase ventilation further to restore CH_4 to <10% LEL
CO_2	>0.5% v/v	Increase ventilation to restore C O_2 to <0.5% v/v
	>1.5% v/v	Stop works, evacuate all personnel, increase ventilation further to restore CO_2 to <0.5%

Table B-7 Vibration Limit for Construction Vibration Monitoring

Type of Building	Guide Values of Maximum PPV* (mm/Sec)	
	Transient Vibration	Continuous Vibration
Vibration-sensitive / dilapidated buildings#	7.5	3.0
Declared monuments/ Historical structures	3.0	

Table B-8.1 Action and Limit Levels and Responses to Evidence of Disturbance to Waterbirds using in Ng Tung, Sheung Yue and Shek Sheung Rivers

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

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

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

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

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

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

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

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

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

APPENDIX C
COPIES OF CALIBRATION CERTIFCATES

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

TEST REPORT

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

Test Report No.:	35810
Date of Issue:	2021-09-06
Date Received:	2021-09-03
Date Tested:	2021-09-03
Date Completed:	2021-09-06
Next Due Date:	2021-11-05
Page:	1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for Calibration:

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X23807
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-01

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.110

****

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

Patrick Tse
PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-01	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23807	2203
Calibration Date:	3-Sep-21	3-Sep-21
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
	Dust Meter	**HVS**
Calibration Point	Mass Concentration (μg/m³) **X-axis**	Mass concentration (μg/m³) **Y-axis**
1	36	44
2	50	59
3	63	67
4	72	78
5	87	93
Average	**61.4**	**68.2**

By Linear Regression of Y on X

Slope , mw = **0.9569** **Intercept, bw =** **9.3858**

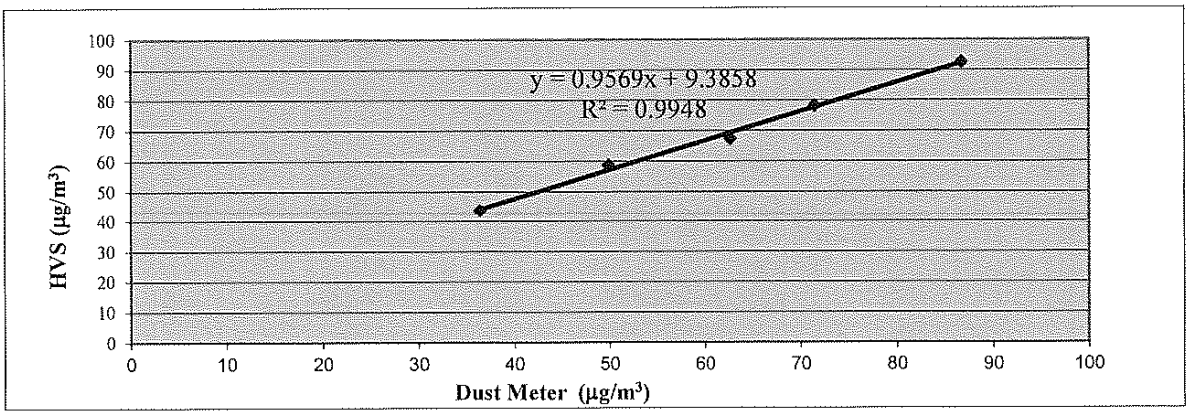
Correlation coefficient* = **0.9974**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (μg/m³)	68.2
Particaulate Concentration by Dust Meter (μg/m³)	61.4
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μg/m³)] **1.110**



QC Reviewer: LEE MAN HEZ Signature: [signature] Date: 3/9/2021

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

TEST REPORT

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

Test Report No.:	35810A
Date of Issue:	2021-09-06
Date Received:	2021-09-03
Date Tested:	2021-09-03
Date Completed:	2021-09-06
Next Due Date:	2021-11-05
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)	1.095

****

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

PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-02	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23808	2203
Calibration Date:	3-Sep-21	3-Sep-21
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (μg/m^3) **X-axis**	Mass concentration (μg/m^3) **Y-axis**
1	38	44
2	52	59
3	61	67
4	74	78
5	86	93
Average	**62.2**	**68.2**

By Linear Regression of Y on X

Slope , mw = **0.9821** **Intercept, bw =** **7.0515**

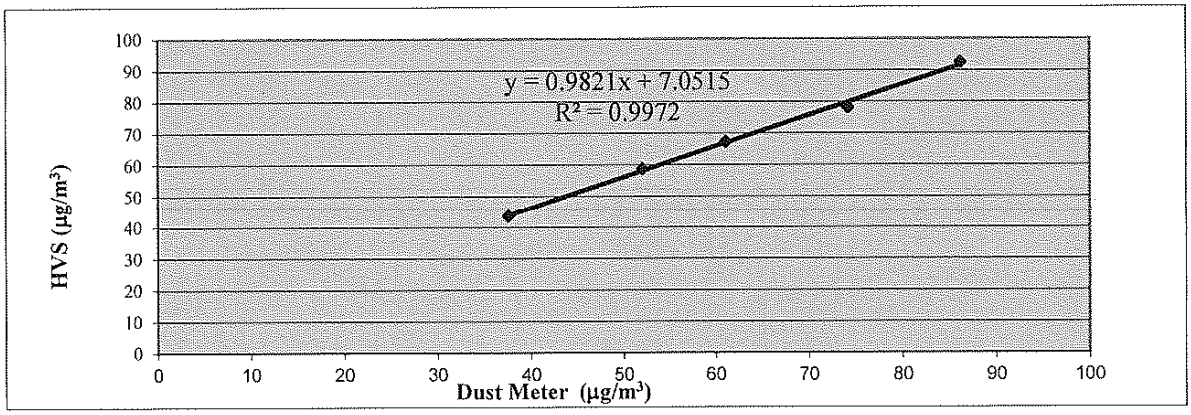
Correlation coefficient* = **0.9986**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (μg/m^3)	68.2
Particaulate Concentration by Dust Meter (μg/m^3)	62.2
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (μg/m^3)] **1.095**



QC Reviewer: LEE MAN HEZ Signature: [signature] Date: 3/9/2021

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

TEST REPORT

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

Test Report No.:	35810B
Date of Issue:	2021-09-06
Date Received:	2021-09-03
Date Tested:	2021-09-03
Date Completed:	2021-09-06
Next Due Date:	2021-11-05
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)	1.081

****

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

PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-03	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23809	2203
Calibration Date:	3-Sep-21	3-Sep-21
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	Dust Meter	HVS
	Mass Concentration ($\mu g/m^3$) **X-axis**	Mass concentration ($\mu g/m^3$) **Y-axis**
1	39	44
2	51	59
3	63	67
4	73	78
5	89	93
Average	**63.1**	**68.2**

By Linear Regression of Y on X

Slope , mw = 0.9486 **Intercept, bw =** 8.3246

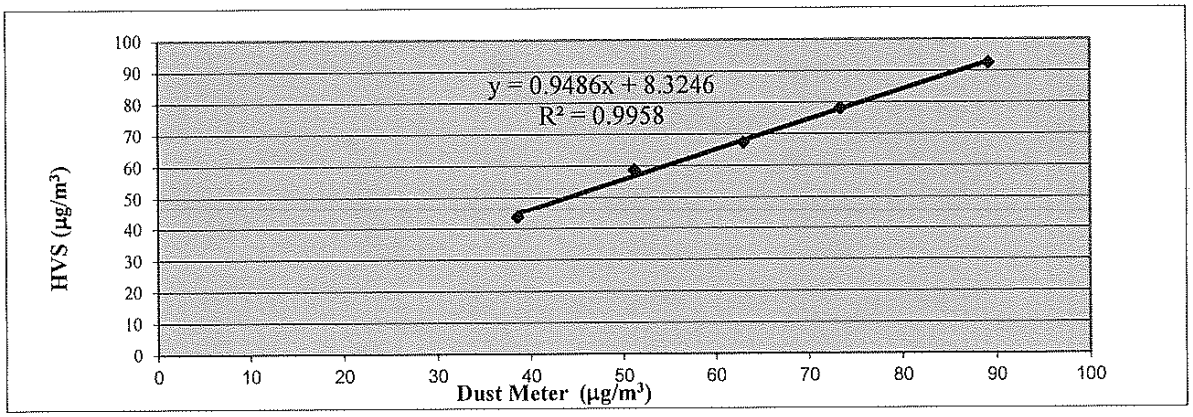
Correlation coefficient* = 0.9979

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler ($\mu g/m^3$)	68.2
Particaulate Concentration by Dust Meter ($\mu g/m^3$)	63.1
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, ($\mu g/m^3$)] **1.081**



QC Reviewer: LEE MAN HEE Signature: Lee Date: 31/9/2021

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18 On Lai Street, Shatin
New Territories, Hong Kong
Tel: 2898 7388 Fax: 2898 7076
Website : www.wellab.com.hk

TEST REPORT

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

Test Report No.:	35810C
Date of Issue:	2021-09-06
Date Received:	2021-09-03
Date Tested:	2021-09-03
Date Completed:	2021-09-06
Next Due Date:	2021-11-05
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)	1.154

****

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

PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-04	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23810	2203
Calibration Date:	3-Sep-21	3-Sep-21
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
	Dust Meter	**HVS**
Calibration Point	Mass Concentration (µg/m^3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	35	44
2	49	59
3	60	67
4	67	78
5	85	93
Average	**59.1**	**68.2**

By Linear Regression of Y on X

Slope , mw = 0.9900 **Intercept, bw =** 9.6695

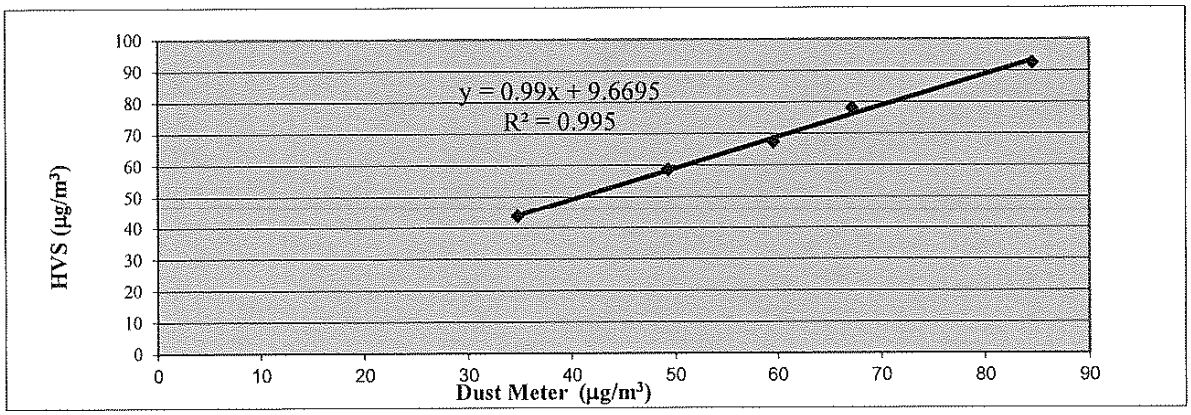
Correlation coefficient* = 0.9975

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	68.2
Particaulate Concentration by Dust Meter (µg/m^3)	59.1
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m^3)] **1.154**



QC Reviewer: LEE MUN HEE Signature: Lee Date: 3/9/2021

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Tel: 2898 7388 Fax: 2898 7076
Website : www.wellab.com.hk

TEST REPORT

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

Test Report No.:	35659
Date of Issue:	2021-08-30
Date Received:	2021-08-27
Date Tested:	2021-08-27
Date Completed:	2021-08-30
Next Due Date:	2021-10-29
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)	1.097

****

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

PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-05	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24476	2203
Calibration Date:	27-Aug-21	27-Aug-21
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (µg/m^3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	38	45
2	56	62
3	65	71
4	80	85
5	84	91
Average	**64.5**	**70.8**

By Linear Regression of Y on X

Slope , mw = 0.9912 **Intercept, bw =** 6.8504

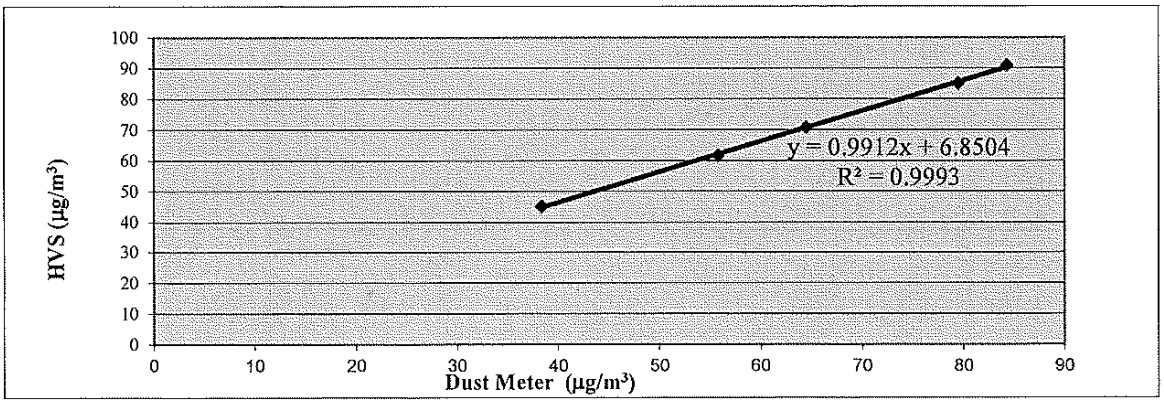
Correlation coefficient* = 0.9996

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	70.8
Particaulate Concentration by Dust Meter (µg/m^3)	64.5
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m^3)] **1.097**



QC Reviewer: [illegible] Signature: [illegible] Date: 28/8/2021

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TEST REPORT

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

Test Report No.:	35659A
Date of Issue:	2021-08-30
Date Received:	2021-08-27
Date Tested:	2021-08-27
Date Completed:	2021-08-30
Next Due Date:	2021-10-29
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)	1.076

****

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PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-06	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24477	2203
Calibration Date:	27-Aug-21	27-Aug-21
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration ($\mu g/m^3$) **X-axis**	Mass concentration ($\mu g/m^3$) **Y-axis**
1	37	45
2	56	62
3	68	71
4	81	85
5	87	91
Average	**65.8**	**70.8**

By Linear Regression of Y on X

Slope , mw = **0.9056** **Intercept, bw =** **11.2308**

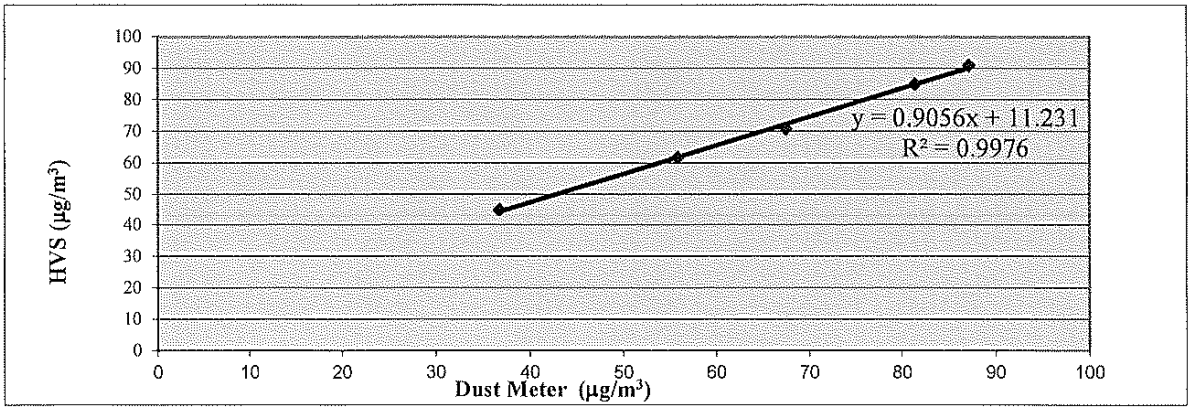
Correlation coefficient* = **0.9988**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler ($\mu g/m^3$)	70.8
Particaulate Concentration by Dust Meter ($\mu g/m^3$)	65.8
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, ($\mu g/m^3$)] **1.076**



QC Reviewer: LEE MAN HEE Signature: Date: 28/8/2021

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TEST REPORT

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

Test Report No.:	35810D
Date of Issue:	2021-09-06
Date Received:	2021-09-03
Date Tested:	2021-09-03
Date Completed:	2021-09-06
Next Due Date:	2021-11-05
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)	1.114

****

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PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-07	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24475	2203
Calibration Date:	3-Sep-21	3-Sep-21
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration ($\mu g/m^3$) **X-axis**	Mass concentration ($\mu g/m^3$) **Y-axis**
1	36	44
2	53	59
3	62	67
4	71	78
5	84	93
Average	**61.2**	**68.2**

By Linear Regression of Y on X

Slope , mw = 1.0103 **Intercept, bw =** 6.3273

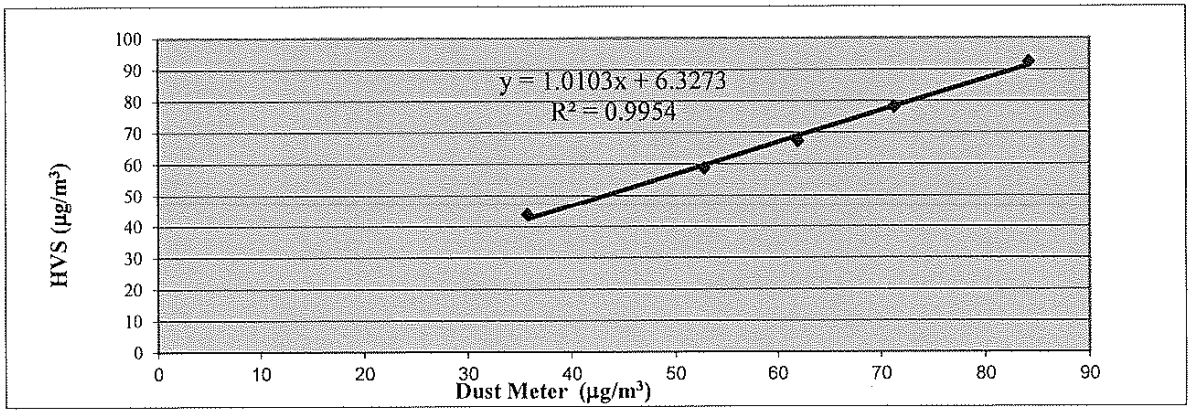
Correlation coefficient* = 0.9977

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler ($\mu g/m^3$)	68.2
Particaulate Concentration by Dust Meter ($\mu g/m^3$)	61.2
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, ($\mu g/m^3$)] 1.114



QC Reviewer: LEE MAN HEE Signature: Date: 3/9/2021

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TEST REPORT

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

Test Report No.:	35659B
Date of Issue:	2021-08-30
Date Received:	2021-08-27
Date Tested:	2021-08-27
Date Completed:	2021-08-30
Next Due Date:	2021-10-29
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)	1.068

****

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

PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-08	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24479	2203
Calibration Date:	27-Aug-21	27-Aug-21
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration ($\mu g/m^3$) **X-axis**	Mass concentration ($\mu g/m^3$) **Y-axis**
1	42	45
2	59	62
3	67	71
4	78	85
5	86	91
Average	**66.3**	**70.8**

By Linear Regression of Y on X

Slope , mw = 1.0596 **Intercept, bw =** 0.5693

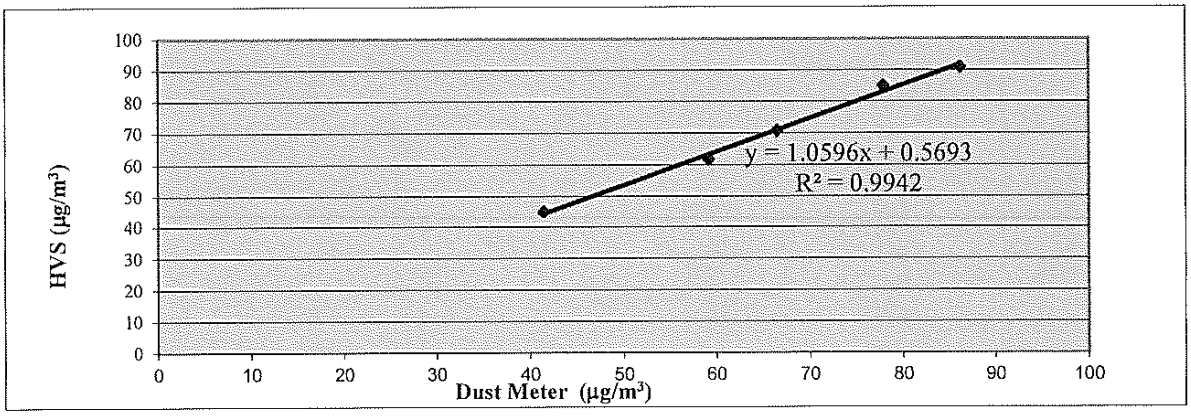
Correlation coefficient* = 0.9971

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler ($\mu g/m^3$)	70.8
Particaulate Concentration by Dust Meter ($\mu g/m^3$)	66.3
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, ($\mu g/m^3$)] **1.068**



QC Reviewer: Lee Min Hee Signature: hei Date: 28/8/2021

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TEST REPORT

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

Test Report No.:	35659C
Date of Issue:	2021-08-30
Date Received:	2021-08-27
Date Tested:	2021-08-27
Date Completed:	2021-08-30
Next Due Date:	2021-10-29
Page:	1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for Calibration:

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

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.058

****

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



PATRICK TSE
Laboratory Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-09	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23811	2203
Calibration Date:	27-Aug-21	27-Aug-21
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
	Dust Meter	**HVS**
Calibration Point	Mass Concentration (µg/m^3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	44	45
2	57	62
3	67	71
4	79	85
5	87	91
Average	**66.9**	**70.8**

By Linear Regression of Y on X

Slope , mw = 1.0548 **Intercept, bw =** 0.2169

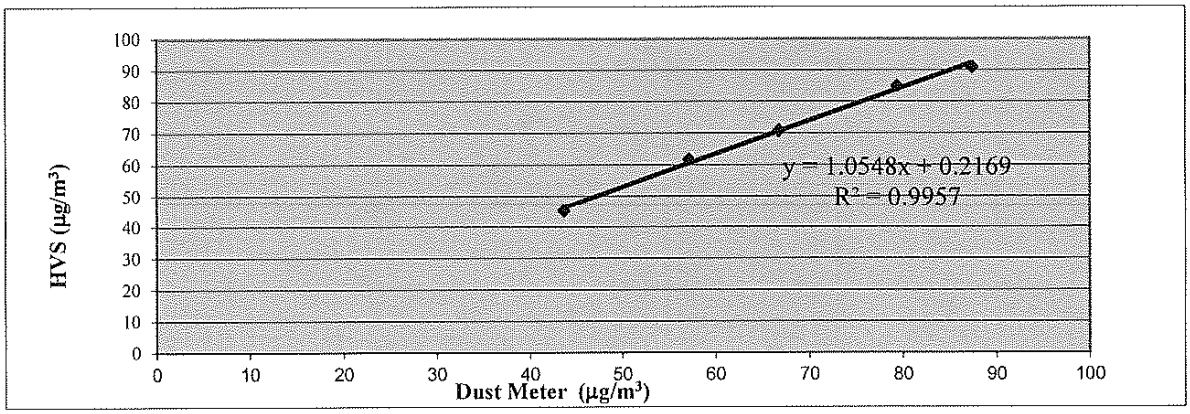
Correlation coefficient* = 0.9978

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	70.8
Particaulate Concentration by Dust Meter (µg/m^3)	66.9
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m^3)] 1.058



QC Reviewer: LIU MAN HEI Signature: Date: 27-8-2021

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TEST REPORT

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

Test Report No.:	35659D
Date of Issue:	2021-08-30
Date Received:	2021-08-27
Date Tested:	2021-08-27
Date Completed:	2021-08-30
Next Due Date:	2021-10-29
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)	1.093

****

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

PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-10	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24478	2203
Calibration Date:	27-Aug-21	27-Aug-21
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (µg/m^3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	37	45
2	54	62
3	64	71
4	79	85
5	89	91
Average	**64.7**	**70.8**

By Linear Regression of Y on X

Slope , mw = **0.8871** **Intercept, bw =** **13.3489**

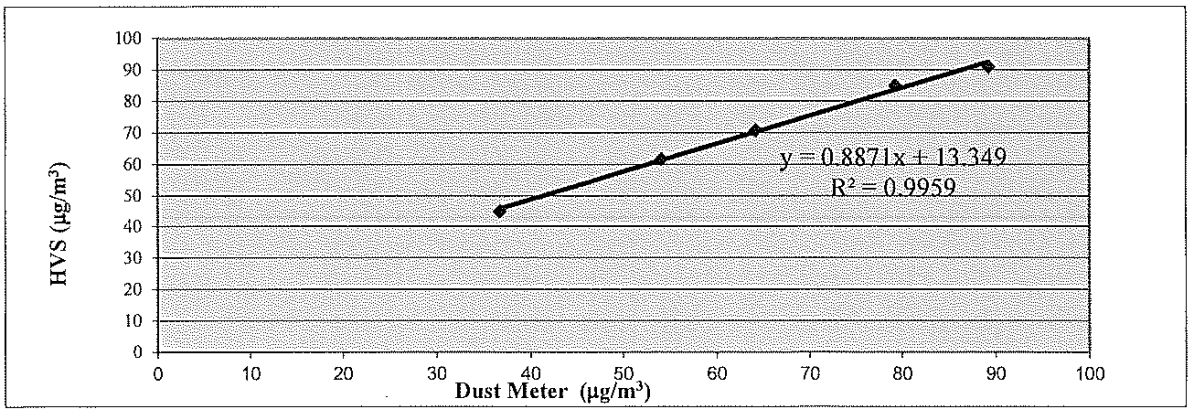
Correlation coefficient* = **0.9979**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	70.8
Particaulate Concentration by Dust Meter (µg/m^3)	64.7
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m^3)] **1.093**



QC Reviewer: Lee Kim Hee Signature: hej Date: 28/8/2021

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

File No. WMA20002/20/0008

Station FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark
Operator: HL

Date: 17-Sep-21
Next Due Date: 16-Nov-21

Equipment No.: WA-12-20
Serial No. 3223

Ambient Condition			
Temperature, Ta (K)	302	Pressure, Pa (mmHg)	759.7

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

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	13.8	3.69	65.11	10.0	3.14
2	10.6	3.23	57.09	7.6	2.74
3	7.4	2.70	47.74	5.7	2.37
4	5.5	2.33	41.19	4.3	2.06
5	3.6	1.88	33.37	2.8	1.66

By Linear Regression of Y on X

Slope , mw = 0.0457 **Intercept, bw =** 0.1573

Correlation coefficient* = 0.9990

*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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.57**

Remarks:

Conducted by: LEE MAN HIN Signature: Date: 17/9/2021

Checked by: Signature: Date: 17/9/2021

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

Station	FLN-DMS3 - House near Tong Hang	File No.	WMA20002/17/0008
Date:	28-Sep-21	Operator:	HL
Equipment No.:	WA-12-17	Next Due Date:	27-Nov-21
		Serial No.	3218

Ambient Condition			
Temperature, Ta (K)	303.1	Pressure, Pa (mmHg)	761.1

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

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	[ΔW x (Pa/760) x (298/Ta)]$^{1/2}$ **Y-axis**
1	15.1	3.86	68.03	9.9	3.12
2	11.8	3.41	60.17	7.7	2.75
3	9.9	3.12	55.13	6.5	2.53
4	6.3	2.49	44.03	4.5	2.10
5	3.4	1.83	32.41	2.2	1.47

By Linear Regression of Y on X

Slope , mw = **0.0453** **Intercept, bw =** **0.0405**

Correlation coefficient* = **0.9980**

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

Therefore, Set Point; W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = **4.02**

Remarks:

Conducted by: LEE MAN HEI Signature: Date: 28/9/2021

Checked by: Ho Ka Chu Signature: Date: 28/9/2021

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

File No. WMA20002/03/0008

Station KTN-DMS4A - Temporary Structure at Pak Shek Au
Operator: KC
Date: 2-Oct-21
Next Due Date: 1-Dec-21
Equipment No.: WA-11-03
Serial No. 3225

Ambient Condition			
Temperature, Ta (K)	301.5	Pressure, Pa (mmHg)	761.9

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

Calibration of RSP Sampler

Calibration Point	ORIFICE					HVS	
	ΔH(orifice), in. of water	Del Hc (1)	Qstd (2) (CFM)	Qa (3) (CFM) **X -axis**	Qa (3) (m^3/min) **X -axis**	ΔW (HVS), in. of water	$[\Delta W \times (Ta + 30) / Pa]^{1/2}$ **Y-axis**
1	8.7	8.62	51.86	52.34	1.48	9.8	2.06
2	7.2	7.13	47.20	47.64	1.35	8.3	1.90
3	5.7	5.65	42.03	42.41	1.20	7.2	1.77
4	3.4	3.37	32.51	32.81	0.93	5.1	1.49
5	2.6	2.58	28.46	28.73	0.81	4.4	1.38

By Linear Regression of Y on X

Slope , mw = **0.0286** **Intercept, bw =** **0.5572**

Correlation coefficient* = **0.9992**

(1) **DEL Hc = ΔH x (Pa/760*298/Ta)**

(2) **Qstd = {[ΔH x (Pa/760) x (298/Ta)]$^{1/2}$ - bc}/mc (m3/min)**

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

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

Set Point Flow Rate., SFR

SFR = 1.13 x (760/Pa) x (Ta/298) = **40.30**

Sampler Well - Type Manometer Set Point, SSP

SSP = [(mw x SFR + bw)^2 x Pa] / (Ta + 30) = **6.70**

Remarks:

Conducted by: Hoka [signature] Signature: [signature] Date: 2/10/2021

Checked by: LEE MAN HEL Signature: [signature] Date: 2-10-2021

TISCH Environmental

RECALIBRATION DUE DATE:
January 28, 2022

Certificate of Calibration

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

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

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
1.0139	0.7160	1.4271	0.9957	0.7032	0.8776
1.0098	1.0118	2.0182	0.9916	0.9936	1.2411
1.0076	1.1334	2.2564	0.9895	1.1131	1.3875
1.0066	1.1842	2.3666	0.9885	1.1629	1.4553
1.0011	1.4261	2.8542	0.9831	1.4004	1.7551
QSTD	**m=**	**2.00902**	**QA**	**m=**	**1.25802**
	b=	**-0.01398**		**b=**	**-0.00860**
	r=	**0.99997**		**r=**	**0.99997**

Calculations

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

For subsequent flow rate calculations:

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

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

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

RECALIBRATION

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

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

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

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TEST REPORT

APPLICANT: **Wellab Limited**
(EM&A Department)
Room 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
PATRICK TSE
General Manager

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TEST REPORT

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

Test Report No.:	34872D
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.	: 580007
Equipment No.	: WN-01-05

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

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

PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab Limited**
(EM&A Department)
Room 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

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PATRICK TSE
General Manager

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TEST REPORT

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

Test Report No.:	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

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General Manager

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TEST REPORT

APPLICANT: **Wellab Limited**
(EM&A Department)
Room 1701, Technology Park,
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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

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General Manager

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TEST REPORT

APPLICANT: **Wellab Limited**
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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

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Patrick Tse
PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab Limited**
(EM&A Department)
Room 1701, Technology Park,
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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

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TEST REPORT

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Room 1701, Technology Park,
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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

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TEST REPORT

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

Test Report No.:	35612
Date of Issue:	2021-08-23
Date Received:	2021-08-20
Date Tested:	2021-08-20 to 2021-08-23
Date Completed:	2021-08-23

ATTN: **Miss Mei Ling Tang**

Certificate of Calibration

Item for calibration:

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

Test conditions:

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

Test Specifications:

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

Methodology:

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

****

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General Manager

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TEST REPORT

Test Report No.:	35612
Date of Issue:	2021-08-23
Date Received:	2021-08-20
Date Tested:	2021-08-20 to 2021-08-23
Date Completed:	2021-08-23
Page:	2 of 2

Certificate of Calibration

Results:

Conductivity performance checking

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

Temperature performance checking

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

pH performance checking

	Instrument Readings (pH unit)	Accetance Criteria	Comment
pH QC buffer 4.00	4.04	4.00 ± 0.10	Pass
pH QC buffer 6.86	6.88	6.86 ± 0.10	Pass
pH QC buffer 9.18	9.17	9.18 ± 0.10	Pass

D.O. performance checking

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

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Accetance Criteria	Comment
7.88	8.02	Difference between Titration value and instrument reading <0.2mg/L	Pass

Turbidity performance checking

Turbidity stock solution	Instrument Readings (NTU)	Accetance Criteria	Comment
10 NTU	10.48	9.0-11.0	Pass
50 NTU	51.22	45.0-55.0	Pass
100 NTU	103.4	90.0-110.0	Pass

Depth performance checking

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

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

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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

Eurotron Instruments (UK) Ltd
Unit 18, Austin Way
Daventry
NN11 8QY
Tel: 01327 871044
Company No. 5501255

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

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 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
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 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

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:	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

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 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

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

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 (October 2021)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1-Oct	2-Oct
						1hr TSP* X3, 24hr TSP* KTN-DMS4, FLN-DMS5
3-Oct	4-Oct	5-Oct	6-Oct	7-Oct	8-Oct	9-Oct
	1hr TSP* X3 FLN-DMS1, FLN-DMS3		**24hr TSP** FLN-DMS1, FLN-DMS3 **24hr RSP (Arsenic)** KTN-DMS4A	**1hr TSP* X3** FLN-DMS1, FLN-DMS3 **1hr TSP* X3, 24hr TSP*** KTN-DMS4, FLN-DMS5 **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 CP-FLN-NMS1, CP-FLN-NMS2		
10-Oct	11-Oct	12-Oct	13-Oct	**14-Oct**	15-Oct	16-Oct
	24hr RSP (Arsenic) KTN-DMS4A	**1hr TSP* X3, 24hr TSP*** KTN-DMS4, FLN-DMS5 **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 **24hr TSP** FLN-DMS1, FLN-DMS3	**No. 8 Northeast Gale or Storm Signal**		**1hr TSP* X3** FLN-DMS1, FLN-DMS3 **24hr RSP (Arsenic)** KTN-DMS4A **Noise** CP-FLN-NMS1, CP-FLN-NMS2	
17-Oct	18-Oct	19-Oct	20-Oct	21-Oct	22-Oct	23-Oct
	1hr TSP* X3, 24hr TSP* KTN-DMS4, FLN-DMS5 **24hr TSP** FLN-DMS1, FLN-DMS3	**1hr TSP* X3** FLN-DMS1, FLN-DMS3 **Noise** CP-FLN-NMS1, CP-FLN-NMS2		**24hr RSP (Arsenic)** KTN-DMS4A	**1hr TSP* X3, 24hr TSP*** KTN-DMS4, FLN-DMS5 **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 **24hr TSP** FLN-DMS1, FLN-DMS3	
24-Oct	25-Oct	26-Oct	27-Oct	28-Oct	29-Oct	30-Oct
	1hr TSP* X3 FLN-DMS1, FLN-DMS3		**24hr RSP (Arsenic)** KTN-DMS4A	**1hr TSP* X3, 24hr TSP*** KTN-DMS4, FLN-DMS5 **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6 **24hr TSP** FLN-DMS1, FLN-DMS3	**1hr TSP* X3** FLN-DMS1, FLN-DMS3 **Noise** CP-FLN-NMS1, CP-FLN-NMS2	
31-Oct						

Remarks:
*Monitoring session would be conducted by portable TSP monitor.
Due to the No.8 Northeast Gale or Storm Signal was in force on 13 Oct 2021, the proposed 1hr TSP* X3 monitoring at FLN-DMS1 and FLN-DMS3, and the noise monitoring at CP-FLN-NMS1 and CP-FLN-NMS2 were rearranged to 15 Oct 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 and 24hr TSP** FLN-DMS5 - Noble Hill	--
	ND/2019/04		--
EP-473/2013/A(7)	ND/2019/05	--	CP-FLN-NMS2 - Scattered Village Houses in Tong Hang
EP-473/2013/A(8)	ND/2019/04	--	CP-FLN-NMS1 - Belair Monte
	ND/2019/05	--	
EP-475/2013/A	ND/2019/06	--	

Remarks:

1. Since the distance between monitoring station CP-KTN-NMS2 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03
2. Since the distance between monitoring station CP-KTN-NMS3 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03
3. Since the distance between monitoring station CP-KTN-NMS1 and site boundary of ND/2019/02 under EP-469/2013 exceeds 300m. The monitoring station is not applicable to ND/2019/02
4. Since the distance between monitoring station FLN-DMS1 and site boundary of ND/2019/05 under EP-473/2013/A exceeds500m. The monitoring station is not applicable to ND/2019/05
5. Since the distance between monitoring station FLN-DMS3 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04
6. Since the distance between monitoring station FLN-DMS5 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05
7. Since the distance between monitoring station CP-FLN-NMS2 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04.
8. Since the distance between monitoring station CP-FLN-NMS1 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.

Contract No. NDO 04/2019

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

Impact Water Quality Monitoring Schedule (October 2021)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1-Oct	2-Oct
						Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream
3-Oct	4-Oct	5-Oct	6-Oct	7-Oct	8-Oct	9-Oct
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream	
10-Oct	11-Oct	12-Oct	13-Oct	**14-Oct**	15-Oct	16-Oct
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		**Due to adverse weather (No. 8 Northeast Gale or Storm Signal), the WQM was cancelled.** **Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream	
17-Oct	18-Oct	19-Oct	20-Oct	21-Oct	22-Oct	23-Oct
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream	
24-Oct	25-Oct	26-Oct	27-Oct	28-Oct	29-Oct	30-Oct
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream	
31-Oct						

Water Quality Monitoring Stations

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

River Indus and near Siu Hang San Tsuen Stream: NTR-CS1 - Upstream of river, NTR-IS1 - Downstream of river, SHST-IS2 - Water sensitive receiver at near Siu Hang San Tsuen Stream, MWR-IS3 - Water sensitive receiver at near Ma Wat River

Environmental Permit(s)	Contract No.	Water Quality Stations
EP-469/2013	ND/2019/02	**River Beas** SYR-CS1 - Upstream of river SYR-IS1 - Downstream of river
EP-473/2013/A	ND/2019/04	**River Indus and near Siu Hang San Tsuen Stream** NTR-CS1 - Upstream of river NTR-IS1 - Downstream of river SHST-IS2 - Water sensitive receiver at near Siu Hang San Tsuen Stream MWR-IS3 - Water sensitive receiver at near Ma Wat River

Contract No. NDO 04/2019

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

Impact Ecological Monitoring Schedule (October 2021)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1-Oct	2-Oct
3-Oct	4-Oct	5-Oct	6-Oct	7-Oct	8-Oct	9-Oct
			Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River **T1 T2** High tide: Start time: 09:00 Low tide: Start time: 15:00		Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley **T3 T5** High tide: Start time: 10:00 Low tide: Start time: 16:00	
10-Oct	11-Oct	12-Oct	13-Oct	**14-Oct**	15-Oct	16-Oct
	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River **T1 T2** High tide: Start time: 13:00 Low tide: Start time: 09:00	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution **T6**	**No. 8 Northeast Gale or Storm Signal**		Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley **T3 T5#** High tide: Start time: 07:00 Low tide: Start time: 15:00	
17-Oct	18-Oct	19-Oct	20-Oct	21-Oct	22-Oct	23-Oct
			Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution **T1, T3, T4, T5, T6**	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: 15:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley **T3 T5** High tide: Start time: 10:00 Low tide: Start time: 15:00	
24-Oct	25-Oct	26-Oct	27-Oct	28-Oct	29-Oct	30-Oct
		Monitoring of Measures to Minimise Impacts to Ma Tso Lung and Siu Hang San Tsuen Stream **MS_01 - MS_15**	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley **T3 T5#** High tide: Start time: 15:00 Low tide: Start time: 10:00	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: 11:00		
31-Oct						

#Night-time avifauna monitoring in Long Valley

Due to the No. 8 Northeast Gale or Storm Signal was in force on 12 (17:20) and 13 Oct 2021, the proposed Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley at T3 and T5# were rearranged to 15 Oct 2021 and the proposed Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution at T1 (Daytime & Night Time) and T6 (Night Time) were rearrange to 20 Oct 2021.

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 October 2021

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

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 (November 2021)

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

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

Remarks:

*Monitoring session would be conducted by portable TSP monitor.

Environmental Permit(s)	Contract No.	Air Quality Stations	Noise Stations
EP-466/2013 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 and 24hr TSP** FLN-DMS5 - Noble Hill	--
	ND/2019/04		--
EP-473/2013/A(7)	ND/2019/05	--	CP-FLN-NMS2 - Scattered Village Houses in Tong Hang
EP-473/2013/A(8)	ND/2019/04	--	CP-FLN-NMS1 - Belair Monte
	ND/2019/05	--	
EP-475/2013/A	ND/2019/06	--	

Remarks:

1. Since the distance between monitoring station CP-KTN-NMS2 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03
2. Since the distance between monitoring station CP-KTN-NMS3 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03
3. Since the distance between monitoring station CP-KTN-NMS1 and site boundary of ND/2019/02 under EP-469/2013 exceeds 300m. The monitoring station is not applicable to ND/2019/02
4. Since the distance between monitoring station FLN-DMS1 and site boundary of ND/2019/05 under EP-473/2013/A exceeds500m. The monitoring station is not applicable to ND/2019/05
5. Since the distance between monitoring station FLN-DMS3 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04
6. Since the distance between monitoring station FLN-DMS5 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05
7. Since the distance between monitoring station CP-FLN-NMS2 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04.
8. Since the distance between monitoring station CP-FLN-NMS1 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.

Contract No. NDO 04/2019

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

Tentative Impact Water Quality Monitoring Schedule (November 2021)

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

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

Water Quality Monitoring Stations

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

River Indus and near Siu Hang San Tsuen Stream: NTR-CS1 - Upstream of river, NTR-IS1 - Downstream of river, SHST-IS2 - Water sensitive receiver at near Siu Hang San Tsuen Stream, MWR-IS3 - Water sensitive receiver at near Ma Wat River

Environmental Permit(s)	Contract No.	Water Quality Stations
EP-469/2013	ND/2019/02	**River Beas** SYR-CS1 - Upstream of river SYR-IS1 - Downstream of river
EP-473/2013/A	ND/2019/04	**River Indus and near Siu Hang San Tsuen Stream** NTR-CS1 - Upstream of river NTR-IS1 - Downstream of river SHST-IS2 - Water sensitive receiver at near Siu Hang San Tsuen Stream MWR-IS3 - Water sensitive receiver at near Ma Wat River

Contract No. NDO 04/2019

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

Tentative Impact Ecological Monitoring Schedule (November 2021)

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

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 November 2021

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

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

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

Appendix E - 1-hour TSP Monitoring Results

Location FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
4-Oct-21	9:00	Sunny	62.0
4-Oct-21	10:00	Sunny	73.6
4-Oct-21	11:00	Sunny	68.0
7-Oct-21	13:15	Sunny	135.8
7-Oct-21	14:15	Sunny	110.0
7-Oct-21	15:15	Sunny	115.6
15-Oct-21	13:00	Cloudy	62.0
15-Oct-21	14:00	Cloudy	73.4
15-Oct-21	15:00	Cloudy	73.7
19-Oct-21	8:45	Sunny	52.2
19-Oct-21	9:45	Sunny	63.5
19-Oct-21	10:45	Sunny	62.5
25-Oct-21	9:00	Sunny	70.2
25-Oct-21	10:00	Sunny	77.7
25-Oct-21	11:00	Sunny	90.6
29-Oct-21	8:00	Cloudy	78.2
29-Oct-21	9:00	Cloudy	101.9
29-Oct-21	10:00	Cloudy	85.8
		Minimum	52.2
		Maximum	135.8
		Average	80.9

Location FLN-DMS3 - House near Tong Hang			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
4-Oct-21	9:00	Sunny	73.2
4-Oct-21	10:00	Sunny	76.8
4-Oct-21	11:00	Sunny	81.7
7-Oct-21	13:00	Sunny	106.3
7-Oct-21	14:00	Sunny	112.9
7-Oct-21	15:00	Sunny	134.5
15-Oct-21	9:00	Cloudy	65.0
15-Oct-21	10:00	Cloudy	72.6
15-Oct-21	11:00	Cloudy	71.3
19-Oct-21	13:00	Sunny	71.8
19-Oct-21	14:00	Sunny	70.2
19-Oct-21	15:00	Sunny	83.9
25-Oct-21	9:00	Sunny	75.5
25-Oct-21	10:00	Sunny	75.9
25-Oct-21	11:00	Sunny	68.6
29-Oct-21	9:00	Cloudy	92.7
29-Oct-21	10:00	Cloudy	100.6
29-Oct-21	11:00	Cloudy	108.0
		Minimum	65.0
		Maximum	134.5
		Average	85.6

Appendix E - 1-hour TSP Monitoring Results

Location FLN-DMS5 - Noble Hill			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
2-Oct-21	9:00	Sunny	127.9
2-Oct-21	10:00	Sunny	121.5
2-Oct-21	11:00	Sunny	150.6
7-Oct-21	8:00	Sunny	140.0
7-Oct-21	9:00	Sunny	176.1
7-Oct-21	10:00	Sunny	134.0
12-Oct-21	9:30	Cloudy	49.6
12-Oct-21	10:30	Cloudy	50.4
12-Oct-21	13:00	Cloudy	60.8
18-Oct-21	9:00	Cloudy	50.7
18-Oct-21	10:00	Cloudy	51.1
18-Oct-21	11:00	Cloudy	57.6
22-Oct-21	13:00	Fine	30.8
22-Oct-21	14:00	Fine	33.5
22-Oct-21	15:00	Fine	35.8
28-Oct-21	9:00	Cloudy	86.5
28-Oct-21	10:00	Cloudy	73.1
28-Oct-21	11:00	Cloudy	69.9
		Minimum	30.8
		Maximum	176.1
		Average	83.3

Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
2-Oct-21	9:00	Sunny	17.5
2-Oct-21	10:00	Sunny	18.3
2-Oct-21	11:00	Sunny	16.9
7-Oct-21	8:00	Sunny	76.6
7-Oct-21	9:00	Sunny	68.3
7-Oct-21	10:00	Sunny	50.8
12-Oct-21	9:00	Cloudy	39.1
12-Oct-21	10:00	Cloudy	39.5
12-Oct-21	11:00	Cloudy	37.2
18-Oct-21	9:00	Cloudy	48.4
18-Oct-21	10:00	Cloudy	45.9
18-Oct-21	11:00	Cloudy	48.5
22-Oct-21	13:00	Fine	62.2
22-Oct-21	14:00	Fine	48.1
22-Oct-21	15:00	Fine	79.7
28-Oct-21	9:00	Cloudy	70.7
28-Oct-21	10:00	Cloudy	68.9
28-Oct-21	11:00	Cloudy	62.5
		Minimum	16.9
		Maximum	79.7
		Average	50.0

Appendix E - 24-hour TSP Monitoring Results

Location FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark

Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. ($\mu g/m^3$)
			Initial	Final		Initial	Final		Initial	Final			
6-Oct-21	Sunny	302.1	3.4845	3.6007	0.1162	5287.3	5311.3	24.0	1.22	1.22	1.22	1758.7	66.1
12-Oct-21	Cloudy	297.7	3.4885	3.5860	0.0975	5311.3	5335.3	24.0	1.23	1.23	1.23	1766.7	55.2
18-Oct-21	Sunny	293.8	3.5191	3.6662	0.1471	5335.3	5359.3	24.0	1.25	1.24	1.25	1795.1	81.9
22-Oct-21	Sunny	291.5	3.4898	3.5647	0.0749	5359.3	5383.3	24.0	1.25	1.25	1.25	1803.0	41.5
28-Oct-21	Cloudy	297.9	3.5048	3.7131	0.2083	5383.3	5407.3	24.0	1.24	1.24	1.24	1780.0	117.0
												Min	41.5
												Max	117.0
												Average	72.4

Location FLN-DMS3 - House near Tong Hang

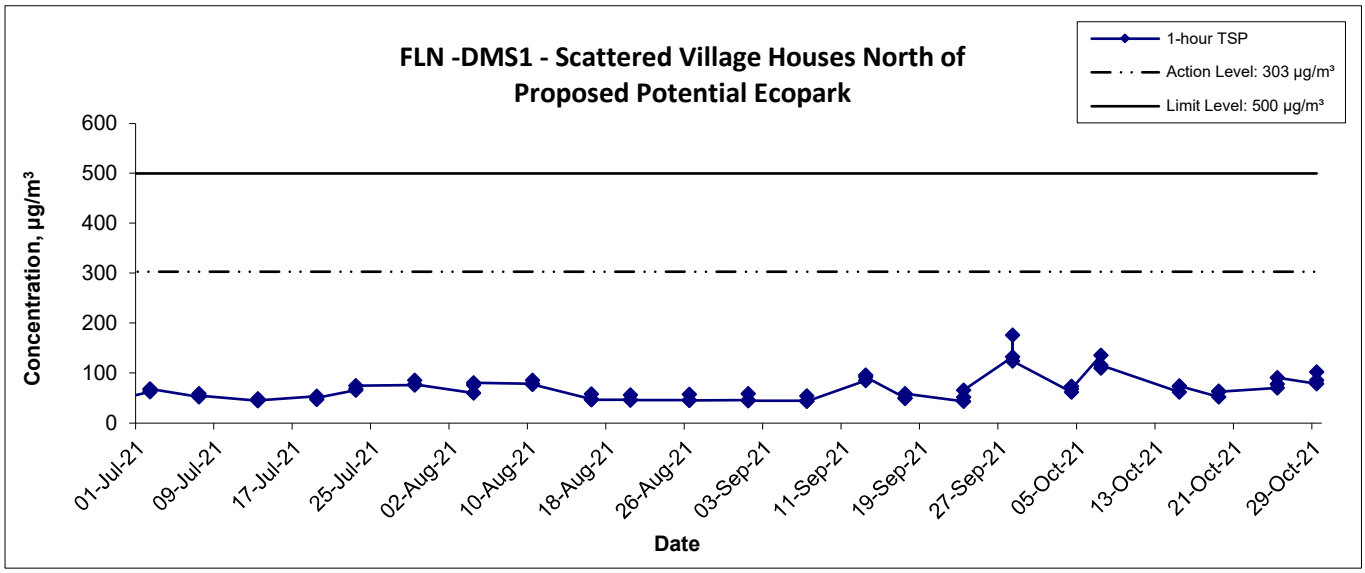
Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. ($\mu g/m^3$)
			Initial	Final		Initial	Final		Initial	Final			
6-Oct-21	Sunny	302.1	3.4764	3.6059	0.1295	6330.6	6354.6	24.0	1.22	1.21	1.22	1750.0	74.0
12-Oct-21	Cloudy	297.7	3.5155	3.6759	0.1604	6354.6	6378.6	24.0	1.22	1.22	1.22	1757.5	91.3
18-Oct-21	Sunny	293.8	3.5448	3.6219	0.0771	6378.7	6402.7	24.0	1.24	1.24	1.24	1784.3	43.2
22-Oct-21	Sunny	291.5	3.4604	3.5118	0.0514	6402.7	6426.7	24.0	1.24	1.25	1.24	1791.7	28.7
28-Oct-21	Cloudy	297.9	3.5018	3.5803	0.0785	6426.7	6450.7	24.0	1.23	1.23	1.23	1770.1	44.3
												Min	28.7
												Max	91.3
												Average	56.3

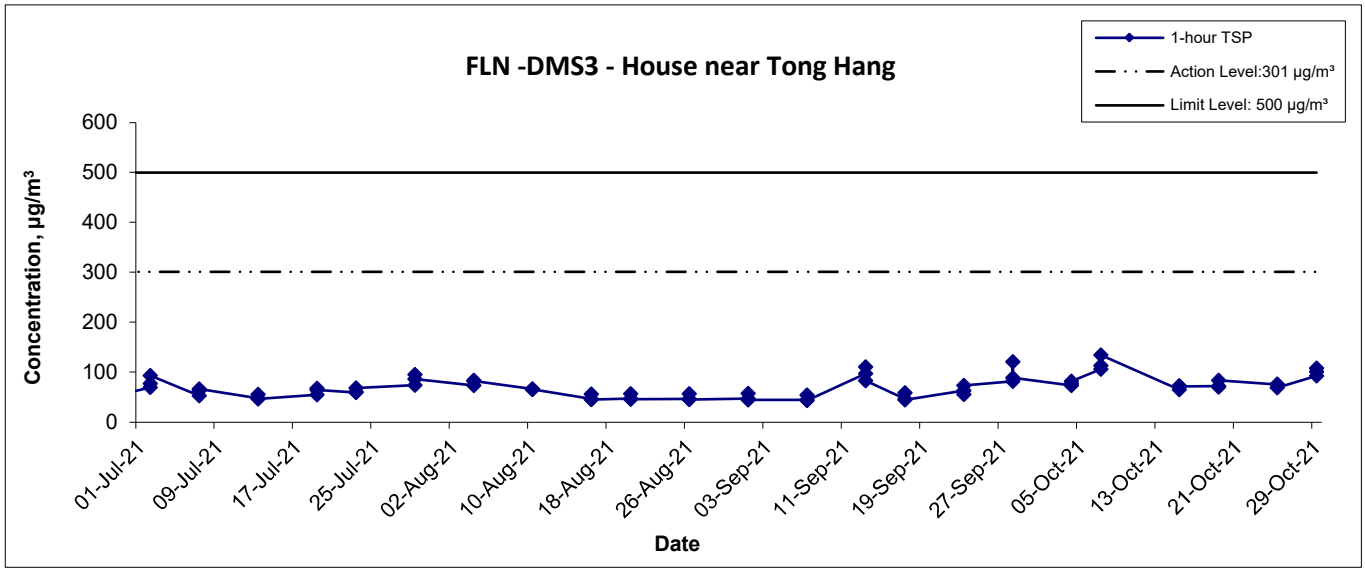
Appendix E - 24-hour TSP Monitoring Results

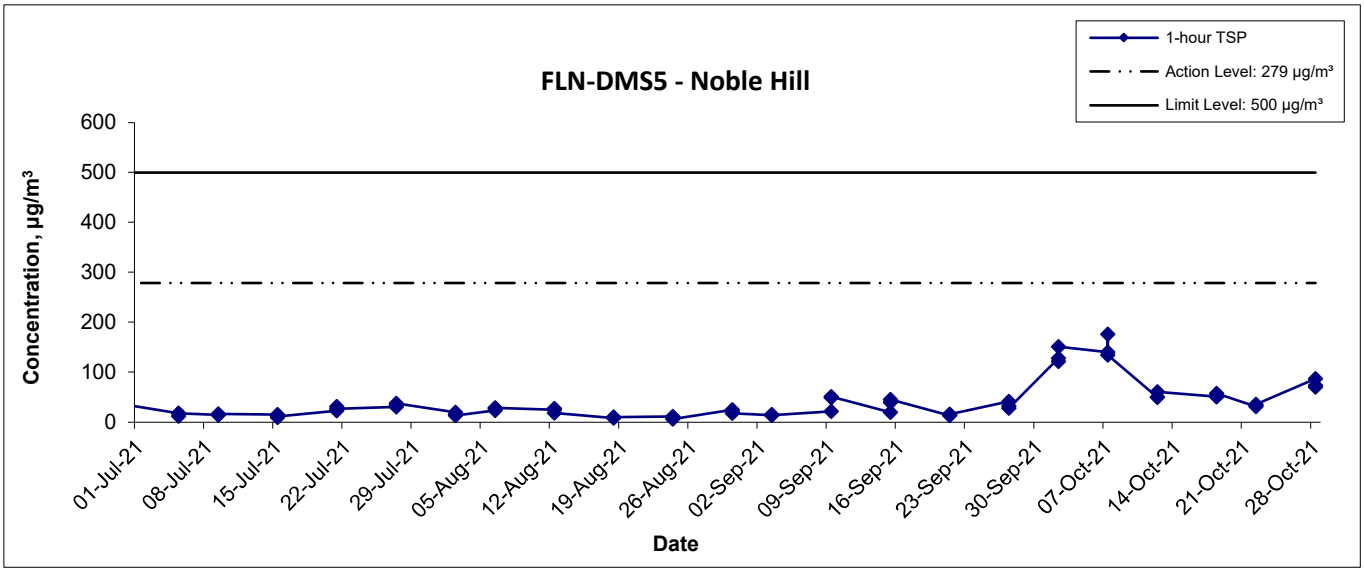
Location FLN-DMS5 - Noble Hill			
Date	Time	Weather	Particulate Concentration (μg/m^3)
2-Oct-21	9:00	Sunny	59.5
7-Oct-21	8:00	Sunny	103.6
12-Oct-21	9:00	Cloudy	56.3
18-Oct-21	9:00	Cloudy	37.1
22-Oct-21	12:00	Fine	41.5
28-Oct-21	9:00	Cloudy	61.1
		Minimum	37.1
		Maximum	103.6
		Average	59.9

Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration (μg/m^3)
2-Oct-21	9:00	Sunny	7.9
7-Oct-21	8:00	Sunny	87.7
12-Oct-21	9:00	Cloudy	36.7
18-Oct-21	9:00	Cloudy	57.8
22-Oct-21	12:00	Fine	54.9
28-Oct-21	9:00	Cloudy	78.9
		Minimum	7.9
		Maximum	87.7
		Average	54.0

1-hr TSP Concentration Levels

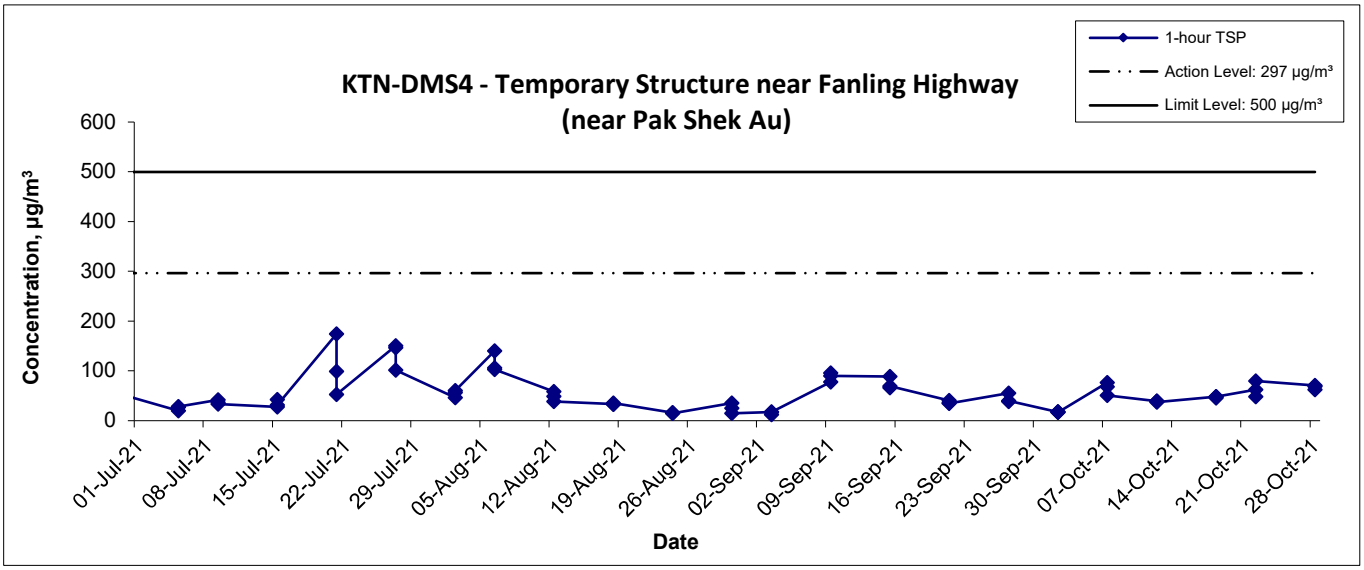






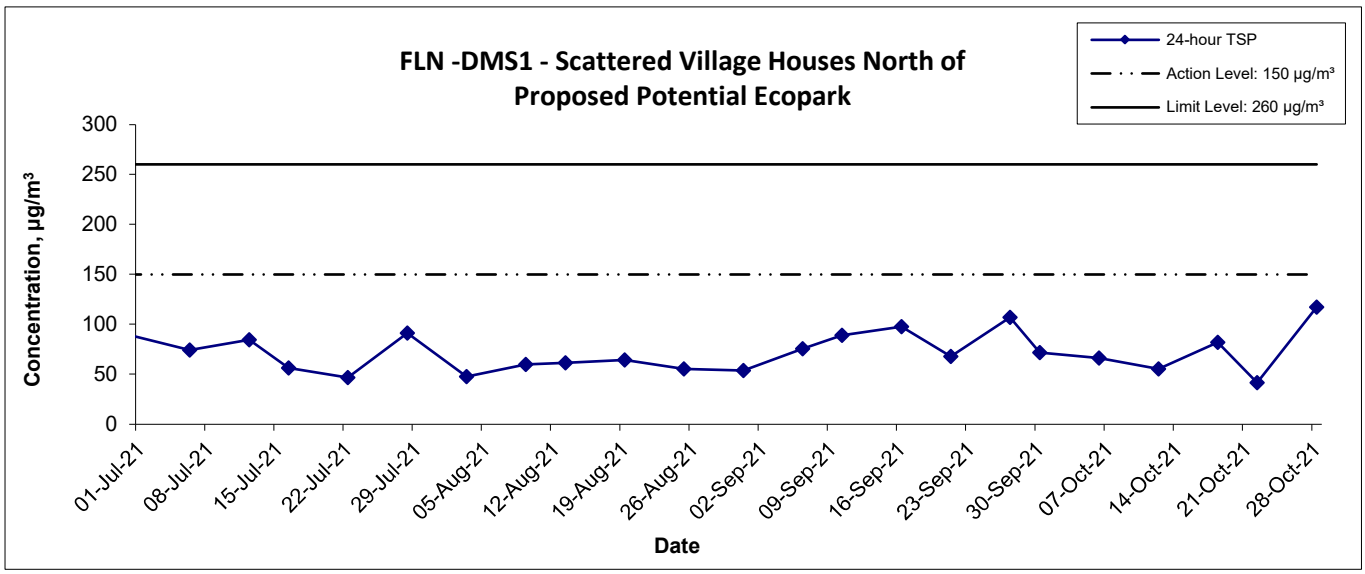
Title: Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	Scale: N.T.S Date: Oct 21	Project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

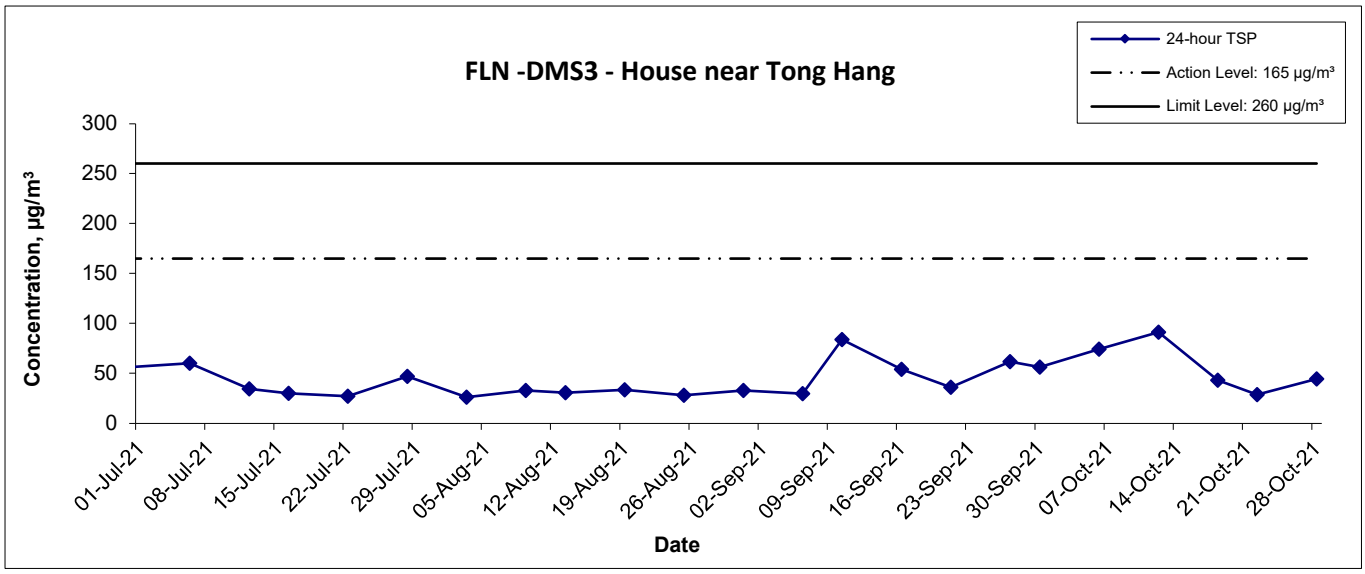
1-hr TSP Concentration Levels

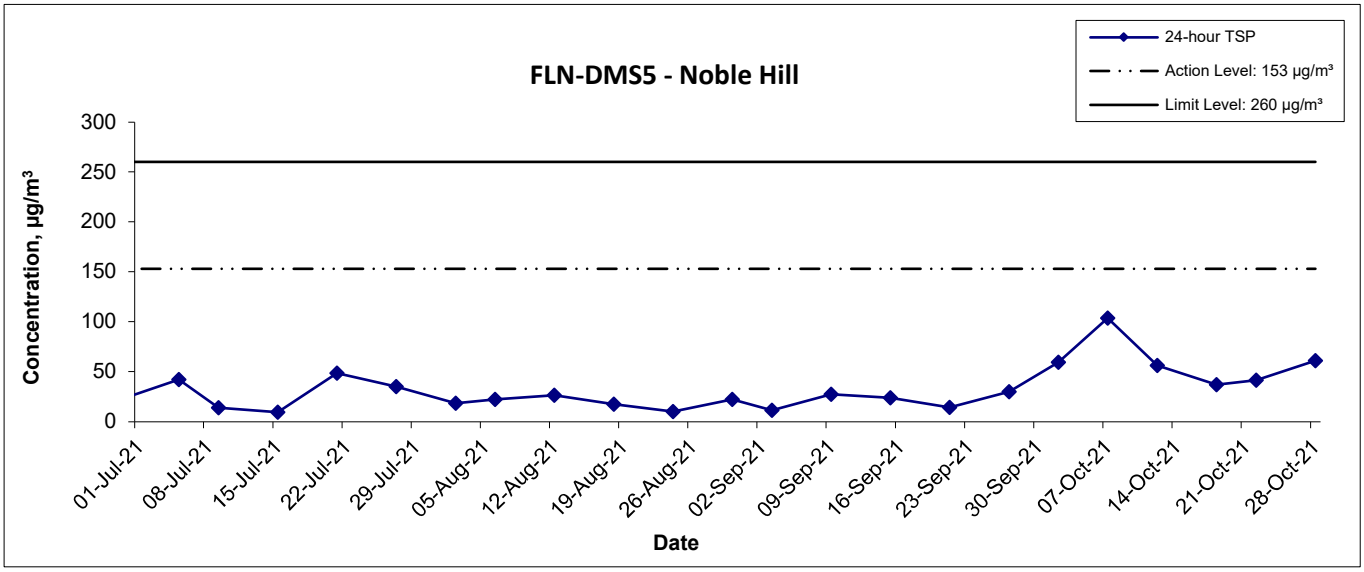


Title	Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	Scale: N.T.S Date: Oct 21	Project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

24-hr TSP Concentration Levels



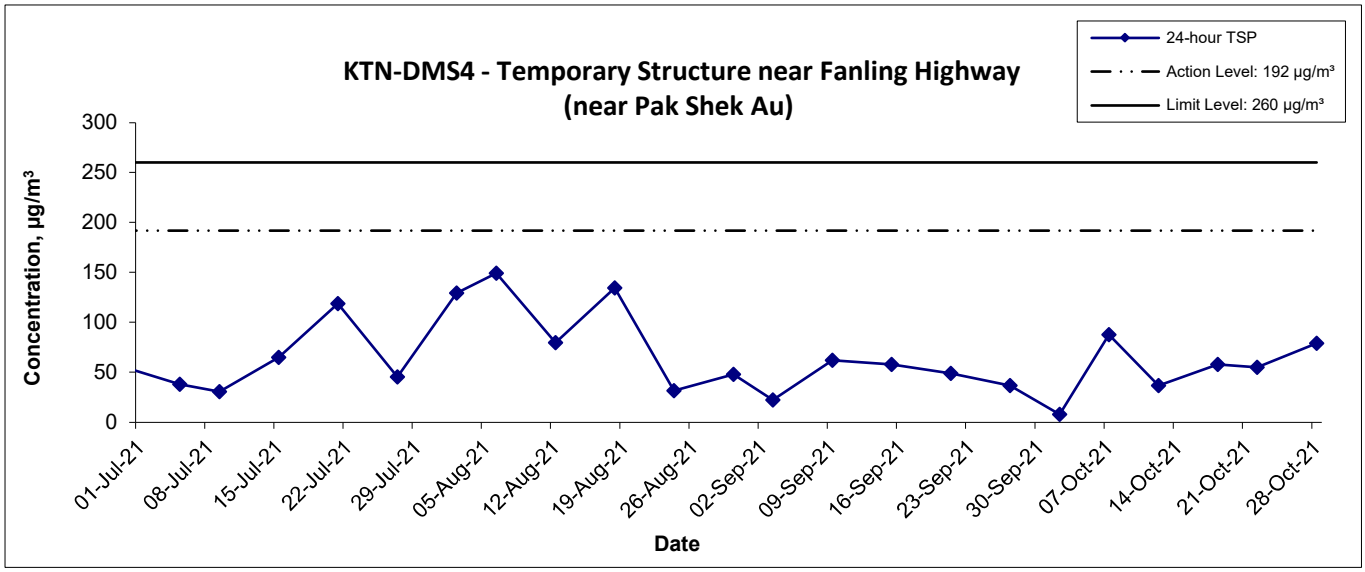




Title	Scale	Project No.
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 24-hour TSP Monitoring Results	N.T.S	WMA20002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

WELLAB 匯力 consulting . testing . research

24-hr TSP Concentration Levels

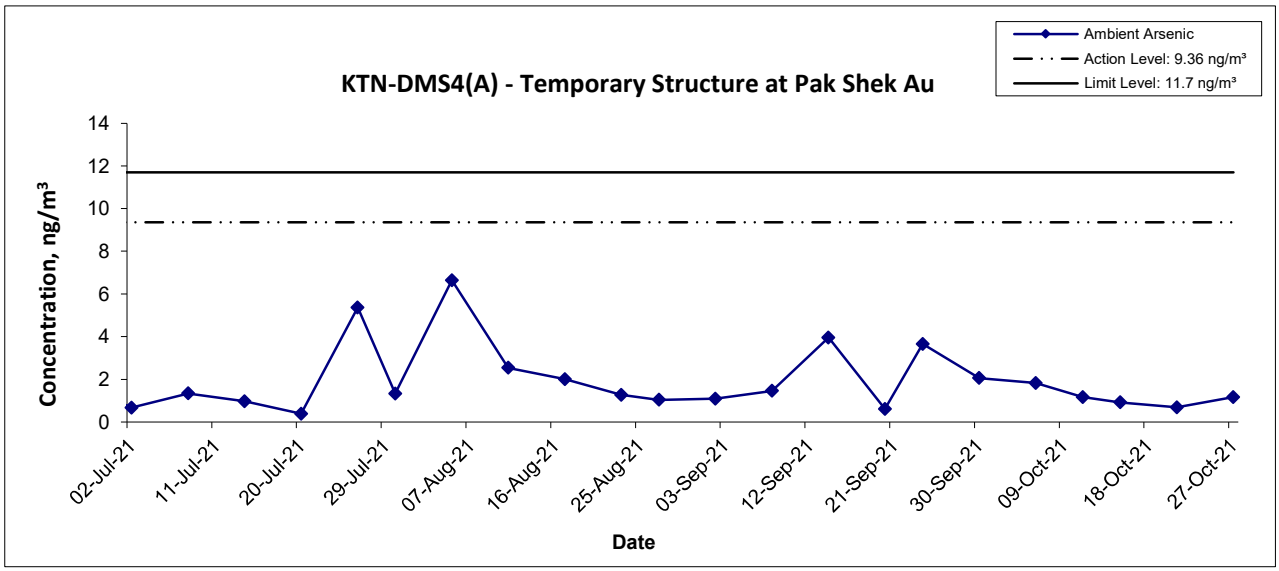


Title	Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 24-hour TSP Monitoring Results	Scale N.T.S Date Oct 21	Project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

Appendix E - Ambient Arsenic Monitoring Results

Location KTN-DMS4(A) - Temporary Structure at Pak Shek Au			
Date	Arsenic (μg)	Standard Volume, Vstd (m^3)	Ambient Arsenic Concentration (ng/m^3)
6-Oct-21	3.0	1644.9	1.82
11-Oct-21	1.9	1632.9	1.16
15-Oct-21	1.5	1628.6	0.92
21-Oct-21	1.1	1609.0	0.68
27-Oct-21	1.9	1620.2	1.17

Ambient Arsenic



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

Table I - Ambient Arsenic Concentration on 6th October 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 35847)	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	3.0 µg	1644.9 m^3	1.82 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	Meiling	12th November 2021
Checked by:	Howard Chan	Howard	12th November 2021

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Website : www.wellab.com.hk

TEST REPORT

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

ATTN: **Ms Ivy Tam**

Report No.:	35847
Date of Issue:	2021-10-15
Date Received:	2021-10-08
Date Tested:	2021-10-08
Date Completed:	2021-10-15
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 35847
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	210105/046
Sample No.	35847-1
Arsenic (µg)	3.0

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

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

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PATRICK TSE
General Manager

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TEST REPORT

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

ATTN: **Ms Ivy Tam**

Report No.:	QC 35847
Date of Issue:	2021-10-15
Date Received:	2021-10-11
Date Tested:	2021-10-11
Date Completed:	2021-10-15
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)	0.05	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	105	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	106	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 35847

****

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General Manager

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TEST REPORT

Report No.:	QC 35847
Date of Issue:	2021-10-15
Date Received:	2021-10-11
Date Tested:	2021-10-11
Date Completed:	2021-10-15

QC report:

Matrix Spike

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

Filter Duplicate

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

Serial dilution check

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35847

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

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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: 6/10/2021 (0 : 00) Collection Date: 7/10/2021

Operators: [signature] 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.	WA.11.03	Set Point	6.70
Slope, m	0.0286	Intercept. b	0.5572

	Initial, I	Final, f
Ambient Pressure (mmHg), Pa	760.8	758.3
Ambient Temperature (K), Ta	302.0	302.2
Delta (in. of Water), W	6.7	6.7
$Y = [W \times (Ta+30)/Pa]^{1/2}$	1.710	1.713
Standard flow, Qstd (m^3/min) = (Y - b)*0.0283/m	1.141	1.144
Elapsed Timer Indicator (Hours), T	13441.91	13465.91
Filter Identification no.	210108/046	
Weight of Filter (g)	4.2407 [illegible]	4.3066
Weight of Particulate (g)	0.0658	
Mean Standard Flow, $Qstd_{avg} = (Qstd_i + Qstd_f)/2$	1.142	
Total Time, Total Time = (Tf - Ti) x 60	1440.00	
Standard Volume, Vstd (m^3) = $Qstd_{avg}$ x Total Time	1644.9	
Particulate Concentration (μg/m^3)	40.1	
Observed Construction Activities — Main Construction Site	N/A	
Observed Construction Activities — Other Construction Site	N/A	

Remarks: Road traffic

Conducted by: Ho Ka [signature] Signature: [signature] Date: 7/10/2021

Checked by: Mely Tang Signature: Mely Date: 8/10/2021

Project No. WMA20002

Table I - Ambient Arsenic Concentration on 11th October 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 35846)	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	1.9 µg	1632.9 m^3	1.16 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		12th November 2021
Checked by:	Howard Chan		12th November 2021

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Website : www.wellab.com.hk

TEST REPORT

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

Report No.:	35846
Date of Issue:	2021-10-21
Date Received:	2021-10-15
Date Tested:	2021-10-15
Date Completed:	2021-10-21

ATTN: **Ms Ivy Tam**

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 35846
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	210105/047
Sample No.	35846-1
Arsenic (μg)	1.9

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

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

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PATRICK TSE
General Manager

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TEST REPORT

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

Report No.:	QC 35846
Date of Issue:	2021-10-21
Date Received:	2021-10-15
Date Tested:	2021-10-15
Date Completed:	2021-10-21

ATTN: **Ms Ivy Tam**

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.05	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	111	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	99	90-110

Interference check solution A

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

Interference check solution AB

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35846

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General Manager

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TEST REPORT

Report No.:	QC 35846
Date of Issue:	2021-10-21
Date Received:	2021-10-15
Date Tested:	2021-10-15
Date Completed:	2021-10-21
Page:	2 of 2

QC report:

Matrix Spike

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

Filter Duplicate

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

Serial dilution check

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35846

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

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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: 11/10/2021 (00 :00) Collection Date: 12/10/2021

Operators: Ka chun Weather (Sunny) Cloudy Windy Rainy

Wind: Strong (Mild) Calm

High Volume Sampler	Model no.	TE-6070X
	Blower Motor Serial no.	3205

RSP - Respirable Suspended Particulates Sampler			
Equipment No.	WA.11.05	Set Point	6-70
Slope, m	0.0286	Intercept. b	0.5(-)V

	Initial, I	Final, f
Ambient Pressure (mmHg), Pa	758.7	756.4
Ambient Temperature (K), Ta	294.2 K	298.2
Delta (in. of Water), W	6.7	6.7
$Y = [W \times (Ta+30)/Pa]^{1/2}$	1.701	1.705
Standard flow, Qstd (m^3/min) = (Y - b)*0.0283/m	1.132	1.136
Elapsed Timer Indicator (Hours), T	13465.91	13489.91
Filter Identification no.	21015/047	
Weight of Filter (g)	4.2345	4.2675
Weight of Particulate (g)	0.0330	
Mean Standard Flow, $Qstd_{avg} = (Qstd_i + Qstd_f)/2$	1.134	
Total Time, Total Time = (Tf - Ti) x 60	144000	
Standard Volume, Vstd (m^3) = $Qstd_{avg}$ x Total Time	1632.9	
Particulate Concentration ($\mu g/m^3$)	20.2	
Observed Construction Activities — Main Construction Site	Dumptruck, crane	
Observed Construction Activities — Other Construction Site	NA	

Remarks: Road flushing

Conducted by: LEE MAN MAN Signature: Lee Date: 12-10-2021

Checked by: Mich Tam Signature: Mich Date: 13/10/2021

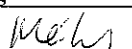
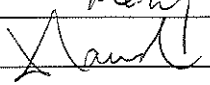
Project No. WMA20002

Table I - Ambient Arsenic Concentration on 15th October 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 35870)	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	1.5 µg	1628.6 m^3	0.92 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		12th November 2021
Checked by:	Howard Chan		12th November 2021

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

TEST REPORT

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

ATTN: **Ms Ivy Tam**

Report No.:	35870
Date of Issue:	2021-10-22
Date Received:	2021-10-18
Date Tested:	2021-10-18
Date Completed:	2021-10-22
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 35870
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	210105/049
Sample No.	35870-1
Arsenic (μg)	1.5

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

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PATRICK TSE
General Manager

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Website : www.wellab.com.hk

TEST REPORT

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

Report No.:	QC 35870
Date of Issue:	2021-10-22
Date Received:	2021-10-18
Date Tested:	2021-10-18
Date Completed:	2021-10-22
Page:	1 of 2

ATTN: **Ms Ivy Tam**

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.05	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	98	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	98	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	107	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35870

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General Manager

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TEST REPORT

Report No.:	QC 35870
Date of Issue:	2021-10-22
Date Received:	2021-10-18
Date Tested:	2021-10-18
Date Completed:	2021-10-22
Page:	2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	104	75-125

Filter Duplicate

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

Serial dilution check

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35870

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

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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: 15/10/2021 (00 : 00) Collection Date: 18/10/2021

Operators: Lei Weather (Sunny) Cloudy Windy Rainy

Wind: Strong Mild (Calm)

High Volume Sampler	Model no.	TE-6070X
	Blower Motor Serial no.	3125

RSP - Respirable Suspended Particulates Sampler			
Equipment No.	WD. (1.03	Set Point	6.70
Slope, m	0.0286	Intercept, b	0.5712

	Initial, I	Final, f
Ambient Pressure (mmHg), Pa	760.4	761.7
Ambient Temperature (K), Ta	298.5	298.0
Delta (in. of Water), W	6.7	6.7
$Y = [W \times (Ta+30)/Pa]^{1/2}$	1.70V	1.688
Standard flow, Qstd (m^3/min) = (Y - b)*0.0283/m	1.15V	1.150
Elapsed Timer Indicator (Hours), T	13490.15	13514.15
Filter Identification no.	210105/049	
Weight of Filter (g)	4.1876	4.2110
Weight of Particulate (g)	0.0234	
Mean Standard Flow, $Qstd_{avg} = (Qstd_i + Qstd_f)/2$	1.131	
Total Time, Total Time = (Tf - Ti) x 60	1440.00	
Standard Volume, Vstd (m^3) = $Qstd_{avg}$ x Total Time	1628.6	
Particulate Concentration ($\mu g/m^3$)	14.4	
Observed Construction Activities — Main Construction Site	Lei Pumptruck	
Observed Construction Activities — Other Construction Site	NA	

Remarks: Road traffic

Conducted by: LEE MAN MEI Signature: Lei Date: 18-10-2021

Checked by: Wendy Tam Signature: Wendy Date: 18/10/2021

Project No. WMA20002

Table I - Ambient Arsenic Concentration on 21st October 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 35906)	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	1.1 µg	1609.0 m^3	0.68 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		12th November 2021
Checked by:	Howard Chan		12th November 2021

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TEST REPORT

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

Report No.:	35906
Date of Issue:	2021-10-29
Date Received:	2021-10-25
Date Tested:	2021-10-25
Date Completed:	2021-10-29

ATTN: **Ms Ivy Tam**

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 35906
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	210105/048
Sample No.	35906-1
Arsenic (µg)	1.1

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

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

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PATRICK TSE
General Manager

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TEST REPORT

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

ATTN: **Ms Ivy Tam**

Report No.:	QC 35906
Date of Issue:	2021-10-29
Date Received:	2021-10-25
Date Tested:	2021-10-25
Date Completed:	2021-10-29
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)	0.05	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	93	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	97	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	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 35906

****

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General Manager

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TEST REPORT

Report No.:	QC 35906
Date of Issue:	2021-10-29
Date Received:	2021-10-25
Date Tested:	2021-10-25
Date Completed:	2021-10-29
Page:	2 of 2

QC report:

Matrix Spike

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

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	2	RPD≤20%

Serial dilution check

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35906

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

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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: 21/10/2021 (00 :00) Collection Date: 22/10/2021

Operators: Hei

Weather: Sunny (Cloudy) Windy Rainy

Wind: Strong Mild (Calm)

High Volume Sampler	Model no.	TE-6070X
	Blower Motor Serial no.	3275

RSP - Respirable Suspended Particulates Sampler			
Equipment No.	WA-113	Set Point	6.70
Slope, m	0.0286	Intercept. b	0.557

	Initial, I	Final, f
Ambient Pressure (mmHg), Pa	763.5	766.8
Ambient Temperature (K), Ta	298.3	291.3
Delta (in. of Water), W	6.7	6.7
$Y = [W \times (Ta+30)/Pa]^{1/2}$	1.687	1.676
Standard flow, Qstd (m^3/min) = (Y - b)*0.0283/m	1.128	1.107
Elapsed Timer Indicator (Hours), T	13514.16	13538.16
Filter Identification no.	210105/048	
Weight of Filter (g)	4.2107	4.2313
Weight of Particulate (g)	0.0206	
Mean Standard Flow, $Qstd_{avg} = (Qstd_i + Qstd_f)/2$	1.117	
Total Time, Total Time = (Tf - Ti) x 60	1440.0	
Standard Volume, Vstd (m^3) = $Qstd_{avg}$ x Total Time	1609.0	
Particulate Concentration ($\mu g/m^3$)	12.8	
Observed Construction Activities — Main Construction Site	Pumptruck	
Observed Construction Activities — Other Construction Site	NA	

Remarks: Road traffic

Conducted by: LEE MAN HEI Signature: Hei Date: 22-10-2021

Checked by: Mely Tam Signature: Mely Date: 25/10/21

Project No. WMA20002

Table I - Ambient Arsenic Concentration on 27th October 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 35922)	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	1.9 µg	1620.2 m^3	1.17 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		12th November 2021
Checked by:	Howard Chan		12th November 2021

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TEST REPORT

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

ATTN: **Ms Ivy Tam**

Report No.:	35922
Date of Issue:	2021-11-02
Date Received:	2021-10-28
Date Tested:	2021-10-28
Date Completed:	2021-11-02
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 35922
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	210105/050
Sample No.	35922-1
Arsenic (µg)	1.9

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

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PATRICK TSE
General Manager

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TEST REPORT

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

Report No.:	QC 35922
Date of Issue:	2021-11-03
Date Received:	2021-10-28
Date Tested:	2021-10-28
Date Completed:	2021-11-03

ATTN: **Ms Ivy Tam**

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.05	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	95	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	97	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	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 35922

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General Manager

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TEST REPORT

Report No.:	QC 35922
Date of Issue:	2021-11-03
Date Received:	2021-10-28
Date Tested:	2021-10-28
Date Completed:	2021-11-03
Page:	2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	109	75-125

Filter Duplicate

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

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	106	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35922

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

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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: 27/10/2021 (0 :00) Collection Date: 28/10/2021

Operators: Hei

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.	WA.1c.03	Set Point	6.70
Slope, m	0.0286	Intercept. b	0.5572

	Initial, I	Final, f
Ambient Pressure (mmHg), Pa	765.0	765.4
Ambient Temperature (K), Ta	297.8	297.9
Delta (in. of Water), W	6.7	6.7
$Y = [\ W \times (Ta+30)/Pa\ ]^{1/2}$	1.694	1.694
Standard flow, Qstd (m^3/min) = (Y - b)*0.0283/m	1.125	1.125
Elapsed Timer Indicator (Hours), T	13538.16	13562.16
Filter Identification no.	2101051050	
Weight of Filter (g)	42383	42752
Weight of Particulate (g)	0.0369	
Mean Standard Flow, $Qstd_{avg} = (\ Qstd_i + Qstd_f)/2$	1.125	
Total Time, Total Time = (Tf - Ti) x 60	1440.00	
Standard Volume, Vstd (m^3) = $Qstd_{avg}$ x Total Time	1620.2	
Particulate Concentration (μg/m^3)	22.8	
Observed Construction Activities — Main Construction Site	N/A	
Observed Construction Activities — Other Construction Site	N/A	

Remarks: Road traffic

Conducted by: Ho ka [signature] Signature: [signature] Date: 28/10/2021

Checked by: [signature] Signature: [signature] Date: 28/10/2021

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}
7-Oct-21	Sunny	09:30	72.0	74.9	67.2	72.6	69.9
		09:35	72.4	75.9	67.6		
		09:40	71.3	73.6	67.1		
		09:45	71.4	74.2	67.5		
		09:50	73.9	77.2	68.3		
		09:55	73.7	76.6	67.9		
15-Oct-21	Cloudy	13:10	69.3	71.5	65.4	67.9	
		13:15	70.4	72.3	65.7		
		13:20	67.2	70.8	65.3		
		13:25	64.3	66.7	65.8		
		13:30	65.7	68.4	65.3		
		13:35	67.4	70.8	65.4		
19-Oct-21	Sunny	10:30	68.6	72.1	60.4	69.3	
		10:35	69.1	72.5	61.6		
		10:40	69.7	72.8	61.9		
		10:45	69.1	72.3	62.4		
		10:50	69.4	72.6	60.2		
		10:55	69.6	73.1	59.5		
29-Oct-21	Cloudy	11:20	70.8	72.3	63.2	68.8	
		11:25	68.3	69.5	63.1		
		11:30	68.7	70.5	63.5		
		11:35	67.5	69.3	62.9		
		11:40	68.3	69.1	62.8		
		11:45	68.7	71.8	63.3		

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}
7-Oct-21	Cloudy	13:30	47.3	49.3	45.0	46.9	59.6
		13:35	47.6	49.7	45.6		
		13:40	47.1	49.7	45.6		
		13:45	47.2	48.2	45.1		
		13:50	45.4	46.4	44.6		
		13:55	46.3	46.9	45.5		
15-Oct-21	Cloudy	11:30	62.3	64.5	63.7	63.1	
		11:35	62.8	65.3	63.8		
		11:40	63.1	64.8	63.5		
		11:45	63.4	65.7	64.1		
		11:50	64.6	67.1	63.8		
		11:55	61.9	64.7	62.8		
19-Oct-21	Sunny	13:20	54.7	56.0	53.0	55.1	
		13:25	54.8	55.8	53.8		
		13:30	54.5	55.4	53.7		
		13:35	54.8	55.8	53.9		
		13:40	55.7	56.2	55.0		
		13:45	56.1	56.9	55.4		
29-Oct-21	Cloudy	09:30	65.2	66.3	61.9	63.0	
		09:35	64.1	64.7	61.3		
		09:40	63.5	64.9	61.3		
		09:45	60.9	61.3	59.8		
		09:50	62.3	62.8	60.3		
		09:55	62.8	62.9	60.5		

Appendix F - Noise Monitoring Results

Location CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
7-Oct-21	Sunny	10:45	57.6	59.0	55.4	56.4	58.6
		10:50	56.6	58.2	54.3		
		10:55	55.4	57.4	52.1		
		11:00	53.5	55.4	53.3		
		11:05	55.7	59.9	48.3		
		11:10	58.9	60.1	58.1		
12-Oct-21	Cloudy	14:15	54.5	59.6	53.9	66.3	
		14:20	55.3	55.8	54.2		
		14:25	55.6	56.8	54.4		
		14:30	57.0	58.3	54.7		
		14:35	63.4	66.3	54.4		
		14:40	73.2	75.4	70.0		
22-Oct-21	Cloudy	16:25	56.1	56.3	50.8	58.5	
		16:30	57.3	58.4	52.3		
		16:35	61.4	63.8	51.4		
		16:40	58.2	58.7	51.5		
		16:45	57.9	58.4	50.9		
		16:50	57.8	59.2	51.3		
28-Oct-21	Sunny	10:40	57.8	58.3	49.2	57.6	
		10:45	57.2	57.7	56.8		
		10:50	57.4	58.1	56.8		
		10:55	57.7	58.7	56.7		
		11:00	57.9	59.3	56.7		
		11:05	57.6	58.1	56.8		

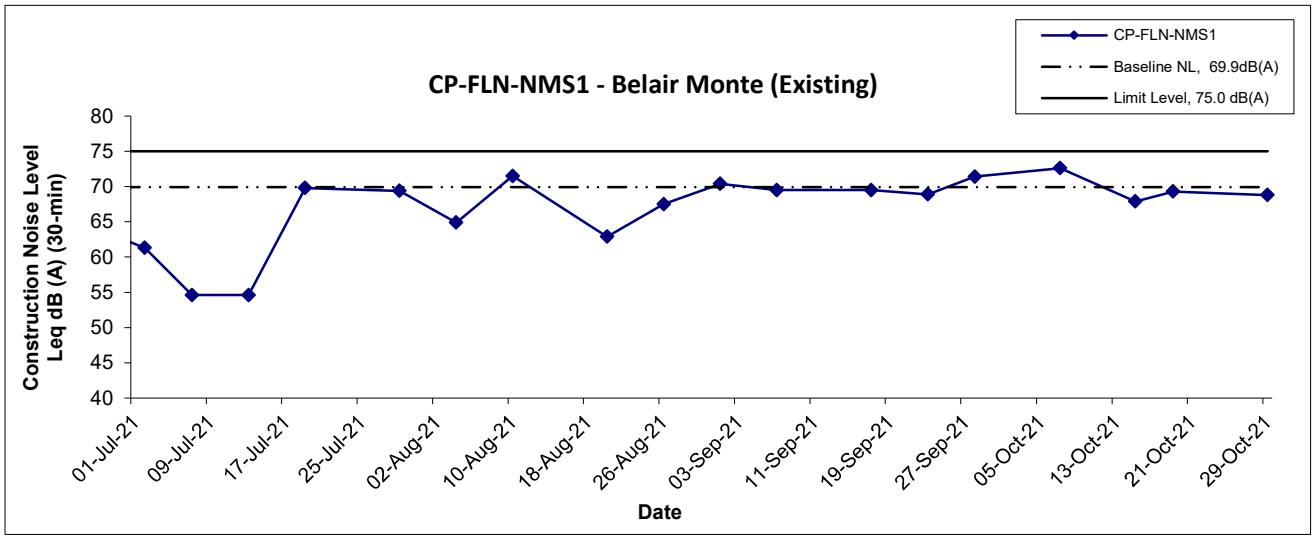
Location CP-KTN-NMS3 - Fung Kong Garden (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
7-Oct-21	Sunny	10:30	58.9	59.3	53.3	58.8	51.6
		10:35	57.3	57.9	53.1		
		10:40	57.8	58.6	53.3		
		10:45	57.6	58.8	53.5		
		10:50	61.3	63.2	54.7		
		10:55	58.3	59.5	54.4		
12-Oct-21	Cloudy	14:50	71.3	75.3	51.5	63.9	
		14:55	53.0	59.6	49.2		
		15:00	56.5	60.7	49.5		
		15:05	52.5	55.2	48.5		
		15:10	51.5	54.0	47.1		
		15:15	52.7	54.5	49.7		
22-Oct-21	Cloudy	16:15	56.4	57.3	51.6	63.3	
		16:20	59.2	61.9	52.4		
		16:25	69.3	70.2	53.8		
		16:30	57.9	58.4	52.8		
		16:35	57.6	58.9	52.7		
		16:40	62.5	64.7	52.1		
28-Oct-21	Sunny	11:20	52.9	53.5	52.1	55.1	
		11:25	55.9	57.7	52.4		
		11:30	54.0	57.6	52.5		
		11:35	55.1	57.0	52.4		
		11:40	55.6	57.8	53.5		
		11:45	56.2	58.0	54.0		

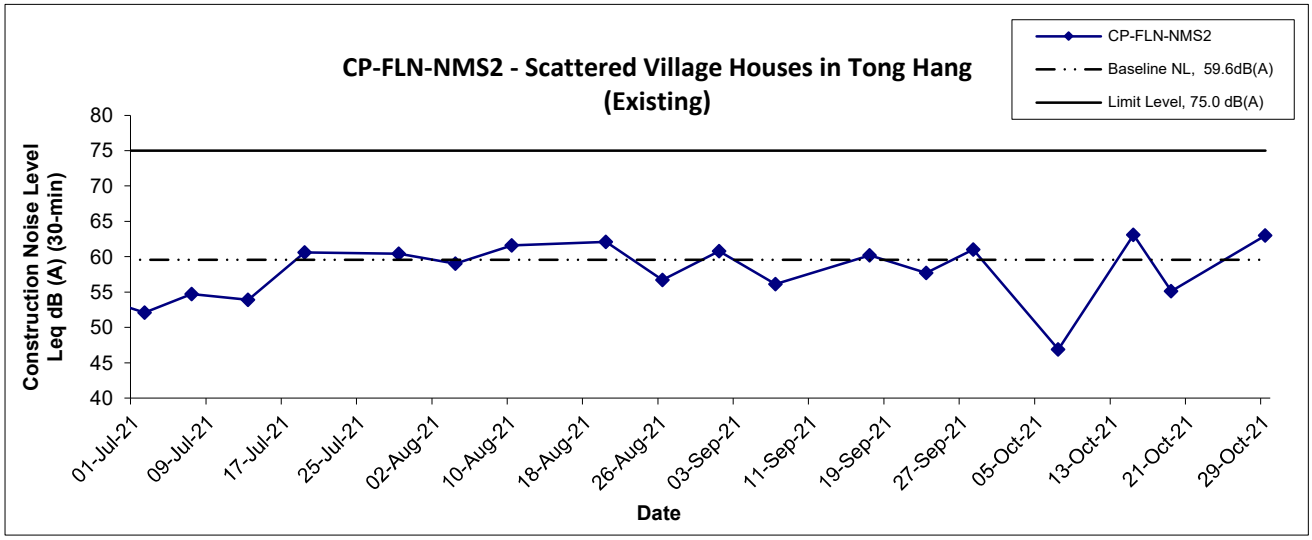
Appendix F - Noise Monitoring Results

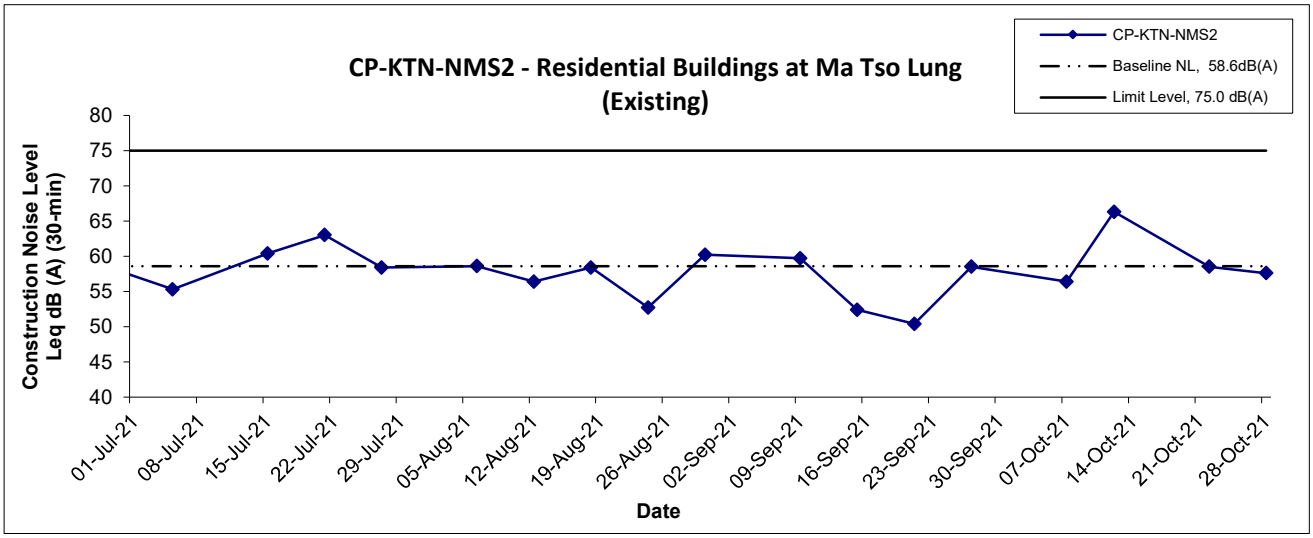
Location CP-KTN-NMS5 - N/A							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
7-Oct-21	Sunny	10:05	57.6	59.0	53.7	56.6	57.2
		10:10	56.6	58.2	54.3		
		10:15	55.4	57.0	53.2		
		10:20	56.3	58.4	53.3		
		10:25	56.7	57.5	53.4		
		10:30	56.9	59.2	52.6		
12-Oct-21	Cloudy	13:00	62.6	65.5	53.4	57.1	
		13:05	52.6	54.0	51.4		
		13:10	54.9	56.9	51.8		
		13:15	53.0	54.6	51.5		
		13:20	54.3	55.4	51.4		
		13:25	54.7	57.0	51.8		
22-Oct-21	Cloudy	11:10	53.3	55.2	48.6	54.8	
		11:15	52.9	54.7	48.5		
		11:20	56.2	57.3	49.2		
		11:25	56.4	57.5	49.3		
		11:30	54.5	56.3	48.5		
		11:35	54.3	55.9	48.1		
28-Oct-21	Cloudy	09:06	54.1	55.7	52.3	54.3	
		09:11	54.3	55.9	52.4		
		09:16	53.8	55.5	52.3		
		09:21	54.5	55.7	52.9		
		09:26	54.8	56.5	52.4		
		09:31	54.2	55.9	52.8		

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}
7-Oct-21	Sunny	16:00	65.2	66.4	62.3	62.7	55.1
		16:05	64.3	66.1	61.8		
		16:10	63.2	65.0	60.2		
		16:15	63.8	66.8	54.6		
		16:20	55.4	55.9	54.3		
		16:25	55.6	56.1	54.2		
12-Oct-21	Cloudy	13:38	62.8	64.0	59.4	67.1	
		13:43	69.4	72.5	61.2		
		13:48	64.4	65.8	60.7		
		13:53	66.3	67.2	59.9		
		13:58	63.6	66.7	59.6		
		14:03	70.4	72.6	61.9		
22-Oct-21	Cloudy	17:20	65.8	67.3	60.9	67.9	
		17:25	67.2	70.4	61.3		
		17:30	68.1	70.7	61.4		
		17:35	65.6	68.1	60.5		
		17:40	71.3	73.2	61.2		
		17:45	66.4	68.5	60.9		
28-Oct-21	Cloudy	10:00	54.7	56.2	47.9	59.6	
		10:05	54.0	55.0	47.5		
		10:10	54.9	56.5	48.2		
		10:15	56.2	60.5	48.2		
		10:20	58.3	58.8	47.6		
		10:25	65.4	70.6	54.8		

Noise Levels

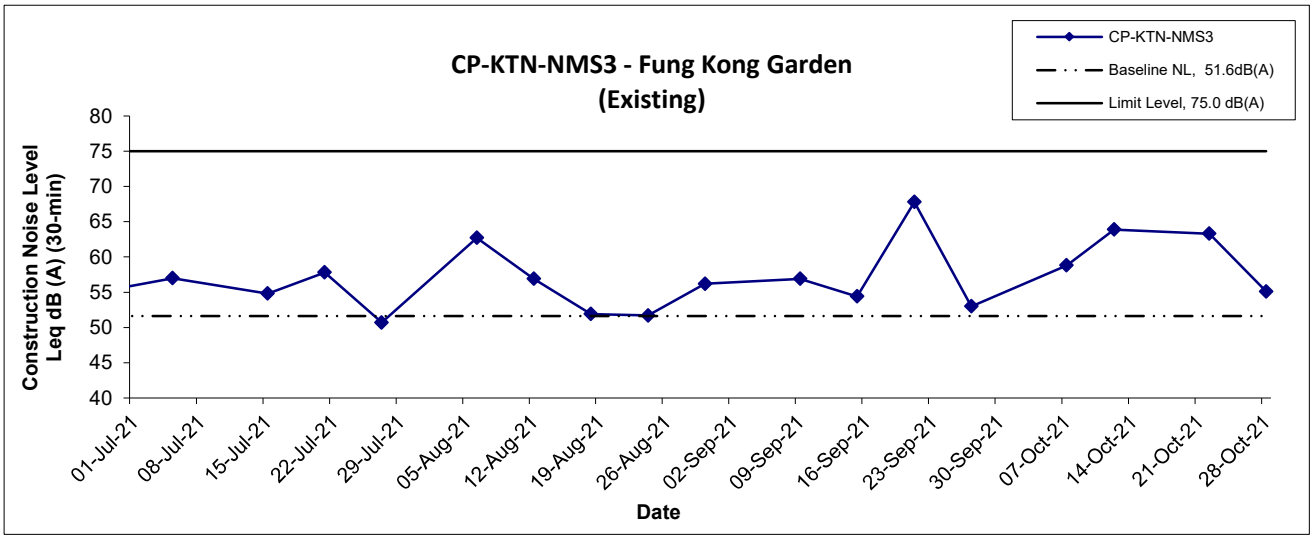


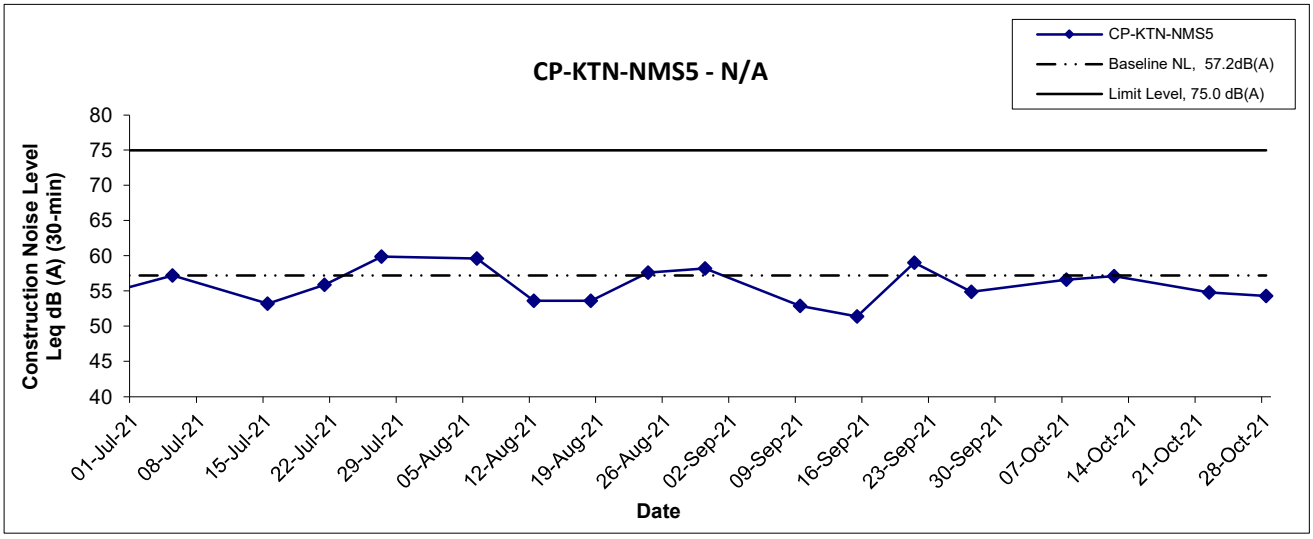


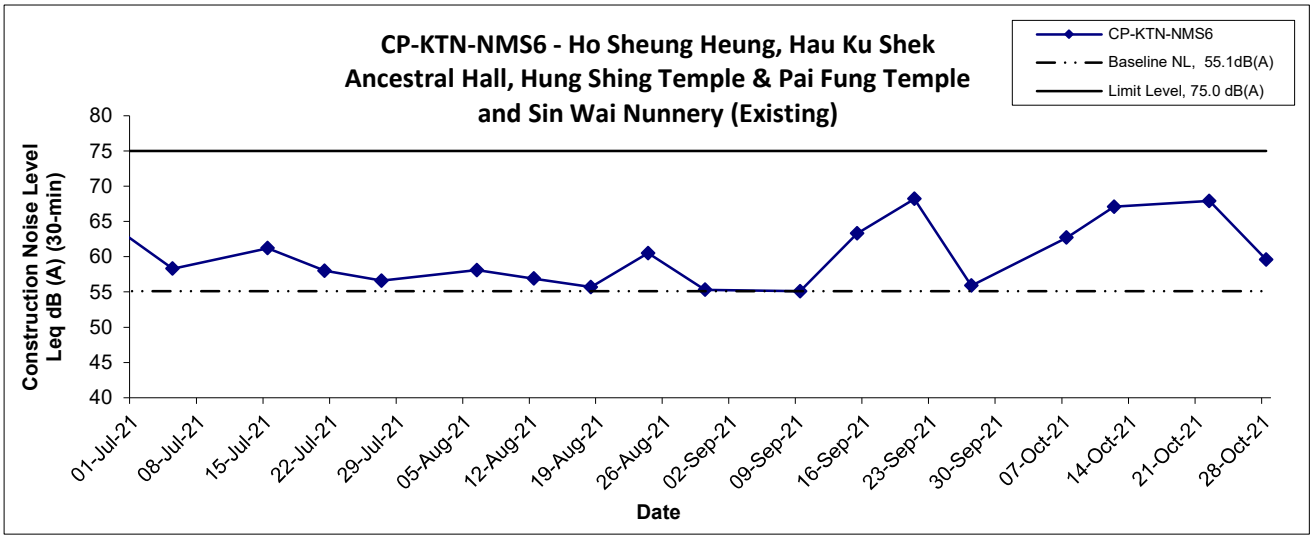


Title: Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S Date: Oct 21	Project No.: WMA20002 Appendix: F	WELLAB 匯力 consulting . testing . research

Noise Levels







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

WELLAB 匯力 consulting . testing . research

APPENDIX G
WATER QUALITY MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

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

Location: SYR-CS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)		Arsenic (μg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Oct-21	Sunny	11:42	Middle	0.1	30.5 30.6	30.6	7.5 7.5	7.5	0.8 0.7	0.8	81.2 81.0	81.1	6.1 6.0	6.1	20.4 20.5	20.5	6 6	6.0	13 15	14.0
4-Oct-21	Sunny	07:55	Middle	0.1	27.5 27.5	27.5	7.4 7.4	7.4	0.1 0.1	0.1	64.2 63.5	63.9	5.1 5.0	5.1	5.9 5.9	5.9	7 7	7.0	12 13	12.5
6-Oct-21	Sunny	12:50	Middle	0.1	29.6 29.5	29.6	7.9 7.9	7.9	0.2 0.2	0.2	40.6 39.5	40.1	3.1 3.0	3.1	4.5 4.6	4.6	6 6	6.0	19 17	18.0
8-Oct-21	Rainy	09:15	Middle	0.2	25.1 25.1	25.1	7.6 7.6	7.6	0.1 0.1	0.1	87.8 87.5	87.7	7.2 7.2	7.2	75.2 74.0	74.6	100 104	102.0	17 19	18.0
11-Oct-21	Sunny	11:01	Middle	0.1	25.6 25.6	25.6	7.3 7.3	7.3	0.1 0.1	0.1	77.1 76.3	76.7	6.3 6.2	6.3	12.0 12.3	12.2	22 22	22.0	10 10	10.0
15-Oct-21	Cloudy	10:45	Middle	0.2	25.3 25.3	25.3	7.3 7.3	7.3	0.1 0.1	0.1	79.0 78.8	78.9	6.5 6.5	6.5	10.1 10.1	10.1	17 17	17.0	9 9	9.0
18-Oct-21	Sunny	13:17	Middle	0.2	23.7 23.6	23.7	8.1 8.1	8.1	0.1 0.1	0.1	95.3 95.3	95.3	8.1 8.1	8.1	3.7 3.9	3.8	5 4	4.5	9 9	9.0
20-Oct-21	Sunny	10:49	Middle	0.2	24.3 24.3	24.3	7.4 7.4	7.4	0.1 0.1	0.1	74.8 74.8	74.8	6.3 6.3	6.3	4.6 4.3	4.5	6 5	5.5	7 8	7.5
22-Oct-21	Cloudy	14:18	Middle	0.2	20.7 20.7	20.7	8.1 8.0	8.1	0.1 0.1	0.1	93.4 92.8	93.1	8.4 8.3	8.4	4.3 4.2	4.3	4 4	4.0	8 8	8.0
25-Oct-21	Sunny	12:48	Middle	0.2	22.3 22.3	22.3	8.0 8.0	8.0	0.1 0.1	0.1	87.3 87.1	87.2	7.6 7.6	7.6	4.5 4.3	4.4	7 6	6.5	7 7	7.0
27-Oct-21	Cloudy	10:09	Middle	0.2	24.8 24.8	24.8	7.9 7.8	7.9	0.8 0.8	0.8	88.4 88.2	88.3	7.3 7.3	7.3	8.9 8.7	8.8	12 12	12.0	8 8	8.0
29-Oct-21	Sunny	11:19	Middle	0.1	24.4 24.4	24.4	7.5 7.5	7.5	0.1 0.1	0.1	72.6 72.5	72.6	6.1 6.1	6.1	4.6 4.5	4.6	8 7	7.5	11 10	10.5

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

Location: SYR-IS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)		Arsenic (μg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Oct-21	Sunny	11:59	Middle	0.3	31.9 31.9	31.9	7.7 7.7	7.7	0.2 0.2	0.2	132.1 132.2	132.2	9.7 9.7	9.7	19.9 19.5	19.7	14 14	14.0	15 16	15.5
4-Oct-21	Sunny	08:13	Middle	0.6	29.2 29.3	29.3	7.2 7.2	7.2	0.3 0.3	0.3	83.2 82.5	82.9	6.4 6.3	6.4	11.6 11.8	11.7	14 12	13.0	5 5	5.0
6-Oct-21	Sunny	13:09	Middle	0.7	31.3 31.2	31.3	7.6 7.6	7.6	0.3 0.3	0.3	91.0 90.6	90.8	6.7 6.7	6.7	17.5 17.5	17.5	16 20	18.0	4 5	4.5
8-Oct-21	Rainy	09:46	Middle	0.6	25.0 25.0	25.0	7.6 7.6	7.6	0.1 0.1	0.1	88.3 88.0	88.2	7.3 7.3	7.3	51.7 50.2	51.0	86 80	83.0	11 11	11.0
11-Oct-21	Sunny	11:19	Middle	0.2	27.7 27.7	27.7	7.5 7.5	7.5	0.1 0.1	0.1	114.4 114.6	114.5	9.0 9.0	9.0	9.7 9.5	9.6	12 13	12.5	10 9	9.5
15-Oct-21	Cloudy	11:02	Middle	0.4	25.4 25.3	25.4	7.5 7.5	7.5	0.1 0.1	0.1	101.8 101.8	101.8	8.4 8.4	8.4	9.2 9.0	9.1	8 10	9.0	10 10	10.0
18-Oct-21	Sunny	13:40	Middle	0.7	24.1 24.1	24.1	7.7 7.6	7.7	0.1 0.1	0.1	98.4 98.5	98.5	8.3 8.3	8.3	10.3 10.5	10.4	13 13	13.0	10 10	10.0
20-Oct-21	Sunny	11:15	Middle	0.6	26.7 26.7	26.7	7.3 7.3	7.3	0.2 0.2	0.2	79.9 79.3	79.6	6.4 6.4	6.4	8.2 8.3	8.3	9 11	10.0	5 4	4.5
22-Oct-21	Cloudy	14:32	Middle	0.5	21.2 21.2	21.2	8.1 8.1	8.1	0.2 0.2	0.2	111.4 111.4	111.4	9.9 9.9	9.9	9.3 9.3	9.3	14 12	13.0	9 9	9.0
25-Oct-21	Sunny	13:05	Middle	0.6	25.7 25.7	25.7	7.6 7.6	7.6	0.2 0.2	0.2	85.4 85.4	85.4	7.0 7.0	7.0	10.4 10.5	10.5	10 9	9.5	6 6	6.0
27-Oct-21	Cloudy	10:26	Middle	0.2	24.7 24.8	24.8	7.9 7.9	7.9	0.2 0.2	0.2	94.3 94.2	94.3	7.8 7.8	7.8	5.7 5.6	5.7	21 24	22.5	8 9	8.5
29-Oct-21	Sunny	11:38	Middle	0.1	27.3 27.3	27.3	7.8 7.8	7.8	0.1 0.1	0.1	118.9 119.1	119.0	9.4 9.4	9.4	12.9 13.1	13.0	12 11	11.5	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
2-Oct-21	Sunny	13:41	Middle	0.1	32.4 32.4	32.4	7.4 7.4	7.4	0.1 0.1	0.1	126.0 126.1	126.1	9.2 9.2	9.2	10.0 10.2	10.1	8 8	8.0
4-Oct-21	Sunny	09:57	Middle	0.1	27.9 27.9	27.9	7.3 7.3	7.3	0.1 0.1	0.1	95.9 95.9	95.9	7.5 7.5	7.5	6.6 6.5	6.6	8 8	8.0
6-Oct-21	Sunny	14:47	Middle	0.1	30.1 30.1	30.1	7.6 7.6	7.6	0.1 0.1	0.1	114.4 114.7	114.6	8.6 8.7	8.7	8.6 8.7	8.7	12 12	12.0
8-Oct-21	Rainy	11:40	Middle	0.2	24.8 24.8	24.8	7.5 7.5	7.5	0.03 0.03	0.03	98.9 98.9	98.9	8.2 8.2	8.2	69.8 70.0	69.9	95 100	97.5
11-Oct-21	Sunny	12:57	Middle	0.1	27.0 27.0	27.0	7.1 7.1	7.1	0.1 0.1	0.1	101.2 101.2	101.2	8.1 8.1	8.1	10.8 10.8	10.8	7 8	7.5
15-Oct-21	Cloudy	10:16	Middle	0.2	25.4 25.4	25.4	7.3 7.3	7.3	0.1 0.1	0.1	90.9 90.8	90.9	7.5 7.5	7.5	8.4 8.5	8.5	8 8	8.0
18-Oct-21	Sunny	15:08	Middle	0.2	26.3 26.3	26.3	7.4 7.4	7.4	0.1 0.1	0.1	121.0 121.1	121.1	9.8 9.8	9.8	7.4 7.3	7.4	9 10	9.5
20-Oct-21	Sunny	14:17	Middle	0.2	28.4 28.4	28.4	7.6 7.6	7.6	0.1 0.1	0.1	126.0 126.7	126.4	9.8 9.9	9.9	7.4 7.9	7.7	7 7	7.0
22-Oct-21	Cloudy	16:04	Middle	0.1	22.4 22.4	22.4	7.4 7.4	7.4	0.1 0.1	0.1	101.4 101.3	101.4	8.8 8.8	8.8	10.9 10.6	10.8	12 11	11.5
25-Oct-21	Sunny	14:50	Middle	0.2	26.1 26.1	26.1	7.6 7.6	7.6	0.1 0.1	0.1	115.5 115.6	115.6	9.4 9.4	9.4	10.4 10.7	10.6	10 8	9.0
27-Oct-21	Cloudy	11:36	Middle	0.2	25.5 25.5	25.5	7.5 7.5	7.5	0.1 0.1	0.1	104.8 104.9	104.9	8.6 8.6	8.6	8.5 8.3	8.4	9 9	9.0
29-Oct-21	Sunny	10:55	Middle	0.2	25.5 25.4	25.5	7.6 7.5	7.6	0.1 0.1	0.1	105.6 105.8	105.7	8.7 8.7	8.7	8.6 8.5	8.6	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-IS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Oct-21	Sunny	12:27	Middle	0.5	31.7 31.8	31.8	7.4 7.4	7.4	0.2 0.2	0.2	80.5 80.7	80.6	5.9 5.9	5.9	5.9 6.0	6.0	4 4	4.0
4-Oct-21	Sunny	08:43	Middle	0.5	28.1 28.1	28.1	7.5 7.5	7.5	0.1 0.1	0.1	76.1 75.9	76.0	6.0 5.9	6.0	6.2 6.2	6.2	6 6	6.0
6-Oct-21	Sunny	13:43	Middle	0.6	29.3 29.3	29.3	7.8 7.8	7.8	0.1 0.1	0.1	84.9 84.3	84.6	6.5 6.5	6.5	6.6 6.4	6.5	8 8	8.0
8-Oct-21	Rainy	10:31	Middle	0.7	24.9 24.9	24.9	7.8 7.8	7.8	0.04 0.04	0.04	98.9 98.9	98.9	8.2 8.2	8.2	72.1 70.6	71.4	95 93	94.0
11-Oct-21	Sunny	11:49	Middle	0.5	26.5 26.5	26.5	7.5 7.5	7.5	0.1 0.1	0.1	98.1 98.0	98.1	7.9 7.9	7.9	7.4 7.5	7.5	8 8	8.0
15-Oct-21	Cloudy	09:12	Middle	0.4	25.5 25.5	25.5	7.8 7.7	7.8	0.1 0.1	0.1	86.8 86.4	86.6	7.1 7.1	7.1	5.4 5.3	5.4	5 5	5.0
18-Oct-21	Sunny	14:04	Middle	0.6	25.4 25.3	25.4	7.6 7.6	7.6	0.1 0.1	0.1	111.0 111.5	111.3	9.1 9.2	9.2	7.5 7.2	7.4	8 8	8.0
20-Oct-21	Sunny	13:07	Middle	0.5	26.8 26.8	26.8	8.0 7.9	8.0	0.1 0.1	0.1	96.2 96.1	96.2	7.7 7.7	7.7	6.4 6.2	6.3	5 5	5.0
22-Oct-21	Cloudy	14:57	Middle	0.7	21.7 21.7	21.7	7.9 7.9	7.9	0.2 0.2	0.2	95.0 94.7	94.9	8.3 8.3	8.3	4.8 4.9	4.9	5 5	5.0
25-Oct-21	Sunny	13:33	Middle	0.6	23.9 23.8	23.9	7.7 7.7	7.7	0.1 0.1	0.1	87.1 86.9	87.0	7.4 7.3	7.4	5.8 5.8	5.8	5 4	4.5
27-Oct-21	Cloudy	11:00	Middle	0.4	24.9 24.9	24.9	7.5 7.5	7.5	0.1 0.1	0.1	75.3 75.2	75.3	6.2 6.2	6.2	4.4 4.4	4.4	5 5	5.0
29-Oct-21	Sunny	09:46	Middle	0.4	24.9 24.9	24.9	7.6 7.5	7.6	0.1 0.1	0.1	73.5 73.0	73.3	6.1 6.0	6.1	6.3 6.2	6.3	6 7	6.5

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

Location: SHST-IS2

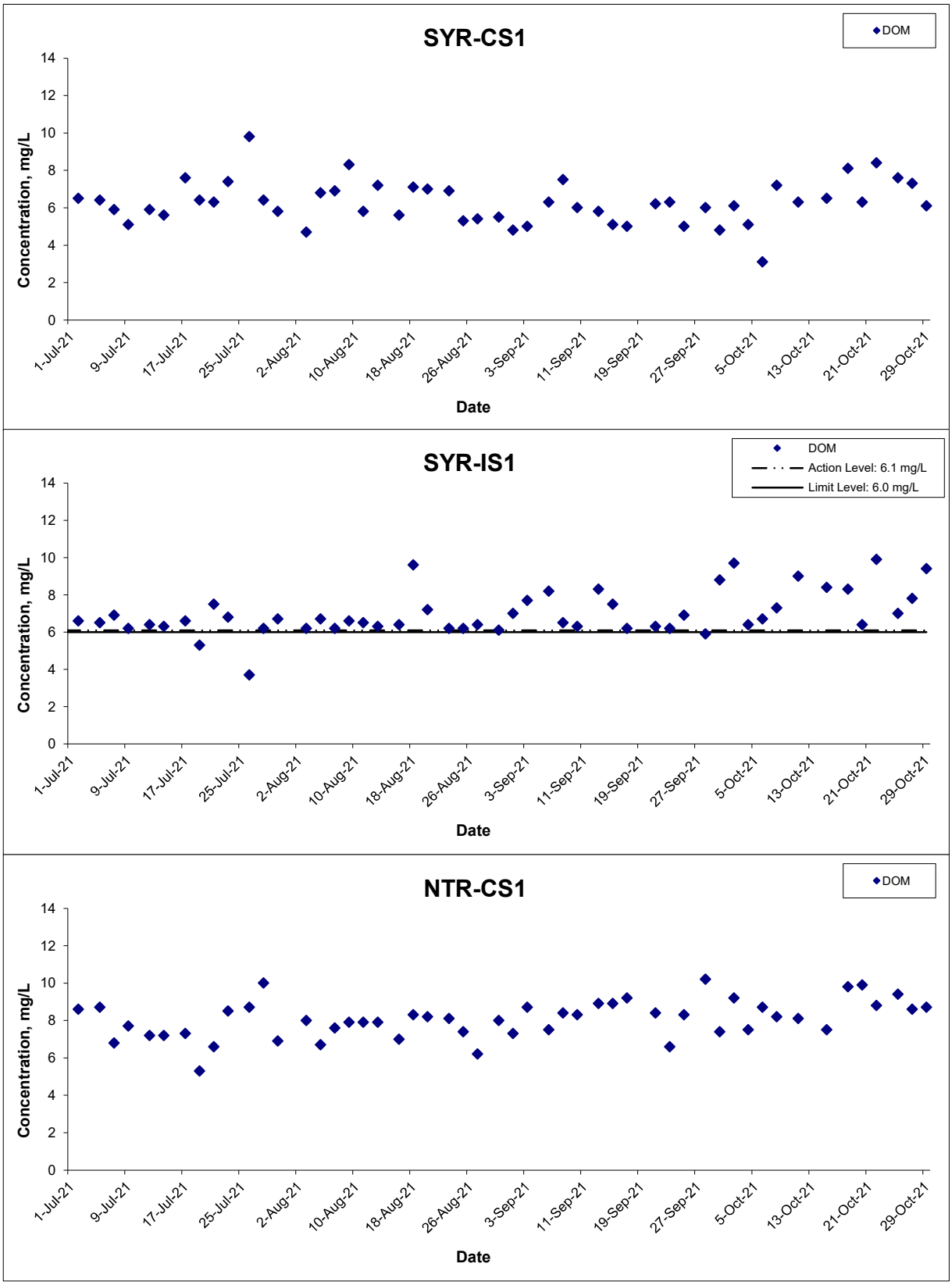
Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Oct-21	Sunny	12:42	Middle	0.1	30.3 30.5	30.4	7.6 7.6	7.6	0.1 0.1	0.1	98.6 98.8	98.7	7.4 7.4	7.4	11.1 11.5	11.3	9 9	9.0
4-Oct-21	Sunny	09:01	Middle	0.1	26.3 26.3	26.3	7.4 7.4	7.4	0.1 0.1	0.1	93.5 92.0	92.8	7.5 7.4	7.5	6.6 6.6	6.6	6 6	6.0
6-Oct-21	Sunny	14:03	Middle	0.2	27.8 27.8	27.8	8.0 8.0	8.0	0.1 0.1	0.1	94.8 94.4	94.6	7.4 7.4	7.4	7.9 7.9	7.9	14 14	14.0
8-Oct-21	Rainy	10:47	Middle	0.1	24.8 24.8	24.8	7.4 7.4	7.4	0.03 0.03	0.03	98.4 98.4	98.4	8.2 8.2	8.2	78.5 75.7	77.1	89 81	85.0
11-Oct-21	Sunny	12:07	Middle	0.1	26.1 26.0	26.1	7.8 7.7	7.8	0.04 0.04	0.04	95.2 95.0	95.1	7.7 7.7	7.7	12.0 11.9	12.0	8 8	8.0
15-Oct-21	Cloudy	09:29	Middle	0.2	24.9 24.9	24.9	8.0 8.0	8.0	0.1 0.1	0.1	94.8 94.5	94.7	7.9 7.8	7.9	8.8 9.1	9.0	8 8	8.0
18-Oct-21	Sunny	14:34	Middle	0.2	25.5 25.5	25.5	8.0 7.8	7.9	0.04 0.04	0.04	101.6 101.4	101.5	8.3 8.3	8.3	7.7 7.8	7.8	11 10	10.5
20-Oct-21	Sunny	13:26	Middle	0.2	26.7 26.6	26.7	8.0 8.0	8.0	0.1 0.1	0.1	99.2 99.2	99.2	8.0 8.0	8.0	8.9 8.7	8.8	8 8	8.0
22-Oct-21	Cloudy	15:18	Middle	0.1	20.6 20.6	20.6	8.3 8.3	8.3	0.2 0.2	0.2	100.7 100.3	100.5	9.0 9.0	9.0	9.1 9.0	9.1	6 6	6.0
25-Oct-21	Sunny	13:53	Middle	0.2	23.9 23.8	23.9	7.9 7.9	7.9	0.1 0.1	0.1	97.6 97.4	97.5	8.2 8.2	8.2	9.6 9.5	9.6	5 4	4.5
27-Oct-21	Cloudy	12:24	Middle	0.3	25.2 25.2	25.2	7.7 7.7	7.7	0.1 0.1	0.1	92.9 92.9	92.9	7.7 7.7	7.7	8.6 8.8	8.7	9 9	9.0
29-Oct-21	Sunny	10:03	Middle	0.2	24.2 24.2	24.2	7.7 7.7	7.7	0.1 0.1	0.1	87.4 87.3	87.4	7.3 7.3	7.3	9.9 10.0	10.0	7 8	7.5

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

Location: MWR-IS3

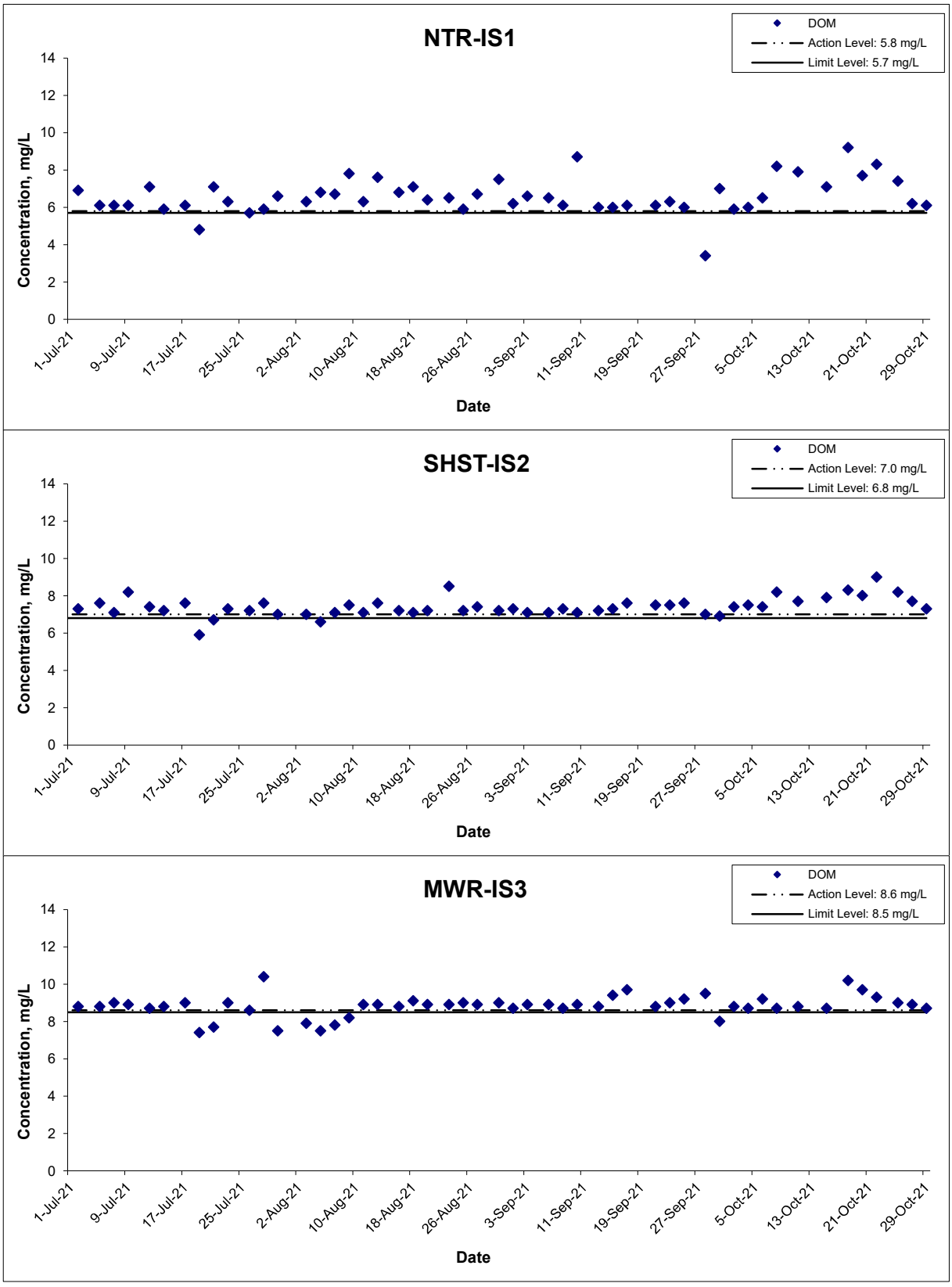
Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Oct-21	Sunny	13:18	Middle	0.1	32.6 32.7	32.7	8.1 8.1	8.1	0.2 0.2	0.2	120.8 121.2	121.0	8.7 8.8	8.8	8.5 8.3	8.4	11 13	12.0
4-Oct-21	Sunny	09:40	Middle	0.1	28.2 28.2	28.2	7.4 7.4	7.4	0.1 0.1	0.1	112.0 112.0	112.0	8.7 8.7	8.7	5.6 5.7	5.7	9 8	8.5
6-Oct-21	Sunny	14:34	Middle	0.1	30.5 30.4	30.5	7.8 7.8	7.8	0.1 0.1	0.1	121.8 122.0	121.9	9.1 9.2	9.2	7.6 7.6	7.6	14 13	13.5
8-Oct-21	Rainy	11:17	Middle	0.2	24.8 24.8	24.8	7.7 7.7	7.7	0.04 0.04	0.04	104.7 104.4	104.6	8.7 8.7	8.7	61.2 62.0	61.6	71 68	69.5
11-Oct-21	Sunny	12:42	Middle	0.1	27.3 27.3	27.3	7.1 7.1	7.1	0.1 0.1	0.1	111.2 111.2	111.2	8.8 8.8	8.8	7.6 8.0	7.8	8 7	7.5
15-Oct-21	Cloudy	10:04	Middle	0.2	25.4 25.4	25.4	7.5 7.5	7.5	0.1 0.1	0.1	105.6 105.9	105.8	8.7 8.7	8.7	5.7 5.8	5.8	6 6	6.0
18-Oct-21	Sunny	14:54	Middle	0.2	26.5 26.6	26.6	7.6 7.5	7.6	0.1 0.1	0.1	126.0 126.7	126.4	10.1 10.2	10.2	6.6 6.2	6.4	8 8	8.0
20-Oct-21	Sunny	13:59	Middle	0.2	28.7 28.7	28.7	8.0 8.0	8.0	0.1 0.1	0.1	125.6 126.0	125.8	9.7 9.7	9.7	6.0 6.0	6.0	8 8	8.0
22-Oct-21	Cloudy	15:43	Middle	0.1	21.1 21.1	21.1	8.1 8.0	8.1	0.1 0.1	0.1	104.1 104.0	104.1	9.3 9.3	9.3	12.3 12.0	12.2	13 12	12.5
25-Oct-21	Sunny	14:29	Middle	0.2	26.1 26.1	26.1	7.9 7.8	7.9	0.1 0.1	0.1	110.9 111.0	111.0	9.0 9.0	9.0	12.1 12.0	12.1	10 10	10.0
27-Oct-21	Cloudy	11:54	Middle	0.3	25.3 25.3	25.3	7.7 7.7	7.7	0.1 0.1	0.1	107.8 107.4	107.6	8.9 8.8	8.9	9.0 8.9	9.0	9 9	9.0
29-Oct-21	Sunny	10:41	Middle	0.2	25.4 25.4	25.4	7.8 7.8	7.8	0.1 0.1	0.1	105.9 106.0	106.0	8.7 8.7	8.7	5.8 5.7	5.8	9 9	9.0

Dissolved Oxygen (Middle)



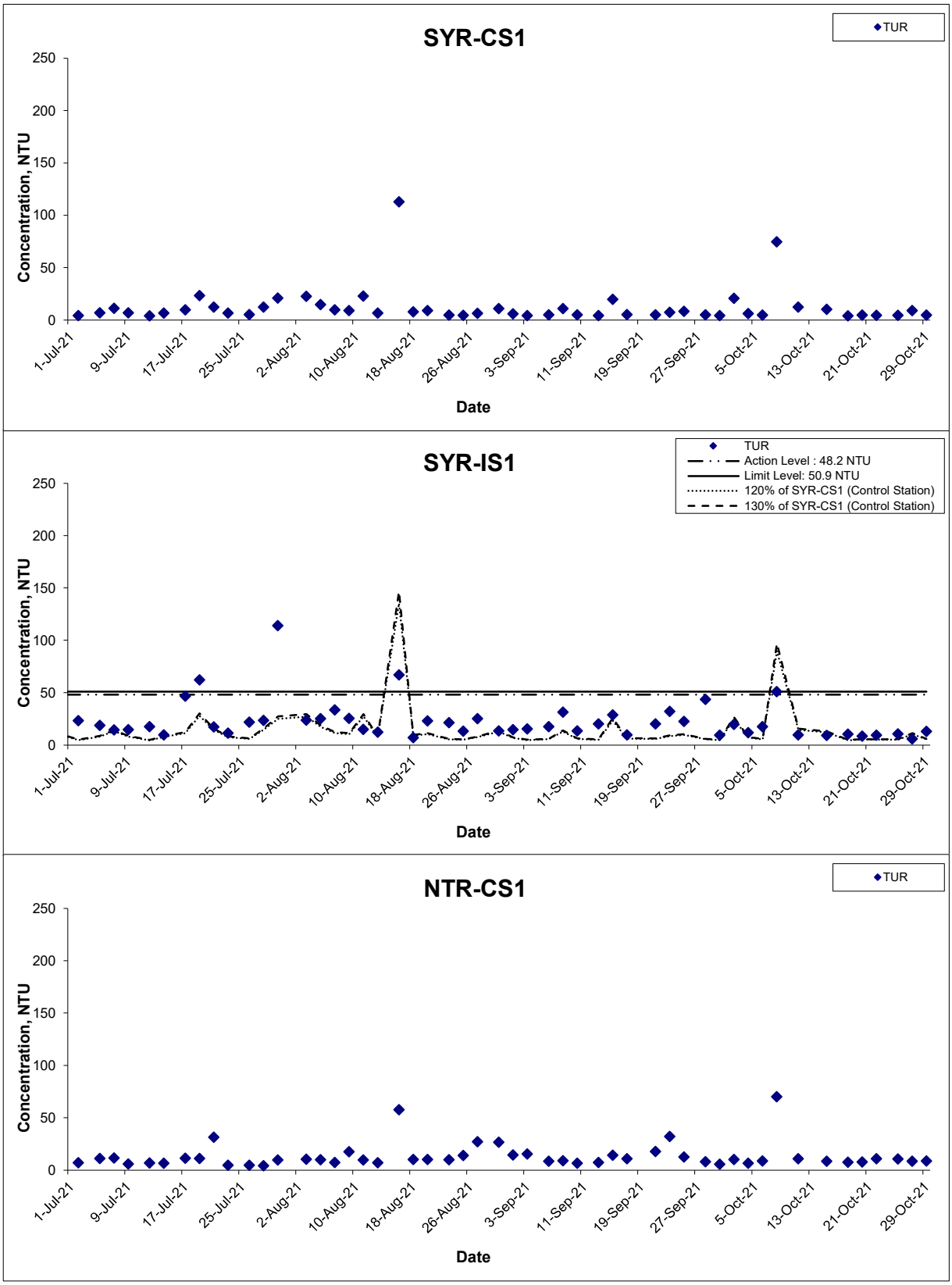
Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: WMA20002	WELLAB 匯力 consulting . testing . research
		Date: Oct 21	Appendix: G	

Dissolved Oxygen (Middle)



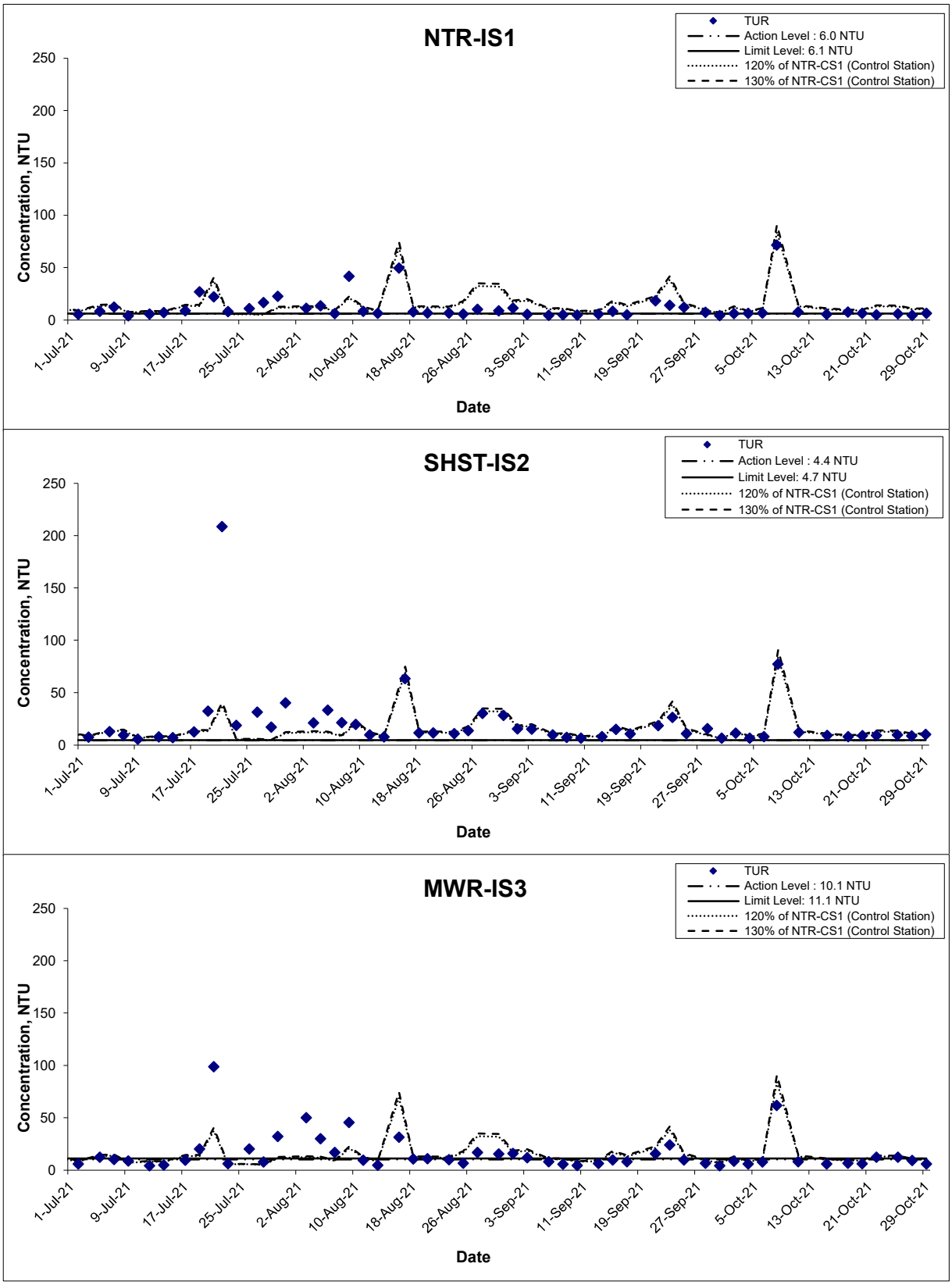
Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S Date: Oct 21	Project No.: WMA20002 Appendix: G	WELLAB 匯力 consulting . testing . research

Turbidity (Depth-averaged)



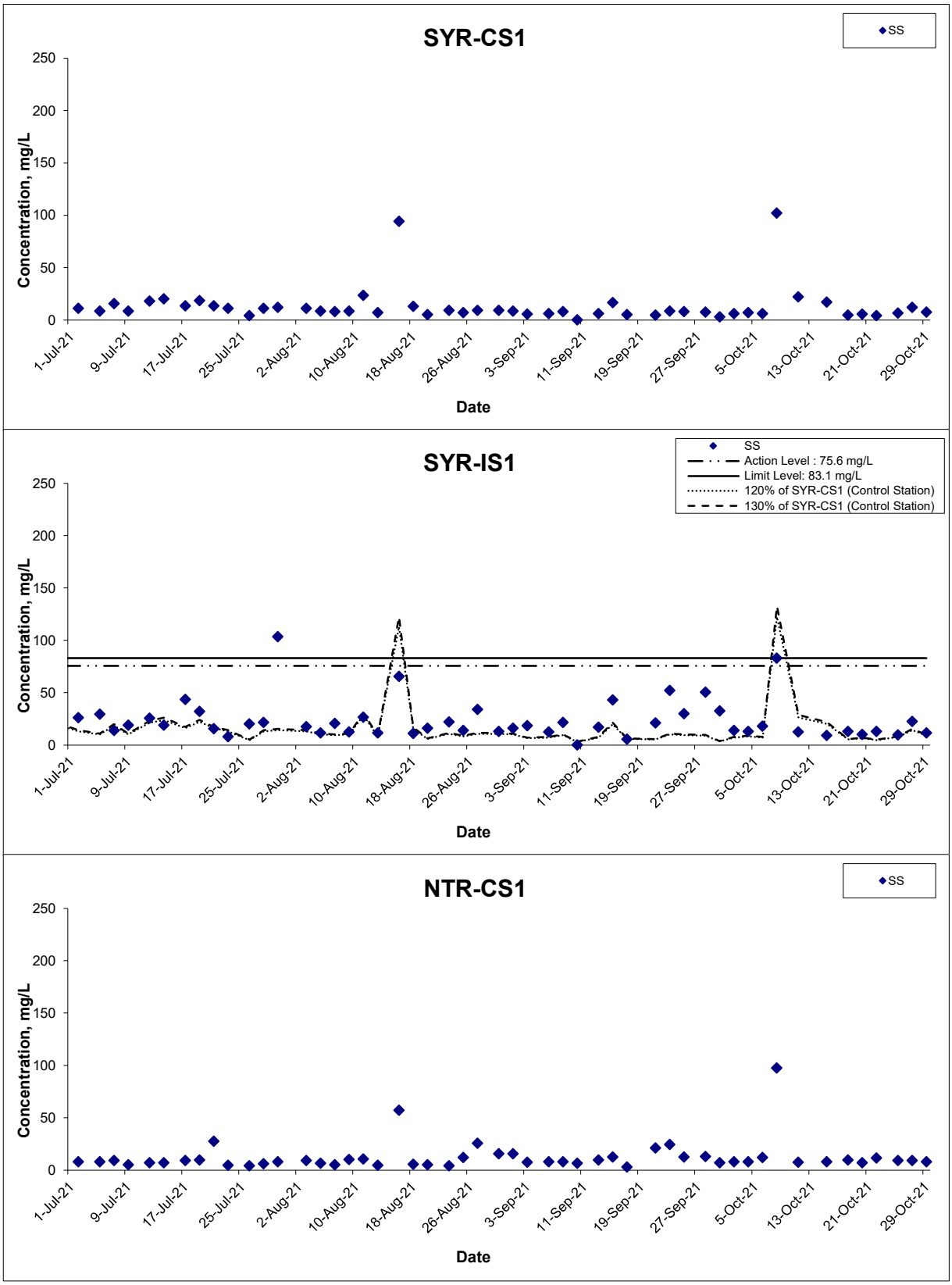
Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: WMA20002	WELLAB 匯力 consulting . testing . research
		Date: Oct 21	Appendix: G	

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	WELLAB 匯力 consulting . testing . research
		Date Oct 21	Appendix G	

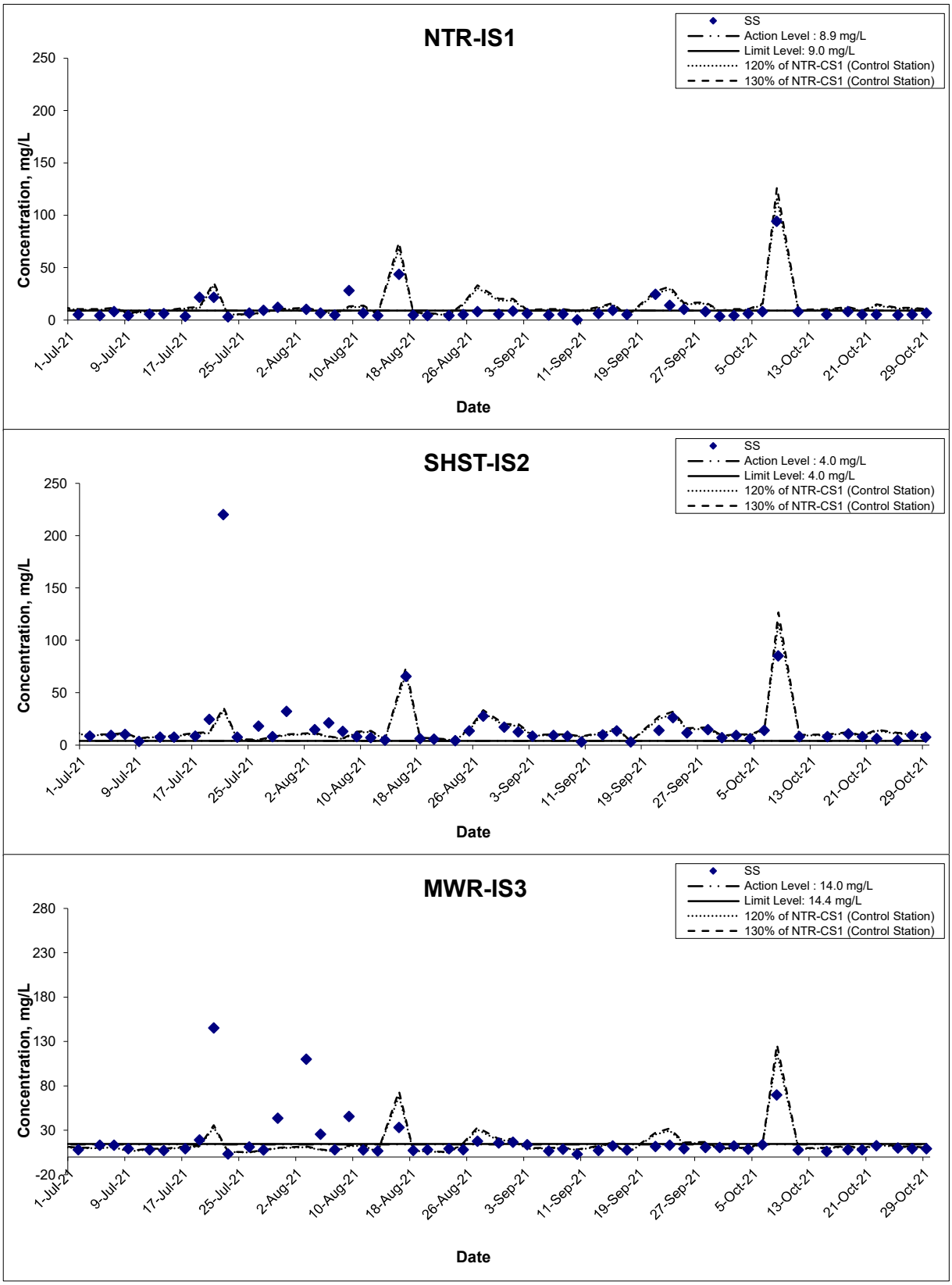
Suspended Solids (Depth-averaged)



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: Oct 21	Appendix: G	

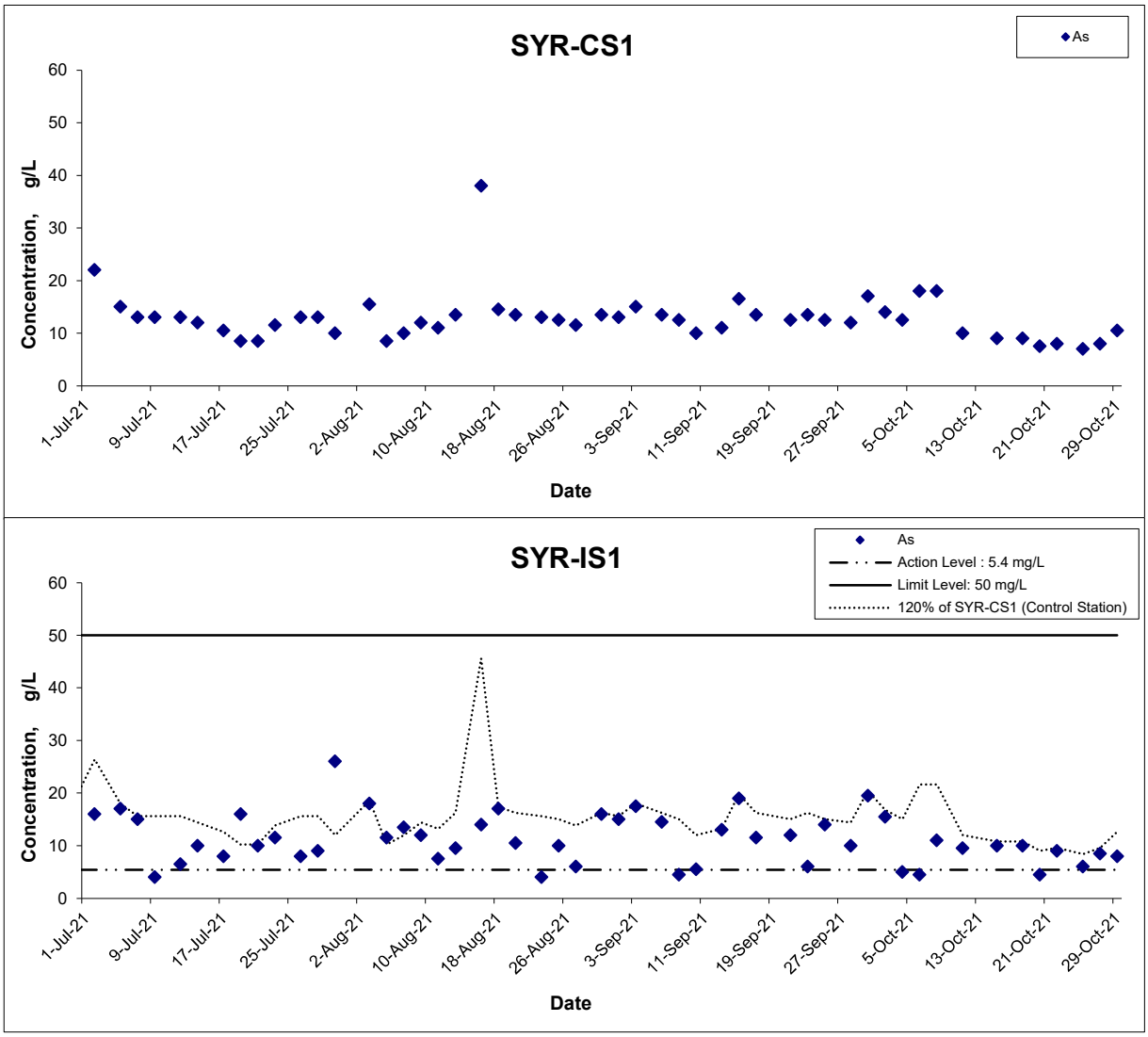
Suspended Solids (Depth-averaged)



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: Oct 21	Appendix: G	

Arsenic (Depth-averaged)



Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S Date: Oct 21	Project No.: WMA20002 Appendix: G	WELLAB 匯力 consulting . testing . research

APPENDIX H
LABORATORY TESTING REPORTS FOR LABORATORY ANALYSIS

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

TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	35786
Date of Issue:	2021-10-07
Date Received:	2021-10-02
Date Tested:	2021-10-02
Date Completed:	2021-10-07
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35786
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. : WMA20002/211002
Sampling Date : 2021-10-02

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.	35786-2	35786-3	35786-5	35786-6
Total Suspended Solids (mg/L)	6	6	14	14
Arsenic (µg/L)	13	15	15	16

Remarks: 1) < = less than

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

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

PATRICK TSE
General Manager

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TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	35786A
Date of Issue:	2021-10-07
Date Received:	2021-10-02
Date Tested:	2021-10-02
Date Completed:	2021-10-07
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35786A
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. : WMA20002/211002
Sampling Date : 2021-10-02

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.	35786-8	35786-9	35786-11	35786-12
Total Suspended Solids (mg/L)	8	8	4	4

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35786-14	35786-15	35786-17	35786-18
Total Suspended Solids (mg/L)	9	9	11	13

Remarks: 1) < = less than

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General Manager

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TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	35802
Date of Issue:	2021-10-08
Date Received:	2021-10-04
Date Tested:	2021-10-04
Date Completed:	2021-10-08
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35802
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. : WMA20002/211004
Sampling Date : 2021-10-04

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.	35802-2	35802-3	35802-5	35802-6
Total Suspended Solids (mg/L)	7	7	14	12
Arsenic (µg/L)	12	13	5	5

Remarks: 1) < = less than

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TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	35802A
Date of Issue:	2021-10-08
Date Received:	2021-10-04
Date Tested:	2021-10-04
Date Completed:	2021-10-08
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35802A
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. : WMA20002/211004
Sampling Date : 2021-10-04

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.	35802-8	35802-9	35802-11	35802-12
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.	35802-14	35802-15	35802-17	35802-18
Total Suspended Solids (mg/L)	6	6	9	8

Remarks: 1) < = less than

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TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	35817
Date of Issue:	2021-10-08
Date Received:	2021-10-06
Date Tested:	2021-10-06
Date Completed:	2021-10-08
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35817
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. : WMA20002/211006
Sampling Date : 2021-10-06

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.	35817-2	35817-3	35817-5	35817-6
Total Suspended Solids (mg/L)	6	6	16	20
Arsenic (μg/L)	19	17	4	5

Remarks: 1) < = less than

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TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	35817A
Date of Issue:	2021-10-08
Date Received:	2021-10-06
Date Tested:	2021-10-06
Date Completed:	2021-10-08
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35817A
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. : WMA20002/211006
Sampling Date : 2021-10-06

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.	35817-8	35817-9	35817-11	35817-12
Total Suspended Solids (mg/L)	12	12	8	8

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35817-14	35817-15	35817-17	35817-18
Total Suspended Solids (mg/L)	14	14	14	13

Remarks: 1) < = less than

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

ATTN: **Ms. Ivy Tam**

Report No.:	35836
Date of Issue:	2021-10-12
Date Received:	2021-10-08
Date Tested:	2021-10-08
Date Completed:	2021-10-12
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35836
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. : WMA20002/211008
Sampling Date : 2021-10-08

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.	35836-2	35836-3	35836-5	35836-6
Total Suspended Solids (mg/L)	100	104	86	80
Arsenic (µg/L)	17	19	11	11

Remarks: 1) < = less than

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

TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	35836A
Date of Issue:	2021-10-12
Date Received:	2021-10-08
Date Tested:	2021-10-08
Date Completed:	2021-10-12
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35836A
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. : WMA20002/211008
Sampling Date : 2021-10-08

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.	35836-8	35836-9	35836-11	35836-12
Total Suspended Solids (mg/L)	95	100	95	93

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35836-14	35836-15	35836-17	35836-18
Total Suspended Solids (mg/L)	89	81	71	68

Remarks: 1) < = less than

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

ATTN: **Ms. Ivy Tam**

Report No.:	35844
Date of Issue:	2021-10-18
Date Received:	2021-10-11
Date Tested:	2021-10-11
Date Completed:	2021-10-18
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35844
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. : WMA20002/211011
Sampling Date : 2021-10-11

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.	35844-2	35844-3	35844-5	35844-6
Total Suspended Solids (mg/L)	22	22	12	13
Arsenic (µg/L)	10	10	10	9

Remarks: 1) < = less than

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

TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	35844A
Date of Issue:	2021-10-18
Date Received:	2021-10-11
Date Tested:	2021-10-11
Date Completed:	2021-10-18
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35844A
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. : WMA20002/211011
Sampling Date : 2021-10-11

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.	35844-8	35844-9	35844-11	35844-12
Total Suspended Solids (mg/L)	7	8	8	8

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35844-14	35844-15	35844-17	35844-18
Total Suspended Solids (mg/L)	8	8	8	7

Remarks: 1) < = less than

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General Manager

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TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	35856
Date of Issue:	2021-10-19
Date Received:	2021-10-15
Date Tested:	2021-10-15
Date Completed:	2021-10-19
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35856
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. : WMA20002/211015
Sampling Date : 2021-10-15

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.	35856-2	35856-3	35856-5	35856-6
Total Suspended Solids (mg/L)	17	17	8	10
Arsenic (µg/L)	9	9	10	10

Remarks: 1) < = less than

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TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	35856A
Date of Issue:	2021-10-19
Date Received:	2021-10-15
Date Tested:	2021-10-15
Date Completed:	2021-10-19
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35856A
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. : WMA20002/211015
Sampling Date : 2021-10-15

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.	35856-8	35856-9	35856-11	35856-12
Total Suspended Solids (mg/L)	8	8	5	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35856-14	35856-15	35856-17	35856-18
Total Suspended Solids (mg/L)	8	8	6	6

Remarks: 1) < = less than

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ATTN: **Ms. Ivy Tam**

Report No.:	35865
Date of Issue:	2021-10-21
Date Received:	2021-10-18
Date Tested:	2021-10-18
Date Completed:	2021-10-21
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35865
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. : WMA20002/211018
Sampling Date : 2021-10-18

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.	35865-2	35865-3	35865-5	35865-6
Total Suspended Solids (mg/L)	5	4	13	13
Arsenic (µg/L)	9	9	10	10

Remarks: 1) < = less than

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Shatin, N.T.

ATTN: **Ms. Ivy Tam**

Report No.:	35865A
Date of Issue:	2021-10-21
Date Received:	2021-10-18
Date Tested:	2021-10-18
Date Completed:	2021-10-21
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35865A
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. : WMA20002/211018
Sampling Date : 2021-10-18

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.	35865-8	35865-9	35865-11	35865-12
Total Suspended Solids (mg/L)	9	10	8	8

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35865-14	35865-15	35865-17	35865-18
Total Suspended Solids (mg/L)	11	10	8	8

Remarks: 1) < = less than

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ATTN: **Ms. Ivy Tam**

Report No.:	35871
Date of Issue:	2021-10-21
Date Received:	2021-10-20
Date Tested:	2021-10-20
Date Completed:	2021-10-21
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35871
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. : WMA20002/211020
Sampling Date : 2021-10-20

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.	35871-2	35871-3	35871-5	35871-6
Total Suspended Solids (mg/L)	6	5	9	11
Arsenic (µg/L)	7	8	5	4

Remarks: 1) < = less than

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ATTN: **Ms. Ivy Tam**

Report No.:	35871A
Date of Issue:	2021-10-21
Date Received:	2021-10-20
Date Tested:	2021-10-20
Date Completed:	2021-10-21
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35871A
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. : WMA20002/211020
Sampling Date : 2021-10-20

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.	35871-8	35871-9	35871-11	35871-12
Total Suspended Solids (mg/L)	7	7	5	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35871-14	35871-15	35871-17	35871-18
Total Suspended Solids (mg/L)	8	8	8	8

Remarks: 1) < = less than

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ATTN: **Ms. Ivy Tam**

Report No.:	35881
Date of Issue:	2021-10-26
Date Received:	2021-10-22
Date Tested:	2021-10-22
Date Completed:	2021-10-26
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35881
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. : WMA20002/211022
Sampling Date : 2021-10-22

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.	35881-2	35881-3	35881-5	35881-6
Total Suspended Solids (mg/L)	4	4	14	12
Arsenic (µg/L)	8	8	9	9

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Shatin, N.T.

ATTN: **Ms. Ivy Tam**

Report No.:	35881A
Date of Issue:	2021-10-26
Date Received:	2021-10-22
Date Tested:	2021-10-22
Date Completed:	2021-10-26
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35881A
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. : WMA20002/211022
Sampling Date : 2021-10-22

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.	35881-8	35881-9	35881-11	35881-12
Total Suspended Solids (mg/L)	12	11	5	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35881-14	35881-15	35881-17	35881-18
Total Suspended Solids (mg/L)	6	6	13	12

Remarks: 1) < = less than

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

ATTN: **Ms. Ivy Tam**

Report No.:	35889
Date of Issue:	2021-10-26
Date Received:	2021-10-25
Date Tested:	2021-10-25
Date Completed:	2021-10-26
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35889
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. : WMA20002/211025
Sampling Date : 2021-10-25

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.	35889-2	35889-3	35889-5	35889-6
Total Suspended Solids (mg/L)	7	6	10	9
Arsenic (μg/L)	7	7	6	6

Remarks: 1) < = less than

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

ATTN: **Ms. Ivy Tam**

Report No.:	35889A
Date of Issue:	2021-10-26
Date Received:	2021-10-25
Date Tested:	2021-10-25
Date Completed:	2021-10-26
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35889A
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. : WMA20002/211025
Sampling Date : 2021-10-25

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.	35889-8	35889-9	35889-11	35889-12
Total Suspended Solids (mg/L)	10	8	5	4

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35889-14	35889-15	35889-17	35889-18
Total Suspended Solids (mg/L)	5	4	10	10

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Ms. Ivy Tam**

Report No.:	35896
Date of Issue:	2021-11-02
Date Received:	2021-10-27
Date Tested:	2021-10-27
Date Completed:	2021-11-02
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35896
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. : WMA20002/211027
Sampling Date : 2021-10-27

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.	35896-2	35896-3	35896-5	35896-6
Total Suspended Solids (mg/L)	12	12	21	24
Arsenic (μg/L)	8	8	8	9

Remarks: 1) < = less than

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ATTN: **Ms. Ivy Tam**

Report No.:	35896A
Date of Issue:	2021-11-02
Date Received:	2021-10-27
Date Tested:	2021-10-27
Date Completed:	2021-11-02
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35896A
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. : WMA20002/211027
Sampling Date : 2021-10-27

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.	35896-8	35896-9	35896-11	35896-12
Total Suspended Solids (mg/L)	9	9	5	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35896-14	35896-15	35896-17	35896-18
Total Suspended Solids (mg/L)	9	9	9	9

Remarks: 1) < = less than

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

ATTN: **Ms. Ivy Tam**

Report No.:	35911
Date of Issue:	2021-11-02
Date Received:	2021-10-29
Date Tested:	2021-10-29
Date Completed:	2021-11-02
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35911
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. : WMA20002/211029
Sampling Date : 2021-10-29

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.	35911-2	35911-3	35911-5	35911-6
Total Suspended Solids (mg/L)	8	7	12	11
Arsenic (µg/L)	11	10	8	8

Remarks: 1) < = less than

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

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

PATRICK TSE
General Manager

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TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	35911A
Date of Issue:	2021-11-02
Date Received:	2021-10-29
Date Tested:	2021-10-29
Date Completed:	2021-11-02
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35911A
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. : WMA20002/211029
Sampling Date : 2021-10-29

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.	35911-8	35911-9	35911-11	35911-12
Total Suspended Solids (mg/L)	8	8	6	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35911-14	35911-15	35911-17	35911-18
Total Suspended Solids (mg/L)	7	8	9	9

Remarks: 1) < = less than

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General Manager

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APPENDIX I
QUALITY CONTROL REPORTS FOR SS AND ARSENIC LABORATORY ANALYSIS

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TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	QC35786
Date of Issue:	2021-10-05
Date Received:	2021-10-02
Date Tested:	2021-10-02
Date Completed:	2021-10-05
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 (%)	101	101	80-120
Arsenic (%)	116	N/A	80-120

Sample Spike

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

Sample Duplicate

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35786.

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

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TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	QC35802
Date of Issue:	2021-10-08
Date Received:	2021-10-04
Date Tested:	2021-10-04
Date Completed:	2021-10-08
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 (%)	110	104	80-120
Arsenic (%)	107	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	106	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	4	RPD≤5%
Arsenic (%)	10	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 35802.

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
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ATTN: **Ms. Ivy Tam**

Report No.:	QC35817
Date of Issue:	2021-10-08
Date Received:	2021-10-06
Date Tested:	2021-10-06
Date Completed:	2021-10-08
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 (%)	101	106	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 (%)	84	N/A	80-120

Sample Duplicate

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35817.

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TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	QC35836
Date of Issue:	2021-10-12
Date Received:	2021-10-08
Date Tested:	2021-10-08
Date Completed:	2021-10-12
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 (%)	100	100	80-120
Arsenic (%)	104	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	95	N/A	80-120

Sample Duplicate

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35836.

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TEST REPORT

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

Report No.:	QC35844
Date of Issue:	2021-10-18
Date Received:	2021-10-11
Date Tested:	2021-10-11
Date Completed:	2021-10-18

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 (%)	106	103	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 (%)	4	1	RPD≤5%
Arsenic (%)	12	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 35844.

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TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	QC35856
Date of Issue:	2021-10-19
Date Received:	2021-10-15
Date Tested:	2021-10-15
Date Completed:	2021-10-19
Page:	1 of 1

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	105	105	80-120
Arsenic (%)	111	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	95	N/A	80-120

Sample Duplicate

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35856.

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General Manager

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TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	QC35865
Date of Issue:	2021-10-21
Date Received:	2021-10-18
Date Tested:	2021-10-18
Date Completed:	2021-10-21
Page:	1 of 1

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	104	101	80-120
Arsenic (%)	98	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	86	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	3	RPD≤5%
Arsenic (%)	11	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35865.

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General Manager

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TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	QC35871
Date of Issue:	2021-10-21
Date Received:	2021-10-20
Date Tested:	2021-10-20
Date Completed:	2021-10-21
Page:	1 of 1

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	102	106	80-120
Arsenic (%)	98	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	104	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	2	4	RPD≤5%
Arsenic (%)	8	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35871.

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

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General Manager

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

ATTN: **Ms. Ivy Tam**

Report No.:	QC35881
Date of Issue:	2021-10-26
Date Received:	2021-10-22
Date Tested:	2021-10-22
Date Completed:	2021-10-26
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	99	80-120
Arsenic (%)	104	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	96	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	2	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 35881.

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General Manager

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

ATTN: **Ms. Ivy Tam**

Report No.:	QC35889
Date of Issue:	2021-10-26
Date Received:	2021-10-25
Date Tested:	2021-10-25
Date Completed:	2021-10-26
Page:	1 of 1

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	109	103	80-120
Arsenic (%)	110	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	102	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 35889.

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

ATTN: **Ms. Ivy Tam**

Report No.:	QC35896
Date of Issue:	2021-11-02
Date Received:	2021-10-27
Date Tested:	2021-10-27
Date Completed:	2021-11-02
Page:	1 of 1

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	102	100	80-120
Arsenic (%)	93	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 (%)	2	0	RPD≤5%
Arsenic (%)	1	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35896.

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

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TEST REPORT

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

ATTN: **Ms. Ivy Tam**

Report No.:	QC35911
Date of Issue:	2021-11-02
Date Received:	2021-10-29
Date Tested:	2021-10-29
Date Completed:	2021-11-02
Page:	1 of 1

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	99	112	80-120
Arsenic (%)	93	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	89	N/A	80-120

Sample Duplicate

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35911.

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APPENDIX J
LANDFILL GAS MONITORING RESULTS

Contract No. ND/2019/01

Development of Kwu Tung North & Fanling North New Development Area, Phase 1: Kwu Tung North New Development Area, Phase 1: Site formation & Infrastucture works

堆填區附近區域(Consultation Zone)每月氣體監察記錄

			氧氣 O2	甲烷 CH4	二氧化碳 CO_2
日期及時間	位置	氣體及安全標準	>19%	<10% LEL	<0.5%
30-10-2021 09:35	CZ PT 1		20.90	0.06	0.00
30-10-2021 09:14	CZ container 1		20.90	0.04	0.00
30-10-2021 09:16	CZ container 2		20.89	0.01	0.00
30-10-2021 09:20	CZ container 3		20.89	0.05	0.00
30-10-2021 09:22	CZ container 4		20.89	0.06	0.00
30-10-2021 09:24	CZ container 5		20.93	0.04	0.02

Prepared by : Y L Chan (Safety Officer) Date : 30-10-2021

APPENDIX K
BUILT HERITAGE MONITORING RESULTS

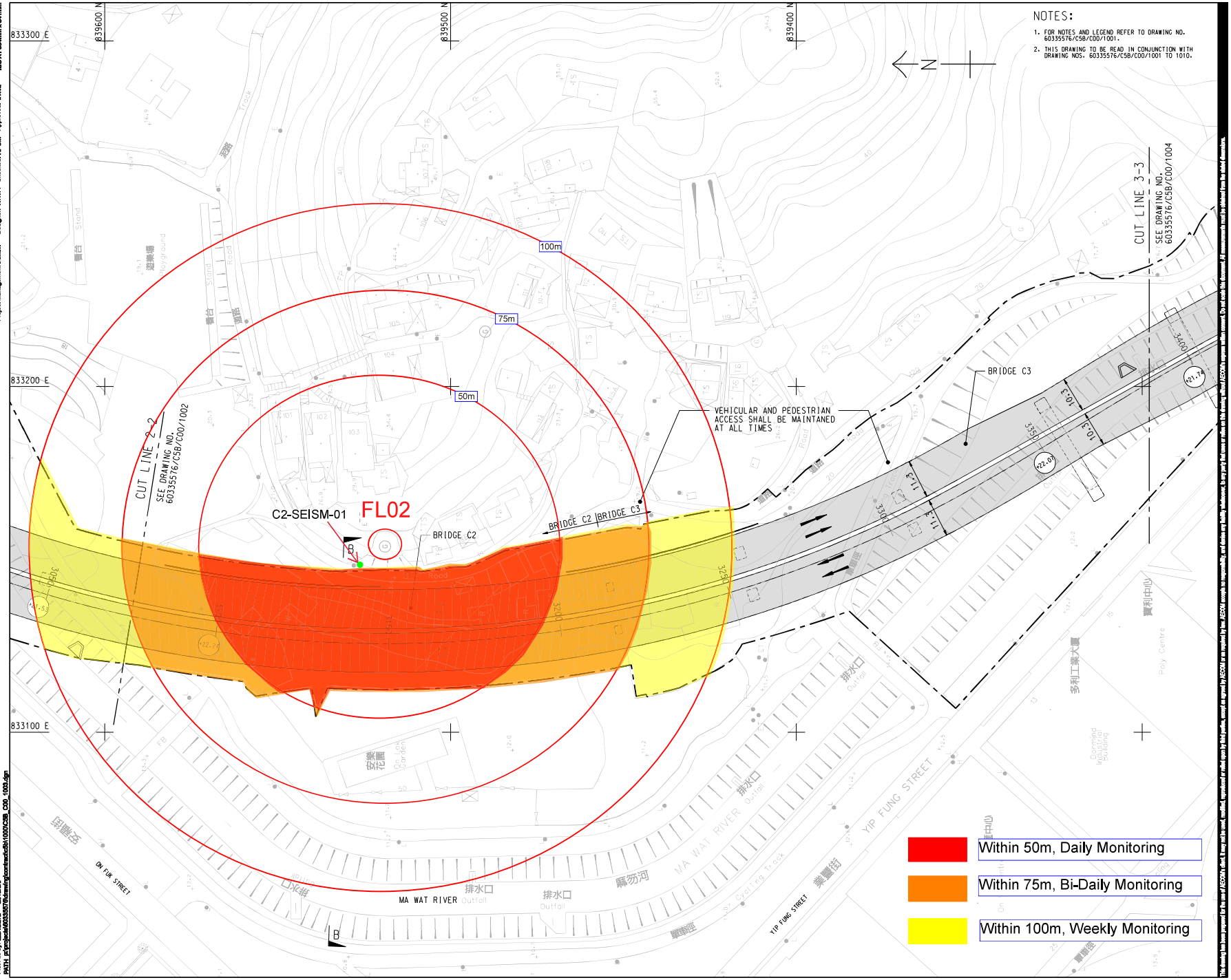
Summary of vibration readings at FL02
(C2-SEISM-01)

CRCC – Paul Y. Joint Venture

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

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

Date	Max. PPV recorded (mm/s)	Serial no. of device (Micromate/ Supergraph)
02 Oct 2021	0.297	UM17124
04 Oct 2021	0.338	UM17126
05 Oct 2021	0.53	UM17126
06 Oct 2021	0.223	UM17126
07 Oct 2021	0.219	UM17121
08 Oct 2021	0.247	UM17126
11 Oct 2021	0.206	UM17124
15 Oct 2021	0.173	UM17121
16 Oct 2021	0.171	UM17126
18 Oct 2021	0.26	UM17124
19 Oct 2021	0.147	UM17121
20 Oct 2021	0.14	UM17126
21 Oct 2021	0.126	UM17124
22 Oct 2021	0.313	UM17121
23 Oct 2021	0.319	UM17126
25 Oct 2021	0.151	UM17126
26 Oct 2021	0.339	UM17121
27 Oct 2021	0.3	UM17121
28 Oct 2021	0.411	UM17124
29 Oct 2021	0.126	UM17121
30 Oct 2021	0.276	UM17124



Project Management Initials: Designer: WHWY Checked: RPCM Approved: WHWL ISO A1 594mm x 841mm

Plot File by: ZENGXU2 20/08/09
PATH: p:\projects\60335576\working\cmd\acd\c1000\C5B_C00_1003.dgn

AECOM

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

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

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

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

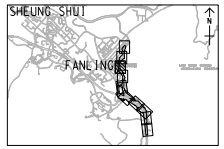
ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
-	JUN-19	TENDER DRAWING	RPCM

STATUS

SCALE: A1 1 : 500
DIMENSION UNIT: METRES

KEY PLAN A1 1 : 70000



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

SHEET TITLE
GENERAL LAYOUT

SHEET 3 OF 10

SHEET NUMBER
60335576/C5B/C00/1003

APPENDIX L
ECOLOGICAL MONITORING RESULTS

Appendix L1a. Avifauna Species Recorded for Water Birds Monitoring, 6 & 8 October 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			6/10/2021 (T1 & T2), 8/10/2021 (T3 & T5)					
					Weather Condition			Sunny, Storm					
					Tidal Condition			High					
					Tide Level (m)			2.62, 2.25					
					Start Time			0900, 1000					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv			1							
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		1	5							
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				3					
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	1	8							
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU		3							
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC		2							
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM			2	1						
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R			7							
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	CWV	PRC	1	1							
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	1	2	6						
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV			1							
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	1	1	1						
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	1	5	15			10			
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	(LC)		3							
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R		2								

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			6/10/2021 (T1 & T2), 8/10/2021 (T3 & T5)					
					Weather Condition			Sunny, Storm					
					Tidal Condition			High					
					Tide Level (m)			2.62, 2.25					
					Start Time			0900, 1000					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Rock Dove	*Columba livia*	原鴿	R		1								
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R		10								
Sooty-headed Bulbul	*Pycnonotus aurigaster*	白喉紅臀鵯	UR		5	1							
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		5	6							
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R		12								
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			3							
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC		2							
Total No. of Species					12	17	4	1	0	1	0	0	0
Total No. of Conservation Interest Species					5	8	3	1	0	1	0	0	0
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			6/10/2021 (T1 & T2), 8/10/2021 (T3 & T5)					
					Weather Condition			Sunny, Storm					
					Tidal Condition			High					
					Tide Level (m)			2.62, 2.25					
					Start Time			0900, 1000					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
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 L1b. Avifauna Species Recorded for Water Birds Monitoring, 6 & 8 October 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			6/10/2021 (T1 & T2), 8/10/2021 (T3 & T5)					
					Weather Condition			Sunny, Storm					
					Tidal Condition			Low					
					Tide Level (m)			1.55, 1.31					
					Start Time			1400, 1600					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv										29
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv						1				
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		3								
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	R, WV	(LC)			2						
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC						51			
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R		1								
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	1	2	3			15			
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC						1			
Common Moorhen	*Gallinula chloropus*	黑水雞	R								3		
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM		2		4			8			
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM							8			
Crested Myna	*Acridotheres cristatellus*	八哥	R		1				35				
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)					15				
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R		3				6				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)			4			17			
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV							3			

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			6/10/2021 (T1 & T2), 8/10/2021 (T3 & T5)					
					Weather Condition			Sunny, Storm					
					Tidal Condition			Low					
					Tide Level (m)			1.55, 1.31					
					Start Time			1400, 1600					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC			4		3				
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	1		21			16			
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R		1				1				
Marsh Sandpiper	*Tringa stagnatilis*	澤鷸	PM, WV	RC						3			
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R						2				
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R		3				3				
Plain Prinia	*Prinia inornata*	純色鷦鶯	R		1								
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R		6								
Rock Dove	*Columba livia*	原鴿	R		5								
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R						65				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		8	2							
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石鴝	WV						1				
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R		5	3							
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		3				11				
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R		1				4				
White-rumped munia	*Lonchura striata*	白腰文鳥	R						2				
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC						10			

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			6/10/2021 (T1 & T2), 8/10/2021 (T3 & T5)					
					Weather Condition			Sunny, Storm					
					Tidal Condition			Low					
					Tide Level (m)			1.55, 1.31					
					Start Time			1400, 1600					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Total No. of Species					16	3	6	0	13	10	1	0	1
Total No. of Conservation Interest Species					2	1	5	0	2	7	0	0	0
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			6/10/2021 (T1 & T2), 8/10/2021 (T3 & T5)					
					Weather Condition			Sunny, Storm					
					Tidal Condition			Low					
					Tide Level (m)			1.55, 1.31					
					Start Time			1400, 1600					
					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)
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WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix L1c. Avifauna Species Recorded for Water Birds Monitoring, 11 & 15 October 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			11/10/2021 (T1 & T2), 15/10/2021 (T3 & T5)					
					Weather Condition			Fine, Rain					
					Tidal Condition			High					
					Tide Level (m)			1.83, 2.24					
					Start Time			1500, 0700					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv		1								
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv						1				1
Black Kite	*Milvus migrans*	黑鳶	R, WV										
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		4	3						1	1
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	R, WV	(LC)		1							
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			5	6		15	11		3
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R										1
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	4	11	11				6		3
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU			1						
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC		2		5		1			
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R		1		1						
Common Moorhen	*Gallinula chloropus*	黑水雞	R								1		
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM			1							
Crested Myna	*Acridotheres cristatellus*	八哥	R						13				10
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)		5							

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			11/10/2021 (T1 & T2), 15/10/2021 (T3 & T5)					
					Weather Condition			Fine, Rain					
					Tidal Condition			High					
					Tide Level (m)			1.83, 2.24					
					Start Time			1500, 0700					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R		7	12		12					50
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)		2	11	1		2	1		
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	1	2							
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	3	2	47	2		7	2		7
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	(LC)	1	1							
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R					1					1
Marsh Sandpiper	*Tringa stagnatilis*	澤鷸	CPM, CWV	RC				1					
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R				1		6				2
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R		3								2
Red-billed Blue Magpie	*Urocissa erythrorhyncha*	紅咀藍鵲	R										6
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R				1						1
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R		8	5							18
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		5		1					5	7
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			4	2		1	1			4
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R		1	1							
White-rumped munia	*Lonchura striata*	白腰文鳥	R					2					
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)		2							

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			11/10/2021 (T1 & T2), 15/10/2021 (T3 & T5)					
					Weather Condition			Fine, Rain					
					Tidal Condition			High					
					Tide Level (m)			1.83, 2.24					
					Start Time			1500, 0700					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC		1				6			
Total No. of Species					12	16	10	8	4	6	5	2	16
Total No. of Conservation Interest Species					4	10	5	5	0	5	4	0	3
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			11/10/2021 (T1 & T2), 15/10/2021 (T3 & T5)					
					Weather Condition			Fine, Rain					
					Tidal Condition			High					
					Tide Level (m)			1.83, 2.24					
					Start Time			1500, 0700					
					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
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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 L1d. Avifauna Species Recorded for Water Birds Monitoring, 11 & 15 October 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			11/10/2021 (T1 & T2), 15/10/2021 (T3 & T5)					
					Weather Condition			Fine, Rain					
					Tidal Condition			Low					
					Tide Level (m)			0.45, 0.65					
					Start Time			0900, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R						1				
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv			3							
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv										7
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		2	2	2		10				
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	R, WV	(LC)						1			
Black-winged Kite	*Elanus caeruleus*	黑翅鳶	OV	LC, (VU)					1				
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			5			44			
Chestnut Munia	*Lonchura atricapilla*	栗腹文鳥	R						2				
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	2	5	5			14			
Cinereous Tit	*Parus cinereus*	蒼背山雀	R		1				2				
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU									
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC		2				4			
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R		2	1							
Common Moorhen	*Gallinula chloropus*	黑水雞	R							2			
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM				5						

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			11/10/2021 (T1 & T2), 15/10/2021 (T3 & T5)					
					Weather Condition			Fine, Rain					
					Tidal Condition			Low					
					Tide Level (m)			0.45, 0.65					
					Start Time			0900, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Crested Myna	*Acridotheres cristatellus*	八哥	R						55				
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)		6			4				
Eurasian Teal	*Anas crecca*	綠翅鴨	WV	RC							10		
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R		2	7			10				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	1	2	13			2			
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)		1							
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV				1			1			
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	2	1	2						
Grey Wagtail	*Motacilla cinerea*	灰鶺鴒	WV		1								
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	1	6	61			12			
Little Grebe	*Tachybaptus ruficollis*	小鷿鷈	R	LC							1		
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R				1						
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R						8				
Oriental Magpie	*Pica serica*	喜鵲	R						3				
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R		3				3				
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	(LC)			1						
Red-rumped Swallow	*Cecropis daurica*	金腰燕	UPM			4							

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			11/10/2021 (T1 & T2), 15/10/2021 (T3 & T5)					
					Weather Condition			Fine, Rain					
					Tidal Condition			Low					
					Tide Level (m)			0.45, 0.65					
					Start Time			0900, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R						1				
Rock Dove	*Columba livia*	原鴿	R			1	7						
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R		3	1			200				
Sooty-headed Bulbul	*Pycnonotus aurigaster*	白喉紅臀鵯	UR		1		10		10				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		2	1	3		9				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			6	3		7				
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R			1			4				
White-rumped munia	*Lonchura striata*	白腰文鳥	R						2				
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)			1						
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC						4			
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R						1				
Yellow-browed Warbler	*Phylloscopus inornatus*	黃眉柳鶯	WV, SpM			1							
Total No. of Species					13	18	15	0	19	9	2	0	1
Total No. of Conservation Interest Species					4	7	7	0	2	7	2	0	0
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			11/10/2021 (T1 & T2), 15/10/2021 (T3 & T5)					
					Weather Condition			Fine, Rain					
					Tidal Condition			Low					
					Tide Level (m)			0.45, 0.65					
					Start Time			0900, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
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 L1e. Avifauna Species Recorded for Water Birds Monitoring, 21 & 22 October 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/10/2021 (T1 & T2), 22/10/2021 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			High					
					Tide Level (m)			2.33, 2.05					
					Start Time			1100, 1000					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Black Kite	*Milvus migrans*	黑鳶	R, WV		3								
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		5	2	2						
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				10		30			
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	2		5						
Cinereous Tit	*Parus cinereus*	蒼背山雀	R		1								
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU	2								
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R		2								
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM			1	1						
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM							3			
Crested Myna	*Acridotheres cristatellus*	八哥	R		5				30				
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)		1			4				
Eurasian Teal	*Anas crecca*	綠翅鴨	WV	RC						20			
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R		2	29			1				
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	CWV	PRC	4								
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	1	2	1	3	5				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/10/2021 (T1 & T2), 22/10/2021 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			High					
					Tide Level (m)			2.33, 2.05					
					Start Time			1100, 1000					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV		1	1							
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	2	1	1	1					
Grey Wagtail	*Motacilla cinerea*	灰鶺鴒	WV		1								
Grey-headed Lapwing	*Vanellus cinereus*	灰頭麥雞	SWV	LC						4			
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R		1								
Intermediate Egret	*Egretta intermedia*	中白鷺	CPM	RC		1							
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)		1	6	2	1				
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	(LC)					1				
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鸝	R			2			6				
Rock Dove	*Columba livia*	原鴿	R			6							
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R		20	3							
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		13	1	4		12				
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石鴝	WV				1						
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R		2								
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			2	3		2	1			1
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R			1	1						
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC			2						

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/10/2021 (T1 & T2), 22/10/2021 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			High					
					Tide Level (m)			2.33, 2.05					
					Start Time			1100, 1000					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Total No. of Species					17	15	11	4	9	5	0	0	1
Total No. of Conservation Interest Species					5	5	5	4	4	3	0	0	0
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/10/2021 (T1 & T2), 22/10/2021 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			High					
					Tide Level (m)			2.33, 2.05					
					Start Time			1100, 1000					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; 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)
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CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
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WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix L1f. Avifauna Species Recorded for Water Birds Monitoring, 21 & 22 October 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/10/2021 (T1 & T2), 22/10/2021 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			Low					
					Tide Level (m)			1.29, 1.42					
					Start Time			1500, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv										3
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		1	2	2		2			2	6
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				12		26	33	3	11
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	2	2	7	4	1	7	1		3
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU			1		3				
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			5			3	1		
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R				1				1		
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM		1		3						
Crested Myna	*Acridotheres cristatellus*	八哥	R			2			57				17
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV				1	6					7
Eurasian Teal	*Anas crecca*	綠翅鴨	WV	RC						14			
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R			26			20				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)		2	6		3	1	1		1
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV			1							
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	1		5						2

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/10/2021 (T1 & T2), 22/10/2021 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			Low					
					Tide Level (m)			1.29, 1.42					
					Start Time			1500, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Intermediate Egret	*Egretta intermedia*	中白鷺	CPM	RC	2								
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)		1		2	6	4	2	1	4
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	(LC)				1					
Marsh Sandpiper	*Tringa stagnatilis*	澤鷸	CPM, CWV	RC			1			1			
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R						2			2	1
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R						1				
Red-rumped Swallow	*Cecropis daurica*	金腰燕	UPM			2							7
Rock Dove	*Columba livia*	原鴿	R			7							
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R						30				80
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R			3			2			2	7
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石鶇	WV						1				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			2	3	1	1	1			3
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R						4			2	1
White-headed Munia	*Lonchura maja*	白頭文鳥	R						7				
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)	1		1						
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC			4	7			7		
Total No. of Species					6	11	13	7	15	8	7	6	15

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/10/2021 (T1 & T2), 22/10/2021 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			Low					
					Tide Level (m)			1.29, 1.42					
					Start Time			1500, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Total No. of Conservation Interest Species					4	3	8	5	4	7	5	2	5

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

Appendix L1i. Avifauna Species Recorded for Water Birds Monitoring, 27 & 28 October 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			28/10/2021 (T1 & T2), 27/10/2021 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			High					
					Tide Level (m)			1.56, 1.59					
					Start Time			1500, 1600					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv						1				
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R						9				17
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	R, WV	(LC)	1								
Black-winged Kite	*Elanus caeruleus*	黑翅鳶	OV	LC, (VU)					1				
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			4	2	1	60			
Chestnut-eared Bunting	*Emberiza fucata*	栗耳鵐	RpM	LC					1				
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	2	6	5	1	5	7			2
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC		2	1			1			
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R		1		2						
Common Moorhen	*Gallinula chloropus*	黑水雞	R							2			
Common Myna	*Acridotheres tristis*	家八哥	UR						2				
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM			3	5						
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM							4			
Crested Myna	*Acridotheres cristatellus*	八哥	R						30				13
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)					3				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			28/10/2021 (T1 & T2), 27/10/2021 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			High					
					Tide Level (m)			1.56, 1.59					
					Start Time			1500, 1600					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV						8				
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R		7	20			30				
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	CWV	PRC	1								
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	1	1	2			2			
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV				2						
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC		1	4		1				
Grey Wagtail	*Motacilla cinerea*	灰鶺鴒	WV		2				1				
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	1	4	23	1		12			8
Little Grebe	*Tachybaptus ruficollis*	小鷿鷈	R	LC	1								
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	(LC)		4	4			5			
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鸝	R			4			9				
Oriental Magpie	*Pica serica*	喜鵲	R						3				
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R						2				
Plain Prinia	*Prinia inornata*	純色鵐鶯	R				2						
Red Collared Dove	*Streptopelia tranquebarica*	火斑鳩	UPM						1				
Rock Dove	*Columba livia*	原鴿	R			4							

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			28/10/2021 (T1 & T2), 27/10/2021 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			High					
					Tide Level (m)			1.56, 1.59					
					Start Time			1500, 1600					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R		30				95				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		1		3		2				
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石鵖	WV				2		1				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			2	4		7	1			
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R		1				4				
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)	1		1		2				
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC					1	14			
Total No. of Species					13	11	15	3	24	10	0	0	4
Total No. of Conservation Interest Species					7	6	7	3	6	7	0	0	2
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			28/10/2021 (T1 & T2), 27/10/2021 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			High					
					Tide Level (m)			1.56, 1.59					
					Start Time			1500, 1600					
					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
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(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 L1j. Avifauna Species Recorded for Water Birds Monitoring, 27 & 28 October 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			27/10/2021 (T1 & T2), 28/10/2021 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			Low					
					Tide Level (m)			0.65, 0.67					
					Start Time			1000, 1100					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv										6
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R			1			5				
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			3	4		50			2
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R				1		1				1
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	4	4	7	3	4	9			5
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU					2				
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			3						
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R			1			1				
Common Myna	*Acridotheres tristis*	家八哥	UR						2				
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM			1	2			1			
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM							2			5
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R			2							
Crested Myna	*Acridotheres cristatellus*	八哥	R				2		6				3
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)				1	11				
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV					2	3				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			27/10/2021 (T1 & T2), 28/10/2021 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			Low					
					Tide Level (m)			0.65, 0.67					
					Start Time			1000, 1100					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Eurasian Teal	*Anas crecca*	綠翅鴨	WV	RC						2	1		
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R						5				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)		2	7		2	1			
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV			1	3						
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	1	1	2			2			1
Grey Wagtail	*Motacilla cinerea*	灰鶺鴒	WV					1	13				
Intermediate Egret	*Egretta intermedia*	中白鷺	CPM	RC		1							
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)		1	13	1	2	8			1
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	(LC)				2	1	1			
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R						2				
Marsh Sandpiper	*Tringa stagnatilis*	澤鷸	CPM, CWV	RC						3			
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R				5		10				1
Northern Shoveler	*Spatula clypeata*	琵嘴鴨	WV	RC						1			
Oriental Magpie	*Pica serica*	喜鵲	R						2				
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R						2				
Red-billed Blue Magpie	*Urocissa erythrorhyncha*	紅咀藍鵲	R				3						
Rock Dove	*Columba livia*	原鴿	R						3				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			27/10/2021 (T1 & T2), 28/10/2021 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			Low					
					Tide Level (m)			0.65, 0.67					
					Start Time			1000, 1100					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R		1	2			210				
Sooty-headed Bulbul	*Pycnonotus aurigaster*	白喉紅臀鵯	UR						5				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		4	1	4		13				3
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石鵖	WV						2				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			2	2	1	8				2
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R					1	3				
White-headed Munia	*Lonchura maja*	白頭文鳥	R						2				
White-rumped munia	*Lonchura striata*	白腰文鳥	R						1				
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)					1				
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC				7		12			
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R										
Yellow-breasted Bunting	*Emberiza aureola*	黃胸鵐	PM	CR, RC				2					
Total No. of Species					4	13	14	11	28	12	1	0	11
Total No. of Conservation Interest Species					2	5	6	7	7	10	1	0	4
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			27/10/2021 (T1 & T2), 28/10/2021 (T3 & T5)					
					Weather Condition			Fine, Fine					
					Tidal Condition			Low					
					Tide Level (m)			0.65, 0.67					
					Start Time			1000, 1100					
					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
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, 15 October 2021, T5

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 15/10/2020					
					Start Time: 19:30					
					Abundance					
					WAL	DAL	SWH	P	Heard	Flight
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			18			
Total No. of Species					0	0	1	0	0	0
Total No. of Conservation Interest Species					0	0	1	0	0	0

Note:
R – Resident; WV – Winter visitor; PM – 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
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
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix L1n. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 27 October 2021, T5

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 27/10/2020					
					Start Time: 19:00					
					Abundance					
					WAL	DAL	SWH	P	Heard	Flight
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	R, WV	LC		2				
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			10			
Total No. of Species					0	1	1	0	0	0
Total No. of Conservation Interest Species					0	1	1	0	0	0

Note:
R – Resident; WV – Winter visitor; PM – 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
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
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix L1k. Waterbirds Recorded in October 2021

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	LC	T1: River bank, River bed, In flight T2: River bank, River bed, In flight T3: River bank, River bed T5: Shallow Water Habitat	Common resident and winter visitor. Widely distributed in Hong Kong.
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	RC	T3: River bed T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, Pond, In flight	Common passage migrant. Found in Deep Bay area, Long Valley, Kam Tin.
Chinese Pond Heron	*Ardeola bacchus*	池鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, in flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, Pond, In flight	Common resident. Widely distributed in Hong Kong.
Common Greenshank	*Tringa nebularia*	青腳鷸	RC	T2: River bed T3: River bed T5: Wet Agricultural Land, Shallow Water Habitat, Pond	Abundant passage migrant and winter visitor. Found in Deep Bay area.
Common Kingfisher	*Alcedo atthis*	普通翠鳥		T1: River bank, In flight T2: River bank, In flight T3: In flight T5: Dry Agricultural Land, Pond, In flight	Common passage migrant and winter visitor. Widely distributed in wetland habitat throughout Hong Kong.
Common Moorhen	*Gallinula chloropus*	黑水雞		T5: Shallow Water Habitat, Pond	Common resident. Found in Deep Bay area, Shuen Wan, Starling Inlet.
Common Sandpiper	*Actitis hypoleucos*	磯鷸		T1: River bed 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 Snipe	*Gallinago gallinago*	扇尾沙錐		T5: Shallow Water Habitat, In flight	Common passage migrant and winter visitor. Found in Long Valley, Chau Tau, Sai Kung.

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	(LC)	T2: River bank T5: Wet Agricultural Land, Dry Agricultural Land	Resident and common passage migrant. Widely distributed in Hong Kong.
Eurasian Teal	*Anas crecca*	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.
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	PRC	T1: River bed, In flight T2: River bed, In flight	Common winter visitor. Widely distributed in coastal areas throughout Hong Kong.
Great Egret	*Ardea alba*	大白鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, In flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, Pond, In flight	Common resident and winter visitor. Widely distributed in Hong Kong.
Green Sandpiper	*Tringa ochropus*	白腰草鷸		T1: River bank, River bed 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	*Ardea cinerea*	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: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat	Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, Cape D'Aguilar.
Grey-headed Lapwing	*Vanellus cinereus*	灰頭麥雞	LC	T5: Shallow Water Habitat	Scarce winter visitor. Found in Kam Tin, Tsim Bei Tsui, Tai Long Wan, Shuen Wan, Castle Peak coast, Chek Lap Kok.
Intermediate Egret	*Egretta intermedia*	中白鷺	RC	T1: River bank, River bed T2: River bank, River bed	Common passage migrant. Found in Deep Bay area, Tai Long Wan, Starling Inlet, Tai O, Cape D'Aguilar.
Little Egret	*Egretta garzetta*	小白鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, In flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water	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	*Tachybaptus ruficollis*	小鸊鹈	LC	T1: River bed T5: Pond	Common resident. Found in Deep Bay area.
Little Ringed Plover	*Charadrius dubius*	金眶鴴	(LC)	T1: River bank, River bed T2: River bank, River bed T3: River bank, River bed T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat	Common winter visitor and passage migrant. Widely distributed in freshwater areas throughout Hong Kong.
Marsh Sandpiper	*Tringa stagnatilis*	澤鷸	RC	T3: River bank, River bed T5: Wet Agricultural Land, Shallow Water Habitat	Common winter visitor and passage migrant. Found in Deep Bay area, Shuen Wan, Long Valley, Kam Tin, Sai Kung.
Northern Shoveler	*Spatula clypeata*	琵嘴鴨	RC	T5: Shallow Water Habitat	Abundant winter visitor. Found in Deep Bay area.
Pied Kingfisher	*Ceryle rudis*	斑魚狗	(LC)	T3: In flight	Uncommon resident. Widely distributed in lakes and ponds throughout Hong Kong.
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥		T1: River bank T2: River bank T3: River bank T5: Wet Agricultural Land, Dry Agricultural Land, In flight	Common resident. Widely distributed in wetland throughout Hong Kong.
White-throated Kingfisher	*Halcyon smyrnensis*	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	*Tringa glareola*	林鷸	LC	T2: River bed T3: River bed T5: Wet Agricultural Land, Dry 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*
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 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 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 *Source: Hong Kong Biodiversity Database, AFCD (https://www.afcd.gov.hk/English/conservation/hkbiodiversity/database/search.php)					

Appendix L1l. Birds Recorded in October 2021

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Asian Koel	*Eudynamys scolopacea*	噪鵑	R	
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv	
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv	
Black Kite	*Milvus migrans*	黑鳶	R, WV	(RC), Cap.586
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	R, WV	(LC)
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R	
Black-winged Kite	*Elanus caeruleus*	黑翅鳶	OV	LC, (VU)
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC
Chestnut Munia	*Lonchura atricapilla*	栗腹文鳥	R	
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R	
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)
Cinereous Tit	*Parus cinereus*	蒼背山雀	R	
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC
Common Moorhen	*Gallinula chloropus*	黑水雞	R	
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R	
Common Myna	*Acridotheres tristis*	家八哥	UR	
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM	
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM	
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R	
Crested Myna	*Acridotheres cristatellus*	八哥	R	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV	
Eurasian Teal	*Anas crecca*	綠翅鴨	WV	RC
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R	
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	CWV	PRC
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV	
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC
Grey Wagtail	*Motacilla cinerea*	灰鶺鴒	WV	
Grey-headed Lapwing	*Vanellus cinereus*	灰頭麥雞	SWV	LC
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R	
Intermediate Egret	*Egretta intermedia*	中白鷺	CPM	RC
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)
Little Grebe	*Tachybaptus ruficollis*	小䴙䴘	R	LC
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	(LC)
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R	
Marsh Sandpiper	*Tringa stagnatilis*	澤鷸	CPM, CWV	RC
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R	
Northern Shoveler	*Spatula clypeata*	琵嘴鴨	WV	RC
Oriental Magpie	*Pica serica*	喜鵲	R	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Oriental Magpie Robin	*Copsychus saularis*	鵲鴝	R	
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	(LC)
Plain Prinia	*Prinia inornata*	純色鱲鶯	R	
Red-billed Blue Magpie	*Urocissa erythrorhyncha*	紅咀藍鵲	R	
Red-collared Dove	*Streptopelia tranquebarica*	火斑鳩	UPM	
Red-rumped Swallow	*Cecropis daurica*	金腰燕	UPM	
Red-whiskered bulbul	*Pycnonotus jocosus*	紅耳鵯	R	
Rock Dove	*Columba livia*	原鴿	R	
Sooty-headed Bulbul	*Pycnonotus aurigaster*	白喉紅臀鵯	UR	
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R	
Spotted Munia	*Lonchura punctulata*	斑文鳥	R	
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石鴝	WV	
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R	
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R	
White-headed Munia	*Lonchura maja*	白頭文鳥	R	
White-rumped munia	*Lonchura striata*	白腰文鳥	R	
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV	
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鱲鶯	R	
Yellow-browed Warbler	*Phylloscopus inornatus*	黃眉柳鶯	WV, SpM	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Yellow-breasted Bunting	*Emberiza aureola*	黃胸鵐	PM	CR, RC

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 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
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 L2. Freshwater Macroinvertebrate Species Recorded for Aquatic Fauna Monitoring

Common Name	Scientific Name	Conservation Status	Date: 26 October 2021									
			Weather: Fine									
			Methods: Kick-netting, sweep netting and direct observation									
			Abundance									
			MS_01*	MS_02	MS_03	MS_04	MS_05*	MS_06	MS_07	MS_08	MS_09	MS_10
Apple Snail	*Pomacea canaliculata*	-								++		
Atyid Shrimp	*Caridina* sp.	-										
Blood Worm	Chironomidae	-										
Chinese River Snail	*Sinotaia guangdungensis*	-			+			+		+++		+
Freshwater Snail	*Bellamya* sp.	-								+		
Freshwater Snail	*Tricula* sp.	-										
Isopod	Isopoda	-										+
Mayfly	Ephemeroptera	-										
Megaloptera	Corydalidae	-							++		++	
Ram's Horn Snail	*Gyraulus convexiusculus*	-		+++								
Red-rimmed Melania	*Melanoides tuberculata*	-								++		+++
River Snail	*Sinotaia quadrata*	-				+				+		
Water Strider	*Metrocoris* sp.							++	+			+
Water Strider	*Microvelia* sp.	-			+				+			
Total No. of species			0	1	2	1	0	2	3	5	1	4
Total No. of Conservation Interest Species			0	0	0	0	0	0	0	0	0	0

Note: *: dried-up station
+: species recorded within the study area (no. of individuals from 1-10)
++: species commonly recorded within the study area (no. of individuals from 11-20)
+++: most abundant species recorded within the study area (no. of individuals from 21 and above)

Appendix L2. Freshwater Macroinvertebrate Species Recorded for Aquatic Fauna Monitoring

Common Name	Scientific Name	Conservation Status	Date: 26 October 2021									
			Weather: Fine									
			Methods: Kick-netting, sweep netting and direct observation									
			Abundance									
			MS_11	MS_12	MS_13	MS_14	MS_15					
Apple Snail	*Pomacea canaliculata*	-	+		++		++					
Atyid Shrimp	*Caridina* sp.	-				+						
Blood Worm	Chironomidae	-		++								
Chinese River Snail	*Sinotaia guangdungensis*	-	+				+					
Freshwater Snail	*Bellamya* sp.	-										
Freshwater Snail	*Tricula* sp.	-	+				+					
Isopod	Isopoda	-										
Mayfly	Ephemeroptera	-			+							
Megaloptera	Corydalidae	-										
Ram's Horn Snail	*Gyraulus convexiusculus*	-										
Red-rimmed Melania	*Melanoides tuberculata*	-				+						
River Snail	*Sinotaia quadrata*	-										
Water Strider	*Metrocoris* sp.	-										
Water Strider	*Microvelia* sp.	-										
Total No. of species			3	1	2	2	3					
Total No. of Conservation Interest Species			0	0	0	0	0					

Appendix L3. Freshwater Fish Species Recorded for Aquatic Fauna Monitoring

Common Name	Scientific Name	Conservation Status	Date: 26 October 2021									
			Weather: Fine									
			Methods: Kick-netting, sweep netting and direct observation									
			Abundance									
			MS_01	MS_02	MS_03	MS_04	MS_05	MS_06	MS_07	MS_08	MS_09	MS_10
Chinese Barb	*Barbodes semifasciolatus*	-								+		
Mosquito Fish	*Gambusia affinis*	-										
Mozambique Tilapia	*Oreochromis mossambicus*	-								+		
Nile Tilapia	*Oreochromis niloticus*	-								+		
Total No. of species			0	0	0	0	0	0	0	3	0	0
Total No. of Conservation Interest Species			0	0	0	0	0	0	0	0	0	0

Note:
LC: Local Concern (Fellowes et al., 2002)
+: species recorded within the study area (no. of individuals from 1-10)
++: species commonly recorded within the study area (no. of individuals from 11-20)
+++: most abundant species recorded within the study area (no. of individuals from 21 and above)

Appendix L3. Freshwater Fish Species Recorded for Aquatic Fauna Monitoring

Common Name	Scientific Name	Conservation Status	Date: 26 October 2021									
			Weather: Fine									
			Methods: Kick-netting, sweep netting and direct observation									
			Abundance									
			MS_11	MS_12	MS_13	MS_14	MS_15					
Chinese Barb	*Barbodes semifasciolatus*	-										
Mosquito Fish	*Gambusia affinis*	-			+							
Mozambique Tilapia	*Oreochromis mossambicus*	-										
Nile Tilapia	*Oreochromis niloticus*	-					+					
Total No. of species			0	0	1	0	1					
Total No. of Conservation Interest Species			0	0	0	0	0					

Note:
LC: Local Concern (Fellowes et al., 2002)
+: species recorded within the study area (no. of individuals from 1-10)
++: species commonly recorded within the study area (no. of individuals from 11-20)
+++: most abundant species recorded within the study area (no. of individuals from 21 and above)

Appendix L4. Mammal Species Recorded for Ecologically Sensitive Habitat Monitoring, 12 & 20 October 2021

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 12/10/2021, 20/10/2021				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Domestic Cat	*Felis catus*	野貓	Uncommon	-	+				
Domestic Dog	*Canis lupus familiaris*	野狗	Common	-	++			+	++
Japanese Pipistrelle	*Pipistrellus abramus*	東亞家蝠	Very Common	Cap. 170	+				
Short-nosed Fruit Bat	*Cynopterus sphinx*	短吻果蝠	Very Common	Cap. 170, I, NT	+				
Total No. of species					4	0	0	1	1
Total No. of Conservation Interest Species					2	0	0	0	0

Note:

Cap. 170: Species under protection of Wild Animals Protection Ordinance (Cap. 170)

NT: Near Threatened in the Red List of China's Vertebrates

I: Indeterminate in China Red Data Book Status

+: species recorded within transect routes

++: species commonly recorded within transect routes

+++: dominant species within transect routes

Appendix L5. Herpetofauna Species Recorded for Ecologically Sensitive Habitat Monitoring, 12 & 20 September 2021

Common Name	Species Name	Chinese Name	Conservation Status	Date: 12/10/2021, 20/10/2021				
				Relative Abundance				
				Transect Walk				
				T1	T3	T4	T5	T6
Amphibian								
Asian Common Toad	*Bufo melanostictus*	黑眶蟾蜍	-	+		+++	+	
Asian Painted Frog	*Kaloula pulchra*	花狹口蛙	-			+	+	
Brown Tree Frog	*Polypedates megacephalus*	斑腿泛樹蛙	-	+				
Gunther's Frog	*Hylarana guentheri*	沼蛙	-	+				
Paddy Frog	*Fejervarya limnocharis*	澤蛙	-	++				
Reptile								
Bowring's Gecko	*Hemidactylus bowringii*	原尾蜥虎	-	+				
Chinese gecko	*Gekko chinensis*	中國壁虎	-	++				
Chinese Skink	*Plestiodon chinensis chinensis*	中國石龍子	-				+	
Total No. of species				6	0	2	3	0
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 L6. Butterfly Species Recorded Ecologically Sensitive Habitat Monitoring, 12 & 20 September 2021

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 12/10/2021, 20/10/2021				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Angled Castor	*Ariadne ariadne*	波蛺蝶	Common	-				+	
Black Prince	*Pohana parisatis staurakius*	羅蛺蝶	Common	-					+
Blue Admiral	*Kaniska canace*	琉璃蛺蝶	Common	-				+	
Blue-spotted Crow	*Euploea midamus*	藍點紫斑蝶	Very common	-				+++	
Common Grass Yellow	*Eurema hecabe*	寬邊黃粉蝶	Very common	-	++	++	+	+++	+++
Common Indian Crow	*Euploea core*	幻紫斑蝶	Common	-	+		++	++	
Common Jay	*Graphium doson axion*	木蘭青鳳蝶	Common	-				+	
Common Mormon	*Papilio polytes*	玉帶鳳蝶	Very common	-	+++	+	+++	+++	
Common Sailer	*Neptis hylas*	中環蛺蝶	Very common	-	+			+	
Common Tiger	*Danaus genutia*	虎斑蝶	Common	-				++	
Danaid Eggfly	*Hypolimnas misippus*	金斑蛺蝶	Uncommon	LC			+		
Great Egg-fly	*Hypolimnas bolina*	幻紫斑蛺蝶	Common	-	++				++
Great Mormon	*Papilio memnon*	美鳳蝶	Very common	-	+	+	+	+	+
Great Orange Tip	*Hebomoia glaucippe*	鶴頂粉蝶	common	-	+				
Indian Cabbage White	*Pieris canidia*	東方菜粉蝶	Very common	-	++			++	++
Mottled Emigrant	*Catopsilia pyranthe*	梨花遷粉蝶	Very common				+		+

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 12/10/2021, 20/10/2021				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Pale Grass Blue	*Pseudozizeeria maha*	酢漿灰蝶	Very common	-	++	+	+	++	+
Paris Peacock	*Papilio paris*	巴黎翠鳳蝶	Very common	-	+		+		+
Plain Tiger	*Danaus chrysippus*	金斑蝶	Common	-	+		+	+	
Plum Judy	*Abisara echerius*	蛇目褐蜆蝶	Very Common	-	++				++
Punchinello	*Zemeros flegyas*	波蜆蝶	Common	-				+	
South China Bush Brown	*Mycalesis zonata*	平頂眉眼蝶	Very Common	-				+	++
Southern Sullied Sailer	*Neptis clinia*	珂環蛺蝶	Common	-			+	+	+
Spangle	*Papilio protenor*	藍鳳蝶	Very Common	-				+	
Tailed Jay	*Graphium agamemnon*	統帥青鳳蝶	Common	-				+	
Three-spot Grass Yellow	*Eurema blanda*	黧黃粉蝶	Common	-					+
Transparent 6-line Blue	*Nacaduba kurava*	古樓娜灰蝶	Common	-	+			+	
Total No. of species					13	4	10	19	12
Total No. of Conservation Interest Species					0	0	1	0	0

Note:
+: species recorded within transect routes
++: species commonly recorded within transect routes
+++: dominant species within transect routes

Appendix L7. Odonata Species Recorded for Ecologically Sensitive Habitat Monitoring 12 & 20 September 2021

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 12/10/2021, 20/10/2021				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Blue Chaser	*Potamarcha congener*	濕地狹翅蜻	Common	LC				+	
Common Red Skimmer	*Orthetrum pruinosum*	赤褐灰蜻	Abundant	-			+	+	+
Crimson Darter	*Crocothemis servilia*	紅蜻	Abundant	-			+		+
Green Skimmer	*Orthetrum sabina*	狹腹灰蜻	Abundant	-	+				
Variegated Flutterer	*Rhyothemis variegata arria*	斑麗翅蜻	Common	-	+				
Wandering Glider	*Pantala flavescens*	黃蜻	Abundant	-	+++		+	+	+++
Total No. of species					3	0	3	3	3
Total No. of Conservation Interest Species					0	0	0	1	0

Note:
LC: Local Concern (Fellowes et al., 2002)
+: species recorded within transect routes
++: species commonly recorded within transect routes
+++: dominant species within transect routes

APPENDIX M
WEATHER CONDITION

APPENDIX M –
GENERAL WEATHER CONDITIONS DURING THE MONITORING PERIOD

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1 October 2021	30.3	79	Trace
2 October 2021	30.0	74	-
3 October 2021	28.8	79	1.9
4 October 2021	29.8	71	-
5 October 2021	30.1	69	Trace
6 October 2021	29.5	69	Trace
7 October 2021	28.8	75	43.9
8 October 2021	25.5	94	329.7
9 October 2021	26.5	91	130.3
10 October 2021	26.8	86	45.1
11 October 2021	28.5	68	-
12 October 2021	25.1	65	0.2
13 October 2021	25.8	89	57.7
14 October 2021	27.8	86	13.3
15 October 2021	26.2	85	4.6

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
16 October 2021	26.8	73	Trace
17 October 2021	24.2	68	-
18 October 2021	23.9	70	-
19 October 2021	25.7	75	-
20 October 2021	26.8	78	0.1
21 October 2021	24.2	70	0.7
22 October 2021	19.3	77	43.9
23 October 2021	20.5	75	-
24 October 2021	22.1	69	-
25 October 2021	23.1	66	-
26 October 2021	25.1	69	-
27 October 2021	25.6	76	Trace
28 October 2021	25.7	77	0.1
29 October 2021	25.5	76	101
30 October 2021	24.4	81	2.4
31 October 2021	24.3	75	-

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

APPENDIX N
EVENT ACTION PLANS

Appendix N:

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

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

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

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

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

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

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

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

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

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

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action level being exceeded by one sampling day	1. Conduct addition site investigation on the same day; 2. Inform IEC, Contractor and ER; 3. Check monitoring data, all plant, equipment, Contractor's working methods and other relative information; 4. Review proposals on remedial measures submitted by Contractor; 5. Discuss remedial measures with IEC and Contractor and ER; and 6. Review submit proposal and ensure the effectiveness of the implemented mitigation measures.	1. Discuss with ET, ER and Contractor on the implemented mitigation measures; 2. Review proposals on remedial measures submitted by Contractor and advise the ER accordingly; and 3. Review submit proposal and advise the ET and ER on the Effectiveness of the implemented mitigation measures.	1. Review proposals on remedial measures submitted by Contractor; 2. Discuss with IEC, ET and Contractor on the Implemented mitigation measures; 3. Make agreement on the remedial measures to be implemented; and 4. Supervise the implementation of agreed remedial measures.	1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the noncompliance in writing; 3. Rectify unacceptable practice; 4. Check all plant and equipment; 5. Consider changes of working methods; 6. Discuss with ER, ET and IEC and submit proposal of remedial measures to ER and IEC; and 7. Implement the agreed mitigation measures.
Action level being exceeded by more than one consecutive sampling days	1. Conduct addition site investigation on the same day; 2. Inform IEC, Contractor and ER; 3. Check monitoring data, all plant, equipment,	1. Discuss with ET, Contractor and ER on the implemented mitigation measures; 2. Review the proposed remedial measures submitted by Contractor and advise	1. Discuss with ET, IEC and Contractor on the proposed mitigation measures; 2. Make agreement on the remedial measures to be implemented; and	1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the non-compliance in writing; 3. Rectify unacceptable

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
	Contractor's working methods and other relative information; 4. Discuss remedial measures with IEC, contractor and ER; and 5. Review submit proposal and ensure the agreed remedial measures are implemented	the ER accordingly; and 3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.	3. Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures	practice; 4. Check all plant and equipment and consider changes of working methods; 5. Discuss with ET, IEC and ER and submit proposal of remedial measures to ER and IEC within 3 working days of notification; and 6. Implement the agreed mitigation measures.
Limit level being exceeded by one sampling day	1. Conduct addition site investigation on the same day; 2. Inform IEC, Contractor and ER; 3. Rectify unacceptable practice; 4. Check monitoring data, all plant, equipment, Contractor's working methods and other relative information; 5. Consider changes of working methods; 6. Discuss mitigation measures with IEC, ER and Contractor; 7. Review the submit	1. Discuss with ET, Contractor and ER on the implemented mitigation measures; 2. Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and 3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.	1. Discuss with ET, IEC and Contractor on the implemented remedial measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the remedial measures to be implemented; and 4. Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures.	1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the noncompliance in writing; 3. Rectify unacceptable practice; 4. Check all plant and equipment and consider changes of working methods; 5. Discuss with ET, IEC and ER and submit proposal of additional mitigation measures to ER and IEC within 3 working days of

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
	proposal and ensure the agreed remedial measures are implemented;			notification; and 6. Implement the agreed remedial measures.
Limit level being exceeded by more than one consecutive sampling days	1. Conduct addition site investigation on the same day; 2. Inform IEC, contractor and ER; 3. Check monitoring data, all plant, equipment, Contractor's working methods and other relative information; 4. Discuss mitigation measures with IEC, ER and Contractor; and 5. Review the submit proposal and ensure the agreed remedial measures are implemented.	1. Discuss with ET, Contractor and ER on the implemented mitigation measures; 2. Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and 3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.	1. Discuss with ET, IEC and Contractor on the implemented remedial measures 2. Request Contractor to critically review the working methods; 3. Make agreement on the remedial measures to be implemented; 4. Discuss with ET and IEC on the effectiveness of the implemented mitigation measures; and 5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the dredging activities until no exceedance of Limit level.	1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the noncompliance in writing; 3. Rectify Unacceptable practice; 4. Check all plant and equipment and consider changes of working methods; 5. Discuss with ET, IEC and ER and submit proposal of additional mitigation measures to ER and IEC within 3 working days of notification; and 6. Implement the agreed remedial measures. 7. As directed by the ER, to slow down or stop all or part of the dredging activities until no exceedance of Limit level.

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

Table N-4: Actions in the event of LFG being detected

Parameter	Monitoring Results	Actions
O_2	<19% v/v	Increase underground ventilation to restore O_2 to >19% v/v
	<18% v/v	Stop works, evacuate all personnel, prohibit entry, and increase ventilation to restore O_2 level to >19%
CH_4	>10% LEL	Prohibit hot works, increase ventilation to restore CH4 to <10% LEL
	>20% LEL	Stop works, evacuate all personnel, increase ventilation further to restore CH_4 to <10% LEL
CO_2	>0.5% v/v	Increase ventilation to restore C O_2 to <0.5% v/v
	>1.5% v/v	Stop works, evacuate all personnel, increase ventilation further to restore CO_2 to <0.5%

Note: Depending on the results of the measurements, actions required will vary and should be set down by the Safety Officer or another appropriately qualified person. As a minimum these should encompass those actions specified in the above table.

Table N-5: Event / Action Plan for Ambient Arsenic Monitoring

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; and 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate
2. Exceedance for two or more consecutive samples	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Advise the ER and Contractor on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC, ER and Contractor on remedial	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 2. Implement the agreed proposals; and 3. Amend proposal if appropriate.

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

	procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC, Contractor and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures	remedial measures to be implemented; 4. Supervise and ensure remedial measures properly implemented; and 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedanceis abated.	3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

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

Table N-6.1 Action and Limit Levels and Responses 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

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	$L_{eq(30\ min.)}$ 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	211005
Date	5 October 2021 (Tuesday)
Time	9:30-11:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
211005-R01	• Drip trays should be provided for chemical storage.	E 14
	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.:210928), no major environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		5 October 2021
Checked by	Dr. Priscilla Choy		5 October 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	211012
Date	12 October 2021 (Tuesday)
Time	13:30-14:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. 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.:211005), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		15 October 2021
Checked by	Dr. Priscilla Choy		15 October 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	211019
Date	19 October 2021 (Tuesday)
Time	14:00-15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. 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.:211012), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		20 October 2021
Checked by	Dr. Priscilla Choy		20 October 2021

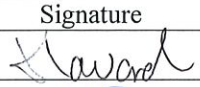
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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

Weekly Site Inspection Record Summary

Checklist Reference Number	211025
Date	25 October 2021 (Monday)
Time	09:30-10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• No environmental deficiency was identified during site inspection.	
	G. Landfill Gas Hazard	
	• No environmental deficiency was identified during site inspection.	
	H. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	I. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	J. Ecology	
	• No environmental deficiency was identified during site inspection.	
	K. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:211019), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan		25 October 2021
Checked by	Dr. Priscilla Choy		25 October 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	211006
Date	6 October 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	
211006-R01	• Clear the stagnant muddy water and provide sufficient wastewater treatment before discharge. (North Bridge)	D6 &D 13ii
211006-R02	• Clear the sediment and stagnant water in the U-channel and provide sufficient wastewater treatment before discharge. (South bridge)	D6 &D 13ii
	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.:210929), all environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		7 October 2021
Checked by	Dr. Priscilla Choy		7 October 2021

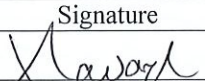
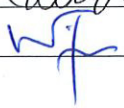
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	211012
Date	12 October 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. 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	
211012-R01	• To clear the stagnant water in drip tray.	E 14
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:211006), all environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		18 October 2021
Checked by	Dr. Priscilla Choy		18 October 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	211022
Date	22 October 2021 (Friday)
Time	14:00-15:30

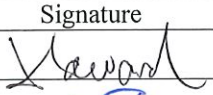
Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
211022-R01	• Dusty haul road should be watered regularly.	B 1
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:211012), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		25 October 2021
Checked by	Dr. Priscilla Choy		25 October 2021

Weekly Site Inspection Record Summary

Checklist Reference Number	211027
Date	27 October 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	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:211022), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		28 October 2021
Checked by	Dr. Priscilla Choy		28 October 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	211008
Date	8 October 2021 (Friday)
Time	10:00 – 11:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
211008-R01	• Clear the rubbish at near the storage area near to 巨賓.	E 1iii.
	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.:210930), item 210930-R01 was remarked as 211008-R01, follow-up action is needed to be reviewed.	

	Name	Signature	Date
Recorded by	Antony Leung		11 October 2021
Checked by	Dr. Priscilla Choy		11 October 2021

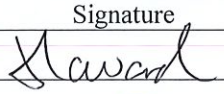
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	211015
Date	15 October 2021 (Friday)
Time	10:00 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.:211008), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		18 October 2021
Checked by	Dr. Priscilla Choy		18 October 2021

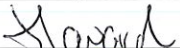
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	211019
Date	19 October 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. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.:211015), no major environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan		21 October 2021
Checked by	Dr. Priscilla Choy		21 October 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	211029
Date	29 October 2021 (Friday)
Time	10:00 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.:211019), no major environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		1 November 2021
Checked by	Dr. Priscilla Choy		1 November 2021

Weekly Site Inspection Record Summary

Checklist Reference Number	211007
Date	7 October 2021 (Thursday)
Time	14:00-15:30

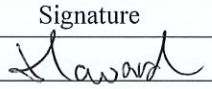
Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
211007-O03	• Regularly clear the U-channel and provide the desilting materials as a sediment control measure at Bridge A2 and Portion H.	D 6
211007-O04	• Regularly clear the U-channel and provide the desilting materials as a sediment control measure at Portion E.	D 6
	E. Waste / Chemical Management	
211007-O01	• To avoid oil leakage from drip tray at Bridge A3.	E 13
211007-O02	• Drip tray should be provided for chemical storage.	E 14
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• 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.: 210930), items 210930-O03, 210930-O04 and 210930-O05 were remarked as 211007-O01, 211007-O02 and 211007-O03. Follow-up actions are needed to be reviewed. Other environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		11 October 2021
Checked by	Dr. Priscilla Choy		11 October 2021

Weekly Site Inspection Record Summary

Checklist Reference Number	211015
Date	15 October 2021 (Friday)
Time	14:45-15:45

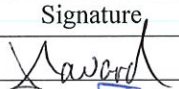
Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
211015-O01	• To ensure sediment in U- Channel was cleared regularly and avoid accumulation.	D 6
	E. Waste / Chemical Management	
211015-O02	• Oil, grease and litters were observed in the water of nearby drainage at Portion H, Contractor was reminded to avoid any foam, oil, grease or litter in any watercourse.	E 11
	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.: 211007), item 211007-O04 was remarked as 211015-O01. Follow-up action is needed to be reviewed. Other environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		18 October 2021
Checked by	Dr. Priscilla Choy		18 October 2021

Weekly Site Inspection Record Summary

Checklist Reference Number	211022
Date	22 October 2021 (Friday)
Time	09:30-10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
211022-R02	• Compressor should be operated with doors closed.	C 9
	D. Water Quality	
211022-R03	• To provide desilting materials at U-Channel.	D 3
	E. Waste / Chemical Management	
211022-R01	• Drip tray should be provided for chemical storage.	E 14
211022-O04	• To clear the oil stain at temporary drainage.	E 13
	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.: 211015), all environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		25 October 2021
Checked by	Dr. Priscilla Choy		25 October 2021

Weekly Site Inspection Record Summary

Checklist Reference Number	211028
Date	28 October 2021 (Thursday)
Time	14:00-15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
211028-R01	• Drip tray should be provided for chemical storage.	E 14
211028-O02	• To avoid oil leakage during maintenance.	E 13
	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	
211028-R03	• To display valid Construction Noise Permit at site entrance.	I 1
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 211022), all environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan	Howard	1 November 2021
Checked by	Dr. Priscilla Choy		1 November 2021

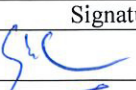
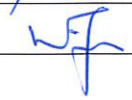
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	211004
Date	4 October 2021 (Monday)
Time	14:00 – 15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
211004-R03	• Faded NRMM Labels shall be replaced on regulated machines.	B 24
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
211004-R01	• Desilting materials should be provided along the site barriers to prevent surface runoff to Ma Wat River.	D 3
211004-R02	• Desilting materials should be provided along the site barriers to prevent surface runoff to On Kui Street.	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.: 210927), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		4 October 2021
Checked by	Dr. Priscilla Choy		4 October 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	211015
Date	15 October 2021 (Friday)
Time	09:00 – 11:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
211015-R01	• Display valid NRMM Labels on regulated machines.	B 24
211015-R02	• Stockpile should be covered properly by imperious sheeting.	B 2 &E 5
	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	
211015-R03	• Remove the stagnant water in the drip tray.	E 14
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 211004), all environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		15 October 2021
Checked by	Dr. Priscilla Choy		15 October 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	211018
Date	18 October 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	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 211015), all environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		19 October 2021
Checked by	Dr. Priscilla Choy		19 October 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	211025
Date	25 October 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	
211025-R01	• Enhance mitigation measures 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.: 211018), no environmental deficiency was identified during site inspection..	

	Name	Signature	Date
Recorded by	Antony Leung		25 October 2021
Checked by	Dr. Priscilla Choy		25 October 2021

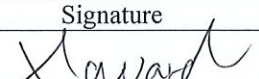
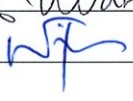
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	211007
Date	7 October 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.: 210930), all identified environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		8 October 2021
Checked by	Dr. Priscilla Choy		8 October 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	211015
Date	15 October 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. 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.: 211007), no environmental deficiency were identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		22 October 2021
Checked by	Dr. Priscilla Choy		22 October 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	211018
Date	18 October 2021 (Monday)
Time	14:00 – 14:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. 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.: 211015), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan		21 October 2021
Checked by	Dr. Priscilla Choy		21 October 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	211028
Date	28 October 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	
211028-R01	• The exposed worksite and haul road should be watered regularly.	A1
211028-R02	• Wheel washing facilities should be available at every designated vehicle exit point.	A6
	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.: 211018), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		29 October 2021
Checked by	Dr. Priscilla Choy		29 October 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	211008
Date	8 October 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	
	• 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.: 210929), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		11 October 2021
Checked by	Dr. Priscilla Choy		11 October 2021

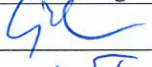
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Weekly Site Inspection Record Summary

Checklist Reference Number	211015
Date	15 October 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	
	• 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.: 211008), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		15 October 2021
Checked by	Dr. Priscilla Choy		15 October 2021

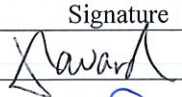
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Weekly Site Inspection Record Summary

Checklist Reference Number	211019
Date	19 October 2021 (Tuesday)
Time	09:00 – 09:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 211015), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan		19 October 2021
Checked by	Dr. Priscilla Choy		19 October 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	211029
Date	29 October 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	
	• 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.: 211019), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		1 November 2021
Checked by	Dr. Priscilla Choy		1 November 2021

APPENDIX Q
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
Construction Dust Impact							
S3.8	D1	Mitigation measures in form of regular watering under a good site practice should be adopted. Watering once per hour on exposed worksites and haul road is proposed to achieve dust removal efficiency of 92.1%. While the above watering frequencies are to be followed, the extent of watering may vary depending on actual site conditions but should be sufficient to maintain an equivalent intensity of no less than 1.7 L/m2 to achieve the respective dust removal efficiencies	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	^
S3.8	D2	The Contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation.	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	^
S3.8	D3	Following dust suppression measures should also be incorporated by the Contractor to control the dust nuisance throughout the construction Phase • Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; • Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; • A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones; • The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle; • Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores;	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	* ^ ^ ^ ^

		• When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period.					^
		• The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials;					
		• Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously;					^
		• Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet;					^
		• Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding;					^
		• Any skip hoist for material transport should be totally enclosed by impervious sheeting;					^
		• Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides;					^
		• Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed;					N/A
		• Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and					N/A
		• Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser					^

		within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.					^
S3.8	D4	Implement regular dust monitoring under EM&A programme during the construction stage.	Monitoring of dust impact	Contractor	Selected representative dust monitoring station	Construction phase	^
Noise Impact (Construction Phase)							
S4.9	N1	Implement the following good site management practices: • Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; • Machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; • Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works; • Mobile plant should be sited as far away from NSRs as possible and practicable; • Material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	Control construction airborne noise	Contractor	All construction sites	Construction phase	^ ^ ^ ^ ^
S4.9	N2	Install temporary site hoarding (approx 2.4m high) located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.	Reduce the construction noise levels at low-level zone of NSRs through partial screening.	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N3	Install movable noise barriers and full enclosure and acoustic mat, screen the noisy plants including air compressor and generator.	Screen the noisy plant items to be used at all construction sites	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N4	Use of “Quiet” Plant and Working Methods	Reduce the noise levels of plant items	Contractor	All construction sites where	Construction phase	*

					practicable		
S4.9	N5	Sequencing operation of construction plants where practicable.	Operate sequentially within the same work site to reduce the construction airborne noise	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N6	Implement a noise monitoring under EM&A programme.	Monitor the construction noise levels at the selected representative locations	Contractor	Selected representative noise monitoring stations	Construction phase	^
Water Quality Impact (Construction Phase)							
S5.7	W1	<u>Construction Runoff and Site Drainage</u> In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures should be provided and the Storm Water Pollution Control Plan is given below. where appropriate, should include the following: **Stormwater Pollution Control Plan** • At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities. The design of the temporary on-site drainage system will be undertaken by the Contractor prior to the commencement of construction. • Diversion of natural stormwater should be provided as far as possible. The design of temporary on-site drainage should prevent runoff going through site surface, construction machinery and equipments in order to avoid or minimize polluted runoff. Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8m^3 capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to	Control construction runoff	Contractor	All construction sites	Construction phase	# *

		disposal. The system capacity shall be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped. • The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a silt/sediment trap. The silt/sediment traps should be incorporated in the permanent drainage channels to enhance deposition rates. • The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94. The detailed design of the sand/silt traps should be undertaken by the contractor prior to the commencement of construction. • Construction works should be programmed to minimize surface excavation works during the rainy seasons (April to September). All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means. • All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas. • Measures should be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, it should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities. • All open stockpiles of construction materials (for example,				* ^ ^ * * ^

		aggregates, sand and fill material) of more than 50m3 should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. • Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. • Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events. • All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities should be provided at every construction site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. • Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources. The oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for the oil interceptors to prevent flushing during heavy rain. • Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water					^ ^ * N/A ^

		quality impacts. • All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby. • Regular environmental audit on the construction site should be carried out in order to prevent any malpractices. Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the meander, wetlands and fish ponds.					^ ^
S5.7	W2	*Stream Diversion* • In order to prevent sediment transport during riverbank works, deployment of silt curtain should be implemented, especially when construction works encroach or occur in close distance to water body. It is recommended to carry out all the riverbank works and diversion works within a cofferdam or diaphragm wall and the work areas on riverbed should be kept in dry condition.	Minimize water quality impact due to stream diversion	Contractor	All streams that required diversion	Construction phase	N/A
S5.7	W3	*Groundwater from Contaminated Area* • For other inaccessible sites, site investigation is required when they are resumed and handed over to the Project Proponent to identify if contaminated groundwater is found. • If the investigation results indicated that the groundwater to be generated from construction works would be contaminated, the contaminated groundwater should be either discharged into recharged wells, or properly treated in compliance with the requirements of Technical Memorandum on Standards for	Minimize water quality impact due to potential groundwater from contaminated area	Contractor	All identified groundwater-contaminated areas	Construction phase	N/A N/A

		Effluents Discharged into Drainage on Sewerage Systems, Inland and Coastal Waters. • If recharged well method were used, the groundwater quality in the recharged well should not be affected by recharging operation, i.e. the pollution levels of the recharged groundwater should not be higher than that in the recharging wells. • If treatment and discharge method were used, the design of wastewater treatment facilities, such as active carbon and petrol interceptor, should be submitted to the EPD and a discharge license should be obtained under the WPCO through the Regional Offices of EPD.					N/A N/A
S5.7	W4	<u>*Sewage from Workforce*</u> Portable chemical toilets and sewage holding tanks should be provided for handling the construction sewage generated by the workforce. A licensed Contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance. Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. Regular environmental audit on the construction site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the Project would not cause water quality impact after undertaking all required measures.	Handling of site sewage	Contractor	All construction sites	Construction Phase	^
Waste Management (Construction Waste)							

S7.6	WM1	*Waste Reduction Measures* Waste reduction is best achieved at the planning and design phase, as well as by ensuring the implementation of good site practices. The following recommendations are proposed to achieve reduction: • segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal; • proper storage and site practices to minimize the potential for damage and contamination of construction materials; • plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste; • sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc); • provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.	Reduce waste generation	Contractor	All construction sites where practicable	Prior to the commencement of construction	^ * ^ N/A ^
S7.6	WM2	Prepare Waste Management Plan and submit to the Engineer for approval	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	^
S7.6	WM3	*Good Site Practice* The following good site practices are recommended throughout the construction activities: • Nomination of an approved personnel, such as a site manager, to be responsible for the implementation of good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; • Training of site personnel in site cleanliness, appropriate waste	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	^ ^

		management procedures and concepts of waste reduction, reuse and recycling; • Provision of sufficient waste disposal points and regular collection for disposal; • Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; • Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;					^ ^ ^
S7.6	WM4	*Storage of Waste* The following recommendation should be implemented to minimize the impacts: • Waste such as soil should be handled and stored well to ensure secure containment; • Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; • Different locations should be designated to stockpile each material to enhance reuse;	Minimize waste impacts from storage	Contractor	All construction sites	Construction phase	^ # ^
S7.6	WM5	*Collection and Transportation of Waste* The following recommendation should be implemented to minimize the impacts: • Remove waste in timely manner; • Employ the trucks with cover or enclosed containers for waste	Minimize waste impact from storage	Contractor	All construction sites	Construction phase	^ ^

		transportation; • Obtain relevant waste disposal permits from the appropriate authorities; and • Disposal of waste should be done at licensed waste disposal facilities.					^ ^
S7.6	WM6	*Excavated and C&D Material* Wherever practicable, C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at Public Fill Reception Facilities areas or reclamation sites. The following mitigation measures should be implemented in handling the excavated and C&D materials: • Maintain temporary stockpiles and reuse excavated fill material for backfilling; • Carry out on-site sorting; • Deliver surplus artificial hard materials to Tuen Mun Area 38 recycling plant or its successor for recycling into subsequent useful products; • Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; and • Implement a recording system for the amount of waste generated, recycled and disposed of for checking; Standard formwork should be used as far as practicable in order to minimize the arising of C&D waste. The use of more durable formwork (e.g. metal hoarding) or plastic facing should be encouraged in order to enhance the possibility of recycling. The purchasing of construction materials should be carefully planned in order to avoid over ordering and wastage.	Minimize waste impacts from excavated and C&D material	Contractor	All construction sites	Construction phase	^ ^ N/A N/A N/A ^ N/A

		Wheel wash facilities have to be provided at the site entrance before the trucks leaving the works area.					^
S7.6	WM7	*Contaminated Soil* As a precaution, it is recommended that standard good site practice should be implemented during the construction phase to minimize any potential exposure to contaminated soils or groundwater. The details of mitigation measures to minimize the potential environmental implications arising from the handling of contaminated materials refer to Land Contamination Section.	Remediate contaminated soil	Contractor	All construction sites where applicable	Construction phase	*
S7.6	WM8	*Chemical Waste* If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producers. Chemical wastes should be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Control the chemical waste and ensure proper storage, handling and disposal	Contractor	All construction sites	Construction phase	^
S7.6	WM9	*General Waste* • General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling. • Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean. • A reputable waste collector should be employed to remove	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction phase	^ ^

		general refuse on a daily basis.					^
S7.6	WM10	*Sewage* • The WMP should document the locations and number of portable chemical toilets depending on the number of workers, land availability, site condition and activities. • Regularly collection by licensed collectors should be arranged to minimize potential environmental impacts.	Minimize production of sewage impacts	Contractor	All construction sites	Construction phase	N/A N/A
S7.6	WM11	Topsoil reuse – Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical. This is considered a general measure for good site practice.	Good site practice	Contractor/ Project Proponent	Onsite	Construction phase	N/A
Land Contamination							
S 8.4	LC2	Detailed site investigation (SI) for all inaccessible potentially contaminated sites in 2 NDAs	Verify the land contamination potential before the commencement of construction	Project Proponent Detailed Design Consultant Contractor	All inaccessible potentially contaminated sites in 2 NDAs as listed in the CAP	After the land is resumed and handed over to the Project Proponent	N/A
S 8.5	LC3	Preparation and submission of supplementary Contamination Assessment Report (CAR) and Remediation Action Plan (RAP) for all inaccessible potentially contaminated sites in 2 NDAs to EPD for agreement if land contamination is confirmed	Present the findings of SI and evaluate the potential environmental and human health impacts Recommend appropriate mitigation measures for the contaminated soil and groundwater identified in	Project Proponent/ Detailed Design Consultant	All inaccessible potentially contaminated sites in 2 NDAs as listed in the CAP	Prior to the commencement of any proposed construction works if land contamination is confirmed	N/A

			the assessment if remediation is required			and remediation is required	
S 8.5	LC4	Preparation and submission of Remediation Report to EPD for agreement	Demonstrate that the decontamination work is adequate and is carried out in accordance with the endorsed supplementary CAR and RAP	Project Proponent/ Detailed Design Consultant	All inaccessible potentially contaminated sites in 2 NDAs as listed in the CAP	Prior to the commencement of any proposed construction works if land contamination is confirmed and remediation is required	N/A
S 8.6	LC5	Re-appraisal of surveyed sites (if they become part of the land requirement for NDA development) that were not identified as potentially contaminated or could not be accessed for visual inspection during the site survey	Verify the land contamination potential due to potential change of land uses before the commencement of construction	Project Proponent/ Detailed Design Consultant	All surveyed sites (if they become part of the land requirement for NDA development (that were not identified as potentially contaminated or could not be accessed for visual inspection during the site survey as	After the land is resumed and handed over to the Project Proponent.	N/A

					listed in the CAP		
S 8.7.2 and Appendix 8.4	LC6	Treatment of arsenic-containing soil "Solidification/Stabilization" (S/S) treatment method was proposed for the treatment of arsenic-containing soil. Toxicity Characteristic Leaching Procedure (TCLP) test should be undertaken after S/S in order to ensure that the contaminant will not leach to the environment. Unconfined Compressive Strength (UCS) test should be conducted, and not less than 1MPa should be met prior to the backfilling or stockpiled for future reuse within the study area.	To treat the arsenic containing soil	Government Developer/ Contractor	KTN NDA	Prior to commencement of construction works within KTN NDA	N/A
S 8.7.2 and Appendix 8.4	LC7	Excavation and Transportation • Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety; • In case the soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table; • Excavation should be carried out during dry season as far as possible to minimize runoff from excavated soils; • Stockpiling site(s) should be lined with impermeable sheeting and bunded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or contaminated run-off during rainy season. Watering should be avoided on stockpiles of soil to minimize runoff; • Supply of suitable backfill material after excavation, if require; Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or run-off, and	To minimize the potential environmental impacts arising from the handling of contaminated materials	Contractor	KTN NDA	Prior to commencement of construction works within KTN NDA	N/A ^

		truck bodies and tailgates should be sealed to prevent any discharge during transport or during wet season; • Speed control for the trucks carrying excavated materials should be enforced; and Vehicle wheel washing facilities at the site's exit points should be established and used.					
S 8.7.2 and Appendix 8.4	LC8	Solidification/Stabilization • The loading, unloading, handling, transfer or storage of cement should be carried out in an enclosed system; • Mixing process and other associated material handling activities should be properly scheduled to minimize potential noise impact and dust emission; • The mixing facilities should be sited as far apart as practicable from the nearby noise sensitive receivers; • Mixing of soil and cement / water / other additive(s) should be undertaken at a solidification plant to minimize the potential for leaching; • Runoff from the solidification / stabilization area should be prevented by constructing a concrete bund along the perimeter of the solidification / stabilization area; • If stockpile of treated soil is required, the stockpiling site(s) should be lined with impermeable sheeting and bunded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or site run-off during rainy season; and If necessary, there should be clear and separated areas for stockpiling of untreated and treated materials.	To minimize the potential environmental impacts arising from the handling of contaminated materials	Contractor	KTN NDA	The course of treatment	N/A ^ ^ ^ ^ ^

S 8.7.2 and Appendix 8.4	LC9	Safety Measures • Set up a list of safety measures for site workers; • Provide written information and training on safety for site workers; • Keep a log-book and plan showing the zones requiring treatment and clean zones; • Maintain a hygienic working environment; • Avoid dust generation; • Provide face and respiratory protection gear to site workers if necessary; • Provide personal protective clothing (e.g. chemical resistant • jackboot, liquid tight gloves) to site workers if necessary; • Provide first aid training and materials to site worker; • Bulk earth moving equipment should be utilized as much as possible to minimize worker Eating, drinking and smoking should not be allowed in the excavation areas and treatment area to avoid inadvertent ingestion of arsenic containing soil.	To minimize the potential adverse effects on health and safety of construction workers	Contractor	KTN NDA	The course of treatment	N/A
Landfill Gas Hazard							
S10.6	LFG1	• Underground rooms or void should be avoided as far as practicable in the proposed developments within the Consultation Zone and should be avoided totally in the proposed developments within the MTLL. • Buildings or structures within the MTLL should be at ground level with raised floor slabs which are less prone to gas ingress. • For the high risk category, the use of active control of gas, including barriers and detection systems are recommended. These measures include the control of gas by mechanical means	To minimize the risk of LFG hazards to occupants within MTLL and its 250m Consultation Zone	Government / Developer/ Detailed Design Consultant within MTLL and its 250m Consultation Zone	Buildings within MTLL and its 250m Consultation Zone	Detailed design phase	N/A

		e.g. ventilation of spaces with air to dilute gas, or extraction of gas using fans or blowers. • For the low risk category, the provision of barriers to the movement of gas is recommended. Measures recommended include the use of membranes in floors or walls, or in trenches, coupled with high permeability vents such as nofines gravel in trenches or voids/permeable layers below structures. • The need and practicality of incorporating such measures should be reviewed in the detailed Qualitative LFG Hazards Assessment (QLFGHA) during the detailed design stage for developments within the 250m Consultation Zone and within MTLL. Recommendations on the detailed precautionary and protection measures to be adopted should be given in the QLFGHA. • The design and construction method of the proposed development within MTLL (i.e. the proposed recreational area in site E1-1) should be provided to EPD for agreement in the design stage to ensure compatibility with the landfill restoration facilities and aftercare works within MTLL, such that these facilities and works will not be affected by the construction or operation of the proposed development.					
S10.6	LFG2	• During all works, safety procedures should be implemented to minimize the risks of fires and explosions, asphyxiation of workers (especially in confined space) and toxicity effects resulting from contact with contaminated soils and groundwater. • Safety officers, specifically trained with regard to LFG and leachate related hazards and the appropriate actions to take in	To minimize the risk of LFG hazards to the staff and visitors within MTLL and its 250m Consultation Zone	Contractor	Construction sites within MTLL and its 250m Consultation Zone	Construction phase	^ ^

		adverse circumstances, should be present on all worksites throughout the works. • All personnel who work on site and all visitors to the site should be made aware of the possibility of ignition of gas in the vicinity of the works, the possible presence of contaminated water and the need to avoid physical contact with it. • Those staff who work in, or have responsibility for "at risk" areas, including bore pilling and excavation works, should receive appropriate training on working in areas susceptible to LFG. • Enhanced personal hygiene practices including washing thoroughly after working and eating only in "clean" areas should be adopted where contact may have been made with any groundwater which is thought to be contaminated with leachate. • Any offices / quarters set up on site should take precautions against LFG ingress, such as being raised off the ground. Other storage premizes, e.g. shipping containers, where this is not possible should be well ventilated prior to entry. • Adequate precautions to prevent the accumulation of LFG under site buildings and within storage shed should be taken by raising buildings off the ground where appropriate and"airing" storage containers prior to entry by personnel and ensuring adequate ventilation at all times. • Smoking and naked flames should be prohibited within confined spaces. "No Smoking" and "No Naked Flame" notices in Chinese and English should be posted prominently around the construction site. Safety notices should be posted warning of the					^ ^ ^ ^ ^

		potential hazards. • Welding, flame-cutting or other hot works may only be carried out in confined spaces when controlled by a "permit to work" procedure, properly authorized by the Safety Officer. The permit to work procedure should set down clearly the requirements for continuous monitoring of methane, carbon dioxide and oxygen throughout the period during which the hot works are in progress. The procedure should also require the presence of an appropriately qualified person who shall be responsible for reviewing the gas measurements as they are made, and who shall have executive responsibility for suspending the work in the event of unacceptable or hazardous conditions. Only those workers who are appropriately trained and fully aware of the potentially hazardous conditions which may arise should be permitted to carry out hot works in confined areas. • During the construction works, adequate fire extinguishers and breathing apparatus sets should be made available on site and appropriate training given in their use. • Ongoing gas monitoring should be considered for offices, stores etc set up on site.					^ N/A ^ ^
S10.6	LFG3	Utility Companies • The developers should make the utility companies aware of the location and features of the site within the Consultation Zone during the respective detailed design stage as part of the QLFGHA. • The utilities companies should have a responsibility to train and ensure their staff to take appropriate precautions at all times	To minimize the risk of LFG hazards to the occupants, maintenance personnel, visitors and other users within MTLL and its 250m Consultation Zone	Government / Developer within MTLL and its 250m Consultation Zone	Buildings within MTLL and its 250m Consultation Zone	Operation phase	N/A

		when entering enclosed spaces or plant rooms. • Should utility installation be required in site E1-1, the developers should make the utility companies aware of the potential constraints imposed by the landfill restoration facilities and aftercare works to ensure these facilities and works will remain unaffected. Appropriate precautionary measures against landfill gas should also be taken should utility installation be required within the MTLL. Building Management • The management committee of the building estate will hold a special responsibility to ensure that the occupants of the building, its staff and maintenance workers are protected from LFG and that visitors to the site are also made aware as to the dangers and the precautions required to be taken. • Of primary importance to satisfactorily upholding this responsibility will be to ensure that strict procedures for maintaining control over all temporary and /or permanent works proposed at the site are reviewed with regard to the LFG hazard. This needs to be accompanied by a comprehensive contingency plan in case of incidents, including liaison with EPD officers, Fire Services Department, Landfill Restoration Contractors and others, as necessary. • All construction and maintenance (including utilities) personnel working at the site should be made aware of the hazards of LFG and its possible presence on site. This should be achieved through a combination of posting warning signs in prominent places and also by access to detailed information on LFG					

		hazards and the designs and procedural means by which these hazards are being minimized on site. In addition, entry to confined spaces such as refuse/store rooms, drainage manholes etc. should be preceded by a period of "airing" the space by opening the door widely allowing fresh air to enter. Where appropriate, monitoring of gas should also precede entry. • Any proposed modifications or additions to the building structure should be subject to a further assessment of LFG hazard, particularly in areas where a gas membrane has been installed. Any penetrations of the membrane must be repaired as soon as possible after detection or works completion using similar products. • The building management company should also make arrangement with Landfill Restoration Contractor so that they are advised of all situations which may potentially threaten the safety of the building occupants resulting from any accidents or failures at the landfill site. The building management company should also have available suitable gas monitoring equipment for any ad hoc investigations necessary relating to LFG and be in a position to undertake any future routine monitoring of gas which may be considered necessary soloing completion of the defects correction period. • To ensure that all the above protection and precautionary measures and issues pertaining to LFG are properly and consistently addressed by future users and owners of the site, it is recommended that a comprehensive LFG hazard management system be developed by the owner of the building or its property					

		management agency. The system should be developed by the developers of the sites as part of the QLFGHA before the occupation of the building and implemented during its operational phase.					
Cultural Heritage (Pre-construction Phase)							
S11.6.1	CH1	Undertaking Further Archaeological Survey to Cover the Outstanding Areas Further archaeological surveys to cover the outstanding areas of the not-yet-surveyed-area with medium archaeological potential located in the areas with proposed development as presented in Figure 11.9 should be implemented after land resumption to confirm and verify the findings of the EIA. The survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance. It should be noted that the scope of further archaeological survey is based on the current proposed alignment. Any additional works areas which have not been covered by the current archaeological impact assessment should be covered as soon as possible. Subject to the findings of the archaeological survey to be conducted after land resumption, additional mitigation measures would be designed and implemented before the commencement of construction works to mitigate the adverse impact.	To confirm and verify the findings of the EIA	Project Proponent/ Contractor/ Qualified Archaeologist	In the not-yet-surveyed-areas with medium archaeological potential located in the areas within Areas D1-11, A3-5, A3-6, B1-1, and B1-7,	After land resumption but before construction	N/A
S11.6.1	CH2	Undertaking Survey-cum-Rescue Excavation A Survey-cum-Rescue Excavation should be conducted after land resumption and before the commencement of construction works to define the precise archaeological deposits extent and to preserve the	To define the precise archaeological deposits extent and to preserve the archaeological resources as far	Project Proponent/ Contractor/ Qualified Archaeologist	In KTN NDA, for Site 3 and In FLN NDA for Site 5.	After land resumption but before construction commencement of	N/A

		archaeological resources by record. The excavation should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance.	as possible			the zone	
S11.6.1	CH3	Undertaking Preservation in-situ for Site 7 Preservation in-situ of the cultivation deposits in Site 7 is proposed. If disturbance to the site by the design of the Central Park is unavoidable, further archaeological survey should be conducted after land resumption prior to the pre-construction stage to assess the feasibility to incorporate Site 7 into the design of the development plan of the proposed zone. Appropriate followup actions, including preservation of the significant archaeological deposits in-situ in the Central Park, would then be considered with the consent of AMO. The recommended mitigation measure of preservation in-situ with further archaeological survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance.	To preserve the archaeological resources as far as possible.	Project Proponent/ Contractor/ Qualified Archaeologist	Site 7 in FLN NDA	After land resumption prior to preconstruction stage of the proposed Central Park (Area C2-8, Zoning O)	N/A
S11.6.1	CH4	Undertaking Induction Training Induction training should be provided to the construction Contractor before the commencement of the excavation works in Spots A, D, F to H. An induction will be conducted as part of the environmental health and safety induction programme to all site staff before they are deployed on site. The induction will include an introduction on the historical development of the Site, the possible archaeological remains	To preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	Spots A, D, F to H	Before the commencement of the excavation works and before site staff are deployed on site	N/A

		that may be encountered during ground excavation works as well as the reporting procedures in case suspected archaeological remains are identified. A set of the presentation material (in the form of power point presentation) with content details will be prepared by an archaeologist and submitted to AMO for reference and record purpose. The first induction briefing will be video recorded and it will be used as induction briefing material for new site staff.					
S11.6.1	CH5	Undertaking Archaeological Impact Assessment before Construction at A1 It is recommended that an Archaeological Impact Assessment to be conducted in the impacted area in Area B1-8 and B1-9 at A1 (Sheung Shui Wa Shan Site of Archaeological Interest) after land resumption and before construction when detail construction work information is available to determine the need for further archaeological follow up actions.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	Area B1-8 and B1-9 zoned as R4 and R3 in A1	After land resumption but before construction	N/A
S11.6.1	CH6	Undertaking Archaeological Impact Assessment before Construction within A1 but except Area B1-8 and B1-9 Should there be any development work within the Sheung Shui Wa Shan Site of Archaeological Interest, it is recommended that an Archaeological Impact Assessment is required after land resumption and before construction when detail construction work information is available to determine the need for further archaeological follow up actions.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible.	Project Proponent/ Contractor/ Qualified Archaeologist	Area within A1 except Area B1-8 and B1-9 in R4 &R3 zoning	After land resumption but before construction	N/A

S11.6.2	CH7	Undertaking baseline condition survey and baseline vibration impact assessment In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 7.5mm/s could be adopted for graded historic buildings) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report. The condition survey of graded historic building should be submitted to AMO for information.	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	G303 and G308	Preconstruction stage before commencement of construction works during Schedule 3 study	N/A
S11.6.2	CH8	Undertaking baseline condition survey and baseline vibration impact assessment In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 7.5mm/s and 15mm/s could be adopted for graded historic buildings and historic buildings respectively) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report. The condition survey of	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	KT57, FL05, FL18, and FL2	Preconstruction stage before commencement of construction works	N/A

		graded historic building should be submitted to AMO for information.					
S11.6.2	CH9	Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out the Project Proponent.	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	Ancillary structures of G303, HKT01, HKT02, Entrance Gate of HKT03, HKT04, KT01 to KT10, KT13, KT36, KT39, KT40, KT41, KT43, KT45, KT47, KT50, KT54, KT62 to KT63, KT69, FL01, FL16, and FL35	Prior to Removal / Relocation of features before commenceme nt of construction works during Schedule 3 study	N/A
S11.6.2	CH10	Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out by the Project Proponent.	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	KT12 and KT61	Prior to Removal / Relocation of features before commencement of construction works	N/A
S11.6.2	CH11	Relocation of Built Heritages Relocation of built heritages to a reasonable location nearby may be required.	To preserve the directly impacted sites by relocation	Project Proponent/ Contractor	HKT01, HKT02, Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of construction works	N/A

S11.6.2	CH12	Drainage System and Access Route Design For the retained built heritage items in developable area, drainage system and access route would be designed to prevent the persevered flooding and maintain the accessibility to the built heritage.	To prevent the persevered flooding and maintain the accessibility to the built heritage	Contractor /Detailed Design consultant	The retained built heritage items	Pre-construction phase	N/A
Cultural Heritage (Construction Phase)							
S11.6.1	CH13	Inform Upon Archaeological Discovery Pursuant to the Antiquities and Monuments Ordinance, the construction Contractor should inform the AMO immediately in case of discovery of antiquities or supposed antiquities in the course of excavation works in construction phase.	Special attention should be given to areas evaluated to have archaeological potential or significance.	Contractor	All soil excavation works	Immediately upon discovery during excavation works	N/A
S11.6.2	CH14	Watertable Monitoring Since the construction works and development activities may induce change in the watertable. It is recommended the Contractor should ensure that the change of watertable induced by the construction works and development activities will not result in settlement of built heritage.	To minimize the potential impacts to the built heritage items by the change of watertable induced by the works during the Construction phase	Contractor	Within NDAs	Construction phase	N/A
S11.6.2	CH15	Conducting Construction Vibration Monitoring and Structural Strengthening Measures Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment	^
Landscape and Visual Impact (Detailed Design, Prior to Construction, Construction and Operation Phases)							
S.12.9	LV1	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use,		Detailed design consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for	N/A

		should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.				all planting, this should be installed as the areas become available, to achieve early establishment	
S.12.9 MM1	LV2	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A
S.12.9 MM2	LV3	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant	Throughout NDAs	Prior to Construction	N/A

		building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines. All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated. Construction time frame should also be considered and designs seek to keep it to a practical minimum.					
S12.9 MM14.4	LV 4	Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed. For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream.	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	All watercourses, particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern Section	Prior to Construction and Construction Phase	^

		Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.					
Landscape and Visual (Construction)							
S.12.9 MM3	LV5	Open Space Provision - the principles adopted in the RODP planning ensure that public open space systems are incorporated. All requirements for open space areas stipulated in the planning documents for the formulation of the Preliminary Layout Plan should be adhered to.	Reprovision of open space. Enhance visual amenity of the area and improve the overall landscape character	Government Developer/ Detailed Design Consultant/ Contractor/	Onsite as stipulated in the planning documents for the formulation of the Preliminary Layout Plan	Prior to Construction and Construction Phas	N/A
S.12.9 MM4	LV6	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A
S.12.9 MM5	LV7	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be	Transplant Trees where suitable for transplantation	Government / Detailed Design	Onsite where possible.	Prior to Construction,	N/A

		transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.		Consultant/ Contractor	Otherwise consider offsite locations	Construction Phase & Maintenance in Operation Phase	
S.12.9 MM6	LV8	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.					
S.12.9 MM7	LV9	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii* are suggested.	Compensate for trees and shrubs lost due to the Project.	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM8	LV10	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.					N/A

		The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda*. In addition some understory vegetation may be planted including shrubs such as *Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii*. The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.					

S.12.9 MM9	LV11	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. building edges, piers).	Soften hard surfaces and facilities	Government / Developer/ Detailed Design Consultant/ Contractor	On appropriate structures	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM10	LV12	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Developer/ Detailed Design Consultant/ Contractor	On appropriate buildings	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM11	LV13	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

S.12.9 MM12	LV14	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	To soften the hard, straight edges and provide greening along roads.	Government / Developer/ Detailed Design Consultant/ Contractor	On viaducts or along roads	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM13 & EIA Annex 13	LV15	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on- wetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

S.12.9 MM14.1	LV16	Reprovision of Natural Stream – Where natural streams are unavoidably affected along some of their length, they can be diverted to avoid the proposed new developments and retain the integrity of the whole stream. Detailed design of any stream diversion should follow the Guidelines in ETWB Technical Circular (Works) No. 5/2005 (Protection of natural streams/rivers from adverse impacts arising from construction works) and appropriate construction methods should be used. Two short stretches of the Ma Tso Lung Stream will be affected by Project in the KTN NDA; by the LMC Eastern Connection Road on the western border of Site F1-3 and further upstream by Site E-2. At both these locations, the stream will be reprovisioned and maintain the flow between unaffected sections of the stream. The reprovisioned stream will be provided with a natural bed and banks, as well as having an area of marsh/ pool next to it and trees and shrubs further from the banks. (See E2, E14 and E24 also)	Achieve a natural stream, similar to existing, including wetland planting provision for embankments	Government / Developer/ Detailed Design Consultant/ Contractor	Streams and channelized watercourses e.g. a Ma Tso Lung and Siu Han San Tsuen	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S12.9 MM14.2	LV17	Stream Buffer Planting –Providing a minimum 10 m buffer with planting (where there is a general presumption against any development taking place) along streams where they flow close to developments, confers a degree of protection to the stream course and its associated vegetation. For the stream at Ma Tso Lung in KTN NDA, the middle and upper sections will be designated as Green Belt zone where there is a general presumption against development as buffer to the stream.	Protect natural streams	Government / Developer/ Detailed Design Consultant/ Contractor	Streams and channelized watercourses e.g. a Ma Tso Lung and Siu Han San Tsuen	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		For the stream at Siu Hang San Tsuen in FLN NDA, within the NDA boundary much of the stream would be located underneath the viaduct for the proposed Fanling Bypass. To the south of the viaduct the stream flows through an Open Space area D1-3. In this Open Space zone a 10m buffer is proposed in which natural vegetation will be retained and enhanced and human activities will be limited in order to avoid direct impacts to the stream bed and to minimize potential indirect impacts to the stream and riparian corridor. (See E3 also)					
S12.9 MM14.3	LV18	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Developer/ Detailed Design Consultant/ Contractor	Channelized watercourse, particularly the Ma Wat River Channel Diversion	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

S12.9 MM15	LV19	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
S.12.9 MM16	LV20	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non- reflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	Throughout NDAs	Construction Phase	^
S.12.9 MM17	LV21	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Developer/ Contractor	Throughout NDAs	Construction and Operation Phases	N/A

Ecology (Prior to Construction Phase or throughout the project)							
S. 13.9	E1	Egretry Habitat Creation & Management Plan (EHCMP) and Woodland Planting and Management Plan (WPMP)	Compensate for loss of Man Kam To Road egretry. Compensate for loss of secondary woodland and hillside plantation of ecological significance.	Project Proponent/ Detailed Design Consultant (EHCMP and WPMP).	FLN area A1-7 (egretry compensation). KTN areas E1-8 and G1-3 (woodland compensation).	Detailed design phase	N/A
S. 13.9	E2	Detailed design of development along lower reaches of Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream in OU zones F1-2 and F1-3 and detailed design of LMC Loop Eastern Connection Road with restoration of diverted stream and riparian corridor, permanent barrier and underpass on the at-grade section Compensation for the loss of seasonally wet grassland at Ma Tso Lung by habitat restoration and enhancement along diverted section of Ma Tso Lung Stream	Minimize impacts on Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream and riparian corridor of importance to species of conservation significance.	Project Proponent/ Detailed Design Consultant. (design of Ma Tso Lung Stream diversion and buffer zone habitat restoration measures)	KTN areas F1-2 and F1-3 and LMC Loop Eastern Connection Road.	Detailed design and construction phases.	N/A
S13.9	E3	Detailed design, implementation and management of Siu Hang San Tsuen Stream to have 10m wide vegetated buffer in Open Space zone D1-3, Fanling Bypass to cross stream on viaduct.	Minimize impacts on Siu Hang San Tsuen Stream and stream fauna.	PlanD, Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	FLN area D1-3.	Detailed design, construction and operation phases.	N/A
S.13.9	E4	Long Valley Nature Park (LVNP) designation, design and implementation.	Compensate for wetland loss arising from the project and protection of Long Valley from	Project Proponent/ Detailed Design Consultant (Long	Long Valley KTN area C1-9 and any suitable areas to be	Detailed design phase	N/A

		Enhancement of non-wetland habitats in LVNP. Planning for the advanced provision of alternative foraging habitat along main river channels for large waterbirds.	adverse ecological impacts including provision of additional/alternative habitat for large waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Valley Nature Park Habitat Creation & Management Plan)	identified during the planning stage		
S13.9	E5	Stringent planning control requirements in Long Valley north and west of Sheung Yue River, including Ho Sheung Heung egretry.	Protect these wetland areas from indirect impacts to habitats and fauna especially breeding ardeids foraging in these areas and utilizing flight-lines from Ho Sheung Heung egretry. Avoid habitat loss and disturbance to fauna of conservation significance, especially nesting ardeids Maintenance of ecological linkages with Deep Bay ecosystem and avoidance of severance of these linkages, especially for waterbirds	PlanD.	KTN areas C2-1 and C2-2 , Ho Sheung Heung egretry and areas north of Long Valley along the Ng Tung River to the Shenzhen River	Detailed design phase	N/A
S13.9	E6	Planning for creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; and detailed design of Open Space areas and development areas along river corridors.	Minimize disturbance to large waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance	Area along Ng Tung, Sheung Yue and Shek Sheung River	Detailed design, construction and operational phases.	N/A

			Maintain ecological linkages within NDA Project Area and between Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.	Authority			
S13.9	E7	Building setback and mounding in locations near Long Valley. KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries).	Minimization of disturbance impacts to fauna using Long Valley.	PlanD	KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries.	Detailed design phase	N/A
S13.9	E8	Preparation and implementation of Guidelines for building design measures to minimize mortality and light and glare impacts to fauna. Guidelines to address the following measures: Use opaque, non-transparent, non-reflective noise barriers for all developments associated with the Project. Measures to include the following: • Fritting, or the placement of ceramic lines or dots on glass, which creates a visual barrier to birds and reduces air conditioning loads by lowering heat gain, while still allowing light transmission for interior spaces. It is most successful when the frits are applied on the outside surface. Frosted glass has similar effects;	Minimize mortality and disturbance impacts on fauna, especially mammals and birds.	PlanD/ Project Proponent/ Developer/ Detailed Design Consultant	Near Long Valley	Detailed design phase	N/A

		• Angled glass to be used only for smaller panes in buildings with a limited amount of glass; • The use of glass that reflects UV light (primarily visible to birds, but not to humans) to reduce collisions; • Film and art treatment allow glass surfaces to be used a medium of expression, often related to the nature and use of the building, as well indicating to birds their impenetrability; • Lightweight external screens can be added to windows or become a façade element of larger buildings, and are suitable where non-operable windows are prevalent, which is often the case in modern buildings in HK					
	E9	Not used					N/A
S13.8	E10	Review development footprint and layout of proposed developments in KTN areas D1-11a and G1-5 to avoid/minimize direct and indirect impacts on secondary woodland at Ho Sheung Heung and shrubland at Crest Hill.	Minimize loss of secondary woodland and shrubland of ecological value.	Project Proponent/Detailed Design Consultant	KTN areas D1-11a and G1-5 to avoid/minimize direct and indirect impacts on secondary woodland at Ho Sheung Heung and Crest Hill	Detailed design phase	N/A

S13.9	E11	No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north or east of KTN D1-5 and east of D1-9 and C2-3, construction hours restricted to 09.00 to 17.30 during 1 March to 31 July on new pedestrian bridge over the Sheung Yue River, new pedestrian bridge over the tidal section of the Ng Tung River and existing bridge between KTN areas C2-2 and C1-8. Review Design and construction methods for all bridges especially those on the Sheung Yue and tidal Ng Tung Rivers and adopt methods which minimize impacts on Long Valley and the rivers, and disturbance and fragmentation impacts on fauna. No overlap in construction of bridges over main river channels. Measures to ensure no hydrological disruption to Long Valley Watercourse and water supply to Long Valley to be designed at the detailed design stage for the rechannelisation of the Long Valley Watercourse and the development of areas through which it passes, including KTN area B3-12. Contingency plan to address any disruption to be included in LVNP HCMP. Avoid removal or interference with screen planting undertaken under the Construction of Cycle Tracks and Associated Supporting Facilities from Sha Po Tsuen to Shek Sheung project.	Minimize disturbance impacts (including cumulative impacts with cycle track project) to flight-lines of breeding ardeids.	Project Proponent/ Detailed Design Consultant Contractor	Along and within Sheung Yue and Ng Tung Rivers, Long Valley, Long Valley and watercourse upstream areas including KTN area B3-12	Detailed design/ construction phase.	^

Ecology (Construction Phase)							
S13.9	E12	Compensatory egretry habitat provision and establishment. Review condition and location of egretries before commencement of works. Formulate and implement additional mitigation measures as appropriate. Phasing of works near and within Man Kam To Road Egretry outside breeding season	Compensate for loss of Man Kam To Road egretry habitat. Avoid mortality of breeding egrets	Project Proponent/ Detailed Design Consultant/ Contractor	FLN area A1-7 500m from Man Kam To Road Egretry.	Construction phase.	^
S13.9	E13	Review design and construction methods for bridges, especially those on the Sheung Yue and tidal Ng Tung Rivers, and adopt measures which minimize impacts on rivers and disturbance and fragmentation impacts on fauna. No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north and east of KTN area D1-5 and east of D1-9 and C2-3 and restriction of working hours on new pedestrian bridges over the Sheung Yue River and tidal Ng Tung River to 09.00 to 17.30 during the ardeid breeding season (1 March to 31 July) Provision of alternative foraging habitat along main river channels for large waterbirds.	Minimize impacts on rivers and disturbance and fragmentation impacts on fauna	Project Proponent/ Detailed Design Consultant/ Contractor	Along and within the Sheung Yue, Ng Tung and Shek Sheung Rivers	Detailed design and construction phases.	^

S13.9	E14	Buffer zone of 15-30m as appropriate on both sides (not less than 45m total width) of Ma Tso Lung Stream north of the point where it is crossed by the LMC Loop Eastern Connection Road, and Ma Tso Lung Stream diversion during construction of the LMC Loop Eastern Connection Road; development along lower reaches of Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream in OU zones in KTN areas F1-2 and F1-3 to be set back beyond buffer. Construction and maintenance of permanent 1.2m high solid faunal barrier at all at-grade sections of LMC Loop eastern connection Road north of junction with road D4 within 15-30m as appropriate of Ma Tso Lung Stream buffer and construction of faunal underpass beneath road. Compensation for the loss of seasonally wet grassland at Ma Tso Lung by habitat restoration and enhancement along diverted section of Ma Tso Lung Stream.	Minimize impacts direct and indirect impacts of habitat loss, disturbance, pollution and fragmentation on Ma Tso Lung Stream and marsh and riparian corridor of importance to species of conservation significance.	PlanD/ Project Proponent/ Developer/ Detailed Design Consultant/ Contractor. (Design of Ma Tso Lung Stream diversion and buffer zone habitat restoration measures)	KTN areas H1-1, F12 and F1-3 and Lok Ma Chau Loop Eastern Connection Road.	Detailed design and construction phases.	N/A
S.13.9	E15	Creation and enhancement of proposed Long Valley Nature Park and creation and enhancement of wetland and buffer planting within LVNP.	Compensate for wetland loss arising from the project	Project Proponent/ Contractor (LVNP Detailed Habitat Creation & Management Plan)	Long Valley, (KTN area C1-9).	Construction phase.	^

S13.9	E16	Creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; provision of Open Space areas and development areas along river corridors; Design and erection of 2m high solid dull green site barrier fence between river channel and any active works area along or adjacent to Ng Tung, Sheung Yue and Shek Sheung Rivers. Ng Tung, Sheung Yue and Shek Sheung Rivers screen planting.	Minimize disturbance to waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Detailed Design Consultant/ Contractor	Ng Tung, Sheung Yue and Shek Sheung Rivers	Detailed design and Construction phases.	^
S13.9	E17	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance on edge of development areas, including along any roads adjacent to or penetrating into areas/habitats of ecological importance. Erection of a 2m high dull green site barrier fence at the edge of the works area or 30m from Ma Tso Lung Stream and tributaries, whichever distance is the greater.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna. Measures to minimize flight- line impacts to birds, especially breeding ardeids.	Contractor	Interface between areas/habitats/ fauna/ flora of ecological importance (e.g. KTN areas B1-3, C1-5, C1- 6, C1-9, C2-2, C2-4, C2-5, D1-8, E1-8, G1- 3, H1-1, Ma Tso Lung Stream and tributaries; FLN areas A1-3, A1-7 and A1-9) and works areas; and around any works areas north of the	Construction phase.	#

					Fanling Bypass and north of the Ng Tung River west of the western terminus of the Fanling Bypass. Riparian corridor of Ma Tso Lung Stream and tributaries.		
S13.9	E18	Compensatory woodland planting, management and maintenance.	Compensate for loss of secondary woodland and hillside plantation of ecological significance.	Project Proponent/ Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A
S13.9	E19	Use opaque, non-transparent, non-reflective noise barriers for all construction sites. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Contractor	All construction sites	Construction phase.	^
S13.9	E20	Pre-site clearance check for presence of flora or fauna of conservation significance and bat roosts. If any are found, measures should be proposed and implemented to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement.	Minimize impacts to flora and fauna of conservation significance. Minimize impacts to protected fauna and flora species. Formulate and implement mitigation measures to avoid, minimize and/or compensate for impacts;	Government/ Developer/ Contractor/ Ecologist	All construction sites.	Prior to clearance of vegetation and structures.	N/A

		Pre-site clearance check on all construction sites and pre –works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of protected plant species/specimens of conservation significance. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, Pre-site clearance of construction sites in Crest Hill area, KTN areas D1-7, D1-11 and G1-5 (where Eurasian Hobby was recorded) and on Cheung Po Tau, FLN area A3-1 (where Grey Nightjar was recorded) for presence of any breeding birds/breeding sites. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement. Pre-site clearance check on all construction sites for presence of Chinese Bullfrog, translocation to suitable areas including LVNP.	including adjustments to design, timing of works, transplantation and translocation.				
S13.9	E21	Pre-works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of flora or fauna of conservation significance and bat roosts. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement.	Minimize impacts to flora and fauna of conservation significance. Minimize impacts to protected fauna and flora species. Consider and implement adjustments to avoid, minimize or compensate for impacts; including adjustments to design, timing of	Government/ Developer/ Contractor/ Ecologist	All construction sites.	Prior to clearance of vegetation and structures.	N/A

		Pre-site clearance check on all construction sites for presence of reptile species of conservation significance, capture and translocate to receptor site; review translocation options in respect to species in Ma Tso Lung area and determine whether release locally or elsewhere is appropriate. Seek agreement of relevant authorities including AFCD in respect of proposed measures then implement Pre-works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of Small Snakehead and *Sommaniathelphusa zanklon*. Capture any *Sommaniathelphusa zanklon* found and translocate to Ma Tso Lung Stream/ other suitable areas including LVNP	works, transplantation and translocation				
S13.9	E22	Prevention of dust, run-off and pollutants impacting Deep Bay catchment area and areas of ecological importance.	Avoid increase to pollution entering ecologically sensitive Deep Bay ecosystem.	Contractor	All construction sites.	Construction	N/A
Specific Mitigation Measures for Designated Projects							
DP2- Castle Peak Road Diversion (Major Improvement)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.A9	LV1-DP2	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed Design Consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to	N/A

						achieve early establishment	
S.12.A9 MM14.4	LV4-DP2	Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed. For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream. Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	All watercourses, particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern Section	Prior to Construction and Construction Phase	N/A
S.12.A9 MM4	LV5-DP2	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor"s works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will	Protect and Preserve Trees	Government/ Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A

		include details of tree protection measures for those trees to be retained.					
S.12.A9 MM5	LV6-DP2	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 Interim Guidelines for Tree Transplanting Works under Highways Department's VegetationMaintenance Ambit" should be referred to.	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	*Onsite where possible, otherwise consider offsite locations*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM6	LV7-DP2	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM8	LV9-DP2	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably	Reprovide areas of woodland to compensate for	Project Proponent/	*In areas identified in*	Prior to Construction,	N/A

		affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda. In addition some understory vegetation may be planted including shrubs such as Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii.* The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.	those areas of quality woodland lost.	Detailed Design Consultant/ Contractor/ Maintenance Authority	*the EIA Landscape Mitigation Plans and as agreed with AFCD*	Construction Phase & Maintenance in Operation Phase	

S.12.A9 MM9	LV10-DP2	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government Detailed Design Consultant/ Contractor	*On appropriate structures*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV11-DP2	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government Detailed Design Consultant/ Contractor	*Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM12	LV12-DP2	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered	To soften the hard, straight edges and provide greening along roads.	Government Detailed Design Consultant/ Contractor	*On viaducts or along roads.*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		part of Screen Planting)					
S.12.A9 MM13 & EIA Annex 13	LV13-DP2	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance onwetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	*Onsite where possible. Otherwise consider offsite locations*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM14.3	LV14-DP2	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well asconsideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Detailed Design Consultant/ Contractor	*Channelized watercourse, particularly the Ma Wat River Channel Diversion*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM15	LV15-DP2	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/	*E1-7 and C1-9 (LVNP) in KNT NDA and generally*	Prior to Construction, Construction Phase	N/A

		Kong Shan Park in E1-7 of KNT ND) should be adhered to.		Contractor/ Maintenance Authority	*throughout NDA*	Maintenance in Operation Phase	
Landscape and Visual (Construction)							
S.12.A9 MM16	LV16-DP2	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	*Throughout NDAs*	Construction Phase	^
S.12.A9 MM17	LV17-DP2	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	*Throughout NDAs*	Construction and Operation Phases	^
Ecology (Detailed Design, Construction and Operational Phases)							
S13.9	E2-DP2	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor/ Maintenance Authority	Within NDA.	Detailed design phase, Construction phase and Operation phase.	^
Ecology (Construction Phase)							
S.13.9	E3-DP2	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse	Contractor.	Interface between areas/habitats of	Construction phase.	#

			ecological impacts on habitats, flora and fauna.		ecological importance (KTN area B1-3) and works areas.		
S13.9	E4-DP2	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN NDA areas E1-8 and G1-3.	Construction phase.	N/A
Cultural Heritage (Construction Phase)							
S11.6.2	CH5-DP2	Conducting Construction Vibration Monitoring and Structural Strengthening Measures Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment,	N/A
DP3- KTN NDA Road P1 and P2 (New Road) and associated new Kwu Tung Interchange (New Road) and Pak Shek Au Interchange Improvement (Major Improvement)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.A9	LV1-DP3	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity		Detailed Design Consultant/ Contractor	*Throughout NDAs,*	Prior to Construction, Construction & for all planting, this should be installed as	^

		strips, and open space sites.				soon as the areas become available, to achieve early establishment	
S.12.A9 MM14.4	LV4-DP3	Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed. For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream. Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	*All watercourses, particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern Section*	Prior to Construction and Construction Phase	^
S.12.A9 MM4	LV5-DP3	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor"s works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later	Protect and Preserve Trees	Government Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction and Construction Phase	N/A

		detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.					
S.12.A9 MM5	LV6-DP3	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit" should be referred to.	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	*Onsite where possible. Otherwise consider offsite locations.*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM6	LV7-DP3	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as	Government Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		Technical Guidelines on Landscape Treatment for Slopes.	possible.				
S.12.A9 MM7	LV8-DP3	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensate orytrees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica,* and *Rhododendron simsii* are suggested.	Compensate for trees and shrubs lost due to the Project.	Government Detailed Design Consultant/ Contractor	*Onsite where possible. Otherwise consider offsite locations*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM8	LV9-DP3	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii,*	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	*In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda. In addition some understory vegetation may be planted including shrubs such as Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii. The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.					
S.12.A9 MM9	LV10-DP3	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government Detailed Design Consultant/ Contractor	*On appropriate structures*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV11-DP3	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment	Government Detailed Design Consultant/ Contractor	*Along roads, around suitable built structures, or around*	Prior to Construction, Construction Phase & Maintenance	N/A

			and create a pleasant pedestrian environment		*VSRs to contain their view out to the NDA structures.*	in Operation Phase	
S.12.A9 MM12	LV12-DP3	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	To soften the hard, straight edges and provide greening along roads.	Government Detailed Design Consultant/ Contractor	*On viaducts or along roads.*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM13 EIA Annex 13	LV13-DP3	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance onwetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	*Onsite where possible. Otherwise consider offsite locations*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM14.3	LV14-DP3	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River	Minimize the necessity of watercourse modification, protect watercourses where	Government / Detailed Design	*Channelized watercourse, particularly the Ma*	Prior to Construction, Construction	N/A

		Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.	possible and enhance channelized watercourses	Consultant/ Contractor	*Wat River Channel Diversion*	Phase & Maintenance in Operation Phase	
S.12.A9 MM15	LV15-DP3	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.		Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	*E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA*	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
Landscape and Visual (Construction)							
S.12.A9 MM16	LV16-DP3	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological	To screen undesirable views of the works site.	Contractor	*Throughout NDAs*	Construction Phase	N/A

		impact assessment (Chapter 13 of the EIA report).					
S.12.A9 MM17	LV17-DP3	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	*Throughout NDAs*	Construction and Operation Phases	N/A
Ecology (Detailed Design, Construction and Operational Phases)							
S13.9	E3-DP3	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor Maintenance Authority.	Throughout.	Detailed design, Construction and Operation phases.	^
Ecology (Construction Phase)							
S.13.9	E4-DP3	Creation of proposed Long Valley Nature Park and creation and enhancement of wetland and woodland areas and buffer planting within LVNP.	Compensate for wetland loss arising from the project.	Project Proponent/ Contractor (LVNP Detailed Habitat Creation & Management Plan).	Long Valley	Construction phase.	N/A
S.13.9	E5-DP3	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance on edge of development areas, including along any roads adjacent to or penetrating into areas/habitats of ecological importance.	Minimize dust,disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.	Contractor.	Interface between areas/habitats of ecological importance (KTN	Construction phase.	N/A

			Measures to minimize flightline impacts to birds,		areas B1-3, H1-1) and works areas.		
S13.9	E6-DP3	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A
DP4- KTN NDA Road D1 to D5 (New Road)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.A9	LV1-DP4	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed Design Consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	N/A
S.12.A9 MM1	LV2-DP4	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor/	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A

		continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.					
S.12.A9 MM2	LV3-DP4	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines. All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated. Construction time frame should also be considered and designs seek to keep it to a practical minimum.	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant/	Throughout NDAs	Prior to Construction	N/A

S.12.A9 MM4	LV4-DP4	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	^
S.12.A9 MM5	LV5-DP4	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along	Transplant Trees where suitable for transplantation	Government / Detailed Design Consultant/ Contractor	Onsite possible. Consider locations where Otherwise offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.					
S.12.A9 MM6	LV6-DP4	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government Detailed Design Consultant/ Contractor	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM7	LV7-DP4	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica, and	Compensate for trees and shrubs lost due to the Project.	Government Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		Rhododendron simsii are suggested..					
S.12.A9 MM8	LV8-DP4	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, XanthoxlyumavicennaeHibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda. In addition some understory vegetation may be planted including shrubs such as Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii. The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.					
S.12.A9 MM9	LV9-DP4	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government / Detailed Design Consultant/ Contractor	On appropriate structures	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV10-DP4	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures , or around VSRs to contain their view out to the NDA structures.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM12	LV11-DP4	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts.	To soften the hard, straight edges and provide greening along roads.	Government Detailed Design Consultant/ Contractor	On viaducts or along roads.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		(Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)					
S.12.A9 MM13 & EIA Annex 13	LV12-DP4	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on-wetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ re-provisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM15	LV13-DP4	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
Landscape and Visual (Construction)							
S.12.A9 MM16	LV14-DP4	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor			N/A
S.12.A9 MM17	LV15-DP4	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	Throughout NDAs	Construction and Operation Phases	N/A

		Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.					
Ecology (Prior to Detailed Design Prior to Construction Phase)							
S. 13.9	E1-DP4	Egretry Habitat Creation & Management Plan (EHCMP) and Woodland Planting and Management Plan (WPMP)	Compensate for loss of Man Kam To Road egretry. Compensate for loss of secondary woodland and hillside plantation of ecological significance.	Project Proponent/ Detailed Design Consultant (EHCMP and WPMP).	FLN area A1-7 (egretry compensation). KTN areas E1-8 and G1-3 (woodland compensation).	Detailed design phase.	N/A
Ecology (Detailed Design, Construction and Operational Phases)							
S13.9	E2-DP4	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor Maintenance Authority.	Throughout.	Throughout.	N/A
Ecology (Construction Phase)							
S.13.9	E3-DP4	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.	Contractor.	Interface between areas/habitats of ecological importance (KTN areas B1-3, E1-8, G1-3 and H1-1) and works areas	Construction phase.	N/A
S13.9	E4-DP4	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A
S13.8	E5-DP4	Maintenance of compensatory native woodland planting.	Compensate for loss of	Maintenance	KTN areas E1-8 and	Operation	N/A

			plantation of ecological significance.	Authority.	G1-3.	phase	
Cultural Heritage (Pre-construction Phase)							
S11.6.1	CH1-DP4	Undertaking Survey-cum-Rescue Excavation A Survey-cum-Rescue Excavation should be conducted after land resumption and before the commencement of construction works to define the precise archaeological deposits extent and to preserve the archaeological resources by record. The excavation should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible.	Project Proponent / Contractor/ Qualified Archaeologist	In KTN NDA, for Site 1	After land resumption but before Construction commencement of the zones	N/A
S11.6.1	CH2-DP4	Undertaking Further Archaeological Survey to Cover the Outstanding Areas Further archaeological surveys to cover the outstanding areas of the not-yet-surveyed-area with medium archaeological potential located with areas with proposed development as presented in **Figure 11.9** should be implemented after land resumption to confirm and verify the findings of the EIA. The survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance. It should be noted that the scope of further archaeological survey is based on the current proposed alignment. Any additional works areas which have not been covered by the current archaeological impact assessment should be covered as soon as possible. Subject to the findings of the archaeological survey to be conducted after land resumption, additional mitigation measures	To confirm and verify the findings of the EIA	Project Proponent/ Contractor/ Qualified Archaeologist	In the not-yet-surveyed- areas with medium archaeological potential located within the work extent of DP4	After land resumption but before construction	N/A

		would be designed and implemented before the commencement of construction works to mitigate the adverse impact.					
S11.6.1	CH3-DP4	Undertaking Induction Training Induction training should be provided to the construction Contractor before the commencement of the excavation works in Spot E. An induction will be conducted as part of the environmental health and safety induction programme to all site staff before they are deployed on site. The induction will include an introduction on the historical development of the Site, the possible archaeological remains that may be encountered during ground excavation works as well as the reporting procedures in case suspected archaeological remains are identified. A set of the presentation material (in the form of power point presentation) with content details will be prepared by an archaeologist and submitted to AMO for reference and record purpose. The first induction briefing will be video recorded and it will be used as induction briefing material for new site staff.	To preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	Spot E	Before the commencement of the excavation works and before site staff are deployed on site	N/A
S11.6.2	CH4-DP4	Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out by the Project Proponent.	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	Entrance Gate of HKT03, KT16, KT17 and KT18	Prior to Removal / Relocation of features before commencement of construction works	N/A
S11.6.2	CH5-DP4	Undertaking baseline condition survey and baseline vibration impact assessment In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project,	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted	Project Proponent/ Contractor	HKT03 (Main Building) and G308	Preconstruction stage before commencement of construction works	N/A

		prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 15mm/s could be adopted for historic buildings) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	built heritage features				
S11.6.2	CH6-DP4	Relocation of Built Heritages Relocation of built heritages to a reasonable location nearby may be required.	To preserve the directly impacted sites by relocation	Project Proponent/ Contractor	Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of construction works	N/A
Cultural Heritage (Construction Phase)							
S11.6.2	CH7-DP4	Conducting Construction Vibration Monitoring and Structural Strengthening Measures Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment,	N/A
DP5- New sewage pumping stations (SPSs) in KTN NDA							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.B9	S.12.B9	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try		Detailed Design	Throughout NDAs,	Prior to Construction,	N/A

		and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Consultant/ Contractor/		Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	
S.12.B9 MM1	LV2-DP5	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor/	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A
S.12.B9 MM2	LV3-DP5	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant/	Throughout NDAs	Throughout NDAs	N/A

		structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines. All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated Construction time frame should also be considered.					
S.12.B9 MM4	LV4-DP5	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor‟s works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of	Protect and Preserve Trees	Government Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	^

		the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.					
S.12.B9 MM5	LV5-DP5	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit" should be referred to.	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite location.	Prior to Construction,, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM6	LV6-DP5	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes	Government/ Detailed Design Consultant/	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

			are as visually amenable as possible.				
S.12.B9 MM7	LV7-DP5	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica,* and *Rhododendron simsii* are suggested.	Compensate for trees and shrubs lost due to the Project.	Government/ Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM8	LV8-DP5	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda. In addition some understory vegetation may be planted including shrubs such as Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus omentosa, Rhaphiolepis indica, and Rhododendron simsii.* The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.					
S.12.B9 MM9	LV9-DP5	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government / Detailed Design Consultant/ Contractor	*On appropriate structures*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

S.12.B9 MM10	LV10-DP5	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Detailed Design Consultant/ Contractor	*On appropriate buildings*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM11	LV11-DP5	Screen Planting – Tall screen/buffer trees and shrubs should be implanted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	*Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM14.3	LV12-DP5	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Detailed Design Consultant/ Contractor	*Channelized watercourse, particularly the Ma Wat River Channel Diversion*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		Eastern Section. This measure will be particularly relevant in this area.					
Landscape and Visual (Construction)							
S.12.B9 MM16	LV13-DP5	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	*Throughout NDAs*	Construction Phase	N/A
S.12.B9 MM17	LV14-DP5	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	*Throughout NDAs*	Construction and Operation Phases	^
Ecology (Construction Phase)							
S.13.9	E1-DP5	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.	Contractor.	*Interface between areas/habitats of ecological importance and works areas (all sides of KTN area F1-2).*	Construction phase.	N/A
DP7-Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works (SWHSTW)							
Landscape and Visual (Construction Phase and Operational Phase)							
S.12.9 MM4	LV1-DP7	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In	Protect and Preserve Trees	Government / Detailed	*Onsite*	Prior to Construction and	N/A

		particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.		Design Consultant/ Contractor		Construction Phase	
S.12.9 MM9	LV2-DP7	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. building edges, piers).	Soften hard surfaces and facilities	Government / Detailed Design Consultant/ Contractor	*On appropriate structures*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM10	LV3-DP7	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Detailed Design Consultant/ Contractor	*On appropriate buildings*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

DP10- Fanling Bypass Eastern Section (New Road)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.D9	LV1-DP10	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed Design Consultant/ Contractor	*Throughout NDAs,*	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	^
S.12.D9 MM1	LV2-DP10	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	Reduce topographical changes and minimize land resumption	Government/ Detailed Design Consultant/ Contractor	*Throughout NDAs, particularly for reservoirs*	Prior to Construction	N/A
S.12.D9 MM4	LV3-DP10	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification	Protect and Preserve Trees	Government/ Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction and Construction Phase	^

		shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.					
S.12.D9 MM5	LV4-DP10	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.	Transplant Trees where suitable for transplantation	Government/ Detailed Design Consultant/ Contractor	*Onsite where possible. Otherwise consider offsite locations*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

S.12.D9 MM6	LV5-DP10	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government/ Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM7	LV6-DP10	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii* are suggested.	Compensate for trees and shrubs lost due to the Project.	Government/ Detailed Design Consultant/ Contractor	*Onsite where possible. Otherwise consider offsite locations*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM8	LV7-DP10	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/	*In areas identified in the EIA Landscape Mitigation Plans*	Prior to Construction, Construction Phase	N/A

		woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda*. In addition some understory vegetation may be planted including shrubs such as *Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii.* *The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.*		Contractor/ Maintenance Authority	*and as agreed with AFCD*	& Maintenance in Operation Phase	

S.12.D9 MM9	LV8-DP10	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government/ Detailed Design Consultant/ Contractor	*On appropriate structures*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM11	LV9-DP10	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government/ Detailed Design Consultant/ Contractor	*Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9MM12	LV10-DP10	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	To soften the hard, straight edges and provide greening along roads.	Government/ Detailed Design Consultant/ Contractor	*On viaducts or along roads.*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM14.3	LV11-DP10	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department	Minimize the necessity of watercourse modification,	Government/ Detailed Design	*Channelized watercourse,*	Prior to Construction,	N/A

		Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.	protect watercourses where possible and enhance channelized watercourses	Consultant/ Contractor	*particularly the Ma Wat River Channel Diversion*	Construction Phase & Maintenance in Operation Phase	
Landscape and Visual (Construction)							
S.12.D9 MM16	LV12-DP10	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	*Throughout NDAs*	Construction Phase	^
S.12.D9 MM17	LV13-DP10	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	*Throughout NDAs*	Construction and Operation phases	^

		Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.					
Ecology (Detailed Design, Construction and Operational Phases)							
S13.8	E1-DP10	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor Maintenance Authority.	*Throughout NDAs*	Detailed design, construction and Operation phases.	^
Ecology (Construction Phase)							
S13.9	E3-DP10	Lower reaches of Siu Hang San Tsuen Stream to have 10m wide vegetated buffer in Open Space Zone D1-3 and Fanling Bypass to cross stream on viaduct.	Minimize impacts on Siu Hang San Tsuen Stream and stream fauna.	Contractor.	*FLN area D1-3.*	Construction phase.	N/A
S.13.9	E4-DP10	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna. Measures to minimize flight-line impacts to birds, especially breeding ardeids.	Contractor.	*Interface between areas/habitats of ecological importance and works areas (all of the north side of the Bypass works areas west of interchange with Sha Tau Kok Road).*	Construction phase.	N/A
Cultural Heritage (Construction Phase)							
S11.6.2	CH4-DP10	Conducting Construction Vibration Monitoring and Structural Strengthening Measures Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the	To minimize the potential impacts during Construction phase on any identified potential vibration impacted	Contractor.	*Identified potential vibration impacted built heritage features*	Construction phase, with details specified in baseline condition survey and	N/A

		assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	built heritage features			baseline vibration impact assessment,	
DP12-Reprovision of temporary wholesale market in FLN NDA							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.D9	LV1-DP12	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed design consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	N/A
S.12.D9 MM1	LV2-DP12	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A

S.12.D9 MM2	LV3-DP12	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines. All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated. Construction time frame should also be considered and designs seek to keep it to a practical minimum.	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant	Throughout NDAs	Prior to Construction	N/A

S.12.D9 MM4	LV4-DP12	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A
S.12.D9 MM5	LV5-DP12	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be	Transplant Trees where suitable for transplantation	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.					
S.12.D9 MM6	LV6-DP12	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM7	LV7-DP12	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.	Compensate for trees and shrubs lost due to the Project.	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		Compensatory planting for shrubs should be considered in suitable locations. Native species such as *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica*, and *Rhododendron simsii* are suggested.					
S.12.D9 MM11	LV8-DP12	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
Landscape and Visual (Construction)							

S.12.D9 MM16	LV9-DP12	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	Throughout NDAs	Construction Phase	N/A
S.12.D9 MM17	LV10-DP12	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	Throughout NDAs	Construction and Operation Phases	N/A

Implementation status:

^ Mitigation measure was fully implemented

* Observation/reminder was made during site audit but improved/rectified by the contractor

\# Observation/reminder was made during site audit but not yet improved/rectified by the contractor

X Non-compliance of mitigation measure

• Non-compliance but rectified by the contractor

N/A Not Applicable at this stage as no such site activities were conducted in the reporting period

APPENDIX R
WASTE GENERATION IN THE REPORTING MONTH

Waste Flow Table of ND/2019/01

Name of Department: Civil Engineering and Development Department

Monthly Summary Waste Flow Table for 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											
December											
Total	365.648	0.000	18.970	337.810	4.260	4.608	0.009	0.435	0.022	13.927	3.815

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	**Hard Rock and Large Broken Concrete**	**Reused in the Contract**	**Reused in Other Projects**	**Disposed as Public Fill**	**Imported Fill**	**Metals**	**Paper / Cardboard Packaging**	**Plastics (see Note 3)**	**Chemical Waste**	**Others, e.g. general refuse**
(in '000m^3)	**(in '000m^3)**	**(in '000m^3)**	**(in '000m^3)**	**(in '000m^3)**	**(in '000m^3)**	**(in '000kg)**	**(in '000kg)**	**(in '000kg)**	**(in '000kg)**	**(in '000m^3)**
1,310.619	300.000	1,010.619	0.000	0.000	0.000	20.000	10.000	20.000	0.500	10.000

Notes: (1) The performance target are given in PS Clause 1.115(14)
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
(4) The Contractor shall also submit the latest forecast of the amount of C&D materials expected to be generated from the Works, together with a break down of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m^3.
(5) Conversion factors for reporting purpose:
in-situ: rock = 2.5 tonnes/m^3; soil = 2.0 tonnes/m^3
excavated: rock = 2.0 tonnes/m^3; soil = 1.8 tonnes/m^3
broken concrete and bitumen = 2.4 tonnes/m^3
C&D Waste = 0.9 tonnes/m^3
Slurry = 1.0 tonnes/m3
(6) Numbers are rounded off to the nearest three decimal places
* Forecast
(7) Total Quantity Generated = a+b+c+d+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	0.00	31.68
Feb	439.77	0.00	0.00	0.00	439.77	0.00	0.01	0.13	0.00	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	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	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	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	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	0.00	56.90
July	800.27	0.00	0.00	0.00	800.27	0.00	0.01	0.00	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	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	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	0.00
Nov											
Dec											
Sub-total	4,647.70	0.00	2,080.00	0.00	2,567.70	546.34	0.01	0.01	0.00	0.00	23.87
Total	10,233.44	0.00	2,080.00	0.00	8,153.44	546.34	0.03	0.14	0.00	0.00	80.77

Notes: (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
(3) Broken concrete for recycling into aggregates.

Forecast of Total Quantities of C&D Materials to be Generated from the ND/2009/02											
Forecast Made at the End of the Project	Total Quantity Generated	Hard Rock & Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemicals Waste	Others, e.g. general refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
Total:	39,900	8,400	2,500	0	29,000	600	100	1.0	3	0.5	200

Waste Flow Table of ND/2019/03

Contract No.: ND/2019/03

Name of Department: CEDD

Monthly Summary Waste Flow Table for ____2021__ (Year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill*	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
Jan	0.83	0	0	0.22	0.61	0	0	0	0	0	0.075
Feb	0	0	0	0	0	0.096	0	0	0	0	0.022
Mar	0.56	0	0	0	0.56	0.26	0	0	0	0	0.15
Apr	0.68	0	0	0	0.68	0.30	0	0	0	0	0.31
May	0.66	0	0	0	0.66	0.15	0	0	0	0	0.21
Jun	0.11	0	0	0	0.11	0.30	0	0	0	0	0.19
Sub-Total	2.84	0	0	0.22	2.62	1.106	0	0	0	0	0.957
Jul	0.26	0	0	0	0.26	0.14	0	0	0	0	0.178
Aug	0	0	0	0	0	0.39	0	0	0	0	0.15
Sep	0	0	0	0	0	0.074	11.9	0	0	0	0.132
Oct	0	0	0	0	0	0	0	0	0	0	0.297
Nov	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-
Total	3.1	0	0	0.22	2.88	1.71	11.9	0	0	0	1.714

*Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

Waste Flow Table of ND/2019/04

DCK JV

Appendix F
Contract No.: 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)	(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	253.57	0.00	0.00	0.00	121.21	0.00	0.00	0.00	0.00	0.00	132.36
Nov											
Dec											
Sub-total	3,292.22	0.00	0.00	0.00	2,968.13	0.00	11.64	0.00	0.00	0.00	312.45
Total	14,224.54	0.00	0.00	0.00	8,193.62	5,026.08	11.64	0.00	0.00	0.00	993.20

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-20												
Feb-20												
Mar-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apr-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.000
Jun-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	0.000
Sub-total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	2.000
Jul-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.000	9.000
Aug-20	1.362	0.000	0.035	0.000	1.327	0.000	0.000	0.020	0.001	21.250	0.000	272.000
Sep-20	0.313	0.000	0.000	0.000	0.313	0.000	0.001	0.039	0.003	47.910	0.000	47.930
Oct-20	0.076	0.000	0.000	0.000	0.076	0.000	0.001	0.020	0.001	79.675	0.000	42.290
Nov-20	0.666	0.000	0.238	0.000	0.428	0.000	0.001	0.020	0.000	55.994	0.000	71.000
Dec-20	0.479	0.000	0.252	0.000	0.227	0.942	0.000	0.020	0.005	112.095	0.000	133.000
Total in 2020	2.896	0.000	0.525	0.000	2.371	0.942	0.003	0.169	0.010	316.924	0.000	577.220
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	2.976	0.000	0.126	0.000	2.850	0.000	0.950	0.541	0.010	15.180	0.000	108.440
Nov-21												
Dec-21												
Total in 2021	20.629	0.000	2.646	0.000	17.983	2.394	16.649	2.081	1.809	150.694	17.182	1205.470
Total of the Project	23.525	0.000	3.171	0.000	20.354	3.336	16.652	2.250	1.819	467.618	17.182	1782.690

*Approx. estimation for each dump truck is 6m3/truck or 12 ton/truck

Total Quantity of Inert C&D Materials Generated: 23.525 (in '000m3) (a) = (b)+ (c)+(d)+(e)

Waste Flow Table of ND/2019/06

Monthly Summary Waste Flow Table
(PS Clauses 1.101 & 1.102)

Name of Department: CEDD

Contract No.:ND/2019/06

Monthly Summary Waste Flow Table for 2019 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in the other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000kg	in '000kg	in '000kg	in '000kg	in '000m3
	A	B	C	D	E	F	G	H	I	J	K
Jan											
Feb											
Mar											
Apr											
May											
June											
Sub-total											
July											
Aug											
Sept											
Oct											
Nov	0.927	0	0	0	0.927	0	0	0	0	0	0.008
Dec	0.428	0	0	0	0.428	0	0	0	0	0	0.071
Total	1.355	0	0	0	1.355	0	0	0	0	0	0.079

Notes: (1) The performance targets are given in PS Clause 1.102(14).

(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material

*(4) The *Contractor* shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the *works*, together with a breakdown of the nature where the amount of C&D materials expected to be generated from the works is equal to or exceeding 50,000m3. [Delete Note (4) and the table above on the forecast, where inapplicable].

(5) Total Quantity Generated, A=B+C+D+E+F

Monthly Summary Waste Flow Table for __2020__(year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in the other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000kg	in '000kg	in '000kg	in '000kg	in '000m3
	A	B	C	D	E	F	G	H	I	J	K
Jan	1.558	0	0	0	1.558	0	0	0	0	0	0.038
Feb	0.548	0	0	0	0.548	0	0	0	0	0	0.011
Mar	0.145	0	0	0	0.145	0	0	0	0	0	0.022
Apr	1.741	0	0	0	1.741	0	0	0	0	0	0.043
May	0.063	0	0	0	0.063	0	0	0	0	0	0.035
June	0.008	0	0	0	0.008	0	0	0	0	0	0.014
Sub-total	4.062	0	0	0	4.062	0	0	0	0	0	0.162
July	1.562	0	0	0	1.562	0	0	0	0	0	0.025
Aug	1.448	0	0	0	1.448	0	0	0	0	0	0.010
Sept	1.171	0	0	0	1.171	0	0	0	0	0	0.010
Oct	1.000	0	0	0	1.000	0	0	0	0	0	0.043
Nov	3.597	0	0	0	3.597	0	0	0	0	0	0.086
Dec	1.707	0	0	0	1.707	0	0	0	0	0	0.023
Total	**14.547**	**0.000**	**0.000**	**0.000**	**14.547**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.358**

Notes: (1) The performance targets are given in PS Clause 1.102(14).

(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material

*(4) The *Contractor* shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the *works*, together with a breakdown of the nature where the amount of C&D materials expected to be generated from the works is equal to or exceeding 50,000m3. [Delete Note (4) and the table above on the forecast, where inapplicable].

(5) Total Quantity Generated, A=B+C+D+E+F

Monthly Summary Waste Flow Table for __2021__ (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in the other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000kg	in '000kg	in '000kg	in '000kg	in '000m3
	A	B	C	D	E	F	G	H	I	J	K
Jan	2.960	0	0	0	2.960	0	0	0	0	0	0.035
Feb	0.498	0	0	0	0.498	0	0	0	0.0035	0	0.006
Mar	0.427	0	0	0	0.427	0	0	0	0	0	0.014
Apr	0.314	0	0	0	0.314	0	0	0	0	0	0.011
May	0.360	0	0	0	0.360	0	0	0	0	0	0.011
June	0.336	0	0	0	0.336	0	0	0	0	0	0.012
Sub-total	4.895	0	0	0	4.89492	0	0	0	0.0035	0	0.08883
July	0.594	0	0	0	0.594	0	0	0	0	0	0.013
Aug	0.986	0	0	0	0.986	0	0	0	0	0	0.021
Sept	1.031	0	0	0	1.031	0	0	0	0	0	0.012
Oct	0.3575	0	0	0	0.358	0	0	0	0	0	0.026
Nov	0										
Dec	0										
Total	7.863	0.000	0.000	0.000	7.863	0.000	0.000	0.000	0.004	0.000	0.160

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	10.294	0	0.340	0	43.620	0.419
Oct	0	0	0	0	0	15.732	0	0	0	42.400	0.309
Nov											
Dec											
Total	1.836	0.000	1.514	0.000	0.322	85.091	0.000	1.446	0.005	175.780	2.749

Notes:

(1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.

(3) Broken concrete for recycling into aggregates.

(4) Total Quantity Gernerated = a+b+c+d..

APPENDIX S
COMPLAINT LOG

Appendix S - Complaint Log

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2020-07-01	Public Road at Portion 6a (ND/2019/01)	13th July 2020	The EPD visit on 13 July 2020 was to respond the complaint received from the 2nd week in July regarding the dust problem in public road of Portion 6a. Mr. Tse (EPD) observed muddy wheel track on the public road, and he expressed that the public road should keep free of mud even it was inside the project area. He also advised BKRWJV (the Contractor) to clean up the muddy wheel track and provide rectified photos to him.	A designated person is provided at the ingress/egress for vehicle washing before the wheel washing facility is in use, this is to make sure all vehicle are free of mud before leaving the site. And, the designated person is also responsible for cleaning the public road if any mud is found on it.	Closed
COM-2020-11-01	Portion 4 and Portion 7 near Dills Corner Garden (ND/2019/01)	11th November 2020	The EPD inspection at Portion 4 on 11 November 2020 was to respond the complaint regarding the dust problem near Dills Corner Garden referred by a District Council Member. No construction activities was carried out and no obvious dust emission was observed. EPD advised BKRWJV (the Contractor) to increase the height of temporary water barrier and install sprinklers on bare ground. Another EPD inspection was conducted on 26 November 2020 at	The height of temporary water barrier was increased at Portion 4. Sprinklers were installed on bare ground at Portion 4 and on top soil at Portion 7. Manual water spraying were provided regularly. Hydroseeding will be provided on soil surface at Portion 4 for long-term measures. Proper implementation of dust mitigation measures will be continuously reviewed and monitored to avoid potential dust impact on site.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			Portion 7 for the dust complaint. During inspection, no obvious dust emission was observed and potential dust may generate from top soil which appear to be dry. EPD advised the Contractor to install sprinklers on top soil for dust suppression.		
COM-2020-11-02	Works Area A & B (ND/2019/05)	27th November 2020	The complainant complained about the noise generated from the alarm of scissors platform during works for PM's site accommodation on Sunday and called the police force. Police officer has checked that Construction Noise Permit has been applied for the construction work. Also, the complainant complained about the reflective blue color of roof material of site office.	Permit-to-Work system was properly implemented for works at restricted hours. The PME used have been checked in compliance with the valid Construction Noise Permit (CNP No.: GW-RN0788-20). Acoustics mats were erected between works area and noise sensitive receivers. Scissor platform or noisy work activities will be arranged and minimized to be used on Sunday or evening time on weekdays. Specific training for the quieter works arrangement was provided to workers. Also, the blue roof will be covered by non-reflective green roof material.	Closed
COM-2021-01-01	Ma Tso Lung Road (ND/2019/01)	7th January 2021	A complaint regarding soil deposited on Ma Tso Lung Road was referred by EPD verbally.	No soil / mud deposit or mud track were observed along the Ma Tso Lung Road during investigation and site inspection between Contractor, the *Supervisor*, ET and IEC. The road condition of Ma Tso Lung Road will be closely monitored and the public road will be regularly cleaned if mud deposit was observed. Wheel washing facilities at every site entrance will be regularly monitored to ensure proper implementation of dust control measures.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2021-01-02	Ma Tso Lung Road (Near L/P VD5622) (ND/2019/01)	13th January 2021	A complaint was received from 1823 regarding the suspected odour emitted from muddy water discharged.	Water sample collected from the wastewater treatment facility was clear and no odour was detected. Sewage from chemical toilet was collected on a regular basis by licensed collector. Brownish wastewater was observed discharging upstream of the site from an unknown factory to the uncharted channel which may be potential source of the odour.	Closed
COM-2021-01-03	CTC Storage Yard (ND/2019/05)	22nd January 2021	A complaint was referred from EPD regarding the noise generated before 7 a.m. on weekdays and machinery noise generated on Sunday from CTC Storage Yard.	No attendance record of workers working for CTC Storage Yard earlier than 8 a.m. and on Sunday (day of complaint) was recorded. To ensure strict compliance to Noise Control Ordinance and prevent noise nuisance to the nearby villages, the Contractor has implemented the following enhancement measures: 1. Issue a memo to the relevant sub-contractor on restricted working hour. 2. Conduct specific training to sub-contractor frontline supervisor and works. 3. Apply a construction noise permit for the suspected location.	Closed
COM-2021-01-04	Ho Sheung Heung (ND/2019/02)	28th January 2021	A complaint was received from 1823 regarding an idling construction vehicle near Ho Sheung Heung to operate the engine for over 10	Ad-hoc training was provided to workers on switching off idling engines when awaiting on site. Poster for “Switching off idling engines” was posted at site entrance to alert workers on the	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			minutes. Also, the complainant complained on noise nuisance from the speaker during meeting.	issue. For noise nuisance from the meeting, the speaker volume in the future event will be lower as much as possible.	
COM-2021-02-01	CTC Storage Yard (ND/2019/05)	4th February 2021	A complaint was received from EPD call on 2nd February 2021 regarding a noise complaint from a Tong Hang villager about noise from CTC storage yard at around 19:00 – 20:00 on 1st February 2021.	The suspected cause of the complaint was the delivery of a rotary drilling rig by a tractor lorry arrived at CTC Storage Yard at around 19:00 at 1st February 2021. The delivery time was restricted due to the oversized tractor lorry (width >2.4m and length protruded >1.4m at tractor tail). No loading and unloading was conducted during the time of complaint. For follow up action, the Contractor will apply Construction Noise Permit for any foreseeable delivery that may not be finished before restricted hours and will notify possible affected village representatives in advance.	Closed
COM-2021-02-02	CTC Storage Yard (ND/2019/05)	16th February 2021	A complaint was received from EPD call on 10th February 2021 regarding a noise complaint from a Tong Hang villager about some impact noise from CTC Storage yard at Sunday's daytime (7th February 2021).	Under investigation, erection of chain link fence for separating works area and adjacent village house was conducted by a sub-contractor on 7th February 2021 without notification to the Contractor. Sub-contractor has been reminded that any work within site area shall be conducted after instruction by the Contractor and permit-to-work system on restricted hours works shall be strictly followed.	Closed
COM-2021-02-03	CTC Storage Yard (ND/2019/05)	2nd March 2021	A complaint was received from EPD call on 24th February 2021 regarding a noise complaint from a Tong Hang villagers about some machinery noise	Further enhancement on erection of acoustics mats and mobile acoustics mat panels was conducted at strategic location at E1-01 for mitigation of the noise impact to the nearby	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			and dust from CTC Storage yard. Joint site inspection of the Contractor, the *supervisor* and EPD was conducted on the same day for the bored piling at CTC Storage Yard and check on the noise and dust mitigation measures. EPD requested to enhance noise and dust mitigation measures for grabbing operation of the Rotary Drill Rig for construction of piles of E1-01.	sensitive receivers. Regular water spraying has been applied to suppress the dust from grabbing procedure and the skip.	
COM-2021-03-01	Ma Tso Lung Shun Yee San Tsuen (ND/2019/01)	1st March 2021	A complaint was referred from EPD regarding fly-tipping of C&D waste near Ma Tso Lung Shun Yee San Tsuen and muddy public road.	Under investigation, the suspected site near Shun Yee San Tsuen was out of project site boundary. Internal trip ticket system was properly implemented for dump trucks transported from project site to other approved alternative disposal ground. Also, dump trucks were properly washed and mechanical cover of dump trucks were closed while leaving the site. For follow up action, banners and flags were displayed on site to promote the environmental protection awareness. Regular training was provided to remind the dump truck drivers that illegal dumping is strictly prohibited.	Closed
COM-2021-03-02	CTC Storage Yard (ND/2019/05)	15th March 2021	A complaint was received from EPD call and an inspection by EPD was conducted on 9th March 2021 regarding a dust complaint from a Tong Hang villager. The complainant	For follow up action, the Contractor provided training to remind frontline supervisors and workers to wet the auger before movement when it was dried for preventing any occasional situation that the auger was dried.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			complained that rotary drill rig shall be equipped with enclosure for dust control and rotary drill rig had exhaust disturbance. Also, the complainant requested to improve wheel washing at site entrance.	The Contractor provided training to brief frontline supervisor and the operators to prevent exhaust disturbance. Also, the drill rigs exhaust pipe shall not face to the public area. If it is avoidable, screens shall be arranged to divert the exhaust gas. An additional cut-off drain was constructed and notice signs were erected for notifying drivers to give wheel washing in front of the cut-off drains.	
COM-2021-03-03	Ma Tso Lung Road (ND/2019/01)	9th April 2021	A complaint was referred from EPD on 23 March 2021 regarding muddy public access road along Ma Tso Lung Road.	The muddy access road was found generated from a nearby private factory where the access road is not hard paved. The Contractor arranged water browser to help clean up the section of road on 24th and 25th March 2021 respectively. Also, dump truck were properly washed at project site exit near Ma Tso Lung Road.	Closed
COM-2021-04-01	Long Valley, Kwu Tung (ND/2019/03)	9th April 2021	A complaint was referred from EPD regarding to associated impacts arising from construction works at Long Valley Nature Park, causing nuisance and affecting the habitat and ecological value in Long Valley.	Construction works for development of Long Valley Nature Park are conducted according to the recommended mitigation measures stated in Habitat Creation and Management Plan. Wetland creation and restoration works are in progress which include provision of paddy field, turning abandoned agricultural lands into wet agricultural land and provision of open water habitat with bird island. Irrigation channel is under construction for provision of reliable water supply to farmland. For construction works, the following significant mitigation measures are implemented: 1. Provide noise barriers to minimize noise nuisance to adjacent field where Greater Painted-	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				snipe was found; 2. Arrange concrete pump for concreting works to minimise noise impact; 3. Provide water spraying on the exposed earth to dampen the dusty surface; 4. Provide shade cloth to separate works area and marsh where Greater Painted-snipe were found; 5. Demarcation of temporary vehicle access to prohibit vehicle across the farmland; 6. Provide 2m dull green site boundary fence along Long Valley work areas; and 7. Block the main accesses by temporary barrier to avoid human disturbance.	
COM-2021-04-02	Close to junction of Ma Wat River and Ng Tung River (ND/2019/04, ND/2019/05, ND/2019/06)	23rd April 2021	A complaint was referred from EPD regarding to suspected polluting effluent discharged from Ma Wat River near junction of Ma Wat River and Ng Tung River.	Under investigation, muddy water was observed from a small stream of Ma Wat River which is outside project site boundary. Contractor's wastewater treatment facilities and mitigation measures on water quality were checked. Latest discharge monitoring results shows the discharge quality in compliance with the limit stated in the discharge licence. The following mitigation measures will keep implemented and inspected: 1. Installation of silt curtain, geotextiles and concrete blocks for excavation works at Ng Tung River with regular inspection; 2. Exposed slope paved with concrete to prevent muddy runoff; 3. Setting up wastewater treatment plants at	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				several locations of the site area; 4. Bund/seal off works area near river and set up with dewatering system; 5. Spare water pumps and sand bags for emergency use during heavy rain; 6. Regular training to the operators of wastewater treatment facilities; and 7. Regular checking and maintenance of the wastewater treatment facilities and desilting tank.	
COM-2021-04-03	Near Shek Wu San Tsuen, Sheung Shui (ND/2019/04)	28th April 2021	A complaint was referred from EPD regarding to construction dust arising from dump trucks from construction sites near Shek Wu San Tsuen.	No obvious dust emission was observed during EPD inspection on 28th and 29th April 2021, However, potential dust impact may arise from sandy materials found on public road and exposed ground surface. For follow up action, soil debris were removed at public road. Water spraying was provided on the exposed ground surface. Also, all dump trucks are covered properly and wheel wash is provided before leaving site. Implemented of the mitigation measures will keep reviewed and monitored.	Closed
COM-2021-05-01	Near Tong Hang section of Ma Wat River (ND/2019/05)	17th May 2021	A complaint was referred from EPD regarding to suspected polluting effluent discharged from construction sites near Ma Wat River.	Under investigation, no pollution from works areas near Ma Wat River was observed. For wastewater pollution control, all wastewater treatment facilities have been setup at discharge points. According to the latest discharge monitoring results on April 2021, no non-compliance to limit set in discharge licence was recorded. Regular maintenance and services of the facilities have been conducted. Close monitoring	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				with checklist has been conducted by operators of the facilities. Mitigation measures such as sealing gaps between concrete blocks/water barriers/pipe pile walls have been implemented to prevent leakage. Implementation of the mitigation measures will keep reviewed and closely monitored.	
COM-2021-09-01	Chau Tau Road near the CLP Chau Tau Substation (ND/2019/01)	2nd September 2021	A complaint was referred by EPD and an inspection by EPD was conducted on 3 September 2021 regarding a muddy public access road at Chau Tau Road near the CLP Chau Tau Substation.	Ad-hoc site inspection was conducted on 2 Sep 2021 at Chau Tau Road near the CLP Chau Tau Substation, no muddy wheel track or soil deposit was observed. No concrete lorry was observed using the Chau Tau Road near the CLP Chau Tau Substation. Concreting at Portion 5 was observed during EPD inspection on 3 September 2021, wheel washing bay and manual wheel washing was provided at site exit, all vehicles were properly washed and no muddy track was observed at Chau Tau Road. The Contractor has been implement following mitigation measure upon received the complaint: • Rearranged the traffic route and informed the concrete lorry drivers not to use Chau Tau Road; • Keep monitoring the effectiveness of the wheel washing facilities at site exist; and • Clean up the public road immediately if soil deposit was observed.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2021-09-02	Not specified (ND/2019/01)	3rd September 2021	A complaint was referred by EPD regarding C&D waste stored on site.	Refer to the photos provided by the complainant, the mentioned C&D waste mainly felled trees mixed with general refuse and temporary stored within the site boundary, Ad-hoc site inspection was conducted by Contractor and RSS on 3rd September 2021, all C&D waste were stored within the site boundary, no odour perceived during site inspection. The Contractor has been implement following mitigation measure upon received the complaint: • Sort out the non-inert waste from the felled trees; • Remove the general refuse if possible, otherwise, coved by tarpaulin sheet; and • Relocate or transport the yard waste to other places which are not easy visible by public. Implementation of the mitigation measures will keep reviewed and closely monitored to ensure no adverse impact will be generated from the construction works of the Project.	Closed

APPENDIX T
SUMMARY OF SUCCESSFUL PROSECUTION

Appendix T - Summary of Successful Prosecution

Date of Successful Prosecution	Details of the Successful Prosecution	Status	Follow Up
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APPENDIX U
SUMMARY TABLE FOR REQUIRED SUBMISSION UNDER ENVIRONMENTAL PERMIT

DP2	EP-466/2013	Castle Peak Road Diversion				
CEDD Contract No. ND/2019/01 - Site Formation and Infrastructural Works at KTN NDA						
Construction commencement date		**12-Aug-20**				
Operation commencement date		**tbc**				

EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 2 March 2020	
2.1	Establish of ET	Before construction	**Establish -** An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	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 Note: The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	*	
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	A copy of Photographic and cartographic records of directly impacted historical buildings at HKT08 and the entrance gate of HKT03	prior to the commencement of the respective removal or relocation works	*	
		Others	**For Approva**l - 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 Sumbissions			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 27 July 2020	
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	EPD Approved 25 August 2020
2.6	Traffic Noise Mitigation Plan	Before construction	**For Approval**	no later than 1 month before the commencement of consturction	Deposited 31 July 2019	EPD Approved 9 August 2019
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records	Others	**Deposit** - A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical lanscape features at Locatoins KT38, KT44 and KT52	prior to the commencement of the respective removal or relocation works	Deposited 10 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
DP: Designated Project
*tentative submission date will be supplemented once available

DP4	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5			
CEDD Contract No. ND/2019/01 - Site Formation and Infrastructural Works at KTN NDA					
Construction commencement date		**1-Jun-20**			
Operation commencement date		**tbc**			

EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 2 March 2020	
2.1	Establish of ET	Before construction	**Establish -** An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	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 Approva**l - 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
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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
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DP4	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5				
CEDD Contract No. ND/2019/03 - Development of Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park						
Construction commencement date		**3-Jul-20**				
Operation commencement date		**tbc**				
EP Condition		**Requirements and Submissions**			**Submission Status**	**Remarks**
		Period	**Action**	**Timeframe**		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 28 April 2020	
2.1	Establish of ET	Before construction	**Establish -** An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	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:
tbc:To be confirmed
DP: Designated Project
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DP10	EP-473/2013/A	Fanling Bypass Eastern Section				
CEDD Contract No. ND/2019/03 - Development of Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park						
Construction commencement date			**6-Oct-20**			
Operation commencement date			**tbc**			
EP Condition		**Requirements and Submissions**			**Submission Status**	**Remarks**
		Period	**Action**	**Timeframe**		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 10 August 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	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	Egretry 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	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

DP10	EP-473/2013/A	Fanling Bypass Eastern Section				
CEDD Contract No. ND/2019/04 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)						
Construction commencement date			**23-Feb-21**			
Operation commencement date			**tbc**			
EP Condition		**Requirements and Submissions**			**Submission Status**	**Remarks**
		Period	**Action**	**Timeframe**		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 8 September 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	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	Egretry Habitat Creation and Management Plan	Before construction	**Approval**	before the commencement of construction	N/A	
2.8	Detailed Design of Siu Hang San Tsuen Stream	Before construction	**Deposit**	before the commencement of construction	Deposited 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
DP: Designated Project
*tentative submission date will be supplemented once available

DP14	EP-546/2017	Fanling North Temporary Sewage Pumping Station				
CEDD Contract No. ND/2019/04 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)						
Construction commencement date			16-Feb-21			
Operation commencement date			tbc			
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 1 month prior to the commencement of construction	Notified 8 September 2020	
1.14	Commencement date of opeation	Before operation	**Notify in writing**	no later than 1 month prior to the commencement of operation	N/A	
2.4	IEC Audit Report	After construction	**Deposit**	within one month upon completion of the construction works	N/A	

DP10	EP-473/2013/A	Fanling Bypass Eastern Section				
CEDD Contract No. ND/2019/05 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)						
Construction commencement date			**1-Aug-20**			
Operation commencement date			**tbc**			
EP Condition		**Requirements and Submissions**			**Submission Status**	**Remarks**
		Period	**Action**	**Timeframe**		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 15 June 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	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	Egretry Habitat Creation and Management Plan	Before construction	**Approval**	before the commencement of construction	N/A	
2.8	Detailed Design of Siu Hang San Tsuen Stream	Before construction	**Deposit**	before the commencement of construction	Deposited 13 May 2021	
2.9	Traffic Noise Mitigation Plan	Before construction	**Approval**	no later than 1 month before the commencement of construction	Submitted 11 September 2020	EPD Approved 8 October 2020
2.10	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	**To Conduct** - A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	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	Submited by Pre-construction ET	
					Submitted 1 September 2020	for EP Condition 2.10
3.4	Monthly EM&A Report	During construction	**Submit**	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by Construction Phase ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

DP12	EP-475/2013/A	Reprovision of temporary Wholesale Market in Fanling North New Development Area				
Contract No. ND/2019/06 - Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products						
Construction commencement date			**29-Oct-19**			
Operation commencement date			**tbc**			

EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 15 October 2019	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	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	Submited 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