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 April 2021

(Version 1.0)

Certified By

Dr. Priscilla Choy
(Environmental Team Leader)

REMARKS:

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

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

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

Monthly Environmental Monitoring and Audit Report No. 18 (April 2021)

13 May 2021
BY EMAIL

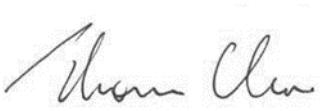
Dear Sir,

We refer to email of 13 May 2021 attaching the Monthly Environmental Monitoring and Audit Report No. 18 prepared by the Environmental Team (ET) of the captioned.

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

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

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



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EXECUTIVE SUMMARY

Introduction

1. This is the 18th 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 April 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	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5	3rd July 2020

Works Contracts	Environmental Permit No.	Designated Project (DP)	Commencement date of construction
Development Area, Phase 1: Development of Long Valley Nature Park	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	6th October 2020
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)	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	23rd February 2021
	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	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	1, 7, 13, 19, 23, 29 Apr 2021	N/A	1, 7, 12, 13, 16, 19, 22, 23, 28, 29 Apr 2021	1, 7, 12, 13, 16, 19, 22, 23, 28, 29 Apr 2021	1, 7, 12, 16, 22, 28 Apr 2021	N/A	N/A
24-hr TSP Monitoring	1, 7, 13, 19, 23, 29 Apr 2021	N/A	1, 7, 9, 13, 15, 19, 21, 23, 27, 29 Apr 2021	1, 7, 9, 13, 15, 19, 21, 23, 27, 29 Apr 2021	1, 7, 9, 15, 21, 27 Apr 2021	N/A	N/A

EM&A Activities		Works Contracts						
		ND/2019/ 01	**ND/2019/ 02**	**ND/2019/ 03**	**ND/2019/ 04**	**ND/2019/ 05**	**ND/2019/ 06**	**ND/2019/ 07**
24-hr RSP (Ambient Arsenic) Monitoring for Land Contamination		1, 7, 12, 16, 22, 28 Apr 2021	N/A	1, 7, 12, 16, 22, 28 Apr 2021	N/A	N/A	N/A	N/A
Noise Monitoring		7, 13, 19, 29 Apr 2021		N/A	1, 7, 12, 22, 28 Apr 2021			N/A
Water Quality Monitoring		N/A	8, 10, 12, 14, 16, 19, 21, 23, 26, 28, 30 Apr 2021	N/A	8, 10, 12, 14, 16, 19, 21, 23, 26, 28, 30 Apr 2021	N/A	N/A	N/A
Landfill Gas Monitoring		30 Apr 2021	N/A	N/A	N/A	N/A	N/A	N/A
Built Heritage Monitoring		N/A	N/A	N/A	N/A	Not required as no pile driving operation within assessment area	N/A	N/A
Ecologic-al Survey	Monitoring of Measures to Minimise Disturbance to Water Birds on Ng Tung River, Sheung Yue River, and Long Valley	N/A*	N/A*	8, 9, 12, 14, 19, 23, 26, 29 Apr 2021	8, 14, 19, 29 Apr 2021	N/A*	N/A*	N/A*
	Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream and Siu Hang San Tsuen Stream	27 Apr 2021	N/A*	27 Apr 2021	27 Apr 2021	N/A*	N/A*	N/A*
	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	20, 21 Apr 2021	20, 21 Apr 2021	21 Apr 2021	21 Apr 2021	21 Apr 2021	N/A*	N/A*
Environmental Site Inspection		8, 13, 20, 27 Apr 2021	7, 14, 23, 28 Apr 2021	9, 16, 20, 30 Apr 2021	8, 15, 22, 29 Apr 2021	7, 16, 19, 26 Apr 2021	8, 15, 22, 29 Apr 2021	8, 16, 23, 30 Apr 2021

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/2019/03.

Breaches of Action and Limit Levels

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

Table III Summary Table for Events Recorded in the Reporting Month

Environmental Monitoring	Parameter	No. of non-project related Exceedances		Total No. of non-project related Exceedances	No. of Exceedance related to the Construction Works of the Contract		Total No. of Exceedance related to the Construction Works of the Contract
		Action Level	Limit Level		Action Level	Limit Level	
Air Quality	1-hr TSP	0	0	0	0	0	0
	24-hr TSP	0	0	0	0	0	0
	24-hr RSP (Ambient Arsenic)	0	0	0	0	0	0
Noise	$L_{eq(30min)}$	0	0	0	0	0	0
Water Quality[1]	DO	0	2	2	0	0	0
	Turbidity	0	2	2	0	0	0
	SS	0	1	1	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

Remark:

[1] The Action and Limit Levels for the Additional Water Quality Monitoring is subject to the agreement with the authority.

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. 2 Limit Level exceedance for dissolved oxygen, 2 Limit level exceedance for turbidity and 1 Limit Level exceedance of suspended solid of impact water quality monitoring were recorded during the reporting month. After investigation, all exceedance were considered non-projected related. No construction of channel for alternation of natural streams was carried out in the reporting month. Therefore, no water quality monitoring according to pre-construction ET's Updated EM&A Manual and Baseline Water Quality Monitoring Report (KTN & FLN NDA) was conducted. For the details, please refer to Section 5.

Land Contamination

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

Landfill Gas Monitoring

9. Monitoring of landfill gases in the reporting month was carried out by the Contractor under ND/2019/01 at excavation location, Portion 6b. No Limit Level exceedance was recorded.

Built Heritage Monitoring

10. No pile driving operation was conducted within assessment area of construction works. No built heritage monitoring was conducted in the reporting month for surveyed cultural heritage.

Ecological Monitoring

11. All ecological monitoring was conducted as scheduled in the reporting month. Action and limit level will be compared after the issue of Final Baseline Ecological Report. The ecological monitoring result in the Reporting Month is shown in **Appendix K**.

Complaint Log

12. Three environmental complaints were received in the reporting month, one for ND/2019/03, one for ND/2019/04 and one for ND/2019/04, ND/2019/05 and ND/2019/06.

Notification of Summons and Successful Prosecutions

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

Reporting Changes

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

Future Key Issues

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

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

Contract No.	Site Activities (May 2021 and June 2021)
ND/2019/01	(a) Site clearance and site formation in Portion 1f
	(b) Site clearance and ground investigation in Portion 2
	(c) Site clearance in Portion 3
	(d) Site clearance, stockpile of soil, construction of KW01 retaining wall, sheetpiling and excavation, and pipes laying in Portion 5
	(e) Site Clearance, sheetpiling and excavation, pipes laying, backfilling, construction of KW01 retaining wall, and construction of site haul road in Portion 6a
	(f) Arsenic soil treatment works in Portion 6b
	(g) Site clearance, construction of site accommodation in Area T2 and T3, sheetpiling and excavation, pipes laying 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) Ground investigation and trenchless works in Portion 8b
	(j) Site clearance, ground investigation and trial pits in Portion 9b
	(k) Stockpile of soil in Portion 9c
	(l) Excavation, sheetpiling for ELS, pipes laying in Portion 10a
	(m) Site Clearance in Portion 10b
	(n) Laying of rising mains, construction of MBR in Portion 11b
	(o) Construction of temporary sewage pumping station in Portion 14
	(p) MIC modules delivery, construction of CLC in Portion 16

ND/2019/02	(a) Pre-bored Socketed H-pile (b) Tree felling (c) ELS (d) Hoarding erection (e) Pipe jacking
ND/2019/03	(a) Road and Drainage work in Portion 1; (b) Portion 2 to Portion 20 - Erection of Permanent Boundary Structure - Construction of Irrigation Channel - Geotechnical Works in Long Valley (Trail Pits) - Construction of Temporary Road in Long Valley - Asbestos Removal in Long Valley - Demolition of Existing Construction in Handed over Area - Construction of Type 2 Storage House - Construction of Outdoor Composting Facility - Construction of Bird Hide - Construction of Outdoor Classroom - Construction of Storage Sheds - Wetland Creation & Restoration works after Obtaining Approval from AFCD (c) Portion 23 and 24 - Tree and Bamboo Planting
ND/2019/04	(a) Site clearance (b) Tree felling (c) Predrill (d) Socket H-piling (e) Bored piling (f) Excavation (g) ELS
ND/2019/05	(a) Bridge Foundation Works - Ground investigation works at D38, DH016, ABH03, D39. - Pre-drilling for bored piles at C2-01, C2-03, C2-04, C3-01, C3-04a, D2-01, E2-01, B1(Portion I & II), B2(Potion II), C1-01 & C1-02(Portion II), C1-04a, C2-02, C3-02, C4-03, E3-01. - Bored piling at C2-03, C2-04, C3-01, C3-03b, C3-04b, C4-03, D1-01, D1-02, D1-03, D1-04, D2-01, D2-02, E1-02, E1-03, E1-04, E2-03, E3-02.

	- Pile cap construction at HKYFB Cap P-02 and Cap AB. - Footing and pier construction at C4-01a and C4-01b. (b) Jockey Club Road - Southbound Footpath & Roadworks Modification - Rockfill Slope - TTA implementation in Jockey Club Road for Towngas UU diversion works - Cut Slope - Tree works (c) Tai Wo Service Road West - Implementation of TTA at Phase 2 for drainage trial pit - Implementation of TTA at Phase 2 for UU diversion, utilities works, trial pit works - Implementation of TTA at Phase 3 for Retaining wall construction works (FW06) - Slope Works (C363) - Utilities Works (Phase 2) - Permanent road works (Phase 1) - Permanent road works (Phase 2) - Site formation works (Phase 2) - Drainage works (Phase 1) - Drainage works (Phase 2) - HKY Footbridge Staircase Dismantle Works - Retaining wall construction works (FW06 & FW52) (d) Tai Wo Service Road East - Drainage works - Water main works - Site Formation at Portion XII - Site Formation at Portion IX - Tree works (e) Fanling Highway - Road works for temporary road diversion for D2-03 construction
ND/2019/06	(a) Finishing works and E&M installations for the Management Office Building (MOB) at Portion 4. (b) Off-site fabrication of steel column, steel truss and bracing of steel canopy in China. (c) Erection of the steel members of steel canopy at Portion 3.

	(d) Construction of retaining wall FW21 at Portion 6. (e) Construction of ground slab of the market stall area at Portion 3. (f) Construction of underground utilities in the final stage market 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 Portion 2. (g) Tree felling/ Disposal of yard waste at Portion 1 and 2. (h) Construction of site haul road at Portion 1. (i) Trial pit at Ma Sik Road.

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 18th EM&A Report which summarises the key findings of the EM&A programme in April 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 T**.

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. Luk Wai Lam	3485 9780	--
	Environmental Officer	Mr. Ng Tao, Richard	9802 9577	
Contract No. ND/2019/03 Contractor (Sang Hing Kuly Joint Venture)	Site Agent	Mr. Tang Wing Kai	9300 7037	--
	Environmental Officer	Mr. Chow Ka Wing	9184 6351	
	Environmental Supervisor	Mr. Ken Kwok	9732 4360	
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. Francis Suen	6672 0311	--
	Environmental Officer	Mr. Pan Fong	9436 9435	

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. Mildred Hung	9460 2745	
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

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 (April 2021)
ND/2019/01	(a) Site clearance in Portion 1f; (b) Site clearance in Portion 2 (c) Site clearance in Portion 3 (d) Erection of temporary noise barrier, laying of rising mains and excavation in Portion 4 (e) Site clearance, stockpile of soil, construction of KW01 retaining wall, sheetpiling and excavation, and pipes laying in Portion 5 (f) Site clearance, sheetpiling and excavation, pipes laying, pre-bored H-piling, construction of KW01 retaining wall, construction of site haul road in Portion 6a (g) Arsenic soil treatment works in Portion 6b (h) 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 in Portion 7 (i) 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 (j) Site clearance, ground investigation and trial pits in Portion 9b (k) Stockpile of soil, temporary slope protection works in Portion 9c (l) Sheetpiling and excavation, pipes laying in Portion 10a (m) Site Clearance in Portion 10b

Contract No.	Site Activities (April 2021)
	(n) Construction of chain-link fence in Portion 11a (o) Site clearance, laying off rising mains in Portion 11b (p) Sheetpiling and excavation, construction of chain-link fence in Portion 14 (q) MIC modules delivery in Portion 16
ND/2019/02	(a) Pre-bored Socketed H-pile (b) Hoarding erection (c) ELS
ND/2019/03	(a) Road and Drainage work in Portion 1; (b) Portion 2 to Portion 20 - Erection of Permanent Boundary Structure - Construction of Irrigation Channel - Geotechnical Works in Long Valley (Trail Pits) - Construction of Temporary Road in Long Valley - Asbestos Removal in Long Valley - Demolition of Existing Construction in Handed over Area - Construction of Storage Shed and Type 2 Storage House - Construction of Bird Hide - Construction of Outdoor Classroom - Wetland Creation & Restoration works after Obtaining Approval from AFCD
ND/2019/04	(a) Site clearance (b) Tree felling (c) Predrill (d) Socket H-piling (e) Bored piling (f) Excavation
ND/2019/05	(f) Bridge Foundation Works - Ground investigation works at D38, DH016, ABH03, D39. - Pre-drilling for bored piles at C2-01, C2-03, C2-04, C3-01, C3-04a, D2-01, E2-01, B1(Portion I & II), B2(Potion II), C1-01 & C1-02(Portion II), C1-04a, C2-02, C3-02, C4-03, E3-01. - Bored piling at C2-03, C2-04, C3-01, C3-03b, C3-04b, C4-03, D1-01, D1-02, D1-03, D1-04, D2-01, D2-02, E1-02, E1-03, E1-04, E2-03, E3-02. - Pile cap construction at HKYFB Cap P-02 and Cap AB. - Footing and pier construction at C4-01a and C4-01b.

Contract No.	Site Activities (April 2021)
	(g) Jockey Club Road - Southbound Footpath & Roadworks Modification - Rockfill Slope - Install temporary electricity meters - TTA implementation in Jockey Club Road for Towngas UU diversion works - Geotechnical Instrumentation (no. FW51/DH01) (h) Tai Wo Service Road West - Implementation of TTA at Phase 2 for drainage trial pit - Implementation of TTA at Phase 2 for UU diversion, utilities works, trial pit works - Implementation of TTA at Phase 3 for Retaining wall construction works (FW06) - New Gas Main pipe construction works (Phase 1) - Slope Works (C363) - Utilities Works (Phase 2) - Permanent road works (Phase 1) - Site formation works (Phase 2) - Drainage works (Phase 1) (i) Tai Wo Service Road East - Backfilling of box culvert BC5 - Drainage works - Water main works - Site Formation at Portion XII (j) Fanling Highway - Dismantle works of existing sign gantry E-DST11 - Road works for temporary road diversion for D2-03 construction
ND/2019/06	(a) Finishing works and E&M installations for the Management Office Building (MOB) at Portion 4. (b) Off-site fabrication of steel column, steel truss and bracing of steel canopy in China. (c) Erection of the steel members of steel canopy at Portion 3. (d) Loading test for mini-piles for the ramp structure at Portion 3 and 5. (e) Construction of retaining wall FW21 at Portion 6. (f) Construction of ground slab of the market stall area and concrete carriageway at Portion 3.

Contract No.	Site Activities (April 2021)
	(g) Construction of underground utilities in the final stage market at Portion 3.
ND/2019/07	(a) Site clearance at Portion 1 and 2. (b) Erection of site hoarding at Portion 1. (c) G.I. works at Portion 1. (d) Construction of box culvert at Portion 2. (e) Filing works at Portion 2. (f) C&D waste disposal at Portion 1 and 2. (g) Tree felling/Disposal of yard waste at Portion 1 and 2. (h) Construction of site haul road.

Construction Programme

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

Status of Environmental Licences, Notifications and Permits

2.9 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-RN0011-21	17/01/2021	16/07/2021	Valid
	GW-RN0143-21	16/03/2021	15/09/2021	Valid
	GW-RN0168-21	23/03/2021	22/06/2021	Valid
	GW-RN0224-21	07/04/2021	06/10/2021	Valid
ND/2019/02	GW-RN0221-21	26/03/2021	25/06/2021	Valid
ND/2019/03	GW-RN0131-21	01/03/2021	31/08/2021	Valid
ND/2019/05	GW-RN0788-20	05/11/2020	04/05/2021	Valid
	GW-RN0919-20	15/02/2021	15/04/2021	Expired in the reporting period
	GW-RN0061-21	02/02/2021	15/04/2021	Expired in the reporting period
	GW-RN0178-21	21/03/2021	20/06/2021	Valid
	GW-RN0189-21	29/03/2021	30/04/2021	Valid
	GW-RN0247-21	14/04/2021	13/07/2021	Valid
	GW-RN0264-21	16/04/2021	29/05/2021	Valid
ND/2019/06	GW-RN0903-20	25/01/2021	24/07/2021	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation				
ND/2019/01	451792	11/12/2019	N/A	Valid
ND/2019/02	454012	05/03/2020	N/A	Valid
ND/2019/03	452216	24/12/2019	N/A	Valid
	452332	31/12/2019	N/A	Valid
	452333	31/12/2019	N/A	Valid
ND/2019/04	461184	23/10/2020	N/A	Valid
ND/2019/05	454323	13/03/2020	N/A	Valid
ND/2019/06	449369	24/09/2019	N/A	Valid
ND/2019/07	459393	28/08/2020	N/A	Valid
Billing Account for Disposal of Construction Waste				
ND/2019/01	7036265	17/01/2020	N/A	Valid
ND/2019/02	7036898	01/04/2020	N/A	Valid

ND/2019/03	7036378	22/01/2020	N/A	Valid
ND/2019/04	7038391	22/09/2020	N/A	Valid
ND/2019/05	7036901	01/04/2020	N/A	Valid
ND/2019/06	7035473	17/10/2019	N/A	Valid
ND/2019/07	7038309	14/09/2020	N/A	Valid
Registration of Chemical Waste Producer				
ND/2019/01	5213-545-B2578-01	10/01/2020	N/A	Valid
ND/2019/02	5213-548-C4439-01	06/05/2020	N/A	Valid
ND/2019/03	5213-623-S4231-01	14/04/2020	N/A	Valid
ND/2019/04	5211-624-D2709-01	26/11/2020	N/A	Valid
ND/2019/05	5213-625-C4464-01	12/04/2021	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
	WT00036076-2020	22/06/2020	30/06/2025	Valid
	WT00036075-2020	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
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
ND/2019/04	WT00037539-2021	16/04/2021	30/04/2026	Valid
ND/2019/05	WT00036996-2020	12/04/2021	31/12/2025	Valid
ND/2019/06	WT00035415-2019	20/03/2020	31/03/2025	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 Sample (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-hour TSP)	Met One Instruments	AEROCET-831	6
FLN-DMS1 FLN-DMS3	Dust Monitor (1-hour TSP)			
	HVS Sampler (TSP) (24-hour TSP)	Tisch	TISCH Model: TE-5025A	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-5025-A)

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 (µg/m³)		Action Level, µg/m³	Limit Level, µg/m³
	Average	Range		
FLN -DMS1	147.0	79.6 - 207.9	303	500
FLN -DMS3	136.6	77.8 – 179.2	301	500
FLN-DMS5	147.0	60.9 – 221.7	279	500
KTN-DMS4	152.3	61.2 – 267.9	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	66.1	41.6 – 118.8	150	260
FLN -DMS3	70.4	47.4 – 130.1	165	260
FLN-DMS5	101.9	83.0 – 143.1	153	260
KTN-DMS4	111.1	73.1 – 173.5	192	260

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

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

Table 3.6 Observation at Dust Monitoring Stations

Monitoring Station	Major Dust Source
FLN -DMS1	Excavator, backhoe with breaker, mobile crane, dump truck, road traffic
FLN -DMS3	Piling, mobile crane, excavator, concrete truck, dump truck, drilling, breaker, road traffic, other construction site
FLN-DMS5	Road traffic
KTN-DMS4	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 M** 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	2
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 L.**

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]	67.0 – 70.8	69.9	75
ND/2019/04				
ND/2019/05				
	CP-FLN-NMS2[2]	61.3 – 68.8	59.6	
ND/2019/01	CP-KTN NMS2[3]	54.5 – 59.2	58.6	
	CP-KTN NMS3[4]	54.3 – 60.0	51.6	
ND/2019/01	CP-KTN NMS5	52.4 – 59.7	57.2	
ND/2019/02	CP-KTN-NMS6	53.2 – 60.5	55.1	

Remarks:
[1]: Since the distance between monitoring station and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.
[2]: Since the distance between monitoring station and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.
[3],[4]: Since the distance between monitoring station and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.

4.9 All noise monitoring was conducted as scheduled in the reporting month. No complaint on construction noise was received during the reporting month. No Action/Level exceedance wsa 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, mobile crane, hand breaker, hand hammer, concrete truck, piling, dump truck, road traffic
ND/2019/04			
ND/2019/05			
	CP-FLN-NMS2[2]	Scattered Village House in Tong Hang (Existing)	Piling, dump truck, mobile crane, breaker, excavator
ND/2019/01	CP-KTN-NMS2[3]	Residential Buildings at Ma Tso Lung (Existing)	Excavator, dump truck, 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, excavator, dump truck, train 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 M** 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 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^{o}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

<table>
<tr><th colspan="2">Monitoring Station(s)</th><th>Parameters, unit</th><th>Depth</th><th>Frequency</th></tr>
<tr><td>River Beas</td><td>SYR-CS1
SYR-IS1</td><td>• Temperature (°C)
• pH (pH unit)
• Turbidity (NTU)
• Water depth (m)
• Salinity (ppt)
• Dissolved Oxygen (DO) (mg/L and % of saturation)
• Suspended Solid (SS) (mg/L)
• Arsenic (As) (μg/L)</td><td rowspan="2">• 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.</td><td rowspan="2">3 days per week, for 2 weeks prior to the commencement of construction works</td></tr>
<tr><td>River Indus and near Siu Hang San Tsuen Stream</td><td>NTR-CS1
NTR-IS1
SHST-IS2
MWR-IS3</td><td>• Temperature (°C)
• pH (pH unit)
• Turbidity (NTU)
• Water depth (m)
• Salinity (ppt)
• Dissolved Oxygen (DO) (mg/L and % of saturation)
• Suspended Solid (SS) (mg/L)</td></tr>
</table>

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^{o}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 2 Limit Level exceedance for dissolved oxygen, 2 Limit level exceedance for turbidity and 1 Limit Level exceedance of suspended solid of impact water quality monitoring were recorded during the reporting month. The summary of exceedance records is shown in **Table 5.6**.

Table 5.6 Summary of Exceedance Records of Water Quality Monitoring in the Reporting Month

Date	Monitoring Stations	Parameter (unit)		
		Dissolved Oxygen (mg/L)	Turbidity (NTU)	Suspended Solid (mg/L)
8th April 2021	NTR-IS1	***5.5***	***6.3***	7.5
	MWR-IS3	***7.7***	***39.2***	***41.0***
No. of Exceedance	Action Level	0	0	0
	Limit Level	2	2	1

Note: ***Bold Italic*** means Action Level exceedance and ***Bold Italic with underline*** means Limit Level exceedance

5.38 After investigation, an influx of muddy water from a tributary (out of project boundary) to Ma Wat River to monitoring stations was observed. The exceedances are considered due to the external factors rather than the contract works and non-projected related. The summary of exceedance recorded in the reporting month is shown in **Appendix N**.

Event and Action Plan

5.39 Should any project related non-compliance of the criteria occur, action in accordance with the Action Plan in **Appendix M** 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)
01/04/2021	KTN-DMS-4A	2.83	9.36	11.7
07/04/2021		5.25		
12/04/2021		4.38		
16/04/2021		2.05		
22/04/2021		3.28		
28/04/2021		5.17		

6.15 All ambient arsenic monitoring was conducted as scheduled in the reporting month. 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 M** 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 M** 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, no pile driving operation was conducted with the assessment area of construction works. No construction vibration monitoring was conducted for surveyed built heritage feature by the Contractor.

Monitoring Parameters and Frequency

8.4 **Table 8.1** summarises the vibration monitoring plan for surveyed cultural heritage under the Works Contracts. Vibration monitoring will be conducted for surveyed built heritage when pile driving operation are conducted within the assessment area of construction works.

Table 8.1 Vibration Monitoring Plan

EP. No	Contract No.	Distance with Construction Works	Monitoring Plan
EP-473/2013/A	ND/2019/05[1]	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, FL02, 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 will be 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 will be assessed by the maximum peak particle velocity (ppv), which is obtained from the maximum value of measurement of all pile driving operation events.

Results and Observations

8.6 In the reporting month, no pile driving operation was conducted with the assessment area of construction works. No construction vibration monitoring was conducted for surveyed built heritage feature by the Contractor.

Event and Action Plan

8.7 **Table 8.2** summarises the vibration limit for construction vibration monitoring for surveyed cultural heritage.

Table 8.2 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.

8.8 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:	8th, 9th, 12th, 14th, 19th, 23rd, 26th, 29th April 2021
Date of night-time monitoring:	12th, 26th April 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 though 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, 65 species of birds were recorded during the bird surveys within assessment area. Among the recorded birds, there were 23 species of waterbirds. The detailed list of waterbirds and all recorded birds are shown in **Appendix K1k and K1l** 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 glareola*, which is a passage migrant and winter visitor, were also commonly observed in shallow water habitat. Juvenile of *Amaurornis phoenicurus* was recorded, while *Himantopus Himantopus* and *Rostratula benghalensis* were observed sitting in nest.

9.13 A high abundance of *Himantopus himantopus* and *Tringa glareola* were found roosting at night-time in wet agricultural lands and shallow water habitats. *Tringa nebularia*, *Gallinula chloropus, Gallinago gallinago, Rostratula benghalensis, Phalaropus lobatus* and *Amaurornis phoenicurus* were also found in wet habitats during the night survey.

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

9.15 Transect T3 was conducted along the Sheung Yue River. Bird species such as *Ardeola bacchus, Tringa ochropus* and *Egretta garzetta* were commonly observed feeding and roosting on the river bank and river bed. Construction work was observed beside Sheung Yue River.

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

9.17 *Egretta intermedia*, *Phalaropus lobatus* and *Streptopelia tranquebarica*, which were all passage migrants, were recorded for the first time since the first reporting month for avifauna survey in July 2020.

9.18 Avifauna monitoring in construction phase was conducted during the reporting month and the detailed results are attached in **Appendix K1**.

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

Monitoring Requirements and Protocol

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

9.20 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

9.21 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: 27th April 2021

Monitoring Location

9.22 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

9.23 The location of Monitoring Stations shown in **Figure 10** for reference.

Monitoring Parameters

9.24 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

9.25 Other information at the time of survey such as weather condition and noticeable natural or anthropogenic activities would be recorded.

Monitoring Result

9.26 In the survey of aquatic fauna, a total of 15 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 aquatic macroinvertebrate species and fish species of conservation importance were recorded. No adverse environmental impacts was observed during monitoring.

9.27 The access to three monitoring stations (MS_04, MS_06 and MS_07) was in private property, and the monitoring stations were inaccessible during the monitoring. The access to the monitoring stations is shown in **Photo 1** below.

Photo 1. Access to MS_04, MS_06 and MS_07 in private property

9.28 Aquatic faunal monitoring in construction phase was conducted during the Reporting Month and the results are attached in **Appendix K2 to K3**.

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

Monitoring Requirements and Protocol

9.29 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.

9.30 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

9.31 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.

9.32 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)

9.33 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.

9.34 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)

9.35 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

9.36 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: 20th, 21st April 2021

Monitoring Location

9.37 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

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

Monitoring Parameters

9.39 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

9.40 During the survey, a total of 5 mammal species were recorded from transects T1, T3, T4, T5 and T6. A total of 3 species of conservation importance were recorded, namely bats *Miniopterus* sp., *Pipistrellus abramus* and *Cynopterus sphinx*.

9.41 Domestic cat, *Felis catus* was found at T1 and T6. Domestic dog, *Canis lupus familiaris*, was found at T1, T3, T4, T5 and T6, where associated with human settlements.

9.42 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).

9.43 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).

9.44 *Miniopterus* sp. was recorded with echolocations in call structure of FM/QCF (frequency modulated/quasi constant frequency) and frequency around 48 kHz to 62 kHz (Chou & Cheng, 2012, p.41-42; Chao, 2001, p.54 & 58). *Pipistrellus abramus* was recorded with FM/QCF

call structure and frequency around 44 kHz to 64 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).

9.45 Bat species, *Cynopterus sphinx* was observed roosting in the tent-shaped shelter under fronds of Chinese Fan-palm during daytime survey, and was found in flight at nighttime at T1, T3 and T4. *Miniopterus* sp. was recorded in flight at nighttime at T1, *Pipistrellus abramus* was recorded in flight at nighttime at T1, T3, T4, T5 and T6.

Herpetofauna (Amphibians and Reptiles)

9.46 Along the transects, a total of 10 herpetofauna species were observed. One species of conservation importance, *Gehyra mutilate* was recorded at T5. Species including frogs, toad, lizards and gecko were recorded near wetland habitats and watercourse. Transect T1 had higher species diversity and abundance than other transects.

Insects (Butterfly and Dragonfly)

9.47 During the insect survey, a total of 19 butterfly species and 12 odonata species were recorded from the transects, with all butterfly species being common or very common. Transect had higher butterfly species diversity than other transects.

9.48 Transect T1 had higher dragonfly species recorded in the reporting month. All of the dragonfly species recorded were common and abundant in Hong Kong.

9.49 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 K4 to K7**.

9.50 For the monitoring conducted on 15th March 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 fallen trees. The inaccessible parts are shown in **Photo 2** and **Photo 3** below. The adjusted accessible transect route is shown in **Figure 11**.

Photo 2. Inaccessible part of transect T5 located within private property

Photo 3. Inaccessible part of transect T5 blocked by fallen trees

Results and Observation

Details of the Influencing Factors

Major Activities

9.51 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.

9.52 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.

9.53 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.

Weather Conditions

9.54 According to the observation during survey, temperature and the rain flow record in the Reporting Month (Reference: http://www.weather.gov.hk/wxinfo/pastwx/metob202104.htm), weather condition might pose influence towards the monitoring result.

9.55 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.

9.56 The detailed Ecological monitoring results are attached in **Appendix K**.

Reference

Chou, C. H., & Cheng, H. C. (2012). Echolocation Calls of the Eleven Insectivorous Bats of Taiwan. Taiwan Journal of Biodiversity, 14(3-4), 33-62.

Chao, N. M. (2001). Identification of Pipistrellus abramus, Miniopterus schreibersii, Hipposideros terasensis, and Rhinolophus monoceros using echolocation call characters (Doctoral dissertation, MS thesis, National Sun Yat-Sen University).

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 O**.

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	8th, 13th, 20th, 27th Apr 2021	7th, 14th, 23rd, 28th Apr 2021	9th, 16th, 20th, 30th Apr 2021	8th, 15th, 22nd, 29th Apr 2021	7th, 16th, 19th, 26th Apr 2021	8th, 15th, 22nd, 29th Apr 2021	8th, 16th, 23rd, 30th, Apr 2021
Joint Site Audit with representative of the *Supervisor's* Representative, the Contractor and IEC	13th April 2021	23rd April 2021	20th April 2021	15th April 2021	16th April 2021	15th April 2021	8th April 2021

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			
Air Quality	20/4/2021	Provide dust control measures for soil nailing works to prevent dust generation (Portion 8a).	Improvement/Rectification was observed during follow-up audit session on 27 April 2021.
	20/4/2021	Provide regular watering on exposed site area (Portion 7).	Improvement/Rectification was observed during follow-up audit session on 27 April 2021.
Contract No.: ND/2019/02			
Water Quality	31/3/2021	To prevent surface runoff discharge into nearby watercourse.	Item was remarked as 210407-R01. Follow-up action is needed to be reviewed.
	7/4/2021	To prevent surface runoff discharge into nearby watercourse.	Improvement/Rectification was observed during follow-up audit session on 14 April 2021.
Waste / Chemical Management	14/4/2021	Drip tray should be provided for chemical storage.	Improvement/Rectification was observed during follow-up audit session on 23 April 2021.
	28/4/2021	Drip tray should be provided for chemical storage.	Follow-up action is needed to be reported in the following month.
Contract No.: ND/2019/03			
Air Quality	9/4/2021	Excavated or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water.	Improvement/Rectification was observed during follow-up audit session on 16 April 2021.
	16/4/2021	Dusty materials remaining after a stockpile should be watered and cleared from the surface of roads.	Improvement/Rectification was observed during follow-up audit session on 20 April 2021.
Water Quality	16/4/2021	Water of wheel washing facilities should be cleared regularly.	Improvement/Rectification was observed during follow-up audit session on 20 April 2021.
Landscape & Visual	30/3/2021	Retained trees should be carefully protected.	Improvement/Rectification was observed during follow-up audit session on 9 April 2021.
	20/4/2021	Retained trees should be carefully protected.	Improvement/Rectification was observed during follow-up audit session on 30 April 2021.

Contract No.: ND/2019/04			
Air Quality	31/3/2021	NRMM label was observed faded and valid NRMM label should be displayed on regulated machine.	Item was remarked as 210408-R02. Follow-up action is needed to be reviewed.
	8/4/2021	NRMM label was observed faded and valid NRMM label should be displayed on regulated machine.	Improvement/Rectification was observed during follow-up audit session on 15 April 2021.
	8/4/2021	To keep the public road near site entrance clean and free of dust.	Improvement/Rectification was observed during follow-up audit session on 15 April 2021.
	22/4/2021	Stockpile of dusty material should be covered properly.	Improvement/Rectification was observed during follow-up audit session on 22 April 2021.
	22/4/2021	To keep the public road near site entrance clean and free of dust.	Item was remarked as 210422-R02. Follow-up action is needed to be reviewed.
	29/4/2021	To keep the public road near site entrance clean and free of dust.	Follow-up action is needed to be reported in the following month.
Water Quality	15/4/2021	To prevent site runoff discharge into the nearby watercourse.	Improvement/Rectification was observed during follow-up audit session on 22 April 2021.
Waste/Chemical Management	31/3/2021	Further provide receptacles on site for waste collection.	Item was remarked as 210408-R01. Follow-up action is needed to be reviewed.
	8/4/2021	Further provide receptacles on site for waste collection.	Improvement/Rectification was observed during follow-up audit session on 15 April 2021.
	8/4/2021	Drip tray should be provided for chemical storage.	Improvement/Rectification was observed during follow-up audit session on 15 April 2021.
Landscape and Visual	29/4/2021	Remove the construction materials within the tree protection zone for all retained trees and properly erect the fencing to protect the retained trees.	Follow-up action is needed to be reported in the following month.

Contract No.: ND/2019/05			
Air Quality	16/4/2021	To keep public road near site entrance clean and free of dust.	Improvement/Rectification was observed during follow-up audit session on 19 April 2021.
	19/4/2021	To enhance the dust suppression measure on site especially for the dust generation activities.	Improvement/Rectification was observed during follow-up audit session on 26 April 2021.
	26/4/2021	Every stock of more than 20 bags of cement should be covered or sheltered on top and 3 sides.	Follow-up action is needed to be reported in the following month
Water Quality	16/4/2021	Contractor was reminded to cover the manhole.	Improvement/Rectification was observed during follow-up audit session on 19 April 2021.
Waste / Chemical Management	29/3/2021	Chemical container should be locked.	Item was remarked as 210407-R01. Follow-up action is needed to be reviewed.
	7/4/2021	Chemical container should be locked.	Improvement/Rectification was observed during follow-up audit session on 16 April 2021.
Contract No.: ND/2019/06			
Water Quality	29/4/2021	To prevent surface runoff discharge into nearby watercourse.	Follow-up action is needed to be reported in the following month
Contract No.: ND/2019/07			
Air Quality	8/4/2021	Ensure all vehicle passes through the wheel wash before leaving the site.	Improvement/Rectification was observed during follow-up audit session on 16 April 2021.
Water Quality	8/4/2021	Re-arrange the piping to discharge the treated water to proper stormwater drain.	Item was remarked as 210416-R01. Follow-up action is needed to be reviewed.
	16/4/2021	Keep review on the arrangement of the piping to discharge the treated water to proper stormwater drain.	Improvement/Rectification was observed during follow-up audit session on 16 April 2021.

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 P**. 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 importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(**Figure 12**)	^[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**.

Solid and Liquid Waste Management Status

10.5 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.

10.6 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 is shown in **Appendix Q**.

10.7 The Contractors are advised to minimize the wastes generated through the 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 P**.

11 ENVIRONMENTAL NON-CONFORMANCE

Summary of Exceedances

11.1 2 Limit Level exceedance for dissolved oxygen, 2 Limit level exceedance for turbidity and 1 Limit Level exceedance of suspended solid of impact water quality monitoring were recorded during the reporting month. After investigation, all exceedance were considered non-projected related.

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

11.3 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.

11.4 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 M** would be carried out.

Summary of Environmental Non-Compliance

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

Summary of Environmental Complaint

11.6 Three environmental complaints was received in the reporting month. One complaint was received for ND/2019/03, one was received for ND/2019/04, and one was received for ND/2019/04, ND/2019/05 and ND/2019/06. The Cumulative Complaint Log since the commencement of the Project is presented in **Appendix R**.

Summary of Environmental Summon and Successful Prosecution

11.7 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 S**.

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 Two Months

Contract No.	Major Site Activities (May and June 2021)	Location/ Working Period	Potential Environmental Impact	Recommended Mitigation Measures
ND/2019/01	(a) Site clearance	Portion 1f, 2, 3, 5, 6a, 7, 9b, 10b	- Construction Dust impact - Noise Impact (Construction Phase) - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste)	**Air** - Regular watering on exposed worksites 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. - Shotcrete on exposed slope.
	(b) GI works	Portion 2, 8b, 9b		
	(c) Excavation	Portion 5, 6a, 8a, 10a		
	(d) Construction of retaining wall	Portion 5, 6a, 8a		
	(e) Soil nailing / shotcrete	Portion 6a, 8a		
	(f) Construction of CLC and site accommodation at Portion 7	Portion 7, 16		
	(g) Construction of site haul road	Portion 6a		
	(h) Pilot trial for arsenic soil treatment works	Portion 6b		

				- Erect solid site hoarding. - Hydroseeding **Noise** - 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 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 or other agreed alternative site (Tung Wah camp site).
ND/2019/02	(a) Pre-bored Socketed H-pile	Portion 7, 9, 10	Air, Noise, Water, Waste	- Dusty works should be sprayed with water or idle stockpile or slope should be covered by Tarpaulin sheet properly. - 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. Noise Management Plan should be followed. - Waste should be sorted and disposed 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 licence. - Dull green barrier and ecological measures should be implemented according to the Ecological protection plan.
	(b) Hoarding erection	Portion 7, 10	Air, Noise, Waste	
	(c) Tree Felling	Portion 7, 10	Air, Noise, Waste	
	(d) ELS	Portion 7, 9, 10	Air, Noise, Water, Waste	
	(e) Pipe jacking	Portion 1, 2	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
	(e) Asbestos Removal in Long Valley	Long Valley	- Air Pollution	- Removing the asbestos containing material according to requirement of COP
ND/2019/04	(a) Socket H-piling	Portion N	- Air, Noise, Water, 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, F	- Air, Noise, Water, Waste	
	(c) Excavation	Bridge F	- Air, Noise, Waste	
	(d) Site clearance	Portion I	- Air, Noise, Waste	
	(e) Tree felling	Portion H	- Air, Noise, Waste	
ND/2019/05	(a) Ground investigation works	D38, DH016, ABH03, D39	- Construction Dust Impact - Noise Impact - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste)	- 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
	(b) Pre drilling for bored piles	C2-01, C2-03, C2-04, C3-01, C3-04a, D2-01, E2-01, B1, B2, C1-01 & C1-02, C1-04a, C2-02, C3-02, C4-03, E3-01		

	(c) Bored piling	C2-03, C2-04, C3-01, C3-03b, C3-04b, C4-03, D1-01, D1-02, D1-03, D1-04, D2-01, D2-02, E1-02, E1-03, E1-04, E2-03, E3-02	- Landscape and Visual - Cultural Heritage	- Manholes to be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system - All vehicles and plant to be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. - Segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal - Sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions - Provide training to workers on appropriate waste management procedures, including waste reduction, reuse and recycling - To adopt other good site practice, such as arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site and regular cleaning and maintenance programme for drainage - Chemical wastes to be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the 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
	(d) Sign Gantry Removal	E-DST11 Fanling Highway		
	(e) Construction of Footpath	Jockey Club Road		
	(f) Pile Cap Construction	HKYFB Cap P-02 and Cap AB		
	(g) Footing Construction	C4-01a and C4-01b		
	(h) Site Formation	Portion XI, XII, TWSRW		
	(i) Utilities Diversion Works and Permanent Road Works	TWSRW		
	(j) Tree Works	TWSRW		
	(k) TTA	Jockey Club Road		
	(l) Drainage & Water Mains construction	Box culvert BC5, TWSRE		
	(m) Temporary removal of noise barrier and sign gantry	D2-03 at Fanling Highway		

	(n) UU diversion	Tai Wo Service Road West		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. - 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.
	(o) Rockfill Slope Construction	Jockey Club Road		
	(p) Road works for temporary road diversion	D2-03		
	(q) Retaining wall construction	FW06, FW52		
	(r) Slope construction	C363		
	(s) Footbridge staircase demolition	Ho Ka Yuen Footbridge		
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) Construction of retaining wall FW21	Portion 6	- Water pollution	- Wastewater generated after wheel washing of vehicles should be treated properly before disposal - Provide sand bags for prevent polluted water discharge off site without wastewater treatment
	(c) Erection of the steel members of steel canopy; Construction of ground slab of the market stall area and concrete carriageway; Construction of underground utilities	Portion 3	- C&D waste - Air pollution - Noise pollution - Water pollution	- Cover C&D waste by impervious sheeting - Spray with water to work area before, during and after the work - Adopt QPME for excavator - Wastewater generated after wheel washing of vehicles should be treated properly before disposal

	in the final stage market			
ND/2019/07	(a) Site clearance	Portion 1, Portion 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
	(b) Erection of site hoarding	Portion 1		
	(c) C&D waste disposal	Portion 1, Portion 2		
	(d) Ground investigation works	Portion 1		
	(e) Construction of box culvert	Portion 2		
	(f) Filing works	Portion 2		
	(g) Tree felling/ disposal of yard waste	Portion 1, Portion 2		
	(h) Construction of site haul road	Portion 1		
	(i) Trial pit	Ma Sik Road		

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

13.2 2 Limit Level exceedance for dissolved oxygen, 2 Limit level exceedance for turbidity and 1 Limit Level exceedance of suspended solid of impact water quality monitoring were recorded during the reporting month. After investigation, all exceedance were considered non-projected related.

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

Contract No. ND/2019/01

13.4 Environmental site inspection were conducted on 8th, 13th, 20th, 27h April 2021 by ET in the reporting month.

Contract No. ND/2019/02

13.5 Environmental site inspection were conducted on 7th, 14th, 23rd, 28th April 2021 by ET in the reporting month.

Contract No. ND/2019/03

13.6 Environmental site inspection were conducted on 9th, 16th, 20th, 30th April 2021 by ET in the reporting month.

Contract No. ND/2019/04

13.7 Environmental site inspection were conducted on 8th, 15th, 22nd, 29th April 2021 by ET in the reporting month.

Contract No. ND/2019/05

13.8 Environmental site inspections were conducted on 7th, 16th, 19th, 26th April 2021 by ET in the reporting month.

Contract No. ND/2019/06

13.9 Environmental site inspections were conducted on 8th, 15th, 22nd, 29th April 2021 by ET in the reporting month.

Contract No. ND/2019/07

13.10 Environmental site inspections were conducted on 8th, 16th, 23rd, 30th April 2021 by ET in the reporting month.

13.11 There were three environmental complaints, no notification of summons or successful prosecutions received in the reporting month.

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

Recommendations

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

Air Quality Impact

- Increase watering frequency for dust generating activities;
- Cover the stockpile of dusty materials entirely with impervious material;
- Ensure all vehicles passes through the wheel wash before leaving the site;
- Ensure all regulated machines displayed with valid Non-road Mobile Machinery (NRMM) labels; and
- Keep public road near work site area clean and free of dust.

Water Impact

- Prevent any surface runoff discharge into nearby watercourse;
- Regularly clear water of wheel washing facilities;
- Discharge the treated water to proper stormwater drain; and
- Ensure the drainage facilities would not be clogged with waste to avoid overflow.

Waste/Chemical Management

- Provide adequate receptacles on site for waste collection; and
- Provide proper storage area for chemical storage.

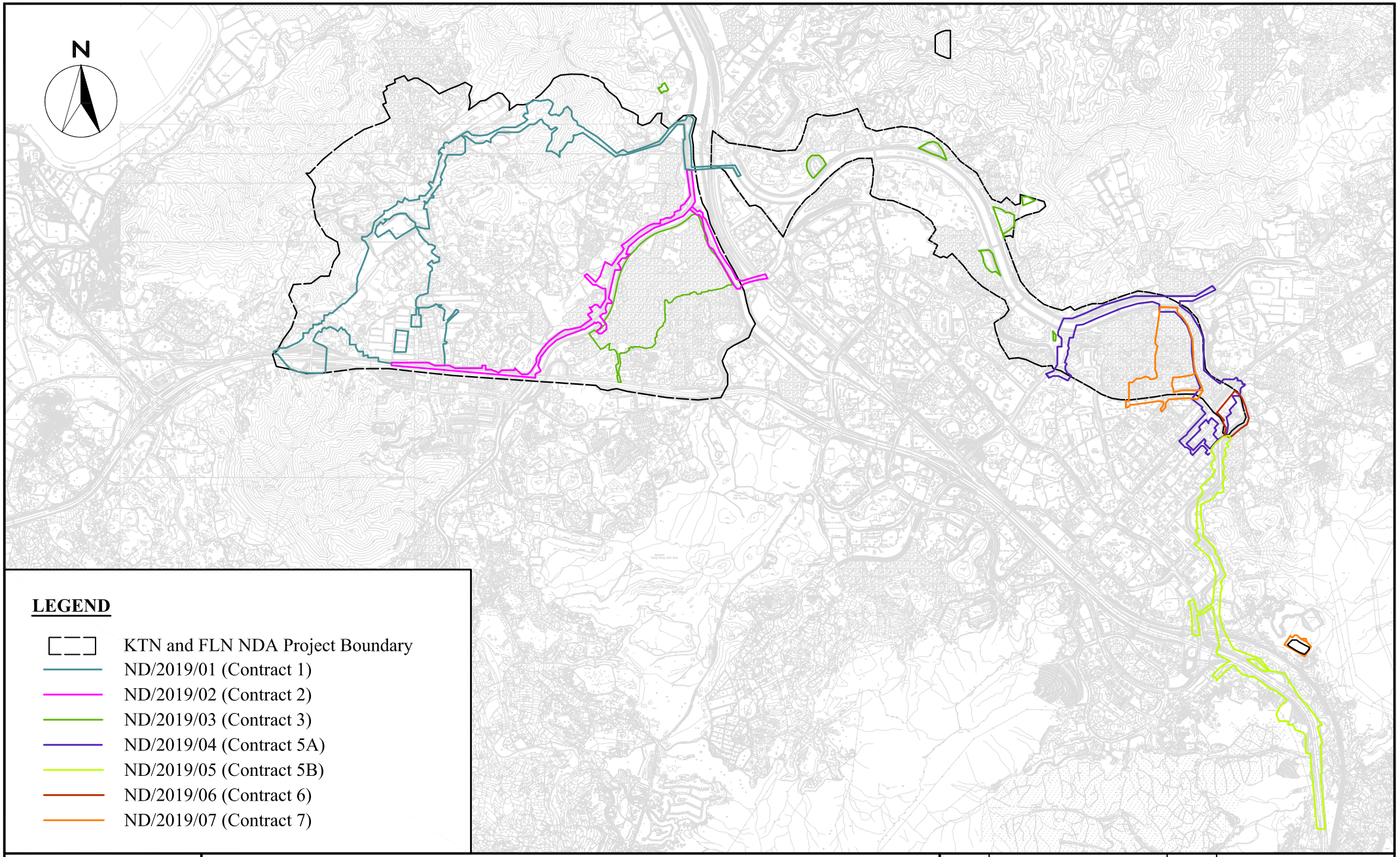
Landscape & Visual Impact

- Protect retained trees carefully and avoid storage of construction material within tree protection zone.

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.

DRAWING(S)



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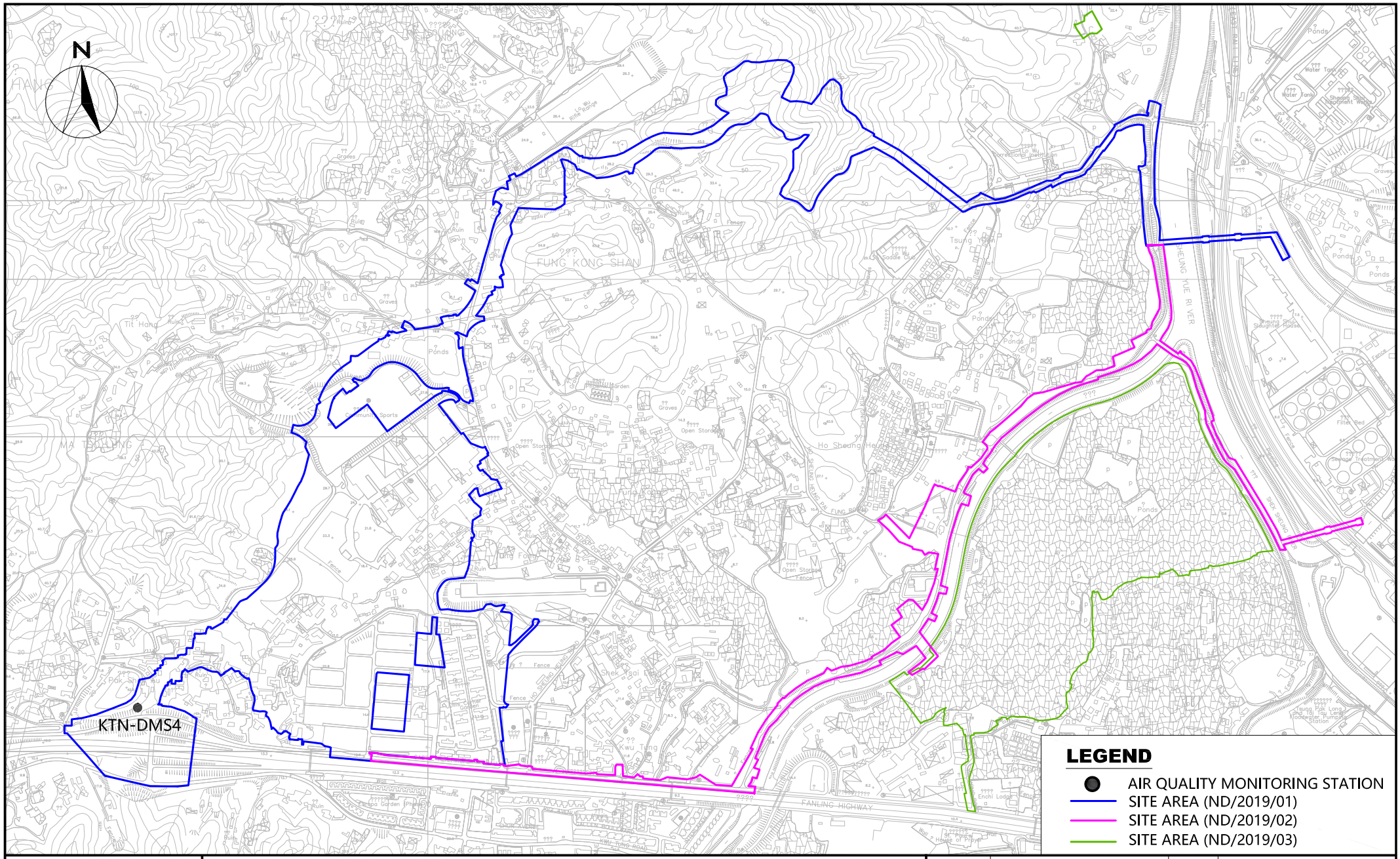
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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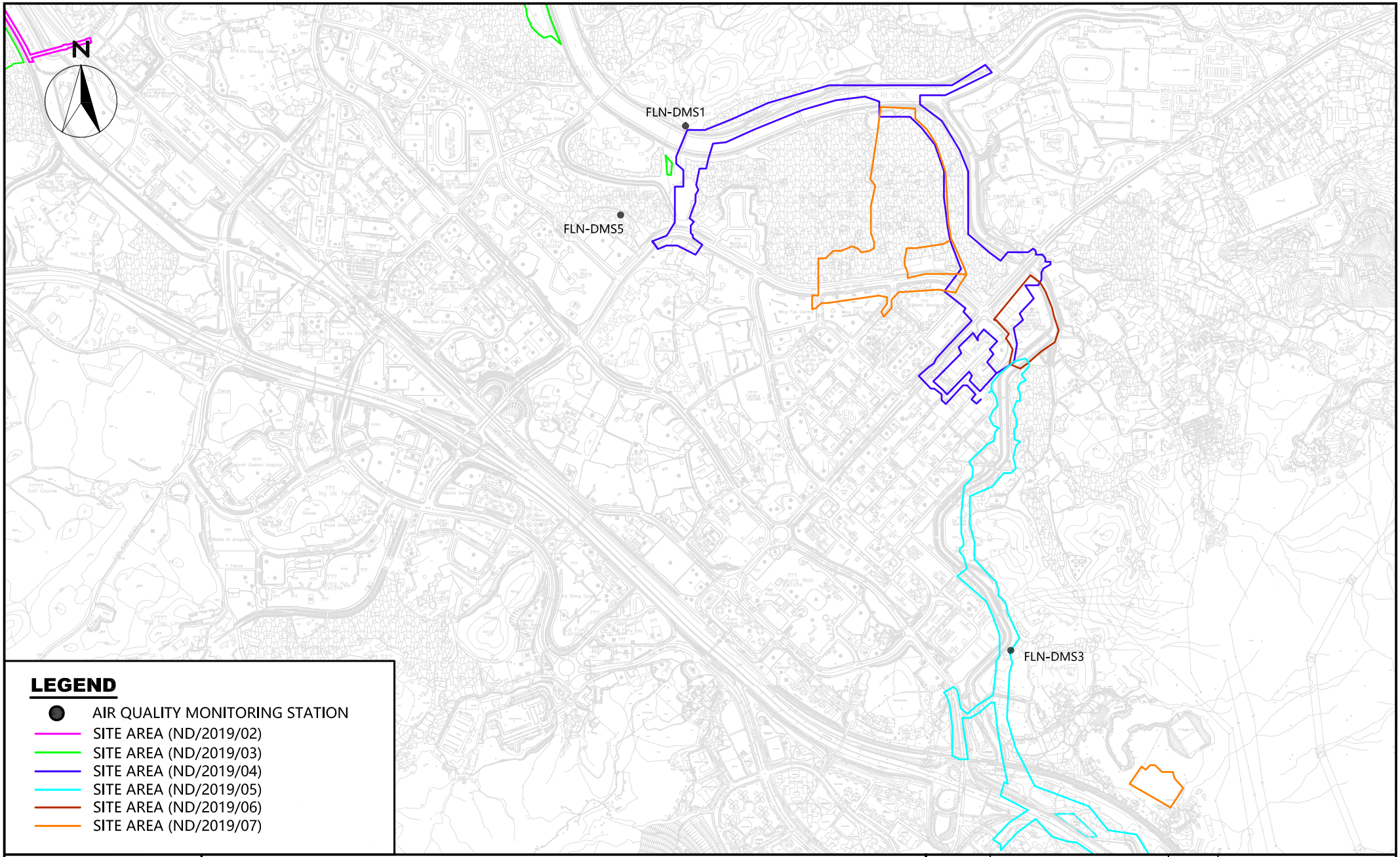
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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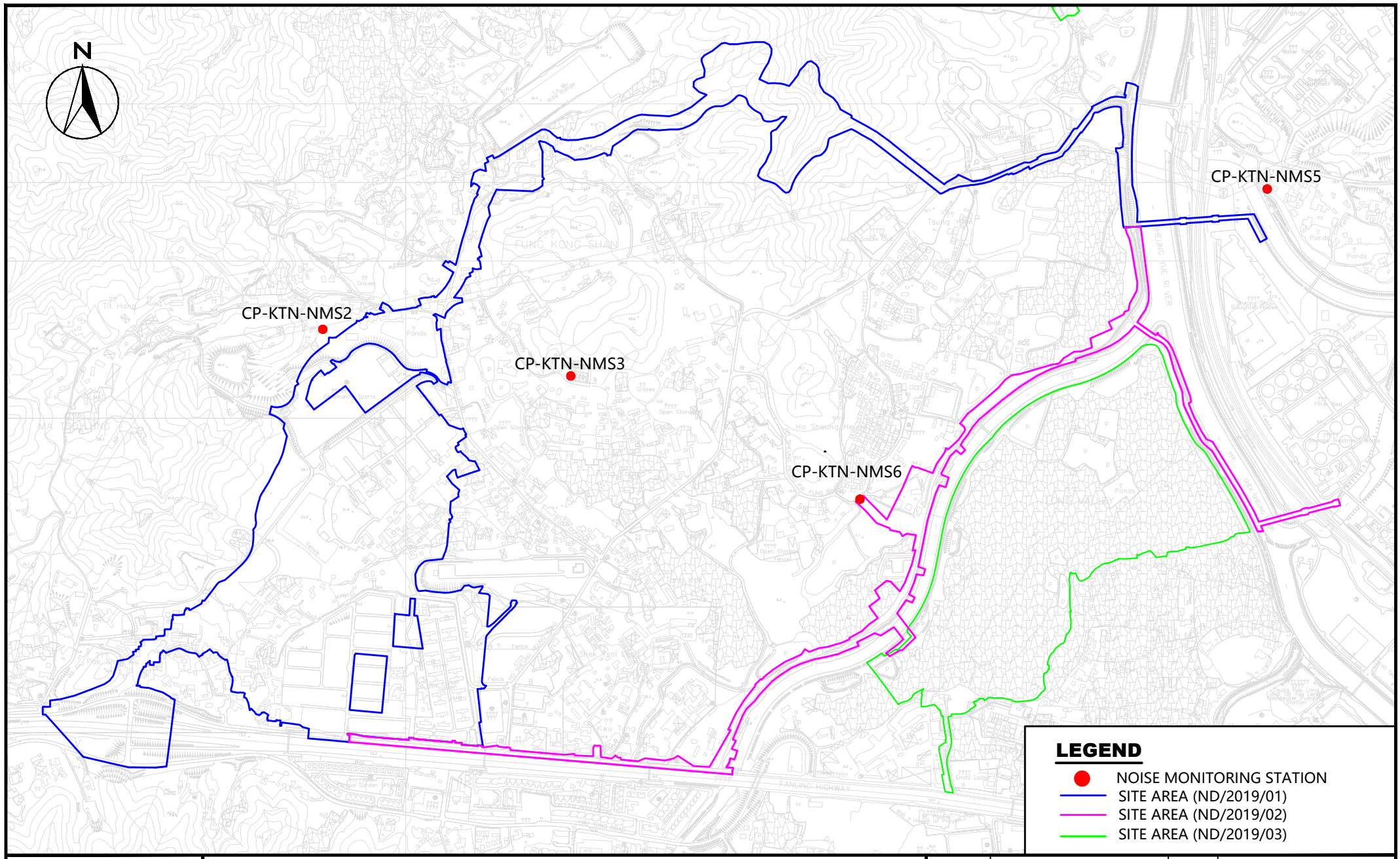
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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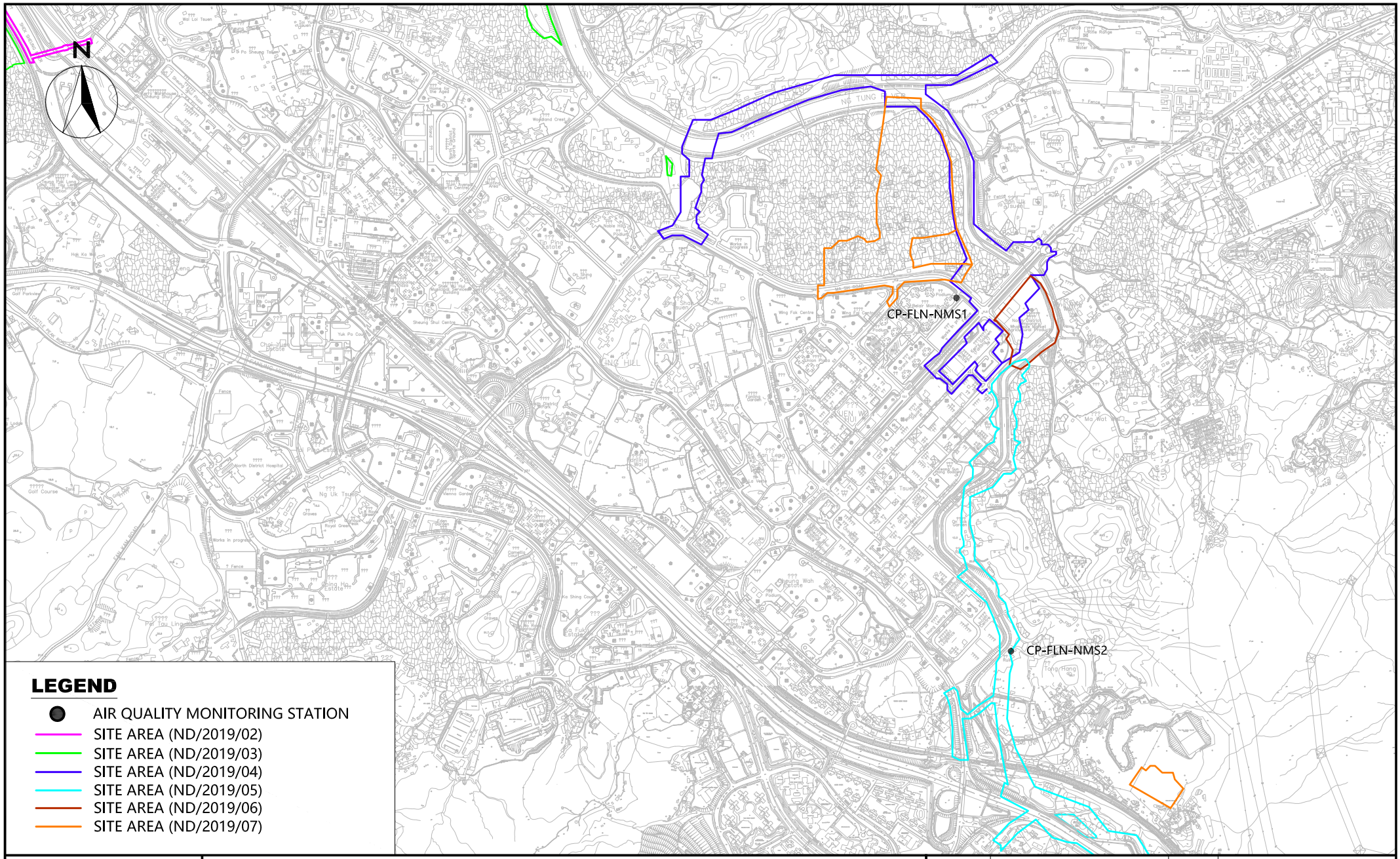
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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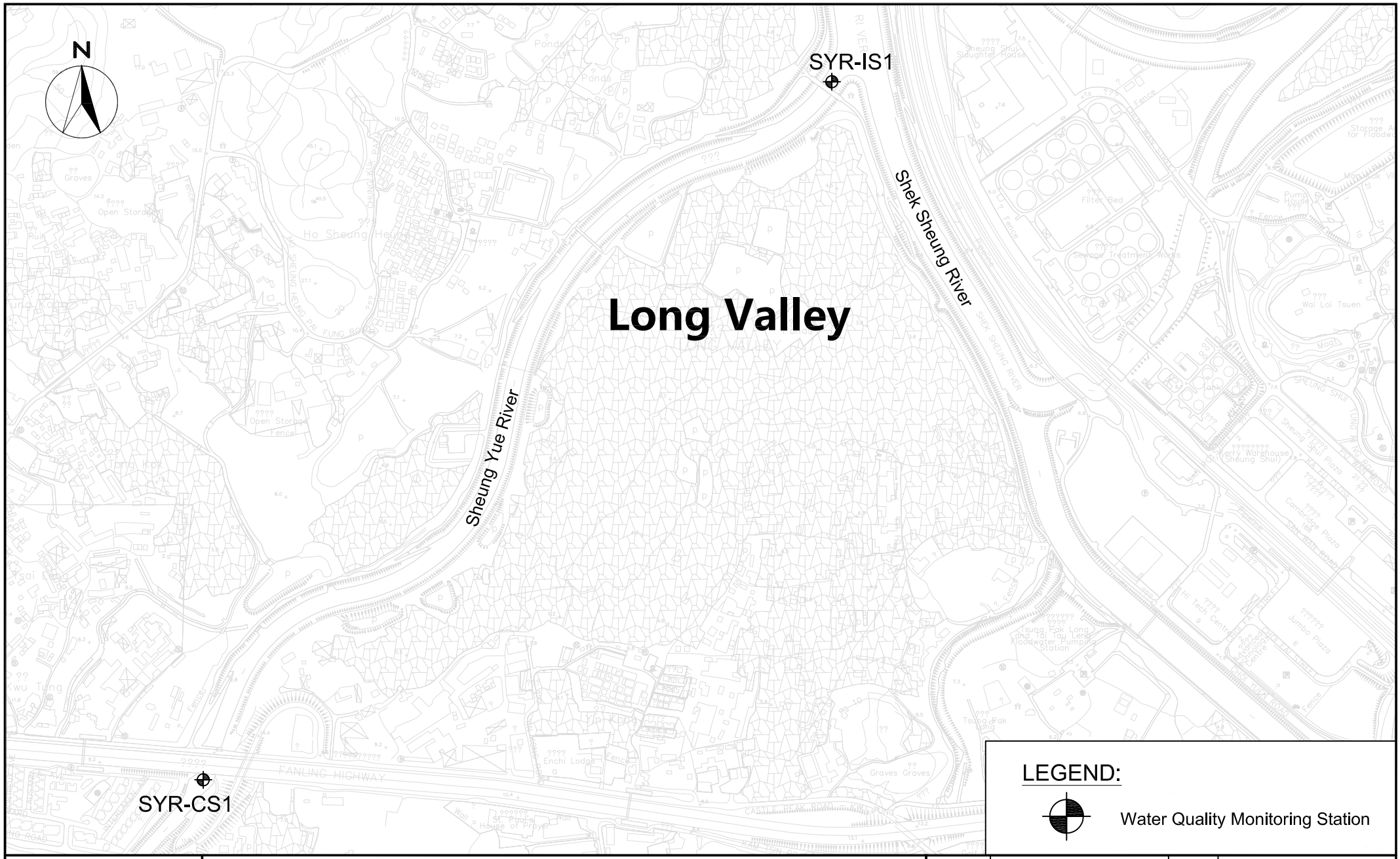
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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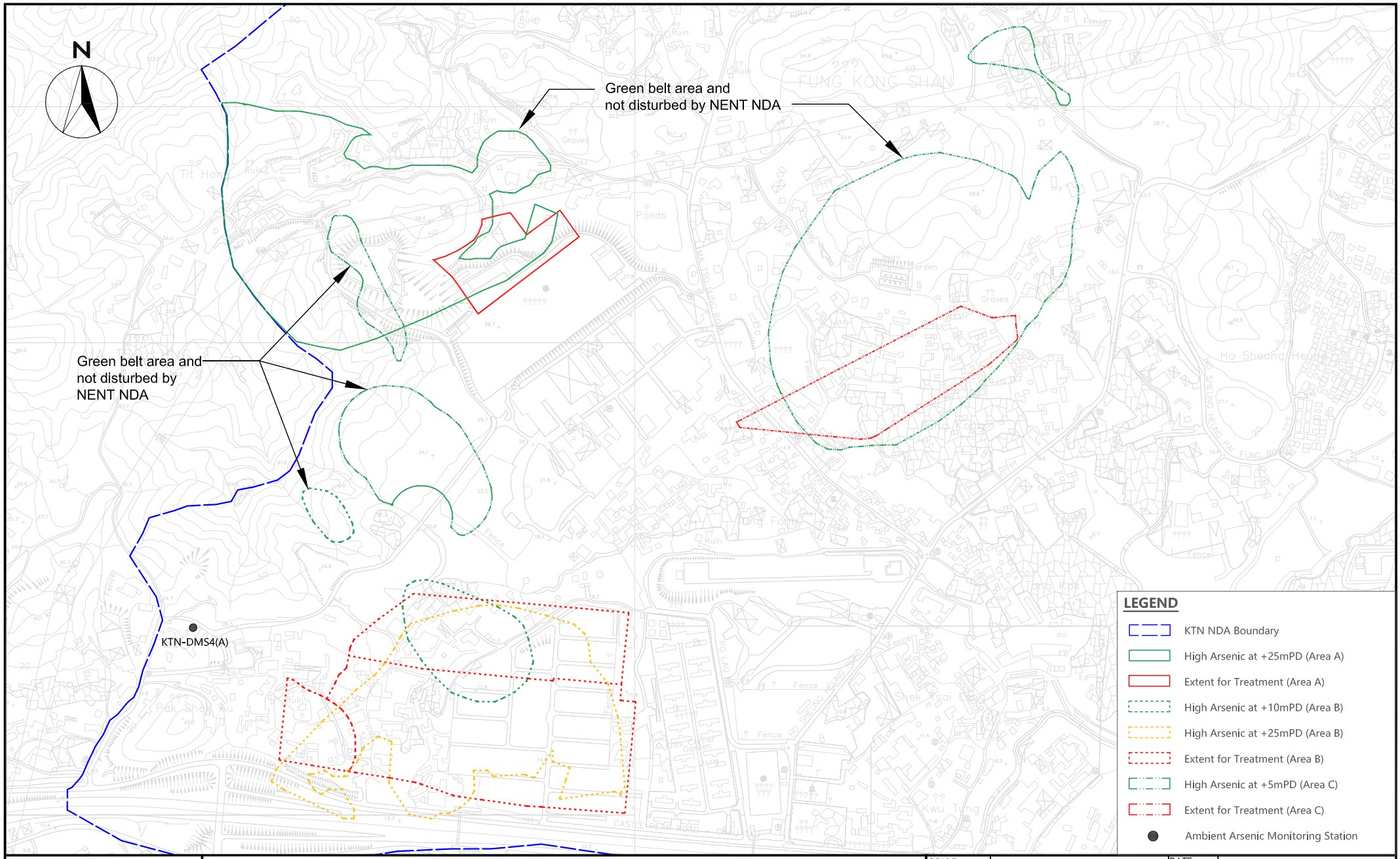
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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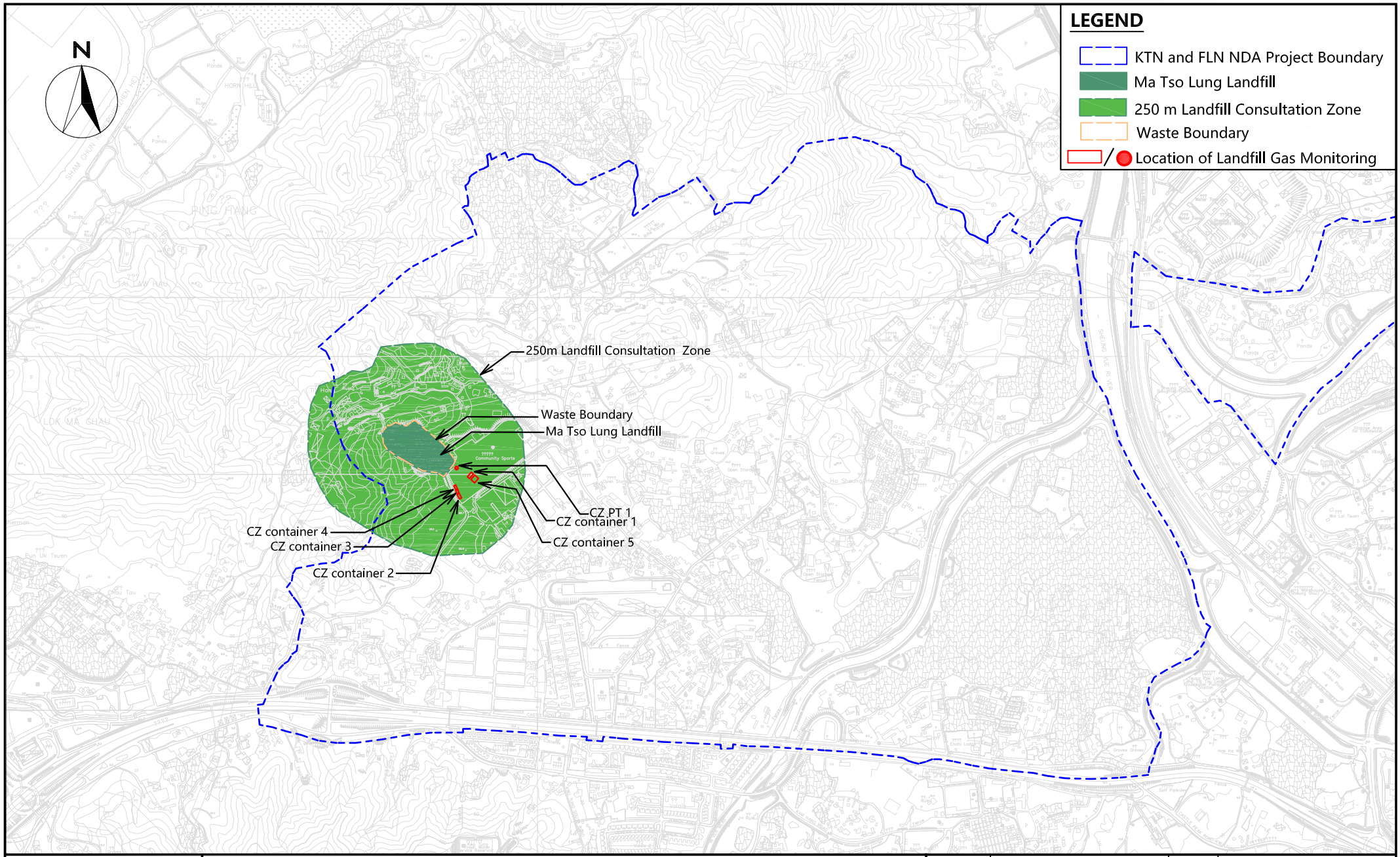
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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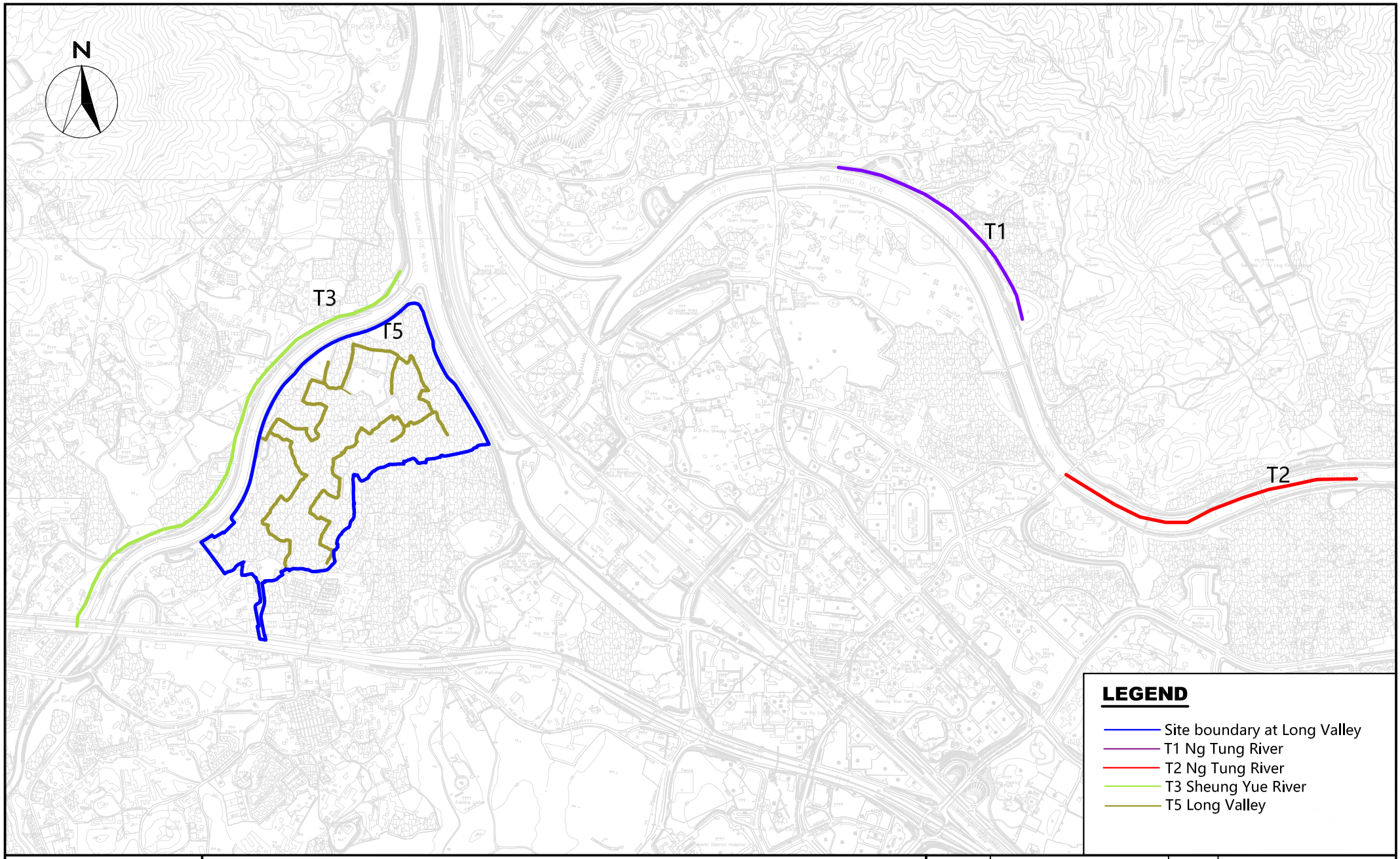
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Landfill Gas Monitoring

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

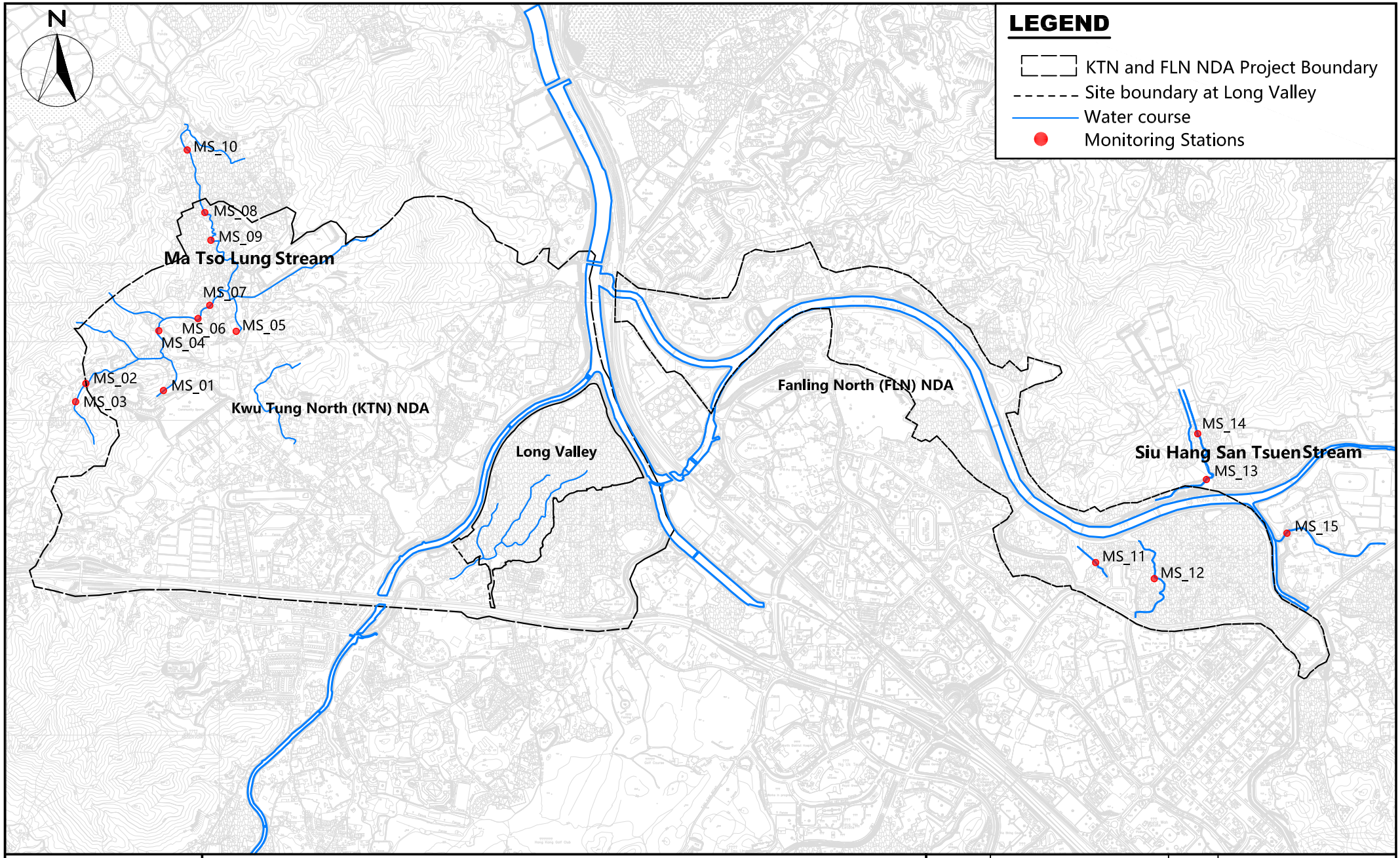


WELLAB 匯力
consulting . testing . research

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

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 —

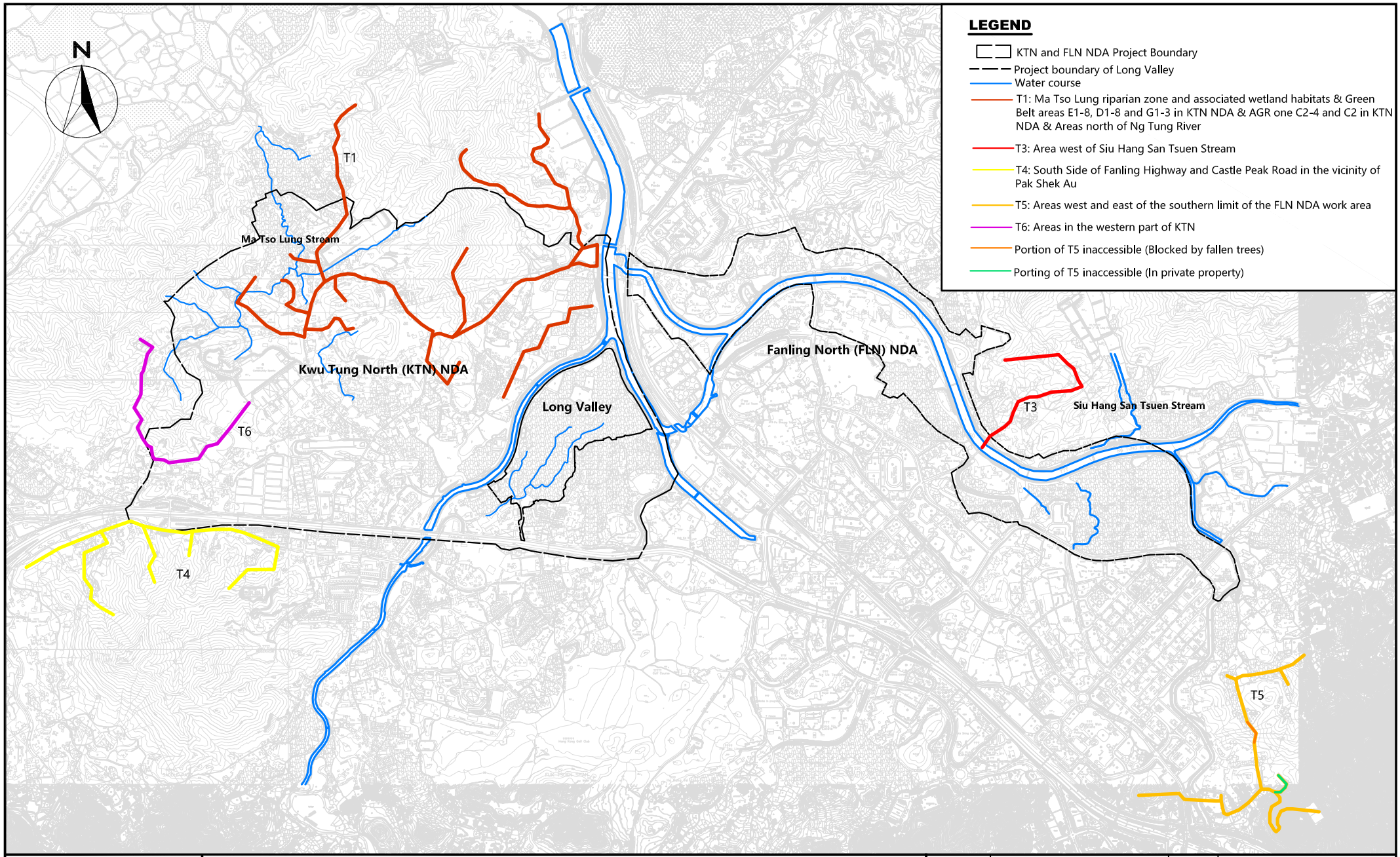


WELLAB 匯力
consulting . testing . research

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

Location of 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 —



WELLAB 匯力
consulting . testing . research

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

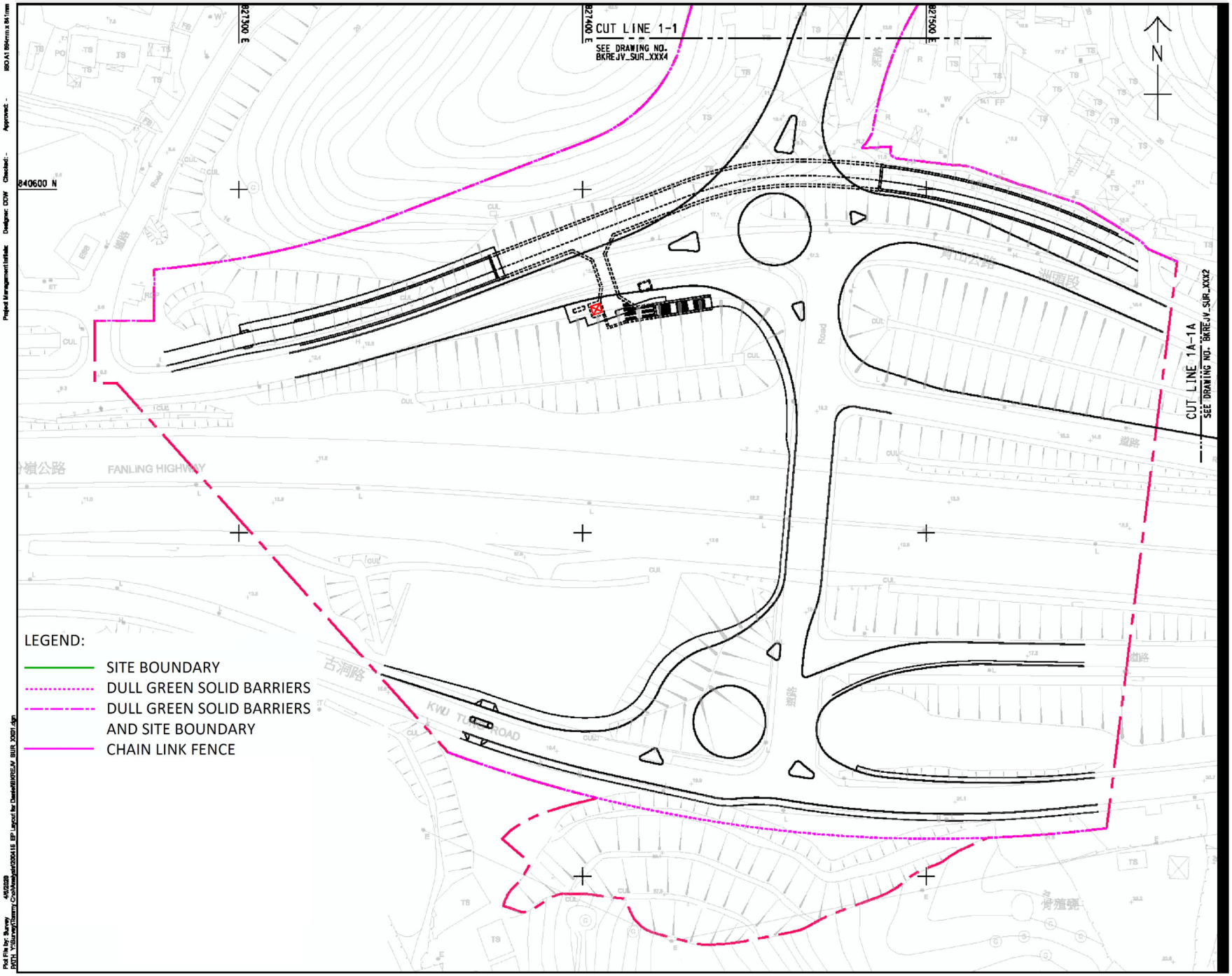
Location of Transect Route of Ecological Sensitive Habitats (Non-Aquatic Fauna) Transects (T1, T3-T6)

SCALE	A4 @ 1:70000	DATE	MAR 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

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

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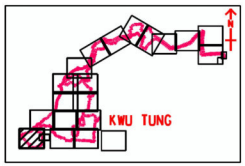
STATUS
階段

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_XXX1

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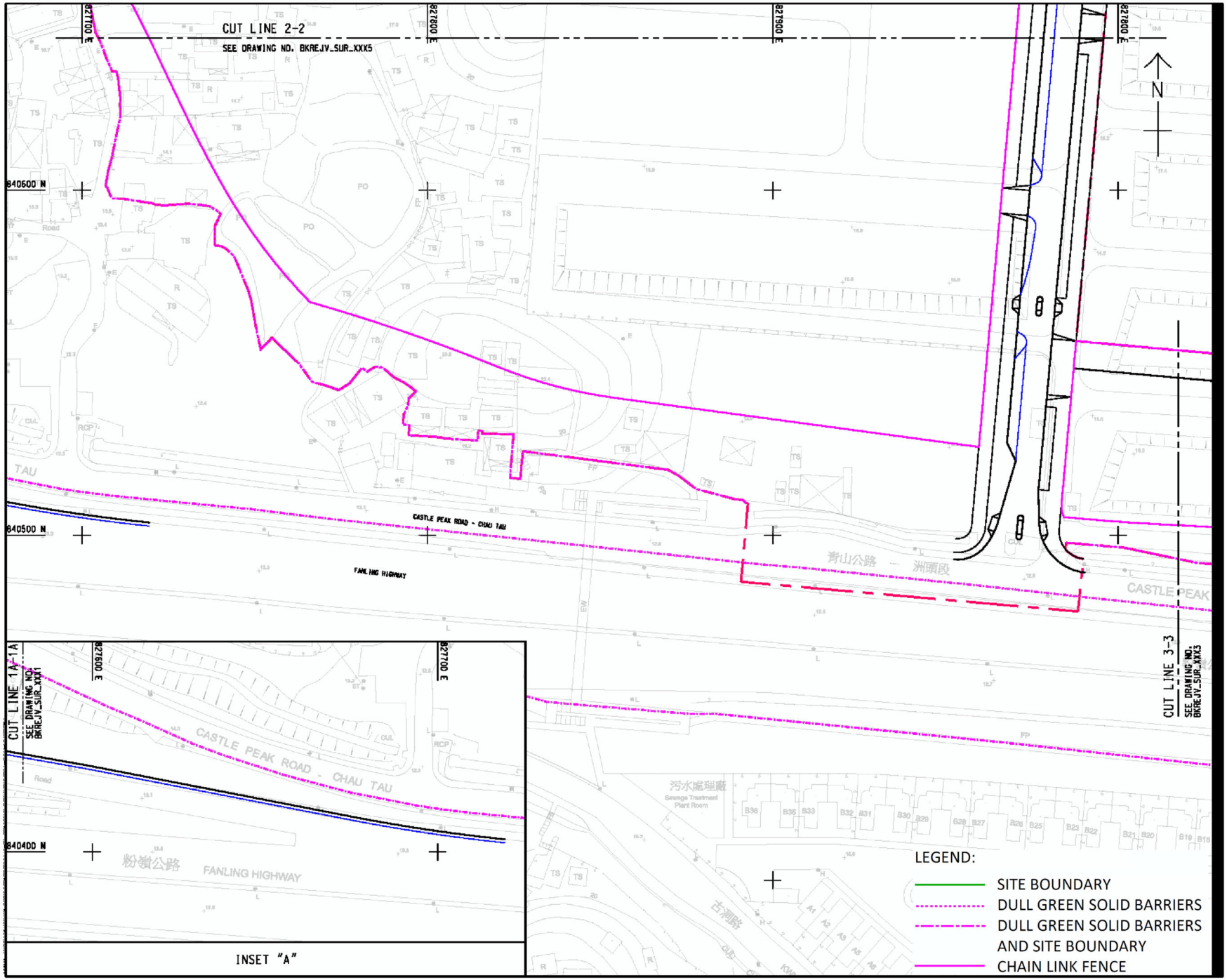

BKREJV

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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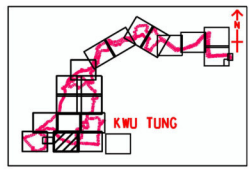
STATUS
階段

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

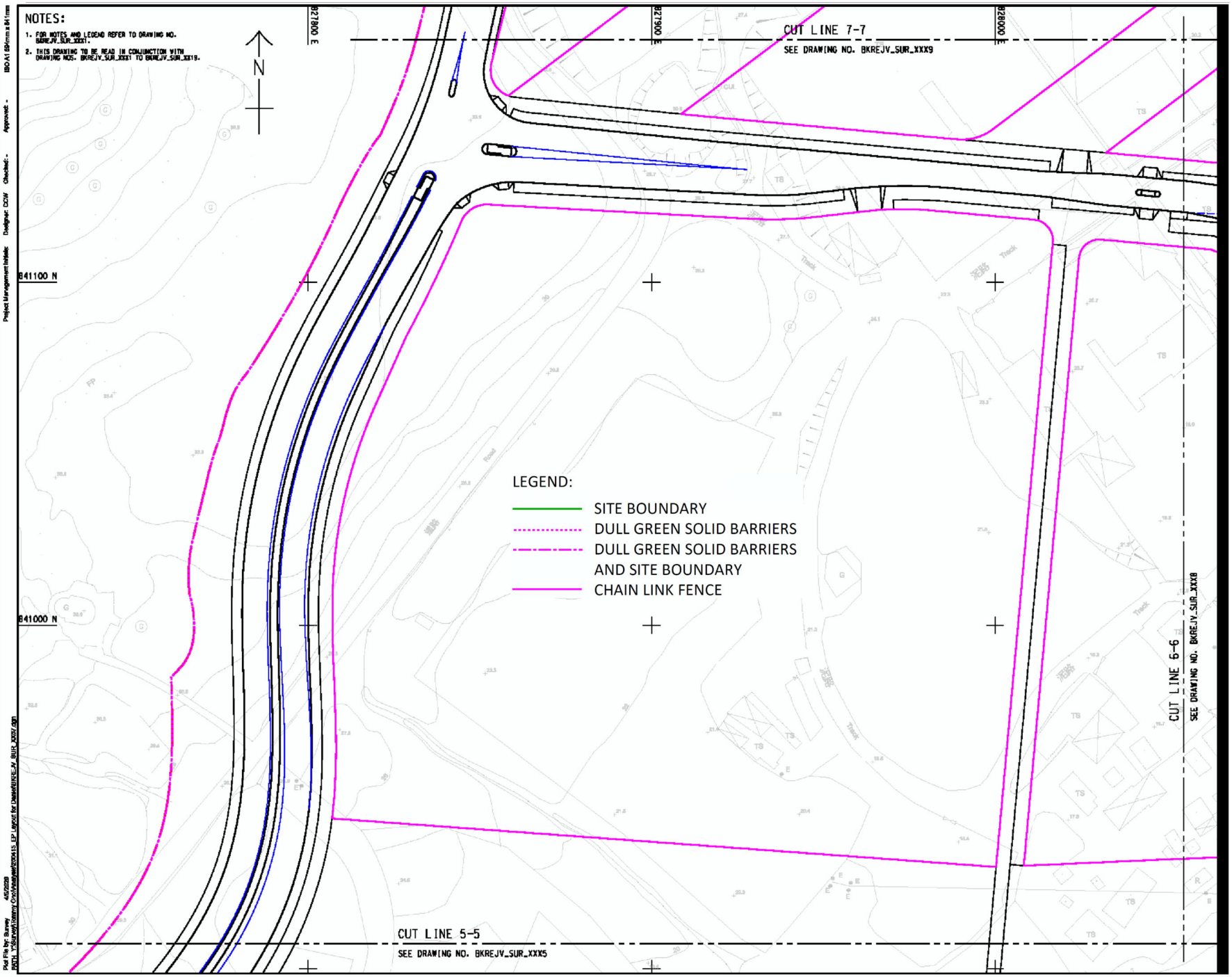
DULL GREEN SOLID BARRIERS LAYOUT

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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業主

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STATUS
階段

SCALE 比例
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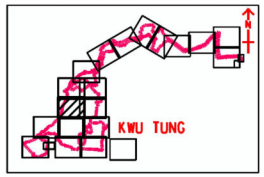
DIMENSION UNIT 尺寸單位
METRES

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
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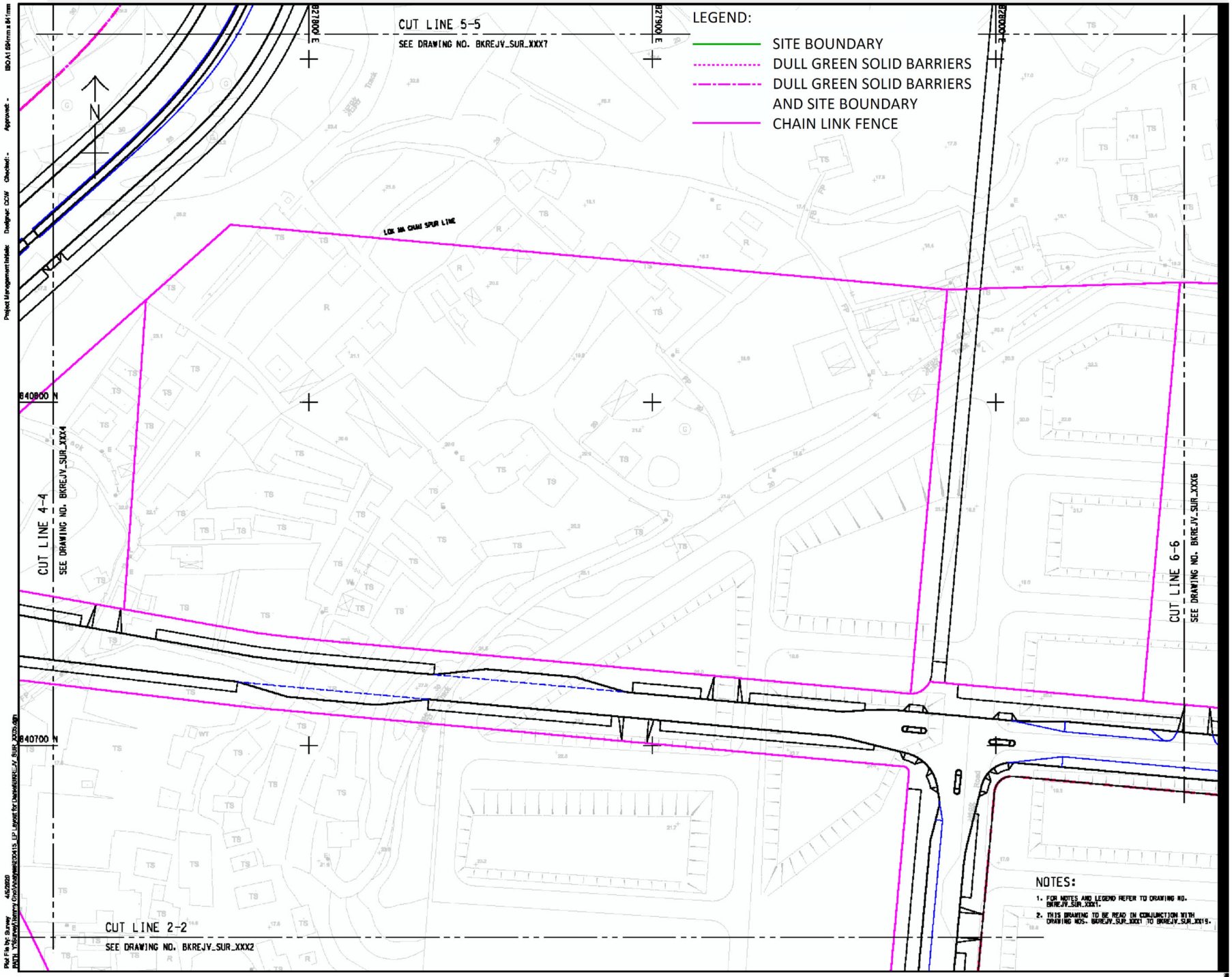

BKREJV

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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STATUS
階段

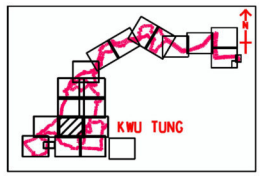
SCALE
比例

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

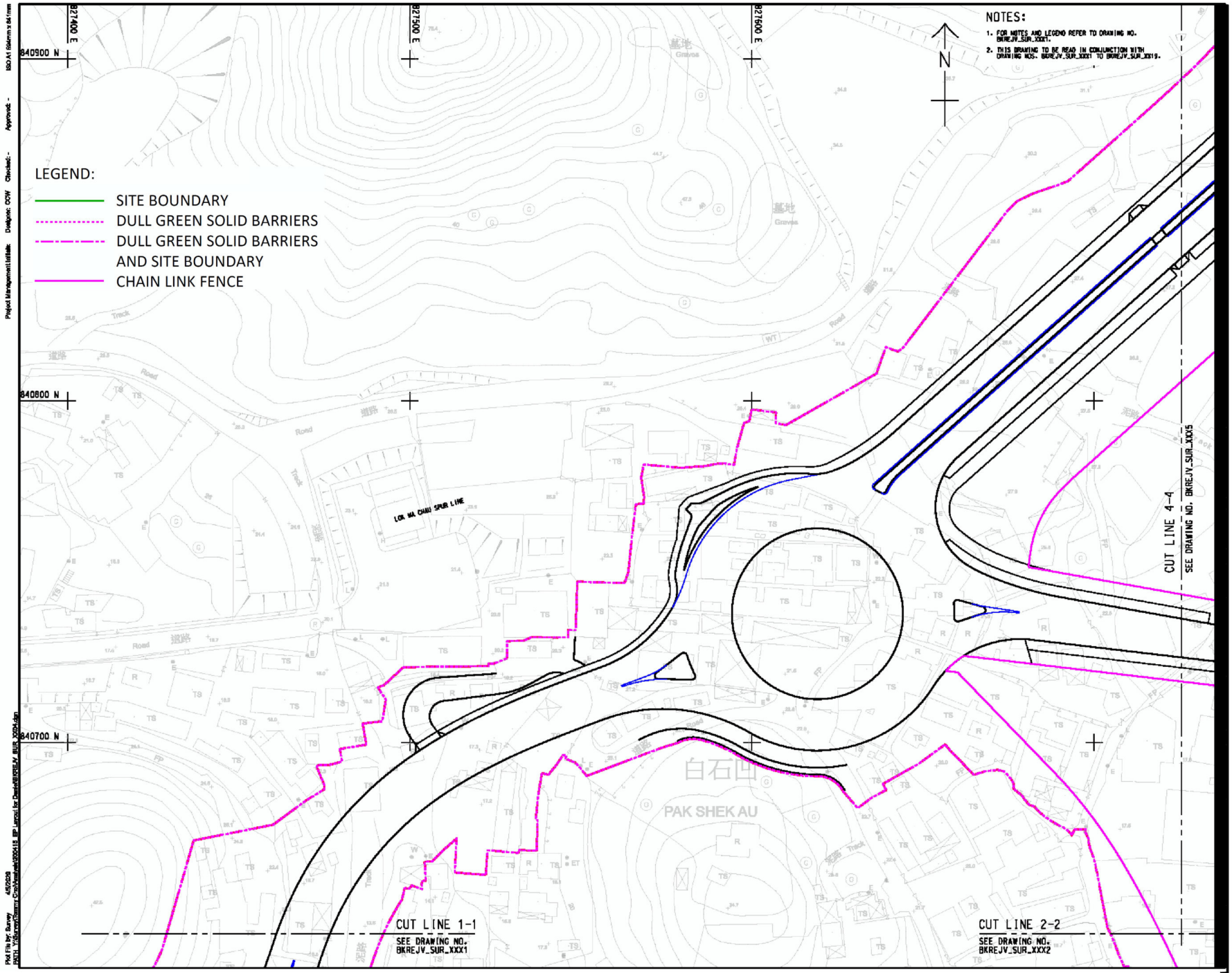
ND/2019/01

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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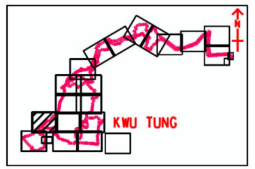
STATUS
階段

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

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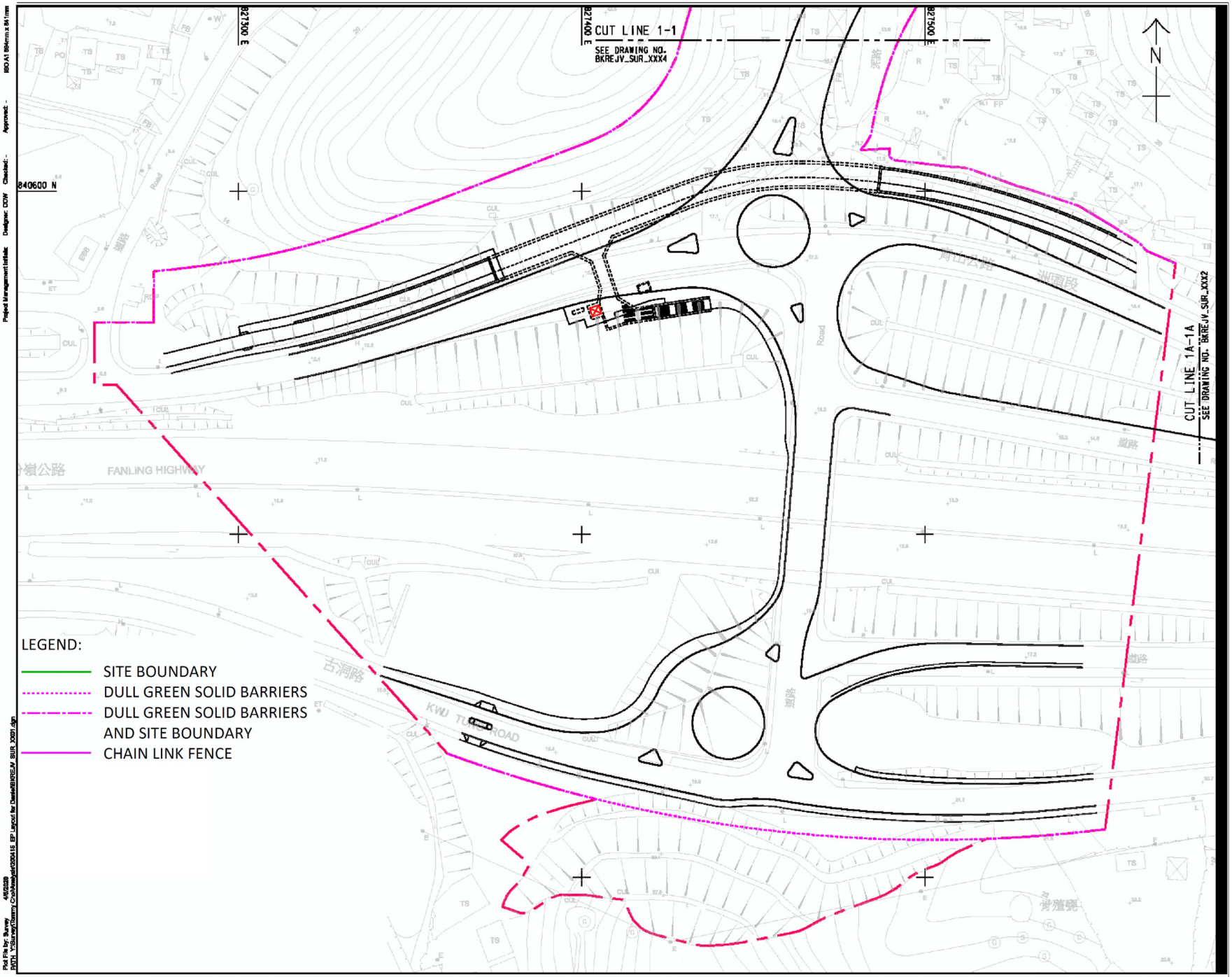

BKREJV

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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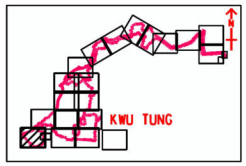
階段

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

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Figure 14

Hoarding Plan

EP-468/2013/A

NOTES:

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

LEGEND:

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

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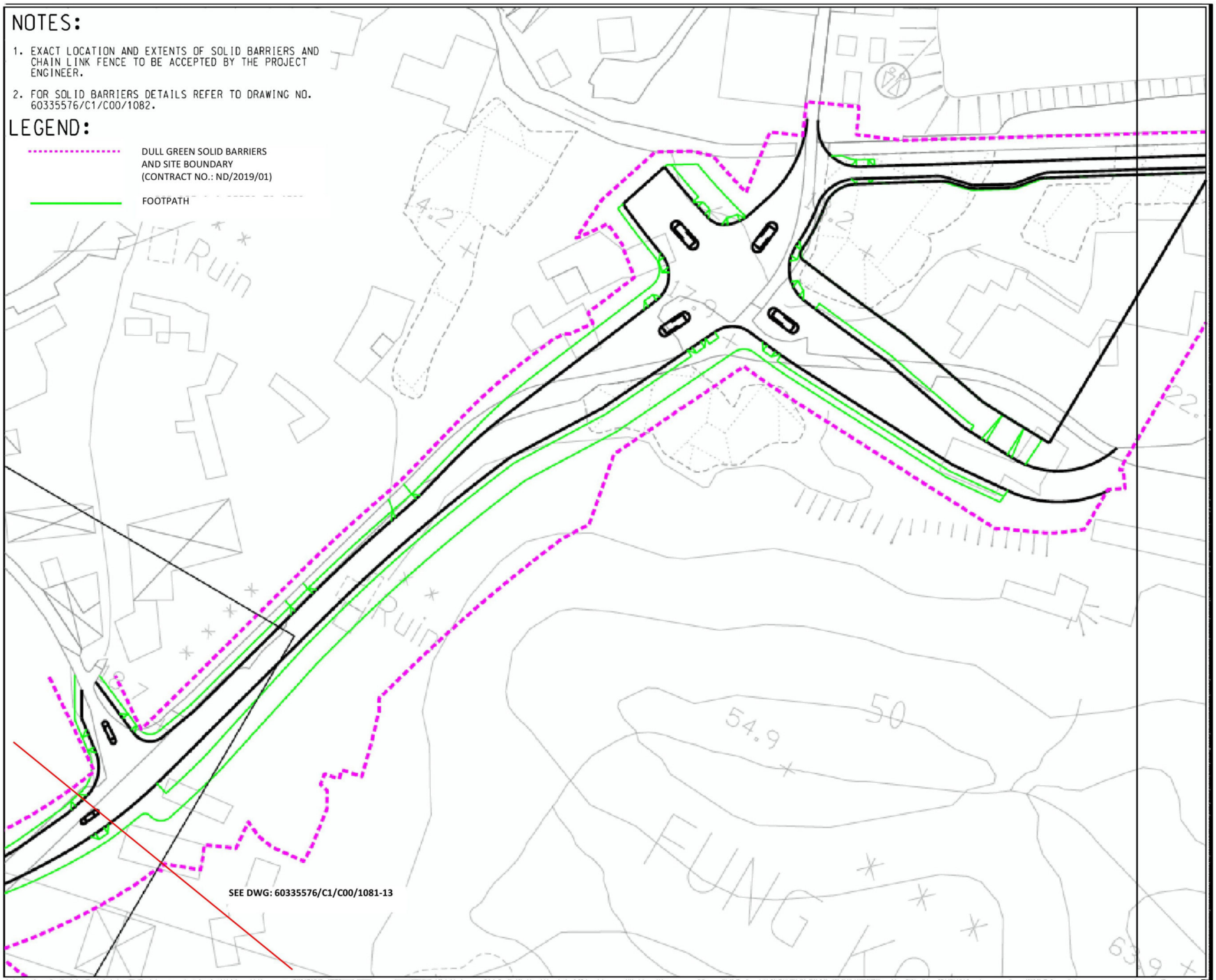

BKREJV

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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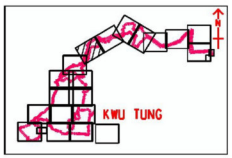
STATUS

SCALE	DIMENSION UNIT
A3 1:1000	METRES

KEY PLAN



PROJECT NO.	CONTRACT NO.
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SHEET TITLE
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
60335576/C1/C00/1081-14

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

LEGEND:

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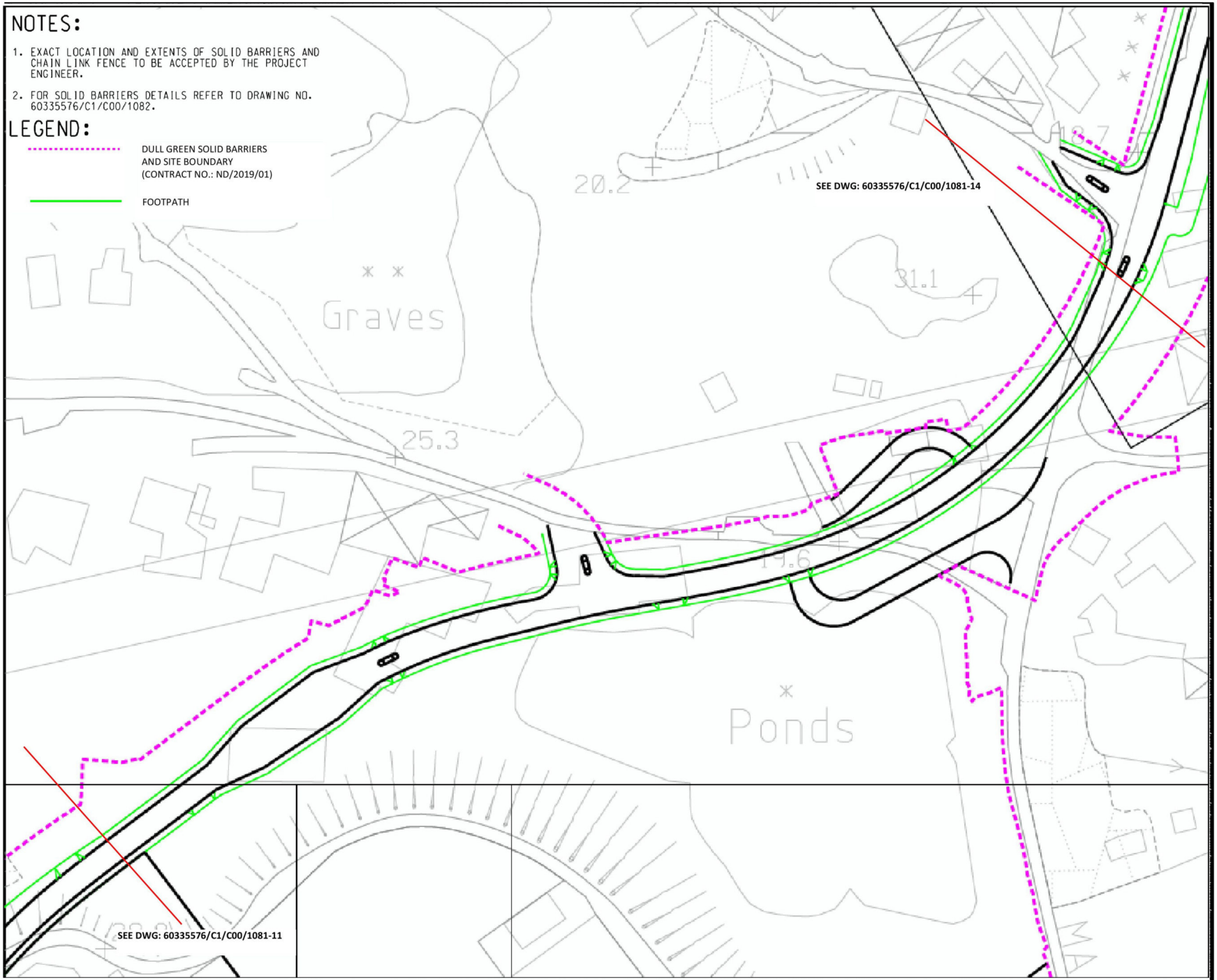

BKREJV

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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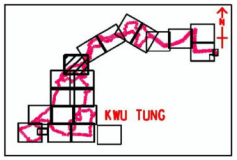
STATUS

SCALE / **DIMENSION UNIT**

A3 1:1000 / METRES

KEY PLAN



PROJECT NO. / **CONTRACT NO.**

60335576 / 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:

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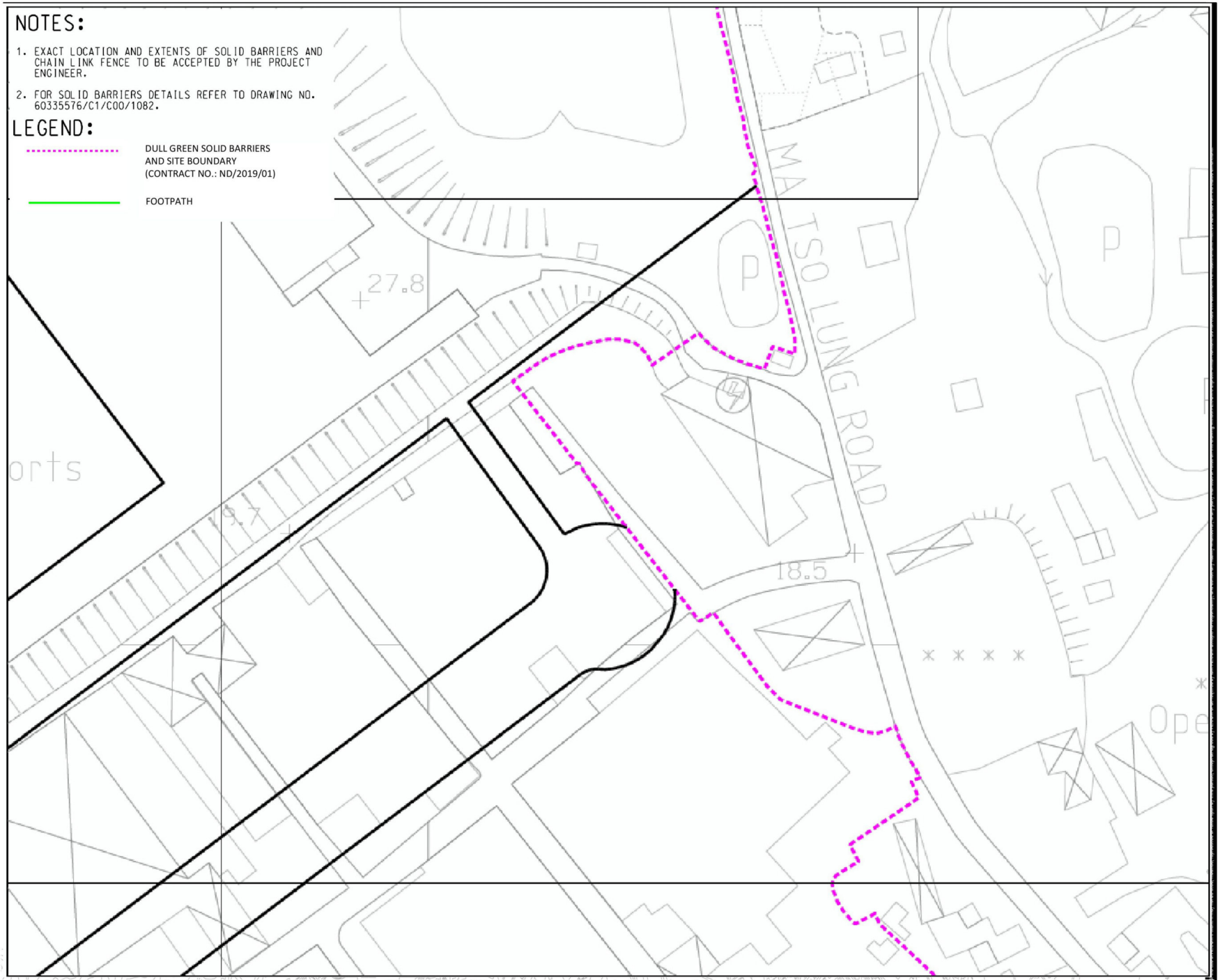

BKREJV

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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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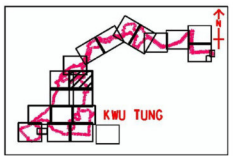
STATUS

SCALE A3 1:1000
DIMENSION UNIT METRES

KEY PLAN



PROJECT NO. 60335576
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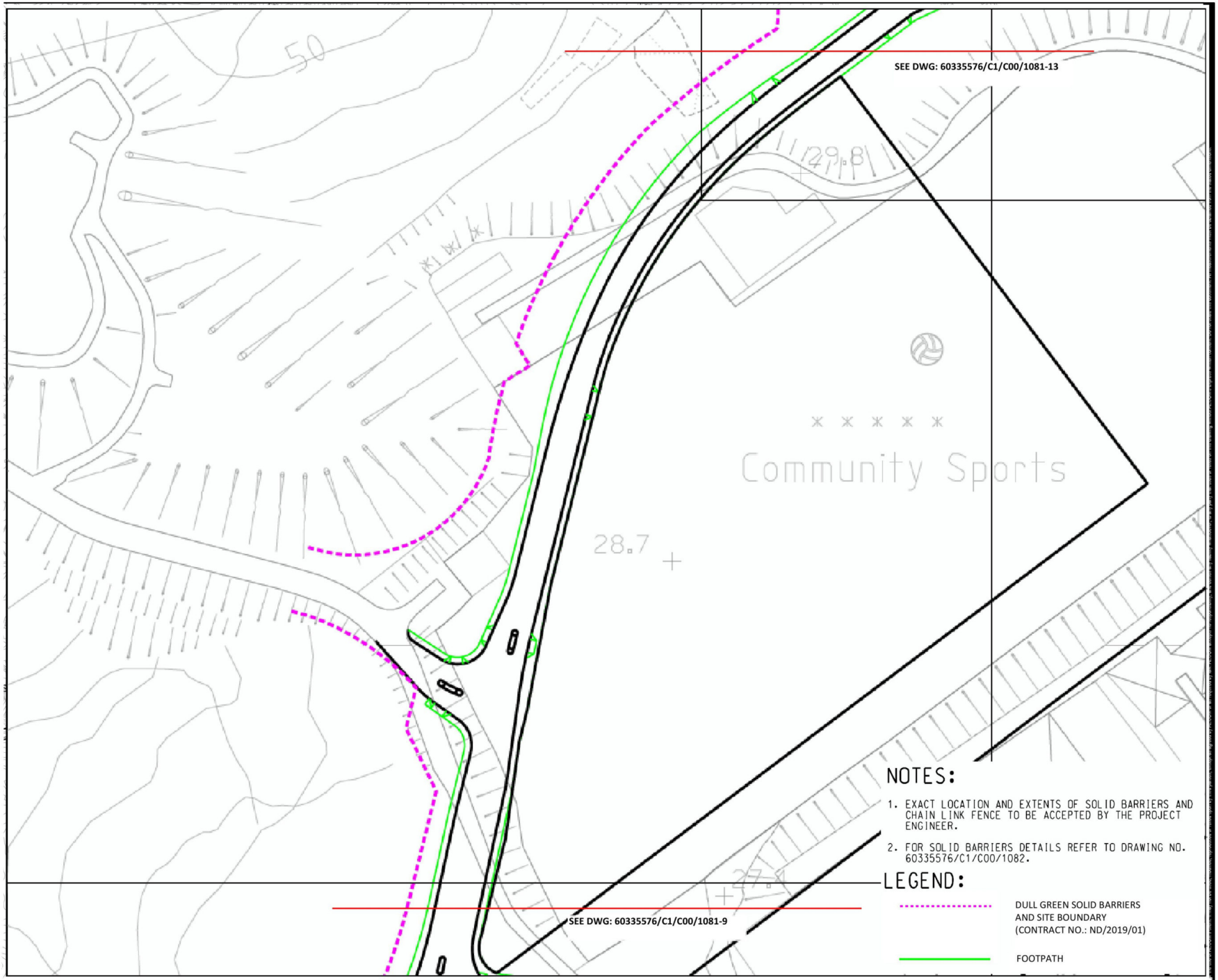

NOTES:

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

LEGEND:

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

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

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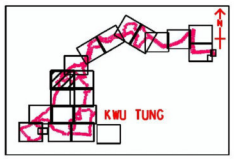

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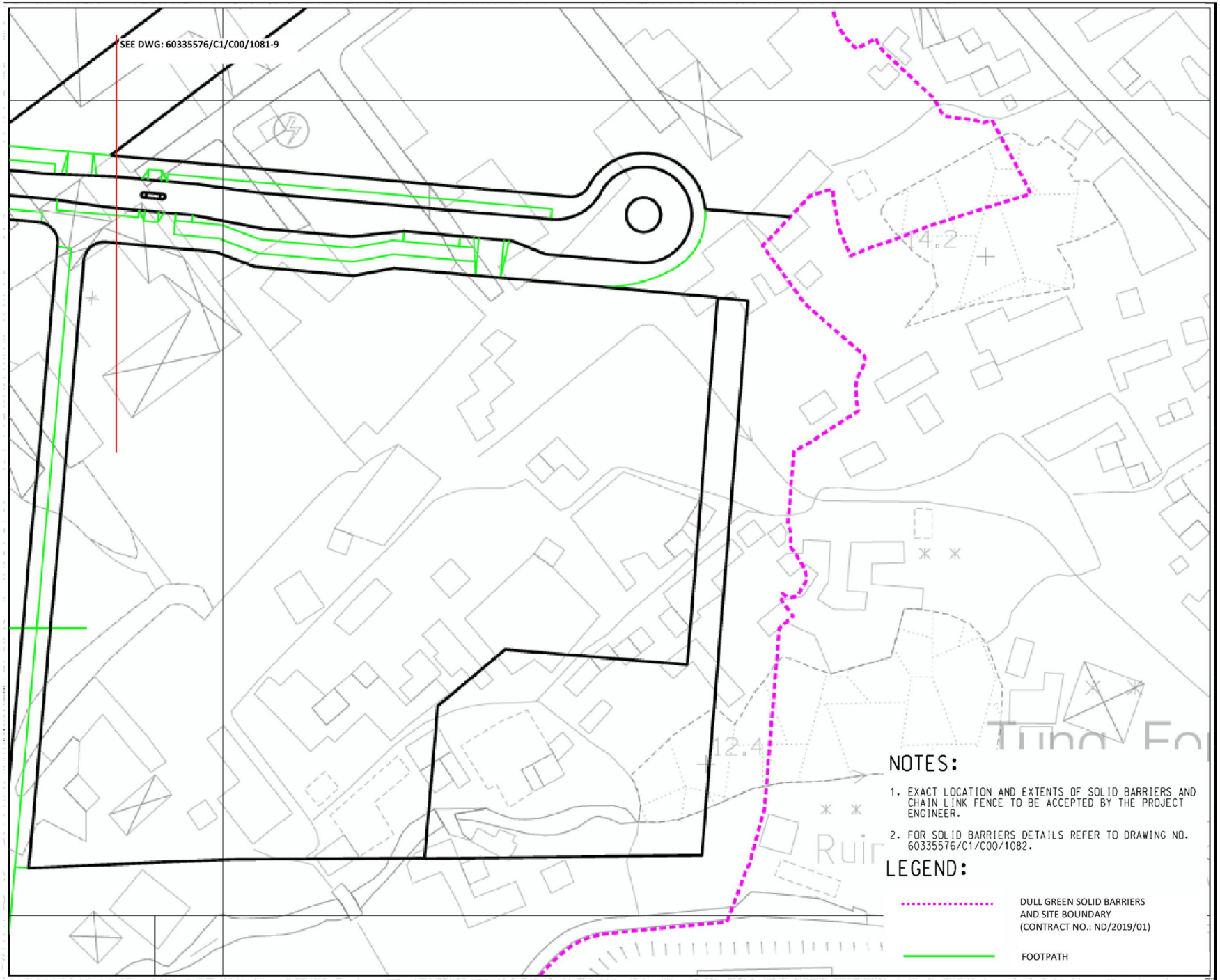

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CONTRACT TITLE:

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 比例
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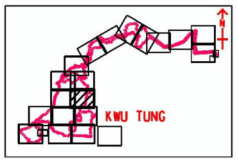
DIMENSION UNIT 尺寸單位
METRES

KEY PLAN


PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/01

SHEET TITLE 圖紙名稱
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER 圖紙編號
60335576/C1/C00/1081-10

NOTES:

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

LEGEND:

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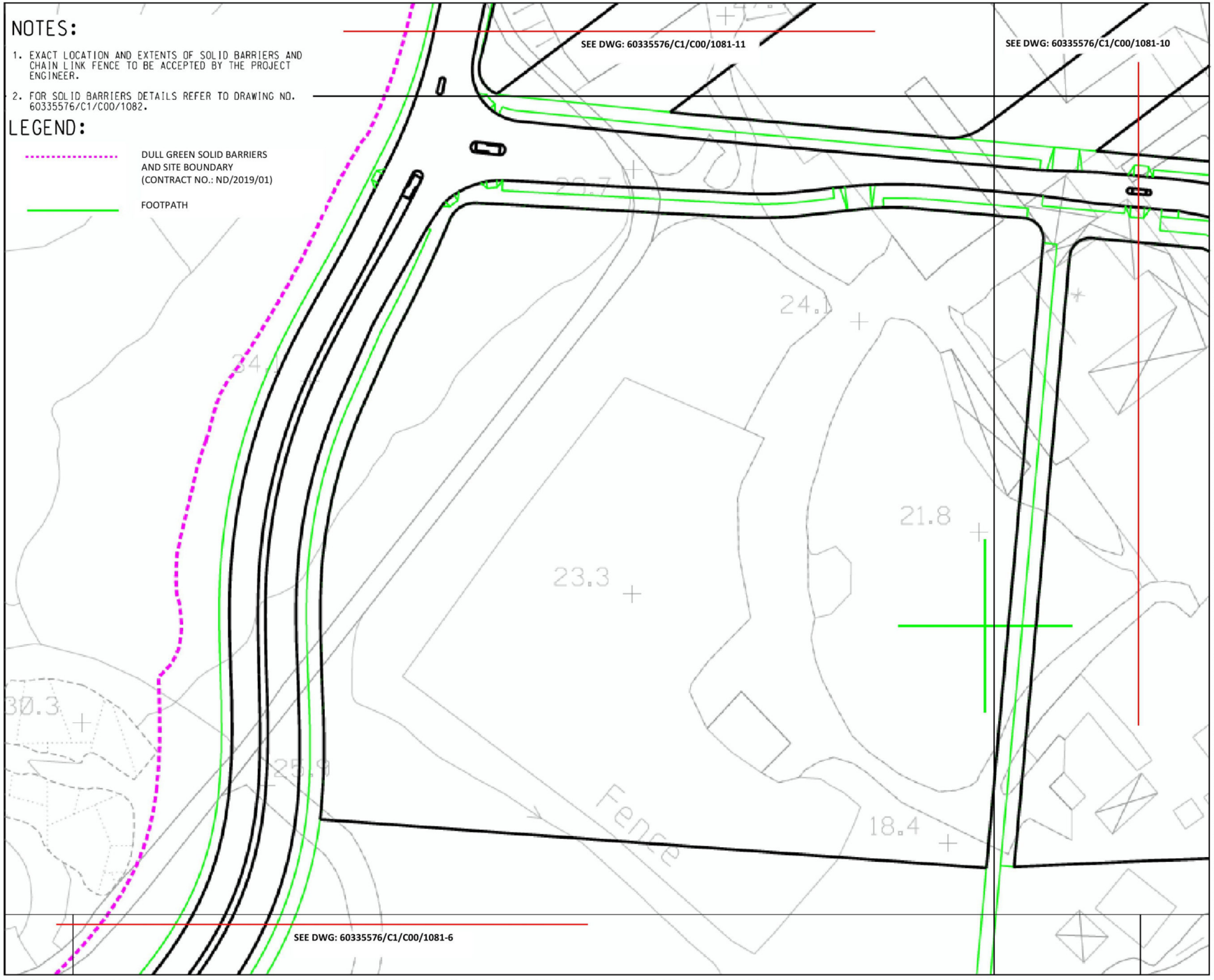

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KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO D5

CONTRACT TITLE:

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

CLIENT
業主

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

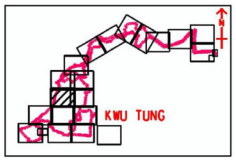
SUB-CONSULTANTS

STATUS

SCALE 比例
A3 1:1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN

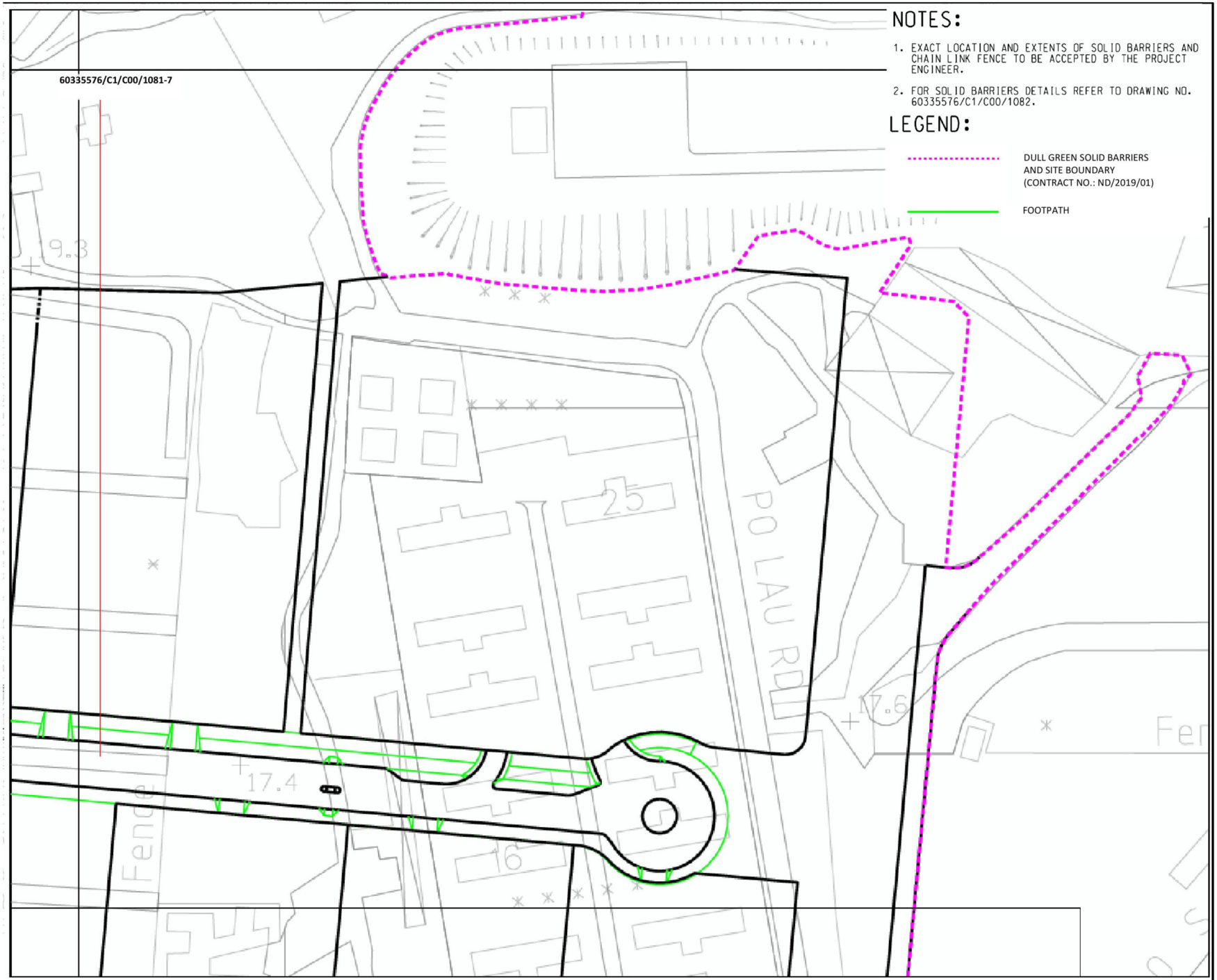


PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/01

SHEET TITLE 圖紙名稱
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER 圖紙編號
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

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

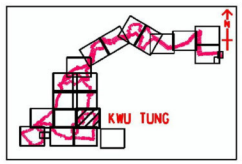
CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

STATUS

SCALE A3 1:1000
DIMENSION UNIT METRES

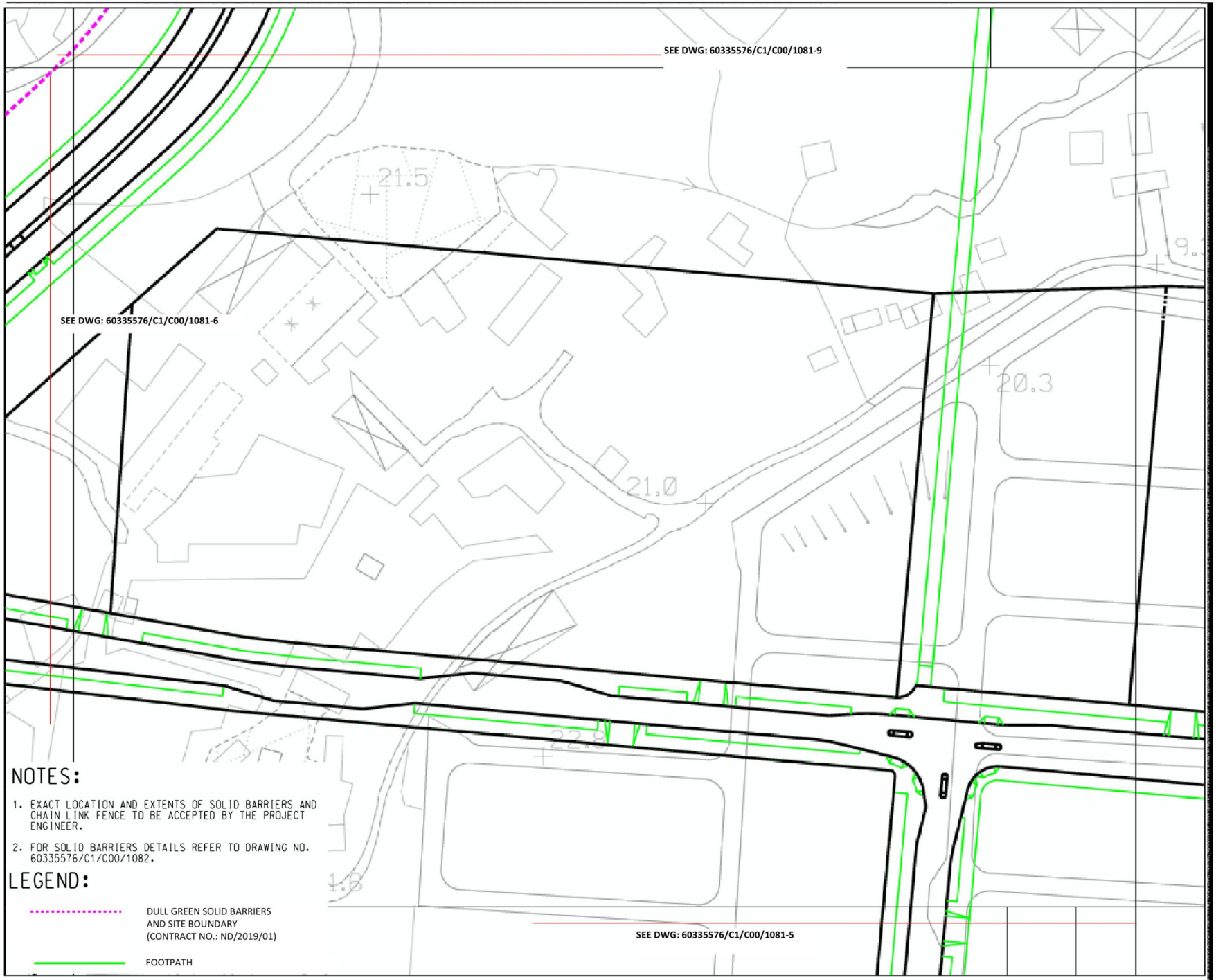
KEY PLAN



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

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

CONSULTANT

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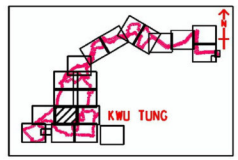
SUB-CONSULTANTS

STATUS

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

KEY PLAN



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

SHEET TITLE

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER

60335576/C1/C00/1081-7

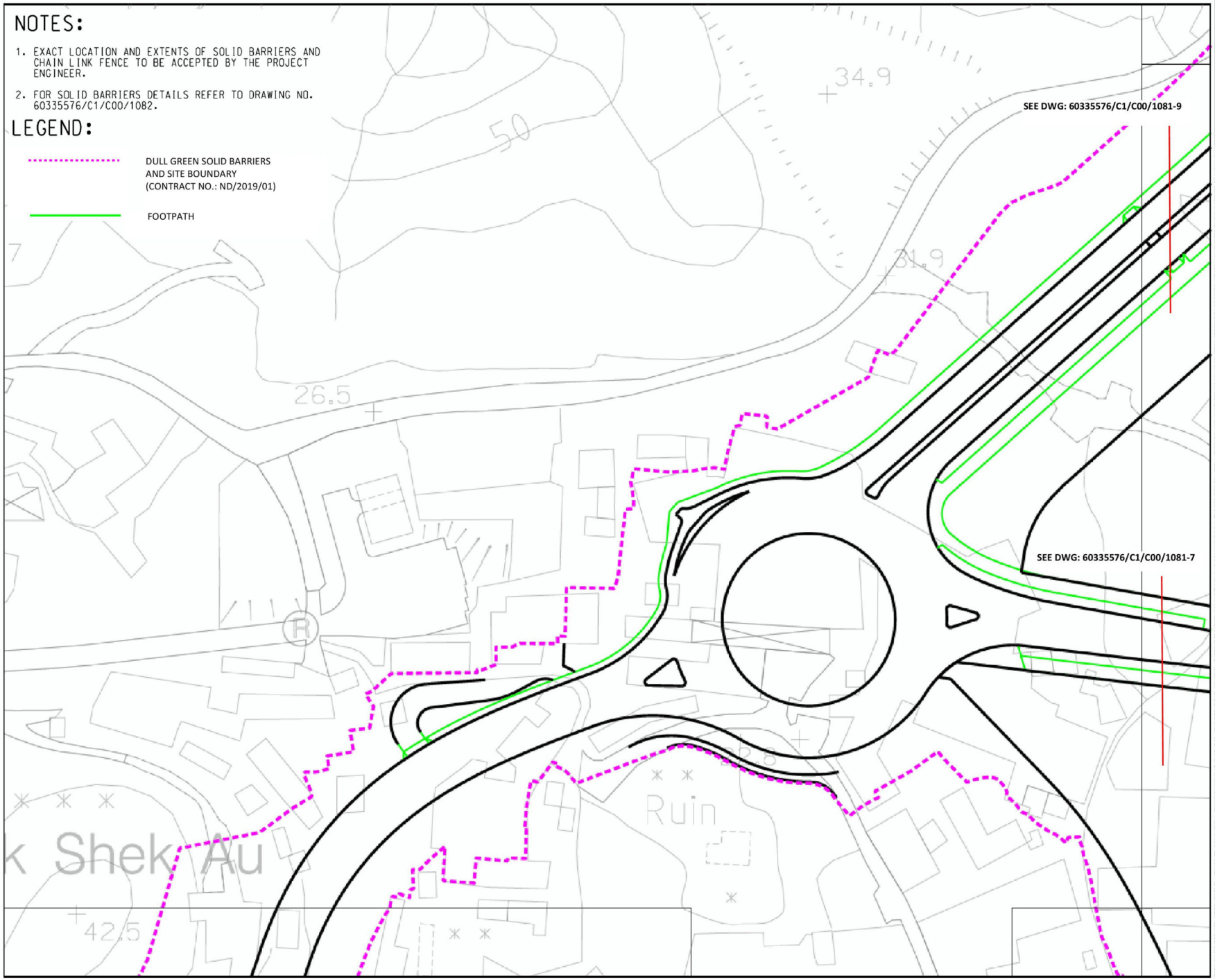
NOTES:

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

CONSULTANT
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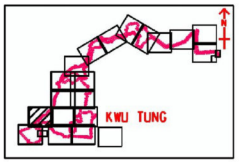
SUB-CONSULTANTS

STATUS

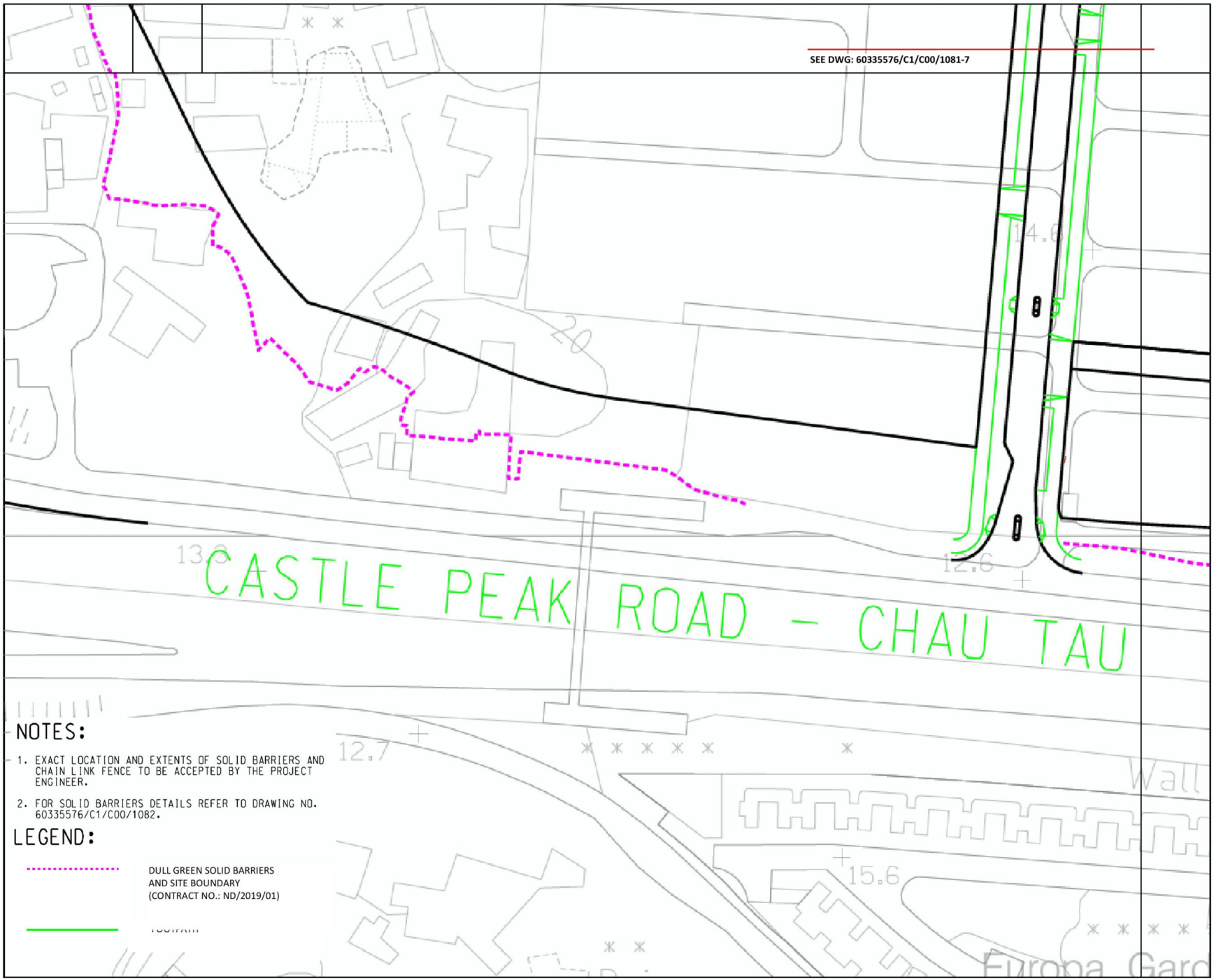
SCALE A3 1:1000
DIMENSION UNIT METRES

KEY PLAN


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

SHEET TITLE
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
60335576/C1/C00/1081-6



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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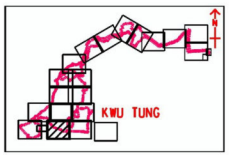
STATUS

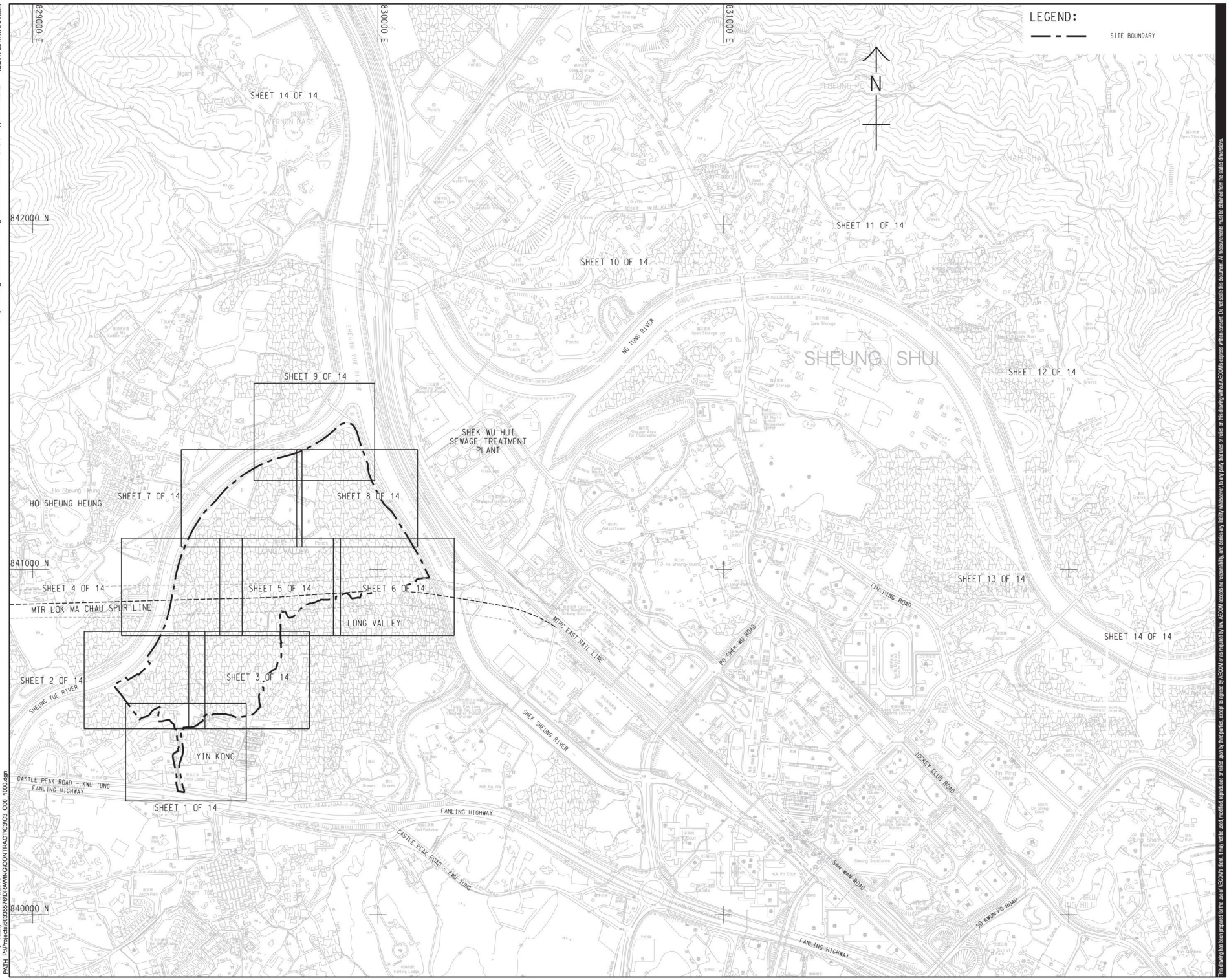
SCALE A3 1:1000
DIMENSION UNIT METRES

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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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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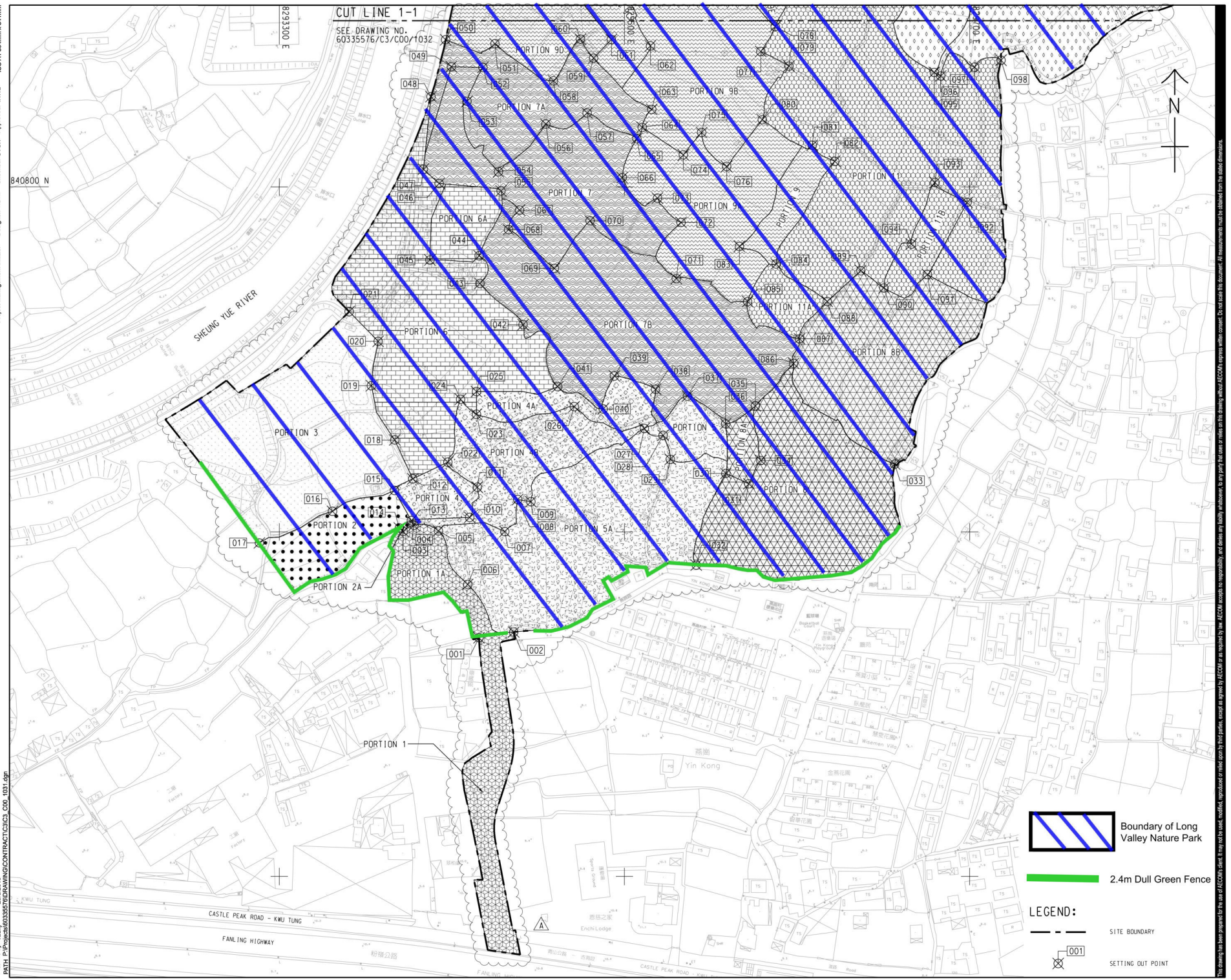

Sang Hing - Kuly Joint Venture

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

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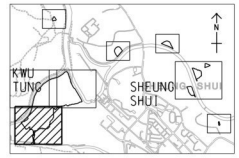
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	AUG-19	TENDER ADDENDUM NO. 3	CYCH
-	JUN-19	TENDER DRAWING	CYCH

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
PATH :P:\Projects\60335576\DRAWING\CONTRACT\C3\C3_C00_1031.dgn

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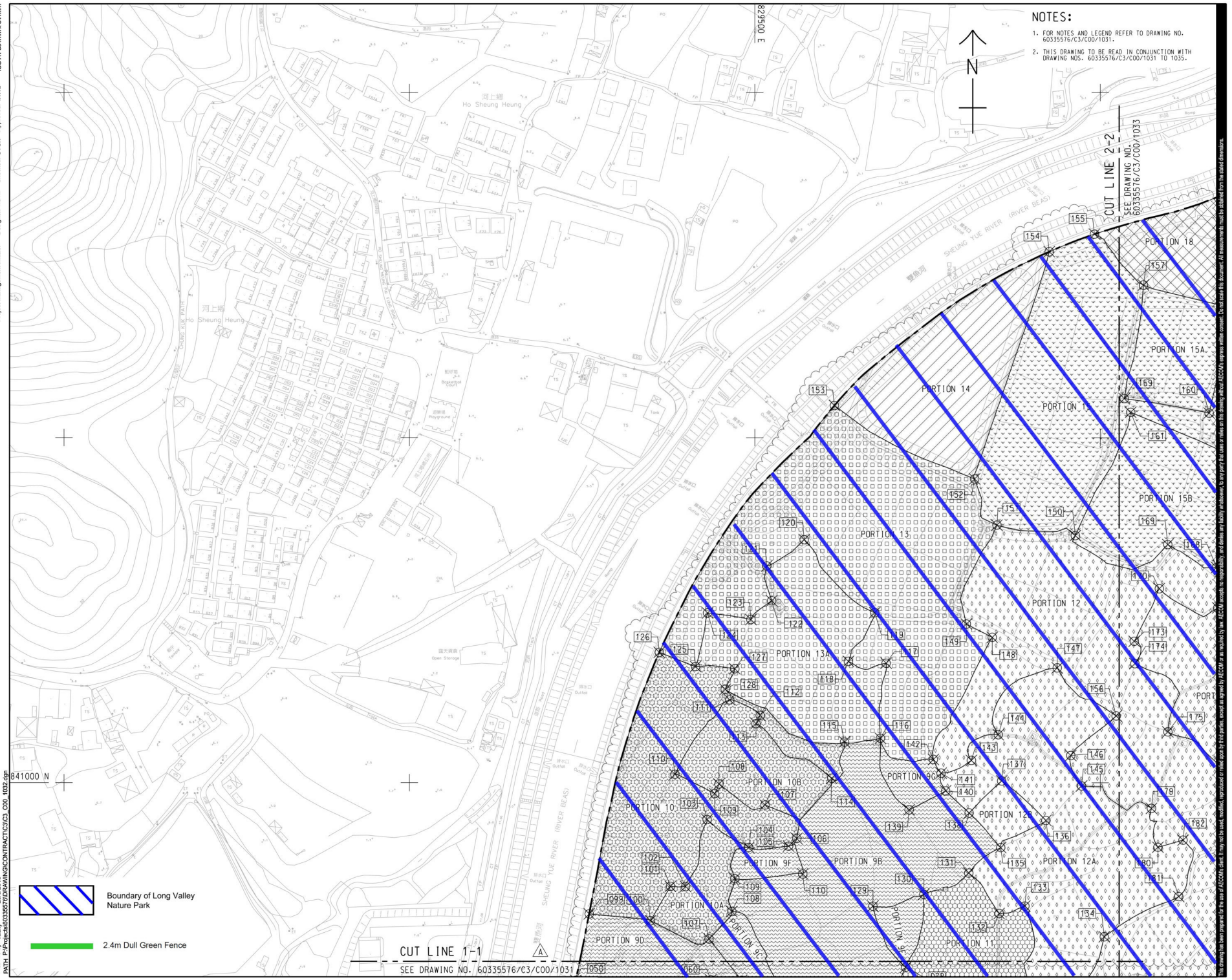

Sang Hing - Kuly Joint Venture

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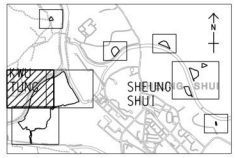
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	AUG-19	TENDER ADDENDUM NO. 3	CYCH
-	JUN-19	TENDER DRAWING	CYCH

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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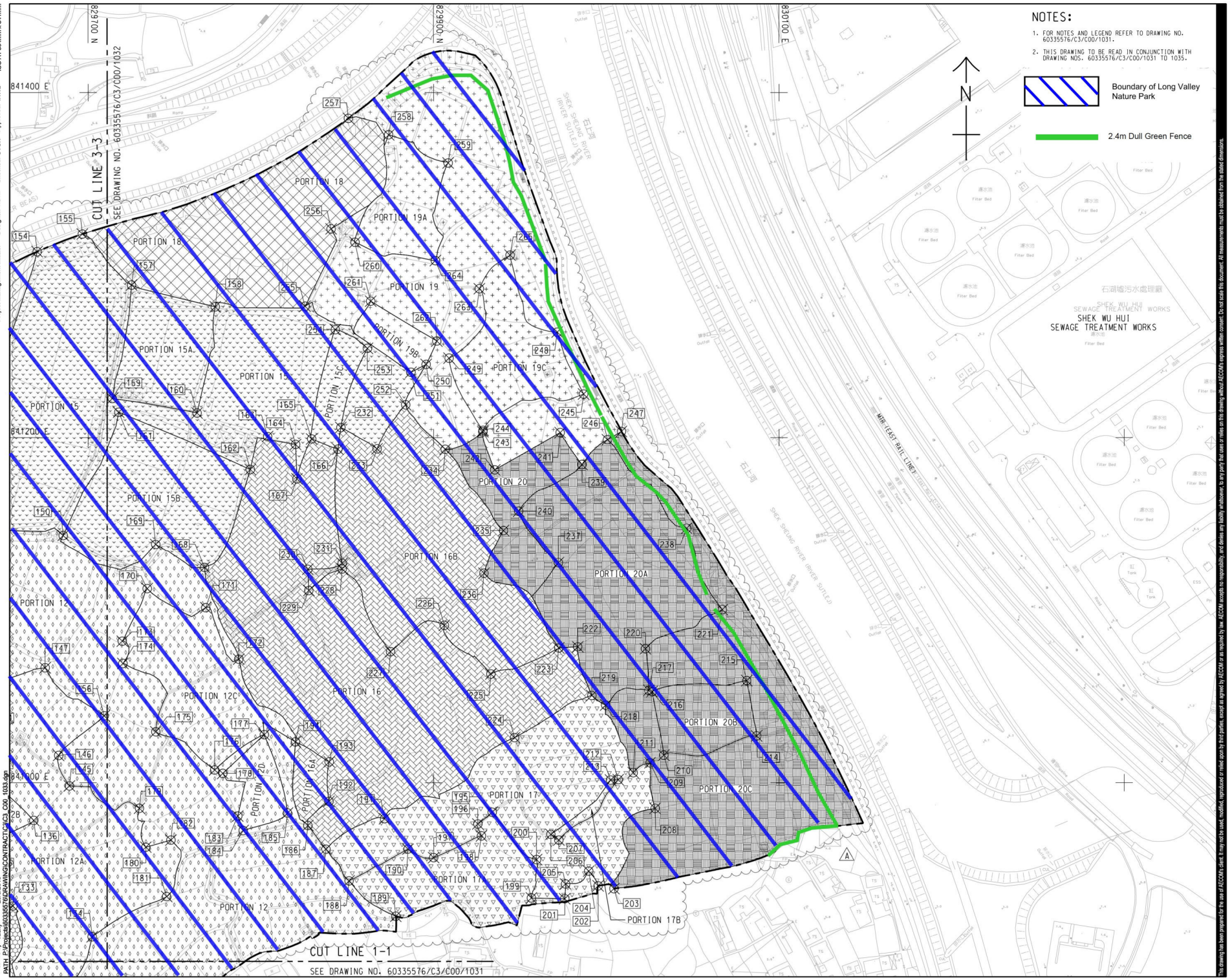

Project Management Initials: Designer: KCTL Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm

Plot File by: Yauky
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C3_C00_1033.dgn
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

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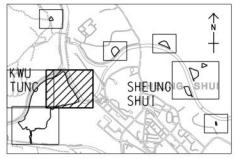
A	AUG-19	TENDER ADDENDUM NO. 3	CYCH
-	JUN-19	TENDER DRAWING	CYCH

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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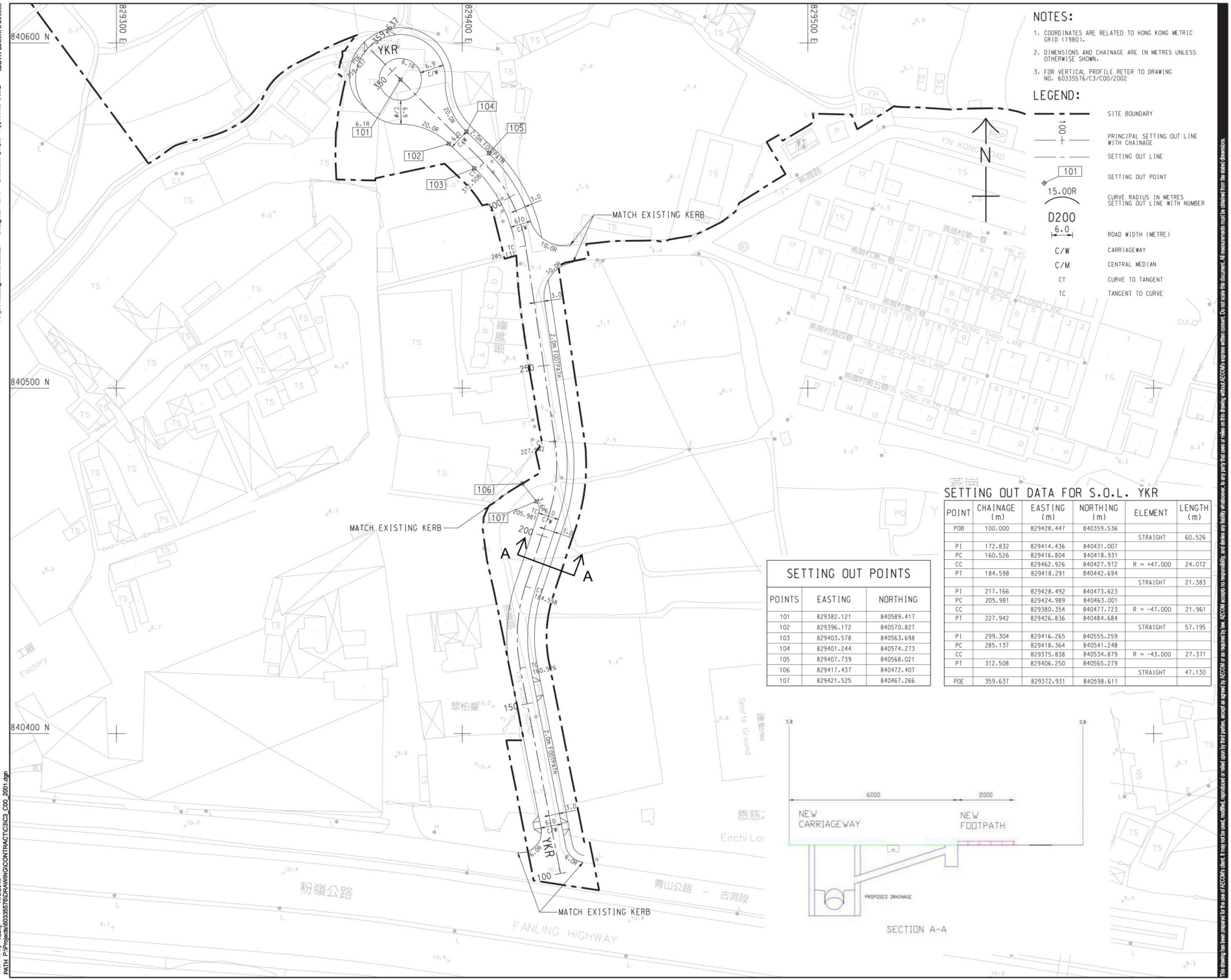

NOTES:

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

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. 覆核
-	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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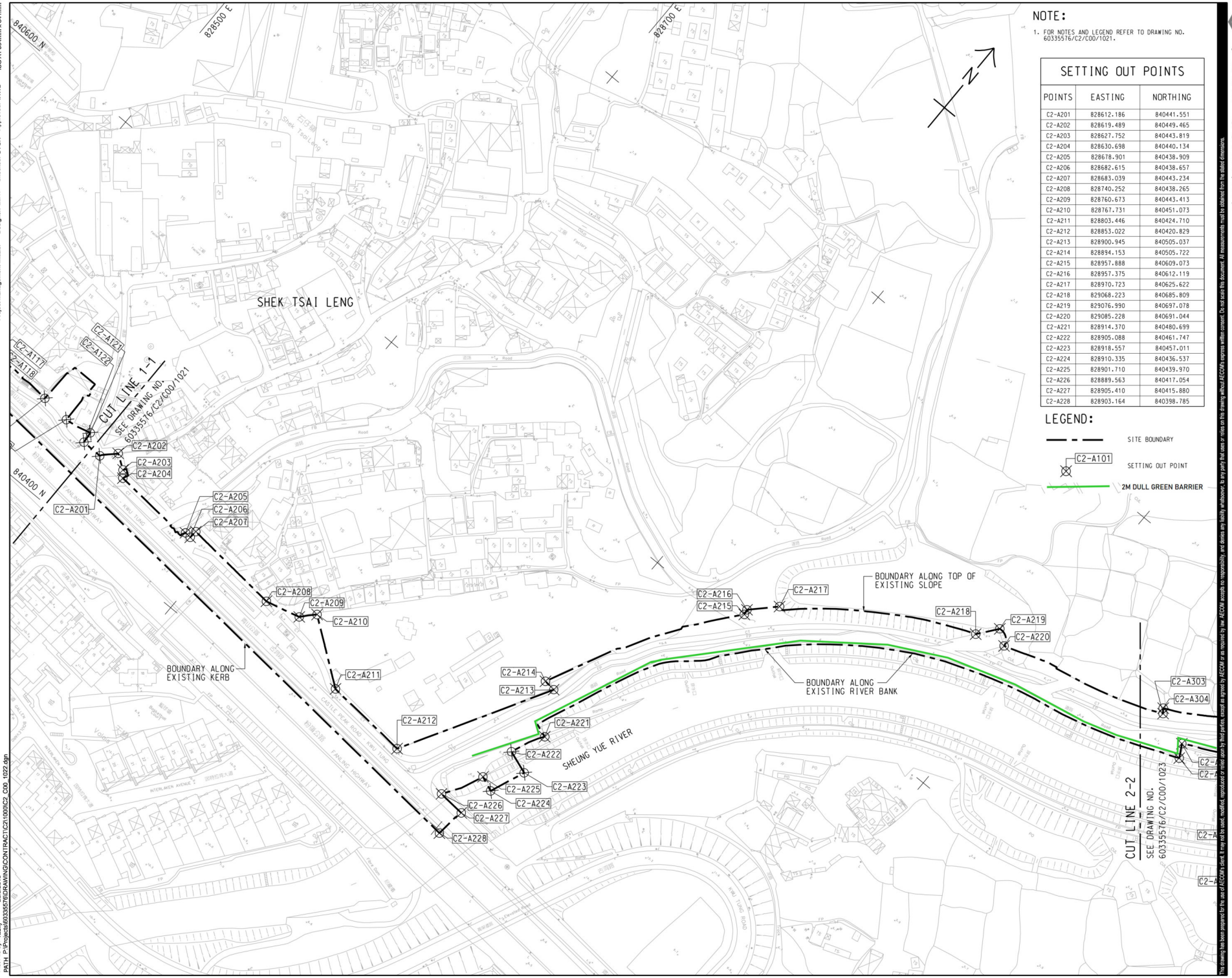
Figure 15

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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ISSUE/REVISION
修訂

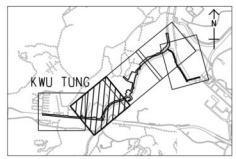
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	SEP-19	TENDER DRAWING	CYCH

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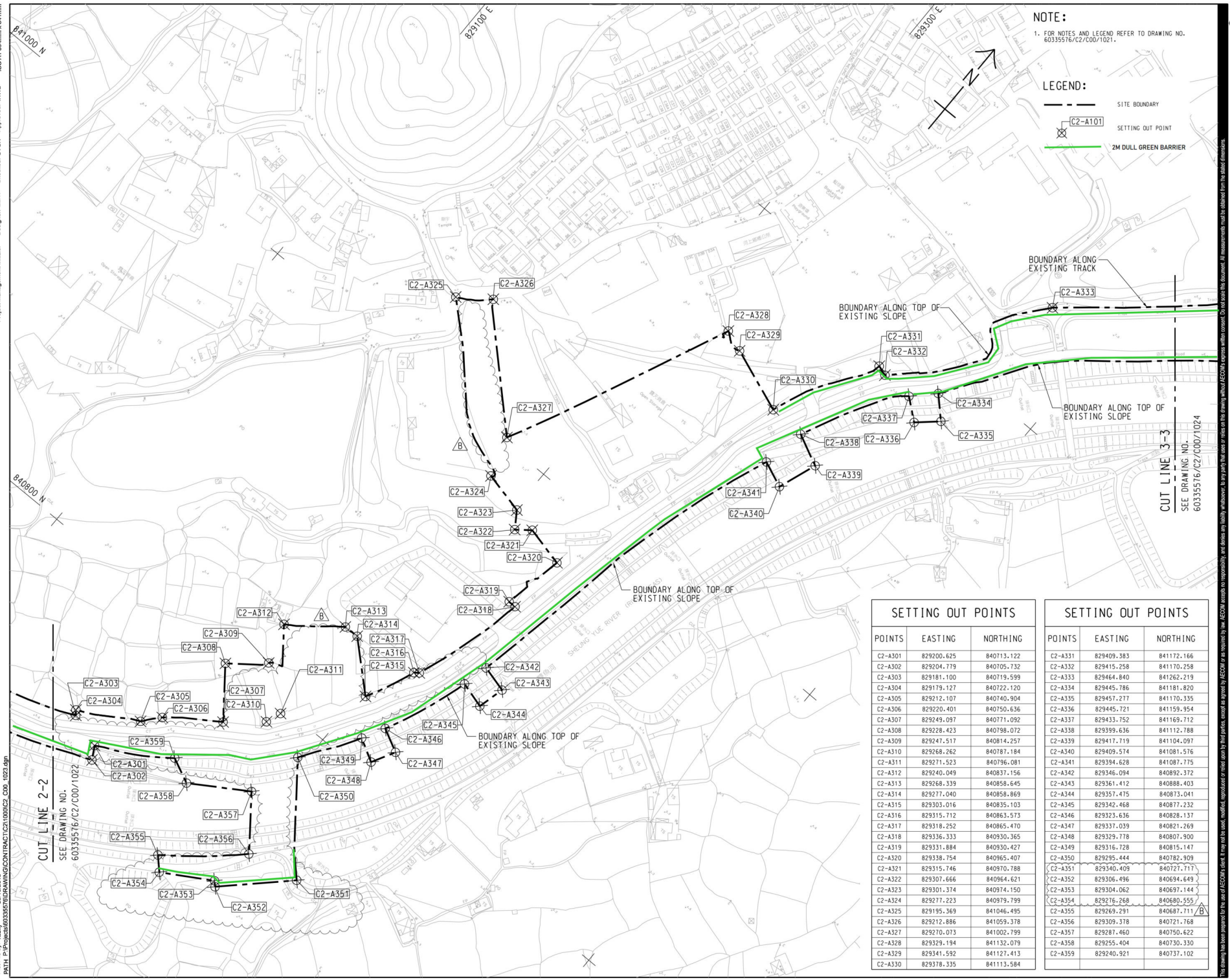
Project Management Initials: Designer: ELHY Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm

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

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

Plot File by: Yauky 30/10/2019
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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

CLIENT
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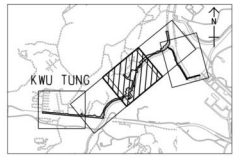
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
B	NOV-19	TENDER ADDENDUM NO. 3	CYCH
A	OCT-19	TENDER ADDENDUM NO. 2	CYCH
-	SEP-19	TENDER DRAWING	CYCH

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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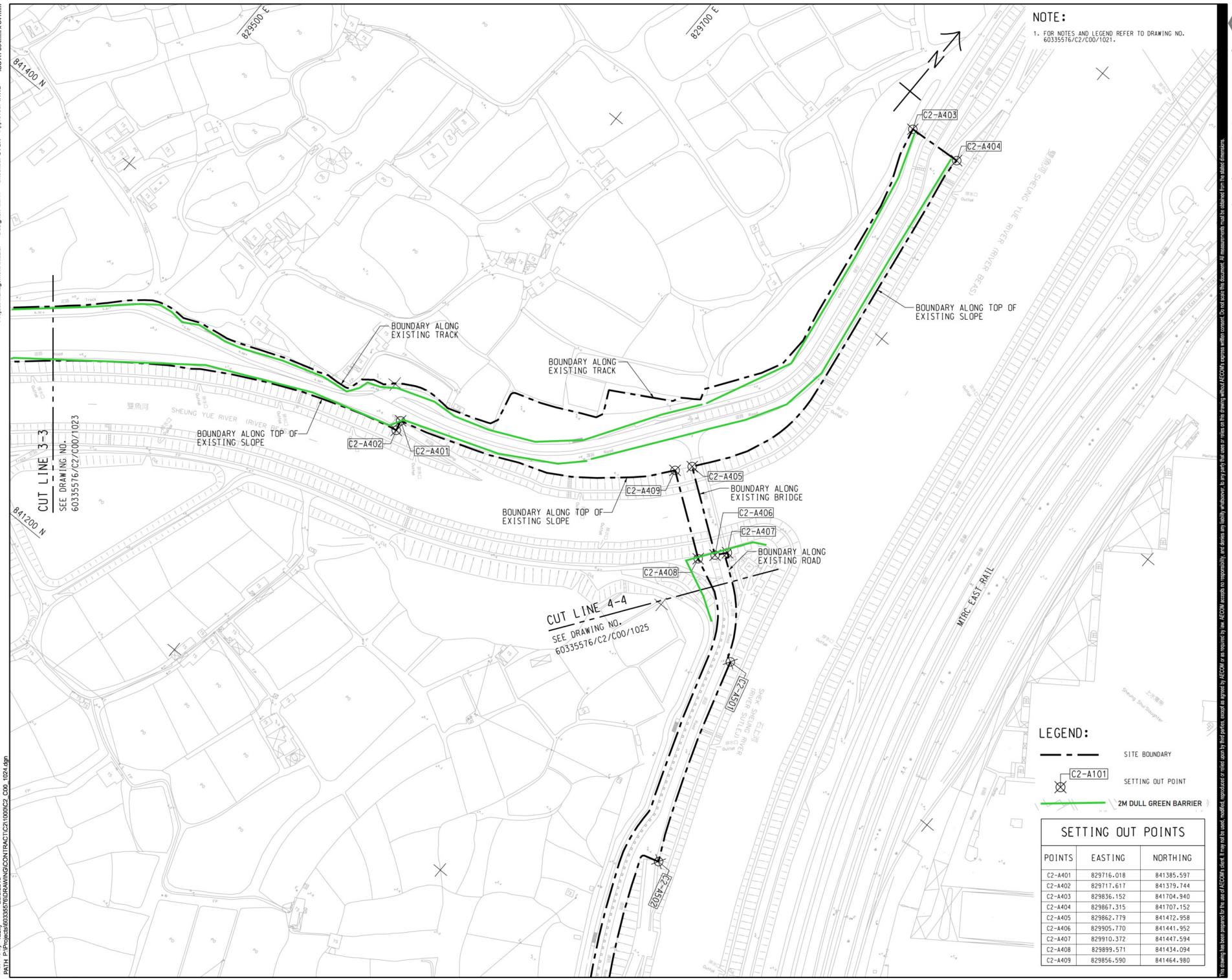

SETTING OUT POINTS

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: ELHY Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm

Plot File by: Yauky 20/9/2019
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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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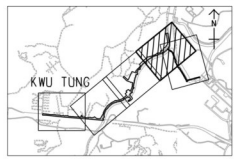
STATUS
階段

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 4 OF 5

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

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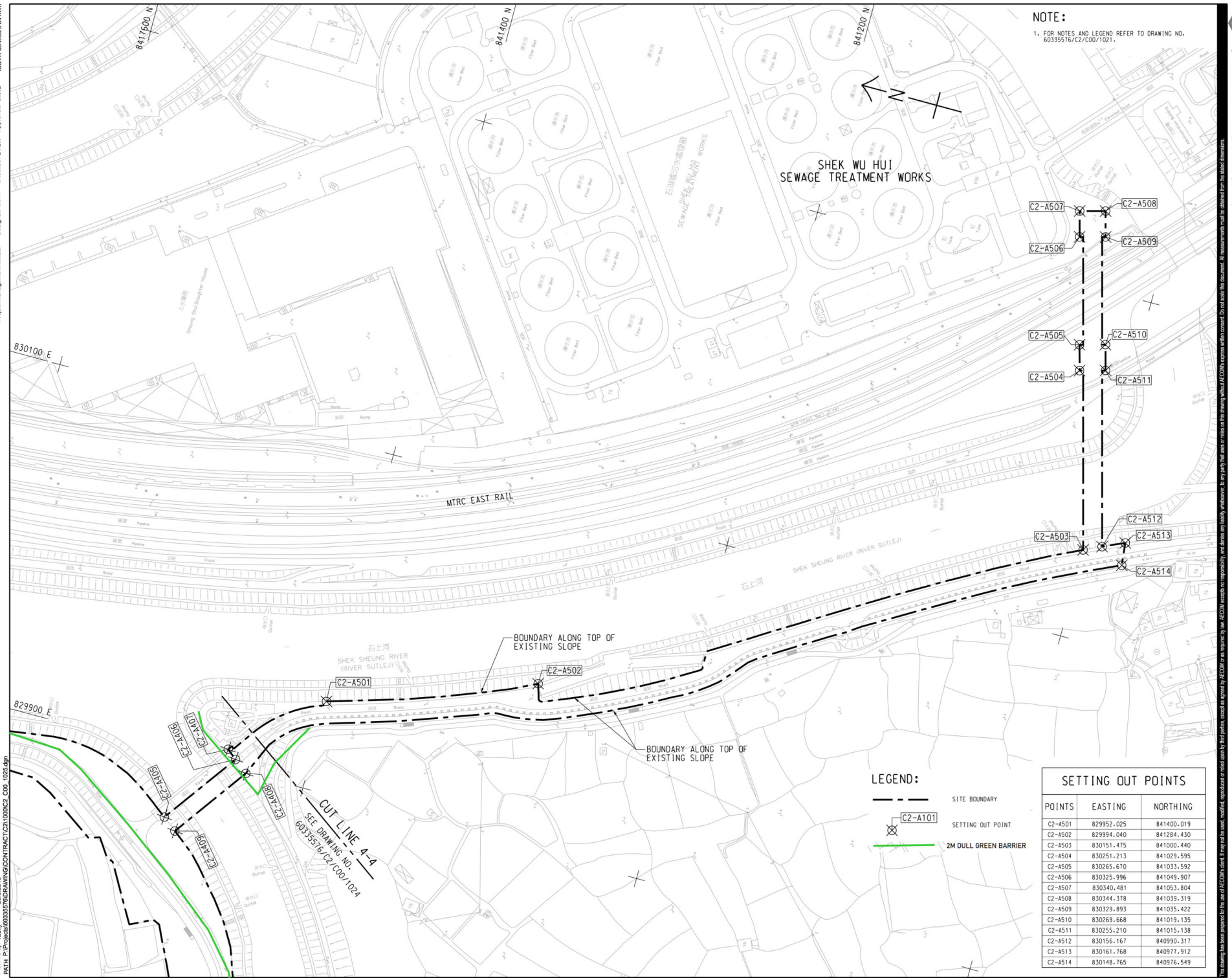

SETTING OUT POINTS

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: ELHY Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm

Plot File by: Yauky 20/9/2019
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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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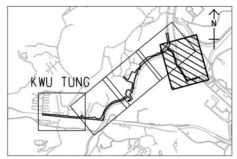
STATUS 階段

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

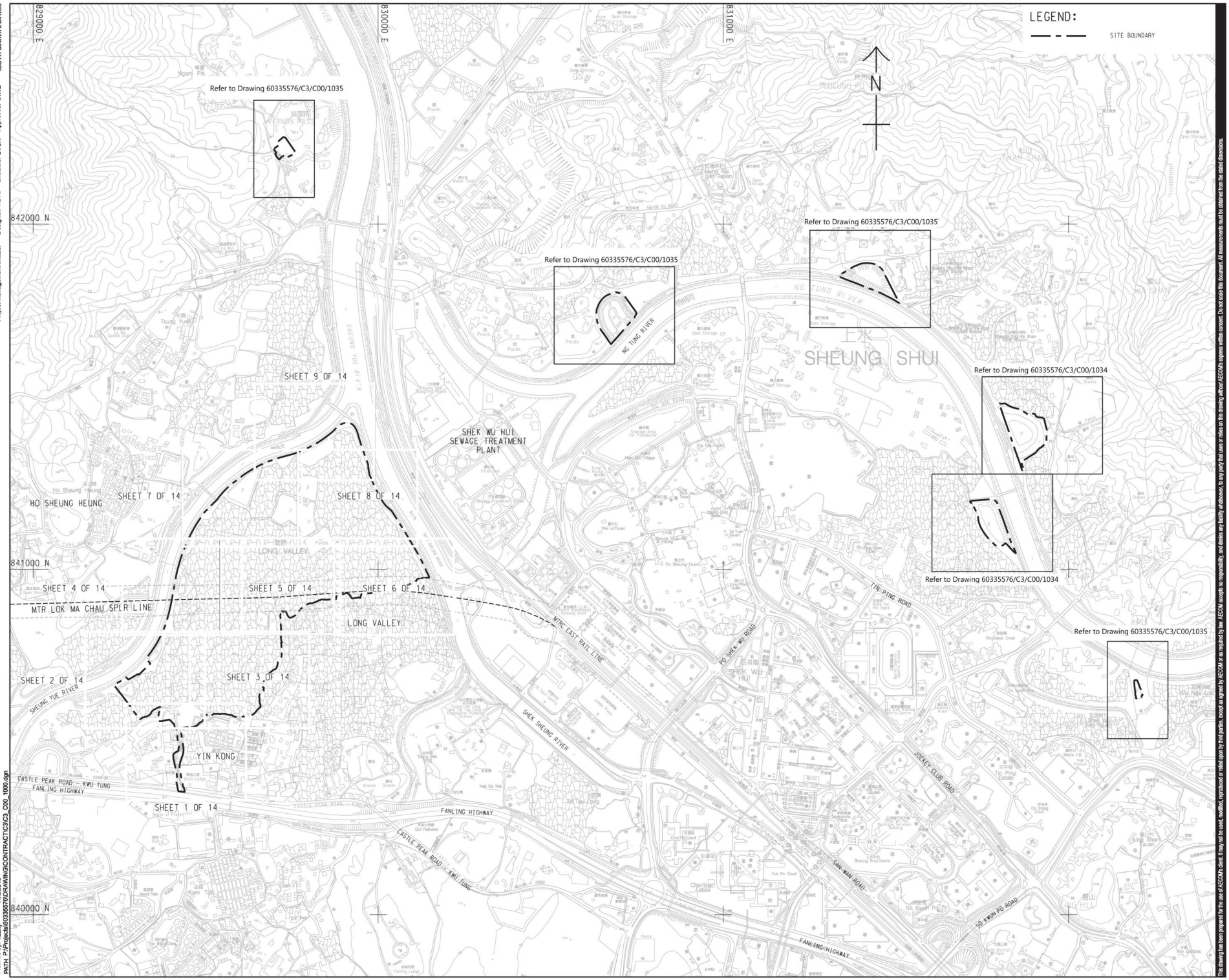
Summary of submission (EP-473/2013/A)

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

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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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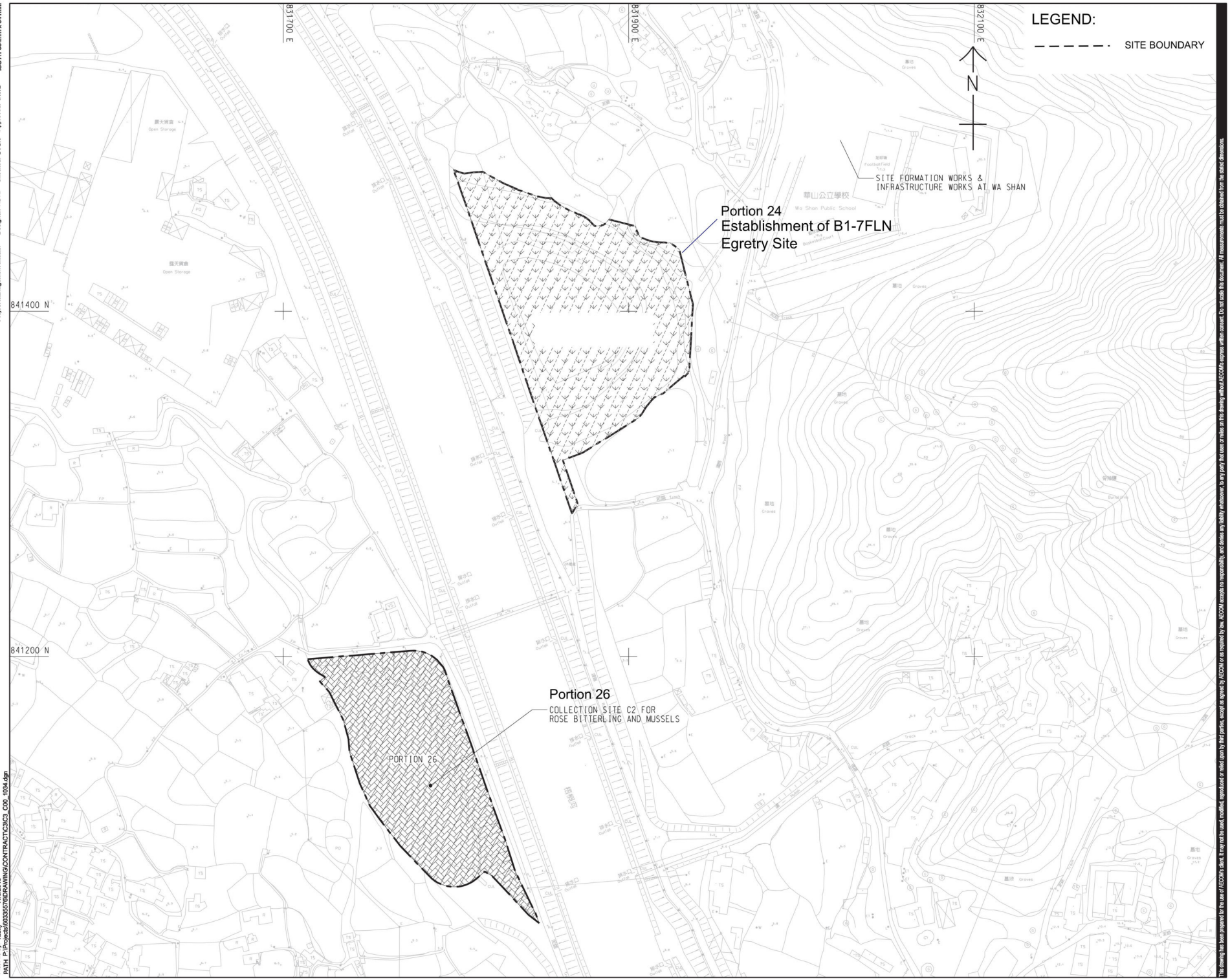

Sang Hing - Kuly Venture

Title of Designated Project
Fanling Bypass Eastern Section

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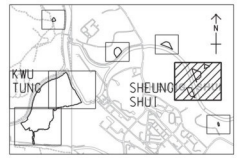
階段

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

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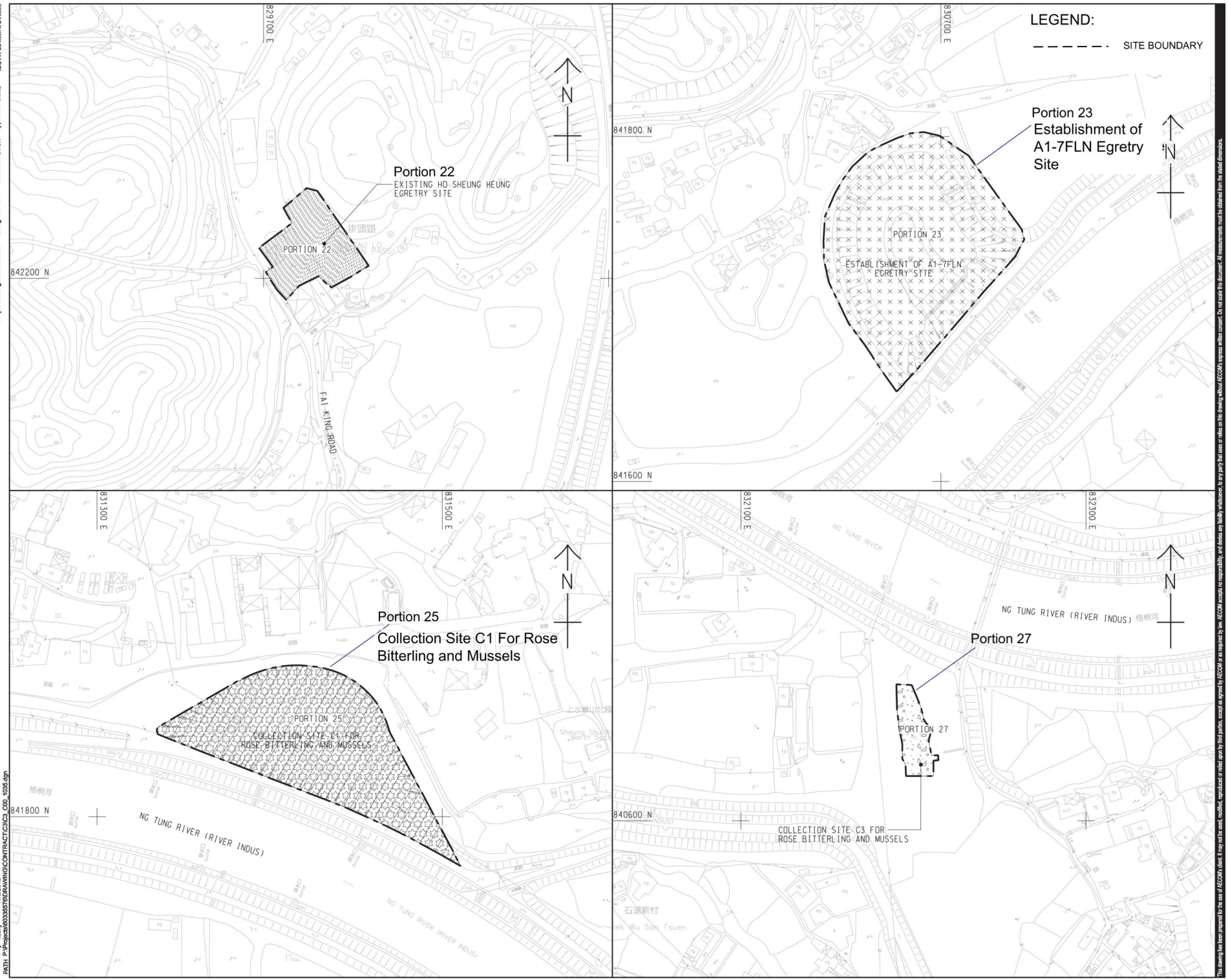

Sang Hing - Kuly Venture

Title of Designated Project
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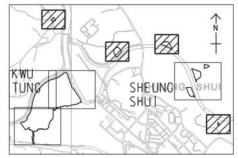
SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 40000



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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
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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
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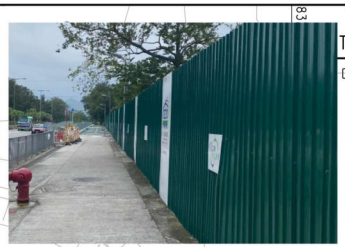
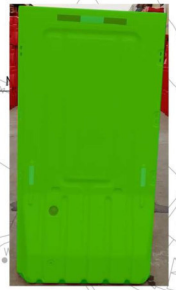
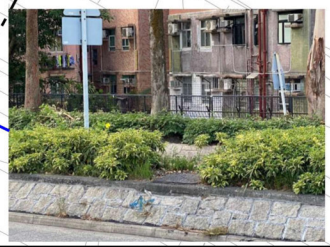


CEDD HOARDING TYPE III IN SOLID DULL GREEN COLOUR

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



2 METRE HIGH GREEN WATER FILLED BARRIER



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)

CLIENT
業主

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

CONSULTANT
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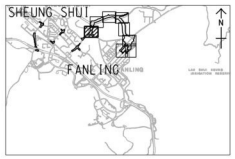
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對
B	JAN-20	TENDER ADDENDUM NO. 2	RPCM
A	DEC-19	TENDER ADDENDUM NO. 1	RPCM
-	NOV-19	TENDER DRAWING	RPCM

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

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

832300 E

832500 E

840800 N

840700 N

N

NG TUNG RIVER

梧桐河

排水口 Outfall

道路

CUT LINE 1-1

SEE DRAWING NO. 60335576/C

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:

Plot File by: ZENGLV2 2019/12/13

PATH: p:\projects\60335576\drawing\contract\c5a\a1000\C5A_C00_1052.dgn

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

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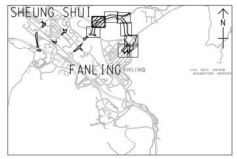
STATUS
階段

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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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
業主

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

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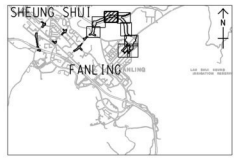
A	JAN-20	TENDER ADDENDUM NO. 2	RPCM
-	NOV-19	TENDER DRAWING	RPCM

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 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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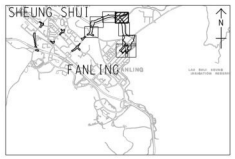
-	NOV-19	TENDER DRAWING	RPCM

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

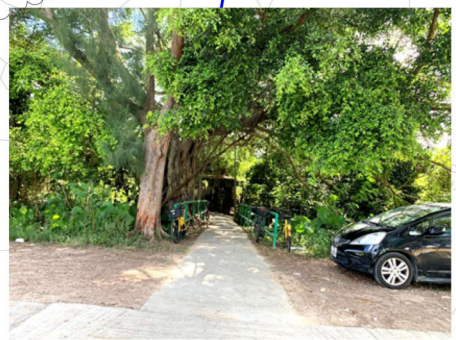
Reasons for not providing additional barriers along the riverbank:

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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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

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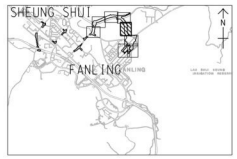
-	NOV-19	TENDER DRAWING	RPCM

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

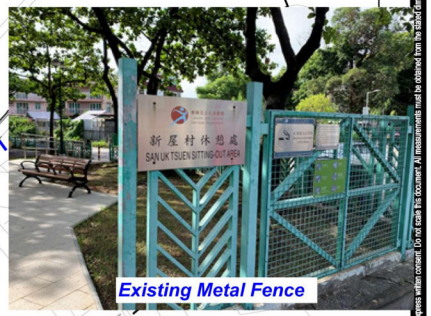
SHEET TITLE
圖紙名稱
HOARDING PLAN

SHEET 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)

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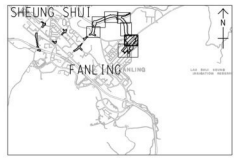
STATUS

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
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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)

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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

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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

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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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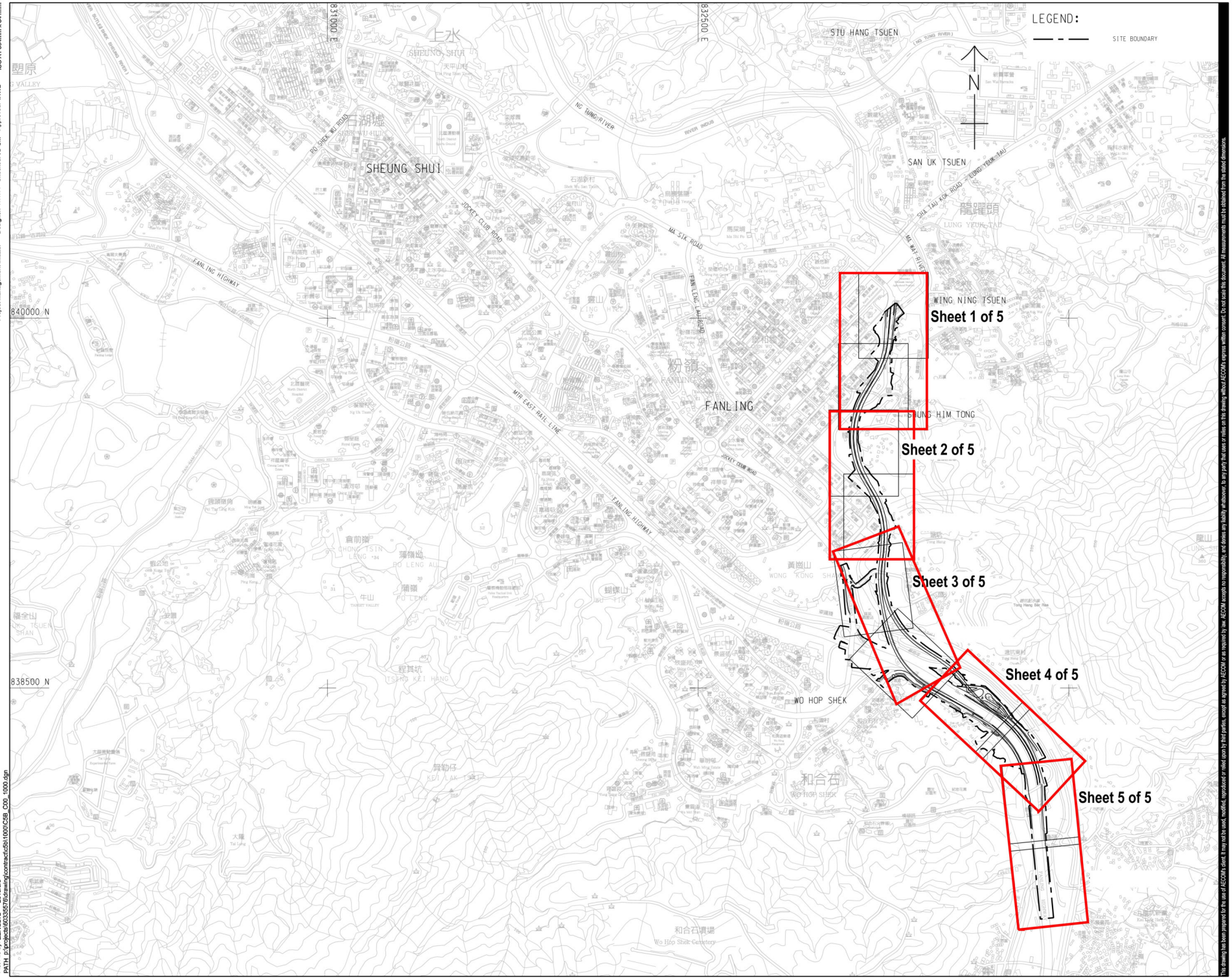

CRCC - Paul Y Joint Venture

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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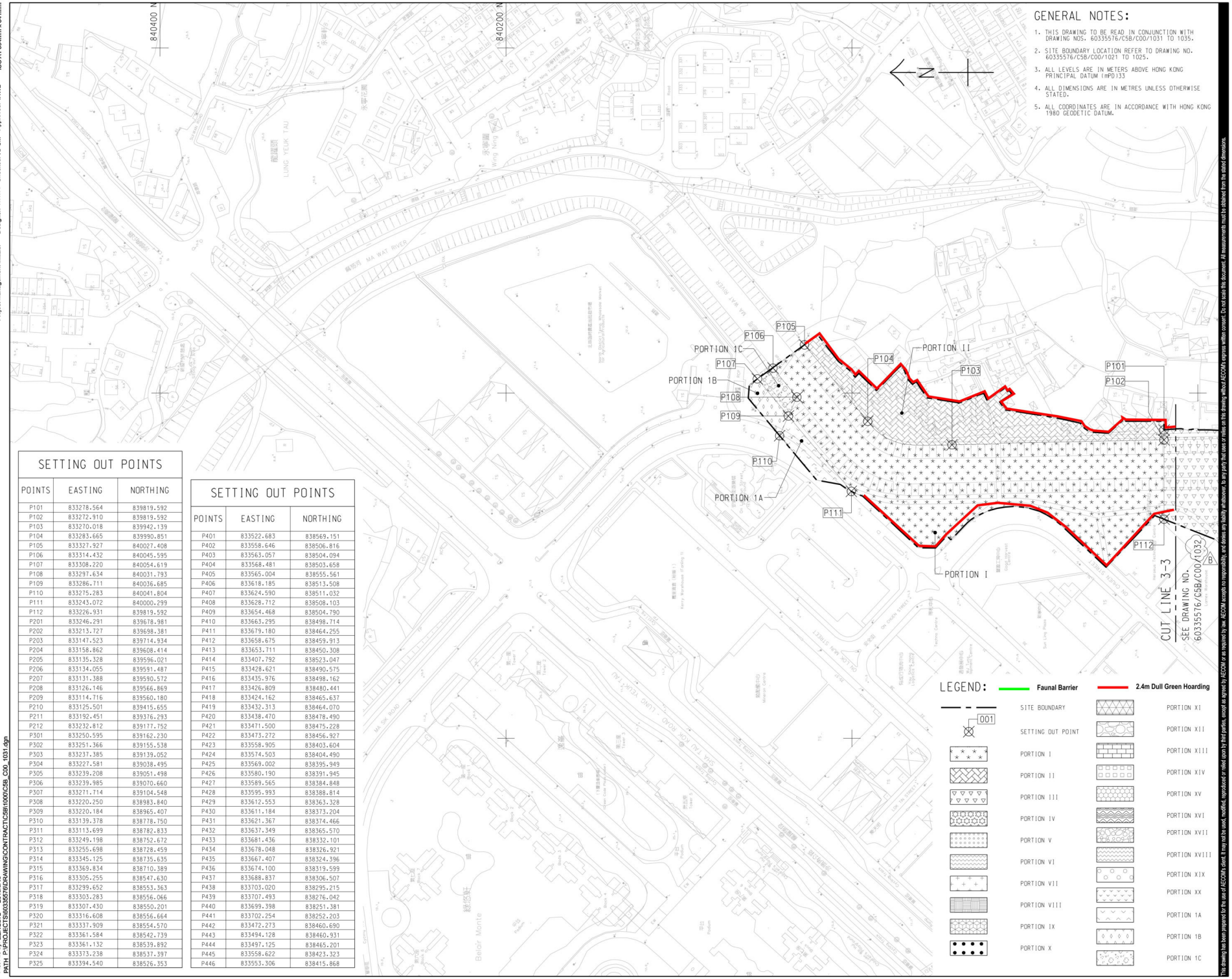

SETTING OUT POINTS

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

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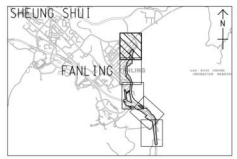
B	AUG-19	TENDER ADDENDUM NO.3	RPCM
A	JUL-19	TENDER ADDENDUM NO.2	RPCM
-	JUN-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖



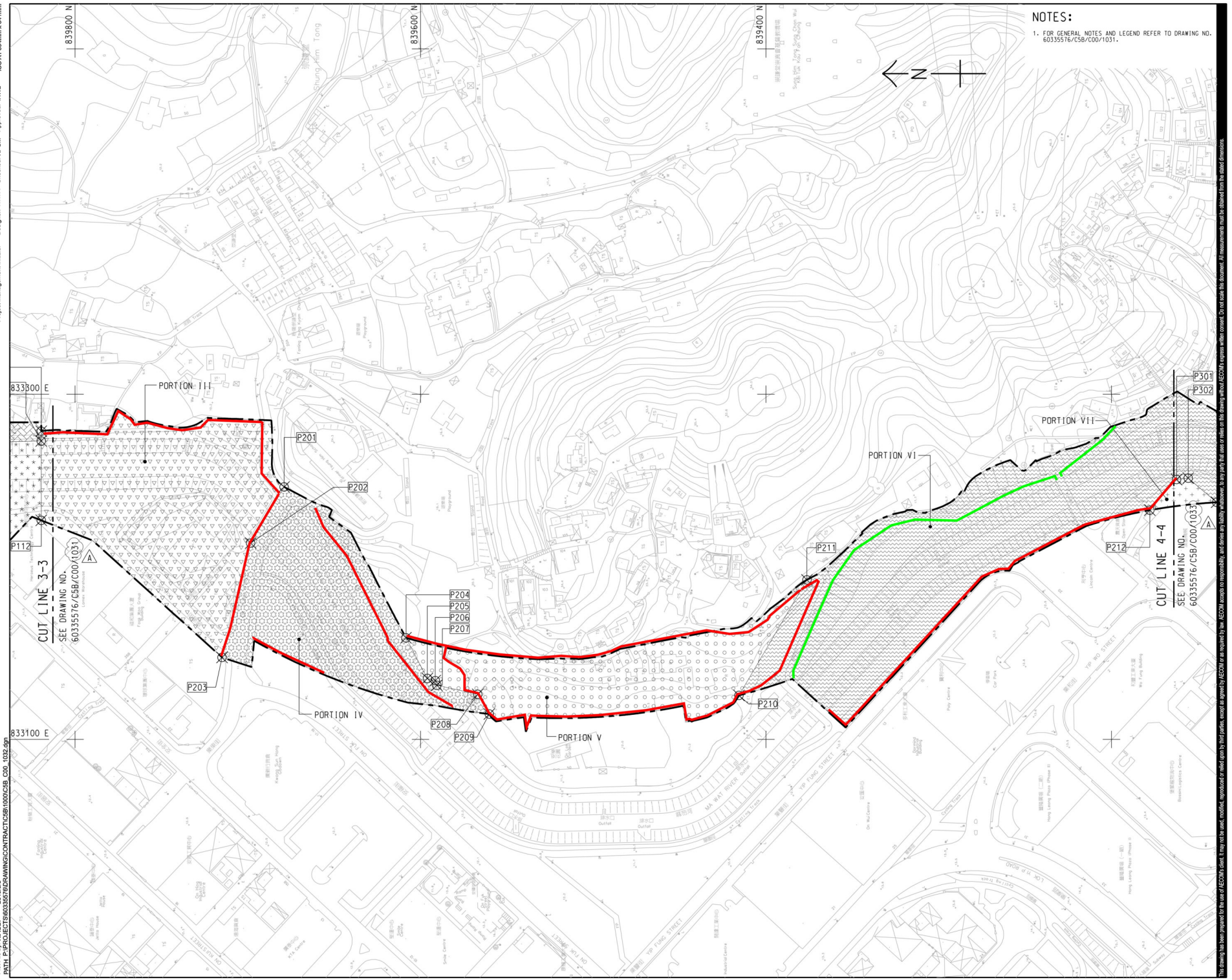
PROJECT NO. 項目編號
60335576

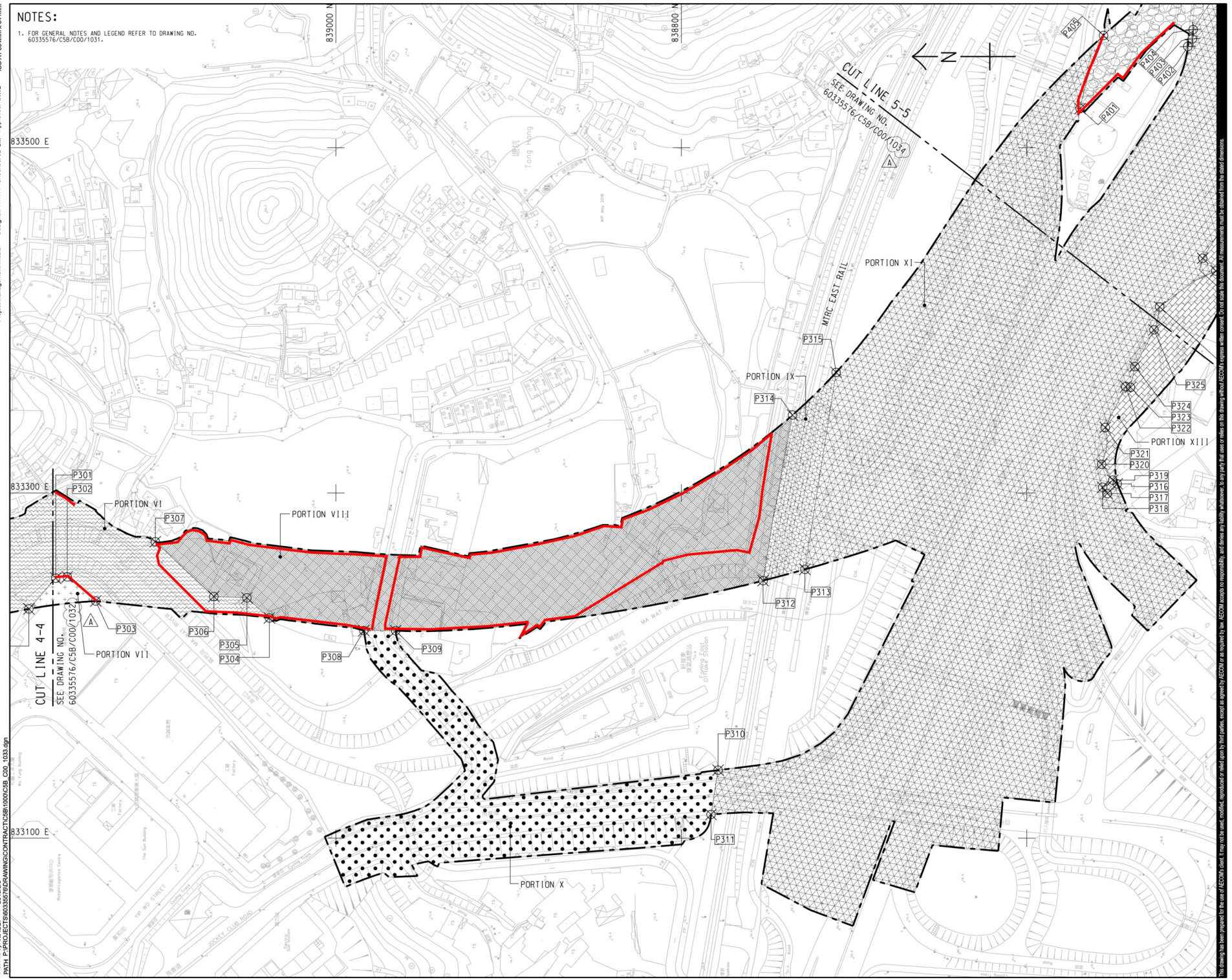
CONTRACT NO. 合約編號
ND/2019/05

SHEET TITLE
圖紙名稱
PORTION OF SITE

SHEET 1 OF 5

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


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 Town Square Children's Playground
Fanling Town Square Playground
Fanling Town Square Sitting Out Area
Fanling Town Square Toilet
Fanling Town Square Public Toilet
Fanling Town Square Public Toilet (Temporary)
Fanling Town Square Sitting Out Area
Fanling Town Square Children's Playground
Fanling Town Square Sitting Out Area
Fanling Town Square Public Toilet
Fanling Town Square Sitting Out Area
Fanling Town Square Children's Playground
Fanling Town Square Sitting Out Area
Fanling Town Square Toilet
Fanling Town Square Public Toilet (Temporary)
Fanling Town Square Sitting Out Area
Fanling Town Square Children's Playground
Fanling Town Square Playground
Fanling Town Square Sitting Out Area
Fanling Town Square Toilet



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)

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

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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 3 OF 5

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

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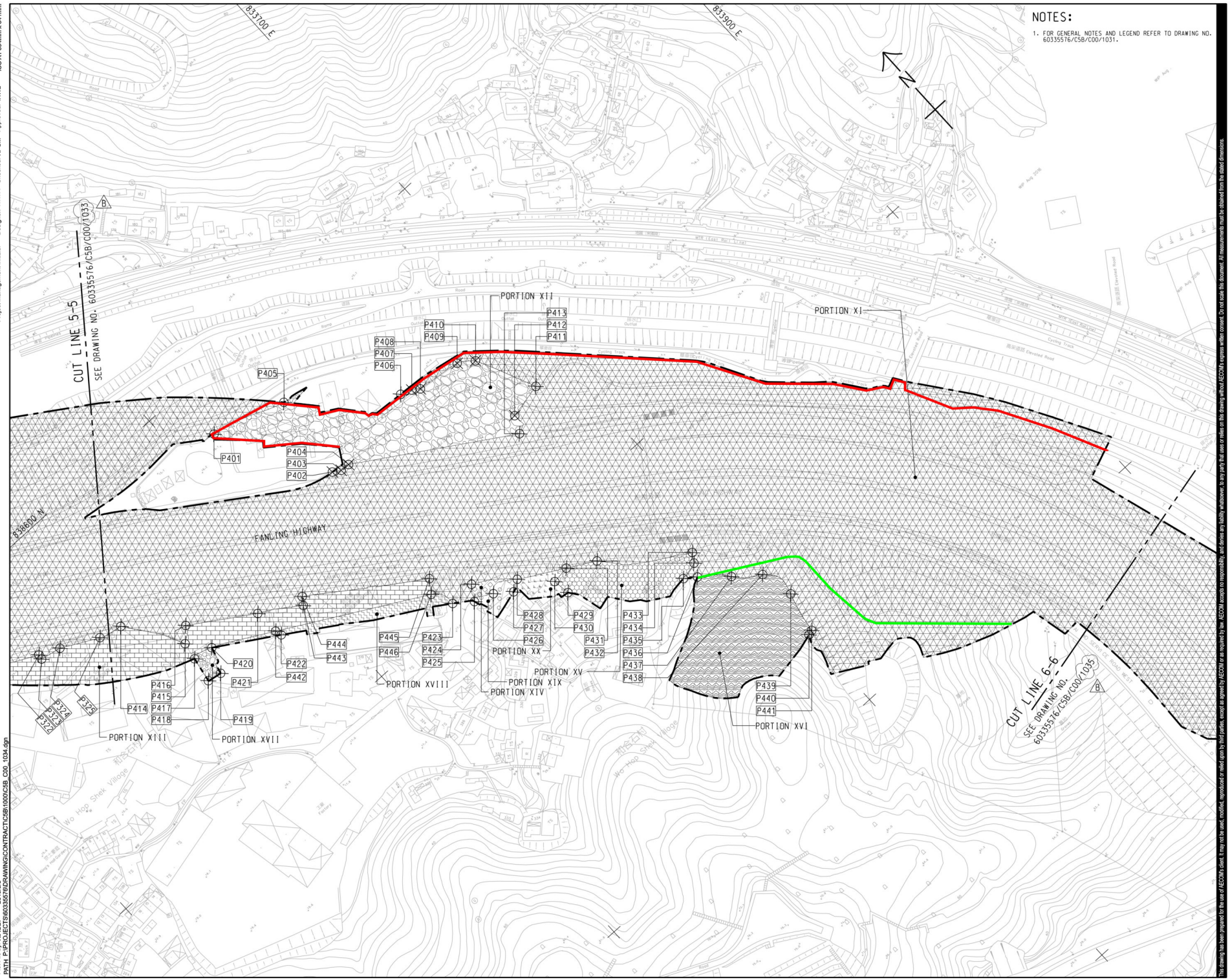

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Fanling Bypass Eastern Section

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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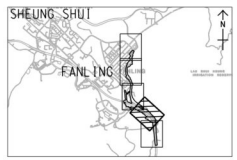
-	JUN-19	TENDER DRAWING	RPCM

STATUS 階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 70000



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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

Project Management Initials: Designer: WHWY Checked: RPCM Approved: IHWL ISO A1 594mm x 841mm
Plot File by: XIAODP 2019/8/8
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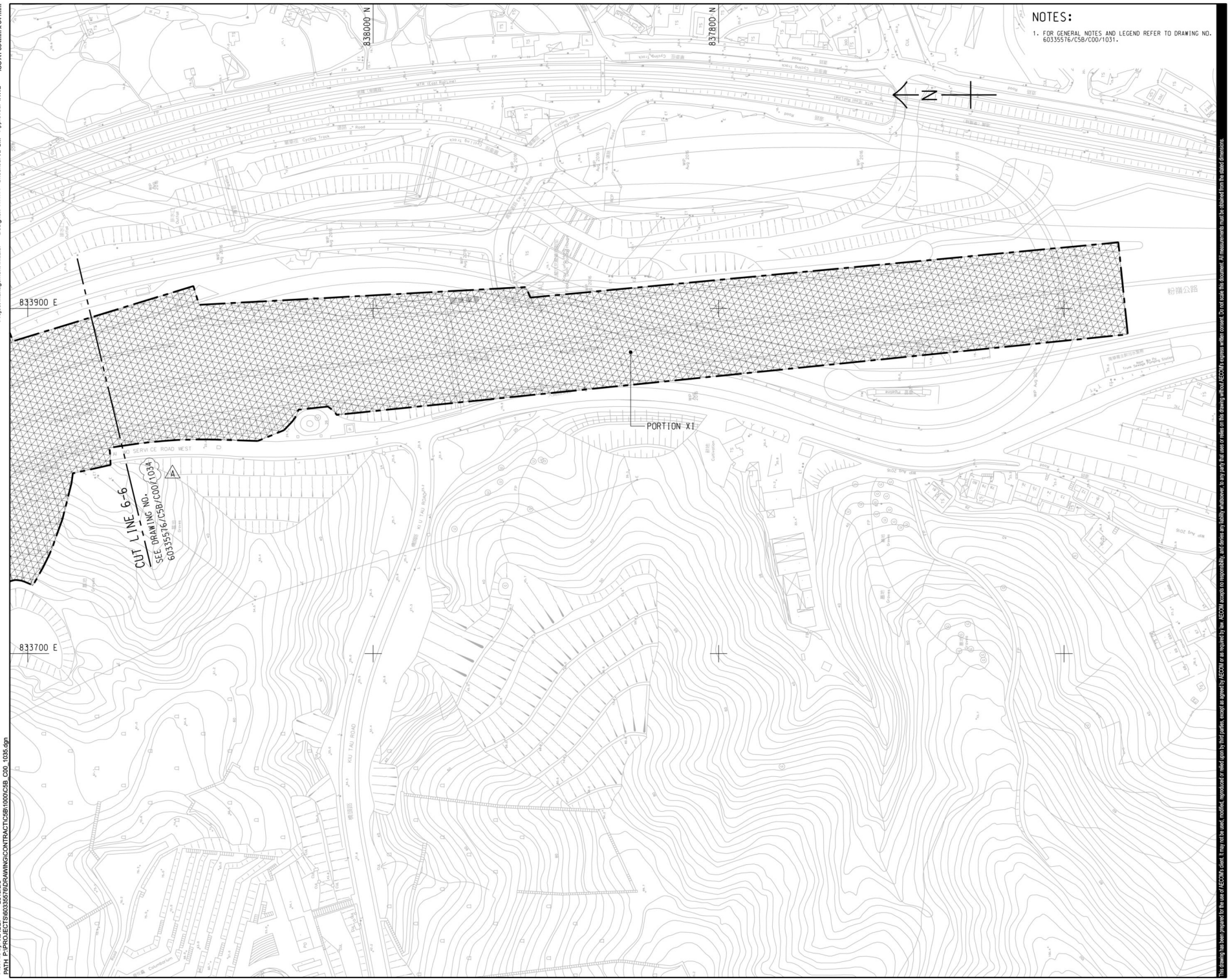

NOTES:

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

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)

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-	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

Figure 17

Hoarding Plan

EP-475/2013/A

ISO A1 594mm x 841mm

Approved: IHWL

Checked: ALUI

Designer: DMCH

Project Management Initiate:

NOTES:

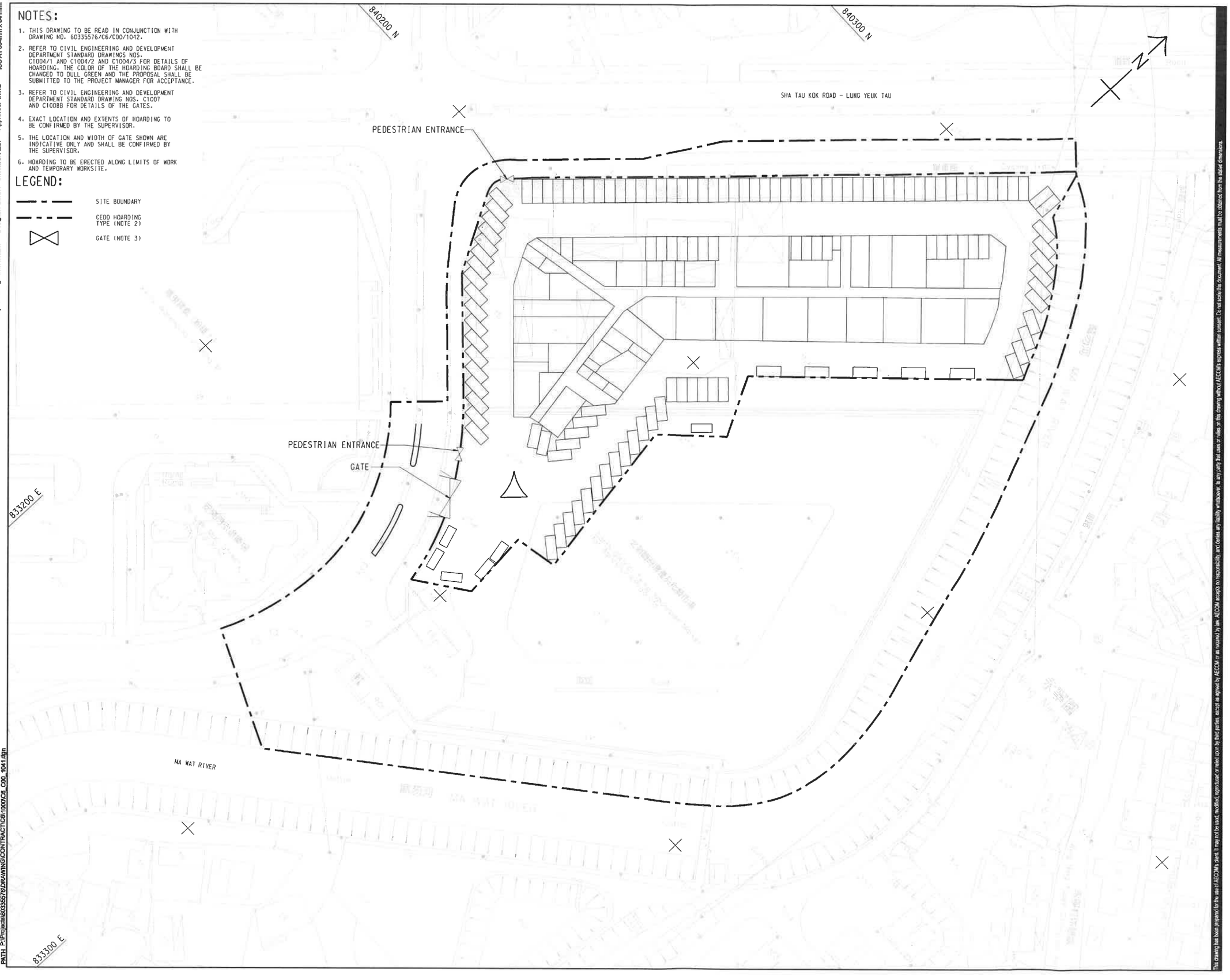
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NO. 60335576/C6/C00/1042.
2. REFER TO CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT STANDARD DRAWINGS NOS. C1004/1 AND C1004/2 AND C1004/3 FOR DETAILS OF HOARDING. THE COLOR OF THE HOARDING BOARD SHALL BE CHANGED TO DULL GREEN AND THE PROPOSAL SHALL 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)



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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

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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

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

NOTES:

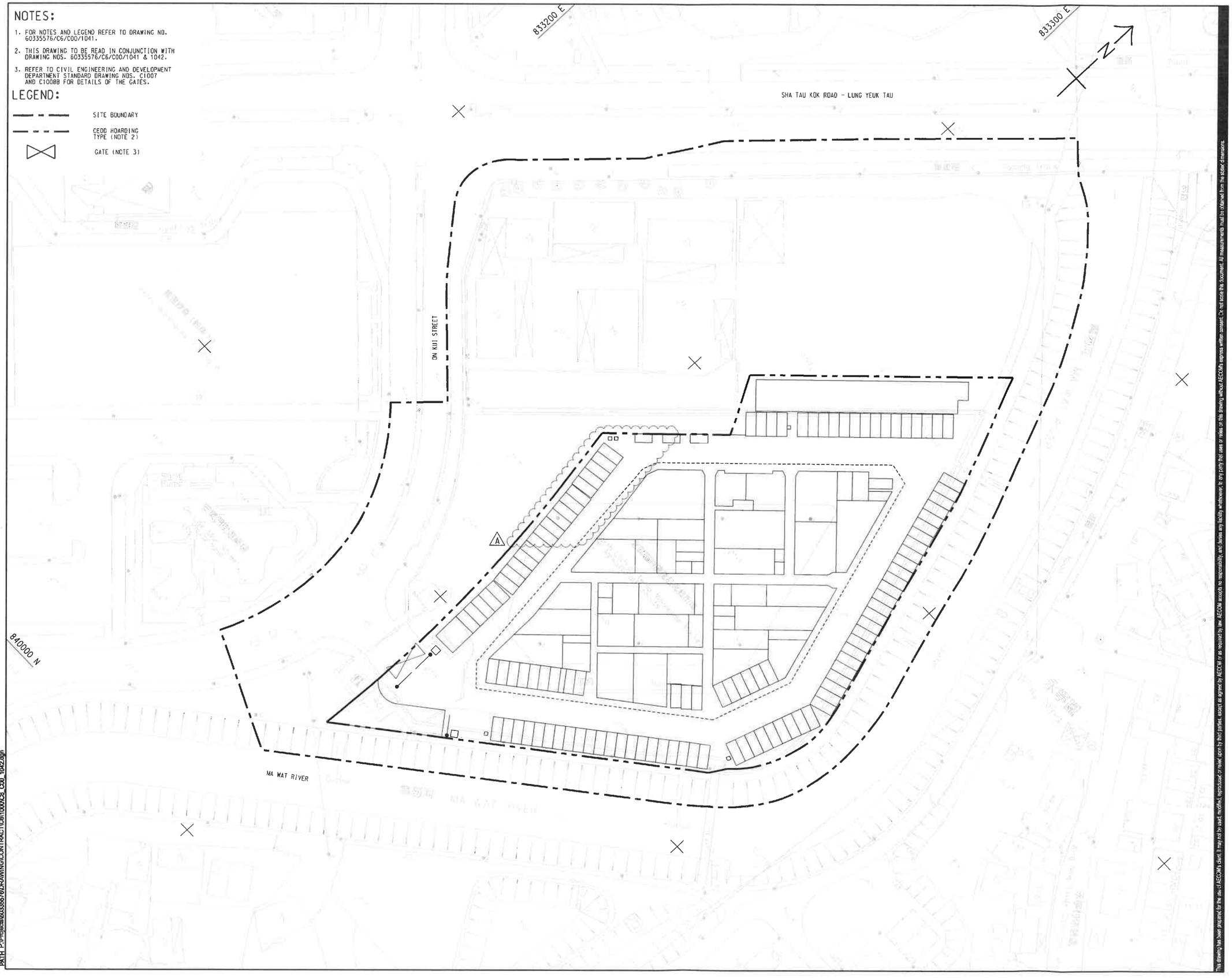
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C6/C00/1041.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C6/C00/1041 & 1042.
3. REFER TO CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT STANDARD DRAWING NOS. C1007 AND C10088 FOR DETAILS OF THE GATES.

LEGEND:

SITE BOUNDARY

CEDD HOARDING TYPE (NOTE 2)

GATE (NOTE 3)



Plot File by: Yauky 20/6/2019
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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
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

VR 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對
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
說明圖

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

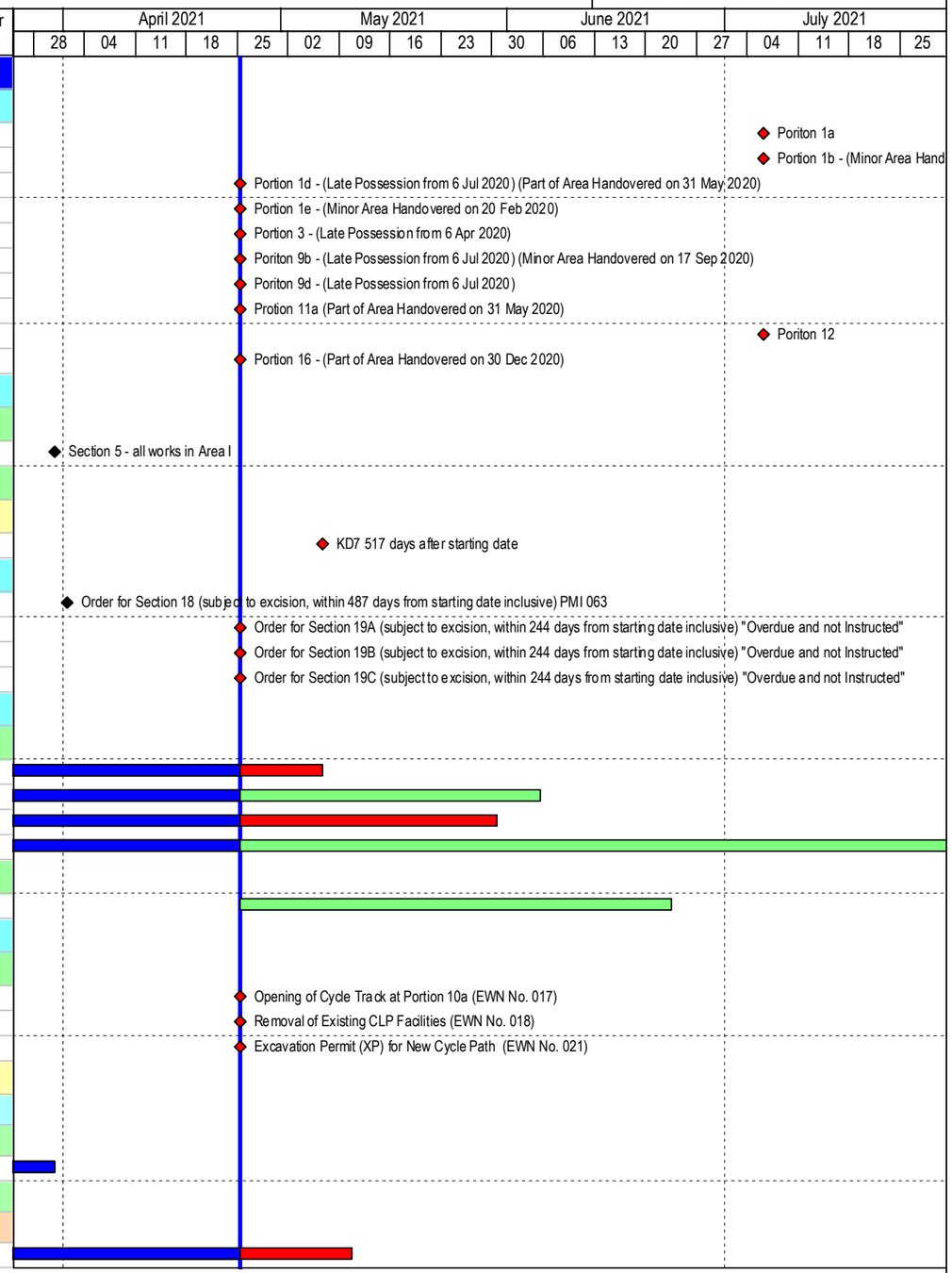
APPENDIX A
CONSTRUCTION PROGRAMME

AECOM

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

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 (2021-04-25) Final						
2.0 - Site Access Dates						
AD-1000	Poriton 1a	0	06-Jul-21*		0	CD(7d)
AD-1010	Portion 1b - (Minor Area Handovered on 7 May 2020)	0	06-Jul-21*		0	CD(7d)
AD-1030	Portion 1d - (Late Possession from 6 Jul 2020) (Part of Area Handovered on 31 May 2020)	0	25-Apr-21*		-293	CD(7d)
AD-1040	Portion 1e - (Minor Area Handovered on 20 Feb 2020)	0	25-Apr-21*		-19	CD(7d)
AD-1070	Portion 3 - (Late Possession from 6 Apr 2020)	0	25-Apr-21*		-384	CD(7d)
AD-1160	Poriton 9b - (Late Possession from 6 Jul 2020) (Minor Area Handovered on 17 Sep 2020)	0	25-Apr-21*		-293	CD(7d)
AD-1180	Poriton 9d - (Late Possession from 6 Jul 2020)	0	25-Apr-21*		-293	CD(7d)
AD-1210	Protion 11a (Part of Area Handovered on 31 May 2020)	0	25-Apr-21*		-293	CD(7d)
AD-1230	Poriton 12	0	06-Jul-21*		0	CD(7d)
AD-1270	Portion 16 - (Part of Area Handovered on 30 Dec 2020)	0	25-Apr-21*		-266	CD(7d)
3.0 - Site Completion Dates						
3.2 Planned Sectional Work Completeion						
SC-1070	Section 5 - all works in Area I	0		31-Mar-21 A		CD(7d)
4.0 - Key Dates						
4.1 Key Date Completion (Orignial Contract Completion Date)						
KD0-1060	KD7 517 days after starting date	0		06-May-21*	0	CD(7d)
5.0 - Ordering Dates						
OD-1010	Order for Section 18 (subject to excision, within 487 days from starting date inclusive) PMI 063	0		01-Apr-21 A		CD(7d)
OD-1020	Order for Section 19A (subject to excision, within 244 days from starting date inclusive) "Overdue and not Instructed"	0		25-Apr-21*	-262	CD(7d)
OD-1030	Order for Section 19B (subject to excision, within 244 days from starting date inclusive) "Overdue and not Instructed"	0		25-Apr-21*	-262	CD(7d)
OD-1040	Order for Section 19C (subject to excision, within 244 days from starting date inclusive) "Overdue and not Instructed"	0		25-Apr-21*	-262	CD(7d)
6.0 - Prelimiaries and General Requirements						
6.2 - General Submissions						
GS-1200	Acceptance of Details for Project Manager's Site Accommodation	12	01-Feb-21 A	06-May-21	-202	CD(7d)
GS-1230	Submission of Major Method Statements	42	06-Dec-19 A	05-Jun-21	1193	CD(7d)
GS-1260	Acceptance of Archaeological Action Plan and Issuance of Licence to Excavate and Search for Antiquities	36	08-Sep-20 A	30-May-21	-19	CD(7d)
GS-1290	Preparation and Submission of Fully Corodinated BIM	1740	21-Aug-20 A	28-Jan-26*	8	CD(7d)
6.3 - Subletting Packages						
SP-1220	Pipeworks of District Cooling System (DCS) "Overdue and not instructed"	60	25-Apr-21	23-Jun-21	149	CD(7d)
7.0 Construction						
Section 1						
S1-1012	Opening of Cycle Track at Portion 10a (EWN No. 017)	0		25-Apr-21	-305	CD(7d)
S1-1016	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Apr-21	-305	CD(7d)
S1-1018	Excavation Permit (XP) for New Cycle Path (EWN No. 021)	0		25-Apr-21	-305	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						
Soil Treatment						
S1K1-1020	Backfill treated soil (250m3 / day / gang, 2 gangs)	0	01-Mar-21 A	31-Mar-21 A		WD(6d)
Civil Works						
Road D1 (Stage 1)						
S1K1-2006	Underground Drainage (around 160m) Manhole KT2001 - KT2001A - KT1015A	12	04-Nov-20 A	10-May-21	-171	WD(6d)



Build King – Richwell Engineering Joint Venture

Planned Work
Critical Work
Actual Work
Milestone
Milestone Critical
Summary LOE
Summary LOE Critical

ND/2019/01 - 3 Month Rolling Programme (2021-04)

Data Date: 25-Apr-21 **Run Date: 28-Apr-21**

Project ID: ND201901-RP-14
Layout: ND201901-3MRP with logo

THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
25-Apr-21	Rev. 0	SC	BY

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
S1K1-2008	Underground Sewerage (around 190m)	24	04-Jan-21 A	25-May-21	-183	WD(6d)
S1K1-2009	Underground Fresh & Flushing watermains (around 190m)	72	26-Apr-21	22-Jul-21	-168	WD(6d)
S1K1-2010	Pressure test for Fresh & Flushing watermains (around 190m)	12	23-Jul-21	05-Aug-21	-90	WD(6d)
S1K1-2012	Noise barrier NB35 footing Stage 1 (4 / 6 bays)	4	03-Mar-21 A	29-Apr-21	-142	WD(6d)
S1K1-2014	Underground utilities (around 190m)	90	23-Jul-21	08-Nov-21	-168	WD(6d)
S1K1-2050	Divert Temporary access to MWSC site from A1 to A2	6	26-May-21	01-Jun-21	-168	WD(6d)
S1K1-2052	Drainage works under Temporary access A1 to MWSC site	30	02-Jun-21	08-Jul-21	-168	WD(6d)
S1K1-2054	Sewerage works under Temporary access A1 to MWSC site	30	02-Jun-21	08-Jul-21	-168	WD(6d)
S1K1-2056	Noise barrier NB35 footing Stage 2 (2 / 6 bays)	30	02-Jun-21	08-Jul-21	-168	WD(6d)
Road D1 (Stage 2) Castle Peak road junction						
S1K1-2026	Underground Drainage ELS & Excavation (around 40m)	24	26-Apr-21	25-May-21	-247	WD(6d)
S1K1-2028	Underground Drainage (around 40m)	40	26-May-21	13-Jul-21	-247	WD(6d)
S1K1-2030	Underground Sewerage (around 40m)	42	14-Jul-21	31-Aug-21	-247	WD(6d)
Road L1						
S1K1-2104	Underground Sewerage Manhole Construction and Pile laying (around 120m)	16	11-Jan-21 A	14-May-21	-168	WD(6d)
S1K1-2106	Underground Drainage (around 120m)	30	15-Mar-21 A	21-Jun-21	-168	WD(6d)
S1K1-2108	Underground Fresh & Flushing watermains (around 120m)	66	24-May-21	10-Aug-21	-168	WD(6d)
S1K1-2110	Underground utilities (around 120m)	78	17-Jul-21	19-Oct-21	-168	WD(6d)
Smart Road Lightings System Installation						
S1K1-3010	Submissions of smart road lighting system design and shop drawings	60	10-Sep-20 A	23-Jun-21	8	CD(7d)
S1K1-3020	Procurement and delivery of smart road lighting system	90	24-Jun-21	21-Sep-21	8	CD(7d)
Section 2A						
S2A-1004	Temporary Stockpile at Portion 5 and Additional Land D	0		25-Apr-21	163	CD(7d)
Portion 5 in Area C1 (Soil Treatment & Interface with HD's Contractors)						
Preparation work/Tree Survey/Site Clearance/GI						
S2AP5-1000	Late Possession of Site of Part of Portion 5 (in Area C1) (CNE No. 004)	0		25-Apr-21	176	CD(7d)
S2AP5-1015	Approval & Acceptance of Tree Felling Application	15	20-Jun-20 A	09-May-21	161	CD(7d)
S2AP5-1022	Site Clearance & Tree Felling (After removing Stockpile at Portion 5)	30	10-May-21	15-Jun-21	132	WD(6d)
S2AP5-1040	Prepare Arsenic Assessment Report	0	09-Nov-20 A	15-Apr-21 A		WD(6d)
S2AP5-1050	Arsenic Treatment Plan	0	09-Nov-20 A	15-Apr-21 A		WD(6d)
Soil Treatment						
S2AP5-2010	Remove soil (original assumed 13140m3) (Arsenic soil below contract required level)	0	16-Apr-21 A	16-Apr-21 A		WD(6d)
S2AP5-2021	Temporary Stockpiling of excavated material	106	14-Sep-20 A	31-Aug-21	27	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)	90	15-Jul-21*	12-Oct-21	117	CD(7d)
S2AP5-3050	HD's Contractor to carry out GI in Area C1 Zone C (Stage 3)	90	15-Jul-21*	12-Oct-21	117	CD(7d)
S2AP5-3060	HD's Contractor to carry out GI in Area C1 Zone D (Stage 3)	90	15-Jul-21*	12-Oct-21	117	CD(7d)
Section 2B						
Portion 9a in Area C2 (Soil Treatment & Interface with HD's Contractors)						
Preparation work/Tree Survey/Site Clearance/GI						
S2BP9a-1040	Prepare Arsenic Assessment Report	0	20-Nov-20 A	15-Apr-21 A		WD(6d)
S2BP9a-1050	Arsenic Treatment Plan	0	20-Nov-20 A	15-Apr-21 A		WD(6d)
Section 3						
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	06-Jul-21	02-Aug-21	0	WD(6d)
S3P1a-1020	Site Clearance	24	06-Jul-21	02-Aug-21	0	WD(6d)
S3P1a-1060	Archaeologiacl Survey	72	06-Jul-21	28-Sep-21	33	WD(6d)
Portion 7 in Area E (Soil Treatment & Interface with HKHS's Contractors)						

Build King – Richwell Engineering Joint Venture

Planned Work
Critical Work
Actual Work
Milestone
Milestone Critical
Summary LOE
Summary LOE Critical

ND/2019/01 - 3 Month Rolling Programme (2021-04)

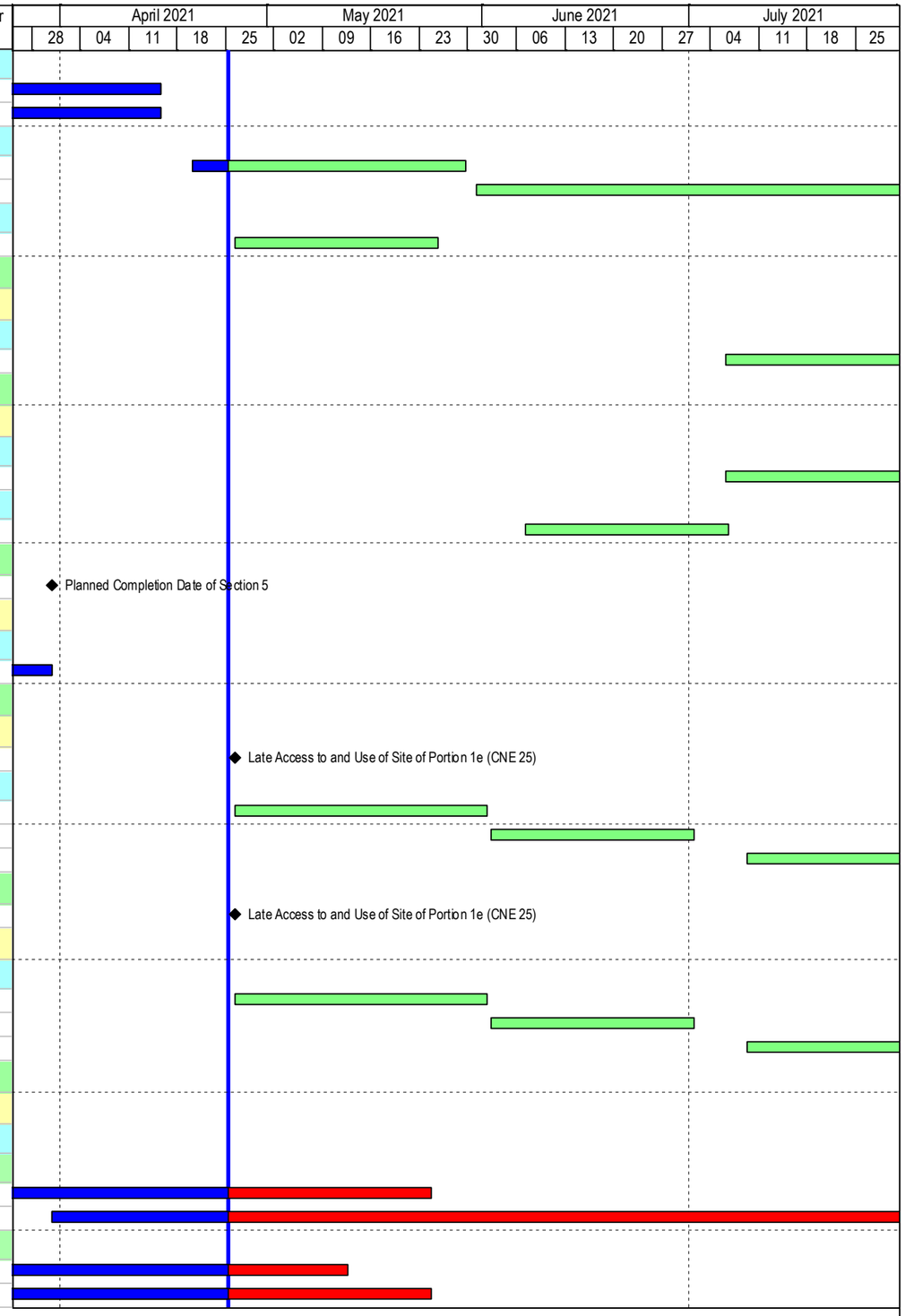
Data Date: 25-Apr-21 **Run Date: 28-Apr-21**

Project ID: ND201901-RP-14
Lauyout: ND201901-3MRP with logo

THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
25-Apr-21	Rev. 0	SC	BY

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
Preparation work/Tree Survey/Site Clearance/GI						
S3P7-1040	Prepare Arsenic Assessment Report	0	09-Nov-20 A	15-Apr-21 A		WD(6d)
S3P7-1050	Arsenic Treatment Plan	0	09-Nov-20 A	15-Apr-21 A		WD(6d)
Soil Treatment						
S3P7-2010	Remove soil (original assumed 15718m3) (3 / 4 EGI completed, interim soil to be excavated / treated : 6300m3 / 2000m3)	28	20-Apr-21 A	29-May-21	146	WD(6d)
S3P7-2020	Backfilling to the formation levels	72	31-May-21	24-Aug-21	146	WD(6d)
Interface with HKHS's contractor to carry out GI						
S3P7-3010	HKHS Contractor to carry out GI in Area E	24	26-Apr-21*	25-May-21	222	WD(6d)
Section 4A						
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	06-Jul-21	09-Aug-21	210	WD(6d)
Section 4C						
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	06-Jul-21	09-Aug-21	200	WD(6d)
Interface with ArchSD's Wet Market Contractor to carry out GI						
S4CP1b-3010	ArchSD's Wet Market Contractor to carry out GI in Area D3	24	07-Jun-21	06-Jul-21	472	WD(6d)
Section 5						
S5-1000	Planned Completion Date of Section 5	0		31-Mar-21 A		CD(7d)
Portion 14 in Area I (Soil Treatment & Complete Temp. Noise Barriers along Castle Peak Road)						
Soil Treatment						
S5P14-2020	Backfilling to the formation levels	0	08-Mar-21 A	31-Mar-21 A		WD(6d)
Section 6A						
Portion 1e in Area G1 (Soil Treatment & Forming Hammerhead)						
S6AP1e-1000	Late Access to and Use of Site of Portion 1e (CNE 25)	0		26-Apr-21	193	WD(6d)
Preparation work/Tree Survey/Site Clearance/GI						
S6AP1e-1010	Tree survey and prepare tree felling and transplant report	30	26-Apr-21	01-Jun-21	193	WD(6d)
S6AP1e-1012	Approval & Acceptance of Tree Felling Application	30	02-Jun-21	01-Jul-21	234	CD(7d)
S6AP1e-1020	Site Clearance & Tree Felling	60	09-Jul-21	16-Sep-21	191	WD(6d)
Section 6B						
S6B-1002	Late Access to and Use of Site of Portion 1e (CNE 25)	0		26-Apr-21	893	WD(6d)
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	30	26-Apr-21	01-Jun-21	893	WD(6d)
S6BP1e-1012	Approval & Acceptance of Tree Felling Application	30	02-Jun-21	01-Jul-21	1100	CD(7d)
S6BP1e-1020	Site Clearance & Tree Felling	60	09-Jul-21	16-Sep-21	893	WD(6d)
Section 7 (Subject to excision)						
Portion 14 in Area K (Complete TSPS with Associated Sewerage)						
KD2 - Complete Temporary Sewage Pumping Station and associated rising mains and sewers, and connect						
Design and Civil Construction						
S7P14-2010	Design and approval of Temporary Sewage Pumping Station (TSPS)	30	04-Jun-20 A	24-May-21	-85	CD(7d)
S7P14-2020	Construction of TSPS	142	31-Mar-21 A	11-Nov-21	-67	WD(6d)
E&M Works						
S7P14-3010	Submission and Approval of E&M plants & materials for TSPS	18	04-Jun-20 A	12-May-21	0	CD(7d)
S7P14-3020	Procurement of E&M equipment for TSPS	30	16-Nov-20 A	24-May-21	0	CD(7d)



Build King – Richwell Engineering Joint Venture

- Planned Work
- Critical Work
- Actual Work
- Milestone
- Milestone Critical
- Summary LOE
- Summary LOE Critical

ND/2019/01 - 3 Month Rolling Programme (2021-04)

Data Date: 25-Apr-21 **Run Date: 28-Apr-21**

Project ID: ND201901-RP-14
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THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
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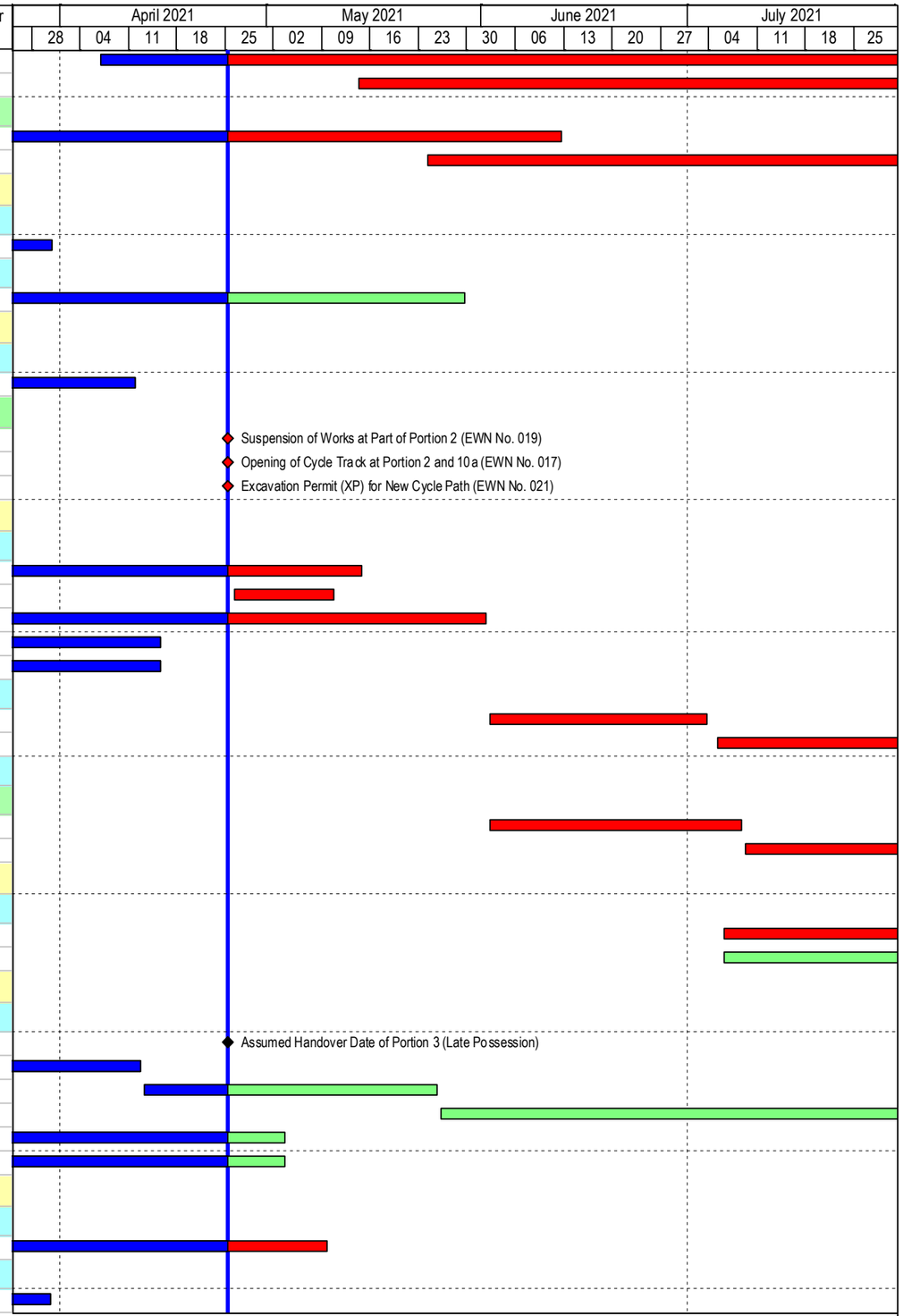
Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
S7P14-3030	Supply, Factory Acceptance Test (FAT) & Delivery of E&M equipment for TSPS	124	07-Apr-21 A	21-Sep-21	-52	WD(6d)
S7P14-3040	E&M Installation for TSPS	150	14-May-21	11-Nov-21	-67	WD(6d)
Sewerage Works						
S7P14-4010	Laying of sewage rising mains from TSPS and connect to existing tank of MBR plant	40	15-Mar-21 A	12-Jun-21	-48	WD(6d)
S7P14-4020	Construciton of sewage manhole and gravity sewer for connection of sewage from MWSC site to TSPS	150	24-May-21	19-Nov-21	-48	WD(6d)
KD2 - Portion 11b in Area K (Complete Temp. Noise Barriers along Castle Peak Road)						
Preparation work						
S7P11b-1010	Site Clearance	0	02-Mar-21 A	31-Mar-21 A		WD(6d)
Sewerage Works						
S7P11b-1020	Laying of sewage rising mains from TSPS and connect to existing tank of MBR plant	28	02-Mar-21 A	29-May-21	96	WD(6d)
Portion 4 in Area K (Complete Temp. Noise Barriers along Castle Peak Road)						
Sewerage Works						
S7P4-2010	Laying of sewage rising mains from TSPS and connect to existing tank of MBR plant	0	01-Feb-21 A	12-Apr-21 A		WD(6d)
Section 8						
S8-1012	Suspension of Works at Part of Portion 2 (EWN No. 019)	0		25-Apr-21	-222	CD(7d)
S8-1016	Opening of Cycle Track at Portion 2 and 10a (EWN No. 017)	0		25-Apr-21	-222	CD(7d)
S8-1018	Excavation Permit (XP) for New Cycle Path (EWN No. 021)	0		25-Apr-21	-222	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	14-May-21	-205	CD(7d)
S8P2-0020	Implement of Stage 1 TTA	12	26-Apr-21	10-May-21	-160	WD(6d)
S8P2-1010	Site clearance / Tree Felling	30	21-Sep-20 A	01-Jun-21	-178	WD(6d)
S8P2-1030	Prepare Arsenic Assessment Report	0	21-Nov-20 A	15-Apr-21 A		WD(6d)
S8P2-1040	Arsenic Treatment Plan	0	28-Nov-20 A	15-Apr-21 A		WD(6d)
Soil Treatment						
S8P2-2010	Remove soil (original assumed 6898m3) (0/1 EGI completed, interim soil to be excavated / treated : 0m3/0m3) Clean Soil	26	02-Jun-21*	03-Jul-21	-160	WD(6d)
S8P2-2020	Backfilling to the formation levels	48	05-Jul-21	28-Aug-21	-58	WD(6d)
Civil Work						
Construction of Pak Shek Au Junction Stage 1						
S8P2-3020	Excavation for retaining wall (1333m3)	30	02-Jun-21	08-Jul-21	-178	WD(6d)
S8P2-3030	Construction of retaining wall (672m3)	110	09-Jul-21	17-Nov-21	-178	WD(6d)
Portion 1a in Area A (Soil Treatment, Slope, Retaining Wall, Noise Barrier, Drainage & Roadwork)						
Preparation work						
S8P1a-1010	Site clearance	48	06-Jul-21	30-Aug-21	-4	WD(6d)
S8P1a-1050	Archaeologiacl Survey	72	06-Jul-21	28-Sep-21	26	WD(6d)
Portion 3 in Area A (Soil Treatment, Drainage & Roadwork)						
Preparation work						
S8P3-1000	Assumed Handover Date of Portion 3 (Late Possession)	0	25-Apr-21*		418	CD(7d)
S8P3-1006	Tree Survey and prepare tree felling and transplant report	0	14-Dec-20 A	12-Apr-21 A		WD(6d)
S8P3-1008	Approval & Acceptance of Tree Felling Application & Tree Felling	24	13-Apr-21 A	25-May-21	314	WD(6d)
S8P3-1010	Site clearance	60	26-May-21	05-Aug-21	314	WD(6d)
S8P3-1030	Prepare Arsenic Assessment Report	6	01-Mar-21 A	03-May-21	392	WD(6d)
S8P3-1040	Arsenic Treatment Plan	6	01-Mar-21 A	03-May-21	392	WD(6d)
Portion 5 in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S8P5-1008	Approval & Acceptance of Tree Felling Application	15	20-Jun-20 A	09-May-21	0	CD(7d)
Construction according to CSD for Alternative on Bored Pile Wall						
S8P5-2024	R.C. Mass Wall construction Bay 1 - Concrete fil	0	02-Mar-21 A	30-Mar-21 A		WD(6d)



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Planned Work
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ND/2019/01 - 3 Month Rolling Programme (2021-04)

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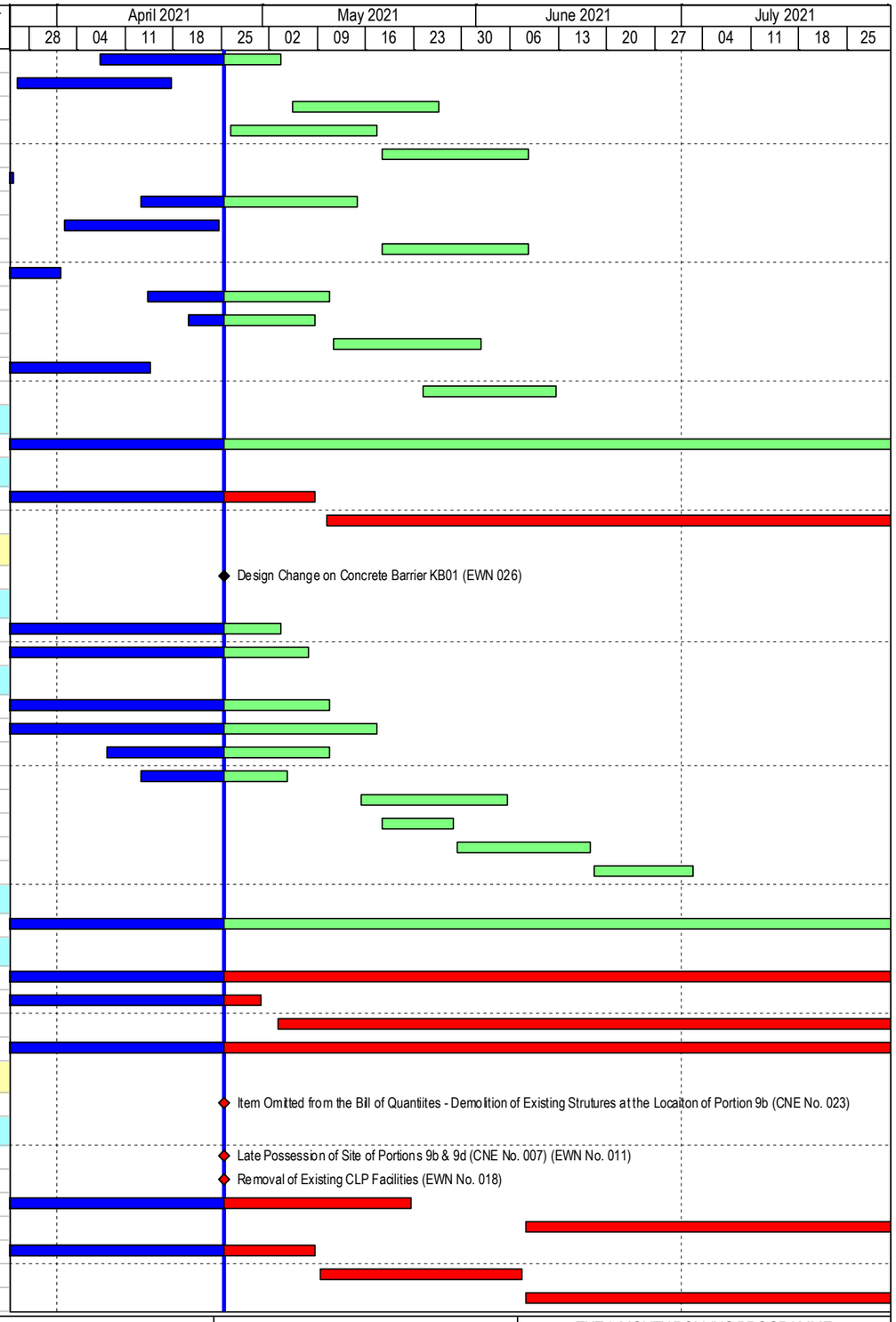
Date	Revision	Checked	Approved
25-Apr-21	Rev.0	SC	BY

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
S8P5-2030	R.C. Mass Wall construction Bay 2 - Concrete fil	6	07-Apr-21 A	03-May-21	86	WD(6d)
S8P5-2034	R.C. Mass Wall construction Bay 3 - Stem wall	0	26-Mar-21 A	17-Apr-21 A		WD(6d)
S8P5-2036	R.C. Mass Wall construction Bay 3 - Concrete fil	18	05-May-21	26-May-21	85	WD(6d)
S8P5-2040	R.C. Mass Wall construction Bay 5 - Stem wall	18	26-Apr-21	17-May-21	74	WD(6d)
S8P5-2042	R.C. Mass Wall construction Bay 5 - Concrete fil	18	18-May-21	08-Jun-21	74	WD(6d)
S8P5-2046	R.C. Mass Wall construction Bay 4 - Stem wall	0	10-Mar-21 A	25-Mar-21 A		WD(6d)
S8P5-2048	R.C. Mass Wall construction Bay 4 - Concrete fil	16	13-Apr-21 A	14-May-21	76	WD(6d)
S8P5-2052	R.C. Mass Wall construction Bay 6 - Stem wall	0	02-Apr-21 A	24-Apr-21 A		WD(6d)
S8P5-2054	R.C. Mass Wall construction Bay 6 - Concrete fil	18	18-May-21	08-Jun-21	74	WD(6d)
S8P5-2058	R.C. Mass Wall construction Bay 7 - Stem wall	0	15-Mar-21 A	01-Apr-21 A		WD(6d)
S8P5-2060	R.C. Mass Wall construction Bay 7 - Concrete fil	12	14-Apr-21 A	10-May-21	70	WD(6d)
S8P5-2064	R.C. Mass Wall construction Bay 8 - Stem wall	11	20-Apr-21 A	08-May-21	71	WD(6d)
S8P5-2066	R.C. Mass Wall construction Bay 8 - Concrete fil	18	11-May-21	01-Jun-21	70	WD(6d)
S8P5-2070	R.C. Mass Wall construction Bay 9 - Stem wall	0	19-Mar-21 A	14-Apr-21 A		WD(6d)
S8P5-2072	R.C. Mass Wall construction Bay 9 - Concrete fil	18	24-May-21	12-Jun-21	70	WD(6d)
Soil Treatment						
S8P5-3050	Backfilling to the formation levels	100	17-Feb-21 A	12-Oct-21	70	WD(6d)
Civil Work						
S8P5-4000	Road P1 (SMH1003 - 1005) - Underground Drainage work	11	18-Jan-21 A	08-May-21	0	WD(6d)
S8P5-4000.02	Road P1 (SMH1006 - 1006a) - Underground Drainage work	121	10-May-21	02-Oct-21	0	WD(6d)
Portion 6a in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)						
S8P6a-0001	Design Change on Concrete Barrier KB01 (EWN 026)	0		25-Apr-21	293	CD(7d)
Preparation work/Tree Survey/Site Clearance/GI						
S8P6a-1004	Approval & Acceptance of Tree Felling Application & Tree Felling	6	16-Jun-20 A	03-May-21	65	WD(6d)
S8P6a-1010	Site Clearance & Tree Felling	10	15-Feb-20 A	07-May-21	65	WD(6d)
Construction according to CSD for Alternative on Bored Pile Wall						
S8P6a-2010	Slope cutting and temporary soil nail installation Row C + Row D (99 Nos Soil nails)	12	28-Oct-20 A	10-May-21	63	WD(6d)
S8P6a-2014	Slope cutting and temporary soil nail installation Row E + Row F (99 Nos Soil nails)	18	16-Nov-20 A	17-May-21	63	WD(6d)
S8P6a-2032	R.C. Mass Wall construction Bay 11 - Concrete fill	12	08-Apr-21 A	10-May-21	70	WD(6d)
S8P6a-2036	R.C. Mass Wall construction Bay 10 - Stem wall	7	13-Apr-21 A	04-May-21	85	WD(6d)
S8P6a-2038	R.C. Mass Wall construction Bay 10 - Concrete fill	18	15-May-21	05-Jun-21	1658	WD(6d)
S8P6a-2040	R.C. Mass Wall construction Bay 12b - Base slab	9	18-May-21	28-May-21	63	WD(6d)
S8P6a-2042	R.C. Mass Wall construction Bay 12b - Stem wall	16	29-May-21	17-Jun-21	63	WD(6d)
S8P6a-2044	R.C. Mass Wall construction Bay 12b - Concrete fill	12	18-Jun-21	02-Jul-21	63	WD(6d)
Soil Treatment						
S8P6a-3050	Backfilling to the formation levels	100	24-Dec-20 A	30-Oct-21	63	WD(6d)
Civil Work						
S8P6a-4000	Road D4 (SMH102A - 5001G) - Underground Drainage work	106	25-Mar-21 A	31-Aug-21	0	WD(6d)
S8P6a-4010	Road D4 (SMH5001C2 - 5001B) - Underground Drainage work	5	08-Sep-20 A	30-Apr-21	0	WD(6d)
S8P6a-4010.02	Road D4 (SMH5001B1 - 5001A) - Underground Drainage work	197	03-May-21	24-Dec-21	0	WD(6d)
S8P6a-4012	Construct and maintain haul road to Portion 9b and 9c	88	28-Dec-20 A	14-Sep-21	0	WD(6d)
Portion 9b & 9d in Area A (Soil Treatment, Slope, Retaining Wall, Drainage & Roadwork)						
S8P9b-0001	Item Omitted from the Bill of Quantiites - Demolition of Existing Strutures at the Locaiton of Portion 9b (CNE No. 023)	0		25-Apr-21	-202	CD(7d)
Preparation work/Tree Survey/Site Clearance/GI						
S8P9b-0005	Late Possession of Site of Portions 9b & 9d (CNE No. 007) (EWN No. 011)	0		25-Apr-21	-203	CD(7d)
S8P9b-0006	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Apr-21	-103	CD(7d)
S8P9b-0060	Notificatioan and Approval of Asbestos Abatement Programme	28	18-Jan-21 A	22-May-21	-191	CD(7d)
S8P9b-0070	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	48	08-Jun-21	04-Aug-21	-165	WD(6d)
S8P9b-1000	Tree Survey and prepare tree felling and transplant report	11	16-Nov-20 A	08-May-21	-190	WD(6d)
S8P9b-1002	Approval & Acceptance of Tree Felling Application	30	09-May-21	07-Jun-21	-207	CD(7d)
S8P9b-1010	Site clearance & Tree Felling	48	08-Jun-21	04-Aug-21	-165	WD(6d)



Build King – Richwell Engineering Joint Venture

Planned Work
Critical Work
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Summary LOE
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ND/2019/01 - 3 Month Rolling Programme (2021-04)

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Project ID: ND201901-RP-14
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THE 3-MONTH ROLLING PROGRAMME

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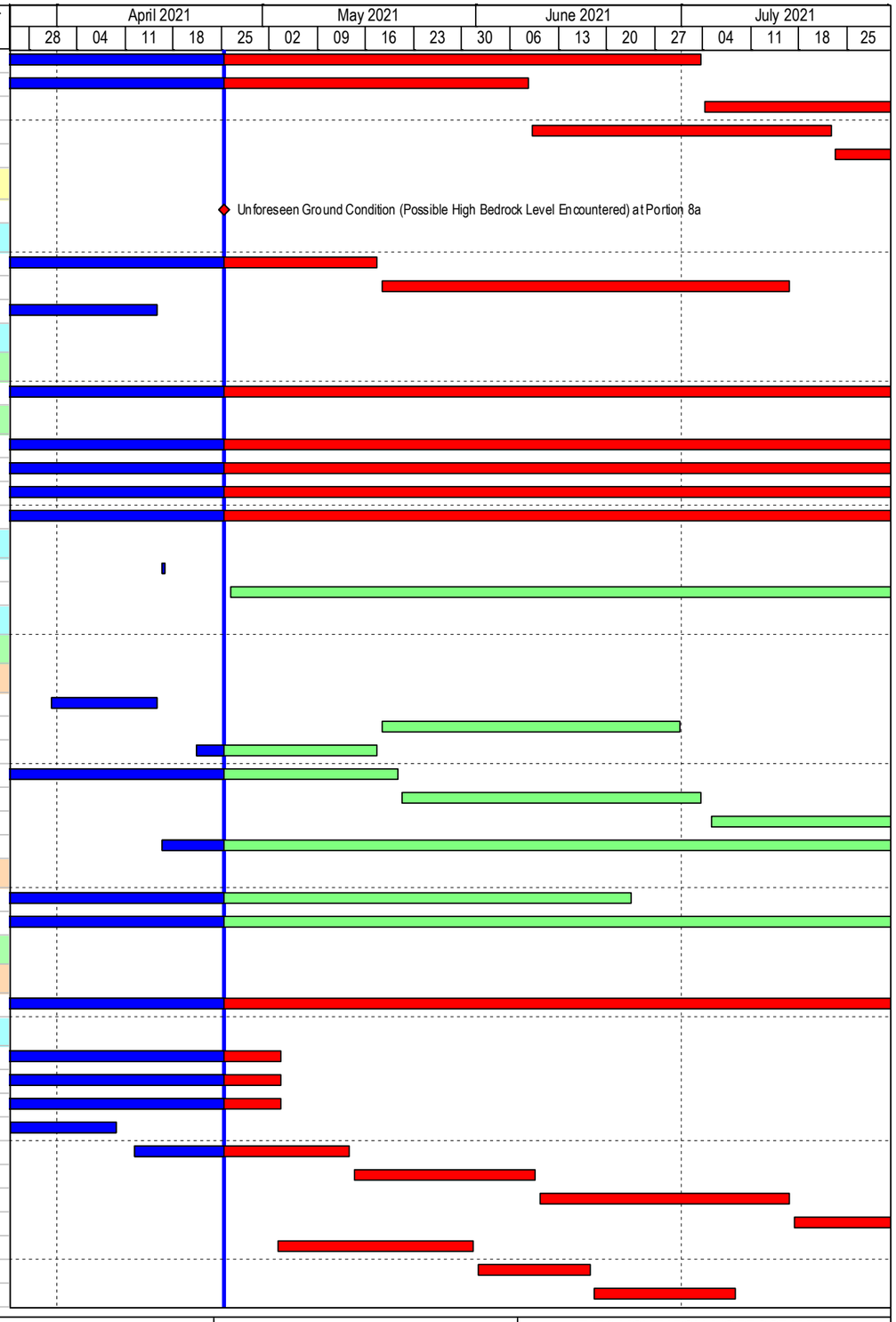
Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
S8P9b-1015	Ground investigation (5 / 13 GI completed)	56	22-Feb-21 A	03-Jul-21	-186	WD(6d)
S8P9b-1020	Environmental ground investigation and laboratory test (10 / 11 EGI completed)	36	18-Nov-20 A	08-Jun-21	-190	WD(6d)
S8P9b-1025	Verification of Ground Condition & Design Review by Project Manager	60	04-Jul-21	01-Sep-21	-233	CD(7d)
S8P9b-1030	Prepare Arsenic Assessment Report	36	09-Jun-21	22-Jul-21	-190	WD(6d)
S8P9b-1040	Arsenic Treatment Plan	36	23-Jul-21	02-Sep-21	-190	WD(6d)
Portion 8a in Area A (Soil Treatment, Reservoirs, Slope, Drainage & Roadwork)						
S8P8a-1104	Unforeseen Ground Condition (Possible High Bedrock Level Encountered) at Portion 8a	0		25-Apr-21	-152	CD(7d)
Preparation work/Tree Survey/Site Clearance/GI						
S8P8a-1030	Ground investigation (2 / 3 GI completed) to Fresh Water Service Reservoir	18	21-Dec-20 A	17-May-21	-20	WD(6d)
S8P8a-1046	Verification of Ground Condition & Design Review by Project Manager (to Fresh Water Service Reservoir)	60	18-May-21	16-Jul-21	-25	CD(7d)
S8P8a-1060	Prepare Arsenic Assessment Report Fresh Water Service Reservoir	0	01-Mar-21 A	15-Apr-21 A		WD(6d)
Forming Site Access and Site Formation						
Stage 1 General Excavation near Flushing Water Servie Reservior (Excavation Volume 52834 m3)						
S8P8a-1160	General excavation for remaining of Road W1	166	11-Jun-20 A	12-Nov-21	-52	WD(6d)
Stage 2 General Excavation near Fresh Water Servie Reservior (Excavation Volume 299396 m3)						
S8P8a-1220	General excavation for New Feature KS47 and adjacent road	118	01-Dec-20 A	14-Sep-21	-36	WD(6d)
S8P8a-1230	General excavation for New Feature KS49 and adjacent road	118	11-Jan-21 A	14-Sep-21	-36	WD(6d)
S8P8a-1240	General excavation for area surrounding Fresh Water Service Reservoir	118	01-Dec-20 A	14-Sep-21	-36	WD(6d)
S8P8a-1250	General excavation for remaining of Road W2	118	14-Dec-20 A	14-Sep-21	-36	WD(6d)
Soil Treatment						
S8P8a-2010	Remove soil (original assumed 29745m3) (6 / 9 EGI completed,soil to be excavated / treated : 0m3 / 0m3) Clean soil	0	16-Apr-21 A	16-Apr-21 A		WD(6d)
S8P8a-2020	Backfilling to the formation levels	120	26-Apr-21	16-Sep-21	70	WD(6d)
KD8 - complete all works for fresh water and flushing water services reservoirs, pipe laying & road						
Construction of Kwu Tung North Flushing Water Service Reservoir (KTN FLWSR)						
Civil Works						
S8K8-1030.05	Construction of Base Slab bay 6.1 (GL 2 - 8 & GL C - E) & 6.2 (GL 8 - 12 & GL C - E)	0	31-Mar-21 A	15-Apr-21 A		WD(6d)
S8K8-1030.06	Construction of Base Slab bay 7 (GL 12 - 15 & GL A - G)	36	18-May-21	30-Jun-21	95	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)	18	21-Apr-21 A	17-May-21	95	WD(6d)
S8K8-1030.21	Construction of Retaining wall at GL 1	20	17-Mar-21 A	20-May-21	21	WD(6d)
S8K8-1030.22	Construction of Retaining wall GL 8 - 15 at GL G	36	21-May-21	03-Jul-21	21	WD(6d)
S8K8-1030.23	Construction of Retaining wall GL 8 - 15 at GL D	36	05-Jul-21	14-Aug-21	21	WD(6d)
S8K8-1030.29	Construction of Columns (4 / 52 Nos completed)	133	16-Apr-21 A	03-Sep-22	21	WD(6d)
E&M Works						
S8K8-2010	Design and Approval for E&M works for KTN FLWSR	60	01-Feb-21 A	23-Jun-21	331	CD(7d)
S8K8-2020	Submission and Approval of E&M plants & materials for KTN FLWSR	100	01-Feb-21 A	01-Oct-21	331	CD(7d)
Construction of Kwu Tung North Freshwater Service Reservoir (KTN FWSR)						
Civil Works						
S8K8-3020	Excavation in rock (238167m3)	118	01-Dec-20 A	14-Sep-21	-121	WD(6d)
Remaining Civil Work in Portion 8a Area A						
S8P8a-2210	Slopeworks for KS47 - Slope cutting and soil nail installation Row AA + Row Z (12 Nos Soil nails) + U channel	6	24-Feb-21 A	03-May-21	-19	WD(6d)
S8P8a-2230	Slopeworks for KS47 - Slope cutting and soil nail installation Row V + Row W (39 Nos Soil nails) + Berm & U channel	6	17-Feb-21 A	03-May-21	-19	WD(6d)
S8P8a-2270	Slopeworks for KS47 - Slope cutting and soil nail installation Row N + Row O (68 Nos Soil nails) + Berm & U channel	6	10-Mar-21 A	03-May-21	-25	WD(6d)
S8P8a-2280	Slopeworks for KS47 - Slope cutting and soil nail installation Row L + Row M (75 Nos Soil nails)	0	25-Mar-21 A	09-Apr-21 A		WD(6d)
S8P8a-2290	Slopeworks for KS47 - Slope cutting and soil nail installation Row J + Row K (87 Nos Soil nails) + U channel	3	12-Apr-21 A	13-May-21	-25	WD(6d)
S8P8a-2300	Slopeworks for KS47 - Slope cutting and soil nail installation Row H + Row I (103 Nos Soil nails)	22	14-May-21	09-Jun-21	-25	WD(6d)
S8P8a-2310	Slopeworks for KS47 - Slope cutting and soil nail installation Row F + Row G (125 Nos Soil nails) + Berm & U channel	30	10-Jun-21	16-Jul-21	-25	WD(6d)
S8P8a-2320	Slopeworks for KS47 - Slope cutting and soil nail installation Row D + Row E (162 Nos Soil nails)	24	17-Jul-21	13-Aug-21	-25	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	24	03-May-21	31-May-21	-31	WD(6d)
S8P8a-2340	Slopeworks for KS49 - Slope cutting and soil nail installation Row N + Row M + Row O (14 Nos Soil nails)	14	01-Jun-21	17-Jun-21	-31	WD(6d)
S8P8a-2350	Slopeworks for KS49 - Slope cutting and soil nail installation Row L + Row K (37 Nos Soil nails)	17	18-Jun-21	08-Jul-21	-31	WD(6d)



Build King – Richwell Engineering Joint Venture

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ND/2019/01 - 3 Month Rolling Programme (2021-04)

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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-2360	Slopeworks for KS49 - Slope cutting and soil nail installation Row I + Row J (40 Nos Soil nails)	17	09-Jul-21	28-Jul-21	-31	WD(6d)
S8P8a-2390	Slopeworks for KS49 - Slope cutting and soil nail installation Row C + Row D (43 Nos Soil nails)	5	02-Jan-21 A	30-Apr-21	-31	WD(6d)
S8P8a-2542	Construction of retaining wall KW06 bay 19 - bay 21 (514m3)	17	15-Jan-21 A	15-May-21	-69	WD(6d)
S8P8a-2546	Excavation for retaining wall KW06 bay 15 - bay 18 (1394m3)	60	17-May-21	28-Jul-21	-69	WD(6d)
S8P8a-2548	Construction of retaining wall KW06 bay 15 - bay 18 (686m3)	90	17-Jul-21	02-Nov-21	-69	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-Apr-21	-183	CD(7d)
S8P8b-1002	Assumed resumption date of fresh and flushing reservoirs construction due to CNE No. 006 & EWN No. 005	0		25-Apr-21	-183	CD(7d)
S8P8b-1004	Suspension of EGI works and withdrawal of TTA on Ho Sheung Heung Rd (CNE No.24)	0		25-Apr-21	-183	CD(7d)
Preparation work						
S8P8b-1010	Site clearance	90	26-Apr-21	12-Aug-21	-146	WD(6d)
S8P8b-1050	Archaeologiacl Survey	72	31-May-21	24-Aug-21	-15	WD(6d)
Construction of Watermains						
Construction of watermains by trenchless method						
S8P8b-4010	Construction of launching and receiving pit at Portion 8b near Sheung Yue River	200	17-Jul-21	17-Mar-22	-146	WD(6d)
Section 9						
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	06-Jul-21	09-Aug-21	49	WD(6d)
Section 10A						
S10A-1002	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Apr-21	364	CD(7d)
S10A-1004	Late Access to and Use of Site of Portion 1e (CNE 25)	0		26-Apr-21	106	WD(6d)
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	26-Apr-21	17-May-21	106	WD(6d)
S10AP1e-1012	Approval & Acceptance of Tree Felling Application	30	18-May-21	16-Jun-21	127	CD(7d)
S10AP1e-1020	Site Clearance & Tree Felling	48	23-Jun-21	18-Aug-21	105	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-Apr-21	725	CD(7d)
Preparation work/Tree Survey/Site Clearance/GI						
S10AP4-0040	Prepare Arsenic Assessment Report	0	09-Nov-20 A	15-Apr-21 A		WD(6d)
S10AP4-0050	Arsenic Treatment Plan	0	09-Nov-20 A	15-Apr-21 A		WD(6d)
Soil Treatment						
S10AP4-1010	Remove soil (original assumed 18142m3) (4 / 6 EGI completed, interim soil to be excavated / treated : 3600m3 / 1920m3)	0	15-Mar-21 A	16-Apr-21 A		WD(6d)
S10AP4-1020	Backfilling to the formation levels	0	17-Apr-21 A	20-Apr-21 A		WD(6d)
Section 11						
Portion 6b in Area B (Soil Treatment & Operation of HAC Soil Treatment Plant)						
Operation and Dismantling of the Soil Treatment Plant						
S11P6b-3010	Provide treament to high arsenic-containing soil	1100	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		25-Apr-21	493	CD(7d)
S12P10b-1012	Approval & Acceptance of Tree Felling Application	22	16-Dec-20 A	22-May-21	403	WD(6d)
S12P10b-1020	Site Clearance & Tree Felling	48	24-May-21	20-Jul-21	403	WD(6d)
S12P10b-1040	Prepare Arsenic Assessment Report	36	21-Jul-21	31-Aug-21	403	WD(6d)
Section 13						

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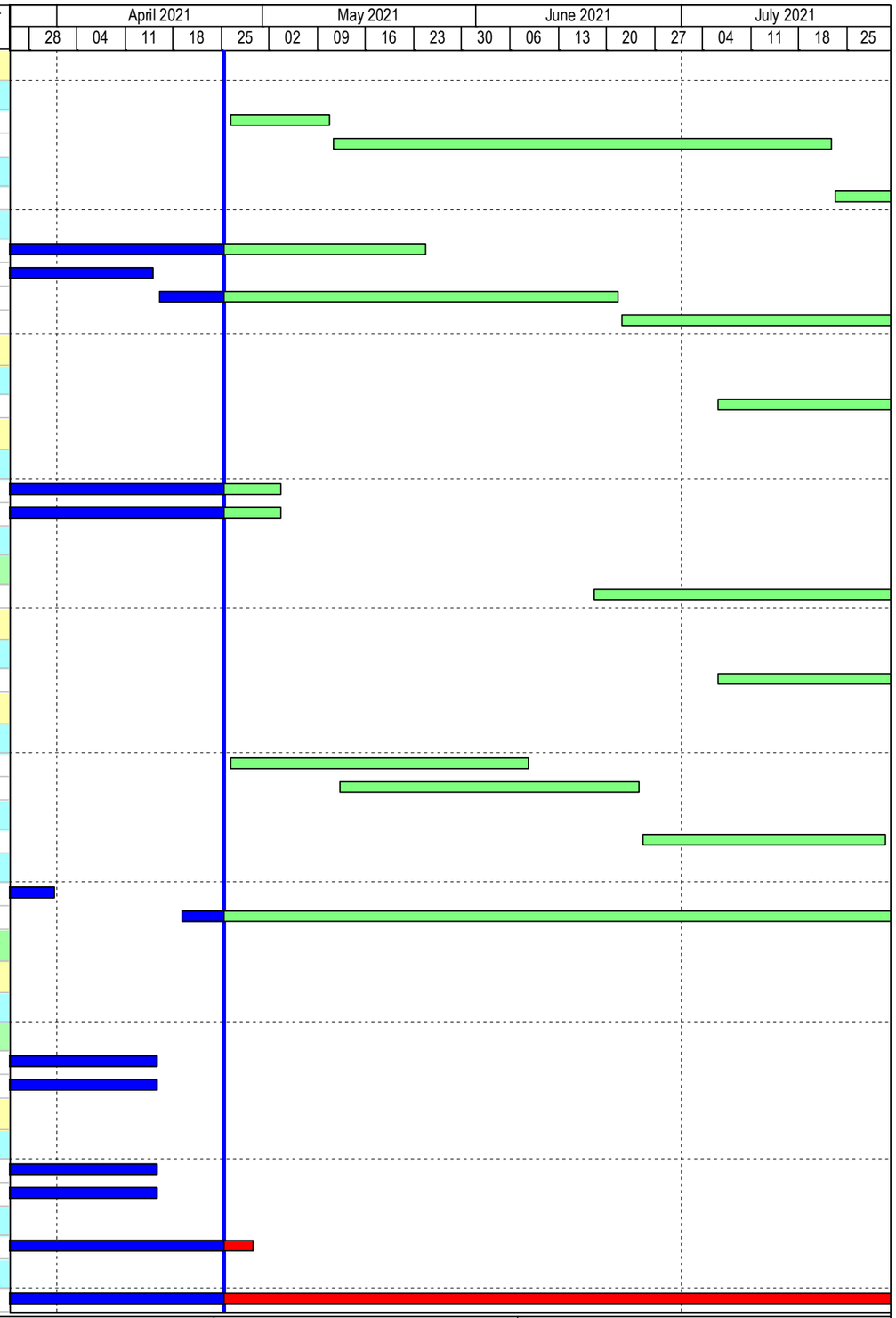
Portion 2 in Area N (Soil Treatment, Slope, Drainage & Pak Shek Au Junction)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P2-1020	Implement TTMS	12	26-Apr-21	10-May-21	138	WD(6d)
S13P2-1030	Site clearance	60	11-May-21	22-Jul-21	138	WD(6d)
Soil Treatment						
S13P2-2010	Remove soil (original assumed 10854m3) (0 / 3 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	32	23-Jul-21*	28-Aug-21	138	WD(6d)
Civil Work						
S13P2-2510	Revised Slope KS38 & 2SE-B/CR148 - Approval & Acceptance of Initial Tree Survey report	30	15-Jan-21 A	24-May-21	318	CD(7d)
S13P2-2520	Revised Slope KS38 & 2SE-B/CR148 - Tree survey and prepare tree felling and transplant report	0	01-Mar-21 A	15-Apr-21 A		WD(6d)
S13P2-2530	Revised Slope KS38 & 2SE-B/CR148 - Approval & Acceptance of tree felling and transplant report	28	16-Apr-21 A	21-Jun-21	318	CD(7d)
S13P2-3005.04	Existing feature 2SE-B/CR148 - Soil nail installation Row H + Row I (65 Nos Soil nails)	48	22-Jun-21	17-Aug-21	258	WD(6d)
Portion 1a in Area N (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P1a-1010	Site clearance	48	06-Jul-21	30-Aug-21	590	WD(6d)
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	03-May-21	652	WD(6d)
S13P7-1040	Arsenic Treatment Plan	6	09-Nov-20 A	03-May-21	652	WD(6d)
Civil Work						
Underground Utilities						
S13P7-3011	Underground drainage (309m drain and 8 M/H)	450	18-Jun-21	19-Dec-22	652	WD(6d)
Portion 1b in Area N (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P1b-1010	Site clearance	60	06-Jul-21	13-Sep-21	817	WD(6d)
Portion 6a in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P6a-1030	Prepare Arsenic Assessment Report	36	26-Apr-21	08-Jun-21	781	WD(6d)
S13P6a-1040	Arsenic Treatment Plan	36	12-May-21	24-Jun-21	781	WD(6d)
Soil Treatment						
S13P6a-2010	Remove soil (original assumed 566m3) (1 / 1 EGI completed, interim soil to be excavated / treated : 0m3 /0m3) Clean Soil	30	25-Jun-21*	30-Jul-21	781	WD(6d)
Civil Work						
S13P6a-3010	Noise barrier NB08 foundation (revised according to CSD) (12 nos. pre-bored H-pile + Test)	0	20-Oct-20 A	31-Mar-21 A		WD(6d)
S13P6a-3012	Drainage works across DJ watermain	143	19-Apr-21 A	16-Oct-21	777	WD(6d)
Section 14						
Portion 7 in Area P (Soil Treatment & KD3 - Tree Felling, General Site Clearance)						
KD3 - Tree felling, general site clearance (including the berm removal / levelling and general site						
Ground Investigation						
S14P7P-1120	Prepare Arsenic Assessment Report	0	09-Nov-20 A	15-Apr-21 A		WD(6d)
S14P7P-1130	Arsenic Treatment Plan	0	09-Nov-20 A	15-Apr-21 A		WD(6d)
Portion 7 in Area S3 (Soil Treatment & Operation of HAC Soil Treatment Plant)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P7S3-1040	Prepare Arsenic Assessment Report	0	09-Nov-20 A	15-Apr-21 A		WD(6d)
S14P7S3-1050	Arsenic Treatment Plan	0	09-Nov-20 A	15-Apr-21 A		WD(6d)
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant						
S14P7S3-2010	Set up, testing and commissioning high arsenic-containing soil treatment plant (KD4) (CSD for Treated soil Stock pile)	4	06-Oct-20 A	29-Apr-21	0	WD(6d)
Operation and Dismantling of the Soil Treatment Plant						
S14P7S3-3010	Stock Pile of Treated Soil	1007	20-Nov-20 A	19-Sep-24	0	WD(6d)



Build King – Richwell Engineering Joint Venture

Planned Work
Critical Work
Actual Work
Milestone
Milestone Critical
Summary LOE
Summary LOE Critical

ND/2019/01 - 3 Month Rolling Programme (2021-04)

Data Date: 25-Apr-21 **Run Date: 28-Apr-21**

Project ID: ND201901-RP-14
Layout: ND201901-3MRP with logo

THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
25-Apr-21	Rev. 0	SC	BY

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
Portion 16 in Area Q (Soil Treatment & Construction of CLC)						
S14P16-1002	Late Possession of Site of Portion 16 (CNE No. 011)	0		25-Apr-21	-124	CD(7d)
KD7 - Complete the construction works of Community Liaison Centre in Area Q						
S14P16-3030	Offsite fabrication and delivery of MiC Modules	33	25-Feb-21 A	04-Jun-21	-135	WD(6d)
S14P16-3040	Erection of MiC Modules	60	29-Mar-21 A	21-Aug-21	-135	WD(6d)
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-Apr-21	655	CD(7d)
S14P7T-1020	Site clearance (Area T1)	30	26-Apr-21	01-Jun-21	558	WD(6d)
S14P7T-1022	Approval & Acceptance of Tree felling Application (Area T1)	30	25-Apr-21	24-May-21	655	CD(7d)
S14P7T-1024	Tree felling works (Area T1)	30	25-May-21	29-Jun-21	535	WD(6d)
Arsenic Assessment						
S14P7T-1040	Prepare Arsenic Assessment Report	0	09-Nov-20 A	15-Apr-21 A		WD(6d)
S14P7T-1050	Arsenic Treatment Plan	0	09-Nov-20 A	15-Apr-21 A		WD(6d)
Land Contamination Assessment						
S14P7T-1063	Submit and acceptance of Contamination Assessment Report (CAR) & Remediation Action Plan (RAP)	14	04-Dec-20 A	12-May-21	1678	WD(6d)
Project Manager's Site Accommodation						
S14P7T-1100	Design and Construction of Project Manager's Main Site Office by Modular Integrated Construction (PMI 018, CE 007)	0		26-Apr-21	-212	CD(7d)
S14P7T-1125	Offsite fabrication and delivery of MiC Modules	0	30-Jan-21 A	15-Apr-21 A		WD(6d)
S14P7T-1130	Erection of Project Manager's Site Accommodation	28	06-Feb-21 A	29-May-21	-168	WD(6d)
S14P7T-1131	Start occupation of Project Manager's Site Accommodation	0		29-May-21*	-210	CD(7d)
Soil Treatment						
S14P7T-2040	Backfilling to the formation levels	0	15-Apr-21 A	15-Apr-21 A		WD(6d)
Portion 1b in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P1b-1010	Tree survey and prepare tree felling and transplant report	18	06-Jul-21	26-Jul-21	841	WD(6d)
Portion 6a in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P6a-1040	Prepare Arsenic Assessment Report	36	26-Apr-21	08-Jun-21	1028	WD(6d)
S14P6a-1050	Arsenic Treatment Plan	36	09-Jun-21	22-Jul-21	1028	WD(6d)
Portion 6b in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P6b-1015	Approval & Acceptance of Tree felling Application	10	16-Jun-20 A	04-May-21	1124	CD(7d)
S14P6b-1017	Tree felling	30	05-May-21	09-Jun-21	985	WD(6d)
S14P6b-1025	Ground investigation (0 / 1 GI completed)	6	10-Jun-21	17-Jun-21	985	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	26-Apr-21	08-Jun-21	1088	WD(6d)
S14P1f-1050	Arsenic Treatment Plan	36	09-Jun-21	22-Jul-21	1088	WD(6d)
Interim Community Liaison Centre (CLC)						
S14P1f-2030	Occupation of interim CLC	177	18-May-20 A	18-Oct-21	1159	CD(7d)
Portion 9c in Area S1 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P9c-1012	Approval & Acceptance of Tree felling Application	13	04-Sep-20 A	11-May-21	-125	WD(6d)
S14P9c-1014	Tree felling	30	12-May-21	17-Jun-21	-125	WD(6d)
S14P9c-1040	Prepare Arsenic Assessment Report	0	16-Oct-20 A	15-Apr-21 A		WD(6d)
S14P9c-1050	Arsenic Treatment Plan	0	16-Oct-20 A	15-Apr-21 A		WD(6d)
Portion 1b (Soil Treatment & Civil Works)						

Build King – Richwell Engineering Joint Venture

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ND/2019/01 - 3 Month Rolling Programme (2021-04)

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Project ID: ND201901-RP-14
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THE 3-MONTH ROLLING PROGRAMME

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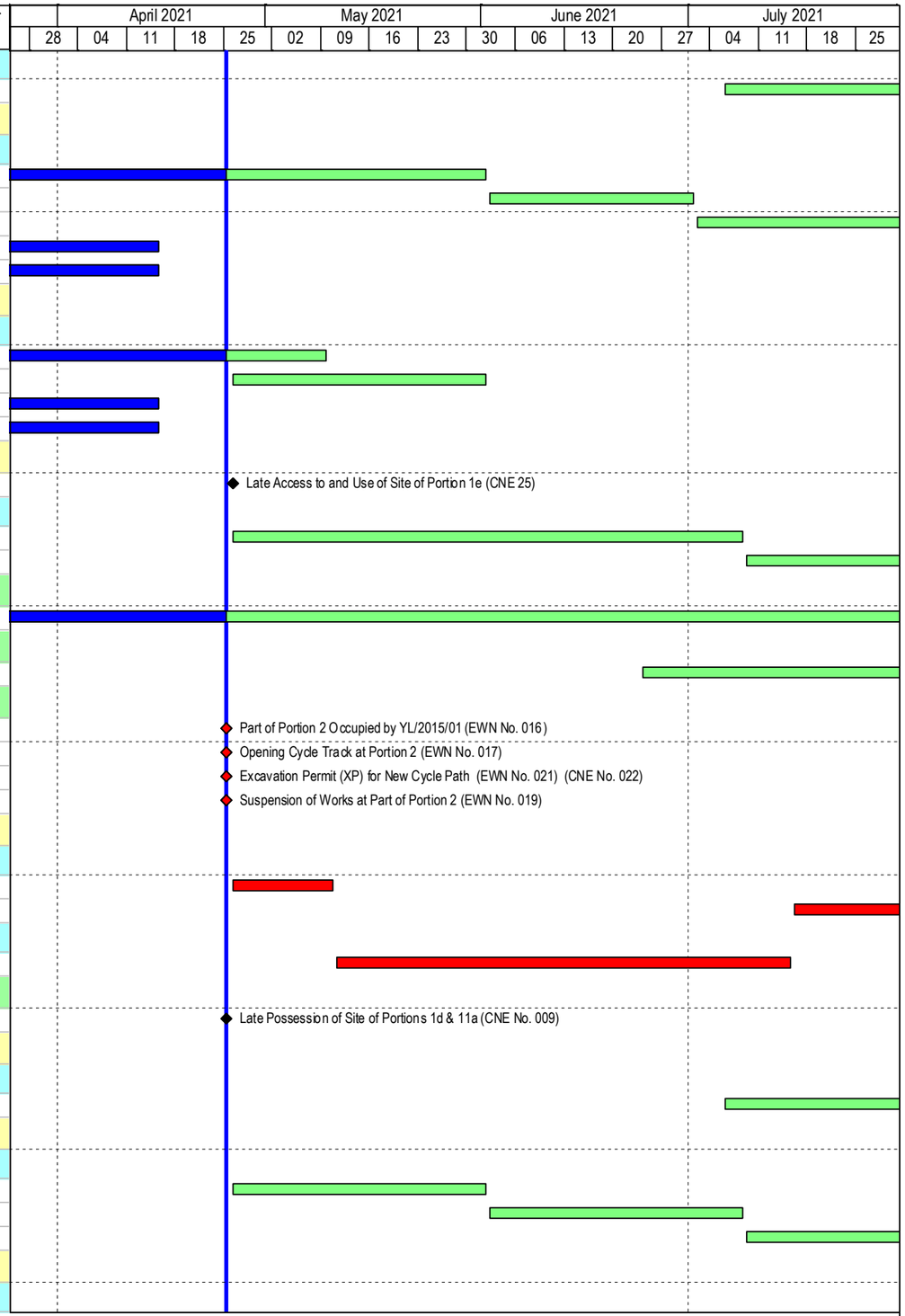
Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
Preparation work/Tree Survey/Site Clearance/GI						
S14P1b-1100	Tree survey and prepare tree felling and transplant report	60	06-Jul-21	13-Sep-21	753	WD(6d)
Portion 3 (Soil Treatment & Civil Works)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P3-1100	Tree survey and prepare tree felling and transplant report	30	01-Dec-20 A	01-Jun-21	869	WD(6d)
S14P3-1102	Approval & Acceptance of Tree felling Application	30	02-Jun-21	01-Jul-21	1071	CD(7d)
S14P3-1104	Site clearance & Tree felling	60	02-Jul-21	09-Sep-21	870	WD(6d)
S14P3-1110	Prepare Arsenic Assessment Report	0	09-Nov-20 A	15-Apr-21 A		WD(6d)
S14P3-1112	Arsenic Treatment Plan	0	09-Nov-20 A	15-Apr-21 A		WD(6d)
Portion 5 (Soil Treatment & Civil Works)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P5-1102	Approval & Acceptance of Tree felling Application	15	20-Jun-20 A	09-May-21	1066	CD(7d)
S14P5-1104	Site clearance & Tree felling	30	26-Apr-21	01-Jun-21	846	WD(6d)
S14P5-1108	Prepare Arsenic Assessment Report	0	09-Nov-20 A	15-Apr-21 A		WD(6d)
S14P5-1110	Arsenic Treatment Plan	0	09-Nov-20 A	15-Apr-21 A		WD(6d)
Portion 1e (Soil Treatment)						
S14P1e-1000	Late Access to and Use of Site of Portion 1e (CNE 25)	0		26-Apr-21	884	WD(6d)
Preparation work/Tree Survey/Site Clearance/GI						
S14P1e-2000	Tree survey and prepare tree felling and transplant report	60	26-Apr-21	08-Jul-21	884	WD(6d)
S14P1e-2010	Approval & Acceptance of Tree felling Application	30	09-Jul-21	07-Aug-21	1090	CD(7d)
Section 15						
S15-1000	Presevation and protection of tree	1691	06-Dec-19 A	10-Dec-25	27	CD(7d)
Section 19A (Subject to excision)						
S19A-1000	Laying of 3x1200mm dia. Water pipes for DCS in Area H (150m 0.33m / day, 3 teams)	182	24-Jun-21	29-Jan-22	124	WD(6d)
Section 20 (Subject to excision)						
S20-1012	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016)	0		25-Apr-21	-123	CD(7d)
S20-1016	Opening Cycle Track at Portion 2 (EWN No. 017)	0		25-Apr-21	-123	CD(7d)
S20-1018	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)	0		25-Apr-21	-123	CD(7d)
S20-1020	Suspension of Works at Part of Portion 2 (EWN No. 019)	0		25-Apr-21	-123	CD(7d)
Construction of Pedestrian Subway cum Cycle Track Stage 1 (North of Castle Peak Road)						
Preparation Work						
S20S2-1010	Implement TTMS	12	26-Apr-21	10-May-21	-96	WD(6d)
S20S2-1020	Diversion of utilities	48	16-Jul-21	09-Sep-21	-96	WD(6d)
ELS for subway ramp						
S20S2-2010	Install sheetpiles before UU diversion (136m, 340 nr sheetpile, 10 nr / day) in Portion 2	54	11-May-21	15-Jul-21	-96	WD(6d)
Section 21 (Subject to excision)						
S21-1012	Late Possession of Site of Portions 1d & 11a (CNE No. 009)	0		25-Apr-21	1095	CD(7d)
Portion 1b in Area M (Soil Treatment)						
Preparation work						
S21P1b-1010	Tree survey and prepare tree felling and transplant report	30	06-Jul-21	09-Aug-21	836	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	26-Apr-21	01-Jun-21	893	WD(6d)
S21P1d-1012	Approval & Acceptance of Tree felling Application	30	02-Jun-21	08-Jul-21	893	WD(6d)
S21P1d-1020	Site Clearance & Tree Felling	60	09-Jul-21	16-Sep-21	893	WD(6d)
Portion 11a in Area M (Soil Treatment)						
Preparation work						



Build King – Richwell Engineering Joint Venture

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ND/2019/01 - 3 Month Rolling Programme (2021-04)

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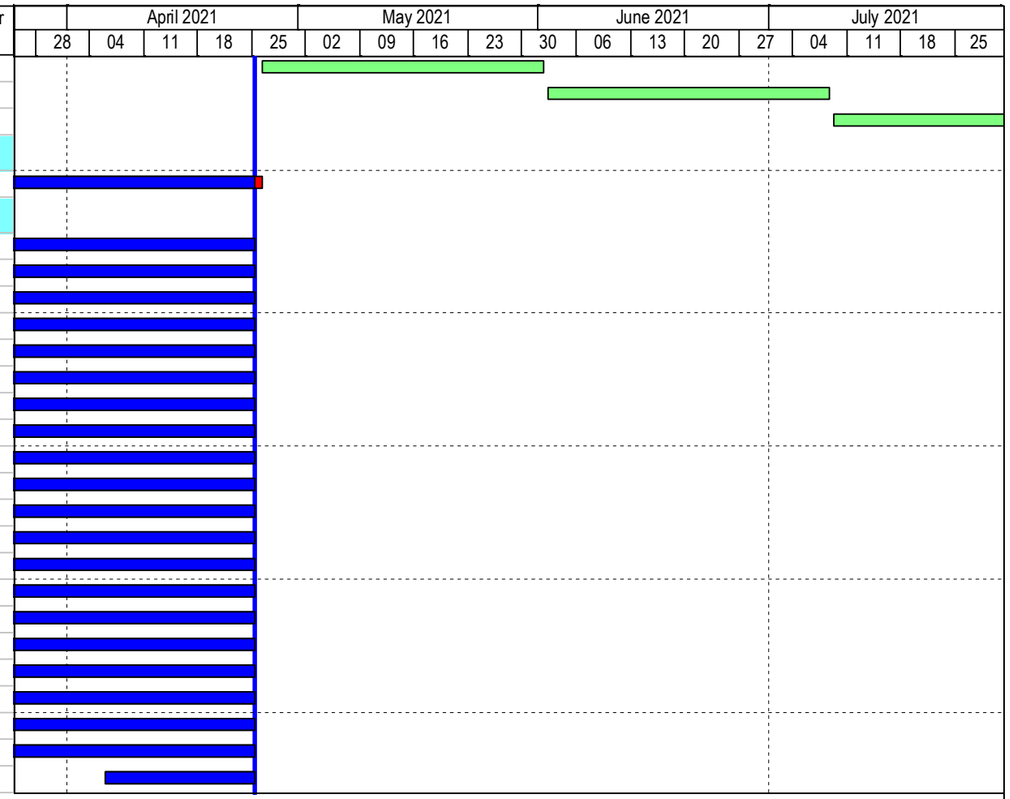
Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
S21P11a-1010	Tree survey and prepare tree felling and transplant report	30	26-Apr-21	01-Jun-21	888	WD(6d)
S21P11a-1012	Approval & Acceptance of Tree felling Application	30	02-Jun-21	08-Jul-21	888	WD(6d)
S21P11a-1020	Site Clearance & Tree Felling	60	09-Jul-21	16-Sep-21	888	WD(6d)
8.0 - PMI / CE						
PC-1011	Design and Construction of Project Manager's Main Site Office by Modular Integrated Construction (PMI 018, CE 007)	0	20-Nov-20 A	26-Apr-21	-168	WD(6d)
9.0 - Major EWN / CNE						
EC-1004	Late Possession of Site of Part of Portion 5 (in Area C1) (CNE No. 004)	0	06-Apr-20 A	25-Apr-21	176	CD(7d)
EC-1005	Late Possession of Site of Portion 3 (CNE No. 005)	0	06-Apr-20 A	25-Apr-21	418	CD(7d)
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-Apr-21	-183	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-Apr-21	-183	CD(7d)
EC-1013	Late Possession of Site of Portions 9b & 9d (CNE No. 007) (EWN No. 011)	0	06-Jul-20 A	25-Apr-21	-203	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-Apr-21	-123	CD(7d)
EC-1015	Late Possession of Site of Portions 1d & 11a (CNE No. 009)	0	06-Jul-20 A	25-Apr-21	1095	CD(7d)
EC-1016	Suspension of Works at Portion 10b (EWN No. 013)	0	02-Jul-20 A	25-Apr-21	493	CD(7d)
EC-1018	Opening of Cycle Track at Portion 2 and 10a (EWN No. 017) (CNE No. 022)	0	04-Aug-20 A	25-Apr-21	-305	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-Apr-21	-305	CD(7d)
EC-1023	Late Possession of Site of Portion 16 (CNE No. 011)	0	02-Aug-20 A	25-Apr-21	-124	CD(7d)
EC-1026	Handling of Unlawful Occupied Property Affected by the Works (CNE No. 014)	0	21-Aug-20 A	25-Apr-21	2083	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-Apr-21	2083	CD(7d)
EC-1028	Suspension of Works at Part of Portion 2 (CNE No. 016) (EWN No. 019)	0	31-Aug-20 A	25-Apr-21	-222	CD(7d)
EC-1030	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)	0	19-Oct-20 A	25-Apr-21	-305	CD(7d)
EC-1031	Temporary Stockpile at Portion 5 and Additional Land D (CNE No. 020)	0	15-Sep-20 A	25-Apr-21	163	CD(7d)
EC-1032	Unforeseen Ground Condition (Possible High Bedrock Level Encountered) at Portion 8a (EWN 022)	0	13-Nov-20 A	25-Apr-21	-152	CD(7d)
EC-1034	Item Omitted from the Bill of Quantities - Demolition of Existing Structures at the Location of Portion 9b (CNE No. 023)	0	04-Dec-20 A	25-Apr-21	-202	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-Apr-21	-183	CD(7d)
EC-1037	Design Change on Concrete Barrier KB01 (EWN 026)	0	22-Mar-21 A	25-Apr-21	293	CD(7d)
EC-1038	Late Access to and Use of Site of Portion 1e (CNE 25)	0	06-Apr-21 A	25-Apr-21	129	CD(7d)



Build King – Richwell Engineering Joint Venture

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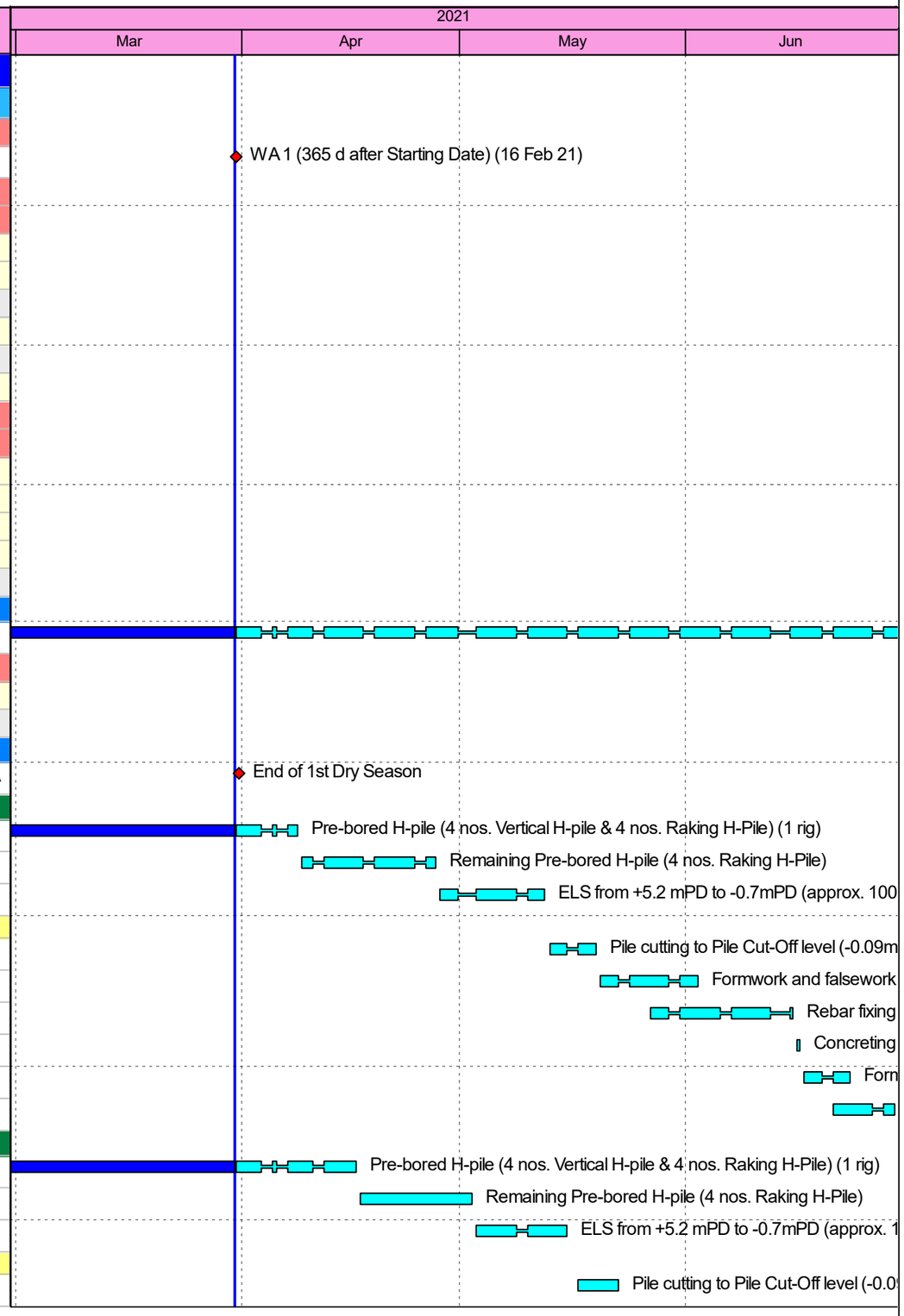
Chun Wo - Kwan Lee JOINT VENTURE

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					
Access Dates					
PD1140	WA 1 (365 d after Starting Date) (16 Feb 21)	0	0	31-Mar-21*	
Compensation Event					
Preliminaries					
Subletting					
Statutory Submission					
HyD					
Site Offices & Preliminaries					
Site Offices & Preliminaries					
Contractor's Design					
Works in Section 1					
Works in Section 2					
Portion 2 - Road & Drains					
Portion 4 - Road & Drains					
Portion 5 - Sewage Rising Main					
Portion 7 - Kwu Tung North Sewage Pumping station					
Sewage Pumping Station					
Foundation					
P7-2010	Install H-pile (62 nos.; 8 nos. / month /rig, 1 rig)	186	113	14-Dec-20 A	13-Aug-21
Works in Section 3					
Portion 9 - Footbridge					
Footbridge Construction					
1st Dry Season: Foundation Works					
P9-1040	End of 1st Dry Season	0	0		31-Mar-21 A
Piling works in Existing Feature: 2SE-B/FR107 (North River Embankment)					
P9-1090	Pre-bored H-pile (4 nos. Vertical H-pile & 4 nos. Raking H-Pile) (1 rig)	36	7	26-Jan-21 A	08-Apr-21
P9-1099	Remaining Pre-bored H-pile (4 nos. Raking H-Pile)	16	16	09-Apr-21	27-Apr-21
P9-1110	ELS from +5.2 mPD to -0.7mPD (approx. 1000m3; 100m3/day)	12	12	28-Apr-21	12-May-21
Abutment FK2-01M					
P9-1120	Pile cutting to Pile Cut-Off level (-0.09mPD)	6	6	13-May-21	19-May-21
P9-1130	Formwork and falsework for Pile Cap	12	12	20-May-21	02-Jun-21
P9-1140	Rebar fixing for Pile Cap (approx. 50T T25) (1T/day/gang) (3 gang)	16	16	27-May-21	15-Jun-21
P9-1150	Concreting the Pile Cap (approx. 200m3)	1	1	16-Jun-21	16-Jun-21
P9-1160	Formwork and falsework for Abutment Wall	6	6	17-Jun-21	23-Jun-21
P9-1170	Rebar fixing for Abutment wall (approx. 15T T25) (1T/day/gang) (2 gang)	8	8	21-Jun-21	29-Jun-21
Piling works Existing Feature: 2SE-B/FR104 (South River Embankment)					
P9-1230	Pre-bored H-pile (4 nos. Vertical H-pile & 4 nos. Raking H-Pile) (1 rig)	30	14	22-Feb-21 A	16-Apr-21
P9-1238	Remaining Pre-bored H-pile (4 nos. Raking H-Pile)	16	16	17-Apr-21	02-May-21
P9-1250	ELS from +5.2 mPD to -0.7mPD (approx. 1000m3; 100m3/day)	12	12	03-May-21	15-May-21
Abutment FK2-01M					
P9-1260	Pile cutting to Pile Cut-Off level (-0.09mPD)	6	6	17-May-21	22-May-21



Actual Work
Remaining Activitiy
Milestone

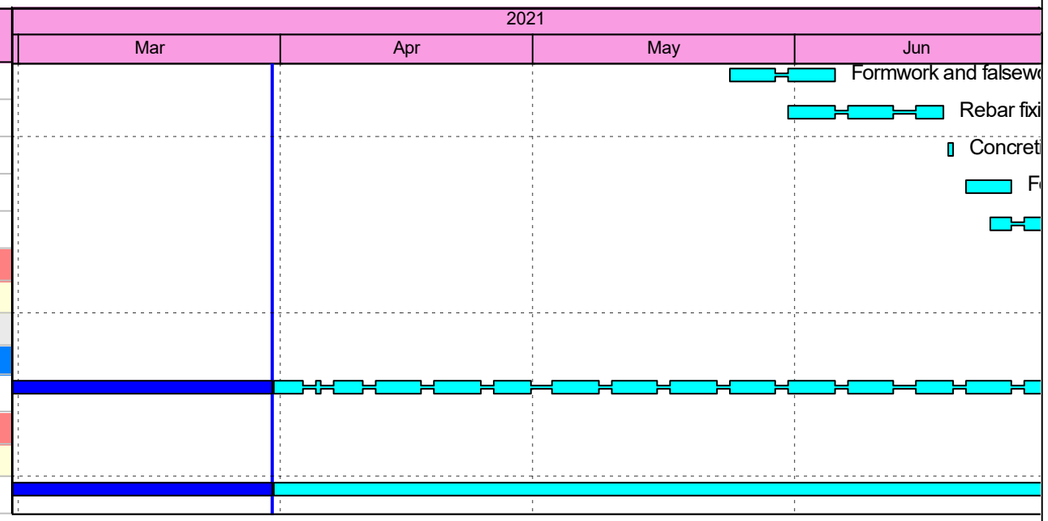
3-Months Rolling Programme (Apr to Jun 2021)

1128

Date	Revision	Checked	Approved
31-Mar-21	0	ZL	AC

Chun Wo - Kwan Lee JOINT VENTURE

Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish
P9-1270	Formwork and falsework for Pile Cap	12	12	24-May-21	05-Jun-21
P9-1280	Rebar fixing for Pile Cap (approx. 50T T25) (1T/day/gang) (3 gang)	16	16	31-May-21	18-Jun-21
P9-1290	Concreting the Pile Cap (approx. 200m3)	1	1	19-Jun-21	19-Jun-21
P9-1300	Formwork and falsework for Abutment Wall	6	6	21-Jun-21	26-Jun-21
P9-1310	Rebar fixing for Abutment wall (approx. 15T T25) (1T/day/gang) (2 gang)	8	8	24-Jun-21	03-Jul-21
Works in Section 4					
Portion 10 - Visitor Centre					
Visitor Centre					
Foundation					
P10-2010	Install H-pile (59 nos.; 1 pile / week/rig, 2 rigs)	184	119	22-Feb-21 A	20-Aug-21
Works in Section 5					
Portion 11 - Village Resite Area					
P11-1005	Temporary Storage Area	650	562	01-Dec-20 A	13-Oct-22



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3-Months Rolling Programme (Apr to Jun 2021)

1128

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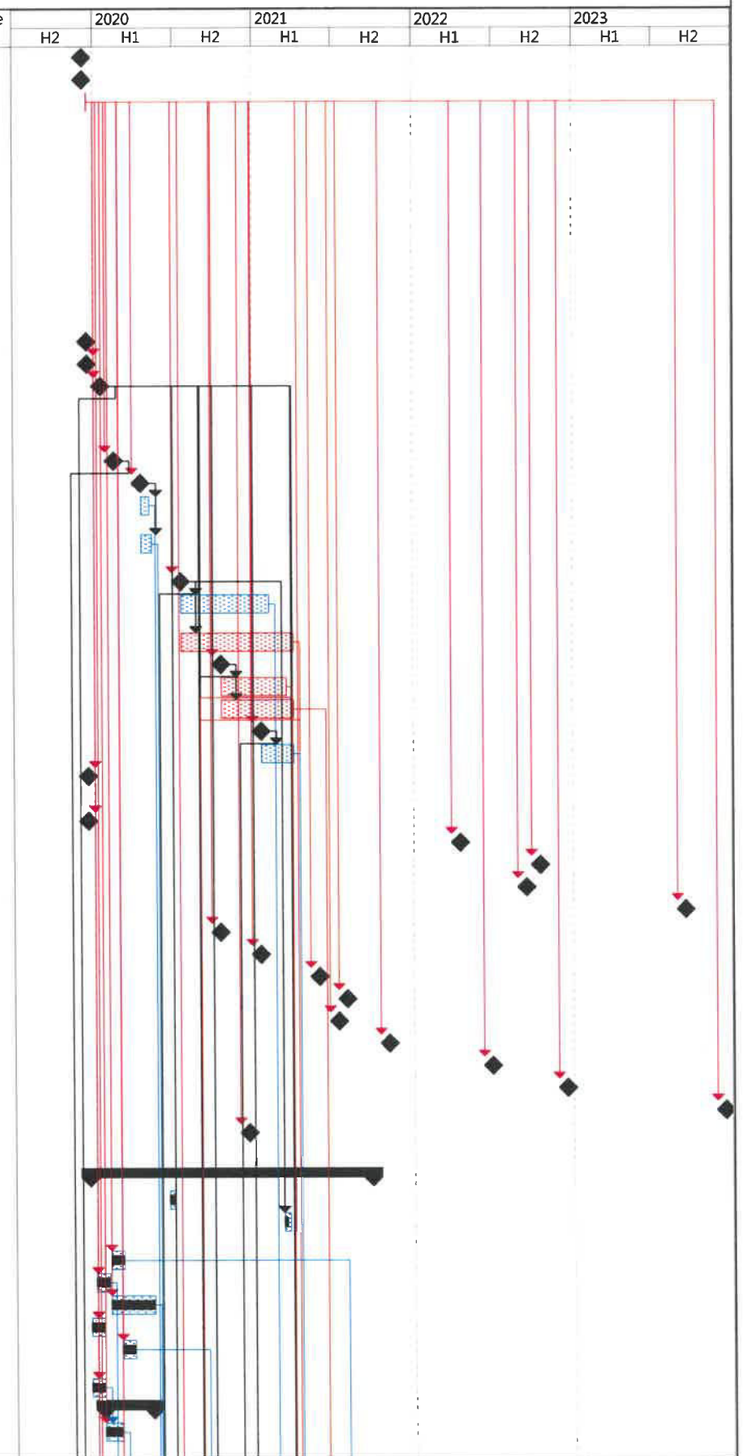
Contract No. ND/2019/03

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
1	**Contract Key Dates**	0 days	Tue 19/12/10	Tue 19/12/10			1479 days	0%	
2	**1.1 Contract Date**	0 days	Tue 19/12/10	Tue 19/12/10			1479 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 ...	-167 days	0%	
4	**1.3 Site Access Dates**	0 days	Thu 19/12/19	Thu 19/12/19			1470 days	0%	
5	Portions 25, 26, 27	0 days	Thu 19/12/19	Thu 19/12/19	3		1469 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	,70,71,73,82,135,218,235,253,279,8 days,77FS+30 days,78,79	302 days	0%	
7	Portions 23, 24	0 days	Mon 20/2/17	Mon 20/2/17	3FS+60 days	313	1409 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	1323 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	199,254,280	1329 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	314	1323 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	83,120,136,219,255,39,12,13	-101 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	112	6 days	0%	
13	Delay of Site Access Dates: 4B,5A	259 days	Sun 20/7/19	Sat 21/4/3	11	139	-101 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	211,236,281,15,16	-167 days	0%	
15	Delay of Site Access Date: Portion 9D	151 days	Mon 20/10/19	Thu 21/3/18	14	220,223	-151 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	220,227	-167 days	0%	
17	Portions 15, 16A, 16B, 17A, 17B, 21	0 days	Mon 21/1/18	Mon 21/1/18	3FS+396 days	298,237,256,282,18	-65 days	0%	
18	Delay of Site Access for Area with Structure in Portion 16B	75 days	Tue 21/1/19	Sat 21/4/3	17	244	35 days	0%	
19	Works Area WA1	0 days	Thu 19/12/19	Thu 19/12/19	3		1469 days	0%	
20									
21	**1.4 Completion of the works**	**0 days**	**Thu 19/12/19**	**Thu 19/12/19**	**3**		**1469 days**	**0%**	
22	Section 1	0 days	Mon 22/4/18	Mon 22/4/18	3FS+851 days		618 days	0%	
23	Section 2	0 days	Tue 22/10/18	Tue 22/10/18	3FS+1034 days		435 days	0%	
24	Section 3	0 days	Sat 22/9/17	Sat 22/9/17	3FS+1003 days		466 days	0%	
25	Section 3A	0 days	Sun 23/9/17	Sun 23/9/17	3FS+1368 days		101 days	0%	
26	Section 4	0 days	Fri 20/10/16	Fri 20/10/16	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		941 days	0%	
29	Section 7	0 days	Mon 21/8/2	Mon 21/8/2	3FS+592 days		877 days	0%	
30	Section 8	0 days	Tue 21/7/13	Tue 21/7/13	3FS+572 days		897 days	0%	
31	Section 9	0 days	Sat 21/11/6	Sat 21/11/6	3FS+688 days		781 days	0%	
32	Section 10	0 days	Thu 22/6/30	Thu 22/6/30	3FS+924 days		545 days	0%	
33	Section 11	0 days	Sun 22/12/18	Sun 22/12/18	3FS+1095 days		374 days	0%	
34	Section 11A	0 days	Mon 23/12/18	Mon 23/12/18	3FS+1460 days		9 days	0%	
35	Section 12	0 days	Fri 20/12/18	Fri 20/12/18	3FS+365 days		1104 days	0%	
36									
37	**2. Preliminary works**	**648 days**	**Fri 19/12/20**	**Mon 21/9/27**			**821 days**	**55%**	
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		1011 days	50%	
40	Prepare, submit & Approve ICE	30 days	Mon 20/2/3	Tue 20/3/3	3	169	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%	



Revised Programme: April 2021

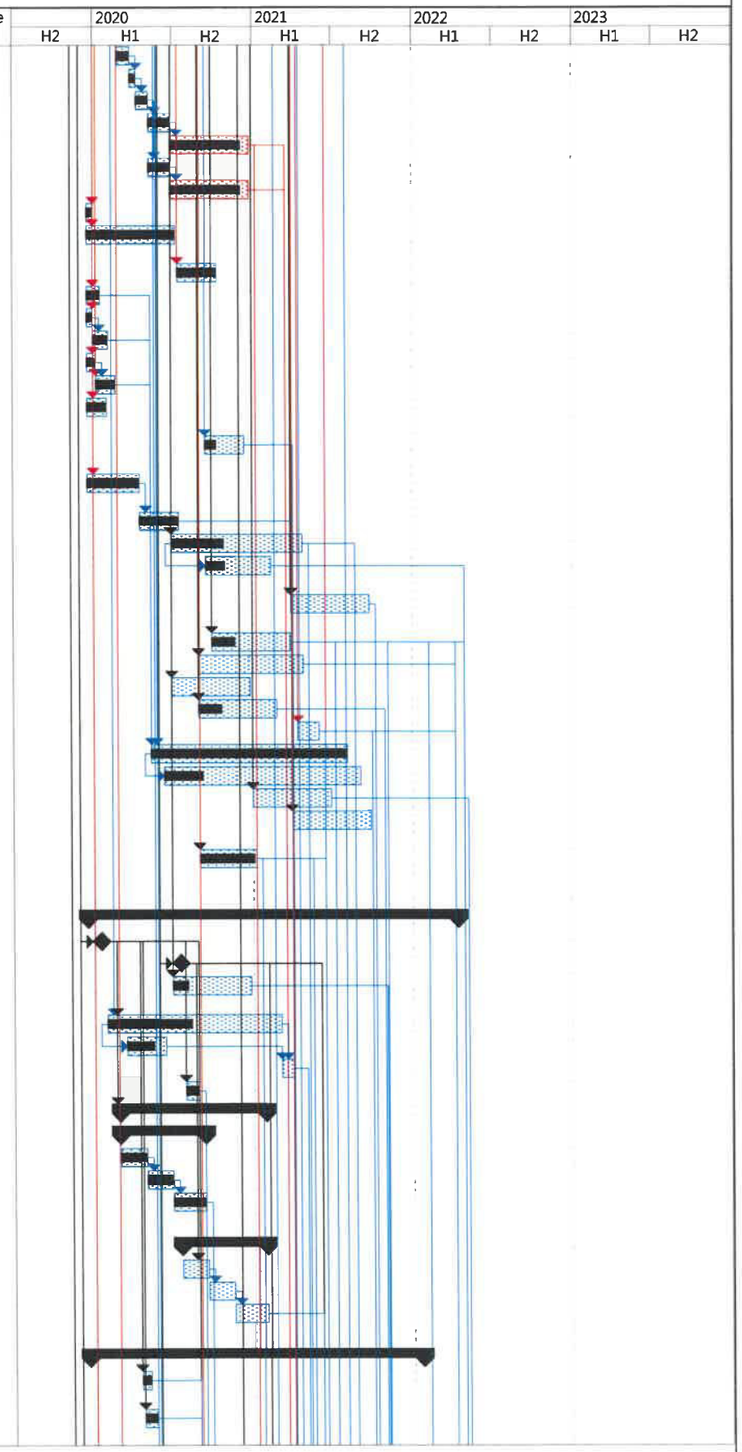
Data Date : 2021-4-3

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
48	Habitat Surveys	30 days	Fri 20/2/28	Sat 20/3/28	47	49	0 days	100%	
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	223,240,259,285	-44 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	223,240,259,285	-44 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	139	10 days	30%	
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	139	0 days	100%	
67	Design/submission/approval of Lodging Facilities	300 days	Tue 20/6/30	Sun 21/4/25	6	125,68SS,124	19 days	40%	
68	Design / Submission / approval of Sewerage System of Lodging Facilities	150 days	Wed 20/9/16	Fri 21/2/12	67SS	128	461 days	30%	
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	153	603 days	0%	
70	Design/submission/approval of E&M works for Facilities	180 days	Wed 20/9/30	Sun 21/3/28	6	128,174,165,130,156,155	328 days	30%	
71	Design/submission/approval of Plumbing works for Facilities	240 days	Mon 20/8/31	Tue 21/4/27	6	156,165	418 days	0%	
72	Design/submission/approval and supply of Lighting	180 days	Tue 20/6/30	Sat 20/12/26	6		1096 days	0%	
73	Design/submission/approval and supply of park facilities	180 days	Sun 20/8/30	Thu 21/2/25	6	159	318 days	30%	
74	Submission and Approval for Fire Extinguisher	50 days	Wed 21/4/14	Wed 21/6/2	3	155,165,181,188,268,174	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		844 days	20%	
77	Design/submission/approval of Entrance gantry signages	180 days	Fri 21/1/1	Tue 21/6/29	6FS+30 days	167	385 days	0%	
78	Design/submission/approval of Irrigation system for landscape softworks	180 days	Thu 21/4/1	Mon 21/9/27	6		821 days	0%	
79	Design/submission/approval of Irrigation Channel and other associated facilities	130 days	Tue 20/9/1	Fri 21/1/8	6	230,247,273,292	72 days	97%	
80									
81	**3. Section 1 of the works (Portions 1 and 1A)**	**848 days**	**Fri 19/12/20**	**Fri 22/4/15**			**621 days**	**37%**	
82	Site Access in Portion 1	0 days	Sat 20/1/18	Sat 20/1/18	6	85,103,89FS+30 days,102,101,88	0 days	100%	
83	Site Access in Portion 1A	0 days	Sat 20/7/18	Sat 20/7/18	11	113,112,96	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	106,114	282 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	108 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	373 days	70%	
87	Application of Traffic Advice and Road Work Advice	30 days	Sat 21/3/6	Sun 21/4/4	85,86	105	108 days	0%	
88	Submission of Utilities Detection Report	30 days	Wed 20/7/29	Thu 20/8/27	82	103	0 days	100%	
89	**Relocation of Utilities (by Others)**	**335 days**	**Sun 20/3/1**	**Fri 21/1/29**	**82FS+30 days**		**134 days**	**50%**	
90	**Relocation of CLP Pole at Yin Kong Road in (Portion 1)**	**195 days**	**Sun 20/3/1**	**Fri 20/9/11**			**0 days**	**100%**	
91	Planning for Relocation	60 days	Sun 20/3/1	Wed 20/4/29		92	0 days	100%	
92	Construction of New Pole	60 days	Thu 20/4/30	Sun 20/6/28	91	93	0 days	100%	
93	Outage and Diversion of Underground Cable	75 days	Mon 20/6/29	Fri 20/9/11	92	103	0 days	100%	
94									
95	**Relocation of CLP Pole at Yin Kong Road (Portion 1A)**	**195 days**	**Sun 20/7/19**	**Fri 21/1/29**			**134 days**	**0%**	
96	Planning for Relocation	60 days	Sun 20/7/19	Wed 20/9/16	83	97	134 days	0%	
97	Construction of New Pole	60 days	Thu 20/9/17	Sun 20/11/15	96	98	134 days	0%	
98	Outage and Diversion of Underground Cable	75 days	Mon 20/11/16	Fri 21/1/29	97	113	134 days	0%	
99									
100	**Site Works (under Portion 1)**	**765 days**	**Fri 19/12/20**	**Sat 22/1/22**			**704 days**	**41%**	
101	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	103	0 days	100%	
102	Compensation Event No. 003 - Reprovision of Hoarding and gate at Enchi Lodge	30 days	Wed 20/4/22	Thu 20/5/21	82	103	0 days	100%	



Revised Programme: April 2021
Data Date : 2021-4-3

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

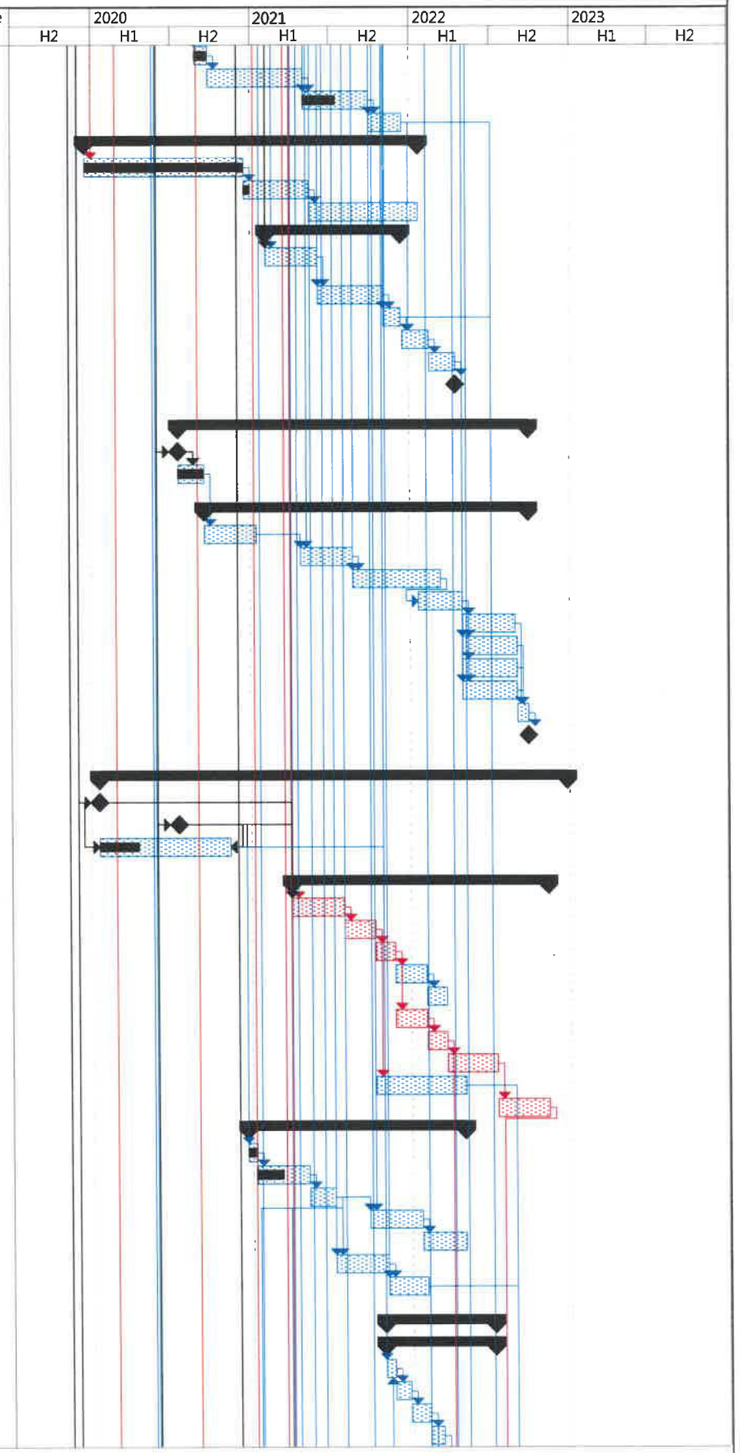
Contract No. ND/2019/03

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
103	Remove existing fencing and site clearance	30 days	Fri 20/8/28	Sat 20/9/26	82,88,93,101,102	104	0 days	100%	
104	Road widening	220 days	Sun 20/9/27	Tue 21/5/4	103	105	78 days	0%	
105	Drainage works	150 days	Wed 21/5/5	Fri 21/10/1	104,87	106	3 days	50%	7 days
106	Lighting and installation of street fruniture	76 days	Sat 21/10/2	Thu 21/12/16	105,84	115,308	3 days	0%	4 days
107	**Construction of Pai Lau**	**765 days**	**Fri 19/12/20**	**Sat 22/1/22**			**704 days**	**50%**	
108	Instruction from PM	365 days	Fri 19/12/20	Fri 20/12/18	3	109	0 days	100%	
109	Design/Submission/approval	150 days	Sat 20/12/19	Mon 21/5/17	108	110	704 days	10%	
110	Construction of Pai Lau	250 days	Tue 21/5/18	Sat 22/1/22	109		704 days	0%	7 days
111	**Site Works (under Portion 1A)**	**310 days**	**Sun 21/2/7**	**Mon 21/12/13**			**6 days**	**0%**	
112	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	120 days	Sun 21/2/7	Sun 21/6/6	83,12	113	6 days	0%	
113	Drainage works	150 days	Mon 21/6/7	Wed 21/11/3	83,112,98	114	6 days	0%	7 days
114	Lighting and installation of street fruniture	40 days	Thu 21/11/4	Mon 21/12/13	113,84	115,308	6 days	0%	4 days
115	Paving block on footway	60 days	Fri 21/12/17	Mon 22/2/14	106,114	116	3 days	0%	
116	bituminous pavement on carriageway	60 days	Tue 22/2/15	Fri 22/4/15	115	117	3 days	0%	
117	**Completion of Section 1 of the works**	**0 days**	**Fri 22/4/15**	**Fri 22/4/15**	**116**		**3 days**	**0%**	
118									
119	**4. Section 2 of the works (Portions 2 and 2A)**	**803 days**	**Sat 20/7/18**	**Thu 22/9/29**			**454 days**	**5%**	
120	Site Access in Portions 2 and 2A	0 days	Sat 20/7/18	Sat 20/7/18	11	121	1257 days	0%	
121	General site clearance / demolition work / Removal of Asbesto Containing Material	60 days	Sun 20/7/19	Wed 20/9/16	120	123	0 days	100%	
122	**Construction of lodging facility & associated facilities**	**743 days**	**Thu 20/9/17**	**Thu 22/9/29**			**19 days**	**0%**	
123	Excavation and formation preparation	120 days	Thu 20/9/17	Thu 21/1/14	121	124	120 days	0%	
124	Construction of foundation / pavement	120 days	Mon 21/4/26	Mon 21/8/23	123,67	125	19 days	0%	
125	Supply of logging units	200 days	Tue 21/8/24	Fri 22/3/11	124,67	126FS-50 days	19 days	0%	
126	Installation of lodging units	100 days	Fri 22/1/21	Sat 22/4/30	125FS-50 days	127,128,129,130	19 days	0%	3 days
127	Installation of furniture / facility	120 days	Sun 22/5/1	Sun 22/8/28	126	131	24 days	0%	
128	Installation of E&M works	125 days	Sun 22/5/1	Fri 22/9/2	70,68,126	131	19 days	0%	5 days
129	Installation of Fire Services	125 days	Sun 22/5/1	Fri 22/9/2	126	131	19 days	0%	
130	Installation of plumbing works	125 days	Sun 22/5/1	Fri 22/9/2	70,126	131	19 days	0%	5 days
131	Testing and commissioning	27 days	Sat 22/9/3	Thu 22/9/29	130,128,129,127	132	19 days	0%	
132	**Completion of Section 2 of the works**	**0 days**	**Thu 22/9/29**	**Thu 22/9/29**	**131**		**19 days**	**0%**	
133									
134	**5. Section 3 of the works (Portions 3, 4, 4A, 4B, 5, 5A, 6 & 6A)**	**1074 days**	**Sat 20/1/18**	**Tue 22/12/27**			**365 days**	**7%**	
135	Site Access in Portions 5 and 6A	0 days	Sat 20/1/18	Sat 20/1/18	6	139,137SS	340 days	0%	
136	Site Access in Portions 3, 4, 4A, 4B, 5A and 6	0 days	Sat 20/7/18	Sat 20/7/18	11	150,139,137FF+20 days	158 days	0%	
137	General site clearance / demolition work / Removal of Asbesto Containing Material	300 days	Sun 20/1/19	Fri 20/11/13	135SS,136FF+20 days	159,150	422 days	30%	
138	**Construction of water treatment wetland**	**588 days**	**Sun 21/4/4**	**Sat 22/11/12**			**-101 days**	**0%**	
139	Excavation for sedimentation pond	120 days	Sun 21/4/4	Sun 21/8/1	64,135,136,66,13	140	-101 days	0%	
140	Excavation for macophyte zones - down stream	71 days	Mon 21/8/2	Mon 21/10/11	139	141,147	-101 days	0%	
141	Bedding preparation	45 days	Tue 21/10/12	Thu 21/11/25	140	142,144	-101 days	0%	
142	Excavation for macophyte zones - mid stream	72 days	Fri 21/11/26	Sat 22/2/5	141	143	645 days	0%	
143	Bedding preparation	45 days	Sun 22/2/6	Tue 22/3/22	142		645 days	0%	
144	Excavation for macophyte zones - upstream	72 days	Fri 21/11/26	Sat 22/2/5	141	145	-101 days	0%	
145	Bedding preparation	45 days	Sun 22/2/6	Tue 22/3/22	144	146,191	-101 days	0%	
146	Excavation for open water zone	115 days	Wed 22/3/23	Fri 22/7/15	145	148	-56 days	0%	
147	Construction of wetland broadwalk	205 days	Tue 21/10/12	Wed 22/5/4	140	192	136 days	0%	
148	Construction of Inlet and outlet structures	120 days	Sat 22/7/16	Sat 22/11/12	146	192	-56 days	0%	
149	**Construction of birdhide**	**499 days**	**Mon 20/12/21**	**Tue 22/5/3**			**603 days**	**13%**	
150	Excavation and formation preparation	21 days	Mon 20/12/21	Sun 21/1/10	136,137	151	0 days	100%	
151	Construction of base slab	120 days	Mon 21/1/11	Mon 21/5/10	150	152	139.5 days	50%	
152	Installation of steel structural frame	60 days	Tue 21/5/11	Fri 21/7/9	151	153,176,155,183	139.5 days	0%	
153	Installation of timber wall / roof	120 days	Sun 21/9/26	Sun 22/1/23	152,69	154	603 days	0%	4 days
154	Installation of timber rised flooring	100 days	Mon 22/1/24	Tue 22/5/3	153		603 days	0%	
155	Installation of E&M, Fire Services System	120 days	Sat 21/7/10	Sat 21/11/6	152,70,74	156	225 days	0%	
156	Testing & commissioning	90 days	Sun 21/11/7	Fri 22/2/4	70,71,155	192	225 days	0%	
157	**Construction of farmer's forum / open area**	**251 days**	**Sun 21/10/31**	**Fri 22/7/8**			**71 days**	**0%**	
158	**Construction of tea house pavilion**	**251 days**	**Sun 21/10/31**	**Fri 22/7/8**			**71 days**	**0%**	
159	Construction of base slab	21 days	Sun 21/10/31	Sat 21/11/20	137,171,73	160	71 days	0%	
160	Construction of walls with columns	35 days	Sun 21/11/21	Sat 21/12/25	159	161	71 days	0%	
161	Installation of roof steel structure	45 days	Sun 21/12/26	Tue 22/2/8	160	162,166	71 days	0%	
162	Installation of recycled timber strip for roof	30 days	Wed 22/2/9	Thu 22/3/10	161	163	71 days	0%	



Revised Programme: April 2021

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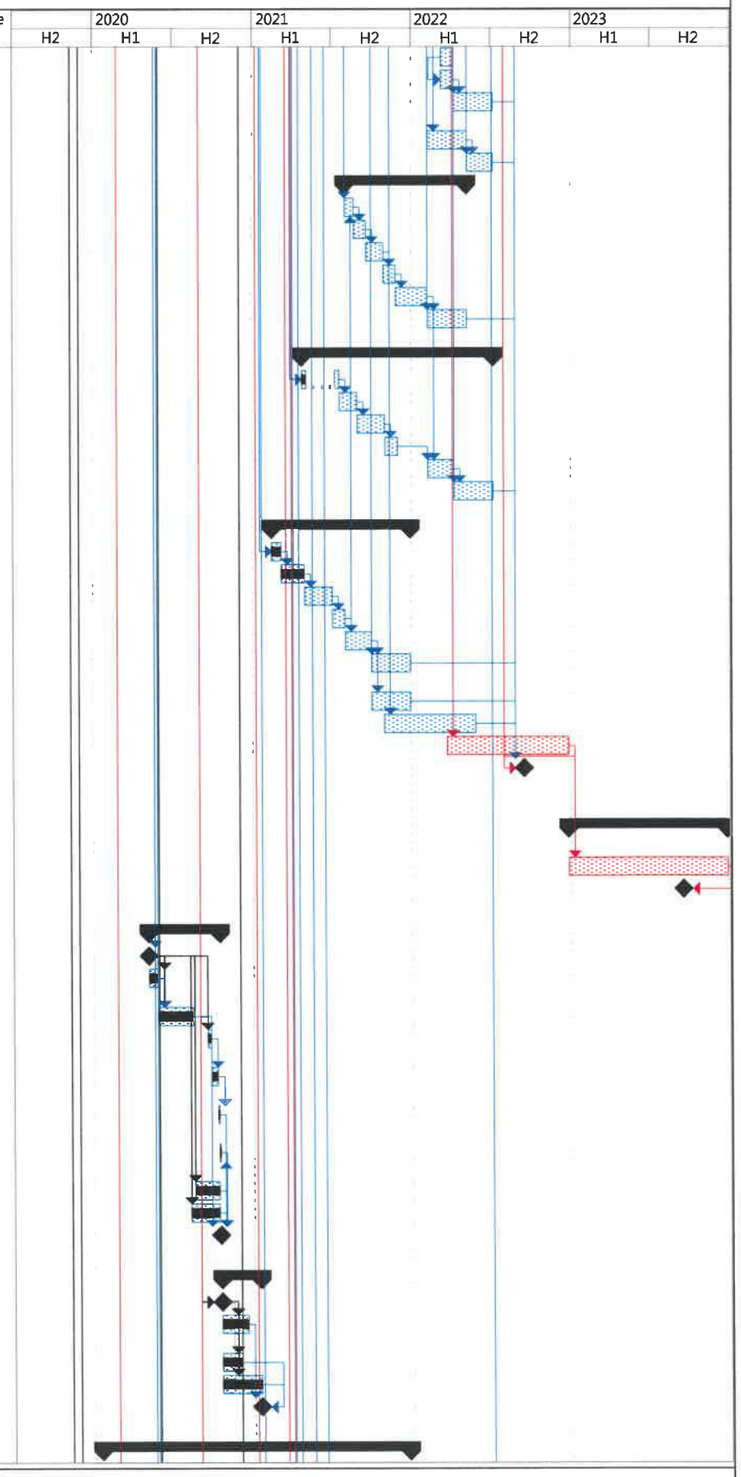
Task | Summary | Rolled Up Milestone | External Tasks | Progress

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
163	Installation of recycled timber strip for walls	30 days	Fri 22/3/11	Sat 22/4/9	162	164SS	71 days	0%	
164	Supply and installation of bench	30 days	Fri 22/3/11	Sat 22/4/9	163SS	165	71 days	0%	
165	Installation of plumbing works / E&M works with testing & commissioning	90 days	Sun 22/4/10	Fri 22/7/8	164,70,71,74	192	71 days	0%	
166	Construction of paving slab for open area	90 days	Wed 22/2/9	Mon 22/5/9	161	167	71 days	0%	4 days
167	Construction of entrance gantry signages	60 days	Tue 22/5/10	Fri 22/7/8	166,77	192	71 days	0%	4 days
168	**Construction of Type 1 storage house**	**280 days**	**Tue 21/8/3**	**Mon 22/5/9**			**71 days**	**0%**	
169	Excavation and formation preparation	21 days	Tue 21/8/3	Mon 21/8/23	40,186	170	71 days	0%	
170	Construction of base slab	28 days	Tue 21/8/24	Mon 21/9/20	169	171	71 days	0%	
171	Construction of walls and roof	40 days	Tue 21/9/21	Sat 21/10/30	170	172,159,190	71 days	0%	
172	Installation of aluminium louvre / GMS door	28 days	Sun 21/10/31	Sat 21/11/27	171	173	71 days	0%	
173	Installation of recycled timber strip / external finishing	73 days	Sun 21/11/28	Tue 22/2/8	172	174,180	71 days	0%	3 days
174	Installation of E&M works & Fire Services with testing & commissioning	90 days	Wed 22/2/9	Mon 22/5/9	173,70,74	192	131 days	0%	
175	**Construction of outdoor classroom shelter**	**439 days**	**Mon 21/4/26**	**Fri 22/7/8**			**71 days**	**3%**	
176	Excavation and formation preparation	21 days	Mon 21/4/26	Tue 21/7/20	152	177	139.5 days	50%	
177	Construction of base slab	42 days	Tue 21/7/20	Tue 21/8/31	176	178	139.5 days	0%	
178	Construction of concrete columns	63 days	Tue 21/8/31	Tue 21/11/2	177	179	139.5 days	0%	3 days
179	Installation of steel roof frame with corrugated sheet	30 days	Tue 21/11/2	Thu 21/12/2	178	180	139.5 days	0%	
180	Installation of recycled timber strip roofing	60 days	Wed 22/2/9	Sat 22/4/9	179,173	181	71 days	0%	
181	Installation of E&M works and Fire Services with testing & comissioning	90 days	Sun 22/4/10	Fri 22/7/8	180,74	192	71 days	0%	
182	**Construction of storage compositing facility**	**319 days**	**Mon 21/2/15**	**Thu 21/12/30**			**261 days**	**24%**	
183	Excavation and formation preparation	22 days	Mon 21/2/15	Mon 21/3/8	152	184	0 days	100%	
184	Construction of base slab	54 days	Tue 21/3/9	Sat 21/5/1	183	185	0 days	100%	
185	Construction of concrete columns	63 days	Sun 21/5/2	Sat 21/7/3	184	186	71 days	0%	3 days
186	Installation of steel roof frame with corrugated sheet	30 days	Sun 21/7/4	Mon 21/8/2	185	187,169	71 days	0%	
187	Installation of recycled timber strip roofing	60 days	Tue 21/8/3	Fri 21/10/1	186	188,189	261 days	0%	
188	Installation of E&M works & Fire Services with testing & commissioning	90 days	Sat 21/10/2	Thu 21/12/30	187,74	192	261 days	0%	
189	**Construction of entry landing with drop bar**	**90 days**	**Sat 21/10/2**	**Thu 21/12/30**	**187**	**192**	**261 days**	**0%**	
190	**Construction of walkway**	**210 days**	**Sun 21/10/31**	**Sat 22/5/28**	**171**	**192**	**112 days**	**0%**	
191	**Landscaping softworks**	**280 days**	**Wed 22/3/23**	**Tue 22/12/27**	**145**	**192,195**	**-101 days**	**0%**	
192	**Completion of Section 3 of the works**	**0 days**	**Sat 22/9/17**	**Sat 22/9/17**	**156,165,167,174,181,188,189**		**-101 days**	**0%**	
193									
194	**6. Section 3A of the works (Establishment works for Section 2 and 3)**	**365 days**	**Wed 22/12/28**	**Wed 23/12/27**			**-101 days**	**0%**	
195	Establishment works for landscape softworks	365 days	Wed 22/12/28	Wed 23/12/27	191	196FF	-101 days	0%	
196	**Completion of Section 3A of the Works**	**0 days**	**Sun 23/9/17**	**Sun 23/9/17**	**195FF**		**-101 days**	**0%**	
197									
198	**7. Section 4 of the works (Portion 18)**	**162 days**	**Thu 20/5/7**	**Fri 20/10/16**			**0 days**	**100%**	
199	Site Access in Portion 18	0 days	Thu 20/5/7	Thu 20/5/7	9	200,201,206,207,202	0 days	100%	
200	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	20 days	Fri 20/5/8	Wed 20/5/27	199	201	0 days	100%	
201	General maintenance to exisitng wetland	80 days	Thu 20/5/28	Sat 20/8/15	199,200	208	0 days	100%	7 days
202	Compensation Event No. 020 - Inclement Weather Conditions in August 2020	8.5 days	Fri 20/9/18	Sat 20/9/26	199	203	0 days	100%	
203	Compensation Event No. 021 - Inclement Weather Conditions in September 2020	14.5 days	Sat 20/9/26	Sat 20/10/10	202	204	0 days	100%	
204	Compensation Event No. 028 - Inclement Weather Conditions in October 2020	3 days	Sun 20/10/11	Tue 20/10/13	203	208	0 days	100%	
205	Compensation Event No. 026 - Provision of Root Barriers behind Gabion Walls of Irrigation Channel	3 days	Wed 20/10/14	Fri 20/10/16	206	208	0 days	100%	
206	Construction of Irrigation Channel	56 days	Wed 20/8/19	Tue 20/10/13	199	205	0 days	100%	
207	Construction of Metal Wire Railing	65 days	Mon 20/8/10	Tue 20/10/13	199	208	0 days	100%	
208	**Completion of Section 4 of the works**	**0 days**	**Fri 20/10/16**	**Fri 20/10/16**	**201,207,204,205**		**0 days**	**100%**	
209									
210	**8. Section 5 of the works (Portion 14)**	**90 days**	**Sun 20/10/18**	**Sat 21/1/16**			**0 days**	**100%**	
211	Site Access in Portion 14	0 days	Sun 20/10/18	Sun 20/10/18	14	214,212,213	0 days	100%	
212	General site clearance / demolition work / Removal of Asbesto Containing Material	60 days	Mon 20/10/19	Thu 20/12/17	211	215	0 days	100%	
213	General maintenance to exisiting wetland	45 days	Mon 20/10/19	Wed 20/12/2	211	215FF	0 days	100%	
214	Boundary Structure - Metal Wire Railing	90 days	Mon 20/10/19	Sat 21/1/16	211	215FF	0 days	100%	
215	**Completion of Section 5 of the works**	**0 days**	**Sat 21/1/16**	**Sat 21/1/16**	**214FF,213FF,212**		**0 days**	**0%**	
216									
217	**9. Section 6 of the works (Portions 8,8A,8B and 9,9A~9G)**	**705 days**	**Sat 20/1/18**	**Thu 21/12/23**			**-40 days**	**15%**	



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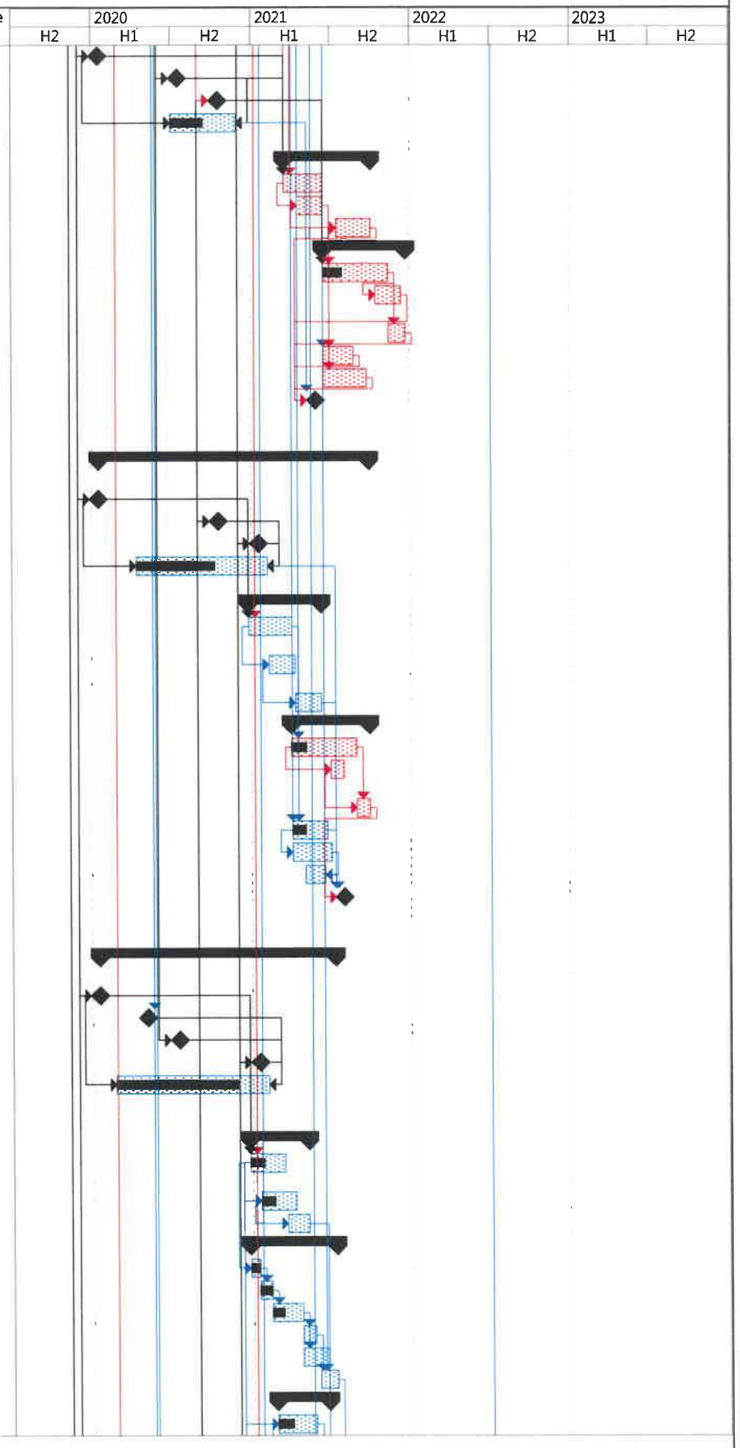
Task | Summary | Rolled Up Milestone | External Tasks | Progress
Critical Task | Rolled Up Task | Rolled Up Progress | Project Summary | Deadline
Milestone | Rolled Up Critical Task | Split | Group By Summary

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
218	Site Access in Portions 8A, 9A, 9C, 9E, 9F, 9G	0 days	Sat 20/1/18	Sat 20/1/18	6	223,221SS	0 days	100%	
219	Site Access in Portion 8	0 days	Sat 20/7/18	Sat 20/7/18	11	221FF+10 days,223	0 days	100%	
220	Site Access in Portions 8B, 9, 9B, 9D	0 days	Sun 20/10/18	Sun 20/10/18	15,16	221FF+10 days,223,227	24 days	50%	
221	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	150 days	Fri 20/7/3	Sun 20/11/29	218SS,219FF+10 days,220FF+10 days	232	182 days	50%	
222	**Wetland Restoration / Wetland Creation**	**200 days**	**Fri 21/3/19**	**Mon 21/10/4**			**-127 days**	**0%**	
223	Excavation	90 days	Fri 21/3/19	Wed 21/6/16	218,54,52,219,220,15	224SS+30 days	-127 days	0%	
224	Backfilling	60 days	Sun 21/4/18	Wed 21/6/16	223SS+30 days	225SS+90 days,227,230,231	-127 days	0%	
225	Agricultural Planting	80 days	Sat 21/7/17	Mon 21/10/4	224SS+90 days	232	-127 days	0%	
226	**Construction of Storage Sheds**	**190 days**	**Thu 21/6/17**	**Thu 21/12/23**			**-40 days**	**18%**	
227	Construction of concrete structure	150 days	Thu 21/6/17	Sat 21/11/13	224,220,16	228FS-30 days,229	-207 days	30%	4 days
228	Installation of Alluminium Window/Lourvre and GMS Door with recycle timber decoration	60 days	Fri 21/10/15	Mon 21/12/13	227FS-30 days	232	-197 days	0%	
229	Installation of GMS roofing structure with recycle timber	40 days	Sun 21/11/14	Thu 21/12/23	227	232	-207 days	0%	
230	Construction of Channel	70 days	Thu 21/6/17	Wed 21/8/25	224,79	232	-87 days	0%	7 days
231	Construction of walkway	100 days	Thu 21/6/17	Fri 21/9/24	224	232	-117 days	0%	7 days
232	**Completion of Section 6 of the works**	**0 days**	**Sun 21/5/30**	**Sun 21/5/30**	**225,229,230,231,221,228**		**-207 days**	**0%**	
233									
234	**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**			**-30 days**	**26%**	
235	Site Access in Portions 10A, 10B, 13A, 16	0 days	Sat 20/1/18	Sat 20/1/18	6	240,238SS	0 days	100%	
236	Site Access in Portions 10, 13	0 days	Sun 20/10/18	Sun 20/10/18	14	238FF+20 days	0 days	100%	
237	Site Access in Portions 16A, 16B	0 days	Mon 21/1/18	Mon 21/1/18	17	238FF+20 days	0 days	100%	
238	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	300 days	Tue 20/4/14	Sun 21/2/7	235SS,236FF+20 days,237FF+20 days	250	176 days	60%	
239	**Wetland Restoration / Wetland Creation**	**167 days**	**Sat 20/12/26**	**Thu 21/6/10**			**53 days**	**0%**	
240	Excavation	100 days	Sat 20/12/26	Sun 21/4/4	235,54,52	241SS+47 days,247	53 days	0%	
241	Backfilling	60 days	Thu 21/2/11	Sun 21/4/11	240SS+47 days	242SS+60 days	53 days	0%	
242	Agricultural Planting	60 days	Mon 21/4/12	Thu 21/6/10	241SS+60 days	250	53 days	0%	
243	**Construction of storage sheds**	**180 days**	**Sat 21/4/3**	**Wed 21/9/29**			**-30 days**	**17%**	
244	Construction of concrete structure	150 days	Sat 21/4/3	Mon 21/8/30	18	245SS+90 days,246	-58 days	24%	
245	Installation of Alluminium Window/Lourvre and GMS Door with recycle timber decoration	30 days	Fri 21/7/2	Sat 21/7/31	244SS+90 days	246SS+30 days	-28 days	0%	
246	Installation of GMS roofing structure with recycle timber	30 days	Tue 21/8/31	Wed 21/9/29	245SS+30 days,244	250	-58 days	0%	
247	Construction of Channel	80 days	Mon 21/4/5	Wed 21/6/23	79,240	248SS,250	40 days	40%	7 days
248	Construction of walkway	90 days	Mon 21/4/5	Sat 21/7/3	247SS	249FF-15 days,250	30 days	0%	6 days
249	Construction of entry landing with drop bar	45 days	Wed 21/5/5	Fri 21/6/18	248FF-15 days	250	45 days	0%	
250	**Completion of Section 7 of the works**	**0 days**	**Mon 21/8/2**	**Mon 21/8/2**	**242,246,247,248,249,238**		**-58 days**	**0%**	
251									
252	**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**			**898 days**	**44%**	
253	Site Access in Portions 7, 17, 19A, 19B, 19C, 20A, 20B	0 days	Sat 20/1/18	Sat 20/1/18	6	259,257SS	0 days	100%	
254	Site Access in Portions 19, 20, 20C	0 days	Thu 20/5/7	Thu 20/5/7	9	257FF+20 days	0 days	100%	
255	Site Access in Portions 7A, 7B	0 days	Sat 20/7/18	Sat 20/7/18	11	257FF+20 days	0 days	100%	
256	Site Access in Portions 17A, 17B	0 days	Mon 21/1/18	Mon 21/1/18	17	257FF+20 days	1053 days	0%	
257	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	350 days	Mon 20/2/24	Sun 21/2/7	253SS,254FF+20 days,255FF+20 days,256FF+20 days		1053 days	80%	
258	**Wetland Restoration / Wetland Creation**	**135 days**	**Sat 20/12/26**	**Sun 21/5/9**			**962 days**	**30%**	
259	Excavation	80 days	Sat 20/12/26	Mon 21/3/15	253,54,52	260SS+25 days,270SS+60 days,263SS,273SS	1017 days	40%	
260	Backfilling	80 days	Wed 21/1/20	Fri 21/4/9	259SS+25 days	261SS+60 days	992 days	40%	
261	Agricultural Planting	50 days	Sun 21/3/21	Sun 21/5/9	260SS+60 days	276	65 days	0%	
262	**Construction of Type 2 storage house**	**199 days**	**Sat 20/12/26**	**Mon 21/7/12**			**898 days**	**31%**	
263	Excavation and formation preparation	21 days	Sat 20/12/26	Fri 21/1/15	259SS	264	0 days	100%	
264	Construction of base slab	28 days	Sat 21/1/16	Fri 21/2/12	263	265	0 days	100%	
265	Construction of walls and roof	70 days	Sat 21/2/13	Fri 21/4/23	264	266,267	11 days	40%	
266	Installation of aluminium louvre / GMS door	30 days	Sat 21/4/24	Sun 21/5/23	265	268	11 days	0%	
267	Installation of recycled timber strip / external finishing	60 days	Sat 21/4/24	Tue 21/6/22	265		918 days	0%	
268	Installation of E&M works with testing & commissioning	40 days	Thu 21/6/3	Mon 21/7/12	266,74	276	1 day	0%	
269	**Construction of storage sheds**	**120 days**	**Wed 21/2/24**	**Wed 21/6/23**			**20 days**	**24%**	
270	Construction of concrete structure	90 days	Wed 21/2/24	Mon 21/5/24	259SS+60 days	271SS+60 days,272	20 days	40%	



Revised Programme: April 2021
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Task
Critical Task
Milestone
Summary
Rolled Up Task
Rolled Up Critical Task
Rolled Up Milestone
Rolled Up Progress
Split
External Tasks
Project Summary
Group By Summary
Progress
Deadline

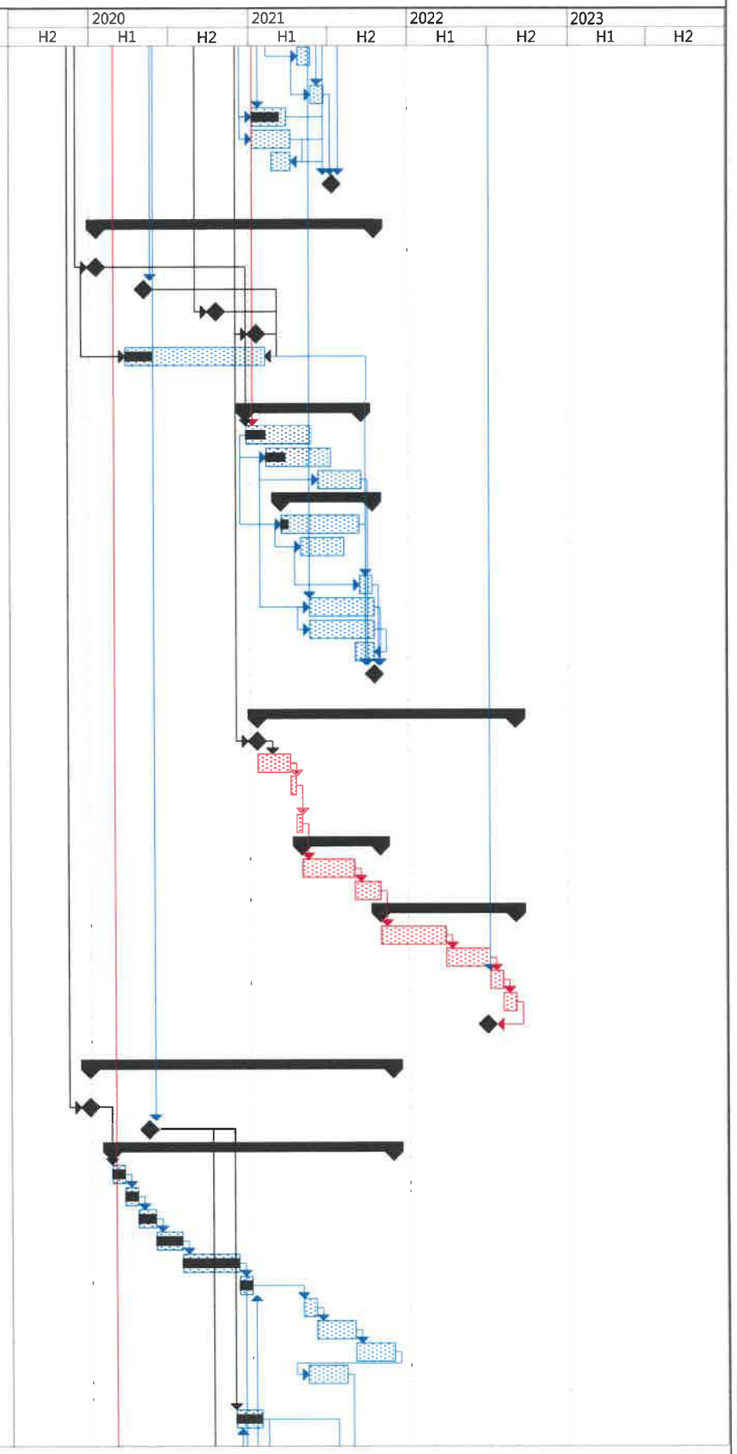
Contract No. ND/2019/03

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
271	Installation of Alluminium Window/Lourvre and GMS Door with recycle timber decoration	30 days	Sun 21/4/25	Mon 21/5/24	270SS+60 days	272SS+21 days	29 days	0%	
272	Installation of GMS roofing structure with recycle timber	30 days	Tue 21/5/25	Wed 21/6/23	271SS+21 days,270	276	20 days	0%	
273	Construction of Channel	80 days	Sat 21/1/9	Mon 21/3/29	79,259SS	274SS,276	106 days	80%	7 days
274	Construction of walkway	90 days	Sat 21/1/9	Thu 21/4/8	273SS	275FF,276	96 days	0%	7 days
275	Construction of entry landing with drop bar	45 days	Tue 21/2/23	Thu 21/4/8	274FF	276	96 days	0%	
276	**Completion of Section 8 of the works**	**0 days**	**Mon 21/7/12**	**Mon 21/7/12**	**261,268,272,273,274,275**		**1 day**	**0%**	
277									
278	**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**			**802 days**	**13%**	
279	Site Access in Portions 11A, 11B, 12A, 12C, 12D, 15B, 15C	0 days	Sat 20/1/18	Sat 20/1/18	6	285,283SS	0 days	100%	
280	Site Access in Portion 15A	0 days	Thu 20/5/7	Thu 20/5/7	9	283FF+20 days	0 days	100%	
281	Site Access in Portions 11, 12, 12B	0 days	Sun 20/10/18	Sun 20/10/18	14	283FF+20 days	0 days	100%	
282	Site Access in Portion 15	0 days	Mon 21/1/18	Mon 21/1/18	17	283FF+20 days	0 days	100%	
283	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	320 days	Wed 20/3/25	Sun 21/2/7	279SS,280FF+20 days,281FF+20 days,282FF+20 days	295	272 days	20%	
284	**Wetland Restoration / Wetland Creation**	**265 days**	**Sat 20/12/26**	**Thu 21/9/16**			**832 days**	**23%**	
285	Excavation	150 days	Sat 20/12/26	Mon 21/5/24	279,54,52	286SS+45 days,289SS+80 days	947 days	30%	
286	Backfilling	150 days	Tue 21/2/9	Thu 21/7/8	285SS+45 days	287SS+120 days,292SS+100 days	902 days	30%	
287	Agricultural Planting	100 days	Wed 21/6/9	Thu 21/9/16	286SS+120 days	295	51 days	0%	
288	**Construction of storage sheds**	**210 days**	**Tue 21/3/16**	**Mon 21/10/11**			**75 days**	**6%**	
289	Construction of concrete structure	180 days	Tue 21/3/16	Sat 21/9/11	285SS+80 days	290SS+45 days,291	26 days	10%	
290	Installation of Alluminium Window/Lourvre and GMS Door with recycle timber decoration	100 days	Fri 21/4/30	Sat 21/8/7	289SS+45 days	291SS+21 days	140 days	0%	
291	Installation of GMS roofing structure with recycle timber	30 days	Sun 21/9/12	Mon 21/10/11	290SS+21 days,289	295	26 days	0%	3 days
292	Construction of Channel	150 days	Thu 21/5/20	Sat 21/10/16	286SS+100 days,79	293SS,295	21 days	0%	4 days
293	Construction of walkway	150 days	Thu 21/5/20	Sat 21/10/16	292SS	294FF,295	21 days	0%	4 days
294	Construction of entry landing with drop bar	45 days	Thu 21/9/2	Sat 21/10/16	293FF	295	21 days	0%	
295	**Completion of Section 9 of the works**	**0 days**	**Sat 21/10/16**	**Sat 21/10/16**	**287,291,292,293,294,283**		**21 days**	**0%**	
296									
297	**13. Section 10 of the works (Portion 21)**	**593 days**	**Mon 21/1/18**	**Sat 22/9/3**			**-65 days**	**0%**	
298	Site Access in Portion 21	0 days	Mon 21/1/18	Mon 21/1/18	17	299	-65 days	0%	
299	Local Objection for commencement of Works	75 days	Tue 21/1/19	Sat 21/4/3	298	300	-65 days	0%	
300	General site clearance / demolition work / Removal of Asbesto Containing Material	14 days	Sun 21/4/4	Sat 21/4/17	299	301	-65 days	0%	
301	Erect site hoarding	14 days	Sun 21/4/18	Sat 21/5/1	300	303	-65 days	0%	
302	**Archaeological Impacts Mitigation Measures**	**180 days**	**Sun 21/5/2**	**Thu 21/10/28**			**-65 days**	**0%**	
303	Archaeological survey	120 days	Sun 21/5/2	Sun 21/8/29	301	304	-65 days	0%	
304	Archaeological impact assessment	60 days	Mon 21/8/30	Thu 21/10/28	303	306	-65 days	0%	
305	**Site formation work and infrastructure works at Wa Shan**	**310 days**	**Fri 21/10/29**	**Sat 22/9/3**			**-65 days**	**0%**	
306	Site formation / slope works	150 days	Fri 21/10/29	Sun 22/3/27	304	307	-65 days	0%	4 days
307	Drainage works	100 days	Mon 22/3/28	Tue 22/7/5	306	308	-65 days	0%	4 days
308	Paving block on footway	30 days	Wed 22/7/6	Thu 22/8/4	106,114,307	309	-65 days	0%	
309	bituminous pavement on carriageway	30 days	Fri 22/8/5	Sat 22/9/3	308	310FF	-65 days	0%	
310	**Completion of Section 10 of the works**	**0 days**	**Thu 22/6/30**	**Thu 22/6/30**	**309FF**		**-65 days**	**0%**	
311									
312	**14. Section 11 of the works (Portions 22, 23, 24 and remainder works)**	**696 days**	**Tue 19/12/31**	**Thu 21/11/25**			**762 days**	**60%**	
313	Site Access in Portions 23, 24	0 days	Tue 19/12/31	Tue 19/12/31	7	316	0 days	100%	
314	Site Access in Portion 22	0 days	Wed 20/5/13	Wed 20/5/13	10	327,329	1323 days	0%	
315	**Egretray Site Protion 23 & 24**	**647 days**	**Tue 20/2/18**	**Thu 21/11/25**			**498 days**	**52%**	
316	General site clearance	30 days	Tue 20/2/18	Wed 20/3/18	313	317	0 days	100%	
317	Erect site hoarding (Deleted)	30 days	Thu 20/3/19	Fri 20/4/17	316	318	0 days	100%	
318	Preliminary Survey	40 days	Sat 20/4/18	Wed 20/5/27	317	319	0 days	100%	
319	Submission of mehtodology for translocation	60 days	Thu 20/5/28	Sun 20/7/26	318	320	0 days	100%	
320	Approval of Methodology for Translocation	130 days	Mon 20/7/27	Thu 20/12/3	319	321,340	0 days	100%	
321	Translocation works	30 days	Fri 20/12/4	Sat 21/1/2	320,341	322	0 days	100%	
322	Planting in Portion 23 & 24	30 days	Fri 21/4/30	Sat 21/5/29	321	323	498 days	0%	
323	Ditch construction at A1-7FLN Egretray Site (Portion 23)	90 days	Sun 21/5/30	Fri 21/8/27	322	324	498 days	0%	
324	Establishmnet of A1-7FLN Egretray Site (Portion 23)	90 days	Sat 21/8/28	Thu 21/11/25	323	325FS-200 days	498 days	0%	10 days
325	Establishment of B1-7FLN Egretray Site (Portion 24)	90 days	Mon 21/5/10	Sat 21/8/7	324FS-200 days	330	498 days	0%	10 days
326									
327	Preparation Works for Landscaping work at existing Ho Sheung Heung Egretry Site (Portion 22)	60 days	Wed 20/11/25	Sat 21/1/23	314,329	330,328	0 days	100%	10 days



Revised Programme: April 2021

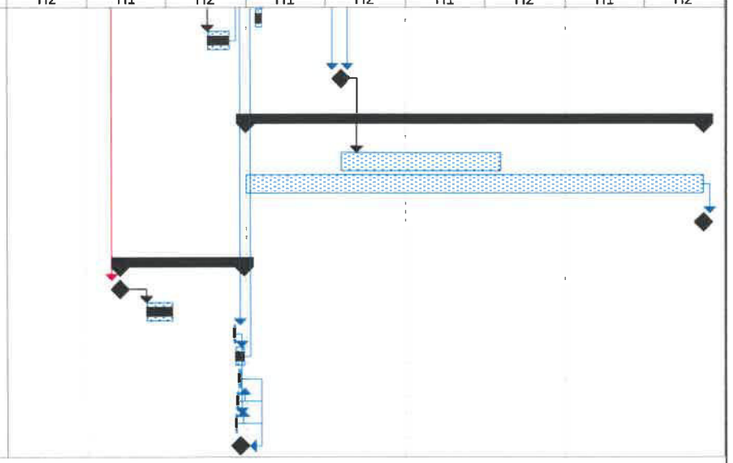
Data Date : 2021-4-3

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

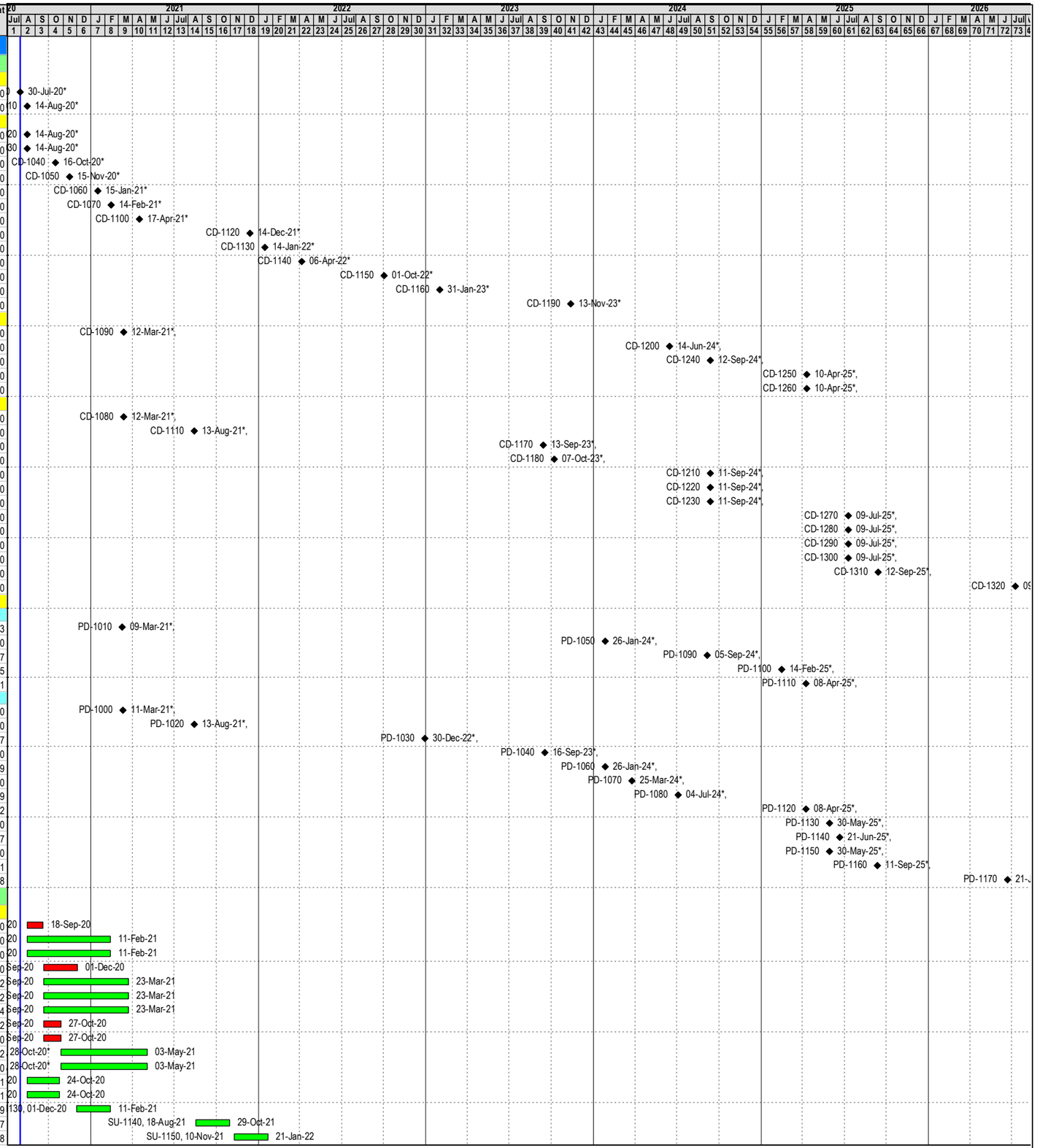
ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
328	Planting for Ho Sheung Heung Egretry Site	14 days	Sun 21/1/24	Sat 21/2/6	327		0 days	100%	
329	Compensation Event No. 017 - Removal of Existing Unsafe Sheds	50 days	Tue 20/10/6	Tue 20/11/24	314	327	0 days	100%	
330	**Completion of Section 11 of the works**	**0 days**	**Sat 21/8/7**	**Sat 21/8/7**	**327,325**	**333**	**498 days**	**0%**	
331									
332	**15. Section 11A of the works (Establishment works for Section 11)**	**1050 days**	**Fri 21/1/1**	**Thu 23/11/16**			**32 days**	**0%**	
333	Establishment works	365 days	Sun 21/8/8	Sun 22/8/7	330		507 days	0%	
334	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		335	32 days	0%	
335	**Completion of Section 11A of the works**	**0 days**	**Thu 23/11/16**	**Thu 23/11/16**	**334**		**32 days**	**0%**	
336									
337	**16. Section 12 of the works (Portions 25, 26 and 27)**	**284 days**	**Wed 20/3/18**	**Sun 20/12/27**			**0 days**	**100%**	
338	Site Access in Portions 25, 26, 27	0 days	Wed 20/3/18	Wed 20/3/18	3FS+90 days	339FS+60 days	0 days	100%	
339	Boundary Site Area	60 days	Mon 20/5/18	Thu 20/7/16	338FS+60 days		0 days	100%	
340	Preparation for translocation works	4 days	Fri 20/12/4	Mon 20/12/7	320	344,341	0 days	100%	
341	Compensation Event No. 11 - Translocation of Rose Bitterling	20 days	Tue 20/12/8	Sun 20/12/27	340	321	0 days	100%	
342	Collection site C1 (Portion 25)	5 days	Mon 20/12/14	Fri 20/12/18	343	345FF	0 days	100%	
343	Collection site C2 (Portion 26)	3 days	Fri 20/12/11	Sun 20/12/13	344	345FF,342	0 days	100%	
344	Collcetion site C3 (Portion 27)	3 days	Tue 20/12/8	Thu 20/12/10	340	345FF,343	0 days	100%	
345	**Completion of Section 12 of the works**	**0 days**	**Fri 20/12/18**	**Fri 20/12/18**	**342FF,343FF,344FF**		**0 days**	**100%**	



Revised Programme: April 2021
Data Date : 2021-4-3

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

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



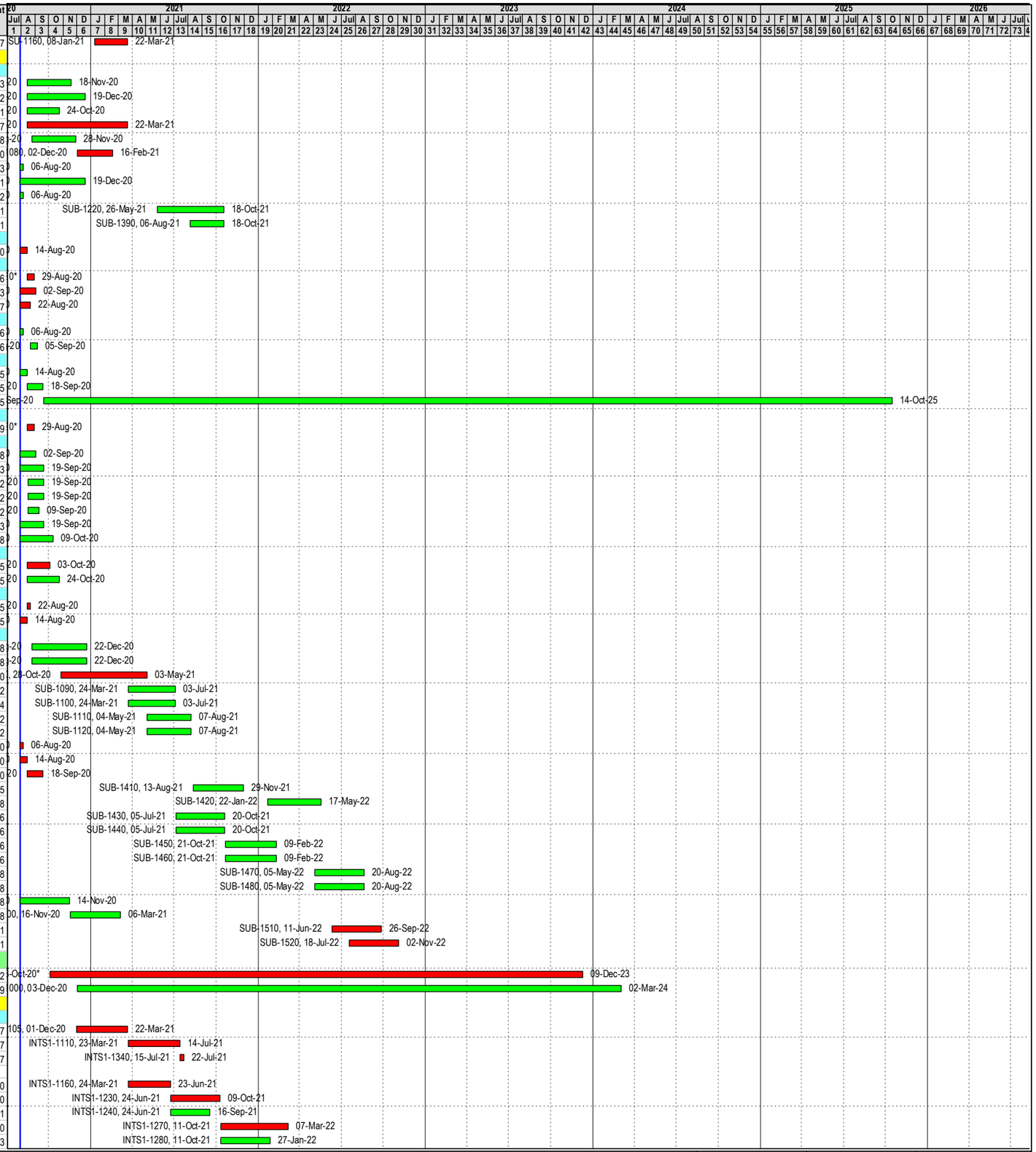
Actual Work ◆ Milestone
Remaining Work
Critical Remaining Work

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
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



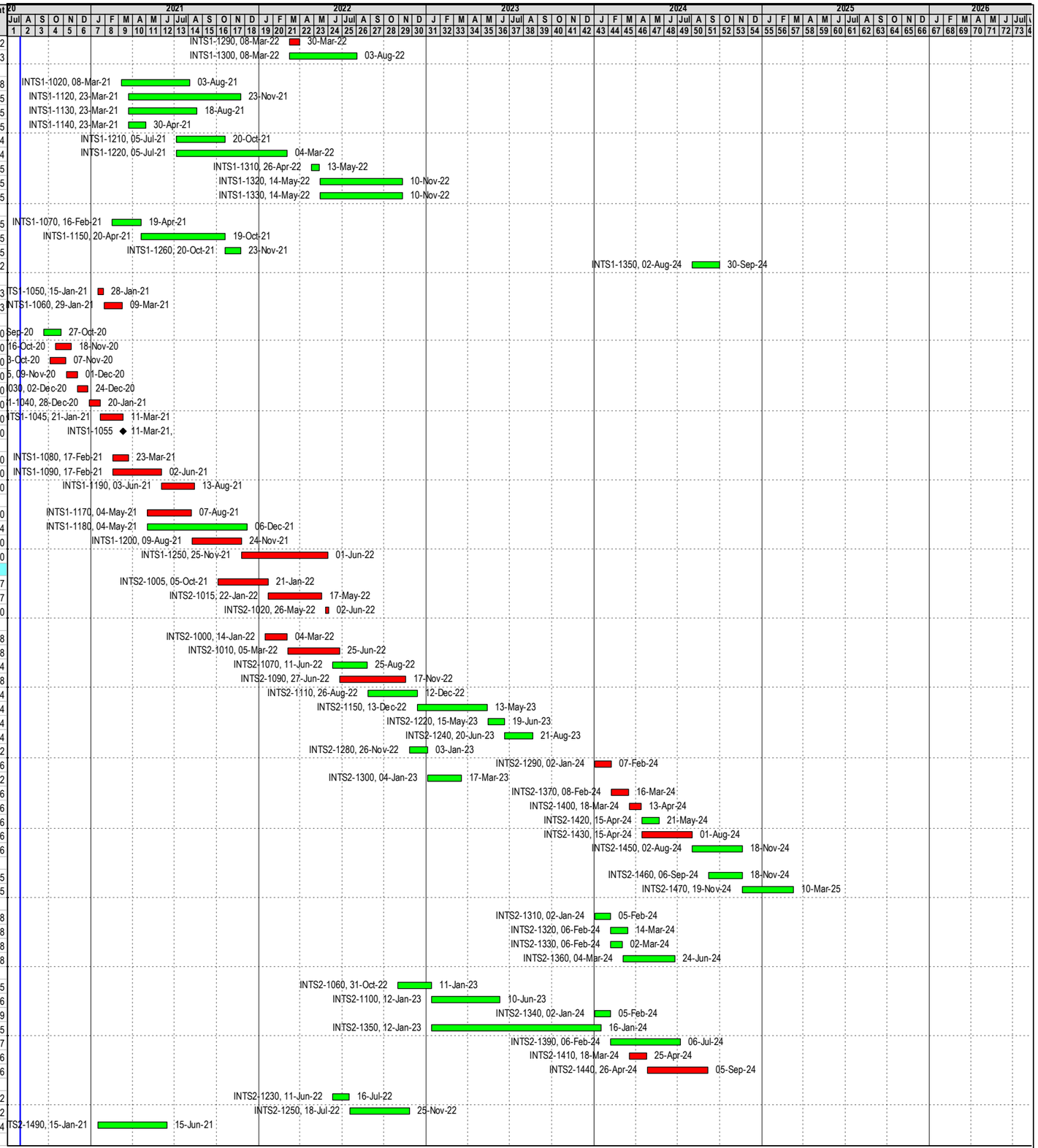
Actual Work
Remaining Work
Critical Remaining Work
◆ Milestone

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							



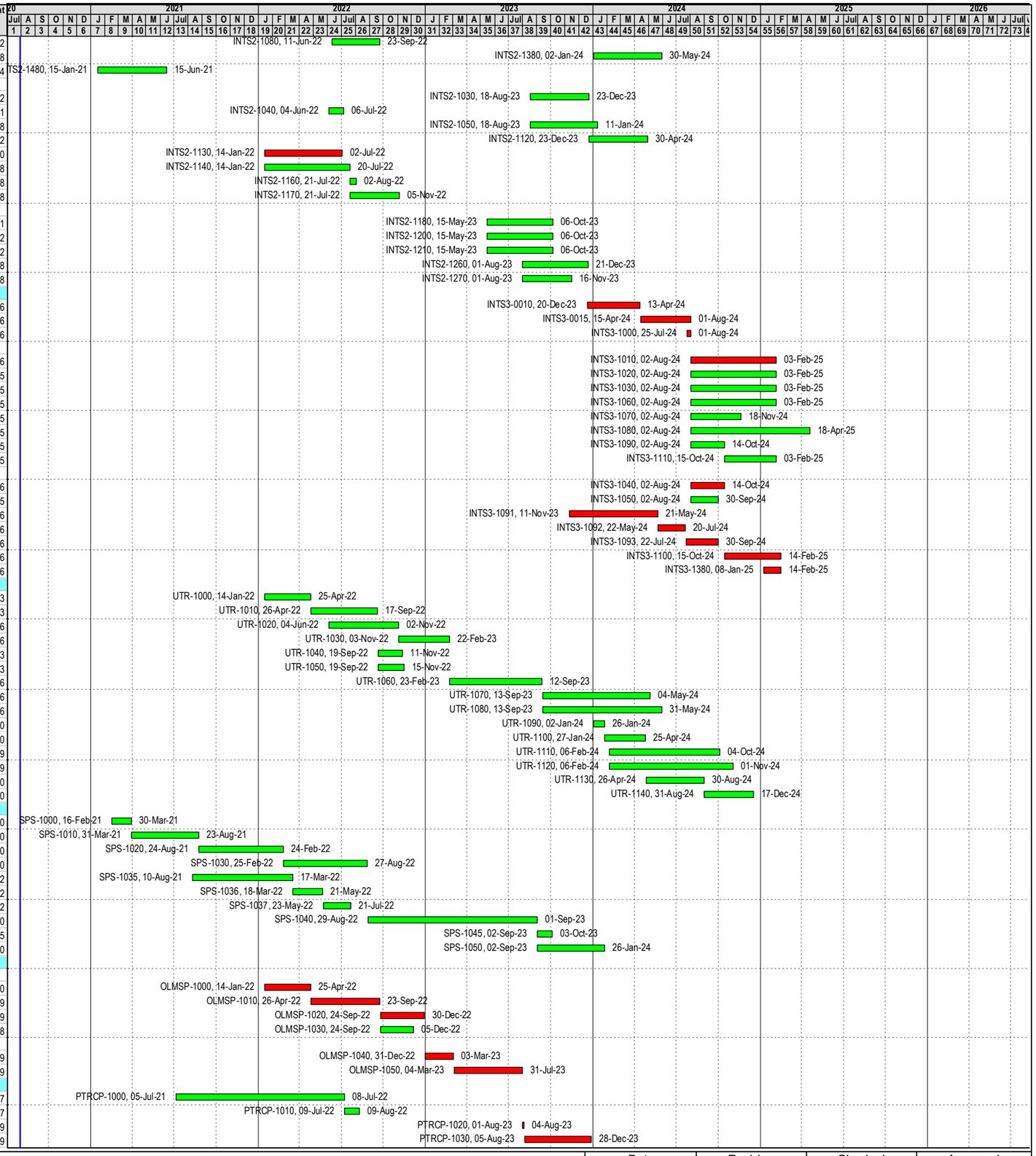
Actual Work ◆ Milestone
Remaining Work
Critical Remaining Work

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

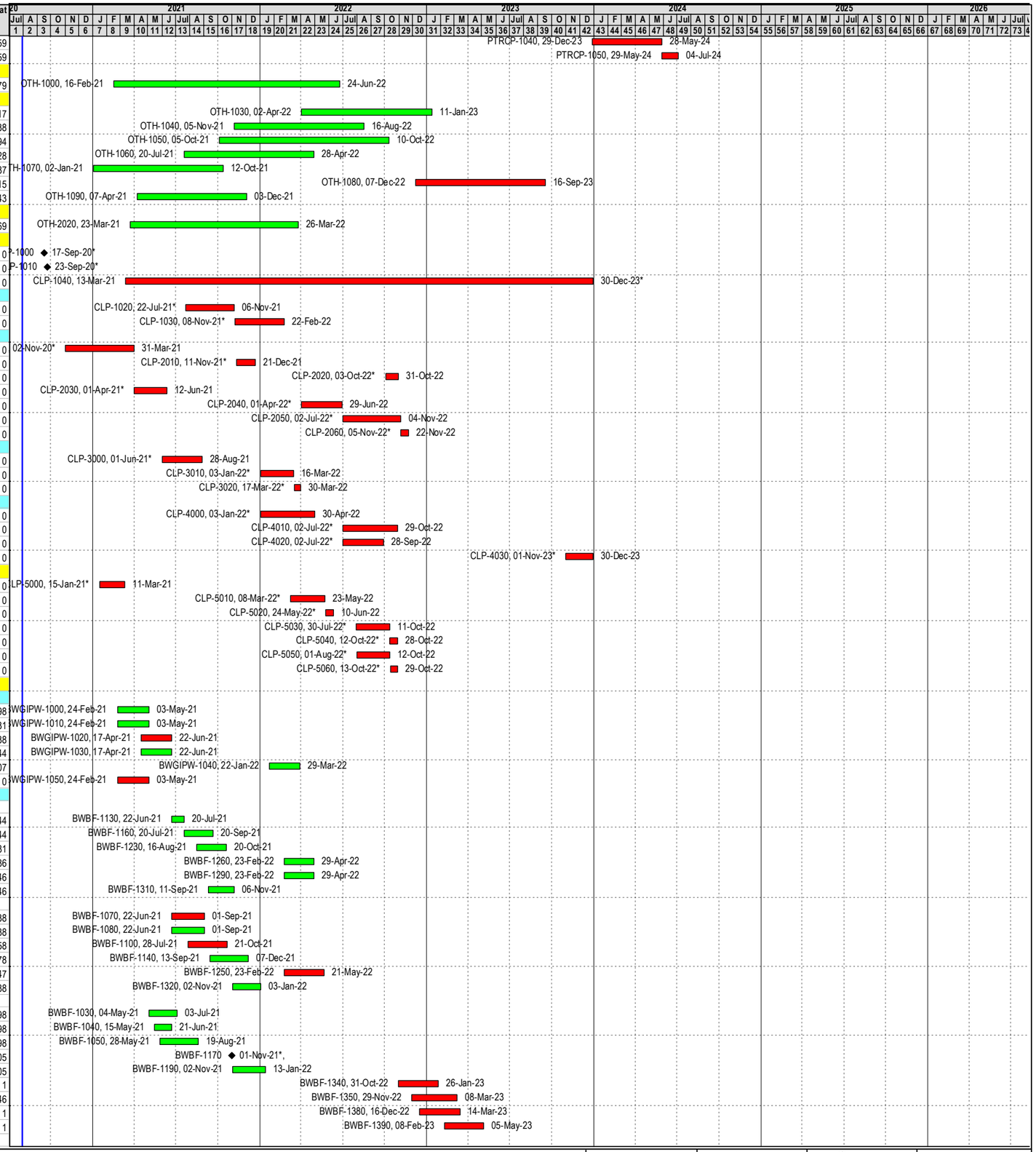
Data Date: 30-Jul-20
Project Start: 30-Jul-20
Project End: 09-Jul-26

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 GI and Predrilling Works							
BWGIPW-1000	Site clearance & additional GI and Pre-drilling works: Bridge A3	53	24-Feb-21	03-May-21	04-Jul-22	03-Sep-22	398
BWGIPW-1010	Site clearance & additional GI and Pre-drilling works: Bridge F	53	24-Feb-21	03-May-21	07-Apr-22	15-Jun-22	331
BWGIPW-1020	Site clearance & additional GI and Pre-drilling works: Bridge A2	53	17-Apr-21	22-Jun-21	03-Jun-21	06-Aug-21	38
BWGIPW-1030	Site clearance & additional GI and Pre-drilling works: Bridge A1	53	17-Apr-21	22-Jun-21	09-Oct-21	11-Dec-21	144
BWGIPW-1040	Site clearance & additional GI and Pre-drilling works: Bridge G	53	22-Jan-22	29-Mar-22	09-Feb-23	17-Apr-23	307
BWGIPW-1050	Site clearance & additional GI and Pre-drilling works: Footbridge F4	53	24-Feb-21	03-May-21	24-Feb-21	03-May-21	0
Construction of Bridge Foundation							
Construction of Bridge A1 Foundation (Team 1)							
BWBF-1130	Abt 01-01M (3no. pile, 15d/pile, 2no. workfronts)	23	22-Jun-21	20-Jul-21	11-Dec-21	11-Jan-22	144
BWBF-1160	Pier A1-02a/b (3no. pile & 2no. pile cap, 15d/pile & 30d/cap, 2no. workfronts)	53	20-Jul-21	20-Sep-21	11-Jan-22	17-Mar-22	144
BWBF-1230	Pier A1-03a/b (3no. pile & 2no. pile cap, 15d/pile & 30d/cap, 2no. workfronts)	53	16-Aug-21	20-Oct-21	25-Mar-22	02-Jun-22	181
BWBF-1260	Pier A1-04a/b (3no. pile & 2no. pile cap, 15d/pile & 30d/cap, 2no. workfronts)	53	23-Feb-22	29-Apr-22	11-Jun-22	13-Aug-22	86
BWBF-1290	Pier A1-05a/b (3no. pile & 2no. pile cap, 15d/pile & 30d/cap, 2no. workfronts)	53	23-Feb-22	29-Apr-22	22-Aug-22	26-Oct-22	146
BWBF-1310	Pier A1-06a/b (2no. pile & 2no. pile cap, 15d/pile & 30d/cap, 2no. workfronts)	45	11-Sep-21	06-Nov-21	12-Nov-22	07-Jan-23	346
Construction of Bridge A2 Foundation (Team 2)							
BWBF-1070	Pier A2-01a/b (3no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	60	22-Jun-21	01-Sep-21	06-Aug-21	19-Oct-21	38
BWBF-1080	Protection Works for Pier A2-03r/l in VEP Zone	60	22-Jun-21	01-Sep-21	06-Oct-21	16-Dec-21	88
BWBF-1100	Pier A2-02a/b (4no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	70	28-Jul-21	21-Oct-21	06-Oct-21	30-Dec-21	58
BWBF-1140	Pier A2-03r/l (4no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	70	13-Sep-21	07-Dec-21	16-Dec-21	15-Mar-22	78
BWBF-1250	Pier A2-04M (4no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts for pile cap)	70	23-Feb-22	21-May-22	23-Apr-22	19-Jul-22	47
BWBF-1320	Pier A2-05M (2no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	50	02-Nov-21	03-Jan-22	24-Jun-22	23-Aug-22	188
Construction of Bridge A3 Foundation (Team 3 and Team 2)							
BWBF-1030	Pier A3-03r (2no. pile & 1 pile cap, before new 132kV cable laying at this location)	50	04-May-21	03-Jul-21	03-Sep-22	04-Nov-22	398
BWBF-1040	Abt A3-06M (3no. pile, 20d/pile, 2no. workfronts)	30	15-May-21	21-Jun-21	16-Sep-22	24-Oct-22	398
BWBF-1050	Pier A3-05a/b (4no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	70	28-May-21	19-Aug-21	28-Sep-22	21-Dec-22	398
BWBF-1170	Start of Dry Season in 2021	0		01-Nov-21*		12-Nov-22	305
BWBF-1190	Platform Erection for predrill and piling during dry season	60	02-Nov-21	13-Jan-22	12-Nov-22	28-Jan-23	305
BWBF-1340	Pier A3-01r/l (4no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	70	31-Oct-22	26-Jan-23	01-Nov-22	28-Jan-23	1
BWBF-1350	Pier A3-02 in nullah (5no. pile & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts) (team 2)	80	29-Nov-22	08-Mar-23	28-Jan-23	08-May-23	46
BWBF-1380	Pier A3-03l (4no. bored piles & 2no. pile cap, 20d/pile & 30d/cap, 2no. workfronts)	70	16-Dec-22	14-Mar-23	17-Dec-22	16-Mar-23	1
BWBF-1390	Pier A3-04a/b (4no. pile & 2no. pile cap,20d/pile & 30d/cap, 2no. workfronts)	70	08-Feb-23	05-May-23	09-Feb-23	08-May-23	1
Construction of Bridge F Foundation (Team 1)							



Actual Work
Remaining Work
Critical Remaining Work
◆ Milestone

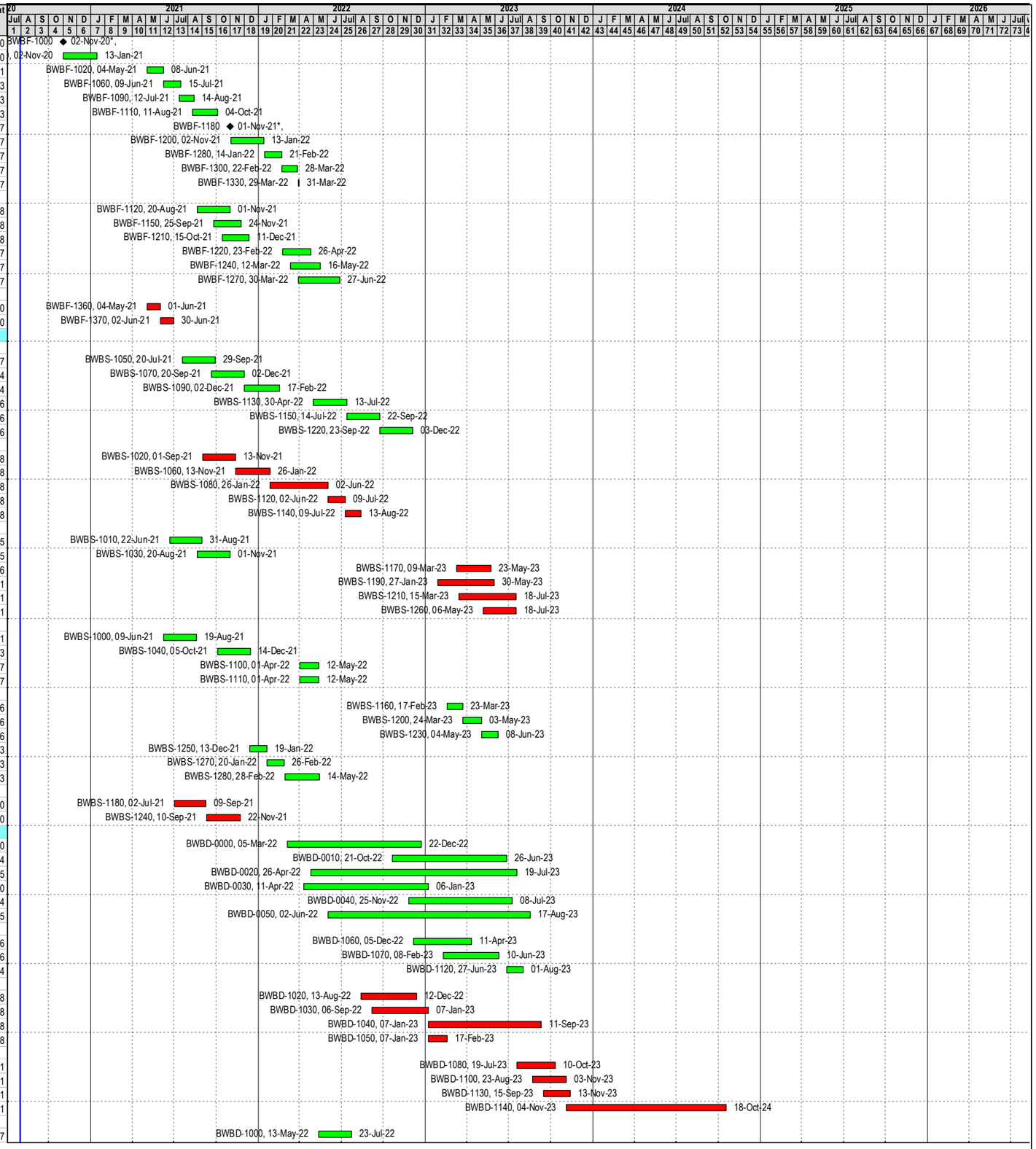
Data Date: 30-Jul-20
Project Start: 30-Jul-20
Project End: 09-Jul-26

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

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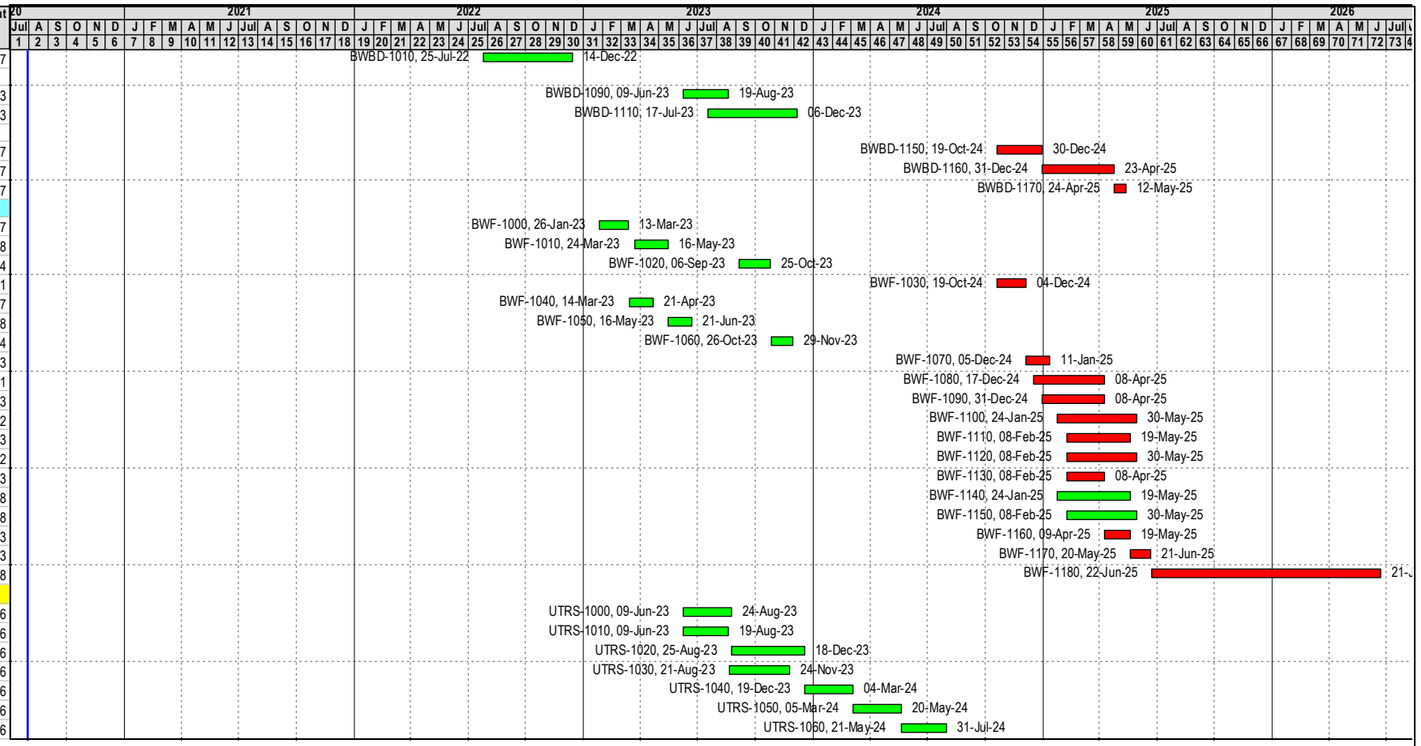
12-Aug-20	Rev. 0	JS	JS
09-Sep-20	Rev. 1	JS	JS
5-Nov-20	Rev. 2	TL	TL

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

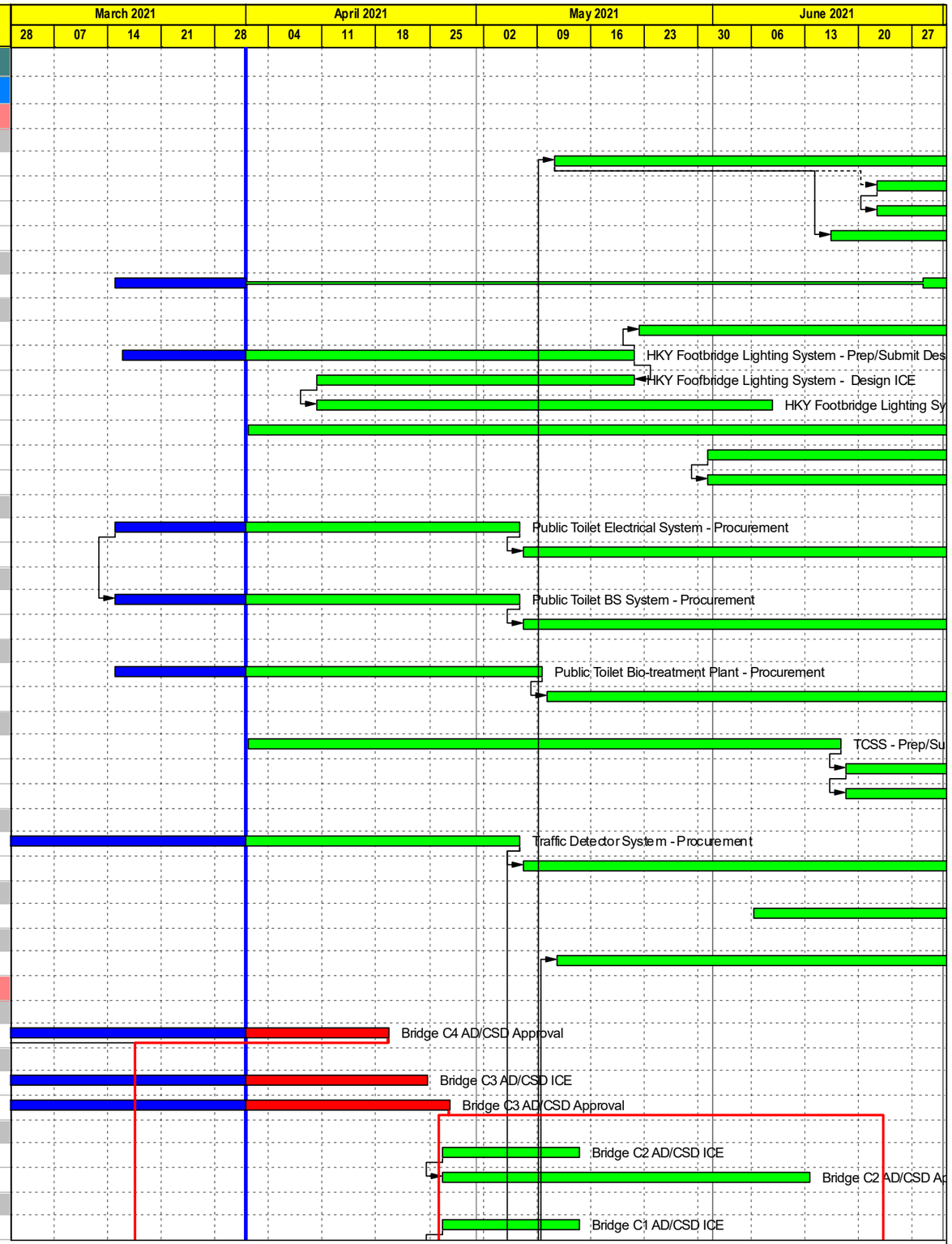
Data Date: 30-Jul-20
Project Start: 30-Jul-20
Project End: 09-Jul-26

ND/2019/04

Preliminary Works Programme

Date	Revision	Checked	Approved
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	Rem Dur	Early Start	Early Finish
ND/2019/05 - DPR3A Update 31 Mar 21 Against DPR1				
2.0 - Preliminary Works				
2.3 - Contractor's Design (PS 1,109)				
2.3.1 - (a) Noise Barrier				
CDa-105	NB79 and NB67 - Prep/Submit Design	72	11-May-21	21-Jul-21
CDa-110	NB79 and NB67 - Design ICE	30	22-Jun-21	21-Jul-21
CDa-120	NB79 and NB67 - Design Approval	42	22-Jun-21	02-Aug-21
CDa-125	NB110 and NB77 - Prep/Submit Design	72	16-Jun-21	26-Aug-21
2.3.3 - (c) Lift Installation E&M				
CDc-100	Lift Install E&M - Prep/Submit Design	45	15-Mar-21 A	12-Aug-21
2.3.4 - (d) Lighting System				
CDd-110	Road Lighting System - Prep/Submit Design	120	22-May-21	18-Sep-21
CDd-140	HKY Footbridge Lighting System - Prep/Submit Design	51	16-Mar-21 A	21-May-21
CDd-150	HKY Foofbridge Lighting System - Design ICE	42	10-Apr-21	21-May-21
CDd-160	HKY Footbridge Lighting System - Design Approval	60	10-Apr-21	08-Jun-21
CDd-170	BBI Lighting System - Prep/Submit Design	102	01-Apr-21	11-Jul-21
CDd-180	BBI Lighting System - Design ICE	42	31-May-21	11-Jul-21
CDd-190	BBI Lighting System - Design Approval	60	31-May-21	29-Jul-21
2.3.5 - (e) BBI Public Toilet Electrical System				
CDe-100	Public Toilet Electrical System - Procurement	36	15-Mar-21 A	06-May-21
CDe-110	Public Toilet Electrical System - Prep/Submit Design	72	07-May-21	17-Jul-21
2.3.6 - (f) BBI Public Toilet BS System				
CDf-100	Public Toilet BS System - Procurement	36	15-Mar-21 A	06-May-21
CDf-110	Public Toilet BS System - Prep/Submit Design	72	07-May-21	17-Jul-21
2.3.7 - (g) BBI Public Toilet Bio-treatment Plant				
CDg-100	Public Toilet Bio-treatment Plant - Procurement	39	15-Mar-21 A	09-May-21
CDg-110	Public Toilet Bio-treatment Plant - Prep/Submit Design	78	10-May-21	26-Jul-21
2.3.8 - (h) Traffic Control and Surveillance System (TCSS)				
CDh-110	TCSS - Prep/Submit Design	78	01-Apr-21	17-Jun-21
CDh-120	TCSS - Design ICE	42	18-Jun-21	29-Jul-21
CDh-130	TCSS - Design Approval	60	18-Jun-21	16-Aug-21
2.3.9 - (i) Traffic Detector System				
CDi-100	Traffic Detector System - Procurement	36	04-Dec-20 A	06-May-21
CDi-110	Traffic Detector System - Prep/Submit Design	90	07-May-21	04-Aug-21
2.3.10 - (j) Crash Cushion System				
CDj-100	Crash Cushion System - Procurement	78	06-Jun-21	22-Aug-21
2.3.11 - (k) Deck Girdder Access Facilities				
CDk-100	Access Facilities - Procurement	180	11-May-21	07-Nov-21
2.4 - Alternative Design and CSD				
2.4.1 - Bridge C4				
AD-033	Bridge C4 AD/CSD Approval	19	02-Jul-20 A	19-Apr-21
2.4.2 - Bridge C3				
AD-042	Bridge C3 AD/CSD ICE	24	19-Oct-20 A	24-Apr-21
AD-043	Bridge C3 AD/CSD Approval	27	19-Oct-20 A	27-Apr-21
2.4.3 - Bridge C2				
AD-052	Bridge C2 AD/CSD ICE	18	26-Apr-21	14-May-21
AD-053	Bridge C2 AD/CSD Approval	48	26-Apr-21	13-Jun-21
2.4.4 - Bridge C1				
AD-062	Bridge C1 AD/CSD ICE	18	26-Apr-21	14-May-21



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)

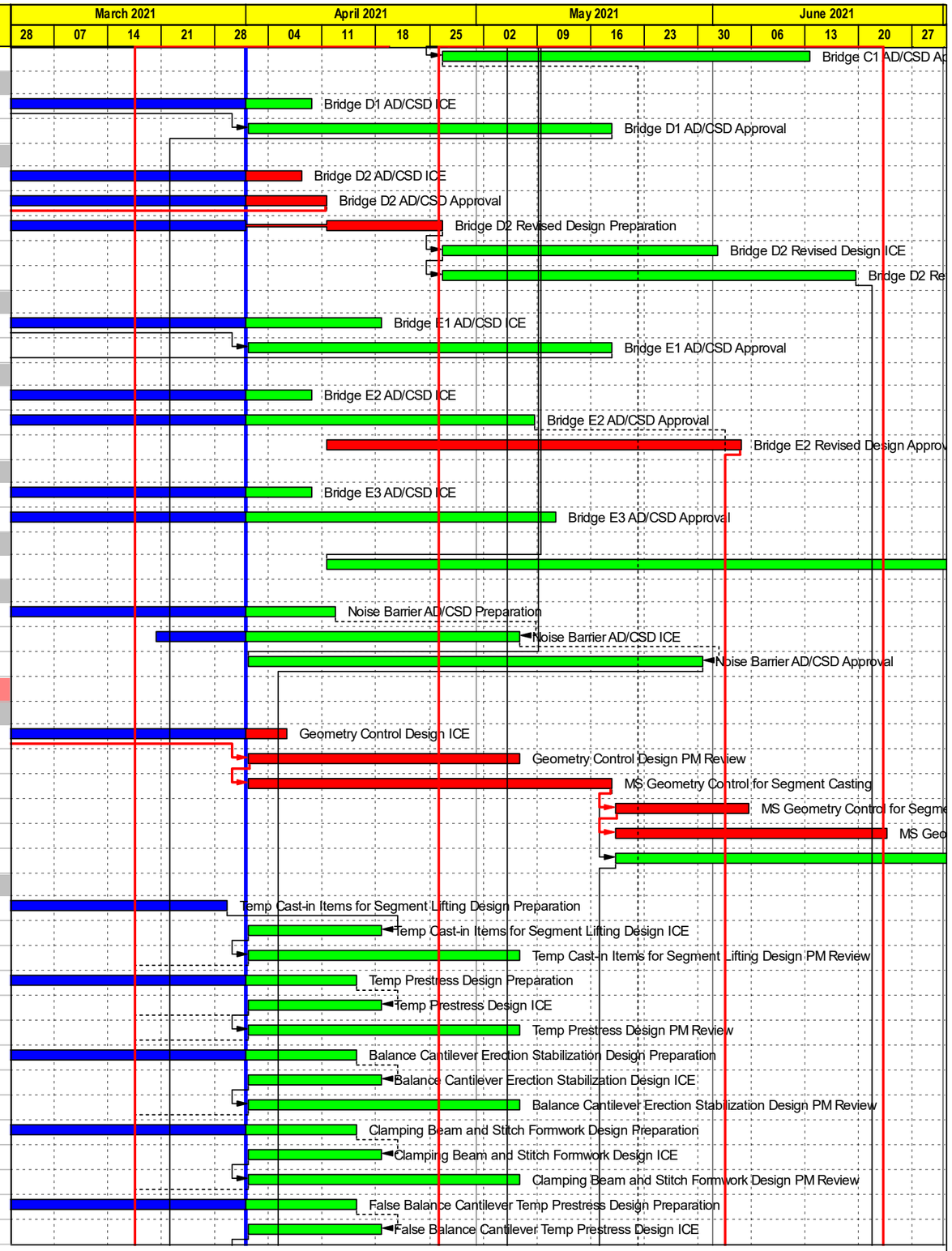
3-Month Rolling Programme - March 2021

Proj ID : DPr3A(ADP1U13)-3MRP
Layout : ND201905 3MRP
Date : Page 1 of 12

3-Month Rolling Programme

Date	Revision	Checked	Approved
12-Apr-21	March 2021		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
AD-063	Bridge C1 AD/CSD Approval	48	26-Apr-21	13-Jun-21
2.4.5 - Bridge D1				
AD-092	Bridge D1 AD/CSD ICE	9	02-Feb-21 A	09-Apr-21
AD-093	Bridge D1 AD/CSD Approval	48	01-Apr-21	18-May-21
2.4.6 - Bridge D2				
AD-102	Bridge D2 AD/CSD ICE	7	02-Jul-20 A	08-Apr-21
AD-103	Bridge D2 AD/CSD Approval	11	02-Jul-20 A	11-Apr-21
AD-104	Bridge D2 Revised Design Preparation	15	17-Aug-20 A	26-Apr-21
AD-105	Bridge D2 Revised Design ICE	36	26-Apr-21	01-Jun-21
AD-106	Bridge D2 Revised Design Approval	54	26-Apr-21	19-Jun-21
2.4.7 - Bridge E1				
AD-112	Bridge E1 AD/CSD ICE	18	01-Feb-21 A	18-Apr-21
AD-113	Bridge E1 AD/CSD Approval	48	01-Apr-21	18-May-21
2.4.8 - Bridge E2				
AD-072	Bridge E2 AD/CSD ICE	9	01-Jul-20 A	09-Apr-21
AD-073	Bridge E2 AD/CSD Approval	38	01-Jul-20 A	08-May-21
AD-076	Bridge E2 Revised Design Approval	54	11-Apr-21	04-Jun-21
2.4.9 - Bridge E3				
AD-082	Bridge E3 AD/CSD ICE	9	19-Oct-20 A	09-Apr-21
AD-083	Bridge E3 AD/CSD Approval	41	19-Oct-20 A	11-May-21
2.4.10 - Bridge E4				
AD-121	Bridge E4 AD/CSD Preparation	92	11-Apr-21	12-Jul-21
2.4.12 - Noise Barrier				
AD-310	Noise Barrier AD/CSD Preparation	12	19-Oct-20 A	12-Apr-21
AD-320	Noise Barrier AD/CSD ICE	36	20-Mar-21 A	06-May-21
AD-330	Noise Barrier AD/CSD Approval	60	01-Apr-21	30-May-21
2.5 - Segment Erection Design and Calculation				
2.5.1 - Geometry Control				
AD-142	Geometry Control Design ICE	5	09-Feb-21 A	06-Apr-21
AD-143	Geometry Control Design PM Review	36	01-Apr-21	06-May-21
AD-145	MS Geometry Control for Segment Casting	48	01-Apr-21	18-May-21
AD-146	MS Geometry Control for Segment Casting ICE	18	19-May-21	05-Jun-21
AD-147	MS Geometry Control for Segment Casting PM Review	36	19-May-21	23-Jun-21
AD-150	MS Geometry Control for Segment Erection	48	19-May-21	05-Jul-21
2.5.3 - Temporary Works				
AD-732	Temp Cast-in Items for Segment Lifting Design Preparation	0	15-Dec-20 A	29-Mar-21 A
AD-742	Temp Cast-in Items for Segment Lifting Design ICE	18	01-Apr-21	18-Apr-21
AD-752	Temp Cast-in Items for Segment Lifting Design PM Review	36	01-Apr-21	06-May-21
AD-762	Temp Prestress Design Preparation	14	15-Dec-20 A	15-Apr-21
AD-772	Temp Prestress Design ICE	18	01-Apr-21	18-Apr-21
AD-782	Temp Prestress Design PM Review	36	01-Apr-21	06-May-21
AD-792	Balance Cantilever Erection Stabilization Design Preparation	14	15-Dec-20 A	15-Apr-21
AD-802	Balance Cantilever Erection Stabilization Design ICE	18	01-Apr-21	18-Apr-21
AD-812	Balance Cantilever Erection Stabilization Design PM Review	36	01-Apr-21	06-May-21
AD-822	Clamping Beam and Stitch Formwork Design Preparation	14	15-Dec-20 A	15-Apr-21
AD-832	Clamping Beam and Stitch Formwork Design ICE	18	01-Apr-21	18-Apr-21
AD-842	Clamping Beam and Stitch Formwork Design PM Review	36	01-Apr-21	06-May-21
AD-852	False Balance Cantilever Temp Prestress Design Preparation	14	15-Dec-20 A	15-Apr-21
AD-862	False Balance Cantilever Temp Prestress Design ICE	18	01-Apr-21	18-Apr-21



CRCC - Paul Y. Joint Venture

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

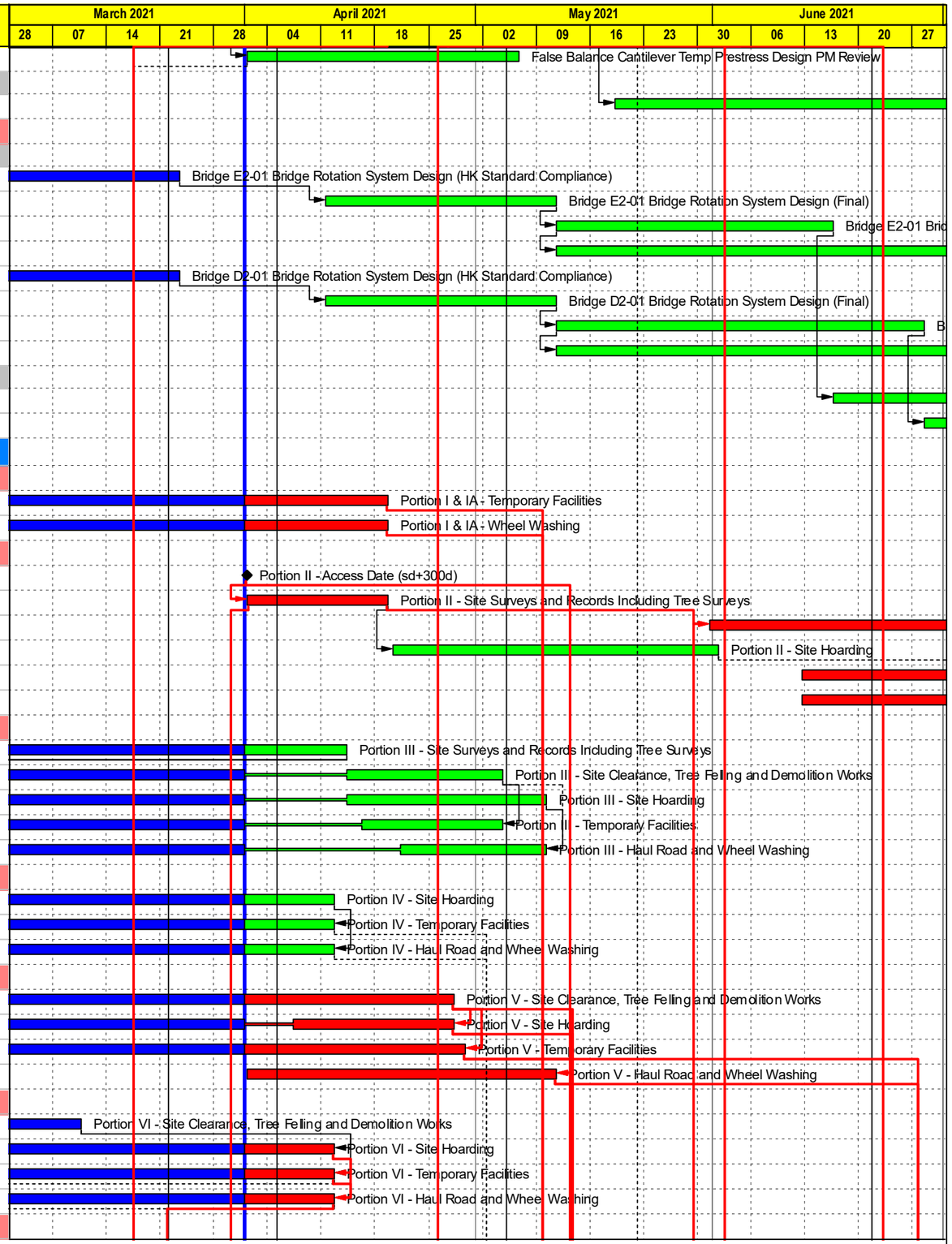
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme - March 2021

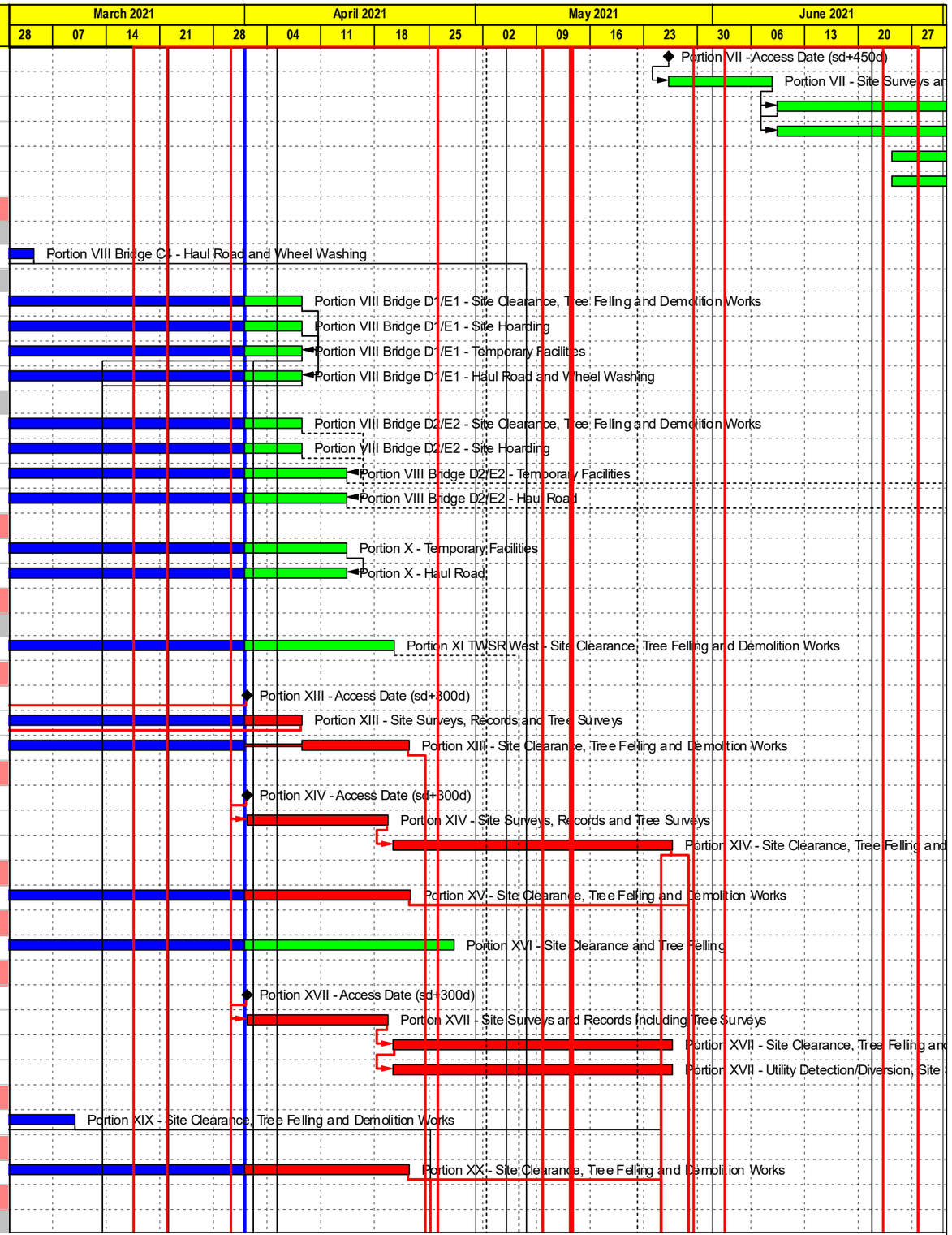
Proj ID : DPr3A(ADP1U13)-3MRP
Layout : ND201905 3MRP
Date : Page 2 of 12

3-Month Rolling Programme			
Date	Revision	Checked	Approved
12-Apr-21	March 2021		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
AD-872	False Balance Cantilever Temp Prestress Design PM Review	36	01-Apr-21	06-May-21
2.5.4 Method Statement				
AD-882	Segment Erection Method Statement Preparation	78	19-May-21	04-Aug-21
2.6 - Bridge Rotation System				
2.6.1 - Design				
BRS-105	Bridge E2-01 Bridge Rotation System Design (HK Standard Compliance)	0	22-Dec-20 A	23-Mar-21 A
BRS-108	Bridge E2-01 Bridge Rotation System Design (Final)	30	11-Apr-21	11-May-21
BRS-120	Bridge E2-01 Bridge Rotation System Design ICE	36	11-May-21	16-Jun-21
BRS-130	Bridge E2-01 Bridge Rotation System Design Approval	72	11-May-21	22-Jul-21
BRS-145	Bridge D2-01 Bridge Rotation System Design (HK Standard Compliance)	0	22-Dec-20 A	23-Mar-21 A
BRS-148	Bridge D2-01 Bridge Rotation System Design (Final)	30	11-Apr-21	11-May-21
BRS-150	Bridge D2-01 Bridge Rotation System ICE	48	11-May-21	28-Jun-21
BRS-160	Bridge D2-01 Bridge Rotation System Approval	72	11-May-21	22-Jul-21
2.6.2 - Fabrication				
BRS-170	Bridge E2-01 Bridge Rotation System Fabrication	90	16-Jun-21	14-Sep-21
BRS-190	Bridge D2-01 Bridge Rotation System Fabrication	90	28-Jun-21	26-Sep-21
3.0 - Site Establishment Works				
3.1 - Portion I & IA Site Set-up				
01-013	Portion I & IA - Temporary Facilities	12	17-Oct-20 A	19-Apr-21
01-014	Portion I & IA - Wheel Washing	12	17-Oct-20 A	19-Apr-21
3.3 - Portion II Site Set-up				
02-100	Portion II - Access Date (sd+300d)	0	01-Apr-21	
02-101	Portion II - Site Surveys and Records Including Tree Surveys	12	01-Apr-21	19-Apr-21
02-102	Portion II - Site Clearance, Tree Felling and Demolition Works	35	31-May-21	13-Jul-21
02-104	Portion II - Site Hoarding	35	20-Apr-21	01-Jun-21
02-105	Portion II - Temporary Facilities	24	12-Jun-21	13-Jul-21
02-106	Portion II - Haul Road and Wheel Washing	24	12-Jun-21	13-Jul-21
3.4 - Portion III Site Set-up				
03-101	Portion III - Site Surveys and Records Including Tree Surveys	7	16-Oct-20 A	14-Apr-21
03-102	Portion III - Site Clearance, Tree Felling and Demolition Works	17	23-Oct-20 A	04-May-21
03-104	Portion III - Site Hoarding	21	23-Oct-20 A	10-May-21
03-105	Portion III - Temporary Facilities	15	23-Oct-20 A	04-May-21
03-106	Portion III - Haul Road and Wheel Washing	15	23-Oct-20 A	10-May-21
3.5 - Portion IV Site Set-up				
04-104	Portion IV - Site Hoarding	6	24-Oct-20 A	12-Apr-21
04-105	Portion IV - Temporary Facilities	6	24-Oct-20 A	12-Apr-21
04-106	Portion IV - Haul Road and Wheel Washing	6	24-Oct-20 A	12-Apr-21
3.6 - Portion V Site Set-up				
05-102	Portion V - Site Clearance, Tree Felling and Demolition Works	19	19-Jan-21 A	28-Apr-21
05-104	Portion V - Site Hoarding	18	19-Jan-21 A	28-Apr-21
05-105	Portion V - Temporary Facilities	21	19-Jan-21 A	29-Apr-21
05-106	Portion V - Haul Road and Wheel Washing	30	01-Apr-21	11-May-21
3.7 - Portion VI Site Set-up				
06-102	Portion VI - Site Clearance, Tree Felling and Demolition Works	0	15-Jul-20 A	10-Mar-21 A
06-104	Portion VI - Site Hoarding	6	03-Oct-20 A	12-Apr-21
06-105	Portion VI - Temporary Facilities	6	03-Oct-20 A	12-Apr-21
06-106	Portion VI - Haul Road and Wheel Washing	6	03-Oct-20 A	12-Apr-21
3.8 - Portion VII Site Set-up				



Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
07-100	Portion VII - Access Date (sd+450d)	0	26-May-21	
07-101	Portion VII - Site Surveys and Records Including Tree Surveys	12	26-May-21	08-Jun-21
07-102	Portion VII - Site Clearance, Tree Felling and Demolition Works	36	09-Jun-21	22-Jul-21
07-104	Portion VII - Site Hoarding	36	09-Jun-21	22-Jul-21
07-105	Portion VII - Temporary Facilities	24	24-Jun-21	22-Jul-21
07-106	Portion VII - Haul Road	24	24-Jun-21	22-Jul-21
3.9 - Portion VIII				
3.9.1 - Bridge C4 Site Set-up				
08-106	Portion VIII Bridge C4 - Haul Road and Wheel Washing	0	12-Nov-20 A	04-Mar-21 A
3.9.2 - Bridge D1/E1 Site Set-up				
08-202	Portion VIII Bridge D1/E1 - Site Clearance, Tree Felling and Demolition Works	2	12-Jan-21 A	08-Apr-21
08-204	Portion VIII Bridge D1/E1 - Site Hoarding	2	12-Jan-21 A	08-Apr-21
08-205	Portion VIII Bridge D1/E1 - Temporary Facilities	2	19-Jan-21 A	08-Apr-21
08-206	Portion VIII Bridge D1/E1 - Haul Road and Wheel Washing	2	19-Jan-21 A	08-Apr-21
3.9.3 - Bridge D2/E2 Site Set-up				
08-302	Portion VIII Bridge D2/E2 - Site Clearance, Tree Felling and Demolition Works	2	06-Jan-21 A	08-Apr-21
08-304	Portion VIII Bridge D2/E2 - Site Hoarding	2	06-Jan-21 A	08-Apr-21
08-305	Portion VIII Bridge D2/E2 - Temporary Facilities	7	13-Jan-21 A	14-Apr-21
08-306	Portion VIII Bridge D2/E2 - Haul Road	7	13-Jan-21 A	14-Apr-21
3.11 - Portion X Site Set-up				
10-105	Portion X - Temporary Facilities	7	03-Oct-20 A	14-Apr-21
10-106	Portion X - Haul Road	7	03-Oct-20 A	14-Apr-21
3.12 - Portion XI Site Set-up				
3.12.4 - Tai Wo Service Road West Site Set-up				
11-430	Portion XI TWSR West - Site Clearance, Tree Felling and Demolition Works	13	03-Oct-20 A	20-Apr-21
3.14 - Portion XIII				
13-100	Portion XIII - Access Date (sd+300d)	0	01-Apr-21	
13-110	Portion XIII - Site Surveys, Records and Tree Surveys	2	14-Dec-20 A	08-Apr-21
13-120	Portion XIII - Site Clearance, Tree Felling and Demolition Works	12	12-Jan-21 A	22-Apr-21
3.15 - Portion XIV				
14-100	Portion XIV - Access Date (sd+300d)	0	01-Apr-21	
14-110	Portion XIV - Site Surveys, Records and Tree Surveys	12	01-Apr-21	19-Apr-21
14-120	Portion XIV - Site Clearance, Tree Felling and Demolition Works	30	20-Apr-21	26-May-21
3.16 - Portion XV				
15-120	Portion XV - Site Clearance, Tree Felling and Demolition Works	15	12-Jan-21 A	22-Apr-21
3.17 - Portion XVI				
16-120	Portion XVI - Site Clearance and Tree Felling	19	03-Oct-20 A	28-Apr-21
3.18 - Portion XVII				
17-100	Portion XVII - Access Date (sd+300d)	0	01-Apr-21	
17-110	Portion XVII - Site Surveys and Records Including Tree Surveys	12	01-Apr-21	19-Apr-21
17-120	Portion XVII - Site Clearance, Tree Felling and Demolition Works	30	20-Apr-21	26-May-21
17-130	Portion XVII - Utility Detection/Diversion, Site Set-up and Facilities	30	20-Apr-21	26-May-21
3.20 - Portion XIX				
19-120	Portion XIX - Site Clearance, Tree Felling and Demolition Works	0	01-Mar-21 A	10-Mar-21 A
3.21 - Portion XX				
20-120	Portion XX - Site Clearance, Tree Felling and Demolition Works	14	01-Dec-20 A	22-Apr-21
3.23 - Segment Storage Facilities				
3.23.1 - Work Area C1 and C2				



CRCC - Paul Y. Joint Venture

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

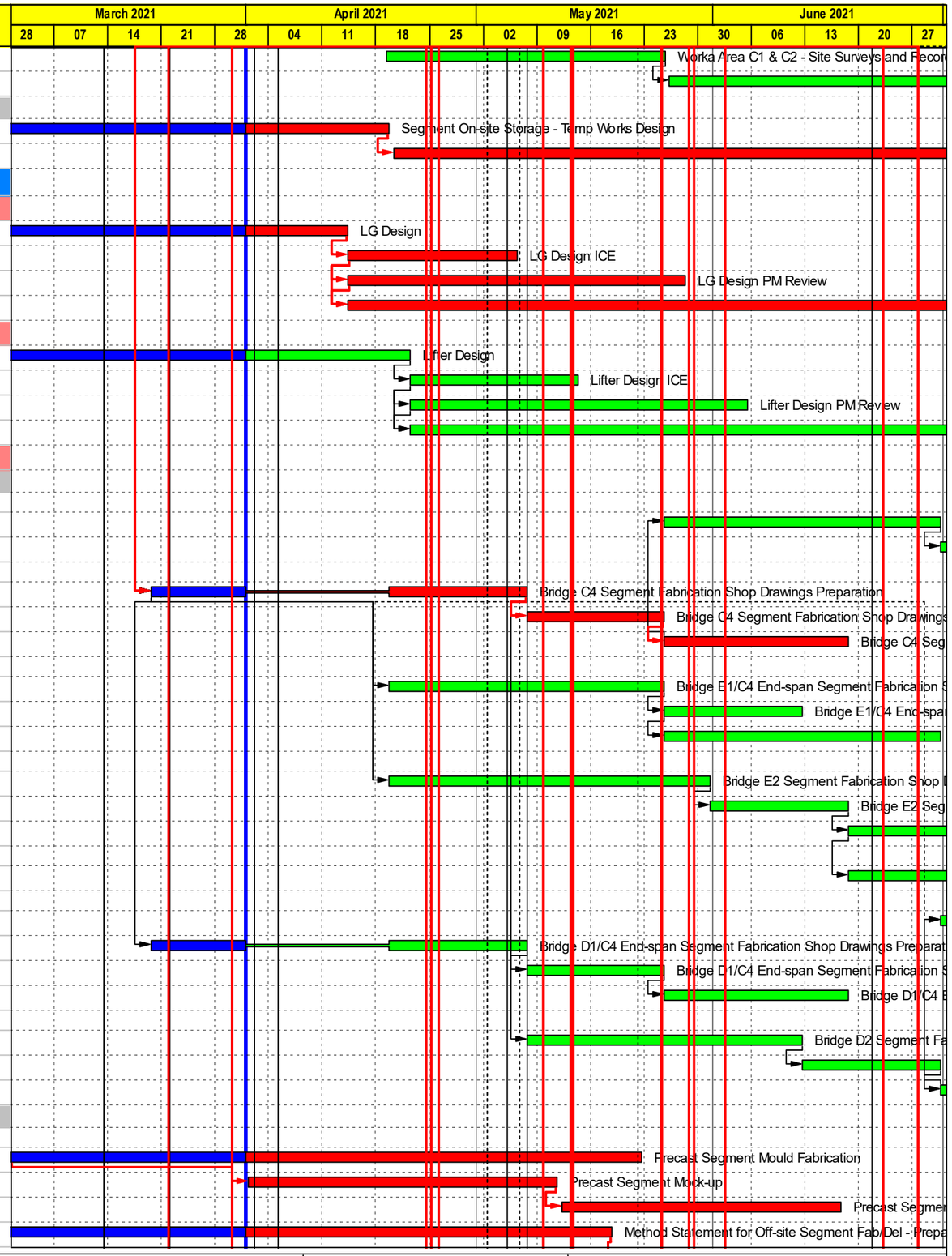
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme - March 2021

Proj ID : DPr3A(ADP1U13)-3MRP
Layout : ND201905 3MRP
Date : Page 4 of 12

3-Month Rolling Programme			
Date	Revision	Checked	Approved
12-Apr-21	March 2021		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
WA-1010	Worka Area C1 & C2 - Site Surveys and Records	30	19-Apr-21	25-May-21
WA-1020	Worka Area C1 & C2 - Set-up and Facilities	60	26-May-21	05-Aug-21
3.23.2 - On-site Segment Storage				
SS-1008	Segment On-site Storage - Temp Works Design	12	29-Dec-20 A	19-Apr-21
SS-1010	Segment On-site Storage - Establishment Works	96	20-Apr-21	13-Aug-21
4.0 - Bridge Construction				
4.1 - Launching Gantry				
LG-102	LG Design	7	15-Oct-20 A	14-Apr-21
LG-103	LG Design ICE	18	14-Apr-21	06-May-21
LG-104	LG Design PM Review	36	14-Apr-21	28-May-21
LG-105	LG Fabrication (6 months)	142	14-Apr-21	04-Oct-21
4.2 - Lifter				
LF-102	Lifter Design	14	09-Nov-20 A	22-Apr-21
LF-103	Lifter Design ICE	18	22-Apr-21	14-May-21
LF-104	Lifter Design PM Review	36	22-Apr-21	05-Jun-21
LF-105	Lifter Fabrication (6 months)	142	22-Apr-21	12-Oct-21
4.3 - Segment Fabrication				
4.3.1 - Shop Drawings				
4.3.1.3 - Bridge C3				
AD-530	Bridge C3 Segment Fabrication Shop Drawings Preparation	36	25-May-21	30-Jun-21
AD-531	Bridge C3 Segment Fabrication Shop Drawings ICE	18	30-Jun-21	18-Jul-21
4.3.1.4 - Bridge C4				
AD-535	Bridge C4 Segment Fabrication Shop Drawings Preparation	18	19-Mar-21 A	07-May-21
AD-536	Bridge C4 Segment Fabrication Shop Drawings ICE	18	07-May-21	25-May-21
AD-537	Bridge C4 Segment Fabrication Shop Drawings PM Review	24	25-May-21	18-Jun-21
4.3.1.5 - Bridge E1				
AD-565	Bridge E1/C4 End-span Segment Fabrication Shop Drawings Preparation	36	19-Apr-21	25-May-21
AD-566	Bridge E1/C4 End-span Segment Fabrication Shop Drawings ICE	18	25-May-21	12-Jun-21
AD-567	Bridge E1/C4 End-span Segment Fabrication Shop Drawings PM Review	36	25-May-21	30-Jun-21
4.3.1.6 - Bridge E2				
AD-570	Bridge E2 Segment Fabrication Shop Drawings Preparation	42	19-Apr-21	31-May-21
AD-571	Bridge E2 Segment Fabrication Shop Drawings ICE	18	31-May-21	18-Jun-21
AD-572	Bridge E2 Segment Fabrication Shop Drawings PM Review	24	18-Jun-21	12-Jul-21
4.3.1.7 - Bridge E3				
AD-580	Bridge E3 Segment Fabrication Shop Drawings Prepararion	36	18-Jun-21	24-Jul-21
4.3.1.9 - Bridge D1				
AD-540	Bridge D1 Segment Fabrication Shop Drawings Preparation	42	30-Jun-21	11-Aug-21
AD-545	Bridge D1/C4 End-span Segment Fabrication Shop Drawings Preparation	18	19-Mar-21 A	07-May-21
AD-546	Bridge D1/C4 End-span Segment Fabrication Shop Drawings ICE	18	07-May-21	25-May-21
AD-547	Bridge D1/C4 End-span Segment Fabrication Shop Drawings PM Review	24	25-May-21	18-Jun-21
4.3.1.10 - Bridge D2				
AD-550	Bridge D2 Segment Fabrication Shop Drawings Preparation	36	07-May-21	12-Jun-21
AD-551	Bridge D2 Segment Fabrication Shop Drawings ICE	18	12-Jun-21	30-Jun-21
AD-552	Bridge D2 Segment Fabrication Shop Drawings PM Review	24	30-Jun-21	24-Jul-21
4.3.2 - Off-Site Fabrication				
4.3.2.1 - Preparation Works				
OSF-131	Precast Segment Mould Fabrication	39	01-Mar-21 A	22-May-21
OSF-133	Precast Segment Mock-up	30	01-Apr-21	11-May-21
OSF-134	Precast Segment Mock-up Acceptance	30	12-May-21	17-Jun-21
OSF-135	Method Statement for Off-site Segment Fab/Del - Preparation	36	02-Jan-21 A	18-May-21



CRCC - Paul Y. Joint Venture

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

3-Month Rolling Programme - March 2021

Proj ID : DPr3A(ADP1U13)-3MRP
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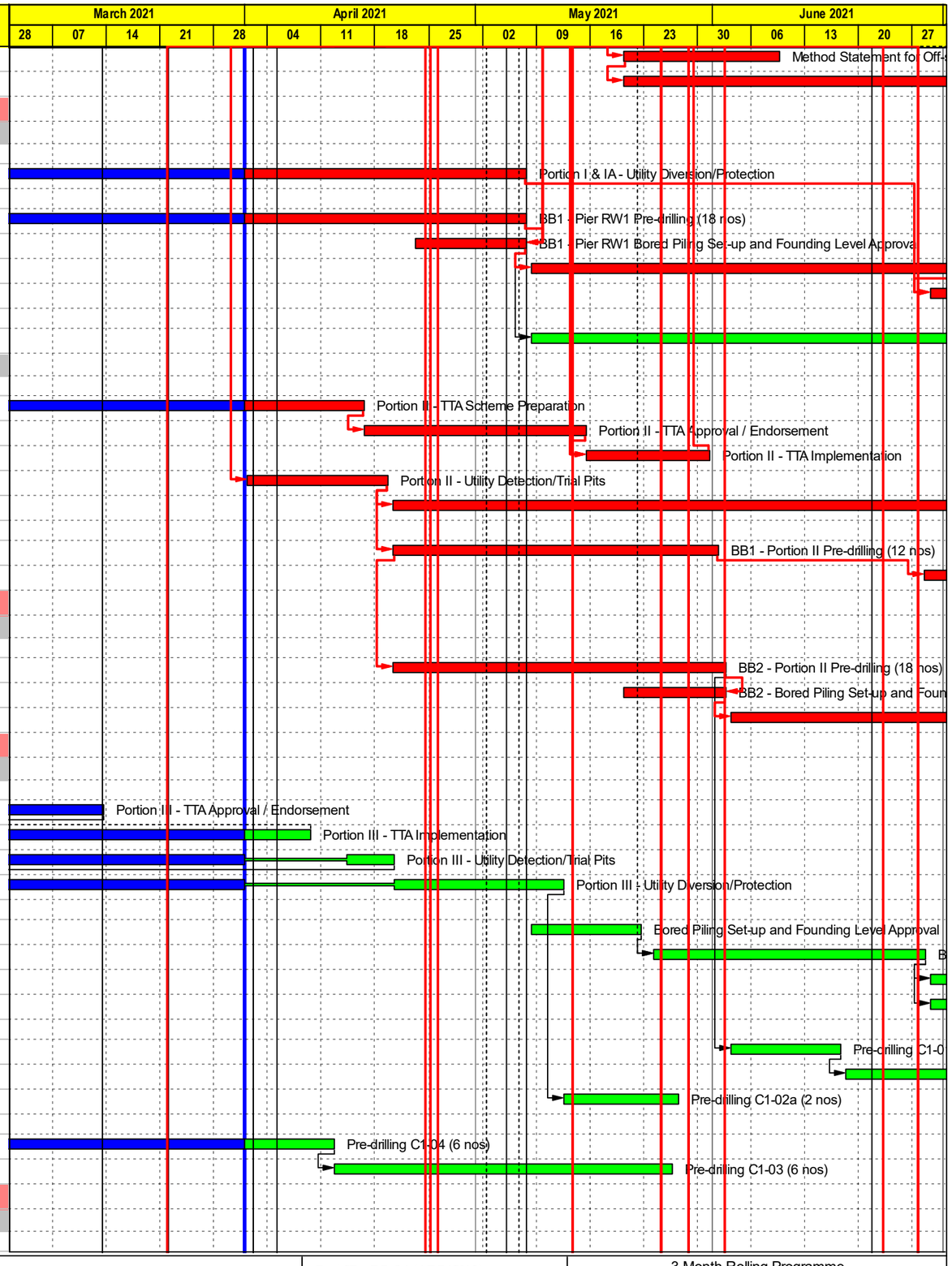
3-Month Rolling Programme

Date	Revision	Checked	Approved
12-Apr-21	March 2021		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
OSF-136	Method Statement for Off-site Segment Fab/Del - ICE	18	20-May-21	09-Jun-21
OSF-137	Method Statement for Off-site Segment Fab/Del - PM Review	42	20-May-21	09-Jul-21
4.4 - Bridge B1				
4.4.1 - Substructure Portion I and 1A				
4.4.1.1 - Preparation Works				
B1-042	Portion I & IA - Utility Diversion/Protection	27	09-Oct-20 A	07-May-21
4.4.1.2 - Piling				
B1-1110	BB1 - Pier RW1 Pre-drilling (18 nos)	27	22-Oct-20 A	07-May-21
B1-1120	BB1 - Pier RW1 Bored Piling Set-up and Founding Level Approval	12	23-Apr-21	07-May-21
B1-1131	BB1 - Pier RW1 Bored Piling (Piles 07/08/09/10)	48	08-May-21	06-Jul-21
B1-1132	BB1 - Pier RW1 Bored Piling (Piles 03/04/05/06)	48	29-Jun-21	24-Aug-21
4.4.1.3 - Pier				
B1-1141	BB1 - Pier RW1/C1 Method Statement Preparation	60	08-May-21	20-Jul-21
4.4.3 - Substructure Portion II				
4.4.3.1 - Preparation Works				
B1-111	Portion II - TTA Scheme Preparation	10	30-Oct-20 A	16-Apr-21
B1-112	Portion II - TTA Approval / Endorsement	24	16-Apr-21	15-May-21
B1-113	Portion II - TTA Implementation	12	15-May-21	31-May-21
B1-121	Portion II - Utility Detection/Trial Pits	12	01-Apr-21	19-Apr-21
B1-122	Portion II - Utility Diversion/Protection	60	20-Apr-21	02-Jul-21
4.4.3.2 - Piling				
B1-1310	BB1 - Portion II Pre-drilling (12 nos)	35	20-Apr-21	01-Jun-21
B1-1320	BB1 - Bored Piling Set-up and Founding Level Approval	12	28-Jun-21	13-Jul-21
4.5 - Bridge B2				
4.5.1 - Substructure				
4.5.1.1 - Piling				
B2-1200	BB2 - Portion II Pre-drilling (18 nos)	36	20-Apr-21	02-Jun-21
B2-1210	BB2 - Bored Piling Set-up and Founding Level Approval	12	20-May-21	02-Jun-21
B2-1220	BB2 - Pier B2-01M Bored Piling (6 nos)	72	03-Jun-21	27-Aug-21
4.6 - Bridge C1				
4.6.1 - Foundation				
4.6.2 - Preparation Works				
C1-112	Portion III - TTA Approval / Endorsement	0	31-Dec-20 A	13-Mar-21 A
C1-113	Portion III - TTA Implementation	4	31-Dec-20 A	09-Apr-21
C1-121	Portion III - Utility Detection/Trial Pits	5	31-Dec-20 A	20-Apr-21
C1-122	Portion III - Utility Diversion/Protection	18	31-Dec-20 A	12-May-21
4.6.3 - Portion I				
C1-1110	Bored Piling Set-up and Founding Level Approval	12	08-May-21	22-May-21
C1-1120	Bored Piling C1-02b (2 nos)	30	24-May-21	28-Jun-21
C1-1122	Bored Pile Testing C1-02b	18	29-Jun-21	20-Jul-21
C1-1125	Bored Piling C1-01Mb N/B (2 nos)	30	29-Jun-21	03-Aug-21
4.6.4 - Portion II				
C1-1200	Pre-drilling C1-01aM (2 nos)	12	03-Jun-21	17-Jun-21
C1-1202	Bored Piling Set-up and Founding Level Approval	12	18-Jun-21	02-Jul-21
C1-1215	Pre-drilling C1-02a (2 nos)	12	12-May-21	27-May-21
4.6.5 - Portion III				
C1-1400	Pre-drilling C1-04 (6 nos)	6	23-Oct-20 A	12-Apr-21
C1-1428	Pre-drilling C1-03 (6 nos)	36	12-Apr-21	26-May-21
4.7 - Bridge C2				
4.7.1 - Foundation				
4.7.1.1 - Preparation Works				



CRCC - Paul Y. Joint Venture

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3-Month Rolling Programme - March 2021

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3-Month Rolling Programme

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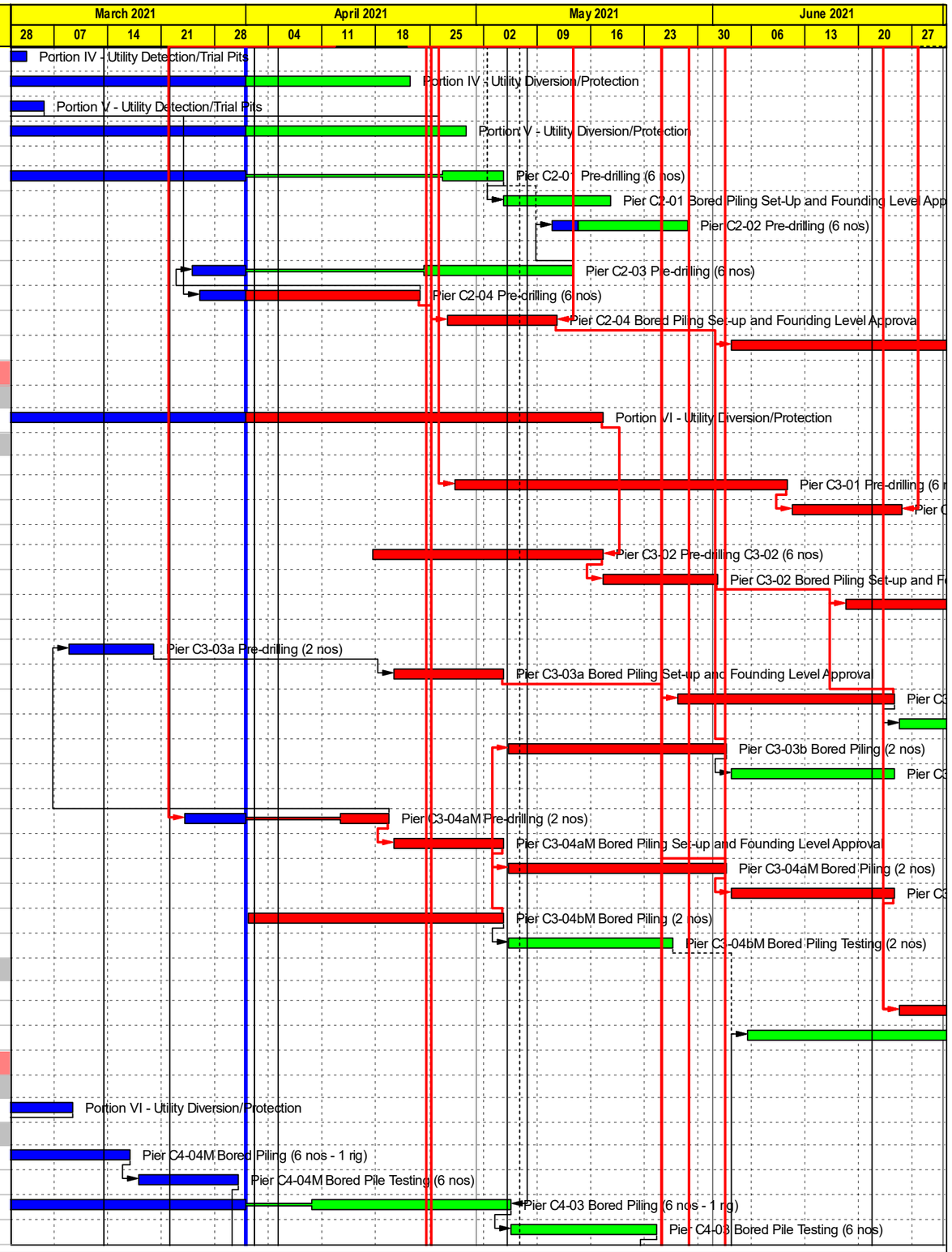
Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
C2-121	Portion IV - Utility Detection/Trial Pits	0	20-Oct-20 A	03-Mar-21 A
C2-122	Portion IV - Utility Diversion/Protection	14	20-Oct-20 A	22-Apr-21
C2-221	Portion V - Utility Detection/Trial Pits	0	19-Jan-21 A	05-Mar-21 A
C2-222	Portion V - Utility Diversion/Protection	21	08-Feb-21 A	29-Apr-21
4.7.1.2 - Portion IV				
C2-1010	Pier C2-01 Pre-drilling (6 nos)	6	04-Dec-20 A	04-May-21
C2-1020	Pier C2-01 Bored Piling Set-Up and Founding Level Approval	12	04-May-21	18-May-21
C2-1050	Pier C2-02 Pre-drilling (6 nos)	12	11-May-21 A	28-May-21
4.7.1.3 - Portion V				
C2-1115	Pier C2-03 Pre-drilling (6 nos)	16	25-Mar-21 A	13-May-21
C2-1210	Pier C2-04 Pre-drilling (6 nos)	16	26-Mar-21 A	23-Apr-21
C2-1215	Pier C2-04 Bored Piling Set-up and Founding Level Approval	12	27-Apr-21	11-May-21
C2-1220	Pier C2-04 Bored Piling (6 nos)	72	03-Jun-21	27-Aug-21
4.8 - Bridge C3				
4.8.1 - Preparation Works				
C3-1206	Portion VI - Utility Diversion/Protection	35	02-Nov-20 A	17-May-21
4.8.2 - Foundation				
4.8.2.1 - C3-01				
C3-1010	Pier C3-01 Pre-drilling (6 nos)	36	28-Apr-21	10-Jun-21
C3-1020	Pier C3-01 Bored Piling Set-up and Founding Level Approval	12	11-Jun-21	25-Jun-21
4.8.2.2 - C3-02				
C3-1050	Pier C3-02 Pre-drilling C3-02 (6 nos)	24	17-Apr-21	17-May-21
C3-1060	Pier C3-02 Bored Piling Set-up and Founding Level Approval	12	17-May-21	01-Jun-21
C3-1070	Pier C3-02 Bored Piling (6 nos)	72	18-Jun-21	10-Sep-21
4.8.2.3 - C3-03				
C3-1090	Pier C3-03a Pre-drilling (2 nos)	0	09-Mar-21 A	20-Mar-21 A
C3-1100	Pier C3-03a Bored Piling Set-up and Founding Level Approval	12	20-Apr-21	04-May-21
C3-1110	Pier C3-03a Bored Piling (2 nos)	24	27-May-21	24-Jun-21
C3-1120	Pier C3-03a Bored Piling Testing (2 nos)	18	25-Jun-21	16-Jul-21
C3-1150	Pier C3-03b Bored Piling (2 nos)	24	05-May-21	02-Jun-21
C3-1160	Pier C3-03b Bored Piling Testing (2 nos)	18	03-Jun-21	24-Jun-21
4.8.2.4 - C3-04M				
C3-7260	Pier C3-04aM Pre-drilling (2 nos)	6	24-Mar-21 A	19-Apr-21
C3-7270	Pier C3-04aM Bored Piling Set-up and Founding Level Approval	12	20-Apr-21	04-May-21
C3-7280	Pier C3-04aM Bored Piling (2 nos)	24	05-May-21	02-Jun-21
C3-7290	Pier C3-04aM Bored Piling Testing (2 nos)	18	03-Jun-21	24-Jun-21
C3-7320	Pier C3-04bM Bored Piling (2 nos)	24	01-Apr-21	04-May-21
C3-7330	Pier C3-04bM Bored Piling Testing (2 nos)	18	05-May-21	26-May-21
4.8.3 - Pier				
4.8.3.4 - C3-04				
C3-1500	Pier C3-04aM ELS	24	25-Jun-21	23-Jul-21
C3-1550	Pier C3-04bM ELS	24	05-Jun-21	06-Jul-21
4.9 - Bridge C4				
4.9.1 - Preparation Works				
C4-122	Portion VI - Utility Diversion/Protection	0	14-Oct-20 A	09-Mar-21 A
4.9.2 - Foundation				
C4-1020	Pier C4-04M Bored Piling (6 nos - 1 rig)	0	13-Jan-21 A	17-Mar-21 A
C4-1025	Pier C4-04M Bored Pile Testing (6 nos)	0	18-Mar-21 A	31-Mar-21 A
C4-1040	Pier C4-03 Bored Piling (6 nos - 1 rig)	21	02-Feb-21 A	05-May-21
C4-1045	Pier C4-03 Bored Pile Testing (6 nos)	15	05-May-21	24-May-21



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3-Month Rolling Programme

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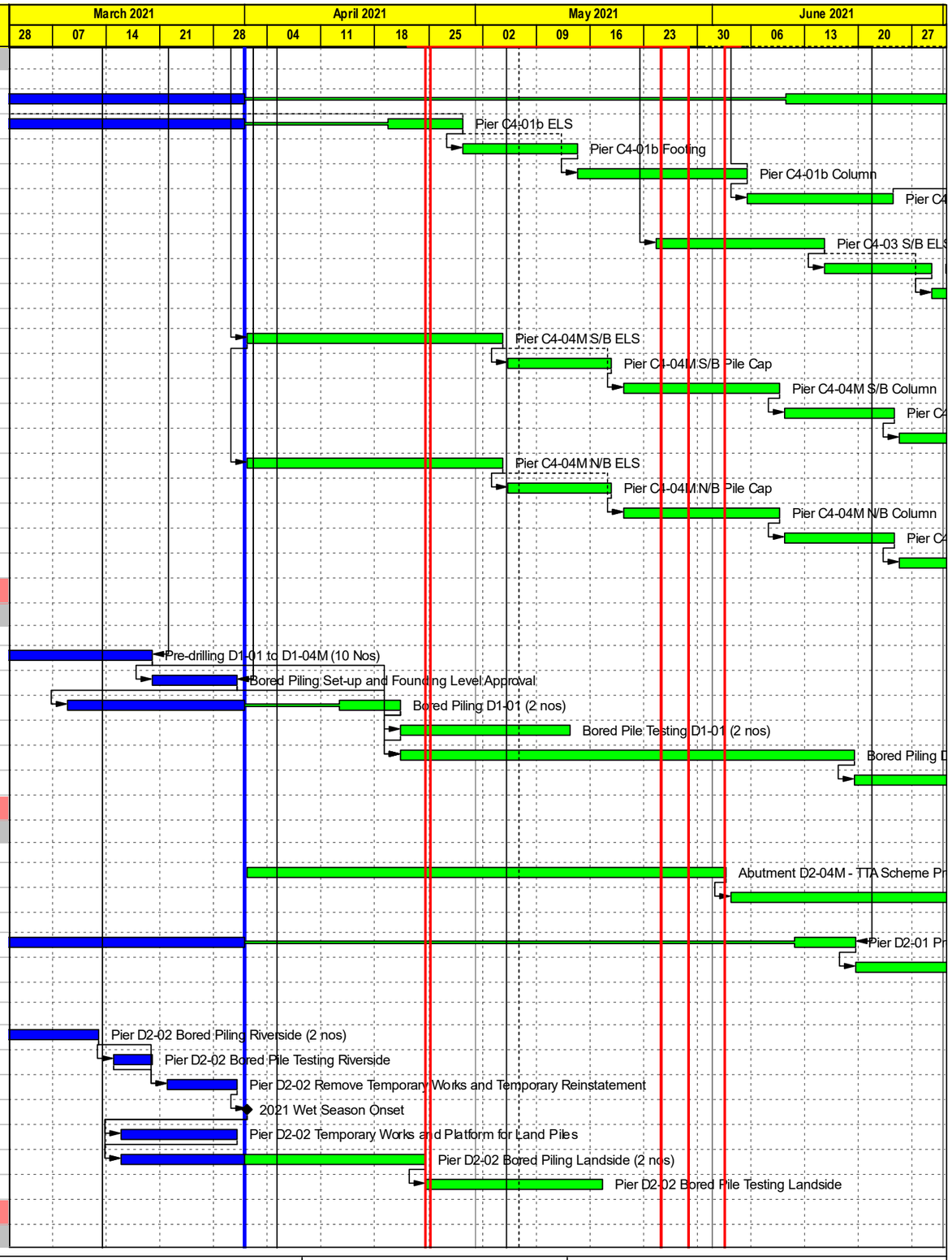
Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
4.9.3 - Pier				
4.9.3.1 - C4-01				
C4-1200	Pier C4-01a ELS	17	21-Jan-21 A	02-Jul-21
C4-1250	Pier C4-01b ELS	8	07-Dec-20 A	29-Apr-21
C4-1255	Pier C4-01b Footing	12	29-Apr-21	14-May-21
C4-1260	Pier C4-01b Column	18	14-May-21	05-Jun-21
C4-1265	Pier C4-01b Backfilling	15	05-Jun-21	24-Jun-21
4.9.3.3 - C4-03				
C4-5510	Pier C4-03 S/B ELS	18	24-May-21	15-Jun-21
C4-5515	Pier C4-03 S/B Pile Cap	12	15-Jun-21	29-Jun-21
C4-5520	Pier C4-03 S/B Column	12	29-Jun-21	14-Jul-21
4.9.3.4 - C4-04M				
C4-5550	Pier C4-04M S/B ELS	24	01-Apr-21	04-May-21
C4-5555	Pier C4-04M S/B Pile Cap	12	05-May-21	18-May-21
C4-5560	Pier C4-04M S/B Column	18	20-May-21	09-Jun-21
C4-5565	Pier C4-04M S/B Backfilling	12	10-Jun-21	24-Jun-21
C4-5568	Pier C4-04M S/B Install Bearing	12	25-Jun-21	09-Jul-21
C4-5570	Pier C4-04M N/B ELS	24	01-Apr-21	04-May-21
C4-5575	Pier C4-04M N/B Pile Cap	12	05-May-21	18-May-21
C4-5580	Pier C4-04M N/B Column	18	20-May-21	09-Jun-21
C4-5585	Pier C4-04M N/B Backfilling	12	10-Jun-21	24-Jun-21
C4-5588	Pier C4-04M N/B Install Bearing	12	25-Jun-21	09-Jul-21
4.10 - Bridge D1				
4.10.1 - Foundation				
4.10.1.2 - Portion VIII				
D1-1100	Pre-drilling D1-01 to D1-04M (10 Nos)	0	23-Dec-20 A	20-Mar-21 A
D1-1110	Bored Piling Set-up and Founding Level Approval	0	20-Mar-21 A	31-Mar-21 A
D1-1120	Bored Piling D1-01 (2 nos)	7	09-Mar-21 A	21-Apr-21
D1-1130	Bored Pile Testing D1-01 (2 nos)	18	21-Apr-21	13-May-21
D1-1140	Bored Piling D1-04M (4 nos)	48	21-Apr-21	19-Jun-21
D1-1145	Bored Piling D1-03 (2 nos)	24	19-Jun-21	19-Jul-21
4.11 - Bridge D2				
4.11.1 - Foundation				
4.11.1.1 - Preparation Works				
D2-431	Abutment D2-04M - TTA Scheme Preparation for Foundation Work	48	01-Apr-21	02-Jun-21
D2-433	Abutment D2-04M - TTA Approval / Endorsement for Foundation Work	60	03-Jun-21	13-Aug-21
4.11.1.2 - Portion VIII				
D2-1110	Pier D2-01 Pre-drilling (4 nos)	6	24-Feb-21 A	19-Jun-21
D2-1120	Pier D2-01 Bored Piling Set-up and Founding Level Approval	12	19-Jun-21	05-Jul-21
4.11.1.3 - Portion XI				
4.11.1.3.1 - Pier D2-02				
D2-1178	Pier D2-02 Bored Piling Riverside (2 nos)	0	18-Jan-21 A	13-Mar-21 A
D2-1182	Pier D2-02 Bored Pile Testing Riverside	0	15-Mar-21 A	20-Mar-21 A
D2-1183	Pier D2-02 Remove Temporary Works and Temporary Reinstatement	0	22-Mar-21 A	31-Mar-21 A
D2-1185	2021 Wet Season Onset	0	01-Apr-21*	
D2-1188	Pier D2-02 Temporary Works and Platform for Land Piles	0	16-Mar-21 A	31-Mar-21 A
D2-1190	Pier D2-02 Bored Piling Landside (2 nos)	17	16-Mar-21 A	24-Apr-21
D2-1193	Pier D2-02 Bored Pile Testing Landside	18	24-Apr-21	17-May-21
4.12 - Bridge E1				
4.12.1 - Foundation				



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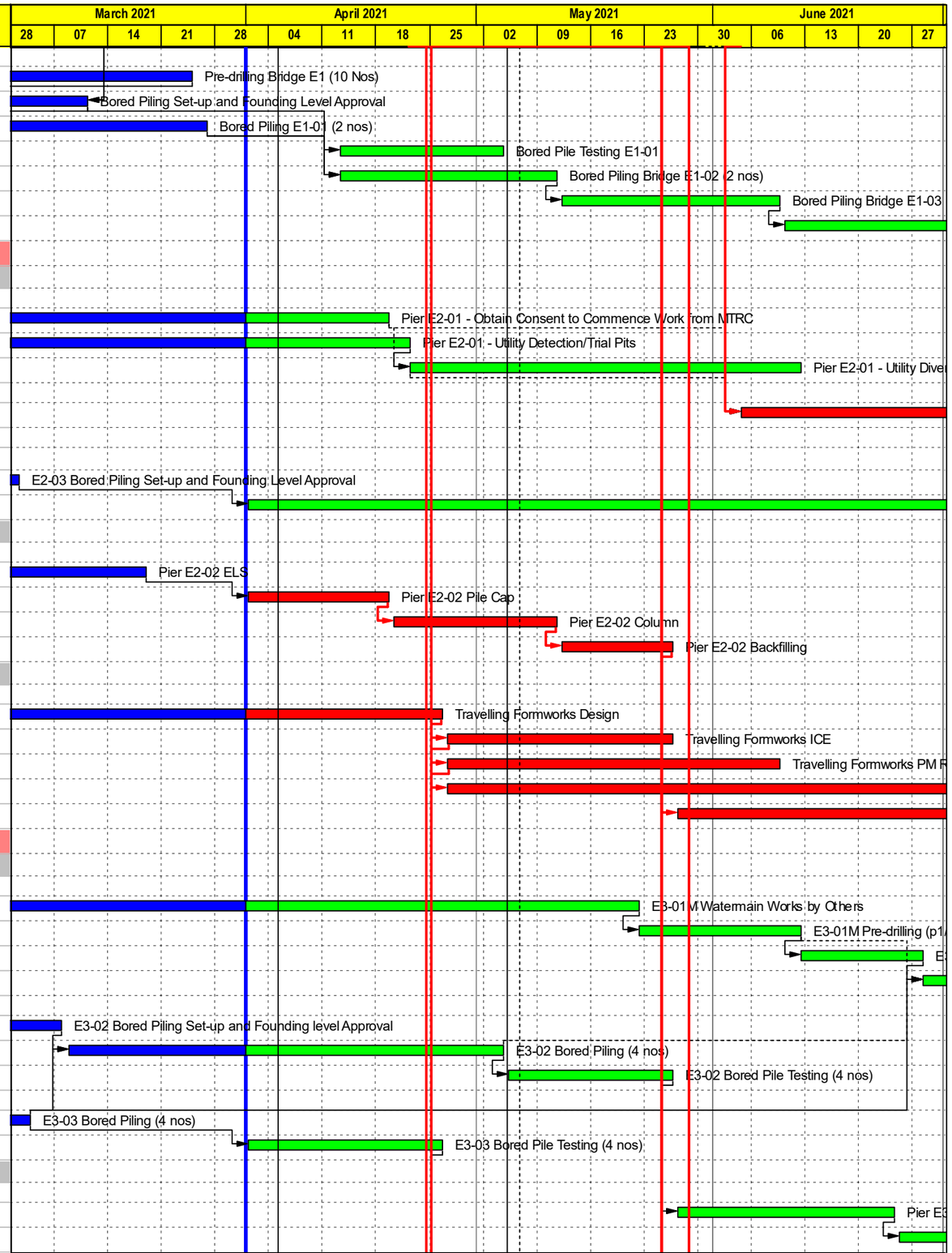
Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
	Portion VIII			
E1-1100	Pre-drilling Bridge E1 (10 Nos)	0	28-Dec-20 A	25-Mar-21 A
E1-1110	Bored Piling Set-up and Founding Level Approval	0	05-Jan-21 A	11-Mar-21 A
E1-1120	Bored Piling E1-01 (2 nos)	0	24-Feb-21 A	27-Mar-21 A
E1-1130	Bored Pile Testing E1-01	18	13-Apr-21	04-May-21
E1-1140	Bored Piling Bridge E1-02 (2 nos)	24	13-Apr-21	11-May-21
E1-1145	Bored Piling Bridge E1-03 (2 nos)	24	12-May-21	09-Jun-21
E1-1150	Bored Piling Bridge E1-04M (4 nos)	48	10-Jun-21	06-Aug-21
	4.13 - Bridge E2			
	4.13.1 - Foundation			
	4.13.1.1 - Preparation Works			
E2-322	Pier E2-01 - Obtain Consent to Commence Work from MTRC	12	30-Dec-20 A	19-Apr-21
E2-324	Pier E2-01 - Utility Detection/Trial Pits	14	01-Mar-21 A	22-Apr-21
E2-325	Pier E2-01 - Utility Diversion/Protection	42	22-Apr-21	12-Jun-21
	4.13.1.3 - Portion VIII			
E2-1110	E2-01 Pre-drilling (6 nos)	30	04-Jun-21	12-Jul-21
	4.13.1.4 - Portion XI			
	4.13.1.4.2 - Pier E2-03			
E2-1220	E2-03 Bored Piling Set-up and Founding Level Approval	0	28-Jan-21 A	02-Mar-21 A
E2-1230	E2-03 Bored Piling (6 nos)	72	01-Apr-21	02-Jul-21
	4.13.2 - Pier			
	4.13.2.2 - E2-02			
E2-1560	Pier E2-02 ELS	0	21-Jan-21 A	19-Mar-21 A
E2-1565	Pier E2-02 Pile Cap	12	01-Apr-21	19-Apr-21
E2-1570	Pier E2-02 Column	18	20-Apr-21	11-May-21
E2-1575	Pier E2-02 Backfilling	12	12-May-21	26-May-21
	4.13.3 - Bridge Deck			
	4.13.3.4 - T-span E2-02			
E2-2271	Travelling Formworks Design	18	26-Jan-21 A	26-Apr-21
E2-2272	Travelling Formworks ICE	24	27-Apr-21	26-May-21
E2-2273	Travelling Formworks PM Review	36	27-Apr-21	09-Jun-21
E2-2274	Travelling Formworks Fabrication	72	27-Apr-21	23-Jul-21
E2-2276	E2-02 Cast In-situ Segment on Pier	48	27-May-21	23-Jul-21
	4.14 - Bridge E3			
	4.14.1 - Foundation			
	4.14.1.1 - Pier E3-01M (Portion XI)			
E3-1015	E3-01M Watermain Works by Others	38	02-Nov-20 A	22-May-21
E3-1020	E3-01M Pre-drilling (p1/p2/p4)	18	22-May-21	12-Jun-21
E3-1025	E3-01M Bored Piling Set-up and Founding Level Approval	12	12-Jun-21	28-Jun-21
E3-1030	E3-01M Bored Piling (4 nos)	48	28-Jun-21	24-Aug-21
	4.14.1.2 - Pier E3-02 (Portion XII)			
E3-1260	E3-02 Bored Piling Set-up and Founding level Approval	0	01-Feb-21 A	08-Mar-21 A
E3-1270	E3-02 Bored Piling (4 nos)	24	09-Mar-21 A	04-May-21
E3-1280	E3-02 Bored Pile Testing (4 nos)	18	05-May-21	26-May-21
	4.14.1.3 - Pier E3-03 (Portion XII)			
E3-1080	E3-03 Bored Piling (4 nos)	0	12-Dec-20 A	04-Mar-21 A
E3-1090	E3-03 Bored Pile Testing (4 nos)	18	01-Apr-21	26-Apr-21
	4.14.2 - Pier			
	4.14.2.2 - E3-02			
E3-1350	Pier E3-02 ELS	24	27-May-21	24-Jun-21
E3-1355	Pier E3-02 Pile Cap	15	25-Jun-21	13-Jul-21



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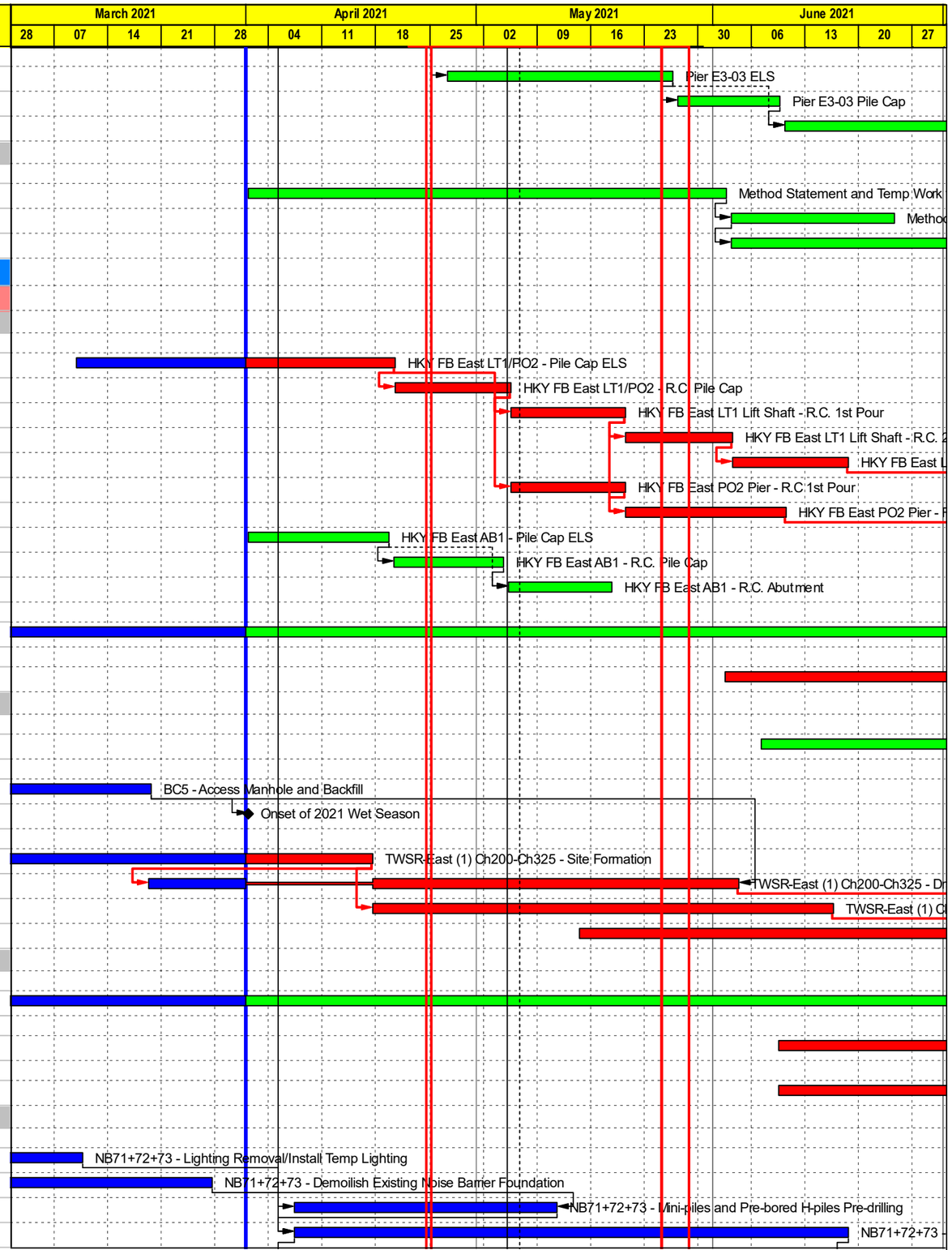
	4.14.2.3 - E3-03			
E3-5530	Pier E3-03 ELS	24	27-Apr-21	26-May-21
E3-5535	Pier E3-03 Pile Cap	12	27-May-21	09-Jun-21
E3-5540	Pier E3-03 Column	18	10-Jun-21	02-Jul-21
	4.14.4 - Bridge Deck			
	4.14.4.4 - T-span E3-03			
E3-2330	Method Statement and Temp Work for Long Casting Bed - Preparation	48	01-Apr-21	02-Jun-21
E3-2335	Method Statement and Temp Work for Long Casting Bed - ICE	18	03-Jun-21	24-Jun-21
E3-2338	Method Statement and Temp Work for Long Casting Bed - PM Review	36	03-Jun-21	16-Jul-21
	5.0 - Fanling Highway Associated Works			
	5.3 - Tai Wo Service Road East (TWSR-East)			
	5.3.1 - TWSR-East HKY FB Extension			
	5.3.1.2 - Lift and Stairs Structure			
FBE-1210	HKY FB East LT1/PO2 - Pile Cap ELS	13	10-Mar-21 A	20-Apr-21
FBE-1215	HKY FB East LT1/PO2 - R.C. Pile Cap	12	20-Apr-21	05-May-21
FBE-1220	HKY FB East LT1 Lift Shaft - R.C. 1st Pour	12	05-May-21	20-May-21
FBE-1225	HKY FB East LT1 Lift Shaft - R.C. 2nd Pour	12	20-May-21	03-Jun-21
FBE-1230	HKY FB East LT1 Lift Shaft - R.C. 3rd Pour Incl Roof	12	03-Jun-21	18-Jun-21
FBE-1240	HKY FB East PO2 Pier - R.C 1st Pour	12	05-May-21	20-May-21
FBE-1245	HKY FB East PO2 Pier - R.C 1st Pour	18	20-May-21	10-Jun-21
FBE-1250	HKY FB East AB1 - Pile Cap ELS	12	01-Apr-21	19-Apr-21
FBE-1255	HKY FB East AB1 - R.C. Pile Cap	12	20-Apr-21	04-May-21
FBE-1260	HKY FB East AB1 - R.C. Abutment	12	05-May-21	18-May-21
	5.3.1.3 - Lift Installation			
FBE-1275	HKY FB East Lift - Manufacturing	106	06-Nov-20 A	12-Aug-21
	5.3.1.4 - HKY FB Extension Deck			
FBE-1340	HKY FB East Steel Deck - Off-site Fabrication/Delivery	120	02-Jun-21	26-Oct-21
	5.3.2 - TWSR East (1) Adjacent to Cycle Track			
	5.3.2.1 - Ch100 to Ch200			
TSE-2356	TWSR (1) Ch100-Ch200 - Application for Lighting Removal	60	07-Jun-21	17-Aug-21
	5.3.2.2 - Box Culvert BC5			
TSE-2040	BC5 - Access Manhole and Backfill	0	24-Feb-21 A	19-Mar-21 A
TSE-2045	Onset of 2021 Wet Season	0	01-Apr-21*	
	5.3.2.3 - Ch200 to Ch325			
TSE-2050	TWSR-East (1) Ch200-Ch325 - Site Formation	11	08-Dec-20 A	17-Apr-21
TSE-2060	TWSR-East (1) Ch200-Ch325 - Drainage, Sewerage and Utilities	38	19-Mar-21 A	04-Jun-21
TSE-2062	TWSR-East (1) Ch200-Ch325 - DN150 Watermain	48	17-Apr-21	16-Jun-21
TSE-2070	TWSR-East (1) Ch200-Ch325 - Mass Concrete Wall (FW03)	42	14-May-21	06-Jul-21
	5.3.3 - TWSR-East Bus-Bus Interchange			
	5.3.3.1 - Bus-Bus Interchange Shelter			
BBI-1205	BBI Covered Walkway - Fabrication and Delivery	135	01-Mar-21 A	14-Sep-21
	5.3.3.2 - Bus-Bus Interchange Road Works			
BBI-1305	BBI - Application for Lighting Removal	60	09-Jun-21	20-Aug-21
	5.3.3.3 - TWSR East (2) Entry to BBI from Fanling Highway			
BBI-1415	BBI - Application for Lighting Removal	60	09-Jun-21	20-Aug-21
	5.3.5 - TWSR-East Noise Barrier			
	5.3.5.1 - Noise Barrier NB71, NB72 and NB73			
TSE-1058	NB71+72+73 - Lighting Removal/Install Temp Lighting	0	07-Jan-21 A	10-Mar-21 A
TSE-1060	NB71+72+73 - Demoilish Existing Noise Barrier Foundation	0	11-Jan-21 A	27-Mar-21 A
TSE-1065	NB71+72+73 - Mini-piles and Pre-bored H-piles Pre-drilling	0	07-Apr-21 A	11-May-21 A
TSE-1070	NB71+72+73 - Pre-bored H-pile Installation (52 nos - 2 rigs)	0	07-Apr-21 A	18-Jun-21 A



CRCC - Paul Y. Joint Venture

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

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

3-Month Rolling Programme - March 2021

Proj ID : DPr3A(ADP1U13)-3MRP
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3-Month Rolling Programme

Date	Revision	Checked	Approved
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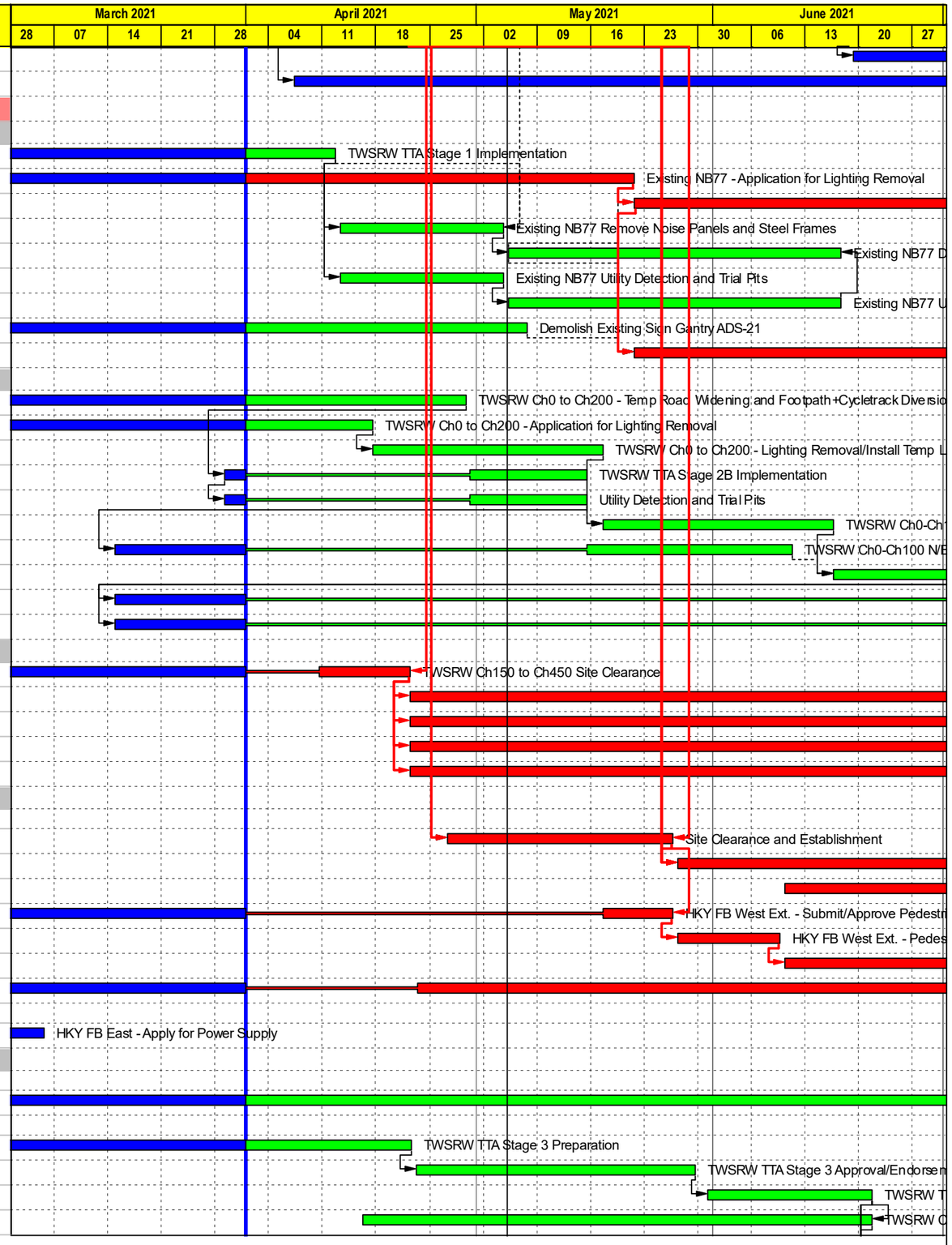
Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
TSE-1075	NB71+72+73 - Pre-bored H-pile Testing	0	19-Jun-21 A	17-Jul-21 A
TSE-1080	NB71+72+73 - Mini-pile Installation (212 nos - 3 rigs)	0	07-Apr-21 A	07-Aug-21 A
5.4 - Tai Wo Service Road West (TWSR-West)				
5.4.1 - Preparation Works for Pier D2-03				
TSW-1015	TWSRW TTA Stage 1 Implementation	6	28-Jan-21 A	12-Apr-21
TSW-1016	Existing NB77 - Application for Lighting Removal	38	30-Dec-20 A	21-May-21
TSW-1018	Existing NB77 - Lighting Removal/Install Temp Lighting	36	21-May-21	05-Jul-21
TSW-1020	Existing NB77 Remove Noise Panels and Steel Frames	18	13-Apr-21	04-May-21
TSW-1025	Existing NB77 Demolish Footing	36	05-May-21	17-Jun-21
TSW-1030	Existing NB77 Utility Detection and Trial Pits	18	13-Apr-21	04-May-21
TSW-1035	Existing NB77 Utility Diversion and/or Protection	36	05-May-21	17-Jun-21
TSW-1055	Demolish Existing Sign Gantry ADS-21	27	28-Jan-21 A	07-May-21
TSW-1075	Temporary Road/Traffic Signs for the TTA for Pier D2-03 Construction	90	21-May-21	06-Sep-21
5.4.2 - TWSR-West Ch000 to Ch200				
TSW-4004	TWSRW Ch0 to Ch200 - Temp Road Widening and Footpath+Cycletrack Diversion	21	03-Feb-21 A	29-Apr-21
TSW-4007	TWSRW Ch0 to Ch200 - Application for Lighting Removal	11	01-Feb-21 A	17-Apr-21
TSW-4008	TWSRW Ch0 to Ch200 - Lighting Removal/Install Temp Lighting	24	17-Apr-21	17-May-21
TSW-4010	TWSRW TTA Stage 2B Implementation	13	29-Mar-21 A	15-May-21
TSW-4015	Utility Detection and Trial Pits	13	29-Mar-21 A	15-May-21
TSW-4100	TWSRW Ch0-Ch100 N/B - Drainage and Sewerage	24	17-May-21	16-Jun-21
TSW-4105	TWSRW Ch0-Ch100 N/B - CLP Ducts+Towngas+Other Utilities	22	15-Mar-21 A	11-Jun-21
TSW-4110	TWSRW Ch0-Ch100 N/B - Roadworks+Footpath+Cycletrack+Run-in	30	16-Jun-21	22-Jul-21
TSW-4115	TWSRW Ch100-Ch150 N/B - Drainage and Sewerage	19	15-Mar-21 A	13-Aug-21
TSW-4120	TWSRW Ch100-Ch150 N/B - CLP Ducts+Towngas+Other Utilities	22	15-Mar-21 A	17-Aug-21
5.4.3 - TWSR-West Ch200 to Ch450				
TSW-4415	TWSRW Ch150 to Ch450 Site Clearance	10	05-Jan-21 A	22-Apr-21
TSW-4425	TWSRW Ch150 to Ch450 Drainage	102	22-Apr-21	24-Aug-21
TSW-4435	TWSRW Ch150 to Ch450 DN450 Watermain Include Testing	102	22-Apr-21	24-Aug-21
TSW-4440	TWSRW Ch150 to Ch450 DN150 Flushing Watermain Include Testing	102	22-Apr-21	24-Aug-21
TSW-4445	TWSRW Ch150 to Ch450 CLP Ducts+Towngas+Other Utilities	102	22-Apr-21	24-Aug-21
5.4.4 - TWSR-West Ch450 to Ch600				
5.4.4.1 - Stage 2B - Ho Ka Yuen FB Extension				
TSW-3010	Site Clearance and Establishment	24	27-Apr-21	26-May-21
TSW-3015	FW05 Cut Slope	60	27-May-21	06-Aug-21
TSW-3026	FW06 L-shape Retaining Wall	48	10-Jun-21	06-Aug-21
TSW-4515	HKY FB West Ext. - Submit/Approve Pedestrian Diversion	7	08-Feb-21 A	26-May-21
TSW-4520	HKY FB West Ext. - Pedestrian Diversion Stage 1	12	27-May-21	09-Jun-21
TSW-4530	HKY FB West Ext. - Demolish Existing Stairs	48	10-Jun-21	06-Aug-21
TSW-4570	HKY FB West Ext. - Lift Manufacturing	189	06-Nov-20 A	07-Dec-21
5.4.4.2 - Power Supply for TWSRW FB Extension				
FBE-1400	HKY FB East - Apply for Power Supply	0	07-Dec-20 A	05-Mar-21 A
5.4.5 - TWSR-West Ch600 to Ch800				
5.4.5.1 - Ch600 to Ch800 Slope Works				
TSW-1115	Slope Works CSD Preparation and Approval	332	14-Sep-20 A	23-May-22
5.4.5.2 - Ch600 to Ch800 Road Works				
TSW-1100	TWSRW TTA Stage 3 Preparation	15	30-Dec-20 A	22-Apr-21
TSW-1105	TWSRW TTA Stage 3 Approval/Endorsement	30	23-Apr-21	29-May-21
TSW-1165	TWSRW TTA Stage 3A Implementation	18	31-May-21	21-Jun-21
TSW-1166	TWSRW Ch600 to Ch700 N/B - Application for Lighting Removal	54	16-Apr-21	21-Jun-21



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

3-Month Rolling Programme - March 2021

Proj ID : DPr3A(ADP1U13)-3MRP
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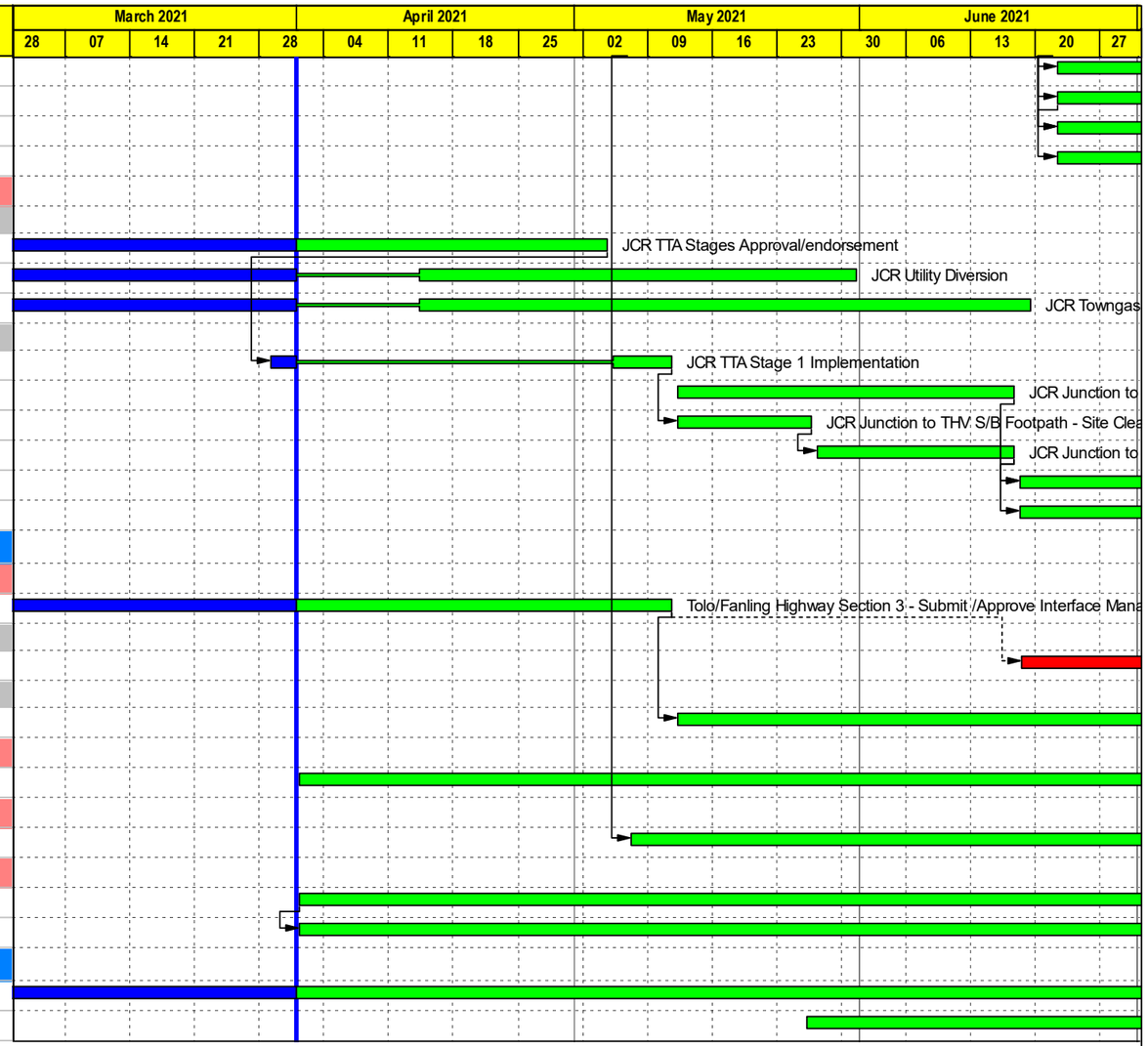
3-Month Rolling Programme

Date	Revision	Checked	Approved
12-Apr-21	March 2021		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
TSW-1167	TWSRW Ch600 to Ch700 N/B - Lighting Removal/Install Temp Lighting	36	22-Jun-21	03-Aug-21
TSW-1170	TWSRW Ch600 to Ch700 N/B - Site Clearance and Formation	36	22-Jun-21	03-Aug-21
TSW-1175	TWSRW Ch600 to Ch700 N/B - Drainage and Sewerage	36	22-Jun-21	03-Aug-21
TSW-1180	TWSRW Ch600 to Ch700 N/B - CLP Ducts+Towngas+Other Utilities	36	22-Jun-21	03-Aug-21
5.5 - Jockey Club Road				
5.5.1 - Preparation Works				
10-121	JCR TTA Stages Approval/endorsement	24	31-Dec-20 A	04-May-21
10-126	JCR Utility Diversion	38	16-Nov-20 A	31-May-21
10-127	JCR Towngas Diversion	54	16-Nov-20 A	19-Jun-21
5.5.2 - Junction to Tong Hang Village (THV)				
JCR-2100	JCR TTA Stage 1 Implementation	6	29-Mar-21 A	11-May-21
JCR-2102	JCR Junction to THV S/B - Lighting Removal/Install Temporary Lighting	30	12-May-21	17-Jun-21
JCR-2110	JCR Junction to THV S/B Footpath - Site Clearance	12	12-May-21	26-May-21
JCR-2120	JCR Junction to THV S/B Footpath - Utility Install/Traffic Light Civil Provision	18	27-May-21	17-Jun-21
JCR-2130	JCR Junction to THV S/B Footpath - Construct/Reinstate	18	18-Jun-21	09-Jul-21
JCR-2135	JCR Junction to THV S/B Footpath - Road Lighting	18	18-Jun-21	09-Jul-21
6.0 - TCSS Works				
6.1 - Key Date 1				
TCS-100	Tolo/Fanling Highway Section 3 - Submit /Approve Interface Management Plan	30	02-Nov-20 A	11-May-21
6.1.1 - TWSRW & FH N/B				
TCS-124	TCSS Ducts - TWSRW Ch150-Ch450	56	18-Jun-21	24-Aug-21
6.1.2 - TWSRE & FH S/B				
TCS-520	TCSS Ducts - Noise Barrier NB73	60	12-May-21	23-Jul-21
6.2 - Key Date 3A and Section 9A				
TCS-300	Tolo/Fanling Highway Section 4 - Submit /Approve Interface Management Plan	120	01-Apr-21	27-Aug-21
6.3 - Key Date 3B and Section 9B				
TCS-370	Traffic Defector System - Submit /Approve Interface Management Plan	120	07-May-21	28-Sep-21
6.4 - Section 9C				
TCS-440	BCP Connecting Road TCSS - Submit /Approve Interface Management Plan	120	01-Apr-21	27-Aug-21
TCS-450	BCP Connecting Road TCSS - Removal of Existing TCSS Equipment	300	01-Apr-21	09-Apr-22
7.0 - Miscellaneous Works				
MIS-100	Preservation and Protection of Trees	295	28-Oct-20 A	04-Apr-22
MIS-200	Drainage Outfall	195	26-May-21	17-Jan-22



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

3-Month Rolling Programme - March 2021

Proj ID : DPr3A(ADP1U13)-3MRP
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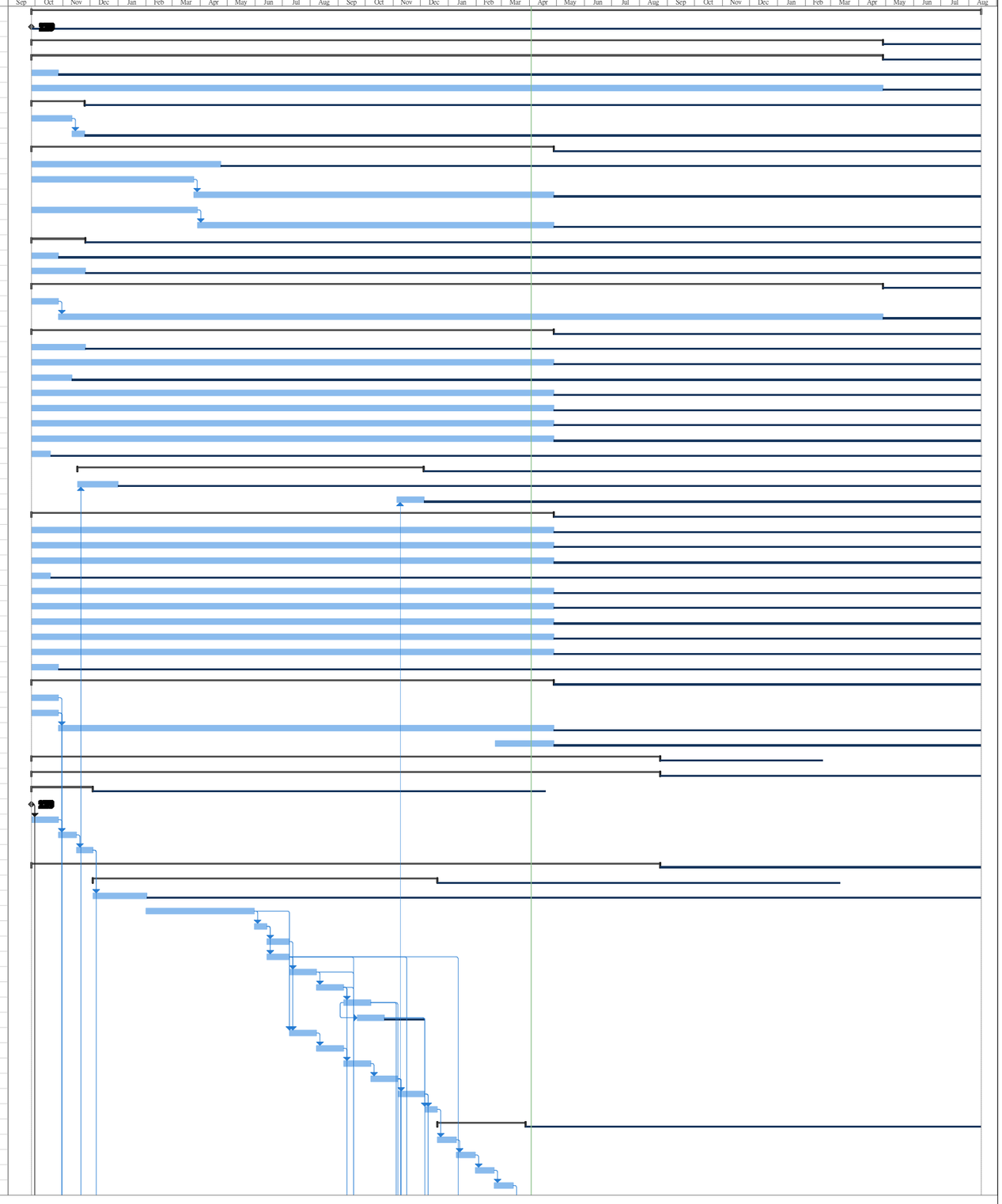
3-Month Rolling Programme

Date	Revision	Checked	Approved
12-Apr-21	March 2021		

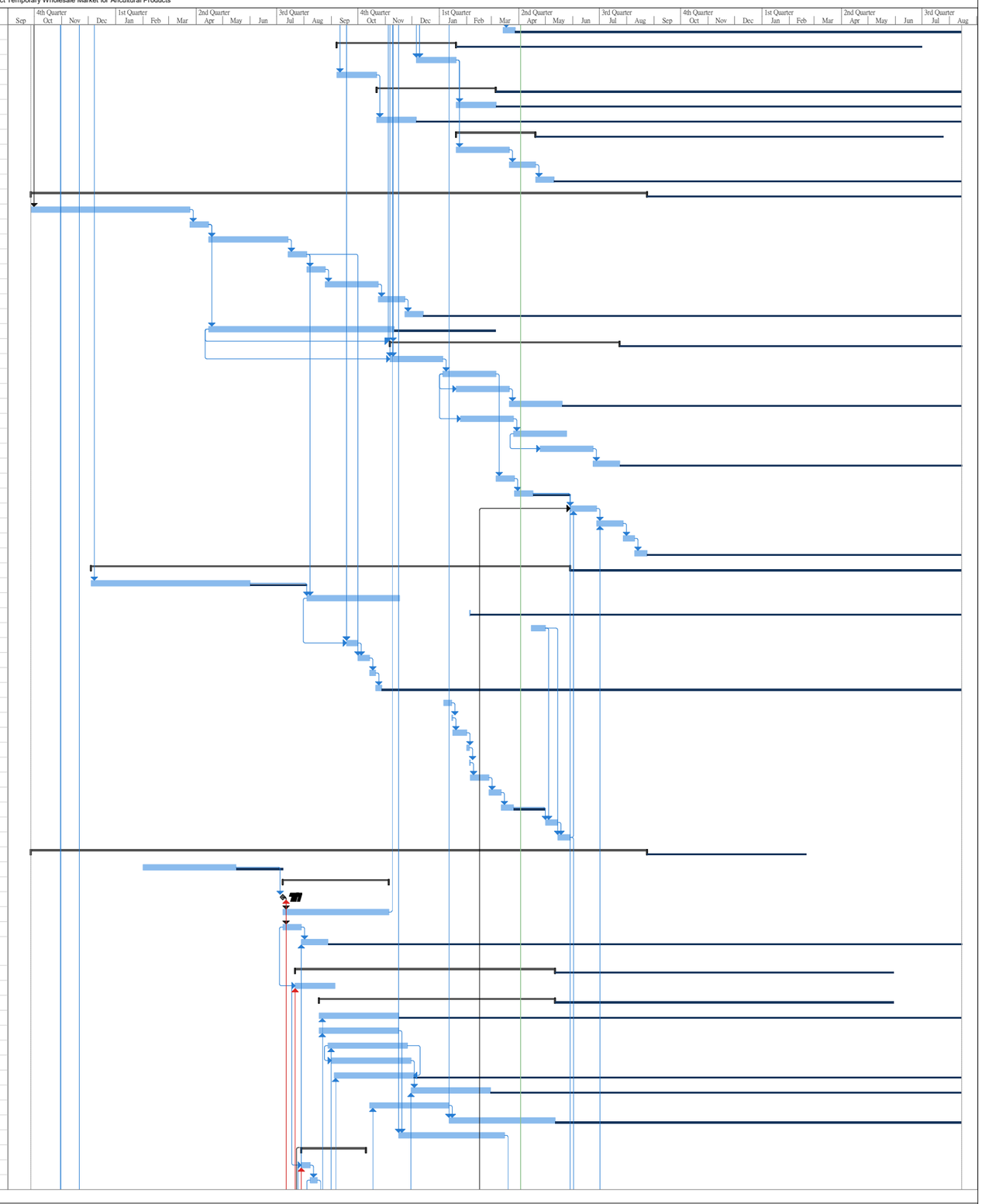
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
1		**ND/2019/06 Contract Period**	**1053 days**	**Fri 27/9/19**	**Sun 14/8/22**	**0 days**	
2		Starting Date	0 days	Fri 27/9/19	Fri 27/9/19	1053 days	
3		**Preliminaries**	**944 days**	**Fri 27/9/19**	**Wed 27/4/22**	**109 days**	
4		**Project 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
Data Date: 2021-01-01
Revised Programme (Rev. 5)

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

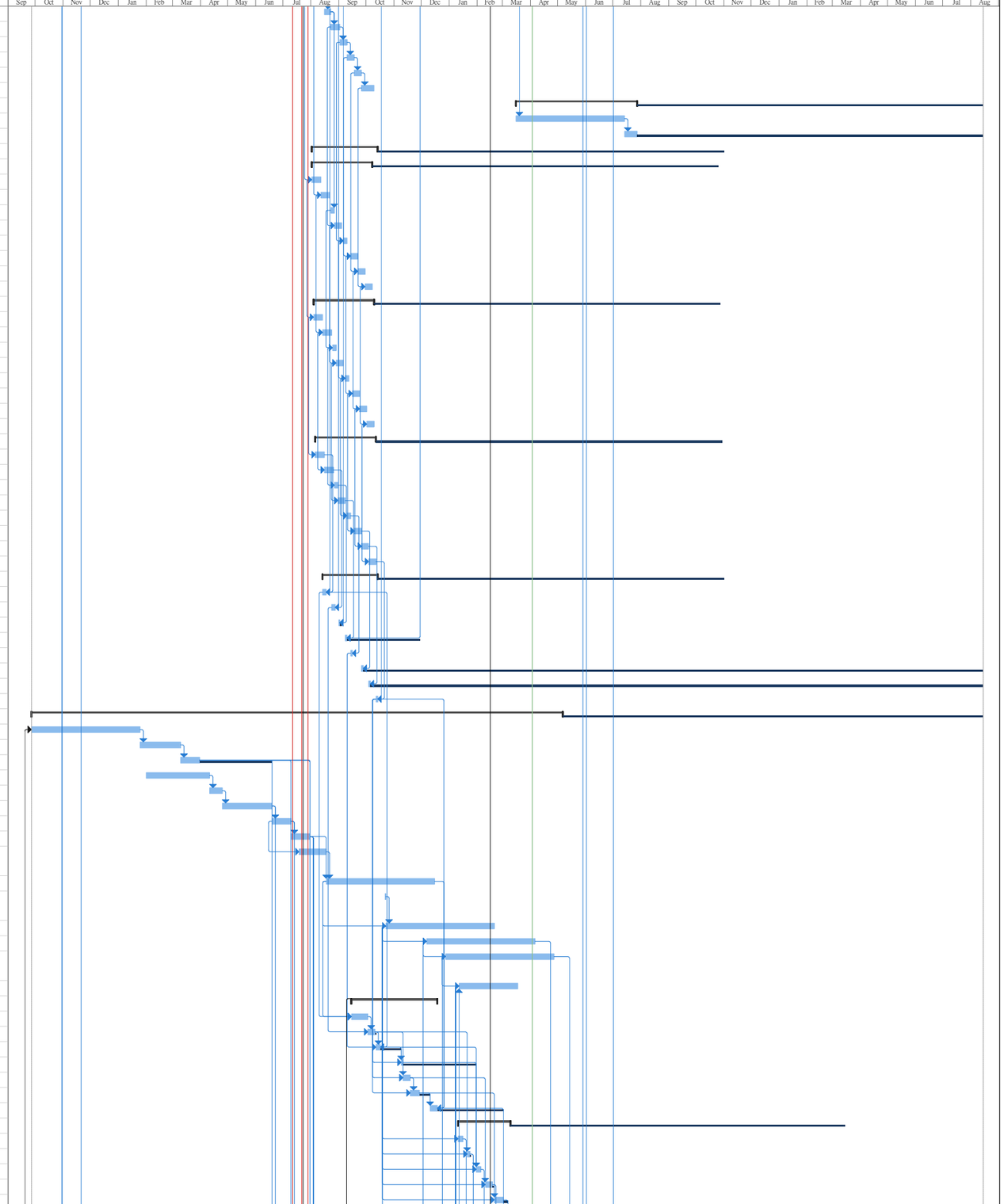
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
79		300 x 300mm roofing concrete tiles	14 days	Sun 14/3/21	Sat 27/3/21	505 days	78
80		**External walls and internal walls**	**135 days**	**Mon 7/9/20**	**Tue 19/1/21**	**527 days**	
81		External wall block work and finishing	45 days	Sun 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



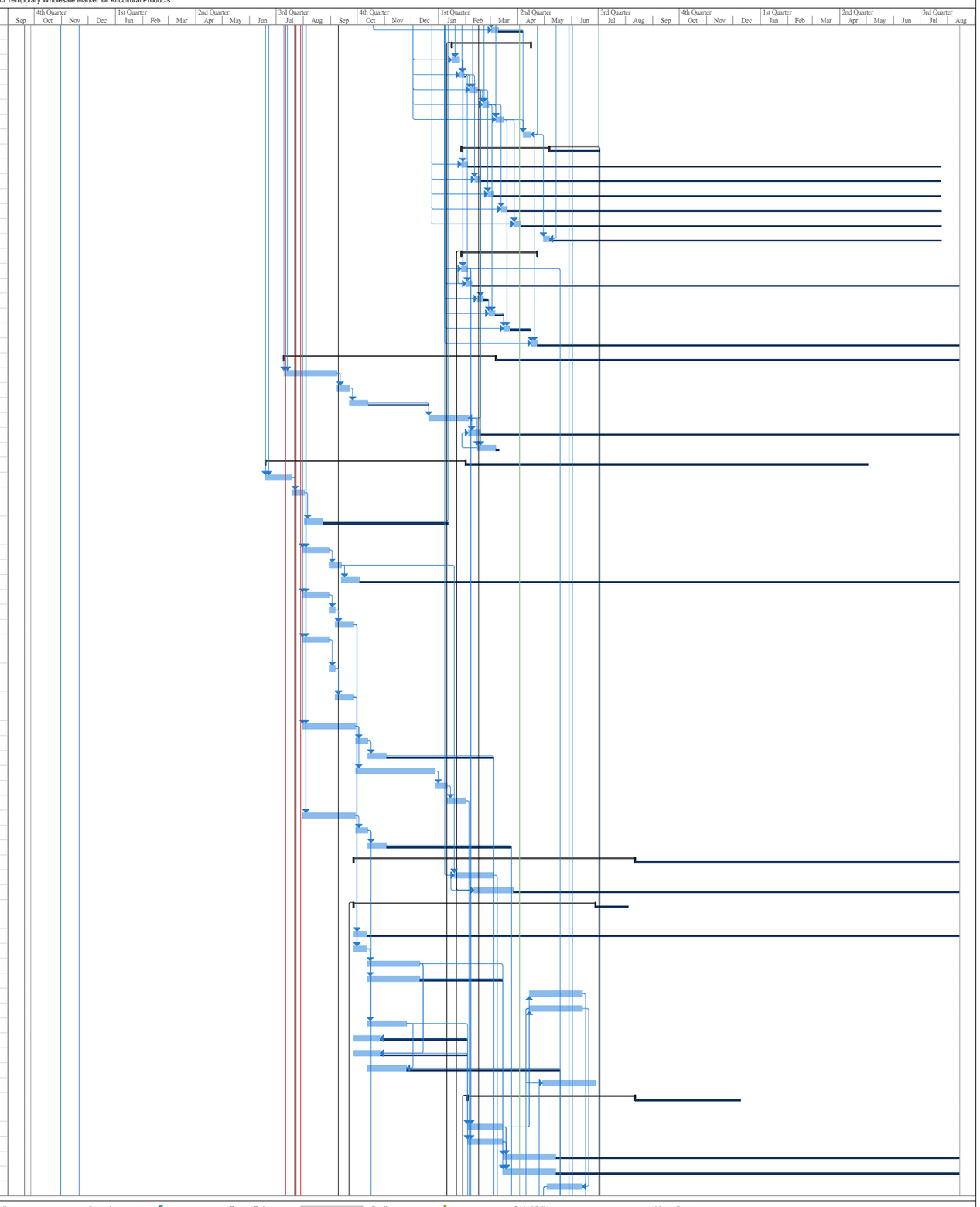
Project: ND/2019/06
Data Date: 2021-01-01
Revised Programme (Rev. 5)

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

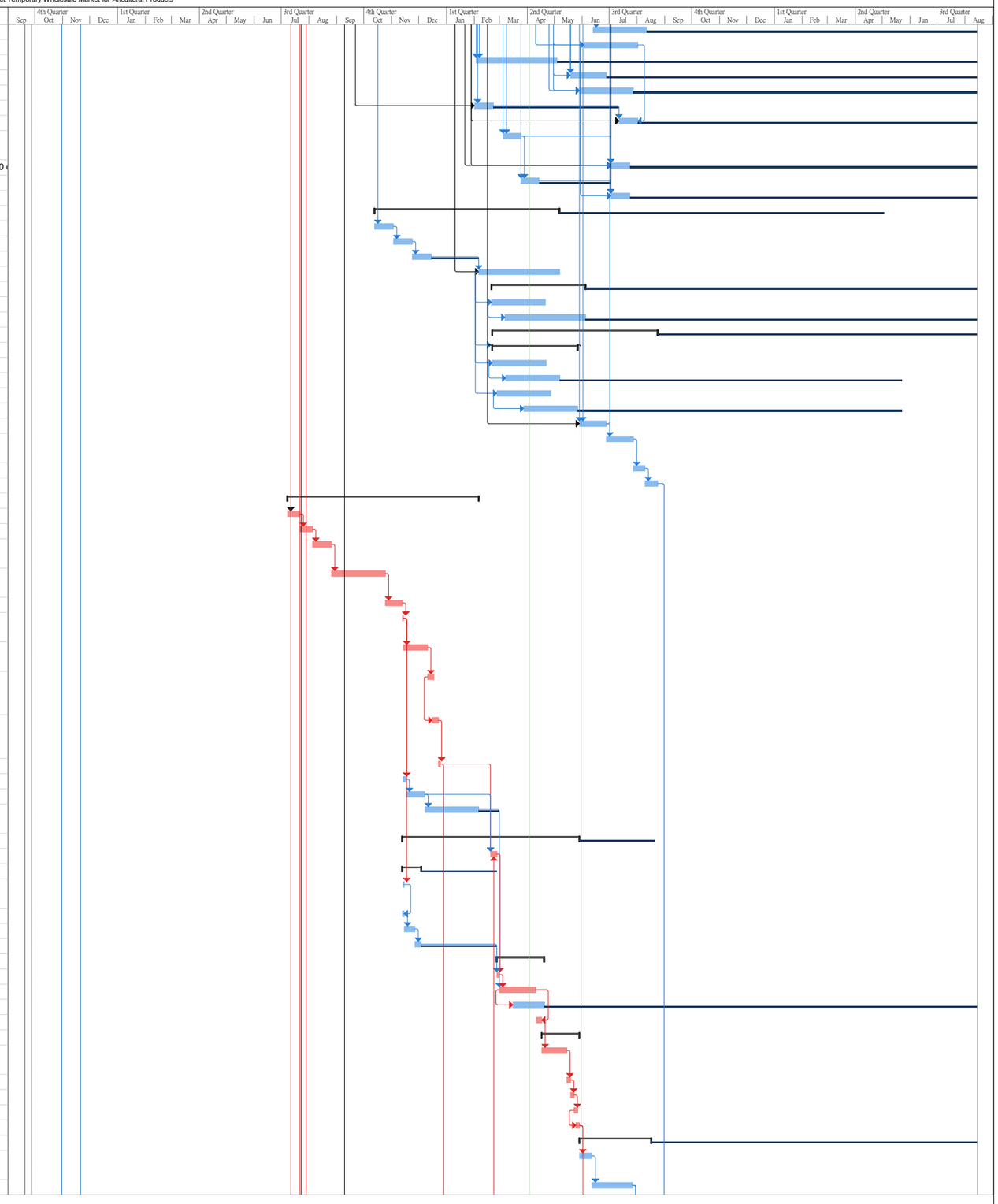
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
156		F28	7 days	Sun 16/8/20	Sat 22/8/20	0 days	155
157		F27 -> F26 - > F25 -> F24	10 days	Sun 23/8/20	Tue 1/9/20	0 days	156
158		F9 -> F8 -> F7	8 days	Wed 2/9/20	Wed 9/9/20	0 days	157
159		F16 -> F15 -> F14 -> F13	8 days	Thu 10/9/20	Thu 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



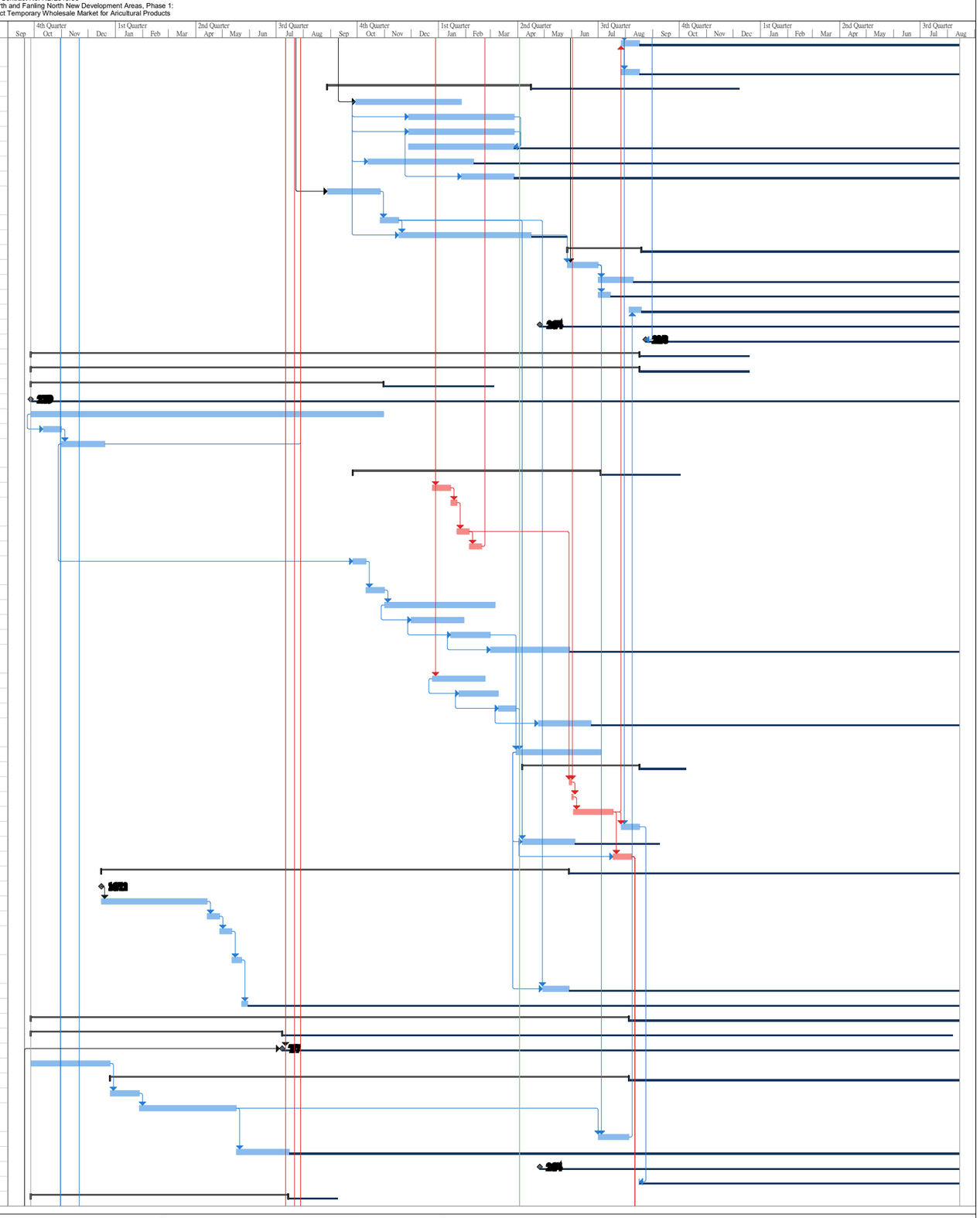
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
232		Area 6 - F23, F24, F25, F26, F27	8 days	Tue 2/3/21	Tue 9/3/21	28 days	214SS+130 days,225
233		**Installation for steel frame and truss**	**90 days**	**Sat 16/1/21**	**Thu 15/4/21**	**0 days**	
234		Area 1 - F5, F4, F3, F11, F10, F9	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



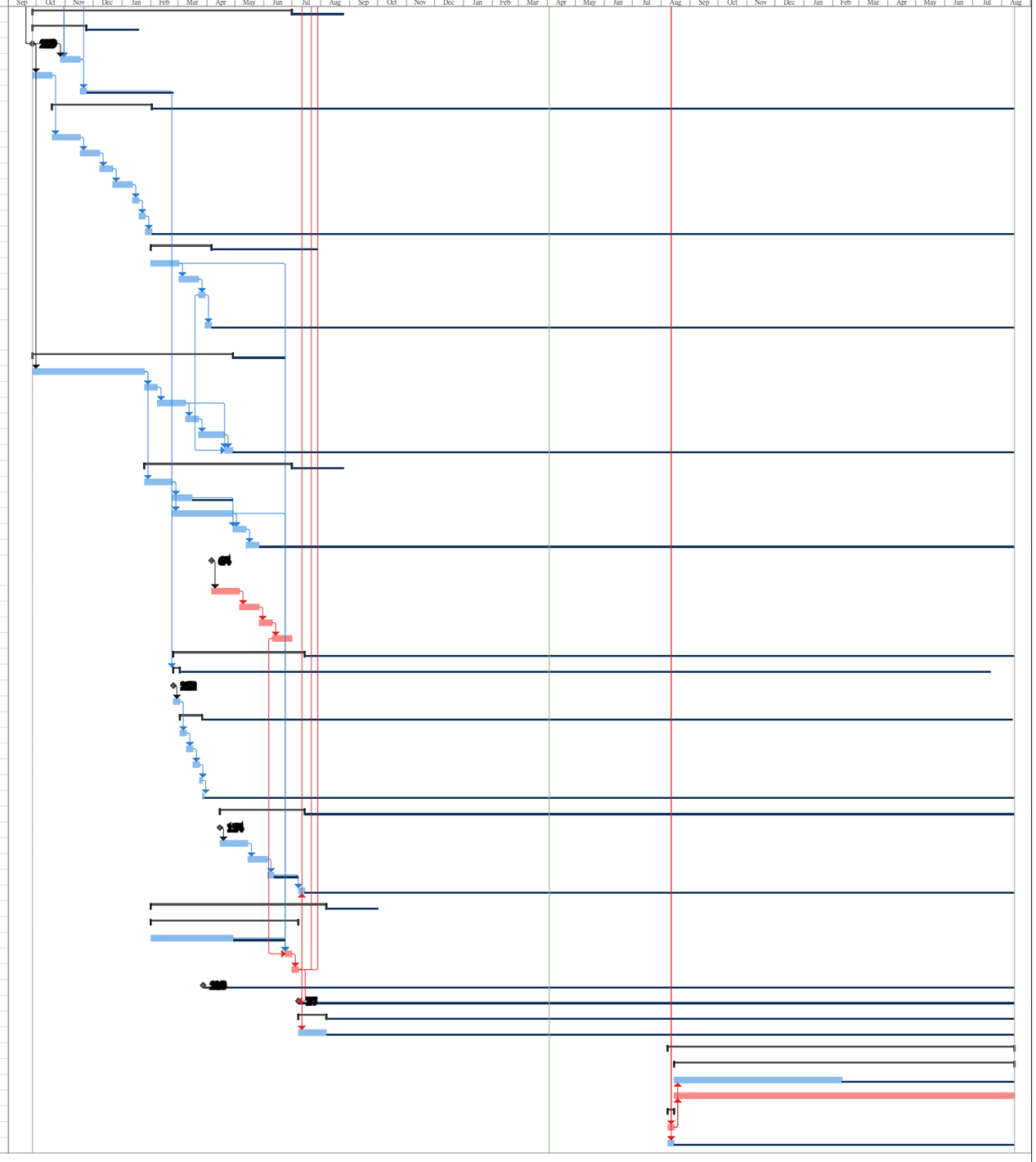
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
304		Install rockwool	60 days	Sun 13/6/21	Wed 11/8/21	368 days	291,303
305		Install top liner	60 days	Thu 3/6/21	Sun 1/8/21	0 days	292SS+30 days,303SS+30 days
306		Install skylight PMMA panel	90 days	Wed 3/2/21	Mon 3/5/21	468 days	293,248
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**	

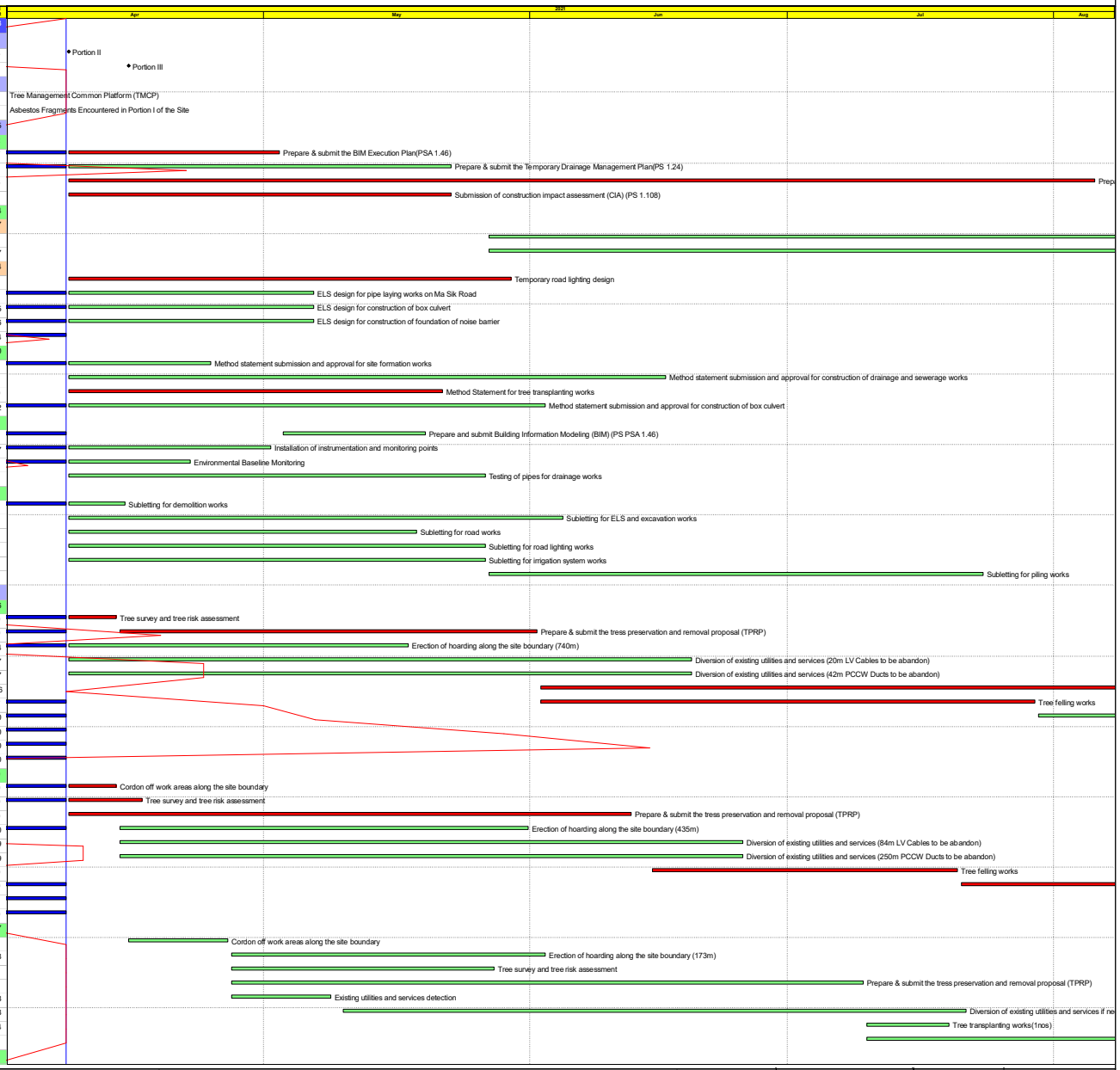


ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
437		**Works at Portion 1**	**278 days**	**Fri 27/9/19**	**Tue 30/6/20**	**56 days**	
438		**General for Portion 1**	**58 days**	**Fri 27/9/19**	**Sat 23/11/19**	**56 days**	
439		Access date of Portion 1	0 days	Fri 27/9/19	Fri 27/9/19	0 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



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		1629	31-Aug-20 A	11-May-24	353
Access Date		7	08-Apr-21	15-Apr-21	0
ACD1010	Portion II	0	08-Apr-21*		-83
ACD1020	Portion III	0	15-Apr-21*		0
Notification of Compensation Event (NCE)		0	31-Mar-21 A	01-Apr-21 A	
NCE-0011	Tree Management Common Platform (TMCP)	0	31-Mar-21 A	01-Apr-21 A	
NCE-0012	Asbestos Fragments Encountered in Portion I of the Site	0	31-Mar-21 A	01-Apr-21 A	
Preliminaries, Contractor's Design, Method Statement Submission and Approval		302	31-Aug-20 A	07-Oct-21	635
General Submission		210	31-Aug-20 A	05-Aug-21	-72
PGS1100	Prepare & submit the BIM Execution Plan(PSA 1.46)	89	31-Aug-20 A	02-May-21	-27
PGS1140	Prepare & submit the Temporary Drainage Management Plan(PS 1.24)	90	09-Feb-21 A	22-May-21	3
PGS1200	Preparation and approval of TTA scheme and traffic impact assessment(PS1.16)	120	08-Apr-21	05-Aug-21	-76
PGS1230	Submission of construction impact assessment (CIA) (PS 1.108)	45	08-Apr-21	22-May-21	-61
Contractor's Design Submission and Approval		220	12-Nov-20 A	07-Oct-21	544
Permanent Works Design		75	27-May-21	21-Aug-21	117
PWD1020	Design for road lighting system	75	27-May-21	21-Aug-21	11
PWD1030	Design for irrigation system	75	27-May-21	21-Aug-21	117
Major Temporary Works Design		220	12-Nov-20 A	07-Oct-21	544
TWD1010	Temporary road lighting design	45	08-Apr-21	29-May-21	-7
TWD1020	ELS design for pipe laying works on Ma Sik Road	45	12-Nov-20 A	06-May-21	49
TWD1025	ELS design for construction of box culvert	45	12-Nov-20 A	06-May-21	155
TWD1035	ELS design for construction of foundation of noise barrier	45	12-Nov-20 A	06-May-21	416
TWD1045	Formwork and false work for construction of box culvert	45	09-Mar-21 A	07-Oct-21	544
Major Construction Works Method Statement		137	05-Oct-20 A	16-Jun-21	120
MS1500	Method statement submission and approval for site formation works	51	05-Oct-20 A	24-Apr-21	65
MS1510	Method statement submission and approval for construction of drainage and sewerage works	60	08-Apr-21	16-Jun-21	14
MS1530	Method Statement for tree transplanting works	38	08-Apr-21	21-May-21	-99
MS1585	Method statement submission and approval for construction of box culvert	60	04-Jan-21 A	02-Jun-21	132
Preliminaries		81	29-Oct-20 A	26-May-21	86
PRS2010	Prepare and submit Building Information Modeling (BIM) (PS PSA 1.46)	30	29-Oct-20 A	19-May-21	31
PRS2020	Installation of instrumentation and monitoring points	42	20-Nov-20 A	01-May-21	107
PRS2040	Environmental Baseline Monitoring	25	04-Dec-20 A	22-Apr-21	62
PRS2070	Testing of pipes for drainage works	42	08-Apr-21	26-May-21	32
Tendering and Procurement for Major Subcontractor		169	16-Sep-20 A	23-Jul-21	88
TDS1042	Subletting for demolition works	60	16-Sep-20 A	14-Apr-21	26
TDS1060	Subletting for ELS and excavation works	50	08-Apr-21	04-Jun-21	24
TDS1070	Subletting for road works	35	08-Apr-21	18-May-21	3
TDS1100	Subletting for road lighting works	42	08-Apr-21	26-May-21	11
TDS1110	Subletting for irrigation system works	42	08-Apr-21	26-May-21	88
TDS1120	Subletting for piling works	50	27-May-21	23-Jul-21	88
Section 1- Site Formation and Infrastructure Works in Area A		575	07-Oct-20 A	08-Jul-22	21
Site Formation (Portion I- Area A 11042m2)		349	07-Oct-20 A	27-Jan-22	176
S1-SF0950	Tree survey and tree risk assessment	62	07-Oct-20 A	13-Apr-21	-99
S1-SF0960	Prepare & submit the tress preservation and removal proposal (TPRP)	75	22-Jan-21 A	01-Jun-21	-99
S1-SF1010	Erection of hoarding along the site boundary (740m)	75	02-Dec-20 A	17-May-21	304
S1-SF1036	Diversion of existing utilities and services (20m LV Cables to be abandon)	60	08-Apr-21	19-Jun-21	277
S1-SF1038	Diversion of existing utilities and services (42m PCCW Ducts to be abandon)	60	08-Apr-21	19-Jun-21	277
S1-SF1039	Tree transplanting works at the side of road (12nos)	70	02-Jun-21	10-Aug-21	-126
S1-SF1041	Tree felling works	60	23-Dec-20 A	29-Jul-21	-57
S1-SF1042	Site clearance	30	24-Nov-20 A	11-Aug-21	140
S1-SF1045	Construction of haul road	21	23-Dec-20 A	25-Aug-21	140
S1-SF1050	Ground investigation works (7nos) and trial pit(1nos) (PMI005)	50	11-Dec-20 A	02-Oct-21	140
S1-SF1180	Site formation works(5055m3) and Removal of temporary works, haul road and temporary accesses	50	23-Feb-21 A	27-Jan-22	140
Site Formation (Portion II- Area A 21900m2)		314	24-Nov-20 A	11-Mar-22	-39
S1-SF1195	Cordon off work areas along the site boundary	10	01-Dec-20 A	13-Apr-21	-39
S1-SF1200	Tree survey and tree risk assessment	20	01-Dec-20 A	16-Apr-21	-39
S1-SF1205	Prepare & submit the tress preservation and removal proposal (TPRP)	55	08-Apr-21	12-Jun-21	-39
S1-SF1220	Erection of hoarding along the site boundary (435m)	50	08-Jan-21 A	31-May-21	130
S1-SF1302	Diversion of existing utilities and services (84m LV Cables to be abandon)	60	14-Apr-21	25-Jun-21	109
S1-SF1304	Diversion of existing utilities and services (250m PCCW Ducts to be abandon)	60	14-Apr-21	25-Jun-21	109
S1-SF1310	Tree felling works	30	15-Jun-21	20-Jul-21	-39
S1-SF1320	Site clearance	30	24-Nov-20 A	12-Aug-21	-39
S1-SF1340	Construction of haul road	30	30-Nov-20 A	04-Sep-21	-11
S1-SF1410	Site formation works part 1 (7285m3 of 21854m3) and Removal of temporary works, haul road and temporary acc	70	23-Feb-21 A	11-Mar-22	-39
Site Formation (Portion III- Area A 4900m2)		133	15-Apr-21	25-Aug-21	177
S1-SF1440	Cordon off work areas along the site boundary	10	15-Apr-21	26-Apr-21	47
S1-SF1450	Erection of hoarding along the site boundary (173m)	30	27-Apr-21	02-Jun-21	158
S1-SF1520	Tree survey and tree risk assessment	25	27-Apr-21	27-May-21	47
S1-SF1525	Prepare & submit the tress preservation and removal proposal (TPRP)	60	27-Apr-21	09-Jul-21	47
S1-SF1530	Existing utilities and services detection	10	27-Apr-21	08-May-21	128
S1-SF1535	Diversion of existing utilities and services if necessary	60	10-May-21	21-Jul-21	128
S1-SF1540	Tree transplanting works(1nos)	10	10-Jul-21	19-Jul-21	214
S1-SF1543	Tree felling works	40	10-Jul-21	25-Aug-21	47
Box Culvert BC3 and Outfall 10		178	03-Mar-21 A	08-Jul-22	18



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-Apr-21)

Date	Revision	Checked	Approved
15-Apr-21	A	LDS	CLX

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

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
Box Culvert BC3 (CH0 to CH264)		178	03-Mar-21 A	08-Jul-22	18
S1-BC1240	Excavation and construction of the box culvert Bay 7	21	03-Mar-21 A	14-Feb-22	18
S1-BC1245	Excavation and construction of the box culvert Bay 8	21	17-Mar-21 A	03-Mar-22	18
S1-BC1250	Excavation and construction of the box culvert Bay 9	21	18-Mar-21 A	21-Mar-22	18
S1-BC1255	Excavation and construction of the box culvert Bay 10	21	20-Mar-21 A	08-Apr-22	18
S1-BC1260	Excavation and construction of the box culvert Bay 11	21	23-Mar-21 A	30-Apr-22	18
S1-BC1265	Excavation and construction of the box culvert Bay 12 and inspection chamber	31	25-Mar-21 A	01-Jun-22	18
S1-BC1270	Excavation and construction of the box culvert Bay 13	21	27-Mar-21 A	20-Jun-22	18
S1-BC1275	Excavation and construction of the box culvert Bay 14	21	30-Mar-21 A	08-Jul-22	18
Section 2- Site Formation and Infrastructure Works in Area B		258	24-Nov-20 A	22-Nov-21	-74
Site Formation and Infrastructure Works in Area B1		109	24-Nov-20 A	08-Apr-21 A	
S2-SF2045	Prepare & submit the tress preservation and removal proposal (TPRP)	75	22-Jan-21 A	08-Apr-21 A	
S2-SF2150	Tree felling works	15	07-Apr-21 A	08-Apr-21 A	
S2-SF2160	Site clearance	15	24-Nov-20 A	08-Apr-21 A	
S2-SF2170	Construction of haul road	10	24-Nov-20 A	08-Apr-21 A	
Site Formation and Infrastructure Works in Area B2		248	08-Jan-21 A	22-Nov-21	-74
S2-SF2245	Prepare & submit the tress preservation and removal proposal (TPRP)	75	22-Jan-21 A	30-Apr-21	-30
S2-SF2262	Diversion of existing utilities and services (80m LV Cables to be abandon)	60	08-Apr-21	19-Jun-21	55
S2-SF2264	Diversion of existing utilities and services (58m PCCW Ducts to be abandon)	60	08-Apr-21	19-Jun-21	55
S2-SF2270	Tree felling works	30	24-May-21	28-Jun-21	-47
S2-SF2280	Site clearance	30	08-Jan-21 A	06-Jul-21	-47
S2-SF2300	Construction of haul road	25	08-Jan-21 A	12-Jul-21	-47
S2-SF2310	Asbestos survey for existing building	25	08-Apr-21	07-May-21	-74
S2-SF2340	Asbestos abatement for existing building	80	08-May-21	12-Aug-21	-74
S2-SF2365	Site formation works Area B part 1 (16623m3)	60	23-Feb-21 A	22-Nov-21	-74
Section 3- Site Formation and Infrastructure Works in Area C		212	07-Oct-20 A	21-Aug-21	147
Site Formation and Infrastructure Works in Portion I Area C (13990m2)		212	07-Oct-20 A	21-Aug-21	147
S3-SF0910	Tree survey and tree risk assessment	10	07-Oct-20 A	08-Apr-21	54
S3-SF0915	Prepare & submit the tress preservation and removal proposal (TPRP)	75	22-Jan-21 A	08-Jun-21	54
S3-SF0920	Weeding works (PMI: No.002 Multiple Site Clearance)	40	09-Oct-20 A	12-Apr-21	89
S3-SF0930	Asbestos survey for farmland area (CE)	20	05-Jan-21 A	14-Apr-21	89
S3-SF0940	Prepare and submit asbestos report and asbestos abatement plan	28	08-Jan-21 A	17-Apr-21	109
S3-SF0950	Asbestos abatement for farmland area (CE)	20	25-Jan-21 A	20-Apr-21	89
S3-SF1000	UU detection and trial pit	10	29-Mar-21 A	26-Apr-21	89
S3-SF1005	Diversion of existing utilities and services (151m LV Cables to be abandon)	60	27-Apr-21	09-Jul-21	157
S3-SF1007	Diversion of existing utilities and services (255m PCCW Ducts to be abandon)	60	27-Apr-21	09-Jul-21	157
S3-SF1020	Tree felling works	30	09-Jun-21	15-Jul-21	54
S3-SF1030	Site clearance	30	09-Feb-21 A	02-Aug-21	70
S3-SF1080	Construction of haul road	21	13-Feb-21 A	13-Aug-21	70
S3-SF1081	Mobilization of G.I rig & Ground investigation (2nos) (PMI005)	21	29-Mar-21 A	21-Aug-21	70
Section 5- Site Formation and Infrastructure Works in Area E and Remainder of the Works		97	03-May-21	26-Aug-21	126
Road L1		97	03-May-21	26-Aug-21	126
Road L1 in Portion I (P700 CH 175 to CH245)		97	03-May-21	26-Aug-21	126
S5-RD0910	UU detection and trial pit (1nos) (PMI005)	14	24-May-21	08-Jun-21	132
S5-RD0920	Asbestos survey for the existing structures	14	03-May-21	18-May-21	116
S5-RD1003	Prepare & submit the tress preservation and removal proposal (TPRP)	75	03-May-21	31-Jul-21	110
S5-RD1008	Diversion of existing utilities and services (36m LV Cables to be abandon)	60	09-Jun-21	19-Aug-21	132
S5-RD1009	Diversion of existing utilities and services (29m PCCW Ducts to be abandon)	60	09-Jun-21	19-Aug-21	132
S5-RD1020	Asbestos removal for the existing structures	30	20-May-21	24-Jun-21	116
S5-RD1035	Demolition of existing structure (9nos 383m2)	53	25-Jun-21	26-Aug-21	116
Section 6-Completion of Preservation And Protection Of Existing Trees		1217	31-Aug-20 A	11-May-24	-105
S6-CS1000	Preservation and protection of trees	1217	31-Aug-20 A	11-May-24	-105

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

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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.
[5] The Action and Limit Levels for the Additional Water Quality Monitoring is subject to the agreement with the authority.

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

TEST REPORT

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

Test Report No.:	34871B
Date of Issue:	2021-03-03
Date Received:	2021-03-01
Date Tested:	2021-03-01
Date Completed:	2021-03-03
Next Due Date:	2021-05-02
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:

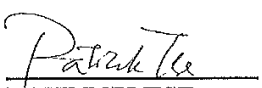
1. Instruction and Operation Manual High Volume Sampler, Tisch Environmental Inc.
2. In-house method in according to the instruction manual: The Dust Monitor was compared with a calibrated High Volume Sampler and the result was used to generate the Correlation Factor (CF) between the Dust Monitor and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

Results:

Correlation Factor (CF)	1.104

****

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.:	34871C
Date of Issue:	2021-03-03
Date Received:	2021-03-01
Date Tested:	2021-03-01
Date Completed:	2021-03-03
Next Due Date:	2021-05-02
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)	1.128

****

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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.:	34870
Date of Issue:	2021-03-01
Date Received:	2021-02-27
Date Tested:	2021-02-27
Date Completed:	2021-03-01
Next Due Date:	2021-04-30
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)	1.148

****

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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.:	34870A
Date of Issue:	2021-03-01
Date Received:	2021-02-27
Date Tested:	2021-02-27
Date Completed:	2021-03-01
Next Due Date:	2021-04-30
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)	1.105

****

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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.:	35071A
Date of Issue:	2021-04-26
Date Received:	2021-04-23
Date Tested:	2021-04-24
Date Completed:	2021-04-26
Next Due Date:	2021-06-25
Page:	1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for Calibration:

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X24477
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-06

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.134

****

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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.:	34870B
Date of Issue:	2021-03-01
Date Received:	2021-02-27
Date Tested:	2021-02-27
Date Completed:	2021-03-01
Next Due Date:	2021-04-30
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)	1.215

****

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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.:	34870D
Date of Issue:	2021-03-01
Date Received:	2021-02-27
Date Tested:	2021-02-27
Date Completed:	2021-03-01
Next Due Date:	2021-04-30
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)	1.139

****

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

File No. WMA20002/20/0005

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

Date: 22-Mar-21
Next Due Date: 21-May-21

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

Ambient Condition			
Temperature, Ta (K)	291.7	Pressure, Pa (mmHg)	769.9

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	14.5	3.87	68.35	10.3	3.26
2	10.7	3.33	58.75	8.1	2.90
3	7.8	2.84	50.20	5.7	2.43
4	5.2	2.32	41.03	4.3	2.11
5	3.4	1.88	33.22	3.0	1.76

By Linear Regression of Y on X

Slope , mw = 0.0431 **Intercept, bw =** 0.3247

Correlation coefficient* = 0.9982

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.58**

Remarks:

Conducted by: wk Tang Signature: Kwai Date: 22/3/2021
Checked by: Ir Ng Kei Signature: kei Date: 22/3/2021

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

File No. WMA20002/17/0005
Station FLN-DMS3 - House near Tong Hang
Operator: WK
Date: 31-Mar-21
Next Due Date: 30-May-21
Equipment No.: WA-12-17
Serial No. 3218

Ambient Condition			
Temperature, Ta (K)	300	Pressure, Pa (mmHg)	757.9

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	14.8	3.83	67.56	9.7	3.10
2	11.1	3.32	58.54	7.8	2.78
3	9.7	3.10	54.74	6.6	2.56
4	6.2	2.48	43.81	4.1	2.02
5	3.4	1.84	32.51	2.4	1.54

By Linear Regression of Y on X

Slope , mw = 0.0456 **Intercept, bw =** 0.0510

Correlation coefficient* = 0.9981

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 4.09

Remarks:

Conducted by: WK, Tony Signature: Kwan Date: 31/3/2021
Checked by: LLL MANJHEE Signature: Lee Date: 31/3/2021

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

File No. WMA20002/03/0004

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

Date: 9-Feb-21
Next Due Date: 8-Apr-21

Equipment No.: WA-11-03
Serial No. 3225

Ambient Condition			
Temperature, Ta (K)	292	Pressure, Pa (mmHg)	766.8

Orifice Transfer Standard Information					
Serial No.:	2896	Slope, mc	0.0588	Intercept, bc	-0.02681
Last Calibration Date:	18-Feb-20	Next Calibration Date:		18-Feb-21	

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	8.96	51.36	49.88	1.41	9.6	2.01
2	6.4	6.59	44.12	42.84	1.21	8.1	1.84
3	5.3	5.46	40.19	39.03	1.10	7.4	1.76
4	3.7	3.81	33.65	32.68	0.92	6.2	1.61
5	2.2	2.27	26.05	25.30	0.72	5	1.45

By Linear Regression of Y on X

Slope , mw = 0.0227 **Intercept, bw =** 0.8725

Correlation coefficient* = 0.9999

(1) **DEL Hc = ΔH x (Pa/760*298/Ta)**

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

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

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

Set Point Flow Rate., SFR

SFR = 1.13 x (760/Pa) x (Ta/298) = 38.78

Sampler Well - Type Manometer Set Point, SSP

SSP = [(mw x SFR + bw)^2 x Pa] / (Ta + 30) = 7.33

Remarks:

Conducted by: WK Tang Signature: Kwan Date: 9/2/2021

Checked by: LEE MAN WAI Signature: Lee Date: 9-2-2021

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

File No. WMA20002/03/0005

Station KTN-DMS4A - Temporary Structure at Pak Shek Au
Operator: KC
Date: 8-Apr-21
Next Due Date: 7-Jun-21
Equipment No.: WA-11-03
Serial No. 3225

Ambient Condition			
Temperature, Ta (K)	296	Pressure, Pa (mmHg)	764.1

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

Calibration of RSP Sampler

Calibration Point	ORIFICE					HVS	
	ΔH(orifice), in. of water	Del Hc (1)	Qstd (2) (CFM)	Qa (3) (CFM) X -axis	Qa (3) (m^3/min) X -axis	ΔW (HVS), in. of water	$[\Delta W \times (Ta + 30) / Pa]^{1/2}$ Y-axis
1	8.9	9.01	53.01	52.37	1.48	9.4	2.00
2	7	7.09	47.04	46.48	1.32	8.6	1.92
3	5.4	5.47	41.35	40.85	1.16	7.3	1.76
4	3.6	3.64	33.81	33.40	0.95	6	1.60
5	2.4	2.43	27.65	27.31	0.77	4.9	1.45

By Linear Regression of Y on X

Slope , mw = 0.0226 **Intercept, bw =** 0.8384

Correlation coefficient* = 0.9970

(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) = 39.45

Sampler Well - Type Manometer Set Point, SSP

SSP = | (mw x SFR + bw)^2 x Pa | / (Ta + 30) = 7.03

Remarks:

Conducted by: [signature] Signature: [signature] Date: 8/4/2021

Checked by: [illegible] Signature: [signature] Date: 8/4/2021

TISCH Environmental

RECALIBRATION DUE DATE:
February 18, 2021

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	February 18, 2020	**Rootsmeter S/N:** 438320	**Ta:** 294	°K
Operator:	Jim Tisch		**Pa:** 753.1	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **2896**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4340	3.2	2.00
2	3	4	1	1.0230	6.4	4.00
3	5	6	1	0.9080	8.0	5.00
4	7	8	1	0.8680	8.8	5.50
5	9	10	1	0.7160	12.8	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)
1.0001	0.6975	1.4173	0.9958	0.6944	0.8836
0.9959	0.9735	2.0044	0.9915	0.9692	1.2496
0.9937	1.0944	2.2410	0.9894	1.0896	1.3971
0.9927	1.1436	2.3504	0.9883	1.1386	1.4653
0.9873	1.3790	2.8347	0.9830	1.3729	1.7672
QSTD	**m=**	**2.07675**	**QA**	**m=**	**1.30043**
	b=	**-0.02681**		**b=**	**-0.01672**
	r=	**0.99993**		**r=**	**0.99993**

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

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

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

TEST REPORT

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

Test Report No.:	34872F
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.	: 580014
Equipment No.	: WN-01-07

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

TEST REPORT

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

Test Report No.:	34873A
Date of Issue:	2021-03-15
Date Received:	2021-03-12
Date Tested:	2021-03-12
Date Completed:	2021-03-15
Next Due Date:	2022-03-14
Page:	1 of 1

ATTN: **Mr. W. K. Tang**

Certificate of Calibration

Item for calibration:

Description	: Sound Level Meter
Manufacturer	: BSWA
Model No.	: BSWA 308
Serial No.	: 580013
Equipment No.	: WN-01-09

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

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

PATRICK TSE
General Manager

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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.:	34136
Date of Issue:	2020-10-03
Date Received:	2020-09-29
Date Tested:	2020-09-29
Date Completed:	2020-10-03
Next Due Date:	2021-10-02
Page:	1 of 1

ATTN: **Mr. W. K. Tang**

Certificate of Calibration

Item for calibration:

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

Test conditions:

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

Methodology:

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

Results:

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

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

Patrick Tse
PATRICK TSE
General Manager

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Website: www.wellab.com.hk

TEST REPORT

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

Test Report No.:	34136A
Date of Issue:	2020-10-03
Date Received:	2020-09-29
Date Tested:	2020-09-29
Date Completed:	2020-10-03
Next Due Date:	2021-10-02
Page:	1 of 1

ATTN: **Mr. W. K. Tang**

Certificate of Calibration

Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 24780
Equipment No.	: N-09-05

Test conditions:

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

Methodology:

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

Results:

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

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

PATRICK TSE
General Manager

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

TEST REPORT

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

ATTN: **Miss Mei Ling Tang**

Test Report No.:	34875_V1
Date of Issue:	2021-03-05
Date Received:	2021-03-03
Date Tested:	2021-03-03 to 2021-03-05
Date Completed:	2021-03-05
Page:	1 of 2

Certificate of Calibration

Item for calibration:

YSI EXO1 Multiparameter Sondes	Equipment No.:	SW-08-17
Manufacturer:	YSI Incorporated, a Xylem brand	
Description:	Model No.	Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599502-24	16J100878
- EXO Optical DO Sensor, Ti	599100-01	16J100941
- EXO conductivity/Temperature Sensor, Ti	599870	16H100175
- EXO Turbidity Sensor, Ti	599101-01	16J101094
- EXO pH Sensor Assembly, Guarded, Ti	599701	16J101303

Test conditions:

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

Test Specifications:

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

Methodology:

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

****

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

PATRICK TSE
General Manager

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

TEST REPORT

Test Report No.:	34875_V1
Date of Issue:	2021-03-05
Date Received:	2021-03-03
Date Tested:	2021-03-03 to 2021-03-05
Date Completed:	2021-03-05

Certificate of Calibration

Results:

Conductivity performance checking

	Instrument Readings (μS/cm)	Accetance Criteria	Comment
KCl stock solution (12890 μS/cm)	13300	12246-13534	Pass

Temperature performance checking

Reference thermometer-E431 Readings (°C)	Instrument Readings (°C)	Correction (°C)	Comment
20.0	19.997	+0.003	N/A

pH performance checking

	Instrument Readings (pH unit)	Accetance Criteria	Comment
pH QC buffer 4.00	3.97	4.00 ± 0.10	Pass
pH QC buffer 6.86	6.80	6.86 ± 0.10	Pass
pH QC buffer 9.18	9.11	9.18 ± 0.10	Pass

D.O. performance checking

	Instrument Readings (mg/L)	Accetance Criteria	Comment
Zero DO soultion	0.08	<0.1mg/L	Pass

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Accetance Criteria	Comment
7.94	8.03	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	9.94	9.0-11.0	Pass
50 NTU	49.63	45.0-55.0	Pass
100 NTU	98.7	90.0-110.0	Pass

Depth performance checking

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

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

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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

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 (April 2021)

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

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
Impact Water Quality Monitoring Schedule (April 2021)

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

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 (April 2021)

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

#Night-time avifauna monitoring in Long Valley

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

Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Weekly Site Inspection Schedule for April 2021

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

Contract No. NDO 04/2019

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

Tentative Impact Air Quality and Noise Monitoring Schedule (May 2021)

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

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 (May 2021)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1-May
2-May	3-May	4-May	5-May	6-May	7-May	8-May
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream	
9-May	10-May	11-May	12-May	13-May	14-May	15-May
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream	
16-May	17-May	18-May	19-May	20-May	21-May	22-May
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream			**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream
23-May	24-May	25-May	26-May	27-May	28-May	29-May
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream		**Water Quality Monitoring** River Beas, River Indus and near Siu Hang San Tsuen Stream	
30-May	31-May					
	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 (May 2021 draft)

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

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

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

Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Tentative Weekly Site Inspection Schedule for May 2021

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

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

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

Appendix E - 1-hour TSP Monitoring Results

Location FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
1-Apr-21	8:30	Sunny	155.6
1-Apr-21	9:30	Sunny	132.7
1-Apr-21	10:30	Sunny	207.9
7-Apr-21	8:30	Sunny	155.3
7-Apr-21	9:30	Sunny	180.5
7-Apr-21	10:30	Sunny	145.4
12-Apr-21	8:30	Sunny	203.9
12-Apr-21	9:30	Sunny	196.1
12-Apr-21	10:30	Sunny	197.6
16-Apr-21	9:00	Cloudy	99.2
16-Apr-21	10:00	Cloudy	118.1
16-Apr-21	11:00	Cloudy	107.6
22-Apr-21	9:00	Sunny	79.6
22-Apr-21	10:00	Sunny	94.0
22-Apr-21	11:00	Sunny	88.5
28-Apr-21	9:00	Cloudy	152.9
28-Apr-21	10:00	Cloudy	173.0
28-Apr-21	11:00	Cloudy	158.4
		Average	147.0
		Maximum	207.9
		Minimum	79.6

Location FLN-DMS3 - House near Tong Hang			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
1-Apr-21	13:00	Sunny	179.2
1-Apr-21	14:00	Sunny	121.1
1-Apr-21	15:00	Sunny	161.5
7-Apr-21	13:10	Sunny	163.5
7-Apr-21	14:10	Sunny	144.2
7-Apr-21	15:10	Sunny	145.1
12-Apr-21	13:10	Fine	144.1
12-Apr-21	14:10	Fine	137.7
12-Apr-21	15:10	Fine	134.5
16-Apr-21	13:00	Cloudy	133.0
16-Apr-21	14:00	Cloudy	145.0
16-Apr-21	15:00	Cloudy	147.4
22-Apr-21	14:00	Sunny	77.8
22-Apr-21	15:00	Sunny	87.5
22-Apr-21	16:00	Sunny	89.0
28-Apr-21	9:00	Cloudy	151.7
28-Apr-21	10:00	Cloudy	154.8
28-Apr-21	11:00	Cloudy	140.8
		Average	136.6
		Maximum	179.2
		Minimum	77.8

Appendix E - 1-hour TSP Monitoring Results

Location FLN-DMS5 - Noble Hill			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
1-Apr-21	8:30	Sunny	174.5
1-Apr-21	9:30	Sunny	137.9
1-Apr-21	10:30	Sunny	165.9
7-Apr-21	8:30	Sunny	204.8
7-Apr-21	9:30	Sunny	174.5
7-Apr-21	10:30	Sunny	143.8
13-Apr-21	8:30	Sunny	127.1
13-Apr-21	9:30	Sunny	102.5
13-Apr-21	10:30	Sunny	87.3
19-Apr-21	8:30	Sunny	221.7
19-Apr-21	9:30	Sunny	199.2
19-Apr-21	10:30	Sunny	182.2
23-Apr-21	8:30	Sunny	143.3
23-Apr-21	9:30	Sunny	153.3
23-Apr-21	10:30	Sunny	163.1
29-Apr-21	8:30	Fine	60.9
29-Apr-21	9:30	Fine	87.9
29-Apr-21	10:30	Fine	115.4
		Average	147.0
		Maximum	221.7
		Minimum	60.9

Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
1-Apr-21	8:30	Sunny	71.8
1-Apr-21	9:30	Sunny	61.2
1-Apr-21	10:30	Sunny	71.4
7-Apr-21	8:30	Sunny	173.2
7-Apr-21	9:30	Sunny	252.2
7-Apr-21	10:30	Sunny	180.3
13-Apr-21	8:30	Sunny	153.0
13-Apr-21	9:30	Sunny	122.9
13-Apr-21	10:30	Sunny	101.5
19-Apr-21	8:30	Sunny	247.3
19-Apr-21	9:30	Sunny	267.9
19-Apr-21	10:30	Sunny	245.2
23-Apr-21	8:30	Sunny	164.2
23-Apr-21	9:30	Sunny	178.1
23-Apr-21	10:30	Sunny	187.9
29-Apr-21	8:30	Fine	71.4
29-Apr-21	9:30	Fine	82.9
29-Apr-21	10:30	Fine	108.5
		Average	152.3
		Maximum	267.9
		Minimum	61.2

Appendix E - 24-hour TSP Monitoring Results

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

Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. ($\mu g/m^3$)
			Initial	Final		Initial	Final		Initial	Final			
1-Apr-21	Cloudy	298.5	3.4100	3.4967	0.0867	4437.2	4461.2	24.0	1.19	1.19	1.19	1717.0	50.5
7-Apr-21	Cloudy	295.5	3.5081	3.5958	0.0877	4461.2	4485.2	24.0	1.21	1.20	1.21	1735.5	50.5
9-Apr-21	Sunny	293.3	3.4355	3.6427	0.2072	4485.2	4509.2	24.0	1.21	1.21	1.21	1744.4	118.8
15-Apr-21	Cloudy	296.0	3.3986	3.4706	0.0720	4519.1	4543.1	24.0	1.20	1.20	1.20	1731.1	41.6
21-Apr-21	Sunny	296.4	3.4713	3.6113	0.1400	4543.1	4567.1	24.0	1.20	1.20	1.20	1729.2	81.0
27-Apr-21	Sunny	296.7	3.4827	3.5760	0.0933	4567.1	4591.1	24.0	1.20	1.20	1.20	1729.3	54.0
												Min	41.6
												Max	118.8
												Average	66.1

Location FLN-DMS3 - House near Tong Hang

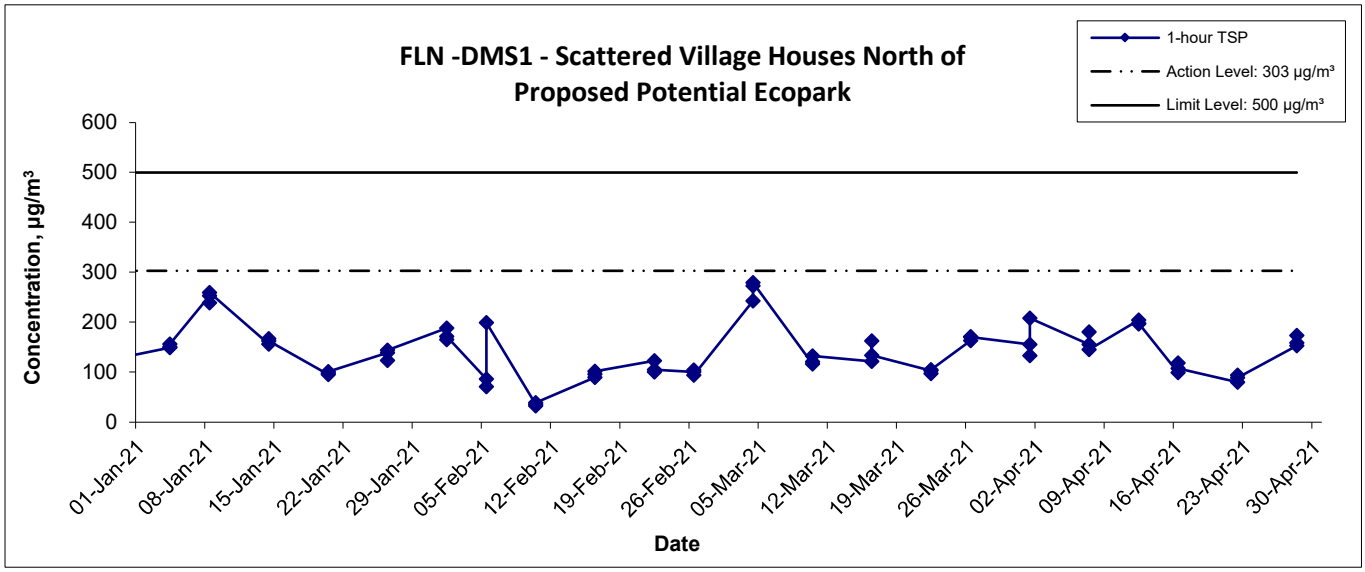
Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. ($\mu g/m^3$)
			Initial	Final		Initial	Final		Initial	Final			
1-Apr-21	Cloudy	298.5	3.4553	3.5637	0.1084	5480.0	5504.0	24.0	1.22	1.22	1.22	1760.5	61.6
7-Apr-21	Cloudy	295.5	3.4887	3.6333	0.1446	5504.0	5528.0	24.0	1.23	1.23	1.23	1777.0	81.4
9-Apr-21	Sunny	293.3	3.4744	3.5628	0.0884	5528.1	5552.1	24.0	1.24	1.24	1.24	1785.0	49.5
15-Apr-21	Cloudy	296.0	3.3724	3.4564	0.0840	5552.1	5576.1	24.0	1.23	1.23	1.23	1773.1	47.4
21-Apr-21	Sunny	296.4	3.4925	3.7229	0.2304	5576.1	5600.1	24.0	1.23	1.23	1.23	1771.4	130.1
27-Apr-21	Sunny	296.7	3.5065	3.5996	0.0931	5600.1	5624.1	24.0	1.23	1.23	1.23	1771.5	52.6
												Min	47.4
												Max	130.1
												Average	70.4

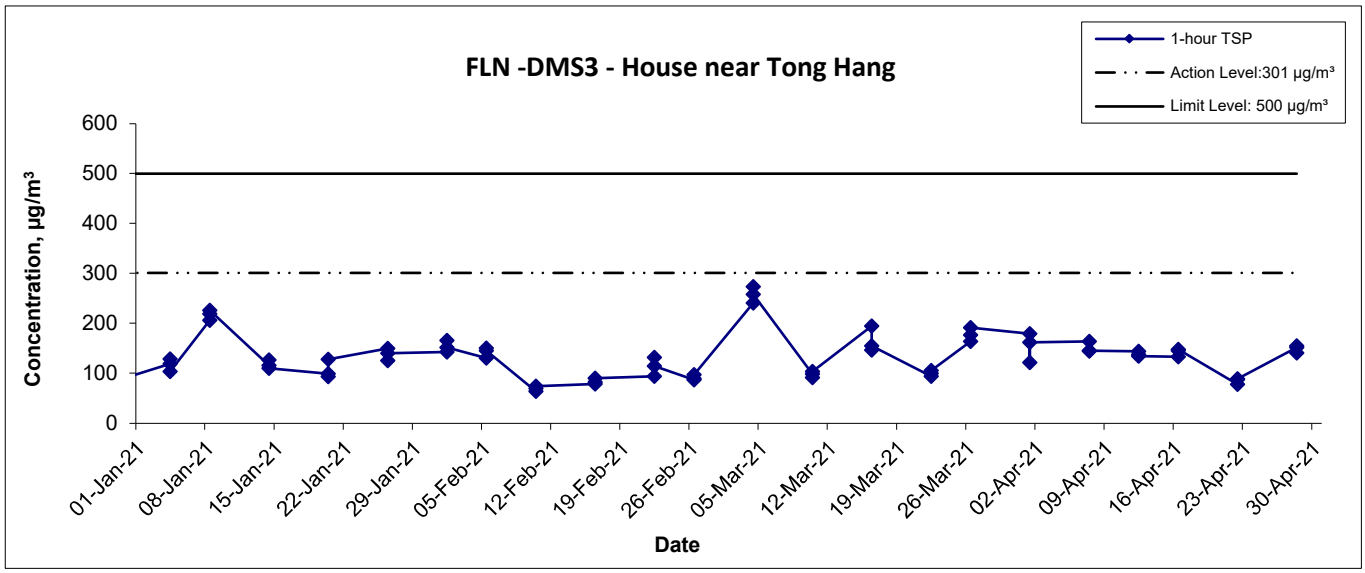
Appendix E - 24-hour TSP Monitoring Results

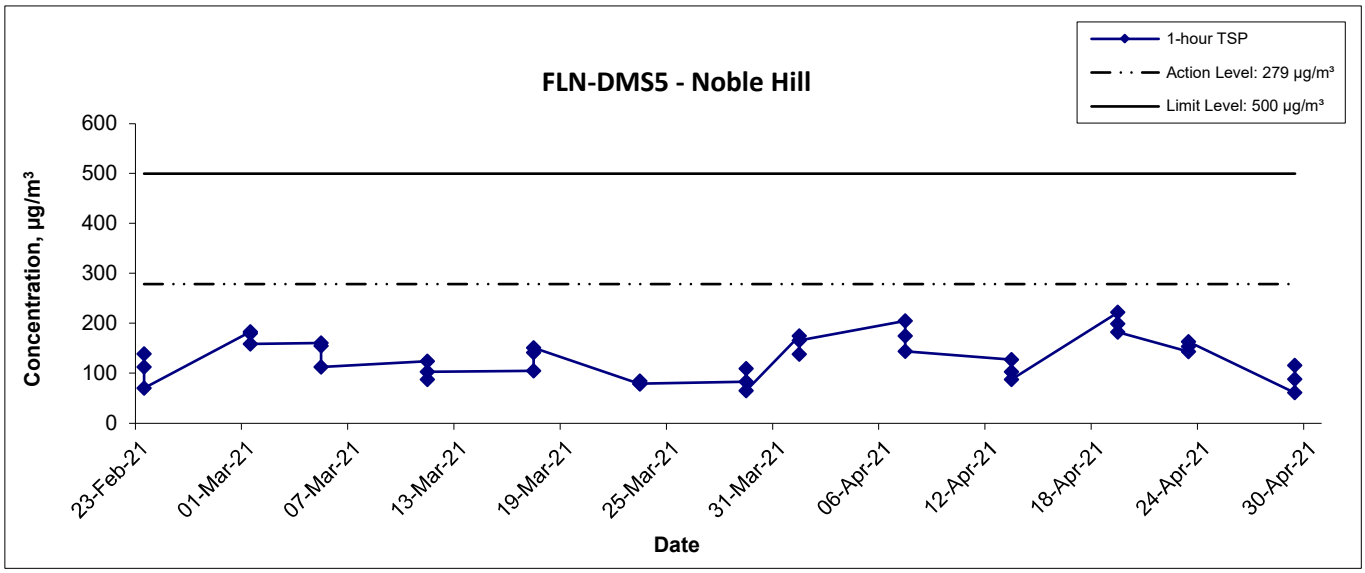
Location FLN-DMS5 - Noble Hill			
Date	Time	Weather	Particulate Concentration (μg/m^3)
1-Apr-21	8:30	Sunny	96.0
7-Apr-21	8:30	Sunny	95.3
13-Apr-21	8:30	Sunny	83.0
19-Apr-21	8:30	Sunny	143.1
23-Apr-21	8:30	Sunny	109.3
29-Apr-21	8:30	Fine	84.8
		Minimum	83.0
		Maximum	143.1
		Average	101.9

Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration (μg/m^3)
1-Apr-21	8:30	Sunny	73.1
7-Apr-21	8:30	Sunny	117.5
13-Apr-21	8:30	Sunny	85.2
19-Apr-21	8:30	Sunny	173.5
23-Apr-21	8:30	Sunny	120.7
29-Apr-21	8:30	Fine	96.4
		Minimum	73.1
		Maximum	173.5
		Average	111.1

1-hr TSP Concentration Levels

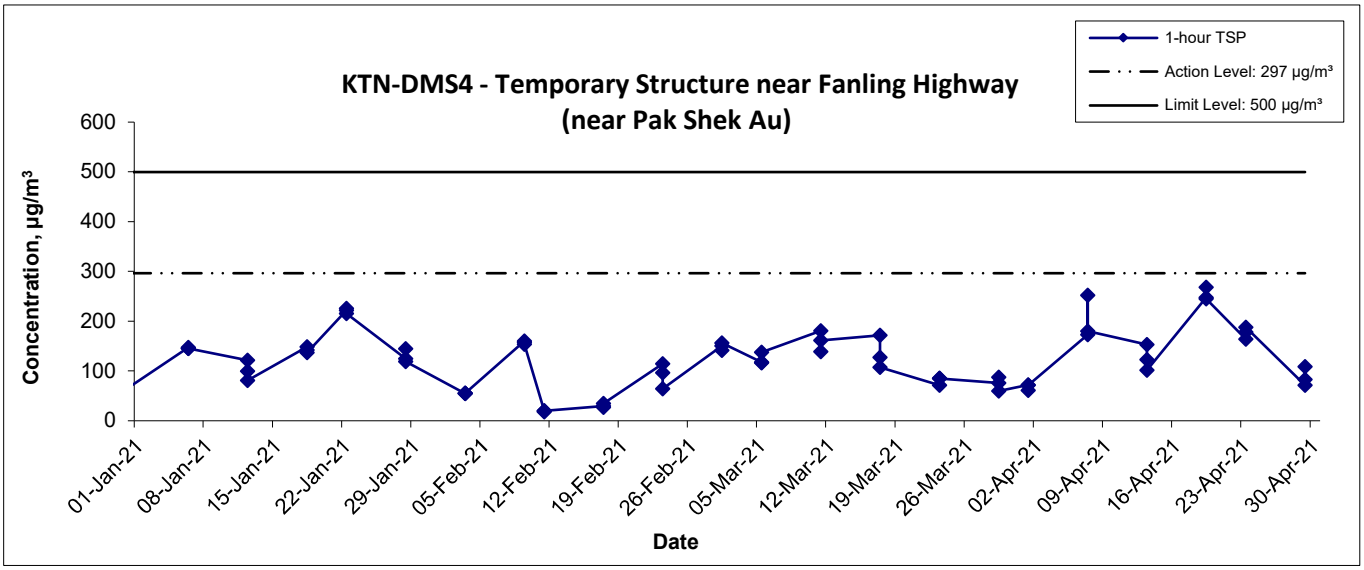






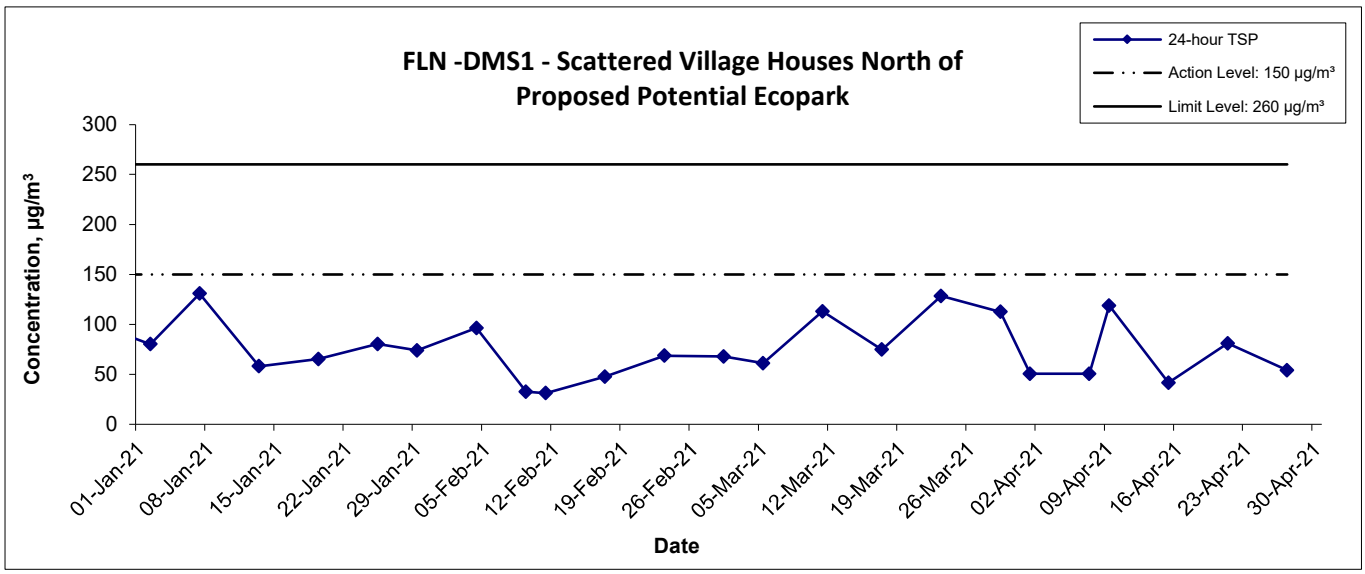
Title: Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	Scale: N.T.S Date: Apr 21	Project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

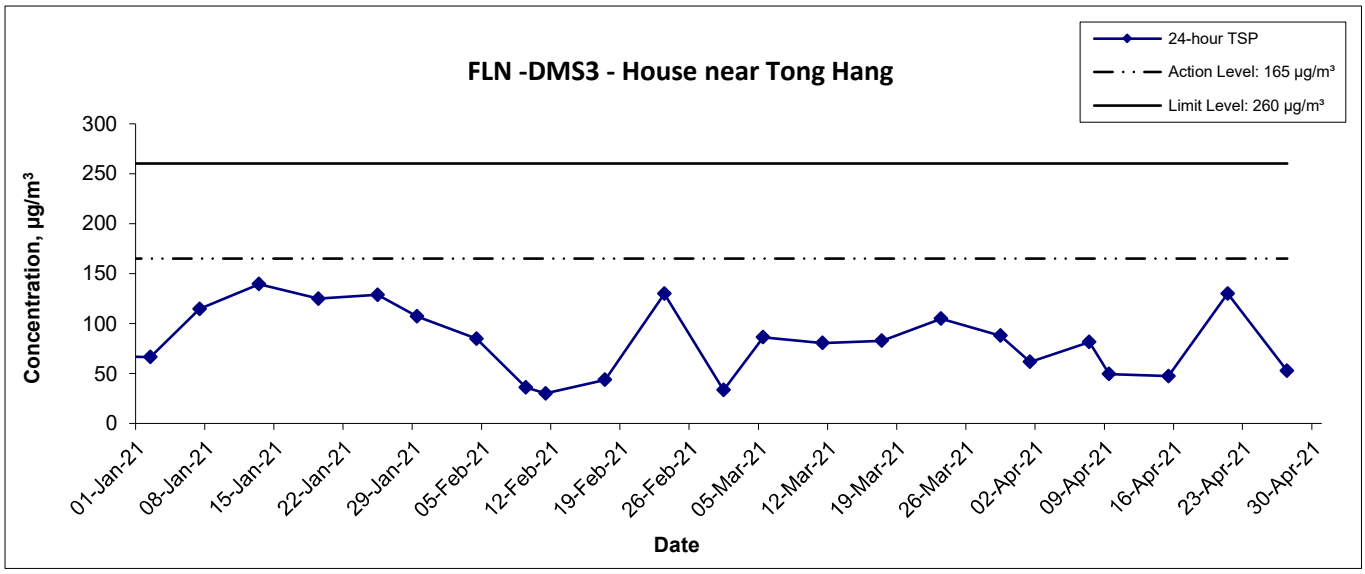
1-hr TSP Concentration Levels

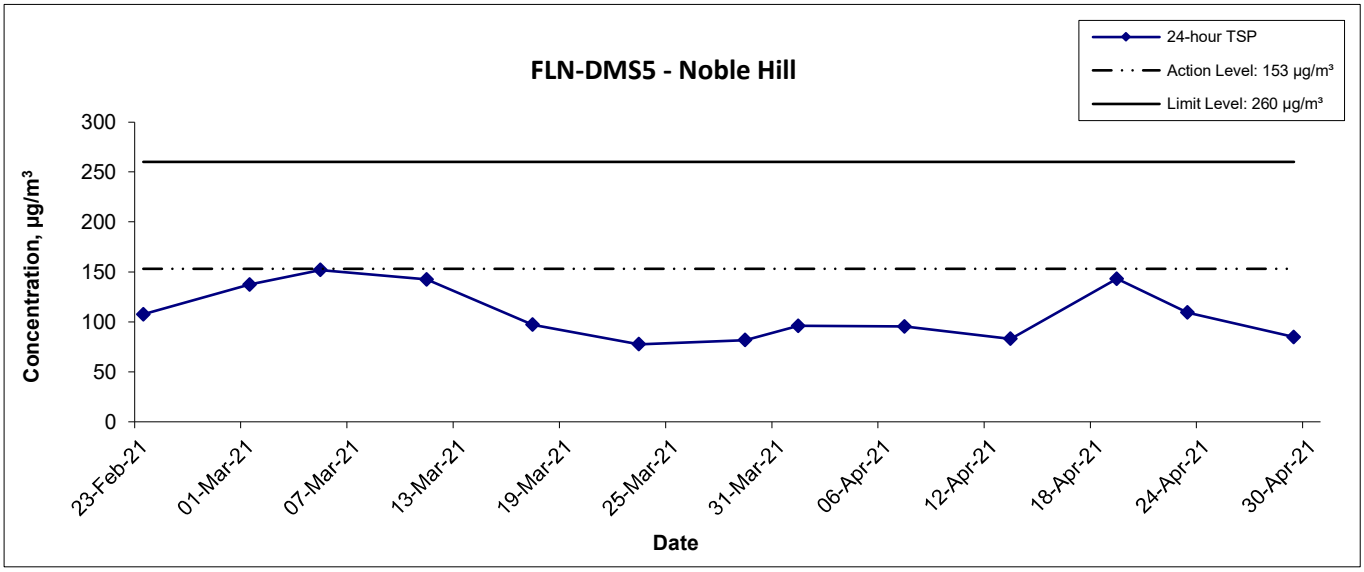


Title	Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	Scale: N.T.S Date: Apr 21	Project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

24-hr TSP Concentration Levels

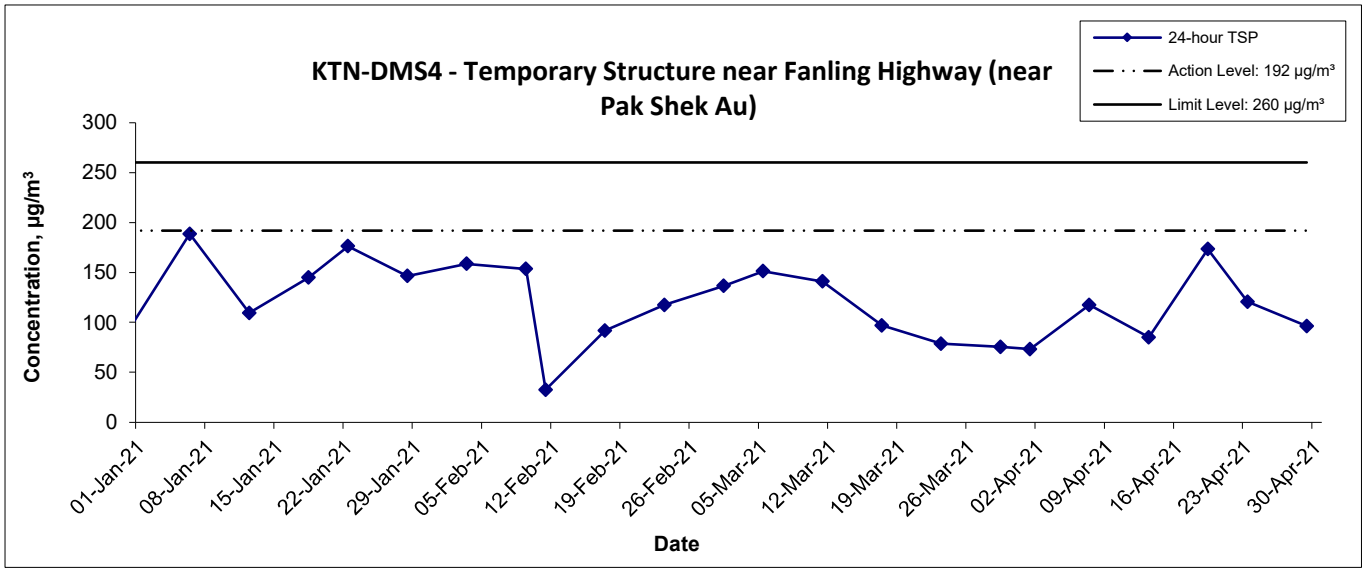






Title: Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	Scale: N.T.S Date: Apr 21	Project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

24-hr TSP Concentration Levels

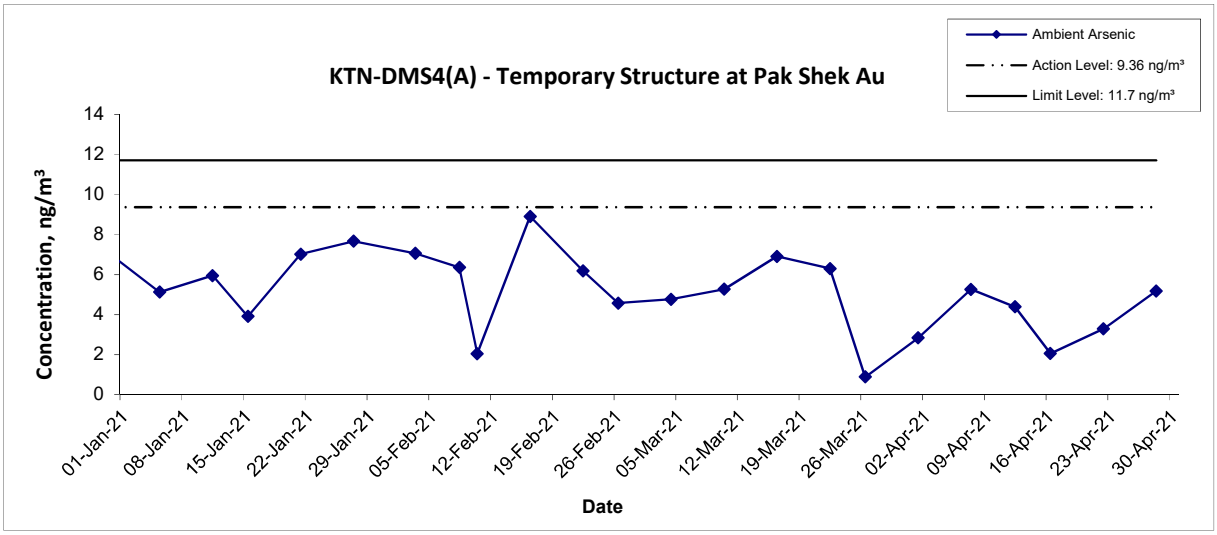


Title: Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	Scale: N.T.S Date: Apr 21	Project 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)
1-Apr-21	4.6	1626.0	2.83
7-Apr-21	8.4	1598.6	5.25
12-Apr-21	7.0	1598.5	4.38
16-Apr-21	3.3	1606.7	2.05
22-Apr-21	5.3	1616.7	3.28
28-Apr-21	8.3	1606.3	5.17

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: Apr 21	Project No.: WMA20002 Appendix: E	WELLAB 匯力 consulting . testing . research

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

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Table I - Ambient Arsenic Concentration on 1st April 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 34960)	Standard Volume, Vstd = $Qstd_{avg}$ x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m^3	KTN-DMS4(A) - Temporary Structure at Pak Shek Au	4.6 µg	1626.0 m^3	2.83 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	6 May 2021
Checked by:	Ivy Tam	Ivy	6 May 2021

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WELLAB LIMITED
Room 1714, Technology Park
18 On Lai Street, Shatin
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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.:	34960
Date of Issue:	2021-04-13
Date Received:	2021-04-07
Date Tested:	2021-04-07
Date Completed:	2021-04-13
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 34960
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	210105/009
Sample No.	34960-1
Arsenic (µg)	4.6

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

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

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

PATRICK TSE
General Manager

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18 On Lai Street, Shatin
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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 34960
Date of Issue:	2021-04-13
Date Received:	2021-04-07
Date Tested:	2021-04-07
Date Completed:	2021-04-13

ATTN: **Ms Ivy Tam**

Page: 1 of 2

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.04	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	98	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	101	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	105	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34960

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General Manager

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TEST REPORT

Report No.:	QC 34960
Date of Issue:	2021-04-13
Date Received:	2021-04-07
Date Tested:	2021-04-07
Date Completed:	2021-04-13

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	89	75-125

Filter Duplicate

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

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	101	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34960

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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: 1/4/2021 (00 :00) Collection Date: 2/4/2021

Operators: WK

Weather: Sunny (Cloudy) Windy Rainy

Wind: Strong (Mild) Calm

High Volume Sampler	Model no.	TE-6070X
	Blower Motor Serial no.	8215

RSP - Respirable Suspended Particulates Sampler			
Equipment No.	WA-11-03	Set Point	7.33
Slope, m	0.0227	Intercept. b	0.8725

	Initial, I	Final, f
Ambient Pressure (mmHg), Pa	757.6	758.9
Ambient Temperature (K), Ta	299.0	297.9
Delta (in. of Water), W	7.3	7.3
$Y = [W \times (Ta+30)/Pa]^{1/2}$	1.780	1.776
Standard flow, Qstd (m^3/min) = (Y - b)*0.0283/m	1.132	1.126
Elapsed Timer Indicator (Hours), T	12601.82	12625.82
Filter Identification no.	210105/009	
Weight of Filter (g)	4.2427	4.3314
Weight of Particulate (g)	0.1042	
Mean Standard Flow, $Qstd_{avg} = (Qstd_i + Qstd_f)/2$	1.129	
Total Time, Total Time = (Tf - Ti) x 60	1440.00	
Standard Volume, Vstd (m^3) = $Qstd_{avg}$ x Total Time	1626.0	
Particulate Concentration ($\mu g/m^3$)	64.1	
Observed Construction Activities — Main Construction Site	NA	
Observed Construction Activities — Other Construction Site	Excavator	

Remarks: Road traffic

Conducted by: LEE MAN MEL Signature: [signature] Date: 2/4/2021

Checked by: Mely Lu Signature: [signature] Date: 8/4/2021

Project No. WMA20002

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

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Table I - Ambient Arsenic Concentration on 7th April 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 34975)	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	8.4 µg	1598.6 m^3	5.25 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		6 May 2021
Checked by:	Ivy Tam		6 May 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.:	34975
Date of Issue:	2021-04-14
Date Received:	2021-04-08
Date Tested:	2021-04-08
Date Completed:	2021-04-14
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 34975
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	210105/010
Sample No.	34975-1
Arsenic (µg)	8.4

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 34975
Date of Issue:	2021-04-14
Date Received:	2021-04-08
Date Tested:	2021-04-08
Date Completed:	2021-04-14

ATTN: **Ms Ivy Tam**

Page: 1 of 2

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.04	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	108	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	105	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	105	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34975

****

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General Manager

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TEST REPORT

Report No.:	QC 34975
Date of Issue:	2021-04-14
Date Received:	2021-04-08
Date Tested:	2021-04-08
Date Completed:	2021-04-14
Page:	2 of 2

QC report:

Matrix Spike

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

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	2	RPD≤20%

Serial dilution check

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34975

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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: 7/4/2021 (0 : ω) Collection Date: 8/4/2021

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 - 11-03	Set Point	1.33
Slope, m	0.0224	Intercept. b	0.8725

	Initial, I	Final, f
Ambient Pressure (mmHg), Pa	765.7	763.1
Ambient Temperature (K), Ta	295.8	295.1
Delta (in. of Water), W	7.3	7.3
$Y = [W \times (Ta+30)/Pa]^{1/2}$	1.767	1.764
Standard flow, Qstd (m^3/min) = (Y - b)*0.0283/m	1.109	1.111
Elapsed Timer Indicator (Hours), T	12625.82	12641.82
Filter Identification no.	210105/010	
Weight of Filter (g)	4.2264	4.3819
Weight of Particulate (g)	0.1555	
Mean Standard Flow, $Qstd_{avg} = (Qstd_i + Qstd_f)/2$	1.110	
Total Time, Total Time = (Tf - Ti) x 60	1440.00	
Standard Volume, Vstd (m^3) = $Qstd_{avg}$ x Total Time	1598.6	
Particulate Concentration ($\mu g/m^3$)	98.5	
Observed Construction Activities — Main Construction Site	N/A	
Observed Construction Activities — Other Construction Site	N/A	

Remarks: Road traffic

Conducted by: Ho Ka Signature: Date: 8/4/2021

Checked by: Mely Tang Signature: Date: 9/4/2021

Project No. WMA20002

Table I - Ambient Arsenic Concentration on 12th April 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 34998)	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	7.0 µg	1598.5 m^3	4.38 ng/m^3	No

Table II – Action and Limit Levels for Ambient Arsenic Monitoring

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

	Name	Signature	Date
Prepared by:	Meiling Tang	Me.Tang	6 May 2021
Checked by:	Ivy Tam	Ivy	6 May 2021

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18 On Lai Street, Shatin
New Territories, Hong Kong
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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.:	34998
Date of Issue:	2021-04-16
Date Received:	2021-04-13
Date Tested:	2021-04-13
Date Completed:	2021-04-16
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 34998
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	210105/011
Sample No.	34998-1
Arsenic (µg)	7.0

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

Report No.:	QC 34998
Date of Issue:	2021-04-16
Date Received:	2021-04-13
Date Tested:	2021-04-13
Date Completed:	2021-04-16

ATTN: **Ms Ivy Tam**

Page: 1 of 2

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.04	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	115	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	105	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	105	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34998

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PATRICK TSE
General Manager

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TEST REPORT

Report No.:	QC 34998
Date of Issue:	2021-04-16
Date Received:	2021-04-13
Date Tested:	2021-04-13
Date Completed:	2021-04-16

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	109	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	5	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	99	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34998

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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: 12/4/2021 (0 : 00) Collection Date: 13/4/2021

Operators: Ho Ka Chun 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.	WA-11-03	Set Point	7.03
Slope, m	0.0226	Intercept. b	0.8384

	Initial, I	Final, f
Ambient Pressure (mmHg), Pa	766.2	763.6
Ambient Temperature (K), Ta	295.0	295.2
Delta (in. of Water), W	7.0	7.0
$Y = [W \times (Ta+30)/Pa]^{1/2}$	1.723	1.727
Standard flow, Qstd (m^3/min) = (Y - b)*0.0283/m	1.108	1.112
Elapsed Timer Indicator (Hours), T	12648.82	12673.82
Filter Identification no.	210105/04	
Weight of Filter (g)	4.2317	4.3464
Weight of Particulate (g)	0.1147	
Mean Standard Flow, $Qstd_{avg} = (Qstd_i + Qstd_f)/2$	1.110	
Total Time, Total Time = (Tf - Ti) x 60	1440.00	
Standard Volume, Vstd (m^3) = $Qstd_{avg}$ x Total Time	1598.5	
Particulate Concentration ($\mu g/m^3$)	71.8	
Observed Construction Activities — Main Construction Site	NA	
Observed Construction Activities — Other Construction Site	N/A	

Remarks: Road traffic

Conducted by: Ho Ka Chun Signature: Date: 12/4/2021

Checked by: Mely Tang Signature: Date: 14/4/2021

Project No. WMA20002

Table I - Ambient Arsenic Concentration on 16th April 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 35026)	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	3.3 µg	1606.7 m^3	2.05 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		6 May 2021
Checked by:	Ivy Tam		6 May 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.:	35026
Date of Issue:	2021-04-23
Date Received:	2021-04-21
Date Tested:	2021-04-21
Date Completed:	2021-04-23
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 35026
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	210105/023
Sample No.	35026-1
Arsenic (µg)	3.3

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

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General Manager

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TEST REPORT

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

Report No.:	QC 35026
Date of Issue:	2021-04-23
Date Received:	2021-04-21
Date Tested:	2021-04-21
Date Completed:	2021-04-23

ATTN: **Ms Ivy Tam**

Page: 1 of 2

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.04	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	102	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	104	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	102	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35026

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General Manager

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TEST REPORT

Report No.:	QC 35026
Date of Issue:	2021-04-23
Date Received:	2021-04-21
Date Tested:	2021-04-21
Date Completed:	2021-04-23

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	117	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	19	RPD≤20%

Serial dilution check

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35026

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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: 16/4/2021 (0 : 00) Collection Date: 18/4/2021

Operators: Kan

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.	NA. 11.03	Set Point	7.05
Slope, m	~~0.2276~~ 0.3226	Intercept. b	0.8384

	Initial, I	Final, f
Ambient Pressure (mmHg), Pa	760.6	763.6
Ambient Temperature (K), Ta	295.8	296.3
Delta (in. of Water), W	7.0	7.0
$Y = [W \times (Ta+30)/Pa]^{1/2}$	1.728	1.730
Standard flow, Qstd (m^3/min) = (Y - b)*0.0283/m	1.166	1.166
Elapsed Timer Indicator (Hours), T	12673.83	12697.83
Filter Identification no.	210104/023	
Weight of Filter (g)	4.2467	4.3710
Weight of Particulate (g)	0.1243	
Mean Standard Flow, $Qstd_{avg} = (Qstd_i + Qstd_f)/2$	1.166	
Total Time, Total Time = (Tf - Ti) x 60	1440.00	
Standard Volume, Vstd (m^3) = $Qstd_{avg}$ x Total Time	1606.7	
Particulate Concentration ($\mu g/m^3$)	77.4	
Observed Construction Activities — Main Construction Site	N/A	
Observed Construction Activities — Other Construction Site	N/A	

Remarks: Road traffic

Conducted by: Ho Ka Man Signature: Date: 19/4/2021

Checked by: Micky Tang Signature: Micky Date: 21/4/2021

Project No. WMA20002

Table I - Ambient Arsenic Concentration on 22nd April 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 35043)	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	5.3 μg	1616.7 m^3	3.28 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	6 May 2021
Checked by:	Ivy Tam	Ivy	6 May 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.:	35043
Date of Issue:	2021-04-28
Date Received:	2021-04-23
Date Tested:	2021-04-23
Date Completed:	2021-04-28
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 35043
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	210105/022
Sample No.	35043-1
Arsenic (µg)	5.3

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

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General Manager

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TEST REPORT

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

ATTN: **Ms Ivy Tam**

Report No.:	QC 35043
Date of Issue:	2021-04-28
Date Received:	2021-04-23
Date Tested:	2021-04-23
Date Completed:	2021-04-28

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.04	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	111	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	109	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	103	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35043

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General Manager

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TEST REPORT

Report No.:	QC 35043
Date of Issue:	2021-04-28
Date Received:	2021-04-23
Date Tested:	2021-04-23
Date Completed:	2021-04-28

QC report:

Matrix Spike

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

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	0	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	103	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35043

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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: 22/4/2021 (0 : 00) Collection Date: 23/4/2021

Operators: Ka Ho 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 11.03	Set Point	7.03
Slope, m	0.0226	Intercept. b	0.8384

	Initial, I	Final, f
Ambient Pressure (mmHg), Pa	761.6	758.6
Ambient Temperature (K), Ta	296.6	297.1
Delta (in. of Water), W	7.0	7.0
$Y = [W \times (Ta+30)/Pa]^{1/2}$	1.733	1.737
Standard flow, Qstd (m^3/min) = (Y - b)*0.0283/m	1.120	1.126
Elapsed Timer Indicator (Hours), T	1287.83	1291.83
Filter Identification no.	210105/022	
Weight of Filter (g)	4.2349	4.5477
Weight of Particulate (g)	0.3128	
Mean Standard Flow, $Qstd_{avg} = (Qstd_i + Qstd_f)/2$	1.123	
Total Time, Total Time = (Tf - Ti) x 60	1440.00	
Standard Volume, Vstd (m^3) = $Qstd_{avg}$ x Total Time	1616.7	
Particulate Concentration ($\mu g/m^3$)	193.5	
Observed Construction Activities – Main Construction Site	N/A	
Observed Construction Activities – Other Construction Site	N/A	

Remarks: Road traffic

Conducted by: Ho Ka Signature: Date: 23/4/2021

Checked by: Merly Tang Signature: Date: 26/4/2021

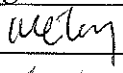
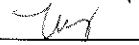
Project No. WMA20002

Table I - Ambient Arsenic Concentration on 28th April 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 35064)	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	8.3 μg	1606.3 m^3	5.17 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		6 May 2021
Checked by:	Ivy Tam		6 May 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.:	35064
Date of Issue:	2021-05-05
Date Received:	2021-04-29
Date Tested:	2021-04-29
Date Completed:	2021-05-05
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 35064
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	210105/012
Sample No.	35064-1
Arsenic (µg)	8.3

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

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TEST REPORT

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

Report No.:	QC 35064
Date of Issue:	2021-05-05
Date Received:	2021-04-29
Date Tested:	2021-04-29
Date Completed:	2021-05-05

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)	0.04	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	105	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	118	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 (%)	106	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35064

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TEST REPORT

Report No.:	QC 35064
Date of Issue:	2021-05-05
Date Received:	2021-04-29
Date Tested:	2021-04-29
Date Completed:	2021-05-05

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	85	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	2	RPD≤20%

Serial dilution check

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 35064

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

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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: 28/4/2021 (0 : 00) Collection Date: 29-4-2021

Operators: Ka Weather ~~Sunny~~ Cloudy (Windy) Rainy

Wind: Strong Mild (Calm)

High Volume Sampler	Model no.	TE-6070X
	Blower Motor Serial no.	3223

RSP - Respirable Suspended Particulates Sampler			
Equipment No.	WD. 11-03	Set Point	7.03
Slope, m	0.2276	Intercept. b	0.09384
	Initial, I	Final, f	
Ambient Pressure (mmHg), Pa	763.7	763.6	
Ambient Temperature (K), Ta	286.9	289.5	
Delta (in. of Water), W	7.0	7.0	
$Y = [W \times (Ta+30)/Pa]^{1/2}$	1.731	1.737	
Standard flow, Qstd (m^3/min) = (Y - b)*0.0283/m	1.118	1.113	
Elapsed Timer Indicator (Hours), T	12721.83	12745.83	
Filter Identification no.	210105/012		
Weight of Filter (g)	4.2648	4.4132	
Weight of Particulate (g)	0.1684		
Mean Standard Flow, $Qstd_{avg} = (Qstd_i + Qstd_f)/2$	1.115		
Total Time, Total Time = (Tf - Ti) x 60	1440.00		
Standard Volume, Vstd (m^3) = $Qstd_{avg}$ x Total Time	1606.3		
Particulate Concentration ($\mu g/m^3$)	104.8		
Observed Construction Activities — Main Construction Site	N/A		
Observed Construction Activities — Other Construction Site	N/A		

Remarks: Road traffic

Conducted by: H. Ka Signature: Date: 29-4-2021

Checked by: Mely Tam Signature: Mely Date: 30/4/2021

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}
1-Apr-21	Sunny	11:30	67.7	70.0	63.6	68.8	69.9
		11:35	67.5	69.6	63.6		
		11:40	67.8	70.1	62.0		
		11:45	68.2	69.7	62.3		
		11:50	72.1	71.9	61.6		
		11:55	66.9	70.1	60.7		
7-Apr-21	Sunny	11:15	68.9	72.4	62.9	70.7	
		11:20	71.2	75.1	64.4		
		11:25	70.3	74.4	63.0		
		11:30	70.2	72.9	65.9		
		11:35	71.2	74.2	63.9		
		11:40	71.9	74.8	61.4		
12-Apr-21	Cloudy	11:20	70.4	73.4	63.9	70.8	
		11:25	70.3	73.7	63.8		
		11:30	70.4	73.5	63.9		
		11:35	71.7	74.3	64.0		
		11:40	70.3	73.8	63.5		
		11:45	71.5	74.1	63.8		
22-Apr-21	Sunny	13:00	67.3	70.3	59.2	67.0	
		13:05	66.3	68.5	59.0		
		13:10	66.4	68.7	59.1		
		13:15	68.2	70.1	59.5		
		13:20	67.3	69.8	59.2		
		13:25	66.4	69.3	58.9		
28-Apr-21	Cloudy	10:40	70.9	73.9	65.2	70.6	
		10:45	69.3	72.4	64.9		
		10:50	69.9	72.3	66.1		
		10:55	72.9	77.0	64.7		
		11:00	70.1	73.5	63.9		
		11:05	69.7	72.8	63.1		

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}
1-Apr-21	Sunny	13:20	62.2	64.0	59.9	61.3	59.6
		13:25	62.7	64.3	59.9		
		13:30	61.4	63.3	59.1		
		13:35	61.2	63.6	58.0		
		13:40	58.4	59.0	57.6		
		13:45	60.5	63.1	57.8		
7-Apr-21	Sunny	13:10	67.2	71.1	60.6	68.8	
		13:15	69.7	72.2	65.6		
		13:20	70.6	71.8	67.9		
		13:25	71.4	74.0	65.7		
		13:30	65.2	68.2	60.4		
		13:35	63.7	66.4	60.3		
12-Apr-21	Cloudy	13:20	61.9	64.5	59.6	62.5	
		13:25	63.2	64.6	59.7		
		13:30	62.2	64.0	60.7		
		13:35	62.5	64.8	61.1		
		13:40	61.8	62.4	61.1		
		13:45	63.2	65.2	61.4		
22-Apr-21	Sunny	14:10	59.5	60.7	55.7	61.7	
		14:15	61.9	63.4	56.3		
		14:20	60.3	61.8	55.9		
		14:25	60.5	62.3	56.5		
		14:30	64.7	65.1	57.2		
		14:35	61.3	62.8	56.1		
28-Apr-21	Cloudy	09:55	60.3	62.3	55.9	65.0	
		10:00	66.4	70.4	56.9		
		10:05	64.7	67.4	56.4		
		10:10	68.6	69.3	59.6		
		10:15	64.8	67.2	56.6		
		10:20	55.9	57.1	54.7		

Appendix F - Noise Monitoring Results

Location CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
7-Apr-21	Cloudy	09:00	52.8	56.2	46.2	56.1	58.6
		09:05	52.0	54.2	47.1		
		09:10	53.9	57.9	47.1		
		09:15	58.0	59.0	57.1		
		09:20	57.4	57.8	46.8		
		09:25	58.4	59.4	56.7		
13-Apr-21	Sunny	09:15	61.7	63.8	57.8	59.2	
		09:20	60.1	59.8	57.4		
		09:25	58.1	58.8	57.3		
		09:30	57.8	58.5	57.1		
		09:35	58.0	58.5	57.2		
		09:40	58.2	58.7	57.7		
19-Apr-21	Sunny	13:00	52.8	55.2	49.6	54.5	
		13:05	53.4	56.1	49.2		
		13:10	55.7	57.3	50.3		
		13:15	54.9	57.0	50.1		
		13:20	53.4	58.3	50.7		
		13:25	55.7	58.3	51.2		
29-Apr-21	Sunny	09:10	58.4	60.0	56.9	58.3	
		09:15	59.8	61.2	57.1		
		09:20	57.3	58.0	56.6		
		09:25	57.7	58.7	56.7		
		09:30	58.7	60.4	56.8		
		09:35	57.7	59.4	56.3		

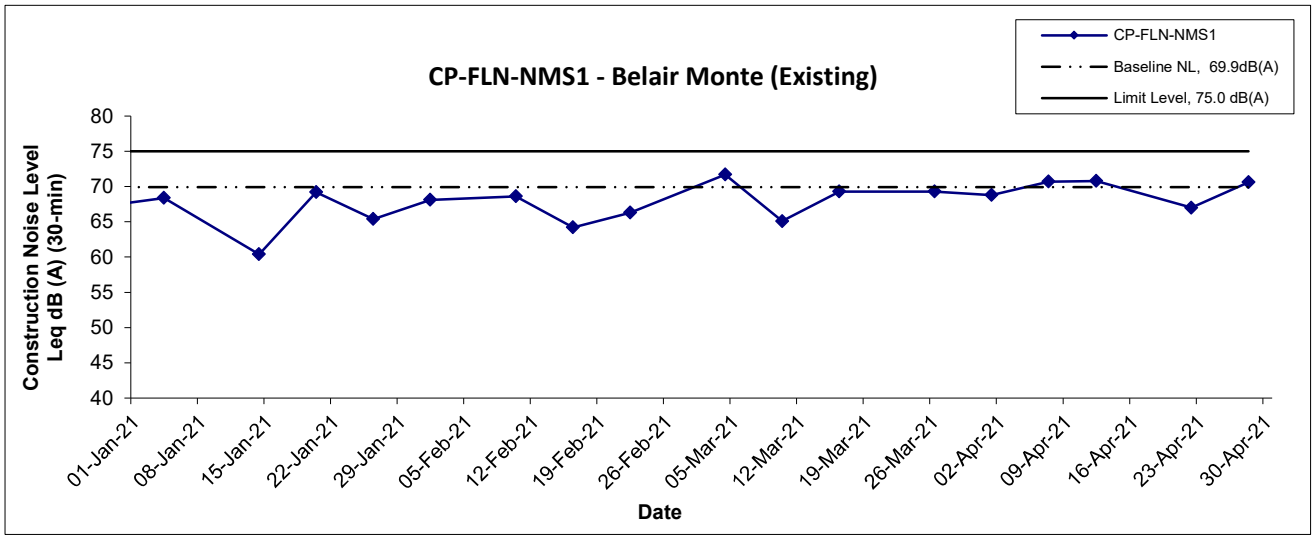
Location CP-KTN-NMS3 - Fung Kong Garden (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
7-Apr-21	Sunny	09:45	49.6	52.7	44.9	54.3	51.6
		09:50	51.9	53.2	45.7		
		09:55	49.0	50.6	43.9		
		10:00	47.0	48.4	45.5		
		10:05	55.0	53.2	45.8		
		10:10	59.7	65.0	45.8		
13-Apr-21	Sunny	10:00	45.9	46.1	41.7	54.6	
		10:05	58.5	63.5	47.3		
		10:10	58.9	60.2	42.9		
		10:15	45.1	47.1	42.6		
		10:20	48.7	52.0	43.9		
		10:25	49.8	51.9	44.1		
19-Apr-21	Sunny	13:45	62.5	68.1	53.3	60.0	
		13:50	61.6	66.3	52.7		
		13:55	58.6	62.9	52.5		
		14:00	57.6	58.5	52.4		
		14:05	58.7	57.7	52.7		
		14:10	58.4	58.0	52.6		
29-Apr-21	Sunny	09:55	52.2	53.5	50.9	54.3	
		10:00	55.3	57.6	51.4		
		10:05	54.0	57.3	51.1		
		10:10	52.6	52.2	51.1		
		10:15	56.9	60.8	51.3		
		10:20	52.7	52.8	52.1		

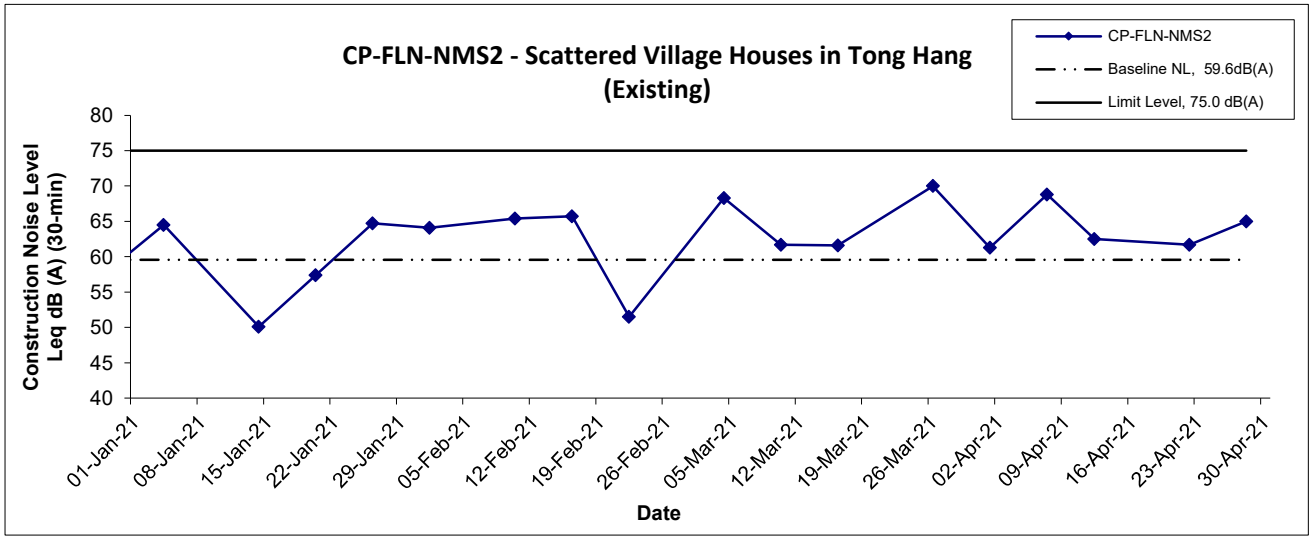
Appendix F - Noise Monitoring Results

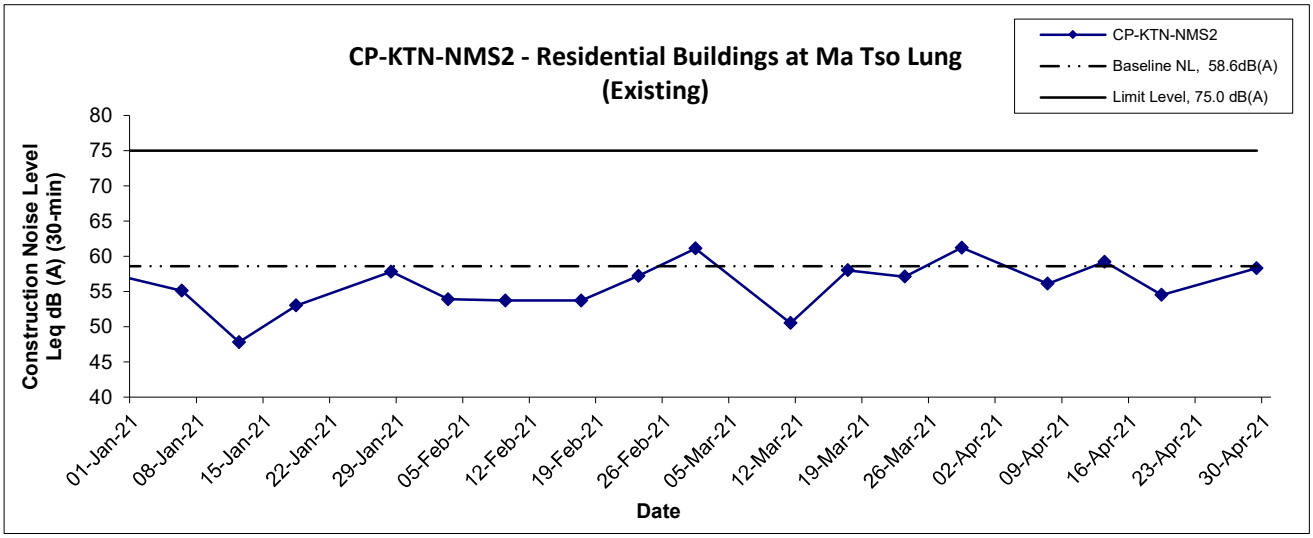
Location CP-KTN-NMS5 - N/A							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
1-Apr-21	Sunny	14:10	59.3	61.9	49.1	58.9	57.2
		14:15	59.4	61.8	49.2		
		14:20	58.9	56.3	49.3		
		14:25	59.7	61.7	49.5		
		14:30	57.3	60.1	49.0		
		14:35	58.4	60.7	49.1		
13-Apr-21	Sunny	13:30	51.3	54.1	43.9	54.3	
		13:35	52.3	54.4	46.3		
		13:40	57.5	55.9	45.8		
		13:45	55.8	59.6	45.3		
		13:50	52.5	52.5	45.1		
		13:55	52.4	56.1	46.9		
19-Apr-21	Sunny	15:30	52.1	54.9	48.2	52.4	
		15:35	53.4	55.4	50.8		
		15:40	53.6	55.4	48.4		
		15:45	50.4	53.1	47.9		
		15:50	53.7	56.9	47.0		
		15:55	50.0	57.7	48.0		
29-Apr-21	Cloudy	13:15	62.5	63.6	60.5	59.7	
		13:20	61.9	63.5	59.7		
		13:25	59.7	61.0	58.3		
		13:30	52.2	54.5	45.6		
		13:35	54.6	59.1	46.5		
		13:40	59.6	63.6	49.1		

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-Apr-21	Cloudy	10:25	51.1	51.5	48.2	53.2	55.1
		10:30	50.3	51.0	49.1		
		10:35	52.1	53.0	49.3		
		10:40	54.6	55.9	50.7		
		10:45	55.8	57.5	51.6		
		10:50	52.8	54.4	51.7		
13-Apr-21	Sunny	10:50	56.6	58.6	53.9	58.4	
		10:55	56.4	58.0	54.1		
		11:00	54.9	55.3	53.6		
		11:05	54.6	55.9	53.3		
		11:10	61.7	67.4	53.4		
		11:15	60.7	61.2	59.2		
19-Apr-21	Sunny	14:40	60.0	62.5	53.9	60.5	
		14:45	56.6	58.8	55.2		
		14:50	64.4	75.2	54.9		
		14:55	60.8	61.0	54.5		
		15:00	58.0	59.1	54.4		
		15:05	58.2	60.7	53.4		
29-Apr-21	Sunny	10:45	58.0	61.0	52.9	59.5	
		10:50	60.6	61.7	56.3		
		10:55	60.3	63.5	56.9		
		11:00	59.4	61.2	54.6		
		11:05	59.4	62.9	53.7		
		11:10	58.8	63.7	52.7		

Noise Levels

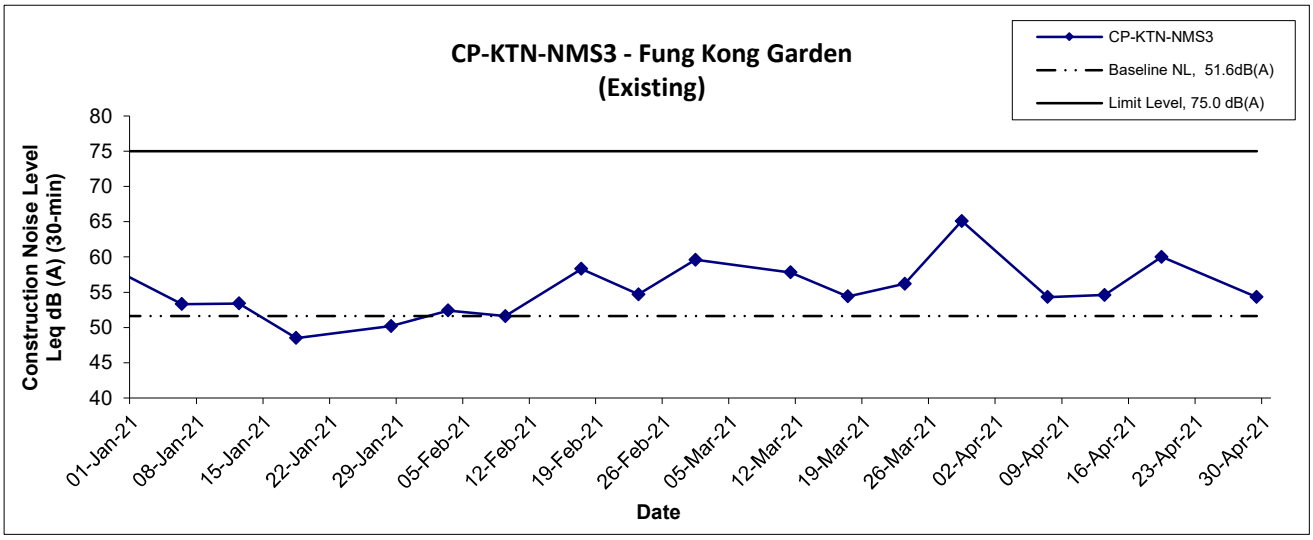


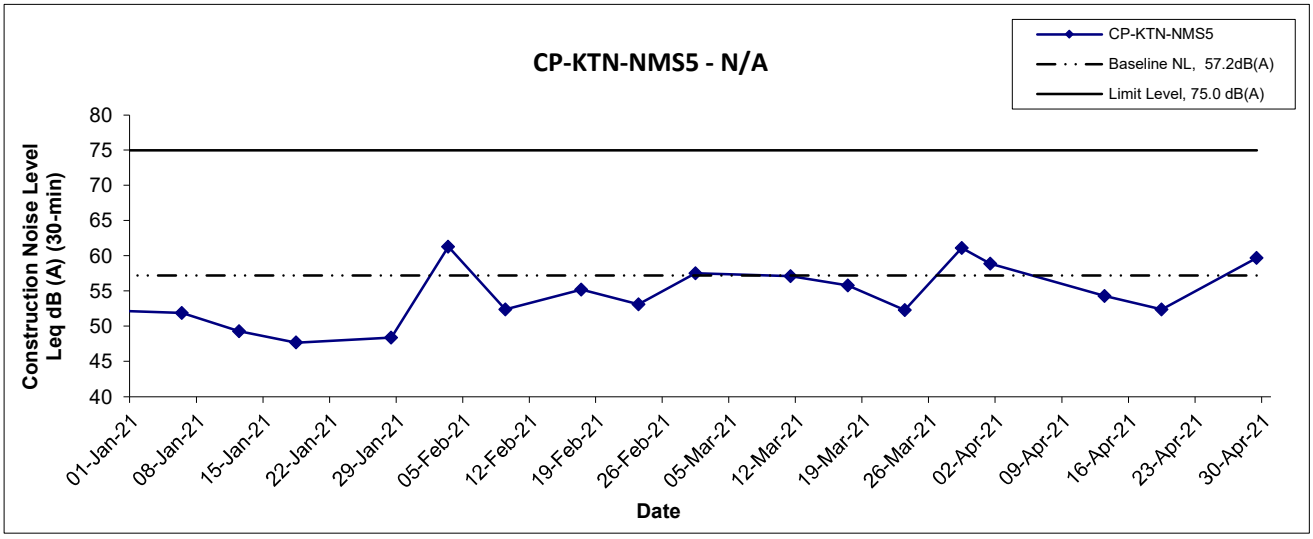


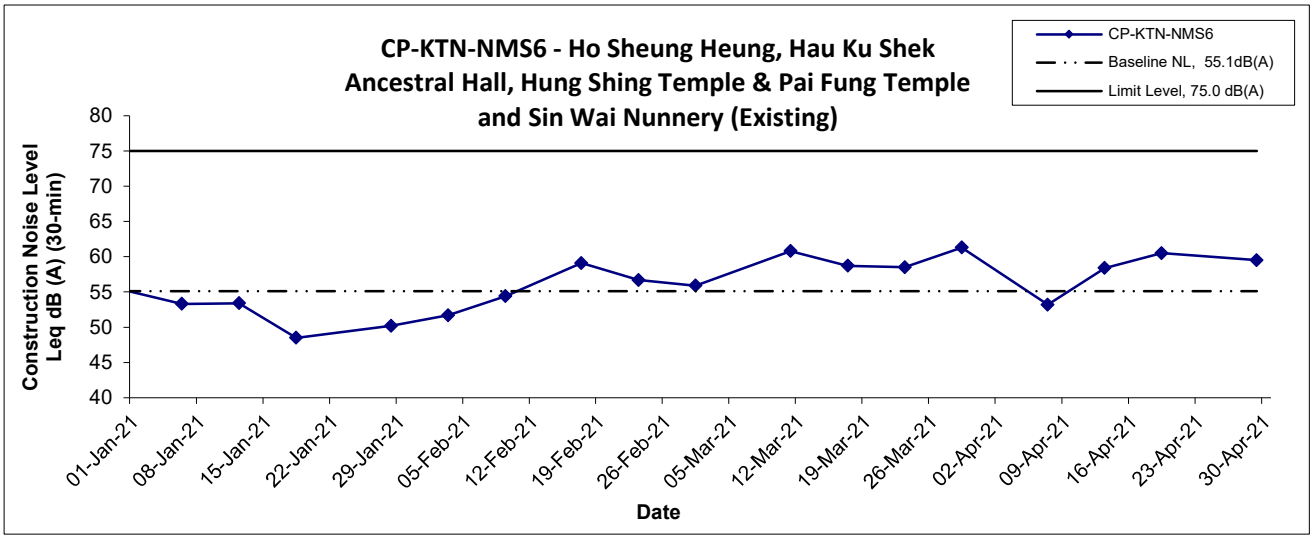


Title: Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S Date: Apr 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: Apr 21	Appendix: F

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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
8-Apr-21	Sunny	10:02	Middle	0.1	24.1 24.1	24.1	7.3 7.3	7.3	0.2 0.2	0.2	65.8 65.9	65.9	5.5 5.5	5.5	7.2 7.1	7.2	22 23	22.5	9 9	9.0
10-Apr-21	Sunny	13:13	Middle	0.1	22.5 22.5	22.5	7.7 7.7	7.7	0.2 0.2	0.2	72.6 72.4	72.5	6.3 6.3	6.3	8.9 8.9	8.9	9 9	9.0	10 10	10.0
12-Apr-21	Sunny	09:13	Middle	0.1	24.5 24.5	24.5	7.3 7.3	7.3	0.1 0.1	0.1	77.8 77.6	77.7	6.5 6.5	6.5	6.7 6.4	6.6	16 16	16.0	8 8	8.0
14-Apr-21	Cloudy	09:34	Middle	0.2	25.8 25.8	25.8	7.6 7.6	7.6	0.2 0.2	0.2	67.6 67.3	67.5	5.5 5.5	5.5	9.0 9.0	9.0	14 16	15.0	8 8	8.0
16-Apr-21	Sunny	09:13	Middle	0.1	25.1 25.1	25.1	7.2 7.2	7.2	0.2 0.2	0.2	82.0 82.0	82.0	6.8 6.8	6.8	5.7 5.6	5.7	14 14	14.0	10 10	10.0
19-Apr-21	Sunny	09:48	Middle	0.1	23.4 23.4	23.4	7.2 7.2	7.2	0.2 0.2	0.2	66.7 66.2	66.5	5.7 5.6	5.7	6.1 5.7	5.9	21 20	20.5	8 8	8.0
21-Apr-21	Sunny	14:16	Middle	0.1	28.3 28.4	28.4	7.1 7.1	7.1	0.2 0.2	0.2	98.9 98.9	98.9	7.7 7.7	7.7	4.8 4.7	4.8	14 11	12.5	8 8	8.0
23-Apr-21	Sunny	10:42	Middle	0.1	28.6 28.5	28.6	7.5 7.5	7.5	0.1 0.1	0.1	79.1 76.9	78.0	6.1 6.0	6.1	13.3 13.7	13.5	39 36	37.5	11 9	10.0
26-Apr-21	Sunny	09:34	Middle	0.1	25.4 25.4	25.4	7.4 7.4	7.4	0.2 0.2	0.2	58.9 58.5	58.7	4.8 4.8	4.8	7.6 7.9	7.8	29 23	26.0	9 9	9.0
28-Apr-21	Cloudy	14:47	Middle	0.1	26.0 26.0	26.0	7.4 7.4	7.4	0.2 0.2	0.2	65.4 65.2	65.3	5.3 5.3	5.3	6.1 6.1	6.1	17 14	15.5	9 9	9.0
30-Apr-21	Sunny	09:56	Middle	0.1	25.7 25.7	25.7	7.3 7.3	7.3	0.2 0.2	0.2	66.2 66.0	66.1	5.4 5.4	5.4	6.6 6.5	6.6	16 14	15.0	21 18	19.5

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
8-Apr-21	Sunny	10:26	Middle	0.4	24.7 24.7	24.7	7.1 7.1	7.1	0.3 0.3	0.3	74.2 74.2	74.2	6.2 6.2	6.2	34.6 35.6	35.1	49 48	48.5	3 4	3.5
10-Apr-21	Sunny	13:39	Middle	0.3	24.1 24.1	24.1	7.2 7.2	7.2	0.3 0.3	0.3	78.7 78.6	78.7	6.6 6.6	6.6	36.8 38.3	37.6	34 39	36.5	3 3	3.0
12-Apr-21	Sunny	09:25	Middle	0.3	25.3 25.3	25.3	7.1 7.1	7.1	0.3 0.3	0.3	76.1 75.7	75.9	6.2 6.2	6.2	45.7 43.0	44.4	50 43	46.5	3 3	3.0
14-Apr-21	Cloudy	09:47	Middle	0.4	26.0 26.0	26.0	7.1 7.1	7.1	0.3 0.3	0.3	82.0 80.7	81.4	6.6 6.5	6.6	37.3 36.9	37.1	73 75	74.0	4 5	4.5
16-Apr-21	Sunny	09:40	Middle	0.3	25.3 25.3	25.3	7.0 7.0	7.0	0.4 0.4	0.4	82.6 82.5	82.6	6.8 6.8	6.8	41.7 42.0	41.9	56 47	51.5	3 3	3.0
19-Apr-21	Sunny	10:00	Middle	0.3	24.3 24.3	24.3	7.0 7.0	7.0	0.2 0.2	0.2	74.6 74.5	74.6	6.2 6.2	6.2	42.6 41.8	42.2	68 68	68.0	4 4	4.0
21-Apr-21	Sunny	13:47	Middle	0.4	28.9 28.9	28.9	7.3 7.3	7.3	0.2 0.2	0.2	99.6 99.9	99.8	7.7 7.7	7.7	32.7 32.2	32.5	43 49	46.0	4 4	4.0
23-Apr-21	Sunny	10:53	Middle	0.4	27.8 27.8	27.8	7.3 7.3	7.3	0.3 0.3	0.3	88.4 88.4	88.4	6.9 6.9	6.9	33.2 33.6	33.4	50 44	47.0	5 5	5.0
26-Apr-21	Sunny	09:56	Middle	0.4	25.5 25.5	25.5	7.3 7.3	7.3	0.3 0.3	0.3	89.0 88.7	88.9	7.3 7.3	7.3	46.3 45.9	46.1	72 65	68.5	3 3	3.0
28-Apr-21	Cloudy	14:58	Middle	0.4	26.7 26.7	26.7	7.2 7.2	7.2	0.2 0.2	0.2	82.6 82.3	82.5	6.6 6.6	6.6	42.4 45.5	44.0	57 60	58.5	3 4	3.5
30-Apr-21	Sunny	10:12	Middle	0.3	26.3 26.3	26.3	7.1 7.1	7.1	0.3 0.3	0.3	80.4 80.3	80.4	6.5 6.5	6.5	40.2 40.2	40.2	40 45	42.5	4 5	4.5

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

Location: NTR-CS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
8-Apr-21	Sunny	11:51	Middle	0.1	24.0 23.9	24.0	7.0 7.0	7.0	0.1 0.1	0.1	67.2 66.9	67.1	5.7 5.6	5.7	4.0 4.0	4.0	10 9	9.5
10-Apr-21	Sunny	15:26	Middle	0.1	26.5 26.5	26.5	7.2 7.1	7.2	0.1 0.1	0.1	85.4 85.3	85.4	6.9 6.9	6.9	4.0 4.0	4.0	6 6	6.0
12-Apr-21	Sunny	11:03	Middle	0.1	24.9 24.8	24.9	7.0 7.0	7.0	0.1 0.1	0.1	69.4 68.6	69.0	5.8 5.7	5.8	7.4 7.5	7.5	16 13	14.5
14-Apr-21	Cloudy	11:05	Middle	0.2	26.0 26.0	26.0	6.9 6.9	6.9	0.1 0.1	0.1	72.5 72.4	72.5	5.9 5.9	5.9	3.6 3.6	3.6	12 12	12.0
16-Apr-21	Sunny	11:07	Middle	0.1	24.2 24.2	24.2	6.9 6.9	6.9	0.1 0.1	0.1	78.0 78.1	78.1	6.5 6.6	6.6	3.0 3.0	3.0	8 8	8.0
19-Apr-21	Sunny	11:13	Middle	0.1	23.9 23.8	23.9	6.9 6.9	6.9	0.1 0.1	0.1	80.2 80.1	80.2	6.8 6.8	6.8	3.9 3.8	3.9	8 8	8.0
21-Apr-21	Sunny	11:21	Middle	0.2	26.5 26.5	26.5	7.2 7.2	7.2	0.2 0.2	0.2	90.5 90.3	90.4	7.3 7.3	7.3	9.7 9.7	9.7	8 8	8.0
23-Apr-21	Sunny	12:07	Middle	0.1	27.9 27.9	27.9	6.9 6.9	6.9	0.1 0.1	0.1	70.0 69.9	70.0	5.5 5.5	5.5	3.9 4.0	4.0	13 11	12.0
26-Apr-21	Sunny	11:12	Middle	0.1	24.3 24.3	24.3	6.9 6.9	6.9	0.1 0.1	0.1	66.6 66.5	66.6	5.6 5.6	5.6	2.8 2.7	2.8	8 9	8.5
28-Apr-21	Cloudy	16:24	Middle	0.1	25.3 25.3	25.3	6.9 6.9	6.9	0.1 0.1	0.1	51.7 51.3	51.5	4.2 4.2	4.2	4.8 4.8	4.8	7 10	8.5
30-Apr-21	Sunny	11:34	Middle	0.2	26.9 26.9	26.9	6.9 6.9	6.9	0.1 0.1	0.1	74.9 74.7	74.8	6.0 6.0	6.0	3.2 3.0	3.1	6 4	5.0

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
8-Apr-21	Sunny	10:51	Middle	0.4	23.8 23.8	23.8	7.2 7.2	7.2	0.1 0.1	0.1	64.5 63.4	64.0	5.5 5.4	5.5	6.2 6.4	6.3	8 7	7.5
10-Apr-21	Sunny	14:16	Middle	0.3	24.5 24.5	24.5	7.3 7.2	7.3	0.2 0.2	0.2	72.6 72.3	72.5	6.1 6.0	6.1	5.3 5.4	5.4	4 5	4.5
12-Apr-21	Sunny	10:00	Middle	0.4	25.5 25.5	25.5	7.1 7.1	7.1	0.1 0.1	0.1	78.4 77.2	77.8	6.4 6.3	6.4	5.0 5.0	5.0	6 5	5.5
14-Apr-21	Cloudy	10:06	Middle	0.5	26.2 26.2	26.2	7.2 7.2	7.2	0.1 0.1	0.1	74.3 73.5	73.9	6.0 5.9	6.0	5.8 5.7	5.8	5 6	5.5
16-Apr-21	Sunny	10:10	Middle	0.3	24.6 24.5	24.6	7.0 7.0	7.0	0.1 0.1	0.1	76.6 76.5	76.6	6.4 6.4	6.4	5.6 5.5	5.6	8 8	8.0
19-Apr-21	Sunny	10:18	Middle	0.4	23.4 23.4	23.4	7.2 7.1	7.2	0.1 0.1	0.1	73.3 72.9	73.1	6.2 6.2	6.2	5.5 5.3	5.4	6 7	6.5
21-Apr-21	Sunny	12:04	Middle	0.4	26.7 26.7	26.7	7.2 7.2	7.2	0.1 0.1	0.1	86.1 86.2	86.2	6.9 6.9	6.9	5.7 5.7	5.7	5 6	5.5
23-Apr-21	Sunny	11:12	Middle	0.4	29.2 29.2	29.2	7.2 7.2	7.2	0.1 0.1	0.1	87.0 86.9	87.0	6.7 6.7	6.7	2.7 2.9	2.8	6 7	6.5
26-Apr-21	Sunny	10:10	Middle	0.4	25.2 25.2	25.2	7.3 7.3	7.3	0.1 0.1	0.1	71.3 71.0	71.2	5.9 5.9	5.9	5.0 5.1	5.1	8 7	7.5
28-Apr-21	Cloudy	15:32	Middle	0.4	25.8 25.8	25.8	7.1 7.1	7.1	0.1 0.1	0.1	74.9 74.5	74.7	6.1 6.1	6.1	5.2 5.1	5.2	5 5	5.0
30-Apr-21	Sunny	10:36	Middle	0.4	26.9 26.9	26.9	7.2 7.2	7.2	0.1 0.1	0.1	76.4 75.4	75.9	6.1 6.0	6.1	4.7 4.5	4.6	5 5	5.0

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

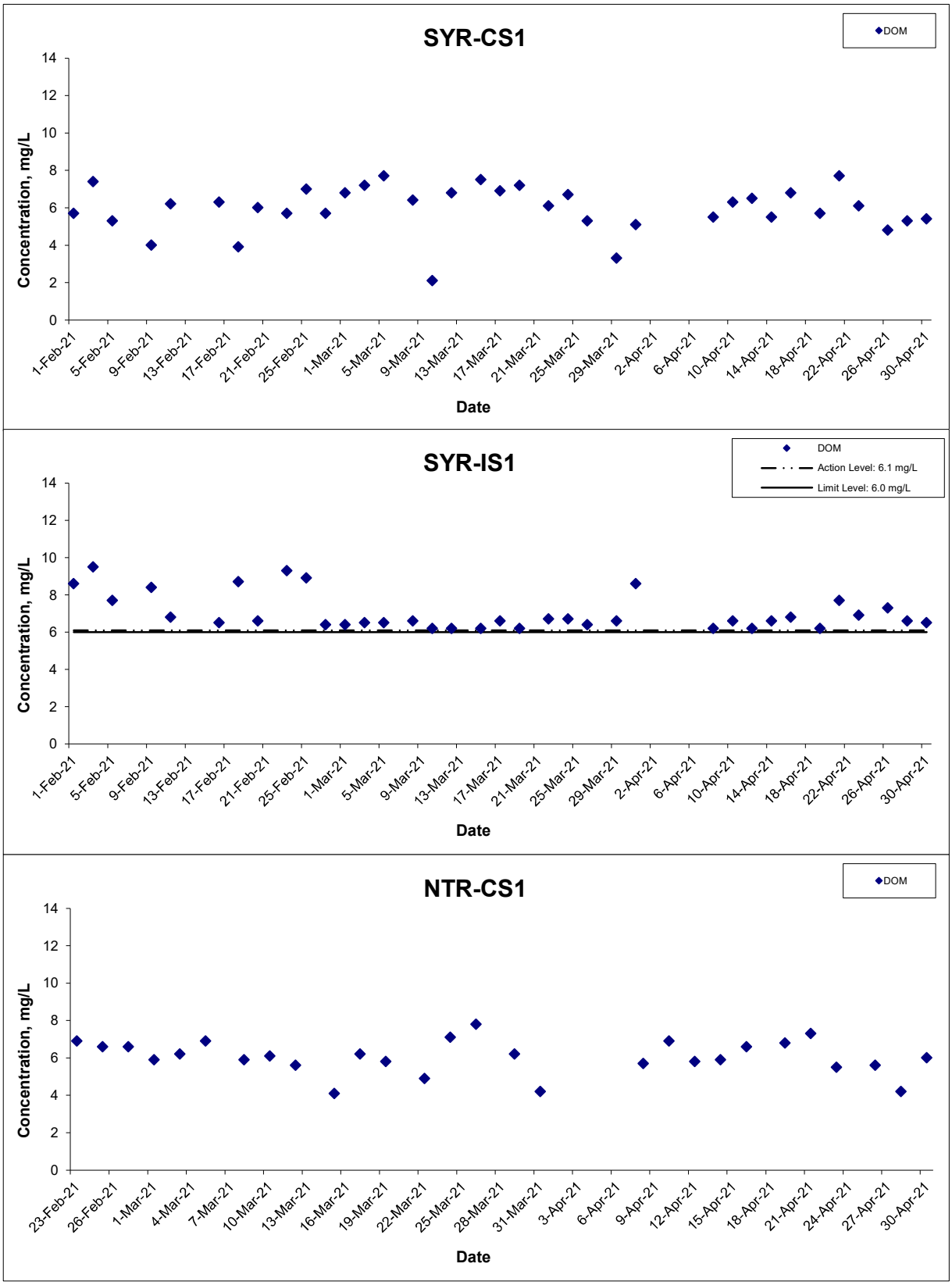
Location: SHST-IS2

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
8-Apr-21	Sunny	11:17	Middle	0.1	22.4 22.4	22.4	7.7 7.7	7.7	0.0 0.0	0.0	94.8 94.6	94.7	8.2 8.2	8.2	3.9 3.9	3.9	7 7	7.0
10-Apr-21	Sunny	14:44	Middle	0.1	23.7 23.7	23.7	7.2 7.2	7.2	0.2 0.2	0.2	85.3 85.2	85.3	7.2 7.2	7.2	3.9 3.9	3.9	3 3	3.0
12-Apr-21	Sunny	10:28	Middle	0.1	25.4 25.3	25.4	7.2 7.2	7.2	0.1 0.1	0.1	96.3 95.7	96.0	7.9 7.9	7.9	4.2 4.1	4.2	3 4	3.5
14-Apr-21	Cloudy	10:27	Middle	0.1	26.1 26.1	26.1	7.3 7.3	7.3	0.1 0.1	0.1	90.3 90.2	90.3	7.3 7.3	7.3	4.2 4.1	4.2	3 3	3.0
16-Apr-21	Sunny	10:33	Middle	0.1	23.9 23.9	23.9	7.1 7.1	7.1	0.1 0.1	0.1	87.6 87.9	87.8	7.4 7.4	7.4	3.3 3.3	3.3	4 3	3.5
19-Apr-21	Sunny	10:47	Middle	0.1	23.4 23.4	23.4	7.3 7.3	7.3	0.1 0.1	0.1	86.8 86.8	86.8	7.4 7.4	7.4	4.3 4.3	4.3	4 3	3.5
21-Apr-21	Sunny	12:29	Middle	0.2	26.7 26.7	26.7	7.1 7.1	7.1	0.1 0.1	0.1	89.5 89.4	89.5	7.2 7.2	7.2	3.8 3.7	3.8	4 4	4.0
23-Apr-21	Sunny	11:28	Middle	0.1	29.5 29.4	29.5	7.4 7.4	7.4	0.1 0.1	0.1	96.6 96.2	96.4	7.4 7.3	7.4	3.8 3.8	3.8	4 4	4.0
26-Apr-21	Sunny	10:38	Middle	0.1	24.5 24.5	24.5	7.5 7.5	7.5	0.1 0.1	0.1	91.8 91.6	91.7	7.7 7.6	7.7	4.2 4.2	4.2	4 4	4.0
28-Apr-21	Cloudy	15:56	Middle	0.1	25.7 25.7	25.7	7.2 7.2	7.2	0.1 0.1	0.1	97.0 96.8	96.9	7.9 7.9	7.9	4.1 4.1	4.1	4 4	4.0
30-Apr-21	Sunny	10:55	Middle	0.1	27.6 27.6	27.6	7.4 7.4	7.4	0.1 0.1	0.1	89.7 89.4	89.6	7.1 7.1	7.1	4.0 4.0	4.0	3 4	3.5

Location: MWR-IS3

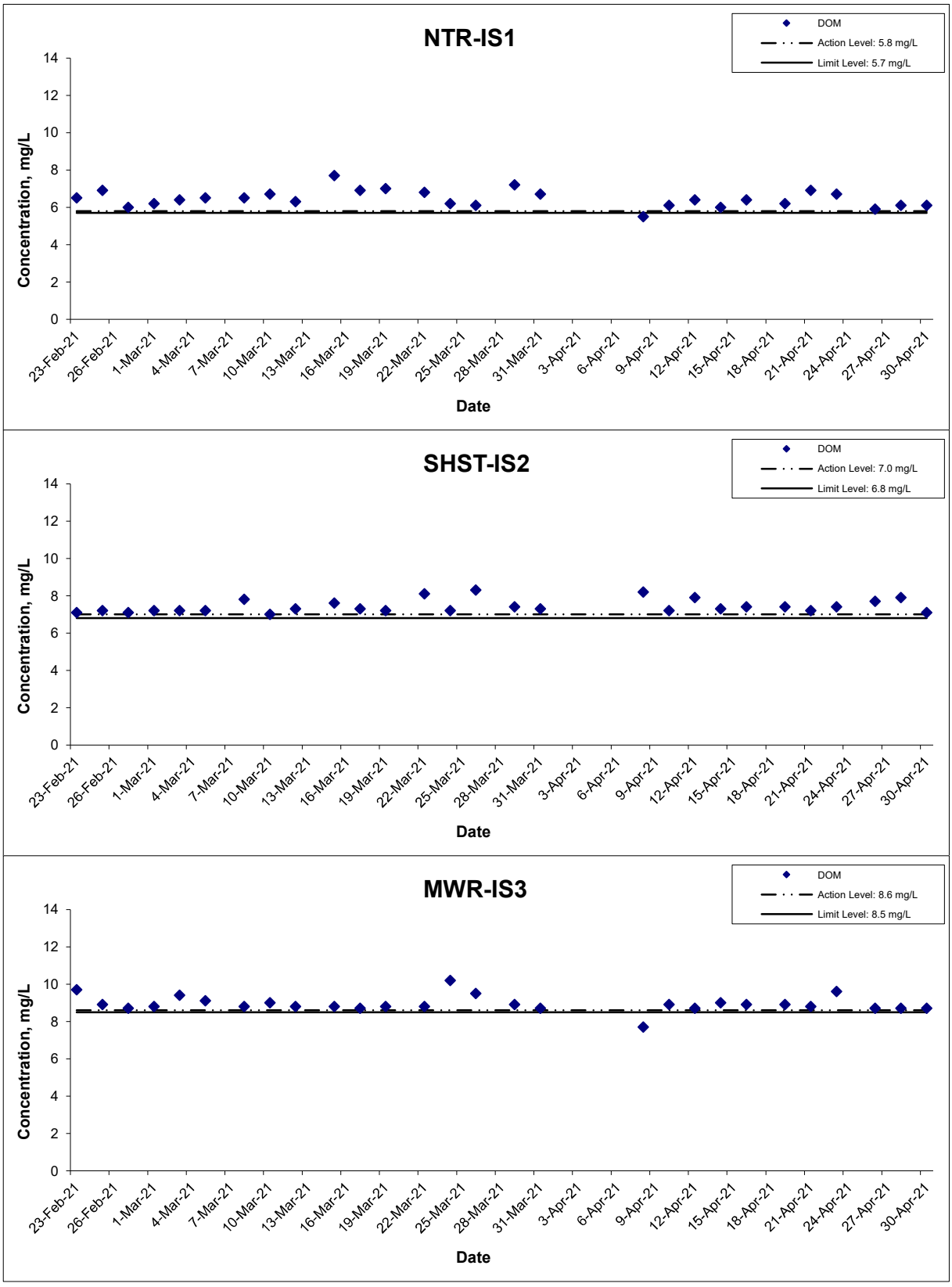
Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
8-Apr-21	Sunny	11:33	Middle	0.1	23.8 23.8	23.8	7.5 7.5	7.5	0.2 0.2	0.2	91.1 90.3	90.7	7.7 7.6	7.7	40.3 38.1	39.2	36 46	41.0
10-Apr-21	Sunny	15:51	Middle	0.1	25.4 25.5	25.5	7.1 7.1	7.1	0.1 0.1	0.1	108.8 108.7	108.8	8.9 8.9	8.9	2.4 2.4	2.4	4 5	4.5
12-Apr-21	Sunny	10:44	Middle	0.1	25.4 25.4	25.4	7.5 7.5	7.5	0.2 0.2	0.2	105.6 105.7	105.7	8.7 8.7	8.7	8.8 8.7	8.8	9 9	9.0
14-Apr-21	Cloudy	10:44	Middle	0.2	26.0 26.0	26.0	7.5 7.5	7.5	0.2 0.2	0.2	110.6 110.6	110.6	9.0 9.0	9.0	4.5 4.7	4.6	11 11	11.0
16-Apr-21	Sunny	11:34	Middle	0.1	24.2 24.3	24.3	6.9 6.9	6.9	0.1 0.1	0.1	105.9 105.8	105.9	8.9 8.9	8.9	3.0 3.1	3.1	9 8	8.5
19-Apr-21	Sunny	10:55	Middle	0.1	23.3 23.3	23.3	7.4 7.4	7.4	0.2 0.2	0.2	104.4 104.4	104.4	8.9 8.9	8.9	9.5 9.4	9.5	10 11	10.5
21-Apr-21	Sunny	11:38	Middle	0.2	26.8 26.8	26.8	7.1 7.1	7.1	0.1 0.1	0.1	110.6 110.5	110.6	8.8 8.8	8.8	3.6 3.8	3.7	5 5	5.0
23-Apr-21	Sunny	11:42	Middle	0.1	28.2 28.2	28.2	7.7 7.6	7.7	0.2 0.2	0.2	123.1 123.3	123.2	9.6 9.6	9.6	7.0 6.7	6.9	8 10	9.0
26-Apr-21	Sunny	10:49	Middle	0.1	24.0 24.1	24.1	7.2 7.2	7.2	0.2 0.2	0.2	103.4 102.4	102.9	8.7 8.6	8.7	7.3 7.3	7.3	12 12	12.0
28-Apr-21	Cloudy	16:10	Middle	0.1	26.1 26.1	26.1	7.4 7.4	7.4	0.2 0.2	0.2	107.1 107.0	107.1	8.7 8.7	8.7	8.8 8.7	8.8	13 11	12.0
30-Apr-21	Sunny	11:09	Middle	0.2	27.7 27.7	27.7	7.5 7.5	7.5	0.1 0.1	0.1	110.8 110.7	110.8	8.7 8.7	8.7	9.9 10.0	10.0	9 10	9.5

Dissolved Oxygen (Middle)



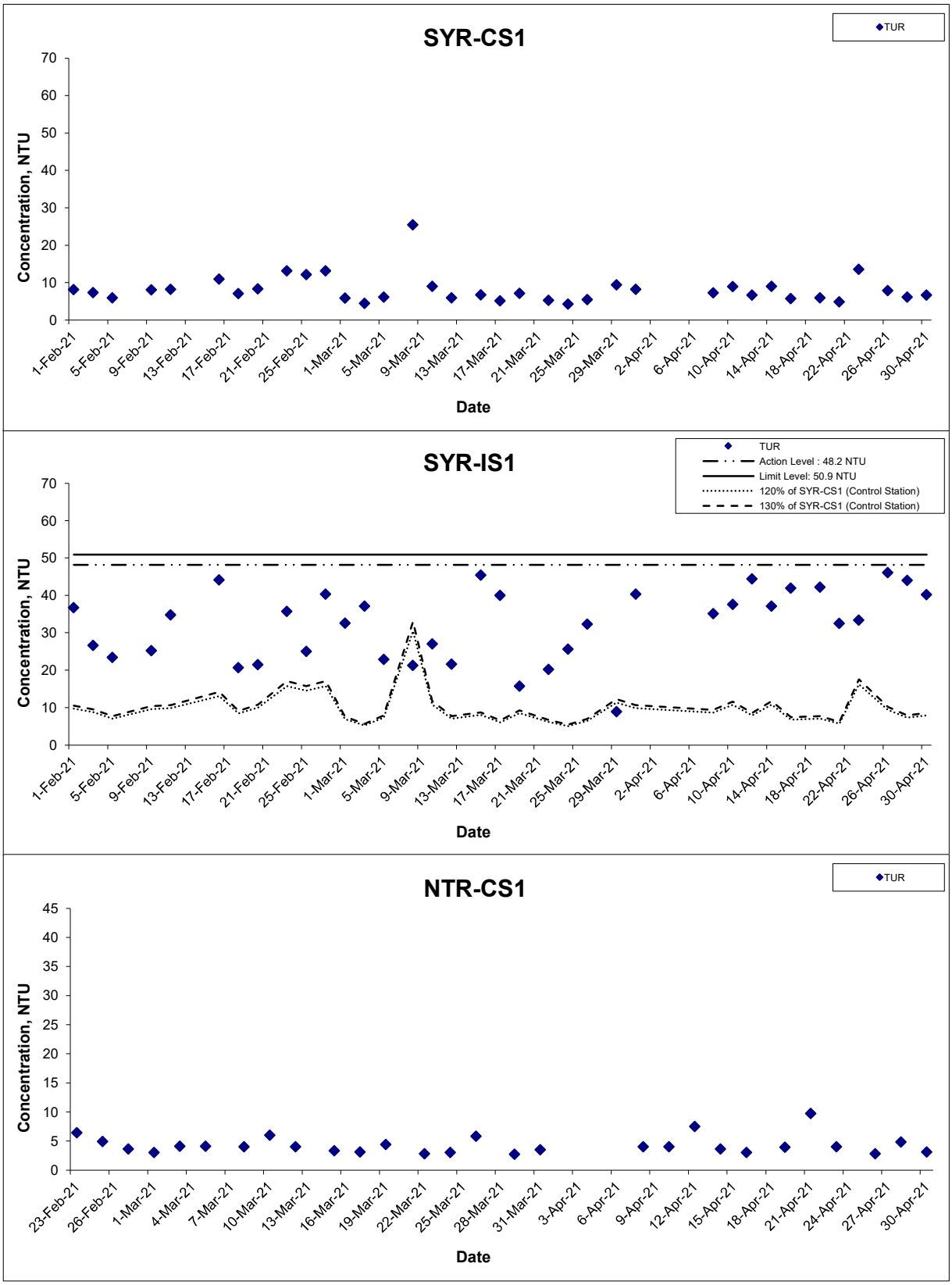
Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: WMA20002	WELLAB 匯力 consulting . testing . research
		Date: Apr 21	Appendix: G	

Dissolved Oxygen (Middle)



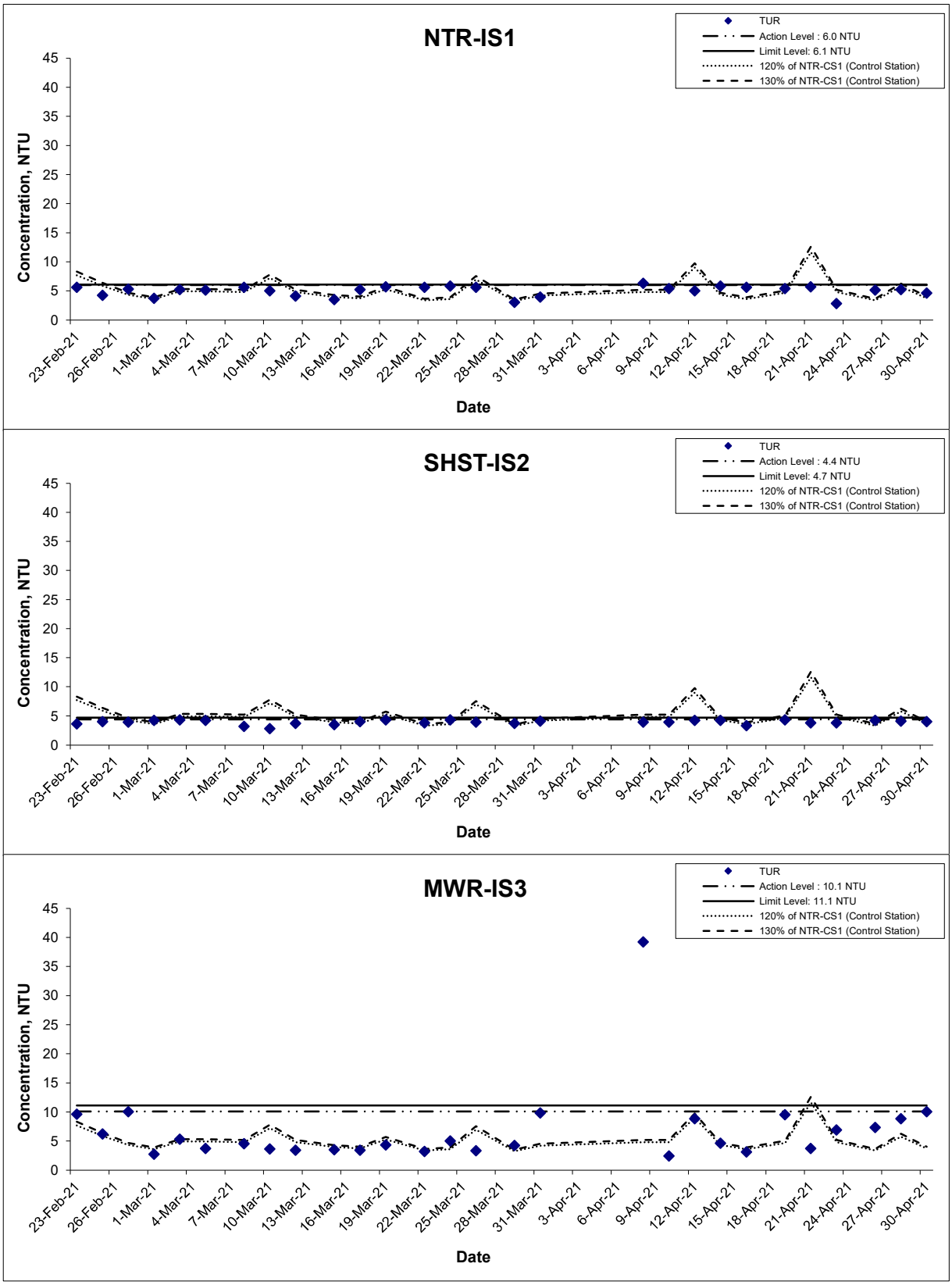
Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: WMA20002	WELLAB 匯力 consulting . testing . research
		Date: Apr 21	Appendix: G	

Turbidity (Depth-averaged)



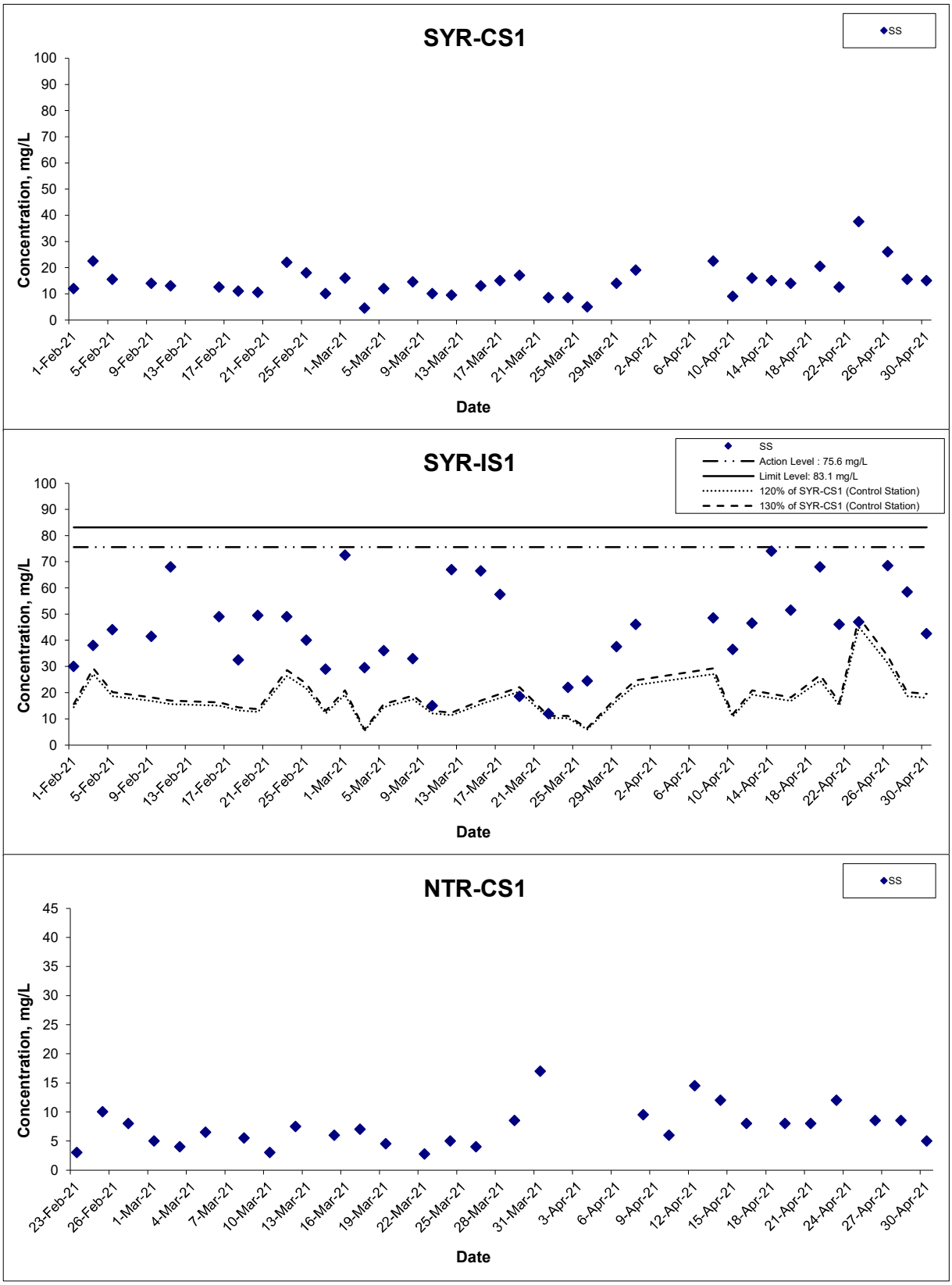
Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: WMA20002	WELLAB 匯力 consulting . testing . research
		Date: Apr 21	Appendix: G	

Turbidity (Depth-averaged)



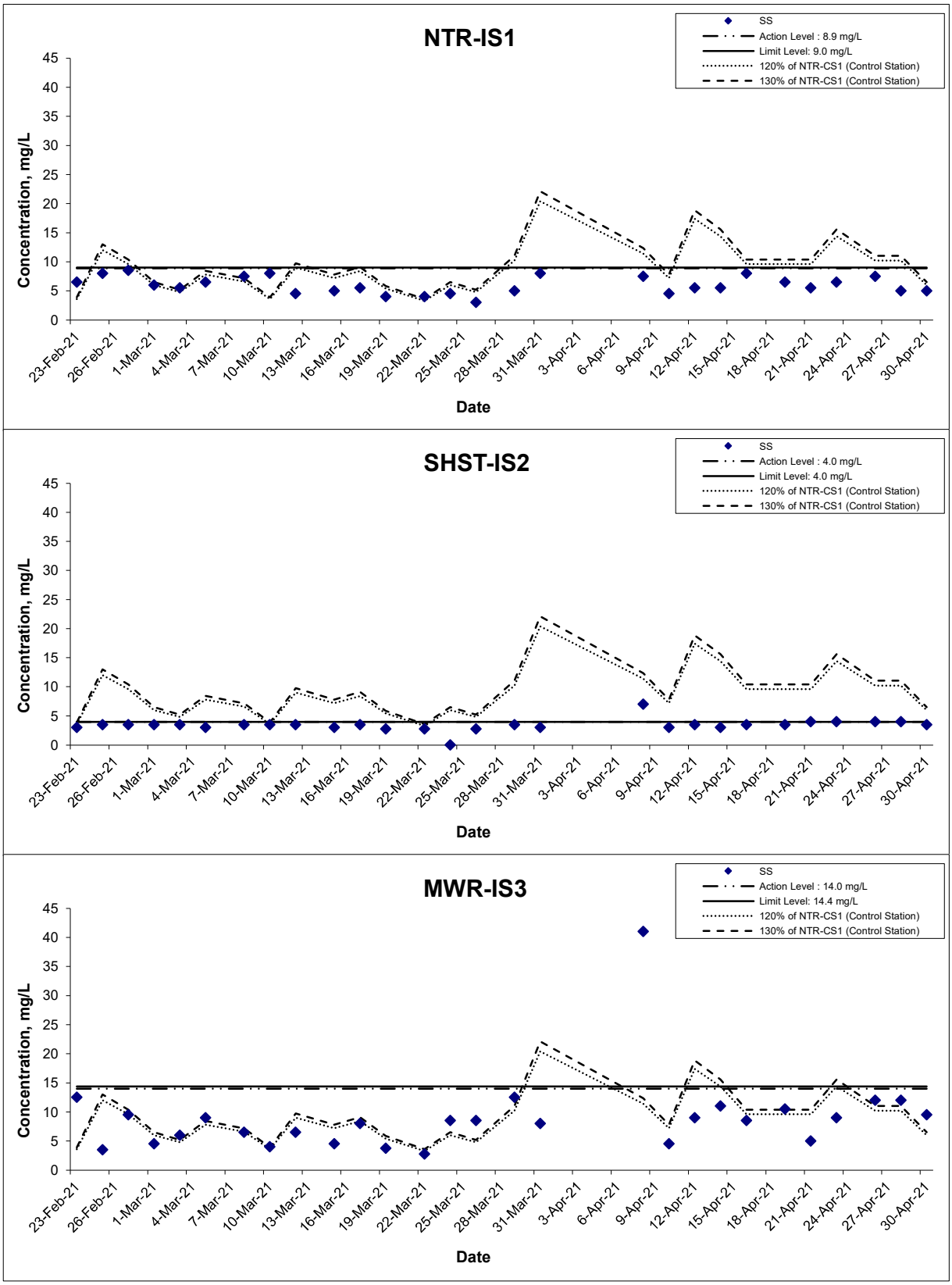
Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA20002	WELLAB 匯力 consulting . testing . research
		Date Apr 21	Appendix G	

Suspended Solids (Depth-averaged)



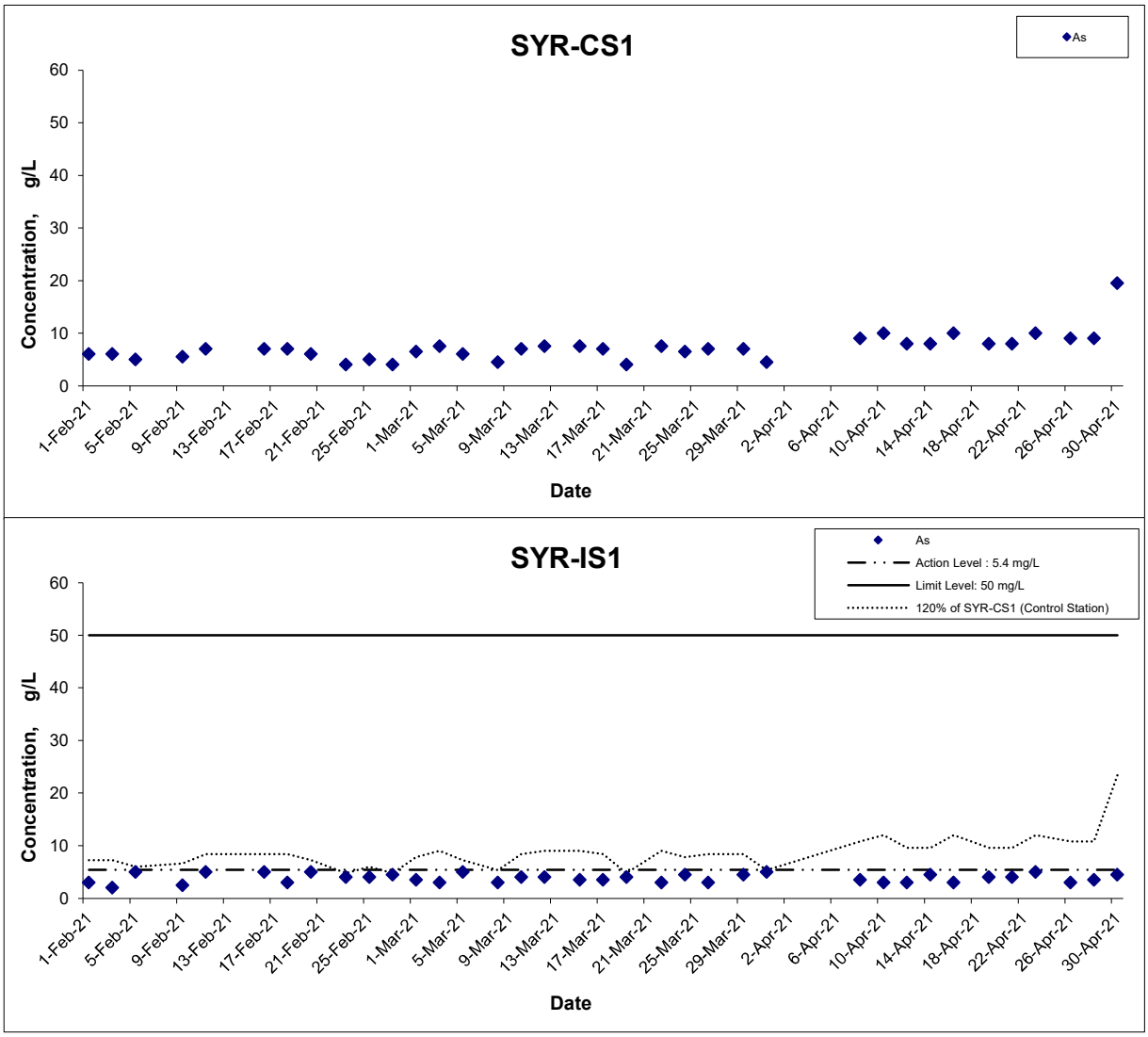
Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: WMA20002	WELLAB 匯力 consulting . testing . research
		Date: Apr 21	Appendix: G	

Suspended Solids (Depth-averaged)



Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: WMA20002	WELLAB 匯力 consulting . testing . research
		Date: Apr 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 Apr 21	Project No. WMA20002 Appendix G	WELLAB 匯力 consulting . testing . research

APPENDIX H
LABORATORY TESTING REPORTS FOR LABORATORY ANALYSIS

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

TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1701, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Ms. Ivy Tam**

Report No.:	34958
Date of Issue:	2021-04-14
Date Received:	2021-04-08
Date Tested:	2021-04-08
Date Completed:	2021-04-14
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 34958
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. : WMA20002/210408
Sampling Date : 2021-04-08

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.	34958-2	34958-3	34958-5	34958-6
Total Suspended Solids (mg/L)	22	23	49	48
Arsenic (μg/L)	9	9	3	4

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

TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1701, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Ms. Ivy Tam**

Report No.:	34958A
Date of Issue:	2021-04-14
Date Received:	2021-04-08
Date Tested:	2021-04-08
Date Completed:	2021-04-14
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 34958A
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. : WMA20002/210408
Sampling Date : 2021-04-08

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.	34958-8	34958-9	34958-11	34958-12
Total Suspended Solids (mg/L)	10	9	8	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	34958-14	34958-15	34958-17	34958-18
Total Suspended Solids (mg/L)	7	7	35	46

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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WELLAB LIMITED
Room 1714, Technology Park,
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Website: www.wellab.com.hk

TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1701, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Ms. Ivy Tam**

Report No.:	34966
Date of Issue:	2021-04-15
Date Received:	2021-04-10
Date Tested:	2021-04-10
Date Completed:	2021-04-15
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 34966
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. : WMA20002/210410
Sampling Date : 2021-04-10

Tests Requested & Methodology:

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

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	34966-2	34966-3	34966-5	34966-6
Total Suspended Solids (mg/L)	9	9	34	39
Arsenic (μg/L)	10	10	3	3

Remarks: 1) < = less than

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PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1701, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Ms. Ivy Tam**

Report No.:	34966A
Date of Issue:	2021-04-15
Date Received:	2021-04-10
Date Tested:	2021-04-10
Date Completed:	2021-04-15
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 34966A
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. : WMA20002/210410
Sampling Date : 2021-04-10

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	34966-8	34966-9	34966-11	34966-12
Total Suspended Solids (mg/L)	6	6	4	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	34966-14	34966-15	34966-17	34966-18
Total Suspended Solids (mg/L)	3	3	4	5

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1701, Technology Park,
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Shatin, N.T.

ATTN: **Ms. Ivy Tam**

Report No.:	34970
Date of Issue:	2021-04-16
Date Received:	2021-04-12
Date Tested:	2021-04-12
Date Completed:	2021-04-16
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 34970
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. : WMA20002/210412
Sampling Date : 2021-04-12

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.	34970-2	34970-3	34970-5	34970-6
Total Suspended Solids (mg/L)	16	16	50	43
Arsenic (µg/L)	8	8	3	3

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Ms. Ivy Tam**

Report No.:	34970A
Date of Issue:	2021-04-16
Date Received:	2021-04-12
Date Tested:	2021-04-12
Date Completed:	2021-04-16
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 34970A
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. : WMA20002/210412
Sampling Date : 2021-04-12

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.	34970-8	34970-9	34970-11	34970-12
Total Suspended Solids (mg/L)	16	13	6	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	34970-14	34970-15	34970-17	34970-18
Total Suspended Solids (mg/L)	3	4	9	9

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1701, Technology Park,
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Shatin, N.T.

ATTN: **Ms. Ivy Tam**

Report No.:	34988
Date of Issue:	2021-04-20
Date Received:	2021-04-14
Date Tested:	2021-04-14
Date Completed:	2021-04-20
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 34988
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. : WMA20002/210414
Sampling Date : 2021-04-14

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.	34988-2	34988-3	34988-5	34988-6
Total Suspended Solids (mg/L)	14	16	73	75
Arsenic (µg/L)	8	8	4	5

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Ms. Ivy Tam**

Report No.:	34988A
Date of Issue:	2021-04-20
Date Received:	2021-04-14
Date Tested:	2021-04-14
Date Completed:	2021-04-20
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 34988A
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. : WMA20002/210414
Sampling Date : 2021-04-14

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.	34988-8	34988-9	34988-11	34988-12
Total Suspended Solids (mg/L)	12	12	5	6

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	34988-14	34988-15	34988-17	34988-18
Total Suspended Solids (mg/L)	3	3	11	11

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Ms. Ivy Tam**

Report No.:	34995
Date of Issue:	2021-04-22
Date Received:	2021-04-16
Date Tested:	2021-04-16
Date Completed:	2021-04-22
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 34995
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. : WMA20002/210416
Sampling Date : 2021-04-16

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.	34995-2	34995-3	34995-5	34995-6
Total Suspended Solids (mg/L)	14	14	56	47
Arsenic (μg/L)	10	10	3	3

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Ms. Ivy Tam**

Report No.:	34995A
Date of Issue:	2021-04-22
Date Received:	2021-04-16
Date Tested:	2021-04-16
Date Completed:	2021-04-22
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 34995A
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. : WMA20002/210416
Sampling Date : 2021-04-16

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.	34995-8	34995-9	34995-11	34995-12
Total Suspended Solids (mg/L)	8	8	8	8

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	34995-14	34995-15	34995-17	34995-18
Total Suspended Solids (mg/L)	4	3	9	8

Remarks: 1) < = less than

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ATTN: **Ms. Ivy Tam**

Report No.:	35001
Date of Issue:	2021-04-23
Date Received:	2021-04-19
Date Tested:	2021-04-19
Date Completed:	2021-04-23
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35001
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. : WMA20002/210419
Sampling Date : 2021-04-19

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.	35001-2	35001-3	35001-5	35001-6
Total Suspended Solids (mg/L)	21	20	68	68
Arsenic (µg/L)	8	8	4	4

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Ms. Ivy Tam**

Report No.:	35001A
Date of Issue:	2021-04-23
Date Received:	2021-04-19
Date Tested:	2021-04-19
Date Completed:	2021-04-23
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35001A
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. : WMA20002/210419
Sampling Date : 2021-04-19

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.	35001-8	35001-9	35001-11	35001-12
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.	35001-14	35001-15	35001-17	35001-18
Total Suspended Solids (mg/L)	4	3	10	11

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Ms. Ivy Tam**

Report No.:	35013
Date of Issue:	2021-04-23
Date Received:	2021-04-21
Date Tested:	2021-04-21
Date Completed:	2021-04-23
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35013
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. : WMA20002/210421
Sampling Date : 2021-04-21

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.	35013-2	35013-3	35013-5	35013-6
Total Suspended Solids (mg/L)	14	11	43	49
Arsenic (μg/L)	8	8	4	4

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Ms. Ivy Tam**

Report No.:	35013A
Date of Issue:	2021-04-23
Date Received:	2021-04-21
Date Tested:	2021-04-21
Date Completed:	2021-04-23
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35013A
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. : WMA20002/210421
Sampling Date : 2021-04-21

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.	35013-8	35013-9	35013-11	35013-12
Total Suspended Solids (mg/L)	8	8	5	6

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35013-14	35013-15	35013-17	35013-18
Total Suspended Solids (mg/L)	4	4	5	5

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Ms. Ivy Tam**

Report No.:	35016
Date of Issue:	2021-04-28
Date Received:	2021-04-23
Date Tested:	2021-04-23
Date Completed:	2021-04-28
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35016
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. : WMA20002/210423
Sampling Date : 2021-04-23

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.	35016-2	35016-3	35016-5	35016-6
Total Suspended Solids (mg/L)	39	36	50	44
Arsenic (μg/L)	11	9	5	5

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Ms. Ivy Tam**

Report No.:	35016A
Date of Issue:	2021-04-28
Date Received:	2021-04-23
Date Tested:	2021-04-23
Date Completed:	2021-04-28
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35016A
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. : WMA20002/210423
Sampling Date : 2021-04-23

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.	35016-8	35016-9	35016-11	35016-12
Total Suspended Solids (mg/L)	13	11	6	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35016-14	35016-15	35016-17	35016-18
Total Suspended Solids (mg/L)	4	4	8	10

Remarks: 1) < = less than

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Website: www.wellab.com.hk

TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1701, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Ms. Ivy Tam**

Report No.:	35035
Date of Issue:	2021-04-28
Date Received:	2021-04-26
Date Tested:	2021-04-26
Date Completed:	2021-04-28
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35035
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. : WMA20002/210426
Sampling Date : 2021-04-26

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.	35035-2	35035-3	35035-5	35035-6
Total Suspended Solids (mg/L)	29	23	72	65
Arsenic (μg/L)	9	9	3	3

Remarks: 1) < = less than

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

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

PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1701, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Ms. Ivy Tam**

Report No.:	35035A
Date of Issue:	2021-04-28
Date Received:	2021-04-26
Date Tested:	2021-04-26
Date Completed:	2021-04-28
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35035A
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. : WMA20002/210426
Sampling Date : 2021-04-26

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.	35035-8	35035-9	35035-11	35035-12
Total Suspended Solids (mg/L)	8	9	8	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35035-14	35035-15	35035-17	35035-18
Total Suspended Solids (mg/L)	4	4	12	12

Remarks: 1) < = less than

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General Manager

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1701, Technology Park,
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ATTN: **Ms. Ivy Tam**

Report No.:	35047
Date of Issue:	2021-04-30
Date Received:	2021-04-28
Date Tested:	2021-04-28
Date Completed:	2021-04-30
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35047
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. : WMA20002/210428
Sampling Date : 2021-04-28

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.	35047-2	35047-3	35047-5	35047-6
Total Suspended Solids (mg/L)	17	14	57	60
Arsenic (µg/L)	9	9	3	4

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.:	35047A
Date of Issue:	2021-04-30
Date Received:	2021-04-28
Date Tested:	2021-04-28
Date Completed:	2021-04-30
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35047A
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. : WMA20002/210428
Sampling Date : 2021-04-28

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.	35047-8	35047-9	35047-11	35047-12
Total Suspended Solids (mg/L)	7	10	5	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35047-14	35047-15	35047-17	35047-18
Total Suspended Solids (mg/L)	4	4	13	11

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Ms. Ivy Tam**

Report No.:	35058
Date of Issue:	2021-05-05
Date Received:	2021-04-30
Date Tested:	2021-04-30
Date Completed:	2021-05-05
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 35058
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. : WMA20002/210430
Sampling Date : 2021-04-30

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.	35058-2	35058-3	35058-5	35058-6
Total Suspended Solids (mg/L)	16	14	40	45
Arsenic (μg/L)	21	18	4	5

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Ms. Ivy Tam**

Report No.:	35058A
Date of Issue:	2021-05-05
Date Received:	2021-04-30
Date Tested:	2021-04-30
Date Completed:	2021-05-05
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 35058A
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. : WMA20002/210430
Sampling Date : 2021-04-30

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.	35058-8	35058-9	35058-11	35058-12
Total Suspended Solids (mg/L)	6	4	5	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35058-14	35058-15	35058-17	35058-18
Total Suspended Solids (mg/L)	3	4	9	10

Remarks: 1) < = less than

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APPENDIX I
QUALITY CONTROL REPORTS FOR SS AND ARSENIC LABORATORY ANALYSIS

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Ms. Ivy Tam**

Report No.:	QC34958
Date of Issue:	2021-04-14
Date Received:	2021-04-08
Date Tested:	2021-04-08
Date Completed:	2021-04-14
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	93	80-120
Arsenic (%)	105	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	118	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	4	2	RPD≤5%
Arsenic (%)	0	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 34958.

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1701, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Ms. Ivy Tam**

Report No.:	QC34966
Date of Issue:	2021-04-15
Date Received:	2021-04-10
Date Tested:	2021-04-10
Date Completed:	2021-04-15
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	107	80-120
Arsenic (%)	115	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 (%)	3	1	RPD≤5%
Arsenic (%)	2	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34966.

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Ms. Ivy Tam**

Report No.:	QC34970
Date of Issue:	2021-04-16
Date Received:	2021-04-12
Date Tested:	2021-04-12
Date Completed:	2021-04-16
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 (%)	107	89	80-120
Arsenic (%)	108	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	118	N/A	80-120

Sample Duplicate

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34970.

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1701, Technology Park,
18 On Lai Street,
Shatin, N.T.

Report No.:	QC34988
Date of Issue:	2021-04-16
Date Received:	2021-04-14
Date Tested:	2021-04-14
Date Completed:	2021-04-16

ATTN: **Ms. Ivy Tam**

Page: 1 of 1

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	113	109	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 (%)	115	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 34988.

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Ms. Ivy Tam**

Report No.:	QC34995
Date of Issue:	2021-04-22
Date Received:	2021-04-16
Date Tested:	2021-04-16
Date Completed:	2021-04-22
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	103	80-120
Arsenic (%)	99	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	102	N/A	80-120

Sample Duplicate

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34995.

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Report No.:	QC35001
Date of Issue:	2021-04-23
Date Received:	2021-04-19
Date Tested:	2021-04-19
Date Completed:	2021-04-23
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	107	80-120
Arsenic (%)	99	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	119	N/A	80-120

Sample Duplicate

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

Remarks: 1) < = less than
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3) This report is the summary of quality control data for report number 35001.

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APPLICANT: **Wellab Limited (EM&A Department)**
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Report No.:	QC35013
Date of Issue:	2021-04-23
Date Received:	2021-04-21
Date Tested:	2021-04-21
Date Completed:	2021-04-23

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 (%)	105	110	80-120
Arsenic (%)	98	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	82	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	0	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 35013.

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Ms. Ivy Tam**

Report No.:	QC35016
Date of Issue:	2021-04-28
Date Received:	2021-04-23
Date Tested:	2021-04-23
Date Completed:	2021-04-28
Page:	1 of 1

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	108	97	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 (%)	93	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	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 35016.

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

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

PATRCIK TSE
General Manager

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WELLAB LIMITED
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Website : www.wellab.com.hk

TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1701, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Ms. Ivy Tam**

Report No.:	QC35035
Date of Issue:	2021-04-28
Date Received:	2021-04-26
Date Tested:	2021-04-26
Date Completed:	2021-04-28
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 (%)	116	98	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 (%)	92	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	4	3	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 35035.

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1701, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Ms. Ivy Tam**

Report No.:	QC35047
Date of Issue:	2021-04-30
Date Received:	2021-04-28
Date Tested:	2021-04-28
Date Completed:	2021-04-30
Page:	1 of 1

QC report

Method Blank

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

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	103	106	80-120
Arsenic (%)	103	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	116	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	2	RPD≤5%
Arsenic (%)	17	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 35047.

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1701, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Ms. Ivy Tam**

Report No.:	QC35058
Date of Issue:	2021-05-05
Date Received:	2021-04-30
Date Tested:	2021-04-30
Date Completed:	2021-05-05
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 (%)	114	116	80-120
Arsenic (%)	109	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 (%)	3	2	RPD≤5%
Arsenic (%)	13	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 35058.

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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%
30-04-2021 9:52	CZ PT 1		20.95	0.00	0.01
30-04-2021 9:47	CZ container 1		20.65	0.00	0.01
30-04-2021 9:41	CZ container 2		20.82	0.00	0.02
30-04-2021 9:43	CZ container 3		20.73	0.00	0.01
30-04-2021 9:45	CZ container 4		20.70	0.00	0.01
30-04-2021 9:49	CZ container 5		20.71	0.06	0.01

Prepared by : Y L Chan (Safety Officer) Date : 30-04-2021

APPENDIX K
ECOLOGICAL MONITORING RESULTS

Appendix K1a. Avifauna Species Recorded for Water Birds Monitoring, 8 & 9 April 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			8/4/2021, 9/4/2021					
					Weather Condition			Cloudy, Drizzle					
					Tidal Condition			High					
					Tide Level (m)			1.8, 1.82					
					Start Time			9:00, 9:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopaceus*	噪鵑	R		1	2	2					2	
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv		3	2	3		1				15
Black Kite	*Milvus migrans*	黑鳶	R, WV	(RC), Cap.586		1							
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R		2	2	3	1	20			6	6
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			2			15			5
Chestnut Munia	*Lonchura atricapilla*	栗腹文鳥	R						33				
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R			1	5		4				
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	3	1	3	1	1	3	2		1
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU									1
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			1						
Common Myna	*Acridotheres tristis*	家八哥	UR				1						
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM				7						
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM						1				1
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R		1							3	
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵐	R		1				3			3	5
Crested Myna	*Acridotheres cristatellus*	八哥	R		5	6	2		4				12

Appendix K1a. Avifauna Species Recorded for Water Birds Monitoring, 8 & 9 April 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			8/4/2021, 9/4/2021					
					Weather Condition			Cloudy, Drizzle					
					Tidal Condition			High					
					Tide Level (m)			1.8, 1.82					
					Start Time			9:00, 9:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Domestic Pigeon	*Columba livia*	原鴿	R			2			13				
Dusky Warbler	*Phylloscopus fuscatus*	褐柳鶯	PM, WV									1	
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)			4	1		1			6
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV					3	11				2
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R		1	3			3				12
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)								1	
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	1	1	1						
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV				7			1			
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC			3						
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R		1	2							12
Japanese White-eye	*Zosterops japonicus*	暗綠繡眼鳥	R						1				
Jungle Crow	*Corvus macrorhynchus*	大嘴烏鴉	R				1						
Large Hawk Cuckoo	*Hierococcyx sparverioides*	大鷹鵑	CPM, Sv		1	1						2	
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	1	1	22			1			4
Magpie Robin	*Copsychus saularis*	鵲鴝	R						3				
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鶥	R				2		5				

Appendix K1a. Avifauna Species Recorded for Water Birds Monitoring, 8 & 9 April 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			8/4/2021, 9/4/2021					
					Weather Condition			Cloudy, Drizzle					
					Tidal Condition			High					
					Tide Level (m)			1.8, 1.82					
					Start Time			9:00, 9:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Olive-backed pipit	*Anthus hodgsoni*	樹鷚	WV			1			1				
Pallas's Leaf Warbler	*Phylloscopus proregulus*	黃腰柳鶯	WV			1	2						
Plain Prinia	*Prinia inornata*	純色鱲鶯	R				1		2	2		1	
Red-billed Blue Magpie	*Urocissa erythrorhyncha*	紅咀藍鵲	R		1								
Red-throated Pipit	*Anthus cervinus*	紅喉鷚	CPM, WV	RC				1					
Red Turtle Dove	*Streptopelia tranquebarica*	火斑鳩	UPM						2				
Sooty-headed Bulbul	*Pycnonotus aurigaster*	白喉紅臀鵯	UR						2				3
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		3	2	7		29				7
Spotted Munia	*Lonchura punctulata*	斑文鳥	R		5				136	33			80
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R		1		3	3	2	5		4	
White-headed Munia	*Lonchura maja*	白頭文鳥	R						6				
White-rumped Munia	*Lonchura striata*	白腰文鳥	R						118				
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)			1						
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		2		1	1	3	1			3
Wood Sandpiper	*Tringa glareola*	林鷸	CPM, WV	LC			4			16			33

Appendix K1a. Avifauna Species Recorded for Water Birds Monitoring, 8 & 9 April 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			8/4/2021, 9/4/2021					
					Weather Condition			Cloudy, Drizzle					
					Tidal Condition			High					
					Tide Level (m)			1.8, 1.82					
					Start Time			9:00, 9:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R				1					3	
Total No. of Species					17	16	25	7	24	10	1	10	18
Total No. of Conservation Interest Species					3	4	8	3	1	4	1	1	5

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 K1b. Avifauna Species Recorded for Water Birds Monitoring, 8 & 9 April 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	8/4/2021, 9/4/2021							
					Weather Condition	Cloudy, Cloudy							
					Tidal Condition	Low							
					Tide Level (m)	1.16, 1.11							
					Start Time	14:00, 14:00							
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopaceus*	噪鵑	R		1	1						2	
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv		4	3	7						20
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R		1	1	2		13			9	9
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			2			18			
Chestnut Munia	*Lonchura atricapilla*	栗腹文鳥	R						17				10
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R		2				5			2	2
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	3	1	3	3		2			2
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU			1		1				
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			2			1			
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R		1								
Common Moorhen	*Gallinula chloropus*	黑水雞	R					1		1			
Common Myna	*Acridotheres tristis*	家八哥	UR						2				3
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM			2	3						
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM					3	1	2			
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R			2							
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵐	R						3			4	
Crested Myna	*Acridotheres cristatellus*	八哥	R		3		1		8				10

Appendix K1b. Avifauna Species Recorded for Water Birds Monitoring, 8 & 9 April 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			8/4/2021, 9/4/2021					
					Weather Condition			Cloudy, Cloudy					
					Tidal Condition			Low					
					Tide Level (m)			1.16, 1.11					
					Start Time			14:00, 14:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Domestic Pigeon	*Columba livia*	原鴿	R						6				7
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)			3	3	5				7
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV					10	7				2
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R		2	1			12				
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)	2								
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV			2	3						
Grey-headed Lapwing	*Vanellus cinereus*	灰頭麥雞	SWV	LC			1						
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC			1						
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R										12
Japanese White-eye	*Zosterops japonicus*	暗綠繡眼鳥	R		1				1				
Large Hawk Cuckoo	*Hierococcyx sparverioides*	大鷹鵑	CPM, Sv		1	1						1	
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)		1	43			4			
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R						1				
Magpie	*Pica pica*	喜鵲	R			1							
Magpie Robin	*Copsychus saularis*	鵲鴝	R		2				1			1	
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鸝	R			3	2		15				

Appendix K1b. Avifauna Species Recorded for Water Birds Monitoring, 8 & 9 April 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			8/4/2021, 9/4/2021					
					Weather Condition			Cloudy, Cloudy					
					Tidal Condition			Low					
					Tide Level (m)			1.16, 1.11					
					Start Time			14:00, 14:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Olive-backed pipit	*Anthus hodgsoni*	樹鷚	WV		2								
Pallas's Leaf Warbler	*Phylloscopus proregulus*	黃腰柳鶯	WV		1	1							
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	LC	1								
Plain Prinia	*Prinia inornata*	純色鷦鶯	R		2		1			2		1	
Plaintive Cuckoo	*Cacomantis merulinus*	八聲杜鵑	USV		1								
Sooty-headed Bulbul	*Pycnonotus aurigaster*	白喉紅臀鵯	UR						3				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		13	7	8		19			2	8
Spotted Munia	*Lonchura punctulata*	斑文鳥	R			4			95				20
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		1	4	1		1				2
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R		1		1	3	2	2		4	
White-headed Munia	*Lonchura maja*	白頭文鳥	R						3				
White-rumped Munia	*Lonchura striata*	白腰文鳥	R						15				10
Wood Sandpiper	*Tringa glareola*	林鷸	CPM, WV	LC			2	13	2	10			8
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R		1		2			1		1	

Appendix K1b. Avifauna Species Recorded for Water Birds Monitoring, 8 & 9 April 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			8/4/2021, 9/4/2021					
					Weather Condition			Cloudy, Cloudy					
					Tidal Condition			Low					
					Tide Level (m)			1.16, 1.11					
					Start Time			14:00, 14:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Total No. of Species					21	16	20	7	24	10	0	10	16
Total No. of Conservation Interest Species					3	2	8	2	2	4	0	0	2

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

Appendix K1c. Avifauna Species Recorded for Water Birds Monitoring, 12 & 14 April 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	12/4/2021, 14/4/2021							
					Weather Condition	Fine, Sunny							
					Tidal Condition	High							
					Tide Level (m)	2.15, 2.33							
					Start Time	11:00, 11:00							
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Alexandrine Parakeet	*Psittacula eupatria*	亞歷山大鸚鵡	RR	NT									6
Asian Koel	*Eudynamys scolopacea*	噪鵑	R		1							2	2
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv		7		9						41
Black Kite	*Milvus migrans*	黑鳶	R, WV	(RC), Cap.586		1							
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R		2	2	2		13			4	17
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC						13			4
Chestnut Munia	*Lonchura atricapilla*	栗腹文鳥	R						13				
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R			1			5			2	
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	2	3	3	3	4	3			2
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU		1	3						1
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			1						
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM		2	1	1						
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM							2			
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R		1								
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵐	R		1	2			4			4	1

Appendix K1c. Avifauna Species Recorded for Water Birds Monitoring, 12 & 14 April 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			12/4/2021, 14/4/2021					
					Weather Condition			Fine, Sunny					
					Tidal Condition			High					
					Tide Level (m)			2.15, 2.33					
					Start Time			11:00, 11:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Crested Myna	*Acridotheres cristatellus*	八哥	R		2		2		17				6
Domestic Pigeon	*Columba livia*	原鴿	R				1		8				
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)			3		40				31
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV						12				1
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)		3	3				1		
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)		1							
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV				5						
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R										3
Large Hawk Cuckoo	*Hierococcyx sparverioides*	大鷹鵑	CPM, Sv		1	1						1	
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)		3	30	1	3	2	1		1
Magpie	*Pica pica*	喜鵲	R						2				2
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鶥	R						13				
Olive-backed pipit	*Anthus hodgsoni*	樹鷚	WV						2				
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	LC	1								
Plain Prinia	*Prinia inornata*	純色鷦鶯	R					1	2	1			1

Appendix K1c. Avifauna Species Recorded for Water Birds Monitoring, 12 & 14 April 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	12/4/2021, 14/4/2021								
					Weather Condition	Fine, Sunny								
					Tidal Condition	High								
					Tide Level (m)	2.15, 2.33								
					Start Time	11:00, 11:00								
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
								WAL	DAL	SWH	P	Heard	Flight
Plaintive Cuckoo	*Cacomantis merulinus*	八聲杜鵑	USV									1	
Red-billed Blue Magpie	*Urocissa erythrorhyncha*	紅咀藍鵲	R				3						
Red-throated Pipit	*Anthus cervinus*	紅喉鷚	CPM, WV	RC					1				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		4	3	7		16			1	10
Spotted Munia	*Lonchura punctulata*	斑文鳥	R			3	7			45			40
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R					1		1			1
White-headed Munia	*Lonchura maja*	白頭文鳥	R							10			
White-rumped Munia	*Lonchura striata*	白腰文鳥	R							10			
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)					1				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV						2				1
Wood Sandpiper	*Tringa glareola*	林鷸	CPM, WV	LC			2			6			6
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R					1				3	
Total No. of Species					11	13	16	5	18	10	2	8	20
Total No. of Conservation Interest Species					2	6	6	2	5	3	2	0	6

Appendix K1c. Avifauna Species Recorded for Water Birds Monitoring, 12 & 14 April 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			12/4/2021, 14/4/2021					
					Weather Condition			Fine, Sunny					
					Tidal Condition			High					
					Tide Level (m)			2.15, 2.33					
					Start Time			11:00, 11:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

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 K1d. Avifauna Species Recorded for Water Birds Monitoring, 12 & 14 April 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	12/4/2021, 14/4/2021							
					Weather Condition	Cloudy, Sunny							
					Tidal Condition	Low							
					Tide Level (m)	1.13, 1.15							
					Start Time	15:00, 16:00							
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R		1	1	1					2	
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv										19
Black Kite	*Milvus migrans*	黑鳶	R, WV	(RC), Cap.586									1
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R		2	1	1		5			9	11
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC						11			
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R		1		1		5			1	
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	3	1	4	1	2				1
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU	1		2						
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC						1			
Common Myna	*Acridotheres tristis*	家八哥	UR						1				
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM		2	4	2						
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM					2	1	2			
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R			1			1				
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵐	R			1			2				1
Crested Myna	*Acridotheres cristatellus*	八哥	R		3	3	4		7				7
Domestic Pigeon	*Columba livia*	原鴿	R			2							2

Appendix K1d. Avifauna Species Recorded for Water Birds Monitoring, 12 & 14 April 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	12/4/2021, 14/4/2021							
					Weather Condition	Cloudy, Sunny							
					Tidal Condition	Low							
					Tide Level (m)	1.13, 1.15							
					Start Time	15:00, 16:00							
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)			4		13				7
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV										1
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R			2							
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)		1							
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)			1		1			2	
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV				3						
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC			2						
Large Hawk Cuckoo	*Hierococcyx sparverioides*	大鷹鵑	CPM, Sv		1	1	1					1	
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	2	2	30				1		
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC						3			
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R						1				
Long-toed Stint	*Calidris subminuta*	長趾濱鷸	UPM	LC						2			
Magpie Robin	*Copsychus saularis*	鵲鴝	R				1		2			1	
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鶥	R			4			5				
Olive-backed pipit	*Anthus hodgsoni*	樹鷚	WV						1				
Pallas's Leaf Warbler	*Phylloscopus proregulus*	黃腰柳鶯	WV		1								

Appendix K1d. Avifauna Species Recorded for Water Birds Monitoring, 12 & 14 April 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	12/4/2021, 14/4/2021								
					Weather Condition	Cloudy, Sunny								
					Tidal Condition	Low								
					Tide Level (m)	1.13, 1.15								
					Start Time	15:00, 16:00								
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
								WAL	DAL	SWH	P	Heard	Flight
Plain Prinia	*Prinia inornata*	純色鷦鶯	R						1			2	
Plaintive Cuckoo	*Cacomantis merulinus*	八聲杜鵑	USV									1	
Red-billed Blue Magpie	*Urocissa erythrorhyncha*	紅咀藍鵲	R				1						
Red-Rumped Swallow	*Hirundo daurica*	金腰燕	UPM				1						
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		6	3	8		23				4
Spotted Munia	*Lonchura punctulata*	斑文鳥	R			8	2		172	70			30
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R					2	3	1	1	1	
White-rumped Munia	*Lonchura striata*	白腰文鳥	R						60				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		2				2				3
Wood Sandpiper	*Tringa glareola*	林鷸	CPM, WV	LC			1	7		18			6
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R				1			1		1	
Total No. of Species					12	15	20	4	20	9	2	10	13
Total No. of Conservation Interest Species					3	3	6	1	3	4	1	1	3

Appendix K1d. Avifauna Species Recorded for Water Birds Monitoring, 12 & 14 April 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			12/4/2021, 14/4/2021					
					Weather Condition			Cloudy, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.13, 1.15					
					Start Time			15:00, 16:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

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 K1e. Avifauna Species Recorded for Water Birds Monitoring, 19 & 23 April 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	19/4/2021, 23/4/2021							
					Weather Condition	Sunny, Sunny							
					Tidal Condition	High							
					Tide Level (m)	2.32, 1.77							
					Start Time	13:00, 8:00							
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R		1	3	1					2	
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv		5	4	2						16
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv		2								
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R		1	4			19			4	8
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC						18			1
Chestnut Munia	*Lonchura atricapilla*	栗腹文鳥	R							6			
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R			2	2		6				3
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	1	1	4	2	2	8			3
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU			3						
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			1						
Common Myna	*Acridotheres tristis*	家八哥	UR				2		4				
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM				3						
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM					2		2			
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R									3	
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵐	R						3			1	3
Crested Myna	*Acridotheres cristatellus*	八哥	R		1	2	5		12				2
Domestic Pigeon	*Columba livia*	原鴿	R						5				

Appendix K1e. Avifauna Species Recorded for Water Birds Monitoring, 19 & 23 April 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			19/4/2021, 23/4/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			2.32, 1.77					
					Start Time			13:00, 8:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)			2	2	3	10			2
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV					1	4				
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R		1								1
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	1	1	1						
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)			2						
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC			1						
Japanese White-eye	*Zosterops japonicus*	暗綠繡眼鳥	R						2				
Large Hawk Cuckoo	*Hierococcyx sparverioides*	大鷹鵑	CPM, Sv		1							1	
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)		3	43	1	1	39			1
Long-toed Stint	*Calidris subminuta*	長趾濱鷸	UPM	LC						2			
Magpie Robin	*Copsychus saularis*	鵲鴝	R				1					1	
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鶥	R			2							2
Olive-backed pipit	*Anthus hodgsoni*	樹鷚	WV										2
Pallas's Leaf Warbler	*Phylloscopus proregulus*	黃腰柳鶯	WV		1	1							
Pintail Snipe	*Gallinago stenura*	針尾沙錐	CPM							1			
Plain Prinia	*Prinia inornata*	純色鱲鶯	R						2			1	

Appendix K1e. Avifauna Species Recorded for Water Birds Monitoring, 19 & 23 April 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	19/4/2021, 23/4/2021								
					Weather Condition	Sunny, Sunny								
					Tidal Condition	High								
					Tide Level (m)	2.32, 1.77								
					Start Time	13:00, 8:00								
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
								WAL	DAL	SWH	P	Heard	Flight
Red-necked Phalarope	*Phalaropus lobatus*	紅頸瓣蹼鷸	CPM							3			
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		1	9			23				4
Spotted Munia	*Lonchura punctulata*	斑文鳥	R		14				48	4			
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R				1	1	1	2		2	
White-headed Munia	*Lonchura maja*	白頭文鳥	R							3			
White-rumped Munia	*Lonchura striata*	白腰文鳥	R						20				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV				1		2				1
Wood Sandpiper	*Tringa glareola*	林鷸	CPM, WV	LC			2	5		13			3
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R				2			1		1	1
Total No. of Species					12	11	19	7	17	14	0	9	16
Total No. of Conservation Interest Species					2	3	8	3	3	5	0	0	4

Appendix K1e. Avifauna Species Recorded for Water Birds Monitoring, 19 & 23 April 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			19/4/2021, 23/4/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			2.32, 1.77					
					Start Time			13:00, 8:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

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 K1f. Avifauna Species Recorded for Water Birds Monitoring, 19 & 23 April 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	19/4/2021, 23/4/2021							
					Weather Condition	Fine, Sunny							
					Tidal Condition	Low							
					Tide Level (m)	1.27, 1.43							
					Start Time	7:30, 12:00							
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R		2	1	1					2	
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv			4							18
Black Kite	*Milvus migrans*	黑鳶	R, WV	(RC), Cap.586	2								
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R		4	5			16			7	13
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC						23			3
Chestnut Munia	*Lonchura atricapilla*	栗腹文鳥	R							5			
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R		2	4			3			2	
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	3	1	3	3	1	8			4
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU									1
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			1						
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		1		2						
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM					2		3			
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R			1							
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵐	R						4				2

Appendix K1f. Avifauna Species Recorded for Water Birds Monitoring, 19 & 23 April 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	19/4/2021, 23/4/2021								
					Weather Condition	Fine, Sunny								
					Tidal Condition	Low								
					Tide Level (m)	1.27, 1.43								
					Start Time	7:30, 12:00								
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
								WAL	DAL	SWH	P	Heard	Flight
Crested Myna	*Acridotheres cristatellus*	八哥	R						25			1	7
Domestic Pigeon	*Columba livia*	原鴿	R			2			8				4
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)		10		5	5	4			7
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV					10	5				
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R			1							
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)		1	1						
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)					1				
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R		2	2							
Large Hawk Cuckoo	*Hierococcyx sparverioides*	大鷹鵑	CPM, Sv		1	1						1	
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)		1	13	3		27			6
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R						1				
Magpie	*Pica pica*	喜鵲	R				1						
Magpie Robin	*Copsychus saularis*	鵲鴝	R				1						
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鶥	R			5			7				
Pallas's Leaf Warbler	*Phylloscopus proregulus*	黃腰柳鶯	WV		1								
Plain Prinia	*Prinia inornata*	純色鱲鶯	R							2		2	

Appendix K1f. Avifauna Species Recorded for Water Birds Monitoring, 19 & 23 April 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	19/4/2021, 23/4/2021								
					Weather Condition	Fine, Sunny								
					Tidal Condition	Low								
					Tide Level (m)	1.27, 1.43								
					Start Time	7:30, 12:00								
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
								WAL	DAL	SWH	P	Heard	Flight
Red-Rumped Swallow	*Hirundo daurica*	金腰燕	UPM										4
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		2	1			25				7
Spotted Munia	*Lonchura punctulata*	斑文鳥	R					7	18	15			30
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		1	1	2						1
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R					1	2			4	
White-headed Munia	*Lonchura maja*	白頭文鳥	R							6			
White-rumped Munia	*Lonchura striata*	白腰文鳥	R						10	20			5
Wood Sandpiper	*Tringa glareola*	林鷸	CPM, WV	LC			5	4	1	22			3
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R				2	1	1	1		4	
Total No. of Species					11	16	11	9	17	13	0	8	17
Total No. of Conservation Interest Species					2	4	4	3	3	4	0	0	5

Appendix K1f. Avifauna Species Recorded for Water Birds Monitoring, 19 & 23 April 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			19/4/2021, 23/4/2021					
					Weather Condition			Fine, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.27, 1.43					
					Start Time			7:30, 12:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

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 K1g. Avifauna Species Recorded for Water Birds Monitoring, 26 & 29 April 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	26/4/2021, 29/4/2021								
					Weather Condition	Cloudy								
					Tidal Condition	High								
					Tide Level (m)	2.31, 2.83								
					Start Time	10:00, 11:00								
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
								WAL	DAL	SWH	P	Heard	Flight
Alexandrine Parakeet	*Psittacula eupatria*	亞歷山大鸚鵡	RR	NT									12
Asian Koel	*Eudynamys scolopacea*	噪鵑	R		2	2	1		1			2	
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv		3		11						10
Black Kite	*Milvus migrans*	黑鳶	R, WV	(RC), Cap.586	3	1							2
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R						11			7	18
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC						26			1
Chestnut Munia	*Lonchura atricapilla*	栗腹文鳥	R					2	9	8			
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R				2		1				4
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	3		6	3	4	2			2
Cinereous Tit	*Parus cinereus*	蒼背山雀	R			3							
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			1						
Common Moorhen	*Gallinula chloropus*	黑水雞	R							2			
Common Myna	*Acridotheres tristis*	家八哥	UR		1				2				
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM				4			2			
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R		1		1		1				
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵐	R		4	2			3				1

Appendix K1g. Avifauna Species Recorded for Water Birds Monitoring, 26 & 29 April 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	26/4/2021, 29/4/2021							
					Weather Condition	Cloudy							
					Tidal Condition	High							
					Tide Level (m)	2.31, 2.83							
					Start Time	10:00, 11:00							
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Crested Myna	*Acridotheres cristatellus*	八哥	R		4		2		7				14
Domestic Pigeon	*Columba livia*	原鴿	R			2			13				
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)					1	1			11
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV		1			54	22	2			4
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R			1			9				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)		1	2			2			
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)	1								
Intermediate Egret	*Egretta intermedia*	中白鷺	CPM	RC						1			
Japanese White-eye	*Zosterops japonicus*	暗綠繡眼鳥	R			5							
Large Hawk Cuckoo	*Hierococcyx sparverioides*	大鷹鵑	CPM, Sv			1						1	
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	2	1	28			15			1
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R						1				
Long-toed Stint	*Calidris subminuta*	長趾濱鷸	UPM	LC						3			
Magpie Robin	*Copsychus saularis*	鵲鴝	R		1		1						
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鶥	R		4	2			2				2
Plain Prinia	*Prinia inornata*	純色鱲鶯	R						1	1		2	

Appendix K1g. Avifauna Species Recorded for Water Birds Monitoring, 26 & 29 April 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			26/4/2021, 29/4/2021					
					Weather Condition			Cloudy					
					Tidal Condition			High					
					Tide Level (m)			2.31, 2.83					
					Start Time			10:00, 11:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Red-necked Phalarope	*Phalaropus lobatus*	紅頸瓣蹼鷸	CPM							1			
Sooty-headed Bulbul	*Pycnonotus aurigaster*	白喉紅臀鵯	UR						1				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		2	1	3		24	1		2	4
Spotted Munia	*Lonchura punctulata*	斑文鳥	R			1		30	66	10			10
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			1	1						1
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R					2		4		1	
White-headed Munia	*Lonchura maja*	白頭文鳥	R						25	10			
White-rumped Munia	*Lonchura striata*	白腰文鳥	R					10	20	20			
Wood Sandpiper	*Tringa glareola*	林鷸	CPM, WV	LC				2		25			
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R							1		2	3
Total No. of Species					14	14	13	7	21	20	0	7	17
Total No. of Conservation Interest Species					4	3	4	1	2	7	0	0	6

Appendix K1g. Avifauna Species Recorded for Water Birds Monitoring, 26 & 29 April 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			26/4/2021, 29/4/2021					
					Weather Condition			Cloudy					
					Tidal Condition			High					
					Tide Level (m)			2.31, 2.83					
					Start Time			10:00, 11:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

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
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CR: Critically Endangered in IUCN Red List Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern. 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 K1h. Avifauna Species Recorded for Water Birds Monitoring, 26 & 29 April 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	26/4/2021, 29/4/2021							
					Weather Condition	Cloudy							
					Tidal Condition	Low							
					Tide Level (m)	0.51, 1.23							
					Start Time	16:00, 16:00							
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R		1	2	1					3	
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv				4						12
Black Kite	*Milvus migrans*	黑鳶	R, WV	(RC), Cap.586	1								
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R		3	3	2		4			5	6
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC						19			
Chestnut Munia	*Lonchura atricapilla*	栗腹文鳥	R							32			
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R		4				2				
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)		1	2	1		4			1
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU			5						
Common Myna	*Acridotheres tristis*	家八哥	UR						3				
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM					1					
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R		2								
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵐	R			2							
Crested Myna	*Acridotheres cristatellus*	八哥	R		2		2						8
Domestic Pigeon	*Columba livia*	原鴿	R				1		1				
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)			1						5

Appendix K1h. Avifauna Species Recorded for Water Birds Monitoring, 26 & 29 April 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	26/4/2021, 29/4/2021								
					Weather Condition	Cloudy								
					Tidal Condition	Low								
					Tide Level (m)	0.51, 1.23								
					Start Time	16:00, 16:00								
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
								WAL	DAL	SWH	P	Heard	Flight
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV					1					
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R						1				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)						1			
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)		1	1						
Greater Painted-snipe	*Rostratula benghalensis*	彩鷸	R, PM, WV	LC						1			
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R										2
Intermediate Egret	*Egretta intermedia*	中白鷺	CPM	RC		1				1			
Japanese White-eye	*Zosterops japonicus*	暗綠繡眼鳥	R			3							
Large Hawk Cuckoo	*Hierococcyx sparverioides*	大鷹鵑	CPM, Sv									1	
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	1	1	17		1	7	1		2
Magpie	*Pica pica*	喜鵲	R				1						
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鶥	R		2		5		5				
Olive-backed pipit	*Anthus hodgsoni*	樹鷚	WV						3				
Plaintive Cuckoo	*Cacomantis merulinus*	八聲杜鵑	USV									1	
Red-necked Phalarope	*Phalaropus lobatus*	紅頸瓣蹼鷸	CPM							1			

Appendix K1h. Avifauna Species Recorded for Water Birds Monitoring, 26 & 29 April 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	26/4/2021, 29/4/2021								
					Weather Condition	Cloudy								
					Tidal Condition	Low								
					Tide Level (m)	0.51, 1.23								
					Start Time	16:00, 16:00								
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
								WAL	DAL	SWH	P	Heard	Flight
Red-Rumped Swallow	*Hirundo daurica*	金腰燕	UPM										1
Sooty-headed Bulbul	*Pycnonotus aurigaster*	白喉紅臀鵯	UR						6				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		1	3	5		11			2	2
Spotted Munia	*Lonchura punctulata*	斑文鳥	R						80				68
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			2	1	1		1			
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R				1		1			1	
White-headed Munia	*Lonchura maja*	白頭文鳥	R							20			
White-rumped Munia	*Lonchura striata*	白腰文鳥	R						10	18			
Wood Sandpiper	*Tringa glareola*	林鷸	CPM, WV	LC				6		10			
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R									3	
Total No. of Species					9	10	15	5	13	12	1	7	10
Total No. of Conservation Interest Species					2	4	5	1	1	13	1	0	3

Appendix K1h. Avifauna Species Recorded for Water Birds Monitoring, 26 & 29 April 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			26/4/2021, 29/4/2021					
					Weather Condition			Cloudy					
					Tidal Condition			Low					
					Tide Level (m)			0.51, 1.23					
					Start Time			16:00, 16:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

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
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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 K1i. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 12 April 2021, T5

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 12/4/2021					
					Start Time: 18:45					
					Abundance					
					WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R						1	
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			18			3
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	1					
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM				4			
Greater Painted-snipe	*Rostratula benghalensis*	彩鷸	R, PM, WV	LC			2			
Large Hawk Cuckoo	*Hierococcyx sparverioides*	大鷹鵑	CPM, Sv						1	
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R		2	1			2	
Wood Sandpiper	*Tringa glareola*	林鷸	CPM, WV	LC	6		26			
Total No. of Species					3	1	4	0	3	1
Total No. of Conservation Interest Species					1	0	2	0	0	1

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 K1j. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 26 April 2021, T5

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 26/4/2021					
					Start Time: 18:45					
					Abundance					
					WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R						1	
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			14			
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)						1
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			2			
Common Moorhen	*Gallinula chloropus*	黑水雞	R				2			
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM				5			
Greater Painted-snipe	*Rostratula benghalensis*	彩鷸	R, PM, WV	LC			8			
Large Hawk Cuckoo	*Hierococcyx sparverioides*	大鷹鵑	CPM, Sv						1	
Red-necked Phalarope	*Phalaropus lobatus*	紅頸瓣蹼鷸	CPM				1			
Savanna Nightjar	*Caprimulgus affinis*	林夜鷹	UR, PM						1	
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R						3	
Wood Sandpiper	*Tringa glareola*	林鷸	CPM, WV	LC	4		19			
Total No. of Species					1	0	7	0	4	1
Total No. of Conservation Interest Species					0	0	3	0	0	1

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 K1k. Waterbirds Recorded in April 2021

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	RC	T3: River bed T5: Shallow Water Habitat, 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.
Collared Crow	*Corvus torquatus*	白頸鴉	LC, VU	T1: River bank T2: River bank, In flight T3: River bank, River bed, In flight T5: Dry Agricultural Land, In flight	Uncommon resident. Found in Inner Deep Bay area, Nam Chung, Kei Ling Ha, Tai Mei Tuk, Pok Fu Lam, Chek lap Kok, Shuen Wan, Lam Tsuen.
Common Greenshank	*Tringa nebularia*	青腳鷸	RC	T3: River bank T5: Shallow Water Habitat	Common passage migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.
Common Kingfisher	*Alcedo atthis*	普通翠鳥		T1: River bank	Common passage migrant and winter visitor. Widely distributed in wetland habitat throughout Hong Kong.
Common Moorhen	*Gallinula chloropus*	黑水雞		T5: Wet Agricultural Land, Shallow Water Habitat	Common resident. Found in Deep Bay area, Shuen Wan, Starling Inlet.
Common Sandpiper	*Actitis hypoleucos*	磯鷸		T1: River bank, In flight T2: River bank T3: River bank, River bed T5: Shallow Water Habitat	Common passage migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.
Common Snipe	*Gallinago gallinago*	扇尾沙錐		T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common passage migrant and winter visitor. Found in Long Valley, Chau Tau, Sai Kung.
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	(LC)	T2: In flight T3: River bank T5: Wet Agricultural Land, Dry Agriculture Land, Shallow Water Habitat, In flight	Resident and common passage migrant. Widely distributed in Hong Kong.

Appendix K1k. Waterbirds Recorded in April 2021

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in 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: Shallow Water Habitat, Pond	Common resident and winter visitor. Widely distributed in Hong Kong.
Greater Painted-snipe	*Rostratula benghalensis*	彩鷸	LC	T5: Shallow Water Habitat	Resident, Passage migrant and winter visitor. Found in Ha Tsuen, Lok Ma Chau, Kam Tin, Long Valley, Hong Kong Wetland Park.
Green Sandpiper	*Tringa ochropus*	白腰草鷸		T2: River bank 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-headed Lapwing	*Vanellus cinereus*	灰頭麥雞	LC	T3: River bed	Scarce winter visitor. Found in Kam Tin, Tsim Bei Tsui, Lo Wu, Tai Long Wan, Shuen Wan, Castle Peak coast, Chek Lap Kok
Grey Heron	*Ardea cinerea*	蒼鷺	PRC	T3: River bank, River bed, In flight	Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, Cape D'Aguilar.
Intermediate Egret	*Egretta intermedia*	中白鷺	RC	T2: River bank T3: Shallow Water Habitat	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 Habitat, Pond, In flight	Common resident. Widely distributed in coastal area throughout Hong Kong.
Long-toed Stint	*Calidris subminuta*	長趾濱鷸	LC	T5: Shallow Water Habitat	Uncommon passage migrant. Found in Long Valley, Ma Tso Lung, Tsim Bei Tsui, Kam Tin, Pui O, Shuen Wan.
Pied Kingfisher	*Ceryle rudis*	斑魚狗	LC	T1: In flight	Uncommon resident. Widely distributed in lakes and ponds throughout Hong Kong.
Pintail Snipe	*Gallinago stenura*	針尾沙錐		T5: Shallow Water Habitat	Common passage migrant. Found in Long Valley, Chau Tau, Ha Tsuen.

Appendix K1k. Waterbirds Recorded in April 2021

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Red-necked Phalarope	*Phalaropus lobatus*	紅頸瓣蹼鷸	CPM	T5: Shallow Water Habitat	Common passage migrant. Widely distributed in sea throughout Hong Kong.
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥		T1: River bank T3: River bank T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, Pond, Heard	Common resident. Widely distributed in wetland throughout Hong Kong.
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	(LC)	T3: River bank T5: Dry Agricultural Land	Common resident. Widely distributed in coastal areas throughout Hong Kong.
Wood Sandpiper	*Tringa glareola*	林鷸	LC	T3: River bed, River bank T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common passage migrant and winter visitor. Widely distributed in wetland area throughout 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 K1l. Birds Recorded in April 2021

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Alexandrine Parakeet	*Psittacula eupatria*	亞歷山大鸚鵡	RR	NT
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-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R	
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 Kingfisher	*Alcedo atthis*	普通翠鳥	R	
Common Moorhen	*Gallinula chloropus*	黑水雞	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 Bulbul	*Pycnonotus jocosus*	紅耳鵯	R	
Crested Myna	*Acridotheres cristatellus*	八哥	R	

Appendix K1l. Birds Recorded in April 2021

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Domestic Pigeon	*Columba livia*	原鴿	R	
Dusky Warbler	*Phylloscopus fuscatus*	褐柳鶯	PM, WV	
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV	
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R	
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)
Greater Painted-snipe	*Rostratula benghalensis*	彩鷸	R, PM, WV	LC
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV	
Grey-headed Lapwing	*Vanellus cinereus*	灰頭麥雞	SWV	LC
Grey Heron	*Ardea cinerea*	蒼鷺	WV	
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R	
Intermediate Egret	*Egretta intermedia*	中白鷺	CPM	RC
Japanese White-eye	*Zosterops japonicus*	暗綠繡眼鳥	R	
Jungle Crow	*Corvus macrorhynchus*	大嘴烏鴉	R	
Large Hawk Cuckoo	*Hierococcyx sparverioides*	大鷹鵑	CPM, Sv	
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R	
Long-toed Stint	*Calidris subminuta*	長趾濱鷸	UPM	LC
Magpie	*Pica pica*	喜鵲	R	
Magpie Robin	*Copsychus saularis*	鵲鴝	R	

Appendix K1l. Birds Recorded in April 2021

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鶥	R	
Olive-backed pipit	*Anthus hodgsoni*	樹鷚	WV	
Pallas's Leaf Warbler	*Phylloscopus proregulus*	黃腰柳鶯	WV	
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	LC
Pintail Snipe	*Gallinago stenura*	針尾沙錐	CPM	
Plaintive Cuckoo	*Cacomantis merulinus*	八聲杜鵑	USV	
Plain Prinia	*Prinia inornata*	純色鷦鶯	R	
Red-billed Blue Magpie	*Urocissa erythrorhyncha*	紅咀藍鵲	R	
Red-necked Phalarope	*Phalaropus lobatus*	紅頸瓣蹼鷸	CPM	
Red-Rumped Swallow	*Hirundo daurica*	金腰燕	UPM	
Red-throated Pipit	*Anthus cervinus*	紅喉鷚	CPM, WV	RC
Red Turtle Dove	*Streptopelia tranquebarica*	火斑鳩	UPM	
Savanna Nightjar	*Caprimulgus affinis*	林夜鷹	UR, PM	
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	
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)

Appendix K1l. Birds Recorded in April 2021

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV	
Wood Sandpiper	*Tringa glareola*	林鷸	WV, CPM	LC
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R	

Note:
R – Resident; RR - Rare resident, WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)
(CR): Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
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NT: Near Threatened in IUCN Red List Status
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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 K2. Freshwater Macroinvertebrate Species Recorded for Aquatic Fauna Monitoring

Common Name	Scientific Name	Conservation Status	Date: 27/4/2021									
			Weather: Drizzle then cloudy									
			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*	-								+++	++	++
Black Threadtail	*Prodasineura autumnalis*	-										+
Bladder Snail	*Physella acuta*	-										
Blood Worm	Chironomidae	-		+						+		
Blue Sprite	*Pseudagrion microcephalum*	-									+	
Chinese River Snail	*Sinotaia guangdungensis*	-										+
Freshwater Snail	*Radix plicatulus*	-	+									
	Tricula sp.	-										+
Golden Freshwater Clam	*Corbicula fluminea*	-										
Ram's Horn Snail	*Gyraulus convexiusculus*	-										
Red-rimmed Melania	*Melanoided tuberculata*	-								+		
River Snail	*Sinotaia quadrata*	-								+		+
Water Strider	*Metrocoris* sp.	-								+	+	+
	Ptilomera tigrina	-									+	+
Yellow Featherlegs	*Copera marginipes*	-		+							+	
Total No. of species			1	2	0	0	0	0	0	5	5	7

Total No. of Conservation Interest Species	0	0	0	0	0	0	0	0	0	0

Note:
+: 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)
*: Dry monitoring station
**: Inaccessible monitoring station in private property

Appendix K2. Freshwater Macroinvertebrate Species Recorded for Aquatic Fauna Monitoring

Common Name	Scientific Name	Conservation Status	Date: 27/4/2021									
			Weather: Drizzle then cloudy									
			Methods: Kick-netting, sweep netting and direct observation									
			Abundance									
			MS_11	MS_12*	MS_13	MS_14	MS_15					
Apple Snail	*Pomacea canaliculata*	-	+		+++	+						
Black Threadtail	*Prodasineura autumnalis*	-										
Bladder Snail	*Physella acuta*	-					+					
Blood Worm	Chironomidae	-	+++			+	+++					
Blue Sprite	*Pseudagrion microcephalum*	-										
Chinese River Snail	*Sinotaia guangdungensis*	-			++							
Freshwater Snail	*Radix plicatulus*	-	++									
	Tricula sp.	-			+							
Golden Freshwater Clam	*Corbicula fluminea*	-			+							
Ram's Horn Snail	*Gyraulus convexiusculus*	-					+					
Red-rimmed Melania	*Melanoided tuberculata*	-										
River Snail	*Sinotaia quadrata*	-			++							
Water Strider	*Metrocoris* sp.	-										
	Ptilomera tigrina	-			+							
Yellow Featherlegs	*Copera marginipes*	-										
Total No. of species			3	0	6	2	3					

Total No. of Conservation Interest Species	0	0	0	0	0					

Note:
+: 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)
*: Dry monitoring station
**: Inaccessible monitoring station in private property

Appendix K3. Freshwater Fish Species Recorded for Aquatic Fauna Monitoring

Common Name	Scientific Name	Conservation Status	Date: 27/4/2021									
			Weather: Drizzle then cloudy									
			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*	-								+	+	+
Nile Tilapia	*Oreochromis niloticus*	-								++	+	+
Redbelly Tilapia	*Tilapia zillii*	-										
Total No. of species			0	0	0	0	0	0	0	2	2	2
Total No. of Conservation Interest Species			0	0	0	0	0	0	0	0	0	0

Note:
VU: Vulnerable in China Red Data Book Status
+: 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)
*: Dry monitoring station
**: Inaccessible monitoring station in private property

Appendix K3. Freshwater Fish Species Recorded for Aquatic Fauna Monitoring

Common Name	Scientific Name	Conservation Status	Date: 27/4/2021									
			Weather: Drizzle then cloudy									
			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*	-										
Nile Tilapia	*Oreochromis niloticus*	-			+							
Redbelly Tilapia	*Tilapia zillii*	-			+							
Total No. of species			0	0	3	0	0					
Total No. of Conservation Interest Species			0	0	0	0	0					

Note:
VU: Vulnerable in China Red Data Book Status
+: 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)
*: Dry monitoring station
**: Inaccessible monitoring station in private property

Appendix K4. Mammal Species Recorded for Ecologically Sensitive Habitat Monitoring, 20 & 21 April 2021

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 20/4/2021, 21/4/2021				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Domestic Cat	*Felis catus*	野貓	Uncommon	-	+				+
Domestic Dog	*Canis lupus familiaris*	野狗	Common	-	+	+	+	+	+
Bent-winged Bat	*Miniopterus* sp.	長翼蝠屬	-	Cap. 170	+				
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	+	+	+		
Total No. of species					5	3	3	2	3
Total No. of Conservation Interest Species					3	2	2	1	1

Note:

Cap. 170: Species under protection of Wild Animals Protection Ordinance (Cap. 170)

LC: Local Concern by Fellowes et al (2002)

VU: Vulnerable in IUCN Red List Status

+: species recorded within transect routes

++: species commonly recorded within transect routes

+++: dominant species within transect routes

Appendix K5. Herpetofauna Species Recorded for Ecologically Sensitive Habitat Monitoring, 20 & 21 April 2021

Common Name	Species Name	Chinese Name	Conservation Status	Date: 20/4/2021, 21/4/2021				
				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	-	+		+		
Gunther's Frog	*Hylarana guentheri*	沼蛙	-	+				
Ornate Pigmy Frog	*Microhyla fissipes*	飾紋姬蛙	-	+				
Paddy Frog	*Fejervarya limnocharis*	澤蛙	-	+			+	
Reptile								
Bowring’s Gecko	*Hemidactylus bowringii*	原尾蜥虎	-	+	+		+	+
Changeable Lizard	*Calotes versicolor*	變色樹蜥	-					
Chinese gecko	*Gekko chinensis*	中國壁虎	-	+				+
Four-clawrd Gecko	*Gehyra mutilata*	截趾虎	VU				+	
Long-tailed Skink	*Eutropis longicaudata*	長尾南蜥	-	+	+	+		
Total No. of species				8	2	3	4	3
Total No. of Conservation Interest Species				0	0	0	1	0

Note:
+: species recorded within transect routes
++: species commonly recorded within transect routes
+++: dominant species within transect routes
VU: Vulnerable in the Red List of China’s Vertebrates

Appendix K6. Butterfly Species Recorded Ecologically Sensitive Habitat Monitoring, 20 & 21 April 2021

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 20/4/2021, 21/4/2021				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Angled Castor	*Ariadne ariadne*	波蛺蝶	Common	-	+				
Blue-spotted Crow	*Euploea midamus*	藍點紫斑蝶	Very common	-	+				
Chocolate Pansy	*Junonia iphita*	鉤翅眼蛺蝶	Common	-					+
Common Bluebottle	*Graphium sarpedon*	青鳳蝶	Common	-	+		+		
Common Grass Yellow	*Eurema hecabe*	寬邊黃粉蝶	Very common	-	+				+
Common Mormon	*Papilio polytes*	玉帶鳳蝶	Very common	-	+		+		+
Common Sailer	*Neptis hylas*	中環蛺蝶	Very common	-	+			+	
Dark Brand Bush Brown	*Mycalesis mineus*	小眉眼蝶	Very common	-		+			
Great Mormon	*Papilio memnon*	美鳳蝶	Very common	-	+	+	+		
Indian Cabbage White	*Pieris canidia*	東方菜粉蝶	Very common	-	++	+	+	+	++
Long-banded Silverline	*Spindasis lohita*	銀線灰蝶	Common	-					+
Pale Grass Blue	*Pseudozizeeria maha*	酢漿灰碟	Very common	-	+	+	+	+	+
Paris Peacock	*Papilio paris*	巴黎翠鳳蝶	Very common	-	+				
Plum Judy	*Abisara echerius*	蛇目褐蜆蝶	Very common	-					
Punchinello	*Zemeros flegyas*	波蜆蝶	Common	-					+
Red-base Jezebel	*Delias pasithoe*	報喜斑粉蝶	Very Common	-	++	+	++	++	+
Red Helen	*Papilio Helenus*	玉斑鳳蝶	Very Common	-	+		+		

Appendix K6. Butterfly Species Recorded Ecologically Sensitive Habitat Monitoring, 20 & 21 April 2021

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 20/4/2021, 21/4/2021				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Southern Sullied Sailer	*Neptis clinia*	珂環蛺蝶	Common	-	+	+			
Spangle	*Papilio protenor*	藍鳳蝶	Very Common	-	+	+	+	+	+
Total No. of species					14	7	8	5	9
Total No. of Conservation Interest Species					0	0	0	0	0

Note:
LC: Local Concern by Fellowes et al (2002)
+: species recorded within transect routes
++: species commonly recorded within transect routes
+++: dominant species within transect routes

Appendix K7. Odonata Species Recorded for Ecologically Sensitive Habitat Monitoring 20 & 21 April 2021

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 20/4/2021, 21/4/2021				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Asian Amberwing	*Brachythemis contaminate*	黃翅蜻	Abundant	-					+
Common Blue Skimmer	*Orthetrum glaucum*	黑尾灰蜻	Common	-	+				
Common Red Skimmer	*Orthetrum pruinosum*	赤褐灰蜻	Abundant	-	+			+	+
Crimson Darter	*Crocothemis servilia*	紅蜻	Abundant	-	+	+			
Crimson Dropwing	*Trithemis aurora*	曉褐蜻	Abundant	-	+				
Green Skimmer	*Orthetrum sabina*	狹腹灰蜻	Abundant	-		+	+	+	
Marsh Skimmer	*Orthetrum luzonicum*	呂宋灰蜻	Abundant	-					+
Orange-tailed Sprite	*Ceriagrion auranticum*	琉球橘黃蟌	Abundant	-				+	
Red-faced Skimmer	*Orthetrum chrysis*	華麗灰蜻	Abundant	-		+			
Variegated Flutterer	*Rhyothemis variegata*	斑麗翅蜻	Common	-	+				
Wandering Glider	*Pantala flavescens*	黃蜻	Abundant	-	+	+	+	+	+
Yellow Featherlegs	*Copera marginipes*	黃狹扇蟌	Abundant	-					+
Total No. of species					6	4	2	4	5
Total No. of Conservation Interest Species					0	0	0	0	0

Note:
LC: listed as Local Concern by Fellowes et al (2002)
+: species recorded within transect routes
++: species commonly recorded within transect routes
+++: dominant species within transect routes

APPENDIX L
WEATHER CONDITION

APPENDIX L –
GENERAL WEATHER CONDITIONS DURING THE MONITORING PERIOD

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1 Apr 21	26.7	79	Trace
2 Apr 21	26.9	79	-
3 Apr 21	26.9	74	-
4 Apr 21	24.7	86	0.8
5 Apr 21	22.4	84	0.7
6 Apr 21	23.9	77	-
7 Apr 21	23.1	76	-
8 Apr 21	23.2	74	-
9 Apr 21	21.0	82	7.5
10 Apr 21	22.4	65	-
11 Apr 21	23.1	73	-
12 Apr 21	24.6	80	-
13 Apr 21	25.9	77	-
14 Apr 21	24.6	84	Trace
15 Apr 21	22.2	91	8.3
16 Apr 21	22.8	88	1.5

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
17 Apr 21	22.8	88	2.5
18 Apr 21	23.2	67	Trace
19 Apr 21	22.5	67	-
20 Apr 21	23.4	73	-
21 Apr 21	24.5	74	-
22 Apr 21	25.2	74	-
23 Apr 21	27.3	75	-
24 Apr 21	25.4	82	Trace
25 Apr 21	24.7	85	0.9
26 Apr 21	23.4	80	0.3
27 Apr 21	23.2	90	5.7
28 Apr 21	24.4	88	4.2
29 Apr 21	24.1	74	0.1
30 Apr 21	25.6	77	-

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

APPENDIX M
EVENT ACTION PLANS

Appendix M:

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

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action level being exceeded by one sampling day	1. Inform IEC, Contractor and ER; 2. Check monitoring data, all plant, equipment and Contractor's working methods; and 3. Discuss remedial measures with IEC and Contractor and ER.	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 and advise the ET and ER on the Effectiveness of the implemented mitigation measures.	1. Discuss with IEC, ET and Contractor on the Implemented mitigation measures; 2. Make agreement on the remedial measures to be implemented; 3. 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 purpose remedial measures to IEC and ER; and 7. Implement the agreed mitigation measures.

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
Action level being exceeded by more than one consecutive sampling days	1. Repeat in-situ measurement on next day of exceedance to confirm findings; 2. Inform IEC, Contractor and ER; 3. Check monitoring data, all plant, equipment and Contractor's working methods; 4. Discuss remedial measures with IEC, contractor and ER 5. Ensure 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 proposed mitigation measures; 2. Make agreement on the remedial measures to be implemented; and 3. 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 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. Repeat measurement on next day of exceedance to confirm findings; 2. Inform IEC, Contractor and ER; 3. Rectify unacceptable practice; 4. Check monitoring data, all	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	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	1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the noncompliance in writing; 3. Rectify unacceptable practice;

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
	plant, equipment and Contractor's working methods; 5. Consider changes of working methods; 6. Discuss mitigation measures with IEC, ER and Contractor; and 7. Ensure the agreed remedial measures are implemented	accordingly; and 3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.	remedial measures to be implemented; and 4. Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures.	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.
Limit level being exceeded by more than one consecutive sampling days	1. Inform IEC, contractor and ER; 2. Check monitoring data, all plant, equipment and Contractor's working methods; 3. Discuss mitigation measures with IEC, ER and Contractor; and 4. Ensure mitigation measures are implemented; and 5. Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days	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	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;

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
			the dredging activities until no exceedance of Limit level.	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 M-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 M-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 M-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 cause 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	Investigate cause and if cause identified as related to NDAs	Decline in numbers of any one waterbird species occurring in	Investigate cause and if caused identified as related

significant numbers* during Baseline Monitoring such that the Action Level response is triggered.	project instigate remedial action to remove or reduce source of disturbance.	significant numbers* during Baseline Monitoring such that the Limit Level response is triggered.	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 M-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 M-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 N
SUMMARY OF EXCEEDANCE

Appendix N: 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	2	0	0
	Turbidity	0	2	0	0
	SS	0	1	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 O
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	210408
Date	8 April 2021 (Thursday)
Time	14:00 – 16:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• 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.:210330), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Kenneth Leung	Leung	8 April 2021
Checked by	Dr. Priscilla Choy		8 April 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	210413
Date	13 April 2021 (Tuesday)
Time	14:00 – 16:00

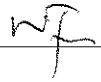
Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. 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.:210408), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Kenneth Leung		15 April 2021
Checked by	Dr. Priscilla Choy		15 April 2021

Weekly Site Inspection Record Summary

Checklist Reference Number	210420
Date	20 April 2021 (Tuesday)
Time	09:30 – 11:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
210420-O01	• Provide dust control measures for soil nailing works to prevent dust generation (Portion 8a).	B 10
210420-R02	• Provide regular watering on exposed site area (Portion 7).	B 1
	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.:210413), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Kenneth Leung		23 April 2021
Checked by	Dr. Priscilla Choy		23 April 2021

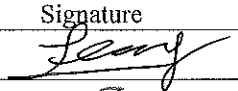
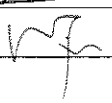
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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

Weekly Site Inspection Record Summary

Checklist Reference Number	210427
Date	27 April 2021 (Tuesday)
Time	09:30 – 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	
	• 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.:210420), all environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kenneth Leung		28 April 2021
Checked by	Dr. Priscilla Choy		28 April 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	210407
Date	7 April 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	
210407-R01	• To prevent surface runoff discharge into nearby watercourse.	D1
	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.:210331), item 210331-R01 was remarked as 210407-R01, follow-up action is needed to be revieded.	

	Name	Signature	Date
Recorded by	Howard Chan	Howard	9 April 2021
Checked by	Dr. Priscilla Choy		9 April 2021

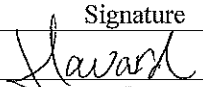
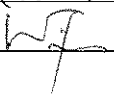
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210414
Date	14 April 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	
210414-R01	• Drip tray should be provided for chemical storage.	E 14
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• 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.:210407), all identified environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		20 April 2021
Checked by	Dr. Priscilla Choy		20 April 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	210423
Date	23 April 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	
	• 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.:210414), all identified environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		26 April 2021
Checked by	Dr. Priscilla Choy		26 April 2021

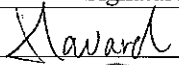
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210428
Date	28 April 2021 (Wednesday)
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. 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	
210428-R01	• Drip tray should be provided for chemcial 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.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:210423), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan		28 April 2021
Checked by	Dr. Priscilla Choy		28 April 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	210409
Date	9 April 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	
210409-R01	• Excavated or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water.	B2
	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.:210330), all environmental deficiencies were rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Julie Tse	Julie Tse	13 April 2021
Checked by	Dr. Priscilla Choy		13 April 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	210416
Date	16 April 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	
210416-R01	• Dusty materials remaining after a stockpile should be watered and cleared form the surface of roads.	B3
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
210416-R02	• Water of wheel washing facilities should be cleared regularly.	D12(iv)
	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.:210409), all environmental deficiencies were rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Julie Tse	Julie Tse	19 April 2021
Checked by	Dr. Priscilla Choy		19 April 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	210420
Date	20 April 2021 (Tuesday)
Time	14:00 – 16:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
210420-R01	• Retained trees should be carefully protected.	F1
	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.:210416), all environmental deficiencies were rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Julie Tse	Julie Tse	22 April 2021
Checked by	Dr. Priscilla Choy		22 April 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	210430
Date	30 April 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	
	• 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.:210420), all environmental deficiencies were rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Julie Tse	Julie Tse	30 April 2021
Checked by	Dr. Priscilla Choy		30 April 2021

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

ND/2019/04 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)

Weekly Site Inspection Record Summary

Checklist Reference Number	210408
Date	8 April 2021 (Thursday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
210408-R02	• NRMM label was observed faded and valid NRMM label should be displayed on regulated machine.	B 24
210408-R03	• To keep the public road near site entrance clean and free of dust.	B 9
	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	
210408-R01	• Further provide receptacles on site for waste collection.	E 1ii
210408-R04	• 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.: 210331), item 210331-R01 was remarked as 210408-R01 and item 210331-R02 was remarked as 210408-R02, follow-up action is needed to be reviewed.	

	Name	Signature	Date
Recorded by	Howard Chan	Howard	14 April 2021
Checked by	Dr. Priscilla Choy		14 April 2021

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

ND/2019/04 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)

Weekly Site Inspection Record Summary

Checklist Reference Number	210415
Date	15 April 2021 (Thursday)
Time	09:30 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
210415-R01	• To prevent surface runoff discharge into the nearby watercourse.	D 4
	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.: 210408), all identified environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan	Howard	20 April 2021
Checked by	Dr. Priscilla Choy		20 April 2021

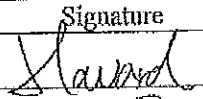
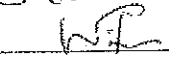
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/04 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)

Weekly Site Inspection Record Summary

Checklist Reference Number	210422
Date	22 April 2021 (Thursday)
Time	14:00 – 16:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
210422-R01	• Stockpile of dusty material should be covered properly.	B 2
210422-R02	• To keep the public road near site entrance clean and free of dust.	B 9
	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.: 210415), all identified environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		23 April 2021
Checked by	Dr. Priscilla Choy		23 April 2021

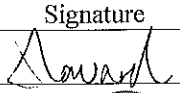
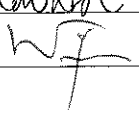
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/04 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)

Weekly Site Inspection Record Summary

Checklist Reference Number	210429
Date	29 April 2021 (Thursday)
Time	14:00 – 16:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
210429-R02	• To keep the public road near site entrance clean and free of dust.	B 9
	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	
210429-R01	• Remove the construction materials within the tree protection zones for all retain trees and properly erect the fencing to protect the retain trees.	E 2
	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.: 210422), item 210422-R02 was remarked as 210429-R02, follow-up action is needed to be reviewed. Other item was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		30 April 2021
Checked by	Dr. Priscilla Choy		30 April 2021

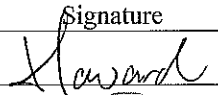
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210407
Date	7 April 2021 (Wednesday)
Time	13:30-15:30

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	
210407-R01	• Chemical container should be locked.	E 3iii
	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.: 210329), item 210329-R01 was remarked as 210407-R01, follow-up action is needed to be reviewed.	

	Name	Signature	Date
Recorded by	Howard Chan		9 April 2021
Checked by	Dr. Priscilla Choy		9 April 2021

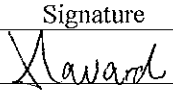
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210416
Date	16 April 2021 (Friday)
Time	09:00-11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
210416-R01	• To keep public road near site entrance clean and free of dust.	B 9
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
210416-R02	• Contractor was reminded to cover the manhole.	D 9
	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.: 210407), all identified environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		20 April 2021
Checked by	Dr. Priscilla Choy		20 April 2021

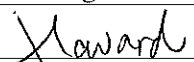
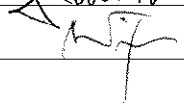
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210419
Date	19 April 2021 (Monday)
Time	13:30-15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
210419-R01	• To enhance the dust suppression measure on site especially for the dust generation activities.	B 11
	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.: 210416), all identified environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		20 April 2021
Checked by	Dr. Priscilla Choy		20 April 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	210426
Date	26 April 2021 (Monday)
Time	13:30-15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
210426-R01	• Every stock of more than 20 bags of cement should be covered or sheltered on top and 3 sides.	B 14
	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.: 210419), all identified environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		27 April 2021
Checked by	Dr. Priscilla Choy		27 April 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	210408
Date	8 April 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.: 210331), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan	Howard	9 April 2021
Checked by	Dr. Priscilla Choy		9 April 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

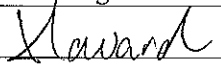
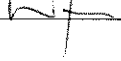
ND/2019/06 – Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products

Weekly Site Inspection Record Summary

Checklist Reference Number	210415
Date	15 April 2021 (Thursday)
Time	14:00-15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. 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.: 210408), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan		20 April 2021
Checked by	Dr. Priscilla Choy		20 April 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

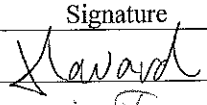
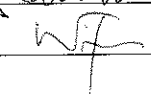
ND/2019/06 – Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products

Weekly Site Inspection Record Summary

Checklist Reference Number	210422
Date	22 April 2021 (Thursday)
Time	09:30-10:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 210415), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan		23 April 2021
Checked by	Dr. Priscilla Choy		23 April 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	210429
Date	29 April 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	
210429-R01	• To prevent surface runoff discharge into nearby watercourse.	D 3
	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.: 210422), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan	Howard	30 April 2021
Checked by	Dr. Priscilla Choy		30 April 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	210408
Date	8 April 2021 (Thursday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
210408-R01	• Ensure all vehicles passes through the wheel wash before leaving the site.	B 6
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
210408-R02	• Re-arrange the piping to discharge the treated water to proper stormwater drain.	D 6
	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.: 210331), no major environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Kenneth Leung		13 April 2021
Checked by	Dr. Priscilla Choy		13 April 2021

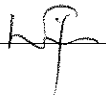
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Weekly Site Inspection Record Summary

Checklist Reference Number	210416
Date	16 April 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	
210416-R01	• Keep review on the arrangement of the piping to discharge the treated water to proper stormwater drain.	D 6
	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.: 210408), item 210408-R02 was remarked as 210416-R01. Follow-up action is needed to be reviewed. Other environmental deificiency was observed improved/rectified by the contractor during site inspection.	

	Name	Signature	Date
Recorded by	Kenneth Leung		20 April 2021
Checked by	Dr. Priscilla Choy		20 April 2021

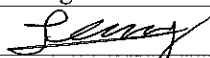
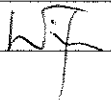
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Weekly Site Inspection Record Summary

Checklist Reference Number	210423
Date	23 April 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.: 210416), all identified environmental deificiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kenneth Leung		26 April 2021
Checked by	Dr. Priscilla Choy		26 April 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	210430
Date	30 April 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.: 210423), no major environmental deificiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Kenneth Leung	Leung	30 April 2021
Checked by	Dr. Priscilla Choy		30 April 2021

APPENDIX P
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	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	* * ^ ^ *

		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;					
		• 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					N/A

		enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and • Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser 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	Contractor	All construction sites where practicable	Construction phase	^

			screening.				
S4.9	N3	Install movable noise barriers and full enclosure and acoustic mat, screen the noisy plants including air compressor and generator.	Screen the noisy plant items to be used at all construction sites	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N4	Use of "Quiet" Plant and Working Methods	Reduce the noise levels of plant items	Contractor	All construction sites where practicable	Construction phase	N/A
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	Control construction runoff	Contractor	All construction sites	Construction phase	*

		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 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					* ^ ^ N/A

		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 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.					N/A ^ * ^
S5.7	W2	*Stream Diversion* • In order to prevent sediment transport during riverbank works, deployment of silt curtain should be implemented,	Minimize water quality impact due to stream diversion	Contractor	All streams that required diversion	Construction phase	N/A

		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.					
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 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	Minimize water quality impact due to potential groundwater from contaminated area	Contractor	All identified groundwater-contaminated areas	Construction phase	N/A N/A N/A N/A

		WPCO through the Regional Offices of EPD.					
S5.7	W4	*Sewage from Workforce* Portable chemical toilets and sewage holding tanks should be provided for handling the construction sewage generated by the workforce. A licensed Contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance. Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. Regular environmental audit on the construction site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the Project would not cause water quality impact after undertaking all required measures.	Handling of site sewage	Contractor	All construction sites	Construction Phase	^
Waste Management (Construction Waste)							
S7.6	WM1	*Waste Reduction Measures* Waste reduction is best achieved at the planning and design phase, as well as by ensuring the implementation of good site practices. The following recommendations are proposed to achieve reduction: • segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal;	Reduce waste generation	Contractor	All construction sites where practicable	Prior to the commencement of construction	^

		• 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.					* ^ 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	N/A
S7.6	WM3	<u>*Good Site Practice*</u> 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 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	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	^ ^ ^ ^

		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 transportation; • Obtain relevant waste disposal permits from the appropriate authorities; and • Disposal of waste should be done at licensed waste disposal facilities.	Minimize waste impact from storage	Contractor	All construction sites	Construction phase	^ ^ ^ ^

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. Wheel wash facilities have to be provided at the site entrance before the trucks leaving the works area.	Minimize waste impacts from excavated and C&D material	Contractor	All construction sites	Construction phase	^ ^ N/A N/A N/A ^ N/A ^
S7.6	WM7	*Contaminated Soil* As a precaution, it is recommended that standard good site	Remediate contaminated soil	Contractor	All construction sites where	Construction phase	^

		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.			applicable		
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	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	N/A

			groundwater identified in the assessment if remediation is required			is confirmed and remediation is required	
S 8.5	LC4	Preparation and submission of Remediation Report to EPD for agreement	Demonstrate that the decontamination work is adequate and is carried out in accordance with the endorsed supplementary CAR and RAP	Project Proponent/ Detailed Design Consultant	All inaccessible potentially contaminated sites in 2 NDAs as listed in the CAP	Prior to the commencement of any proposed construction works if land contamination is confirmed and remediation is required	N/A
S 8.6	LC5	Re-appraisal of surveyed sites (if they become part of the land requirement for NDA development) that were not identified as potentially contaminated or could not be accessed for visual inspection during the site survey	Verify the land contamination potential due to potential change of land uses before the commencement of construction	Project Proponent/ Detailed Design Consultant	All surveyed sites (if they become part of the land requirement for NDA development (that were not identified as potentially contaminated or could not be accessed for visual inspection	After the land is resumed and handed over to the Project Proponent.	N/A

					during the site survey as listed in the CAP		
S 8.7.2 and Appendix 8.4	LC6	Treatment of arsenic-containing soil "Solidification/Stabilization" (S/S) treatment method was proposed for the treatment of arsenic-containing soil. Toxicity Characteristic Leaching Procedure (TCLP) test should be undertaken after S/S in order to ensure that the contaminant will not leach to the environment. Unconfined Compressive Strength (UCS) test should be conducted, and not less than 1MPa should be met prior to the backfilling or stockpiled for future reuse within the study area.	To treat the arsenic containing soil	Government Developer/ Contractor	KTN NDA	Prior to commencement of construction works within KTN NDA	N/A
S 8.7.2 and Appendix 8.4	LC7	Excavation and Transportation • 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;	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 ^

		• 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 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	To minimize the potential environmental impacts arising from the handling of contaminated materials	Contractor	KTN NDA	The course of treatment	N/A ^ ^ ^ ^ ^

		If necessary, there should be clear and separated areas for stockpiling of untreated and treated materials.					
S 8.7.2 and Appendix 8.4	LC9	<u>Safety Measures</u> • 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	To minimize the risk of LFG hazards to occupants within MTLL and its 250m Consultation Zone	Government / Developer/ Detailed Design Consultant within MTLL	Buildings within MTLL and its 250m Consultation Zone	Detailed design phase	N/A

		gas ingress. • For the high risk category, the use of active control of gas, including barriers and detection systems are recommended. These measures include the control of gas by mechanical means e.g. ventilation of spaces with air to dilute gas, or extraction of gas using fans or blowers. • For the low risk category, the provision of barriers to the movement of gas is recommended. Measures recommended include the use of membranes in floors or walls, or in trenches, coupled with high permeability vents such as nofines gravel in trenches or voids/permeable layers below structures. • The need and practicality of incorporating such measures should be reviewed in the detailed Qualitative LFG Hazards 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.		and its 250m Consultation Zone			

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 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	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	^ ^ ^ ^ ^ ^

		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					^ ^ N/A

		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.					^ ^
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 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	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

		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	<u>Undertaking Further Archaeological Survey to Cover the Outstanding Areas</u> Further archaeological surveys to cover the outstanding areas of the not-yet-surveyed-area with medium archaeological potential	To confirm and verify the findings of the EIA	Project Proponent/ Contractor/ Qualified	In the not-yet-surveyed-areas with medium archaeological	After land resumption but before construction	N/A

		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.		Archaeologist	potential located in the areas within Areas D1-11, A3-5, A3-6, B1-1, and B1-7,		
S11.6.1	CH2	<u>Undertaking Survey-cum-Rescue Excavation</u> A Survey-cum-Rescue Excavation should be conducted after land resumption and before the commencement of construction works to define the precise archaeological deposits extent and to preserve the archaeological resources by record. The excavation should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	In KTN NDA, for Site 3 and In FLN NDA for Site 5.	After land resumption but before construction commencement of the zone	N/A

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 that may be encountered during ground excavation works as well as the reporting procedures in case suspected archaeological remains are	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

		identified. A set of the presentation material (in the form of power point presentation) with content details will be prepared by an archaeologist and submitted to AMO for reference and record purpose. The first induction briefing will be video recorded and it will be used as induction briefing material for new site staff.					
S11.6.1	CH5	<u>Undertaking Archaeological Impact Assessment before Construction at A1</u> It is recommended that an Archaeological Impact Assessment to be conducted in the impacted area in Area B1-8 and B1-9 at A1 (Sheung Shui Wa Shan Site of Archaeological Interest) after land resumption and before construction when detail construction work information is available to determine the need for further archaeological follow up actions.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	Area B1-8 and B1-9 zoned as R4 and R3 in A1	After land resumption but before construction	N/A
S11.6.1	CH6	<u>Undertaking Archaeological Impact Assessment before Construction within A1 but except Area B1-8 and B1-9</u> Should there be any development work within the Sheung Shui Wa Shan Site of Archaeological Interest, it is recommended that an Archaeological Impact Assessment is required after land resumption and before construction when detail construction work information is available to determine the need for further archaeological follow up actions.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible.	Project Proponent/ Contractor/ Qualified Archaeologist	Area within A1 except Area B1-8 and B1-9 in R4 &R3 zoning	After land resumption but before construction	N/A

S11.6.2	CH7	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	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 commenceme nt of construction works	N/A

		construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report. The condition survey of graded historic building should be submitted to AMO for information.					
S11.6.2	CH9	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	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, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.				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, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed design consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as the areas become available, to achieve early establishment	N/A
S.12.9 MM1	LV2	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A

S.12.9 MM2	LV3	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as 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	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

		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. 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	^
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.	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	^

		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					
S.12.9 MM5	LV7	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.	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

		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.12.9 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 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.12.9 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	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

		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.					
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. 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*					N/A

		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	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

		upper sections will be designated as Green Belt zone where there is a general presumption against development as buffer to the stream. 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.	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

		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.					
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	To minimize glare impact to adjacent VSRs	Government / Developer/ Contractor	Throughout NDAs	Construction and Operation Phases	N/A

		glare impact to adjacent VSRs during the operation phase.					
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.	^
S.13.9	E4	Long Valley Nature Park (LVNP) designation, design and implementation. Enhancement of non-wetland habitats in LVNP. Planning for the advanced provision of alternative foraging habitat along main river channels for large waterbirds.	Compensate for wetland loss arising from the project and protection of Long Valley from adverse ecological impacts including provision of additional/alternative habitat for large waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Project Proponent/ Detailed Design Consultant (Long Valley Nature Park Habitat Creation & Management Plan)	Long Valley KTN area C1-9 and any suitable areas to be identified during the planning stage	Detailed design phase	N/A
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	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

			conservation significance, especially nesting ardeids Maintenance of ecological linkages with Deep Bay ecosystem and avoidance of severance of these linkages, especially for waterbirds				
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. Maintain ecological linkages within NDA Project Area and between Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Area along Ng Tung, Sheung Yue and Shek Sheung River	Detailed design, construction and operational phases.	N/A
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	Detailed design phase	N/A

					boundaries.		
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; • 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	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

	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	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.	^

		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.					
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	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.	^

		(1 March to 31 July) Provision of alternative foraging habitat along main river channels for large waterbirds.					
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,	Construction phase.	N/A

					G1- 3, H1-1, Ma Tso Lung Stream and tributaries; FLN areas A1-3, A1-7 and A1-9) and works areas; and around any works areas north of the Fanling Bypass and north of the Ng Tung River west of the western terminus of the Fanling Bypass. Riparian corridor of Ma Tso Lung Stream and tributaries.		
S13.9	E18	Compensatory woodland planting, management and maintenance.	Compensate for loss of secondary woodland and hillside plantation of ecological significance.	Project Proponent/ Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A

S13.9	E19	Use opaque, non-transparent, non-reflective noise barriers for all construction sites. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Contractor	All construction sites	Construction phase.	^
S13.9	E20	Pre-site clearance check for presence of flora or fauna of conservation significance and bat roosts. If any are found, measures should be proposed and implemented to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement. Pre-site clearance check on all construction sites and pre – works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of protected plant species/specimens of conservation significance. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, 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	Minimize impacts to flora and fauna of conservation significance. Minimize impacts to protected fauna and flora species. Formulate and implement mitigation measures to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation.	Government/ Developer/ Contractor/ Ecologist	All construction sites.	Prior to clearance of vegetation and structures.	N/A

		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.					
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. 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	Minimize impacts to flora and fauna of conservation significance. Minimize impacts to protected fauna and flora species. Consider and implement adjustments to avoid, minimize or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation	Government/ Developer/ Contractor/ Ecologist	All construction sites.	Prior to clearance of vegetation and structures.	N/A

		suitable areas including LVNP					
S13.9	E22	Prevention of dust, run-off and pollutants impacting Deep Bay catchment area and areas of ecological importance.	Avoid increase to pollution entering ecologically sensitive Deep Bay ecosystem.	Contractor	All construction sites.	Construction	N/A
Specific Mitigation Measures for Designated Projects							
DP2- Castle Peak Road Diversion (Major Improvement)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.A9	LV1-DP2	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity 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 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.	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	All watercourses, particularly the stream at Siu	Prior to Construction and Construction	N/A

		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.			Hang San Tsuen that will flow under the Fanling Bypass Eastern Section	Phase	
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 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.A9 MM5	LV6-DP2	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	*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.		Design Consultant/ Contractor	*otherwise consider offsite locations*	Construction Phase & Maintenance in Operation Phase	
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 affected by the Project. The	Reprovide areas of woodland to compensate for	Project Proponent/ Detailed	*In areas identified in the EIA*	Prior to Construction, Construction	N/A

		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	those areas of quality woodland lost.	Design Consultant/ Contractor/ Maintenance Authority	*Landscape Mitigation Plans and as agreed with AFCD*	Phase & Maintenance in Operation Phase	

		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-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	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

		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)					
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 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	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

		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.					
S.12.A9 MM15	LV15-DP2	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ 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-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.	Minimize mortality impacts	Detailed	Within NDA.	Detailed	^

		Unnecessary lighting should be avoided.	on birds.	Design Consultant/ Contractor/ Maintenance Authority		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 ecological impacts on habitats, flora and fauna.	Contractor.	Interface between areas/habitats of ecological importance (KTN area B1-3) and works areas.	Construction phase.	N/A
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	N/A

						assessment,	
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 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.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 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.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	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

		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	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-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	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 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,*	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

		Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica, and *Rhododendron simsii* are suggested..					
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, 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	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

		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 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-DP3	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the	To soften the hard, straight edges and provide	Government Detailed	*On viaducts or along roads.*	Prior to Construction,	N/A

		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)	greening along roads.	Design Consultant/ Contractor		Construction Phase & Maintenance in Operation Phase	
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 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	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

		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.					
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 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.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	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor/	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A

		interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.					
S.12.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	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

		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.					
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	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

		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.					
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	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	N/A

		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..				Operation Phase	
S.12.A9 MM8	LV8-DP4	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus	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

		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	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	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures , or around VSRs to	Prior to Construction, Construction Phase &	N/A

			surrounding environment and create a pleasant pedestrian environment		contain their view out to the NDA structures.	Maintenance in Operation Phase	
S.12.A9 MM12	LV11-DP4	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	To soften the hard, straight edges and provide greening along roads.	Government Detailed Design Consultant/ Contractor	On viaducts or along roads.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM13 & EIA Annex 13	LV12-DP4	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on-wetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ re-provisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM15	LV13-DP4	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design	E1-7 and C1-9 (LVNP) in KNT NDA and generally	Prior to Construction, Construction	N/A

		for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.		Consultant/ Contractor/ Maintenance Authority	throughout NDA	Phase Maintenance in Operation Phase	
Landscape and Visual (Construction)							
S.12.A9 MM16	LV14-DP4	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor			N/A
S.12.A9 MM17	LV15-DP4	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	Throughout NDAs	Construction and Operation Phases	N/A
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	Detailed design phase.	N/A

					compensation).		
Ecology (Detailed Design, Construction and Operational Phases)							
S13.9	E2-DP4	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor Maintenance Authority.	Throughout.	Throughout.	N/A
Ecology (Construction Phase)							
S.13.9	E3-DP4	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.	Contractor.	Interface between areas/habitats of ecological importance (KTN areas B1-3, E1-8, G1-3 and H1-1) and works areas	Construction phase.	N/A
S13.9	E4-DP4	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A
S13.8	E5-DP4	Maintenance of compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Maintenance Authority.	KTN areas E1-8 and G1-3.	Operation phase	N/A
Cultural Heritage (Pre-construction Phase)							
S11.6.1	CH1-DP4	<u>Undertaking Survey-cum-Rescue Excavation</u> A Survey-cum-Rescue Excavation should be conducted after land resumption and before the commencement of construction works to define the precise archaeological deposits extent and to preserve the archaeological resources by record. The	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	N/A

		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.				the zones	
S11.6.1	CH2-DP4	<u>Undertaking Further Archaeological Survey to Cover the Outstanding Areas</u> Further archaeological surveys to cover the outstanding areas of the not-yet-surveyed-area with medium archaeological potential located with areas with proposed development as presented in **Figure 11.9** should be implemented after land resumption to confirm and verify the findings of the EIA. The survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance. It should be noted that the scope of further archaeological survey is based on the current proposed alignment. Any additional works areas which have not been covered by the current archaeological impact assessment should be covered as soon as possible. Subject to the findings of the archaeological survey to be conducted after land resumption, additional mitigation measures 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 within the work extent of DP4	After land resumption but before construction	N/A
S11.6.1	CH3-DP4	<u>Undertaking Induction Training</u> Induction training should be provided to the construction Contractor before the commencement of the excavation works in Spot E. An induction will be conducted as part of the	To preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified	Spot E	Before the commencement of the excavation works and before	N/A

		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.		Archaeologist		site staff are deployed on site	
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, 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	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	HKT03 (Main Building) and G308	Preconstruction stage before commencement of construction works	N/A

		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.					
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 and restore these to their former state		Detailed Design Consultant/	Throughout NDAs,	Prior to Construction, Construction &	N/A

		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.		Contractor/		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	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the	Detailed Design Consultant/	Throughout NDAs	Throughout NDAs	N/A

		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	surrounding landscape				
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	Protect and Preserve Trees	Government Detailed Design Consultant/	Onsite	Prior to Construction and Construction	^

		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.		Contractor		Phase	
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	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

		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.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 are as visually amenable as possible.	Government/ Detailed Design Consultant/	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
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.	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.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 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*	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

		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.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,	Reduce exposure to untreated concrete surfaces and particularly mitigate	Government / Detailed Design Consultant/	*On appropriate buildings*	Prior to Construction, Construction Phase &	N/A

		maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	visual impact to VSRs at high levels. Provide greening.	Contractor		Maintenance in Operation Phase	
S.12.B9 MM11	LV11-DP5	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.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	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

		south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.					
Landscape and Visual (Construction)							
S.12.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	Contractor.	*Interface between areas/habitats of ecological*	Construction phase.	N/A

			ecological impacts on habitats, flora and fauna.		*importance and works areas (all sides of KTN area F1-2).*		
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 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 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	N/A

						in Operation Phase	
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	Reduce topographical changes and minimize land resumption	Government/ Detailed Design Consultant/ Contractor	*Throughout NDAs, particularly for reservoirs*	Prior to Construction	N/A

		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.					
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 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.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	Transplant Trees where suitable for transplantation	Government/ Detailed Design Consultant/	*Onsite where possible. Otherwise*	Prior to Construction, Construction	N/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.		Contractor	*consider offsite locations*	Phase & Maintenance in Operation Phase	
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	Compensate for trees and shrubs lost due to the	Government/ Detailed Design	*Onsite where possible.*	Prior to Construction,	N/A

		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.	Project.	Consultant/ Contractor	*Otherwise consider offsite locations*	Construction Phase & Maintenance in Operation Phase	
S.12.D9 MM8	LV7-DP10	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate	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

		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.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	LV9-	Screen Planting – Tall screen/buffer trees and shrubs should be	To screen proposed	Government/	*Along roads,*	Prior to	N/A

MM11	DP10	planted. This measure may additionally form part of the compensatory planting.	structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Detailed Design Consultant/ Contractor	*around suitable built structures, or around VSRs to contain their view out to the NDA structures.*	Construction, Construction Phase & Maintenance in Operation Phase	
S.12.D9 MM12	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 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	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

		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.					
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. 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)							
S13.8	E1-	Use opaque, non-transparent, non-reflective noise barriers.	Minimize mortality impacts	Detailed Design	*Throughout NDAs*	Detailed design,	^

	DP10	Unnecessary lighting should be avoided.	on birds.	Consultant/ Contractor Maintenance Authority.		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 assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard	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	N/A

		stated in the EIA report.				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.	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

		Construction time frame should also be considered and designs seek to keep it to a practical minimum.					
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	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

		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.					
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	Compensate for trees and shrubs lost due to the Project.	Government / Detailed Design Consultant/	Onsite where possible. Otherwise	Prior to Construction, Construction	N/A

		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.		Contractor	consider offsite locations	Phase & Maintenance in Operation Phase	
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 Q
WASTE GENERATION IN THE REPORTING MONTH

Name of Department: Civil Engineering and Development Department

Monthly Summary Waste Flow Table for 2020

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 '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
January	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
February	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
March	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.065
April	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.351
May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.793
June	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.202
Sub-total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.411
July	5.907	0.000	5.907	0.000	0.000	0.000	0.000	0.000	1.780	0.000	0.455
August	0.027	0.000	0.024	0.000	0.003	0.000	0.000	0.086	0.000	0.000	0.327
September	0.145	0.000	0.145	0.000	0.000	0.000	0.003	0.059	0.000	0.000	0.503
October	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.717
November	3.024	0.000	0.000	0.101	2.923	0.000	38.540	0.009	0.000	0.000	0.744
December	19.155	0.000	0.151	19.004	0.000	0.000	0.001	0.000	0.002	0.000	0.151
Total	28.258	0.000	6.227	19.105	2.926	0.000	38.544	0.154	1.782	0.000	4.308

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	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)
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											
June											
Sub-total	165.055	0.000	2.193	158.552	0.886	3.424	0.005	0.120	0.004	0.033	0.539
July											
August											
September											
October											
November											
December											
Total	165.055	0.000	2.193	158.552	0.886	3.424	0.005	0.120	0.004	0.033	0.539

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

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Name of Department: CEDD

Appendix F

Contract No.: ND/2019/02

Waste Flow Table

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	Reused in the Contract	Reused in other Projects	Disposed as Public Fill*	Imported Fill	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
June	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sub-total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
July	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aug	7.99	0.00	0.00	0.00	7.99	0.00	0.00	0.01	0.00	0.00	0.00
Sept	12.55	0.00	0.00	0.00	12.55	0.00	0.00	0.00	0.00	0.00	0.00
Oct	1,499.49	0.00	0.00	0.00	1,499.49	0.00	0.00	0.00	0.00	0.00	9.10
Nov	449.84	0.00	0.00	0.00	449.84	0.00	3.85	0.00	0.00	0.00	28.47
Dec	47.36	0.00	0.00	0.00	47.36	0.00	0.01	0.03	0.00	0.00	39.44
Sub-total	2,017.23	0.00	0.00	0.00	2,017.23	0.00	3.86	0.04	0.00	0.00	77.01
Total	2,017.23	0.00	0.00	0.00	2,017.23	0.00	3.86	0.04	0.00	0.00	77.18

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.

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Name of Department: CEDD

Appendix F

Contract No.: ND/2019/02

Year **2021**

Waste Flow Table

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	Reused in the Contract	Reused in other Projects	Disposed as Public Fill*	Imported Fill	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											
June											
Sub-total	3,222.88	0.00	0.00	0.00	3,222.88	0.00	0.01	0.13	0.00	0.00	50.00
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Sub-total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	3,222.88	0.00	0.00	0.00	3,222.88	0.00	0.01	0.13	0.00	0.00	50.00

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	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:	29,000	8,400	0	25,000	4,000	0	100	1.0	3	0.5	200

Sang Hing – Kuly Joint Venture
Contract No.: ND/2019/03
Kwu Tung North and Fanling North New Development Areas, Phase 1:
Development of Long Valley Nature Park

Name of Department: CEDD Contract No.: ND/2019/03

Monthly Summary Waste Flow Table for __2019__ (Year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill*	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
Jan	–	–	–	–	–	–	–	–	–	–	–
Feb	–	–	–	–	–	–	–	–	–	–	–
Mar	–	–	–	–	–	–	–	–	–	–	–
Apr	–	–	–	–	–	–	–	–	–	–	–
May	–	–	–	–	–	–	–	–	–	–	–
June	–	–	–	–	–	–	–	–	–	–	–
July	–	–	–	–	–	–	–	–	–	–	–
Aug	–	–	–	–	–	–	–	–	–	–	–
Sept	–	–	–	–	–	–	–	–	–	–	–
Oct	–	–	–	–	–	–	–	–	–	–	–
Nov	–	–	–	–	–	–	–	–	–	–	–
Dec	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0

*Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

Sang Hing – Kuly Joint Venture
Contract No.: ND/2019/03
Kwu Tung North and Fanling North New Development Areas, Phase 1:
Development of Long Valley Nature Park

Name of Department: CEDD Contract No.: ND/2019/03

Monthly Summary Waste Flow Table for __2020__ (Year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill*	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
Jan	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0.01
Mar	0	0	0	0	0	0	0	0	0	0	0.004
Apr	0	0	0	0	0	0	0	0	0	0	0.038
May	0	0	0	0	0	0	0	0	0	0	0.004
Jun	0	0	0	0	0	0	0	0	0	0	0.015
Sub-Total	0	0	0	0	0	0	0	0	0	0	0.071
Jul	0.1	0	0	0	0.1	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0.03
Sep	0	0	0	0	0	0	0	0	0	0	0
Oct	0.08	0	0	0	0.08	0	0	0	0	0	0.038
Nov	0.08	0	0	0	0.08	0	0	0	0	0	0.1
Dec	0.54	0	0	0	0.54	0	0	0	0	0	0.038
Total	0.8	0	0	0	0.8	0	0	0	0	0	0.277

*Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

Sang Hing – Kuly Joint Venture
Contract No.: ND/2019/03
Kwu Tung North and Fanling North New Development Areas, Phase 1:
Development of Long Valley Nature Park

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	–	–	–	–	–	–	–	–	–	–	–
Jun	–	–	–	–	–	–	–	–	–	–+	–
Sub-Total	2.07	0	0	0.22	1.85	0.656	0	0	0	0gtr/	0.557
Jul	–	–	–	–	–	–	–	–	–	–	–
Aug	–	–	–	–	–	–	–	–	–	–	–
Sep	–	–	–	–	–	–	–	–	–	–	–
Oct	–	–	–	–	–	–	–	–	–	–	–
Nov	–	–	–	–	–	–	–	–	–	–	–
Dec	–	–	–	–	–	–	–	–	–	–	–
Total	2.87	–	–	0.22	2.65	0.656	0	0	0	0	0.834

*Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

Sang Hing – Kuly Joint Venture
Contract No.: ND/2019/03
Kwu Tung North and Fanling North New Development Areas, Phase 1:
Development of Long Valley Nature Park

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
2.5	1	2	0	0.5	5	1	0.2	0.2	1	3

*Remark: Figure to be revised if necessary

Notes:

(1) The performance targets are given in ETWB Technical Circular PS Clause 6(14).
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
(4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m3. (ETWB Technical Circular PS Clause 5(4)(b) refers). [Delete Note (4) and the table above on the forecast, where inapplicable].

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	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 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											
June											
Sub-total	1,705.91	0.00	0.00	0.00	1,618.19	3,208.78	0.00	0.00	0.00	0.00	648.33
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Sub-total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1,705.91	0.00	0.00	0.00	1,618.19	3,208.78	0.00	0.00	0.00	0.00	648.33

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.

Monthly Summary Waste Flow Table for 2020 (year)

Name of Person completing the record: Pan Fong (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	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)	Yard Waste	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 '000kg)	(in '000 ton)
Jan												
Feb												
Mar	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	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
Jun	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	0.002
Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.009
Aug	1.327	0.000	0.035	0.000	1.327	0.000	0.000	0.020	0.001	21.250	0.000	0.272
Sep	0.313	0.000	0.000	0.000	0.313	0.000	0.001	0.039	0.003	34.290	0.000	0.048
Oct	0.076	0.000	0.000	0.000	0.076	0.000	0.001	0.020	0.001	59.400	0.000	0.042
Nov	0.428	0.000	0.238	0.000	0.428	0.000	0.001	0.020	0.000	54.370	0.000	0.071
Dec	0.227	0.000	0.252	0.000	0.227	0.942	0.000	0.020	0.020	112.095	0.000	0.133
Total	2.371	0.000	0.525	0.000	2.371	0.942	0.003	0.169	0.025	281.405	0.000	0.577

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	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)	Yard Waste	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 '000kg)	(in '000 kg)
Jan-21	1.725	0.000	0.300	0.000	1.725	0.564	0.000	0.419	0.065	55.020	3.482	99.590
Feb-21	0.808	0.000	0.066	0.000	0.808	0.000	0.000	0.137	0.000	33.194	0.000	162.010
Mar-21	2.094	0.000	0.560	0.000	2.094	0.000	0.002	0.088	0.002	24.670	0.000	221.160
Apr-21	2.265	0.000	0.480	0.000	2.265	0.282	0.002	0.000	1.678	0.002	0.000	201.690
May-21												
Jun-21												
Sub-total	6.892	0.000	1.406	0.000	6.892	0.846	0.005	0.644	1.745	112.886	3.482	684.450
Jul-21												
Aug-21												
Sep-21												
Oct-21												
Nov-21												
Dec-21												
Total in 2021	6.892	0.000	1.406	0.000	6.892	0.846	0.005	0.644	1.745	112.886	3.482	684.450
Total of the Project	9.263	0.000	1.931	0.000	9.263	1.788	0.008	0.813	1.755	429.810	3.482	1261.670

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
Jan											
Feb											
Mar											
Apr											
May											
June											
Sub-total											
July											
Aug											
Sept											
Oct											
Nov	0	0	0	0	0.927	0	0	0	0	0	0.008
Dec	0	0	0	0	0.428	0	0	0	0	0	0.071
Total	**0**	**0**	**0**	**0**	**1.355**	**0**	**0**	**0**	**0**	**0**	**0.079**

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
Jan	0	0	0	0	1.558	0	0	0	0	0	0.038
Feb	0	0	0	0	0.548	0	0	0	0	0	0.011
Mar	0	0	0	0	0.145	0	0	0	0	0	0.022
Apr	0	0	0	0	1.741	0	0	0	0	0	0.043
May	0	0	0	0	0.063	0	0	0	0	0	0.035
June	0	0	0	0	0.008	0	0	0	0	0	0.014
Sub-total	0	0	0	0	4.062	0	0	0	0	0	0.162
July	0	0	0	0	1.562	0	0	0	0	0	0.025
Aug	0	0	0	0	1.448	0	0	0	0	0	0.010
Sept	0	0	0	0	1.171	0	0	0	0	0	0.010
Oct	0	0	0	0	1.000	0	0	0	0	0	0.043
Nov	0	0	0	0	3.597	0	0	0	0	0	0.086
Dec	0	0	0	0	1.707	0	0	0	0	0	0.023
Total	**0.000**	**0.000**	**0.000**	**0.000**	**14.547**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.358**

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
Jan	0	0	0	0	2.960	0	0	0	0	0	0.035
Feb	0	0	0	0	0.498	0	0	0	0.0035	0	0.006
Mar	0	0	0	0	0.427	0	0	0	0	0	0.014
Apr	0	0	0	0	0.314	0	0	0	0	0	0.011
May											
June											
Sub-total											
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total	**0.000**	**0.000**	**0.000**	**0.000**	**4.199**	**0.000**	**0.000**	**0.000**	**0.004**	**0.000**	**0.066**

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].

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	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	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											
Jun											
Sub-total	0.267	0.000	0.000	0.000	0.267	2.679	0.000	0.712	0.000	76.760	1.479
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	0.267	0.000	0.000	0.000	0.267	2.679	0.000	0.712	0.000	76.760	1.479

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.

APPENDIX R
COMPLAINT LOG

Appendix R - 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

APPENDIX S
SUMMARY OF SUCCESSFUL PROSECUTION

Appendix S - Summary of Successful Prosecution

Date of Successful Prosecution	Details of the Successful Prosecution	Status	Follow Up
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APPENDIX T
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	*	
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 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	*	
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 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 <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	*	
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at locations HKT03, KT16, KT17 and KT18	prior to the commencement of the respective removal or relocation works	*	
		Others	**For Approva**l - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	*	
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 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 ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

DP5	EP-469/2013	Sewage Pumping Stations in Kwu Tung North New Development Area				
CEDD Contract No. ND/2019/02 - Kwu Tung North New Development Area, Phase 1: Roads and Drains between Kwu Tung North New Development Area and Shek Wu Hui						
Construction commencement date			**28-Oct-20**			
Operation commencement date			**tbc**			

EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notify 14 October 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 17 September 2020	
2.5	Location Plans	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 15 October 2020	
2.6	Landscape Plan	Before construction	**Deposit**	at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures	*	
3.1	Change in EM&A requirements/ programme	Others	**Seek prior approval from the Director --** justified by ET leader and verified by IEC	before implementation		
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-construction ET	by Fugro
3.4	Monthly EM&A Report	During construction	**Submit**	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing**-- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
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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	N/A	
		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 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	N/A	
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 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	N/A	
2.9	Traffic Noise Mitigation Plan	Before construction	**Approval**	no later than 1 month before the commencement of construction	Submitted 11 September 2020	EPD Approved 8 October 2020
2.10	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	**To Conduct -** A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	*	
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 Approva**l - 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 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	N/A	
2.9	Traffic Noise Mitigation Plan	Before construction	**Approval**	no later than 1 month before the commencement of construction	Submitted 11 September 2020	EPD Approved 8 October 2020
2.10	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	**To Conduct** - A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer Note: The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	Submitted 1 September 2020	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 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 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