

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 January 2021**

(Version 1.0)

Certified By



Dr. Priscilla Choy
(Environmental Team Leader)

REMARKS:

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

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

WELLAB LIMITED

Room 1701, Technology Park,
18 On Lai Street,

Shatin, NT, Hong Kong

Tel: (852) 2898 7388 Fax: (852) 2898 7076

Website: www.wellab.com.hk

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

Attention: Mr. Ryan Chau

Your Reference

Our Reference

EC/TC/df/414202/L0059

3/F International Trade
Tower
348 Kwun Tong Road
Kowloon
Hong Kong

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

Agreement No. CE 33/2019 (EP)

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

Monthly Environmental Monitoring and Audit Report No. 15 (January 2021)

23 February 2021

BY EMAIL

Dear Sir,

We refer to email of 23 February 2021 attaching the Monthly Environmental Monitoring and Audit Report No. 15 prepared by the Environmental Team (ET) of the captioned.

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

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

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



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

c.c.
AECOM
Wellab Ltd.

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

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EXECUTIVE SUMMARY**Introduction**

1. This is the 15th 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 January 2021.
2. During the reporting month, the following Works Contracts under relevant Environmental Permit(s) were undertaken for the Project:

Table I Works Contracts under relevant Environmental Permit(s) in the Reporting Month

Works Contracts	Environmental Permit No.	Designated Project (DP)	Commencement date of construction
Contract No. ND/2019/01 - Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works	EP-466/2013	Castle Peak Road Diversion	12 th August 2020
	EP-467/2013/A	Kwu Tung North New Development Area Road P1 and P2 and Associated New Kwu Tung Interchange and Pak Shek Au Interchange Improvement	12 th August 2020
	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5	1 st June 2020
	EP-470/2013	Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works	23 rd March 2020
Contract No. ND/2019/02 - Kwu Tung North New Development Area, Phase 1: Roads and Drains between Kwu Tung North New Development Area and Shek Wu Hui	EP-469/2013	Sewage Pumping Stations in Kwu Tung North New Development Area	28 th October 2020

Works Contracts	Environmental Permit No.	Designated Project (DP)	Commencement date of construction
Contract No. ND/2019/03 - Kwu Tung North New Development Area, Phase 1: Development of Long Valley Nature Park	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5	3 rd July 2020
	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	6 th October 2020
Contract No. ND/2019/05 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	1 st August 2020
Contract No. ND/2019/06 - Fanling North New Development Area, Phase 1: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products	EP-475/2013/A	Reprovision of temporary Wholesale Market in Fanling North New Development Area	29 th October 2019

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/2019/05	ND/2019/06
1-hr Total Suspended Particulates (TSP) Monitoring	6, 12, 18, 22, 28 Jan 2021	N/A	4, 6, 8, 12, 14, 18, 20, 22, 26, 28 Jan 2021	4, 8, 14, 20, 26, Jan 2021	N/A
24-hr TSP Monitoring	6, 12, 18, 22, 28 Jan 2021	N/A	2, 6, 7, 12, 13, 18, 19, 22, 25, 28, 29 Jan 2021	2, 7, 13, 19, 25, 29 Jan 2021	
24-hr RSP (Ambient Arsenic) Monitoring for Land Contamination	5, 11, 15, 21, 27 Jan 2021	N/A	5, 11, 15, 21, 27 Jan 2021	N/A	
Noise Monitoring	6, 12, 18, 28 Jan 2021	6, 12, 18, 28 Jan 2021	4, 14, 20, 26 Jan 2021		
Landfill Gas Monitoring	29 January 2021	N/A	N/A	N/A	N/A

EM&A Activities		Works Contracts				
		ND/2019/01	ND/2019/02	ND/2019/03	ND/2019/05	ND/2019/06
Built Heritage Monitoring		N/A	N/A	N/A	Daily assessment subject to construction works conducted within assessment area	N/A
Ecological Survey	Monitoring of Measures to Minimise Disturbance to Water Birds on Ng Tung River, Sheung Yue River, and Long Valley	N/A*	N/A*	5, 8, 12, 15, 18, 19, 25, 29 Jan 2021	N/A*	N/A*
	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	25, 27 Jan 2021	25, 27 Jan 2021	25 Jan 2021	25 Jan 2021	N/A*
Environmental Site Inspection		5, 12, 19, 26 Jan 2021	6, 13, 22, 27 Jan 2021	8, 15, 22, 29 Jan 2021	4, 13, 18, 25 Jan 2021	6, 11, 21, 28 Jan 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 noise monitoring station CP-FLN-NMS2 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to the contract.

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)	2	0	2	0	0	0
Landfill Gas	O ₂	0	0	0	0	0	0
	CH ₄						
	CO ₂						
Cultural heritage	Built Heritage Monitoring	0	0	0	0	0	0

Air Quality

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

Construction Noise

6. All construction noise monitoring was conducted as scheduled in the reporting month. Two Action Level exceedance were recorded due to documented noise complaints received for Contract ND/2019/02 and ND/2019/05 in this reporting month. No Limit Level exceedance was recorded in the reporting month.

Water Quality

7. No construction of channel for alternation of natural streams was carried out in the reporting month. Therefore, no water quality monitoring was conducted. For the details, please refer to Section 5.

Land Contamination

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

Landfill Gas Monitoring

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

Built Heritage Monitoring

10. Built heritage monitoring in the reporting month was carried out by the Contractor under ND/2019/05 for surveyed cultural heritage. No Limit Level exceedance was recorded.

Ecological Monitoring

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

Complaint Log

12. Four environmental complaints were received in the reporting month. Two of the complaint were received for ND/2019/01, one complaint was received for ND/2019/02 and one complaint was received for ND/2019/05.

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 (February 2021 and March 2021)
ND/2019/01	(a) Site clearance and site formation in Portion 1f; (b) Site clearance, ground investigation, working platform erection for soil nail, soil nailing in Portion 2 (c) Site clearance and ground investigation in Portion 3 (d) Erection of temporary noise barrier steel frame and laying of rising mains in Portion 4 (e) Site clearance, temporary slope cutting for temporary soil nailing, Stockpile of soil, Ground Investigation, construction of KW01 retaining wall in Portion 5 (f) Site Clearance, temporary slope cutting for temporary soil nailing, sheetpiling and excavation, pipes laying, backfilling, pre-bored H-piling, construction of KW01 retaining wall, construction 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) Ground Investigation, 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) Ground Investigation in Portion 8b (k) Site clearance, ground investigation and trial pits in Portion 9b (l) Stockpile of soil in Portion 9c

	<p>(m) Excavation, sheetpiling for ELS, pipes laying in Portion 10a</p> <p>(n) Site Clearance in Portion 10b</p> <p>(o) Laying of rising mains in in Portion 11b</p> <p>(p) Site clearance, Construction of temporary sewage pumping station, laying of rising mains in Portion 14</p> <p>(q) Site clearance, Construction of CLC in Portion 16</p>
ND/2019/02	<p>(a) Pipe Jacking</p> <p>(b) Tree felling</p> <p>(c) Inspection Pit</p> <p>(d) Hoarding and Dull green barrier erection</p> <p>(e) Pre-bored Socketed H-pile</p>
ND/2019/03	<p>(a) Road and Drainage work in Portion 1;</p> <p>(b) Portion 2 to Portion 20</p> <ul style="list-style-type: none"> - 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 works 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 <p>(c) Portion 22 and Portion 27</p> <ul style="list-style-type: none"> - Planting at Portion 22
ND/2019/05	<p>(a) Ground investigation works</p> <p>(b) Pre-drilling for bored poles</p> <p>(c) Bored piling</p> <p>(d) Socketed H-pile installation</p> <p>(e) Construction of haul road</p> <p>(f) Construction of footpath</p> <p>(g) Footing construction</p> <p>(h) Site formation</p>

	<ul style="list-style-type: none"> (i) Utilities diversion works (j) Project Manager's site accommodation construction (k) Tree transplant (l) TTA (m) Drainage & water mains construction (n) Temporary removal of noise barrier and sign gantry (o) UU diversion (p) Rockfill slope construction (q) Road works for temporary road diversion (r) Retaining wall construction (s) Slope construction (t) Footbridge staircase demolition
ND/2019/06	<ul style="list-style-type: none"> (a) Construction of finishing works, E&M works and Building Services works of Management Office Building (MOB) at Portion 4. (b) Installation of truss of steel canopy at Portion 3. (c) Drainage works in the final stage market at Portion 3. (d) Formation of carriageway and footway at Portion 3. (e) Off-site fabrication, welding and application of coating of columns and steel truss of steel canopy in China. (f) Slope improvement works at Portion 6. (g) Mobilization of plants for mini-pile works at Portion 3 and 5. (h) Commencement of mini-pile works at Portion 3 and 5.

1 INTRODUCTION

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

Purpose of the report

- 1.2 This is the 15th EM&A Report which summarises the key findings of the EM&A programme in January 2021.

Structure of the report

- 1.3 The structure of the report is as follows:

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

Shek Sheung River and Long Valley, monitoring of measures to minimise impacts on ecological sensitive habitats from disturbance and pollution during the reporting month.

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

2 PROJECT INFORMATION

Background

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

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

Table 2.1 Summary of EPs under the Project and the Respective Work Contracts

EP No.	Designated Project	C1	C2	C3	C5 A	C5 B	C6	C7
EP-466/2013	Castle Peak Road Diversion	✓						
EP-467/2013/A	Kwu Tung North New Development Area Road P1 and P2 and Associated New Kwu Tung Interchange and Pak Shek Au Interchange Improvement	✓						
EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5	✓		✓				
EP-469/2013	Sewage Pumping Stations in Kwu Tung North New Development Area		✓					
EP-470/2013	Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works	✓						
EP-473/2013/A	Fanling Bypass Eastern Section			✓	✓	✓		
EP-475/2013/A	Reprovision of temporary Wholesale Market in Fanling North New Development Area						✓	
EP-546/2017	Fanling North Temporary Sewage Pumping Station				✓			

Note: C1: ND/2019/01 C2: ND/2019/02 C3: ND/2019/03 C5A: ND/2019/04
C5B: ND/2019/05 C6: ND/2019/06 C7: ND/2019/07

- 2.4 The site boundary of the Project and all Works Contracts are shown in **Drawing No. 1**.
- 2.5 The required submissions and submission status under Environmental Permits are shown in **Appendix R**.

Project Organization

- 2.6 Different parties with different levels of involvement in the Project organization include:
- Project Proponent – Civil Engineering and Development Department (CEDD)
 - *Supervisor / Supervisor's Representative* – AECOM
 - Environmental Team (ET) – Wellab Limited
 - Independent Environmental Checker (IEC) – Mott MacDonald Hong Kong Ltd (MottMac)
- 2.7 The key personnel contact names and numbers are summarised in **Table 2.2**.

Table 2.2 Key Contacts of the Project

Party	Role	Contact Person	Phone No.	Fax No.
Civil Engineering and Development Department, HKSAR (CEDD)	Project Proponent	Mr. Felix Fan	3152 3551	3547 1658
<i>Supervisor / Supervisor's Representative</i> (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
<u>Contract No. ND/2019/01</u> Contractor (Build King – Richwell Engineering Joint Venture.)	Site Agent	Mr. Ivan Leung	9640 8340	--
	Environmental Officer	Mr. Edward Tam	9287 8270	
<u>Contract No. ND/2019/02</u> Contractor (Chun Wo – Kwan Lee Joint Venture.)	Site Agent	Mr. Luk Wai Lam	3485 9780	--
	Environmental Officer	Mr. Ng Tao, Richard	9802 9577	
<u>Contract No. ND/2019/03</u> 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	
<u>Contract No. ND/2019/05</u> Contractor (CRCC – Paul Y. Joint Venture)	Site Agent	Mr. Francis Suen	6672 0311	--
	Environmental Officer	Mr. Pan Fong	9436 9435	
<u>Contract No. ND/2019/06</u> Contractor (New Concepts Engineering Development Ltd.)	Site Agent	Mr. Anson Chan	9349 1320	2363 2162
	Environmental Officer	Mr. Alex Choy	9409 9608	
	Environmental Coordinator	Ms. Mildred Hung	9460 2745	

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 (January 2021)
ND/2019/01	<ul style="list-style-type: none"> (a) Site clearance (tree felling) in Portion 1f (b) Site clearance, working platform erection for soil nail, soil nailing in Portion 2 (c) Site clearance in Portion 3 (d) Erection of temporary noise barrier, laying of rising mains in Portion 4 (e) Site clearance, temporary slope cutting for temporary soil nailing, Stockpile of soil, ground investigation, construction of KW01 retaining wall in Portion 5 (f) Site clearance, temporary slope cutting for temporary soil nailing, sheetpiling and excavation, pipes laying, backfilling, 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 & T3, sheetpiling and excavation, pipes laying in Portion 7 (i) Ground Investigation, 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) Ground Investigation (trial pits) in Portion 8b (k) Site clearance. ground investigation, trial pits in Portion 9b (l) Stockpile of soil, temp. slope protection works in Portion 9c (m) Pipes laying, sheet piling for ELS and excavation works in Portion 10a (n) Site clearance in Portion 10b (o) Site clearance in Portion 16
ND/2019/02	<ul style="list-style-type: none"> (a) GI (b) Tree felling (c) ELS (d) Hoarding erection (e) Pre-bored Socked H-pile (f) Footpath improvement work
ND/2019/03	<ul style="list-style-type: none"> (a) Road and Drainage work at Portion 1 (b) Erection of Permanent Boundary Structure, Construction of Irrigation Channel, Geotechnical Works in Long Valley (Trail Pits), Construction of

Contract No.	Site Activities (January 2021)
	Temporary Road in Long Valley, Asbestos Removal in Long Valley, Demolition of Existing Construction in Handed over Area, Construction works of storage shed and Type 2 Storage House, Construction of Bird Hiad, Construction works of Outdoor classroom, Wetland Creation & Restoration works after Obtaining Approval from AFCD in Portion 2 to 20 (c) Planting in Portion 22
ND/2019/05	(a) Ground investigation works, pre-drilling for bored piles, bored piling, socketed H-pile installation and footing construction for bridge foundation works (b) Construction of utilities, drainage, car park and miscellaneous and ABWF works for Project Manager's site accommodation (c) Ground investigation works and SB permanent footpath construction at Jockey Club Road (d) Site formation and Utilities diversion works at Tai Wo Service Road West (e) Box culvert BC5 and associated drainage construction and drainage works at Tai Wo Service Road East (f) Erection of temporary signboard for dismantle works of existing sign gantry E-DST11
ND/2019/06	(a) Construction of finishing works, E&M works and Building Services works of Management Office Building (MOB) at Portion 4. (b) Installation of truss of steel canopy at Portion 3. (c) Drainage works in the final stage market at Portion 3. (d) Formation of carriageway and footway at Portion 3. (e) Off-site fabrication, welding and application of coating of steel truss of steel canopy in China. (f) Slope improvement works at Portion 6.

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	21/11/2013	N/A	Valid
ND/2019/05	EP-473/2013/A	21/11/2013	N/A	Valid
ND/2019/06	EP-475/2013/A	13/01/2017	N/A	Valid
Construction Noise Permit (CNP)				
ND/2019/01	GW-RN0540-20	29/07/2020	16/01/2021	Expired in the reporting period
	GW-RN0626-20	16/09/2020	15/03/2021	Valid
	GW-RN0625-20	08/09/2020	07/03/2021	Valid
	GW-RN0904-20	23/12/2020	22/03/2021	Valid
	GW-RN0011-21	17/01/2021	16/07/2021	Valid
ND/2019/03	GW-RN0649-20	13/09/2020	28/02/2021	Valid
ND/2019/05	GW-RN0578-20	11/08/2020	03/02/2021	Valid
	GW-RN0788-20	05/11/2020	04/05/2021	Valid
	GW-RN0890-20	21/12/2020	20/03/2021	Valid
ND/2019/06	GW-RN0507-20	25/07/2020	24/01/2021	Expired in the reporting period
	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/2019/05	454323	13/03/2020	N/A	Valid
ND/2019/06	449369	24/09/2019	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/2019/05	7036901	01/04/2020	N/A	Valid
ND/2019/06	7035473	17/10/2019	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/2019/05	5213-625-C4464-01	20/05/2020	N/A	Valid
ND/2019/06	5213-625-N2716-01	02/10/2019	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
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/2019/05	WT00036996-2020	22/12/2020	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. **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/2019/05	FLN-DMS3 ^[3]	House near Tong Hang
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 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/03.

Monitoring Equipment

- 3.4 As the power supply for High Volume Sample (HVS) for TSP monitoring at KTN-DMS 4 was 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 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
KTN-DMS4	Dust Monitor (1-hour and 24-hour TSP)	Met One Instruments	AEROCET-831	7
FLN-DMS1 FLN-DMS3	Dust Monitor (1-hour TSP)			
	HVS Sampler (TSP) (24-hour TSP)	Tisch	TISCH Model: TE-5170	2

- 3.8 Meteorological information extracted from “Hong Kong Observatory - Ta Kwu Ling Weather Station” was proposed as the alternative method to obtain representative wind data. For Ta Kwu Ling Weather Station, it is located nearby the Project site and situated at approximately 15m above mean sea level. The station’s wind data monitoring equipment is set above the existing ground ten meters in compliance with the general setting up requirement. Furthermore, this station also provides other meteorological information, such as the humidity, rainfall, air pressure and temperature etc.
- 3.9 The general weather conditions (i.e. sunny, cloudy or rainy) were recorded by the field staffs during the monitoring day.

Monitoring Parameters, Frequency and Duration

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

Table 3.3 Impact Dust Monitoring Parameters, Frequency and Duration

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

Monitoring Methodology and QA/QC Procedure

1-hour and 24-hour TSP Air Quality Monitoring

Instrumentation

- 3.11 Direct reading dust meter was deployed for the air quality monitoring as shown in **Table 3.2**.
- 3.12 The measuring procedures of the dust meter are in accordance with the Manufacturer's Instruction Manual as follows:

(AEROCET-831)

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

Maintenance/Calibration

- 3.13 The following maintenance/calibration was required for the direct dust meters:
- Check and calibrate the meter by HVS to check the validity and accuracy of the results measured by direct reading method at 2-month intervals throughout all stages of the air quality monitoring.

24-hour TSP Air Quality Monitoring

Instrumentation

(TISCH Model: TE-5170)

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

HVS Installation

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

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

Filters Preparation

- 3.16 Wellab Limited (HOKLAS Registration No.083) is the HOKLAS accredited laboratory and responsible for the preparation of 24-hr conditioned and pre-weighed filter papers for monitoring team.
- 3.17 All filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than ± 3 °C; the relative humidity (RH) was < 50% and not variable by more than ± 5 %. A convenient working RH was 40%.

Operating/Analytical Procedures

- 3.18 Operating/analytical procedures for the air quality monitoring were highlighted as follows:
- Prior to the commencement of the dust sampling, the flow rate of the HVS was properly set (between 1.1 m³/min. and 1.4 m³/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50;
 - The power supply was checked to ensure the sampler worked properly;
 - On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air quality monitoring station;
 - The filter holding frame was then removed by loosening the four nuts and carefully a weighted and conditioned filter was centered with the stamped number upwards, on a supporting screen;
 - The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges;
 - The shelter lid was closed and secured with the aluminum strip;
 - The timer was then programmed. Information was recorded on the record sheet, which

included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number);

- After sampling, the filter was removed and kept in a clean and tightly sealed plastic bag. The filter paper was then be returned to the HOKLAS laboratory (Wellab Ltd.) for reconditioning in the humidity-controlled chamber followed by accurate weighting by an electronic balance with a readout down to 0.1mg. The elapsed time was also recorded; and
- Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature should be between 25°C and 30°C and not vary by more than $\pm 3^\circ\text{C}$; the RH should be $< 50\%$ and not vary by more than $\pm 5\%$. A convenient working RH is 40%. Weighing results were returned for further analysis of TSP concentrations collected by each filter.

Maintenance/Calibration

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

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

Results and Observations

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

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

Monitoring Station	Concentration ($\mu\text{g}/\text{m}^3$)		Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
	Average	Range		
FLN -DMS1	159.3	94.8 – 259.3	303	500
FLN -DMS3	139.2	93.5 – 225.7	301	500
KTN-DMS4	147.9	81.3 – 226.0	297	500

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

Monitoring Station	Concentration ($\mu\text{g}/\text{m}^3$)		Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
	Average	Range		
FLN -DMS1	81.4	58.1 – 130.8	150	260
FLN -DMS3	113.6	66.5 – 139.5	165	260
KTN-DMS4	153.2	109.4 – 188.6	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	Road traffic, excavator, dump truck, concrete mixer truck, mobile crane
FLN -DMS3	Road traffic, excavator, backhoe
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 K** 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/2019/05	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 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.

[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	3
Acoustical Calibrator	SVANTEK	SV30A	2

Monitoring Parameters, Frequency and Duration

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

Table 4.3 Noise Monitoring Parameters, Duration and Frequency

Contract No.	Monitoring Stations	Parameter	Duration	Frequency	Measurement
ND/2019/06	CP-FLN-NMS1 ^[3]	$L_{10(30 \text{ min.})}$ dB(A) $L_{90(30 \text{ min.})}$ dB(A) $L_{eq(30 \text{ min.})}$ dB(A) (as six consecutive $L_{eq, 5 \text{ min}}$ readings)	0700-1900 hrs on normal weekdays	Once per week	Façade
ND/2019/05	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 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.

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

Monitoring Methodology and QA/QC Procedures

- The microphone head of the sound level meter was positioned at 1m from the exterior of the noise sensitive I and lowered sufficiently so that the building's external wall acted as a reflecting surface;
- The battery condition was checked to ensure the correct functioning of the meter;
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - frequency weighting : A
 - time weighting : Fast
 - time measurement : $L_{eq}(30 \text{ min.}) \text{ dB(A)}$
(as six consecutive $L_{eq, 5\text{min}}$ readings) during non-restricted hours (i.e. 0700-1900 hrs on normal weekdays)
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after re- calibration or repair of the equipment;
- During the monitoring period, the L_{eq} , L_{90} and L_{10} were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet;
- Noise measurement was paused temporarily during periods of high intrusive noise (e.g. dog barking, helicopter noise) if possible and observation record during measurement period should be provided; and
- Noise monitoring was cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s. The wind speed should be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

Maintenance and Calibration

- 4.5 The microphone head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.
- 4.6 The sound level meter and calibrator were checked and calibrated at yearly intervals.
- 4.7 Immediately prior to and following each noise measurement, the accuracy of the sound level meter should be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements would be accepted as valid only if the calibration levels before and after the noise measurement agreed to within 1.0 dB.

Results and Observations

- 4.8 The noise monitoring results are summarized in **Table 4.4**. Detailed monitoring results and graphical presentations of noise monitoring are shown in **Appendix F**. The weather information for the reporting month is summarized in **Appendix J**.

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]	60.4 – 69.2	69.9	75
ND/2019/05				
ND/2019/01	CP-FLN-NMS2 ^[2]	50.1 – 64.7	59.6	
	CP-KTN NMS2 ^[3]	47.8 – 57.8	58.6	
	CP-KTN NMS3 ^[4]	47.7 – 51.9	51.6	
ND/2019/01	CP-KTN NMS5	48.5 – 53.4	57.2	
ND/2019/02	CP-KTN-NMS6	54.8 – 60.3	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. Two Action Level exceedance for noise monitoring was recorded due to the documented noise complaints received for Contract ND/2019/02 and ND/2019/05 and no Limit Level exceedance was recorded in this reporting month. The summary of exceedance record in reporting month is shown in **Appendix L**.
- 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, Road Traffic at Ma Sik Road, other construction site
ND/2019/05			Excavator, Breaking machine, Soil nailing machine, Road Traffic near Tong Hang
ND/2019/01	CP-KTN-NMS2 ^[3]	Residential Buildings at Ma Tso Lung (Existing)	Dump truck, Road Traffic near Ma Tso Lung, Road washing

ND/2019/01	CP-KTN-NMS3 ^[4]	Fung Kong Garden (Existing)	Road Traffic near Fung Kong Garden
ND/2019/01	CP-KTN-NMS5	N/A	Traffic noise from railway, other construction site
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 near Ho Sheung Heung, other construction site

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 K** shall be carried out.

5 WATER QUALITY MONITORING**Monitoring Requirements**

- 5.1 In accordance with the Updated EM&A Manual, impact water quality monitoring shall be carried out three days per week at all the designated monitoring stations during the construction period. The measurement periods are during the construction of channel specified in Table 4.1 of Updated EM&A Manual. The interval between two sets of monitoring shall not be less than 36 hours.
- 5.2 Replicate in-situ measurements of Dissolved Oxygen (DO), temperature, turbidity, pH, Suspended Solids (SS) and samples for Suspended Solids (SS), ammonia nitrogen, unionized ammonia, nitrate nitrogen and orthophosphate from each independent sampling event shall be collected to ensure a robust statistically interpretable database.
- 5.3 **Appendix B** shows the established Action and Limit Levels for the water quality monitoring work according to pre-construction ET's Updated EM&A Manual and Baseline Water Quality Monitoring Report (KTN & FLN NDA).

Monitoring Parameters, Frequency

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

Table 5.1 Water Quality Monitoring Parameters and Frequency

Parameters, unit	Depth	Frequency
<ul style="list-style-type: none"> • Temperature(°C) • pH(pH unit) • turbidity (NTU) • water depth (m) • salinity (ppt) • DO (mg/L and % of saturation) • SS (mg/L) • Ammonia Nitrogen (NH₃-N) (mg NH₃-N/L) • Unionized Ammonia (UIA) (mg/L) • Nitrate-nitrogen (NO₃-N) (mg NO₃⁻-N/L) • Ortho-phosphate (PO₄) (mg PO₄³⁻-P/L) 	<ul style="list-style-type: none"> • 3 water depths: 1m below water surface, mid-depth and 1m above river bed. • If the water depth was less than 3m, mid-depth sampling only. • If water depth was less than 6m, mid-depth may be omitted. 	3 days per week during construction of channel

Results and Observations

- 5.5 According to the Section 5.6.1.2 of approved EIA Report, the potential water quality impact

during construction is due to the alternation of natural streams (i.e. channelization of Ma Tso Lung Stream and Siu Hang San Tsuen Stream) as these two streams are the ecological importance streams.

- 5.6 No construction of channel was carried out Ma Tso Lung Stream and Siu Hang San Tsuen Stream during the reporting month. Therefore, no water quality monitoring was conducted.

6 LAND CONTAMINATION (AMBIENT ARSENIC MONITORING)**Monitoring Requirements**

- 6.1 According to Section 7.5 of updated EM&A Manual, an ambient arsenic monitoring is required to be conducted in KTN during the clean-up processes of arsenic containing soil and the construction phase.
- 6.2 The Respirable Suspended Particulate (RSP, or PM10) should be measured by High Volume Sampler (HVS) equipped with PM10 selector following the "Reference Method for the Determination of Particulate Matter as PM10 in the Atmosphere" Part 50 Chapter 1 Appendix J, Title 40 of the Code of Federal Regulations of the USEPA.
- 6.3 The Dust-laden air should be drawn through PM10 HVS fitted with a conditioned pre-weighting filter paper, at a controlled rate. After sampling for 24-hour (refer Section 9.5.5 for details on measurement period), the filter paper with retained PM10 particulates shall be collected and returned to the laboratory for drying in a desiccators followed by accurate weighting. 24-hour average RSP levels shall be calculated from the ratio of the mass of PM10 particulates retained on the filter paper to the total volume of air sampled.
- 6.4 The weighted filter paper shall be prepared for arsenic testing through a "Hot Acid Extraction Procedure". The extracted material shall be tested for arsenic by using Inductively Coupled Plasma/Mass Spectrometry (ICP/MS). The extraction and testing will be referenced to the following methods:
- Compendium Method 10-3.1 Selection, Preparation and Extraction of Filter Material, Center for Environmental Research Information, Office of Research and Development, USEPA, June 1999; and
 - Compendium Method 10-3.5 determination of Metals in Ambient Particulate Matter using Inductively Coupled Plasma/Mass Spectrometry (ICP/MS., Center for Environmental Research Information, Office of Research and Development, USEPA, June 1999.

Monitoring Location

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

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 m³/min. and 1.4 m³/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.
- The power supply was checked to ensure the sampler worked properly. On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.
- The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter will be carefully centered with the stamped number upwards, on a supporting screen.
- The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure were sufficient to avoid air leakage at the edges.
- The shelter lid was closed and secured with the aluminum strip.
- The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).
- After sampling, the filter was removed and sent to the Wellab Ltd. for weighing. The elapsed time was also recorded.
- Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature was between 25°C and 30°C and not vary by more than ±3°C; the relative humidity (RH) was < 50% and not vary by more than ±5%. A convenient working RH was 40%. Weighing results were further analysis of RSP concentrations collected by each filter.

Maintenance/Calibration

6.10 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)
05/01/2021	KTN-DMS-4A	5.12	9.36	11.7
11/01/2021		5.94		
15/01/2021		3.90		
21/01/2021		7.01		
27/01/2021		7.66		

- 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 K** 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	RKI Eagle (Serial No. E094106)	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 G**. 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 K** would be carried out.

8 BUILT HERITAGE MONITORING**Monitoring Requirement**

- 8.1 In accordance with the updated EM&A Manual, baseline condition survey and baseline vibration impact assessment shall be conducted for identified built heritage prior to the commencement of construction works. Baseline condition survey and baseline vibration impact assessment shall be conducted by a qualified building surveyor or qualified structural engineer to define the vibration limit (a vibration limit at 7.5mm/s and 15mm/s could be adopted for graded historical buildings and historical buildings, respectively) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase to ensure the construction performance meets with the vibration standard stated in the EIA report.
- 8.2 According to the condition survey report from cultural heritage condition survey for Fanling Bypass Eastern Section under EP-473/2013/A, vibration monitoring plan was proposed for the surveyed cultural heritage based on the Buildings Department's Practice Note (PNAP APP-137). This section presents the results of built heritage monitoring performed by the Contractor according to the proposed monitoring plan in baseline condition survey report. **Appendix B** shows the Limit Levels for the monitoring works.

Monitoring Location

- 8.3 In the reporting month, construction vibration monitoring was conducted for built heritage feature at FL36 when pile driving operation was conducted within assessment area of construction works. The location of the construction vibration monitoring stations was summarised in **Table 8.1** and shown in **Appendix H**.

Table 8.1 Location of Construction Vibration Monitoring

EP. No	Contract No.	Monitoring Station (s)	Nature of Cultural Heritage	Location (s)
EP-473/2013/A	ND/2019/05	FL36	Shrines	Opposite to Lincoln Centre, adjoin the Ma Wat River, slightly on the uphill side

Monitoring Parameters and Frequency

- 8.4 **Table 8.2** summarises the vibration monitoring plan for surveyed cultural heritage under the Works Contracts. Vibration monitoring was conducted for surveyed built heritage when pile driving operation were conducted within the assessment area of construction works.

Table 8.2 Vibration Monitoring Plan

EP. No	Contract No.	Monitoring Station (s)	Distance with Construction Works	Monitoring Plan
EP-473/2013/A	ND/2019/05	FL36	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 and FL27 were not within the assessment area of the related construction work, no construction vibration monitoring was conducted for the built heritage in the reporting month.

- 8.5 The construction vibration monitoring was conducted throughout each event of the pile driving operation on a daily basis. The effect of ground-borne vibration from piling works on the surveyed built heritage was assessed by the maximum peak particle velocity (ppv), which was obtained from the maximum value of measurement of all pile driving operation events.

Monitoring Equipment

- 8.6 The copies of calibration certificate of the monitoring equipment employed by the Contractor for the construction vibration monitoring are attached in **Appendix C**.

Results and Observations

- 8.7 In the reporting month, construction vibration monitoring was carried out by the Contractor for the built heritage feature at FL36 on a daily basis when pile driving operation was conducted within 50m of construction work. No Limit Level exceedance for construction vibration monitoring was recorded in the reporting month. The monitoring results are provided in **Appendix H**.

Event and Action Plan

- 8.8 **Table 8.3** summarises the vibration limit for construction vibration monitoring for surveyed cultural heritage.

Table 8.3 Vibration Limit for Construction Vibration Monitoring

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

Remarks:

* peak particle velocity

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

- 8.9 If any exceedance of limit have been found or damage to either structural or non-structural elements of the historic buildings have been identified, the construction works should stop immediately and seek structural engineer's advices for any remedial work.

9 ECOLOGICAL MONITORING

Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, Sheung Yue River, Shek Sheung River and Long Valley

Monitoring Requirements and Protocol

- 9.1 As required under Section 12.3.2.5 of Updated EM&A Manual, where development under the NDAs project is undertaken within 200m (the maximum distance at which it is predicted there may be some disturbance, and hence a reduction in numbers, of large waterbirds) of Sheung Yue River and Long Valley, weekly transect at both high and low tides should be followed (It is considered high tide when the tidal levels are above 1.5m and low tide when the tidal levels are below 1.5m at Tsim Bei Tsui Station).
- 9.2 The purpose of the survey was to identify and enumerate all bird species utilizing the river channels and Long Valley Nature Park (LVNP) and identify any sources of actual or potential disturbance to birds due to construction activities throughout the construction period according to Methodology specified in Table 12.1 in Updated EM&A Manual.
- 9.3 Monitoring in Long Valley should follow the methodology adopted by the regular HKBWS bird monitoring programme in order to obtain comparable results and complete coverage of the area in the shortest time possible.

Monitoring Frequency

- 9.4 High tide and low tide avifauna monitoring is required to be carried out on weekly basis. Additional night-time avifauna monitoring in Long Valley is required to be carried out twice monthly from September to April.

Date of avifauna monitoring: 5th, 8th, 12th, 15th, 18st, 19th, 25th, 29th January 2021

Date of night-time monitoring: 8th, 12th January 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 7** 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, 69 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 I1k and I1l** 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.

9.13 A high abundance of *Himantopus himantopus* and *Tringa glareola* were found roosting at night-time in shallow water habitats. *Gallinago gallinago*, *Anas crecca*, *Rostratula benghalensis*, *Ardea cinerea*, *Charadrius dubius*, *Recurvirostra avosetta* and *Amaurornis phoenicurus* were also found in wet habitats during the night survey.

9.14 Soil turning with excavator and landscape formation 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, while construction activities were observed at T2 during the avifauna monitoring.

- 9.17 *Falco tinnunculus* and *Accipiter trivirgatus* 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 I1**.

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.

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 |
- 9.23 The location of Monitoring Stations shown in **Figure 8** 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 Status

- 9.26 According to the Updated EM&A Manual, quantitative aquatic fauna replicate surveys of stream fauna is required to be carried out on monthly basis during wet season. During the reporting Month, no aquatic fauna replicate surveys was carried out.

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

Monitoring Requirements and Protocol

- 9.27 As required under Section 12.3.2.17 of Updated EM&A Manual, monitoring of measures to minimize impacts should be carried out during the construction phase.
- 9.28 The purpose of survey is to monitor the effectiveness of measures to minimize impacts on ecologically sensitive habitats from disturbance and pollution by standard faunal transect surveys.

Mammal survey

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

Herpetofauna survey (Amphibians and Reptiles)

- 9.31 Amphibian surveys should be conducted whenever possible on evenings following or during periods of rainfall, focusing on areas suitable for amphibians (e.g. forest, shrublands, grasslands, streams, ponds, marshes, etc.). Calling amphibians should be recorded, supplemented by visual observation of eggs, tadpoles, adult frogs, and toads.
- 9.32 Active searching of appropriate microhabitats such as stones, pond bunds, crevices and leaf debris should be performed mainly. Observation of exposed, basking and foraging reptiles should also be conducted. Nomenclature of amphibian and reptile should be based on Chan et al. (2005) and Karsen et al. (1998), respectively.

Insect survey (Butterfly and Dragonfly)

- 9.33 Butterflies and dragonflies observed along the transects should be identified and counted. Preferable habitats of the insects such as watercourses, fishponds, and vegetated areas should be observed with special attention. Nomenclature and protection status of the species should

be based on Lo et al. (2005) for butterflies and Tam et al. (2011) for dragonflies

Monitoring Frequency

- 9.34 Monitoring surveys of ecological sensitive receivers such as mammals, insects (butterflies and dragonflies), and herpetofauna should be undertaken on a monthly bases.

Date of Monitoring surveys of ecological sensitive receivers: 25th, 27th January 2021

Monitoring Location

- 9.35 The transect routes in the Reporting Month according to construction works are as follows:
- T1. Ma Tso Lung riparian zone and associated wetland habitats;
 - T1. Green belt areas E1-8, D1-8 and G1-3 in KTN NDA;
 - T1. AGR one C2-4 and C2-2 in KTN NDA;
 - T1. Area north of Ng Tung River;
 - T3. Area west of Siu Hang San Tsuen Stream
 - T4. South side of Fanling Highway and Castle Peak Road in the vicinity of Pak Shek Au;
 - T5. Area west and east of the southern limit of the FLN NDA work area; and
 - T6. Areas in the western part of KTN
- 9.36 The location of Transects is shown in **Figure 9** for reference.

Monitoring Parameters

- 9.37 The monitoring parameters and survey methodology for each transect are described below:-
- Species composition
 - Abundance
 - Distribution for fauna observed
 - Species of conservation significance would be specified

Monitoring Result

Mammal

- 9.38 During the survey, a total of 6 mammal species were recorded from transects T1, T3, T4, T5 and T6. A total of 4 species of conservation importance were recorded, namely *Miniopterus schreibersii*, *Rhinolophus* sp., *Pipistrellus abramus* and *Cynopterus sphinx*, which are all bat species.
- 9.39 Domestic cat, *Felis catus* was found at T1 and T5. Domestic dog, *Canis lupus familiaris*, was found at T1, T3, T4, T5 and T6, where associated with human settlements.
- 9.40 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 and T3. *Miniopterus* sp. was recorded in flight at nighttime at T1, *Rhinolophus* sp. was recorded in flight at nighttime at T5, *Pipistrellus abramus* was recorded in flight at nighttime at T1, T3, T4, and T5.
- 9.41 Echolocation calls of bats were recorded with a bat detector. The bat detector would list out possible bat species having similar echolocation calls in pattern and frequency. The structure

of the echolocation calls from the recordings was later analysed to identify species as far as possible (the lack of literature on echolocation call structure makes the field identification of some bat species in Hong Kong difficult, and some species could only be identified to genus level, or remain unidentified from the recordings).

- 9.42 Identification of bat species encountered in the surveys was made with consideration to the possible bat species suggested by the bat detector, the distribution of the suggested bat species in Hong Kong, previous records of bat species in the EIA Report and Baseline Monitoring Report, and the structure of echolocation calls of the recordings (including call structure, frequency, duration, inter pulse interval etc., with reference to relevant literatures).
- 9.43 *Miniopterus* sp. was with echolocations in call structure of FM/QCF (frequency modulated/quasi constant frequency) and frequency around 50 kHz to 64 kHz recorded (Chao, 2001, p.54 and Chou & Cheng, 2012, p.42). *Rhinolophus* sp. was recorded with echolocations in call structure of FM-CF-FM (frequency modulated -constant frequency -frequency modulated) and frequency around 35 kHz to 45 kHz (Shek & Lau, 2006, p.9-12). *Pipistrellus abramus* was recorded with FM/QCF call structure and frequency around 45 kHz to 62 kHz (Chao, 2001, p.54 and Ma et.al, 2010, p.6). The above characteristics were further compared with data from relevant literatures to confirm the identities. References were made to Tong (2016).

Herpetofauna (Amphibians and Reptiles)

- 9.44 Along the transects, a total of 3 herpetofauna species were observed. None of them were species of conservation importance. Species including toad and gecko were recorded near wetland habitats and watercourse. Transect T5 had higher species diversity and abundance than other transects.

Insects (Butterfly and Dragonfly)

- 9.45 During the insect survey, a total of 12 butterfly species and 5 odonata species were recorded from the transects, with none of the species being of conservation importance. Transect T1 and T5 had higher butterfly species diversity than other transects. Uncommon species *Chilades pandava* was found at transect T1.
- 9.46 Number of dragonfly species recorded in the reporting month is similar among all of the transects. All of the dragonfly species recorded were common and abundant in Hong Kong.
- 9.47 Ecological sensitive receivers such as mammals, insects (butterflies and dragonflies), and herpetofauna monitoring in construction phase was conducted during the reporting month and the results are attached in **Appendix I2 to I5**.

Results and Observation

Details of the Influencing Factors

Major Activities

- 9.48 During the survey of Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley, anthropogenic activities including soil turning with excavator and landscape formation works were observed in Long Valley. Construction work was observed beside Sheung Yue River.

- 9.49 The anthropogenic activities affected only a small area of habitat in Long Valley during the monitoring and would only pose minor disturbances to the birds. It was observed that *Bubulcus coromandus* foraged in close vicinity to the excavators.
- 9.50 During the survey of Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, anthropogenic activities including construction works at T2, and recreational fishing by fishing rod at both T1 and T2 were observed.

Weather Conditions

- 9.51 According to the observation during survey, temperature and the rain flow record in the Reporting Month (Reference: <http://www.weather.gov.hk/wxinfo/pastwx/metob202101.htm>), weather condition might pose influence towards the monitoring result.
- 9.52 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.
- 9.53 The detailed Ecological monitoring results are attached in **Appendix I**.

Reference

- 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)
- 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.
- 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.
- Shek, C. T., & Lau, T. Y. (2006). Echolocation Calls of Five Horseshoe Bats of Hong Kong. *Hong Kong Biodiversity*, 13, 9-12.
- 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 M**.

Table 10.1 Summary of Site Audit

Environmental Site Inspection	Works Contracts				
	ND/2019/01	ND/2019/02	ND/2019/03	ND/2019/05	ND/2019/06
Weekly site audit with representative of the <i>Supervisor's</i> Representative and the Contractor	5 th , 12 th , 19 th , 26 th January 2021	6 th , 13 th , 22 nd , 27 th January 2021	8 th , 15 th , 22 nd , 29 th January 2021	4 th , 13 th , 18 th , 25 th January 2021	6 th , 11 th , 21 st , 28 th January 2021
Joint Site Audit with representative of the <i>Supervisor's</i> Representative, the Contractor and IEC	12 th January 2021	22 nd January 2021	22 nd January 2021	13 th January 2021	11 th January 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	29/12/2020	To replace the impervious materials for covering and sheltering stock of more than 20 bags of cement on top and 3 sides. (Portion 5)	Improvement/Rectification was observed during follow-up audit session on 5 January 2021.
	12/01/2021	NRMM Label was observed faded, Contractor was reminded to replace the NRMM Label.	Improvement/Rectification was observed during follow-up audit session on 19 January 2021.
	26/01/2021	To avoid cement from extending beyond storage area for preventing dust generation. (Portion 8)	Follow-up action is needed to be reported in the following month.
Waste/ Chemical Management	29/12/2020	Drip tray should be provided for chemical storage at Portion 8a.	Improvement/Rectification was observed during follow-up audit session on 5 January 2021.
	29/12/2020	To provide adequate capacity of storage area with drip trays for chemical storage. (Portion 5)	Improvement/Rectification was observed during follow-up audit session on 5 January 2021.
	05/01/2021	Drip tray should be provided for chemical storage.	Improvement/Rectification was observed during follow-up audit session on 12 January 2021.
	19/01/2021	Drip tray should be provided for chemical storage.	Improvement/Rectification was observed during follow-up audit session on 26 January 2021.
Contract No.: ND/2019/02			
Air Quality	06/01/2021	Contractor was reminded to water the exposed worksites regularly to avoid dust generation.	Improvement/Rectification was observed during follow-up audit session on 13 January 2021.
	06/01/2021	NRMM Label was observed faded, Contractor was reminded to replace the NRMM Label.	Improvement/Rectification was observed during follow-up audit session on 13 January 2021.
	13/01/2021	NRMM Label was observed faded, Contractor was reminded to replace the NRMM Label.	Item was remarked as 210122-R01. Follow-up action is needed to be reviewed.
	22/01/2021	NRMM Label was observed faded, Contractor was reminded to replace the NRMM Label.	Improvement/Rectification was observed during follow-up audit session on 27 January 2021.

	22/01/2021	Contractor was reminded to clean the road regularly.	Improvement/Rectification was observed during follow-up audit session on
Water Quality	30/12/2020	Contractor was reminded to clear the debris in channel.	Item was remarked as 210106-R03. Follow-up action is needed to be reviewed.
	06/01/2021	Contractor was reminded to clear the debris in channel.	Improvement/Rectification was observed during follow-up audit session on 13 January 2021.
	22/01/2021	Contractor was reminded to provide sandbag to prevent surface runoff and waste water discharge into nearby water course.	Item was remarked as 210127-R03. Follow-up action is needed to be reviewed.
	27/01/2021	To prevent surface muddy runoff from entering nearby planting area.	Follow-up action is needed to be reported in the following month.
Waste / Chemical Management	22/01/2021	General refuse should be disposed of properly.	Improvement/Rectification was observed during follow-up audit session on 27 January 2021.
	22/01/2021	Properly clear the oil spillage from the generator.	Item was remarked as 210127-R02. Follow-up action is needed to be reviewed.
	27/01/2021	To avoid overlapping of chemical and provide adequate bund capacity for storage.	Follow-up action is needed to be reported in the following month.
	27/01/2021	Properly clear the oil stain from the air compressor.	Follow-up action is needed to be reported in the following month.
Ecology	30/12/2020	Hoarding was erected at part of active works area. Hoarding erection is still processing and will be checked and reviewed.	Improvement/Rectification was observed during follow-up audit session on 6 January 2021.
Contract No.: ND/2019/03			
Air Quality	08/01/2021	Exposed worksite and haul road should be watered at least once per hour to avoid dust generation.	Improvement/Rectification was observed during follow-up audit session on 15 January 2021.
	08/01/2021	NRMM Label was observed faded, Contractor was reminded to replace the NRMM Label.	Improvement/Rectification was observed during follow-up audit session on 15 January 2021.


Waste/ Chemical Management	08/01/2021	General refuse should be disposed of properly.	Improvement/Rectification was observed during follow-up audit session on 15 January 2021.
	15/01/2021	General refuse should be disposed of regularly.	Improvement/Rectification was observed during follow-up audit session on 22 January 2021.
	29/01/2021	Drip tray should be provided for chemical storage.	Follow-up action is needed to be reported in the following month.
Contract No.: ND/2019/05			
Air Quality	28/12/2020	NRMM label was observed faded. Contractor was reminded to display valid NRMM label. (Portion 6)	Improvement/Rectification was observed during follow-up audit session on 6 January 2021.
	28/12/2020	To keep public road near site entrance clean and free of dust.	Improvement/Rectification was observed during follow-up audit session on
	04/01/2021	NRMM label should be displayed on regulated machines.	Improvement/Rectification was observed during follow-up audit session on 13 January 2021.
	13/01/2021	NRMM label was observed faded. Contractor was reminded to display valid NRMM label.	Improvement/Rectification was observed during follow-up audit session on 18 January 2021.
Water Quality	25/01/2021	Avoid any untreated wastewater/muddy water runoff into nearby watercourse and site runoff should be directed to sedimentation tank before discharging.	Follow-up action is needed to be reported in the following month.
	25/01/2021	Contractor was reminded to regularly monitor the sedimentation tank to avoid overflow.	Follow-up action is needed to be reported in the following month.
Waste / Chemical Management	28/12/2020	To store chemical containers at area with drip tray provided. (Portion 6)	Improvement/Rectification was observed during follow-up audit session on 6 January 2021.
	04/01/2021	The chemical waste container should be locked.	Improvement/Rectification was observed during follow-up audit session on 13 January 2021.
	18/01/2021	Drip tray should be provided for chemical storage.	Improvement/Rectification was observed during follow-up audit session on 25 January 2021.





Contract No.: ND/2019/06			
<i>Air Quality</i>	11/01/2021	To further enhance dust mitigation measure including watering for works area.	Improvement/Rectification was observed during follow-up audit session on 21 January 2021.
<i>Water Quality</i>	11/01/2021	Contractor was reminded to clear the mud regularly and prevent/ avoid any muddy water discharge into nearby watercourse.	Improvement/Rectification was observed during follow-up audit session on 21 January 2021.
<i>Waste / Chemical Management</i>	06/01/2021	Housekeeping should be improved on site.	Improvement/Rectification was observed during follow-up audit session on 11 January 2021.
<i>Ecology</i>	11/01/2021	Dull green site barrier fences should be erected around all active works areas.	Improvement/Rectification was observed during follow-up audit session on 21 January 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 N**. The photographic records of measures as stipulated in EP to mitigate environmental impacts in the reporting month are presented in **Table 10.3**.

Table 10.3 Photographic Records and Implementation Status of Measures

EP No.	Condition	Photographic Record	Implementation Status
EP-466/2013	2.9	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(Figure 10)</p>	Λ _[1]

EP- 468/2013/ A	2.11	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(Figure 12)</p>	^ _[1]
EP- 469/2013	2.7	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(Figure 12)</p>	^ _[1]
EP- 473/2013/ A	2.13	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(Figure 14)</p>	^ _[1]
EP- 475/2013/ A	2.7	 <p>To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(Figure 15)</p>	^ _[1]
Implementation status:		<p>^ Mitigation measure was fully implemented</p> <p>* Observation/reminder was made during site audit but improved/rectified by the contractor</p> <p># Observation/reminder was made during site audit but not yet improved/ rectified by the contractor</p> <p>X Non-compliance of mitigation measure</p> <p>• Non-compliance but rectified by the contractor</p> <p>N/A Not Applicable at this stage as no such site activities were conducted in the reporting period</p>	

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

- 10.4 Under EP-467/2013/A (Condition 2.9), to minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas. As the Works programme under above EPs were still under preparation work and the barrier fences erection was still progressing in the Reporting Month, 2m high solid dull green site barrier fences will be checked once in place. The Hoarding Plan of the above EPs is shown in **Figure 11**.

Solid and Liquid Waste Management Status

- 10.5 Waste generated from Contract No. ND/2019/01, ND/2019/02, ND/2019/03, ND/2019/05 and ND/2019/06 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/2019/05 and ND/2019/06 during the reporting month is shown in **Appendix O**.
- 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 N**.

11 ENVIRONMENTAL NON-CONFORMANCE

Summary of Exceedances

- 11.1 Two Action Level exceedance for construction noise monitoring were recorded due to the documented noise complaint received for Contract ND/2019/02 and ND/2019/05 and no exceedance of Limit Level for construction noise monitoring was recorded in this reporting month.
- 11.2 No exceedance of Action and Limit Levels of air quality, ambient arsenic, landfill gas monitoring and built heritage monitoring in the reporting month. The summary of exceedance record in reporting month is shown in **Appendix L**.
- 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 K** 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 Four environmental complaints was received in the reporting month. Two of the complaint were received for ND/2019/01, one complaint was received for ND/2019/02 and one complaint was received for ND/2019/05. The Cumulative Complaint Log since the commencement of the Project is presented in **Appendix P**.

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 Q**.

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 (February and March 2021)	Location/ Working Period	Potential Environmental Impact	Recommended Mitigation Measures
ND/2019/01	(a) Site clearance	Portion 1f, 2, 3, 5, 6a, 7, 9c, 10b, 14, 16	<ul style="list-style-type: none"> - Construction Dust impact - Noise Impact (Construction Phase) - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste) 	Air <ul style="list-style-type: none"> - 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. - Erect solid site hoarding.
	(b) GI works	Portion 2, 3, 5, 8a, 8b		
	(c) Excavation	Portion 6a, 10a		
	(d) Construction of temporary road	Portion 7, 9b		
	(e) Construction of retaining wall	Portion 8a		
	(f) Sheetpiling	Portion 6a, 10a		
	(g) Soil nailing / shotcrete	Portion 2, 5, 6a, 8a		
	(h) Construction of CLC and site accommodation at Portion 7	Portion 7, 16		

	(i) Pre-bored H pile	Portion 6a		<p>Noise</p> <ul style="list-style-type: none"> - Regular inspect of construction plants in good condition - Provide temporary noise screens if necessary. - Use of Quiet plants (QPME) and working methods if possible. - Sequencing operation of construction plants where practicable. - Shut down the machines and plant if not in use. - Only well-maintained plant to be operated on-site. - Mobile plant to be sited as far away from NSRs as possible and practicable. - Conduct noise monitoring regularly. - Erect silent-up noise barrier at Portion 6b <p>Water</p> <ul style="list-style-type: none"> - Re-circulation / re-use of water to minimize wastewater generation. - Set up wastewater treatment system (AquaSed) on site. - Erect soil bund / temporary drain to divert /collect surface runoff. - Maintain the drainage and wastewater treatment facilities. <p>Waste Management</p> <ul style="list-style-type: none"> - Sort out demolition debris and excavated materials from demolition works to recover reusable / recyclable portions. - Provide recycling bin on site, encourage reuse and recycle as much as possible. - Provide drip tray for chemical containers. - Chemical spill kit available on site. - Chemical waste cabinet available on site.
	(j) Pilot trial for arsenic soil treatment works	Portion 6b		

				<ul style="list-style-type: none"> - Chemical wastes to be stored in appropriate containers and collected by a licensed chemical waste collector. - Delivery of yard waste to EcoPark for reuse or other agreed alternative site..
ND/2019/02	(a) Pipe Jacking	Portion 1, 2	Air, Noise, Water, Waste	<ul style="list-style-type: none"> - 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. - 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) Tree Felling	Portion 7, 10	Air, Noise, Waste	
	(c) Inspection Pit	Portion 1, 2	Air, Noise, Water, Waste,	
	(d) Hoarding and Dull green barrier erection	Portion 7, 9, 10	Air, Noise, Waste	
	(e) Pre-bored Socketed H-pile	Portion 7, 9, 10	Air, Noise, Water, Waste, Ecology	
ND/2019/03	(a) Excavation of irrigation channel	Long Valley	<ul style="list-style-type: none"> - C&D waste - Air pollution - Noise pollution 	<ul style="list-style-type: none"> - Watering exposed earth regularly - Cover C&D material by tarpaulin - Adopt QPME for excavation
	(b) Excavation of trench in Yin Kong Road	Portion 1 and Portion 1A	<ul style="list-style-type: none"> - C&D waste - Air pollution - Noise pollution - Water pollution 	<ul style="list-style-type: none"> - Watering exposed earth regularly - Cover C&D material by tarpaulin - Noise barrier for screening from source of noise - Wastewater will be treated before discharging to channel
	(c) Demolition of existing structure	Long Valley	<ul style="list-style-type: none"> - C&D material - Air Pollution 	<ul style="list-style-type: none"> - Cover C&D material by tarpaulin - Watering while demolish the structure

	(d) Construction works of storage shed and Type 2 Storage House	Long Valley	- 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/2019/05	(a) Ground investigation works	D32, D28, D38, D39, DH024 and slope GI at Tai Wo Service Road West, Jockey Club Road	- Construction Dust Impact - Noise Impact - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste) - Landscape and Visual - Cultural Heritage	- Regular watering on exposed worksites and haul road - Stockpiling area should be provided with covers and water spraying system - Only well-maintained plant to be operated on-site - Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; - Mobile plant to be sited as far away from NSRs as possible practicable - All open stockpiles of construction materials of more than 50m ³ to be covered with tarpaulin - Manholes to be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system - All vehicles and plant to be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. - Segregate and store different types of waste in different containers, skip or stockpiles to enhance 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
	(b) Pre drilling for bored piles	C4-03, D1 and E1		
	(c) Bored piling	C3-03, C3-04, C4-03, C4-04, E2-02, D2-02, E3-02 and E3-03		
	(d) Socketed H-pile installation	Ho Ka Yuen Footbridge		
	(e) Construction of haul road	D2-02		
	(f) Construction of Footpath	Jockey Club Road		
	(g) Site formation	Portion XIII		

	(h) Utilities Diversion Works	TWSRW		<ul style="list-style-type: none"> - To adopt other good site practice, such as arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site and regular cleaning and maintenance programme for drainage - Chemical wastes to be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation - Conducting Construction Vibration Monitoring - Tree Protection & Preservation – Existing trees to be retained within the Project site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. - Tree Transplantation – Tree unavoidably affected by the Project works should be transplanted where practical. Tree should be transplanted straight to their final receptor site and not held in a temporary 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.
	(i) Project Manager's Site Accommodation Construction	Works Area A		
	(j) Tree Transplant	Works Area A		
	(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		
	(o) Rockfill slope construction	Jockey Club Road		
	(p) Road works for temporary road diversion	D2-03		
	(q) Retaining wall construction	FW06		
	(r) Slope construction	C363		
	(s) Footbridge staircase demolition	Ho Ka Yuen Footbridge		

ND/2019/06	(a) Construction of finishing works, E&M works and Building Services works of Management Office Building (MOB)	Portion 4	<ul style="list-style-type: none"> - Noise pollution - Water pollution 	<ul style="list-style-type: none"> - Adopt noise barrier in screening noise - Wastewater generated after wheel washing of vehicles should be treated properly before discharge
	(b) Installation of steel canopy column	Portion 3	<ul style="list-style-type: none"> - Noise pollution 	<ul style="list-style-type: none"> - Adopt noise barrier in screening noise
	(c) Construction of underground utilities in the final stage market	Portion 3	<ul style="list-style-type: none"> - C&D waste - Air pollution - Noise pollution - Water pollution 	<ul style="list-style-type: none"> - 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 discharging
	(d) Formation of carriageway and footway	Portion 3	<ul style="list-style-type: none"> - C&D waste - Noise pollution 	<ul style="list-style-type: none"> - Cover C&D waste by impervious sheeting - Adopt noise barrier in screening noise
	(e) Slope improvement works	Portion 6	<ul style="list-style-type: none"> - C&D waste - Air Pollution - Noise Pollution 	<ul style="list-style-type: none"> - Cover C&D waste by impervious sheeting - Spray with water to work area before, during and after the work - Adopt QPME for excavator
	(f) Mini-pile works	Portion 3 and 5	<ul style="list-style-type: none"> - Air Pollution - Water Pollution - Noise Pollution 	<ul style="list-style-type: none"> - Provide screening to prevent dust emission - Provide bunding to control wastewater within the piling site & treat before discharging - Erect noise barrier to screen out noise generated from the piling rig

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 the 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 January 2021 in accordance with Updated EM&A Manual.

13.2 Two Action Level exceedance for construction noise monitoring was recorded due to the documented noise complaint received for Contract ND/2019/02 and ND/2019/05 and no exceedance of Limit Level for construction noise monitoring was recorded in this reporting month.

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

Contract No. ND/2019/01

13.4 Environmental site inspection were conducted on 5th, 12th, 19th, 26th, January 2021 by ET in the reporting month.

Contract No. ND/2019/02

13.5 Environmental site inspection were conducted on 6th, 13th, 22nd, 27th January 2021 by ET in the reporting month.

Contract No. ND/2019/03

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

Contract No. ND/2019/05

13.7 Environmental site inspections were conducted on 4th, 13th, 18th, 25th January 2021 by ET in the reporting month.

Contract No. ND/2019/06

13.8 Environmental site inspections were conducted on 6th, 11th, 21st, 28th January 2021 by ET in the reporting month.

13.9 There was four environmental complaints, no notification of summons or successful prosecutions received in the reporting month.

13.10 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

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

Air Quality Impact

- To enhance the dust suppression measures such as water spraying on all haul roads and exposed work site area;
- To maintain the impervious material to entirely cover the stockpile of dusty materials;
- To ensure all regulated machines displayed with valid Non-road Mobile Machinery (NRMM) labels; and
- To keep public road near work site area clean and free of dust.

Water Impact

- To prevent any surface runoff discharge into nearby drainage or stream;
- To divert all the water generated from construction site to de-silting facilities with enough handling capacity before discharge; and
- To ensure the drainage facilities would not be clogged with waste to avoid overflow.

Waste/Chemical Management

- To properly dispose of general refuse on site;
- To avoid improper handling, storage and disposal of oil drums or chemical containers on site; and
- To store chemical waste/waste oil properly in the designated place before disposal.

Landscape & Visual Impact

- To clear the construction materials/wastes properly within the tree protection zone.
- Retained trees should be carefully protected.
- Dull green fencing should be secured with no gaps or no holes.

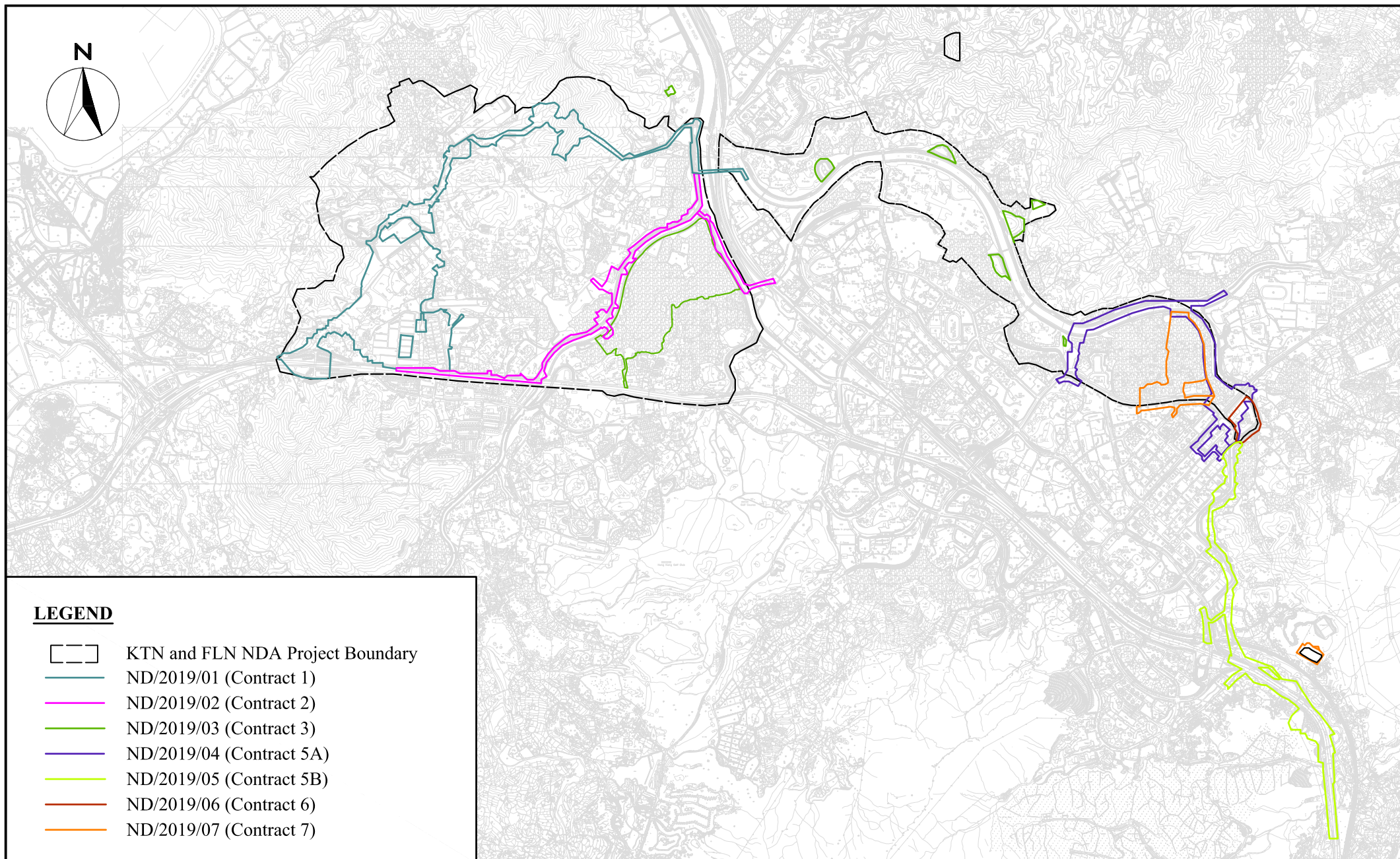
Landfill Gas Hazard

- “No Smoking” and “No Naked Flame” notices in Chinese and English should be posted prominently around the construction site.

Land Contamination

- Stockpiling site(s) should be lined with impermeable sheeting and banded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or contaminated run-off during rainy season. Watering should be avoided on stockpiles of soil to minimize runoff.

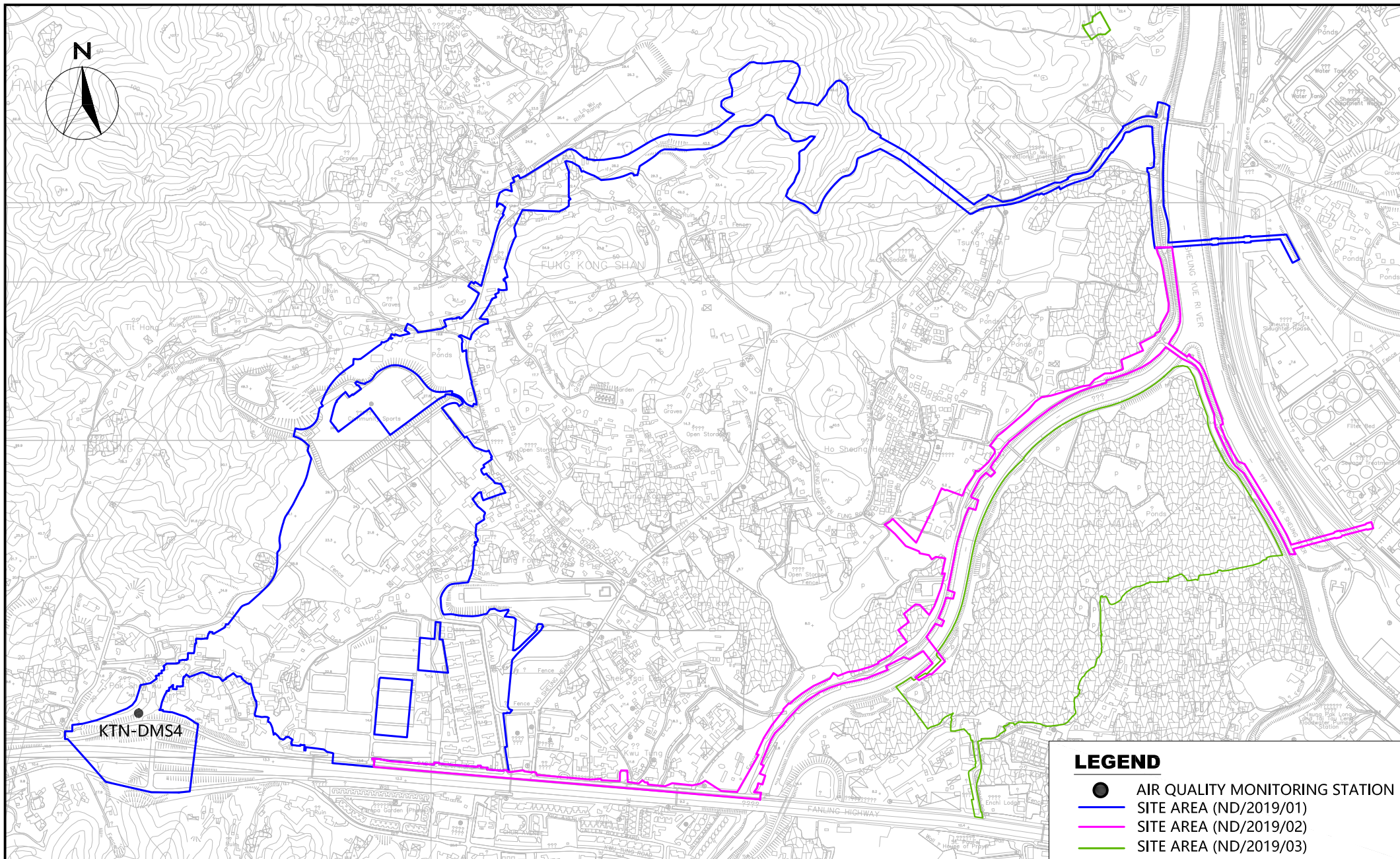
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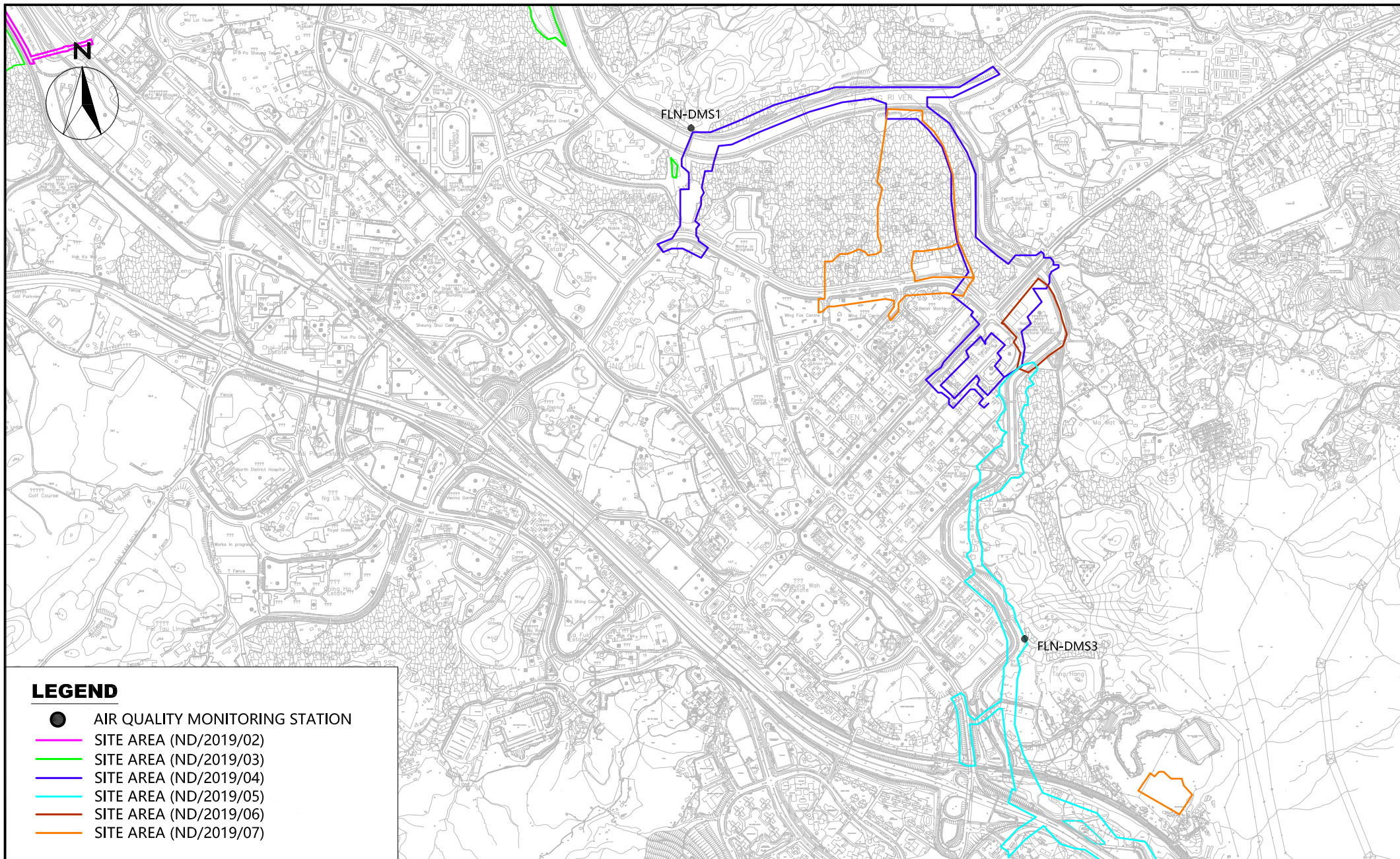
- KTN and FLN NDA Project Boundary
- ND/2019/01 (Contract 1)
- ND/2019/02 (Contract 2)
- ND/2019/03 (Contract 3)
- ND/2019/04 (Contract 5A)
- ND/2019/05 (Contract 5B)
- ND/2019/06 (Contract 6)
- ND/2019/07 (Contract 7)

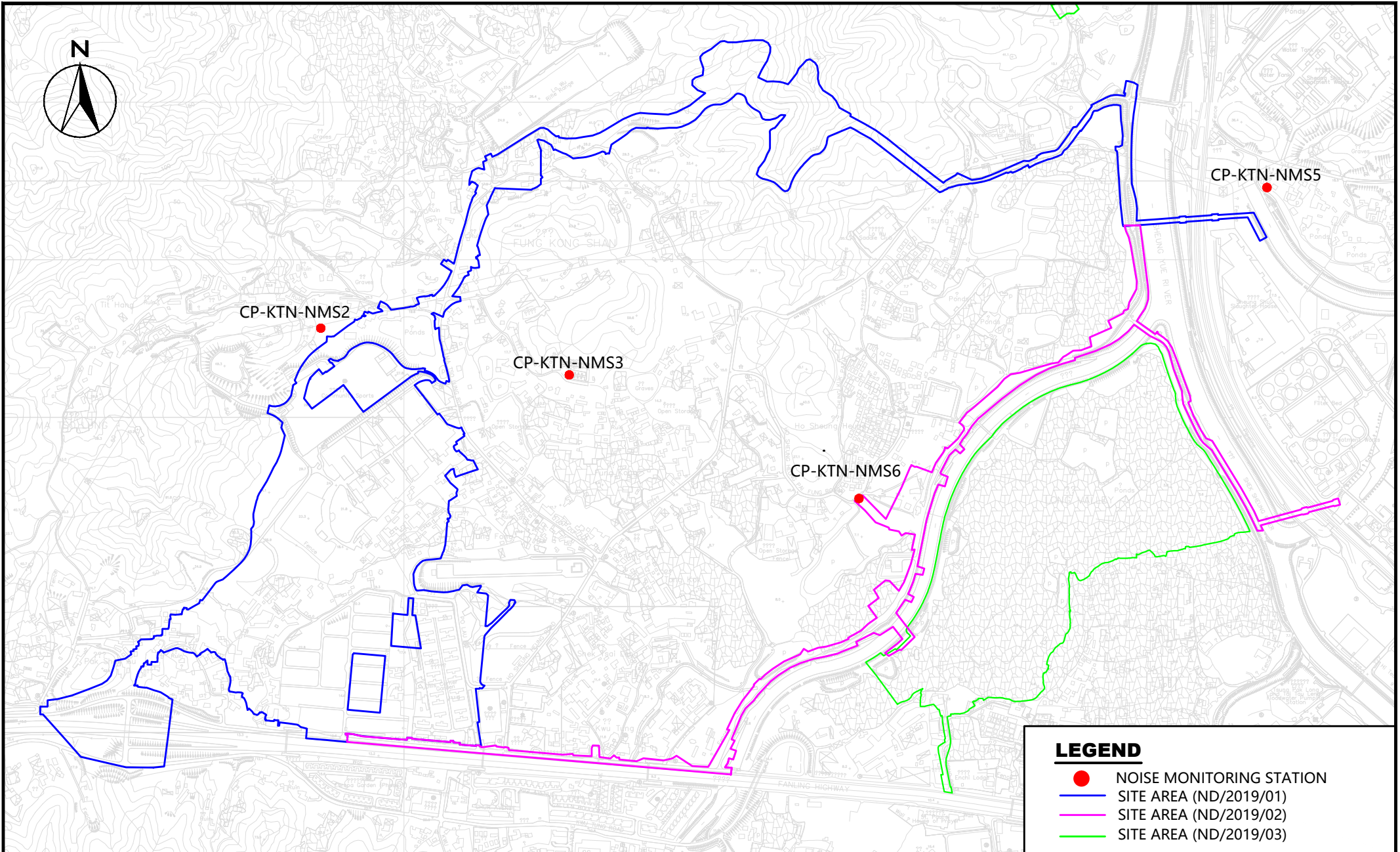
FIGURE(S)



LEGEND

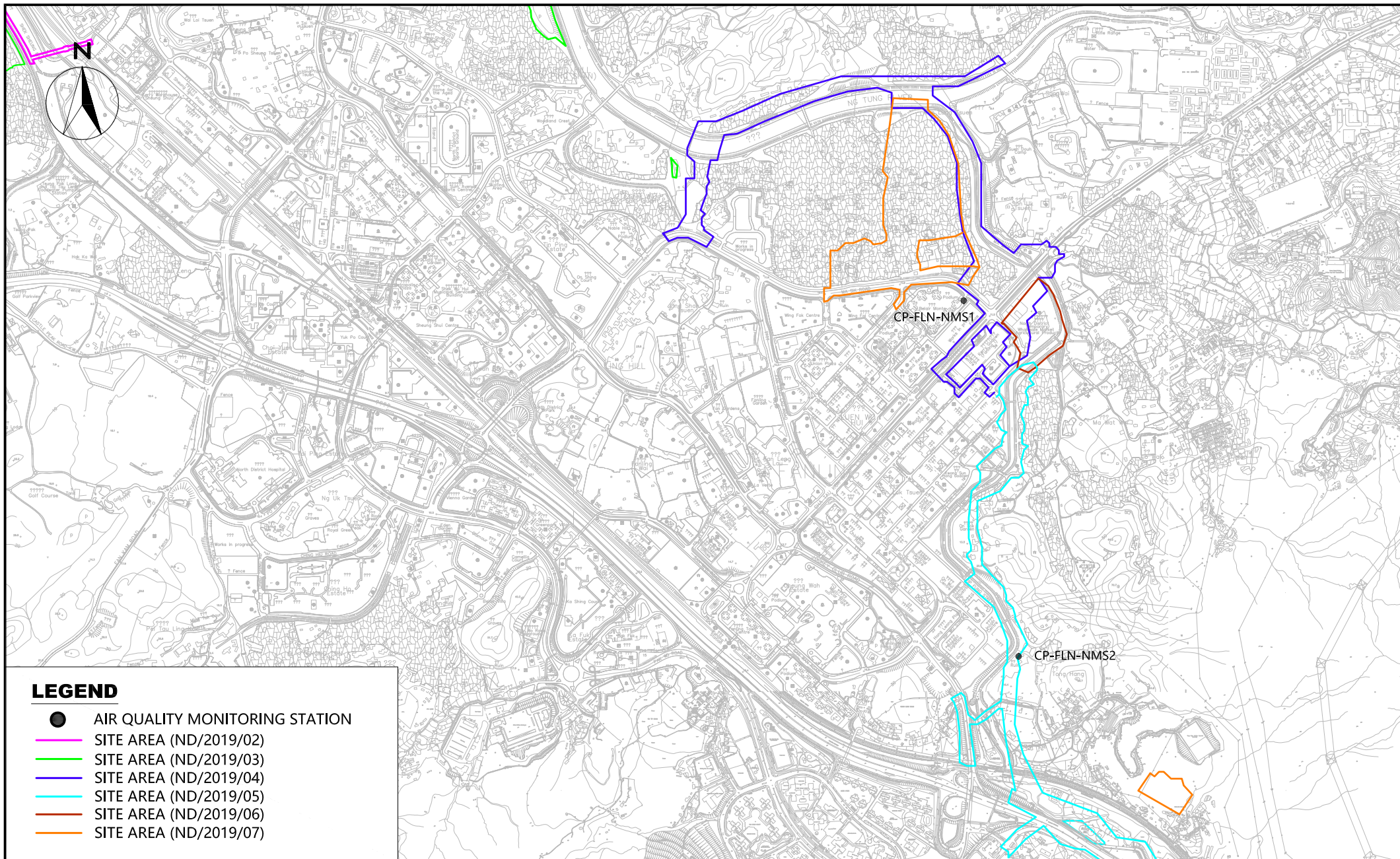
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- SITE AREA (ND/2019/01)
- SITE AREA (ND/2019/02)
- SITE AREA (ND/2019/03)

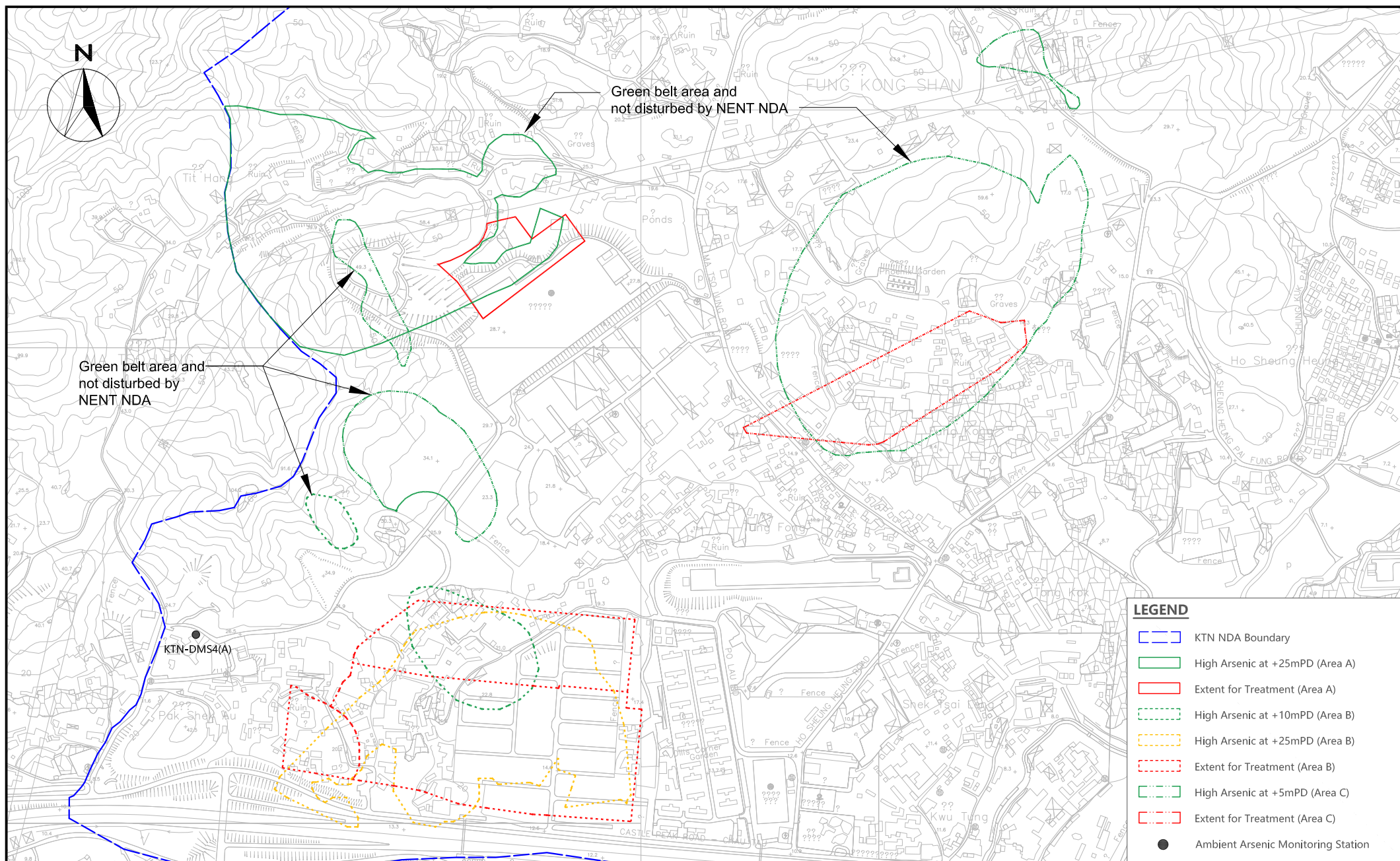




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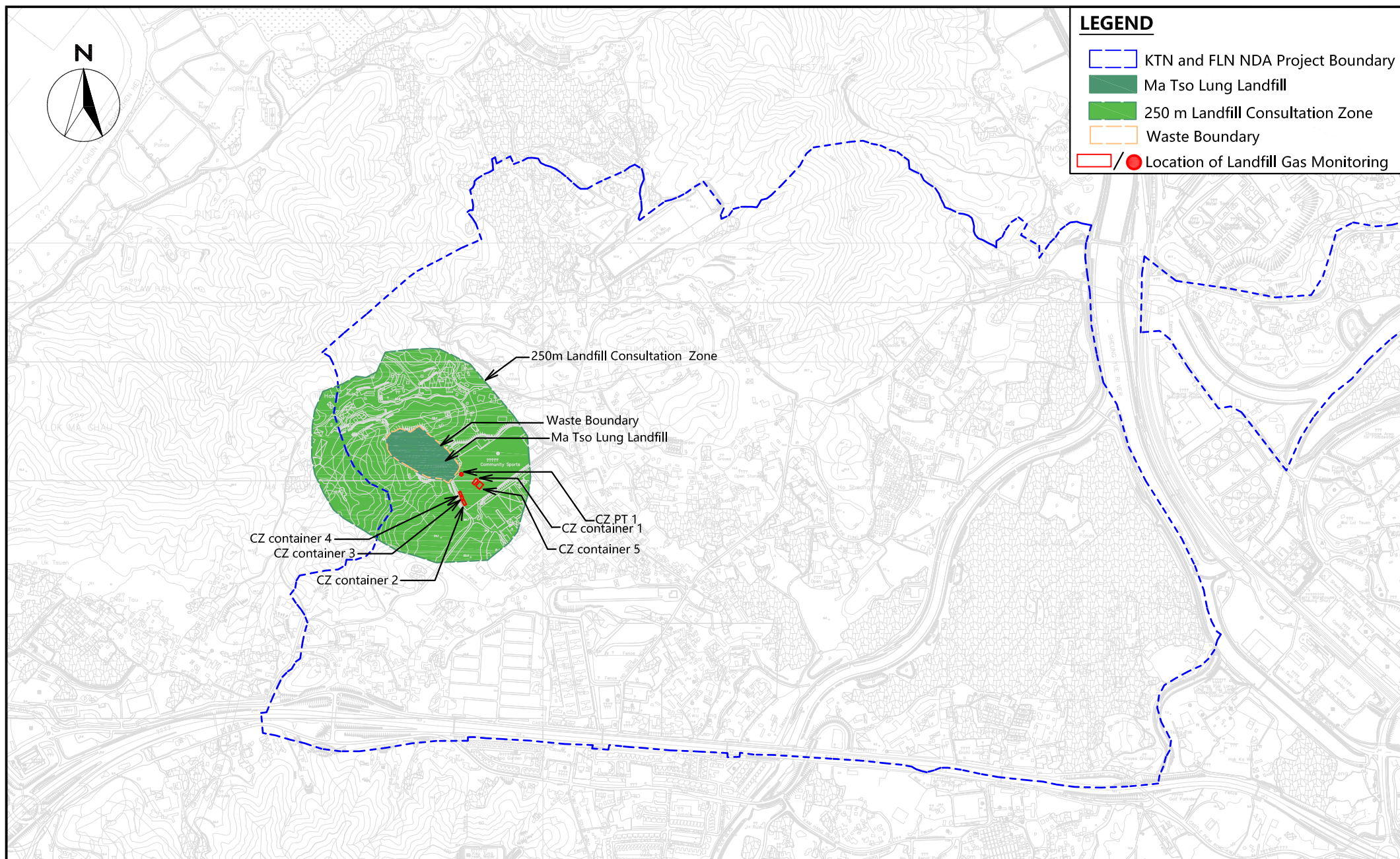
- NOISE MONITORING STATION
- SITE AREA (ND/2019/01)
- SITE AREA (ND/2019/02)
- SITE AREA (ND/2019/03)

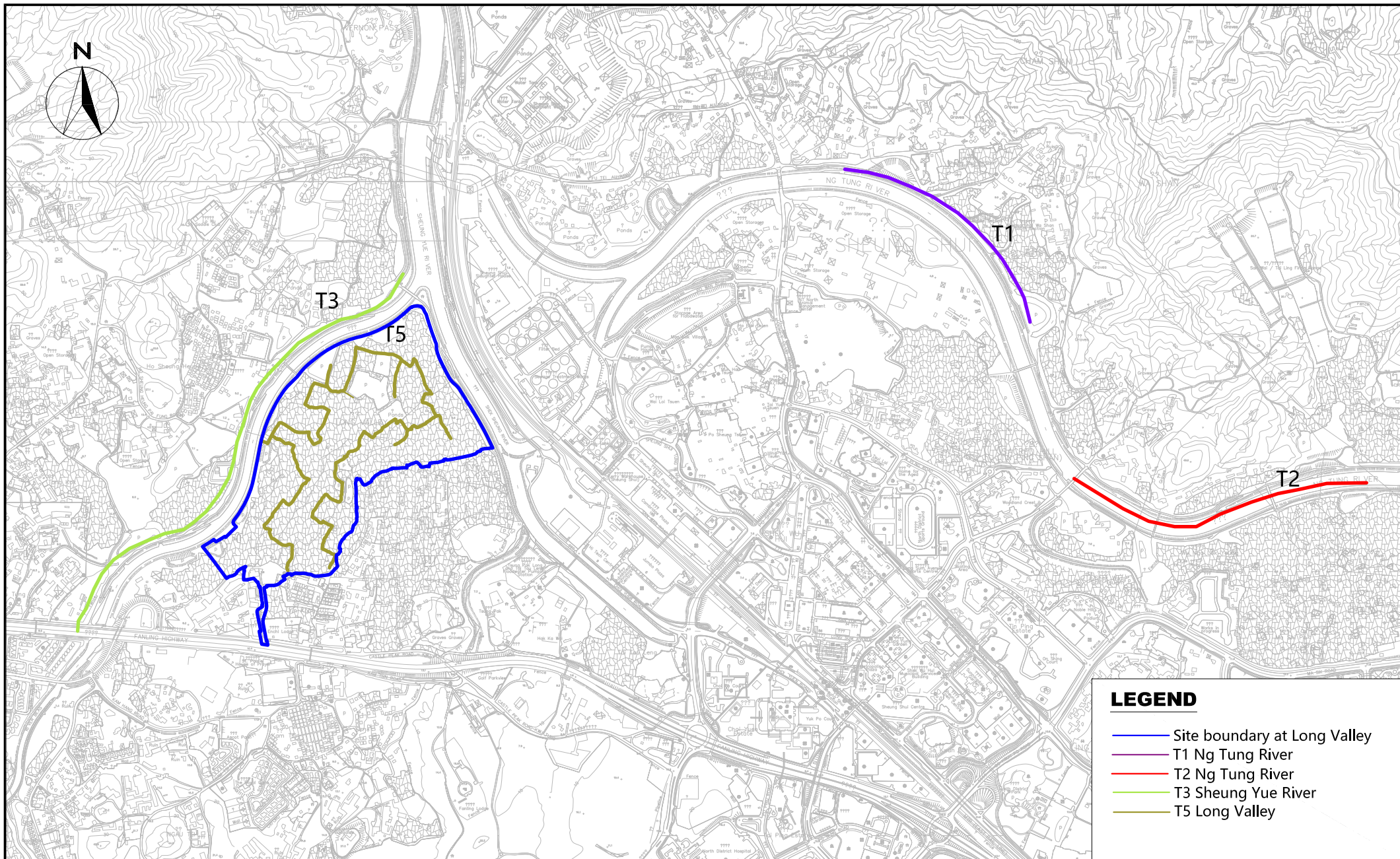




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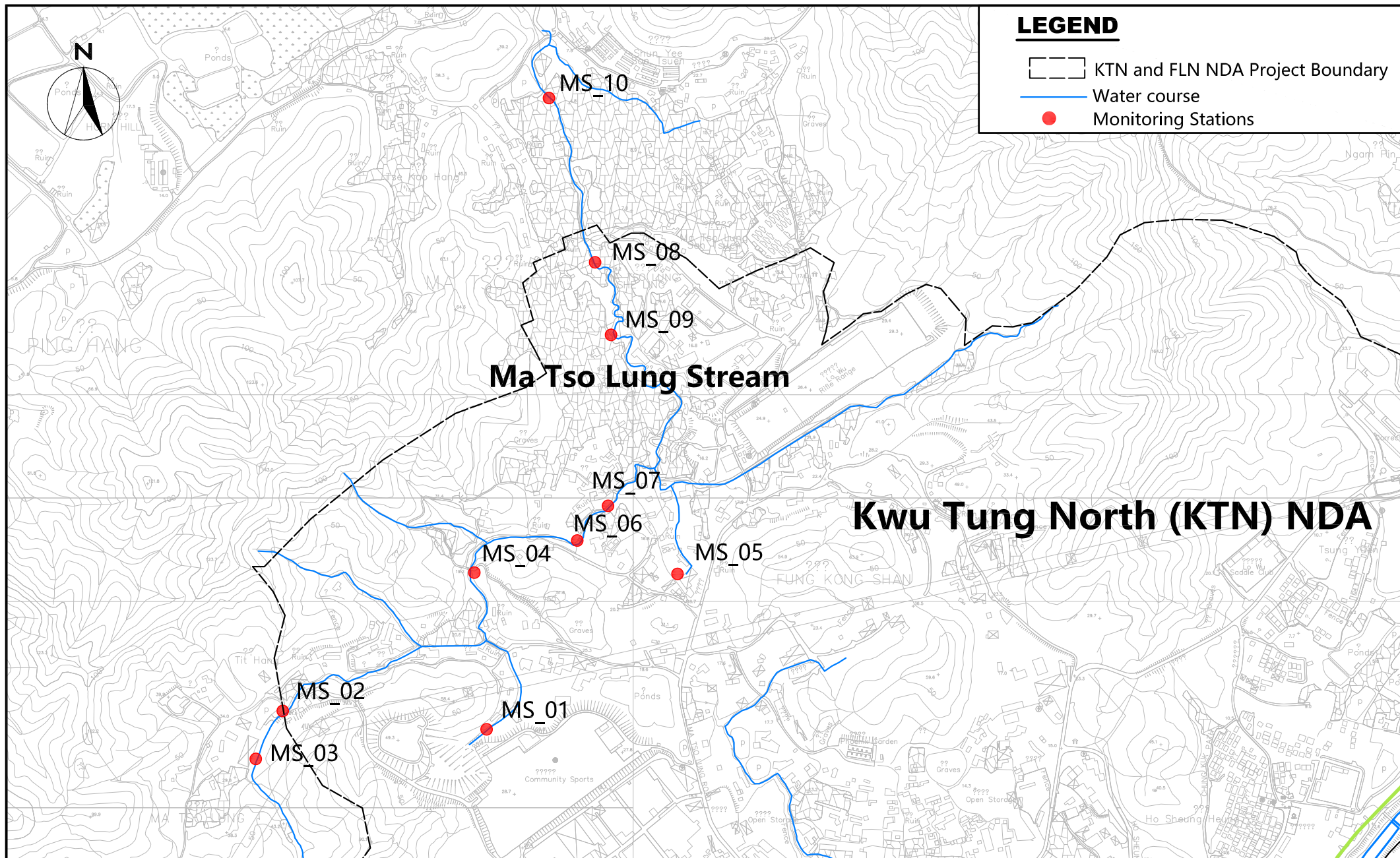
- KTN NDA Boundary
- High Arsenic at +25mPD (Area A)
- Extent for Treatment (Area A)
- High Arsenic at +10mPD (Area B)
- High Arsenic at +25mPD (Area B)
- Extent for Treatment (Area B)
- High Arsenic at +5mPD (Area C)
- Extent for Treatment (Area C)
- Ambient Arsenic Monitoring Station





LEGEND

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



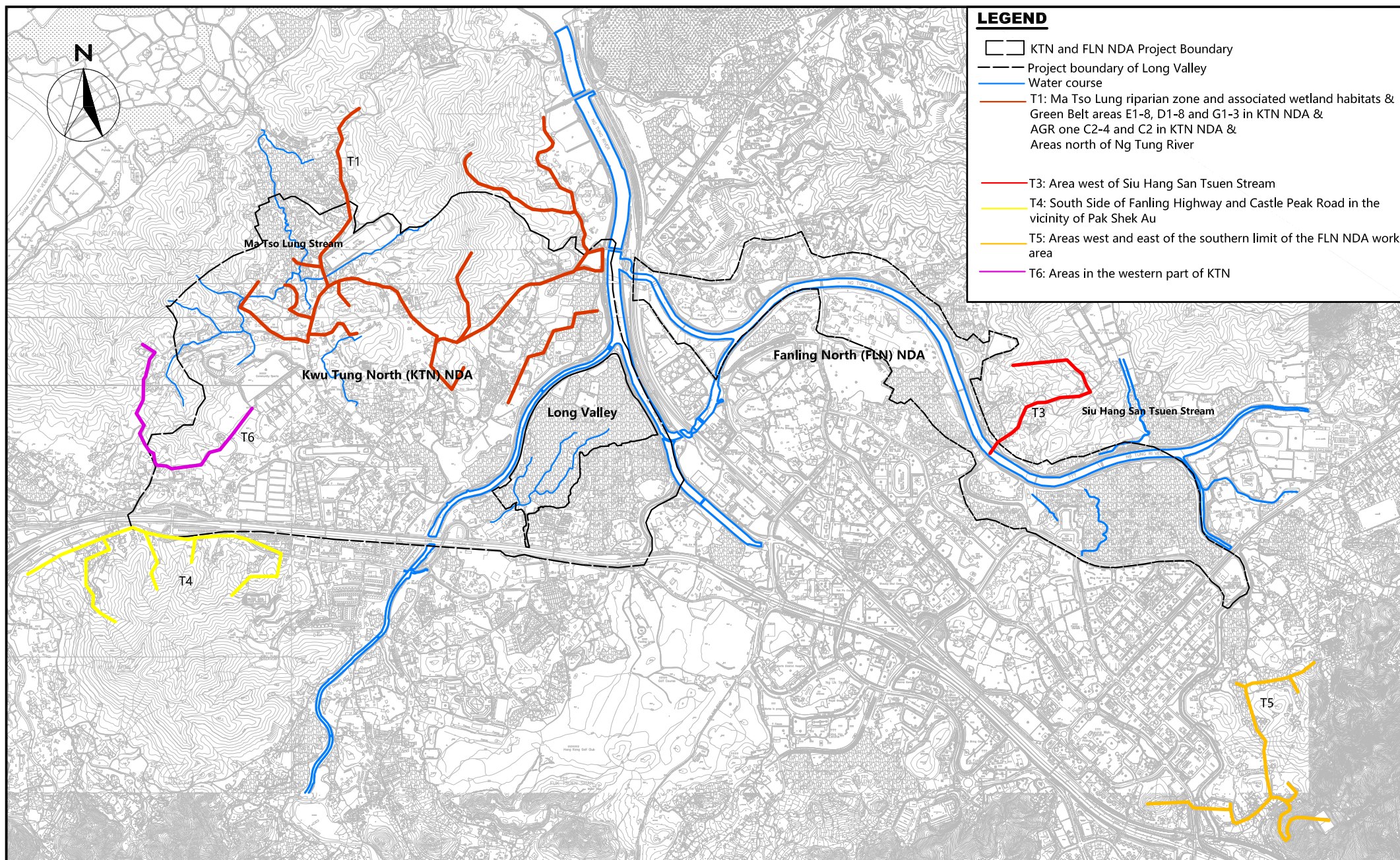


Figure 10

Hoarding Plan

EP-466/2013

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

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A3 1:1000

METRES



項目編號

60335576

CONTRACT NO.

合約編號

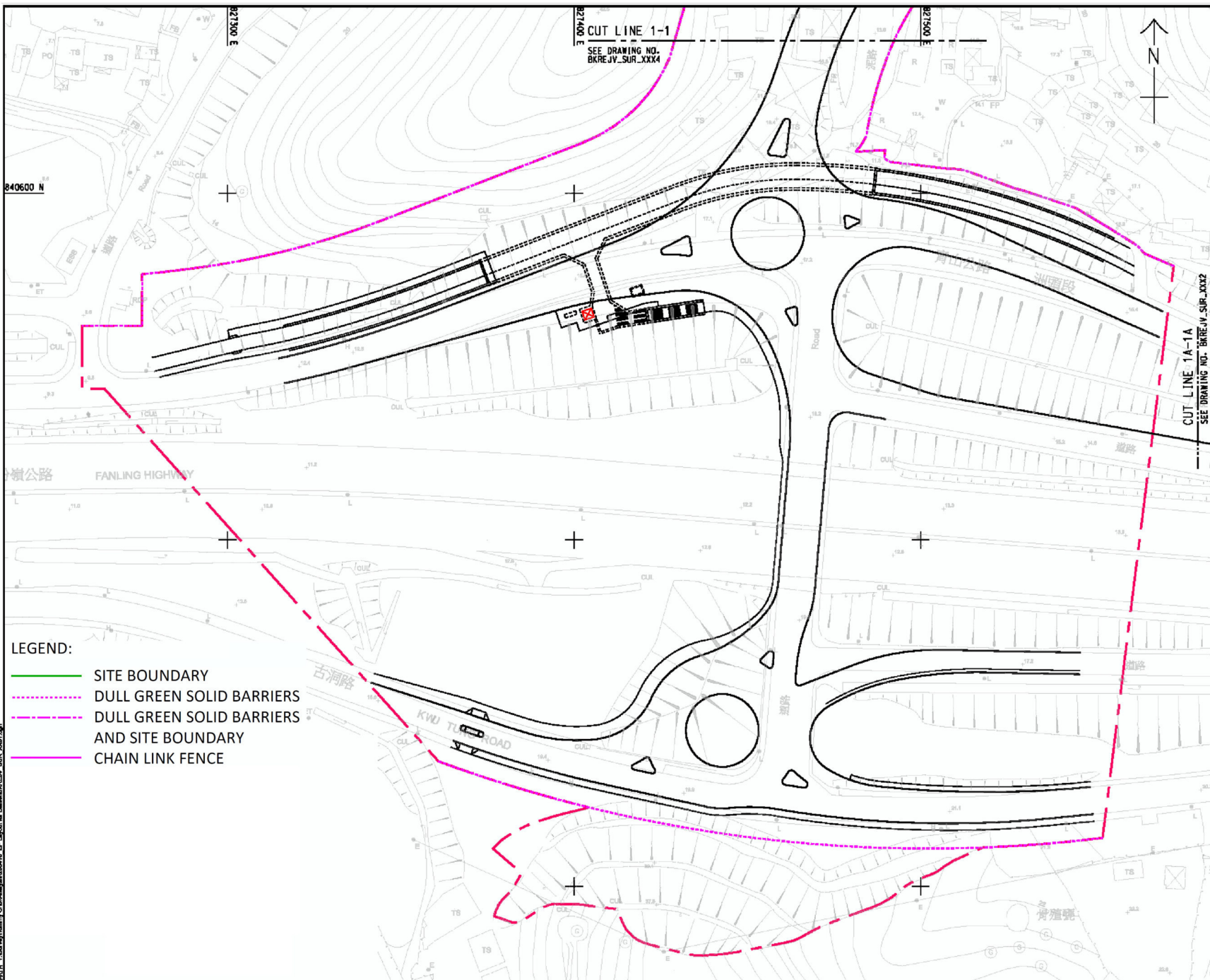
ND/2019/01

圖紙名稱	圖紙編號	圖紙說明
圖紙名稱	圖紙編號	圖紙說明

DULL GREEN SOLID BARRIERS LAYOUT

圖形編號

BKREJV_SUR_XXX1



BKREJV

TITLE OF DESIGNATED PROJECT:
Castle Peak Road Diversion

CONTRACT TITLE:

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

CLIENT

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Civil Engineering and
Development Department

CONSULTANT

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www.aecom.com

SUB-CONSULTANTS

設計工程師有限公司

STATUS

SCALE

比例

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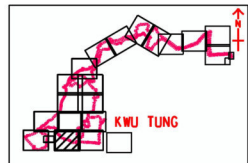
DIMENSION UNIT

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

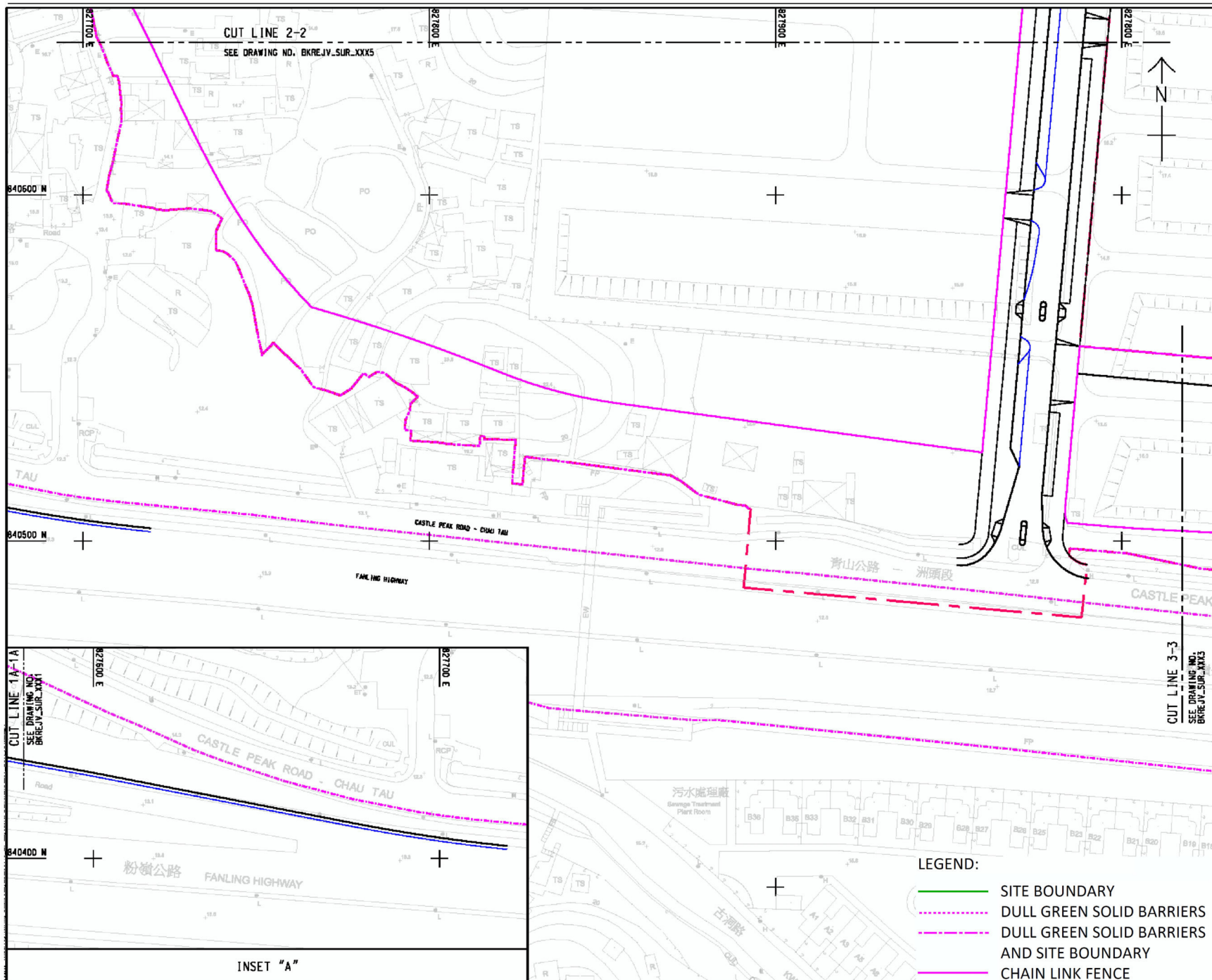
圖紙名稱

DULL GREEN SOLID
BARRIERS LAYOUT

SHEET NUMBER

圖紙編號

BKREJV_SUR_XXX2



LEGEND:





-  SITE BOUNDARY
-  DULL GREEN SOLID BARRIERS
-  DULL GREEN SOLID BARRIERS AND SITE BOUNDARY
-  CHAIN LINK FENCE

Figure 11

Hoarding Plan

EP-467/2013/A

Plot File No: Survey 46/2028
Project Management Module Designer: CDM Checked: Approved: BOKA1 BOKA1 a BOKA1

NOTES:

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



841100 N

841000 N

CUT LINE 7-7

SEE DRAWING NO. BKREJV_SUR_XXX9

LEGEND:

- SITE BOUNDARY
- DULL GREEN SOLID BARRIERS
- DULL GREEN SOLID BARRIERS AND SITE BOUNDARY
- CHAIN LINK FENCE

BKREJV

TITLE OF DESIGNATED PROJECT:

Kwu Tung North New Development Area Road P1 and P2 and Associated New Kwu Tung Interchange and Pak Shek Au Interchange Improvement

CONTRACT TITLE:

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

CLIENT

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CONSULTANT

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STATUS

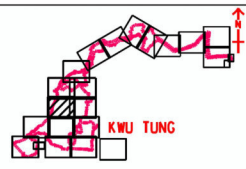
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DIMENSION UNIT

METRES

KEY PLAN



PROJECT NO.

60335576

CONTRACT NO.

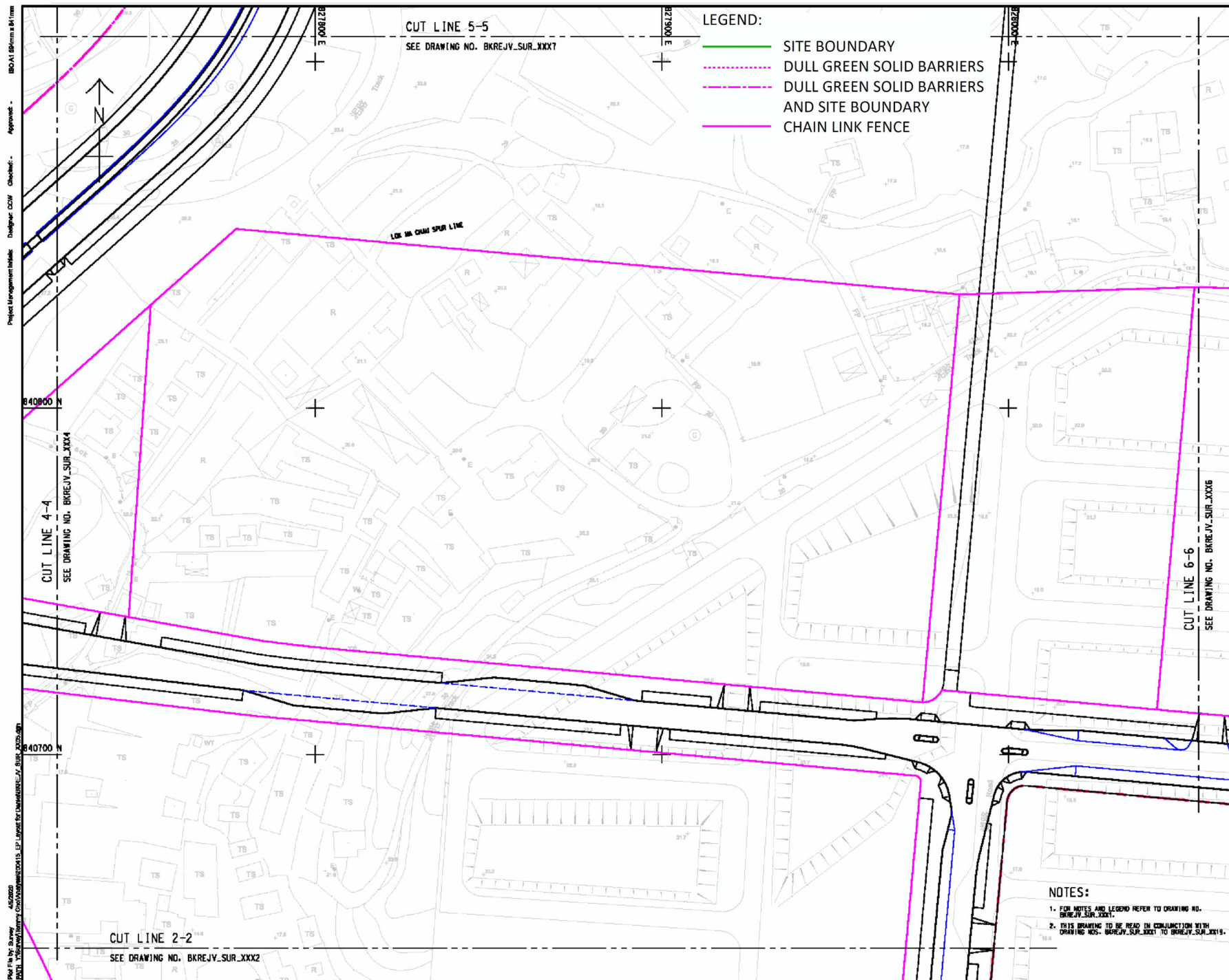
ND/2019/01

SHEET TITLE

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER

BKREJV_SUR_XXX7



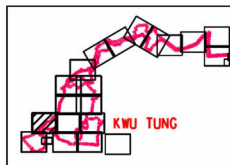
**CONTRACT NO.: ND/2019/01
KWU TUNG NORTH NEW
DEVELOPMENT AREA, PHASE 1:
SITE FORMATION AND
INFRASTRUCTURE WORKS**



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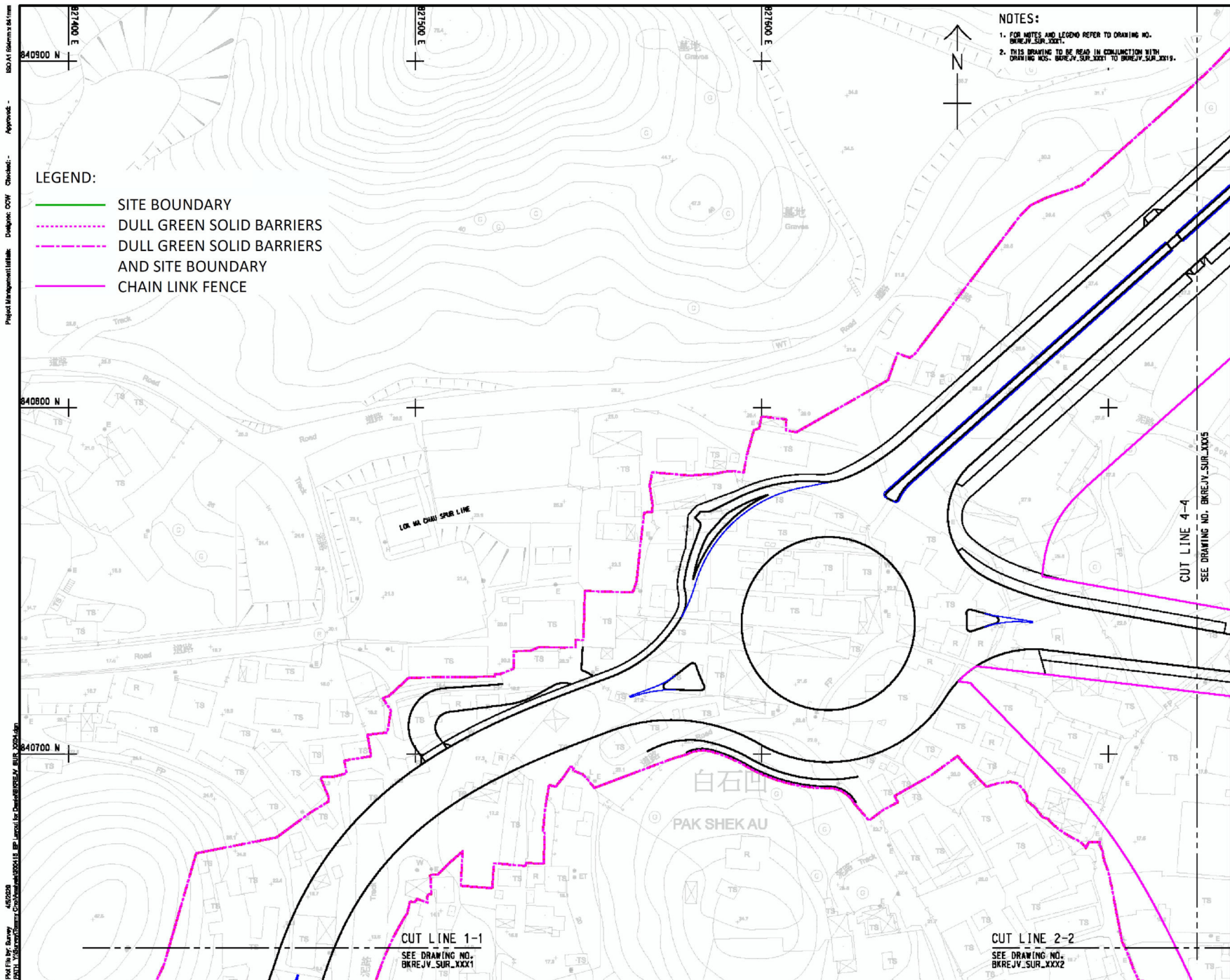
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60335576 ND/2019/0

DULL GREEN SOLID

PKREIV SLIP VVV4



BKREJV

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

CONTRACT TITLE:

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

CLIENT

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分判工程顧問公司

STATUS

圖則

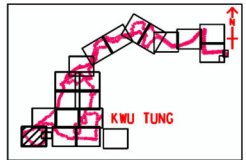
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DIMENSION UNIT

METRES

KEY PLAN



PROJECT NO.

60335576

CONTRACT NO.

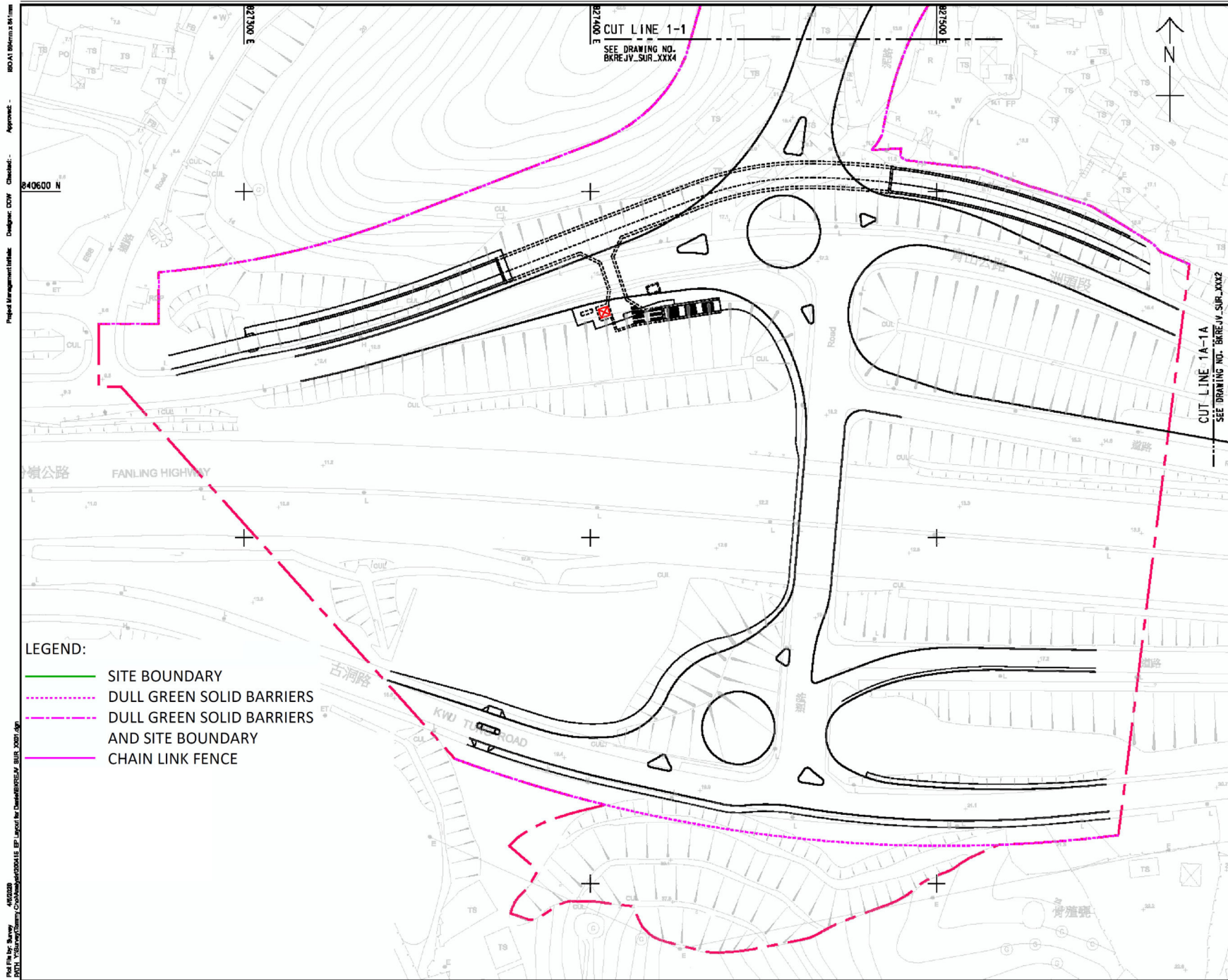
ND/2019/01

SHEET TITLE

**DULL GREEN SOLID
BARRIERS LAYOUT**

SHEET NUMBER

BKREJV_SUR_XXX1



Project File by Survey 4/2022/08
2021.12.28 17:00:00
Project Management Interface Designer: CDW Checked: -
Approved: -
BIOA1 Biometrics & ID Item

Figure 12

Hoarding Plan

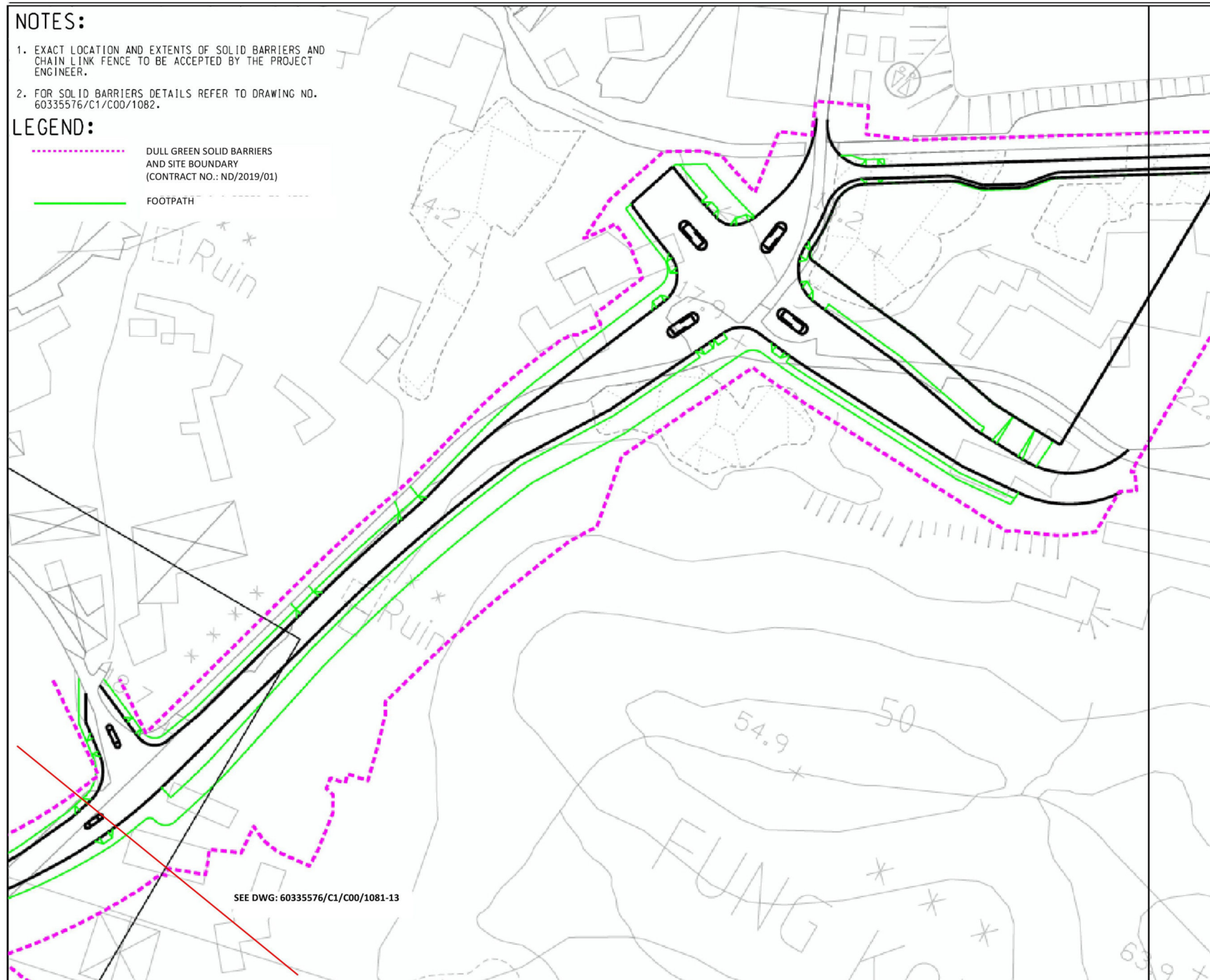
EP-468/2013/A

NOTES:

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

LEGEND:

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



BKREJV

TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW
DEVELOPMENT AREA ROAD D1 TO
D5

CONTRACT TITLE:

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

CLIENT

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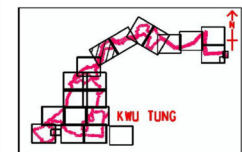
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DIMENSION UNIT

METRES

KEY PLAN



PROJECT NO.

60335576

CONTRACT NO.

ND/2019/01

SHEET TITLE

**DULL GREEN SOLID
BARRIERS LAYOUT**

SHEET NUMBER

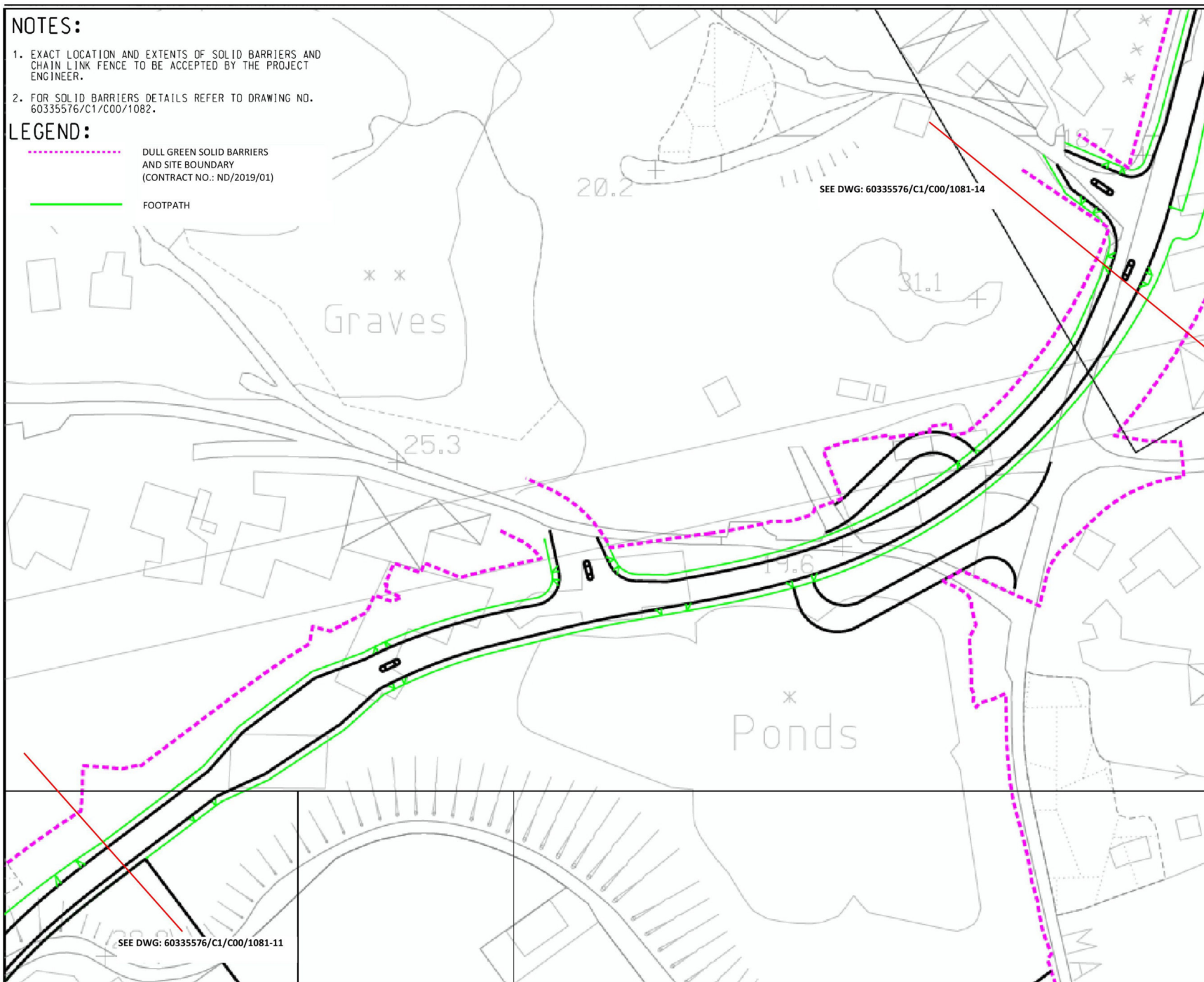
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NOTES:

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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



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

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

BKREJV

TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW
DEVELOPMENT AREA ROAD D1 TO
D5

CONTRACT TITLE:

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

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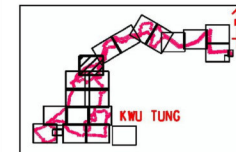
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DIMENSION UNIT

METRES

KEY PLAN



PROJECT NO.

60335576

CONTRACT NO.

ND/2019/01

SHEET TITLE

DULL GREEN SOLID
BARRIERS LAYOUT

SHEET NUMBER

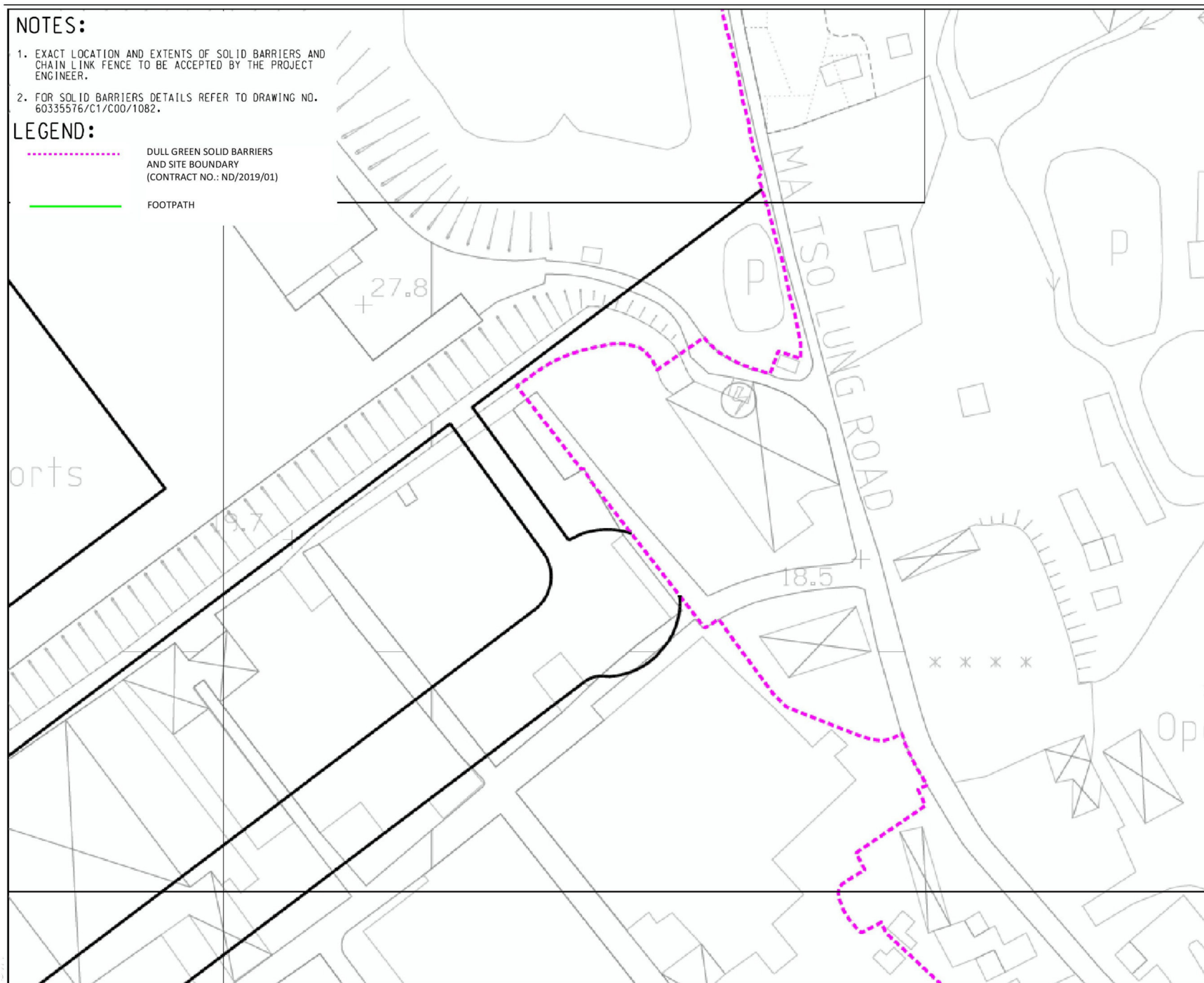
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2. FOR SOLID BARRIERS DETAILS REFER TO DRAWING NO. 60335576/C1/C00/1082.

LEGEND:

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



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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:
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STATUS

设计

SCALE

比例

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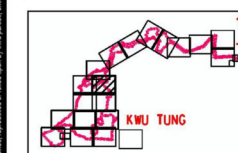
DIMENSION UNIT

尺寸单位

METRES

KEY PLAN

索引图



PROJECT NO.

项目编号

60335576

CONTRACT NO.

合约编号

ND/2019/01

SHEET TITLE

设计名称

DULL GREEN SOLID
BARRIERS LAYOUT

SHEET NUMBER

图则编号

60335576/C1/C00/1081-12

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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CEDD Civil Engineering and
Development Department

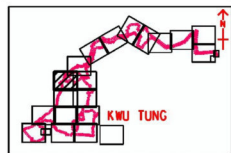
CONSULTANT
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SUB-CONSULTANTS

STATUS

SCALE **DIMENSION UNIT**
比例 尺寸單位
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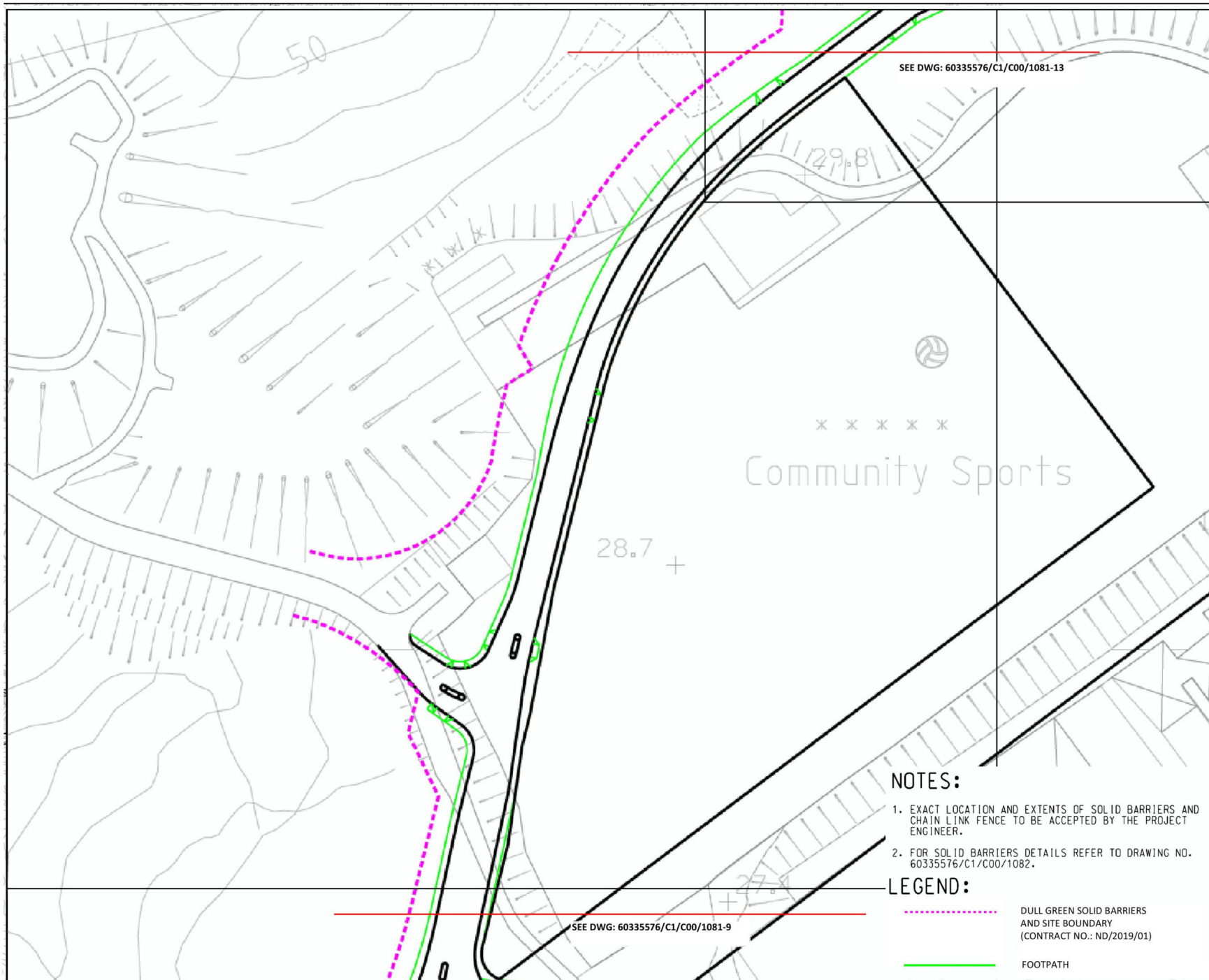
KEY PLAN
索引圖



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

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

SHEET NUMBER
圖紙編號
60335576/C1/C00/1081-11



BKREJV

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

CONTRACT TITLE:

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

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CONSULTANT

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SUB-CONSULTANTS

STATUS

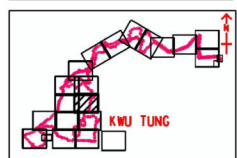
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DIMENSION UNIT

METRES

KEY PLAN



PROJECT NO.

60335576

CONTRACT NO.

ND/2019/01

SHEET TITLE

**DULL GREEN SOLID
BARRIERS LAYOUT**

SHEET NUMBER

60335576/C1/C00/1081-10

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

NOTES:

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

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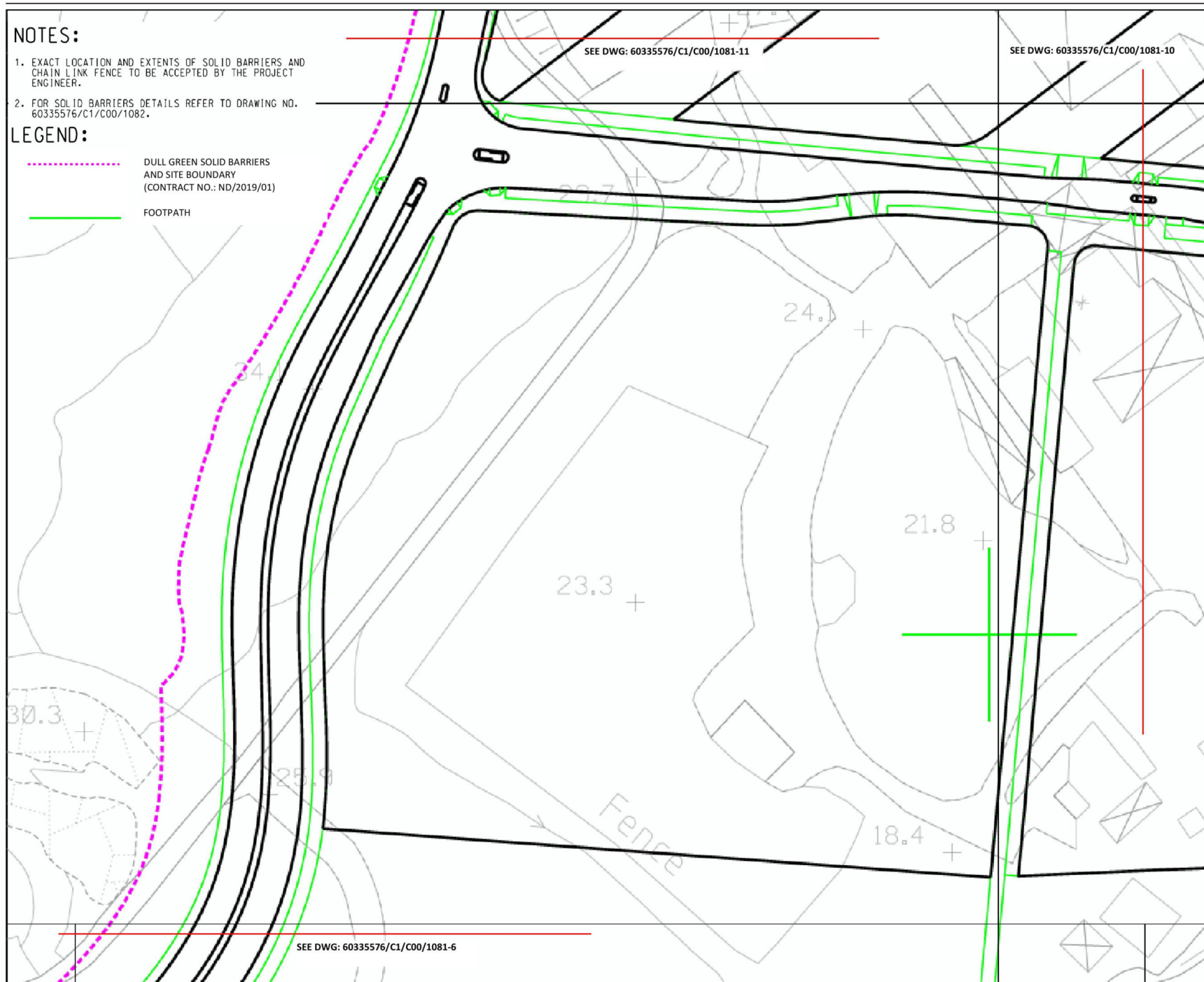
- DULL GREEN SOLID BARRIERS AND SITE BOUNDARY (CONTRACT NO.: ND/2019/01)
- FOOTPATH

NOTES:

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

LEGEND:

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



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

SEE DWG: 60335576/C1/C00/1081-10

SEE DWG: 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

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Development Department

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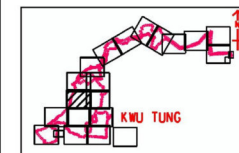
SUB-CONSULTANTS

STATUS

SCALE DIMENSION UNIT

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KEY PLAN



PROJECT NO.

60335576

CONTRACT NO.

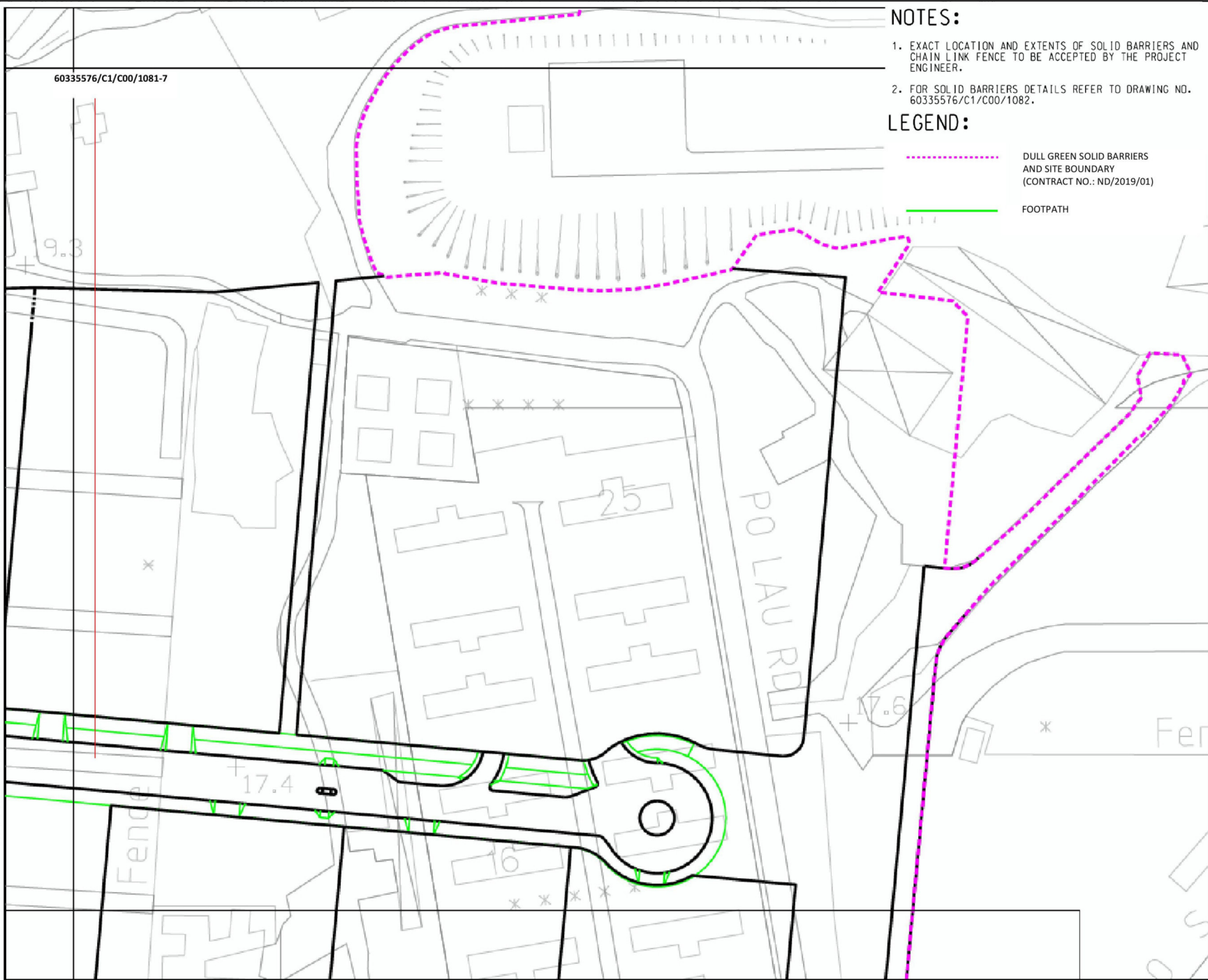
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DULL GREEN SOLID
BARRIERS LAYOUT

SHEET NUMBER

60335576/C1/C00/1081-9



60335576/C1/C00/1081-7

NOTES:

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

LEGEND:

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

BKREJV

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

CONTRACT TITLE:

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

CLIENT

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Civil Engineering and
Development Department

CONSULTANT

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SUB-CONSULTANTS

设计/工程顾问公司

STATUS

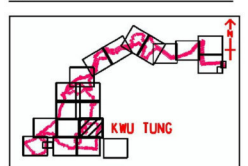
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DIMENSION UNIT

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

BKREJV

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

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

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

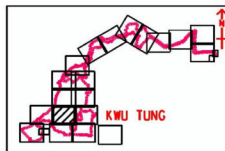
CONSULTANT
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STATUS

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

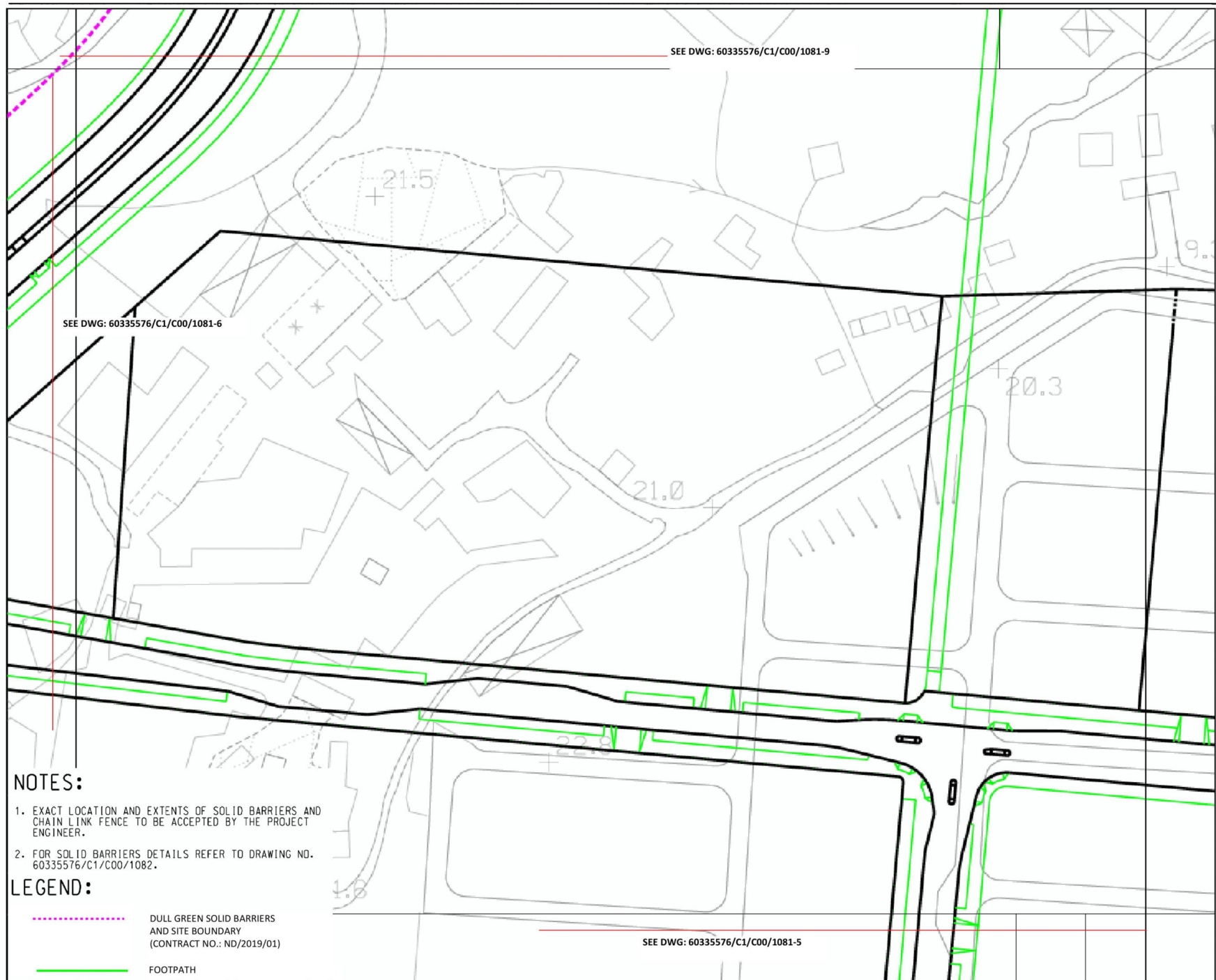
KEY PLAN



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

SHEET TITLE
**DULL GREEN SOLID
BARRIERS LAYOUT**

SHEET NUMBER
60335576/C1/C00/1081-7



NOTES:

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

LEGEND:

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

BKREJV

TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO D5

CONTRACT TITLE:

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

CLIENT

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CEDD Civil Engineering and Development Department

CONSULTANT

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STATUS

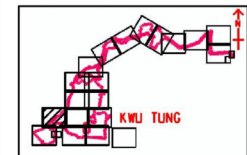
SCALE

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/C00/1081-6

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

土木工務拓展署
Civil Engineering and
Development Department

CONSULTANT

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STATUS

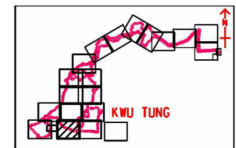
SCALE

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

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

CASTLE PEAK ROAD - CHAU TAU

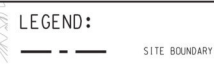
NOTES:

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)

.....



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

CLIENT



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- JUN-19	TENDER DRAWING	CYC

STATUS

SCALE DIMENSION UNIT

A1 1 : 5000

METRES

KEY PLAN

PROJECT NO.

CONTRACT NO.

60335576

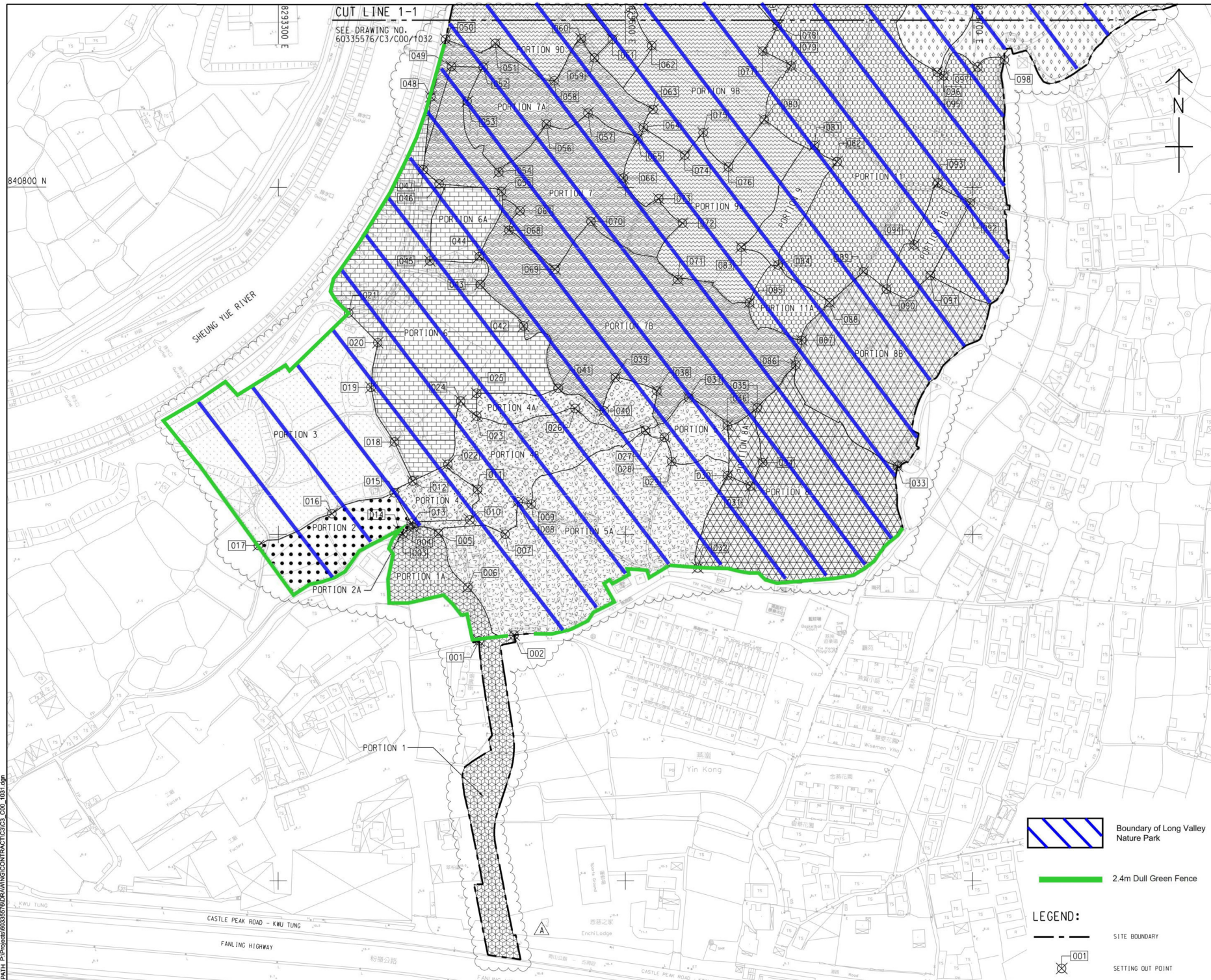
ND/2019/03

SHEET TITLE

KEY PLAN OF GENERAL LAYOUT

SHEET NUMBER

60335576/C3/C00/1000



Boundary of Long Valley Nature Park



2.4m Dull Green Fence

LEGEND:



SITE BOUNDARY



SETTING OUT POINT

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Sang Hing - Kuly Joint Venture

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

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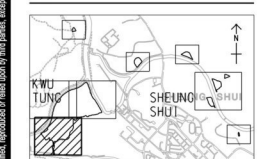
SUB-CONSULTANTS
设计工程顾问公司

ISSUE/REVISION				
NO.	DATE	DESCRIPTION	CHK.	REV.
A	AUG-19	TENDER ADDENDUM NO. 3	CYCH	
JUN-19	JUN-19	TENDER DRAWING	CYCH	

STATUS
Status

SCALE
A1 1 : 1000
DIMENSION UNIT
METRES

KEY PLAN
A1 1 : 40000

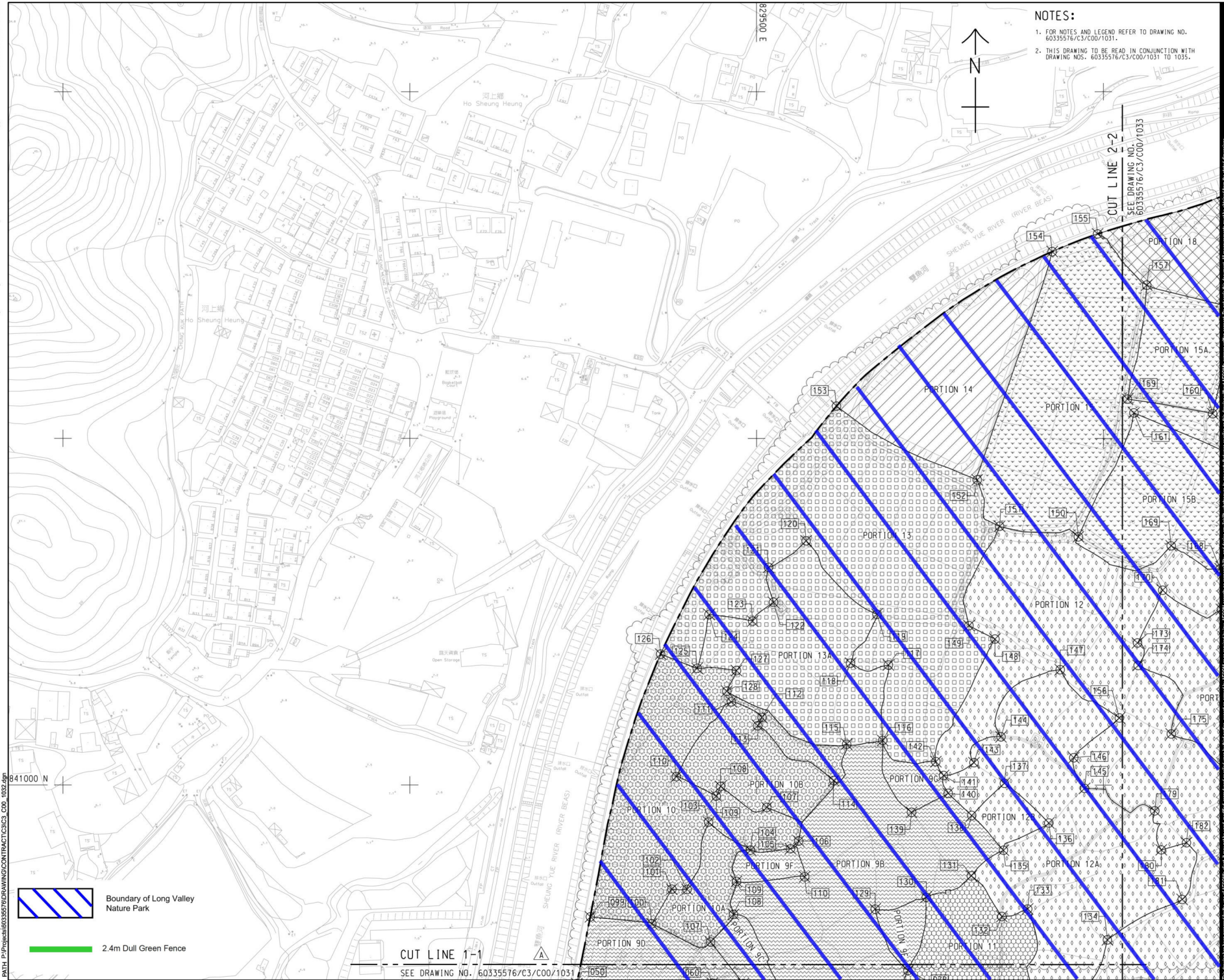


PROJECT NO.
60335576
CONTRACT NO.
ND/2019/03

SHEET TITLE
PORTION OF SITE

SHEET NUMBER
60335576/C3/C00/1031A

SHEET 1 OF 5



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

Sang Hing - Kuly Joint Venture

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

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

STATUS

SCALE
A1 1 : 1000
DIMENSION UNIT
METRES

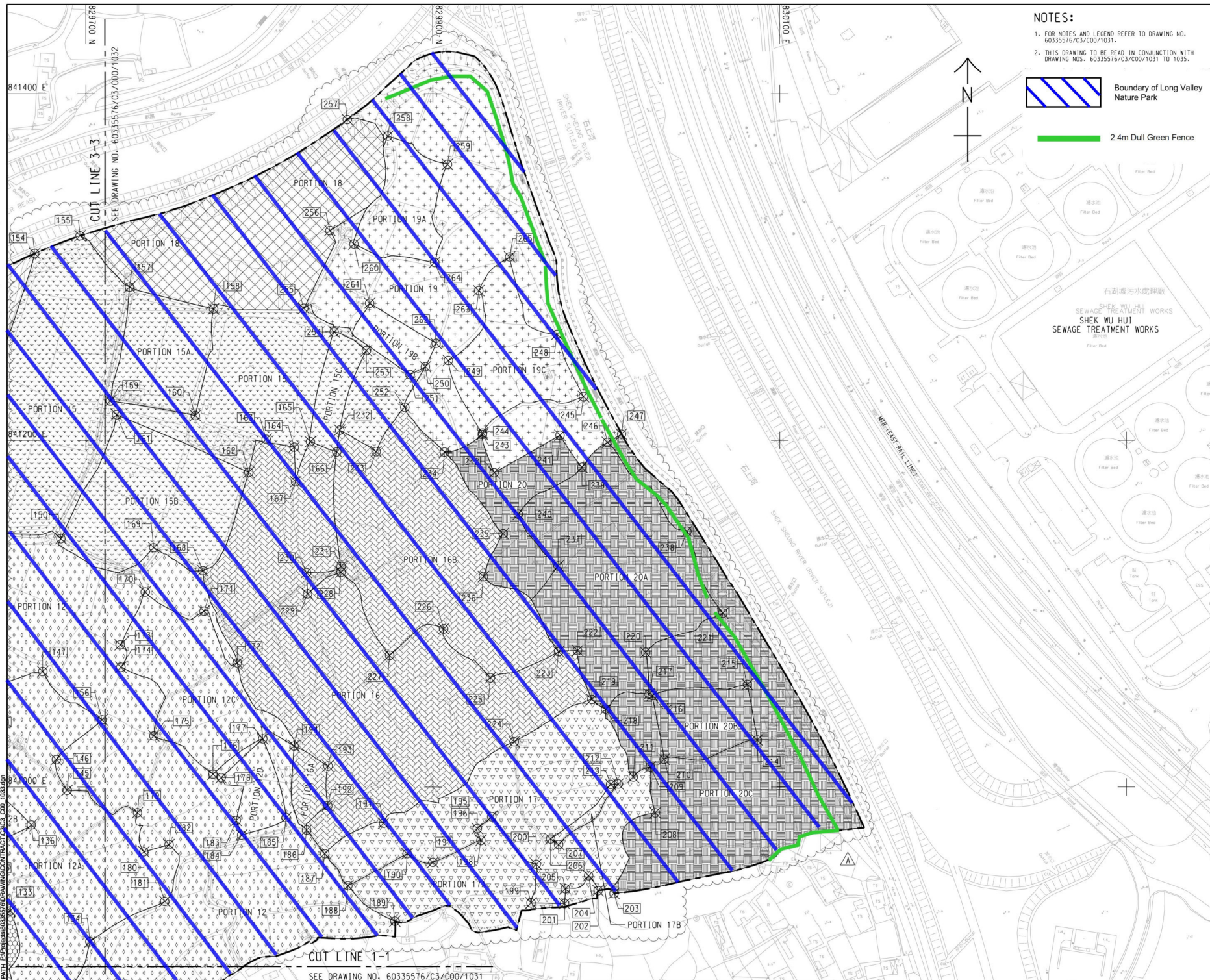
KEY PLAN
A1 1 : 40000



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

SHEET TITLE
PORTION OF SITE

SHEET NUMBER
60335576/C3/C00/1032A



NOTES:

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



Boundary of Long Valley Nature Park



2.4m Dull Green Fence



石湖墟污水處理廠
SHEK WU HUI
SEWAGE TREATMENT WORKS
SHEK WU HUI
SEWAGE TREATMENT WORKS

Sang Hing - Kuly Joint Venture

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

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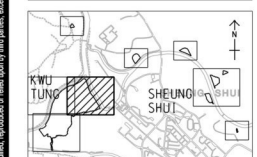
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IR	DATE	DESCRIPTION	CHK.
IR	DATE	DESCRIPTION	CHK.

STATUS

SCALE DIMENSION UNIT

A1 1 : 1000 METRES

KEY PLAN A1 1 : 40000



PROJECT NO.

60335576

CONTRACT NO.

ND/2019/03

SHEET TITLE

PORTION OF SITE

SHEET NUMBER

60335576/C3/C00/1033A

SHEET 3 OF 5



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

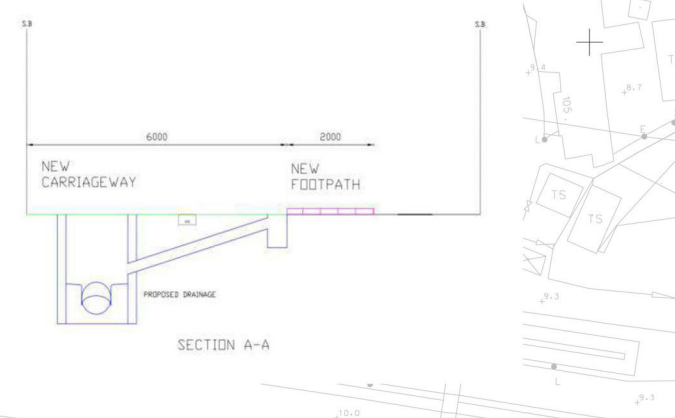
- LEGEND:
- SITE BOUNDARY
 - PRINCIPAL SETTING OUT LINE WITH CHAINAGE
 - SETTING OUT LINE
 - SETTING OUT POINT
 - CURVE RADIUS IN METRES SETTING OUT LINE WITH NUMBER
 - ROAD WIDTH (METRE)
 - C/W CARRIAGEWAY
 - C/M CENTRAL MEDIAN
 - CT CURVE TO TANGENT
 - TC TANGENT TO CURVE

SETTING OUT DATA FOR S.O.L. YKR

POINT	CHAINAGE (m)	EASTING (m)	NORTHING (m)	ELEMENT	LENGTH (m)
PDB	100.000	829428.447	840359.536		
PI	172.832	829414.436	840431.007	STRAIGHT	60.526
PC	160.526	829416.804	840418.931		
CC	829462.926	840427.972	R = +47.000	24.072	
PT	184.598	829418.291	840442.694		
PI	217.166	829428.492	840473.623	STRAIGHT	21.383
PC	205.981	829424.989	840463.001		
CC	829380.354	840477.723	R = -47.000	21.961	
PT	227.942	829426.836	840484.684		
PI	299.304	829416.265	840555.259	STRAIGHT	57.195
PC	285.137	829418.354	840541.248		
CC	829375.838	840534.879	R = -43.000	27.371	
PT	312.508	829406.250	840565.279		
PDE	359.637	829372.931	840598.611	STRAIGHT	47.130

SETTING OUT POINTS

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



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Sang Hing - Kuly Venture

Title of Designated Project

Kwu Tung North New Development Area Road D1 to D5

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

STATUS
最新

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

Figure 13

Hoarding Plan

EP-469/2013

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

SETTING OUT POINTS			
POINTS	EASTING	NORTHING	
C2-A201	828662.186	840441.551	
C2-A202	828614.889	840449.465	
C2-A203	828627.752	840434.819	
C2-A204	828630.698	840440.134	
C2-A205	828678.901	840438.909	
C2-A206	828682.615	840438.367	
C2-A207	828683.039	840443.234	
C2-A208	828740.252	840438.265	
C2-A209	828760.673	840445.413	
C2-A210	828761.731	840515.073	
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	829068.123	840685.809	
C2-A219	829076.990	840697.078	
C2-A220	828983.228	840691.044	
C2-A221	828914.370	840480.699	
C2-A222	828905.088	84061.747	
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	

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

ISSUE/REVISION

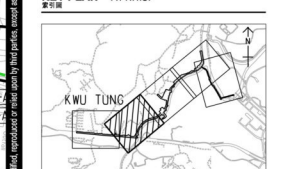
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I/R	DATE	DESCRIPTION		CHK.

STATUS

required by _____

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

KEY PLAN A1 N.T.S.



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

SHEET TITLE
圖紙名稱

SITE OF WORKS

SHEET NUMBER
001-000000

60335576/C2/C00/1022

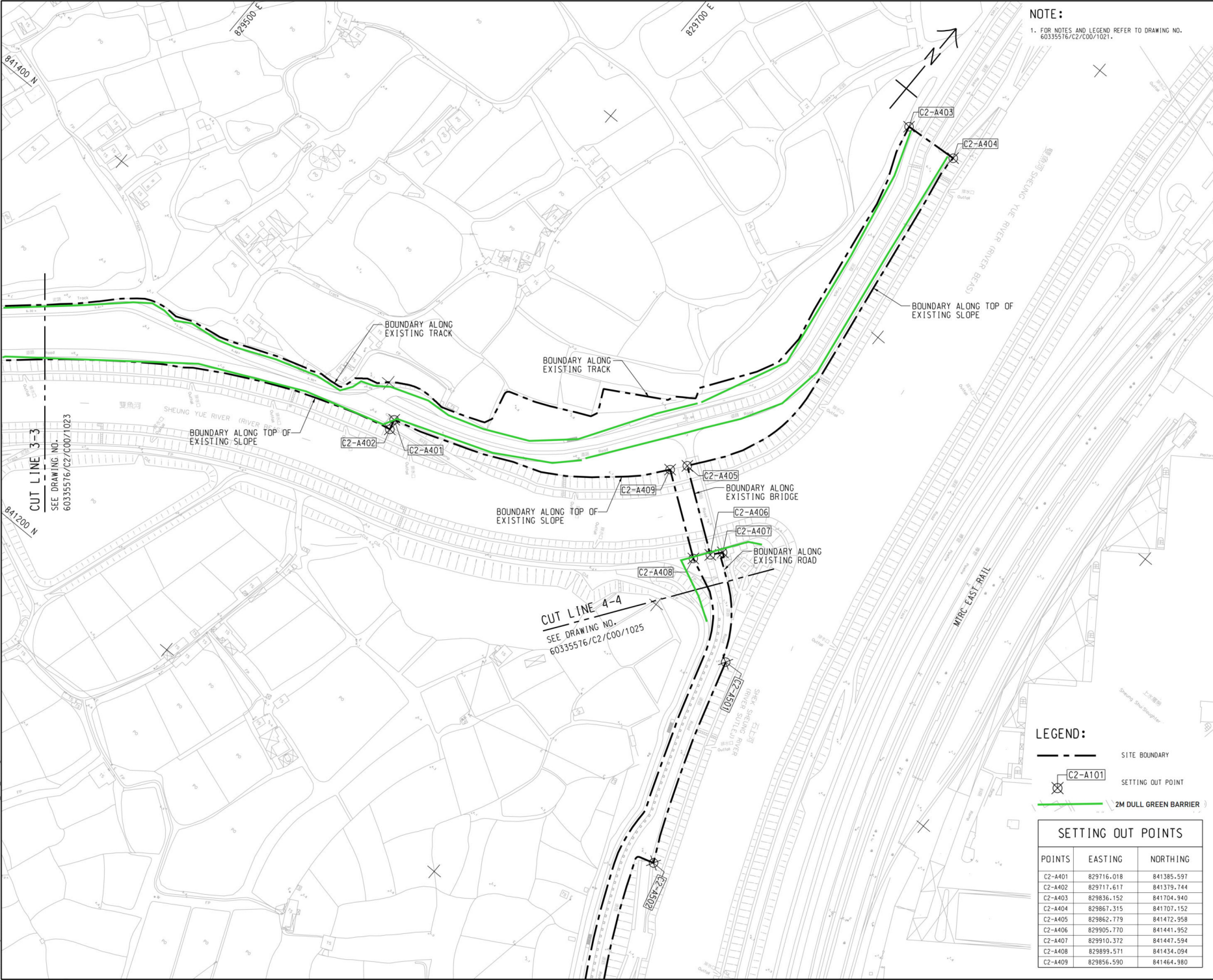
SHEET 2 OF 5



60335576/C2/C00/1023B

SETTING OUT POINTS			
POINTS	EASTING	NORTHING	
C2-A331	829409.383	841172.166	
C2-A332	829415.258	841170.255	
C2-A333	829446.840	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	829394.574	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	829325.778	840807.900	
C2-A349	829316.728	840815.141	
C2-A350	829395.444	840852.909	
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	829555.404	840730.330	
C2-A359	829240.921	840737.102	

ISO A1 564mm x 841mm
Checked: CYCH
Approved: ELYN
Project Management Initials
Designer: ELYN
20/09/2019
Path: P:\Projects\60335576\DRAWING\CONTRACT\1024\1024.dgn



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

LEGEND:

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

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

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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SEP-19 <td>TENDER DRAWING<td>CYCH<td></td></td></td>	TENDER DRAWING <td>CYCH<td></td></td>	CYCH <td></td>	

STATUS
校核

SCALE
比例 1:1000
DIMENSION UNIT
尺寸單位 METRES

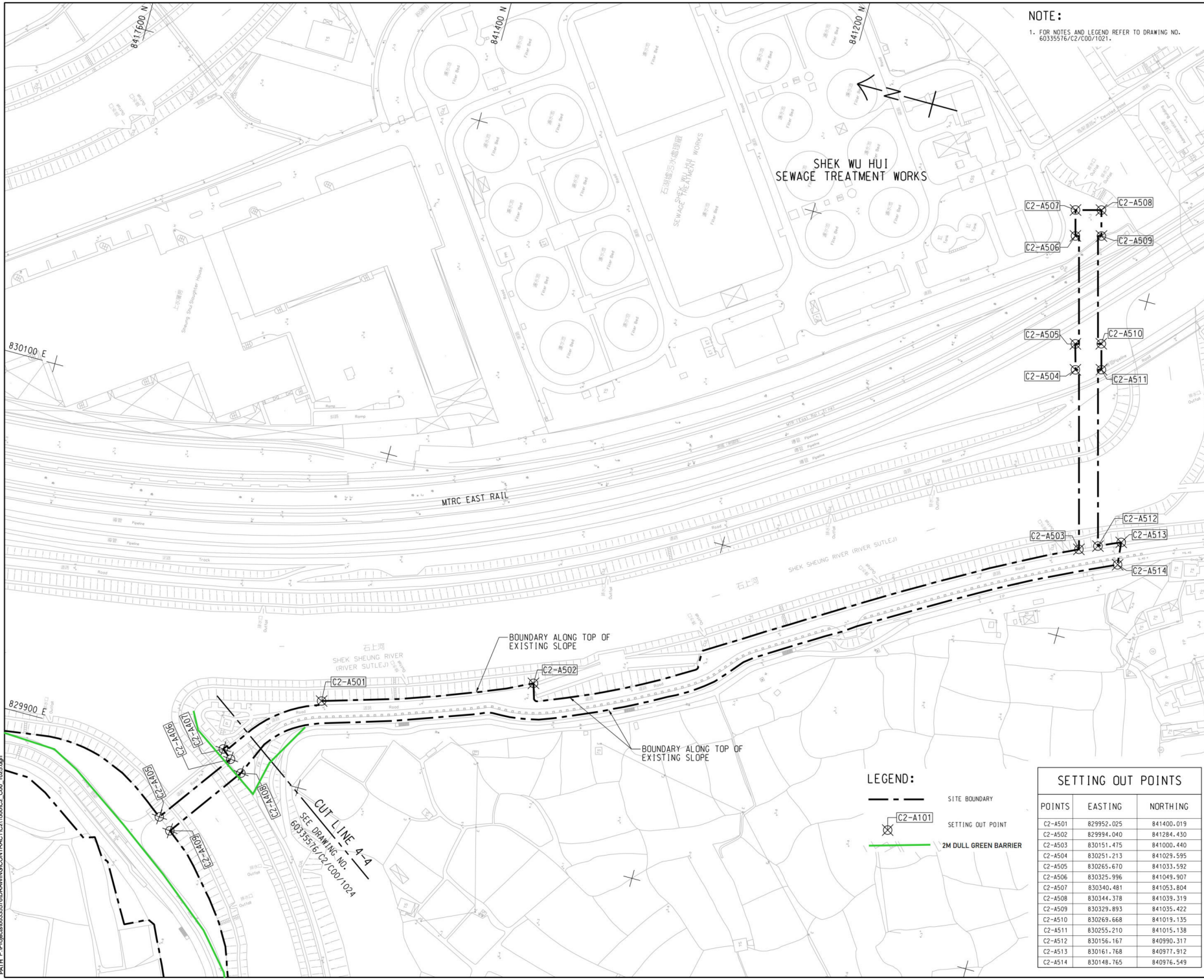
KEY PLAN A1 N.T.S.

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

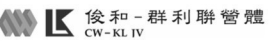
SHEET TITLE
SITE OF WORKS

SHEET NUMBER
60335576/C2/C00/1024

SHEET 4 OF 5



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



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

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

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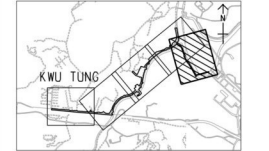
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1	SEP-19	TENDER DRAWING	CYCH

STATUS
修訂

SCALE
比例 1:1000
DIMENSION UNIT
尺寸單位 METRES

KEY PLAN
圖則



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

SHEET TITLE
圖紙名稱 SITE OF WORKS

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

Figure 14

Hoarding Plan

EP-473/2013/A

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

Submission of Layout Plan

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

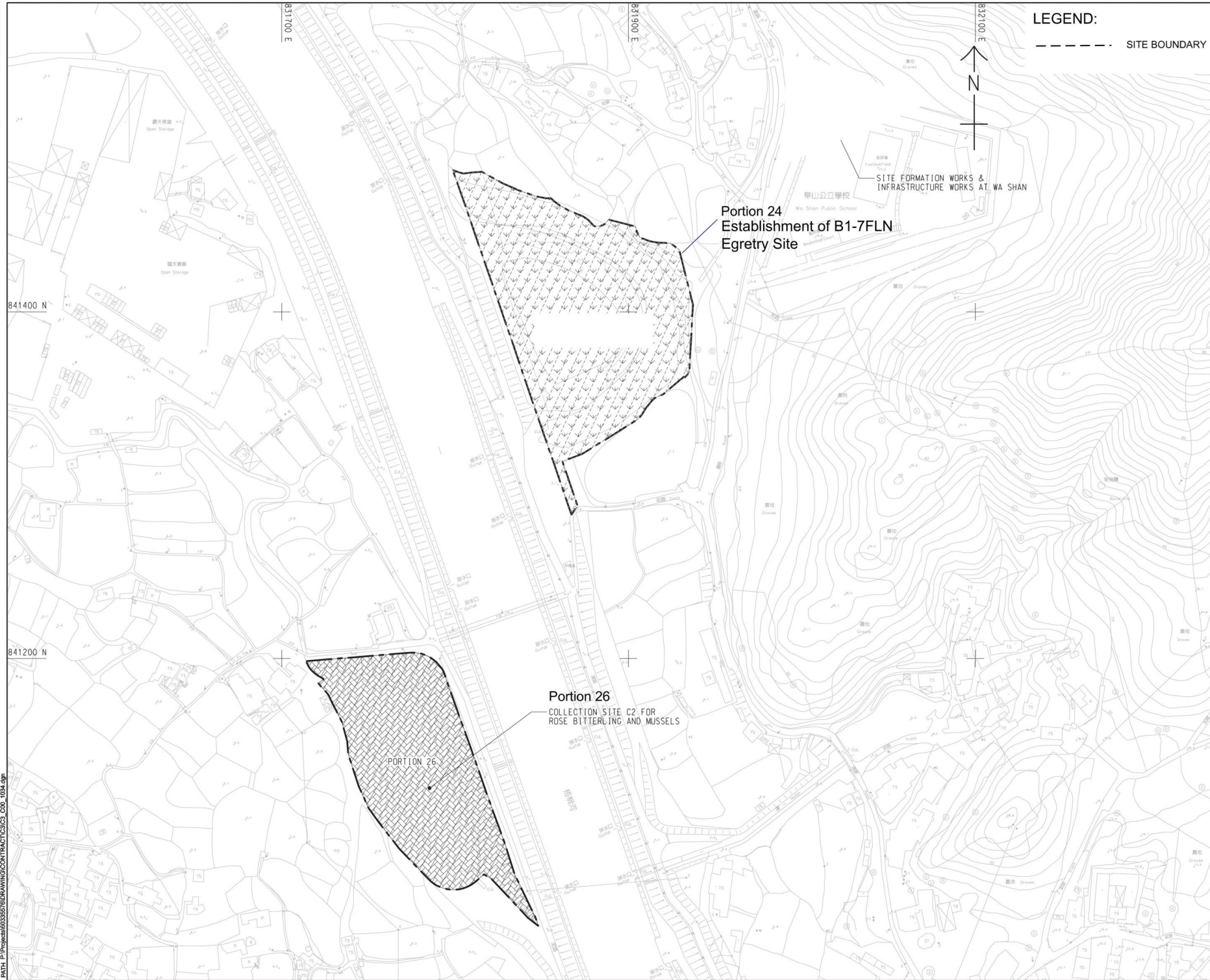
Table of Summary of Submission

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



60335576/C3/C00/1000

1. **Accuracy:** The data was obtained from a reliable source (e.g., a government agency or a reputable research organization).
 2. **Completeness:** The data covers the entire time period and includes all relevant variables.
 3. **Consistency:** The data is consistent with other sources and does not contain any obvious errors or outliers.
 4. **Timeliness:** The data is up-to-date and reflects the most recent information available.
 5. **Transparency:** The data is clearly documented and the sources are properly cited.



LEGEND:
----- SITE BOUNDARY

Sang Hing - Kuly Venture

Title of Designated Project
Fanling Bypass Eastern Section

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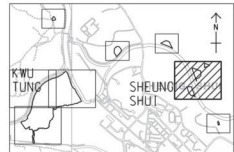
SUB-CONSULTANTS
分 局 土 地 研 究 所

ISSUE/REVISION			
REV	DATE	DESCRIPTION	CHK
1	JUN-19	TENDER DRAWING	CYCH

STATUS
備 註

SCALE
A1 1 : 1000
DIMENSION UNIT
METRES

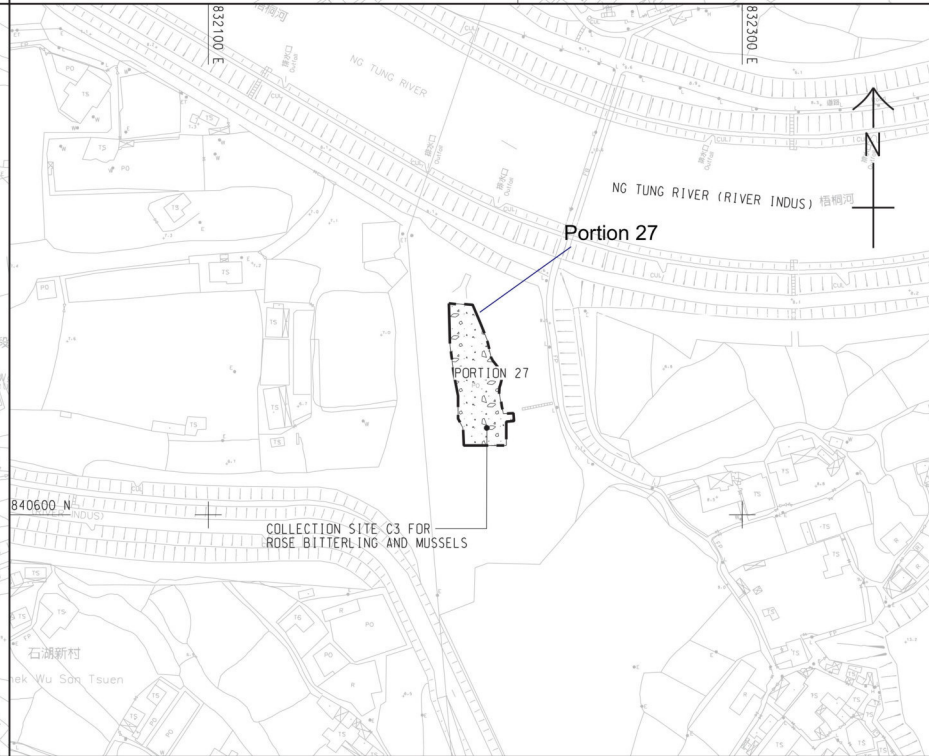
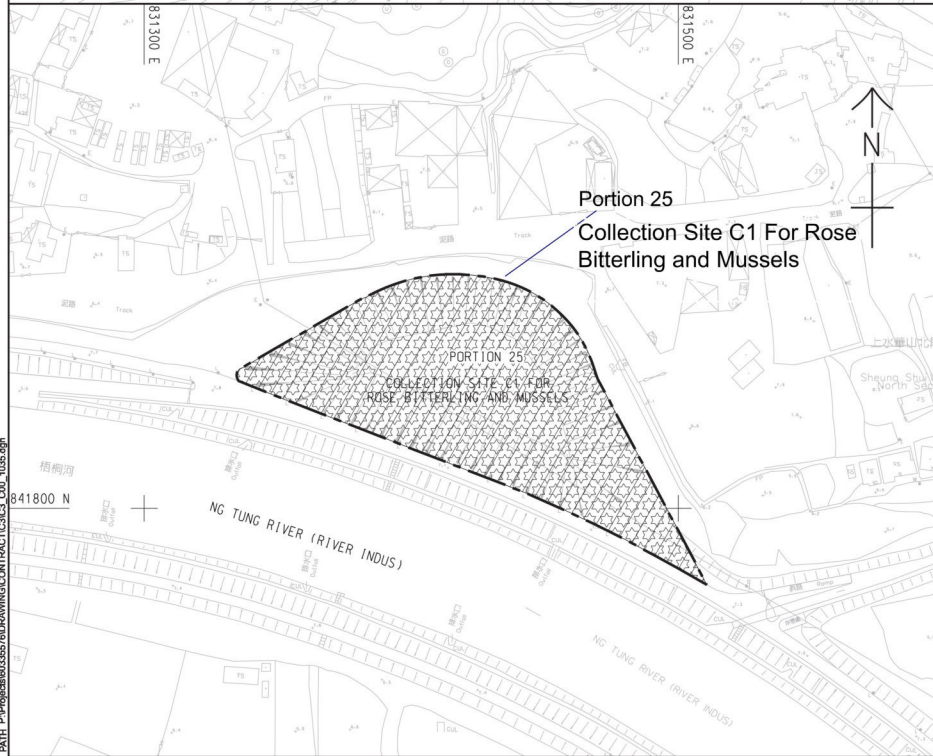
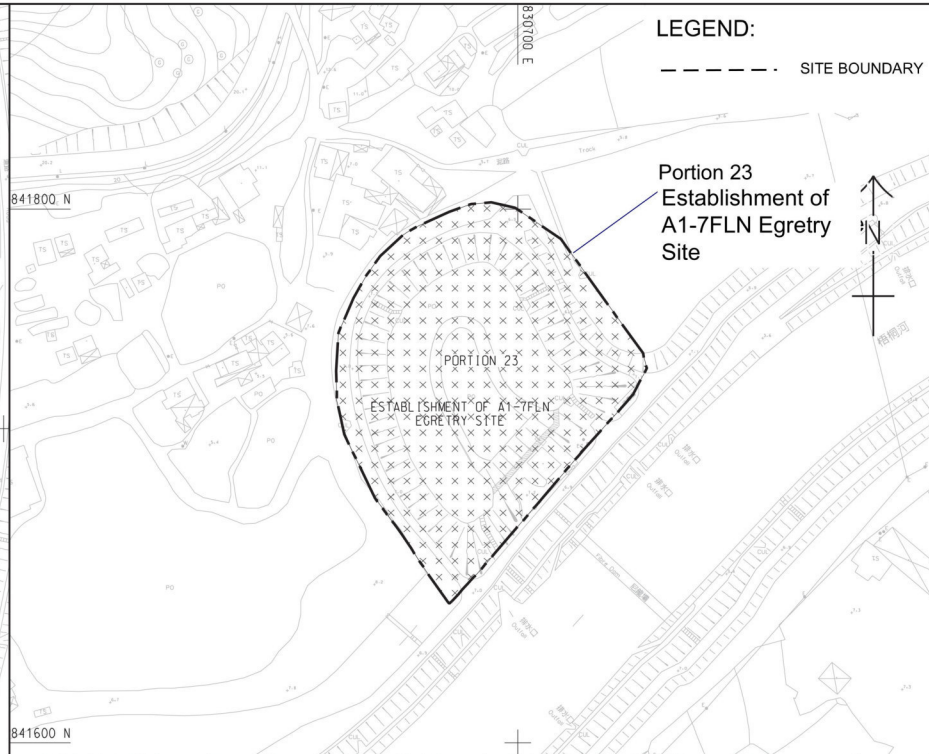
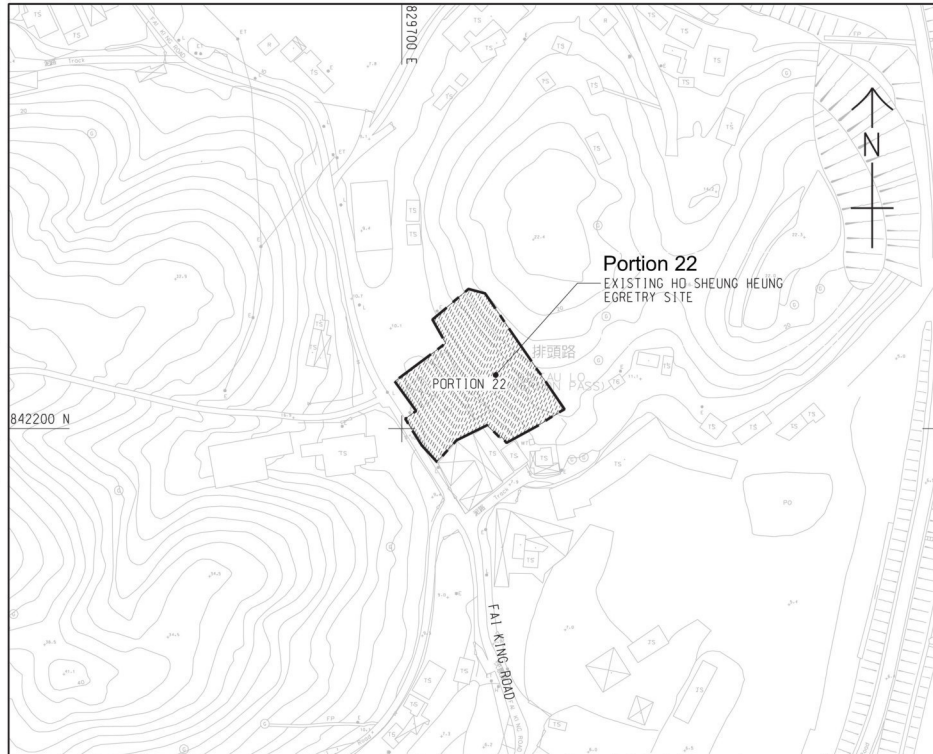
KEY PLAN
A1 1 : 40000



PROJECT NO.
60335576
SHEET TITLE
PORTION OF SITE

SHEET NUMBER
60335576/C3/C00/1034

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Sang Hing - Kuly Venture

Title of Designated
 Project
 Fanling Bypass Eastern
 Section

CLIENT
 土木 工程 拓展 署
CEDD
 Civil Engineering and
 Development Department

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 工程顧問公司
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ISSUE/REVISION

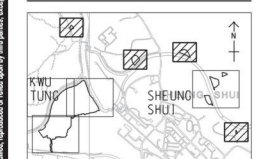
NO.	DATE	DESCRIPTION	CHK.
1	JUN-19	TENDER DRAWING	CYCH

STATUS
 備案

SCALE
 比例
 A1 1 : 1000

DIMENSION UNIT
 尺寸單位
 METRES

KEY PLAN A1 1 : 40000



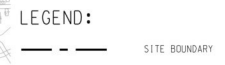
PROJECT NO.
 項目編號
 60335576

CONTRACT NO.
 合約編號
 ND/2019/03

SHEET TITLE
 圖紙名稱
 PORTION OF SITE

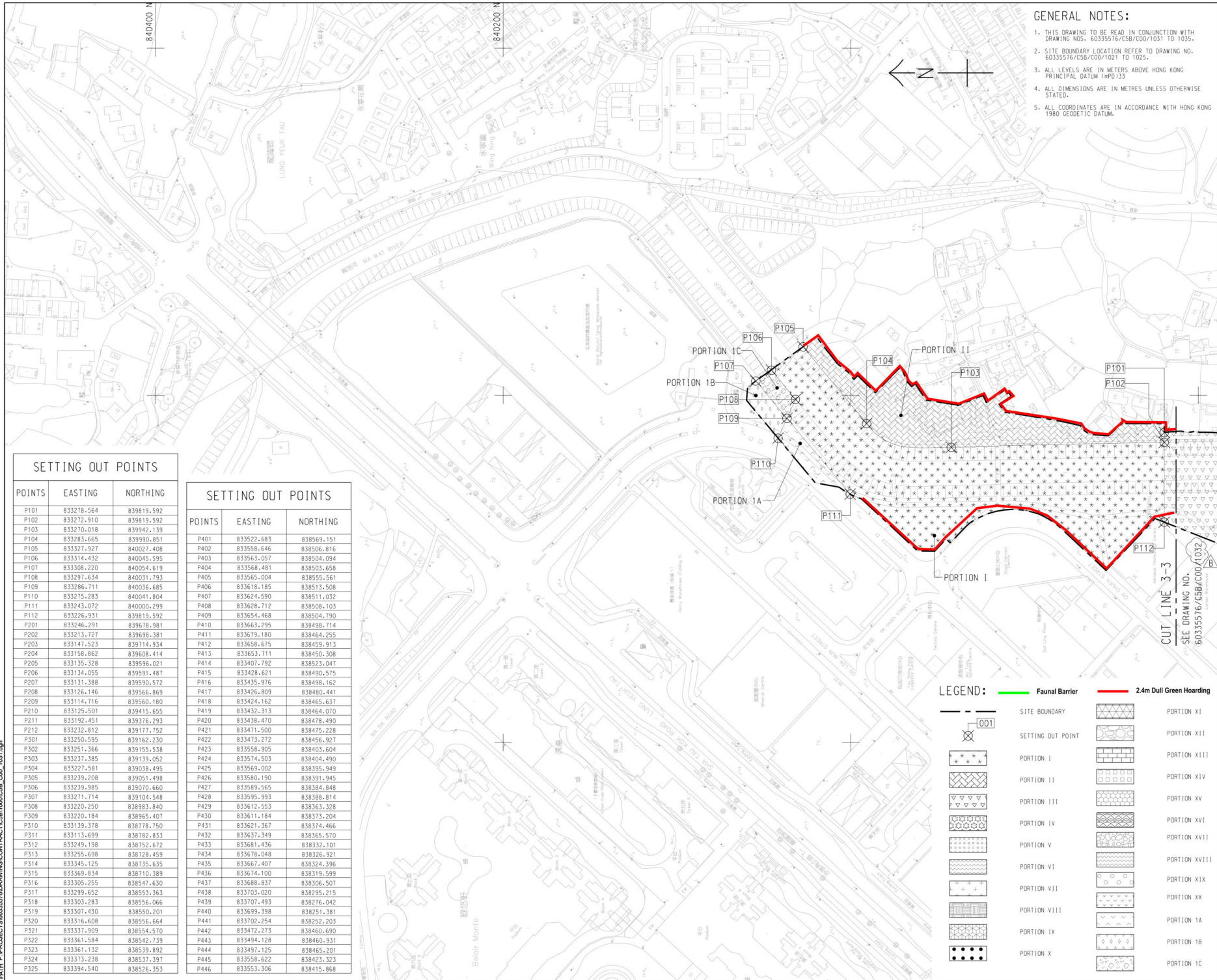
SHEET NUMBER
 圖紙編號
 60335576/C3/C00/1035

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60335576/C5B/C00/1000

[illegible]



GENERAL NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C5B/C00/1031 TO 1035.
2. SITE BOUNDARY LOCATION REFER TO DRAWING NO. 60335576/C5B/C00/1001 TO 1025.
3. ALL LEVELS ARE IN METERS ABOVE HONG KONG PRINCIPAL DATUM (mPD) 133.
4. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
5. ALL COORDINATES ARE IN ACCORDANCE WITH HONG KONG 1980 GEODETIC DATUM.

CRCC - Paul Y Joint Venture

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

CONTRACT TITLE: ND/2019/05

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

CLIENT
土木 工程 拓展 署
CEDD
Civil Engineering and
Development Department

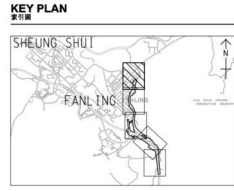
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A	JUL-19	TENDER ADDENDUM NO.2	RPCM	
JUN-19		TENDER DRAWING	RPCM	
IR	DATE	DESCRIPTION	CHK.	CHK.
修訂	日期	內容摘要	校核	校核

STATUS
狀態

SCALE
比例
A1 : 1:1000
METRES

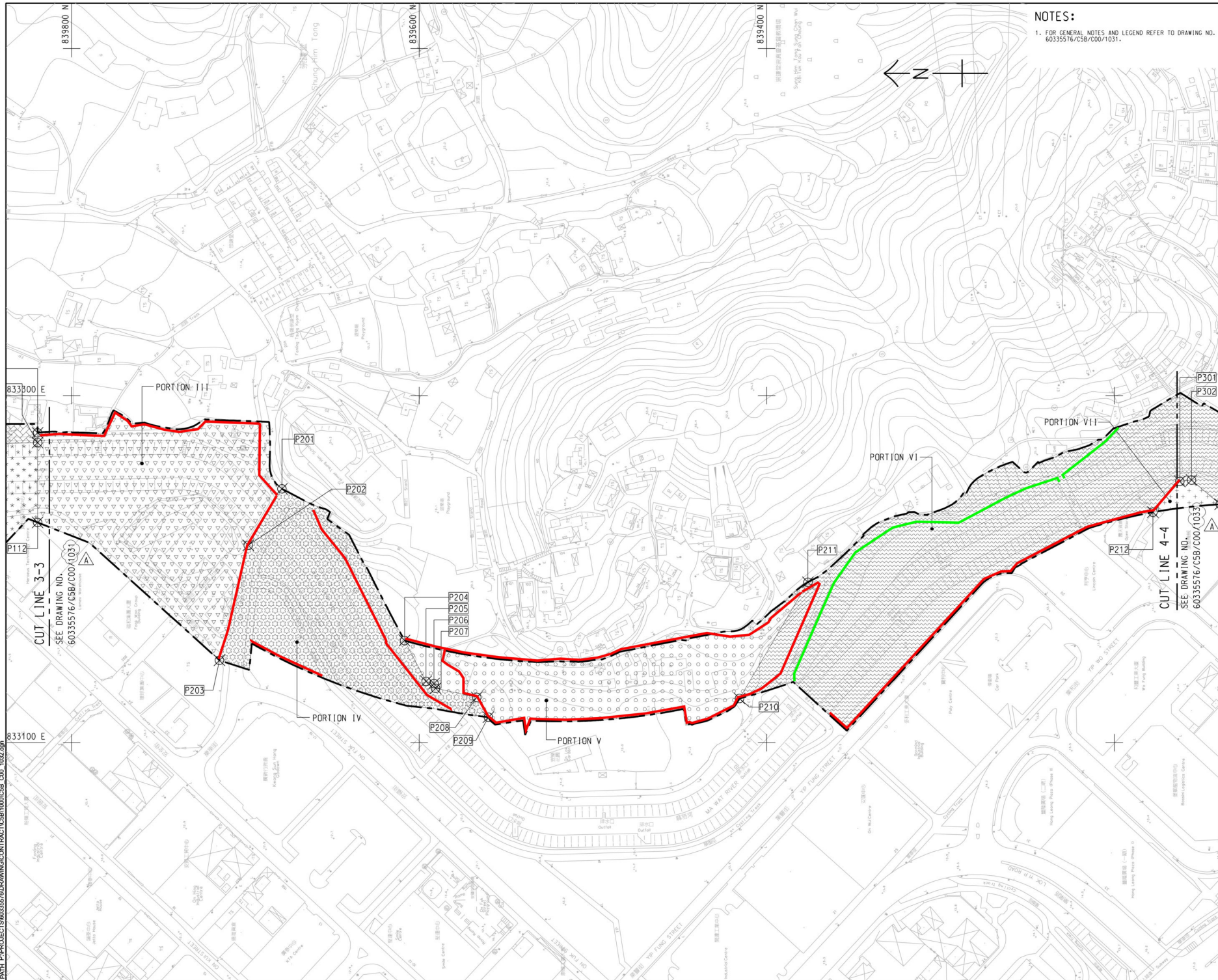


PROJECT NO.
項目編號
60335576

CONTRACT NO.
合約編號
ND/2019/05

SHEET TITLE
圖紙名稱
PORTION OF SITE

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



NOTES:

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

CRCC - Paul Y Joint Venture

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

CONTRACT TITLE: ND/2019/05

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

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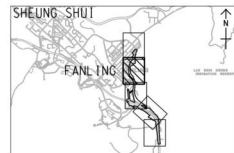
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ISSUE/REVISION			
NO.	DATE	DESCRIPTION	CHK.
A	AUG-19	TENDER ADDENDUM NO.3	RPCM
-	JUN-19	TENDER DRAWING	RPCM
VR	DATE	DESCRIPTION	CHK.

STATUS

SCALE
A1 1: 1000
DIMENSION UNIT
METRES

KEY PLAN
A1 1: 70000

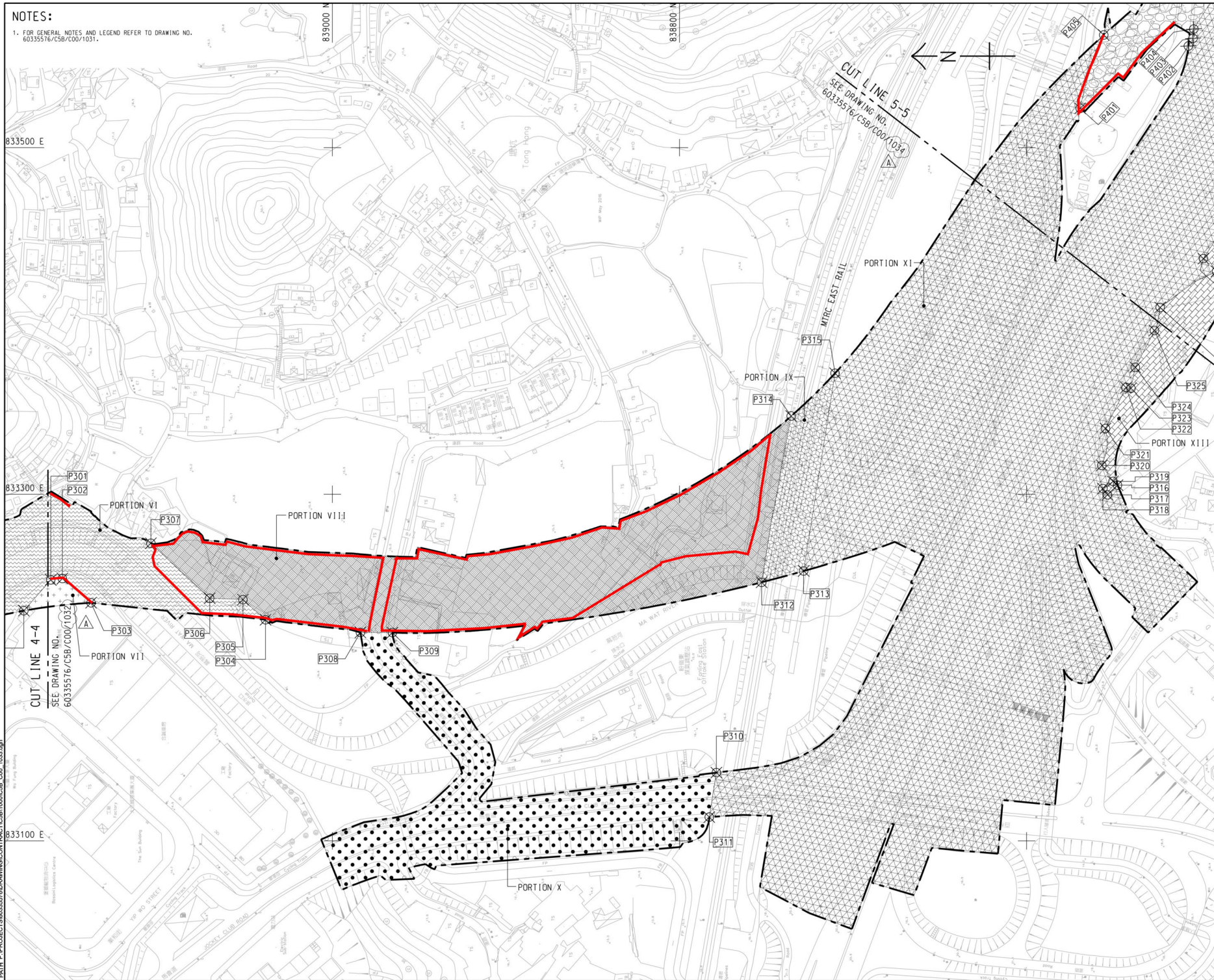


PROJECT NO.
60335576
CONTRACT NO.
ND/2019/05

SHEET TITLE
PORTION OF SITE

SHEET NUMBER
60335576/C5B/C00/1032A

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



CRCC - Paul Y Joint Venture

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

CONTRACT TITLE: ND/2019/05

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

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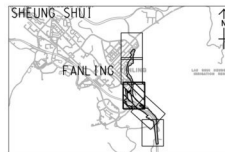
NO.	DATE	DESCRIPTION	CHK.
A	AUG-19	TENDER ADDENDUM NO.3	RPCM
J	JUN-19	TENDER DRAWING	RPCM

STATUS

SCALE DIMENSION UNIT

A1 1: 1000 METRES

KEY PLAN



PROJECT NO.

60335576

CONTRACT NO.

ND/2019/05

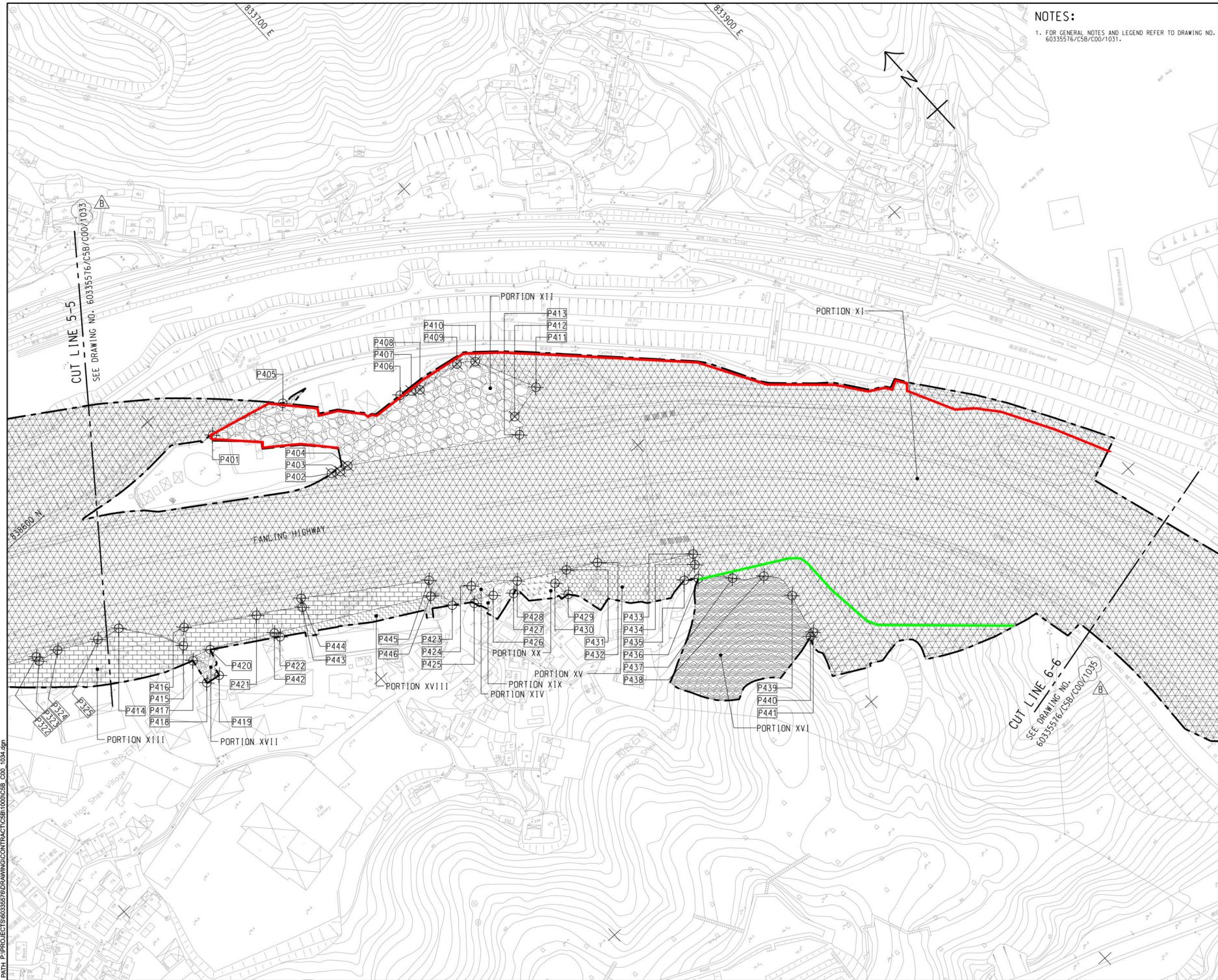
SHEET TITLE

PORTION OF SITE

SHEET NUMBER

60335576/CSB/C00/1033A

SHEET 3 OF 5



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

CRCC - Paul Y Joint Venture

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

CONTRACT TITLE: ND/2019/05

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

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

STATUS

SCALE DIMENSION UNIT

A1 1:1000 METRES

KEY PLAN A1 1:70000



PROJECT NO. CONTRACT NO.

60335576 ND/2019/05

SHEET TITLE

PORTION OF SITE

SHEET NUMBER

60335576/C5B/C00/1034B



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

CRCC - Paul Y Joint Venture

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

CONTRACT TITLE: ND/2019/05

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

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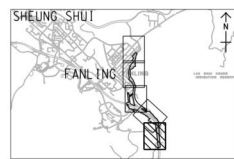
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NO.	DATE	DESCRIPTION	CHK.	CHK.
A	AUG-19	TENDER ADDENDUM NO.3	RPCM	
JUN-19	TENDER DRAWING	RPCM		
IR	DATE	DESCRIPTION	CHK.	CHK.
修改	日期	內容摘要	校核	校核

STATUS
修改

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 NUMBER
圖紙編號
60335576/C5B/C00/1035A

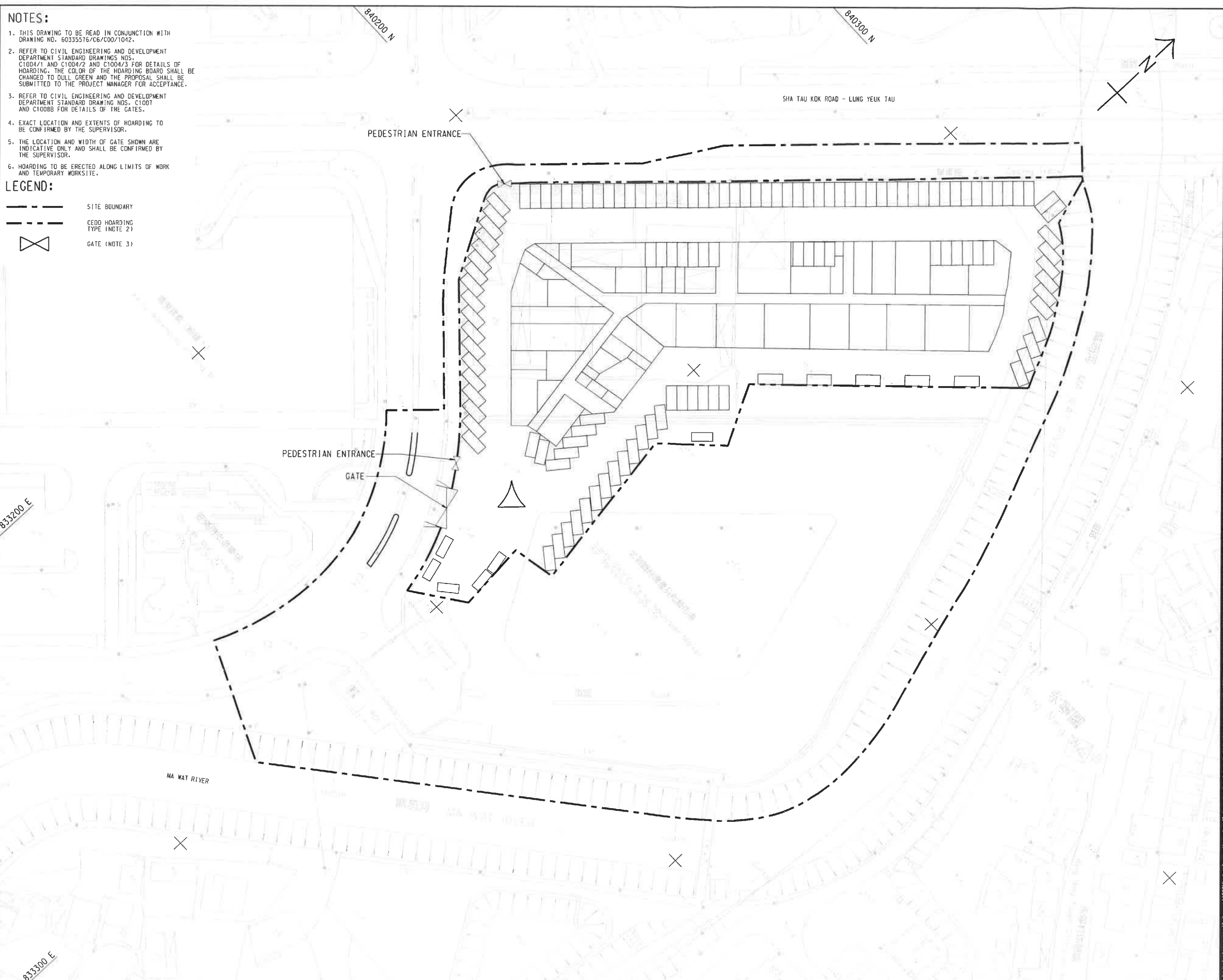
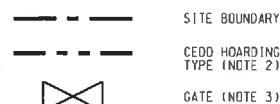
Figure 15

Hoarding Plan

EP-475/2013/A

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 GREEN TO DUE GREEN. 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.

 SITE BOUNDARY
 CEDD HOARDING
 TYPE (NOTE 2)
 GATE (NOTE 3)



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PROJECT

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

CONTRACT TITLE:

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

CLIENT



土木工程拓展署
Civil Engineering and
Development Department

CONSULTANT
工務局顧問

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-	FEB-19	TENDER DRAWING	ALU
VR	DATE	DESCRIPTION	CHIR
修訂	日期	內容摘要	姓名

STATUS

SCALE
比例

A1 1:500

DIMENSION UNIT
尺寸單位

METRES

KEY PLAN

PROJECT NO.

60335576

SHEET TITLE

HOARDING PLAN (INTERIM STAGE)

SHEET NUMBER

60335576/C6/C00/1041

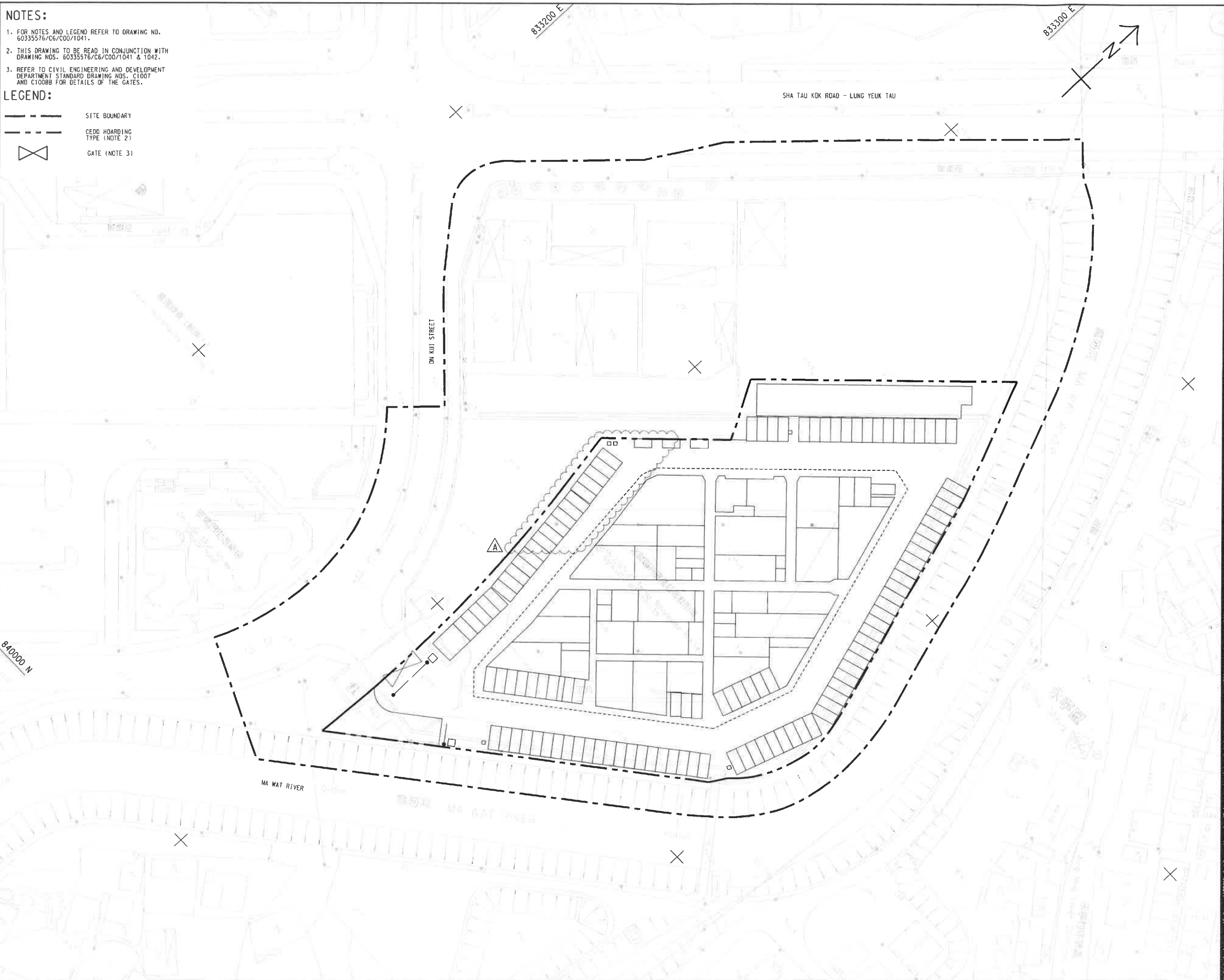
CONTRACT NO.

ND/2019/06

ISO A1 594mm x 841mm
Project Management Initials: Designer: DMCH Checked: ALUI Approved: IHML
Pld File by: Yauky 20/02/2019
PATH: P:\Projects\60335576\60335576\DWG\CONTRACT\08\1000\CS_C00_1042.dgn

- NOTES:
- FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C6/C00/1041.
 - THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C6/C00/1041 & 1042.
 - REFER TO CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT STANDARD DRAWING NOS. C1007 AND C1008B FOR DETAILS OF THE GATES.

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



AECOM

PROJECT

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

CONTRACT TITLE:

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

CLIENT

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

CONSULTANT

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

STATUS

原稿

SCALE

比例

A1 1 : 500

DIMENSION UNIT

尺寸單位

METRES

KEY PLAN

圖則索引

PROJECT NO.

項目編號

60335576

CONTRACT NO.

合約編號

ND/2019/06

SHEET TITLE

圖則名稱

HOARDING PLAN (FINAL STAGE)

SHEET NUMBER


圖則編號

60335576/C6/C00/1042A

APPENDIX A
CONSTRUCTION PROGRAMME

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	20	December 2020					January 2021				February 2021				March 2021					
							22	29	06	13	20	27	03	10	17	24	31	07	14	21	28	07	14	21	28	
Revised Programme (2020-12-25) Final																										
2.0 - Site Access Date																										
AD-1030	Portion 1d - (Late Possession from 6 Jul 2020) (Part of Area Handovered on 31 May 2020)	0	25-Dec-20*		-172	CD (7d)	◆ Portion 1d - (Late Possession from 6 Jul 2020) (Part of Area Handovered on 31 May 2020)																			
AD-1070	Portion 3 - (Late Possession from 6 Apr 2020)	0	25-Dec-20*		-263	CD (7d)	◆ Portion 3 - (Late Possession from 6 Apr 2020)																			
AD-1160	Portion 9b - (Late Possession from 6 Jul 2020) (Minor Area Handovered on 17 Sep 2020)	0	25-Dec-20*		-172	CD (7d)	◆ Portion 9b - (Late Possession from 6 Jul 2020) (Minor Area Handovered on 17 Sep 2020)																			
AD-1180	Portion 9d - (Late Possession from 6 Jul 2020)	0	25-Dec-20*		-172	CD (7d)	◆ Portion 9d - (Late Possession from 6 Jul 2020)																			
AD-1210	Portion 11a (Part of Area Handovered on 31 May 2020)	0	25-Dec-20*		-172	CD (7d)	◆ Portion 11a (Part of Area Handovered on 31 May 2020)																			
AD-1250	Portion 14	0	25-Dec-20*		-18	CD (7d)	◆ Portion 14																			
AD-1270	Portion 16 - (Part of Area Handovered on 30 Dec 2020)	0	25-Dec-20*		-145	CD (7d)	◆ Portion 16 - (Part of Area Handovered on 30 Dec 2020)																			
3.0 - Section Completion Date																										
3.1 Sectional Work Completion (Original Contract Completion Date)																										
SC0-1070	Section 5 - all works in Area I	0		06-Feb-21 A		CD (7d)	◆ Section 5 - all works in Area I																			
3.2 Planned Sectional Work Completion																										
SC-1070	Section 5 - all works in Area I	0		01-Mar-21*	-23	CD (7d)	◆ Section 5 - all works in Area I																			
4.0 - Key Date																										
4.1 Key Date Completion (Original Contract Completion Date)																										
KD0-1030	KD4 366 days after starting date	0		06-Dec-20 A		CD (7d)	◆ KD4 366 days after starting date																			
4.2 Planned Key Date Completion																										
KD-1020	KD3 320 days after starting date	0		27-Nov-20 A		CD (7d)	◆ KD3 320 days after starting date																			
KD-1030	KD4 366 days after starting date	0		05-Dec-20 A		CD (7d)	◆ KD4 366 days after starting date																			
KD-1040	KD5 305 days after starting date	0		09-Feb-21*	-126	CD (7d)	◆ KD5 305 days after starting date																			
5.0 - Ordering Date																										
OD-1020	Order for Section 19A (subject to excision, within 244 days from starting date inclusive)	0		25-Dec-20*	-141	CD (7d)	◆ Order for Section 19A (subject to excision, within 244 days from starting date inclusive)																			
OD-1030	Order for Section 19B (subject to excision, within 244 days from starting date inclusive)	0		25-Dec-20*	-141	CD (7d)	◆ Order for Section 19B (subject to excision, within 244 days from starting date inclusive)																			
OD-1040	Order for Section 19C (subject to excision, within 244 days from starting date inclusive)	0		25-Dec-20*	-141	CD (7d)	◆ Order for Section 19C (subject to excision, within 244 days from starting date inclusive)																			
6.0 - Preliminaries and General Requirements																										
6.1 - Preliminaries																										
PRE-1020	Baseline Ecological Monitoring Works (by ET) (from 3/7/19 to 2/7/20)	0	28-Nov-19 A	30-Jun-20 A		CD (7d)																				
PRE-1030	Provision of Waste Water Treatment Facilities	0	01-Feb-20 A	10-Feb-20 A		CD (7d)																				
PRE-1040	Erection of Interim Contractor's Site Accommodation in Additional Land near Portion 1f	0	08-Jan-20 A	21-Jan-20 A		WD (6d)																				
6.2 - General Submission																										
GS-1040	Submission of Draft Construction Health and Safety Plan	0	28-Nov-19 A	06-Dec-19 A		CD (7d)																				
GS-1060	Submission of Draft Environmental Management Plan	0	28-Nov-19 A	06-Dec-19 A		CD (7d)																				
GS-1070	Submission of Environmental Management Plan	0	28-Nov-19 A	31-Dec-19 A		CD (7d)																				
GS-1080	Submission of Site Traffic Safety Management Plan	0	16-Oct-20 A	30-Nov-20 A		CD (7d)																				
GS-1100	Submission of Interface Management Plan	21	25-Dec-20*	14-Jan-21	235	CD (7d)																				
GS-1120	Acceptance of Interface Management Plan	21	15-Jan-21	04-Feb-21	235	CD (7d)																				
GS-1130	Submission of Detailed Interface Document	21	05-Feb-21	25-Feb-21	235	CD (7d)																				
GS-1140	Acceptance of Detailed Interface Document	21	26-Feb-21	18-Mar-21	235	CD (7d)																				
GS-1160	Submission of Subcontractor Management Plan	0	28-Nov-19 A	06-Dec-19 A		CD (7d)																				
GS-1180	Submission of Emergency Unit	0	06-Dec-19 A	17-Dec-19 A		CD (7d)																				

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	20	December 2020					January 2021				February 2021			March 2021			
							22	29	06	13	20	27	03	10	17	24	31	07	14	21	28	07	14
GS-1190	Submission of Details for Project Manager's Site Accommodation	7	06-Mar-20 A	31-Dec-20	-233	CD (7d)																	
GS-1200	Acceptance of Details for Project Manager's Site Accommodation	42	01-Jan-21	11-Feb-21	-233	CD (7d)																	
GS-1230	Submission of Major Method Statements	42	06-Dec-19 A	04-Feb-21	2162	CD (7d)																	
GS-1260	Acceptance of Archaeological Action Plan and Issuance of Licence to Excavate and Search for Antiquities	71	08-Sep-20 A	05-Mar-21*	0	CD (7d)																	
6.3 - Subletting Package																							
SP-1020	Site Hoarding	0	05-Mar-20 A	20-Apr-20 A		CD (7d)																	
SP-1030	Independent Checking Engineer Services	0	14-Feb-20 A	17-Apr-20 A		CD (7d)																	
SP-1040	Security System for the site	0	07-Dec-19 A	08-Jan-20 A		CD (7d)																	
SP-1060	Tree Survey	0	20-Jan-20 A	24-Mar-20 A		CD (7d)																	
SP-1070	Ground Investigation and Laboratory Testing	0	20-Jan-20 A	24-Mar-20 A		CD (7d)																	
SP-1090	Piling Works	0	10-Jul-20 A	25-Aug-20 A		CD (7d)																	
SP-1110	RC Works for Retaining Wall (same as SP-1112)	0	11-Jun-20 A	06-Aug-20 A		CD (7d)																	
SP-1111	Civil Provisions for STF (TSPS & MBR)	0	03-Apr-20 A	03-Jun-20 A		CD (7d)																	
SP-1112	RC Works for Reservoirs (same as SP-1110)	0	11-Jun-20 A	06-Aug-20 A		CD (7d)																	
SP-1121	Trenchless Works 600mm dia Watermain	0	09-Jun-20 A	07-Aug-20 A		CD (7d)																	
SP-1130	Road & Drainage & Watermain Laying Works (Stage 1 Works along D1 and L1 Road)	0	11-May-20 A	05-Jun-20 A		CD (7d)																	
SP-1131	Road & Drainage Works (Stage 2 for Remaining Whole Site)	7	03-Jun-20 A	31-Dec-20	18	CD (7d)																	
SP-1132	Watermain Laying Works (Stage 2 for Remaining Whole Site)	7	03-Jun-20 A	31-Dec-20	248	CD (7d)																	
SP-1140	Road Lighting Works	0	08-Jun-20 A	04-Aug-20 A		CD (7d)																	
SP-1150	Construction works for Temporary Noise Barrier (same as SP-1230)	0	10-Jun-20 A	26-Aug-20 A		CD (7d)																	
SP-1160	E&M works for MBR Plant and Associated Works (including Sewage Transfer Station)	0	02-Apr-20 A	03-Jun-20 A		CD (7d)																	
SP-1170	E&M works for Water Service Reservoirs (Service Reservoir Specialist)	0	28-Sep-20 A	15-Dec-20 A		CD (7d)																	
SP-1200	Slope Works - Soil Nailing	0	15-Jul-20 A	08-Sep-20 A		CD (7d)																	
SP-1220	Pipeworks of District Cooling System (DCS)	60	25-Dec-20	22-Feb-21	270	CD (7d)																	
SP-1230	Panel Installation for Permanent Noise Barriers (same as SP-1150)	0	13-Jun-20 A	26-Aug-20 A		CD (7d)																	
SP-1240	Traffic Consultant	0	14-Feb-20 A	09-Apr-20 A		CD (7d)																	
SP-1250	Interim Community Liaison Centre	0	22-Feb-20 A	24-Mar-20 A		CD (7d)																	
SP-1260	Condition Survey	0	22-Feb-20 A	17-Apr-20 A		CD (7d)																	
SP-1270	Building Information Modelling (BIM)	0	06-Jun-20 A	07-Jul-20 A		CD (7d)																	
SP-1280	Construction Video Film Production	0	23-Apr-20 A	29-May-20 A		CD (7d)																	
SP-1290	Demolition of Small Building	0	04-Jun-20 A	17-Jul-20 A		CD (7d)																	
7.0 - CONSTRUCTION																							
Section 1																							
S1-1012	Opening of Cycle Track at Portion 10a (EWN No. 017)	0		25-Dec-20	-182	CD (7d)						◆ Opening of Cycle Track at Portion 10a (EWN No. 017)											
S1-1016	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Dec-20	-182	CD (7d)						◆ Removal of Existing CLP Facilities (EWN No. 018)											
S1-1018	Excavation Permit (XP) for New Cycle Path (EWN No. 021)	0		25-Dec-20	-182	CD (7d)						◆ Excavation Permit (XP) for New Cycle Path (EWN No. 021)											
Portion 10a in Area H, H1, H2 (Soil Treatment & Provision of Site Access & EVA to MWSC)																							
Preparation work/Tree Survey/Site Clearance/GI																							
S1P10a-1031	Additional tree felling due to increase in total nos. of trees to be felled at Portions 7 & 10a (EWN No. 012)	0	07-Oct-20 A	30-Oct-20 A		WD (6d)																	
KD1 - Provision of Site Access and EVA to MWSC																							
Soil Treatment																							
S1K1-1010	Remove soil (original assumed 29975m3) (7 / 7 EGI completed, interim soil to be excavated / treated : 14400m3 / 5250m3)	29	26-Sep-20 A	30-Jan-21	-92	WD (6d)																	
S1K1-1020	Backfill treated soil (250m3 / day / gang, 2 gangs)	62	01-Feb-21	20-Apr-21	89	WD (6d)																	
Civil Work																							
Road D1 (Stage 1)																							
S1K1-2000	Construct & maintain Temporary drainage	301	22-Sep-20 A	31-Dec-21	-121	WD (6d)																	



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Joint Venture**

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


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Activity ID		Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	2020		December 2020					January 2021			February 2021				March 2021					
								20	22	29	06	13	20	27	03	10	17	24	31	07	14	21	28	07	14	21	28
		S1K1-2004	Underground Drainage (around 30m) Manhole SMH KT2001	10	25-Nov-20 A	08-Jan-21	-138	WD (6d)																			
		S1K1-2006	Underground Drainage (around 160m) Manhole KT2001 - KT2001A - KT1015A	42	04-Nov-20 A	18-Feb-21	-105	WD (6d)																			
		S1K1-2008	Underground Sewerage (around 190m)	66	09-Jan-21	30-Mar-21	-121	WD (6d)																			
		S1K1-2009	Underground Fresh & Flushing watermains (around 190m)	72	26-Feb-21	26-May-21	-121	WD (6d)																			
		S1K1-2012	Noise barrier NB35 footing (71m)	54	19-Mar-21	26-May-21	-121	WD (6d)																			
		Road D1 (Stage 2) Castle Peak road junction																									
		S1K1-2024	Construct & maintain Temporary drainage	332	28-Dec-20	10-Feb-22	-152	WD (6d)																			
		S1K1-2026	Underground Drainage ELS & Excavation (around 40m)	24	28-Dec-20	25-Jan-21	-152	WD (6d)																			
		S1K1-2028	Underground Drainage (around 40m)	40	26-Jan-21	16-Mar-21	-152	WD (6d)																			
		S1K1-2030	Underground Sewerage (around 40m)	42	17-Mar-21	08-May-21	-152	WD (6d)																			
		Rooad L1																									
		S1K1-2100	Construct & maintain Temporary drainage	301	21-Dec-20 A	31-Dec-21	-121	WD (6d)																			
		S1K1-2102	Underground Sewerage ELS & Excavation (around 10m) at Road D1 junction	20	21-Dec-20 A	22-Jan-21	-119	WD (6d)																			
		S1K1-2104	Underground Sewerage (around 120m)	60	02-Jan-21	16-Mar-21	-121	WD (6d)																			
		S1K1-2106	Underground Drainage (around 120m)	60	06-Feb-21	23-Apr-21	-121	WD (6d)																			
		S1K1-2108	Underground Fresh & Flushing watermains (around 40m)	66	24-Mar-21	15-Jun-21	-121	WD (6d)																			
		Section 2A																									
		S2A-1002	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Dec-20	291	CD (7d)																			
S2A-1004	Temporary Stockpile at Portion 5 and Additional Land D	0		25-Dec-20	253	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-Dec-20		291	CD (7d)																					
S2AP5-1010	Tree survey and prepare tree felling and transplant report	0	08-Apr-20 A	04-Jun-20 A		WD (6d)																					
S2AP5-1015	Approval & Acceptance of Tree Felling Application	15	20-Jun-20 A	08-Jan-21	188	CD (7d)																					
S2AP5-1022	Site Clearance & Tree Felling (After removing Stockpile at Portion 5)	30	28-Dec-20	01-Feb-21	204	WD (6d)																					
S2AP5-1040	Prepare Arsenic Assessment Report	28	09-Nov-20 A	29-Jan-21	196	WD (6d)																					
S2AP5-1050	Arsenic Treatment Plan	30	09-Nov-20 A	01-Feb-21	194	WD (6d)																					
Soil Treatment																											
S2AP5-2000	Construct & maintain Temporary drainage	94	17-Feb-21	11-Jun-21	194	WD (6d)																					
S2AP5-2010	Remove soil (original assumed 13140m3) (6 / 6 EGI completed, interim soil to be excavated / treated : 24300m3 / 12600m3)	34	17-Feb-21	27-Mar-21	194	WD (6d)																					
Section 3																											
Portion 7 in Area E (Soil Treatment & Interface with HKHS's Contractors)																											
Preparation work/Tree Survey/Site Clearance/GI																											
S3P7-1010	Tree survey and prepare tree felling and transplant report	0	06-Apr-20 A	18-May-20 A		WD (6d)																					
S3P7-1030	Environmental ground investigation and lab test (3 EGI) (another 1 EGI in other portion represent part of this portion)	0	21-May-20 A	13-Jun-20 A		WD (6d)																					
S3P7-1040	Prepare Arsenic Assessment Report	30	09-Nov-20 A	01-Feb-21	173	WD (6d)																					
S3P7-1050	Arsenic Treatment Plan	30	09-Nov-20 A	01-Feb-21	173	WD (6d)																					
Soil Treatment																											
S3P7-2000	Construct & maintain Temporary drainage	122	24-Feb-21	23-Jul-21	173	WD (6d)																					
S3P7-2010	Remove soil (original assumed 15718m3) (3 / 4 EGI completed, interim soil to be excavated / treated : 6300m3 / 2000m3)	50	24-Feb-21*	26-Apr-21	173	WD (6d)																					
Interface with HKHS's contractor to carry out GI																											
S3P7-3010	HKHS Contractor to carry out GI in Area E	24	28-Dec-20*	25-Jan-21	195	WD (6d)																					
Section 5																											
S5-1000	Planned Completion Date of Section 5	0		01-Mar-21	-23	CD (7d)																					
Portion 4 in Area I (Soil Treatment & Complete Temp. Noise Barriers along Castle Peak Road)																											
Preparation work/Tree Survey/Site Clearance/GI																											



Build King – Richwell Engineering
Joint Venture

Planned Work

Critical Work

Actual Work

Milestone

Milestone Critical

Summary LOE

Summary LOE Critical

ND/2019/01 - 3 Month Rolling Programme (2020-12)

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Date	Revision	Checked	Approved
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Activity ID		Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	20	December 2020					January 2021					February 2021				March 2021				
								22	29	06	13	20	27	03	10	17	24	31	07	14	21	28	07	14	21	28	
	S5P4-1010	Tree survey and prepare tree felling and transplant report (including Approval)	0	17-Apr-20 A	11-May-20 A		WD (6d)																				
	S5P4-1020	Site Clearance	0	05-Mar-20 A	13-Apr-20 A		WD (6d)																				
	S5P4-1030	Environmental ground investigation and laboratory test(1 / 1 EGI completed)	0	14-Apr-20 A	29-Apr-20 A		WD (6d)																				
	S5P4-1040	Prepare Arsenic Assessment Report	0	30-Apr-20 A	18-May-20 A		WD (6d)																				
	S5P4-1050	Arsenic Treatment Plan	0	30-Apr-20 A	18-May-20 A		WD (6d)																				
Soil Treatment																											
	S5P4-2020	Site formation works	0	03-Dec-20 A	14-Dec-20 A		WD (6d)																				
KD9 - Complete the temp. noise barriers along Castle Peak Road in Area T1, T2, T3, H, H1, I, J,K																											
	S5P4-3000	Construct & maintain Temporary drainage	43	24-Sep-20 A	19-Feb-21	640	WD (6d)																				
	S5P4-3005	Construction of Slope Drainage in Portion 4 (48m) along Castle Peak Road	0	24-Sep-20 A	08-Oct-20 A		WD (6d)																				
	S5P4-3020	Erection of Temporary Noise Barrier Frame in Portion 4 (48m)	4	15-Dec-20 A	31-Dec-20	640	WD (6d)																				
	S5P4-3040	Erection of Temporary Noise Barrier Panel in Portion 4 (48m)	30	13-Jan-21	19-Feb-21	640	WD (6d)																				
Portion 14 in Area I (Soil Treatment & Complete Temp. Noise Barriers along Castle Peak Road)																											
	S5P14-1000	Late Access to and Use of Site of Portion 14 (CNE No. 021)	0		25-Dec-20	-18	CD (7d)																				
Preparation work/Tree Survey/Site Clearance/GI																											
	S5P14-1010	Site Clearance	6	28-Dec-20	04-Jan-21	-16	WD (6d)																				
Soil Treatment																											
	S5P14-2000	Construct & maintain Temporary drainage	36	05-Jan-21	18-Feb-21	-16	WD (6d)																				
	S5P14-2010	Remove soil (EGI was carried out by other Contract, interim soil to be excavated and treated : 0m3)	6	05-Jan-21	11-Jan-21	-16	WD (6d)																				
	S5P14-2020	Backfilling to the formation levels	30	12-Jan-21	18-Feb-21	-16	WD (6d)																				
KD9 - Complete the temporary noise barriers along Castle Peak Road in Area T1, T2, T3, H, H1, I, J,																											
	S5P14-3010	Erection of temporary noise barrier in Portion 14 (40m)	9	19-Feb-21	01-Mar-21	-16	WD (6d)																				
Sectoin 6A																											
Portion 1e in Area G1 (Soil Treatment & Forming Hammerhead)																											
Preparation work/Tree Survey/Site Clearance/GI																											
	S6AP1e-1035	Environmental ground investigation and laboratory test(1/1 EGI completed) in Hammer Head area	0	20-May-20 A	23-May-20 A		WD (6d)																				
Section 7 (Subject to excision)																											
	S7K2-1010	Late Access to and Use of Site of Portion 14 (CNE No. 021)	0		25-Dec-20	-18	CD (7d)																				
Portion 14 in Area K (Complete TSPS with Associated Sewerage)																											
Preparation work/Tree Survey/Site Clearance/GI																											
	S7P14-1010	Site Clearance	24	28-Dec-20	25-Jan-21	-16	WD (6d)																				
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)	6	04-Jun-20 A	30-Dec-20	-22	CD (7d)																				
	S7P14-2020	Construction of TSPS	185	26-Jan-21	09-Sep-21	-16	WD (6d)																				
E&M Works																											
	S7P14-3010	Submission and Approval of E&M plants & materials for TSPS	38	04-Jun-20 A	31-Jan-21	-22	CD (7d)																				
	S7P14-3020	Procurement of E&M equipment for TSPS	36	16-Nov-20 A	29-Jan-21	-22	CD (7d)																				
	S7P14-3030	Supply, Factory Acceptance Test (FAT) & Delivery of E&M equipment for TSPS	140	30-Jan-21	23-Jul-21	-19	WD (6d)																				
	S7P14-3040	E&M Installation for TSPS	150	15-Mar-21	13-Sep-21	-19	WD (6d)																				
Sewerage Works																											
	S7P14-4000	Construct & maintain Temporary drainage	200	02-Jan-21	03-Sep-21	15	WD (6d)																				
	S7P14-4010	Laying of sewage rising mains from TSPS and connect to existing tank of MBR plant	180	02-Jan-21	11-Aug-21	15	WD (6d)																				
	S7P14-4020	Constructon of sewage manhole and gravity sewer for connection of sewage from MWSC site to TSPS	150	05-Mar-21	03-Sep-21	15	WD (6d)																				
KD2 - Portion 11b in Area K (Complete Temp. Noise Barriers along Castle Peak Road)																											

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	20	December 2020					January 2021					February 2021				March 2021				
							22	29	06	13	20	27	03	10	17	24	31	07	14	21	28	07	14	21	28	
Preparation work																										
S7P11b-1000	Early Access to Portion 11b Area K for KD-2 works	0		25-Dec-20*	3	CD (7d)	◆ Early Access to Portion 11b Area K for KD-2 works																			
S7P11b-1010	Site Clearance	18	28-Dec-20	18-Jan-21	0	WD (6d)																				
Sewerage Works																										
S7P11b-1015	Construct & maintain Temporary drainage	201	19-Jan-21	21-Sep-21	0	WD (6d)																				
S7P11b-1020	Laying of sewage rising mains from TSPS and connect to existing tank of MBR plant	201	19-Jan-21	21-Sep-21	0	WD (6d)																				
Portion 4 in Area K (Complete Temp. Noise Barriers along Castle Peak Road)																										
Preparation work																										
S7P4-1010	Site Clearance	0	05-Mar-20 A	13-Apr-20 A		WD (6d)																				
Sewerage Works																										
S7P4-2000	Construct & maintain Temporary drainage	349	28-Dec-20	02-Mar-22	300	WD (6d)																				
S7P4-2010	Laying of sewage rising mains from TSPS and connect to existing tank of MBR plant	270	02-Jan-21	27-Nov-21	14	WD (6d)																				
KD9 - Complete the temporary noise barriers along Castle Peak Road in Area T1, T2, T3, H, H1, I, J,K																										
S7P4-3010	Erection of Temporary Noise Barrier Frame in Area K, Portion 4 (115m, 1 gang)	4	15-Dec-20 A	31-Dec-20	640	WD (6d)																				
S7P4-3020	Erection of Temporary Noise Barrier Panel in Area K, Portion 4 (115m, 1 gang)	30	13-Jan-21	19-Feb-21	640	WD (6d)																				
Section 8																										
S8-1012	Suspension of Works at Part of Portion 2 (EWN No. 019)	0		25-Dec-20	-111	CD (7d)	◆ Suspension of Works at Part of Portion 2 (EWN No. 019)																			
S8-1014	Insufficent Stockpile Area (EWN No. 020)	0		25-Dec-20	47	CD (7d)	◆ Insufficent Stockpile Area (EWN No. 020)																			
S8-1016	Opening of Cycle Track at Portion 2 and 10a (EWN No. 017)	0		25-Dec-20	-90	CD (7d)	◆ Opening of Cycle Track at Portion 2 and 10a (EWN No. 017)																			
S8-1018	Excavation Permit (XP) for New Cycle Path (EWN No. 021)	0		25-Dec-20	-90	CD (7d)	◆ Excavation Permit (XP) for New Cycle Path (EWN No. 021)																			
Portion 2 in Area A (Soil Treatment & Construction of Pak Shek Au Junction)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S8P2-0010	Tree Survey and prepare tree felling and transplant report	0	19-Jun-20 A	21-Jul-20 A		WD (6d)																				
S8P2-0015	Approval & Acceptance of Tree Felling Application	20	23-Jul-20 A	13-Jan-21	-93	CD (7d)																				
S8P2-0020	Implement of Stage 1 TTA	12	28-Dec-20	11-Jan-21	-74	WD (6d)																				
S8P2-1010	Site clearance / Tree Felling	30	21-Sep-20 A	01-Feb-21	-92	WD (6d)																				
S8P2-1025	Verification of Ground Condition & Design Review by Project Manager	11	05-Nov-20 A	04-Jan-21	-39	CD (7d)																				
S8P2-1030	Prepare Arsenic Assessment Report	30	28-Dec-20	01-Feb-21	-92	WD (6d)																				
S8P2-1040	Arsenic Treatment Plan	30	28-Dec-20	01-Feb-21	-92	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-Feb-21	06-Mar-21*	-92	WD (6d)																				
S8P2-2020	Backfilling to the formation levels	48	08-Mar-21	06-May-21	36	WD (6d)																				
Civil Work																										
Construction of Pak Shek Au Junction Stage 1																										
S8P2-3000	Construct & maintain Temporary drainage	424	02-Feb-21	12-Jul-22	-84	WD (6d)																				
S8P2-3020	Excavation for retaining wall (1333m3)	30	02-Feb-21	11-Mar-21	-84	WD (6d)																				
S8P2-3030	Construction of retaining wall (672m3)	110	12-Mar-21	26-Jul-21	-84	WD (6d)																				
Portion 3 in Area A (Soil Treatment, Drainage & Roadwork)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S8P3-1000	Assumed Handover Date of Portion 3 (Late Possession)	0	25-Dec-20*		428	CD (7d)	◆ Assumed Handover Date of Portion 3 (Late Possession)																			
S8P3-1010	Site clearance	60	28-Dec-20	11-Mar-21	345	WD (6d)																				
S8P3-1015	Ground investigation (0 / 1 GI completed)	6	12-Mar-21	18-Mar-21	345	WD (6d)																				
S8P3-1020	Environmental ground investigation and laboratory test(1 / 1 EGI completed)	0	11-Nov-20 A	16-Nov-20 A		WD (6d)																				
S8P3-1025	Verification of Ground Condition & Design Review by Project Manager	60	19-Mar-21	17-May-21	553	CD (7d)																				
Portion 5 in Area A (Soil Treatment, Bored Pile Wall (CSD), Drainage & Roadwork)																										

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	20	December 2020					January 2021				February 2021				March 2021			
							22	29	06	13	20	27	03	10	17	24	31	07	14	21	28	07	14	21
Preparation work/Tree Survey/Site Clearance/GI																								
S8P5-1015	Ground investigation (1 / 1 GI completed) outside CSD location	0	07-Sep-20 A	09-Sep-20 A		WD (6d)																		
S8P5-1020	Ground investigation (3 / 3 GI completed) within CSD loaction	0	20-Jul-20 A	04-Aug-20 A		WD (6d)																		
Construction according to CSD for Alternative on Bored Pile Wall																								
S8P5-2004	Construct & maintain Temporary drainage	945	14-Dec-20 A	05-Mar-24	0	WD (6d)																		
S8P5-2010	Slope cutting and temporary soil nail installation Row A + Row B (164 Nos Soil nails)	24	14-Dec-20 A	25-Jan-21	137	WD (6d)																		
S8P5-2012	Slope cutting and temporary soil nail installation Row C + Row D (192 Nos Soil nails)	34	02-Nov-20 A	05-Feb-21	197	WD (6d)																		
S8P5-2014	Slope cutting and temporary soil nail installation Row E + Row F (137 Nos Soil nails)	58	17-Nov-20 A	09-Mar-21	173	WD (6d)																		
S8P5-2020	R.C. Mass Wall construction (bay 1 - bay 9)	231	21-Dec-20 A	07-Oct-21	0	WD (6d)																		
Soil Treatment																								
S8P5-3040	Remove soil (original assumed 3303m3) (7 / 7 EGI completed, interim soil to be excavated / treated : 42660m3 / 18600m3)	59	23-Sep-20 A	10-Mar-21	102	WD (6d)																		
Portion 6a in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)																								
Preparation work/Tree Survey/Site Clearance/GI																								
S8P6a-1002	Tree Survey and prepare tree felling and transplant report	0	25-Apr-20 A	23-May-20 A		WD (6d)																		
S8P6a-1004	Approval & Acceptance of Tree Felling Application & Tree Felling	3	16-Jun-20 A	27-Dec-20	31	CD (7d)																		
S8P6a-1010	Site Clearance & Tree Felling	25	15-Feb-20 A	26-Jan-21	23	WD (6d)																		
Construction according to CSD for Alternative on Bored Pile Wall																								
S8P6a-2004	Construct & maintain Temporary drainage	945	28-Oct-20 A	05-Mar-24	0	WD (6d)																		
S8P6a-2010	Slope cutting and temporary soil nail installation Row C + Row D (99 Nos Soil nails)	36	28-Oct-20 A	08-Feb-21	23	WD (6d)																		
S8P6a-2014	Slope cutting and temporary soil nail installation Row E + Row F (99 Nos Soil nails)	64	16-Nov-20 A	19-Mar-21	64	WD (6d)																		
Soil Treatment																								
S8P6a-3040	Remove soil (original assumed 40834m3) (3 / 6 EGI completed, interim soil to be excavated / treated : 7400m3 / 6300m3)	59	23-Sep-20 A	10-Mar-21	0	WD (6d)																		
Civil Work																								
S8P6a-4010	Road D4 (CH160 - CH400) - Underground Drainage work	126	08-Sep-20 A	02-Jun-21	0	WD (6d)																		
Portion 9b & 9d in Area A (Soil Treatment, Slope, Retaining Wall, Drainage & Roadwork)																								
S8P9b-0001	Item Omitted from the Bil of Quantiites - Demolition of Existing Strutures at the Locaiton of Portion 9b (CNE No. 023)	0		25-Dec-20	-66	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-Dec-20*	-172	CD (7d)																		
S8P9b-0006	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Dec-20	613	CD (7d)																		
S8P9b-0010	Liasion with HKPF and submit proposal of protective measures for works near Lo Wu Fring Range	0	10-Feb-20 A	04-Mar-20 A		CD (7d)																		
S8P9b-0050	Prepare and submit Asbestos Abatement Programme	24	18-Nov-20 A	17-Jan-21	-179	CD (7d)																		
S8P9b-0060	Notificatioan and Approval of Asbestos Abatement Programme	30	18-Jan-21	16-Feb-21	-179	CD (7d)																		
S8P9b-0070	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	48	17-Feb-21	16-Apr-21	-144	WD (6d)																		
S8P9b-1000	Tree Survey and prepare tree felling and transplant report	24	16-Nov-20 A	25-Jan-21	-154	WD (6d)																		
S8P9b-1002	Approval & Acceptance of Tree Felling Application	30	26-Jan-21	24-Feb-21	-187	CD (7d)																		
S8P9b-1010	Site clearance & Tree Felling	48	25-Feb-21	24-Apr-21	-151	WD (6d)																		
S8P9b-1015	Ground investigation (0 / 13 GI completed)	60	08-Feb-21	24-Apr-21	-151	WD (6d)																		
S8P9b-1020	Environmental ground investigation and laboratory test(4 / 8 EGI completed)	37	18-Nov-20 A	09-Feb-21	-93	WD (6d)																		
Civil Work																								
S8P9b-3020	Form the access to service reservoirs	22	14-Dec-20 A	22-May-21	400	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-Dec-20	-109	CD (7d)																		
Preparation work/Tree Survey/Site Clearance/GI																								
S8P8a-1004	Approval & Acceptance of Tree Felling Application	0	27-Jun-20 A	09-Dec-20 A		CD (7d)																		
S8P8a-1020	Site clearance & Tree Felling for Fresh Water Service Reservior	0	15-Oct-20 A	15-Dec-20 A		WD (6d)																		
S8P8a-1030	Ground investigation (0 / 5 GI completed) to Fresh Water Service Reservoir	30	31-Dec-20	04-Feb-21	341	WD (6d)																		



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								22	29	06	13	20	27	03	10	17	24	31	07	14	21	28	07	14	21	28
	S8P8a-1042	Environmental ground investigation and laboratory test (2 / 3 EGI) to Fresh Water Service Reservoir	16	26-Oct-20 A	15-Jan-21	87	WD (6d)																			
	S8P8a-1044	Verification of Ground Condition & Design Review by Project Manager (to Flushing Water Service Reservoir)	0	18-Jul-20 A	15-Sep-20 A		CD (7d)																			
	S8P8a-1046	Verification of Ground Condition & Design Review by Project Manager (to Fresh Water Service Reservoir)	60	05-Feb-21	05-Apr-21	420	CD (7d)																			
	S8P8a-1050	Prepare Arsenic Assessment Report Flushing Water Service Reservoir	0	09-Oct-20 A	02-Nov-20 A		WD (6d)																			
	S8P8a-1060	Prepare Arsenic Assessment Report Fresh Water Service Reservoir	30	16-Mar-21	22-Apr-21	87	WD (6d)																			
	Forming Site Access and Site Fomation																									
	Stage 2 General Excavation near Flushing Water Servie Reservior (Excavation Volume 52834 m3)																									
	S8P8a-1105	Construct & maintain Temporary drainage	236	25-Aug-20 A	13-Oct-21	-105	WD (6d)																			
	S8P8a-1110	Form site access to Flushing Water Service Reservoir	0	06-Jan-20 A	08-Apr-20 A		WD (6d)																			
	S8P8a-1120	General excavation for New Feature KS45 and adjacent road	0	25-Aug-20 A	17-Oct-20 A		WD (6d)																			
	S8P8a-1130	General excavation for New Feature KS46 and adjacent road	4	25-Aug-20 A	31-Dec-20	29	WD (6d)																			
	S8P8a-1140	General excavation for area surrounding Flushing Water Service Reservoir	4	25-Aug-20 A	31-Dec-20	29	WD (6d)																			
	S8P8a-1150	Form haul road to Fresh Water Service Reservoir	0	03-Sep-20 A	10-Dec-20 A		WD (6d)																			
	S8P8a-1160	General excavation for remaining of Road W1	236	11-Jun-20 A	13-Oct-21	-105	WD (6d)																			
	Stage 2 General Excavation near Fresh Water Servie Reservoir (Excavation Volume 299396 m3)																									
	S8P8a-1208	Construct & maintain Temporary drainage	450	01-Dec-20 A	07-Jul-22	193	WD (6d)																			
	S8P8a-1220	General excavation for New Feature KS47 and adjacent road	450	01-Dec-20 A	07-Jul-22	193	WD (6d)																			
	S8P8a-1250	General excavation for area surrounding Fresh Water Service Reservoir	380	01-Dec-20 A	08-Apr-22	157	WD (6d)																			
	S8P8a-1252	General excavation for remaining of Road W2	236	14-Dec-20 A	13-Oct-21	49	WD (6d)																			
	KD8 - complete all works for fresh water and flushing water services reservoirs, pipe laying and roa																									
	S8K8 -6000	Insufficent Stockpile Area (EWN No. 020)	0		25-Dec-20	47	CD (7d)	◆ Insufficent Stockpile Area (EWN No. 020)																		
	Construction of Kwu Tung North Flushing Water Service Reservoir (KTN FLWSR)																									
	Civil Works																									
	S8K8-1005	Construct & maintain Temporary drainage	741	25-Aug-20 A	29-Jun-23	150	WD (6d)																			
	S8K8-1010	General excavation (24709m3)	0	25-Aug-20 A	30-Oct-20 A		WD (6d)																			
	S8K8-1020	Excavation in rock (1070m3)	4	12-Oct-20 A	31-Dec-20	37	WD (6d)																			
	S8K8-1025	Construction of Sub soil drainage	18	23-Nov-20 A	22-Jan-21	37	WD (6d)																			
	S8K8-1030.00	Construction of Base Slab bay 1 (GL 8 - 12 & GL F - G)	30	21-Dec-20 A	01-Feb-21	29	WD (6d)																			
S8K8-1030.01	Construction of Base Slab bay 2 (GL 8 - 12 & GL A - B)	24	02-Feb-21	04-Mar-21	29	WD (6d)																				
S8K8-1030.02	Construction of Base Slab bay 3 (GL 3 - 8 & GL F - G)	24	05-Mar-21	01-Apr-21	29	WD (6d)																				
Construction of Kwu Tung North Freshwater Service Reservoir (KTN FWSR)																										
Civil Works																										
S8K8-3000	Construct & maintain Temporary drainage	891	16-Nov-20 A	28-Dec-23	0	WD (6d)																				
S8K8-3010	General excavation (45475m3, 2 gangs)	0	16-Nov-20 A	30-Nov-20 A		WD (6d)																				
S8K8-3020	Excavation in rock (2300m3, 2 gangs)	212	01-Dec-20 A	13-Sep-21	-91	WD (6d)																				
Remaining Civil Work in Portion 8a Area A																										
S8P8a-2060	Construct & maintain Temporary drainage	28	26-Oct-20 A	29-Jan-21	657	WD (6d)						Construct & maintain Temporary drainage														
S8P8a-2080	Slopeworks for KS27 - General Excavation	0	26-Oct-20 A	02-Nov-20 A		WD (6d)																				
S8P8a-2085	Slopeworks for KS27 - Slope cutting and soil nail installation Row A + Row B (29 Nos Soil nails)	4	01-Dec-20 A	31-Dec-20	657	WD (6d)																				
S8P8a-2090	Slopeworks for KS27 - Slope cutting and soil nail installation Row C + Row D (18 Nos Soil nails)	24	02-Jan-21	29-Jan-21	657	WD (6d)																				
S8P8a-2150	Construct & maintain Temporary drainage	22	14-Sep-20 A	22-Jan-21	663	WD (6d)						Construct & maintain Temporary drainage														
S8P8a-2155	Slopeworks for KS46 - Mobilization and Test soil nail	0	14-Sep-20 A	04-Oct-20 A		WD (6d)																				
S8P8a-2160	Slopeworks for KS46 - Slope cutting and soil nail installation Row J + Row K (13 Nos Soil nails)	0	05-Oct-20 A	12-Oct-20 A		WD (6d)																				
S8P8a-2170	Slopeworks for KS46 - Slope cutting and soil nail installation Row H + Row I (24 Nos Soil nails)	0	13-Oct-20 A	23-Oct-20 A		WD (6d)																				
S8P8a-2180	Slopeworks for KS46 - Slope cutting and soil nail installation Row G (17 Nos Soil nails) + Berm & U channel	6	26-Oct-20 A	22-Jan-21	1764	WD (6d)																				
S8P8a-2190	Slopeworks for KS46 - Slope cutting and soil nail installation Row E + Row F (43 Nos Soil nails)	0	25-Nov-20 A	30-Nov-20 A		WD (6d)																				
S8P8a-2192	Slopeworks for KS46 - Slope cutting and soil nail installation Row C + Row D (70 Nos Soil nails)	0	07-Dec-20 A	11-Dec-20 A		WD (6d)																				



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	S8P8a-2200	Slopeworks for KS46 - Slope cutting and soil nail installation Row A + Row B (83 Nos Soil nails)	22	28-Dec-20	22-Jan-21	663	WD (6d)																				
	S8P8a-2208	Construct & maintain Temporary drainage	226	23-Dec-20 A	30-Sep-21	193	WD (6d)																				
	S8P8a-2210	Slopeworks for KS47 - Slope cutting and soil nail installation Row AA + Row Z (12 Nos Soil nails) + U channel	6	23-Dec-20 A	04-Jan-21	193	WD (6d)																				
	S8P8a-2220	Slopeworks for KS47 - Slope cutting and soil nail installation Row X + Row Y (28 Nos Soil nails)	10	05-Jan-21	15-Jan-21	193	WD (6d)																				
	S8P8a-2230	Slopeworks for KS47 - Slope cutting and soil nail installation Row V + Row W (39 Nos Soil nails) + Berm & U channel	14	16-Jan-21	01-Feb-21	193	WD (6d)																				
	S8P8a-2240	Slopeworks for KS47 - Slope cutting and soil nail installation RowT + Row U (46 Nos Soil nails)	10	02-Feb-21	16-Feb-21	193	WD (6d)																				
	S8P8a-2250	Slopeworks for KS47 - Slope cutting and soil nail installation Row R + Row S (55 Nos Soil nails) + Berm & U channel	18	17-Feb-21	09-Mar-21	193	WD (6d)																				
	S8P8a-2260	Slopeworks for KS47 - Slope cutting and soil nail installation Row P + Row Q (61 Nos Soil nails)	12	10-Mar-21	23-Mar-21	193	WD (6d)																				
	S8P8a-2270	Slopeworks for KS47 - Slope cutting and soil nail installation Row N + Row O (68 Nos Soil nails) + Berm & U channel	20	24-Mar-21	19-Apr-21	193	WD (6d)																				
	S8P8a-2498	Construct & maintain Temporary drainage	39	11-Jun-20 A	11-Feb-21	-121	WD (6d)																				
	S8P8a-2502	Construction of retaining wall KW06 bay 8 - bay 14 (900m3)	39	07-Jul-20 A	11-Feb-21	-121	WD (6d)																				
	S8P8a-2538	Construct & maintain Temporary drainage	199	28-Dec-20	28-Aug-21	81	WD (6d)																				
	S8P8a-2540	Excavation for retaining wall KW06 bay 15 - bay 21 (2444m3)	100	28-Dec-20	30-Apr-21	102	WD (6d)																				
	S8P8a-2542	Construction of retaining wall KW06 bay 15 - bay 21 (1200m3)	160	16-Feb-21	28-Aug-21	81	WD (6d)																				
	S8P8a-2598	Construct & maintain Temporary drainage	158	16-Jan-21	30-Jul-21	-121	WD (6d)																				
	S8P8a-2600	Excavation for retaining wall KW05 bay 10 - bay 16 (2139m3)	90	16-Jan-21	08-May-21	-121	WD (6d)																				
	S8P8a-2602	Construction of retaining wall KW05 bay 10 - bay 16 (1050m3)	140	06-Feb-21	30-Jul-21	-121	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-Dec-20	21	CD (7d)	◆ No Access to Part of Portion 8b near Sheung Shui Slaughter House (EWN No. 007)																			
S8P8b-1002	Assumed resumption date of fresh and flushing reservoirs construction due to CNE No. 006 & EWN No. 005	0			25-Dec-20	-91	CD (7d)	◆ Assumed resumption date of fresh and flushing reservoirs construction due to CNE No. 006 & EWN No. 005																			
Preparation work/Tree Survey/Site Clearance/GI																											
S8P8b-1010	Site Clearance	90	28-Dec-20	19-Apr-21	-75	WD (6d)	◆																				
Section 10A																											
S10A-1011	Removal of Existing CLP Facilities (EWN No. 018)	0			25-Dec-20	2204	CD (7d)	◆ Removal of Existing CLP Facilities (EWN No. 018)																			
Portion 4 in Area J (Soil Treatment & Temp. Noise Barriers along Castle Peak Road)																											
Preparation work/Tree Survey/Site Clearance/GI																											
S10AP4-0010	Tree survey and prepare tree felling and transplant report	0	17-Apr-20 A	11-May-20 A		WD (6d)																					
S10AP4-0020	Site clearance	0	05-Mar-20 A	09-Apr-20 A		WD (6d)																					
S10AP4-0030	Environmental ground investigation and lab test (3 EGI) (another 2 EGI in other portion represent part of this portion)	0	14-Apr-20 A	29-Apr-20 A		WD (6d)																					
S10AP4-0040	Prepare Arsenic Assessment Report	28	09-Nov-20 A	29-Jan-21	257	WD (6d)	◆																				
S10AP4-0050	Arsenic Treatment Plan	28	09-Nov-20 A	29-Jan-21	257	WD (6d)	◆																				
KD9 - Complete the temporary noise barriers along Castle Peak Road in Area T1, T2, T3, H, H1, I, J,																											
S10AP4-2000	Construction of Slope Drainage in Area J (103m) along Castle Peak Road	0	25-Aug-20 A	05-Sep-20 A		CD (7d)																					
S10AP4-2005	Construction of Temporary Noise barrier Frame in Area J (103m)	4	15-Dec-20 A	31-Dec-20	583	WD (6d)	◆																				
Section 11																											
Portion 6b in Area B (Soil Treatment & Operation of HAC Soil Treatment Plant)																											
S11P6b-1000	Planned completion of KD4 - Portion 6b	0			05-Dec-20 A		CD (7d)	◆ Planned completion of KD4 - Portion 6b																			
Preparation work/Tree Survey/Site Clearance/GI																											
S11P6b-1020	Site Clearance	0	20-Feb-20 A	26-Feb-20 A		WD (6d)																					
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant																											
S11P6b-2005	Construct & maintain Temporary drainage	1365	05-May-20 A	08-Aug-25	123	WD (6d)	◆																				
S11P6b-2010	Set up, testing and commissioning high arsenic-containing soil treatment plant (KD4)	0	05-May-20 A	05-Dec-20 A		WD (6d)	◆																				
Operation and Dismantling of the Soil Treatment Plant																											
S11P6b-3010	Provide treatment to high arsenic-containing soil	1218	03-Dec-20 A	08-Feb-25	-95	WD (6d)	◆																				
Section 12A																											
Portion 10b in Area L1 (Soil Treatment, Drainage & Roadwork)																											



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Preparation work/Tree Survey/Site Clearance/GI																										
S12P10b-1005	Resumption date from suspension of works at Portion 10b (EWN 13)	0		25-Dec-20	642	CD (7d)	◆ Resumption date from suspension of works at Portion 10b (EWN 13)																			
S12P10b-1010	Tree survey and prepare tree felling and transplant report	0	20-Jul-20 A	15-Dec-20 A		WD (6d)																				
S12P10b-1012	Approval & Acceptance of Tree Felling Application	22	16-Dec-20 A	22-Jan-21	497	WD (6d)																				
S12P10b-1020	Site Clearance & Tree Felling	48	23-Jan-21	23-Mar-21	497	WD (6d)																				
S12P10b-1035	Environmental ground investigation and laboratory test(2 of 2 EGI completed)	0	19-May-20 A	29-May-20 A		WD (6d)																				
S12P10b-1040	Prepare Arsenic Assessment Report	36	24-Mar-21	08-May-21	497	WD (6d)																				
Section 13																										
Portion 2 in Area N (Soil Treatment, Slope, Drainage & Pak Shek Au Junction)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S13P2-1018	Site clearance for existing slope feature 2SE-B/CR148	0	14-Nov-20 A	20-Nov-20 A		WD (6d)																				
S13P2-1020	Implement TTMS	12	28-Dec-20	11-Jan-21	130	WD (6d)																				
S13P2-1030	Site clearance	60	12-Jan-21	25-Mar-21	130	WD (6d)																				
S13P2-1040	Environmental ground investigation and laboratory test(3 EGI)	0	16-Oct-20 A	16-Nov-20 A		WD (6d)																				
S13P2-1045	Verification of Ground Condition & Design Review by Project Manager	9	03-Nov-20 A	02-Jan-21	264	CD (7d)																				
Civil Work																										
S13P2-3000	Construct & maintain Temporary drainage	1160	23-Nov-20 A	25-Nov-24	134	WD (6d)																				
S13P2-3005.1	Existing feature 2SE-B/CR148 - Mobilisation for Soil nail works	4	23-Nov-20 A	31-Dec-20	216	WD (6d)																				
S13P2-3005.2	Existing feature 2SE-B/CR148 - Soil nail installation Row L + Row M (41 Nos Soil nails)	36	04-Jan-21	17-Feb-21	215	WD (6d)																				
S13P2-3005.3	Existing feature 2SE-B/CR148 - Soil nail installation Row J + Row K (52 Nos Soil nails)	40	18-Feb-21	08-Apr-21	215	WD (6d)																				
Portion 7 in Area N (Soil Treatment, Drainage & Roadwork)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S13P7-1030	Prepare Arsenic Assessment Report	28	16-Jul-20 A	29-Jan-21	571	WD (6d)																				
S13P7-1040	Arsenic Treatment Plan	33	09-Nov-20 A	04-Feb-21	566	WD (6d)																				
Soil Treatment																										
S13P7-2010	Remove soil (original assumed 316m3) (3 / 3 EGI completed, interim soil to be excavated / treated : 1350m3 / 900m3)	30	05-Feb-21*	15-Mar-21	566	WD (6d)																				
S13P7-2020	Backfilling to the formation levels	60	16-Mar-21	29-May-21	566	WD (6d)																				
Civil Work																										
Underground Utilities																										
S13P7-3000	Construct & maintain Temporary drainage	737	05-Feb-21	03-Aug-23	566	WD (6d)																				
Portion 6a & 5 in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S13P6a-1002	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Dec-20	1019	CD (7d)	◆ Removal of Existing CLP Facilities (EWN No. 018)																			
S13P6a-1025	Pre-drilling for Noise Barriers	0	17-Jun-20 A	08-Jul-20 A		WD (6d)																				
S13P6a-1026	Trial pit for Dongjiang watermains	0	18-Jun-20 A	29-Jun-20 A		WD (6d)																				
S13P6a-1030	Prepare Arsenic Assessment Report	36	28-Dec-20	08-Feb-21	753	WD (6d)																				
S13P6a-1040	Arsenic Treatment Plan	36	09-Feb-21	25-Mar-21	753	WD (6d)																				
Civil Work																										
S13P6a-3000	Construct & maintain Temporary drainage	577	20-Oct-20 A	06-Dec-22	753	WD (6d)																				
S13P6a-3010	Noise barrier NB08 foundation (revised according to CSD) (12 nos. pre-bored H-pile)	39	20-Oct-20 A	11-Feb-21	876	WD (6d)																				
Section 14																										
Portion 10a in Area H1 (Soil Treatment, UU Diversion & Construction Access to MWSC)																										
KD5 - Provision of construction access in Area H1 and between Area H1 and Multi-Welfare Services Com																										
S14K5-1000	Planned Completion Date of KD5	0		09-Feb-21	-126	CD (7d)	◆ Planned Completion Date of KD5																			
S14K5-1002	Opening of Cycle Track at Portion 10a (EWN No. 017)	0		25-Dec-20	-114	CD (7d)	◆ Opening of Cycle Track at Portion 10a (EWN No. 017)																			



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Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	2020	December 2020					January 2021				February 2021				March 2021						
							22	29	06	13	20	27	03	10	17	24	31	07	14	21	28	07	14	21	28		
14	S14K5-1004	Excavation Permit (XP) for New Cycle Path (EWN No. 021)	0		25-Dec-20	1690	CD (7d)	Excavation Permit (XP) for New Cycle Path (EWN No. 021)																			
	Soil Treatment																										
	S14K5-1010	Remove soil (original assumed 2143m3) (1 / 1 EGI completed, interim soil to be excavated and treated : 0m3) Clean Soil	0	09-Oct-20 A	21-Oct-20 A		WD (6d)																				
	Civil Works																										
	S14K5-2000	Construction of Access in Area H1 (10m) at Castle Peak Road Junction (KD5)	24	28-Dec-20	25-Jan-21	1367	WD (6d)																				
	S14K5-2002	Formation works for Access and u channel in Area H1 (110m)	0	15-Dec-20 A	21-Dec-20 A		WD (6d)																				
	S14K5-2004	Construction of Access and u channel in Area H1 (110m)	9	19-Dec-20 A	07-Jan-21	-104	WD (6d)																				
	S14K5-2006	Construct 10m wide precast concrete slab Temporary access A1 to MWSC site	10	24-Dec-20 A	19-Jan-21	-104	WD (6d)																				
	S14K5-2007	Divert temporary watermain in Area H for MWSC site and Area P	18	20-Jan-21	09-Feb-21	-104	WD (6d)																				
	S14K5-2008	Construct Footpath	12	27-Jan-21	09-Feb-21	-104	WD (6d)																				
	Portion 10a in Area H2 (Soil Treatment & Construction Access to MWSC)																										
	KD6 - Provision of construction access in Area H2 and between Area H2 and Multi-Welfare Services Com																										
	Soil Treatment																										
	S14K6-1010	Remove soil (original assumed 2827m3) (2 / 2 EGI completed, interim soil to be excavated and treated : 0m3) Clean Soil	0	07-Oct-20 A	21-Oct-20 A		WD (6d)																				
	Civil Works																										
	S14K6-2000	Formation works for Access and u channel in Area H2 (KD6)	0	22-Oct-20 A	02-Nov-20 A		WD (6d)																				
	S14K6-2002	Construction of Access and u channel in Area H2	4	03-Nov-20 A	31-Dec-20	-66	WD (6d)																				
	S14K6-2004	Construct 10m wide precast concrete slab Temporary access A2 to MWSC site	16	20-Feb-21	10-Mar-21	-105	WD (6d)																				
	S14K6-2008	Construct Footpath	18	11-Mar-21	31-Mar-21	-105	WD (6d)																				
	S14K6-2010	Site Formation for Access and u channel in Area H2 for Alternative Po Lau Road	12	22-Oct-20 A	11-Jan-21	1110	WD (6d)																				
	S14K6-2012	Construct Access , Footpath and u channel in Area H2 for Alternative Po Lau Road	17	14-Nov-20 A	30-Jan-21	1110	WD (6d)																				
	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																										
	S14P7P-1000	Planned completion date of KD3	0		27-Nov-20 A		CD (7d)	◆ Planned completion date of KD3																			
Preparation work																											
S14P7P-1020	General site clearance (tree felling and remaining clearance)	0	07-Oct-20 A	02-Nov-20 A		WD (6d)																					
S14P7P-1021	Additional site clearance due to increase in total nos. of trees to be felled at Portions 7 & 10a (EWN No. 012)	0	07-Oct-20 A	02-Nov-20 A		WD (6d)																					
S14P7P-1023	Berm removal and General Site levelling	0	03-Nov-20 A	27-Nov-20 A		WD (6d)																					
S14P7P-1026	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Dec-20	1484	CD (7d)	◆ Removal of Existing CLP Facilities (EWN No. 018)																				
S14P7P-1028	Site formation for Construction of Alternative Po Lau Road	0	10-Jul-20 A	17-Jul-20 A		WD (6d)																					
S14P7P-1030	Site formation for Construction of Alternative Po Lau Road (after Tree felling)	15	21-Dec-20 A	14-Jan-21	1112	WD (6d)																					
S14P7P-1032	Construct Access, Footpath and u channel for Alternative Po Lau Road (after Tree felling)	29	24-Dec-20 A	30-Jan-21	1110	WD (6d)																					
Ground Investigation																											
S14P7P-1120	Prepare Arsenic Assessment Report	28	09-Nov-20 A	29-Jan-21	1105	WD (6d)																					
S14P7P-1130	Arsenic Treatment Plan	20	09-Nov-20 A	29-Jan-21	1105	WD (6d)																					
Portion 7 in Area S3 (Soil Treatment & Operation of HAC Soil Treatment Plant)																											
S14P7S3-1000	Planned completion date of KD4	0		05-Dec-20 A		CD (7d)	◆ Planned completion date of KD4																				
Preparation work/Tree Survey/Site Clearance/GI																											
S14P7S3-1018	Tree Felling and General site clearance	0	07-Oct-20 A	02-Nov-20 A		WD (6d)																					
S14P7S3-1030	Environmental ground investigation and lab test (3 EGI) (another 1 EGI in other portion represent part of this portion)	0	09-May-20 A	28-May-20 A		WD (6d)																					
S14P7S3-1040	Prepare Arsenic Assessment Report	28	09-Nov-20 A	29-Jan-21	1099	WD (6d)																					
S14P7S3-1050	Arsenic Treatment Plan	28	09-Nov-20 A	29-Jan-21	1099	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	31-Dec-20	22	WD (6d)																					
Operation and Dismantling of the Soil Treatment Plant																											
S14P7S3-3010	Stock Pile of Treated Soil	1101	20-Nov-20 A	17-Sep-24	22	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 (2020-12)

Data Date: 25-Dec-20 Run Date: 02-Jan-21

Project ID: ND201901-RP-9
 Layout: ND201901-3MRP with logo
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THE 3-MONTH ROLLING PROGRAMME			
Date	Revision	Checked	Approved
25-Dec-20	Rev.0	JC	BY

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	20	December 2020					January 2021					February 2021				March 2021				
							22	29	06	13	20	27	03	10	17	24	31	07	14	21	28	07	14	21	28	
Portion 16 in Area Q (Soil Treatment & Construction of CLC)																										
S14P16-1002	Late Possession of Site of Portion 16 (CNE No. 011)	0		25-Dec-20	-134	CD (7d)	◆ Late Possession of Site of Portion 16 (CNE No. 011)																			
KD7 - Complete the construction works of Community Liaison Centre in Area Q																										
S14P16-1010	Site Clearance	60	28-Dec-20	11-Mar-21	-112	WD (6d)																				
S14P16-1020	Site Formation for CLC construction	50	12-Mar-21	13-May-21	-112	WD (6d)																				
S14P16-3010	Design submission for construction of Community Liaison Centre (CLC) using MiC method	0	15-Sep-20 A	02-Dec-20 A		CD (7d)																				
S14P16-3020	Approval of design for construction of CLC	36	03-Dec-20 A	29-Jan-21	-85	CD (7d)																				
S14P16-3030	Offsite fabrication and delivery of MiC Modules	80	30-Jan-21	11-May-21	-70	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-Dec-20*		-219	CD (7d)	◆ Late Possession of Site of Part of Portions 7 and 10a (in Area H, H1, T1, T2 & T3) (CNE No. 001)																			
S14P7T-1010	Tree survey and prepare tree felling and transplant report (Area T1)	18	23-Nov-20 A	18-Jan-21	-177	WD (6d)																				
S14P7T-1020	Site Clearance	30	28-Dec-20	01-Feb-21	-183	WD (6d)																				
S14P7T-1022	Approval & Acceptance of Tree felling Application (Area T1)	30	19-Jan-21	17-Feb-21	1570	CD (7d)																				
S14P7T-1024	Tree felling works (Area T1)	30	18-Feb-21	24-Mar-21	1272	WD (6d)																				
Arsenic Assessment																										
S14P7T-1040	Prepare Arsenic Assessment Report	28	09-Nov-20 A	29-Jan-21	1315	WD (6d)																				
S14P7T-1050	Arsenic Treatment Plan	28	09-Nov-20 A	29-Jan-21	1315	WD (6d)																				
Land Contamination Assessment																										
S14P7T-1061	Site investigation (SI) (inspection pits, boreholes and sampling)	0	31-Aug-20 A	01-Dec-20 A		WD (6d)																				
S14P7T-1062	Laboratory testing	3	07-Sep-20 A	30-Dec-20	-192	WD (6d)																				
S14P7T-1063	Submit and acceptance of Contamination Assessment Report (CAR) & Remediation Action Plan (RAP)	30	31-Dec-20	04-Feb-21	-192	WD (6d)																				
Project Manager's Site Accommodation																										
A1040	Design and Construction of Project Manager's Main Site Office by Modular Integrated Construction (PMI 018, CE 007)	0		28-Dec-20	-187	CD (7d)	◆ Design and Construction of Project Manager's Main Site Office by Modular Integrated Construction (PMI 018, CE 007)																			
S14P7T-1100	Construct & maintain Temporary drainage	112	05-Feb-21	25-Jun-21	-192	WD (6d)																				
S14P7T-1110	Excavated soil to stockpile area	24	05-Feb-21	08-Mar-21	-192	WD (6d)																				
S14P7T-1120	Backfill of clean soil	40	09-Mar-21	27-Apr-21	-192	WD (6d)																				
S14P7T-1125	Offsite fabrication and delivery of MiC Modules	58	16-Feb-21	27-Apr-21	-192	WD (6d)																				
Portion 6a in Area S2 (Soil Treatment)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S14P6a-1010	Tree survey and prepare tree felling and transplant report	0	14-Apr-20 A	08-Jun-20 A		WD (6d)																				
S14P6a-1030	Environmental ground investigation and laboratory test(1 / 1 EGI in other portion represent this portion)	0	15-Jun-20 A	27-Jul-20 A		WD (6d)																				
S14P6a-1040	Prepare Arsenic Assessment Report	36	14-Jan-21*	27-Feb-21	1233	WD (6d)																				
S14P6a-1050	Arsenic Treatment Plan	36	01-Mar-21	14-Apr-21	1233	WD (6d)																				
Portion 6b in Area S2 (Soil Treatment)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S14P6b-1010	Tree survey and prepare tree felling and transplant report	0	14-Apr-20 A	03-Jun-20 A		WD (6d)																				
S14P6b-1015	Approval & Acceptance of Tree Felling Application	10	16-Jun-20 A	03-Jan-21	1398	CD (7d)																				
S14P6b-1017	Tree Felling	30	04-Jan-21	06-Feb-21	1206	WD (6d)																				
S14P6b-1025	Ground investigation (0 / 1 GI completed)	6	08-Feb-21	17-Feb-21	1206	WD (6d)																				
S14P6b-1030	Environmental ground investigation and laboratory test(3 EGI in other portion represent this portion)	0	15-Jun-20 A	27-Jul-20 A		WD (6d)																				
Portion 1f in Area R (Soil Treatment & Construction of Interim CLC & Road A1)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S14P1f-1020	Site Clearance & Tree Felling	0	06-Jan-20 A	17-Dec-20 A		WD (6d)																				
S14P1f-1030	Environmental ground investigation and laboratory test(2 EGI) (from Adjacent Portion)	0	22-Oct-20 A	11-Dec-20 A		WD (6d)																				
S14P1f-1040	Prepare Arsenic Assessment Report	36	28-Dec-20	08-Feb-21	1114	WD (6d)																				



Build King – Richwell Engineering Joint Venture

◆ Milestone

◆ Milestone Critical

Summary LOE

Summary LOE Critical

ND/2019/01 - 3 Month Rolling Programme (2020-12)

Data Date: 25-Dec-20

Run Date:02-Jan-21

Project ID: ND201901-RP-9

Lauyout: ND201901-3MRP with logo

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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	20	December 2020					January 2021					February 2021				March 2021				
							22	29	06	13	20	27	03	10	17	24	31	07	14	21	28	07	14	21	28	
S14P1f-1050	Arsenic Treatment Plan	36	09-Feb-21	25-Mar-21	1114	WD (6d)																				
Interim Community Liaison Centre (CLC)																										
S14P1f-2010	Submissions and approval for proposed interim CLC	0	09-Mar-20 A	18-Mar-20 A		CD (7d)																				
S14P1f-2020	Construction of interim CLC	0	14-Apr-20 A	18-May-20 A		WD (6d)																				
S14P1f-2030	Occupation of interim CLC	267	18-May-20 A	17-Sep-21	1108	CD (7d)																				
Portion 9c in Area S1 (Soil Treatment)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S14P9c-1010	Tree survey and prepare tree felling and transplant report	5	31-Jul-20 A	02-Jan-21	-90	WD (6d)																				
S14P9c-1012	Approval & Acceptance of Tree Felling Application	30	03-Jan-21	01-Feb-21	-112	CD (7d)																				
S14P9c-1014	Tree Felling	30	02-Feb-21	11-Mar-21	-92	WD (6d)																				
S14P9c-1020	Forming site access and site clearance	60	17-Jun-20 A	11-Mar-21	-92	WD (6d)																				
S14P9c-1030	Environmental ground investigation and laboratory test (3 / 3 EGI completed)	0	02-Jul-20 A	21-Jul-20 A		WD (6d)																				
S14P9c-1040	Prepare Arsenic Assessment Report	28	16-Oct-20 A	29-Jan-21	1281	WD (6d)																				
S14P9c-1050	Arsenic Treatment Plan	28	16-Oct-20 A	29-Jan-21	1281	WD (6d)																				
Portion 1b (Soil Treatment & Civil Works)																										
Civil Works																										
S14P1b-1250	Site formation for Construction of Alternative Po Lau Road	12	11-Jan-21	23-Jan-21	1368	WD (6d)																				
S14P1b-1260	Construct Access, Footpath and u channel for Alternative Po Lau Road	14	15-Jan-21	30-Jan-21	1362	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	60	28-Dec-20	11-Mar-21	855	WD (6d)																				
S14P3-1102	Approval & Acceptance of Tree Felling Application	30	12-Mar-21	10-Apr-21	1051	CD (7d)																				
S14P3-1107	Environmental ground investigation and laboratory test (2 / 2 EGI completed)	0	14-Nov-20 A	30-Nov-20 A		WD (6d)																				
S14P3-1110	Prepare Arsenic Assessment Report	28	09-Nov-20 A	29-Jan-21	999	WD (6d)																				
S14P3-1112	Arsenic Treatment Plan	28	09-Nov-20 A	29-Jan-21	999	WD (6d)																				
Portion 5 (Soil Treatment & Civil Works)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S14P5-1100	Tree survey and prepare tree felling and transplant report	0	08-Apr-20 A	04-Jun-20 A		WD (6d)																				
S14P5-1102	Approval & Acceptance of Tree Felling Application	15	20-Jun-20 A	08-Jan-21	1111	CD (7d)																				
S14P5-1104	Site Clearance & Tree Felling	30	26-Feb-20 A	01-Feb-21	883	WD (6d)																				
S14P5-1106	Environmental ground investigation and laboratory test (2 / 2 EGI completed)	0	15-May-20 A	18-May-20 A		WD (6d)																				
S14P5-1108	Prepare Arsenic Assessment Report	28	09-Nov-20 A	29-Jan-21	885	WD (6d)																				
S14P5-1110	Arsenic Treatment Plan	28	09-Nov-20 A	29-Jan-21	885	WD (6d)																				
Section 15																										
S15-1000	Presevation and protection of tree	1812	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	23-Feb-21	02-Oct-21	222	WD (6d)																				
Section 20 (Subject to excision)																										
S20-1012	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016)	0	25-Dec-20		19	CD (7d)																				
S20-1016	Opening Cycle Track at Portion 2 (EWN No. 017)	0		25-Dec-20	570	CD (7d)																				
S20-1020	Suspension of Works at Part of Portion 2 (EWN No. 019)	0		25-Dec-20	441	CD (7d)																				
Construction of Pedestrian Subway cum Cycle Track Stage 1 (South of Castle Peak Road)																										
Foundation and ELS																										
S20S1-1010	Site investigation (22 SI holes)	60	02-Feb-21	19-Apr-21	-17	WD (6d)																				
Section 21 (Subject to excision)																										

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	2020	December 2020					January 2021					February 2021				March 2021				
							22	29	06	13	20	27	03	10	17	24	31	07	14	21	28	07	14	21	28	
Portion 1d in Area M (Soil Treatment & Demolition of Existing CLC)																										
Preparation work																										
S21P1d-0005	Late Possession of Site of Portions 1d (CNE No. 009)	0		25-Dec-20	1476	CD (7d)																				
S21P1d-0010	Demolition of existing Community Liaison Centre (CLC)	0	27-May-20 A	05-Jun-20 A		WD (6d)																				
Portion 11a in Area M (Soil Treatment)																										
Preparation work																										
S21P11a-10005	Late Possession of Site of Portions 11a (CNE No. 009)	0		25-Dec-20	1470	CD (7d)																				
8.0 - PMI / CE																										
PC-1002	Remove the existing un-wanted vegetation in Area 1.3 within Portion 7 (PMI 001, CE 001)	0	15-Feb-20 A	18-Feb-20 A		WD (6d)																				
PC-1003	Remove the existing un-wanted vegetation in Area 2 within Portion 10a (PMI 001, CE 001)	0	03-Feb-20 A	12-Feb-20 A		WD (6d)																				
PC-1004	Remove the existing un-wanted vegetation in Area 3 within Portion 4 (PMI 001, CE 001)	0	05-Feb-20 A	12-Feb-20 A		WD (6d)																				
PC-1006	Site clearance and ground investigation for SALRS at Wa Shan Site (PMI 002, CE 002)	0	09-Jul-20 A	16-Aug-20 A		WD (6d)																				
PC-1007	Design and Construction of Alternative Access road for Po Lau Road (PMI 017)	29	10-Jul-20 A	30-Jan-21	1139	WD (6d)																				
PC-1008	Additional Tree Survey at the Vested Land of MTRCL around future Kwu Tung Station (PMI 027, CE 024)	0	03-Aug-20 A	31-Aug-20 A		WD (6d)																				
PC-1010	Omission of Works and Changes of Demolition Method to Demolish 6 Blocks of Buildings in Dillis Corner (PMI 042, CE 008)	29	14-Oct-20 A	30-Jan-21	1757	WD (6d)																				
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	28-Dec-20	-153	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-Dec-20	291	CD (7d)																				
EC-1005	Late Possession of Site of Portion 3 (CNE No. 005)	0	06-Apr-20 A	25-Dec-20	428	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-Dec-20	-109	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-Dec-20	21	CD (7d)																				
EC-1013	Late Possession of Site of Portions 9b & 9d (CNE No. 007) (EWN No. 011)	0	06-Jul-20 A	25-Dec-20	-172	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-Dec-20	19	CD (7d)																				
EC-1015	Late Possession of Site of Portions 1d & 11a (CNE No. 009)	0	06-Jul-20 A	25-Dec-20	1470	CD (7d)																				
EC-1016	Suspension of Works at Portion 10b (EWN No. 013)	0	02-Jul-20 A	25-Dec-20	642	CD (7d)																				
EC-1017	Short of Accredited Laboratory for TCLP Test of Arsenic (EWN No. 014)	0	10-Jul-20 A	25-Dec-20	-114	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-Dec-20	-182	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-Dec-20	-182	CD (7d)																				
EC-1023	Late Possession of Site of Portion 16 (CNE No. 011)	0	02-Aug-20 A	25-Dec-20	-134	CD (7d)																				
EC-1026	Handling of Unlawful Occupied Property Affected by the Works (CNE No. 014)	0	21-Aug-20 A	25-Dec-20	2204	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-Dec-20	2204	CD (7d)																				
EC-1028	Suspension of Works at Part of Portion 2 (CNE No. 016) (EWN No. 019)	0	31-Aug-20 A	25-Dec-20	-111	CD (7d)																				
EC-1029	Insufficient Stockpile Area (EWN No. 020)	0	15-Sep-20 A	25-Dec-20	47	CD (7d)																				
EC-1030	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)	0	19-Oct-20 A	25-Dec-20	-182	CD (7d)																				
EC-1031	Temporary Stockpile at Portion 5 and Additional Land D (CNE No. 020)	0	15-Sep-20 A	25-Dec-20	253	CD (7d)																				
EC-1032	Unforeseen Ground Condition (Possible High Bedrock Level Encountered) at Portion 8a	0	13-Nov-20 A	25-Dec-20	-109	CD (7d)																				
EC-1033	Late Access to and Use of Site of Portion 14 (CNE No. 021)	0	07-Dec-20 A	25-Dec-20	-18	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-Dec-20	-66	CD (7d)																				

[illegible]

Activity ID	Activity Name	Original Duration	Remaining Duration	Start	Finish	2021			
						Jan	Feb	Mar	Apr
Footbridge Construction									
Site Preparation									
P9-1020	Public consultation & Setup TTA	18	16	21-Sep-20 A	20-Feb-21				
P9-1520	Trial Pit (3nos. T60, T61 & T65) & Borehole (1nos.)	18	18	22-Feb-21	13-Mar-21				
P9-1530	Submission & Approval of GI Report	60	60	15-Mar-21	25-May-21				
Foundation Works									
Piling works in Existing Feature: 2SE-B/FR107 (North River Embankment)									
P9-1070	Pre-Drilling (6 nos.) (5days /nos /rig) (3 rigs)	42	0	10-Nov-20 A	31-Dec-20 A				
P9-1080	Sheet pile (120nos.12m long ; 10nos./day/rig)	12	0	16-Dec-20 A	31-Dec-20 A				
P9-1085	Site Setup for Piling works (incl. assembly of crawler crane)	18	0	05-Jan-21 A	25-Jan-21 A				
P9-1090	Pre-bored H-pile (Vertical H-pile x 4nos. & Raking H-Pile x 4nos.) (1 Rig.)	34	30	26-Jan-21 A	09-Mar-21				
P9-1092	Erection of temporary working platform for piling works	14	14	10-Mar-21	25-Mar-21				
P9-1094	Remaining Pre-bored H-Pile (Raking H-Pile x 4nos.) (1Rig.)	16	16	26-Mar-21	14-Apr-21				
P9-1110	ELS from +5.2 mPD to -0.7mPD (approx. 1000m3 & 3-layer of struts)	16	16	15-Apr-21	04-May-21				
Piling works Existing Feature: 2SE-B/FR104 (South River Embankment)									
P9-1220	Pre-Drilling (3 nos.) (4days/nos/rig) (2 rigs)	10	0	17-Dec-20 A	31-Dec-20 A				
P9-1225	Widening of village road	30	0	04-Jan-21 A	23-Jan-21 A				
P9-1228	Site Setup for Piling works	18	11	22-Jan-21 A	11-Feb-21				
P9-1230	Pre-bored H-pile (Vertical H-pile x 4nos. & Raking H-Pile x 4nos.) (1 Rig.)	34	34	16-Feb-21	26-Mar-21				
P9-1232	Erection of temporary working platform for piling works	14	14	27-Mar-21	13-Apr-21				
P9-1234	Remaining Pre-bored H-Pile (Raking H-Pile x 4nos.) (1Rig.)	16	16	14-Apr-21	03-May-21				
Works in Section 4									
Portion 10 - Visitor Centre									
Visitor Centre									
Foundation									
P10-2000	Pre-Drilling (~10nos.)	20	0	06-Oct-20 A	31-Dec-20 A				
P10-2005	Tree Felling (Tree Group KT-G5) & Site Setup	30	7	04-Jan-21 A	06-Feb-21				
P10-2010	Stage1 - Install H-pile (9 nos.; 1pile / week)	54	54	08-Feb-21	15-Apr-21				
P10-2012	Piling Rig transfer to Portion 10 / Completion of Piling works in North River Embankment	0	0	16-Apr-21					
P10-2015	Stage2 - Install remaining H-pile (50 nos.; 2piles / week)	150	150	16-Apr-21	12-Sep-21				
Works in Section 5									
Portion 11 - Village Resite Area									
P11-1005	Temporary Storage Area for piling and pipe jacking works	550	500	01-Dec-20 A	28-Sep-22				

Actual Work

Remaining Activity

Milestone

ND/2019/02

3-Months Rolling Programme (Jan to Apr-2021)

1128

Date	Revision	Checked	Approved
30-Jan-21	ND201902-DMP Ver.0		

Contract No. ND/2019/03
Kwu Tung North and Fanling North New Development Areas, Phase 1 : Development of Long Valley Nature Park
Project Programme of the Works

Sang Hing - Kuly Joint Venture

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance	2020		2021		2022		2023	
										H2	H1	H2	H1	H2	H1	H2	H1
1	Contract Key Dates	0 days	Tue 19/12/10	Tue 19/12/10			1470 days	0%									
2	1.1 Contract Date	0 days	Tue 19/12/10	Tue 19/12/10			1470 days	0%									
3	1.2 Starting Date	1 day	Thu 19/12/19	Thu 19/12/19		57,59,60,61,40,5,55,43,45,42,41,3 days,161,6FS+30 days,7FS+60 days,8FS+121 days,11FS+212 days,13FS+304 days,17,16FS+396 days,53,54,20FS+851 days,21FS+1034 days,22FS+1003 days,24FS+273 days,25FS+394 days,26FS+528 days,27FS+592 days,28FS+...	-77 days	0%									
4	1.3 Site Access Dates	0 days	Thu 19/12/19	Thu 19/12/19			1461 days	0%									
5	Portions 25, 26, 27	0 days	Thu 19/12/19	Thu 19/12/19	3		1460 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	,68,69,71,80,129,213,230,248,274, days,75FS+30 days,76,77	218 days	0%									
7	Portions 23, 24	0 days	Mon 20/2/17	Mon 20/2/17	3FS+60 days	307	1400 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	1300 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	197,249,275	1300 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	308	1314 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	81,114,130,214,250,37,12	-11 days	0%									
12	Delay of Site Access Dates: 4B,5A	169 days	Sun 20/7/19	Sun 21/1/3	11	133	-11 days	0%									
13	Portions 8B, 9, 9B, 9D, 10, 11, 12, 12B, 13, 14	0 days	Sun 20/10/18	Sun 20/10/18	3FS+304 days	206,231,276,14,15	-77 days	0%									
14	Delay of Site Access Date: Portion 9D	77 days	Mon 20/10/19	Sun 21/1/3	13	215	-77 days	0%									
15	Delay of Site Access for Area with Structure in Portion 8B, 9B	77 days	Mon 20/10/19	Sun 21/1/3	13	215,222	-77 days	0%									
16	Portions 15, 16A, 16B, 17A, 17B, 21	0 days	Mon 21/1/18	Mon 21/1/18	3FS+396 days	293,232,251,277	10 days	0%									
17	Works Area WA1	0 days	Thu 19/12/19	Thu 19/12/19	3		1460 days	0%									
18																	
19	1.4 Completion of the works	0 days	Thu 19/12/19	Thu 19/12/19	3		1460 days	0%									
20	Section 1	0 days	Mon 22/4/18	Mon 22/4/18	3FS+851 days		609 days	0%									
21	Section 2	0 days	Tue 22/10/18	Tue 22/10/18	3FS+1034 days		426 days	0%									
22	Section 3	0 days	Sat 22/9/17	Sat 22/9/17	3FS+1003 days		457 days	0%									
23	Section 3A	0 days	Sun 23/9/17	Sun 23/9/17	3FS+1368 days		92 days	0%									
24	Section 4	0 days	Fri 20/10/16	Fri 20/10/16	3FS+273 days		1159 days	0%									
25	Section 5	0 days	Sat 21/1/16	Sat 21/1/16	3FS+394 days		1066 days	0%									
26	Section 6	0 days	Sun 21/5/30	Sun 21/5/30	3FS+528 days		932 days	0%									
27	Section 7	0 days	Mon 21/8/2	Mon 21/8/2	3FS+592 days		868 days	0%									
28	Section 8	0 days	Tue 21/7/13	Tue 21/7/13	3FS+572 days		888 days	0%									
29	Section 9	0 days	Sat 21/11/6	Sat 21/11/6	3FS+688 days		772 days	0%									
30	Section 10	0 days	Thu 22/6/30	Thu 22/6/30	3FS+924 days		536 days	0%									
31	Section 11	0 days	Sun 22/12/18	Sun 22/12/18	3FS+1095 days		365 days	0%									
32	Section 11A	0 days	Mon 23/12/18	Mon 23/12/18	3FS+1460 days		0 days	0%									
33	Section 12	0 days	Fri 20/12/18	Fri 20/12/18	3FS+365 days		1095 days	0%									
34																	
35	2. Preliminary works	646 days	Fri 19/12/20	Sat 21/9/25			814 days	49%									
36	Set up Project Manager's Accommodation in WA1 (1st part)	14 days	Wed 20/6/17	Tue 20/6/30			1266 days	0%									
37	Set up Project Manager's Accommodation in Portion 3 (2nd part)	14 days	Sun 20/7/19	Sat 20/8/1	11		1234 days	0%									
38	Prepare, submit & Approve ICE	30 days	Mon 20/2/3	Tue 20/3/3	3	167	0 days	100%									
39	Prepare, submit & Approve Traffic Consultant	30 days	Wed 20/1/1	Thu 20/1/30	3	83	0 days	100%									
40	Prepare, submit & Approve Landscape Team Leader	100 days	Mon 20/2/3	Tue 20/5/12	3	73	0 days	100%									
41	Prepare, submit & Approve Agricultural Specialist	30 days	Fri 19/12/20	Sat 20/1/18	3		0 days	100%									
42	Prepare, submit & Approve Constructed / Treatment Wetland Specialist	30 days	Fri 20/2/28	Sat 20/3/28	3	62	0 days	100%									
43	Prepare, submit & Approve Ecological Team Leader	30 days	Fri 19/12/20	Sat 20/1/18	3	45	0 days	100%									
44	Habitat Survey	112 days	Sun 20/1/19	Sat 20/5/9			0 days	100%									
45	Submission/approval of Habitat Surveys Method Statement and Programme	40 days	Sun 20/1/19	Thu 20/2/27	3,43	46	0 days	100%									

Revised Programme: December 2020

Data Date : 2021-1-3

Task

Critical Task

Milestone



Summary

Rolled Up Task

Rolled Up Critical Task



Rolled Up Milestone

Rolled Up Progress

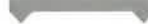
Split



External Tasks

Project Summary

Group By Summary



Progress

Deadline



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

Project Programme of the Works

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance	2020		2021		2022		2023	
										H2	H1	H2	H1	H2	H1	H2	H1
46	Habitat Surveys	30 days	Fri 20/2/28	Sat 20/3/28	45	47	0 days	100%									
47	Submission of Habitat Record	14 days	Sun 20/3/29	Sat 20/4/11	46	48	0 days	100%									
48	Approval of Habitat Survey Record	28 days	Sun 20/4/12	Sat 20/5/9	47	51,49	0 days	100%									
49	Prepare and Submit Wetland Restoration Proposal	50 days	Sun 20/5/10	Sun 20/6/28	48	50	0 days	100%									
50	Approval of Wetland Restoration Proposal	180 days	Mon 20/6/29	Fri 20/12/25	49	218,235,254,280	0 days	70%									
51	Prepare and Submit Wetland Creation Proposal	50 days	Sun 20/5/10	Sun 20/6/28	48	52	0 days	100%									
52	Approval of Wetland Cretation Proposal	180 days	Mon 20/6/29	Fri 20/12/25	51	218,235,254,280	0 days	70%									
53	Prepare and Submit Ecological Protection Plan	14 days	Fri 19/12/20	Thu 20/1/2	3		0 days	100%									
54	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%									
55	Prepare, submit & Approve G.I. Contractor	90 days	Wed 20/7/15	Mon 20/10/12	3		0 days	100%									
56	Prepare and submit Smart Card Sysytem	30 days	Fri 19/12/20	Sat 20/1/18	3	73	0 days	100%									
57	Prepare, submit Draft Safety Plan	14 days	Fri 19/12/20	Thu 20/1/2	3	58	0 days	100%									
58	Review & Approve Safety Plan	35 days	Fri 20/1/3	Thu 20/2/6	57	73	0 days	100%									
59	Prepare, Submit Draft Environmental Management Plan	21 days	Fri 19/12/20	Thu 20/1/9	3	60	0 days	100%									
60	Review & Approve Environmental Management Plan	45 days	Fri 20/1/10	Sun 20/2/23	3,59	73	0 days	100%									
61	Prepare, submit & Approve Site Management Plan for Trip Ticket System	45 days	Fri 19/12/20	Sun 20/2/2	3		0 days	100%									
62	Submission and Approval of Construction Method for water treatment wetland	90 days	Tue 20/9/15	Sun 20/12/13	42	133	10 days	30%									
63	Submission of Proposal for Source of Water for Water Treatment Wetland	120 days	Fri 19/12/20	Fri 20/4/17	3	64	0 days	100%									
64	Approval of Source of Water for Water Treatment Wetland	90 days	Sat 20/4/18	Thu 20/7/16	63	133	0 days	100%									
65	Design/submission/approval of Lodging Facilities	300 days	Tue 20/6/30	Sun 21/4/25	6	119,66SS,118	19 days	12%									
66	Design / Submission / approval of Sewerage System of Lodging Facilities	150 days	Wed 20/9/16	Fri 21/2/12	65SS	122	461 days	0%									
67	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	147	594 days	0%									
68	Design/submission/approval of E&M works for Facilities	180 days	Wed 20/9/30	Sun 21/3/28	6	122,172,159,124,150,149	328 days	0%									
69	Design/submission/approval of Plumbing works for Facilities	240 days	Mon 20/8/31	Tue 21/4/27	6	150,159	418 days	0%									
70	Design/submission/approval and supply of Lighting	180 days	Tue 20/6/30	Sat 20/12/26	6		1087 days	0%									
71	Design/submission/approval and supply of park facilities	180 days	Sun 20/8/30	Thu 21/2/25	6	153	318 days	30%									
72	Submission and Approval for Fire Extinguisher	50 days	Thu 20/12/31	Thu 21/2/18	3	149,159,179,186,263,172	105 days	0%									
73	Tree survey and submission	450 days	Wed 20/5/13	Thu 21/8/5	40,58,60,56	74SS+30 days	0 days	100%									
74	Tree felling / Site clearance	450 days	Fri 20/6/12	Sat 21/9/4	73SS+30 days		835 days	20%									
75	Design/submission/approval of Entrance gantry signages	180 days	Fri 21/1/1	Tue 21/6/29	6FS+30 days	165	385 days	0%									
76	Design/submission/approval of Irrigation system for landscape softworks	180 days	Sat 20/10/31	Wed 21/4/28	6		964 days	0%									
77	Design/submission/approval of Irrigation Channel and other associated facilities	130 days	Tue 20/9/1	Fri 21/1/8	6	225,242,268,287	116 days	97%									
78																	
79	3. Section 1 of the works (Portions 1 and 1A)	818 days	Sat 20/1/18	Fri 22/4/15			3 days	30%									
80	Site Access in Portion 1	0 days	Sat 20/1/18	Sat 20/1/18	6	83,101,87FS+30 days,100,99,86	0 days	100%									
81	Site Access in Portion 1A	0 days	Sat 20/7/18	Sat 20/7/18	11	107,106,94	0 days	100%									
82	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	104,108	282 days	20%									
83	Application for XP for constructionof Yin Kong Road	400 days	Fri 20/1/31	Fri 21/3/5	39,80	84SS+45 days,85	63 days	49%									
84	Prepare TTA for TMLG and approval from TD and RMO	90 days	Mon 20/3/16	Sat 20/6/13	83SS+45 days	85	328 days	70%									
85	Application of Traffic Advice and Road Work Advice	30 days	Sat 21/3/6	Sun 21/4/4	83,84	103	63 days	0%									
86	Submission of Utilities Detection Report	30 days	Wed 20/7/29	Thu 20/8/27	80	101	0 days	100%									
87	Relocation of Utilities (by Others)	335 days	Sun 20/3/1	Fri 21/1/29	80FS+30 days		134 days	50%									
88	Relocation of CLP Pole at Yin Kong Road in (Portion 1)	195 days	Sun 20/3/1	Fri 20/9/11			0 days	100%									
89	Planning for Relocation	60 days	Sun 20/3/1	Wed 20/4/29		90	0 days	100%									
90	Construction of New Pole	60 days	Thu 20/4/30	Sun 20/6/28	89	91	0 days	100%									
91	Outage and Diversion of Underground Cable	75 days	Mon 20/6/29	Fri 20/9/11	90	101	0 days	100%									
92																	
93	Relocation of CLP Pole at Yin Kong Road (Portion 1A)	195 days	Sun 20/7/19	Fri 21/1/29			134 days	0%									
94	Planning for Relocation	60 days	Sun 20/7/19	Wed 20/9/16	81	95	134 days	0%									
95	Construction of New Pole	60 days	Thu 20/9/17	Sun 20/11/15	94	96	134 days	0%									
96	Outage and Diversion of Underground Cable	75 days	Mon 20/11/16	Fri 21/1/29	95	107	134 days	0%									
97																	
98	Site Works (under Portion 1)	610 days	Thu 20/4/16	Thu 21/12/16			3 days	19%									
99	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	80	101	0 days	100%									

Revised Programme: December 2020

Data Date : 2021-1-3

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

Project Programme of the Works

Page 3

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

Project Programme of the Works

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance	2020		2021		2022		2023	
										H2	H1	H2	H1	H2	H1	H2	H1
158	Supply and installation of bench	30 days	Wed 21/7/7	Thu 21/8/5	157SS	159	318 days	0%									
159	Installation of plumbing works / E&M works with testing & commissioning	90 days	Fri 21/8/6	Wed 21/11/3	158,68,69,72	190	318 days	0%									
160	Construction of Pai Lau	828 days	Fri 19/12/20	Sat 22/3/26			25 days	46%									
161	Instruction from PM	365 days	Fri 19/12/20	Fri 20/12/18	3	162	0 days	100%									
162	Design/Submission/approval	150 days	Sat 20/12/19	Mon 21/5/17	161	163	25 days	10%									
163	Construction of Pai Lau	313 days	Tue 21/5/18	Sat 22/3/26	162	164	25 days	0%	7 days								
164	Construction of paving slab for open area	90 days	Sun 22/3/27	Fri 22/6/24	163,155	165	25 days	0%	4 days								
165	Construction of entrance gantry signages	60 days	Sat 22/6/25	Tue 22/8/23	164,75	190	25 days	0%	4 days								
166	Construction of Type 1 storage house	480 days	Wed 20/3/4	Sat 21/6/26			448 days	0%									
167	Excavation and formation preparation	21 days	Wed 20/3/4	Tue 20/3/24	38,184	168	588 days	0%									
168	Construction of base slab	28 days	Wed 20/3/25	Tue 20/4/21	167	169	588 days	0%									
169	Construction of walls and roof	40 days	Wed 20/4/22	Sun 20/5/31	168	170,153,188	588 days	0%									
170	Installation of aluminium louvre / GMS door	28 days	Mon 20/6/1	Sun 20/6/28	169	171	588 days	0%									
171	Installation of recycled timber strip / external finishing	73 days	Mon 20/6/29	Wed 20/9/9	170	172,178	588 days	0%	3 days								
172	Installation of E&M works & Fire Services with testing & commissioning	90 days	Mon 21/3/29	Sat 21/6/26	171,68,72	190	448 days	0%									
173	Construction of outdoor classroom shelter	306 days	Mon 21/4/26	Fri 22/2/25			204 days	3%									
174	Excavation and formation preparation	21 days	Mon 21/4/26	Sun 21/5/16	146	175	204 days	50%									
175	Construction of base slab	42 days	Mon 21/5/17	Sun 21/6/27	174	176	204 days	0%									
176	Construction of concrete columns	63 days	Mon 21/6/28	Sun 21/8/29	175	177	204 days	0%	3 days								
177	Installation of steel roof frame with corrugated sheet	30 days	Mon 21/8/30	Tue 21/9/28	176	178	204 days	0%									
178	Installation of recycled timber strip roofing	60 days	Wed 21/9/29	Sat 21/11/27	177,171	179	204 days	0%									
179	Installation of E&M works and Fire Services with testing & comissioning	90 days	Sun 21/11/28	Fri 22/2/25	178,72	190	204 days	0%									
180	Construction of storage compositing facility	596 days	Wed 19/10/2	Wed 21/5/19			486 days	7%									
181	Excavation and formation preparation	22 days	Mon 21/4/26	Mon 21/5/17	146		0 days	100%									
182	Construction of base slab	54 days	Wed 19/10/2	Sun 19/11/24		183	595 days	0%									
183	Construction of concrete columns	63 days	Mon 19/11/25	Sun 20/1/26	182	184	595 days	0%	3 days								
184	Installation of steel roof frame with corrugated sheet	30 days	Mon 20/1/27	Tue 20/2/25	183	185,167	595 days	0%									
185	Installation of recycled timber strip roofing	60 days	Wed 20/2/26	Sat 20/4/25	184	186,187	785 days	0%									
186	Installation of E&M works & Fire Services with testing & commissioning	90 days	Fri 21/2/19	Wed 21/5/19	185,72	190	486 days	0%									
187	Construction of entry landing with drop bar	90 days	Sun 20/4/26	Fri 20/7/24	185	190	785 days	0%									
188	Construction of walkway	210 days	Mon 20/6/1	Sun 20/12/27	169	190	629 days	0%									
189	Landscaping softworks	280 days	Thu 21/12/23	Wed 22/9/28	139	190,193	-11 days	0%									
190	Completion of Section 3 of the works	0 days	Sat 22/9/17	Sat 22/9/17	150,159,165,172,179,186,187		-11 days	0%									
191																	
192	6. Section 3A of the works (Establishment works for Section 2 and 3)	365 days	Thu 22/9/29	Thu 23/9/28			-11 days	0%									
193	Establishment works for landscape softworks	365 days	Thu 22/9/29	Thu 23/9/28	189	194FF	-11 days	0%									
194	Completion of Section 3A of the Works	0 days	Sun 23/9/17	Sun 23/9/17	193FF		-11 days	0%									
195																	
196	7. Section 4 of the works (Portion 18)	162 days	Thu 20/5/7	Fri 20/10/16			0 days	100%									
197	Site Access in Portion 18	0 days	Thu 20/5/7	Thu 20/5/7	9	198,199,200,202	0 days	100%									
198	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	20 days	Fri 20/5/8	Wed 20/5/27	197	199	0 days	100%									
199	General maintenance to exisitng wetland	80 days	Thu 20/5/28	Sat 20/8/15	197,198	203	0 days	100%	7 days								
200	Construction of Irrigation Channel	30 days	Wed 20/8/19	Thu 20/9/17	197	201	0 days	100%									
201	Additional Works to the Irrigation Channel	29 days	Fri 20/9/18	Fri 20/10/16	200	203	0 days	100%									
202	Construction of Metal Wire Railing	39 days	Mon 20/8/10	Thu 20/9/17	197	203	0 days	100%									
203	Completion of Section 4 of the works	0 days	Fri 20/10/16	Fri 20/10/16	199,202,201		0 days	100%									
204																	
205	8. Section 5 of the works (Portion 14)	80 days	Sun 20/10/18	Wed 21/1/6			10 days	96%									
206	Site Access in Portion 14	0 days	Sun 20/10/18	Sun 20/10/18	13	209,207,208	0 days	100%									
207	General site clearance / demolition work / Removal of Asbesto Containing Material	60 days	Mon 20/10/19	Thu 20/12/17	206	210	0 days	100%									
208	General maintenance to exisiting wetland	45 days	Mon 20/10/19	Wed 20/12/2	206	210FF	0 days	100%									
209	Boundary Structure - Metal Wire Railing	80 days	Mon 20/10/19	Wed 21/1/6	206	210FF	10 days	90%									
210	Completion of Section 5 of the works	0 days	Wed 21/1/6	Wed 21/1/6	209FF,208FF,207		10 days	0%									
211																	
212	9. Section 6 of the works (Portions 8,8A,8B and 9,9A~9G)	542 days	Sat 20/1/18	Tue 21/7/13			0 days	10%									

Revised Programme: December 2020

Data Date : 2021-1-3

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

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

Project Programme of the Works

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance										
										2020	2020	2021	2021	2021	2022	2022	2023	2023	2023
										H2	H1	H2	H1	H2	H1	H2	H1	H2	
213	Site Access in Portions 8A, 9A, 9C, 9E, 9F, 9G	0 days	Sat 20/1/18	Sat 20/1/18	6	218,216SS	0 days	100%											
214	Site Access in Portion 8	0 days	Sat 20/7/18	Sat 20/7/18	11	216FF+10 days,218	0 days	100%											
215	Site Access in Portions 8B, 9, 9B, 9D	0 days	Sun 20/10/18	Sun 20/10/18	14,15	216FF+10 days,218,222	68 days	50%											
216	General site clearance / demolition work / Removal of Asbestos Containing Material & Dioxin Contaminated	150 days	Fri 20/7/3	Sun 20/11/29	213SS,214FF+10 days,215FF+10 days	227	226 days	50%											
217	Wetland Restoration / Wetland Creation	200 days	Sat 20/12/26	Tue 21/7/13			0 days	0%											
218	Excavation	90 days	Sat 20/12/26	Thu 21/3/25	213,52,50,214,215	219SS+30 days	0 days	0%											
219	Backfilling	60 days	Mon 21/1/25	Thu 21/3/25	218SS+30 days	220SS+90 days,222,225,226	0 days	0%											
220	Agricultural Planting	80 days	Sun 21/4/25	Tue 21/7/13	219SS+90 days	227	0 days	0%											
221	Construction of Storage Sheds	110 days	Fri 21/3/26	Tue 21/7/13			0 days	0%											
222	Construction of concrete structure	70 days	Fri 21/3/26	Thu 21/6/3	219,215,15	223FS-30 days,224	0 days	0%	4 days										
223	Installation of Alluminium Window/Louvre and GMS Door with recycle timber decoration	60 days	Wed 21/5/5	Sat 21/7/3	222FS-30 days	227	10 days	0%											
224	Installation of GMS roofing structure with recycle timber	40 days	Fri 21/6/4	Tue 21/7/13	222	227	0 days	0%											
225	Construction of Channel	70 days	Fri 21/3/26	Thu 21/6/3	219,77	227	40 days	0%	7 days										
226	Construction of walkway	100 days	Fri 21/3/26	Sat 21/7/3	219	227	10 days	0%	7 days										
227	Completion of Section 6 of the works	0 days	Tue 21/7/13	Tue 21/7/13	220,224,225,226,216,223		0 days	0%											
228																			
229	10. Section 7 of the works (Portions 10,10A,10B, 13,13A and 16,16A,16B)	542 days	Sat 20/1/18	Tue 21/7/13			20 days	17%											
230	Site Access in Portions 10A, 10B, 13A, 16	0 days	Sat 20/1/18	Sat 20/1/18	6	235,233SS	0 days	100%											
231	Site Access in Portions 10, 13	0 days	Sun 20/10/18	Sun 20/10/18	13	233FF+20 days	0 days	100%											
232	Site Access in Portions 16A, 16B	0 days	Mon 21/1/18	Mon 21/1/18	16	233FF+20 days	176 days	0%											
233	General site clearance / demolition work / Removal of Asbestos Containing Material & Dioxin Contaminated	300 days	Tue 20/4/14	Sun 21/2/7	230SS,231FF+20 days,232FF+20 days	245	176 days	40%											
234	Wetland Restoration / Wetland Creation	167 days	Sat 20/12/26	Thu 21/6/10			20 days	0%											
235	Excavation	100 days	Sat 20/12/26	Sun 21/4/4	230,52,50	236SS+47 days,239SS+50 days,242	20 days	0%											
236	Backfilling	60 days	Thu 21/2/11	Sun 21/4/11	235SS+47 days	237SS+60 days	53 days	0%											
237	Agricultural Planting	60 days	Mon 21/4/12	Thu 21/6/10	236SS+60 days	245	53 days	0%											
238	Construction of storage sheds	150 days	Sun 21/2/14	Tue 21/7/13			20 days	0%											
239	Construction of concrete structure	90 days	Sun 21/2/14	Fri 21/5/14	235SS+50 days	240SS+90 days	20 days	0%											
240	Installation of Alluminium Window/Louvre and GMS Door with recycle timber decoration	30 days	Sat 21/5/15	Sun 21/6/13	239SS+90 days	241SS+30 days	20 days	0%											
241	Installation of GMS roofing structure with recycle timber	30 days	Mon 21/6/14	Tue 21/7/13	240SS+30 days	245	20 days	0%											
242	Construction of Channel	80 days	Mon 21/4/5	Wed 21/6/23	77,235	243SS,245	40 days	40%	7 days										
243	Construction of walkway	90 days	Mon 21/4/5	Sat 21/7/3	242SS	244FF-15 days,245	30 days	0%	6 days										
244	Construction of entry landing with drop bar	45 days	Wed 21/5/5	Fri 21/6/18	243FF-15 days	245	45 days	0%											
245	Completion of Section 7 of the works	0 days	Tue 21/7/13	Tue 21/7/13	237,241,242,243,244,233		20 days	0%											
246																			
247	11. Section 8 of the works (Portions 7,7A,7B, 17,17A,17B, 19,19A,19B,19C, 20,20A,20B&20C)	522 days	Sat 20/1/18	Wed 21/6/23			908 days	20%											
248	Site Access in Portions 7, 17, 19A, 19B, 19C, 20A, 20B	0 days	Sat 20/1/18	Sat 20/1/18	6	254,252SS	0 days	100%											
249	Site Access in Portions 19, 20, 20C	0 days	Thu 20/5/7	Thu 20/5/7	9	252FF+20 days	1300 days	0%											
250	Site Access in Portions 7A, 7B	0 days	Sat 20/7/18	Sat 20/7/18	11	252FF+20 days	1228 days	0%											
251	Site Access in Portions 17A, 17B	0 days	Mon 21/1/18	Mon 21/1/18	16	252FF+20 days	1044 days	0%											
252	General site clearance / demolition work / Removal of Asbestos Containing Material & Dioxin Contaminated	350 days	Mon 20/2/24	Sun 21/2/7	248SS,249FF+20 days,250FF+20 days,251FF+20 days		1044 days	30%											
253	Wetland Restoration / Wetland Creation	135 days	Sat 20/12/26	Sun 21/5/9			38 days	0%											
254	Excavation	80 days	Sat 20/12/26	Mon 21/3/15	248,52,50	255SS+25 days,265SS+60 days,258SS,268SS	38 days	0%											
255	Backfilling	80 days	Wed 21/1/20	Fri 21/4/9	254SS+25 days	256SS+60 days	65 days	0%											
256	Agricultural Planting	50 days	Sun 21/3/21	Sun 21/5/9	255SS+60 days	271	65 days	0%											
257	Construction of Type 2 storage house	159 days	Sat 20/12/26	Wed 21/6/2			929 days	22%											
258	Excavation and formation preparation	21 days	Sat 20/12/26	Fri 21/1/15	254SS	259	0 days	100%											
259	Construction of base slab	28 days	Sat 21/1/16	Fri 21/2/12	258	260	0 days	100%											
260	Construction of walls and roof	40 days	Sat 21/2/13	Wed 21/3/24	259	261,262	41 days	0%											
261	Installation of aluminium louvre / GMS door	30 days	Thu 21/3/25	Fri 21/4/23	260	263	41 days	0%											
262	Installation of recycled timber strip / external finishing	60 days	Thu 21/3/25	Sun 21/5/23	260		939 days	0%											
263	Installation of E&M works with testing & commissioning	40 days	Sat 21/4/24	Wed 21/6/2	261,72	271	41 days	0%											
264	Construction of storage sheds	120 days	Wed 21/2/24	Wed 21/6/23			20 days	12%											

Revised Programme: December 2020

Data Date : 2021-1-3

Task

Critical Task

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Summary

Rolled Up Task

Rolled Up Critical Task

Rolled Up Milestone

Rolled Up Progress

Split

External Tasks

Project Summary

Group By Summary

Progress

Deadline

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

Project Programme of the Works

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance	Gantt Chart															
										2020		2021		2022		2023									
										H2	H1	H2	H1	H2	H1	H2	H1	H2							
265	Construction of concrete structure	90 days	Wed 21/2/24	Mon 21/5/24	254SS+60 days	266SS+60 days,267	20 days	20%																	
266	Installation of Alluminium Window/Louvre and GMS Door with recycle timber decoration	30 days	Sun 21/4/25	Mon 21/5/24	265SS+60 days	267SS+21 days	29 days	0%																	
267	Installation of GMS roofing structure with recycle timber	30 days	Tue 21/5/25	Wed 21/6/23	266SS+21 days,265	271	20 days	0%																	
268	Construction of Channel	80 days	Sat 21/1/9	Mon 21/3/29	77,254SS	269SS,271	106 days	70%	7 days																
269	Construction of walkway	90 days	Sat 21/1/9	Thu 21/4/8	268SS	270FF,271	96 days	0%	7 days																
270	Construction of entry landing with drop bar	45 days	Tue 21/2/23	Thu 21/4/8	269FF	271	96 days	0%																	
271	Completion of Section 8 of the works	0 days	Wed 21/6/23	Wed 21/6/23	256,263,267,268,269,270		20 days	0%																	
272																									
273	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			793 days	5%																	
274	Site Access in Portions 11A, 11B, 12A, 12C, 12D, 15B, 15C	0 days	Sat 20/1/18	Sat 20/1/18	6	280,278SS	0 days	100%																	
275	Site Access in Portion 15A	0 days	Thu 20/5/7	Thu 20/5/7	9	278FF+20 days	0 days	100%																	
276	Site Access in Portions 11, 12, 12B	0 days	Sun 20/10/18	Sun 20/10/18	13	278FF+20 days	0 days	90%																	
277	Site Access in Portion 15	0 days	Mon 21/1/18	Mon 21/1/18	16	278FF+20 days	1044 days	0%																	
278	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	320 days	Wed 20/3/25	Sun 21/2/7	274SS,275FF+20 days,276FF+20 days,277FF+20 days		1044 days	20%																	
279	Wetland Restoration / Wetland Creation	265 days	Sat 20/12/26	Thu 21/9/16			21 days	0%																	
280	Excavation	150 days	Sat 20/12/26	Mon 21/5/24	274,52,50	281SS+45 days,284SS+80 days	21 days	0%																	
281	Backfilling	150 days	Tue 21/2/9	Thu 21/7/8	280SS+45 days	282SS+120 days,287SS+100 days	21 days	0%																	
282	Agricultural Planting	100 days	Wed 21/6/9	Thu 21/9/16	281SS+120 days	290	51 days	0%																	
283	Construction of storage sheds	210 days	Tue 21/3/16	Mon 21/10/11			26 days	0%																	
284	Construction of concrete structure	180 days	Tue 21/3/16	Sat 21/9/11	280SS+80 days	285SS+45 days,286	26 days	0%																	
285	Installation of Alluminium Window/Louvre and GMS Door with recycle timber decoration	100 days	Fri 21/4/30	Sat 21/8/7	284SS+45 days	286SS+21 days	140 days	0%																	
286	Installation of GMS roofing structure with recycle timber	30 days	Sun 21/9/12	Mon 21/10/11	285SS+21 days,284	290	26 days	0%	3 days																
287	Construction of Channel	150 days	Thu 21/5/20	Sat 21/10/16	281SS+100 days,77	288SS,290	21 days	0%	4 days																
288	Construction of walkway	150 days	Thu 21/5/20	Sat 21/10/16	287SS	289FF,290	21 days	0%	4 days																
289	Construction of entry landing with drop bar	45 days	Thu 21/9/2	Sat 21/10/16	288FF	290	21 days	0%																	
290	Completion of Section 9 of the works	0 days	Sat 21/10/16	Sat 21/10/16	282,286,287,288,289		21 days	0%																	
291																									
292	13. Section 10 of the works (Portion 21)	518 days	Mon 21/1/18	Mon 22/6/20			10 days	0%																	
293	Site Access in Portion 21	0 days	Mon 21/1/18	Mon 21/1/18	16	294	10 days	0%																	
294	General site clearance / demolition work / Removal of Asbesto Containing Material	14 days	Tue 21/1/19	Mon 21/2/1	293	295	10 days	0%																	
295	Erect site hoarding	14 days	Tue 21/2/2	Mon 21/2/15	294	297	10 days	0%																	
296	Archaeological Impacts Mitigation Measures	180 days	Tue 21/2/16	Sat 21/8/14			10 days	0%																	
297	Archaeological survey	120 days	Tue 21/2/16	Tue 21/6/15	295	298	10 days	0%																	
298	Archaeological impact assessment	60 days	Wed 21/6/16	Sat 21/8/14	297	300	10 days	0%																	
299	Site formation work and infrastructure works at Wa Shan	310 days	Sun 21/8/15	Mon 22/6/20			10 days	0%																	
300	Site formation / slope works	150 days	Sun 21/8/15	Tue 22/1/11	298	301	10 days	0%	4 days																
301	Drainage works	100 days	Wed 22/1/12	Thu 22/4/21	300	302	10 days	0%	4 days																
302	Paving block on footway	30 days	Fri 22/4/22	Sat 22/5/21	104,108,301	303	10 days	0%																	
303	bituminous pavement on carriageway	30 days	Sun 22/5/22	Mon 22/6/20	302	304FF	10 days	0%																	
304	Completion of Section 10 of the works	0 days	Mon 22/6/20	Mon 22/6/20	303FF		10 days	0%																	
305																									
306	14. Section 11 of the works (Portions 22, 23, 24 and remainder works)	549 days	Tue 19/12/31	Thu 21/7/1			900 days	60%																	
307	Site Access in Portions 23, 24	0 days	Tue 19/12/31	Tue 19/12/31	7	310	0 days	100%																	
308	Site Access in Portion 22	0 days	Wed 20/5/13	Wed 20/5/13	10	320,322	1314 days	0%																	
309	Egretray Site Protion 23 & 24	500 days	Tue 20/2/18	Thu 21/7/1			645 days	54%																	
310	General site clearance	30 days	Tue 20/2/18	Wed 20/3/18	307	311	0 days	100%																	
311	Erect site hoarding (Deleted)	30 days	Thu 20/3/19	Wed 20/4/17	310	312	0 days	100%																	
312	Preliminary Survey	40 days	Sat 20/4/18	Wed 20/5/27	311	313	0 days	100%																	
313	Submission of mehtodology for translocation	60 days	Thu 20/5/28	Sun 20/7/26	312	314	0 days	100%																	
314	Approval of Methodology for Translocation	130 days	Mon 20/7/27	Thu 20/12/3	313	315,333	0 days	100%																	
315	Translocation works	30 days	Fri 20/12/4	Sat 21/1/2	314,334	316	0 days	100%																	
316	Ditch construction at A1-7FLN Egretray Site (Portion 23)	90 days	Sun 21/1/3	Fri 21/4/2	315	317	645 days	0%																	
317	Establishmnet of A1-7FLN Egretray Site (Portion 23)	90 days	Sat 21/4/3	Thu 21/7/1	316	318FS-200 days	645 days	0%	10 days																
318	Establishment of B1-7FLN Egretray Site (Portion 24)	90 days	Mon 20/12/14	Sat 21/3/13	317FS-200 days	323	645 days	0%	10 days																
319																									

Revised Programme: December 2020

Data Date : 2021-1-3

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



ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance		2020	2021		2022		2023	
											H2	H1	H2	H1	H2	H1	H2
320	Preparation Works for Landscaping work at existing Ho Sheung Heung Egrettry Site (Portion 22)	60 days	Wed 20/11/25	Sat 21/1/23	308,322	323,321	0 days	100%	10 days								
321	Planting for Ho Sheung Heung Egrettry Site	14 days	Sun 21/1/24	Sat 21/2/6	320		1045 days	0%									
322	Compensation Event No. 017 - Removal of Existing Unsafe Sheds	50 days	Tue 20/10/6	Tue 20/11/24	308	320	0 days	100%									
323	Completion of Section 11 of the works	0 days	Sat 21/3/13	Sat 21/3/13	320,318	326	645 days	0%									
324																	
325	15. Section 11A of the works (Establishment works for Section 11)	1050 days	Fri 21/1/1	Thu 23/11/16			32 days	0%									
326	Establishment works	365 days	Sun 21/3/14	Sun 22/3/13	323		645 days	0%									
327	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		328	32 days	0%									
328	Completion of Section 11A of the works	0 days	Thu 23/11/16	Thu 23/11/16	327		32 days	0%									
329																	
330	16. Section 12 of the works (Portions 25, 26 and 27)	284 days	Wed 20/3/18	Sun 20/12/27			0 days	100%									
331	Site Access in Portions 25, 26, 27	0 days	Wed 20/3/18	Wed 20/3/18	3FS+90 days	332FS+60 days	0 days	100%									
332	Boundary Site Area	60 days	Mon 20/5/18	Thu 20/7/16	331FS+60 days		0 days	100%									
333	Preparation for translocation works	4 days	Fri 20/12/4	Mon 20/12/7	314	337,334	0 days	100%									
334	Compensation Event No. 11 - Translocation of Rose Bitterling	20 days	Tue 20/12/8	Sun 20/12/27	333	315	0 days	100%									
335	Collection site C1 (Portion 25)	5 days	Mon 20/12/14	Fri 20/12/18	336	338FF	0 days	100%									
336	Collection site C2 (Portion 26)	3 days	Fri 20/12/11	Sun 20/12/13	337	338FF,335	0 days	100%									
337	Collection site C3 (Portion 27)	3 days	Tue 20/12/8	Thu 20/12/10	333	338FF,336	0 days	100%									
338	Completion of Section 12 of the works	0 days	Fri 20/12/18	Fri 20/12/18	335FF,336FF,337FF		0 days	100%									

Revised Programme: December 2020

Data Date : 2021-1-3

Task

Critical Task

Milestone

Summary

Rolled Up Task

Rolled Up Critical Task

Rolled Up Milestone

Rolled Up Progress

Split

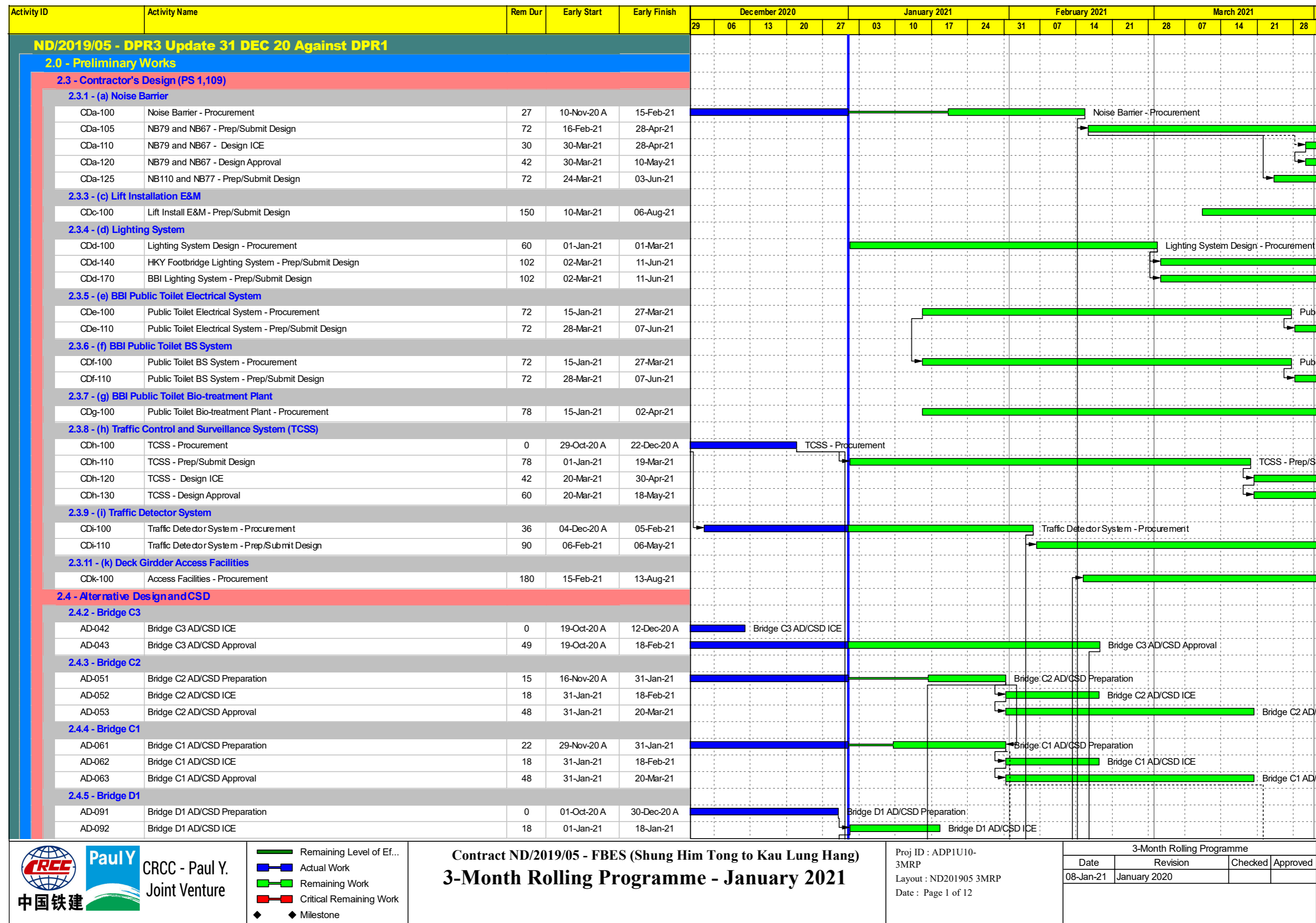
External Tasks

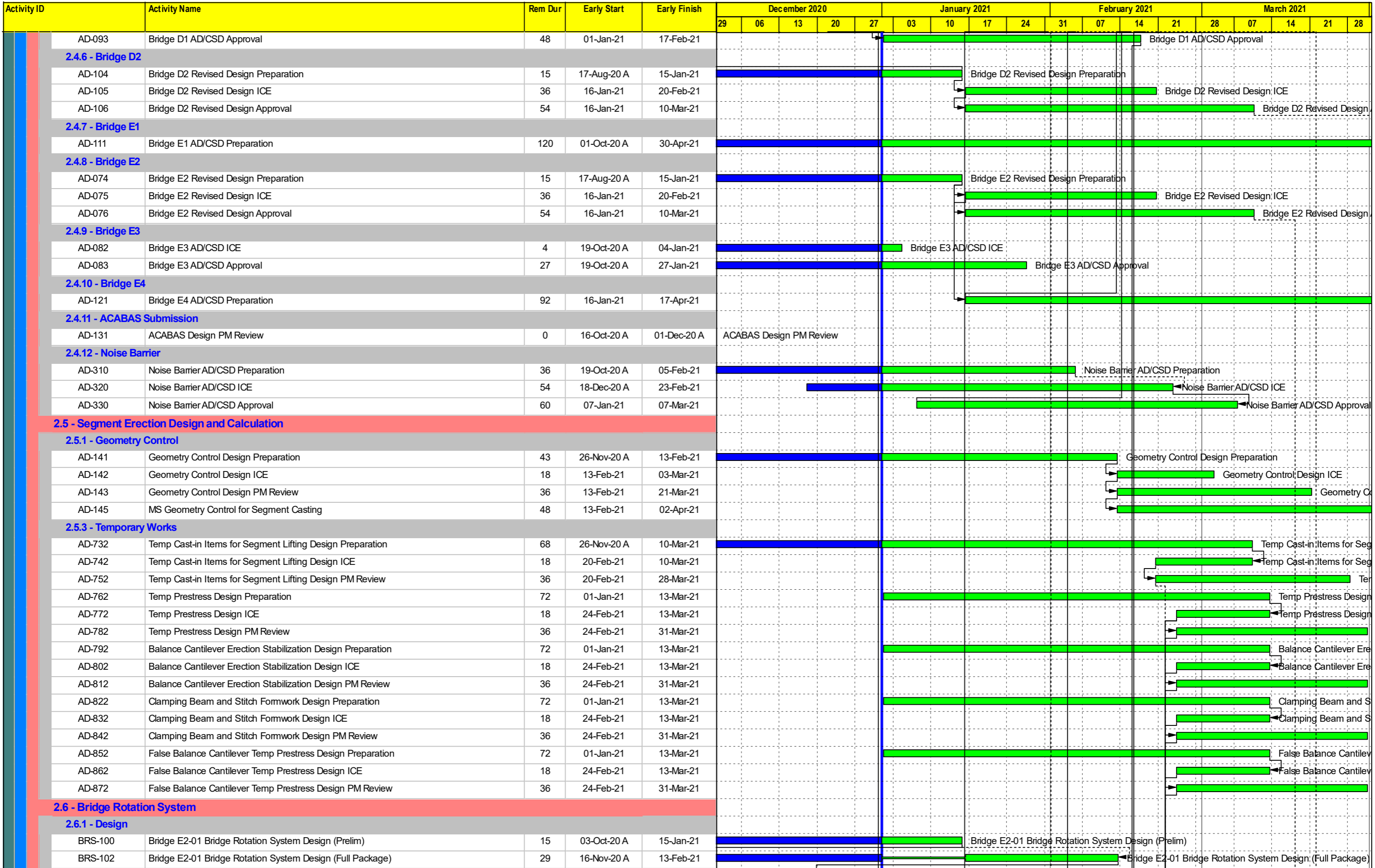
Project Summary

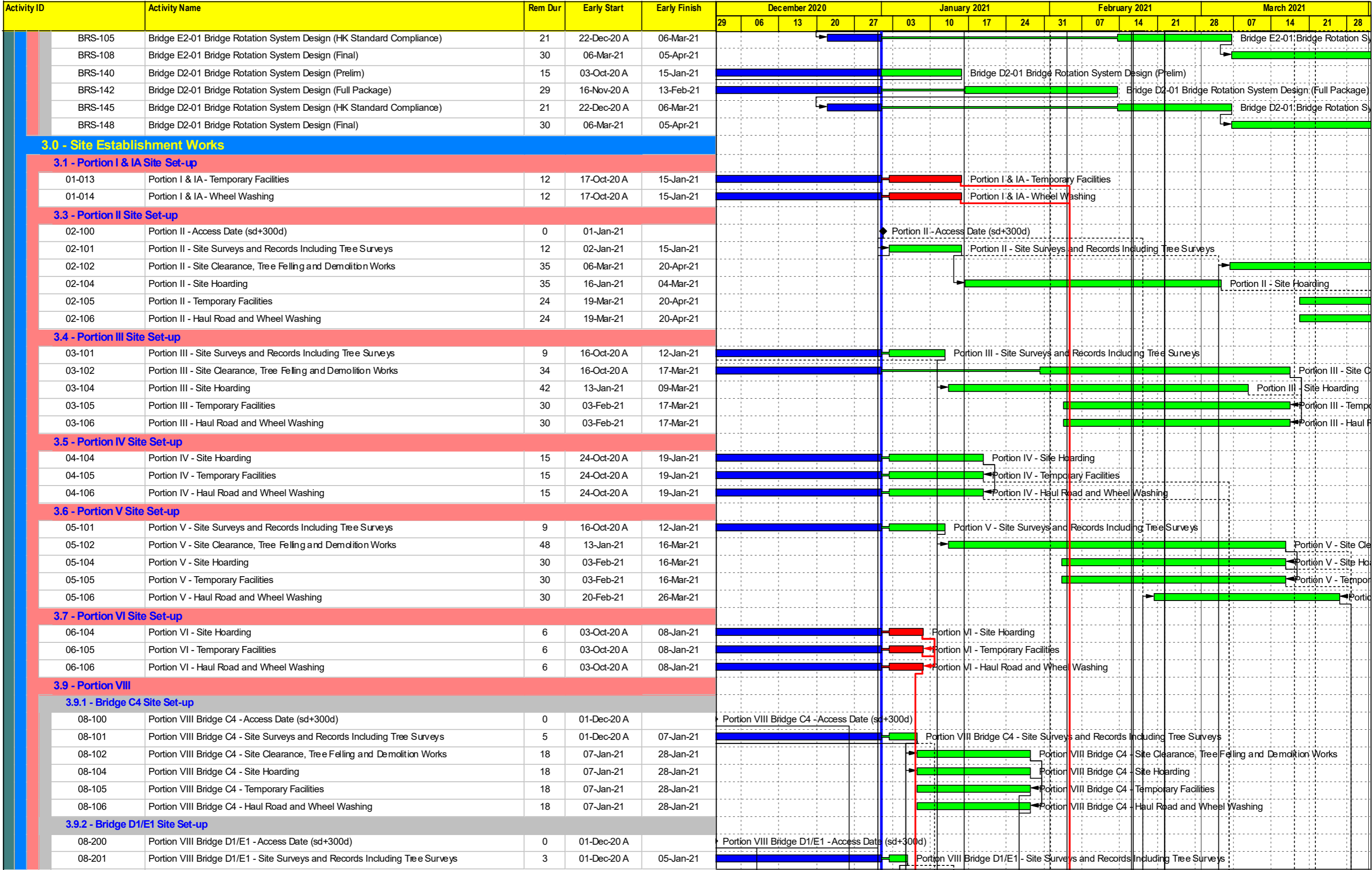
Group By Summary

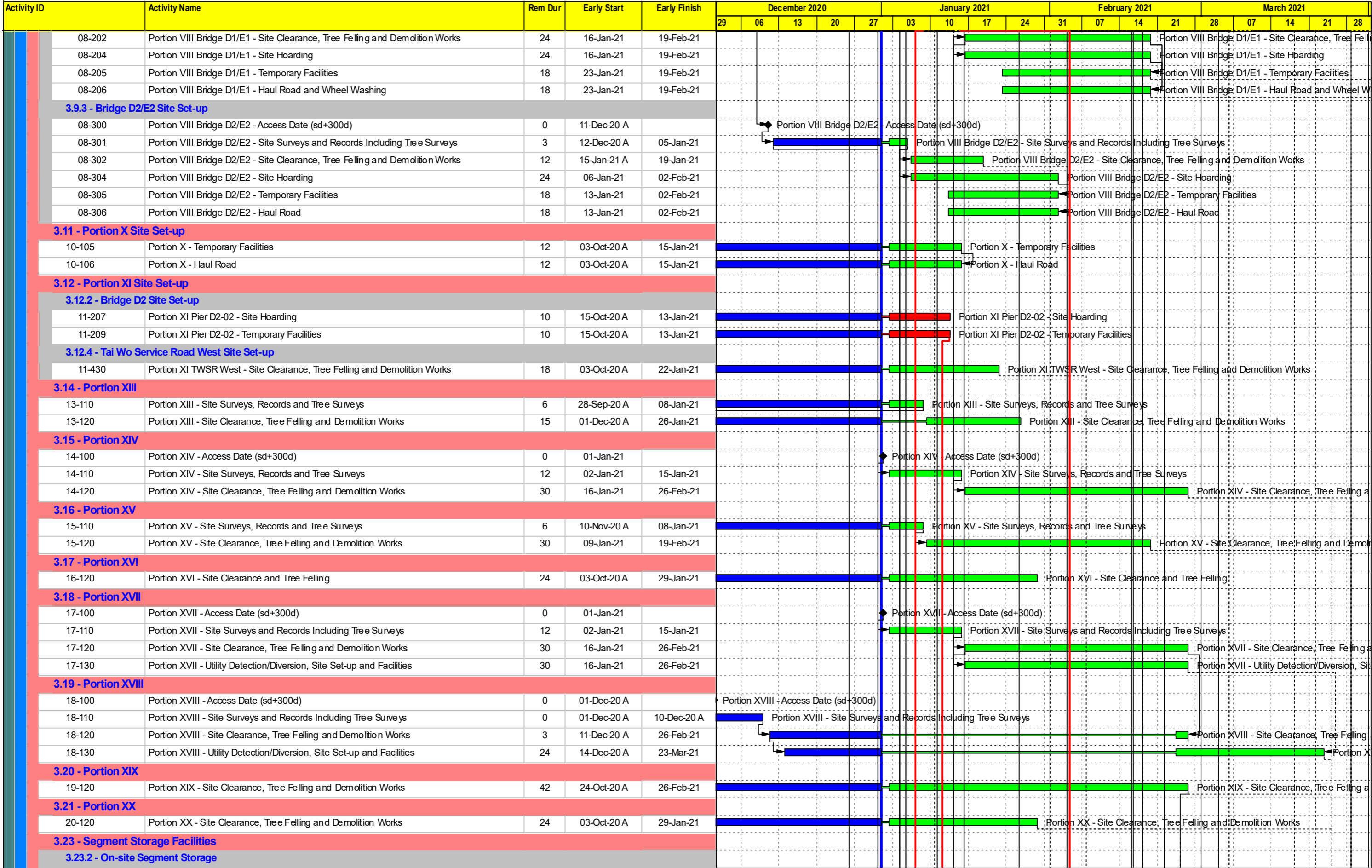
Progress

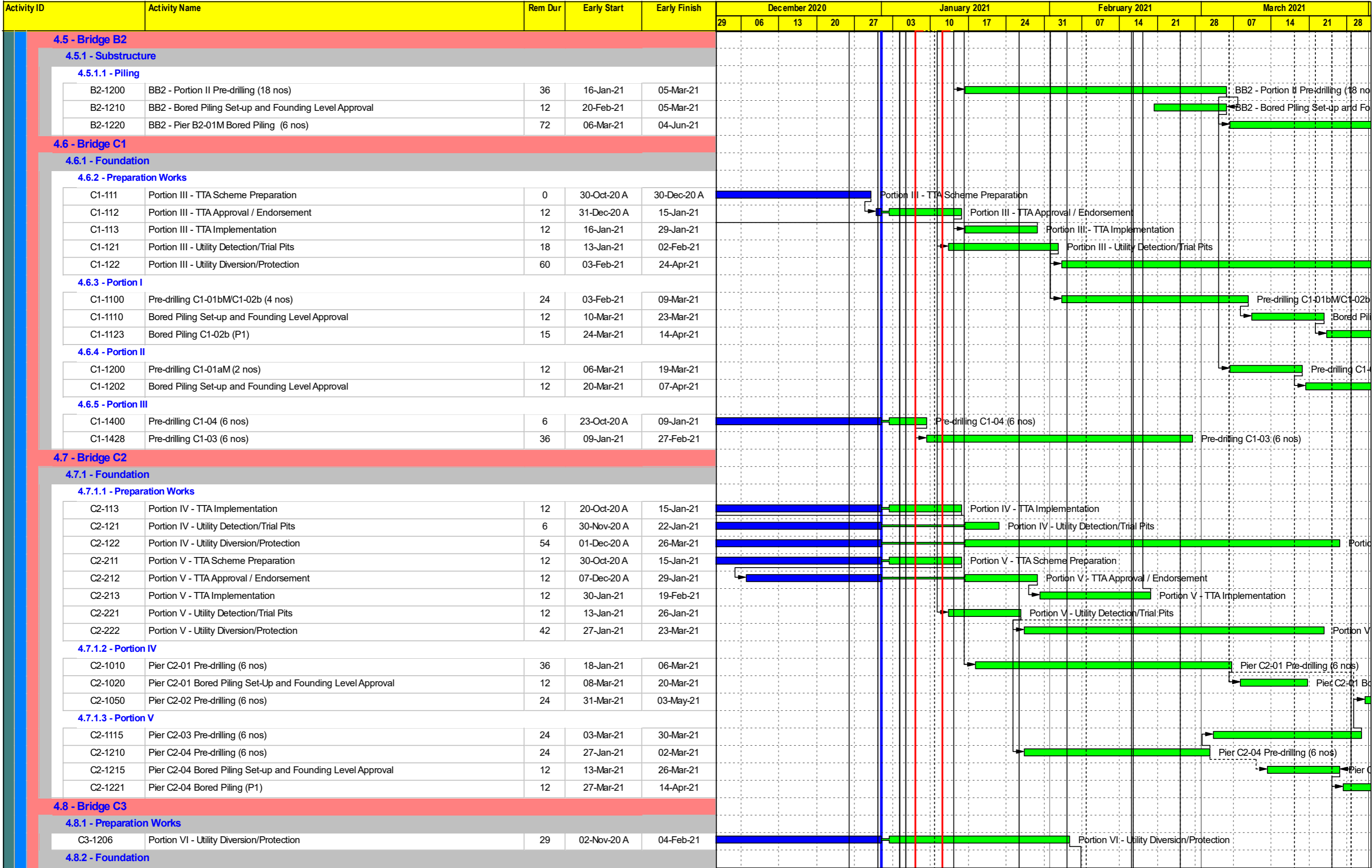
Deadline

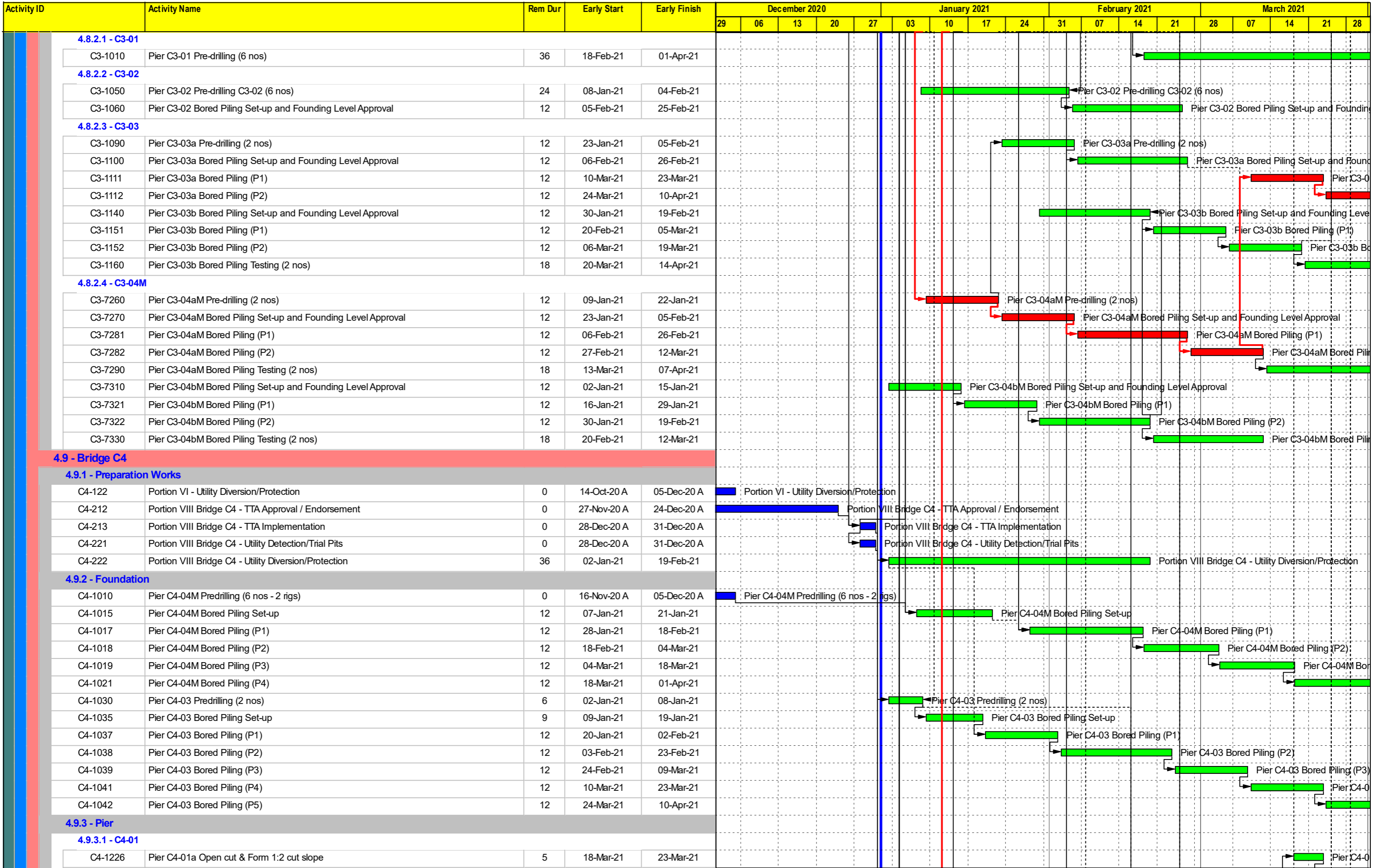












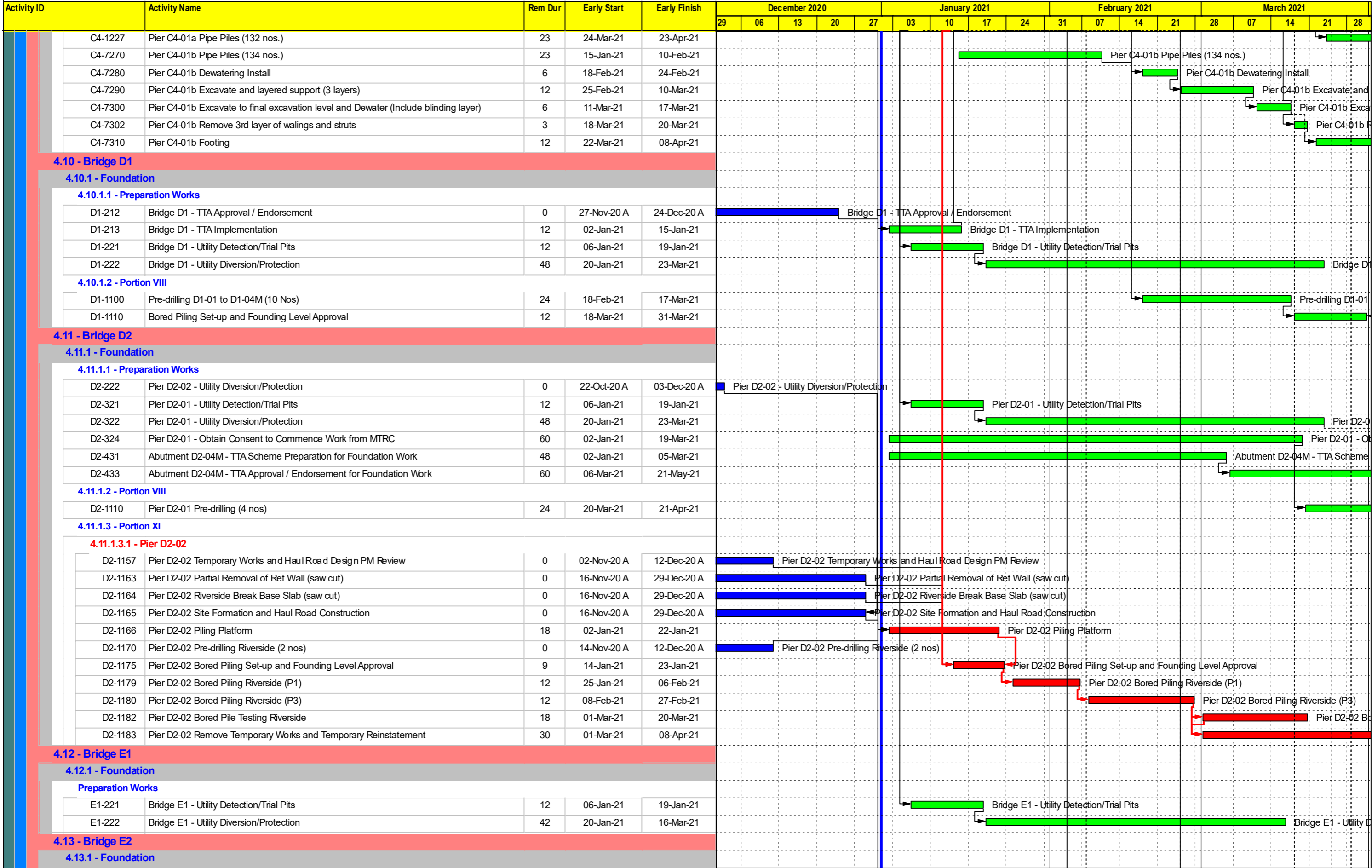
CRCC - Paul Y.
Joint Venture

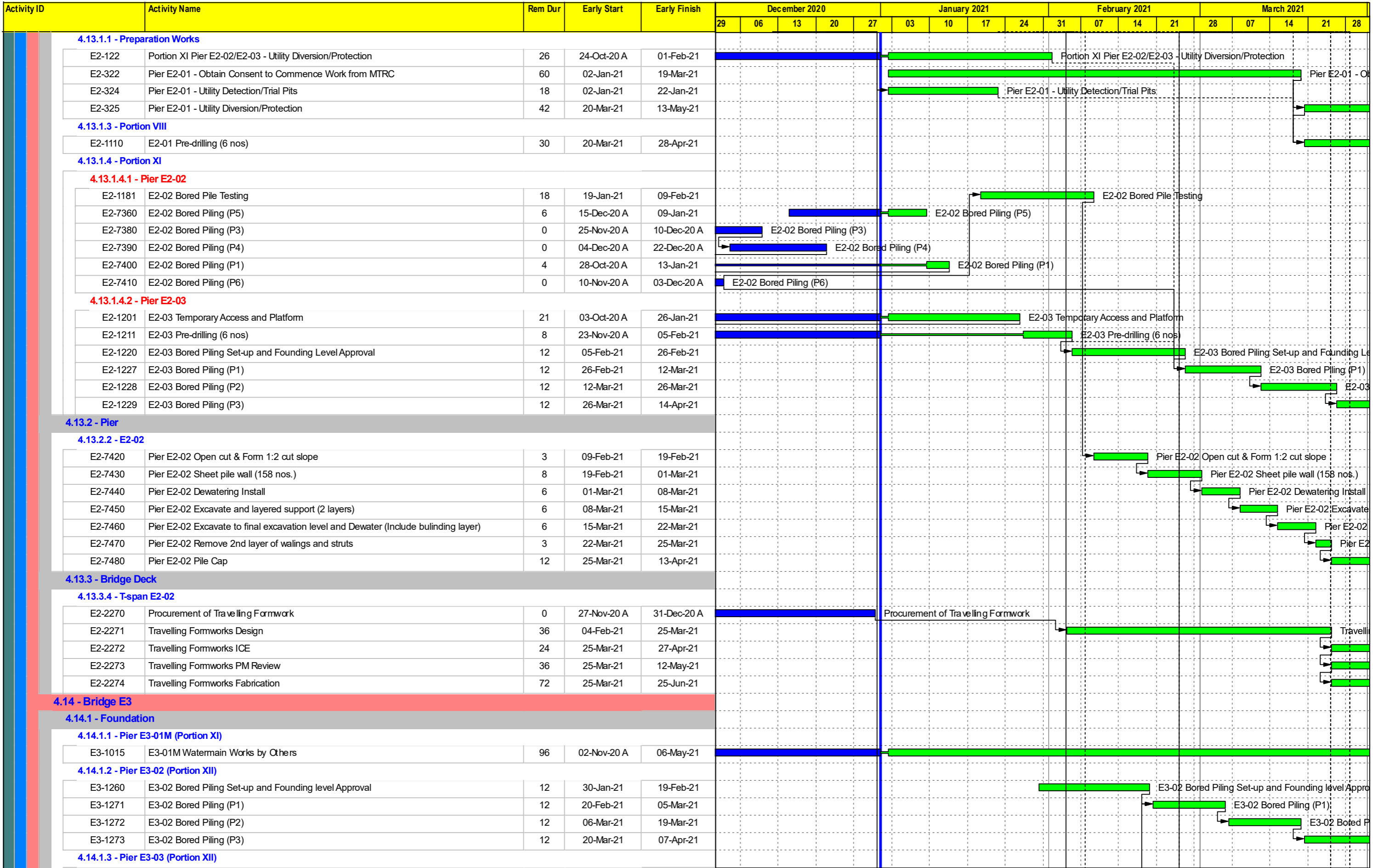
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- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone

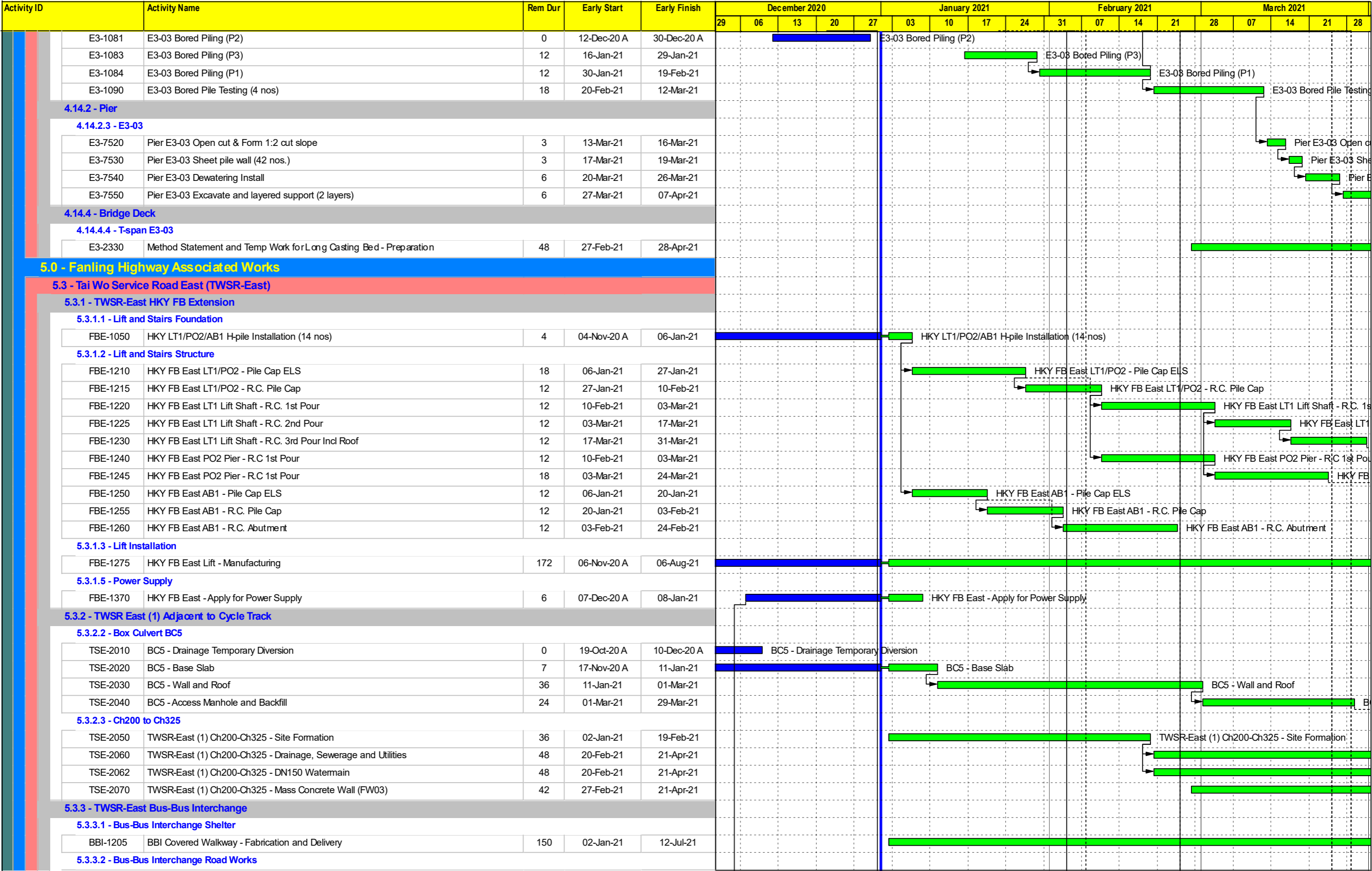
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)
3-Month Rolling Programme - January 2021

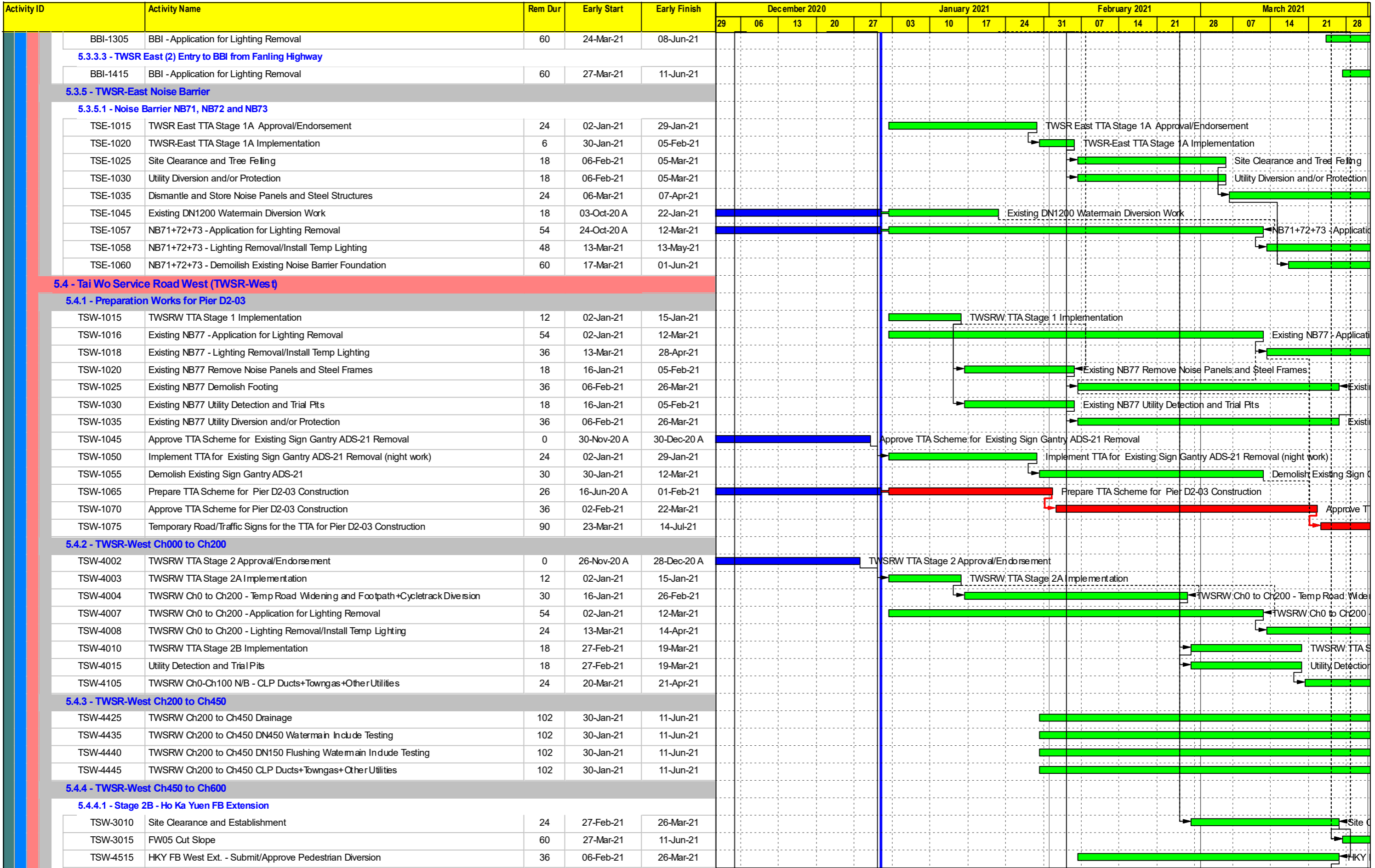
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Date : Page 7 of 12

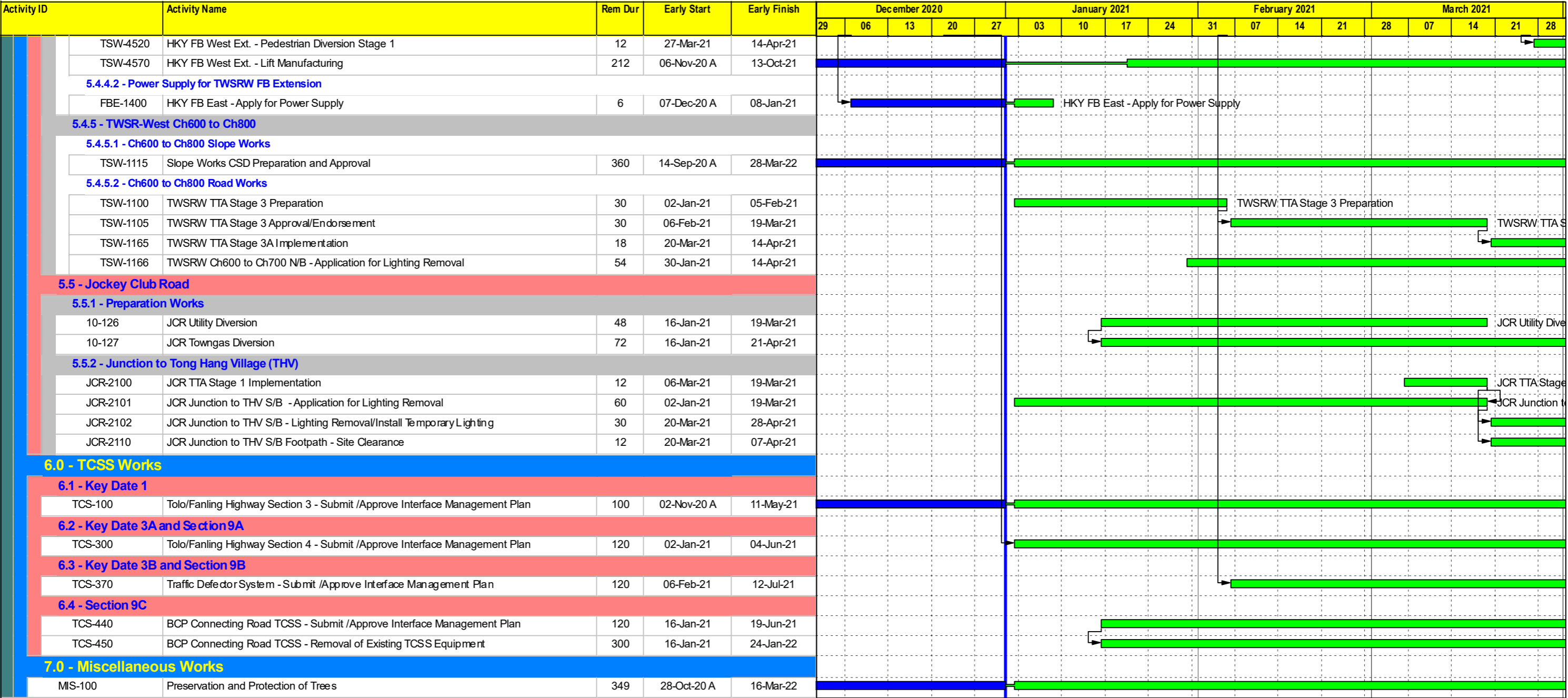
3-Month Rolling Programme			
Date	Revision	Checked	Approved
08-Jan-21	January 2020		



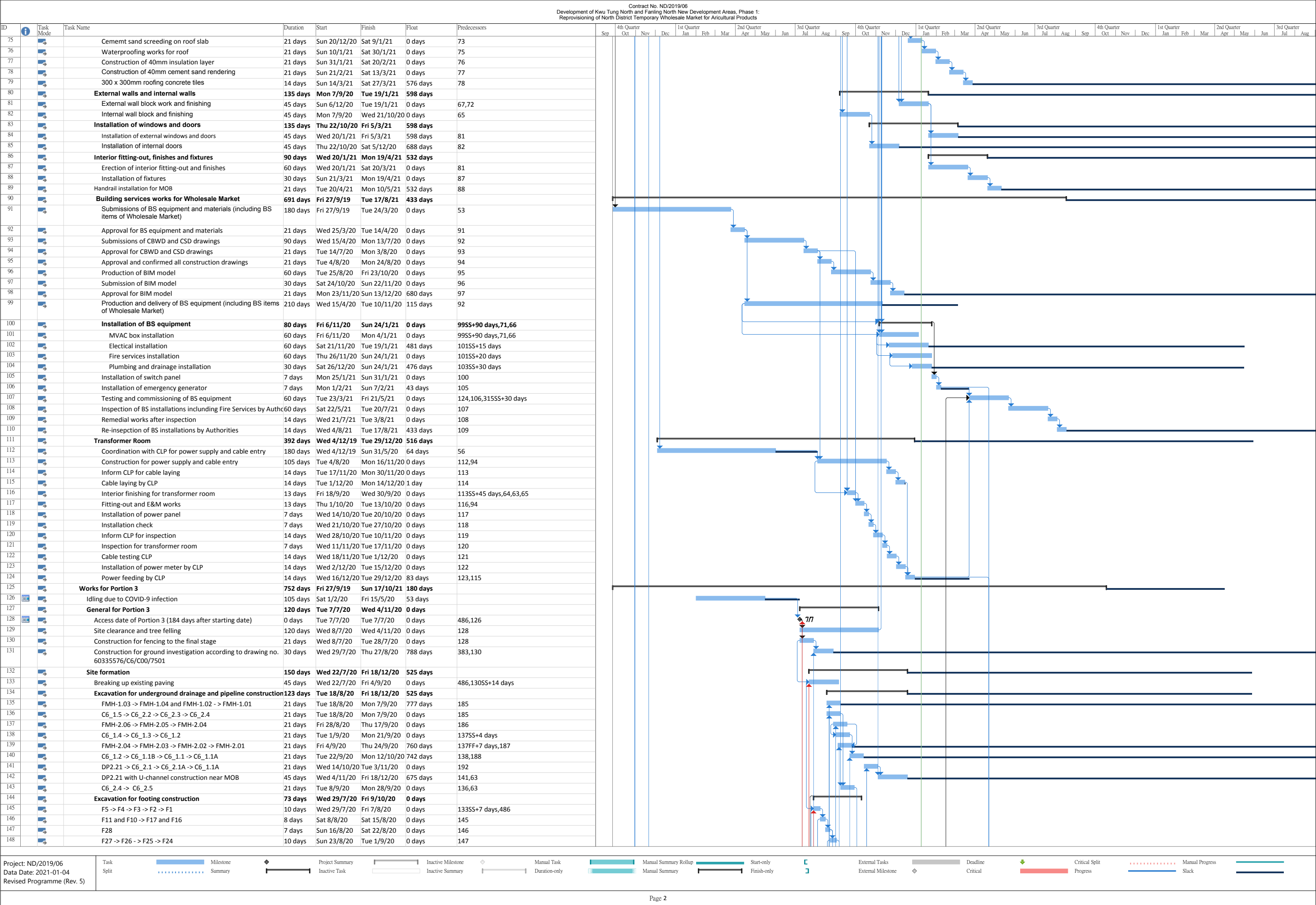






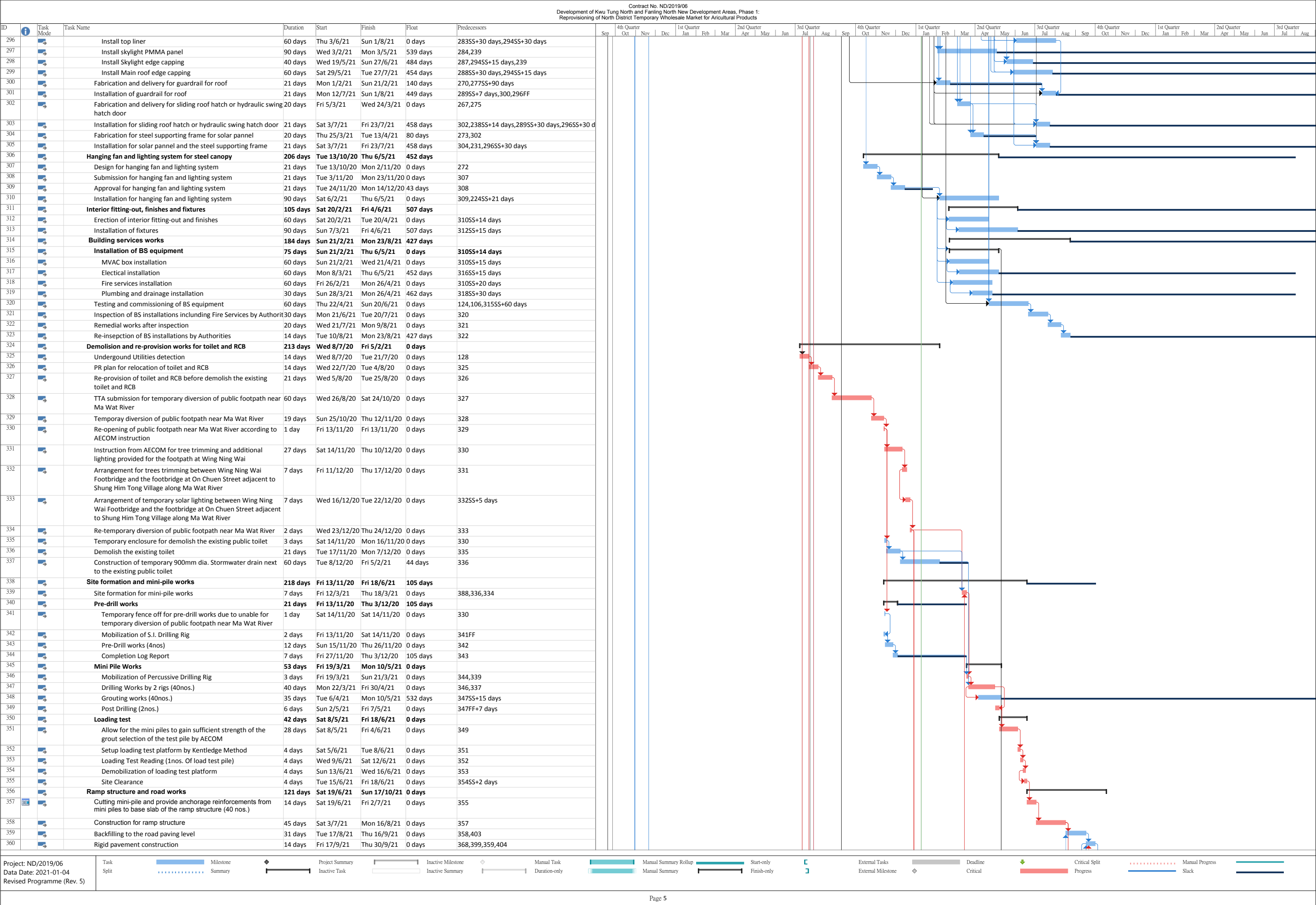


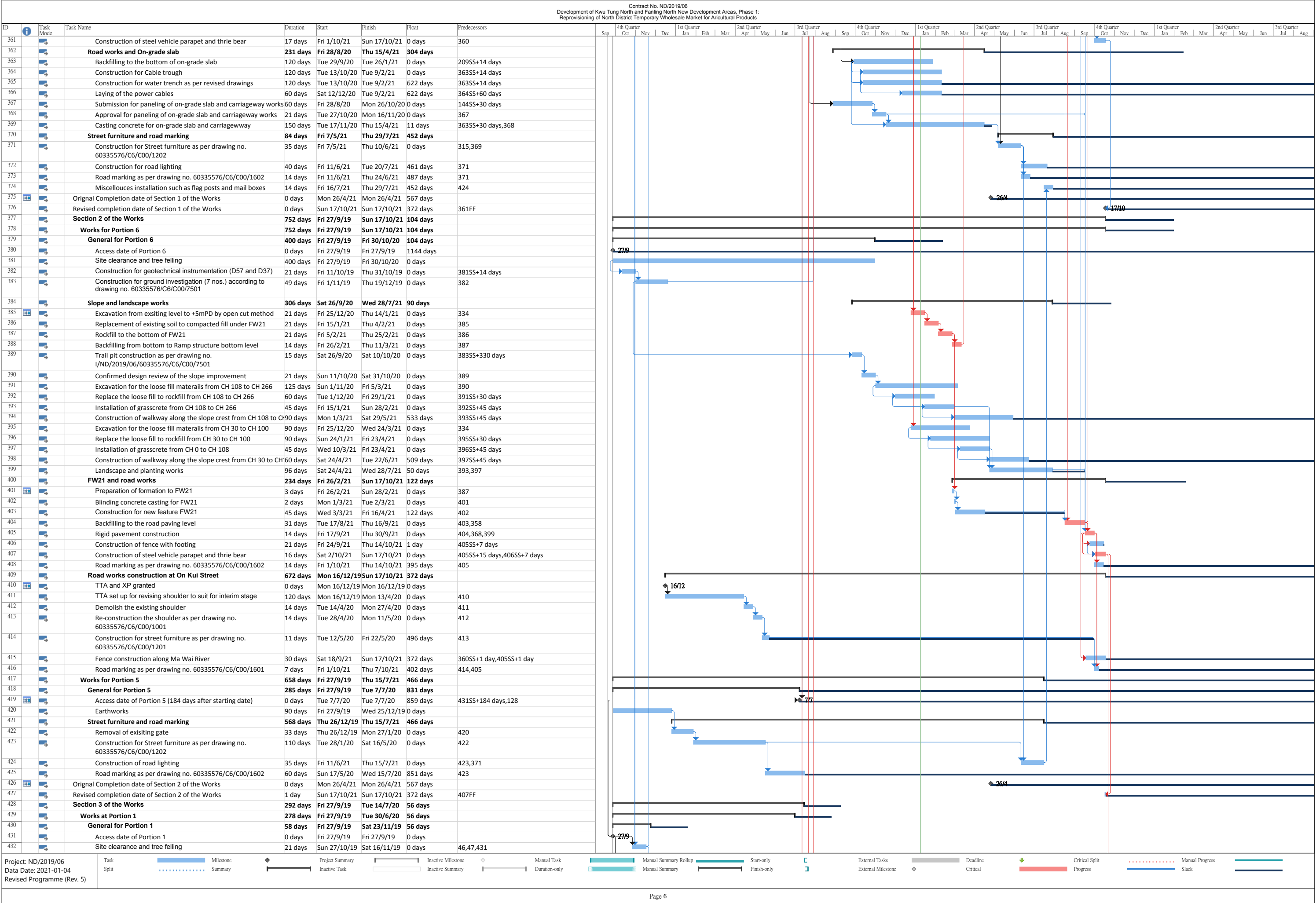
				Contract No. ND/2019/06 North and Fanning North New Development Areas, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Aricultural Products																											
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
1		ND/2019/06 Contract Period	1124 days	Fri 27/9/19	Mon 24/10/220 days																										
2		Starting Date	0 days	Fri 27/9/19	Fri 27/9/19	1144 days																									
3		Preliminaries	944 days	Fri 27/9/19	Wed 27/4/22 180 days																										
4		Project Manager and Supervisor's site accommodation	944 days	Fri 27/9/19	Wed 27/4/22 180 days																										
5		Refurnishing the existing site office and provision of furniture and equipment	30 days	Fri 27/9/19	Sat 26/10/19	1114 days																									
6		Provision of regular service to the accommodation (up to completion of DLP)	944 days	Fri 27/9/19	Wed 27/4/22	200 days																									
7		Contractor's site accommodation	59 days	Fri 27/9/19	Sun 24/11/19 1065 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	1085 days	8																								
10		Maintenance of land traffic flow	579 days	Fri 27/9/19	Tue 27/4/21 545 days																										
11		Arrangement of TMLG in different stages	210 days	Fri 27/9/19	Thu 23/4/20	934 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	565 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	565 days	14																								
16		Provision of insurances	60 days	Fri 27/9/19	Mon 25/11/19 1064 days																										
17		Third party insurance	30 days	Fri 27/9/19	Sat 26/10/19	1114 days																									
18		PII for the works	60 days	Fri 27/9/19	Mon 25/11/19	1084 days																									
19		Land transport for the use of the Project Manager and Supervisor	944 days	Fri 27/9/19	Wed 27/4/22 180 days																										
20		Provision of vehicles	30 days	Fri 27/9/19	Sat 26/10/19	0 days																									

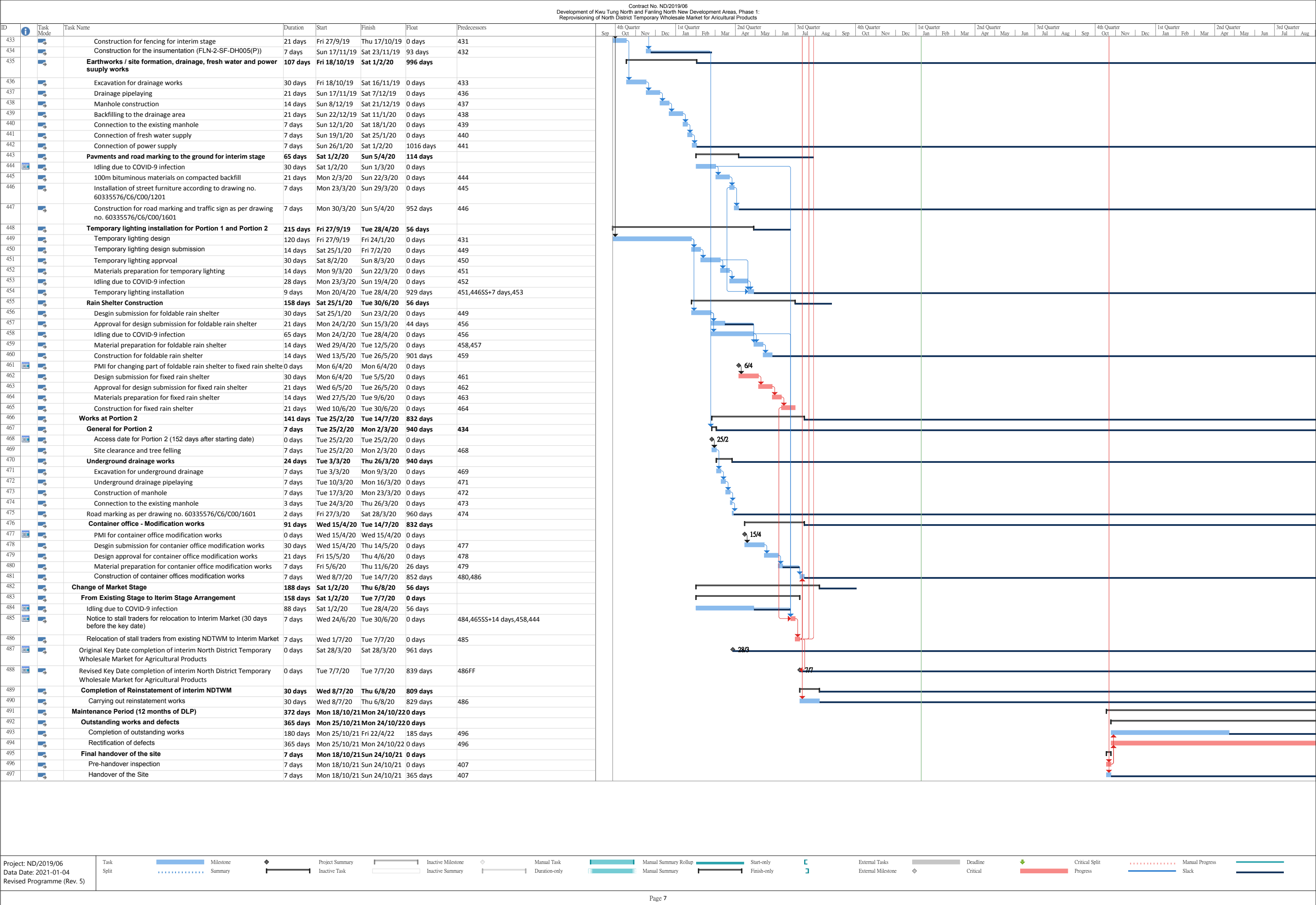


[illegible]

[illegible]







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	
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	
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-5 Action and Limit Levels for Ambient Arsenic Monitoring

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

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

Parameter	Monitoring Results	Actions
O ₂	<19% v/v	Increase underground ventilation to restore O ₂ to >19% v/v
	<18% v/v	Stop works, evacuate all personnel, prohibit entry, and increase ventilation to restore O ₂ level to >19%
CH ₄	>10% LEL	Prohibit hot works, increase ventilation to restore CH ₄ to <10% LEL
	>20% LEL	Stop works, evacuate all personnel, increase ventilation further to restore CH ₄ to <10% LEL
CO ₂	>0.5% v/v	Increase ventilation to restore C O ₂ to <0.5% v/v
	>1.5% v/v	Stop works, evacuate all personnel, increase ventilation further to restore CO ₂ to <0.5%

Table B-7 Vibration Limit for Construction Vibration Monitoring

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

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

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

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

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

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

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

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

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

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

**APPENDIX C
COPIES OF CALIBRATION
CERTIFCATES**

TEST REPORT

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

Test Report No.:	34597
Date of Issue:	2021-01-03
Date Received:	2021-01-02
Date Tested:	2021-01-02
Date Completed:	2021-01-03
Next Due Date:	2021-03-02

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.	: X23807
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-01

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.138
-------------------------	-------

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.:	34597A
Date of Issue:	2021-01-03
Date Received:	2021-01-02
Date Tested:	2021-01-02
Date Completed:	2021-01-03
Next Due Date:	2021-03-02

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

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.113
-------------------------	-------

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.:	34597B
Date of Issue:	2021-01-03
Date Received:	2021-01-02
Date Tested:	2021-01-02
Date Completed:	2021-01-03
Next Due Date:	2021-03-02

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)	1.068
-------------------------	-------

PREPARED AND CHECKED BY:

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



PATRICK TSE

General Manager

TEST REPORT

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

Test Report No.:	34596
Date of Issue:	2020-12-27
Date Received:	2020-12-24
Date Tested:	2020-12-24
Date Completed:	2020-12-27
Next Due Date:	2021-02-26

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)	1.159
-------------------------	-------

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.:	34596A
Date of Issue:	2020-12-27
Date Received:	2020-12-24
Date Tested:	2020-12-24
Date Completed:	2020-12-27
Next Due Date:	2021-02-26

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)	1.116
-------------------------	-------

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.:	34596C
Date of Issue:	2020-12-27
Date Received:	2020-12-24
Date Tested:	2020-12-24
Date Completed:	2020-12-27
Next Due Date:	2021-02-26

Page: 1 of 1

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

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

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.094
-------------------------	-------

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


PATRICK TSE
Laboratory Manager

TEST REPORT

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

Test Report No.:	34596D
Date of Issue:	2020-12-27
Date Received:	2020-12-24
Date Tested:	2020-12-24
Date Completed:	2020-12-27
Next Due Date:	2021-02-26

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)	1.125
-------------------------	-------

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.: 33250
Date of Issue: 2020-03-11
Date Received: 2020-03-10
Date Tested: 2020-03-10
Date Completed: 2020-03-11
Next Due Date: 2021-03-10

Page: 1 of 1

ATTN: Mr. W. K. Tang

Certificate of Calibration

Item for calibration:

Description : Sound Level Meter
Manufacturer : BSWA
Model No. : BSWA 308
Serial No. : 570271
Equipment No. : WN-01-01

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.: 33250A
Date of Issue: 2020-03-11
Date Received: 2020-03-10
Date Tested: 2020-03-10
Date Completed: 2020-03-11
Next Due Date: 2021-03-10

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. : 580004
Equipment No. : WN-01-02

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.: 33250C
Date of Issue: 2020-03-11
Date Received: 2020-03-10
Date Tested: 2020-03-10
Date Completed: 2020-03-11
Next Due Date: 2021-03-10

Page: 1 of 1

ATTN: Mr. W. K. Tang

Certificate of Calibration

Item for calibration:

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

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.: 33963A
Date of Issue: 2020-08-21
Date Received: 2020-08-19
Date Tested: 2020-08-19
Date Completed: 2020-08-21
Next Due Date: 2021-08-20

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. : 24791
Equipment No. : N-09-04

Test conditions:

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

Methodology:

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

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.: 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 \pm 0.1 dB
At 114 dB SPL	114.0	114.0 \pm 0.1 dB

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

Station <u>FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark</u>	File No. <u>WMA20002/20/0003 v2</u>
Date: <u>1-Dec-20</u>	Operator: <u>WK</u>
Equipment No.: <u>WA-12-20</u>	Next Due Date: <u>31-Jan-21</u>
	Serial No. <u>3223</u>

Ambient Condition			
Temperature, Ta (K)	296.5	Pressure, Pa (mmHg)	767.1

Orifice Transfer Standard Information					
Serial No.	2896	Slope, mc	0.0588	Intercept, bc	-0.02681
Last Calibration Date:	18-Feb-20	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	18-Feb-21	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	16.3	4.07	69.61	9.9	3.17
2	12.8	3.60	61.74	8.3	2.90
3	9.9	3.17	54.35	6.6	2.59
4	5.9	2.45	42.06	4.5	2.14
5	3.5	1.88	32.50	3.2	1.80

By Linear Regression of Y on X

Slope, mw = 0.0372 Intercept, bw = 0.5809

Correlation coefficient* = 0.9996

*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 = $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 4.69

Remarks: _____

Conducted by: <u>W.K. Tang</u>	Signature: <u>[Signature]</u>	Date: <u>1/12/2020</u>
Checked by: <u>KEF MAN MSL</u>	Signature: <u>[Signature]</u>	Date: <u>1-12-2020</u>

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

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

File No. WMA20002/20/0004
Operator: WK
Next Due Date: 19-Mar-21
Serial No. 3223

Ambient Condition			
Temperature, Ta (K)	295	Pressure, Pa (mmHg)	765.4

Orifice Transfer Standard Information					
Serial No.	2896	Slope, mc	0.0588	Intercept, bc	-0.02681
Last Calibration Date:	18-Feb-20	$mc \times Q_{std} + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	18-Feb-21	$Q_{std} = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	16.1	4.05	69.29	9.7	3.14
2	12.5	3.57	61.11	8.1	2.87
3	9.9	3.17	54.43	6.7	2.61
4	5.6	2.39	41.05	4.2	2.07
5	3.4	1.86	32.09	3.1	1.78

By Linear Regression of Y on X

Slope, mw = 0.0375 Intercept, bw = 0.5582
Correlation coefficient* = 0.9992

*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

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

Therefore, Set Point; W = $(mw \times Q_{std} + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 4.63

Remarks: _____

Conducted by: Wk. Tang Signature: Kiwan
Checked by: Lee Kun Hei Signature: Lee

Date: 20/1/2021
Date: 20/1/2021

High-Volume TSP Sampler

5-POINT CALIBRATION DATA SHEET

Station FLN-DMS3 - House near Tong Hang
Date: 1-Dec-20
Equipment No.: WA-12-17

File No. WMA20002/17/0003_v2
Operator: WK
Next Due Date: 31-Jan-21
Serial No. 3218

Ambient Condition			
Temperature, Ta (K)	290.3	Pressure, Pa (mmHg)	771.7

Orifice Transfer Standard Information					
Serial No.	2896	Slope, mc	0.0588	Intercept, bc	-0.02681
Last Calibration Date:	18-Feb-20	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	18-Feb-21	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X - axis	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis
1	15.8	4.06	69.47	11.7	3.49
2	12.1	3.55	60.86	9.7	3.18
3	9.6	3.16	54.25	7.3	2.76
4	6.3	2.56	44.04	5.3	2.35
5	3.3	1.85	32.00	3.5	1.91

By Linear Regression of Y on X

Slope, mw = 0.0432 Intercept, bw = 0.4884
Correlation coefficient* = 0.9961

*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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 5.27

Remarks:

Conducted by: W.K. Tang Signature: W.K. Tang
Checked by: LEE MAN Signature: Lee Man

Date: 1/12/2020
Date: 1-12-2020

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

Station KTN-DMS4A - Temporary Structure at Pak Shek Au File No. WMA20002/03/0003
Date: 10-Dec-20 Operator: WK
Equipment No.: WA-11-03 Next Due Date: 9-Feb-20
Serial No. 3225

Ambient Condition			
Temperature, Ta (K)	294	Pressure, Pa (mmHg)	766.2

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	8.89	51.17	50.07	1.42	9.4	1.99
2	6.5	6.64	44.29	43.34	1.23	8.1	1.85
3	5.6	5.72	41.14	40.26	1.14	7.2	1.74
4	3.6	3.68	33.08	32.37	0.92	6.1	1.61
5	2.2	2.25	25.96	25.40	0.72	5	1.45

By Linear Regression of Y on X

Slope, mw = 0.0218 Intercept, bw = 0.8969
Correlation coefficient* = 0.9972

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

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation	
Set Point Flow Rate., SFR	
$SFR = 1.13 \times (760/Pa) \times (Ta/298) =$	<u>39.07</u>
Sampler Well - Type Manometer Set Point, SSP	
$SSP = [(mw \times SFR + bw)^2 \times Pa] / (Ta + 30) =$	<u>7.22</u>

Remarks: _____

Conducted by: W.V. Tang Signature: [Signature] Date: 10/12/2020
Checked by: LEE MAN YEE Signature: [Signature] Date: 10-12-2020

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)	$\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)}$ (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=	$\Delta Vol / ((Pa - \Delta P) / Pstd) (Tstd / Ta)$	Va=	$\Delta Vol / ((Pa - \Delta P) / Pa)$
Qstd=	$Vstd / \Delta Time$	Qa=	$Va / \Delta Time$
For subsequent flow rate calculations:			
Qstd= $1/m \left(\left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} \right) - b \right)$		Qa= $1/m \left(\left(\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)} \right) - b \right)$	

Standard Conditions
Tstd: 298.15 °K

Pstd: 760 mm Hg

Key
ΔH: calibrator manometer reading (in H2O)

ΔP: rootsmeter manometer reading (mm Hg)

Ta: actual absolute temperature (°K)

Pa: actual barometric pressure (mm Hg)

b: intercept

m: slope

RECALIBRATION

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



Calibration Certificate

Number: CCP/80000

Customer: Hong Kong Landfill Restoration Group Limited
Contact Person: Mr. Stanley Cheng
Detector Model: RKI Eagle
Serial Number: E094106

Sensor Type	Calibration gas & concentration	Fresh air reading	Span Set to	Gas Mfg. Co. Cylinder / Lot No.
CH4	50% vol	0% vol	50% vol	SPANTECH / M70/05/2020-1 to 6
CH4	50% LEL	0% LEL	50% LEL	SPANTECH / M63/05/2020-1 to 6
O2	18% vol	20.9% vol	18% vol	SPANTECH / M63/05/2020-1 to 6
CO2	30% vol	0% vol	30% vol	SPANTECH / AG3431-7-1

Next Calibration Date: 30th July 2021

Remarks: Instrument PASSED – fit for service.

Authorized Signature



Technical Department

Date: 31st July 2020

FireMark Hong Kong Limited
Flat A, 11/F., Hop Hing Industrial Building, 704 Castle Peak Road, Lai Chi Kok,
Kowloon, Hong Kong
Tel : (852) 2751 8871 Fax : (852) 2751 8806



3728 4th Ave South
Birmingham, AL 35222-2420 USA
www.nomis.com

205-592-2488
Toll Free 800-749-2477
Fax 205-592-0213
sales@nomis.com

Certificate of Calibration

Record Number: 15027-4433

Client: Promat (HK) Ltd.

Model: SuperGraph	Gain: X2	Serial Number# : 4433
Transducer #: 4433		Microphone # : N/A
Date Calibrated: 18-Sep-2020	Next Calibration:	18-Sep-2021
Temperature: 71° F		Relative Humidity: 36%

The above equipment has been calibrated on a shake table system at the listed input level and frequencies. The results are within the International Society of Explosives Engineers (ISEE) Performance Specifications for Blasting Seismographs set forth in the 2017 edition, exceptions as noted. Accuracy of referenced equipment below is traceable to the National Institute of Standards and Technology (NIST) and are supported by a calibration system which conforms to the requirements of MIL-STD-45662A and meets ISO-9000 customer requirements .

<i>Manufacturer</i>	<i>Model</i>	<i>Serial</i>	<i>Traceability Number</i>	<i>Due Date</i>
Larcor	ST-1S	9022	20200822-9021	8/22/2021
Tektronix	TDS340A	B017920	1983196-1-TDS340A-B017920-1	1/16/2021
Larcor	ST-1C	9021	20200822-9021	8/22/2021
Fluke	87	62010903	BVL611559-62010903	2/25/2021
Tektronix	AFG3021C	C012257	2002907-1-AFG3021C-C012257-1	4/24/2021

PHASE RESPONSE TABLE

Model: SuperGraph

Record: 15027-4433

Gain: X2

Seismograph #: 4433

Transducer #: 4433

Radial	Reference	Reference					
Frequency	F	F1	F2	F3	F4*	F5*	F6*
Frequency (Hz)	30	1.60	2.03	1.22	338	266.01	444.81
Amplitude (in/s)	1	0.707	0.88	0.46	0.707	0.84	0.51
Deviation (%)	N/A	N/A	3.53%	8.00%	N/A	1.18%	2.00%
Tolerance	N/A	F1 < 2.0 Hz	F amp X 0.85 +/- 10%	F amp X 0.50 +/- 10%	F4 > 250 Hz	F amp X 0.85 +/- 10%	F amp X 0.50 +/- 10%
Pass/Fail	N/A	Pass	Pass	Pass	Pass	Pass	Pass

Transverse	Reference	Reference					
Frequency	F	F1	F2	F3	F4*	F5*	F6*
Frequency (Hz)	30	1.64	2.08	1.25	331	260.50	435.60
Amplitude (in/s)	1	0.707	0.88	0.46	0.707	0.83	0.51
Deviation (%)	N/A	N/A	3.53%	8.00%	N/A	2.35%	2.00%
Tolerance	N/A	F1 < 2.0 Hz	F amp X 0.85 +/- 10%	F amp X 0.50 +/- 10%	F4 > 250 Hz	F amp X 0.85 +/- 10%	F amp X 0.50 +/- 10%
Pass/Fail	N/A	Pass	Pass	Pass	Pass	Pass	Pass

Vertical	Reference	Reference					
Frequency	F	F1	F2	F3	F4*	F5*	F6*
Frequency (Hz)	30	1.59	2.02	1.21	338	266.01	444.81
Amplitude (in/s)	1	0.707	0.92	0.46	0.707	0.84	0.51
Deviation (%)	N/A	N/A	8.24%	8.00%	N/A	1.18%	2.00%
Tolerance	N/A	F1 < 2.0 Hz	F amp X 0.85 +/- 10%	F amp X 0.50 +/- 10%	F4 > 250 Hz	F amp X 0.85 +/- 10%	F amp X 0.50 +/- 10%
Pass/Fail	N/A	Pass	Pass	Pass	Pass	Pass	Pass

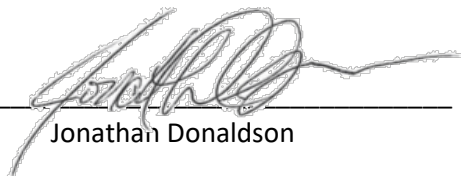
*Induced electronically

Notes

* Ground vibration sensor exception: The ground vibration sensors were electronically verified from 60 Hz to 250 Hz. A signal generator was connected to the inputs of the ground channels and the amplitude response verified from 60 Hz to 250 Hz.

The above equipment has been calibrated on a shake table system at the listed input level and frequencies. The results are within the International Society of Explosives Engineers (ISEE) Performance Specifications for Blasting Seismographs set forth in the 2017 edition, exceptions as noted.

Calibrated by:



Jonathan Donaldson

Date:

18-Sep-2020

Calibration Certificate

Amplitude Response Table

Model: SuperGraph

Record #:

15027-4433

Serial #: 4433

Transducer #: 4433

Gain X2

Microphone #: N/A Type: ___ 148dB ___ 160dB ___ 6Hz

Frequency (Hz)	Input (In/Sec)	Radial (In/Sec)	Transverse (In/Sec)	Vertical (In/Sec)	Tolerance	Pass/Fail
2 Hz	1 ips	0.87	0.86	0.92	+5% to -3dB	Pass
3 Hz	1 ips	0.99	0.99	1.02	+/-5% or .02 in/sec whichever is larger	Pass
4 Hz	1 ips	1.00	1.00	1.01	+/-5% or .02 in/sec whichever is larger	Pass
10 Hz	1 ips	1.01	1.02	0.98	+/-5% or .02 in/sec whichever is larger	Pass
30 Hz	1 ips	1.00	1.00	1.00	+/-5% or .02 in/sec whichever is larger	Pass
60 Hz	1 ips *	1.00	1.00	1.00	+/-5% or .02 in/sec whichever is larger	Pass
100 Hz	1 ips *	0.99	0.99	0.99	+/-5% or .02 in/sec whichever is larger	Pass
125 Hz	1 ips *	0.98	0.98	0.98	+/-5% or .02 in/sec whichever is larger	Pass
200 Hz	1 ips *	0.93	0.92	0.93	+5% to -3dB	Pass
250 Hz	1 ips *	0.86	0.85	0.87	+5% to -3dB	Pass

Frequency (Hz)	input (dB)	Air overpressure	Tolerance	Pass/ Fail
2 Hz	137 dB	N/A	-3 dB, +/-1 dB	N/A
3 Hz	137 dB	N/A	-1 dB, +/-1 dB	N/A
4 Hz	137 dB	N/A	+/- 1 dB	N/A
10 Hz	137 dB	N/A	+/- 1 dB	N/A
30 Hz	137 dB	N/A	+/- 1 dB	N/A
60 Hz	137 dB	N/A	+/- 1 dB	N/A
100 Hz	137 dB	N/A	+/- 1 dB	N/A
125 Hz	137 dB	N/A	+/- 1 dB	N/A
200 Hz	137 dB	N/A	+ 1 dB to -3 dB	N/A
250 Hz	137 dB	N/A	+ 1 dB to -4 dB	N/A

*Induced electronically

I certify tht the above equipment has been calibrated on a shake table system and with an acoustic calibrator at the listed input level and frequencies. The results are within the International Society of Explosives Engineers (ISEE) Performance Specifications for Blasting Seismographs set forth in the 2017 edition, exceptions as noted.

Calibrated by:



Jonathan Donaldson

18-Sep-2020

CALIBRATION CERTIFICATE

Calibration Item: Micromate System ISEE (Calibration with Geophone UM17121)
Model No.: 721A2501
Serial No.: UM17121
Calibration Date: 8 January 2021
Next Calibration Date: 8 January 2022
Method Used: In-house Method B3-001
In-house Testing Procedure No.: B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

*References are traceable to NIST or equivalent.

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

Authorized by:



(Wong, Keefe Solomon)

Date: 8 January 2021

CALIBRATION CERTIFICATE

Calibration Item: TRIAXIAL GEOPHONE (Calibration with
main unit UM17121)
Part Number: 721A2901
Serial No.: UM17121
Calibration Date: 8 January 2021
Next Calibration Date: 8 January 2022
Method Used: In-house Method B3-001
In-house Testing Procedure No.: B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

*References are traceable to NIST or equivalent.

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

Authorized by: _____

(Wong, Keefe Solomon)

Date: 8 January 2021

CALIBRATION CERTIFICATE


Calibration Item: Micromate System ISEE (Calibration with Geophone UM17124)
Model No.: 721A2501
Serial No.: UM17124
Calibration Date: 8 January 2021
Next Calibration Date: 8 January 2022
Method Used: In-house Method B3-001
In-house Testing Procedure No.: B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Brueel & Kjaer Accelerometer*	4370	30323
Brueel & Kjaer Charge Amplifier*	2647	2518810
Brueel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

*References are traceable to NIST or equivalent.

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

Authorized by: _____


(Wong, Keefe Solomon)
Date: 8 January 2021

CALIBRATION CERTIFICATE

Calibration Item: TRIAXIAL GEOPHONE (Calibration with
main unit UM17124)
Part Number: 721A2901
Serial No.: UM17124
Calibration Date: 8 January 2021
Next Calibration Date: 8 January 2022
Method Used: In-house Method B3-001
In-house Testing Procedure No.: B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Brueel & Kjaer Accelerometer*	4370	30323
Brueel & Kjaer Charge Amplifier*	2647	2518810
Brueel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

*References are traceable to NIST or equivalent.

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

Authorized by: _____



(Wong, Keefe Solomon)

Date: 8 January 2021

CALIBRATION CERTIFICATE

Calibration Item: Micromate System ISEE (Calibration with
Geophone UM17126)
Model No.: 721A2501
Serial No.: UM17126
Calibration Date: 8 January 2021
Next Calibration Date: 8 January 2022
Method Used: In-house Method B3-001
In-house Testing Procedure No.: B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

*References are traceable to NIST or equivalent.

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

Authorized by: _____



(Wong, Keefe Solomon)

Date: 8 January 2021

CALIBRATION CERTIFICATE

Calibration Item: TRIAXIAL GEOPHONE (Calibration with
main unit UM17126)
Part Number: 721A2901
Serial No.: UM17126
Calibration Date: 8 January 2021
Next Calibration Date: 8 January 2022
Method Used: In-house Method B3-001
In-house Testing Procedure No.: B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Brueel & Kjaer Accelerometer*	4370	30323
Brueel & Kjaer Charge Amplifier*	2647	2518810
Brueel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

*References are traceable to NIST or equivalent.

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

Authorized by: _____



(Wong, Keefe Solomon)

Date: 8 January 2021

**APPENDIX D
ENVIRONMENTAL MONITORING
SCHEDULES**

Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Impact Air Quality and Noise Monitoring Schedule (January 2021)

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

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

Remarks:

*Monitoring session would be conducted by portable TSP monitor.

Environmental Permit(s)	Contract No.	Air Quality Stations	Noise Stations
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	<u>1hr TSP and 24hr TSP</u> KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)	--
EP-468/2013/A	ND/2019/03		
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	<u>24hr RSP (Arsenic)</u> KTN-DMS4A - Temporary Structure at Pak Shek Au	--
EP-468/2013/A	ND/2019/03		
EP-467/2013/A EP-468/2013/A ⁽¹⁾	ND/2019/01	--	CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung
EP-468/2013/A ⁽²⁾	ND/2019/01	--	CP-KTN-NMS3 -Fung Kong Garden
EP-469/2013 ⁽³⁾	ND/2019/02	--	CP-KTN-NMS6 - Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery
EP-470/2013	ND/2019/01	--	CP-KTN-NMS5 - N/A
EP-473/2013/A ⁽⁴⁾	ND/2019/03	<u>1hr TSP and 24hr TSP</u> FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark	--
EP-473/2013/A ⁽⁵⁾	ND/2019/05	<u>1hr TSP and 24hr TSP</u> FLN-DMS3 - House near Tong Hang	--
EP-473/2013/A ⁽⁶⁾	ND/2019/05	--	CP-FLN-NMS2 - Scattered Village Houses in Tong Hang
EP-473/2013/A ⁽⁷⁾	ND/2019/03	--	CP-FLN-NMS1 - Belair Monte
EP-473/2013/A	ND/2019/05	--	
EP-475/2013/A	ND/2019/06	--	
Remarks: 1. Since the distance between monitoring station CP-KTN-NMS2 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 2. Since the distance between monitoring station CP-KTN-NMS3 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 3. Since the distance between monitoring station CP-KTN-NMS1 and site boundary of ND/2019/02 under EP-469/2013 exceeds 300m. The monitoring station is not applicable to ND/2019/02 4. Since the distance between monitoring station FLN-DMS1 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05 5. Since the distance between monitoring station FLN-DMS3 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/03 6. Since the distance between monitoring station CP-FLN-NMS2 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 7. 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 Ecological Monitoring Schedule (January 2021)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1-Jan	2-Jan
3-Jan	4-Jan	5-Jan	6-Jan	7-Jan	8-Jan	9-Jan
		Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River T1 T2 High tide: Start time: 16:00 Low tide: Start time: 10:00			Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley# T3 T5 High tide: Start time: 16:00 Low tide: Start time: 12:00	
10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	16-Jan
		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: 13:00 Low tide: Start time: 09:00	
17-Jan	18-Jan	19-Jan	20-Jan	21-Jan	22-Jan	23-Jan
	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: 09:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River T1 T2 High tide: Start time: 15:30 Low tide: Start time: 09:30				
24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	30-Jan
	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River T1 T2 High tide: Start time: 16:00 Low tide: Start time: 12:00 Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution T3, T4, T5		Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution T1, T6		Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley T3 T5 High tide: Start time: 12:00 Low tide: Start time: 08:00	
31-Jan						

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

Item	Activity	Monitoring Stations/Transects
1	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, Sheung Yue River, and Long Valley	T1. Ng Tung River T2. Ng Tung River T3. Sheung Yue River T5. Long Valley
2	Monitoring of Measures to Minimise Impacts 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 January 2021

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

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

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 (February 2021)

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

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

Remarks:

*Monitoring session would be conducted by portable TSP monitor.

Environmental Permit(s)	Contract No.	Air Quality Stations	Noise Stations
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	<u>1hr TSP and 24hr TSP</u> KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)	--
EP-468/2013/A	ND/2019/03		
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	<u>24hr RSP (Arsenic)</u> KTN-DMS4A - Temporary Structure at Pak Shek Au	--
EP-468/2013/A	ND/2019/03		
EP-467/2013/A EP-468/2013/A ⁽¹⁾	ND/2019/01	--	CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung
EP-468/2013/A ⁽²⁾	ND/2019/01	--	CP-KTN-NMS3 -Fung Kong Garden
EP-469/2013 ⁽³⁾	ND/2019/02	--	CP-KTN-NMS6 - Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery
EP-470/2013	ND/2019/01	--	CP-KTN-NMS5 - N/A
EP-473/2013/A ⁽⁴⁾	ND/2019/03	<u>1hr TSP and 24hr TSP</u> FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark	--
	ND/2019/04		--
EP-473/2013/A ⁽⁵⁾	ND/2019/05	<u>1hr TSP and 24hr TSP</u> FLN-DMS3 - House near Tong Hang	--
EP-473/2013/A ⁽⁶⁾	ND/2019/03	<u>1hr TSP and 24hr TSP</u>	--
	ND/2019/04	FLN-DMS5 - Noble Hill	--
EP-473/2013/A ⁽⁷⁾	ND/2019/05	--	CP-FLN-NMS2 - Scattered Village Houses in Tong Hang
EP-473/2013/A ⁽⁸⁾	ND/2019/03	--	CP-FLN-NMS1 - Belair Monte
EP-473/2013/A	ND/2019/04	--	
EP-473/2013/A	ND/2019/05	--	
EP-475/2013/A	ND/2019/06	--	
Remarks: 1. Since the distance between monitoring station CP-KTN-NMS2 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 2. Since the distance between monitoring station CP-KTN-NMS3 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 3. Since the distance between monitoring station CP-KTN-NMS1 and site boundary of ND/2019/02 under EP-469/2013 exceeds 300m. The monitoring station is not applicable to ND/2019/02 4. Since the distance between monitoring station FLN-DMS1 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05 5. Since the distance between monitoring station FLN-DMS3 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04 6. Since the distance between monitoring station FLN-DMS5 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05 7. Since the distance between monitoring station CP-FLN-NMS2 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04. 8. Since the distance between monitoring station CP-FLN-NMS1 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.			

Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Tentative Impact Ecological Monitoring Schedule (February 2021)

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

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

#Night-time avifauna monitoring in Long Valley

Item	Activity	Monitoring Stations/Transects
1	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, Sheung Yue River, and Long Valley	T1. Ng Tung River T2. Ng Tung River T3. Sheung Yue River T5. Long Valley
2	Monitoring of Measures to Minimise Impacts 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 Impact Water Quality Monitoring Schedule (February 2021)

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

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

Water Quality Monitoring Stations

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

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

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

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

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

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

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

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

Appendix E - 1-hour TSP Monitoring Results

Location FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
4-Jan-21	8:00	Fine	149.2
4-Jan-21	9:00	Fine	150.0
4-Jan-21	10:00	Fine	156.1
8-Jan-21	13:00	Cloudy	252.7
8-Jan-21	14:00	Cloudy	238.6
8-Jan-21	15:00	Cloudy	259.3
14-Jan-21	14:00	Sunny	156.1
14-Jan-21	15:00	Sunny	166.6
14-Jan-21	16:00	Sunny	162.7
20-Jan-21	9:00	Cloudy	94.8
20-Jan-21	10:00	Cloudy	97.7
20-Jan-21	11:00	Cloudy	100.9
26-Jan-21	9:00	Sunny	138.7
26-Jan-21	10:00	Sunny	123.0
26-Jan-21	11:00	Sunny	143.6
Average			159.3
Maximum			259.3
Minimum			94.8

Location FLN-DMS3 - House near Tong Hang			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
4-Jan-21	8:45	Fine	118.9
4-Jan-21	9:45	Fine	128.3
4-Jan-21	10:45	Fine	103.7
8-Jan-21	9:00	Cloudy	206.3
8-Jan-21	10:00	Cloudy	218.9
8-Jan-21	11:00	Cloudy	225.7
14-Jan-21	9:00	Sunny	115.4
14-Jan-21	10:00	Sunny	126.5
14-Jan-21	11:00	Sunny	109.8
20-Jan-21	13:00	Cloudy	99.1
20-Jan-21	14:00	Cloudy	93.5
20-Jan-21	15:00	Cloudy	128.1
26-Jan-21	13:30	Sunny	149.3
26-Jan-21	14:30	Sunny	125.3
26-Jan-21	15:30	Sunny	139.7
Average			139.2
Maximum			225.7
Minimum			93.5

Appendix E - 1-hour TSP Monitoring Results

Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
6-Jan-21	9:00	Fine	147.2
6-Jan-21	10:00	Fine	145.0
6-Jan-21	11:00	Fine	145.2
12-Jan-21	13:00	Sunny	121.5
12-Jan-21	14:00	Sunny	99.8
12-Jan-21	15:00	Sunny	81.3
18-Jan-21	9:00	Sunny	148.7
18-Jan-21	10:00	Sunny	142.0
18-Jan-21	11:00	Sunny	136.7
22-Jan-21	9:00	Sunny	221.8
22-Jan-21	10:00	Sunny	226.0
22-Jan-21	11:00	Sunny	215.1
28-Jan-21	8:00	Sunny	124.9
28-Jan-21	9:00	Sunny	144.6
28-Jan-21	10:00	Sunny	119.1
Average			147.9
Maximum			226.0
Minimum			81.3

Appendix E - 24-hour TSP Monitoring Results

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

Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m ³ /min.)		Av. flow (m ³ /min)	Total vol. (m ³)	Conc. (µg/m ³)
			Initial	Final		Initial	Final		Initial	Final			
2-Jan-21	Cloudy	283.5	3.5011	3.6466	0.1455	4029.1	4053.1	24.0	1.27	1.25	1.26	1815.6	80.1
7-Jan-21	Sunny	284.0	3.3300	3.5669	0.2369	4053.1	4077.1	24.0	1.25	1.27	1.26	1811.8	130.8
13-Jan-21	Sunny	280.0	3.3435	3.4496	0.1061	4077.1	4101.1	24.0	1.28	1.26	1.27	1827.1	58.1
19-Jan-21	Sunny	285.8	3.4315	3.5492	0.1177	4101.1	4125.1	24.0	1.26	1.24	1.25	1802.2	65.3
25-Jan-21	Sunny	290.4	3.4296	3.5712	0.1416	4125.1	4149.1	24.0	1.22	1.22	1.22	1763.1	80.3
29-Jan-21	Sunny	288.6	3.4908	3.6220	0.1312	4149.1	4173.1	24.0	1.23	1.24	1.23	1777.2	73.8
												Min	58.1
												Max	130.8
												Average	81.4

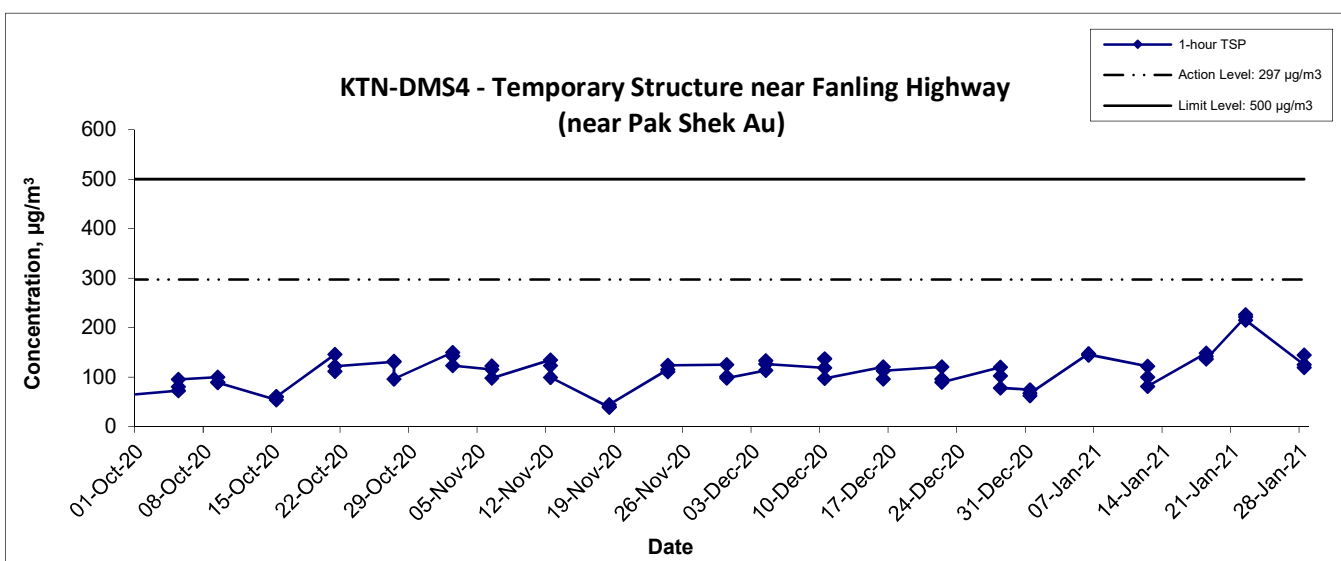
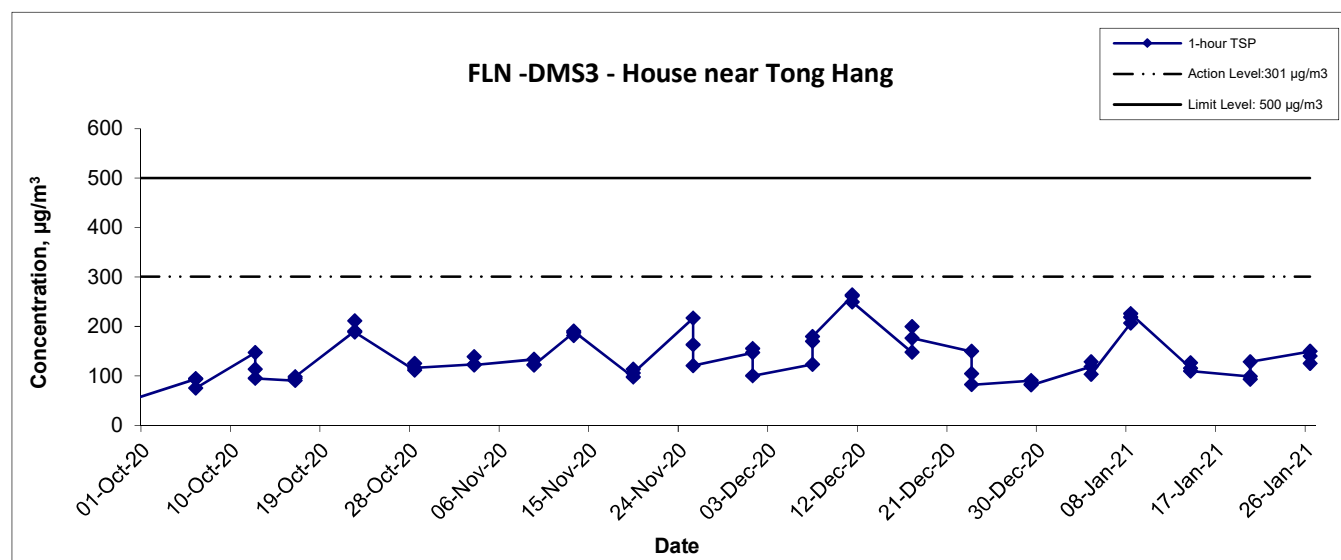
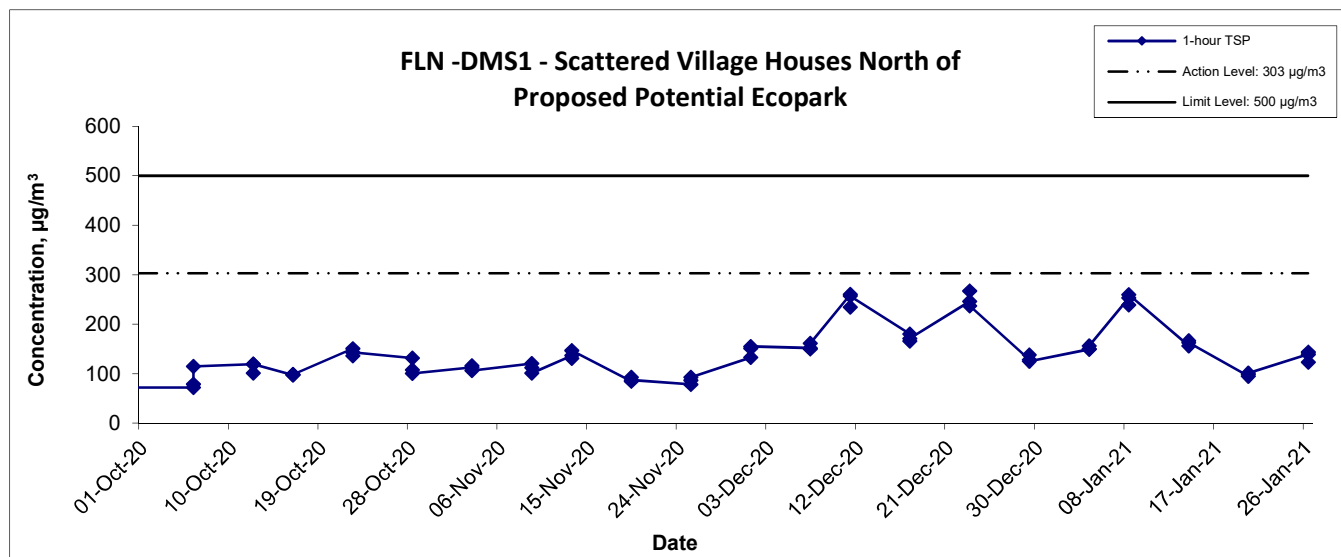
Location FLN-DMS3 - House near Tong Hang

Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m ³ /min.)		Av. flow (m ³ /min)	Total vol. (m ³)	Conc. (µg/m ³)
			Initial	Final		Initial	Final		Initial	Final			
2-Jan-21	Cloudy	283.6	3.5129	3.6313	0.1184	5071.9	5095.9	24.0	1.25	1.23	1.24	1780.9	66.5
7-Jan-21	Sunny	284.0	3.3523	3.5561	0.2038	5095.9	5119.9	24.0	1.23	1.24	1.23	1777.9	114.6
13-Jan-21	Sunny	280.2	3.2115	3.4614	0.2499	5119.9	5143.9	24.0	1.25	1.24	1.24	1791.1	139.5
19-Jan-21	Sunny	285.9	3.4758	3.6967	0.2209	5143.9	5167.9	24.0	1.24	1.22	1.23	1768.5	124.9
25-Jan-21	Sunny	290.5	3.4757	3.7006	0.2249	5167.9	5191.9	24.0	1.21	1.21	1.21	1746.6	128.8
29-Jan-21	Sunny	288.6	3.4869	3.6755	0.1886	5191.9	5215.9	24.0	1.22	1.22	1.22	1760.2	107.1
												Min	66.5
												Max	139.5
												Average	113.6

Appendix E - 24-hour TSP Monitoring Results

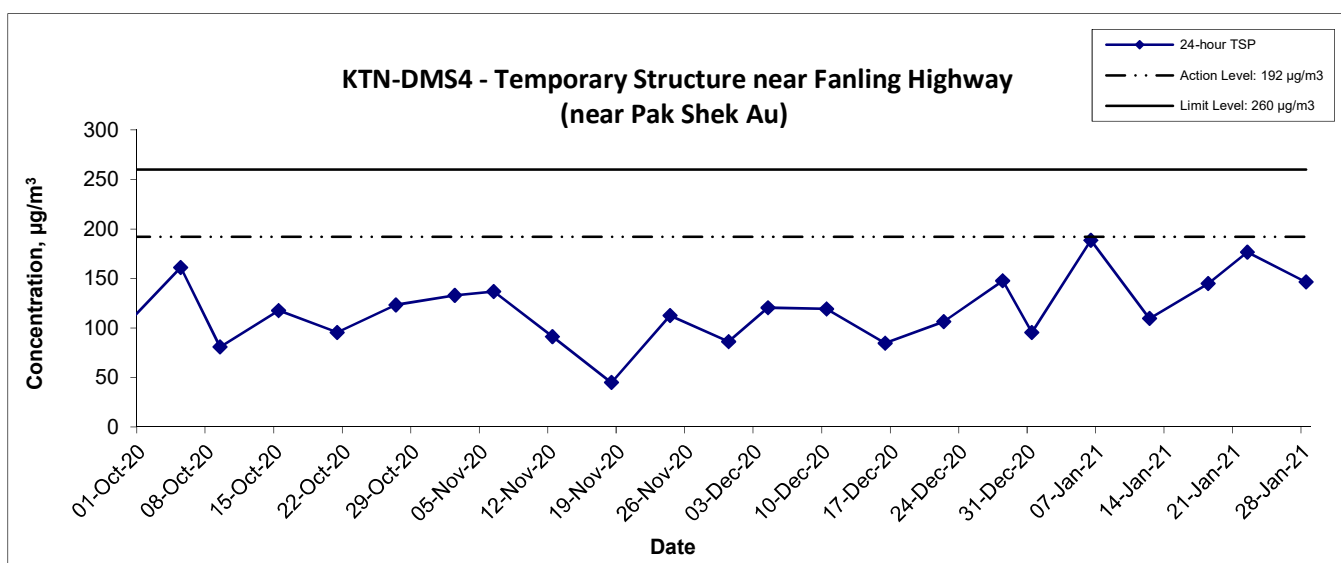
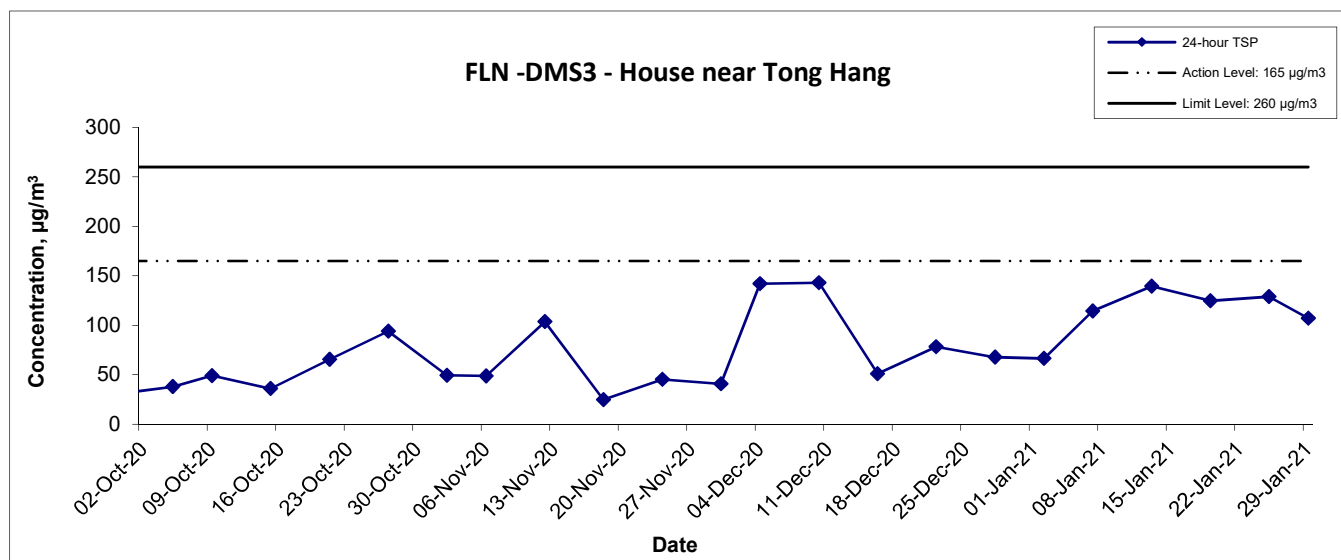
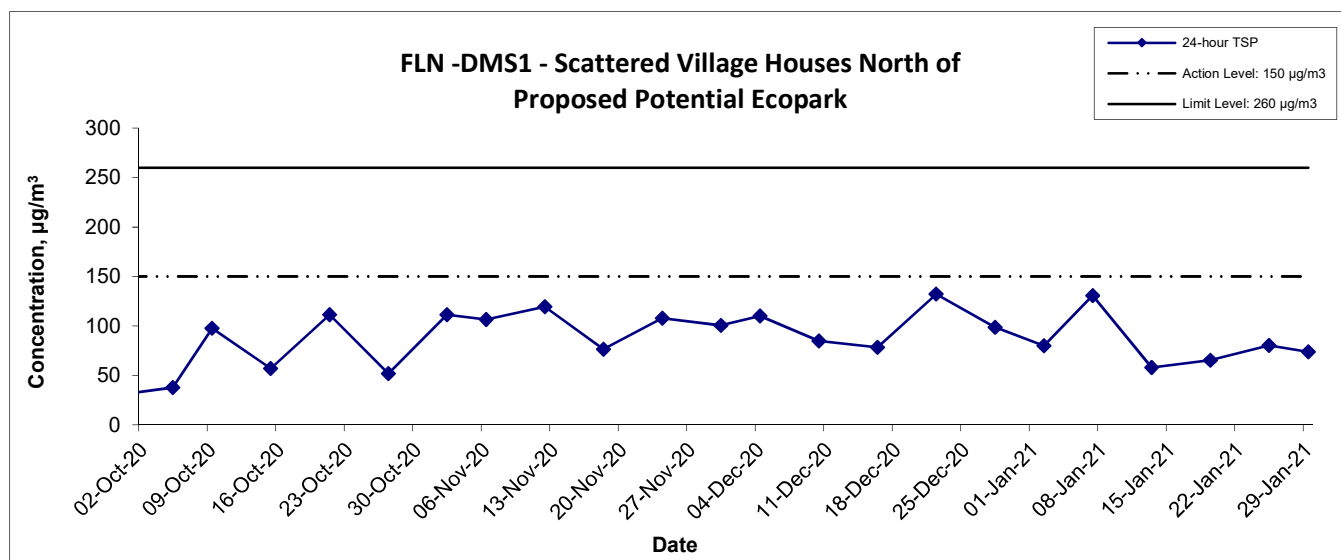
Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration ($\mu\text{g}/\text{m}^3$)
6-Jan-21	8:25	Fine	188.6
12-Jan-21	10:30	Sunny	109.4
18-Jan-21	9:00	Sunny	144.9
22-Jan-21	8:15	Sunny	176.5
28-Jan-21	8:00	Sunny	146.5
		Minimum	109.4
		Maximum	188.6
		Average	153.2


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 Kwo Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	Scale N.T.S	Project No. WMA20002	
	Date Jan 21	Appendix E	

24-hr TSP Concentration Levels

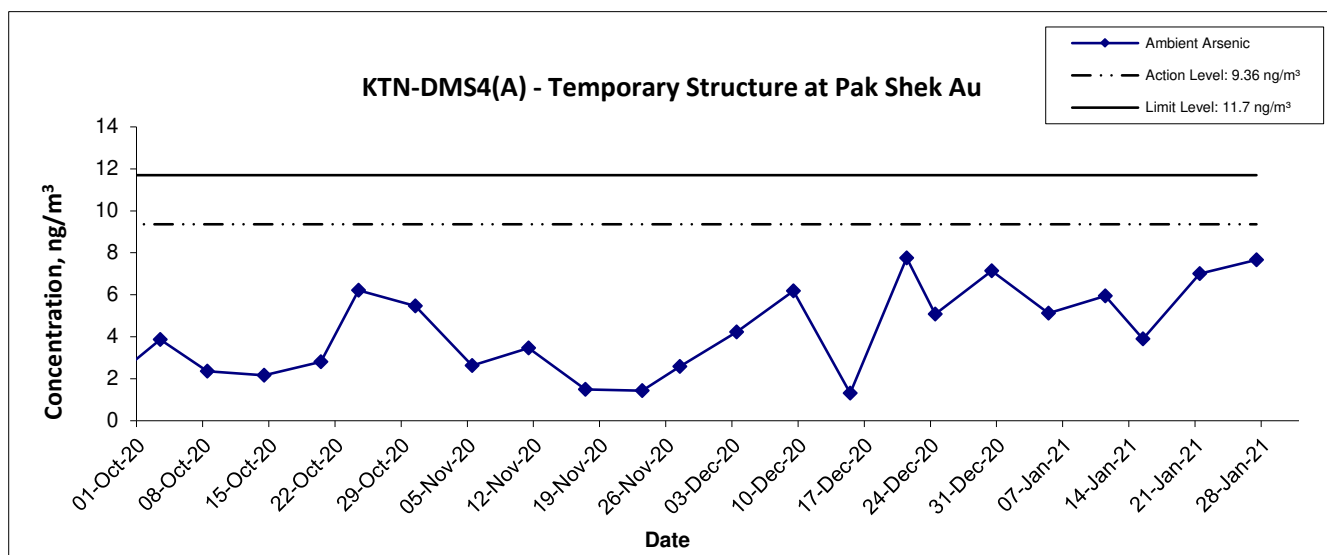



Title Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwo Tung North and Fanling North New Development Areas Graphical Presentation of 24-hour TSP Monitoring Results	Scale N.T.S	Project No. WMA20002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

Appendix E - Ambient Arsenic Monitoring Results

Location KTN-DMS4(A) - Temporary Structure at Pak Shek Au			
Date	Arsenic (μg)	Standard Volume, Vstd (m^3)	Ambient Arsenic Concentration (ng/m^3)
5-Jan-21	8.0	1562.4	5.12
11-Jan-21	9.0	1516.3	5.94
15-Jan-21	6.0	1538.5	3.90
21-Jan-21	11.0	1569.3	7.01
27-Jan-21	12.0	1565.8	7.66

Ambient Arsenic



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

Service Contract No. NDO 04/2019

Environmental Team for Environmental Monitoring and Audit Works in
Construction Phase for the First Phase Development of
Kwu Tung North and Fanling North New Development Areas

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Table I - Ambient Arsenic Concentration on 5th January 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 34577)	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 µg	1562.4 m ³	5.12 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		11 February 2021
Checked by:	Ivy Tam		11 February 2021

TEST REPORT

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

Report No.: 34577
Date of Issue: 2021-01-12
Date Received: 2021-01-06
Date Tested: 2021-01-12
Date Completed: 2021-01-12

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 34577
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	200615/042
Sample No.	34577-1
Arsenic (µg)	8

Remarks: 1) < = less than

2) Results for the test material reported as received

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	QC 34577
Date of Issue:	2021-01-12
Date Received:	2021-01-06
Date Tested:	2021-01-12
Date Completed:	2021-01-12

Page: 1 of 2

ATTN: Ms Ivy Tam

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (µg)	0.03	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	89	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 (%)	100	70-130

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 34577

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 34577
Date of Issue:	2021-01-12
Date Received:	2021-01-06
Date Tested:	2021-01-12
Date Completed:	2021-01-12
Page:	2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	83	75-125

Filter Duplicate

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

Serial dilution check

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

Remarks: 1) \leq less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 34577

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

Contract No. NDO 04/2019

Advance and First Stage Works of

Kwu Tung North and Fanling North New Development Areas

24-hr RSP Air Quality Monitoring (Project No.: WMA20002)

Field Operation Data Log Sheet

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

Sampling Date & Time: From: 5-1-2021 (0:00)

Collection Date: 6-1-2021

Operators: ka chun

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	7.22
Slope, m	0.0228		Intercept. b	0.8969
		Initial, I	Final, f	
Ambient Pressure (mmHg), Pa		768.0	768.1	
Ambient Temperature (K), Ta		290.7	289.8	
Delta (in. of Water), W		7.2	7.2	
$Y = [W \times (Ta+30)/Pa]^{1/2}$		1.734	1.731	
Standard flow, Qstd (m³/min) = (Y - b)*0.0283/m		1.087	1.083	
Elapsed Timer Indicator (Hours), T		12193.74	12217.74	
Filter Identification no.		200615/042		
Weight of Filter (g)		4.5331	4.6231	
Weight of Particulate (g)		0.0900		
Mean Standard Flow, $Qstd_{avg} = (Qstd_i + Qstd_f)/2$		1.085		
Total Time, Total Time = (Tf - Ti) x 60		1440.00		
Standard Volume, $Vstd (m^3) = Qstd_{avg} \times \text{Total Time}$		1562.4		
Particulate Concentration (µg/m³)		57.6		
Observed Construction Activities	Main Construction Site	N/A		
	Other Construction Site	N/A		

Remarks: Road traffic

Conducted by: LTB MAN HET

Signature: lei

Date: 6-1-2021

Checked by: Meibing Tang

Signature: Meibing

Date: 7/1/2021

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 11th January 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 34605)	Standard Volume, $V_{std} = Q_{std_{avg}} \times \text{Total Time}$ (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	9 μg	1516.3 m^3	5.94 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 11.7 ng/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		11 February 2021
Checked by:	Ivy Tam		11 February 2021

TEST REPORT

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

Report No.:	34605
Date of Issue:	2021-01-18
Date Received:	2021-01-13
Date Tested:	2021-01-15
Date Completed:	2021-01-18

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 34605
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	200615/043
Sample No.	34605-1
Arsenic (µg)	9

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

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
 General Manager

TEST REPORT

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

Report No.:	QC 34605
Date of Issue:	2021-01-18
Date Received:	2021-01-13
Date Tested:	2021-01-15
Date Completed:	2021-01-18

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)	0.03	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	94	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	94	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 (%)	113	70-130

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 34605

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 34605
Date of Issue:	2021-01-18
Date Received:	2021-01-13
Date Tested:	2021-01-15
Date Completed:	2021-01-18

Page: 2 of 2

QC report:

Matrix Spike

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

Filter Duplicate

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

Serial dilution check

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

Remarks: 1) \leq less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 34605

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

Contract No. NDO 04/2019

Advance and First Stage Works of

Kwu Tung North and Fanling North New Development Areas

24-hr RSP Air Quality Monitoring (Project No.: WMA20002)

Field Operation Data Log Sheet

WELLAB 匯力
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Station: KTN-DMS4A - Temporary Structure at Pak Shek AuSampling Date & Time: From: 11/1/2021 (00 : 00)Collection Date: 12/1/2021
 Operators: Tim Weather Sunny Cloudy Windy Rainy
 Wind: Strong Mild Calm

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

RSP - Respirable Suspended Particulates Sampler				
Equipment No.	WA.11.03		Set Point	7.2
Slope, m	0.0218		Intercept. b	0.8969
		Initial, I	Final, f	
Ambient Pressure (mmHg), Pa		771.3	774.1	
Ambient Temperature (K), Ta		284.2	282.0	
Delta (in. of Water), W		7.2	7.2	
$Y = [W \times (Ta+30)/Pa]^{1/2}$		1.713	1.704	
Standard flow, Qstd (m ³ /min) = (Y - b)*0.0283/m		1.059	1.047	
Elapsed Timer Indicator (Hours), T		12217.75	12241.75	
Filter Identification no.		200615 / 043		
Weight of Filter (g)		4.5361	4.6268	
Weight of Particulate (g)		0.0907		
Mean Standard Flow, Qstd _{avg} = (Qstd _i + Qstd _f)/2		1.053		
Total Time, Total Time = (Tf - Ti) x 60		1440.00		
Standard Volume, Vstd (m ³) = Qstd _{avg} x Total Time		1516.3		
Particulate Concentration (µg/m ³)		59.8		
Observed Construction Activities	Main Construction Site	N/A		
	Other Construction Site	N/A		

Remarks: N/A
 Conducted by: W.K. Tang Signature: W.K. Tang Date: 12/1/2021
 Checked by: Me. Tang Signature: Me. Tang Date: 13/1/2021

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

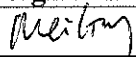

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Table I - Ambient Arsenic Concentration on 15th January 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 34615)	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	6 µg	1538.5 m ³	3.90 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		11 February 2021
Checked by:	Ivy Tam		11 February 2021

TEST REPORT

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

Report No.:	34615
Date of Issue:	2021-01-22
Date Received:	2021-01-18
Date Tested:	2021-01-20
Date Completed:	2021-01-22

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 34615
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	200615/044
Sample No.	34615-1
Arsenic (µg)	6

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

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	QC 34615
Date of Issue:	2021-01-22
Date Received:	2021-01-18
Date Tested:	2021-01-20
Date Completed:	2021-01-22

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)	0.03	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 (%)	99	70-130

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 34615

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 34615
Date of Issue:	2021-01-22
Date Received:	2021-01-18
Date Tested:	2021-01-20
Date Completed:	2021-01-22

Page: 2 of 2

QC report:

Matrix Spike

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

Filter Duplicate

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

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	109	90-110

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 34615

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

Contract No. NDO 04/2019

Advance and First Stage Works of

Kwu Tung North and Fanling North New Development Areas

24-hr RSP Air Quality Monitoring (Project No.: WMA20002)

Field Operation Data Log Sheet

WELLAB 匯力
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Station: KTN-DMS4A - Temporary Structure at Pak Shek AuSampling Date & Time: From: 15-1-2021 (00:00)Collection Date: 18-1-2021Operators: Wk
 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	7.22
Slope, m	0.0218		Intercept. b	0.8969
		Initial, I	Final, f	
Ambient Pressure (mmHg), Pa		766.1	764.4	
Ambient Temperature (K), Ta		283.8	285.0	
Delta (in. of Water), W		7.2	7.2	
$Y = [W \times (Ta+30)/Pa]^{1/2}$		1.717	1.723	
Standard flow, Qstd (m ³ /min) = (Y - b)*0.0283/m		1.065	1.072	
Elapsed Timer Indicator (Hours), T		12241.81	12265.81	
Filter Identification no.		200615/044		
Weight of Filter (g)		4.5313	4.6187	
Weight of Particulate (g)		0.0874		
Mean Standard Flow, Qstd _{avg} = (Qstd _i + Qstd _f)/2		1.068		
Total Time, Total Time = (Tf - Ti) x 60		1440.00		
Standard Volume, Vstd (m ³) = Qstd _{avg} x Total Time		1538.5		
Particulate Concentration (µg/m ³)		56.8		
Observed Construction Activities	Main Construction Site	N.A		
	Other Construction Site	N.A		

Remarks:

Road trafficConducted by: AlexSignature: 7LDate: 18-1-2021Checked by: Mei-ling ZangSignature: Mei-lingDate: 19/1/2021

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

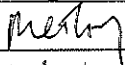

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Table I - Ambient Arsenic Concentration on 21st January 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 34649)	Standard Volume, $V_{std} = Q_{std_{avg}} \times \text{Total Time}$ (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	11 μg	1569.3 m^3	7.01 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 11.7 ng/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		11 February 2021
Checked by:	Ivy Tam		11 February 2021

TEST REPORT

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

Report No.:	34649
Date of Issue:	2021-01-28
Date Received:	2021-01-22
Date Tested:	2021-01-27
Date Completed:	2021-01-28

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 34649
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	200615/046
Sample No.	34649-1
Arsenic (µg)	11

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

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	QC 34649
Date of Issue:	2021-01-28
Date Received:	2021-01-22
Date Tested:	2021-01-27
Date Completed:	2021-01-28

ATTN: Ms Ivy Tam

Page: 1 of 2

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (µg)	0.03	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	103	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	97	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	109	70-130

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 34649

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 34649
Date of Issue:	2021-01-28
Date Received:	2021-01-22
Date Tested:	2021-01-27
Date Completed:	2021-01-28

Page: 2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	82	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	12	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 34649

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

Contract No. NDO 04/2019

Advance and First Stage Works of

Kwu Tung North and Fanling North New Development Areas

24-hr RSP Air Quality Monitoring (Project No.: WMA20002)

Field Operation Data Log Sheet

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

Sampling Date & Time: From: 21/1/2021 (0 : 00)

Collection Date: 22/1/2021

Operators:

Ka Chun

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	7.22
Slope, m	0.5228		Intercept. b	0.8969
		Initial, I	Final, f	
Ambient Pressure (mmHg), Pa		765.5	763.8	
Ambient Temperature (K), Ta		290.0	290.4	
Delta (in. of Water), W		7.2	7.2	
$Y = [W \times (Ta+30)/Pa]^{1/2}$		1.735	1.738	
Standard flow, Qstd (m ³ /min) = (Y - b)*0.0283/m		1.088	1.092	
Elapsed Timer Indicator (Hours), T		12289.81	1233.81	
Filter Identification no.		200615 / 046		
Weight of Filter (g)		4.5428	4.6792	
Weight of Particulate (g)		0.1364		
Mean Standard Flow, Qstd _{avg} = (Qstd _i + Qstd _f)/2		1.090		
Total Time, Total Time = (Tf - Ti) x 60		1440.00		
Standard Volume, Vstd (m ³) = Qstd _{avg} x Total Time		1568.3		
Particulate Concentration (µg/m ³)		86.9		
Observed Construction Activities	Main Construction Site	Excavator		
	Other Construction Site	N/A		

Remarks:

Road traffic

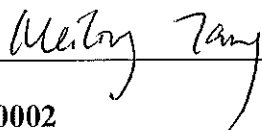
Conducted by: Ho Ka Chun

Signature:

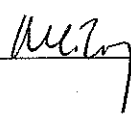


Date: 22/1/2021

Checked by:



Signature:



Date: 23/1/2021

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

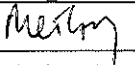

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Table I - Ambient Arsenic Concentration on 27th January 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 34670)	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	12 µg	1565.8 m ³	7.66 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		11 February 2021
Checked by:	Ivy Tam		11 February 2021

TEST REPORT

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

Report No.:	34670
Date of Issue:	2021-02-03
Date Received:	2021-01-28
Date Tested:	2021-02-01
Date Completed:	2021-02-03

ATTN: Ms Ivy Tam

Page: 1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 34670
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	200615/047
Sample No.	34670-1
Arsenic (µg)	12

Remarks: 1) < = less than

2) Results for the test material reported as received

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Report No.:	QC 34670
Date of Issue:	2021-02-03
Date Received:	2021-01-28
Date Tested:	2021-02-01
Date Completed:	2021-02-03

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)	0.03	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	107	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 (%)	99	70-130

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 34670

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

Report No.:	QC 34670
Date of Issue:	2021-02-03
Date Received:	2021-01-28
Date Tested:	2021-02-01
Date Completed:	2021-02-03

Page: 2 of 2

QC report:

Matrix Spike

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

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	8	RPD \leq 20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	108	90-110

Remarks: 1) \leq less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 34670

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

Contract No. NDO 04/2019

Advance and First Stage Works of

Kwu Tung North and Fanling North New Development Areas

24-hr RSP Air Quality Monitoring (Project No.: WMA20002)

Field Operation Data Log Sheet

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

Sampling Date & Time: From: 27 / 1 / 2021 (00 : 00)

Collection Date: 28 / 1 / 2021

Operators: Tim

Weather Sunny Cloudy Windy Rainy

Wind: Strong Mild Calm

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

RSP - Respirable Suspended Particulates Sampler				
Equipment No.	WA-11-03		Set Point	7.22
Slope, m	0.0219		Intercept. b	0.8969
		Initial, I	Final, f	
Ambient Pressure (mmHg), Pa		765.3	767.1	
Ambient Temperature (K), Ta		289.9	290.4	
Delta (in. of Water), W		7.2	7.2	
$Y = [W \times (Ta+30)/Pa]^{1/2}$		1.735	1.734	
Standard flow, Qstd (m ³ /min) = (Y - b)*0.0283/m		1.088	1.087	
Elapsed Timer Indicator (Hours), T		12313.81	12337.81	
Filter Identification no.		200 615 / 047		
Weight of Filter (g)		4.5384	4.6750	
Weight of Particulate (g)		0.1366		
Mean Standard Flow, Qstd _{avg} = (Qstd _i + Qstd _f)/2		1.087		
Total Time, Total Time = (Tf - Ti) x 60		1440.00		
Standard Volume, Vstd (m ³) = Qstd _{avg} x Total Time		1565.8		
Particulate Concentration (µg/m ³)		87.2		
Observed Construction Activities	Main Construction Site	NA		
	Other Construction Site	Excavator		

Remarks: Road traffic

Conducted by: LEE MAN HEE Signature: her Date: 28-1-2021

Checked by: Melroy Tang Signature: Melroy Date: 29/1/2021

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}
4-Jan-21	Cloudy	09:15	67.3	70.8	58.2	68.4	69.9
		09:20	67.7	71.7	57.7		
		09:25	67.3	71.1	58.2		
		09:30	67.8	71.2	58.7		
		09:35	70.7	74.2	61.9		
		09:40	68.3	72.1	59.6		
14-Jan-21	Cloudy	16:29	58.7	62.5	52.6	60.4	
		16:34	57.8	58.8	52.6		
		16:39	57.8	58.8	52.6		
		16:44	61.2	63.4	56.2		
		16:49	62.8	64.1	53.6		
		16:54	61.4	63.7	53.6		
20-Jan-21	Cloudy	14:05	68.6	71.6	62.5	69.2	
		14:10	69.1	72.3	60.1		
		14:15	69.7	73.5	60.0		
		14:20	71.0	72.3	61.5		
		14:25	68.2	71.8	60.6		
		14:30	67.4	71.0	59.2		
26-Jan-21	Sunny	17:00	64.1	64.7	63.1	65.4	
		17:05	58.7	59.3	58.3		
		17:10	68.3	69.2	67.9		
		17:15	66.6	70.2	56.4		
		17:20	64.4	67.6	57.9		
		17:25	65.1	67.8	58.2		

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}
4-Jan-21	Cloudy	10:30	60.4	62.1	56.5	64.5	59.6
		10:35	60.2	61.9	56.8		
		10:40	62.2	63.9	58.2		
		10:45	64.4	65.2	60.5		
		10:50	60.4	62.3	57.0		
		10:55	69.6	73.7	56.7		
14-Jan-21	Sunny	13:50	50.1	51.2	48.7	50.1	
		13:55	50.6	52.1	48.9		
		14:00	49.8	51.0	48.6		
		14:05	49.6	50.5	48.6		
		14:10	50.1	51.1	49.1		
		14:15	50.4	52.0	48.9		
20-Jan-21	Cloudy	15:00	59.8	62.3	52.6	57.4	
		15:05	53.8	55.3	51.7		
		15:10	52.8	54.3	50.9		
		15:15	52.5	53.8	51.0		
		15:20	58.3	59.7	56.6		
		15:25	60.3	62.4	51.9		
26-Jan-21	Sunny	16:00	63.9	68.0	57.3	64.7	
		16:05	63.4	66.7	57.5		
		16:10	65.8	68.1	57.4		
		16:15	64.9	67.6	57.3		
		16:20	65.5	68.0	57.5		
		16:25	64.4	66.6	57.2		

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}
6-Jan-21	Cloudy	09:30	48.8	51.7	42.8	55.1	58.6
		09:35	53.6	54.6	42.9		
		09:40	52.0	54.8	45.4		
		09:45	47.7	49.7	43.4		
		09:50	59.4	64.5	45.0		
		09:55	57.4	61.8	44.4		
12-Jan-21	Sunny	08:05	47.7	50.2	44.8	47.8	
		08:10	48.8	50.5	47.3		
		08:15	48.4	50.2	43.3		
		08:20	47.8	49.4	42.1		
		08:25	45.5	47.4	51.6		
		08:30	48.0	49.7	42.2		
18-Jan-21	Sunny	13:57	51.6	55.2	38.6	53.0	
		14:02	53.7	58.0	37.9		
		14:07	52.0	54.9	38.9		
		14:12	55.1	58.9	43.8		
		14:17	51.8	55.1	44.8		
		14:22	52.7	55.8	40.6		
28-Jan-21	Sunny	09:15	58.7	63.1	47.7	57.8	
		09:20	57.7	61.3	47.6		
		09:25	58.8	60.7	46.1		
		09:30	58.6	63.0	46.7		
		09:35	56.4	60.1	47.9		
		09:40	56.1	60.2	48.5		

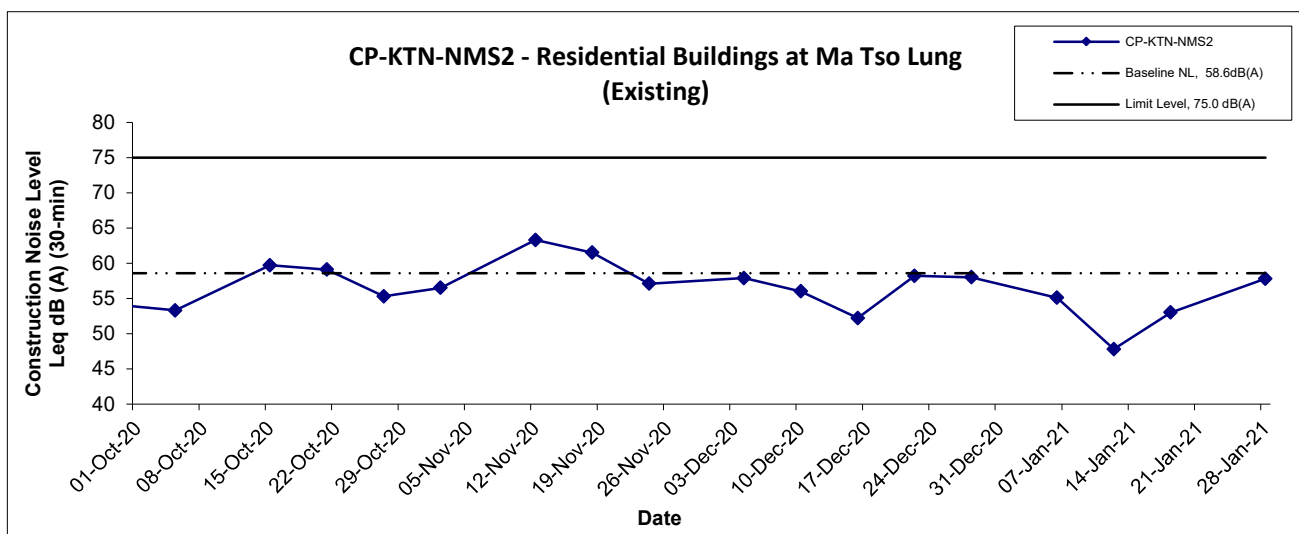
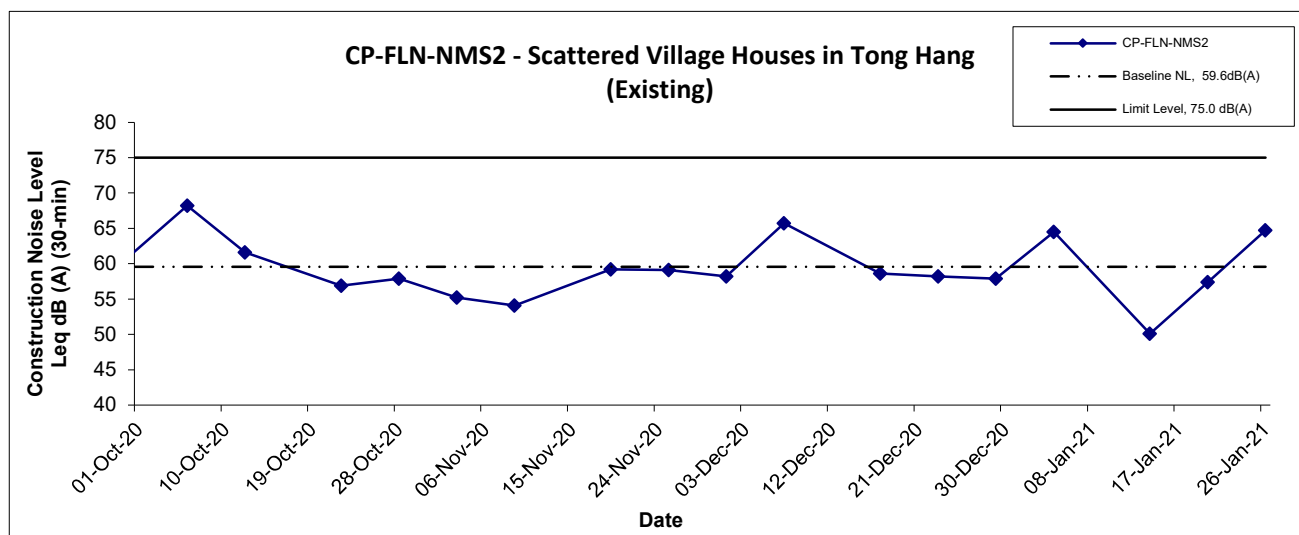
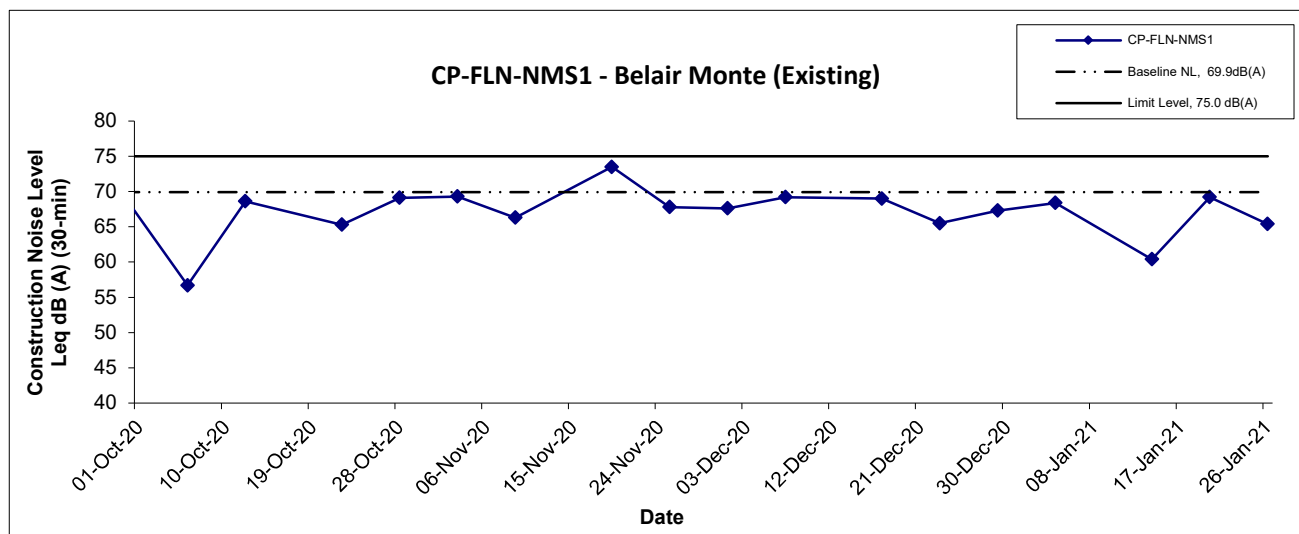
Location CP-KTN-NMS3 - Fung Kong Garden (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
6-Jan-21	Cloudy	10:05	45.5	47.7	39.9	51.9	51.6
		10:10	43.4	45.9	39.4		
		10:15	51.6	54.5	40.5		
		10:20	55.0	58.0	42.7		
		10:25	52.3	57.0	41.0		
		10:30	54.0	57.8	40.7		
12-Jan-21	Sunny	08:45	42.6	44.7	39.8	49.3	
		08:50	43.4	45.9	39.3		
		08:55	43.3	45.0	39.3		
		09:00	47.5	48.1	39.4		
		09:05	54.2	55.4	39.7		
		09:10	51.0	53.8	39.9		
18-Jan-21	Sunny	14:34	48.6	52.0	41.0	47.7	
		14:39	45.0	47.2	42.3		
		14:44	45.0	45.8	43.5		
		14:49	48.5	50.0	44.5		
		14:54	48.1	50.0	40.6		
		14:59	49.3	50.4	43.0		
28-Jan-21	Sunny	09:55	48.5	52.9	41.6	48.4	
		10:00	48.2	50.8	42.3		
		10:05	45.1	47.6	41.6		
		10:10	44.7	46.8	41.4		
		10:15	50.7	51.5	43.7		
		10:20	49.8	53.3	42.0		


Appendix F - Noise Monitoring Results

Location CP-KTN-NMS5 - N/A							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
6-Jan-21	Cloudy	11:30	54.8	56.8	46.0	53.3	57.2
		11:35	53.7	56.8	45.9		
		11:40	53.2	58.9	46.1		
		11:45	52.3	59.8	46.2		
		11:50	52.0	56.1	46.6		
		11:55	53.2	56.2	46.1		
12-Jan-21	Sunny	11:00	54.3	59.1	47.8	53.4	
		11:05	51.8	55.4	47.9		
		11:10	52.0	55.0	45.7		
		11:15	54.1	57.1	44.7		
		11:20	51.3	54.8	47.0		
		11:25	55.5	55.9	47.7		
18-Jan-21	Sunny	11:21	50.4	51.2	45.1	48.5	
		11:26	45.3	48.5	43.2		
		11:31	48.7	52.6	42.7		
		11:36	48.8	49.8	43.0		
		11:41	46.9	48.7	43.2		
		11:46	49.1	49.4	42.7		
28-Jan-21	Sunny	11:30	48.1	49.5	44.9	50.2	
		11:35	48.5	49.9	42.1		
		11:40	50.6	50.7	44.0		
		11:45	51.6	52.3	44.4		
		11:50	51.8	57.3	43.2		
		11:55	49.4	50.8	44.4		

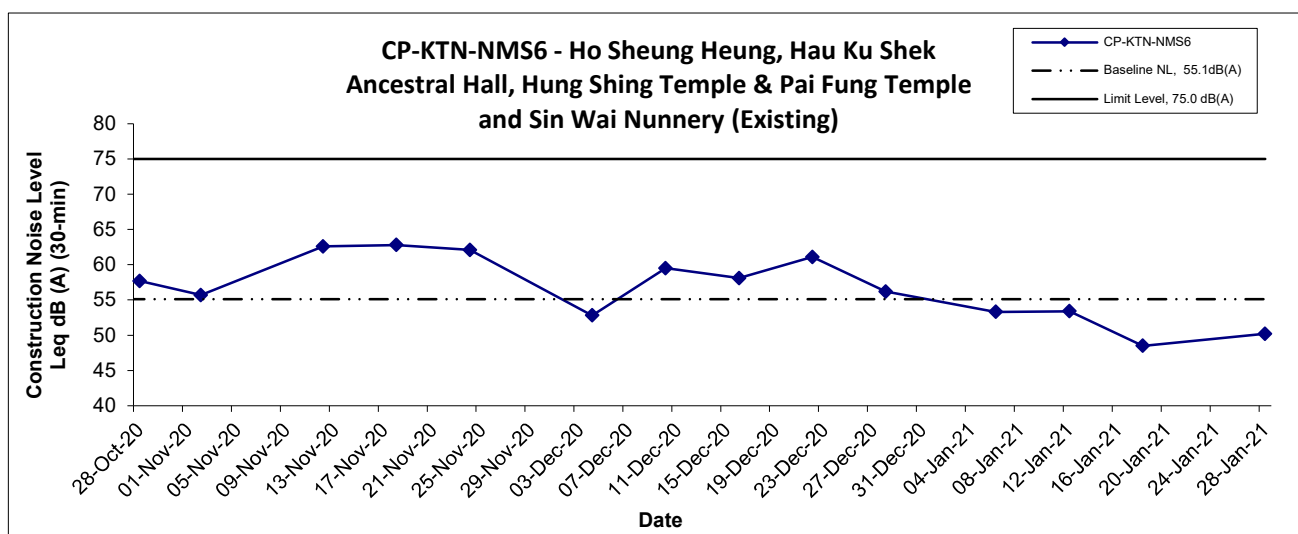
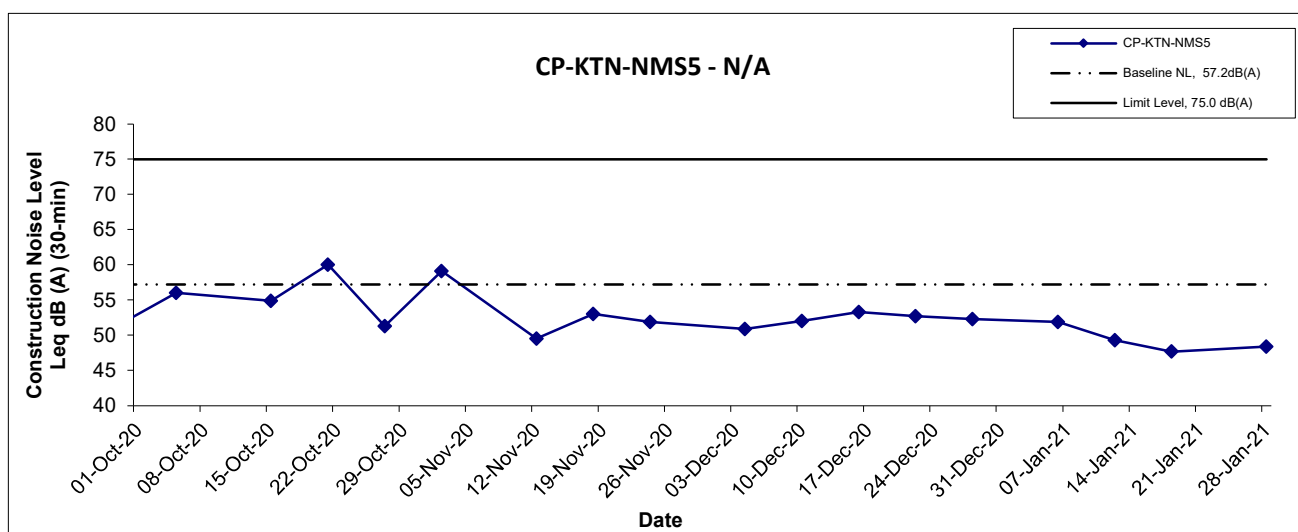
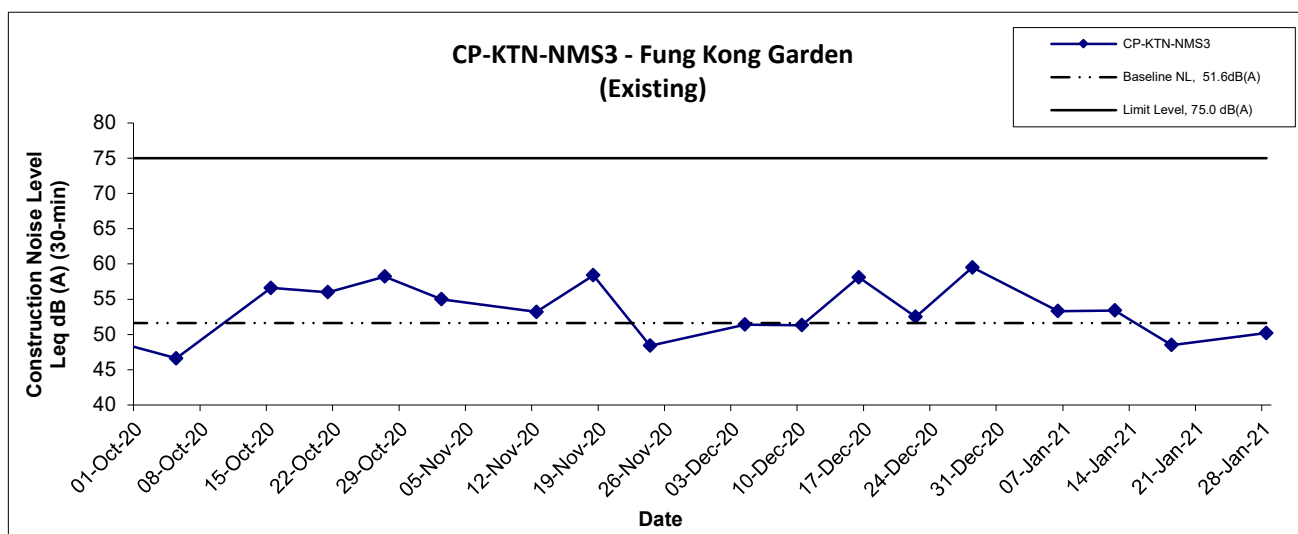
Location CP-KTN-NMS6 - Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}
6-Jan-21	Cloudy	10:45	58.7	60.9	55.0	58.6	55.1
		10:50	59.0	61.1	52.6		
		10:55	55.7	59.1	52.1		
		11:00	62.1	63.3	53.9		
		11:05	56.7	59.0	53.6		
		11:10	56.0	59.1	52.0		
12-Jan-21	Sunny	09:35	54.7	56.6	46.0	54.8	
		09:40	54.7	56.6	46.1		
		09:45	57.8	59.4	46.0		
		09:50	54.8	57.4	46.1		
		09:55	53.1	55.3	46.1		
		10:00	50.5	53.9	45.3		
18-Jan-21	Sunny	15:17	54.6	57.8	49.2	57.2	
		15:22	54.4	56.0	49.1		
		15:27	53.3	56.4	48.9		
		15:32	57.3	60.6	48.7		
		15:37	61.2	62.3	49.6		
		15:42	57.3	58.5	49.6		
28-Jan-21	Sunny	10:35	60.7	61.9	53.0	60.3	
		10:40	55.3	56.0	51.6		
		10:45	56.8	57.6	51.2		
		10:50	54.8	55.8	51.0		
		10:55	65.6	67.1	51.2		
		11:00	56.4	57.7	50.5		


Noise Levels



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

Noise Levels



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

**APPENDIX G
LANDFILL GAS MONITORING
RESULTS**

Contract No. ND/2019/01

**Development of Kwu Tung North & Fanling North New Development Area, Phase 1:
Kwu Tung North New Development Area, Phase 1: Site formation & Infrastructure works**

堆填區附近區域(Consultation Zone)每月氣體監察記錄

日期及時間	位置	氣體及安全標準	氧氣 O ₂ >19%	甲烷 CH ₄ <10% LEL	二氧化碳 CO ₂ <0.5%
29-01-2021 16:19	CZ PT 1		20.9	0	0
29-01-2021 16:11	CZ container 1		20.9	0	0
29-01-2021 16:13	CZ container 2		20.9	0	0
29-01-2021 16:15	CZ container 3		20.9	0	0
29-01-2021 16:17	CZ container 4		20.9	0	0
29-01-2021 16:09	CZ container 5		20.9	0	0

Prepared by : Roy Yuen (Safety Officer)

Date : 29-01-2021

**APPENDIX H
BUILT HERITAGE MONITORING
RESULTS**

Summary of vibration readings at FL36 (C4-SEISM-10)

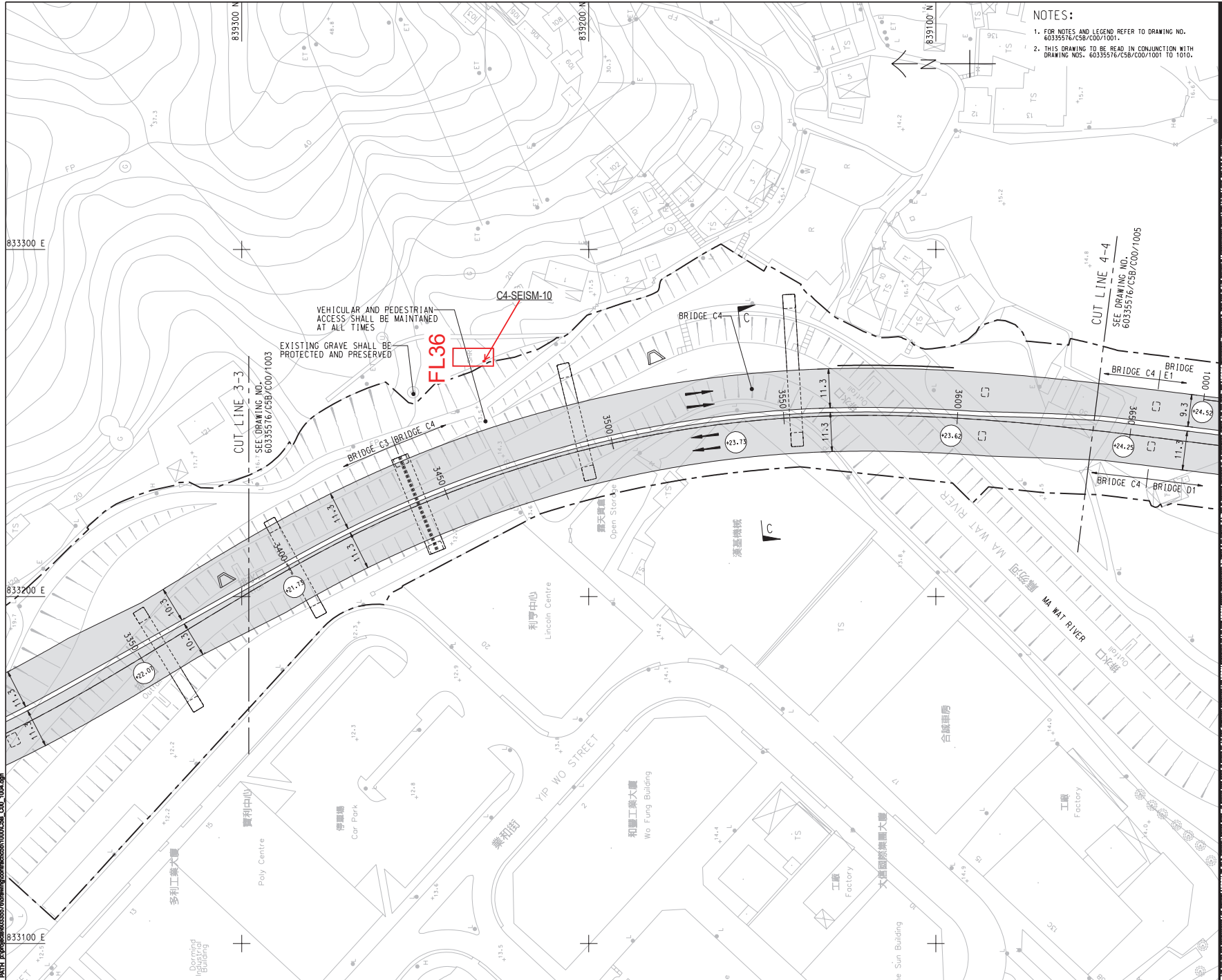


CRCC – Paul Y. Joint Venture

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

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

Date	Max. PPV recorded (mm/s)
06 Jan 2021	0.203
07 Jan 2021	0.147
08 Jan 2021	0.152
09 Jan 2021	0.140
11 Jan 2021	0.159
12 Jan 2021	0.165
13 Jan 2021	0.202
14 Jan 2021	0.185
15 Jan 2021	0.517
16 Jan 2021	0.191
18 Jan 2021	0.197
19 Jan 2021	0.192
20 Jan 2021	0.285
21 Jan 2021	0.194
22 Jan 2021	0.193
23 Jan 2021	0.797
25 Jan 2021	0.953
26 Jan 2021	0.221
27 Jan 2021	0.513
28 Jan 2021	0.173
29 Jan 2021	0.160
30 Jan 2021	0.209



NOTES:
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C5B/C00/1001.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C5B/C00/1001 TO 1010.

AECOM
PROJECT
**DEVELOPMENT OF
KWU TUNG NORTH AND
FANLING NORTH
NEW DEVELOPMENT
AREAS, PHASE 1**
CONTRACT TITLE:
**FANLING NORTH NEW
DEVELOPMENT AREA, PHASE 1:
FANLING BYPASS
EASTERN SECTION
(SHUNG HIM TONG TO
KAU LUNG HANG)**
CLIENT
CEPD 土木工程拓展署
Civil Engineering and
Development Department
CONSULTANT
AECOM
AECOM Asia Company Ltd.
www.aecom.com
SUB-CONSULTANTS
CEPD
ISSUE/REVISION

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

STATUS
KEY PLAN A1 1: 70000
SCALE A1 1: 800 METRES
DIMENSION UNIT METRES
PROJECT NO. 60335576
CONTRACT NO. ND/2019/05
SHEET TITLE GENERAL LAYOUT
SHEET NUMBER 60335576/C5B/C00/1004
SHEET 4 OF 10

APPENDIX I
ECOLOGICAL MONITORING RESULTS

Appendix IIa. Avifauna Species Recorded for Water Birds Monitoring, 5 & 8 January 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			5/1/2021, 8/1/2021					
					Weather Condition			Sunny, Cloudy					
					Tidal Condition			High					
					Tide Level (m)			1.7, 1.87					
					Start Time			16:00, 16:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Black-necked Starling	<i>Sturnus nigricollis</i>	黑領棕鳥	R		6				9			5	
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷗	PM	RC					1	20			5
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵯	R			1	1						
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	1	3	3						6
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥	R				1						
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R						3	4			
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR				2						
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷗	WV, PM				1						
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					3					1
Common Tailorbird	<i>Orthotomus sutorius</i>	長尾縫葉鶯	R			3							
Crested Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵯	R			4	3		3			1	
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R				1		22				21
Domestic Pigeon	<i>Columba livia</i>	原鴿	R						5				
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV			2			2	1		2	1
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鶯	R, PM	(LC)					7				
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV		1	3		3	6				1

Appendix IIa. Avifauna Species Recorded for Water Birds Monitoring, 5 & 8 January 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			5/1/2021, 8/1/2021						
					Weather Condition			Sunny, Cloudy						
					Tidal Condition			High						
					Tide Level (m)			1.7, 1.87						
					Start Time			16:00, 16:00						
					Abundance									
					Transect Walk									
T1	T2	T3	T5						Heard	Flight				
			WAL	DAL	SWH	P								
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC				1		1				
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R		12									
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC	2									
Greater Coucal	<i>Centropus sinensis</i>	褐翅鴉鵂	R	(VU)					2					
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	1	2	3	2					1	
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鵂	UPM, WV			1	1							
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC	1	1	2							
Japanese White-eye	<i>Zosterops japonicus</i>	暗綠繡眼鳥	R			7			2					
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	2	1	5	3	1				4	
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鶿	R	LC	1	1								
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鴝	WV, PM	LC			1							
Masked Laughing Thrush	<i>Garrulax perspicillatus</i>	黑臉噪鵂	R						5					
Olive Backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV		3				3					
Pallas's Leaf Warbler	<i>Phylloscopus proregulus</i>	黃腰柳鶯	WV		1	3								
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鵲	WV	RC				3		9				
Richard's Pipit	<i>Anthus richardi</i>	田鵲	WV, PM			1								

Appendix IIa. Avifauna Species Recorded for Water Birds Monitoring, 5 & 8 January 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			5/1/2021, 8/1/2021					
					Weather Condition			Sunny, Cloudy					
					Tidal Condition			High					
					Tide Level (m)			1.7, 1.87					
					Start Time			16:00, 16:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		5	1	2		6				5
Spotted Munia	<i>Lonchura punctulata</i>	斑文鳥	R						160				
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵯	WV				1		2				3
White Wagtail	<i>Motacilla alba</i>	白鵲鴝	PM, WV		2	4	3		13				5
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R						2				
White-headed Munia	<i>Lonchura maja</i>	白頭文鳥	R						140				
White-rumped munia	<i>Lonchura striata</i>	白腰文鳥	R						110				
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	LC				2	12		5			
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R						2				
Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	黃眉柳鶯	WV, SpM		1	2							
Total No. of Species					14	17	16	7	22	6	0	3	11
Total No. of Conservation Interest Species					6	5	5	4	4	3	0	0	4

Appendix IIa. Avifauna Species Recorded for Water Birds Monitoring, 5 & 8 January 2021, High Tide

Appendix 1: Hong Kong Species Recorded for Water Birds Monitoring, 5 to 6 January 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		5/1/2021, 8/1/2021							
					Weather Condition		Sunny, Cloudy							
					Tidal Condition		High							
					Tide Level (m)		1.7, 1.87							
					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.hkbiobiodiversity.net) Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586) (CR): Rare in China Red Data Book Status VU: Vulnerable in IUCN Red List Status (VU): Vulnerable in China Red Data Book Status 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 IIb. Avifauna Species Recorded for Water Birds Monitoring, 5 & 8 January 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			5/1/2021, 8/1/2021					
					Weather Condition			Sunny, Cloudy					
					Tidal Condition			Low					
					Tide Level (m)			0.34, 0.82					
					Start Time			10:00, 12:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Alexandrine Parakeet	<i>Psittacula eupatria</i>	亞歷山大鸚鵡	RR	NT		2							
Black-necked Starling	<i>Sturnus nigricollis</i>	黑領棕鳥	R			5	1		6			5	
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC			1	1		20			7
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵯	R			2							
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	2	4	4	1	4				4
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU									1
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R							5			
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR		1				2				
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM				1						
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					8	1	2			
Crested Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵯	R			6	2						3
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R		2	3	2	12	29				12
Domestic Pigeon	<i>Columba livia</i>	原鴿	R						2				
Daurian Redstart	<i>Phoenicurus aureus</i>	北紅尾鵯	WV			1			1				

Appendix IIb. Avifauna Species Recorded for Water Birds Monitoring, 5 & 8 January 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			5/1/2021, 8/1/2021									
					Weather Condition			Sunny, Cloudy									
					Tidal Condition			Low									
					Tide Level (m)			0.34, 0.82									
					Start Time			10:00, 12:00									
					Abundance												
					Transect Walk												
T1		T2		T3		T5											
						WAL		DAL		SWH		P		Heard		Flight	
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV				1			1	2						
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鶯	R, PM	(LC)						8							
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵪鶉	PM, WV						6	4						7	
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC					1								
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R			2				33							
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC	1												
Great Egret	<i>Ardea alba</i>	大白鶯	R, WV	PRC(RC)	1	4	2										
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鶿	UPM, WV					1			1						
Grey Heron	<i>Ardea cinerea</i>	蒼鶯	WV	PRC	2	2	1									1	
Japanese White-eye	<i>Zosterops japonicus</i>	暗綠繡眼鳥	R			5											
Little Egret	<i>Egretta garzetta</i>	小白鶯	R	PRC(RC)	1	5	4	3	2	1						9	
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鶺鴒	WV, PM	LC			2										
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R							1							
Magpie Robin	<i>Copsychus saularis</i>	鶺鴒	R			1				3					1		1
Masked Laughing Thrush	<i>Garrulax perspicillatus</i>	黑臉噪鶿	R			4											
Olive Backed Pipit	<i>Anthus hodgsoni</i>	樹鶺鴒	WV							8							

Appendix IIb. Avifauna Species Recorded for Water Birds Monitoring, 5 & 8 January 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			5/1/2021, 8/1/2021						
					Weather Condition			Sunny, Cloudy						
					Tidal Condition			Low						
					Tide Level (m)			0.34, 0.82						
					Start Time			10:00, 12:00						
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
			WAL	DAL	SWH	P	Heard	Flight						
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵯	CPM, WV	RC				2						
Richard's Pipit	<i>Anthus richardi</i>	田鵯	WV, PM					1						
Pallas's Leaf Warbler	<i>Phylloscopus proregulus</i>	黃腰柳鶯	WV		1	4								
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鵯	WV	RC					8				2	
Pintail Snipe	<i>Gallinago stenura</i>	針尾沙錐	CPM						1					
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		6	3	2		11				3	
Spotted Munia	<i>Lonchura punctulata</i>	斑文鳥	R		14				115					
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵯	WV			1	1		2					
White Wagtail	<i>Motacilla alba</i>	白鵯鵯	PM, WV		3	3	3		10				7	
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R						2					
White-headed Munia	<i>Lonchura maja</i>	白頭文鳥	R						80					
White-rumped munia	<i>Lonchura striata</i>	白腰文鳥	R						100					
Wood Sandpiper	<i>Tringa glareola</i>	林鵯	LC					5		4			1	
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R							1		1		

Appendix IIb. Avifauna Species Recorded for Water Birds Monitoring, 5 & 8 January 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		5/1/2021, 8/1/2021							
					Weather Condition		Sunny, Cloudy							
					Tidal Condition		Low							
					Tide Level (m)		0.34, 0.82							
					Start Time		10:00, 12:00							
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
			WAL	DAL	SWH	P	Heard	Flight						
Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	黃眉柳鶯	WV, SpM		1	3						1		
Total No. of Species					12	20	13	11	23	9	0	4	13	
Total No. of Conservation Interest Species					5	5	6	5	3	3	0	0	6	
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 IIc. Avifauna Species Recorded for Water Birds Monitoring, 12 & 15 January 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			12/1/2021, 15/1/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.63, 1.7					
					Start Time			11:00, 13:00					
					Abundance								
					Transect Walk								
T1	T2	T3	T5						Heard	Flight			
WAL	DAL	SWH	P										
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv			2							
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV	(RC), Cap.586		2	2						
Black-necked Starling	<i>Sturnus nigricollis</i>	黑領棕鳥	R		2	3			5			4	
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷗	PM	RC			3			20			
Chestnut Munia	<i>Lonchura atricapilla</i>	栗腹文鳥	R						2				
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵲	R						3				
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	2	5	1	4	6				
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU					1				
Common Greenshank	<i>Tringa nebularia</i>	青腳鷗	PM, WV	RC			1						
Common Kestrel	<i>Falco tinnunculus</i>	紅隼	CaM, Wv	Cap. 586			1						
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R							2			
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷗	WV, PM				1						
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					2					
Common Tailorbird	<i>Orthotomus sutorius</i>	長尾縫葉鷺	R			2	2						
Crested Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵲	R			2	3						2

Appendix IIc. Avifauna Species Recorded for Water Birds Monitoring, 12 & 15 January 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			12/1/2021, 15/1/2021						
					Weather Condition			Sunny, Sunny						
					Tidal Condition			High						
					Tide Level (m)			1.63, 1.7						
					Start Time			11:00, 13:00						
					Abundance									
					Transect Walk									
T1	T2	T3	T5											
			WAL	DAL	SWH	P	Heard	Flight						
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R				2					3		
Daurian Redstart	<i>Phoenicurus aureus</i>	北紅尾鵲	WV						1					
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV		1	1	2					3		
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)				12	9				1	
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鵲	PM, WV					5	2				2	
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC						1				
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R			7			35					
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	1	3	2						1	
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鵲	UPM, WV			1	1							
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC	1		1							
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R		1								48	
Japanese White-eye	<i>Zosterops japonicus</i>	暗綠繡眼鳥	R			2								
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	1	2	1	4	2	4	1		5	
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鴝	WV, PM	LC		1								
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R		1									
Masked Laughing Thrush	<i>Garrulax perspicillatus</i>	黑臉噪鵲	R			1								

Appendix IIc. Avifauna Species Recorded for Water Birds Monitoring, 12 & 15 January 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			12/1/2021, 15/1/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.63, 1.7					
					Start Time			11:00, 13:00					
					Abundance								
					Transect Walk								
T1	T2	T3	T5										
			WAL	DAL	SWH	P	Heard	Flight					
Olive Backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV		1								
Red-rumped Swallow	<i>Hirundo daurica</i>	金腰燕	UPM										38
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵲	CPM, WV	RC				3					
Pallas's Leaf Warbler	<i>Phylloscopus proregulus</i>	黃腰柳鶯	WV			1	3						
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鵲	WV	RC						9			
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		2		3		10				2
Spotted Munia	<i>Lonchura punctulata</i>	斑文鳥	R						230				
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵲	WV				2	2	3				
White Wagtail	<i>Motacilla alba</i>	白鵲鵲	PM, WV		4	5	9	6	5		1		8
White-headed Munia	<i>Lonchura maja</i>	白頭文鳥	R						70				
White-rumped munia	<i>Lonchura striata</i>	白腰文鳥	R						150				
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	LC			1	1	5	1	2			
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R						1				
Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	黃眉柳鶯	WV, SpM			1	1						

Appendix IIc. Avifauna Species Recorded for Water Birds Monitoring, 12 & 15 January 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		12/1/2021, 15/1/2021						
					Weather Condition		Sunny, Sunny						
					Tidal Condition		High						
					Tide Level (m)		1.63, 1.7						
					Start Time		11:00, 13:00						
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Total No. of Species					11	18	20	9	18	6	2	3	9
Total No. of Conservation Interest Species					4	5	8	4	4	4	1	0	3
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 IId. Avifauna Species Recorded for Water Birds Monitoring, 12 & 15 January 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			12/1/2021, 15/1/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.19, 0.42					
					Start Time			15:00, 9:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV	(RC), Cap.586		1							
Black-necked Starling	<i>Sturnus nigricollis</i>	黑領棕鳥	R		3				6			2	
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC					2	23			2
Chestnut Munia	<i>Lonchura atricapilla</i>	栗腹文鳥	R						9				
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵯	R										1
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	4	4		5	5				4
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU		2							
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC		1				1			
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥	R										1
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R						1				
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM			1	1						
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					1		4			3
Common Tailorbird	<i>Orthotomus sutorius</i>	長尾縫葉鶯	R				1						
Crested Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵯	R		4								
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R		1								
Domestic Pigeon	<i>Columba livia</i>	原鴿	R				12		1				

Appendix IId. Avifauna Species Recorded for Water Birds Monitoring, 12 & 15 January 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			12/1/2021, 15/1/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.19, 0.42					
					Start Time			15:00, 9:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Daurian Redstart	<i>Phoenicurus aureus</i>	北紅尾鵯	WV			2							
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV		1	2	3	1			1		
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鶯	R, PM	(LC)				17					
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵪鶉	PM, WV				9	3				2	
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC					2				
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R		4			6					
Great Egret	<i>Ardea alba</i>	大白鶯	R, WV	PRC(RC)	1	1						1	
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鶉	UPM, WV			2			1				
Grey Heron	<i>Ardea cinerea</i>	蒼鶯	WV	PRC		2	1						
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R		1							3	
Japanese White-eye	<i>Zosterops japonicus</i>	暗綠繡眼鳥	R			1							
Little Egret	<i>Egretta garzetta</i>	小白鶯	R	PRC(RC)	1	7	2	2	1		1	4	
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鴝	WV, PM	LC		1			4				
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R					1					
Magpie Robin	<i>Copsychus saularis</i>	鵲鵲	R					1					
Masked Laughing Thrush	<i>Garrulax perspicillatus</i>	黑臉噪鵲	R					8					

Appendix IId. Avifauna Species Recorded for Water Birds Monitoring, 12 & 15 January 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			12/1/2021, 15/1/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.19, 0.42					
					Start Time			15:00, 9:00					
					Abundance								
					Transect Walk								
T1	T2	T3	T5										
			WAL	DAL	SWH	P	Heard	Flight					
Olive Backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV			3		7					
Red-rumped Swallow	<i>Hirundo daurica</i>	金腰燕	UPM									24	
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵲	CPM, WV	RC			2						
Richard's Pipit	<i>Anthus richardi</i>	田鵲	WV, PM					1					
Pallas's Leaf Warbler	<i>Phylloscopus proregulus</i>	黃腰柳鶯	WV			3							
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鵲	WV	RC			1	1	5				
Plain Prinia	<i>Prinia inornata</i>	純色鷦鶯	R					1					
Sooty-headed Bulbul	<i>Pycnonotus aurigaster</i>	白喉紅臀鵲	UR					1				2	
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R			1	5		12			2	
Spotted Munia	<i>Lonchura punctulata</i>	斑文鳥	R						320				
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵲	WV				1	5					
White Wagtail	<i>Motacilla alba</i>	白鵲鵲	PM, WV			8	1	5	13			2	
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R						1				
White-headed Munia	<i>Lonchura maja</i>	白頭文鳥	R						25				
White-rumped munia	<i>Lonchura striata</i>	白腰文鳥	R						40				
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	LC			1	1	8	4	5			

Appendix IId. Avifauna Species Recorded for Water Birds Monitoring, 12 & 15 January 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		12/1/2021, 15/1/2021							
					Weather Condition		Sunny, Sunny							
					Tidal Condition		Low							
					Tide Level (m)		1.19, 0.42							
					Start Time		15:00, 9:00							
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
			WAL	DAL	SWH	P	Heard	Flight						
Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	黃眉柳鶯	WV, SpM		2									
Total No. of Species					8	16	12	10	27	8	1	2	13	
Total No. of Conservation Interest Species					3	8	2	4	5	5	1	0	4	
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 IIe. Avifauna Species Recorded for Water Birds Monitoring, 18 & 19 January 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			18/1/2021, 19/1/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.68, 1.68					
					Start Time			15:00, 15:30					
					Abundance								
					Transect Walk								
T1	T2	T3	T5										
			WAL	DAL	SWH	P	Heard	Flight					
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV	(RC), Cap.586		2							1
Black-necked Starling	<i>Sturnus nigricollis</i>	黑領棕鳥	R		3		2	2	1			3	
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC			1	4		13			1
Chestnut Munia	<i>Lonchura atricapilla</i>	栗腹文鳥	R						12				
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵲	R						2				
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	3	4		3	7	1			2
Cinereous Tit	<i>Oarus cinereus</i>	蒼背山雀	R						2				
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU		2	1						1
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			1						
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R							1			
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR						2				
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM				1						
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					3					
Common Tailorbird	<i>Orthotomus sutorius</i>	長尾縫葉鶯	R				4						
Crested Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵲	R									3	
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R						2			2	1

Appendix IIe. Avifauna Species Recorded for Water Birds Monitoring, 18 & 19 January 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			18/1/2021, 19/1/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.68, 1.68					
					Start Time			15:00, 15:30					
					Abundance								
					Transect Walk								
T1	T2	T3	T5						Heard	Flight			
			WAL	DAL	SWH	P							
Domestic Pigeon	<i>Columba livia</i>	原鴿	R					4					
Daurian Redstart	<i>Phoenicurus aureus</i>	北紅尾鵯	WV		1	1							
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV			2		5	2		1		
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)			1	7	27				
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵯鵯	PM, WV					9	5			5	
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R			4			40				
Greater Coucal	<i>Centropus sinensis</i>	褐翅鴉鵯	R	(VU)					1				
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)		3							
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鵯	UPM, WV			1	3	1					
Grey-headed Lapwing	<i>Vanellus cinereus</i>	灰頭麥雞	SWV	LC			1						
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC	2	2	5			1	1	5	
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R			2						6	
Japanese White-eye	<i>Zosterops japonicus</i>	暗綠繡眼鳥	R			1							
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	1	3	8	3	1	5	1	2	
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鶿	R	LC	4								
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鵯	WV, PM	LC				4					

Appendix IIe. Avifauna Species Recorded for Water Birds Monitoring, 18 & 19 January 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			18/1/2021, 19/1/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.68, 1.68					
					Start Time			15:00, 15:30					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R				2		1				
Magpie Robin	<i>Copsychus saularis</i>	鵲鴝	R						1			2	2
Masked Laughing Thrush	<i>Garrulax perspicillatus</i>	黑臉噪鵲	R									4	
Olive Backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV				3		2				
Red-rumped Swallow	<i>Hirundo daurica</i>	金腰燕	UPM										3
Richard's Pipit	<i>Anthus richardi</i>	田鵲	WV, PM						1				
Pallas's Leaf Warbler	<i>Phylloscopus proregulus</i>	黃腰柳鶯	WV		2	1	5						1
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC						4			
Plain Prinia	<i>Prinia inornata</i>	純色鷦鶯	R							1			
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		2		4		14			1	4
Spotted Munia	<i>Lonchura punctulata</i>	斑文鳥	R				6	6	170				
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵲	WV				2	1	2	1			
White Wagtail	<i>Motacilla alba</i>	白鵲鵲	PM, WV		3	10	8	9	15	1			1
White-headed Munia	<i>Lonchura maja</i>	白頭文鳥	R						7				
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R				1						

Appendix IIe. Avifauna Species Recorded for Water Birds Monitoring, 18 & 19 January 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			18/1/2021, 19/1/2021						
					Weather Condition			Sunny, Sunny						
					Tidal Condition			High						
					Tide Level (m)			1.68, 1.68						
					Start Time			15:00, 15:30						
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
			WAL	DAL	SWH	P	Heard	Flight						
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	LC		1	2	4							
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R		1	3		1	1					
Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	黃眉柳鶯	WV, SpM		4	1								
Total No. of Species					8	16	24	13	23	11	2	7	14	
Total No. of Conservation Interest Species					4	6	7	5	4	5	2	0	6	

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 II f. Avifauna Species Recorded for Water Birds Monitoring, 18 & 19 January 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			18/1/2021, 19/1/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			0.36, 0.51					
					Start Time			9:00, 9:30					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV	(RC), Cap.586			1						
Black-necked Starling	<i>Sturnus nigricollis</i>	黑領棕鳥	R				3		7			8	
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷗	PM	RC			2	5		26			1
Chestnut Munia	<i>Lonchura atricapilla</i>	栗腹文鳥	R						2				
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵲	R				1		1				
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	2	6	1	2	4	3			4
Common Greenshank	<i>Tringa nebularia</i>	青腳鷗	PM, WV	RC			1						
Common Koel	<i>Eudynamys scolopacea</i>	噪鵲	R						1				
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R							2			
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷗	WV, PM			3	2						
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					1	1	1			
Common Tailorbird	<i>Orthotomus sutorius</i>	長尾縫葉鶯	R						1				
Crested Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵲	R			2			4				
Domestic Pigeon	<i>Columba livia</i>	原鴿	R						4				
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV			2	3	1	3			1	
Eastern Buzzard	<i>Buteo japonicus</i>	普通鵟	WV	Cap.586									1

Appendix II f. Avifauna Species Recorded for Water Birds Monitoring, 18 & 19 January 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			18/1/2021, 19/1/2021												
					Weather Condition			Sunny, Sunny												
					Tidal Condition			Low												
					Tide Level (m)			0.36, 0.51												
					Start Time			9:00, 9:30												
					Abundance															
					Transect Walk															
T1			T2			T3			T5											
									WAL		DAL		SWH		P		Heard		Flight	
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)					5	19										5
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV		1	1			2	1										
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R							120										
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC	1															
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	1	4	3	1												
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鵲	UPM, WV			1	5	1												
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC	1	3	1		1											1
Hair-crested Drongo	<i>Dicrurus hottentottus</i>	髮冠卷尾	PM, SV		2															
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R																	22
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	1	5	6	5	1	2	1									3
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鴝	WV, PM	LC			3	3	5											5
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R				1		1											
Magpie Robin	<i>Copsychus saularis</i>	鵲鴝	R			1			4											
Masked Laughing Thrush	<i>Garrulax perspicillatus</i>	黑臉噪鵲	R						3											
Olive Backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV			5	4		2											

Appendix II f. Avifauna Species Recorded for Water Birds Monitoring, 18 & 19 January 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			18/1/2021, 19/1/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			0.36, 0.51					
					Start Time			9:00, 9:30					
					Abundance								
					Transect Walk								
T1	T2	T3	T5										
			WAL	DAL	SWH	P	Heard	Flight					
Red-rumped Swallow	<i>Hirundo daurica</i>	金腰燕	UPM										30
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵯	CPM, WV	RC					2				
Richard's Pipit	<i>Anthus richardi</i>	田鵯	WV, PM					2	1				
Pallas's Leaf Warbler	<i>Phylloscopus proregulus</i>	黃腰柳鶯	WV				4						
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC						4			
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		3	1	1		4			1	4
Spotted Munia	<i>Lonchura punctulata</i>	斑文鳥	R				18	58	58				
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵯	WV				2		6	1			
White Wagtail	<i>Motacilla alba</i>	白鵲鵯	PM, WV		1	4	14	13	21				2
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R					1					
White-headed Munia	<i>Lonchura maja</i>	白頭文鳥	R					1	8				
Wood Sandpiper	<i>Tringa glareola</i>	林鵯	LC				3	6	1	5			
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R			2	1					1	
Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	黃眉柳鶯	WV, SpM			1	1						
Zitting Cisticola	<i>Cisticola juncidis</i>	棕扇尾鶯	PM, WV	LC				1					

Appendix II f. Avifauna Species Recorded for Water Birds Monitoring, 18 & 19 January 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		18/1/2021, 19/1/2021							
					Weather Condition		Sunny, Sunny							
					Tidal Condition		Low							
					Tide Level (m)		0.36, 0.51							
					Start Time		9:00, 9:30							
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
			WAL	DAL	SWH	P	Heard	Flight						
Total No. of Species					9	15	23	17	28	8	1	4	11	
Total No. of Conservation Interest Species					5	4	8	7	6	4	1	0	7	
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 IIg. Avifauna Species Recorded for Water Birds Monitoring, 25 & 29 January 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			25/1/2021, 29/1/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.62, 1.65					
					Start Time			16:00, 12:00					
					Abundance								
					Transect Walk								
T1	T2	T3	T5						Heard	Flight			
WAL	DAL	SWH	P										
Black-necked Starling	<i>Sturnus nigricollis</i>	黑領棕鳥	R			2						5	1
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC			1			20			
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	2	3	2	10	8	3			3
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R							2			
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR						1				
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM							1			
Common Tailorbird	<i>Orthotomus sutorius</i>	長尾縫葉鶯	R				2						
Crested Bulbul	<i>Pycnonotus jocosus</i>	紅耳鶇	R		2								2
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R		7								
Domestic Pigeon	<i>Columba livia</i>	原鴿	R			2							
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV				1		1	1		2	
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鶯	R, PM	(LC)				37		2			
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV					14	3				
Great Egret	<i>Ardea alba</i>	大白鶯	R, WV	PRC(RC)		4	1						
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷸	UPM, WV				2						
Grey Heron	<i>Ardea cinerea</i>	蒼鶯	WV	PRC			3						

Appendix IIg. Avifauna Species Recorded for Water Birds Monitoring, 25 & 29 January 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			25/1/2021, 29/1/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.62, 1.65					
					Start Time			16:00, 12:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	2	7	3	1		1			2
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鴝	WV, PM	LC			1			7			
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R				1		1				
Magpie Robin	<i>Copsychus saularis</i>	鵲鵯	R					1					
Masked Laughing Thrush	<i>Garrulax perspicillatus</i>	黑臉噪鵲	R						7				
Olive Backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV				3						
Pallas's Leaf Warbler	<i>Phylloscopus proregulus</i>	黃腰柳鶯	WV		3	3	2						
Plain Prinia	<i>Prinia inornata</i>	純色鷦鶯	R							1			
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R			2			4		2	1	
Spotted Munia	<i>Lonchura punctulata</i>	斑文鳥	R						25				
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵲	WV				3						
White Wagtail	<i>Motacilla alba</i>	白鵲鵯	PM, WV		1	1	6	3	5				
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R						1				
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	LC				1			4			
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R				1			3		2	

Appendix IIg. Avifauna Species Recorded for Water Birds Monitoring, 25 & 29 January 2021, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		25/1/2021, 29/1/2021						
					Weather Condition		Sunny, Sunny						
					Tidal Condition		High						
					Tide Level (m)		1.62, 1.65						
					Start Time		16:00, 12:00						
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Total No. of Species					6	8	16	6	10	11	1	4	4
Total No. of Conservation Interest Species					2	3	6	3	1	5	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 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 IIh. Avifauna Species Recorded for Water Birds Monitoring, 25 & 29 January 2021, Low Tide

Appendix III: Wetland Species Recorded for Water Birds Monitoring, 10 to 19 January 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			25/1/2021, 29/1/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.29, 0.38					
					Start Time			12:00, 8:00					
					Abundance								
					Transect Walk								
T1	T2	T3	T5						Heard	Flight			
WAL	DAL	SWH	P										
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV	(RC), Cap.586									2
Black-necked Starling	<i>Sturnus nigricollis</i>	黑領棕鳥	R		2			1				2	
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC				2	1	27			1
Chestnut Munia	<i>Lonchura atricapilla</i>	栗腹文鳥	R						3				
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵯	R						1				
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)	3	4	2	5	10	3			2
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU		4							
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC			1						
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R							2			
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM			2	1						
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM					4		1			
Common Tailorbird	<i>Orthotomus sutorius</i>	長尾縫葉鶯	R				2		3				
Crested Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵯	R			3	1						2
Crested Goshawk	<i>Accipiter trivirgatus</i>	鳳頭鷹	UR	Cap.586, (CR)	1								
Daurian Redstart	<i>Phoenicurus aureoreus</i>	北紅尾鵯	WV						1				
Domestic Pigeon	<i>Columba livia</i>	原鴿	R				4		2				2

Appendix IIh. Avifauna Species Recorded for Water Birds Monitoring, 25 & 29 January 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			25/1/2021, 29/1/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.29, 0.38					
					Start Time			12:00, 8:00					
					Abundance								
					Transect Walk								
T1	T2	T3	T5						Heard	Flight			
WAL	DAL	SWH	P										
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV				2		1			2	
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)					11				10
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵲鴝	PM, WV					2	4				1
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R						3	3			13
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)		3	4						
Greater Coucal	<i>Centropus sinensis</i>	褐翅鴉鵂	R	(VU)			1						
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鵲	UPM, WV		1		5						
Grey-headed Lapwing	<i>Vanellus cinereus</i>	灰頭麥雞	SWV	LC			3						
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC			4						
Grey Wagtail	<i>Motacilla cinerea</i>	灰鵲鴝	WV				1						
Little Bunting	<i>Emberiza pusilla</i>	小鵲	CPM, WV				1						
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)	2	5	6		7	1	1		
Little Grebe	<i>Tachybaptus ruficollis</i>	小鷺鷥	R	LC		3							
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鴝	WV, PM	LC			5	3					
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R				1						
Magpie	<i>Pica pica</i>	喜鵲	R				3						

Appendix IIh. Avifauna Species Recorded for Water Birds Monitoring, 25 & 29 January 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			25/1/2021, 29/1/2021					
					Weather Condition			Sunny, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			1.29, 0.38					
					Start Time			12:00, 8:00					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
			WAL	DAL	SWH	P	Heard	Flight					
Magpie Robin	<i>Copsychus saularis</i>	鵲鵯	R		1			3					
Masked Laughing Thrush	<i>Garrulax perspicillatus</i>	黑臉噪鵯	R				6	8					
Olive Backed Pipit	<i>Anthus hodgsoni</i>	樹鵯	WV			3	2	5				1	
Pallas's Leaf Warbler	<i>Phylloscopus proregulus</i>	黃腰柳鶯	WV		2	6					1		
Plain Prinia	<i>Prinia inornata</i>	純色鷓鴣	R					1	1		1		
Red-rumped Swallow	<i>Hirundo daurica</i>	金腰燕	UPM									1	
Richard's Pipit	<i>Anthus richardi</i>	田鵯	WV, PM					2					
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R		1		5		7		4		
Spotted Munia	<i>Lonchura punctulata</i>	斑文鳥	R					77					
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵯	WV			4	1	3					
White Wagtail	<i>Motacilla alba</i>	白鵲鵯	PM, WV		3	3	7	5	13	1		3	
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R			3							
White Headed Munia	<i>Lonchura maja</i>	白頭文鳥	R					2					
Wood Sandpiper	<i>Tringa glareola</i>	林鵯	LC			3			9				
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷓鴣	R			1		1			3		
Zitting Cisticola	<i>Cisticola juncidis</i>	棕扇尾鶯	PM, WV	LC			1						

Appendix I1h. Avifauna Species Recorded for Water Birds Monitoring, 25 & 29 January 2021, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		25/1/2021, 29/1/2021							
					Weather Condition		Sunny, Sunny							
					Tidal Condition		Low							
					Tide Level (m)		1.29, 0.38							
					Start Time		12:00, 8:00							
					Abundance									
					Transect Walk									
					T1	T2	T3	T5						
			WAL	DAL	SWH	P	Heard	Flight						
Total No. of Species					7	10	27	10	23	9	1	6	11	
Total No. of Conservation Interest Species					3	5	9	3	4	3	1	0	4	
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 IIi. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 8 January 2021, T5

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 8/1/2021					
					Start Time: 17:55					
					Abundance					
					WAL	DAL	SWH	P	Heard	Flight
Black-necked Starling	<i>Sturnus nigricollis</i>	黑領棕鳥	R			30			10	
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC			21			
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)						1
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR			12				
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM		3		8			
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R			40				
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	RC			2			
Greater Painted-snipe	<i>Rostratula benghalensis</i>	彩鷸	R, PM, WV	LC			1			
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC				1		1
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)						1
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鸕	WV, PM	LC			1			
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC			8			
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R				1	2		
Wood Sandpiper	<i>Tringa glareola</i>	林鷸	LC				42			
Total No. of Species					1	3	8	2	1	3
Total No. of Conservation Interest Species					0	0	5	1	0	3

Appendix IIi. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 8 January 2021, T5

Appendix 1: Wetland Species Recorded for Water Birds Monitoring, Night Survey, 8 January 2021, 18

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 8/1/2021					
					Start Time: 17:55					
					Abundance					
					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 IIj. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 12 January 2021, T5

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 12/1/2021					
					Start Time: 18:00					
					Abundance					
					WAL	DAL	SWH	P	Heard	Flight
Black-necked Starling	<i>Sturnus nigricollis</i>	黑領棕鳥	R			20			20	
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC			25			
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)		1				
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR			8				
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM		3		5			
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R			30			20	
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)	1					2
Greater Painted-snipe	<i>Rostratula benghalensis</i>	彩鷸	R, PM, WV	LC	1					
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	PRC						1
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)						3
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鷸	WV	RC			7			
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R			1				
Wood Sandpiper	<i>Tringa glareola</i>	林鷸	LC		4		15			
Total No. of Species					4	5	4	0	2	3
Total No. of Conservation Interest Species					2	1	2	0	0	3

Appendix IIj. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 12 January 2021, T5

Appendix 1: Wetland Species Recorded for Water Birds Monitoring, Night Survey, 12 January 2021, 18										
Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 12/1/2021					
					Start Time: 18:00					
					Abundance					
					WAL	DAL	SWH	P	Heard	Flight
<p>Note:</p> <p>R – Resident; RR - Rare resident, WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant</p> <p>Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)</p> <p>Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance</p> <p>Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)</p> <p>(CR): Rare in China Red Data Book Status</p> <p>VU: Vulnerable in IUCN Red List Status</p> <p>(VU): Vulnerable in China Red Data Book Status</p> <p>NT: Near Threatened in IUCN Red List Status</p> <p>CR: Critically Endangered in IUCN Red List Status</p> <p>RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)</p> <p>WAL: Wet Agricultural Land</p> <p>DAL: Dry Agricultural Land</p> <p>SWH: Shallow Water Habitat</p> <p>P: Pond</p>										

Appendix I1k. Waterbirds Recorded in January 2021

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	RC	T3: River bed T5: Dry Agricultural Land, Wet Agricultural Land, Shallow Water Habitat, In flight	Common passage migrant. Found in Deep Bay area, Long Valley, Kam Tin.
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, in flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common resident. Widely distributed in Hong Kong.
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	LC, VU	T1: In flight T2: In flight T3: 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	<i>Tringa nebularia</i>	青腳鷸	RC	T2: River bank T3: River bank T5: Shallow Water Habitat	Common passage migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥		T3: River bank T5: In flight	Common passage migrant and winter visitor. Widely distributed in wetland habitat throughout Hong Kong.
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞		T5: Dry Agricultural Land, Shallow Water Habitat	Common resident. Found in Deep Bay area, Shuen Wan, Starling Inlet.
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸		T2: River bank T3: River bank, River bed	Common passage migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐		T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common passage migrant and winter visitor. Found in Long Valley, Chau Tau, Sai Kung.
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	(LC)	T3: River bank T5: Wet Agricultural Land, Dry Agriculture Land, Shallow Water Habitat, In flight	Resident and common passage migrant. Widely distributed in Hong Kong.

Appendix IIk. Waterbirds Recorded in January 2021

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	RC	T5: Wet Agricultural Land, Shallow Water Habitat	Common winter visitor. Found in Deep Bay area, Shuen Wan, Tai Lam Chung Reservoir, Victoria Harbour, Urban Park.
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	PRC	T1: In flight	Common winter visitor. Widely distributed in coastal areas throughout Hong Kong.
Great Egret	<i>Ardea alba</i>	大白鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, In flight T5: Wet Agricultural Land, In flight	Common resident and winter visitor. Widely distributed in Hong Kong.
Greater Painted-snipe	<i>Rostratula benghalensis</i>	彩鷺	LC	T5: Wet Agricultural Land, 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	<i>Tringa ochropus</i>	白腰草鷺		T1: River bank T2: River bank T3: River bank, River bed T5: Wet Agricultural Land, 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	<i>Vanellus cinereus</i>	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	<i>Ardea cinerea</i>	蒼鷺	PRC	T1: River bank T2: River bank T3: River bank, River bed, In flight T5: Dry Agricultural Land, Shallow Water Habitat, Pond, In flight	Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, Cape D'Aguilar.
Little Egret	<i>Egretta garzetta</i>	小白鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, In flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, Pond, In flight	Common resident. Widely distributed in coastal area throughout Hong Kong.
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鷀	LC	T1: In river T2: In river	Common resident. Found in Deep Bay area.

Appendix I1k. Waterbirds Recorded in January 2021

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鸻	LC	T2: River bed T3: River bed T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat	Common winter visitor and passage migrant. Widely distributed in freshwater areas throughout Hong Kong.
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鹮	RC	T5: Wet Agricultural Land, Shallow Water Habitat, In flight	Abundant winter visitor. Found in Deep Bay area.
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥		T5: Wet Agricultural Land, Dry Agricultural Land	Common resident. Widely distributed in wetland throughout Hong Kong.
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	(LC)	T3: River bank	Common resident. Widely distributed in coastal areas throughout Hong Kong.
Wood Sandpiper	<i>Tringa glareola</i>	林鷸	LC	T2: River bed T3: River bed 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

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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

*Source: Hong Kong Biodiversity Database, AFCD (<https://www.afcd.gov.hk/English/conservation/hkbiodiversity/database/search.php>)

Appendix III. Birds Recorded in January 2021

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Alexandrine Parakeet	<i>Psittacula eupatria</i>	亞歷山大鸚鵡	RR	NT
Barn Swallow	<i>Hirundo rustica</i>	家燕	PM, Sv	
Black Kite	<i>Milvus migrans</i>	黑鳶	R, WV	(RC), Cap.586
Black-necked Starling	<i>Sturnus nigricollis</i>	黑領棕鳥	R	
Black-winged Stilt	<i>Himantopus himantopus</i>	黑翅長腳鷸	PM	RC
Chestnut Munia	<i>Lonchura atricapilla</i>	栗腹文鳥	R	
Chinese Bulbul	<i>Pycnonotus sinensis</i>	白頭鵲	R	
Chinese Pond Heron	<i>Ardeola bacchus</i>	池鷺	R	PRC(RC)
Cinereous Tit	<i>Parus cinereus</i>	蒼背山雀	R	
Collared Crow	<i>Corvus torquatus</i>	白頸鴉	UR	LC, VU
Common Greenshank	<i>Tringa nebularia</i>	青腳鷸	PM, WV	RC
Common Kestrel	<i>Falco tinnunculus</i>	紅隼	CaM, Wv	Cap. 586
Common Kingfisher	<i>Alcedo atthis</i>	普通翠鳥	R	
Common Koel	<i>Eudynamys scolopacea</i>	噪鵲	R	
Common Moorhen	<i>Gallinula chloropus</i>	黑水雞	R	
Common Myna	<i>Acridotheres tristis</i>	家八哥	UR	
Common Sandpiper	<i>Actitis hypoleucos</i>	磯鷸	WV, PM	
Common Snipe	<i>Gallinago gallinago</i>	扇尾沙錐	WV, PM	
Common Tailorbird	<i>Orthotomus sutorius</i>	長尾縫葉鶯	R	
Crested Bulbul	<i>Pycnonotus jocosus</i>	紅耳鵲	R	

Appendix III. Birds Recorded in January 2021

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Crested Goshawk	<i>Accipiter trivirgatus</i>	鳳頭鷹	UR	Cap.586, (CR)
Crested Myna	<i>Acridotheres cristatellus</i>	八哥	R	
Daurian Redstart	<i>Phoenicurus auroreus</i>	北紅尾鴝	WV	
Domestic Pigeon	<i>Columba livia</i>	原鴿	R	
Dusky Warbler	<i>Phylloscopus fuscatus</i>	褐柳鶯	PM, WV	
Eastern Buzzard	<i>Buteo japonicus</i>	普通鵟	WV	Cap.586
Eastern Cattle Egret	<i>Bubulcus coromandus</i>	牛背鷺	R, PM	(LC)
Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	東黃鵪鶉	PM, WV	
Eurasian Teal	<i>Anas crecca</i>	綠翅鴨	WV	
Eurasian Tree Sparrow	<i>Passer montanus</i>	樹麻雀	R	
Great Cormorant	<i>Phalacrocorax carbo</i>	普通鸕鶿	CWV	PRC
Great Egret	<i>Ardea alba</i>	大白鷺	R, WV	PRC(RC)
Greater Coucal	<i>Centropus sinensis</i>	褐翅鴉鵂	R	(VU)
Greater Painted-snipe	<i>Rostratula benghalensis</i>	彩鷸	R, PM, WV	LC
Green Sandpiper	<i>Tringa ochropus</i>	白腰草鷸	UPM, WV	
Grey-headed Lapwing	<i>Vanellus cinereus</i>	灰頭麥雞	SWV	LC
Grey Heron	<i>Ardea cinerea</i>	蒼鷺	WV	
Grey Wagtail	<i>Motacilla cinerea</i>	灰鵪鶉	WV	
Hair-crested Drongo	<i>Dicrurus hottentottus</i>	髮冠卷尾	PM, SV	
House Swift	<i>Apus nipalensis</i>	小白腰雨燕	SpM, R	

Appendix III. Birds Recorded in January 2021

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Japanese White-eye	<i>Zosterops japonicus</i>	暗綠繡眼鳥	R	
Little Bunting	<i>Emberiza pusilla</i>	小鵪	CPM, WV	
Little Egret	<i>Egretta garzetta</i>	小白鷺	R	PRC(RC)
Little Grebe	<i>Tachybaptus ruficollis</i>	小鸕鷀	R	LC
Little Ringed Plover	<i>Charadrius dubius</i>	金眶鸕	WV, PM	LC
Long-tailed Shrike	<i>Lanius schach</i>	棕背伯勞	R	
Magpie	<i>Pica pica</i>	喜鵲	R	
Magpie Robin	<i>Copsychus saularis</i>	鵲鵲	R	
Masked Laughing Thrush	<i>Garrulax perspicillatus</i>	黑臉噪鵲	R	
Olive Backed Pipit	<i>Anthus hodgsoni</i>	樹鵲	WV	
Pallas's Leaf Warbler	<i>Phylloscopus proregulus</i>	黃腰柳鶯	WV	
Pied Avocet	<i>Recurvirostra avosetta</i>	反嘴鵲	WV	RC
Plain Prinia	<i>Prinia inornata</i>	純色鷦鶯	R	
Red-rumped Swallow	<i>Hirundo daurica</i>	金腰燕	UPM	
Red-throated Pipit	<i>Anthus cervinus</i>	紅喉鵲	CPM, WV	RC
Richard's Pipit	<i>Anthus richardi</i>	田鵲	WV, PM	
Sooty-headed Bulbul	<i>Pycnonotus aurigaster</i>	白喉紅臀鵲	UR	
Spotted Dove	<i>Streptopelia chinensis</i>	珠頸斑鳩	R	
Spotted Munia	<i>Lonchura punctulata</i>	斑文鳥	R	
Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	黑喉石鵲	WV	

Appendix III. Birds Recorded in January 2021

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
White Headed Munia	<i>Lonchura maja</i>	白頭文鳥	R	
White Wagtail	<i>Motacilla alba</i>	白鵲鴝	PM, WV	
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	白胸苦惡鳥	R	
White-rumped munia	<i>Lonchura striata</i>	白腰文鳥	R	
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	白胸翡翠	R	(LC)
Wood Sandpiper	<i>Tringa glareola</i>	林鵲	WV, PM	LC
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	黃腹鷦鶯	R	
Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	黃眉柳鶯	WV, SpM	
Zitting Cisticola	<i>Cisticola juncidis</i>	棕扇尾鶯	PM, WV	LC

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 I2. Mammal Species Recorded for Ecologically Sensitive Habitat Monitoring, 25 & 27 January 2021

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 25/1/2021, 27/1/2021				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Domestic Cat	<i>Felis catus</i>	野貓	Uncommon	-	+			+	
Domestic Dog	<i>Canis lupus familiaris</i>	野狗	Common	-	+	+	+	+	+
Bent-winged Bat	<i>Miniopterus</i> sp.	長翼蝠屬	-	Cap. 170	+				
Horseshoe Bat	<i>Rhinolophus</i> sp.	菊頭蝠屬	-	Cap. 170				+	
Japanese Pipistrelle	<i>Pipistrellus abramus</i>	東亞家蝠	Very Common	Cap. 170	+	+	+	+	
Short-nosed Fruit Bat	<i>Cynopterus sphinx</i>	短吻果蝠	Very Common	Cap. 170	+	+			
Total No. of species					5	3	2	4	1
Total No. of Conservation Interest Species					3	2	1	2	0
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 I3. Herpetofauna Species Recorded for Ecologically Sensitive Habitat Monitoring, 25 & 27 January 2021

Appendix 10: Herpetofauna Species Recorded for Ecologically Sensitive Habitat Monitoring, 25 & 27 January 2021

Common Name	Species Name	Chinese Name	Conservation Status	Date: 25/1/2021, 27/1/2021				
				Relative Abundance				
				Transect Walk				
				T1	T3	T4	T5	T6
Amphibian								
Asian Common Toad	<i>Bufo melanostictus</i>	黑眶蟾蜍	-				+	
Reptile								
Bowring's Gecko	<i>Hemidactylus bowringii</i>	原尾蜥虎	-	+	+		+	+
Chinese gecko	<i>Gekko chinensis</i>	中國壁虎	-	+			+	
Total No. of species				2	1	0	3	1
Total No. of Conservation Interest Species				0	0	0	0	0
Note:								
+: species recorded within transect routes								
++: species commonly recorded within transect routes								
+++: dominant species within transect routes								

Appendix I4. Butterfly Species Recorded Ecologically Sensitive Habitat Monitoring, 25 & 27 January 2021

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 25/1/2021, 27/1/2021				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Angled Castor	<i>Ariadne ariadne</i>	波蛱蝶	Common	-				+	
Common Grass Yellow	<i>Eurema hecabe</i>	寬邊黃粉蝶	Very common	-	+	+	+	+	
Common Jester	<i>Symbrenthia lilaea</i>	散紋盛蛱蝶	Common	-			+		
Common Mormon	<i>Papilio polytes</i>	玉帶鳳蝶	Very common	-			+		+
Common Sailer	<i>Neptis hylas</i>	中環蛱蝶	Very common	-	+				
Great Mormon	<i>Papilio memnon</i>	美鳳蝶	Very common	-	+			+	
Indian Cabbage White	<i>Pieris canidia</i>	東方菜粉蝶	Very common	-	++	+	+	++	+
Lemon Emigrant	<i>Catopsilia pomona</i>	遷粉蝶	Common	-				+	
Pale Grass Blue	<i>Pseudozizeeria maha</i>	酢漿灰蝶	Very common	-	+	+	+	+	
Plains Cupid	<i>Chilades pandava</i>	曲紋紫灰蝶	Uncommon	-	+				
Plum Judy	<i>Abisara echerius</i>	蛇目褐蛱蝶	Very common	-		+			
Red-base Jezebel	<i>Delias pasithoe</i>	報喜斑粉蝶	Very Common	-	+++	+	+	+	+
Total No. of species					7	5	6	7	3
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 I5. Odonata Species Recorded for Ecologically Sensitive Habitat Monitoring 25 & 27 January 2021

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 25/1/2021, 27/1/2021				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Common Blue Skimmer	<i>Orthetrum glaucum</i>	黑尾灰蜻	Common	-				+	
Crimson Darter	<i>Crocothemis servilia</i>	紅蜻	Abundant	-	+				
Green Skimmer	<i>Orthetrum sabina</i>	狹腹灰蜻	Abundant	-		+			+
Red-faced Skimmer	<i>Orthetrum chrysis</i>	華麗灰蜻	Abundant	-		+			
Wandering Glider	<i>Pantala flavescens</i>	黃蜻	Abundant	-	+	+	+	+	+
Total No. of species					2	3	1	2	2
Total No. of Conservation Interest Species					0	0	0	0	0
<p>Note:</p> <p>LC: listed as Local Concern by Fellowes et al (2002)</p> <p>+: species recorded within transect routes</p> <p>++: species commonly recorded within transect routes</p> <p>+++: dominant species within transect routes</p>									

APPENDIX J
WEATHER CONDITION

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

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1 Jan 21	11.8	40	-
2 Jan 21	14	52	-
3 Jan 21	16.7	65	-
4 Jan 21	18.3	66	-
5 Jan 21	18.8	65	-
6 Jan 21	17.1	72	-
7 Jan 21	15.3	67	-
8 Jan 21	9.1	52	-
9 Jan 21	10.7	38	-
10 Jan 21	12.8	40	-
11 Jan 21	10.6	44	-
12 Jan 21	11.9	33	-
13 Jan 21	13.4	48	-
14 Jan 21	15.2	55	-
15 Jan 21	17.3	59	-
16 Jan 21	17.6	68	-

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
17 Jan 21	16.6	58	-
18 Jan 21	14.2	53	-
19 Jan 21	15.4	64	-
20 Jan 21	18.2	69	-
21 Jan 21	20.1	73	-
22 Jan 21	20.3	80	-
23 Jan 21	20.2	78	-
24 Jan 21	18.4	83	Trace
25 Jan 21	19.2	74	-
26 Jan 21	19.6	78	-
27 Jan 21	18.9	77	-
28 Jan 21	19.1	70	-
29 Jan 21	16.6	60	-
30 Jan 21	16.7	68	-
31 Jan 21	18.4	67	-

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

APPENDIX K
EVENT ACTION PLANS

Appendix K:**Table K-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 K-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 K-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 K-4: Actions in the event of LFG being detected

Parameter	Monitoring Results	Actions
O ₂	<19% v/v	Increase underground ventilation to restore O ₂ to >19% v/v
	<18% v/v	Stop works, evacuate all personnel, prohibit entry, and increase ventilation to restore O ₂ level to >19%
CH ₄	>10% LEL	Prohibit hot works, increase ventilation to restore CH ₄ to <10% LEL
	>20% LEL	Stop works, evacuate all personnel, increase ventilation further to restore CH ₄ to <10% LEL
CO ₂	>0.5% v/v	Increase ventilation to restore C O ₂ to <0.5% v/v
	>1.5% v/v	Stop works, evacuate all personnel, increase ventilation further to restore CO ₂ to <0.5%

Note: Depending on the results of the measurements, actions required will vary and should be set down by the Safety Officer or another appropriately qualified person. As a minimum these should encompass those actions specified in the above table.

Table K-5: Event / Action Plan for Ambient Arsenic Monitoring

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; and 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate
2. Exceedance for two or more consecutive samples	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Advise the ER and Contractor on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC, ER and Contractor on remedial	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 2. Implement the agreed proposals; and 3. Amend proposal if appropriate.

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

	<p>procedures to determine possible mitigation to be implemented;</p> <p>6. Arrange meeting with IEC, Contractor and ER to discuss the remedial actions to be taken;</p> <p>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</p> <p>8. If exceedance stops, cease additional monitoring.</p>	<p>their effectiveness and advise the ER accordingly;</p> <p>3. Supervise the implementation of remedial measures</p>	<p>remedial measures to be implemented;</p> <p>4. Supervise and ensure remedial measures properly implemented; and</p> <p>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</p>	<p>3. Implement the agreed proposals;</p> <p>4. Resubmit proposals if problem still not under control;</p> <p>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</p>
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Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

Table K-6.1 Action and Limit Levels and Responses to Evidence of Disturbance to Waterbirds using in Ng Tung, Sheung Yue and Shek Sheung Rivers

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

Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Action Level response is triggered.	Investigate cause and if cause identified as related to NDAs project instigate remedial action to remove or reduce source of disturbance.	Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Limit Level response is triggered.	Investigate cause and if caused identified as related to NDAs project instigate remedial action. Review and adjust LVNP management measures to improve conditions for affected species.
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* Whether numbers are significant will depend on species and season and should be determined following collection and evaluation of Baseline survey data.

Table K-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 K-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 L
SUMMARY OF EXCEEDANCE

Appendix L: Exceedance Report**(A) Exceedance Report for Air Quality**

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Air Quality	1-hr TSP	0	0	0	0
	24-hr TSP	0	0	0	0
	24-hr RSP (Ambient Arsenic)	0	0	0	0

(B) Exceedance Report for Construction Noise

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Noise	$L_{eq}(30 \text{ min.}) \text{ dB(A)}$	2	0	0	0

(C) 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

(D) 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 M
SITE AUDIT SUMMARY

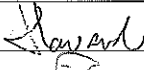

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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

Weekly Site Inspection Record Summary

Checklist Reference Number	210105
Date	5 January 2021 (Tuesday)
Time	09:30 – 12:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
210105-R01	• Drip tray should be provided for chemical storage.	E 3i
	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.:201229), all environmental deficiencies was rectified by the contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		5 January 2021
Checked by	Dr. Priscilla Choy		5 January 2021

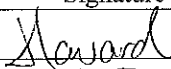
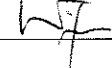
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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

Weekly Site Inspection Record Summary

Checklist Reference Number	210112
Date	12 January 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	
210112-R01	• NRMM Label was observed faded, Contractor was reminded to replace the NRMM Label.	B24
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• 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.:210105), all environmental deficiency was rectified by the contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		13 January 2021
Checked by	Dr. Priscilla Choy		13 January 2021

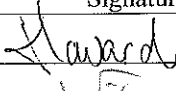

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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

Weekly Site Inspection Record Summary

Checklist Reference Number	210119
Date	19 January 2021 (Tuesday)
Time	10:00 – 12:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
210119-R01	• Drip tray should be provided for chemical storage.	E14
	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.:210112), all environmental deficiency was rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		19 January 2021
Checked by	Dr. Priscilla Choy		19 January 2021

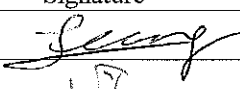
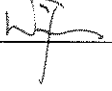
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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

Weekly Site Inspection Record Summary

Checklist Reference Number	210126
Date	26 January 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	
210126-R01	<ul style="list-style-type: none"> To avoid cement from extending beyond storage area for preventing dust generation. (Portion 8) 	B16
	C. Noise	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	D. Water Quality	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	E. Waste / Chemical Management	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	F. Land Contamination	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	G. Landfill Gas Hazard	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	H. Cultural Heritage	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	I. Landscape and Visual	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	J. Ecology	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	K. Permits/Licences	
	<ul style="list-style-type: none"> No environmental deficiency was identified during site inspection. 	
	L. Others	
	<ul style="list-style-type: none"> Follow-up on previous audit section (Ref. No.:210119), all environmental deficiency was rectified by the Contractor. 	

	Name	Signature	Date
Recorded by	Kenneth Leung		26 January 2021
Checked by	Dr. Priscilla Choy		26 January 2021

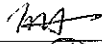
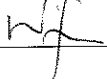
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210106
Date	6 January 2021 (Wednesday)
Time	9:30-11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
210106-R01	• Contractor was reminded to water the exposed worksites regularly to avoid dust generation.	B1
210106-R02	• NRMM Label was observed faded. Contractor was reminded to replace the NRMM Label.	B24
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
210106-R03	• Contactor was reminded to clear the debris in channel.	D3
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:201230), item 201230-R02 was remarked as 210106-R03. Follow-up action is needed to be reviewed. Other item was rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Ella Ho		11 January 2021
Checked by	Dr. Priscilla Choy		11 January 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	210113
Date	13 January 2021 (Wednesday)
Time	9:30-11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
210113-R01	• NRMM Label was observed faded. Contractor was reminded to replace the NRMM Label.	B24
	<i>C. Construction Noise Impact</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Cultural Heritage</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Landscape and Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>L. Others</i>	
	• Follow-up on previous audit section (Ref. No.:210106), all identified environmental deficiencies were observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Ella Ho		18 January 2021
Checked by	Dr. Priscilla Choy		18 January 2021

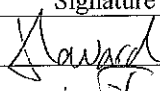

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210122
Date	22 January 2021 (Friday)
Time	14:00-16:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
210122-R01	• NRMM Label was observed faded. Contractor was reminded to replace the NRMM Label.	B24
210122-R02	• Contractor was reminded to clean the road regularly.	B9
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
210122-R05	• Contractor was reminded to provided sandbag to prevent surface runoff and waste water discharge into nearby water course.	D1
	E. Waste / Chemical Management	
210122-R03	• General refuse should be disposed of properly.	E1iii
210122-R04	• Properly clear the oil spillage from the generator.	E13
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:210113), item 210113-R01 was remarked as 210122-R01, follow-up action is need to be reviewed.	

	Name	Signature	Date
Recorded by	Howard Chan		25 January 2021
Checked by	Dr. Priscilla Choy		25 January 2021

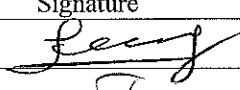
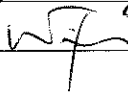
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210127
Date	27 January 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	
210127-R03	• To prevent surface muddy runoff from entering nearby planting area.	D1
	E. Waste / Chemical Management	
210127-R01	• To avoid overlapping of chemical and provide adequate bund capacity for storage.	E3ii
210127-R02	• Properly clear the oil stain from the air compressor.	E13
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:210122), item 210122-R04 and 210122-R05 were remarked as 210127-R02 and 210127-R03. Follow-up action is need to be reviewed.	

	Name	Signature	Date
Recorded by	Kenneth Leung		27 January 2021
Checked by	Dr. Priscilla Choy		27 January 2021

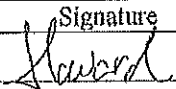
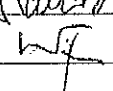
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210108
Date	8 January 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	
210108-R01	• Exposed worksites and haul road should be watered at least once per hour to avoid dust generation.	B1
210108-R02	• NRMM Label was observed faded, Contractor was reminded to replace the NRMM Label.	B24
	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	
210108-R03	• General refuse should be disposed of properly.	E1iii
	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.:201230), no major environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan		11 January 2021
Checked by	Dr. Priscilla Choy		11 January 2021

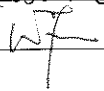
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210115
Date	15 January 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	
210115-R01	• General refuse should be disposed of regularly.	E1iii
	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.:210108), all environmental deficiencies were rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		18 January 2021
Checked by	Dr. Priscilla Choy		18 January 2021

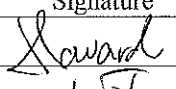
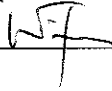
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210122
Date	22 January 2021 (Friday)
Time	09:00 – 09:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape & 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.:210115), all environmental deficiency was rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		25 January 2021
Checked by	Dr. Priscilla Choy		25 January 2021

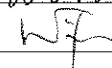
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210129
Date	29 January 2021 (Friday)
Time	10:00 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
210129-R01	• Drip tray should be provided for chemical storage.	E14
	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.:210122), no major environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan		29 January 2021
Checked by	Dr. Priscilla Choy		29 January 2021

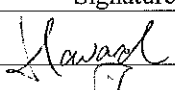
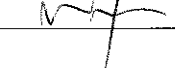
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210104
Date	4 January 2021 (Monday)
Time	14:00-15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
210104-R01	• NRMM label should be displayed on regulate machines.	B 24
	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	
210104-O01	• The chemical waste 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.: 201228), all environmental deficiencies were observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		5 January 2021
Checked by	Dr. Priscilla Choy		5 January 2021

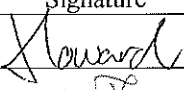
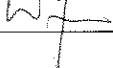
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210113
Date	13 January 2021 (Wednesday)
Time	14:00-16:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
210113-R01	• NRMM was observed faded, Contractor was reminded to replace the NRMM Label.	B 24
	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.: 210104), all environmental deficiencies were observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		15 January 2021
Checked by	Dr. Priscilla Choy		15 January 2021

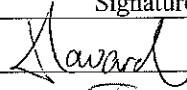
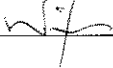
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210118
Date	18 January 2021 (Monday)
Time	13:40-16:00

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	
210118-R01	• Drip tray should be provided for chemical storage.	E14
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 210113), all environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		19 January 2021
Checked by	Dr. Priscilla Choy		19 January 2021

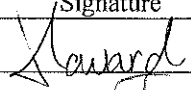
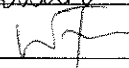
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210125
Date	25 January 2021 (Monday)
Time	13:50-16:00

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	
210125-O01	• Avoid any untreated wastewater/muddy water runoff into nearby watercourse and site runoff should be directed to sedimentation tank before discharging.	D2i, D4, D5i
210125-R01	• Contractor was reminded to regularly monitoring the sedimentation tank to avoid overflow.	D5iii
	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.: 210118), all environmental deficiency was observed improved/rectified by the Contractor.	

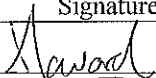

	Name	Signature	Date
Recorded by	Howard Chan		26 January 2021
Checked by	Dr. Priscilla Choy		26 January 2021

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	210106
Date	6 January 2021 (Wednesday)
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	
210106-R01	• Housekeeping should be improved on site.	E12
	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.: 201231), no major environmental deficiency was identified during site inspection.	

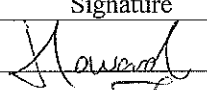
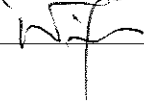
	Name	Signature	Date
Recorded by	Howard Chan		7 January 2021
Checked by	Dr. Priscilla Choy		7 January 2021

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	210111
Date	11 January 2021 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
210111-R03	• To future enhance dust mitigation measures including watering for works area.	B11
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
210111-R01	• Contractor was reminded to clear the mud regularly and prevent/ avoid any muddy water discharge into nearby watercourse.	D17
	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	
210111-R02	• Dull green site barrier fences should be erected around all active works areas.	G1
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 210106), all environmental deficiency was rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		13 January 2021
Checked by	Dr. Priscilla Choy		13 January 2021

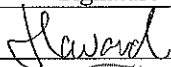
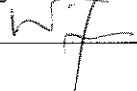
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210121
Date	21 January 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.: 210111), all environmental deficiencies were rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan		21 January 2021
Checked by	Dr. Priscilla Choy		21 January 2021

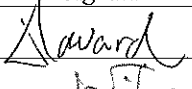

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	210128
Date	28 January 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.: 210121), no major environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan		29 January 2021
Checked by	Dr. Priscilla Choy		29 January 2021

APPENDIX N
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
Construction Dust Impact							
S3.8	D1	Mitigation measures in form of regular watering under a good site practice should be adopted. Watering once per hour on exposed worksites and haul road is proposed to achieve dust removal efficiency of 92.1%. While the above watering frequencies are to be followed, the extent of watering may vary depending on actual site conditions but should be sufficient to maintain an equivalent intensity of no less than 1.7 L/m ² to achieve the respective dust removal efficiencies	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	*
S3.8	D2	The Contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation.	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	^
S3.8	D3	<p>Following dust suppression measures should also be incorporated by the Contractor to control the dust nuisance throughout the construction Phase</p> <ul style="list-style-type: none"> Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones; The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle; Where practicable, vehicle washing facilities with high 	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	<p>*</p> <p>^</p> <p>*</p> <p>^</p> <p>^</p>

		<p>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;</p> <ul style="list-style-type: none"> • When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period. • The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials; • Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously; • Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; • Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; • Any skip hoist for material transport should be totally enclosed by impervious sheeting; • Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides; • Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed; • Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally 						<p>^</p> <p>*</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>
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		<p>enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and</p> <ul style="list-style-type: none"> 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	<p>Implement the following good site management practices:</p> <ul style="list-style-type: none"> Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; Machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works; Mobile plant should be sited as far away from NSRs as possible and practicable; Material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. 	Control construction airborne noise	Contractor	All construction sites	Construction phase	^ ^ ^ ^ ^
S4.9	N2	Install temporary site hoarding (approx 2.4m high) located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.	Reduce the construction noise levels at low-level zone of NSRs through partial	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	<p><u>Construction Runoff and Site Drainage</u></p> <p>In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures should be provided and the Storm Water Pollution Control Plan is given below.</p> <p>where appropriate, should include the following:</p> <p>Stormwater Pollution Control Plan</p> <ul style="list-style-type: none"> At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal 	Control construction runoff	Contractor	All construction sites	Construction phase	*
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		<p>facilities. The design of the temporary on-site drainage system will be undertaken by the Contractor prior to the commencement of construction.</p> <ul style="list-style-type: none"> • Diversion of natural stormwater should be provided as far as possible. The design of temporary on-site drainage should prevent runoff going through site surface, construction machinery and equipments in order to avoid or minimize polluted runoff. Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8m³ capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity shall be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped. • The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a silt/sediment trap. The silt/sediment traps should be incorporated in the permanent drainage channels to enhance deposition rates. • The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94. The detailed design of the sand/silt traps should be undertaken by the contractor prior to the commencement of construction. • Construction works should be programmed to minimize 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 					<p>^</p> <p>^</p> <p>^</p> <p>N/A</p>
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		<p>means.</p> <ul style="list-style-type: none"> • All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas. • Measures should be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, it should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities. • All open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m³ should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. • Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. • Precautions to be taken at any time of year when rainstorms are 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 						<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>
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		<p>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.</p> <ul style="list-style-type: none"> 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	<p><u>Stream Diversion</u></p> <ul style="list-style-type: none"> In order to prevent sediment transport during riverbank works, deployment of silt curtain should be implemented, 	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	<p><u>Groundwater from Contaminated Area</u></p> <ul style="list-style-type: none"> For other inaccessible sites, site investigation is required when they are resumed and handed over to the Project Proponent to identify if contaminated groundwater is found. If the investigation results indicated that the groundwater to be generated from construction works would be contaminated, the contaminated groundwater should be either discharged into recharged wells, or properly treated in compliance with the requirements of Technical Memorandum on Standards for 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	<p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>

		WPCO through the Regional Offices of EPD.					
S5.7	W4	<p><u>Sewage from Workforce</u></p> <p>Portable chemical toilets and sewage holding tanks should be provided for handling the construction sewage generated by the workforce. A licensed Contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.</p> <p>Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. Regular environmental audit on the construction site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the Project would not cause water quality impact after undertaking all required measures.</p>	Handling of site sewage	Contractor	All construction sites	Construction Phase	^
Waste Management (Construction Waste)							
S7.6	WM1	<p><u>Waste Reduction Measures</u></p> <p>Waste reduction is best achieved at the planning and design phase, as well as by ensuring the implementation of good site practices. The following recommendations are proposed to achieve reduction:</p> <ul style="list-style-type: none"> segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal; 	Reduce waste generation	Contractor	All construction sites where practicable	Prior to the commencement of construction	^

		<ul style="list-style-type: none"> 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. 					<p>*</p> <p>^</p> <p>N/A</p> <p>^</p>
S7.6	WM2	Prepare Waste Management Plan and submit to the Engineer for approval	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	N/A
S7.6	WM3	<p><u>Good Site Practice</u></p> <p>The following good site practices are recommended throughout the construction activities:</p> <ul style="list-style-type: none"> Nomination of an approved personnel, such as a site manager, to be responsible for the implementation of good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; Training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling; Provision of sufficient waste disposal points and regular collection for disposal; Appropriate measures to minimise windblown litter and 	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	<p>^</p> <p>^</p> <p>^</p> <p>^</p>

		dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; <ul style="list-style-type: none"> Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; 					^
S7.6	WM4	<u>Storage of Waste</u> The following recommendation should be implemented to minimize the impacts: <ul style="list-style-type: none"> Waste such as soil should be handled and stored well to ensure secure containment; Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; Different locations should be designated to stockpile each material to enhance reuse; 	Minimize waste impacts from storage	Contractor	All construction sites	Construction phase	^ ^ ^
S7.6	WM5	<u>Collection and Transportation of Waste</u> The following recommendation should be implemented to minimize the impacts: <ul style="list-style-type: none"> Remove waste in timely manner; Employ the trucks with cover or enclosed containers for waste transportation; Obtain relevant waste disposal permits from the appropriate authorities; and Disposal of waste should be done at licensed waste disposal facilities. 	Minimize waste impact from storage	Contractor	All construction sites	Construction phase	^ ^ ^ ^

S7.6	WM6	<p><u>Excavated and C&D Material</u></p> <p>Wherever practicable, C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at Public Fill Reception Facilities areas or reclamation sites. The following mitigation measures should be implemented in handling the excavated and C&D materials:</p> <ul style="list-style-type: none"> • Maintain temporary stockpiles and reuse excavated fill material for backfilling; • Carry out on-site sorting; • Deliver surplus artificial hard materials to Tuen Mun Area 38 recycling plant or its successor for recycling into subsequent useful products; • Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; and • Implement a recording system for the amount of waste generated, recycled and disposed of for checking; <p>Standard formwork should be used as far as practicable in order to minimize the arising of C&D waste. The use of more durable formwork (e.g. metal hoarding) or plastic facing should be encouraged in order to enhance the possibility of recycling. The purchasing of construction materials should be carefully planned in order to avoid over ordering and wastage.</p> <p>Wheel wash facilities have to be provided at the site entrance before the trucks leaving the works area.</p>	Minimize waste impacts from excavated and C&D material	Contractor	All construction sites	Construction phase	<p>^</p> <p>^</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>^</p> <p>N/A</p> <p>^</p>
S7.6	WM7	<p><u>Contaminated Soil</u></p> <p>As a precaution, it is recommended that standard good site</p>	Remediate contaminated soil	Contractor	All construction sites where	Construction phase	<p>^</p>

		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	<p><u>Chemical Waste</u></p> <p>If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producers. Chemical wastes should be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.</p>	Control the chemical waste and ensure proper storage, handling and disposal	Contractor	All construction sites	Construction phase	*
S7.6	WM9	<p><u>General Waste</u></p> <ul style="list-style-type: none"> General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling. Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean. A reputable waste collector should be employed to remove 	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction phase	<p>^</p> <p>*</p> <p>^</p>

		general refuse on a daily basis.					
S7.6	WM10	<u>Sewage</u> <ul style="list-style-type: none"> The WMP should document the locations and number of portable chemical toilets depending on the number of workers, land availability, site condition and activities. Regularly collection by licensed collectors should be arranged to minimize potential environmental impacts. 	Minimize production of sewage impacts	Contractor	All construction sites	Construction phase	N/A
S7.6	WM11	Topsoil reuse – Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical. This is considered a general measure for good site practice.	Good site practice	Contractor/ Project Proponent	Onsite	Construction phase	N/A
Land Contamination							
S 8.4	LC2	Detailed site investigation (SI) for all inaccessible potentially contaminated sites in 2 NDAs	Verify the land contamination potential before the commencement of construction	Project Proponent Detailed Design Consultant Contractor	All inaccessible potentially contaminated sites in 2 NDAs as listed in the CAP	After the land is resumed and handed over to the Project Proponent	N/A
S 8.5	LC3	Preparation and submission of supplementary Contamination Assessment Report (CAR) and Remediation Action Plan (RAP) for all inaccessible potentially contaminated sites in 2 NDAs to EPD for agreement if land contamination is confirmed	Present the findings of SI and evaluate the potential environmental and human health impacts Recommend appropriate mitigation measures for the contaminated soil and	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

[illegible]

		<ul style="list-style-type: none"> 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	<p>Solidification/Stabilization</p> <ul style="list-style-type: none"> The loading, unloading, handling, transfer or storage of cement should be carried out in an enclosed system; Mixing process and other associated material handling activities should be properly scheduled to minimize potential noise impact and dust emission; The mixing facilities should be sited as far apart as practicable from the nearby noise sensitive receivers; Mixing of soil and cement / water / other additive(s) should be undertaken at a solidification plant to minimize the potential for leaching; Runoff from the solidification / stabilization area should be prevented by constructing a concrete bund along the perimeter of the solidification / stabilization area; If stockpile of treated soil is required, the stockpiling site(s) should be lined with impermeable sheeting and 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	<p>N/A</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>

		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> <ul style="list-style-type: none"> Set up a list of safety measures for site workers; Provide written information and training on safety for site workers; Keep a log-book and plan showing the zones requiring treatment and clean zones; Maintain a hygienic working environment; Avoid dust generation; Provide face and respiratory protection gear to site workers if necessary; Provide personal protective clothing (e.g. chemical resistant jackboot, liquid tight gloves) to site workers if necessary; Provide first aid training and materials to site worker; Bulk earth moving equipment should be utilized as much as possible to minimize worker <p>Eating, drinking and smoking should not be allowed in the excavation areas and treatment area to avoid inadvertent ingestion of arsenic containing soil.</p>	To minimize the potential adverse effects on health and safety of construction workers	Contractor	KTN NDA	The course of treatment	N/A
Landfill Gas Hazard							
S10.6	LFG1	<ul style="list-style-type: none"> Underground rooms or void should be avoided as far as practicable in the proposed developments within the Consultation Zone and should be avoided totally in the proposed developments within the MTLL. Buildings or structures within the MTLL should be at ground level with raised floor slabs which are less prone to 	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

		<p>gas ingress.</p> <ul style="list-style-type: none"> 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 no fines 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			
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S10.6	LFG2	<ul style="list-style-type: none"> During all works, safety procedures should be implemented to minimize the risks of fires and explosions, asphyxiation of workers (especially in confined space) and toxicity effects resulting from contact with contaminated soils and groundwater. Safety officers, specifically trained with regard to LFG and leachate related hazards and the appropriate actions to take in adverse circumstances, should be present on all worksites throughout the works. All personnel who work on site and all visitors to the site should be made aware of the possibility of ignition of gas in the vicinity of the works, the possible presence of contaminated water and the need to avoid physical contact with it. Those staff who work in, or have responsibility for "at risk" areas, including bore pilling and excavation works, should receive appropriate training on working in areas susceptible to LFG. Enhanced personal hygiene practices including washing thoroughly after working and eating only in "clean" areas should be adopted where contact may have been made with any groundwater which is thought to be contaminated with leachate. Any offices / quarters set up on site should take precautions against LFG ingress, such as being raised off the ground. Other storage premises, e.g. shipping containers, where this is not possible should be well 	To minimize the risk of LFG hazards to the staff and visitors within MTLL and its 250m Consultation Zone	Contractor	Construction sites within MTLL and its 250m Consultation Zone	Construction phase	<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>
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		<p>ventilated prior to entry.</p> <ul style="list-style-type: none"> • 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 					<p>^</p> <p>^</p> <p>N/A</p>
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		<p>out hot works in confined areas.</p> <ul style="list-style-type: none"> During the construction works, adequate fire extinguishers and breathing apparatus sets should be made available on site and appropriate training given in their use. Ongoing gas monitoring should be considered for offices, stores etc set up on site. 					<p>^</p> <p>^</p>
S10.6	LFG3	<p>Utility Companies</p> <ul style="list-style-type: none"> The developers should make the utility companies aware of the location and features of the site within the Consultation Zone during the respective detailed design stage as part of the QLFGHA. The utilities companies should have a responsibility to train and ensure their staff to take appropriate precautions at all times when entering enclosed spaces or plant rooms. Should utility installation be required in site E1-1, the developers should make the utility companies aware of the potential constraints imposed by the landfill restoration facilities and aftercare works to ensure these facilities and works will remain unaffected. Appropriate precautionary measures against landfill gas should also be taken should utility installation be required within the MTLL. <p>Building Management</p> <ul style="list-style-type: none"> The management committee of the building estate will hold a special responsibility to ensure that the occupants of the building, its staff and maintenance workers are protected from LFG and that visitors to the site are also 	To minimize the risk of LFG hazards to the occupants, maintenance personnel, visitors and other users within MTLL and its 250m Consultation Zone	Government / Developer within MTLL and its 250m Consultation Zone	Buildings within MTLL and its 250m Consultation Zone	Operation phase	N/A

		<p>made aware as to the dangers and the precautions required to be taken.</p> <ul style="list-style-type: none"> • 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 					
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		<p>must be repaired as soon as possible after detection or works completion using similar products.</p> <ul style="list-style-type: none"> 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	<p><u>Undertaking Further Archaeological Survey to Cover the Outstanding Areas</u></p> <p>Further archaeological surveys to cover the outstanding areas of the not-yet-surveyed-area with medium archaeological potential</p>	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	<p><u>Undertaking Preservation in-situ for Site 7</u></p> <p>Preservation in-situ of the cultivation deposits in Site 7 is proposed. If disturbance to the site by the design of the Central Park is unavoidable, further archaeological survey should be conducted after land resumption prior to the pre-construction stage to assess the feasibility to incorporate Site 7 into the design of the development plan of the proposed zone.</p> <p>Appropriate followup actions, including preservation of the significant archaeological deposits in-situ in the Central Park, would then be considered with the consent of AMO.</p> <p>The recommended mitigation measure of preservation in-situ with further archaeological survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance.</p>	To preserve the archaeological resources as far as possible.	Project Proponent/ Contractor/ Qualified Archaeologist	Site 7 in FLN NDA	After land resumption prior to preconstruction stage of the proposed Central Park (Area C2-8, Zoning O)	N/A
S11.6.1	CH4	<p><u>Undertaking Induction Training</u></p> <p>Induction training should be provided to the construction Contractor before the commencement of the excavation works in Spots A, D, F to H. An induction will be conducted as part of the environmental health and safety induction programme to all site staff before they are deployed on site. The induction will include an introduction on the historical development of the Site, the possible archaeological remains that may be encountered during ground excavation works as well as the reporting procedures in case suspected archaeological remains are</p>	To preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	Spots A, D, F to H	Before the commencement of the excavation works and before site staff are deployed on site	N/A

		identified. A set of the presentation material (in the form of power point presentation) with content details will be prepared by an archaeologist and submitted to AMO for reference and record purpose. The first induction briefing will be video recorded and it will be used as induction briefing material for new site staff.					
S11.6.1	CH5	<p><u>Undertaking Archaeological Impact Assessment before Construction at A1</u></p> <p>It is recommended that an Archaeological Impact Assessment to be conducted in the impacted area in Area B1-8 and B1-9 at A1 (Sheung Shui Wa Shan Site of Archaeological Interest) after land resumption and before construction when detail construction work information is available to determine the need for further archaeological follow up actions.</p>	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	Area B1-8 and B1-9 zoned as R4 and R3 in A1	After land resumption but before construction	N/A
S11.6.1	CH6	<p><u>Undertaking Archaeological Impact Assessment before Construction within A1 but except Area B1-8 and B1-9</u></p> <p>Should there be any development work within the Sheung Shui Wa Shan Site of Archaeological Interest, it is recommended that an Archaeological Impact Assessment is required after land resumption and before construction when detail construction work information is available to determine the need for further archaeological follow up actions.</p>	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible.	Project Proponent/ Contractor/ Qualified Archaeologist	Area within A1 except Area B1-8 and B1-9 in R4 & R3 zoning	After land resumption but before construction	N/A

S11.6.2	CH7	<p><u>Undertaking baseline condition survey and baseline vibration impact assessment</u></p> <p>In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 7.5mm/s could be adopted for graded historic buildings) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report. The condition survey of graded historic building should be submitted to AMO for information.</p>	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	G303 and G308	Preconstruction stage before commencement of construction works during Schedule 3 study	N/A
S11.6.2	CH8	<p><u>Undertaking baseline condition survey and baseline vibration impact assessment</u></p> <p>In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 7.5mm/s and 15mm/s could be adopted for graded historic buildings and historic buildings respectively) and to evaluate if construction vibration monitoring and structural strengthening measures are required during</p>	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	KT57, FL05, FL18, and FL2	Preconstruction stage before commencement of construction works	N/A

		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	<p><u>Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages</u></p> <p>Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out the Project Proponent.</p>	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	Ancillary structures of G303, HKT01, HKT02, Entrance Gate of HKT03, HKT04, KT01 to KT10, KT13, KT36, KT39, KT40, KT41, KT43, KT45, KT47, KT50, KT54, KT62 to KT63, KT69, FL01, FL16, and FL35	Prior to Removal / Relocation of features before commencement of construction works during Schedule 3 study	N/A
S11.6.2	CH10	<p><u>Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages</u></p> <p>Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out by the Project Proponent.</p>	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	KT12 and KT61	Prior to Removal / Relocation of features before commencement of construction works	N/A

S11.6.2	CH11	Relocation of Built Heritages Relocation of built heritages to a reasonable location nearby may be required.	To preserve the directly impacted sites by relocation	Project Proponent/ Contractor	HKT01, HKT02, Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of construction works	N/A
S11.6.2	CH12	Drainage System and Access Route Design For the retained built heritage items in developable area, drainage system and access route would be designed to prevent the persevered flooding and maintain the accessibility to the built heritage.	To prevent the persevered flooding and maintain the accessibility to the built heritage	Contractor /Detailed Design consultant	The retained built heritage items	Pre-construction phase	N/A
Cultural Heritage (Construction Phase)							
S11.6.1	CH13	<u>Inform Upon Archaeological Discovery</u> Pursuant to the Antiquities and Monuments Ordinance, the construction Contractor should inform the AMO immediately in case of discovery of antiquities or supposed antiquities in the course of excavation works in construction phase.	Special attention should be given to areas evaluated to have archaeological potential or significance.	Contractor	All soil excavation works	Immediately upon discovery during excavation works	N/A
S11.6.2	CH14	<u>Watertable Monitoring</u> Since the construction works and development activities may induce change in the watertable. It is recommended the Contractor should ensure that the change of watertable induced by the construction works and development activities will not result in settlement of built heritage.	To minimize the potential impacts to the built heritage items by the change of watertable induced by the works during the Construction phase	Contractor	Within NDAs	Construction phase	N/A
S11.6.2	CH15	<u>Conducting Construction Vibration Monitoring and Structural Strengthening Measures</u> Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and	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	N/A

		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	
<i>Landscape and Visual Impact (Detailed Design, Prior to Construction, Construction and Operation Phases)</i>							
S.12.9	LV1	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed design consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as the areas become available, to achieve early establishment	N/A
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	<p>Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines. 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</p>	<p>Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape</p>	<p>Detailed Design Consultant</p>	<p>Throughout NDAs</p>	<p>Prior to Construction</p>	<p>N/A</p>
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		designs seek to keep it to a practical minimum.					
S12.9 MM14.4	LV 4	<p>Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed.</p> <p>For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream.</p> <p>Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.</p>	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	All watercourses, particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern Section	Prior to Construction and Construction Phase	N/A
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.	<p>Reprovision of open space.</p> <p>Enhance visual amenity of the area and improve the overall landscape character</p>	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 – 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.	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	^

		<p>Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained</p>					
S.12.9 MM5	LV7	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible.</p> <p>A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p>	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	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM7	LV9	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development</p>	Compensate for trees and shrubs lost due to the Project.	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i> , <i>Diospyros vaccinioides</i> , <i>Gardenia jasminoides</i> , <i>Ixora chinensis</i> , <i>Ligustrum sinense</i> , <i>Litsea rotundifolia</i> , <i>Melastoma dodecandrum</i> , <i>Atalantia buxifolia</i> , <i>Rhodomyrtus tomentosa</i> , <i>Rhaphiolepis indica</i> , and <i>Rhododendron simsii</i> are suggested.					
S.12.9 MM8	LV10	<p>Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum</i></p>					N/A

		<p><i>avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <p>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</p>					
S.12.9 MM9	LV11	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. building edges, piers).	Soften hard surfaces and facilities	Government / Developer/ Detailed Design Consultant/ Contractor	On appropriate structures	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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S.12.9 MM10	LV12	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Developer/ Detailed Design Consultant/ Contractor	On appropriate buildings	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM11	LV13	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

S.12.9 MM12	LV14	<p>Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics.</p> <p>For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)</p>	To soften the hard, straight edges and provide greening along roads.	Government / Developer/ Detailed Design Consultant/ Contractor	On viaducts or along roads	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM13 & EIA Annex 13	LV15	<p>Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on- wetland areas within the LVNP. (See E4,E15 and E25 also)</p> <p>Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.</p>	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

S.12.9 MM14.1	LV16	<p>Reprovision of Natural Stream – Where natural streams are unavoidably affected along some of their length, they can be diverted to avoid the proposed new developments and retain the integrity of the whole stream. Detailed design of any stream diversion should follow the Guidelines in ETWB Technical Circular (Works) No. 5/2005 (Protection of natural streams/rivers from adverse impacts arising from construction works) and appropriate construction methods should be used.</p> <p>Two short stretches of the Ma Tso Lung Stream will be affected by Project in the KTN NDA; by the LMC Eastern Connection Road on the western border of Site F1-3 and further upstream by Site E-2.</p> <p>At both these locations, the stream will be reprovisioned and maintain the flow between unaffected sections of the stream. The reprovisioned stream will be provided with a natural bed and banks, as well as having an area of marsh/ pool next to it and trees and shrubs further from the banks. (See E2, E14 and E24 also)</p>	Achieve a natural stream, similar to existing, including wetland planting provision for embankments	Government / Developer/ Detailed Design Consultant/ Contractor	Streams and channelized watercourses e.g. a Ma Tso Lung and Siu Han San Tsuen	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S12.9 MM14.2	LV17	<p>Stream Buffer Planting –Providing a minimum 10 m buffer with planting (where there is a general presumption against any development taking place) along streams where they flow close to developments, confers a degree of protection to the stream course and its associated vegetation.</p> <p>For the stream at Ma Tso Lung in KTN NDA, the middle and</p>	Protect natural streams	Government / Developer/ Detailed Design Consultant/ Contractor	Streams and channelized watercourses e.g. a Ma Tso Lung and Siu Han San Tsuen	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		<p>upper sections will be designated as Green Belt zone where there is a general presumption against development as buffer to the stream.</p> <p>For the stream at Siu Hang San Tsuen in FLN NDA, within the NDA boundary much of the stream would be located underneath the viaduct for the proposed Fanling Bypass. To the south of the viaduct the stream 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)</p>					
S12.9 MM14.3	LV18	<p>Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc.</p>	<p>Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses</p>	<p>Government / Developer/ Detailed Design Consultant/ Contractor</p>	<p>Channelized watercourse, particularly the Ma Wat River Channel Diversion</p>	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	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	<p>Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs.</p> <p>All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.</p>	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
S.12.9 MM16	LV20	<p>Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non- reflective, recessive colours be used.</p> <p>Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).</p>	To screen undesirable views of the works site.	Contractor	Throughout NDAs	Construction Phase	^
S.12.9 MM17	LV21	<p>Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.</p> <p>Street and night time lighting shall also be controlled to minimize</p>	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.	N/A
S.13.9	E4	Long Valley Nature Park (LVNP) designation, design and implementation. Enhancement of non-wetland habitats in LVNP. Planning for the advanced provision of alternative foraging habitat along main river channels for large waterbirds.	Compensate for wetland loss arising from the project and protection of Long Valley from adverse ecological impacts including provision of additional/alternative habitat for 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 egrettry.	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 egrettry. Avoid habitat loss and disturbance to fauna of	PlanD.	KTN areas C2-1 and C2-2 , Ho Sheung Heung egrettry and areas north of Long Valley along the Ng Tung River to the Shenzhen River	Detailed design phase	N/A

			<p>conservation significance, especially nesting ardeids</p> <p>Maintenance of ecological linkages with Deep Bay ecosystem and avoidance of severance of these linkages, especially for waterbirds</p>				
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.	<p>Minimize disturbance to large waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.</p> <p>Maintain ecological linkages within NDA Project Area and between Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.</p>	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	<p>Building setback and mounding in locations near Long Valley.</p> <p>KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries).</p>	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	<p>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:</p> <p>Use opaque, non-transparent, non-reflective noise barriers for all developments associated with the Project.</p> <p>Measures to include the following:</p> <ul style="list-style-type: none"> • Fritting, or the placement of ceramic lines or dots on glass, which creates a visual barrier to birds and reduces air conditioning loads by lowering heat gain, while still allowing light transmission for interior spaces. It is most successful when the frits are applied on the outside surface. Frosted glass has similar effects; • 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	<p>No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north or east of KTN D1-5 and east of D1-9 and C2-3, construction hours restricted to 09.00 to 17.30 during 1 March to 31 July on new pedestrian bridge over the Sheung Yue River, new pedestrian bridge over the tidal section of the Ng Tung River and existing bridge between KTN areas C2-2 and C1-8.</p> <p>Review Design and construction methods for all bridges especially those on the Sheung Yue and tidal Ng Tung Rivers and adopt methods which minimize impacts on Long Valley and the rivers, and disturbance and fragmentation impacts on fauna.</p> <p>No overlap in construction of bridges over main river channels. Measures to ensure no hydrological disruption to Long Valley Watercourse and water supply to Long Valley to be designed at</p>	Minimize disturbance impacts (including cumulative impacts with cycle track project) to flight-lines of breeding ardeids.	Project Proponent/Detailed Design Consultant Contractor	Along and within Sheung Yue and Ng Tung Rivers, Long Valley, Long Valley and watercourse upstream areas including KTN area B3-12	Detailed design/construction phase.	N/A

		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 egret habitat provision and establishment. Review condition and location of egrets before commencement of works. Formulate and implement additional mitigation measures as appropriate. Phasing of works near and within Man Kam To Road Egret outside breeding season	Compensate for loss of Man Kam To Road egret habitat. Avoid mortality of breeding egrets	Project Proponent/ Detailed Design Consultant/ Contractor	FLN area A1-7 500m from Man Kam To Road Egret.	Construction phase.	N/A
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.	N/A

		(1 March to 31 July)					
		Provision of alternative foraging habitat along main river channels for large waterbirds.					
S13.9	E14	<p>Buffer zone of 15-30m as appropriate on both sides (not less than 45m total width) of Ma Tso Lung Stream north of the point where it is crossed by the LMC Loop Eastern Connection Road, and Ma Tso Lung Stream diversion during construction of the LMC Loop Eastern Connection Road; development along lower reaches of Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream in OU zones in KTN areas F1-2 and F1-3 to be set back beyond buffer.</p> <p>Construction and maintenance of permanent 1.2m high solid faunal barrier at all at-grade sections of LMC Loop eastern connection Road north of junction with road D4 within 15-30m as appropriate of Ma Tso Lung Stream buffer and construction of faunal underpass beneath road.</p> <p>Compensation for the loss of seasonally wet grassland at Ma Tso Lung by habitat restoration and enhancement along diverted section of Ma Tso Lung Stream.</p>	Minimize impacts direct and indirect impacts of habitat loss, disturbance, pollution and fragmentation on Ma Tso Lung Stream and marsh and riparian corridor of importance to species of conservation significance.	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.	N/A
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	<p>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.</p> <p>Pre-site clearance check on all construction sites and pre – works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of protected plant species/specimens of conservation significance. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works,</p> <p>Pre-site clearance of construction sites in Crest Hill area, KTN areas D1-7, D1-11 and G1-5 (where Eurasian Hobby was recorded) and on Cheung Po Tau, FLN area A3-1 (where Grey Nightjar was recorded) for presence of any breeding birds/breeding sites. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and</p>	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	<p>Pre-works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of flora or fauna of conservation significance and bat roosts. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement.</p> <p>Pre-site clearance check on all construction sites for presence of reptile species of conservation significance, capture and translocate to receptor site; review translocation options in respect to species in Ma Tso Lung area and determine whether release locally or elsewhere is appropriate. Seek agreement of relevant authorities including AFCD in respect of proposed measures then implement</p> <p>Pre-works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of Small Snakehead and <i>Sommaniathephusa zanklon</i>. Capture any <i>Sommaniathephusa zanklon</i> found and translocate to Ma Tso Lung Stream/ other</p>	Minimize impacts to flora and fauna of conservation significance. Minimize impacts to protected fauna and flora species. Consider and implement adjustments to avoid, minimize or compensate for impacts; including adjustments to design, timing of works, 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

		<p>Guidelines stated should be followed.</p> <p>For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream. Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.</p>			<p>Hang San Tsuen that will flow under the Fanling Bypass Eastern Section</p>	Phase	
S.12.A9 MM4	LV5- DP2	<p>Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction.</p> <p>In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification.</p> <p>Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</p>	Protect and Preserve Trees	Government/ Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A
S.12.A9 MM5	LV6- DP2	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be</p>	Transplant Trees where suitable for transplantation	Government Detailed	<i>Onsite where possible,</i>	Prior to Construction,	N/A

		<p>transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit" should be referred to.</p>		Design Consultant/ Contractor	<i>otherwise consider offsite locations</i>	Construction Phase & Maintenance in Operation Phase	
S.12.A9 MM6	LV7- DP2	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	Government Detailed Design Consultant/ Contractor	<i>Onsite</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM8	LV9- DP2	<p>Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The</p>	<p>Reprovide areas of woodland to compensate for</p>	Project Proponent/ Detailed	<i>In areas identified in the EIA</i>	Prior to Construction, Construction	N/A

	<p>location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <p>The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is</p>	those areas of quality woodland lost.	Design Consultant/ Contractor/ Maintenance Authority	Landscape Mitigation Plans and as agreed with AFCD	Phase & Maintenance in Operation Phase	
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		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	<i>On appropriate structures</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV11- DP2	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government Detailed Design Consultant/ Contractor	<i>Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM12	LV12- DP2	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate	To soften the hard, straight edges and provide greening along roads.	Government Detailed Design Consultant/ Contractor	<i>On viaducts or along roads.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		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	<i>Onsite where possible. Otherwise consider offsite locations</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM14.3	LV14- DP2	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Detailed Design Consultant/ Contractor	<i>Channelized watercourse, particularly the Ma Wat River Channel Diversion</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		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	<i>E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA</i>	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
Landscape and Visual (Construction)							
S.12.A9 MM16	LV16- DP2	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	<i>Throughout NDAs</i>	Construction Phase	^
S.12.A9 MM17	LV17- DP2	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	<i>Throughout NDAs</i>	Construction and Operation Phases	N/A
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	<p>General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to.</p> <p>With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.</p>		Detailed Design Consultant/ Contractor	<i>Throughout NDAs,</i>	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	^
S.12.A9 MM14.4	LV4-DP3	<p>Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed.</p> <p>For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream.</p> <p>Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.</p>	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	<i>All watercourses, particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern Section</i>	Prior to Construction and Construction Phase	N/A

S.12.A9 MM4	LV5- DP3	<p>Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</p>	Protect and Preserve Trees	Government Detailed Design Consultant/ Contractor	<i>Onsite</i>	Prior to Construction and Construction Phase	N/A
S.12.A9 MM5	LV6- DP3	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along</p>	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	<i>Onsite where possible. Otherwise consider offsite locations.</i>	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	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	Government Detailed Design Consultant/ Contractor	<i>Onsite</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM7	LV8- DP3	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p> <p>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>,</p>	Compensate for trees and shrubs lost due to the Project.	Government Detailed Design Consultant/ Contractor	<i>Onsite where possible. Otherwise consider offsite locations</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		<i>Ixora chinensis</i> , <i>Ligustrum sinense</i> , <i>Litsea rotundifolia</i> , <i>Melastoma dodecandrum</i> , <i>Atalantia buxifolia</i> , <i>Rhodomyrtus tomentosa</i> , <i>Rhaphiolepis indica</i> , and <i>Rhododendron simsii</i> are suggested..					
S.12.A9 MM8	LV9- DP3	<p>Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <p>The area allocated for compensatory woodland planting allows in</p>	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	<i>In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.					
S.12.A9 MM9	LV10- DP3	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government Detailed Design Consultant/ Contractor	<i>On appropriate structures</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV11- DP3	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government Detailed Design Consultant/ Contractor	<i>Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM12	LV12- 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	<i>On viaducts or along roads.</i>	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	<i>Onsite where possible. Otherwise consider offsite locations</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM14.3	LV14- DP3	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River 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	<i>Channelized watercourse, particularly the Ma Wat River Channel Diversion</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		<p>planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc.</p> <p>For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.</p>					
S.12.A9 MM15	LV15- DP3	<p>Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs.</p> <p>All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.</p>		<p>Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority</p>	<p><i>E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA</i></p>	<p>Prior to Construction, Construction Phase Maintenance in Operation Phase</p>	N/A
Landscape and Visual (Construction)							
S.12.A9 MM16	LV16- DP3	<p>Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used.</p> <p>Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).</p>	<p>To screen undesirable views of the works site.</p>	Contractor	<p><i>Throughout NDAs</i></p>	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	<u>Throughout NDAs,</u>	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	N/A
S.12.A9 MM1	LV2-DP4	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor/	<u>Throughout NDAs,</u> <u>particularly for</u> <u>reservoirs</u>	Prior to Construction	N/A

		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	<p>Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines.</p> <p>All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise</p>	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant/	Throughout NDAs	Prior to Construction	N/A

		<p>barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated.</p> <p>Construction time frame should also be considered and designs seek to keep it to a practical minimum.</p>					
S.12.A9 MM4	LV4- DP4	<p>Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</p>	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	*
S.12.A9 MM5	LV5- DP4	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary</p>	Transplant Trees where suitable for transplantation	Government / Detailed Design Consultant/ Contractor	Onsite possible. Consider locations where Otherwise offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		<p>tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.</p>					
S.12.A9 MM6	LV6- DP4	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	<p>Government Detailed Design Consultant/ Contractor</p>	Onsite	<p>Prior to Construction, Construction Phase & Maintenance in Operation Phase</p>	N/A
S.12.A9 MM7	LV7- DP4	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process</p>	<p>Compensate for trees and shrubs lost due to the Project.</p>	<p>Government Detailed Design Consultant/ Contractor</p>	<p>Onsite where possible. Otherwise consider offsite locations</p>	<p>Prior to Construction, Construction Phase & Maintenance in</p>	N/A

		<p>under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Raphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested..</p>				Operation Phase	
S.12.A9 MM8	LV8- DP4	<p>Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus</i></p>	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		<p>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, Rhapsiolepis 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.</p>					
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	<u>Throughout NDAs</u>	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	<p><u>Undertaking Further Archaeological Survey to Cover the Outstanding Areas</u></p> <p>Further archaeological surveys to cover the outstanding areas of the not-yet-surveyed-area with medium archaeological potential located with areas with proposed development as presented in Figure 11.9 should be implemented after land resumption to confirm and verify the findings of the EIA. The survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance. It should be noted that the scope of further archaeological survey is based on the current proposed alignment. Any additional works areas which have not been covered by the current archaeological impact assessment should be covered as soon as possible. Subject to the findings of the archaeological survey to be conducted after land resumption, additional mitigation measures would be designed and implemented before the commencement of construction works to mitigate the adverse impact.</p>	To confirm and verify the findings of the EIA	Project Proponent/ Contractor/ Qualified Archaeologist	In the not-yet-surveyed- areas with medium archaeological potential located within the work extent of DP4	After land resumption but before construction	N/A
S11.6.1	CH3-DP4	<p><u>Undertaking Induction Training</u></p> <p>Induction training should be provided to the construction Contractor before the commencement of the excavation works in Spot E. An induction will be conducted as part of the</p>	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	<u>Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages</u> Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out by the Project Proponent.	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	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	<u>Undertaking baseline condition survey and baseline vibration impact assessment</u> In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration	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	<u>Relocation of Built Heritages</u> Relocation of built heritages to a reasonable location nearby may be required.	To preserve the directly impacted sites by relocation	Project Proponent/ Contractor	Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of construction works	N/A
<i>Cultural Heritage (Construction Phase)</i>							
S11.6.2	CH7-DP4	<u>Conducting Construction Vibration Monitoring and Structural Strengthening Measures</u> Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment,	N/A
<i>DP5- New sewage pumping stations (SPSs) in KTN NDA</i>							
<i>Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)</i>							
S.12.B9	S.12.B9	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try 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	<ul style="list-style-type: none"> 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

		<p>Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines.</p> <ul style="list-style-type: none"> • 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	<p>Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection</p>	Protect and Preserve Trees	Government Detailed Design Consultant/	Onsite	Prior to Construction and Construction	^

		<p>Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>• A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</p>		Contractor		Phase	
S.12.B9 MM5	LV5- DP5	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>• A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along</p>	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite location.	Prior to Construction,, Construction Phase & Maintenance in Operation Phase	N/A

		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	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <ul style="list-style-type: none"> • In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes. 	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	Government/ Detailed Design Consultant/	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM7	LV7- DP5	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p>	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

		<ul style="list-style-type: none"> Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Raphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested.. 					
S.12.B9 MM8	LV8- DP5	<p>Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory</p>	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		<p>vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <ul style="list-style-type: none"> • 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	<i>On appropriate structures</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM10	LV10- DP5	<ul style="list-style-type: none"> • 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/	<i>On appropriate buildings</i>	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	<i>Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.</i>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM14.3	LV12- DP5	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. • For example, a stretch of the Ma Wat River Channel in the	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Detailed Design Consultant/ Contractor	<u>Channelized watercourse, particularly the Ma Wat River Channel Diversion</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		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	<p>Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used.</p> <ul style="list-style-type: none"> Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report). 	To screen undesirable views of the works site.	Contractor	<i>Throughout NDAs</i>	Construction Phase	N/A
S.12.B9 MM17	LV14- DP5	<p>Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.</p> <ul style="list-style-type: none"> Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase. 	To minimize glare impact to adjacent VSRs	Government / Contractor	<i>Throughout NDAs</i>	Construction and Operation Phases	^
Ecology (Construction Phase)							
S.13.9	E1-DP5	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse	Contractor.	<i>Interface between areas/habitats of ecological</i>	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	<p>Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</p>	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	<u>Onsite</u>	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	<u>On appropriate structures</u>	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	<u>On appropriate buildings</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
DP10- Fanling Bypass Eastern Section (New Road)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.D9	LV1- DP10	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed Design Consultant/ Contractor	<u>Throughout NDAs.</u>	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	^
S.12.D9 MM1	LV2- DP10	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut	Reduce topographical changes and minimize land resumption	Government/ Detailed Design Consultant/ Contractor	<u>Throughout NDAs.</u> <u>particularly for reservoirs</u>	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	<p>Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</p>	Protect and Preserve Trees	Government/ Detailed Design Consultant/ Contractor	<u>Onsite</u>	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/	<u>Onsite where possible. Otherwise</u>	Prior to Construction, Construction	N/A

		<p>temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.</p>		Contractor	<u>consider offsite locations</u>	Phase & Maintenance in Operation Phase	
S.12.D9 MM6	LV5- DP10	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	Government/ Detailed Design Consultant/ Contractor	<u>Onsite</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM7	LV6- DP10	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant	Compensate for trees and shrubs lost due to the	Government/ Detailed Design	<u>Onsite where possible.</u>	Prior to Construction,	N/A

		<p>Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested.</p>	Project.	Consultant/ Contractor	<u>Otherwise</u> <u>consider offsite</u> <u>locations</u>	Construction Phase & Maintenance in Operation Phase	
S.12.D9 MM8	LV7- DP10	<p>Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate</p>	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	<u>In areas identified</u> <u>in the EIA</u> <u>Landscape</u> <u>Mitigation Plans</u> <u>and as agreed</u> <u>with AFCD</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		<p>locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i>. The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.</p>					
S.12.D9 MM9	LV8- DP10	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government/ Detailed Design Consultant/ Contractor	<u>On appropriate structures</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9	LV9-	Screen Planting – Tall screen/buffer trees and shrubs should be	To screen proposed	Government/	<u>Along roads.</u>	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	<u>around suitable built structures. or around VSRs to contain their view out to the NDA structures.</u>	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	<u>On viaducts or along roads.</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM14.3	LV11- DP10	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department 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	<u>Channelized watercourse. particularly the Ma Wat River Channel Diversion</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		<p>upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc.</p> <p>For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.</p>					
Landscape and Visual (Construction)							
S.12.D9 MM16	LV12- DP10	<p>Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used.</p> <p>Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).</p>	To screen undesirable views of the works site.	Contractor	<u>Throughout NDAs</u>	Construction Phase	^
S.12.D9 MM17	LV13- DP10	<p>Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.</p> <p>Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.</p>	To minimize glare impact to adjacent VSRs	Government / Contractor	<u>Throughout NDAs</u>	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	<u>Throughout NDAs</u>	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.	<u>FLN area D1-3.</u>	Construction phase.	N/A
S.13.9	E4- DP10	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna. Measures to minimize flight-line impacts to birds, especially breeding ardeids.	Contractor.	<u>Interface between areas/habitats of ecological importance and works areas (all of the north side of the Bypass works areas west of interchange with Sha Tau Kok Road).</u>	Construction phase.	N/A
Cultural Heritage (Construction Phase)							
S11.6.2	CH4- DP10	<u>Conducting Construction Vibration Monitoring and Structural Strengthening Measures</u> Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the 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.	<u>Identified potential vibration impacted built heritage features</u>	Construction phase, with details specified in baseline condition survey and baseline vibration impact	N/A

		stated in the EIA report.				assessment,	
<i>DP12-Reprovision of temporary wholesale market in FLN NDA</i>							
<i>Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)</i>							
S.12.D9	LV1- DP12	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed design consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	N/A
S.12.D9 MM1	LV2- DP12	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A

S.12.D9 MM2	LV3- DP12	<p>Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines.</p> <p>All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated.</p>	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant	Throughout NDAs	Prior to Construction	N/A
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		Construction time frame should also be considered and designs seek to keep it to a practical minimum.					
S.12.D9 MM4	LV4- DP12	<p>Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</p>	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A
S.12.D9 MM5	LV5- DP12	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

		<p>project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.</p>					
S.12.D9 MM6	LV6- DP12	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	Government / Detailed Design Consultant/ Contractor	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

		<p>compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p> <p>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested.</p>		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

<i>Landscape and Visual (Construction)</i>							
S.12.D9 MM16	LV9- DP12	<p>Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used.</p> <p>Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).</p>	To screen undesirable views of the works site.	Contractor	Throughout NDAs	Construction Phase	N/A
S.12.D9 MM17	LV10- DP12	<p>Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.</p> <p>Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.</p>	To minimize glare impact to adjacent VSRs	Government / Contractor	Throughout NDAs	Construction and Operation Phases	N/A

Implementation status:

- ^ Mitigation measure was fully implemented
- * Observation/reminder was made during site audit but improved/rectified by the contractor
- # Observation/reminder was made during site audit but not yet improved/rectified by the contractor
- X Non-compliance of mitigation measure
- Non-compliance but rectified by the contractor

N/A Not Applicable at this stage as no such site activities were conducted in the reporting period

APPENDIX O
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	0.000	0.000	0.000	43.303	0.000	0.000	0.002	0.120	0.002	0.000	0.220
February											
March											
April											
May											
June											
Sub-total	0.000	0.000	0.000	43.303	0.000	0.000	0.002	0.120	0.002	0.000	0.220
July											
August											
September											
October											
November											
December											
Total	28.258	0.000	6.227	62.408	2.926	0.000	38.546	0.355	1.784	0.000	4.528

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in Other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
1,310.619	300.000	1,010.619	0.000	0.000	0.000	20.000	10.000	20.000	0.500	10.000

- Notes: (1) The performance target are given in PS Clause 1.115(14)
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
(4) The Contractor shall also submit the latest forecast of the amount of C&D materials expected to be generated from the Works, together with a break down of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m³.
(5) Conversion factors for reporting purpose:
in-situ: rock = 2.5 tonnes/m³; soil = 2.0 tonnes/m³
excavated: rock = 2.0 tonnes/m³; soil = 1.8 tonnes/m³
broken concrete and bitumen = 2.4 tonnes/m³
C&D Waste = 0.9 tonnes/m³
Non-inert C&D material: 6.5m³/dump truck
(6) Numbers are rounded off to the nearest three decimal places
* Forecast



俊和 - 群利聯營體
CW - KL JV

Name of Department: CEDD

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.



俊和 - 群利聯營體
CW - KL JV

Name of Department: CEDD

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	288.53	0.00	0.00	0.00	288.53	0.00	0.00	0.00	0.00	0.00	31.68
Feb											
Mar											
Apr											
May											
June											
Sub-total	288.53	0.00	0.00	0.00	288.53	0.00	0.00	0.00	0.00	0.00	31.68
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Sub-total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	2,305.76	0.00	0.00	0.00	2,305.76	0.00	3.86	0.04	0.00	0.00	108.69

Notes:

- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) Broken concrete for recycling into aggregates.

Forecast of Total Quantities of C&D Materials to be Generated from the ND/2009/02											
Forecast Made at the End of the Project	Total Quantity Generated	Hard Rock & Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemicals Waste	Others, e.g. general refuse
									(see Note 2)		
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
Total:	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	–	–	–	–	–	–	–	–	–	–	–
Mar	–	–	–	–	–	–	–	–	–	–	–
Apr	–	–	–	–	–	–	–	–	–	–	–
May	–	–	–	–	–	–	–	–	–	–	–
Jun	–	–	–	–	–	–	–	–	–	–	–
Sub-Total	0.83	–	–	0.22	0.61	–	–	–	–	–	0.075
Jul	–	–	–	–	–	–	–	–	–	–	–
Aug	–	–	–	–	–	–	–	–	–	–	–
Sep	–	–	–	–	–	–	–	–	–	–	–
Oct	–	–	–	–	–	–	–	–	–	–	–
Nov	–	–	–	–	–	–	–	–	–	–	–
Dec	–	–	–	–	–	–	–	–	–	–	–
Total	1.63	–	–	0.22	1.41	0	0	0	0	0	0.352

*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].
-

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	0.360	0.000	1.725	0.571	0.000	0.419	0.065	55.020	3.482	99.590
Feb-21												
Mar-21												
Apr-21												
May-21												
Jun-21												
Sub-total	1.725	0.000	0.360	0.000	1.725	0.571	0.000	0.419	0.065	55.020	3.482	99.590
Jul-21												
Aug-21												
Sep-21												
Oct-21												
Nov-21												
Dec-21												
Total in 2021	1.725	0.000	0.360	0.000	1.725	0.571	0.000	0.419	0.065	55.020	3.482	99.590
Total of the Project	4.095	0.000	0.885	0.000	4.095	1.513	0.003	0.588	0.075	371.944	3.482	100.167

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											
Mar											
Apr											
May											
June											
Sub-total											
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total	0.000	0.000	0.000	0.000	2.960	0.000	0.000	0.000	0.000	0.000	0.035

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].

**APPENDIX P
COMPLAINT LOG**

Appendix P - Complaint Log

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2020-07-01	Public Road at Portion 6a (ND/2019/01)	13 th July 2020	The EPD visit on 13 July 2020 was to respond the complaint received from the 2nd week in July regarding the dust problem in public road of Portion 6a. Mr. Tse (EPD) observed muddy wheel track on the public road, and he expressed that the public road should keep free of mud even it was inside the project area. He also advised BKRWJV (the Contractor) to clean up the muddy wheel track and provide rectified photos to him.	A designated person is provided at the ingress/egress for vehicle washing before the wheel washing facility is in use, this is to make sure all vehicle are free of mud before leaving the site. And, the designated person is also responsible for cleaning the public road if any mud is found on it.	Closed
COM-2020-11-01	Portion 4 and Portion 7 near Dills Corner Garden (ND/2019/01)	11 th November 2020	The EPD inspection at Portion 4 on 11 November 2020 was to respond the complaint regarding the dust problem near Dills Corner Garden referred by a District Council Member. No construction activities was carried out and no obvious dust emission was observed. EPD advised BKRWJV (the Contractor) to increase the height of temporary water barrier and install sprinklers on bare ground. Another EPD inspection was conducted on 26 November 2020 at Portion 7 for the dust complaint. During inspection, no obvious dust	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
			emission was observed and potential dust may generate from top soil which appear to be dry. EPD advised the Contractor to install sprinklers on top soil for dust suppression.		
COM-2020-11-02	Works Area A & B (ND/2019/05)	27 th November 2020	The complainant complained about the noise generated from the alarm of scissors platform during works for PM's site accommodation on Sunday and called the police force. Police officer has checked that Construction Noise Permit has been applied for the construction work. Also, the complainant complained about the reflective blue color of roof material of site office.	Permit-to-Work system was properly implemented for works at restricted hours. The PME used have been checked in compliance with the valid Construction Noise Permit (CNP No.: GW-RN0788-20). Acoustics mats were erected between works area and noise sensitive receivers. Scissor platform or noisy work activities will be arranged and minimized to be used on Sunday or evening time on weekdays. Specific training for the quieter works arrangement was provided to workers. Also, the blue roof will be covered by non-reflective green roof material.	Closed
COM-2021-01-01	Ma Tso Lung Road (ND/2019/01)	7 th January 2021	A complaint regarding soil deposited on Ma Tso Lung Road was referred by EPD verbally.	No soil / mud deposit or mud track were observed along the Ma Tso Lung Road during investigation and site inspection between Contractor, the <i>Supervisor</i> , ET and IEC. The road condition of Ma Tso Lung Road will be closely monitored and the public road will be regularly cleaned if mud deposit was observed. Wheel washing facilities at every site entrance will be regularly monitored to ensure	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				proper implementation of dust control measures.	
COM-2021-01-02	Ma Tso Lung Road (Near L/P VD5622) (ND/2019/01)	13 th January 2021	A complaint was received from 1823 regarding the suspected odour emitted from muddy water discharged.	Water sample collected from the wastewater treatment facility was clear and no odour was detected. Sewage from chemical toilet was collected on a regular basis by licensed collector. Brownish wastewater was observed discharging upstream of the site from an unknown factory to the uncharted channel which may be potential source of the odour.	Closed
COM-2021-01-03	CTC Storage Yard (ND/2019/05)	22 nd January 2021	A complaint was referred from EPD regarding the noise generated before 7 a.m. on weekdays and machinery noise generated on Sunday from CTC Storage Yard.	No attendance record of workers working for CTC Storage Yard earlier than 8 a.m. and on Sunday (day of complaint) was recorded. To ensure strict compliance to Noise Control Ordinance and prevent noise nuisance to the nearby villages, the Contractor has implemented the following enhancement measures: 1. Issue a memo to the relevant sub-contractor on restricted working hour. 2. Conduct specific training to sub-contractor frontline supervisor and works. 3. Apply a construction noise permit for the suspected location.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2021-01-04	Ho Sheung Heung (ND/2019/02)	28 th January 2021	A complaint was received from 1823 regarding an idling construction vehicle near Ho Sheung Heung to operate the engine for over 10 minutes. Also, the complainant complained on noise nuisance from the speaker during meeting.	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 issue. For noise nuisance from the meeting, the speaker volume in the future event will be lower as much as possible.	Closed

APPENDIX Q
SUMMARY OF SUCCESSFUL
PROSECUTION

Appendix Q - Summary of Successful Prosecution

Date of Successful Prosecution	Details of the Successful Prosecution	Status	Follow Up
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**APPENDIX R
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 <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	*	
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	A copy of Photographic and cartographic records of directly impacted historical buildings at HKT08 and the entrance gate of HKT03	prior to the commencement of the respective removal or relocation works	*	
		Others	For Approval - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	*	
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 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	Traffic Noise Mitigation Plan	Before construction	For Approval	no later than 1 month before the commencement of construction	Deposited 31 July 2019	EPD Approved 9 August 2019
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records	Others	Deposit - A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical lanscape features at Locatoins KT38, KT44 and KT52	prior to the commencement of the respective removal or relocation works	*	
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
2.2	Employment of IEC				Established 23 January 2020	Construction Phase ET
					Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 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 Approval - 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 th 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

DP: Designated Project

*tentative submission date will be supplemented once available

DP4	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5				
CEDD Contract No. ND/2019/03 - Development of Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park						
Construction commencement date		3-Jul-20				
Operation commencement date		tbc				
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	no later than 8 weeks prior to the commencement of construction	Notified 28 April 2020	
2.1	Establish of ET	Before construction	Establish - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 18 June 2020	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 18 June 2020	EPD Approval 29 June 2020
2.6	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	To Conduct - A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer 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	Deposit - A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at locations HKT03, KT16, KT17 and KT18	prior to the commencement of the respective removal or relocation works	N/A	
		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	Egrettry Habitat Creation and Management Plan	Before construction	Approval	before the commencement of construction	Submitted 20 October 2020	EPD approved 4 November 2020
2.8	Detailed Design of Siu Hang San Tsuen Stream	Before construction	Deposit	before the commencement of construction	N/A	
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 <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	N/A	
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:

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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	Egretty Habitat Creation and Management Plan	Before construction	Approval	before the commencement of construction	N/A	
2.8	Detailed Design of Siu Hang San Tsuen Stream	Before construction	Deposit	before the commencement of construction	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	Submitted by Pre-construction ET Submitted 1 September 2020	for EP Condition 2.10
3.4	Monthly EM&A Report	During construction	Submit	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by ET monthly	
4.2	Dedicated website	During construction	Set up and Notify in writing -- the internet address	in place within one month after the commencement of construction of the Project	Notified 22 April 2020	cover all EPs
		During construction and operation	Upload -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:

tbc: To be confirmed

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DP12	EP-475/2013/A	Reprovision of temporary Wholesale Market in Fanling North New Development Area				
Contract No. ND/2019/06 - Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products						
Construction commencement date			29-Oct-19			
Operation commencement date			tbc			
EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	no later than 8 weeks prior to the commencement of construction	Notified 15 October 2019	
2.1	Establish of ET	Before construction	Establish - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
		Established 20 February 2020			Construction Phase IEC	
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 14 October 2019	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 14 October 2019	
2.6	Landscape Plan	Others	Deposit	at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures of the Project	*	
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre-construction ET	
3.4	Monthly EM&A Report	During construction	Submit	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by 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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