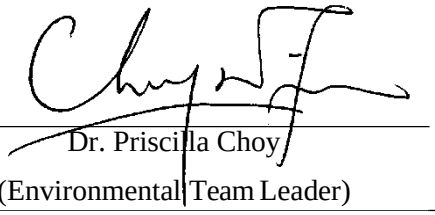
Civil Engineering and Development Department

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 February 2022

(Version 1.0)

Certified By



Dr. Priscilla Choy
(Environmental Team Leader)

REMARKS:

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

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

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

Monthly Environmental Monitoring and Audit Report No. 28 (February 2022)

19 March 2022

BY EMAIL

Dear Sir,

We refer to email of 18 March 2022 attaching the Monthly Environmental Monitoring and Audit Report No. 28 prepared by the Environmental Team (ET) of the captioned.

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

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

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

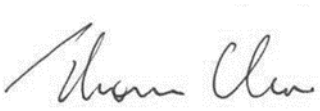

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TABLE OF CONTENTS

Page

EXECUTIVE SUMMARY 1
Introduction 1
Environmental Monitoring and Audit Progress 2
Breaches of Action and Limit Levels 5
Reporting Changes 6
Future Key Issues 6

1 INTRODUCTION **10**
Purpose of the report 10
Structure of the report 10

2 PROJECT INFORMATION **12**
Background 12
Project Organization 13
Summary of Construction Works Undertaken During Reporting Month 14
Construction Programme 16
Status of Environmental Licences, Notifications and Permits 16

3 AIR QUALITY MONITORING **19**
Monitoring Requirements 19
Monitoring Location 19
Monitoring Equipment 19
Monitoring Parameters, Frequency and Duration 20
Monitoring Methodology and QA/QC Procedure 21
Results and Observations 23
Event and Action Plan 24

4 NOISE MONITORING **25**
Monitoring Requirements 25
Monitoring Location 25
Monitoring Equipment 25
Monitoring Parameters, Frequency and Duration 26
Monitoring Methodology and QA/QC Procedures 27
Maintenance and Calibration 27
Results and Observations 27
Event and Action Plan 29

5 WATER QUALTY MONITORING **30**
Monitoring Requirements 30
Monitoring Parameters, Frequency 30
Results and Observations 31
Monitoring Requirements 31
Monitoring Locations 31
Monitoring Equipment 32
Monitoring Parameters and Frequency 34
Monitoring Methodology 35
QA/QC Requirements 35
Results and Observations 36
Event and Action Plan 36

6 LAND CONTAMINATION (AMBIENT ARSENIC MONITORING) **37**
Monitoring Requirements 37
Monitoring Location 37

Monitoring Equipment 38
Monitoring Parameters, Frequency and Duration 38
Monitoring Methodology and QA/QC Procedure 38
Maintenance/Calibration 39
Laboratory Measurement / Analysis 39
Results and Observations 40
Event and Action Plan 40

7 LANDFILL GAS MONITORING 41
Monitoring Requirement 41
Monitoring Parameters and Frequency 41
Monitoring Locations 41
Monitoring Equipment 41
Results and Observations 42
Event and Action Plan 42

8 BUILT HERITAGE MONITORING 43
Monitoring Requirement 43
Monitoring Location 43
Monitoring Parameters and Frequency 43
Monitoring Equipment 44
Results and Observations 44
Event and Action Plan 44

9 ECOLOGICAL MONITORING 45
Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, Sheung Yue River, Shek Sheung River and Long Valley 45
Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream and Siu Hang San Tsuen Stream, and Long Valley 47
Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution 48
Results and Observation 51
Reference 51

10 ENVIRONMENTAL SITE INSPECTION 45
Site Audits 52
Implementation Status of Environmental Mitigation Measures 55
Implementation Status of Water Quality Mitigation Measures 57
Solid and Liquid Waste Management Status 59
Ecological Mitigation Measures – Creation of Long Valley Nature Park (LVNP) 60

11 ENVIRONMENTAL NON-CONFORMANCE 63
Summary of Exceedances 63
Summary of Environmental Non-Compliance 63
Summary of Environmental Complaint 63
Summary of Environmental Summon and Successful Prosecution 63

12 FUTURE KEY ISSUES 64
Key Issues in the Coming Two Months 64
Monitoring Schedule for the Next Month 71
Construction Programme for the Next Month 71

13 CONCLUSIONS AND RECOMMENDATIONS 72
Conclusions 72
Recommendations 73

LIST OF TABLES

Table I	Works Contracts under relevant Environmental Permit(s) in the Reporting Month
Table II	Summary Table for EM&A Activities in the Reporting Month
Table III	Summary Table for Events Recorded in the Reporting Month
Table IV	Summary Table for Site Activities in the coming Two Months
Table 2.1	Summary of EPs under the Project and the Respective Work Contracts
Table 2.2	Key Contacts of the Project
Table 2.3	Summary Table for Major Site Activities in the Reporting Month
Table 2.4	Status of Environmental Licences, Notifications and Permits
Table 3.1	Location for Air Quality Monitoring Locations
Table 3.2	Air Quality Monitoring Equipment
Table 3.3	Impact Dust Monitoring Parameters, Frequency and Duration
Table 3.4	Summary Table of 1-hour TSP Monitoring Results during the Reporting Month
Table 3.5	Summary Table of 24-hour TSP Monitoring Results during the Reporting Month
Table 3.6	Observation at Dust Monitoring Stations
Table 4.1	Location for Noise Monitoring Stations
Table 4.2	Noise Monitoring Equipment
Table 4.3	Noise Monitoring Parameters, Duration and Frequency
Table 4.4	Summary Table of Noise Monitoring Results during the Reporting Month
Table 4.5	Observation at Noise Monitoring Stations
Table 5.1	Water Quality Monitoring Parameters and Frequency
Table 5.2	Additional Water Quality Monitoring Stations
Table 5.3	Water Quality Monitoring Equipment
Table 5.4	Additional Water Quality Monitoring Parameters and Frequency
Table 5.5	Method for Laboratory Analysis for Water Samples
Table 6.1	Location of Ambient Arsenic Monitoring station
Table 6.2	Ambient Arsenic Monitoring Equipment
Table 6.3	Impact Ambient Arsenic Monitoring Parameters, Frequency and Duration
Table 6.4	Summary Table of 24-hour RSP Monitoring Results during the Reporting Month
Table 7.1	Landfill Gas Monitoring Equipment
Table 8.1	Location of Construction Vibration Monitoring
Table 8.2	Vibration Monitoring Plan
Table 8.3	Vibration Limit for Construction Vibration Monitoring
Table 10.1	Summary of Site Audit
Table 10.2	Observations and Recommendations of Site Audit
Table 10.3	Photographic Records and Implementation Status of Measures
Table 10.4	Specific Water Quality Mitigation Measures for Major Construction Works in the Reporting Month
Table 10.5	Photographic Records of Site Activities in LVNP
Table 12.1	Summary Table for Site Activities, Potential Environmental Impacts and Recommended Mitigation Measures in the coming Two Months

LIST OF DRAWINGS

Drawing no. 1	Project Boundary for the Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas

LIST OF FIGURES

Figure 1	Location of Air Quality Monitoring Station (KTN)
Figure 2	Location of Air Quality Monitoring Station (FLN)
Figure 3	Location of Noise Monitoring Station (KTN)
Figure 4	Location of Noise Monitoring Station (FLN)
Figure 5	Location of Additional Water Quality Monitoring Stations at River Beas
Figure 6	Location of Additional Water Quality Monitoring Stations at River Indus and near Siu Hang San Tsuen Stream
Figure 7	Location of Ambient Arsenic Monitoring Station
Figure 8	Location of Landfill Gas monitoring
Figure 9	Location of Monitoring of Measures to minimize Disturbance to Water Birds on Ng Tung, Sheung Yue River and Long Valley (Transect Routes for T1-T3&T5)
Figure 10	Location of Monitoring Stations at Ma Tso Lung Stream and Siu Hang Sun Tsuen Stream
Figure 11	Location of Transect Routes of Ecological Sensitive Habitats (Non-Aquatic Fauna) Transects (T1, T3-T6)
Figure 12	Hoarding Plan of EP-466/2013
Figure 13	Hoarding Plan of EP-467/2013/A
Figure 14	Hoarding Plan of EP-468/2013/A
Figure 15	Hoarding Plan of EP-469/2013
Figure 16	Hoarding Plan of EP-473/2013/A
Figure 17	Hoarding Plan of EP-475/2013/A

LIST OF APPENDICES

Appendix A Construction Programme
Appendix B Action and Limit Levels
Appendix C Copies of Calibration Certificates
Appendix D Environmental Monitoring Schedules
Appendix E Air Quality and Ambient Arsenic Monitoring Results and Graphical Presentation
Appendix F Noise Monitoring Results and Graphical Presentation
Appendix G Water Quality Monitoring Results and Graphical Presentations
Appendix H Laboratory Testing Reports for Laboratory Analysis
Appendix I Quality Control Reports for SS and Arsenic Laboratory Analysis
Appendix J Landfill Gas Monitoring Results
Appendix K Built Heritage Monitoring Results
Appendix L Ecological Monitoring Results
Appendix M Weather Condition
Appendix N Event Action Plans
Appendix O Summary of Exceedance
Appendix P Site Audit Summary
Appendix Q Environmental Mitigation Implementation Schedule (EMIS)
Appendix R Waste Generation in the Reporting Month
Appendix S Complaint Log
Appendix T Summary of Successful Prosecution
Appendix U Summary Table for Required Submission under Environmental Permits

EXECUTIVE SUMMARY

Introduction

1. This is the 28th 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 February 2022.

2. During the reporting month, the following Works Contracts under relevant Environmental Permit(s) were undertaken for the Project:

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

Works Contracts	Environmental Permit No.	Designated Project (DP)	Commencement date of construction
Contract No. ND/2019/01 - Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works	EP-466/2013	Castle Peak Road Diversion	12th August 2020
	EP-467/2013/A	Kwu Tung North New Development Area Road P1 and P2 and Associated New Kwu Tung Interchange and Pak Shek Au Interchange Improvement	12th August 2020
	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5	1st June 2020
	EP-470/2013	Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works	23rd March 2020
Contract No. ND/2019/02 - Kwu Tung North New Development Area, Phase 1: Roads and Drains between Kwu Tung North New Development Area and Shek Wu Hui	EP-469/2013	Sewage Pumping Stations in Kwu Tung North New Development Area	28th October 2020
Contract No. ND/2019/03 - Kwu Tung North New Development Area, Phase 1: Development of Long Valley Nature Park	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5	3rd July 2020
	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	6th October 2020
Contract No. ND/2019/04 –	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	23rd February 2021

Works Contracts	Environmental Permit No.	Designated Project (DP)	Commencement date of construction
Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)	EP-546/2017	Fanling North Temporary Sewage Pumping Station	16th February 2021
Contract No. ND/2019/05 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	1st August 2020
Contract No. ND/2019/06 - Fanling North New Development Area, Phase 1: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products	EP-475/2013/A	Reprovision of temporary Wholesale Market in Fanling North New Development Area	29th October 2019
Contract No. ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works	Works area not under relevant Environmental Permit for Phase 1 of the Project.		1st March 2021

Environmental Monitoring and Audit Progress

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

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

EM&A Activities	Monitoring Station (s)	Works Contracts						
		ND/2019/01	ND/2019/02	ND/2019/03	ND/2019/04	ND/2019/05	ND/2019/06	ND/2019/07
1-hr Total Suspended Particulates (TSP) Monitoring	FLN-DMS1	N/A	N/A	4, 9, 15, 21, and 25 Feb 22	4, 9, 15, 21, and 25 Feb 22	N/A	N/A	N/A
	FLN-DMS3			N/A	N/A	4, 9, 15, 21, and 25 Feb 22		
	FLN-DMS5			4, 10, 16, 22 and 28 Feb 22	4, 10, 16, 22 and 28 Feb 22	N/A		
	KTN-DMS4	4, 10, 16, 22 and 28 Feb 22		4, 10, 16, 22 and 28 Feb 22	N/A			
24-hr TSP Monitoring	FLN-DMS1	N/A	N/A	4, 8, 14, 18 and 24 Feb 22	4, 8, 14, 18 and 24 Feb 22	N/A	N/A	N/A
	FLN-DMS3			N/A	N/A	4, 8, 14, 18 and 24 Feb 22		
	FLN-DMS5A			4, 10, 16, 22 and 28 Feb 22	4, 10, 16, 22 and 28 Feb 22	N/A		
	KTN-DMS4	4, 10, 16, 22 and 28 Feb 22		4, 10, 16, 22 and 28 Feb 22	N/A			
Noise Monitoring	CP-FLN-NMS1	N/A			4, 9, 15 and 25 Feb 22			N/A
	CP-FLN-NMS2	N/A				4, 9, 15 and 25 Feb 22	N/A	
	CP-KTN-NMS2	10, 16 and 25 Feb 22	N/A	N/A				
	CP-KTN-NMS3							
	CP-KTN-NMS5							
	CP-KTN-NMS6	N/A	10, 16 and 25 Feb 22					
Ecological Survey	Monitoring of Measures to Minimise Disturbance to Water Birds on Ng Tung River, Sheung Yue River, and Long Valley	N/A*	N/A*	4, 8, 11, 15, 18, 21 and 25 Feb 22	8, 15 and 21 Feb 22	N/A*	N/A*	N/A*
	Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream and Siu Hang San Tsuen Stream	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*

EM&A Activities	Monitoring Station (s)	Works Contracts						
		ND/2019/01	ND/2019/02	ND/2019/03	ND/2019/04	ND/2019/05	ND/2019/06	ND/2019/07
	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	17 and 22 Feb 22	17 and 22 Feb 22	17 Feb 22	17 Feb 22	17 Feb 22	N/A*	N/A*
24-hr RSP (Ambient Arsenic) Monitoring for Land Contamination		5, 9, 15, 21 and 25 Feb 22	N/A	5, 9, 15, 21 and 25 Feb 22	N/A	N/A	N/A	N/A
Water Quality Monitoring		N/A	4, 7, 9, 11, 14, 16, 18, 21, 23, 25 and 28 Feb 22	N/A	4, 7, 9, 11, 14, 16, 18, 21, 23, 25 and 28 Feb 22	N/A	N/A	N/A
Landfill Gas Monitoring		26 Feb 22	N/A	N/A	N/A	N/A	N/A	N/A
Built Heritage Monitoring		N/A	N/A	N/A	N/A	Daily assessment subject to construction works conducted within assessment area	N/A	N/A
Environmental Site Inspection		8, 17 and 22 Feb 22	9, 18 and 23 Feb 22	4, 11, 18 and 25 Feb 22	4, 11, 16 and 23 Feb 22	7, 17, 21 and 28 Feb 22	10, 15 and 24 Feb 22	4, 11, 18 and 25 Feb 22

Remark:

N/A – No relevant monitoring is required according to updated EM&A Manual

N/A* – No relevant monitoring is required according to Baseline Ecological Monitoring Plan (Table 3.1)

[1] Since the distance between monitoring station CP-KTN-NMS2 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03

[2] Since the distance between monitoring station CP-KTN-NMS3 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03

[3] Since the distance between monitoring station CP-KTN-NMS1 and site boundary of ND/2019/02 under EP-469/2013 exceeds 300m. The monitoring station is not applicable to ND/2019/02

[4] Since the distance between monitoring station FLN-DMS1 and site boundary of ND/2019/05 under EP-473/2013/A exceeds500m. The monitoring station is not applicable to ND/2019/05

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

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

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

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

Breaches of Action and Limit Levels

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

Table III Summary Table for Events Recorded in the Reporting Month

Environmental Monitoring	Parameter	No. of non-project related Exceedances		Total No. of non-project related Exceedances	No. of Exceedance related to the Construction Works of the Contract		Total No. of Exceedance related to the Construction Works of the Contract
		Action Level	Limit Level		Action Level	Limit Level	
Air Quality	1-hr TSP	0	0	0	0	0	0
	24-hr TSP	0	0	0	0	0	0
	24-hr RSP (Ambient Arsenic)	0	0	0	0	0	0
Noise	$L_{eq(30min)}$	0	0	0	0	0	0
Water Quality [1]	DO	0	0	0	0	0	0
	Turbidity	0	1	1	0	1	1
	SS	0	1	1	0	1	1
	Arsenic	0	0	0	0	0	0
Landfill Gas	O_2	0	0	0	0	0	0
	CH_4						
	CO_2						
Cultural heritage	Built Heritage Monitoring	0	0	0	0	0	0

Air Quality

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

Construction Noise

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

Water Quality

7. All additional water quality monitoring was conducted as scheduled in the reporting month. Two (2) Limit Level exceedances for turbidity, two (2) Limit Level exceedances for suspended solids of impact water quality monitoring were recorded. After investigation, one (1) Limit Level exceedances for turbidity and one (1) Limit Level exceedances for suspended solids at monitoring station, NTR-IS1, were found due to Contract No. ND/2019/04. Other exceedances were considered non-projected

related. No construction of channel for alternation of natural streams was carried out in the reporting month. Therefore, no water quality monitoring according to pre-construction ET's Updated EM&A Manual and Baseline Water Quality Monitoring Report (KTN & FLN NDA) was conducted. For the details, please refer to Section 5.

Land Contamination

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

Landfill Gas Monitoring

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

Built Heritage Monitoring

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

Ecological Monitoring

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

Complaint Log

12. One environmental complaint for ND/2019/04 was received in the reporting month.

Notification of Summons and Successful Prosecutions

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

Reporting Changes

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

Future Key Issues

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

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

Contract No.	Site Activities (March 2022 and April 2022)
ND/2019/01	(a) Site Clearance, remove of existing structures and tree felling in Portion 1a (b) Site clearance, ground investigation, sheet piling, excavation and drainage in Portion 1b (c) Site Clearance, remove of existing structures and tree felling in Portion 1e (d) Site clearance, tree felling, temporary road construction and site formation work in Portion 2 (e) Site clearance, backfilling, excavation and tree felling in Portion 3 (f) Site clearance, sheet piling and excavation, drainage works and temporary road construction in Portion 5 (g) Site Clearance, sheet piling and excavation, pipes laying, backfilling, construction of KB01 retaining wall, haul road construction in Portion 6a (h) Operation of HAC treatment facility in Portion 6b (i) Site clearance, sheetpiling and excavation, pipes laying and construction of APLR in Portion 7 (j) Construction of retaining Wall, slope drainage and maintenance access construction, RC construction of flushing water service reservoir and fresh water reservoir, construction of temporary haul road in Portion 8a (k) Sheet piling for receiving pit, trenchless works, excavation in Portion 8b (l) Sheet piling and excavation, pipes laying, demolition of existing structures, GI works in Portion 9b (m) Stockpile of soil and excavation in Portion 9c (n) Excavation, sheetpiling for ELS, drainage works and road construction in Portion 10a (o) Sheetpiling and excavation, drainage works in Portion 10b (p) Construction of MBR at 11b (q) Construction of temporary sewage pumping station in Portion 14
ND/2019/02	(a) Pipe Jacking (b) ELS (c) Concreting (d) Backfilling (e) Sheet Pile Installation (f) Bedding and Pipe Laying (g) Cut and Fill of Slope
ND/2019/03	(a) Portion 1 & Portion 1A - Drainage works at Yin Kong Road - Construction of Pai Lau (b) Long Valley - Erection of Permanent Boundary Structure - Construction of Compacted Earth Path / Walkway - Construction of Ditches - Construction of Irrigation Channel - Construction of Decking & Sluices - Construction of Wetland Boardwalk - Construction of Type 1 Storage House - Construction of Type 2 Storage House - Construction of Tea House - Construction of Composting Facility - Construction of Bird Hide - Construction of Outdoor Classroom - Construction of Storage Sheds

	- Wetland Creation & Restoration works
ND/2019/04	(a) Site clearance (b) Tree felling (c) Predrill (d) Bored piling (e) Excavation (f) Sheet piling (g) ELS
ND/2019/05	(a) North Team Works - Pre-drilling for bored piles at B1 & B2(Portion II), C1(Portion II) & C1-03 - Bored piling at B1(Portion I), B1&B2(Portion II), C1(Portion II), C1-02b, C1-03, C2-02, C2-03a, C2-03b, C3-02, C3-03a, C3-04a, D2-01, E2-01. - ELS and Pile cap construction at C1-04, C3-04b, D1-01, D1-02, D1-03, D1-04, E1-01, E1-02, E1-03 & E1-04 - C4-01 Portal Beam - Bailey bridge construction - Piling platform & haul road construction from B2-03 to C1-02a at Portion II - Footing construction at C4-02 - Pier construction at C3-03b, C4-03, C4-04aM, C4-04bM, D1-01, E1-01, E1-02, E1-03 & E1-04. (b) Viaduct Works - Fabrication of 6th to 8th typical segment mould to be completed by the end of Feb 2022. - 1st SOP is targeted to cast by the middle of Feb 2022. - Target to cast in 16 segments in Feb 2022 and 24 segments in Mar 2022. - Fabrication of launching girder (LG) is completed, the test in progress. Start LG delivery to HK site in Jan 2022, will finish in Mar 2022. - Fabrication of 1st set Form Travel (FT) is targeted to complete in Feb 2022 and delivery to HK site in the middle of Mar 2022. - Bridge rotation design of Pier E2-01 submited to ICE endorsement in end of Jan 2022. The design of Pier D2-01 to be completed in Feb 2022 and ICE endorsement in Mar 2022. - Construction of ground beam for motorized segment trolley in CTC yard was in progress. (c) South Team Works - Venton Area – Gas main laying. - Portion 13 – Twin DN1200 storm drain construction. - Portion 17 and 18 – Construction of DN 600 and DN450 sewer. RW 52 bay 6 - Portion 18 – Gas main laying - TWSR (West) – RW06 construction and FS04 slope works. - HKY FB (East) – construction of LT1, P02 - Portion 11 – DN1200 and DN600 watermain laying work. - E2-02 pier – Construction of tower crane foundation. Construction of SOP - E2-03 – Pile cap construction. - E3-01 – Pile cap construction. - E3-03 – Pier Head and SOP construction - D2-02 – Pile cap construction. - D2-03 – Piling works.

ND/2019/06	(a) Rectification works for T&C of E&M installations for the steel canopy, MOB and additional water tank and pump house at Portion 3 (b) Application of additional coating and colour strip painting on stall area at Portion 3 (c) Finishing works for the additional water tank and pump house at Portion 3 (d) Flag pole installation at Portion 3 (e) Installation of handrails at MOB at Portion 4 and new pump house at Portion 3 (f) Joint sealant application for carriageway at Portion 3 (g) CI covers and grating installation at Portion 3 (h) Installation of signage of the market at Portion 3
ND/2019/07	(a) Site clearance at Portion 4 and 5 (b) Erection of site hoarding at Portion 4 (c) C&D waste disposal at Portion 1, 2, 4 and 5 (d) G.I. works at Portion 4 (e) Construction of box culvert at Portion 2 (f) Filling works at Portion 1, 2 and 4 (g) Tree felling/ Disposal of yard waste at Portion 4 (h) Construction of site haul road at Portion 4 (i) Drainage works and sewage works at Portion 1, 3 and 4 (j) Mini piling works at Portion 4 and 5 (k) Construction of noise barrier at Portion 5

1 INTRODUCTION

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

Purpose of the report

1.2 This is the 28th EM&A Report which summarises the key findings of the EM&A programme in February 2022.

Structure of the report

1.3 The structure of the report is as follows:

Section 1: **Introduction -** purpose and structure of the report.

Section 2: **Project Information -** summarises background and scope of the Project, site description, project organisation and contact details, construction programme, the construction works undertaken and the status of Environmental Permits/Licences during the reporting month.

Section 3: **Air Quality Monitoring -** summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.

Section 4: **Noise Monitoring -** summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.

Section 5: **Water Quality Monitoring - s**ummarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels and Event / Action Plans.

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

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

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

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

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

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

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

Section 13: **Conclusions and Recommendations**

2 PROJECT INFORMATION

Background

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

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

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

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

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

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

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

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

2.4 The site boundary of the Project and all Works Contracts are shown in **Drawing No. 1**.

2.5 The required submissions and submission status under Environmental Permits are shown in **Appendix U**.

Project Organization

2.6 Different parties with different levels of involvement in the Project organization include:

- Project Proponent – Civil Engineering and Development Department (CEDD)
- *Supervisor / Supervisor's* Representative – AECOM
- Environmental Team (ET) – Wellab Limited
- Independent Environmental Checker (IEC) – Mott MacDonald Hong Kong Ltd (MottMac)

2.7 The key personnel contact names and numbers are summarised in **Table 2.2**

Table 2.2 Key Contacts of the Project

Party	Role	Contact Person	Phone No.	Fax No.
Civil Engineering and Development Department, HKSAR (CEDD)	Project Proponent	Mr. Felix Fan	3152 3551	3547 1658
Supervisor / Supervisor's Representative (AECOM)	Chief Resident Engineer	Mr. Alan Lee	6398 5982	2645 3900
Environmental Team (Wellab Limited)	Environmental Team Leader	Dr. Priscilla Choy	2898 7388	2898 7076
Independent Environmental Checker (MottMac)	Independent Environmental Checker	Mr. Thomas Chan	2828 5967	2827 1823
Contract No. ND/2019/01 Contractor (Build King – Richwell Engineering Joint Venture)	Site Agent	Mr. Ivan Leung	9640 8340	--
	Environmental Officer	Mr. Edward Tam	9287 8270	
Contract No. ND/2019/02 Contractor (Chun Wo – Kwan Lee Joint Venture.)	Site Agent	Mr. Andy Chan	3485 9780	--
	Environmental Officer	Ms. Suchi Law	6679 6800	
Contract No. ND/2019/03 Contractor (Sang Hing Kuly Joint Venture)	Site Agent	Mr. Tang Wing Kai	9300 7037	--
	Environmental Officer	Mr. Jackey Tam	6742 5596	
Contract No. ND/2019/04 Contractor (Daewoo – Chun Wo – Kwan Lee Joint Venture)	Site Agent	Mr. Bear Ding	6483 6198	--
	Environmental Officer	Ms. Donna Tso	9283 7167	
	Environmental Supervisor	Ms. Peggie Hon	9714 3308	
Contract No. ND/2019/05 Contractor (CRCC – Paul Y. Joint Venture)	Site Agent	Mr. Darvin Lo	9467 5891	--
	Environmental Manager	Mr. Pan Fong	9436 9435	
	Environmental Officer	Ms. Louise Poon	5272 5709	
Contract No. ND/2019/06 Contractor (New Concepts Engineering Development Ltd.)	Site Agent	Mr. Anson Chan	9349 1320	2363 2162
	Environmental Officer	Mr. Alex Choy	9409 9608	
	Environmental Coordinator	Ms. Gloria Wong	64398946	
Contract No. ND/2019/07 Contractor (China Road and Bridge Corporation)	Site Agent	Mr. Daniel Wong	5335 9572	--
	Environmental Officer	Mr. K. M. Lui	5113 8223	
	Environmental Supervisor	Mr. Attlee Chau	6386 9018	

Summary of Construction Works Undertaken During Reporting Month

2.8 The major site activities undertaken in the reporting month are shown in Table 2.3.

Table 2.3 Summary Table for Major Site Activities in the Reporting Month

Contract No.	Site Activities (February 2022)
ND/2019/01	(a) Site clearance, tree felling, demolition of existing structures and site formation works in Portion 1a (b) Site clearance, sheet piling, excavation, drainage and demolition of existing structures in Portion 1b (c) Site clearance in Portion 1e (d) Site clearance, tree felling, temporary road construction and site formation works in Portion 2 (e) Site clearance, excavation, backfilling in Portion 3 (f) Site clearance, sheet piling, excavation, drainage works, watermain, backfill in Portion 5 (g) Site clearance, drainage works, backfill in Portion 6a (h) Operation of HAC soil treatment facility in Portion 6b (i) Site clearance, sheet piling and excavation, drainage works in Portion 7 (j) Construction of retaining wall, slope cutting, slope drainage and maintenance access construction, excavation for fresh water service reservoir, RC construction of flushing water service reservoir, construction of temporary haul road in Portion 8a (k) Site clearance, excavation for jacking pit, sheet piling for receiving pit in Portion 8b (l) Sheet piling and excavation, drainage works in Portion 9b (m) Stockpile of soil and excavation in Portion 9c (n) Excavation, sheet piling for ELS, drainage works and road work in Portion 10a (o) Sheet piling and excavation in Portion 10b (p) Construction of MBR in Portion 11b (q) Construction of temporary sewage pumping station in Portion 14 (r) Construction of CLC in Portion 16
ND/2019/02	(a) Sheet Pile Installation (b) Concreting (c) Sheet Pile Installation (d) ELS (e) Falsework modification (f) Preparation works
ND/2019/03	(a) Portion 1 & Portion 1A - Drainage works at Yin Kong Road - Construction of Pai Lau (b) Long Valley - Erection of Permanent Boundary Structure - Construction of Compacted Earth Bund / Walkway - Construction of Ditches - Construction of Irrigation Channel - Construction of Decking & Sluices - Construction of Wetland Boardwalk - Construction of Type 1 Storage House - Construction of Type 2 Storage House - Construction of Tea House - Construction of Composting Facility - Construction of Bird Hide - Construction of Outdoor Classroom - Construction of Storage Sheds - Wetland Creation & Restoration works

Contract No.	Site Activities (February 2022)
ND/2019/04	(a) Site clearance (b) Tree felling (c) Predrill (d) Bored piling (e) Excavation (f) Sheet piling and ELS
ND/2019/05	(a) The pre-drilling will start at the B1-01a and B1-02b in Portion III. (b) Rotary drilling rigs at B1, C1-01b, C2-03, C3-02 and C3-03a and C2-04a. (c) RCD rig at D2-03. (d) Portal Beam at C4-01, C4-03 and C4-04. (e) LT1 of HKY abutment third pour (f) Excavation at TWSR-East DN1200 and DN600 drainage from Ch250 to Ch350.
ND/2019/06	(a) Rectification works for T&C of E&M installations for the steel canopy, MOB and additional water tank and pump house at Portion 3 are in progress. (b) Electrical board installations at stall area under the steel canopy at Portion 3 has been completed. (c) Application of additional coating and colour strip painting on stall area at Portion 3 are in progress. (d) Finishing works for the additional water tank and pump house at Portion 3 are in progress. (e) Installation of handrails at MOB at Portion 4 and new pump house at Portion 3 are in progress. (f) Road marking / stall marking at Portion 3 has been completed. (g) CI covers and grating installation at Portion 3 is in progress. (h) Road light installation at Portion 3 has been completed. (i) Pipe connection to existing drainage MH at Interim Stage Market at Portion 1 has been completed. (j) Drainage system cleaning and CCTV record at Portion 3 has been completed.
ND/2019/07	(a) Site clearance at Portion 2 and 5 (b) Erection of site hoarding at Portion 2 and 4 (c) C&D waste disposal in Portion 1, 2, 4 and 5 (d) G.I. works at Portion 4 and 5 (e) Drainage works and Sewerage works at Portion 1, 3 and 4 (f) Construction of box culvert in Portion 2 (g) Filling works in Portion 1, 2 and 4 (h) Tree felling / Disposal of yard waste in Portion 4 (i) Construction of site haul road in Portion 4

Construction Programme

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

Status of Environmental Licences, Notifications and Permits

2.10 A summary of the relevant permits, licences, and/or notifications on environmental protection for this Project is presented in **Table 2.4**.

Table 2.4 Status of Environmental Licenses, Notifications and Permits

Contract No.	Permit / License No.	Valid Period		Status
		From	To	
Environmental Permit (EP)				
ND/2019/01	EP-466/2013	21/11/2013	N/A	Valid
	EP-467/2013/A	27/01/2017	N/A	Valid
	EP-468/2013/A	27/01/2017	N/A	Valid
	EP-470/2013	21/11/2013	N/A	Valid
ND/2019/02	EP-469/2013	21/11/2013	N/A	Valid
ND/2019/03	EP-468/2013/A	27/01/2017	N/A	Valid
	EP-473/2013/A	27/01/2017	N/A	Valid
ND/2019/04	EP/473/2013/A	27/01/2017	N/A	Valid
	EP/546/2017	16/11/2017	N/A	Valid
ND/2019/05	EP-473/2013/A	27/01/2017	N/A	Valid
ND/2019/06	EP-475/2013/A	13/01/2017	N/A	Valid
Construction Noise Permit (CNP)				
ND/2019/01	GW-RN0654-21	13/09/2021	07/03/2022	Valid
	GW-RN0690-21	30/09/2021	29/03/2022	Valid
	GW-RN0692-21	25/09/2021	24/03/2022	Valid
	GW-RN0036-22	23/01/2022	16/07/2022	Valid
	GW-RN0975-21	08/01/2022	07/04/2022	Valid
ND/2019/02	GW-RN0047-22	01/02/2022	31/07/2022	Valid
ND/2019/03	GW-RN0615-21	01/09/2021	28/02/2022	Expired in the reporting month
ND/2019/04	GW-RN0764-21	28/10/2021	27/04/2022	Valid
	GW-RN0050-22	27/01/2022	29/03/2022	Valid
ND/2019/05	GW-RN0782-21	27/10/2021	26/04/2022	Valid
	GW-RN0952-21	25/12/2021	23/03/2022	Valid
	GW-RN0039-22	01/02/2022	31/03/2022	Valid
	GW-RN0096-22	14/02/2022	13/05/2022	Valid
	GW-RN0095-22	11/02/2022	10/05/2022	Valid
ND/2019/06	GW-RN0657-21	13/09/2021	12/02/2022	Expired in the reporting month
	GW-RN0054-22	13/02/2022	12/08/2022	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation				
ND/2019/01	451792	11/12/2019	N/A	Valid
ND/2019/02	454012	05/03/2020	N/A	Valid
ND/2019/03	452216	24/12/2019	N/A	Valid
	452332	31/12/2019	N/A	Valid
	452333	31/12/2019	N/A	Valid
ND/2019/04	461184	23/10/2020	N/A	Valid
ND/2019/05	454323	13/03/2020	N/A	Valid
ND/2019/06	449369	24/09/2019	N/A	Valid
ND/2019/07	459393	28/08/2020	N/A	Valid
Billing Account for Disposal of Construction Waste				
ND/2019/01	7036265	17/01/2020	N/A	Valid
ND/2019/02	7036898	01/04/2020	N/A	Valid
ND/2019/03	7036378	22/01/2020	N/A	Valid
ND/2019/04	7038391	22/09/2020	N/A	Valid
ND/2019/05	7036901	01/04/2020	N/A	Valid
ND/2019/06	7035473	17/10/2019	N/A	Valid
ND/2019/07	7038309	14/09/2020	N/A	Valid
Registration of Chemical Waste Producer				
ND/2019/01	5213-545-B2578-01	10/01/2020	N/A	Valid

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

3 AIR QUALITY MONITORING

Monitoring Requirements

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

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

Monitoring Location

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

Table 3.1 Location for Air Quality Monitoring Locations

EP No.	Contract No.	Monitoring Station	Location
EP-473/2013/A	ND/2019/03	FLN-DMS1[2]	Scattered Village Houses North of Proposed Potential Ecopark
	ND/2019/04		
	ND/2019/05	FLN-DMS3[3]	House near Tong Hang
	ND/2019/03	FLN-DMS5[4]	Noble Hill
	ND/2019/04	FLN-DMS5A	Good View New Village
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	KTN-DMS4	Temporary Structure near Fanling Highway (near Pak Shek Au)
EP-468/2013/A	ND/2019/03		

Remark:
[1]: Noting that construction phase air quality monitoring at the other proposed monitoring stations (e.g. planned), where access is permitted, will be conducted during the relevant works contract(s).
[2]: Since the distance between monitoring station and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05.
[3]: Since the distance between monitoring station and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04.
[4]: Since the distance between monitoring station and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05

Monitoring Equipment

3.4 As the power supply for High Volume Sampler (HVS) for TSP monitoring at FLN-DMS 5A and KTN-DMS 4 were rejected, direct reading dust meter was used to measure both 1-hour and 24-hour average TSP levels:-

- The proposal for alternative monitoring equipment (i.e. direct reading dust meter) for TSP monitoring was approved by EPD according to approved Baseline Air Quality Monitoring Report (KTN & FLN NDA); and
- Adopt same measurement methodology (i.e. direct reading dust meter) as baseline monitoring for reliable comparison.

3.5 The proposed use of portable direct reading dust meters was submitted to IEC and obtained

agreement from the IEC as stated in Section 2.4.5 of the Updated EM&A Manual.

3.6 HVS for 24-hr TSP monitoring will be adopted once secured supply of electricity become available at FLN-DMS 5A and KTN-DMS 4.

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

Table 3.2 Air Quality Monitoring Equipment

Monitoring Station	Equipment	Manufacturer	Model and Make	Quantity
FLN-DMS5A KTN-DMS4	Dust Monitor (1-hour and 24-hour TSP)	Met One Instruments	AEROCET-831	9
FLN-DMS1 FLN-DMS3	Dust Monitor (1-hour TSP)			
	HVS Sampler (TSP) (24-hour TSP)	Tisch	TISCH Model: TE-5170	2

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

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

Monitoring Parameters, Frequency and Duration

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

Table 3.3 Impact Dust Monitoring Parameters, Frequency and Duration

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

Monitoring Methodology and QA/QC Procedure

1-hour and 24-hour TSP Air Quality Monitoring

Instrumentation

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

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

(AEROCET-831)

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

Maintenance/Calibration

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

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

24-hour TSP Air Quality Monitoring

Instrumentation

(TISCH Model: TE-5170)

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

HVS Installation

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

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

Filters Preparation

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

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

Operating/Analytical Procedures

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

- Prior to the commencement of the dust sampling, the flow rate of the HVS was properly set (between 1.1 m^3/min. and 1.4 m^3/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50;
- The power supply was checked to ensure the sampler worked properly;
- On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air quality monitoring station;
- The filter holding frame was then removed by loosening the four nuts and carefully a weighted and conditioned filter was centered with the stamped number upwards, on a supporting screen;
- The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges;

- The shelter lid was closed and secured with the aluminum strip;
- The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number);
- After sampling, the filter was removed and kept in a clean and tightly sealed plastic bag. The filter paper was then be returned to the HOKLAS laboratory (Wellab Ltd.) for reconditioning in the humidity-controlled chamber followed by accurate weighting by an electronic balance with a readout down to 0.1mg. The elapsed time was also recorded; and
- Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature should be between 25°C and 30°C and not vary by more than ±3°C; the RH should be < 50% and not vary by more than ±5%. A convenient working RH is 40%. Weighing results were returned for further analysis of TSP concentrations collected by each filter.

Maintenance/Calibration

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

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

Results and Observations

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

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

Monitoring Station	Concentration (µg/m^3)		Action Level, µg/m^3	Limit Level, µg/m^3
	Average	Range		
FLN-DMS1	46.1	34.4 – 57.3	303	500
FLN-DMS3	61.1	34.7 – 95.4	301	500
FLN-DMS5	73.1	18.2 – 140.0	279	500
KTN-DMS4	45.5	9.4 – 92.7	297	500

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

Monitoring Station	Concentration (µg/m³)		Action Level, µg/m³	Limit Level, µg/m³
	Average	Range		
FLN-DMS1	49.7	34.1 – 66.2	150	260
FLN-DMS3	26.9	21.7 – 39.6	165	260
FLN-DMS5A	81.1	31.6 – 150.5	153	260
KTN-DMS4	47.2	16.0 – 106.3	192	260

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

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

Table 3.6 Observation at Dust Monitoring Stations

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

Event and Action Plan

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

4 NOISE MONITORING

Monitoring Requirements

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

Monitoring Location

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

Table 4.1 Location of Noise Monitoring Stations

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

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

Monitoring Equipment

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

Table 4.2 Noise Monitoring Equipment

Equipment	Manufacturer	Model	Quantity
Sound Level Meter	BSWA	BSWA 308	5
Acoustical Calibrator	Brüel & Kjær	4231	1
	SVANTEK	SV30A	2

Monitoring Parameters, Frequency and Duration

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

Table 4.3 Noise Monitoring Parameters, Duration and Frequency

Contract No.	Monitoring Stations	Parameter	Duration	Frequency	Measurement
ND/2019/06	CP-FLN-NMS1[3]	$L_{10(30\ min.)}$ dB(A) $L_{90(30\ min.)}$ dB(A) $L_{eq(30\ min.)}$dB(A) (as six consecutive $L_{eq,\ 5min}$ readings)	0700-1900 hrs on normal weekdays	Once per week	Façade
ND/2019/04					
ND/2019/05	CP-FLN-NMS2[4]				
ND/2019/01	CP-KTN NMS2[5]				Free-field[1]
	CP-KTN NMS3[6]				
ND/2019/01	CP-KTN NMS5				
ND/2019/02	CP-KTN-NMS6				Façade

Remarks:

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

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

L_{10} is the level exceeded for 10% of the time. For 10% of the time, the sound or noise has a sound pressure level above L_{10}. L_{90} is the level exceeded for 90% of the time. For 90% of the time, the noise level is above this level.

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

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

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

Monitoring Methodology and QA/QC Procedures

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

Maintenance and Calibration

4.5 The microphone head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.

4.6 The sound level meter and calibrator were checked and calibrated at yearly intervals.

4.7 Immediately prior to and following each noise measurement, the accuracy of the sound level meter should be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements would be accepted as valid only if the calibration levels before and after the noise measurement agreed to within 1.0 dB.

Results and Observations

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

Table 4.4 Summary Table of Noise Monitoring Results during the Reporting Month

Contract No.	Monitoring Station	Noise Level Leq (30 min), dB(A)	Baseline Level, dB(A)	Limit Level, dB(A)
ND/2019/06	CP-FLN-NMS1[1]	69.9 – 72.9	69.9	75
ND/2019/04				
ND/2019/05				
	CP-FLN-NMS2[2]	54.8 – 62.8	59.6	
ND/2019/01	CP-KTN-NMS2[3]	53.9 – 59.9	58.6	
	CP-KTN-NMS3[4]	46.4 – 55.3	51.6	
ND/2019/01	CP-KTN-NMS5	55.5 – 64.2	57.2	
ND/2019/02	CP-KTN-NMS6	57.0 – 59.3	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. No complaint on construction noise was received during the reporting month. No Action/Level exceedance was recorded. The summary of exceedance record in reporting month is shown in **Appendix O**.

4.10 According to our field observations, the major noise source identified at the designated noise monitoring stations in the reporting month are as follows:

Table 4.5 Observation at Noise Monitoring Stations

Contract No.	Monitoring Station	Location	Major Noise Source
ND/2019/06	CP-FLN-NMS1[1]	Belair Monte (Existing)	Excavator, dump truck, mobile crane, piling, road traffic
ND/2019/04			
ND/2019/05			
	CP-FLN-NMS2[2]	Scattered Village House in Tong Hang (Existing)	Excavator, piling, dump truck, road traffic
ND/2019/01	CP-KTN-NMS2[3]	Residential Buildings at Ma Tso Lung (Existing)	Dump truck, excavator, road traffic
ND/2019/01	CP-KTN-NMS3[4]	Fung Kong Garden (Existing)	Road traffic
ND/2019/01	CP-KTN-NMS5	N/A	Road traffic
ND/2019/02	CP-KTN-NMS6	Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery (Existing)	Road traffic

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

Event and Action Plan

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

5 WATER QUALTY MONITORING

Monitoring Requirements

5.1 In accordance with the Updated EM&A Manual, impact water quality monitoring shall be carried out three days per week at all the designated monitoring stations during the construction period. The measurement periods are during the construction of channel specified in Table 4.1 of Updated EM&A Manual. The interval between two sets of monitoring shall not be less than 36 hours.

5.2 Replicate in-situ measurements of Dissolved Oxygen (DO), temperature, turbidity, pH, Suspended Solids (SS) and samples for Suspended Solids (SS), ammonia nitrogen, unionized ammonia, nitrate nitrogen and orthophosphate from each independent sampling event shall be collected to ensure a robust statistically interpretable database.

5.3 **Appendix B** shows the established Action and Limit Levels for the water quality monitoring work according to pre-construction ET's Updated EM&A Manual and Baseline Water Quality Monitoring Report (KTN & FLN NDA).

Monitoring Parameters, Frequency

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

Table 5.1 Water Quality Monitoring Parameters and Frequency

Parameters, unit	Depth	Frequency
• Temperature(°C) • pH(pH unit) • turbidity (NTU) • water depth (m) • salinity (ppt) • DO (mg/L and % of saturation) • SS (mg/L) • Ammonia Nitrogen (NH_3-N) (mg NH_3-N/L) • Unionized Ammonia (UIA) (mg/L) • Nitrate-nitrogen (NO_3-N) (mg NO_3^--N/L) • Ortho-phosphate (PO_4) (mg PO_4^{3-}-P/L)	• 3 water depths: 1m below water surface, mid-depth and 1m above river bed. • If the water depth was less than 3m, mid-depth sampling only. • If water depth was less than 6m, mid-depth may be omitted.	3 days per week during construction of channel

Results and Observations

5.5 According to the Section 5.6.1.2 of approved EIA Report, the potential water quality impact during construction is due to the alternation of natural streams (i.e. channelization of Ma Tso Lung Stream and Siu Hang San Tsuen Stream) as these two streams are the ecological importance streams.

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

Additional Water Quality Monitoring

Monitoring Requirements

5.7 Additional Water Quality Monitoring shall be carried out at River Beas, River Indus and near Siu Hang San Tsuen Stream three days per week at all designated monitoring stations during the construction period. The measurement period are during the construction site drainage along River Beas, construction of footbridge across River Beas and during construction of bridge across River Indus.

5.8 Replicate in-situ measurement and samples from each independent sampling event were collected to ensure a robust statistically interpretable database. DO, temperature, turbidity and pH were measured in-situ whereas SS and arsenic were determined by an accredited laboratory. Other relevant data were recorded, including monitoring location / position, time, water depth, weather conditions and any special phenomena or work underway at the construction site.

5.9 For all the monitoring stations, sampling were taken at 3 water depths, namely 1m below the water surface, mid depth and 1m above the river bed. For stations that are less than 3m in depth, only the mid depth sample was taken. Should the water depth is less than 6m, in which case the mid-depth station may be omitted. The interval between two sampling surveys was not less than 36 hours.

5.10 **Appendix B** shows the established Action and Limit Levels for the environmental monitoring works

Monitoring Locations

5.11 Additional impact water quality monitoring was conducted at 6 monitoring stations (SYR-CS1, SYR-IS1, NTR-CS1, NTR-IS1, SHST-IS2, MWR-IS3) which is summarised in **Table 5.2**. The location of monitoring stations are shown in **Figure 5** and **6**.

Table 5.2 Additional Water Quality Monitoring Stations

Station	Description	Locations	Measurement Periods
River Beas			
SYR-CS1	Control Station	Upstream of river	During the construction site drainage along River Beas and construction of footbridge across River Beas
SYR-IS1	Impact Station	Downstream of river	
River Indus and near Siu Hang San Tsuen Stream			
NTR-CS1	Control Station	Upstream of river	During construction of bridge across River Indus
NTR-IS1	Impact Station	Downstream of river	
SHST-IS2	Impact Station	Water sensitive receiver at near Siu Hang San Tsuen Stream	
MWR-IS3	Impact Station	Water sensitive receiver at near Ma Wat River	

Monitoring Equipment

Instrumentation

5.12 A multi-parameter meters (Model YSI EXO) was used to measure DO, turbidity, salinity, pH and temperature.

Dissolved Oxygen (DO) and Temperature Measuring Equipment

5.13 The instrument for measuring dissolved oxygen and temperature should be portable and weatherproof complete with cable, sensor, and use DC power source. The equipment was capable of measuring:

- A dissolved oxygen level in the range of 0-20mg/L and 0-200% saturation; and
- The temperature within 0-45 degree Celsius.

5.14 The equipment had a membrane electrode with automatic temperature compensation complete with a cable.

5.15 Sufficient stocks of spare electrodes and cables were available for replacement where necessary.

5.16 Salinity compensation was built-in in the DO equipment. *In-situ* salinity was measured to calibrate the DO equipment prior to each DO measurement.

Turbidity

5.17 Turbidity was measured *in situ* by using the nephelometric method. The instrument was portable and weatherproof using a DC power sources complete with cable, sensor and comprehensive operation manuals. The equipment was capable of measuring turbidity between 0-1000 NTU. The probe cable was not less than 25m in length. The meter was calibrated in order to establish the relationship between NTU units and the levels of suspended Solids.

Salinity

5.18 A portable salinometer capable of recording salinity within the range of 0-40 parts per thousand (ppt) was used for salinity measurement.

Water Depth Detector

5.19 A portable, battery-operated and hand held echo sounder was used for the determination of water depth at each designated monitoring station.

pH

5.20 The instrument was consisting of a potentiometer, a glass electrode, a reference electrode and a temperature-compensating device. It was readable to 0.1pH in a range of 0 to 14. Standard buffer solutions of at least pH 7 and pH 10 were used for calibration of the instrument before and after use.

Water Sampling for Laboratory Analysis

5.21 A water sampler, consisting of a transparent Polyvinyl Chloride (PVC) of a capacity of not less than two litres which can be effectively sealed with cups at both ends was used. The water sampler had a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler was at the selected water depth. In addition, a sampling cup attached to a fixed or extendable rod was also used for sampling at the monitoring stations with swallow water.

Sample Container and Storage

5.22 Following collection, water samples for laboratory analysis were stored in high density polyethylene bottles with appropriate preservatives added, packed in the ice (cooled to $4^{o}C$ without being frozen). The sample were delivered to WELLAB Limited (HOKLAS Registration No.083) and analysed as soon as possible after collection of the water samples. Sufficient volume of samples was collected to achieve the detection limit.

Calibration of In Situ Instruments

5.23 The pH meter, DO meter and turbidimeter were checked and calibrated before use. DO meter and turbidimeter were certified by WELLAB Limited before use and subsequently re-calibrated at quarterly basis throughout all stage of water quality monitoring programme. Response of sensors and electrodes were checked with certified standard solutions before each use. Wet bulb calibration for a DO meter was carried out before measurement at each monitoring station.

5.24 For the on-site calibration of field equipment (Multi-parameter Water Quality System), the BS 1427:2009, “Guide to on-site test methods for analysis of waters” was observed.

Back-up Equipment

5.25 Sufficient stocks of spare parts were maintained for replacements when necessary. Backup monitoring equipment was also be made available so that monitoring can proceed uninterrupted even when some equipment is under maintenance, calibration, etc.

5.26 **Table 5.3** summarizes the equipment used in the water quality monitoring program. The copies of the calibration certificates of multi-parameter water quality system are shown in the **Appendix C**.

Table 5.3 Water Quality Monitoring Equipment

Equipment	Model and Make	Qty.
Water sampler and sampling cup	A 2-Litre transparent PVC cylinder with latex cups at both ends and sampling cup for monitoring stations with swallow water	1
Sonar Water Depth Detector	Garmin Striker plus 4	1
Multi-parameter Water Quality System	YSI EXO 1	2

Monitoring Parameters and Frequency

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

Table 5.4 Additional Water Quality Monitoring Parameters and Frequency

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

5.28 Monitoring location and position, time, sampling depth, weather conditions and any special phenomena or work underway nearby was also be recorded

Monitoring Methodology

Instrumentation

5.29 A multi-parameter meters (Model YSI EXO) was used to measure DO, turbidity, salinity, pH and temperature.

Operating/Analytical Procedures

5.30 At each measurement, two consecutive measurements of DO concentration, DO saturation, salinity, turbidity, pH and temperature were taken. The probes were retrieved out of the water after the first measurement and then re-deployed for the second measurement. Where the difference in the value between the first and second readings of each set was more than 25% of the value of the first reading, the reading was discarded and further readings were taken.

Laboratory Analytical Methods

5.31 Duplicate samples from each independent sampling event are required for all parameter. Analysis of suspended solids and arsenic were carried out by WELLAB Ltd. and comprehensive quality assurance and control procedures in place in order to ensure the quality and consistency in results. The reporting limit and detection limit are provided in **Table 5.5.**

Table 5.5 Method for Laboratory Analysis for Water Samples

Determinant	Proposed Method	Limit of Reporting
Total Suspend Solids (SS)	APHA 17ed 2540 D	2.5 mg/L
Arsenic (As)	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

QA/QC Requirements

Decontamination Procedures

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

Sampling Management and Supervision

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

Quality Control Measures for Sample Testing

5.34 The samples testing and following QC programme were performed by WELLAB Ltd. for every batch of 20 samples:

- One method blank; and
- One set of QC sample.

Results and Observations

5.35 All additional water quality monitoring was conducted as scheduled in the reporting month. The water quality monitoring schedule for this reporting month is shown in **Appendix D**.

5.36 The monitoring results and graphical presentation of additional water quality monitoring at the monitoring stations are shown in **Appendix G**.

5.37 Two (2) Limit Level exceedances for turbidity, two (2) Limit Level exceedances for suspended solids of impact water quality monitoring were recorded. After investigation, one (1) Limit Level exceedances for turbidity and one (1) Limit Level exceedances for suspended solids at monitoring station, NTR-IS1, were found due to Contract No. ND/2019/04. Other exceedances were considered non-projected related. The summary of exceedance record in the reporting month is shown in **Appendix O**.

Event and Action Plan

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

6 LAND CONTAMINATION (AMBIENT ARSENIC MONITORING)

Monitoring Requirements

6.1 According to Section 7.5 of updated EM&A Manual, an ambient arsenic monitoring is required to be conducted in KTN during the clean-up processes of arsenic containing soil and the construction phase.

6.2 The Respirable Suspended Particulate (RSP, or PM10) should be measured by High Volume Sampler (HVS) equipped with PM10 selector following the "Reference Method for the Determination of Particulate Matter as PM10 in the Atmosphere" Part 50 Chapter 1 Appendix J, Title 40 of the Code of Federal Regulations of the USEPA.

6.3 The Dust-laden air should be drawn through PM10 HVS fitted with a conditioned pre-weighting filter paper, at a controlled rate. After sampling for 24-hour (refer Section 9.5.5 for details on measurement period), the filter paper with retained PM10 particulates shall be collected and returned to the laboratory for drying in a desiccators followed by accurate weighting. 24-hour average RSP levels shall be calculated from the ratio of the mass of PM10 particulates retained on the filter paper to the total volume of air sampled.

6.4 The weighted filter paper shall be prepared for arsenic testing through a "Hot Acid Extraction Procedure". The extracted material shall be tested for arsenic by using Inductively Coupled Plasma/Mass Spectrometry (ICP/MS). The extraction and testing will be referenced to the following methods:

- Compendium Method 1O-3.1 Selection, Preparation and Extraction of Filter Material, Center for Environmental Research Information, Office of Research and Development, USEPA, June 1999; and
- Compendium Method 1O-3.5 determination of Metals in Ambient Particulate Matter using Inductively Coupled Plasma/Mass Spectrometry (ICP/MS., Center for Environmental Research Information, Office of Research and Development, USEPA, June 1999.

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

Monitoring Location

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

6.7 **Table 6.1 Location of Ambient Arsenic Monitoring station**

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

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

Monitoring Equipment

6.8 **Table 6.2** summarizes the equipment used in the ambient arsenic monitoring. Copies of calibration certificates are attached in **Appendix C**.

Table 6.2 Ambient Arsenic Monitoring Equipment

Monitoring Stations	Equipment	Model and Make	Quantity
KTN-DMS-4A	Calibrator	TISCH Model: TE-5025A	1
	HVS Sampler (RSP)	TISCH Model: TE-6070X	1

Monitoring Parameters, Frequency and Duration

6.9 **Table 6.3** summarizes the monitoring parameters and frequencies of ambient arsenic during the clean-up processes of arsenic-containing soil and construction. The ambient arsenic monitoring schedule for the reporting month is shown in **Appendix D**.

Table 6.3 Impact Ambient Arsenic Monitoring Parameters, Frequency and Duration

Parameters	Frequency
24-hr RSP (Ambient Arsenic)	Once/ 6 days

Monitoring Methodology and QA/QC Procedure

24-hour RSP Monitoring

Instrumentation

6.10 High volume samplers (HVS) (GMW PM10 (TE6070X)) complete with appropriate sampling inlets was employed for 24-hour RSP monitoring. The sampler is composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complied with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50).

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

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

Operating/analytical procedures for the operation of HVS

- Prior to the commencement of the dust sampling, the flow rate of the high volume sampler will be properly set (between 1.1 m^3/min. and 1.4 m^3/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.
- The power supply was checked to ensure the sampler worked properly. On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.
- The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter will be carefully centered with the stamped number upwards, on a supporting screen.
- The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure were sufficient to avoid air leakage at the edges.
- The shelter lid was closed and secured with the aluminum strip.
- The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).
- After sampling, the filter was removed and sent to the Wellab Ltd. for weighing. The elapsed time was also recorded.
- Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature was between 25°C and 30°C and not vary by more than ±3°C; the relative humidity (RH) was < 50% and not vary by more than ±5%. A convenient working RH was 40%. Weighing results were further analysis of RSP concentrations collected by each filter.

Maintenance/Calibration

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

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

Laboratory Measurement / Analysis

6.13 Quartz filters of size 8" x 10" were labelled before sampling. A HOKLAS accredited laboratory, Wellab Ltd., is responsible for the preparation of 24-hr conditioned and pre-weighed filter papers for the monitoring team. The balance for weighting filter paper was regularly calibrated against a traceable standard.

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

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

Results and Observations

6.16 The ambient arsenic monitoring results are summarized in **Table 6.4**. Detailed monitoring results and test report are shown in **Appendix E**.

Table 6.4 Summary Table of 24-hour RSP Monitoring Results (Ambient Arsenic) during the Reporting Month

Monitoring Date	Monitoring Station	Concentration (ng/m^3)	Action Level (ng/m^3)	Limit Level, (ng/m^3)
05/02/2022	KTN-DMS4(A)	0.70	9.36	11.7
09/02/2022		0.89		
15/02/2022		0.76		
21/02/2022		0.46		
25/02/2022		0.76		

6.17 All ambient arsenic monitoring was conducted as scheduled in the reporting month. During the reporting month, around 2103 tons of arsenic soil was transported to soil treatment plant and 4400 tons were treated. No Action/Limit Level exceedances were recorded.

Event and Action Plan

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

7 LANDFILL GAS MONITORING

Monitoring Requirement

7.1 In accordance with the updated EM&A Manual, monitoring of landfill gas (LFG) is required for construction works within the Ma Tso Lung Landfill (MTLL, close to KTN NDA) during the construction phase. This section presents the results of landfill gas measurements performed by the Contractor. **Appendix B** shows the Limit Levels for the monitoring works.

7.2 The MTLL is situated in the vicinity of the KTN NDA. A portion of the development falls within the MTLL and its 250m Consultation Zone.

Monitoring Parameters and Frequency

7.3 Monitoring parameters for Landfill gas monitoring include Methane, Carbon dioxide and Oxygen.

7.4 According to the mitigation measures of the updated EM&A Manual, measurements of the following frequencies should be carried out according to the monitoring requirements and procedures specified in Paragraphs 8.23 to 8.28 of EPD's Guidance Note, "LANDFILL GAS HAZARD ASSESSMENT GUIDANCE NOTE".

7.5 The frequency of monitoring of LFG are conducted referring to the updated EM&A Manual - Monitoring of any LFG which may be migrated to the site should be undertaken during the construction of infrastructure and the development within the Consultation Zone and within MTLL when the works involve confined spaces. Routine gas monitoring should be undertaken during groundwork construction and in all excavations. Monthly gas monitoring should also be conducted for offices, stores etc. set up on site.

Monitoring Locations

7.6 Monitoring of oxygen, methane and carbon dioxide was performed for construction of infrastructure and the development within the Consultation Zone and within MTLL when the works involve confined spaces. In this reporting month, the area required to be monitored for landfill gas are shown below and **Figure 6** shows the landfill gas monitoring locations.

- Excavation Locations: Portion 6b
- Manholes and Chambers: N/A
- Relocation of monitoring wells: N/A
- Any other Confined Spaces: Containers in Portion 6b

Monitoring Equipment

7.7 **Table 7.1** summarizes the equipment employed by the Contractor for the landfill gas monitoring.

Table 7.1 Landfill Gas Monitoring Equipment

Equipment	Model and Make	Quantity
Portable gas detector	Rasi 700 BIO (Serial No. 330055)	1

Results and Observations

7.8 In the reporting month, landfill gas monitoring was carried out by the Contractor at the aforesaid locations on 1 occasion with 6 monitoring stations. No Limit Level exceedance for landfill gas monitoring was recorded in the reporting month. The monitoring results are provided in **Appendix J**. Copies of calibration certificates are attached in **Appendix C**.

Event and Action Plan

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

8 BUILT HERITAGE MONITORING

Monitoring Requirement

8.1 In accordance with the updated EM&A Manual, baseline condition survey and baseline vibration impact assessment shall be conducted for identified built heritage prior to the commencement of construction works. Baseline condition survey and baseline vibration impact assessment shall be conducted by a qualified building surveyor or qualified structural engineer to define the vibration limit (a vibration limit at 7.5mm/s and 15mm/s could be adopted for graded historical buildings and historical buildings, respectively) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase to ensure the construction performance meets with the vibration standard stated in the EIA report.

8.2 According to the condition survey report from cultural heritage condition survey for Fanling Bypass Eastern Section under EP-473/2013/A, vibration monitoring plan was proposed for the surveyed cultural heritage based on the Buildings Department's Practice Note (PNAP APP-137). This section presents the results of built heritage monitoring performed by the Contractor according to the proposed monitoring plan in baseline condition survey report. **Appendix B** shows the Limit Levels for the monitoring works.

Monitoring Location

8.3 In the reporting month, construction vibration monitoring was conducted for built heritage feature at FL02 and FL27 when pile driving operation was conducted within assessment area of construction works. The location of the construction vibration monitoring stations was summarised in **Table 8.1** and shown in **Appendix K**.

Table 8.1 Location of Construction Vibration Monitoring

EP. No	Contract No.	Monitoring Station (s)	Nature of Cultural Heritage	Location (s)
EP-473/2013/A	ND/2019/05	FL02	Grave	Northwest side of Shung Him Tong Tsuen, at the hillside behind On Lok Garden
		FL27	Monument	At the opposite of Shung Him Tong Public Toilet, at the bottom of slope feature

Monitoring Parameters and Frequency

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

Table 8.2 Vibration Monitoring Plan

EP. No	Contract No.	Monitoring Stations	Distance with Construction Works	Monitoring Plan
EP-473/2013/A	ND/2019/05	FL02 and FL27	Within 50m	Daily assessment is required
			Within 75m	Bi-daily assessment is required
			Within 100m	Weekly assessment is required

Remarks:
[1] Baseline condition survey was conducted for built heritage features at HFL05, FL02, FL04, FL24, FL27 and FL36 under ND/2019/05 for EP-473/2013/A. As HFL05, FL04, FL24, FL27 and FL36 were not within the assessment area of the related construction work, no construction vibration monitoring was conducted for the built heritage in the reporting month.

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

Monitoring Equipment

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

8.7 The Calibration Certificates of the equipment for vibration monitoring was expired since 8 January 2022. Equipment have been sent to laboratory for calibration. The Contractor was reminded to ensure all monitoring shall be conducted by the equipment with valid calibration certificates. In addition, special training has been provided by contractor to the related staff to avoid the recurrence of late calibration.

Results and Observations

8.8 In the reporting month, construction vibration monitoring was carried out by the Contractor for the built heritage feature at FL02 and FL27 on a daily basis when pile driving operation was conducted within 50m of construction work. No Limit Level exceedance for construction vibration monitoring was recorded in the reporting month. The monitoring results are provided in **Appendix K**.

Event and Action Plan

8.9 **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.

8.10 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: 4th, 8th, 11th, 15th, 18th, 21st, 25th February 2022

Date of night-time monitoring: 4th, 18th February 2022

Monitoring Location

9.5 The avifauna monitoring was carried out at Ng Tung River, Sheung Yue River and Long Valley in reporting month according to construction works. The transect routes in the Reporting Month were as follows:

- T1. Ng Tung River
- T2. Ng Tung River
- T3. Sheung Yue River
- T5. Long Valley

As the sensitive receivers (large waterbirds) are easily visible, the transect route will only need to follow one bank of the rivers.

9.6 The location of Transects T1, T2, T3 and T5 is shown in **Figure 9** for reference.

Monitoring Parameters

9.7 The monitoring parameters and survey methodology for each transect are described below:

- Abundance of birds
- Types of habitat of which birds in use
- Notable bird behaviours such as roosting, feeding, nesting and presence of juveniles
- Birds heard through birdcalls that could not be located would be marked as "heard", while birds flying over the survey area would be marked as "flight". Species of conservation significance would be specified.

9.8 Other information at the time of survey such as weather condition, tidal condition, tide level and noticeable natural or anthropogenic activities would be documented.

9.9 For Avifauna survey, Ornithological nomenclature would make reference to The Avifauna of Hong Kong (Carey *et al*. 2001), The Birds of Hong Kong and South China (Viney *et al*. 2005), and the most recent updated list from other sources (e.g. Hong Kong Bird Watching Society).

Monitoring Result

9.10 In total, 70 species of birds were recorded during the bird surveys within assessment area. Among the recorded birds, there were 24 species of waterbirds. The detailed list of waterbirds and all recorded birds are shown in **Appendix L1k and L1l** respectively.

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

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

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

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

9.15 Transect T1 and T2 are located at Ng Tung River. *Ardeola bacchus* and *Egretta garzetta* were commonly found feeding and roosting along the Ng Tung River. Fishing activities were observed at both T1 and T2, while construction activities were observed beside T2 during the avifauna monitoring. Noise-producing anthropogenic sources observed during avifauna monitoring includes ground investigation works of remaining phase near T1 and T2.

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

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

Monitoring Requirements and Protocol

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

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

Monitoring Frequency

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

Monitoring Location

9.20 During wet season, the monitoring location required to be carried out in Ma Tso Lung Stream according to construction works are as follow:

- MS_01
- MS_02
- MS_03
- MS_04
- MS_05
- MS_06
- MS_07
- MS_08
- MS_09
- MS_10
- MS_11
- MS_12
- MS_13
- MS_14
- MS_15

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

Monitoring Parameters

9.22 The monitoring parameters and survey methodology for each monitoring station are described below:

- Species composition
- Abundance
- Distribution for invertebrates and fish fauna
- Species of conservation significance would be specified

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

Monitoring Status

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

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

Monitoring Requirements and Protocol

9.25 As required under Section 12.3.2.17 of Updated EM&A Manual, monitoring of measures to minimize impacts should be carried out during the construction phase.

9.26 The purpose of survey is to monitor the effectiveness of measures to minimize impacts on ecologically sensitive habitats from disturbance and pollution by standard faunal transect surveys.

Mammal survey

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

9.28 Bat survey should be conducted along the transect routes shortly after sunset, with the use of a bat detector to record the echolocation calls. The relative abundance of the species encountered should be estimated with reference to the baseline monitoring results, i.e. using a scale from one (species recorded within transect routes) to three (dominant species within transect routes), for comparison between baseline results and the current monitoring results. Nomenclature of mammal should be based on Shek (2006).

Herpetofauna survey (Amphibians and Reptiles)

9.29 Amphibian surveys should be conducted whenever possible on evenings following or during periods of rainfall, focusing on areas suitable for amphibians (e.g. forest, shrublands, grasslands, streams, ponds, marshes, etc.). Calling amphibians should be recorded, supplemented by visual observation of eggs, tadpoles, adult frogs, and toads.

9.30 Active searching of appropriate microhabitats such as stones, pond bunds, crevices and leaf debris should be performed mainly. Observation of exposed, basking and foraging reptiles should also be conducted. Nomenclature of amphibian and reptile should be based on Chan et al. (2005) and Karsen et al. (1998), respectively.

Insect survey (Butterfly and Dragonfly)

9.31 Butterflies and dragonflies observed along the transects should be identified and counted. Preferable habitats of the insects such as watercourses, fishponds, and vegetated areas should be observed with special attention. Nomenclature and protection status of the species should be based on Lo et al. (2005) for butterflies and Tam et al. (2011) for dragonflies

Monitoring Frequency

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

Date of Monitoring surveys of ecological sensitive receivers:	17th , 22nd February 2022

Monitoring Location

9.33 The transect routes in the Reporting Month according to construction works are as follows:

- T1. Ma Tso Lung riparian zone and associated wetland habitats;

- T1. Green belt areas E1-8, D1-8 and G1-3 in KTN NDA;
- T1. AGR one C2-4 and C2-2 in KTN NDA;
- T1. Area north of Ng Tung River;
- T3. Area west of Siu Hang San Tsuen Stream
- T4. South side of Fanling Highway and Castle Peak Road in the vicinity of Pak Shek Au;
- T5. Area west and east of the southern limit of the FLN NDA work area; and
- T6. Areas in the western part of KTN

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

Monitoring Parameters

9.35 The monitoring parameters and survey methodology for each transect are described below:-

- Species composition
- Abundance
- Distribution for fauna observed
- Species of conservation significance would be specified

Monitoring Result

Mammal

9.36 During the survey, a total of 4 mammal species were recorded from transects T1, T3, T4, T5 and T6. A total of 2 species of conservation importance were recorded, namely bats *Pipistrellus abramus* and *Cynopterus sphinx*.

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

9.38 Echolocation calls of bats were recorded with a bat detector. The bat detector would list out possible bat species having similar echolocation calls in pattern and frequency. The structure of the echolocation calls from the recordings was later analysed to identify species as far as possible (the lack of literature on echolocation call structure makes the field identification of some bat species in Hong Kong difficult, and some species could only be identified to genus level, or remain unidentified from the recordings).

9.39 Identification of bat species encountered in the surveys was made with consideration to the possible bat species suggested by the bat detector, the distribution of the suggested bat species in Hong Kong, previous records of bat species in the EIA Report and Baseline Monitoring Report, and the structure of echolocation calls of the recordings (including call structure, frequency, duration, inter pulse interval etc., with reference to relevant literatures).

9.40 *Pipistrellus abramus* was recorded with FM/QCF call structure and frequency around 45 kHz to 68 kHz (Ma et al., 2010, p.319). The above characteristics were further compared with data from relevant literatures to confirm the identities. References were also made to Tong (2016).

9.41 Bat species, *Cynopterus sphinx* was observed roosting in the tent-shaped shelter under fronds of Chinese Fan-palm during during the monitoring at T4. *Pipistrellus abramus* was recorded in flight at nighttime at all of the transects.

Herpetofauna (Amphibians and Reptiles)

9.42 Along the transects, a total of 3 herpetofauna species were observed. No species of conservation importance were recorded. Species including toads and geckos were recorded

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

Insects (Butterfly and Dragonfly)

9.43 During the insect survey, a total of 4 butterfly species and 1 odonata species were recorded from the transects, with all butterfly species being common or very common, except an uncommon species recorded at T1, Vanessa indica indica. Transect T1 had higher butterfly species diversity than other transects.

9.44 Drop in both diversity and abundance of butterfly was recorded for this reporting month. Since the monitoring took place during a period of particularly cold rainy weather of the month of February 2022, which could potentially influence the activities of butterflies. More attention should be paid to future monitoring result as the weather condition changes.

9.45 The only species of odonata recorded, *Pantala flavescens,* was recorded at T4. The species was not a species of conservation importance, and was known to be particularly abundant throughout most transects in previous monitoring months.

9.46 Ecological sensitive receivers such as mammals, insects (butterflies and dragonflies), and herpetofauna monitoring in construction phase was conducted during the reporting month and the results are attached in **Appendix L4 to L7**.

9.47 Since activities of odonata can fluctuates with environmental conditions, in addition to potential effects of surrounding human activities and alteration to their natural habitat (vegetative clearance and construction works outside of the projects observed at various transect), more attention should be paid to future monitoring results, potential sources of disturbance and other relevant ecological data.

9.48 For the monitoring conducted on 17th February 2022 on Transect T/5, a section of the transect route was found located within private property, and was not accessible. Another section on transect T5 was found blocked by new accumulation of fallen trees. The inaccessible part are shown in **Photo 1** and **Photo 2** below. The adjusted accessible transect route is shown in **Figure 11**.

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

Results and Observation

Details of the Influencing Factors

Major Activities

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

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

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

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

Weather Conditions

9.53 According to the observation during survey, temperature and the rain flow record in the Reporting Month (Reference: http://www.weather.gov.hk/wxinfo/pastwx/metob202202.htm), weather condition might pose influence towards the monitoring result.

The detailed Ecological monitoring results are attached in **Appendix L**.

Reference

Ma, J., Jones, G., Zhu, G. J., & Metzner, W. (2010). Echolocation behaviours of the Japanese pipistrelle bat Pipistrellus abramus during foraging flight. Acta Theriologica, 55(4), 315-332.

Tong, C. F. (2016). Distribution and preference of landscape features and foraging sites of insectivorous bats in Hong Kong urban parks. (Master dissertation)

10 ENVIRONMENTAL SITE INSPECTION

Site Audits

10.1 Site audits were carried out by ET on weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures on the Contract site. The summaries of site audits are presented in **Table 10.1** and **Appendix P**.

Table 10.1 Summary of Site Audit

Environmental Site Inspection	**Works Contracts**						
	ND/2019/ 01	**ND/2019/ 02**	**ND/2019/ 03**	**ND/2019/ 04**	**ND/2019/ 05**	**ND/2019/ 06**	**ND/2019/ 07**
Weekly site audit with representative of the *Supervisor's* Representative and the Contractor	8, 17 and 22 Feb 22	9, 18 and 23 Feb 22	4, 11, 18 and 25 Feb 22	4, 11, 16 and 23 Feb 22	7, 17, 21 and 28 Feb 22	10, 15 and 24 Feb 22	4, 11, 18 and 25 Feb 22
Joint Site Audit with representative of the *Supervisor's* Representative, the Contractor and IEC	15 Feb 22*	18 Feb 22	18 Feb 22*	16 Feb 22	17 Feb 22	15 Feb 22	18 Feb 22

Remarks:
[*] Joint Site Audit canceled due to the Pandemic outbreak.

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			
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Contract No.: ND/2019/02			
Water Quality	23/02/2022	To enhance water mitigation measure to prevent surface runoff to pavement.	Follow-up action is needed to be reported in the following month.
Waste/ Chemical Management	18/02/2022	Drip tray should be provided for chemical storage.	Item was remarked as 220223-R01.
	23/02/2022	Drip tray should be provided for chemical storage.	Follow-up action is needed to be reported in the following month.
Ecology	31/01/2022	Erect 2m high dull green barrier around active works area.	Item was remarked as 220209-R01.
	09/02/2022	Erect 2m high dull green barrier around active works area.	Improvement/Rectification was observed during follow-up audit session on 18 February 2022.
Contract No.: ND/2019/03			
Air Quality	18/02/2022	Dusty stockpiles should be properly covered.	Improvement/Rectification was observed during follow-up audit session on 25 February 2022.
Water Quality	28/01/2022	Wheel-washing bay should be cleared regularly.	Improvement/Rectification was observed during follow-up audit session on 4 February 2022.
	28/01/2022	To enhance water mitigation measures around water stream near 巨賓.	Item was remarked as 220204-O01.
	04/02/2022	To enhance water mitigation measures around water stream near 巨賓, exposed slope of the stream should be covered properly.	Item was remarked as 220211-O01.
	11/02/2022	To enhance water mitigation measures around water stream near 巨賓, exposed slope of the stream should be covered to prevent further debris from entering the irrigation water channels.	Item was remarked as 220218-O01.
	18/02/2022	To enhance water mitigation measures around water stream near 巨賓, exposed slope of the stream should be covered to prevent further debris from entering the irrigation water channels.	Item was remarked as 220225-O01.

	Date	Observations and Recommendations	Follow-up
	18/02/2022	Wheel-washing bay should be cleared and cleaned regularly.	Item was remarked as 220225-R01.
	25/02/2022	To enhance water mitigation measures around water stream near 巨賓, exposed slope of the stream should be covered to prevent further debris from entering the irrigation water channels.	Follow-up action is needed to be reported in the following month.
	25/02/2022	Wheel-washing bay should be cleared and cleaned regularly.	Follow-up action is needed to be reported in the following month.
Ecology	18/02/2022	2m high solid dull green site barrier should be properly maintained.	Improvement/Rectification was observed during follow-up audit session on 25 February 2022.
Contract No.: ND/2019/04			
Air Quality	27/01/2022	Faded NRMM label shall be replaced.	Item was remarked as 220204-R01.
	04/02/2022	Faded NRMM label shall be replaced.	Improvement/Rectification was observed during follow-up audit session on 11 February 2022.
	04/02/2022	Faded NRMM label shall be replaced. (Bridge F)	Item was remarked as 220211-R03.
	11/02/2022	Faded NRMM label shall be replaced. (Bridge F)	Item was remarked as 220216-R01.
	11/02/2022	Exposed haul road should be watered regularly.	Improvement/Rectification was observed during follow-up audit session on 16 February 2022.
	16/02/2022	Faded NRMM label shall be replaced. (Bridge F)	Improvement/Rectification was observed during follow-up audit session on 23 February 2022.
Water Quality	27/01/2022	Clear the sediment and provide desilting facilities inside the drainage.	Item was remarked as 220204-R02.
	04/02/2022	Clear the sediment and provide desilting facilities inside the drainage.	Item was remarked as 220211-R01.
	11/02/2022	Clear the sediment and provide desilting facilities inside the drainage.	Improvement/Rectification was observed during follow-up audit session on 16 February 2022.
	23/02/2022	Direct the muddy stagnant water to de-silting facility before discharge to drainage and U-channel. (Portion B)	Follow-up action is needed to be reported in the following month.
Waste/ Chemical Management	04/02/2022	General refuse should be disposed of regularly.	Item was remarked as 220211-R02.

	Date	Observations and Recommendations	Follow-up
	11/02/2022	General refuse should be disposed of regularly.	Improvement/Rectification was observed during follow-up audit session on 16 February 2022.
Contract No.: ND/2019/05			
Air Quality	07/02/2022	Display Valid NRMM label on regulated machine.	Improvement/Rectification was observed during follow-up audit session on 17 February 2022.
	28/02/2022	Dusty worksite shall be watered regularly.	Follow-up action is needed to be reported in the following month.
Water Quality	07/02/2022	To ensure all vehicles cleared of mud before leaving the site.	Improvement/Rectification was observed during follow-up audit session on 17 February 2022.
	07/02/2022	To enhance water mitigation measure to prevent muddy runoff.	Improvement/Rectification was observed during follow-up audit session on 17 February 2022.
	17/02/2022	Remove the construction materials inside the temporary drainage.	Improvement/Rectification was observed during follow-up audit session on 21 February 2022.
	21/02/2022	To enhance water mitigation measure to prevent surface runoff to drainage.	Improvement/Rectification was observed during follow-up audit session on 28 February 2022.
	28/02/2022	To enhance water mitigation measure to prevent surface runoff.	Follow-up action is needed to be reported in the following month.
Contract No.: ND/2019/06			
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Contract No.: ND/2019/07			
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Implementation Status of Environmental Mitigation Measures

10.3 According to the EIA Report, EPs and the Updated EM&A Manual, the mitigation measures detailed in the documents are recommended to be implemented during the construction phase. An updated summary of the Environmental Mitigation Implementation Schedule is provided in **Appendix Q**. The photographic records of measures as stipulated in EP to mitigate environmental impacts in the reporting month are presented in **Table 10.3.**

Table 10.3 Photographic Records and Implementation Status of Measures

EP No.	Condition	Photographic Record	Implementation Status
EP-466/2013	2.9	To minimise adverse impacts on habitats of ecological imprtance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(**Figure 12**)	/[1]
EP-468/2013/A	2.11	To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(**Figure 14**)	/[1]
EP-469/2013	2.7	To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(**Figure 15**)	/[1]
EP-473/2013/A	2.13	To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(**Figure 16**)	/[1]

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

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

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

10.4 Under EP-467/2013/A (Condition 2.9), to minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas. As the Works programme under above EPs were still under preparation work and the barrier fences erection was still progressing in the Reporting Month, 2m high solid dull green site barrier fences will be checked once in place. The Hoarding Plan of the above EPs is shown in **Figure 13**.

Implementation Status of Air Quality and Noise Mitigation Measures

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

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

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

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

Solid and Liquid Waste Management Status

10.6 Waste generated from Contract No. ND/2019/01, ND/2019/02, ND/2019/03, ND/2019/04, ND/2019/05, ND/2019/06 and ND/2019/07 include inert construction and demolition (C&D) materials and non-inert C&D wastes in the Reporting Month.

10.7 The amount of wastes generated by the construction works of the Contract No. ND/2019/01, ND/2019/02, ND/2019/03, ND/2019/04, ND/2019/05, ND/2019/06 and ND/2019/07 during the reporting month are shown in **Appendix R**.

10.8 The Contractors are advised to minimize the wastes generated through recycling or reusing. All mitigation measures stipulated in the Updated EM&A Manual and waste management plans shall be fully implemented. The status of implementation of waste management and reduction measures are summited in **Appendix Q**.

Ecological Mitigation Measures – Creation of Long Valley Nature Park (LVNP)

10.9 From the findings of EIA Report, the area of Long Valley has been assessed as of high to very high ecological value and is the largest contiguous area of freshwater wetland habitats in Hong Kong. To safeguard the ecological value of Long Valley, about 37 hectares of land in Long Valley has been proposed to develop into Long Valley Nature Park (LVNP) for conserving and enhancing the ecologically important environment as well as for compensation of the wetland loss due to the NDA development.

10.10 LVNP is developed according to approved Habitat Creation and Management Plan (HCMP) submitted under EP-468/2013/A. The HCMP provides a framework and specifications for development and management of the LVNP and guides the development to maintain and enhance the 37ha of low-lying wetland habitats.

10.11 Regarding to the design, the zoning of land use in the LVNP is intended to maintain the existing mosaic pattern of wet and dry agriculture, while controlling the activities that could potentially disturb target habitats and species. The LVNP will divide into three broad zones of land use as below:

- Biodiversity Zone of about 21 hectares largely designated for biodiversity conservation through cultivation of specified crops and habitat management.
- Agricultural Zone of about 11 hectares designated for commercially focuses crop production and eco-friendly agricultural practice for farming.
- Visitor Zone of about 5 hectares designed to accommodate visitors as well as storage and other facilities and for educational purposes.

10.12 The construction of the LVNP started in late 2019 and is expected to be completed in 2023. During construction period, the progress of construction and wetland enhancement works are under observation by different stakeholders including AFCD and green groups. Close communication between AFCD and CEDD are conducted to exchange views on conservation, restoration and management of habitats as well as on the planning and design of the park. Also, advices from green groups, Hong Kong Bird Watching Society (HKBWS) and The Conservancy Association (CA), are taken on habitat management of Long Valley and potential effects on habitat and wildlife of each individual work conducted in Long Valley. Regular meeting are held monthly on 25th February 2022 in the reporting month to share the progress of LVNP with different stakeholders, including CEDD, AFCD, CA, HKBWS, Contractor, ET, IEC and farmers.

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

Table 10.5 Photographic Records of Site Activities in LVNP

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

Open water Habitat

Open water Habitat

Chinese arrowhead pond

Creation of wetland with designated habitat for biodiversity conservation

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

Retention of washing bay for amphibians breeding

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

Provision of bird island (hidden area)

Restoring of water flea pond to provide food source to water birds

Construction of storage sheds for farmers	An *Centropus sinensis* was recorded
Wet agricultural land	Provision of noise barrier for noisy works in Long Valley

11 ENVIRONMENTAL NON-CONFORMANCE

Summary of Exceedances

11.1 No exceedance of Action and Limit Levels of air quality, construction noise, ambient arsenic and landfill gas monitoring in the reporting month. Two (2) Limit Level exceedances for turbidity, two (2) Limit Level exceedances for suspended solids of impact water quality monitoring were recorded. After investigation, one (1) Limit Level exceedances for turbidity and one (1) Limit Level exceedances for suspended solids at monitoring station, NTR-IS1, were found due to Contract No. ND/2019/04. Other exceedances were considered non-projected related. The summary of exceedance record in reporting month is shown in **Appendix O.**

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

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

Summary of Environmental Non-Compliance

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

Summary of Environmental Complaint

11.4 One environmental complaint for ND/2019/04 was received in the reporting month. The Cumulative Complaint Log since the commencement of the Project is presented in **Appendix S**.

Summary of Environmental Summon and Successful Prosecution

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

12 FUTURE KEY ISSUES

Key Issues in the Coming Two Months

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

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

Contract No.	Major Site Activities (March to April 2022)	Location/ Working Period	Potential Environmental Impact	Recommended Mitigation Measures
ND/2019/01	(a) Site clearance	Portion 1a, 1b, 1e, 2, 3, 5, 6a, 7	- Construction Dust impact - Noise Impact (Construction Phase) - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste)	**Air** - Watering on exposed earth and haul road. - Cover the stockpiles or dusty materials. - Deploy water browsers to water the haul road. - Deploy mist-cannon on site - Install sprinkler system for dust suppression. - Provide shelter with top and 3-sides for cement production activities. - Entirely cover the Arsenic-containing soil. - Store the bulk cement in enclosed silo tank for Solidification / Stabilization treatment. - Close the mechanical cover of the vehicles used for transporting dusty materials. - Establish vehicle wheel washing facilities at vehicle exit points. - Speed control of site vehicles. - Erect solid site hoarding. **Noise**
	(b) GI works	Portion 1b, 9b		
	(c) Excavation	Portion 1b, 3, 5, 6a, 7, 8a, 8b, 9b, 9c, 10a, 10b		
	(d) Construction of retaining wall	Portion 6a, 8a		
	(e) Site Formation	Portion 2		
	(f) Demolition of existing structure	Portion 1a, 1e, 9b		
	(g) Construction of temporary site haul road	Portion 2, 5, 6a, 7, 8a, 10a		
	(h) Operation of HAC treatment facility	Portion 6b		
	(i) Tree felling	Portion 1a, 2, 3		

	(j) Drainage Works	Portion 1b, 5, 6a, 7, 8a, 9b, 10a, 10b, 11b		- Regular inspect of construction plants in good condition - Provide temporary noise screens if necessary. - Use of Quiet plants (QPME) and working methods if possible. - Sequencing operation of construction plants where practicable. - Shut down the machines and plant if not in use. - Only well-maintained plant to be operated on-site. - Mobile plant to be sited as far away from NSRs as possible and practicable. - Conduct noise monitoring regularly. - Erect silent-up noise barrier at Portion 6b. **Water** - Set up wastewater treatment system (AquaSed) on site. - Erect soil bund / temporary drain to divert /collect surface runoff. - Maintain the drainage and wastewater treatment facilities. **Waste / Chemical Management** - Sort out demolition debris and excavated materials from demolition works to recover reusable / recyclable portions. - Provide recycling bin on site, encourage reuse and recycle as much as possible. - Provide drip tray for chemical containers. - Chemical spill kit available on site. - Chemical waste cabinet available on site. - Chemical wastes to be stored in appropriate containers and collected by a licensed chemical waste collector. - Delivery of yard waste to Y-Park for reuse/ upcycling or agreed alternative site.
	(k) Sheetpiling	Portion 1b, 5, 6a, 7, 8b, 9b, 10a, 10b		

ND/2019/02	(a) Pipe Jacking	Portion 1, 3	Air, Noise, Waste	- Dusty works should be spray water or idle stockpile or slop should be covered by Tarpaulin sheet properly. - Wheel washing should be carried out at every exit. - Plants should be well maintained to prevent dark smoke and oil leakage. Idle plant should be turned off. - Drip tray should be provided for all chemical and stationary plants. - No construction works shall be carried out in restricted hours (7:00 pm to 7:00 am) unless CNP is obtained. - Waste should be sorted and dispose according to the Waste Management Plan - No direct discharge of wastewater into storm drains is allowed. Wastewater must be de-silted before discharged in accordance with the water discharge license. - Dull green barrier and ecological measures should be implemented according to the Ecological protection plan.
	(b) ELS	Portion 2, 3, 7	Air, Noise, Waste	
	(c) Concreting	Portion 3, 9, 10	Air, Noise, Water, Waste, Ecology	
	(d) Backfilling	Portion 3	Air, Noise, Water, Waste, Ecology	
	(e) Sheet Pile Installation	Portion 3, 7	Air, Noise, Water, Waste, Ecology	
	(f) Bedding and Pipe Laying	Portion 3	Air, Noise, Water, Waste	
	(g) Cut and Fill of Slope	Portion 7	Air, Noise, Water, Waste	
ND/2019/03	(a) Excavation of irrigation channel	Long Valley	- C&D waste - Air pollution - Noise pollution	- Watering exposed earth regularly - Cover C&D material by tarpaulin - Adopt QPME for excavation
	(b) Excavation of trench in Yin Kong Road	Portion 1 and Portion 1A	- C&D waste - Air pollution - Noise pollution - Water pollution	- Watering exposed earth regularly - Cover C&D material by tarpaulin - Noise barrier for screening from source of noise - Wastewater will be treated before discharging to channel
	(c) Demolition of existing structure	Long Valley	- C&D material - Air Pollution	- Cover C&D material by tarpaulin - Watering while demolish the structure
	(d) Construction works of storage shed and Type 2 Storage House	Long Valley	- C&D material - Air Pollution	- Watering exposed earth regularly - Cover C&D material by tarpaulin

ND/2019/04	(a) Sheet piling	Portion H, Bridge F, A2	- Air, Noise, Waste	- Dusty works should be sprayed with water or stockpile should be covered by tarpaulin properly. - Plants should have maintenance to prevent dark smoke and oil leakage. Idle plant should be turned off. - Drip tray should be provided for all chemical and stationary plants. - No construction works shall be carried out in restricted hours (7:00 pm to 7:00 am) unless CNP is granted. - Waste should be sorted and disposed according to Waste Management Plan. - No direct discharge of wastewater into storm water drains is allowed. Wastewater must be desilted before discharging according to water discharge license.
	(b) Bored piling	Bridge A1, A2, A3	- Air, Noise, Water, Waste	
	(c) Predrill	Bridge A1, A3, Portion E, H	- Air, Noise, Water, Waste	
	(d) Excavation and ELS	Portion H	- Air, Noise, Waste	
	(e) Site clearance	Portion H	- Air, Noise, Waste	
	(f) Tree felling	Portion H	- Air, Noise, Waste	
ND/2019/05	(a) Pre drilling for bored piles	B1 & B2(Portion II), C1(Portion II) & C1 03	- 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.
	(b) Bored piling	B1(Portion I), B1&B2(Portion II), C1(Portion II), C1-02b, C103, C2-02, C2-03a, C2-03b, C3-02, C3-03a, C3-04a, D2-01, E2-01.		
	(c) Pipe Pilling	D2-03		
	(d) Interface Coring works	D2-02, B1-01 P8, B1-02b P2, C1-04a P1, C2-01 P5, C2-02 P1, C2-02 P3 & C2-02 P6		

	(e) ELS & Pile Cap Construction	C1-04, C3-04b, D1-01, D1-02, D1-03, D1-04, E1-01, E1-02, E1-03 & E1-04, E2-03 E3-01, E3-03, D2-02		- Segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal - Sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions - Provide training to workers on appropriate waste management procedures, including waste reduction, reuse and recycling - To adopt other good site practice, such as arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site and regular cleaning and maintenance programme for drainage - Chemical wastes to be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation - Conducting Construction Vibration Monitoring - Tree Protection & Preservation – Exiting trees to be retained within the Project site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. - Tree Transplantation – Tree unavoidably affected by the Project works should be transplanted where practical. Tree should be transplanted straight to their
	(f) Footing Construction	C4-02		
	(g) Utitilies Diversion Works and Permanent Road Works	Venton Area Portion 11, Portion 13, Portion 17 and 18		
	(h) Pier/ Column Construction	C3-03b, C4-03, C4-04aM, C4-04bM, D1-01, E1-01, E1-02, E1-03& E1-04		
	(i) Haul road construction	B2-03 to C1-02a at Portion II		
	(j) Launching Girder & Form Traveler Fabrication	CTC Storage Yard		
	(k) Drainage & Water Mains construction	Portion XI, XIII, XVII, XVIII		
	(l) Slope works	RW06, FS04		
	(m) Demolition	HD Warehouse		

				final receptor site and not held in a temporary nursey as far as possible. - Erect 2m high dull green site boundary fence.
ND/2019/06	A. Construction of finishing works, E&M works and Building Services works of Management Office Building (MOB)	Portion 4	- Noise pollution - Water pollution	- Adopt noise barrier in screening noise - Wastewater generated after wheel washing of vehicles should be treated properly before disposal
	B. Installation of steel canopy column	Portion 3	- Noise pollution	- Adopt noise barrier in screening noise
	C. Construction of underground utilities in the final stage market	Portion 3	- Air pollution - Noise pollution - C&D waste - Water pollution	- Cover C&D waste by impervious sheeting - Spray with water to work area before, during and after the work - Adopt QPME for excavator - Wastewater generated after wheel washing of vehicles should be treated properly before disposal
	D. Formation of carriageway and footway	Portion 3	- Noise pollution - Air pollution	- Cover C&D waste by impervious sheeting - Adopt noise barrier in screening noise
	E. Slope improvement works	Portion 6	- Noise pollution - C&D waste	- Adopt Noise barrier in screening noise - Cover C&D waste by impervious sheeting
ND/2019/07	(a) Site clearance	Portion 4, 5	- Construction Dust Impact - Noise Impact - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste) - Landscape and Visual	- Regular watering on exposed worksites and haul road. - Stockpiling area should be provided with covers and water s praying system. - Only well maintained plant to be operated on site. - Plant known to emit noise strongly in one direction, where possible; be orientated so that the noise is directed away from nearby NSRs. - Mobile plant to be sited as far away from NSRs as possible practicable.
	(b) Erection of site hoarding	Portion 4		
	(c) C&D waste disposal	Portion 1, 2, 4, 5		
	(d) Ground investigation works	Portion 3, 4		
	(e) Construction of box culvert	Portion 2		
	(f) Filing works	Portion 1, 2, 4		

	(g) Tree felling/ disposal of yard waste	Portion 4, 5		- All open stockpiles of construction materials of more than 50m^3 to be covered with tarpaulin. - Manholes to be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system. - All vehicles and plant to be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. - Segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal. - Sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions. - Provide training to workers on appropriate waste management procedures, including waste reduction, reuse and recycling. - To adopt other good site practice, such as arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site and regular cleaning and maintenance programme for drainage. - 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.
	(h) Construction of site haul road	Portion 1, 4		
	(i) Sewage works	Portion 1, 3		
	(j) Demolition of villager's houses	Portion 4, 5		
	(k) Drainage Works	Portion 1, 3		

				- Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. - Tree Transplantation Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. - Erect 2m high dull green site boundary fence. - Light Control Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.

12.2 The major site activities in coming two months is shown in **Table IV**.

Monitoring Schedule for the Next Month

12.3 The tentative environmental monitoring schedule for next month is shown in **Appendix D**.

Construction Programme for the Next Month

12.4 A tentative construction programme is provided in **Appendix A**.

13 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

13.1 This Monthly EM&A Report presents the EM&A work undertaken in February 2022 in accordance with Updated EM&A Manual.

13.2 No Action/Limit Level exceedance were recorded for air quality, construction noise, ambient arsenic and landfill gas monitoring in the reporting month. Two (2) Limit Level exceedances for turbidity, two (2) Limit Level exceedances for suspended solids of impact water quality monitoring were recorded. After investigation, one (1) Limit Level exceedances for turbidity and one (1) Limit Level exceedances for suspended solids at monitoring station, NTR-IS1, were found due to Contract No. ND/2019/04. Other exceedances were considered non-projected related.

Contract No. ND/2019/01

13.3 Environmental site inspection were conducted on 8, 17 and 22 Feb 22 by ET in the reporting month.

Contract No. ND/2019/02

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

Contract No. ND/2019/03

13.5 Environmental site inspection were conducted on 4, 11, 18 and 25 Feb 22 by ET in the reporting month.

Contract No. ND/2019/04

13.6 Environmental site inspection were conducted on 4, 11, 16 and 23 Feb 22 by ET in the reporting month.

Contract No. ND/2019/05

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

Contract No. ND/2019/06

13.8 Environmental site inspections were conducted on 10, 15 and 24 Feb 22 by ET in the reporting month.

Contract No. ND/2019/07

13.9 Environmental site inspections were conducted on 4, 11, 18 and 25 Feb 22 by ET in the reporting month.

13.10 There were one environmental complaint for ND/2019/04 received in the reporting month. No notification of summons or successful prosecutions received in the reporting month.

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

Recommendations

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

Air Quality Impact

- To regular watering haul road;
- To provide vehicle washing facilities with high pressure water jet at every discernible or designated vehicle exit point;
- To maintain the impervious material to entirely cover the stockpile of dusty materials; and
- To ensure all regulated machines displayed with valid Non-road Mobile Machinery (NRMM) labels.

Construction Noise Impact

- To ensure compressor was operating with doors closed.

Water Impact

- To review and implement temporary drainage system;
- To prevent any surface runoff discharge into Sheung Yuen River, Ma Wat River or public road;
- To provide sandbags or construct berm to prevent any outflow of muddy water from site area;
- To ensure all vehicle clear of earth and mud before leaving site;
- To ensure the drainage facilities would not be clogged with waste or sediment to avoid overflow;
- To regularly check the condition of desilting materials for ensuring proper function;
- To regularly maintain and ensure water treatment facilities proper operation and functioning;
- To divert all the water generated from construction site to de-silting facilities with sufficient handling capacity before discharge; and
- To avoid or regularly clear the stagnant water in drip tray;

Waste/Chemical Management

- To dispose of general refuse properly;
- To clear and avoid the oil stain at site area;
- To provide proper storage area for chemical storage; and
- To maintain drip tray for chemical storage well.

Landfill Gas Hazard

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

Land Contamination

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

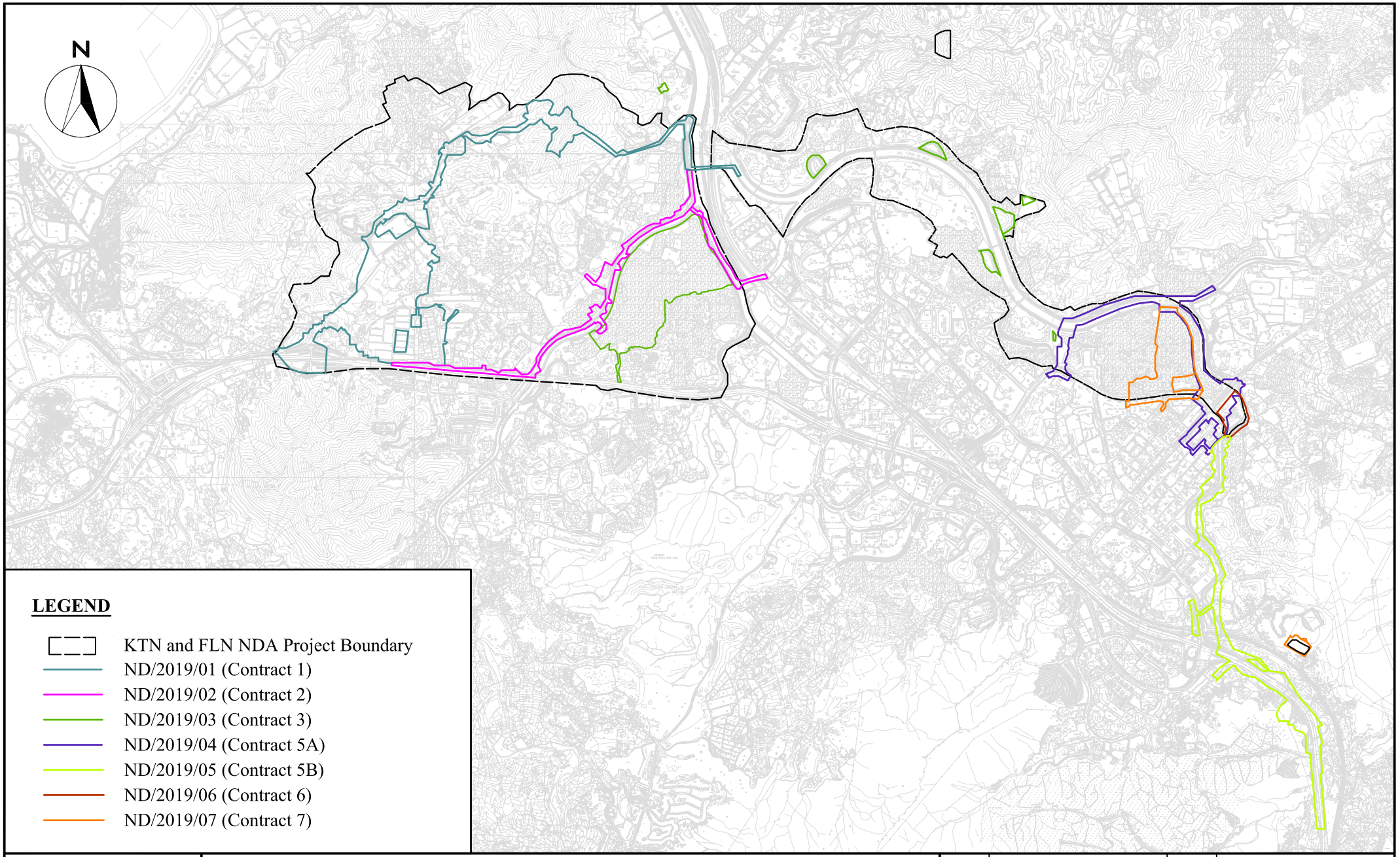
Ecology

- Properly erect and maintain 2m high solid barriers for protecting Siu Hang San Tsuen Stream.

Permit/ Licences

- To display valid Permit or Licences on site entrance.

DRAWING(S)



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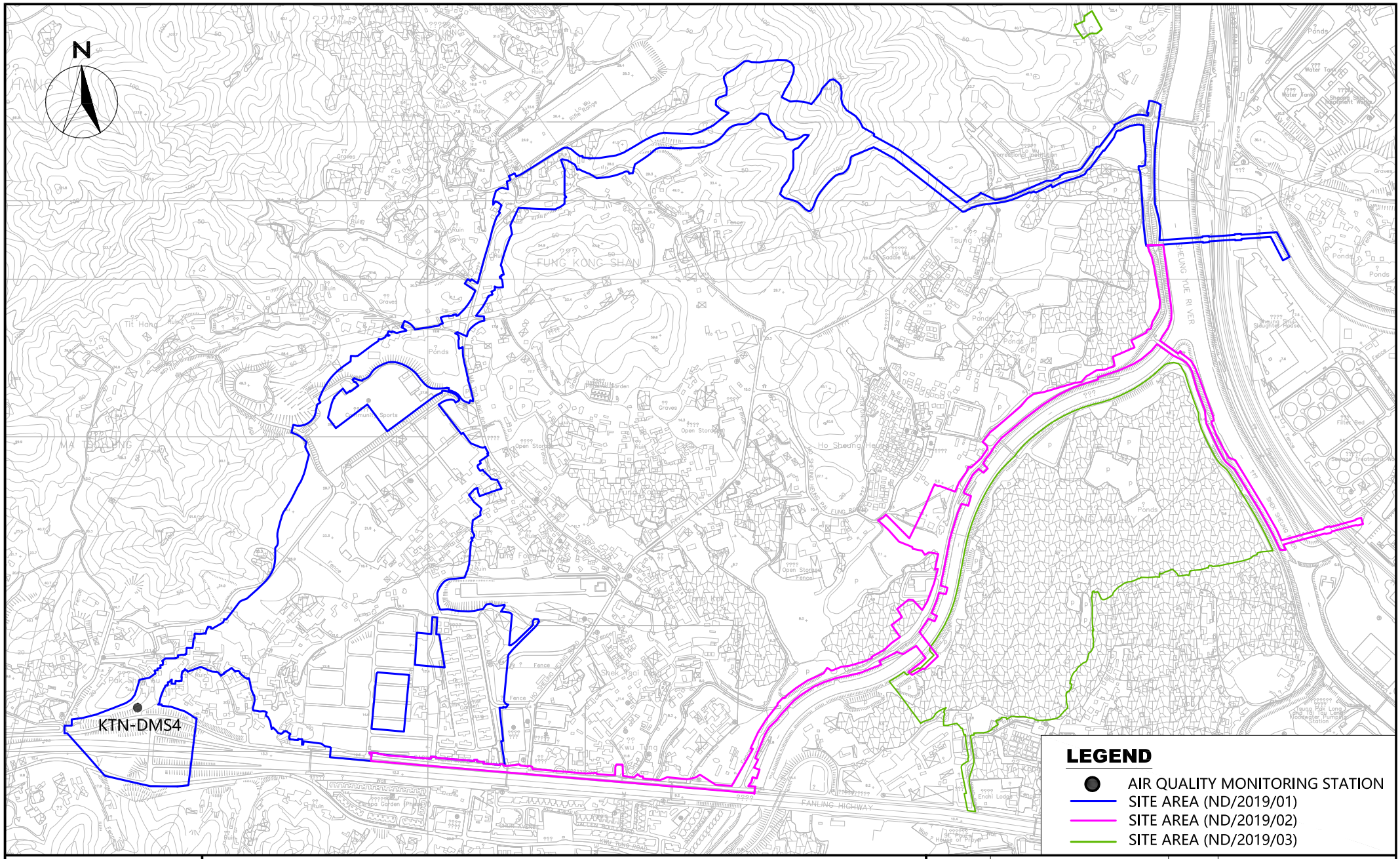
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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

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

FIGURE(S)



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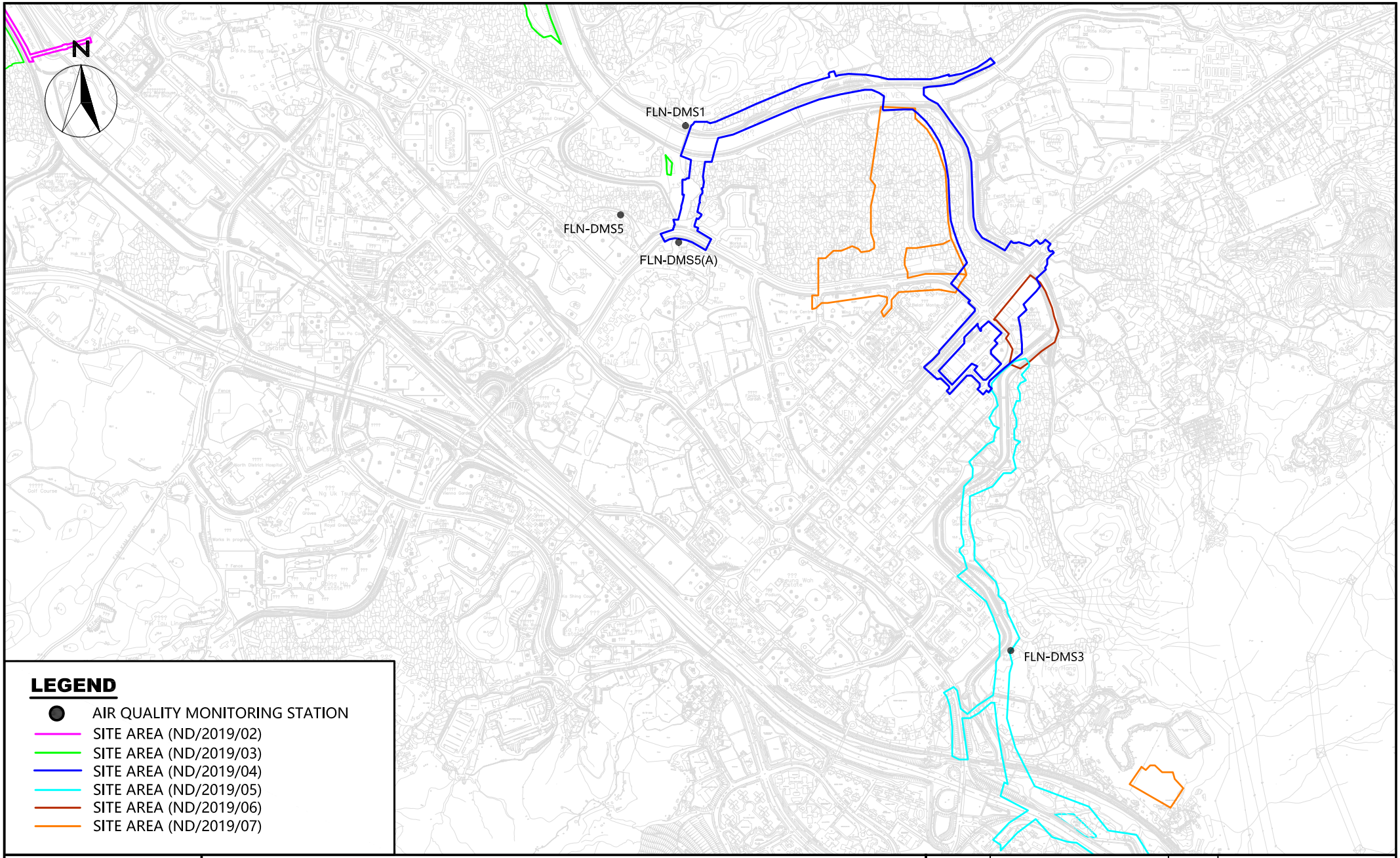
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Air Quality Monitoring Station (KTN)

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



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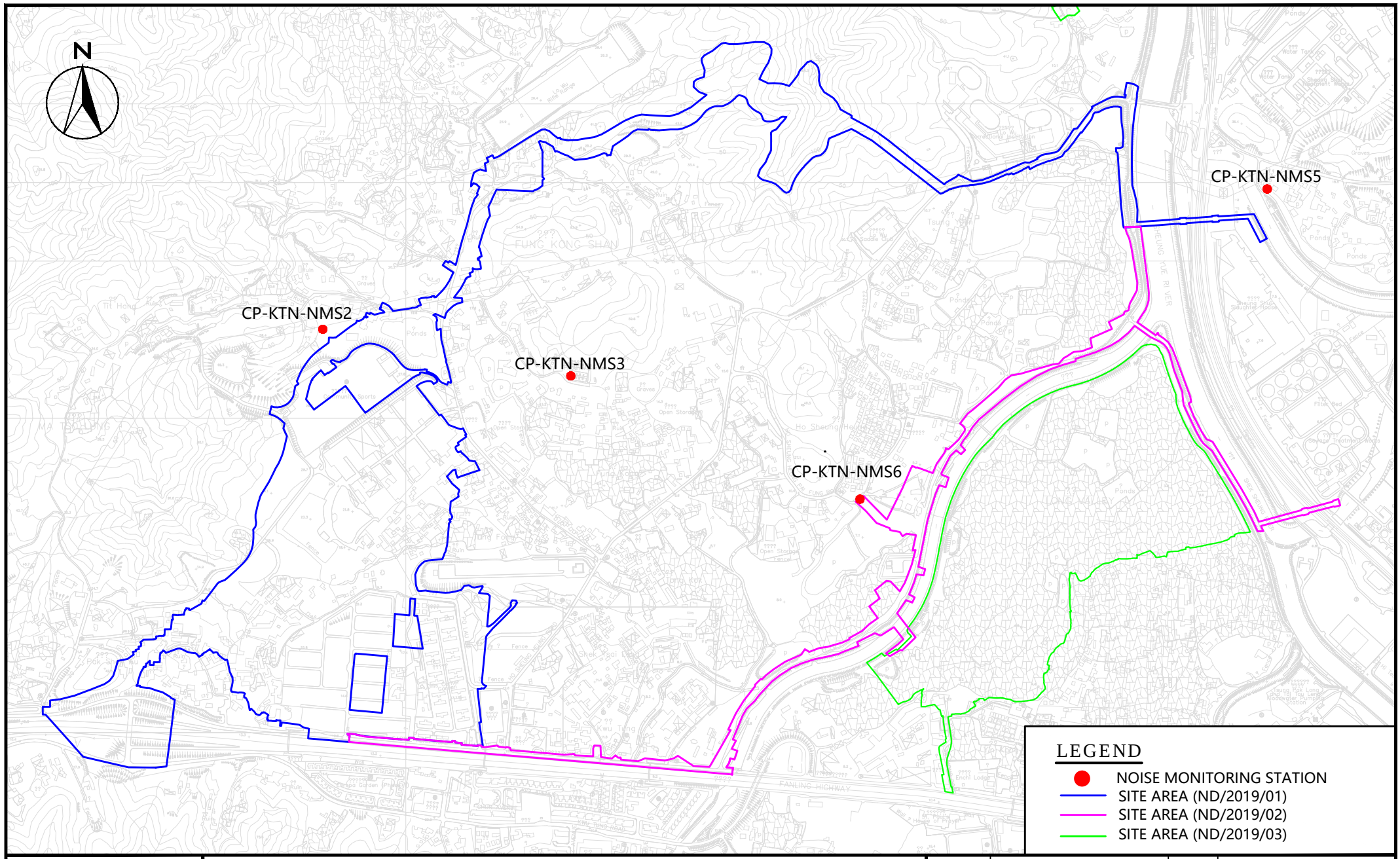
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Air Quality Monitoring Station (FLN)

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



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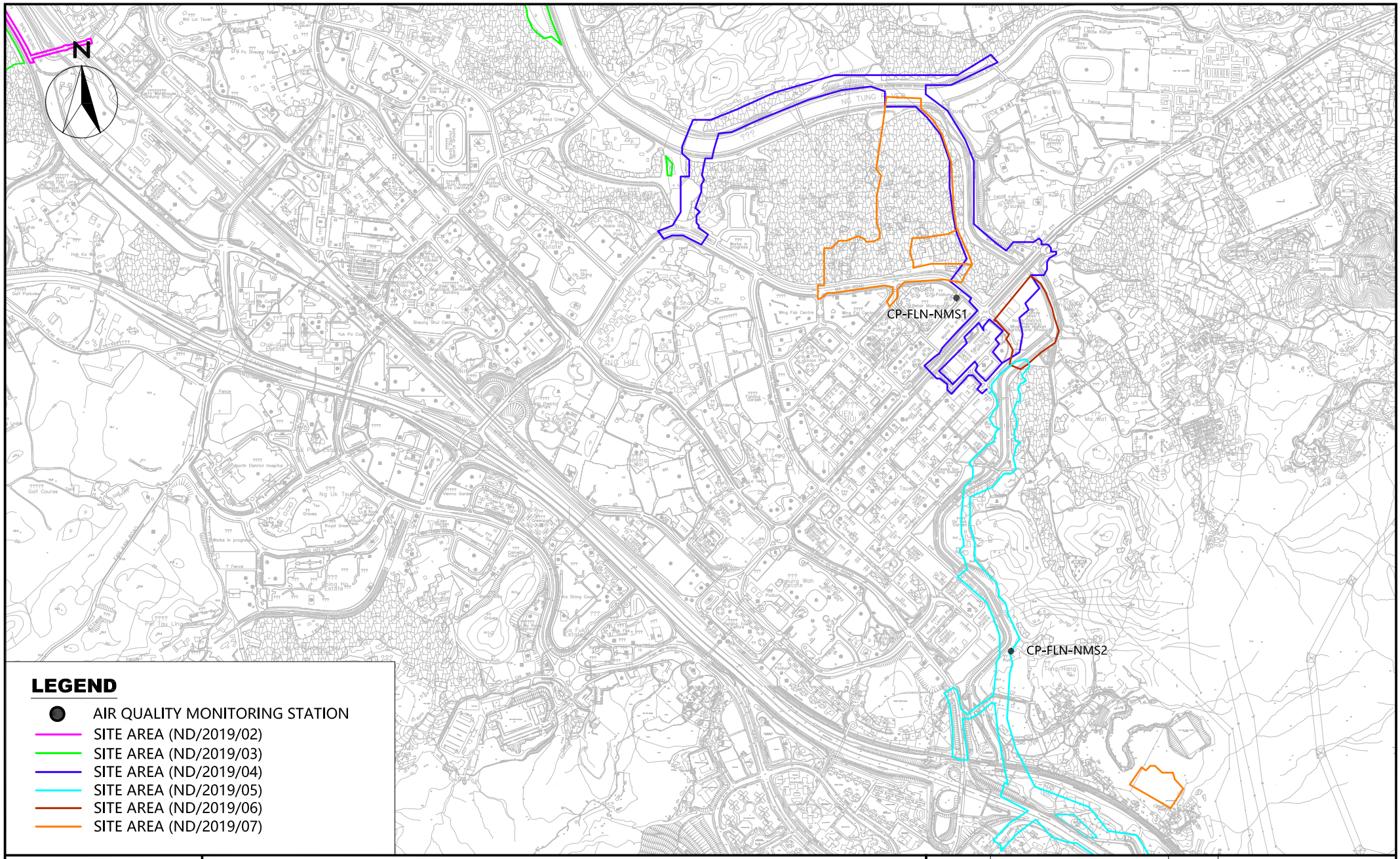
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Noise Monitoring Station (KTN)

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



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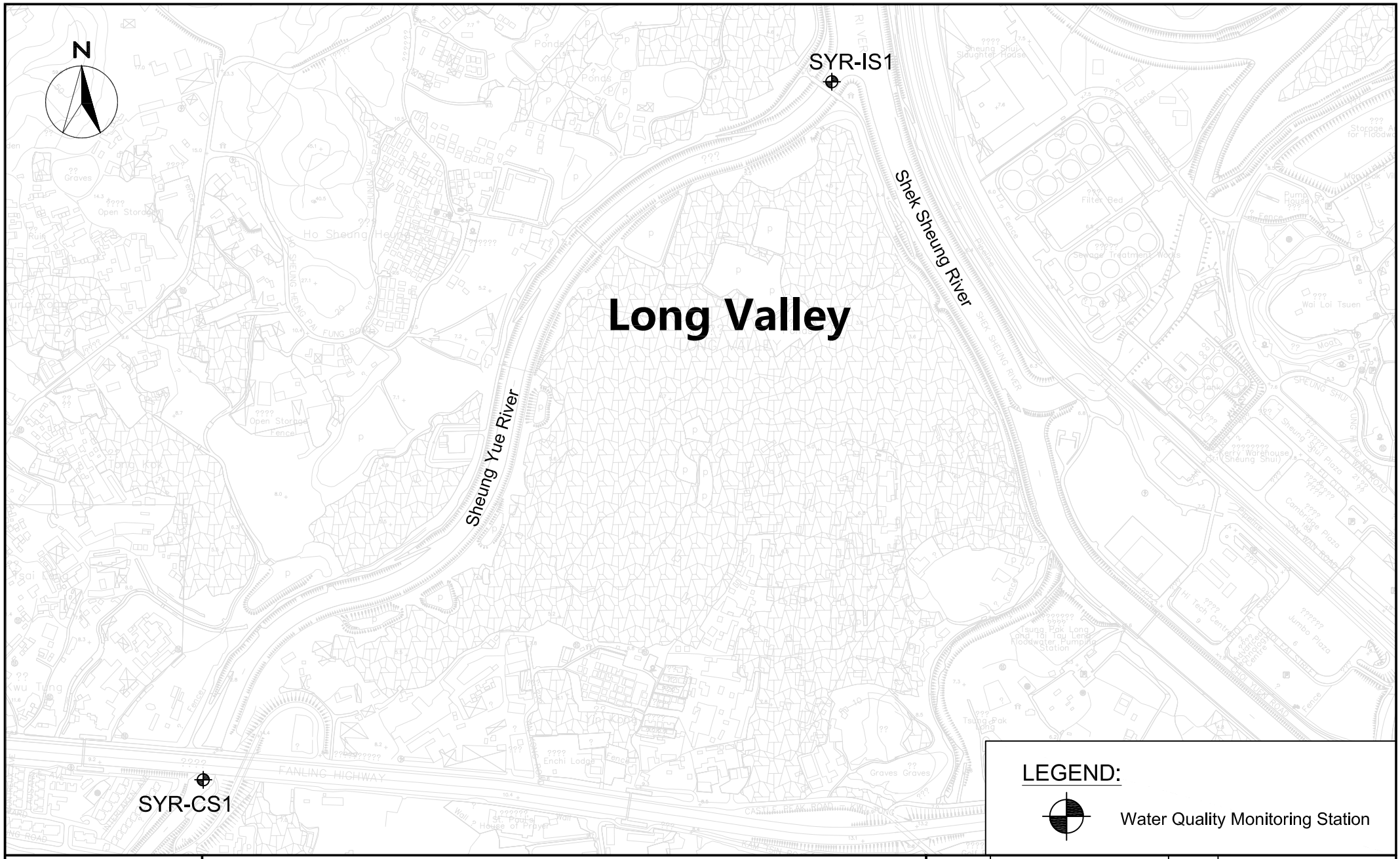
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Noise Monitoring Stations (FLN)

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



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

Location of Additional Water Quality Monitoring Stations at River Beas

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

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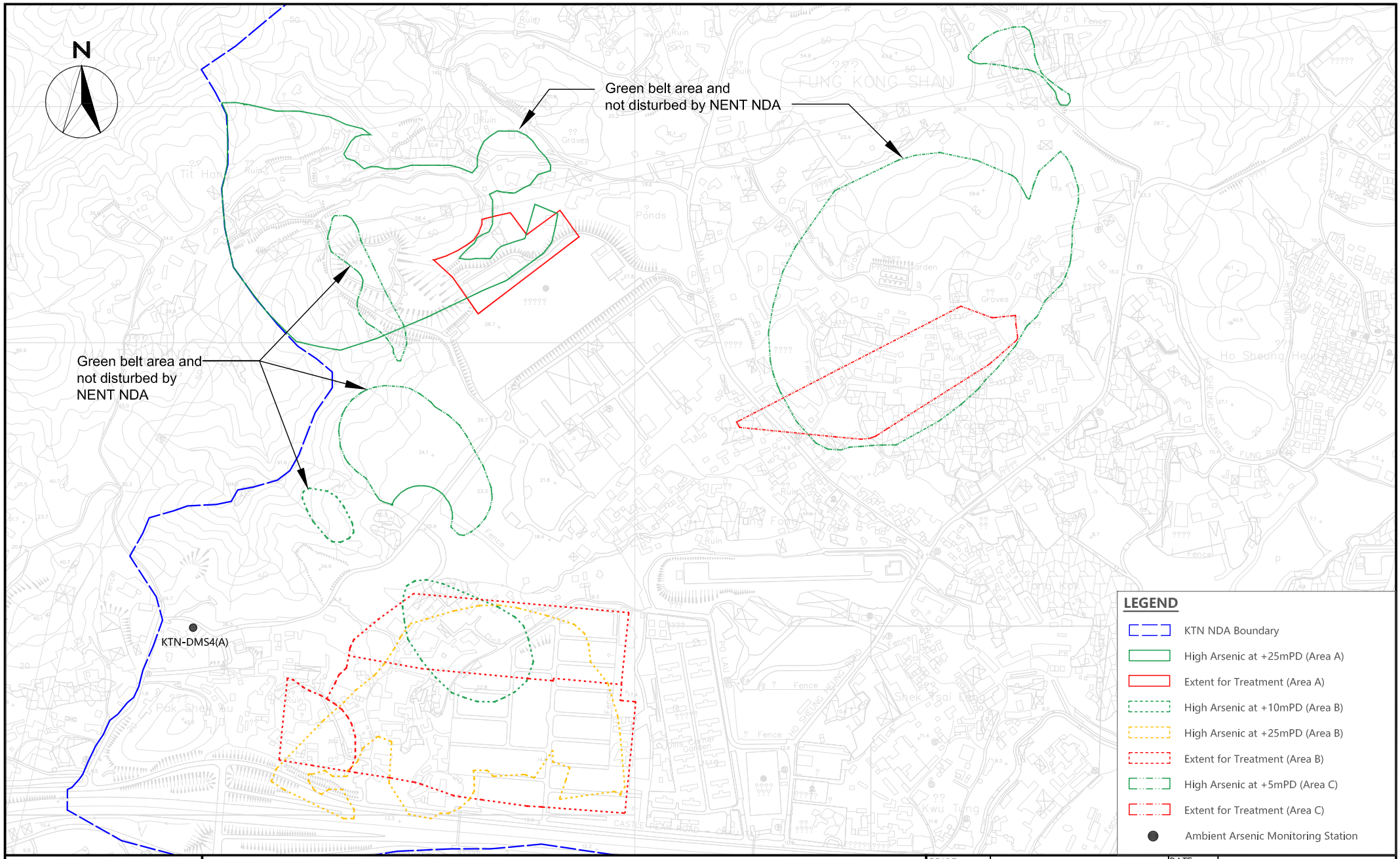
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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

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



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

Location of Ambient Arsenic Monitoring Station

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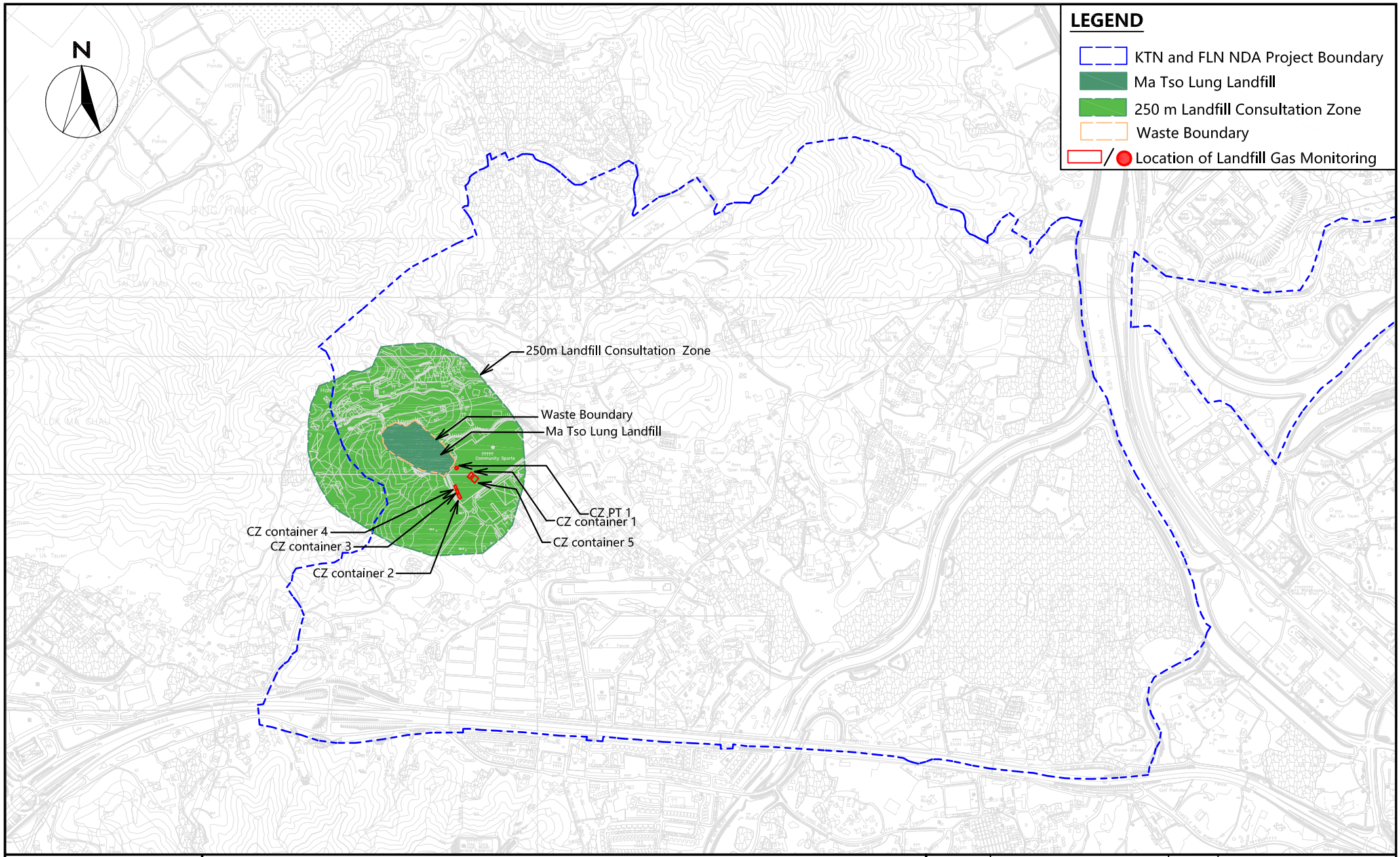
CHECK	IT	DRAWN	ML
PROJECT No.	WMA20002	FIGURE NO.	7
		REV	-

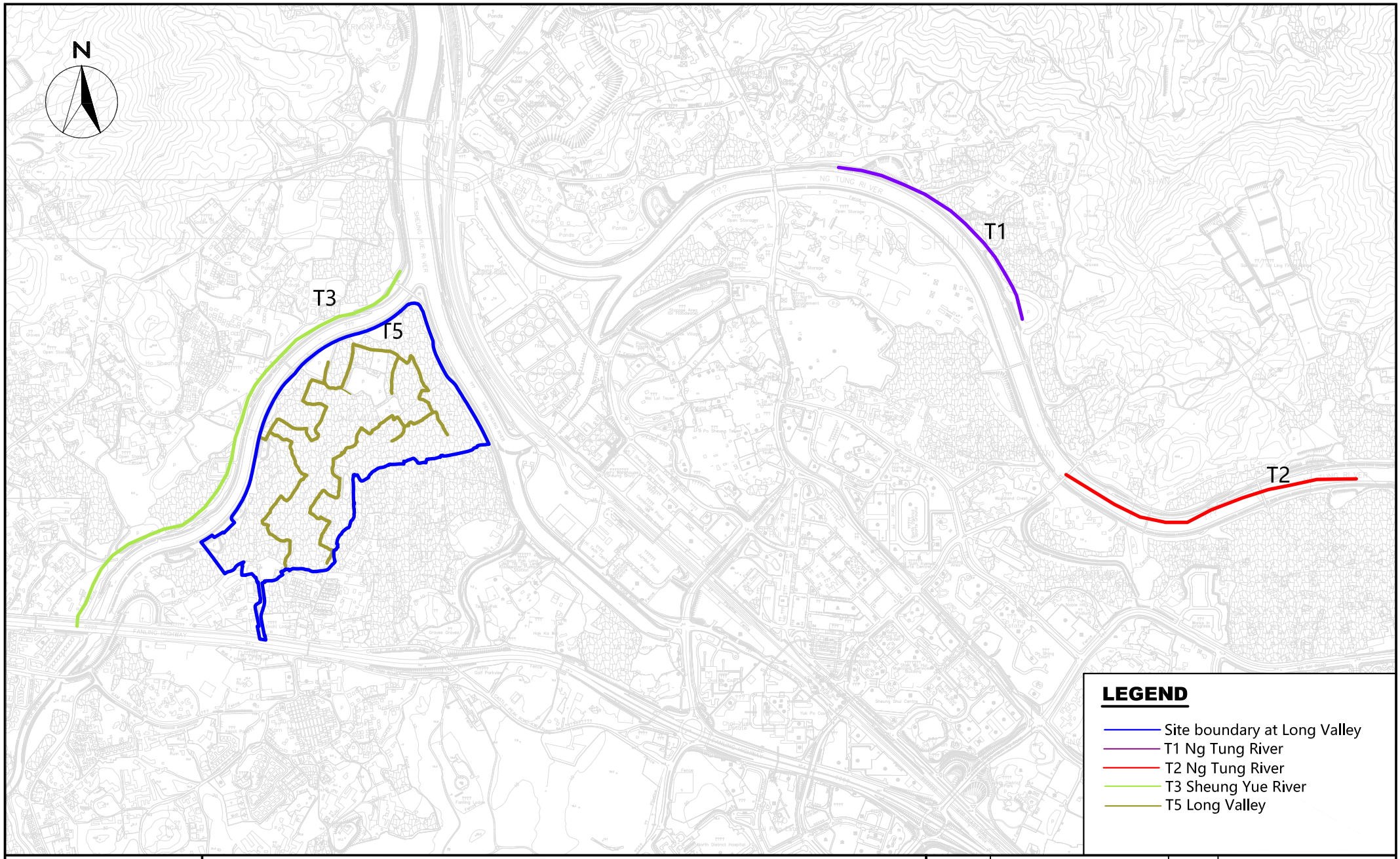


WELLAB 匯力
consulting . testing . research

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

Location of Landfill Gas Monitoring

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



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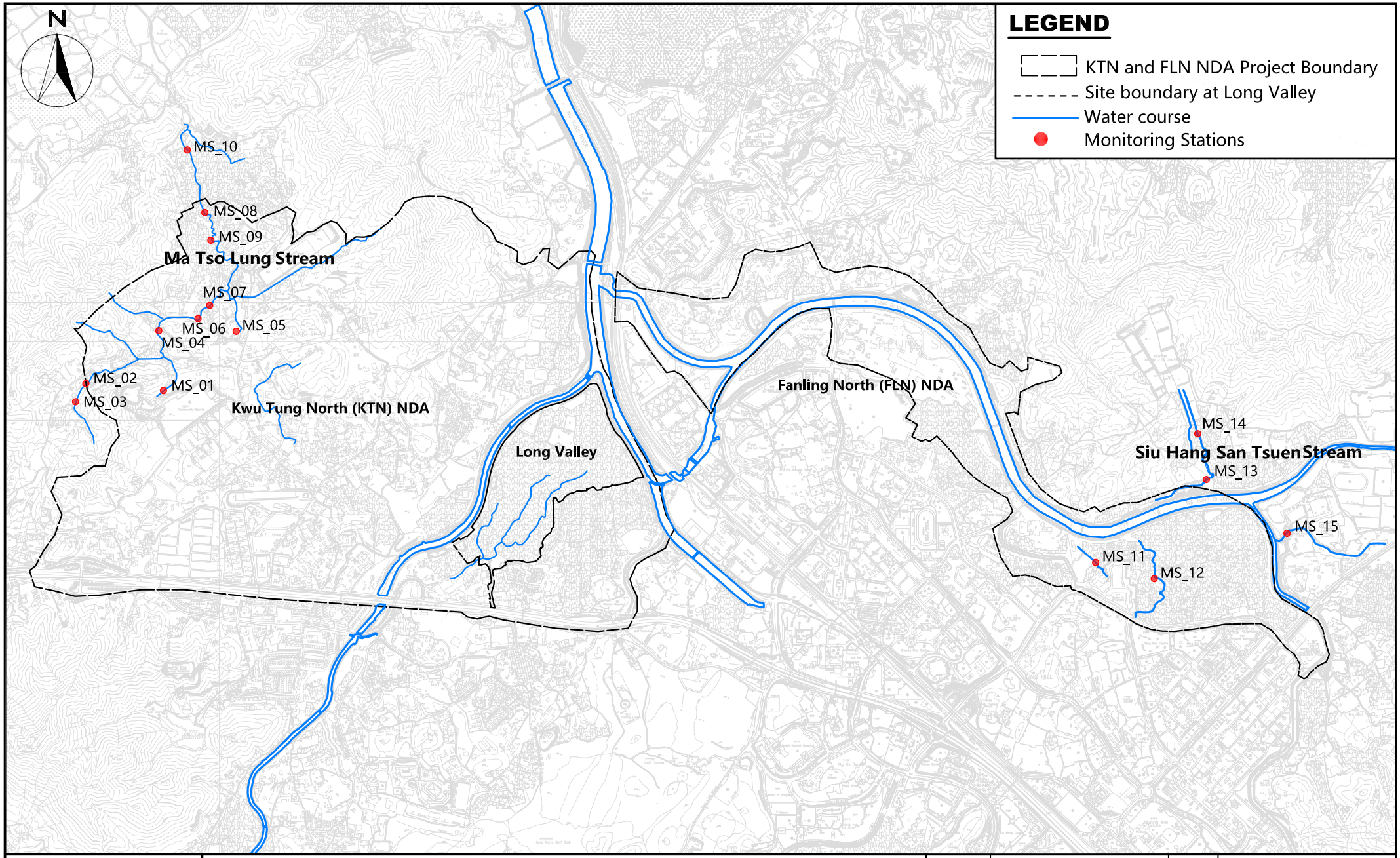
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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

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



WELLAB 匯力
consulting . testing . research

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

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

SCALE	A4 @ 1:60000	DATE	MAY 2020
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PROJECT No.	WMA20002	FIGURE NO.	10
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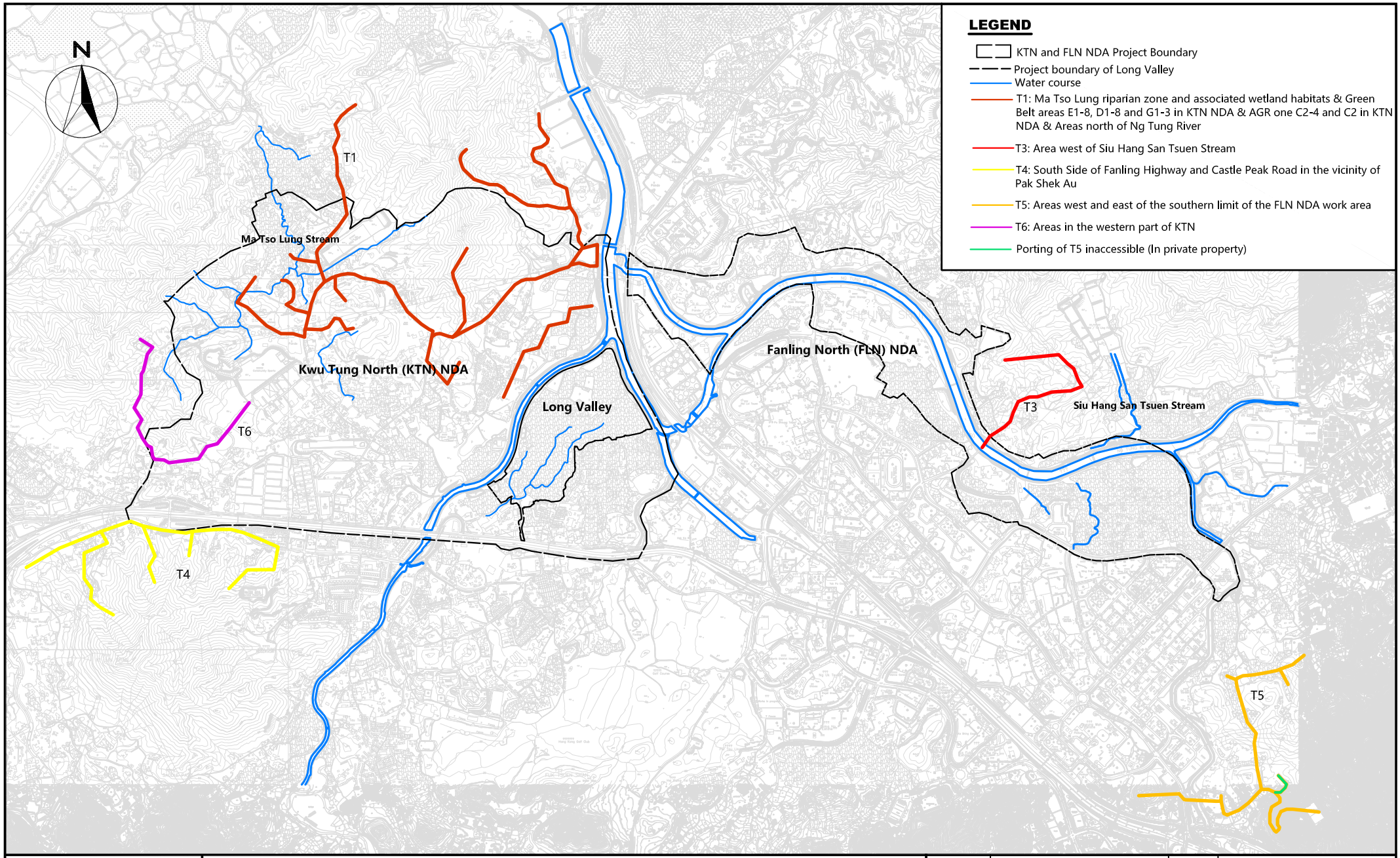

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Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

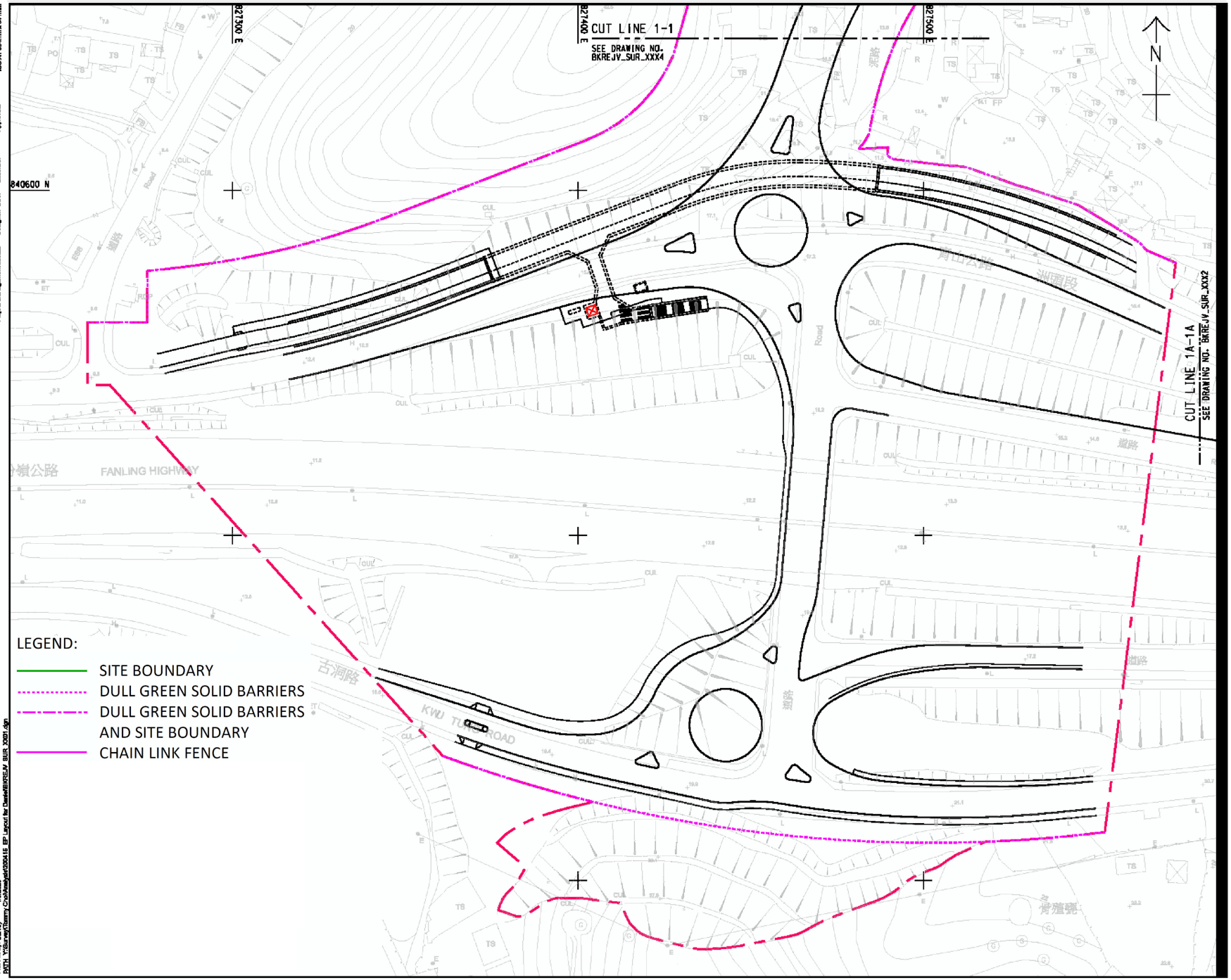
Location of Transect Route of Ecological Sensitive Habitats (Non-Aquatic Fauna) Transects (T1, T3-T6)

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

Figure 12

Hoarding Plan

EP-466/2013



BKREJV

TITLE OF DESIGNATED PROJECT:
Castle Peak Road Diversion

CONTRACT TITLE:

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

CLIENT
業主

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

CONSULTANT
工程顧問公司

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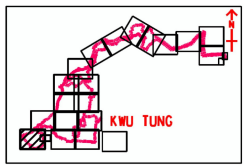
分判工程顧問公司

STATUS
階段

SCALE 比例
A3 1:1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/01

SHEET TITLE
圖紙名稱

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
圖紙編號

BKREJV_SUR_XXX1

Project Management Initials: Designed: CCW Checked: - Approved: -
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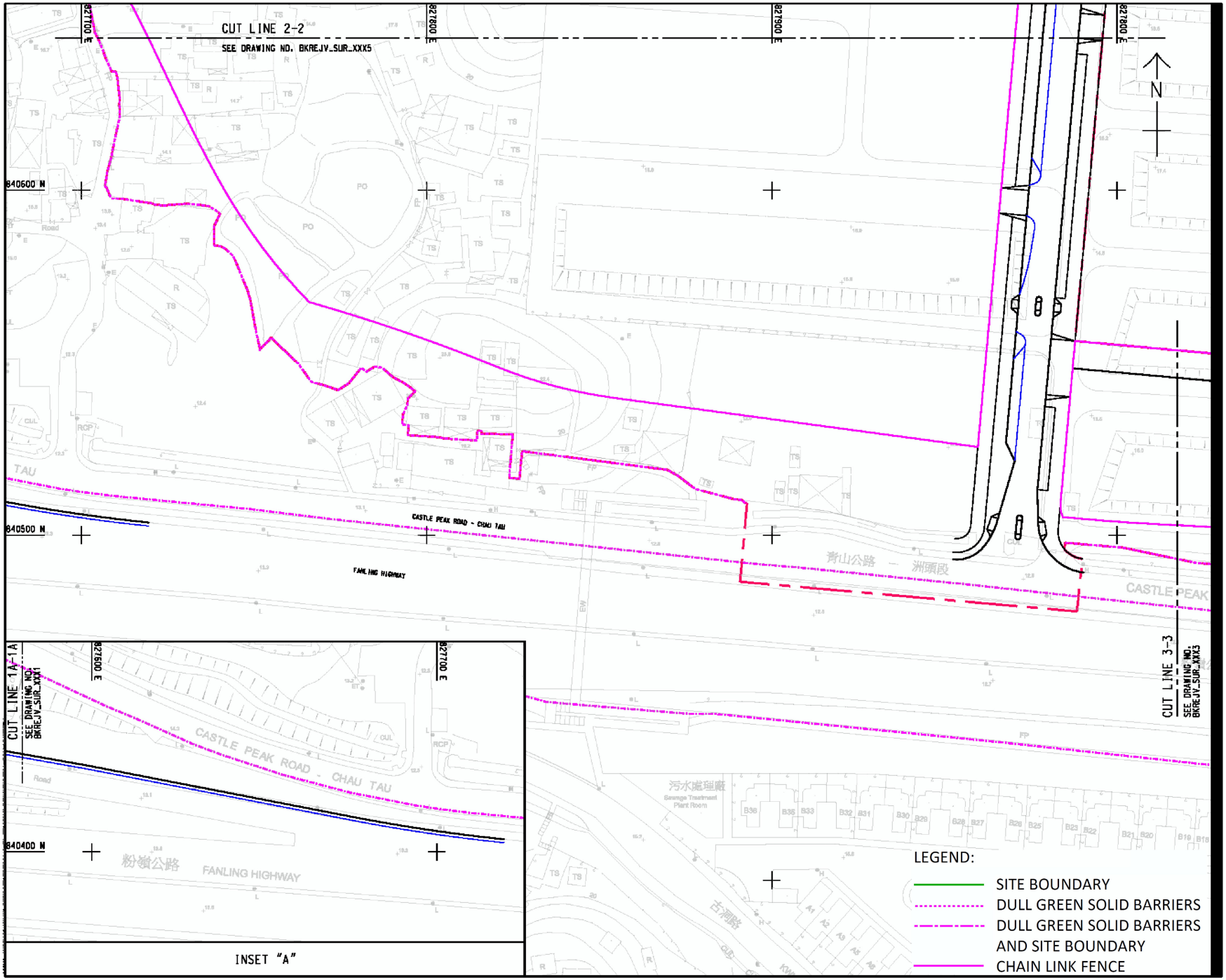
4/6/2020



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
業主

土木工程拓展署
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STATUS
階段

SCALE
比例
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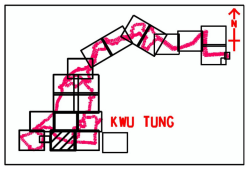
DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖



PROJECT NO.
項目編號
60335576

CONTRACT NO.
合約編號
ND/2019/01

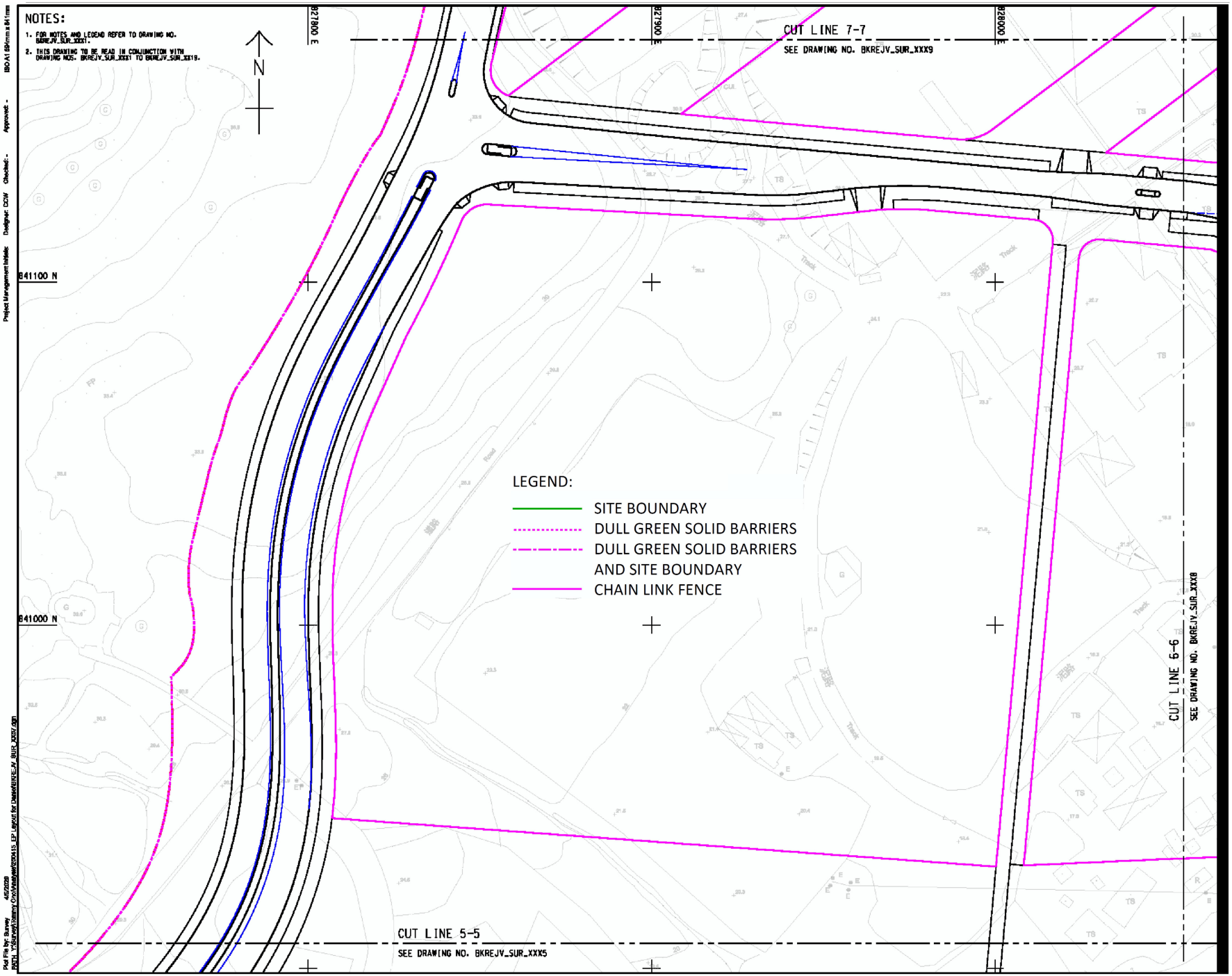
SHEET TITLE
圖紙名稱
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
圖紙編號
BKREJV_SUR_XXX2

Figure 13

Hoarding Plan

EP-467/2013/A



BKREJV

TITLE OF DESIGNATED PROJECT:

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

CONTRACT TITLE:

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

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STATUS
階段

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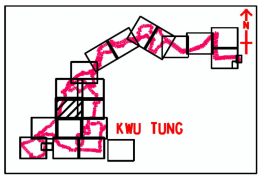
DIMENSION UNIT 尺寸單位
METRES

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_XXX7

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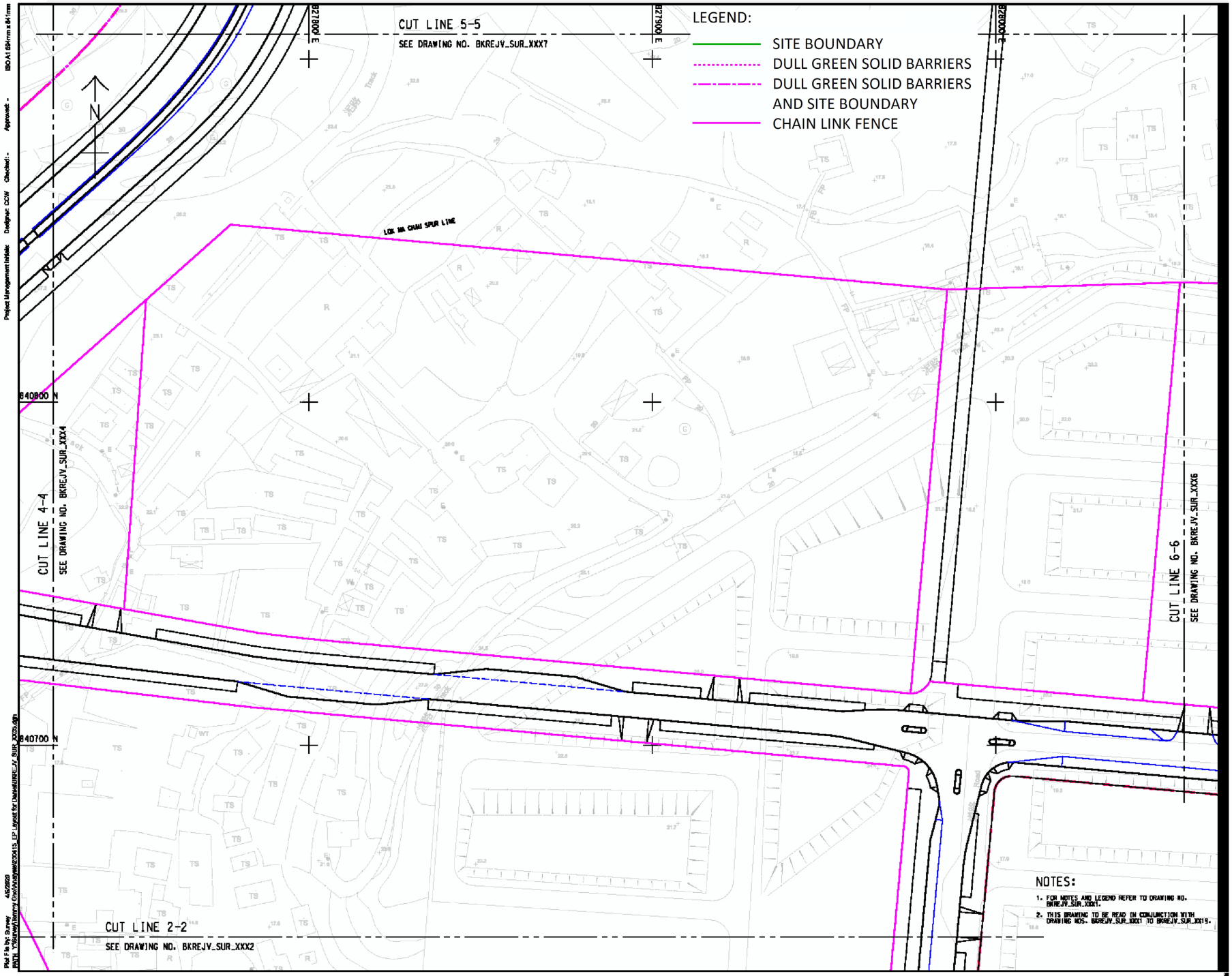

BKREJV

TITLE OF DESIGNATED PROJECT:

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

CONTRACT TITLE:

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

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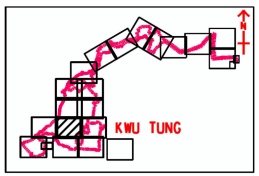
STATUS
階段

SCALE 比例
A3 1:1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/01

SHEET TITLE
圖紙名稱

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
圖紙編號
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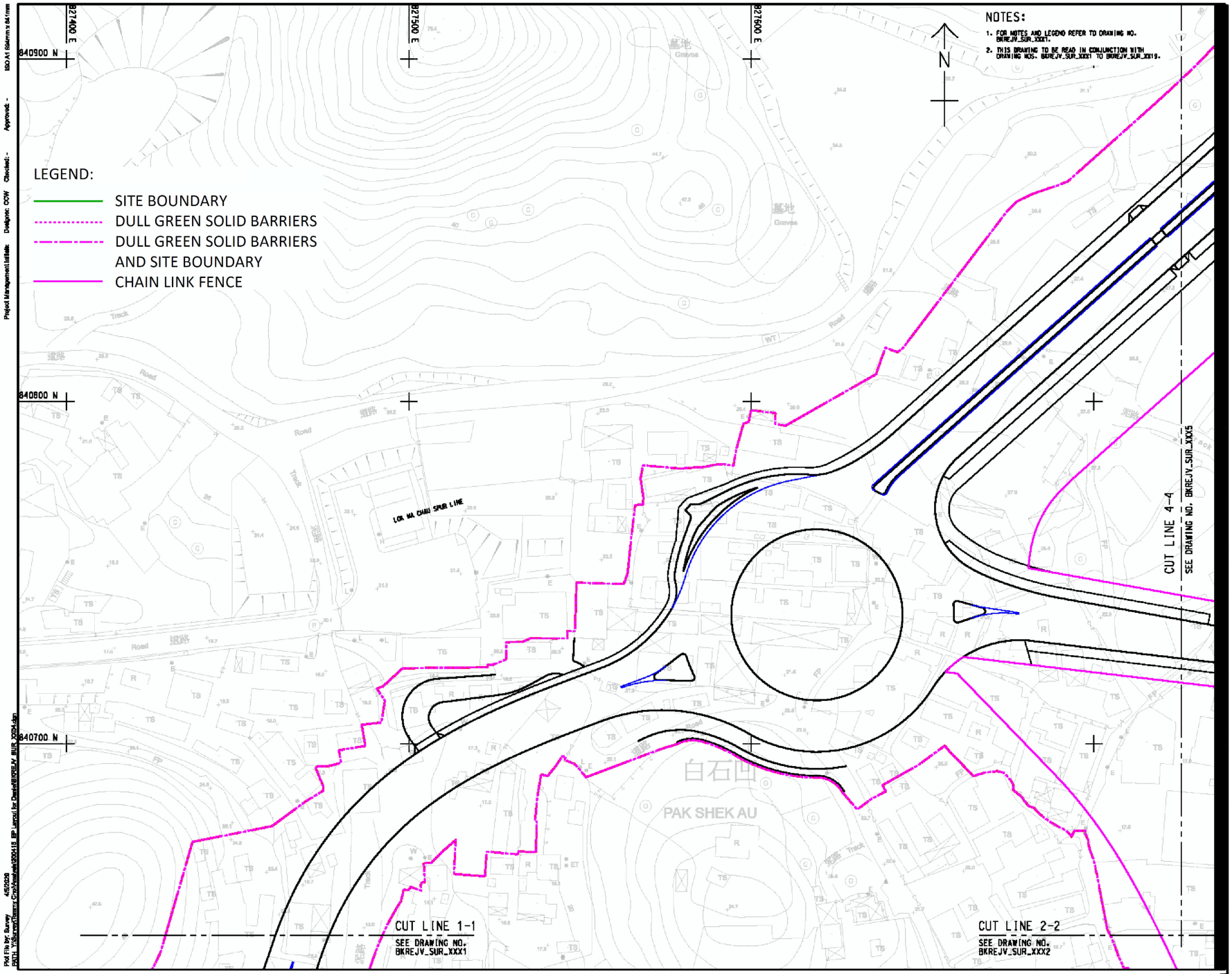

BKREJV

TITLE OF DESIGNATED PROJECT:

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

CONTRACT TITLE:

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

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STATUS
階段

SCALE
比例
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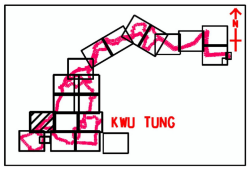
DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖



PROJECT NO.
項目編號
60335576

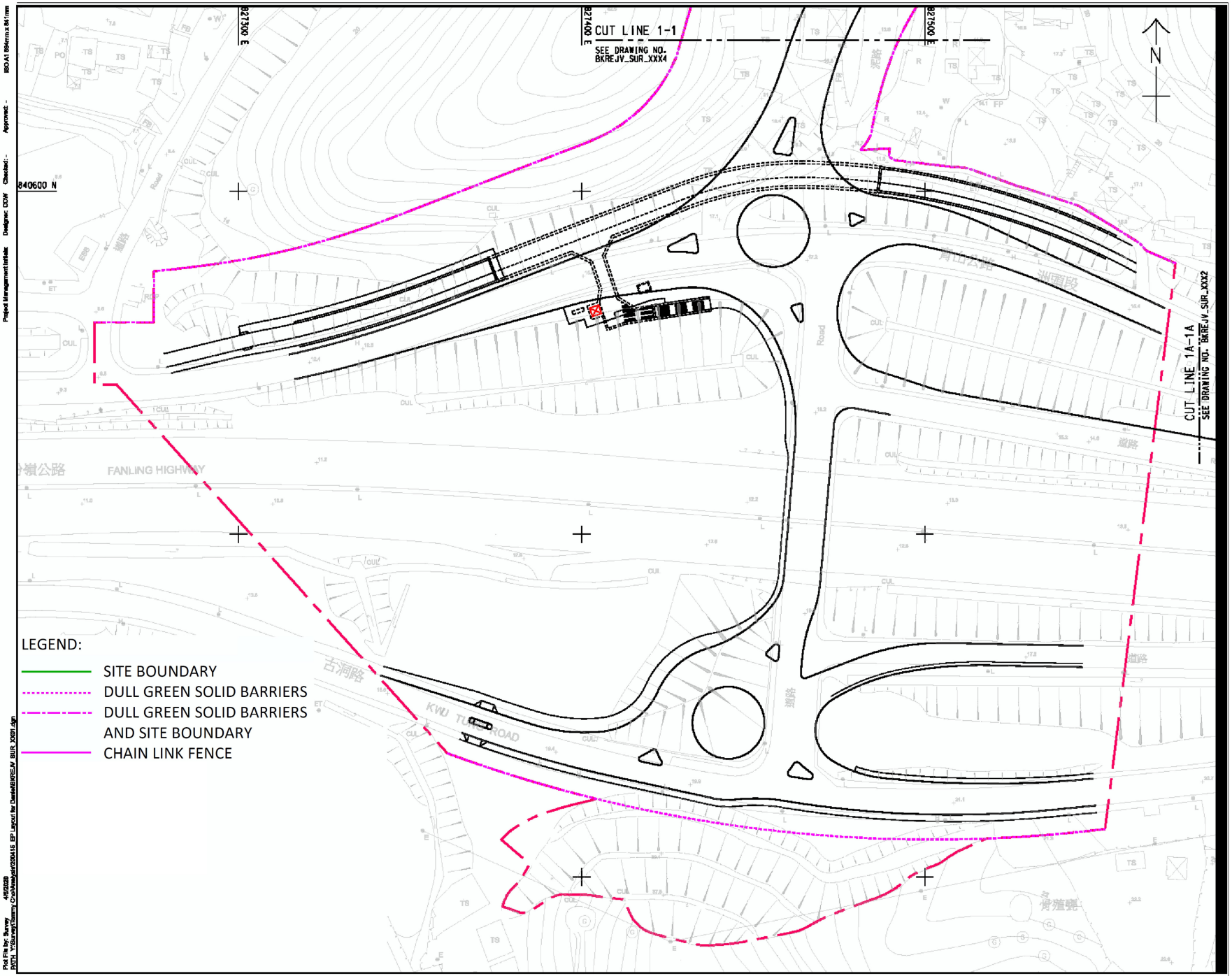
CONTRACT NO.
合約編號
ND/2019/01

SHEET TITLE
圖紙名稱

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
圖紙編號
BKREJV_SUR_XXX4

ISO A1 594mm x 841mm Approved: - Checked: - Designed: CCW Project Management Initials: 4552508 PM File by: Survey



BKREJV

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

CONTRACT TITLE:

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

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業主

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STATUS
階段

SCALE 比例
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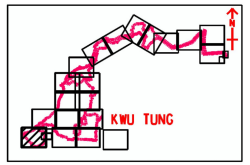
DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/01

SHEET TITLE
圖紙名稱

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
圖紙編號

BKREJV_SUR_XXX1

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Plot File by: Survey 4/6/2020
Plot Time: 11:53:44 by Tommy C on Model dgn\0300415 EP Layout for Dwg\BKREJV_SUR_XXX1.dgn

Figure 14

Hoarding Plan

EP-468/2013/A

NOTES:

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

LEGEND:

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

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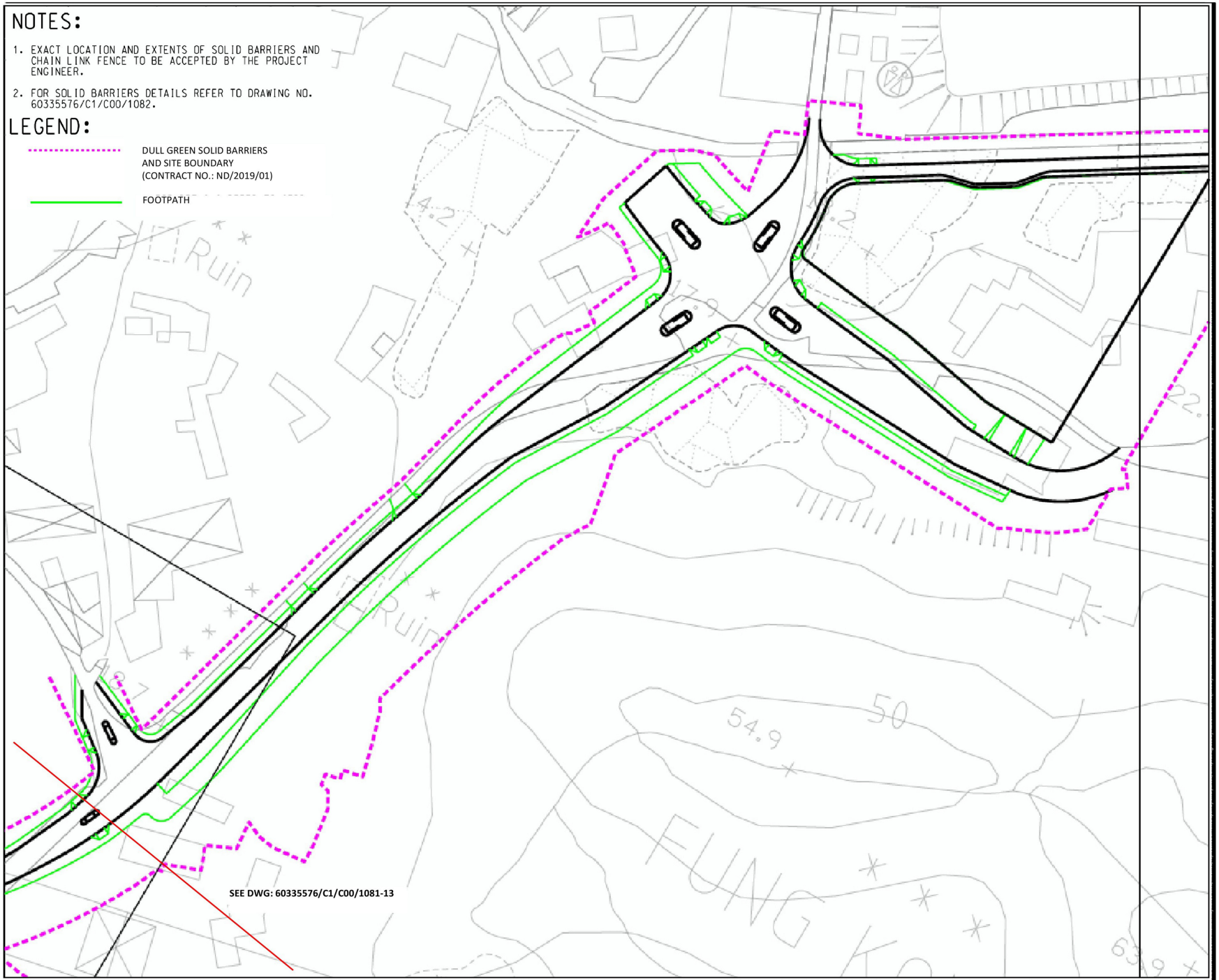

BKREJV

TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO D5

CONTRACT TITLE:

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

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Civil Engineering and Development Department

CONSULTANT

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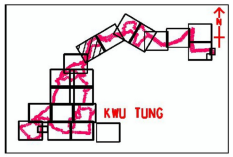
SUB-CONSULTANTS

STATUS

SCALE A3 1:1000

DIMENSION UNIT METRES

KEY PLAN



PROJECT NO. 60335576

CONTRACT NO. ND/2019/01

SHEET TITLE

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER

60335576/C1/C00/1081-14

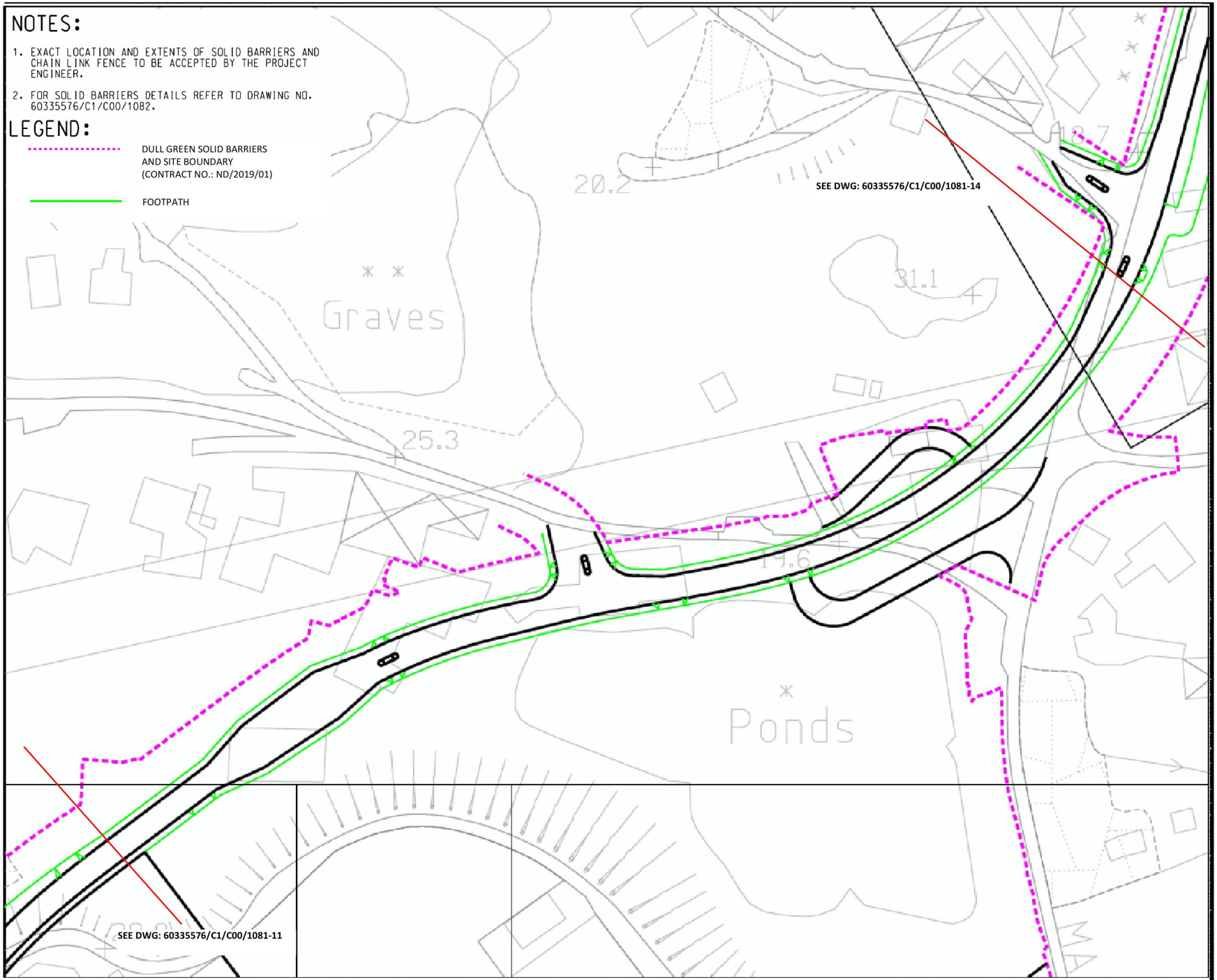
NOTES:

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

LEGEND:

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

FOOTPATH



BKREJV

TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO D5

CONTRACT TITLE:

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

CLIENT

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CEDD Civil Engineering and Development Department

CONSULTANT

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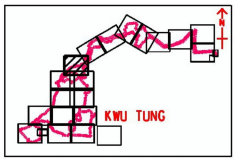
STATUS

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/C00/1081-13

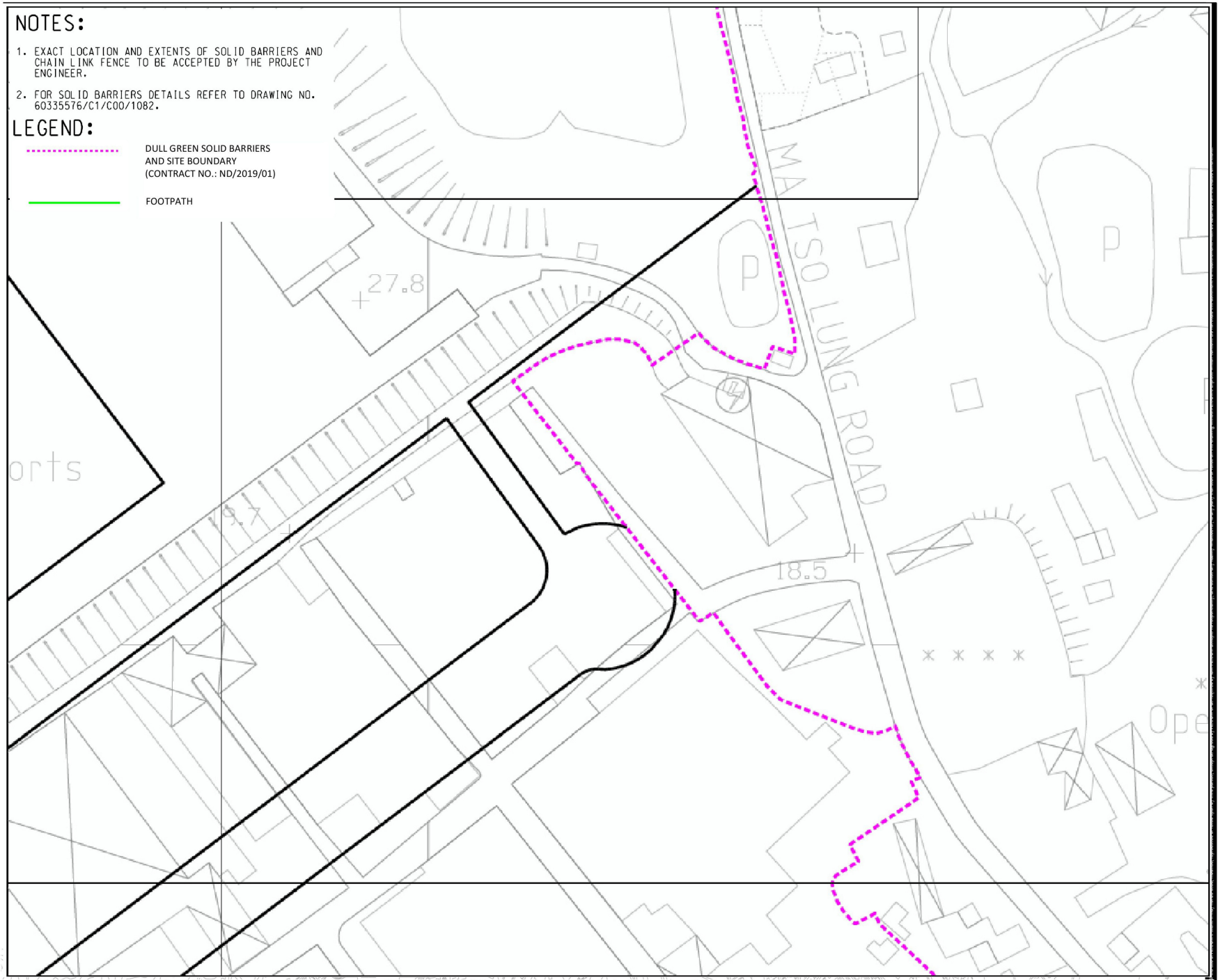
NOTES:

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

LEGEND:

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

FOOTPATH



BKREJV

TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO D5

CONTRACT TITLE:

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

CLIENT

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

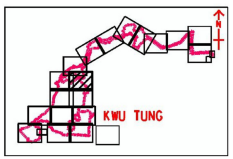
SUB-CONSULTANTS

STATUS

SCALE / **DIMENSION UNIT**

A3 1:1000 / METRES

KEY PLAN



PROJECT NO. / **CONTRACT NO.**

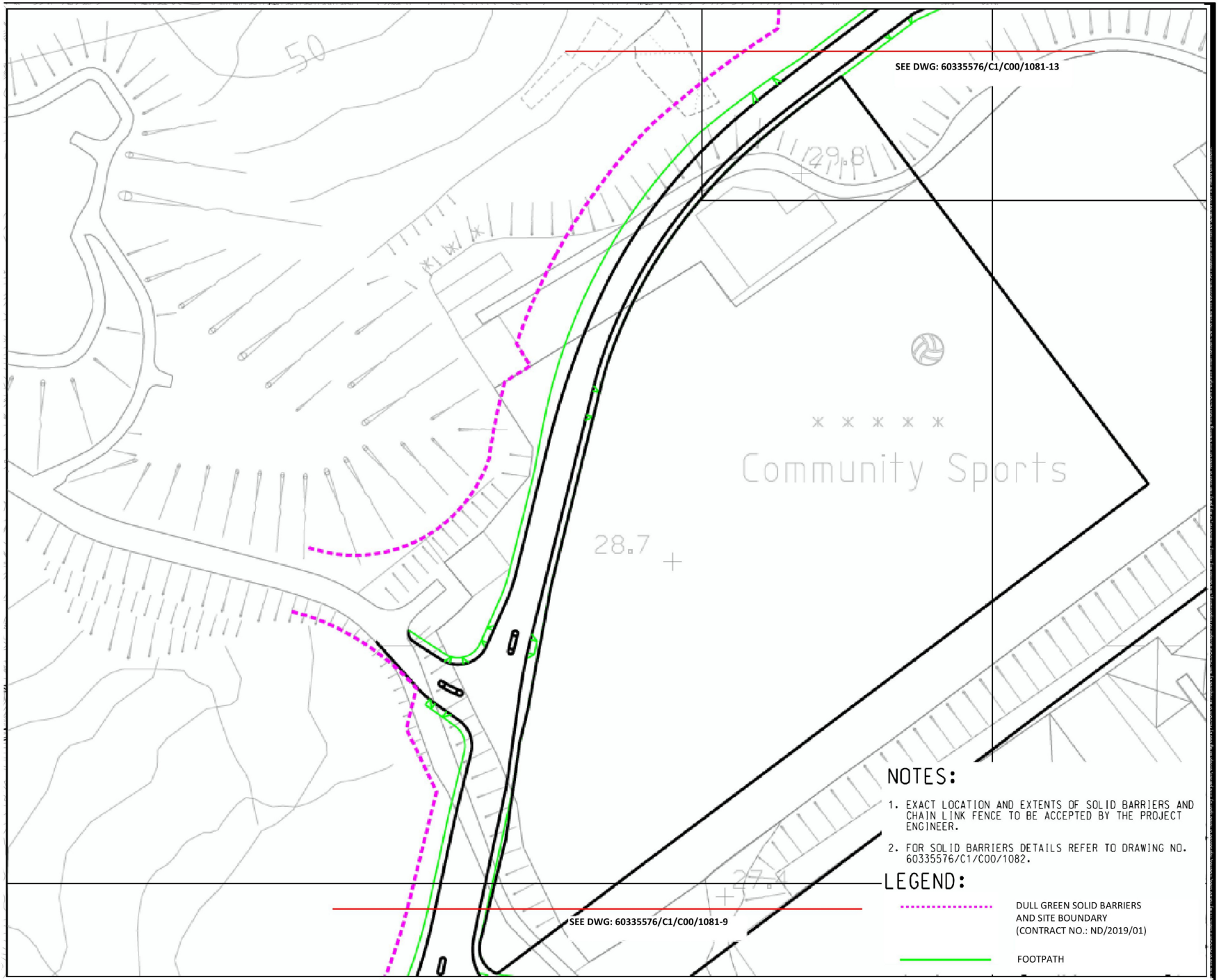
60335576 / ND/2019/01

SHEET TITLE

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER

60335576/C1/C00/1081-12



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

CLIENT

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

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

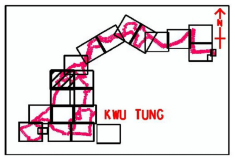
SUB-CONSULTANTS

STATUS

SCALE / **DIMENSION UNIT**

A3 1:1000 METRES

KEY PLAN



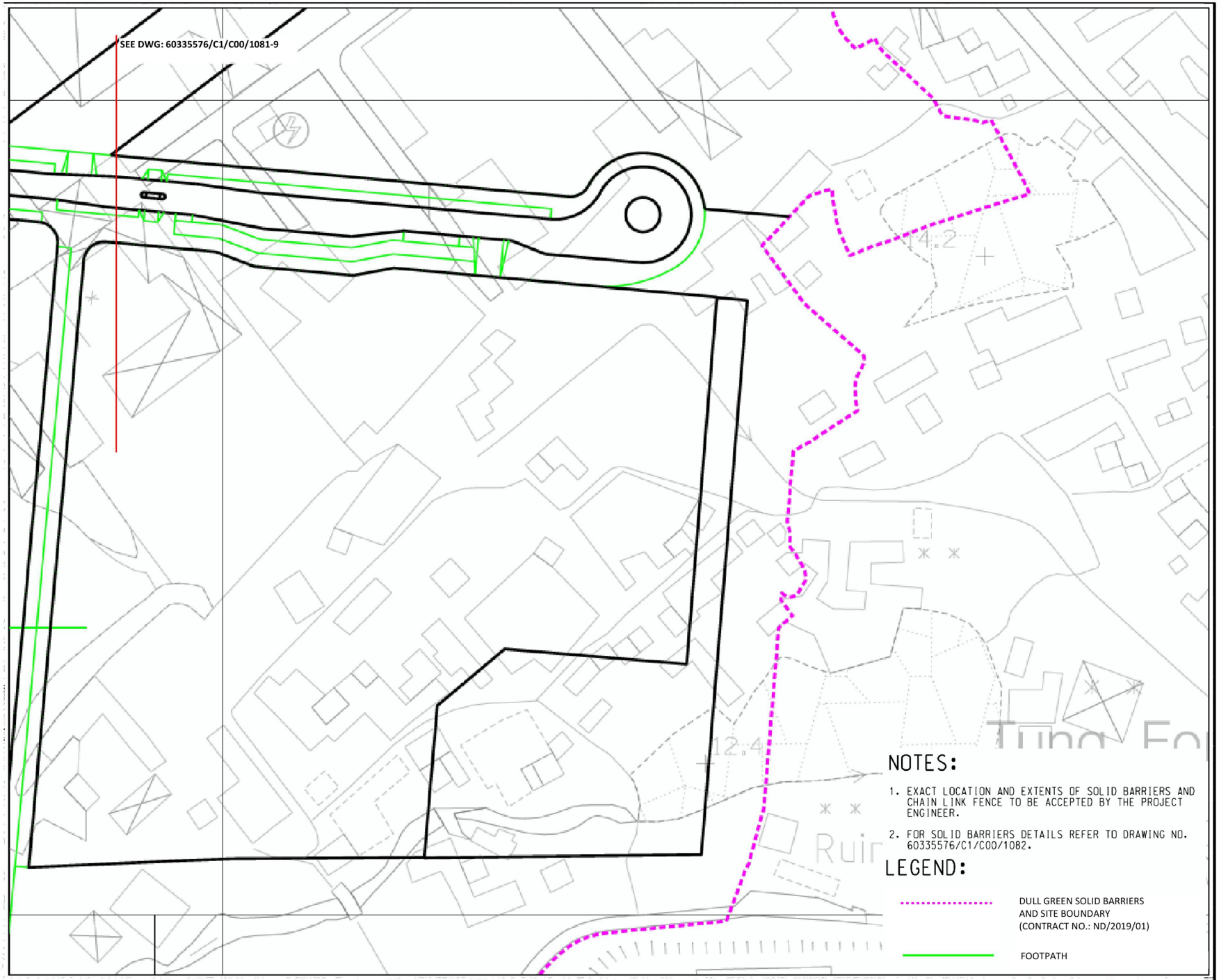
PROJECT NO. 60335576 / **CONTRACT NO.** ND/2019/01

SHEET TITLE

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER

60335576/C1/C00/1081-11



NOTES:

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

LEGEND:

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

FOOTPATH

BKREJV

TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO D5

CONTRACT TITLE:

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

CLIENT

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT

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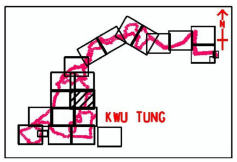
SUB-CONSULTANTS

STATUS

SCALE / **DIMENSION UNIT**

A3 1:1000 / METRES

KEY PLAN



PROJECT NO. / **CONTRACT NO.**

60335576 / ND/2019/01

SHEET TITLE

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER

60335576/C1/C00/1081-10

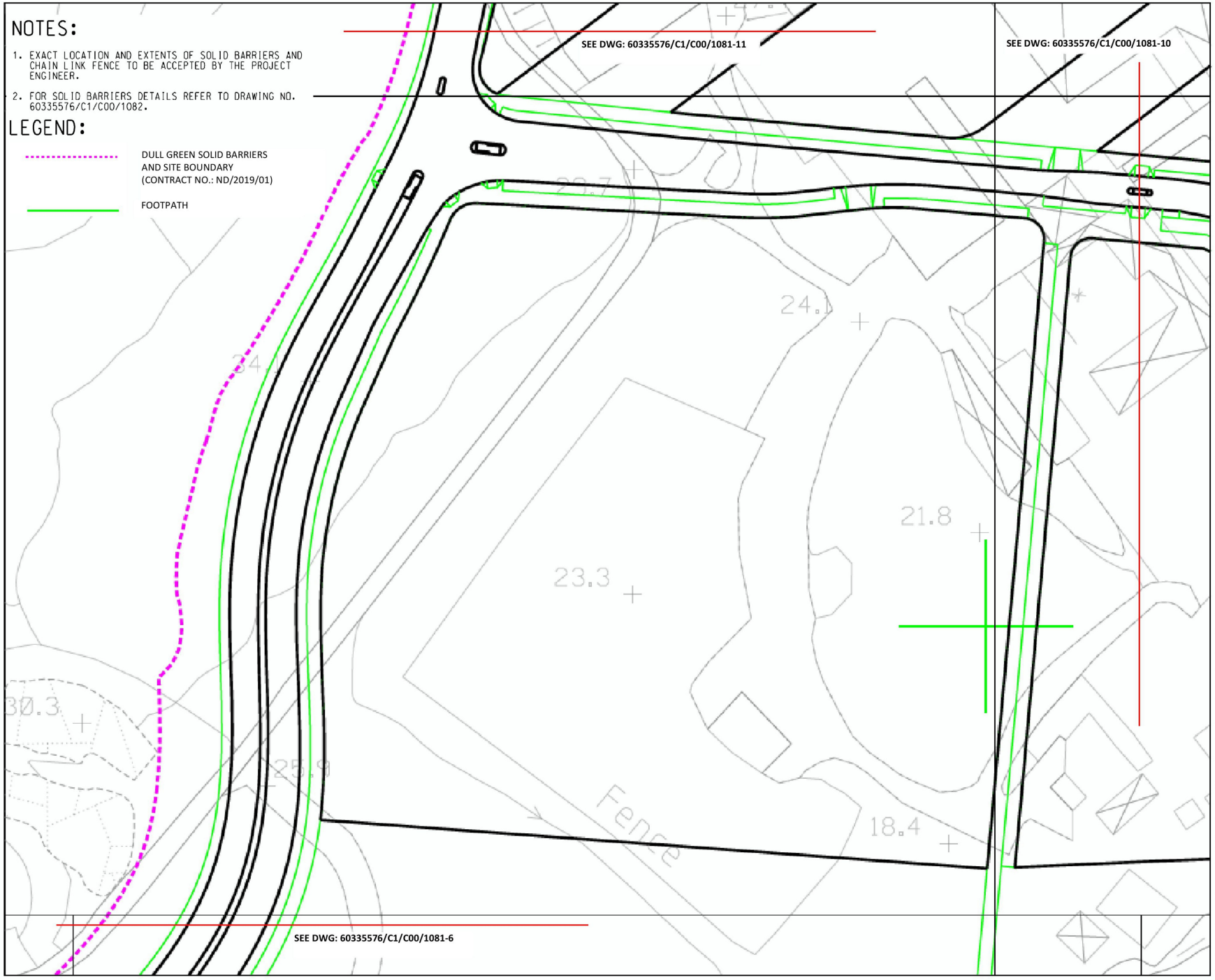
NOTES:

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

LEGEND:

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

FOOTPATH



BKREJV

TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO D5

CONTRACT TITLE:

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

CLIENT

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CONSULTANT

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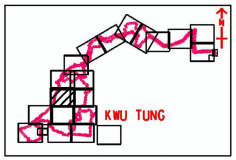
STATUS

SCALE / **DIMENSION UNIT**

A3 1:1000 / METRES

KEY PLAN



PROJECT NO. / **CONTRACT NO.**

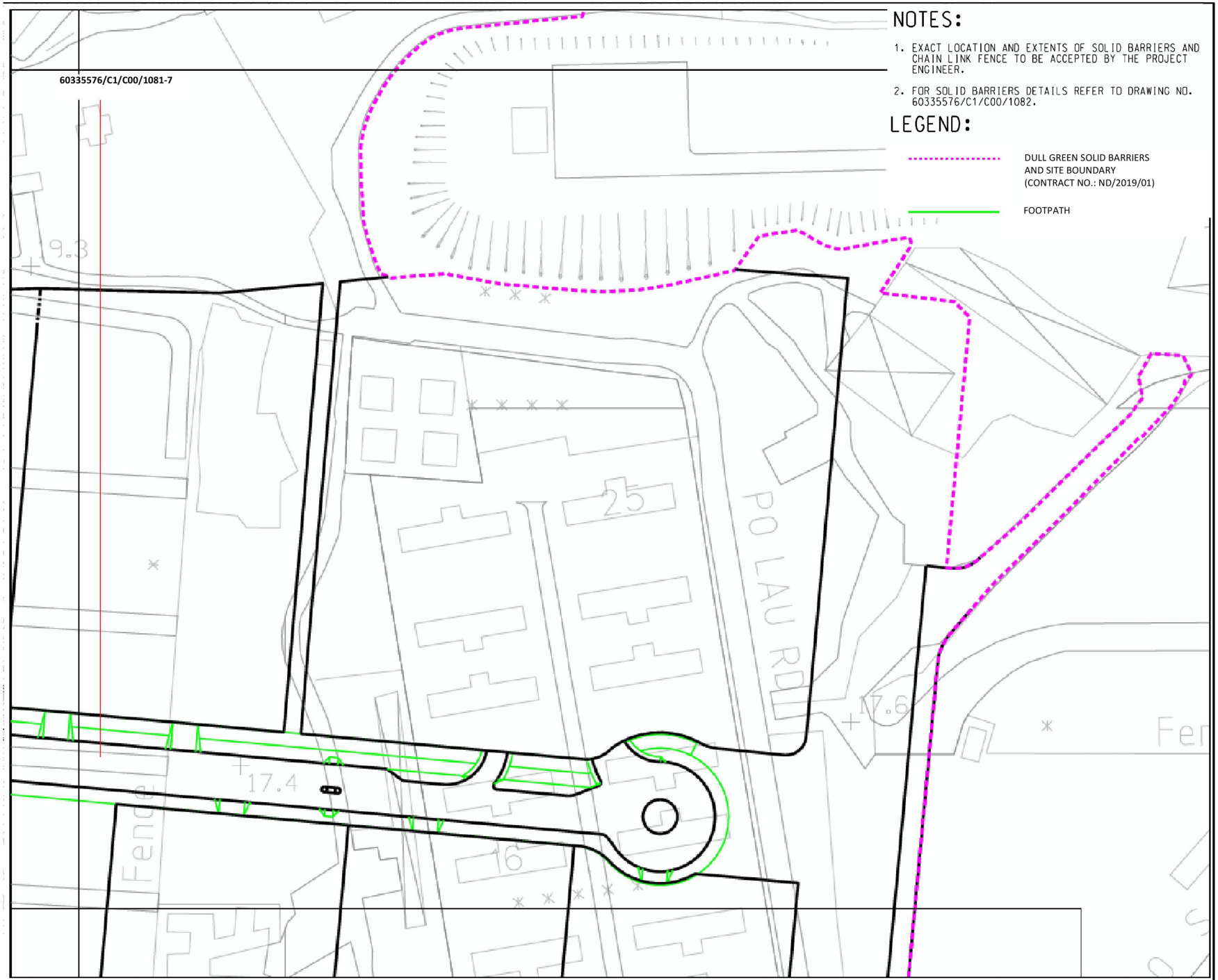
60335576 / ND/2019/01

SHEET TITLE

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER

60335576/C1/C00/1081-9



NOTES:

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

LEGEND:

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

FOOTPATH

BKREJV

TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO D5

CONTRACT TITLE:

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

CLIENT

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CONSULTANT

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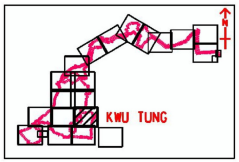
SUB-CONSULTANTS

STATUS

SCALE / **DIMENSION UNIT**

A3 1:1000 METRES

KEY PLAN



PROJECT NO. 60335576

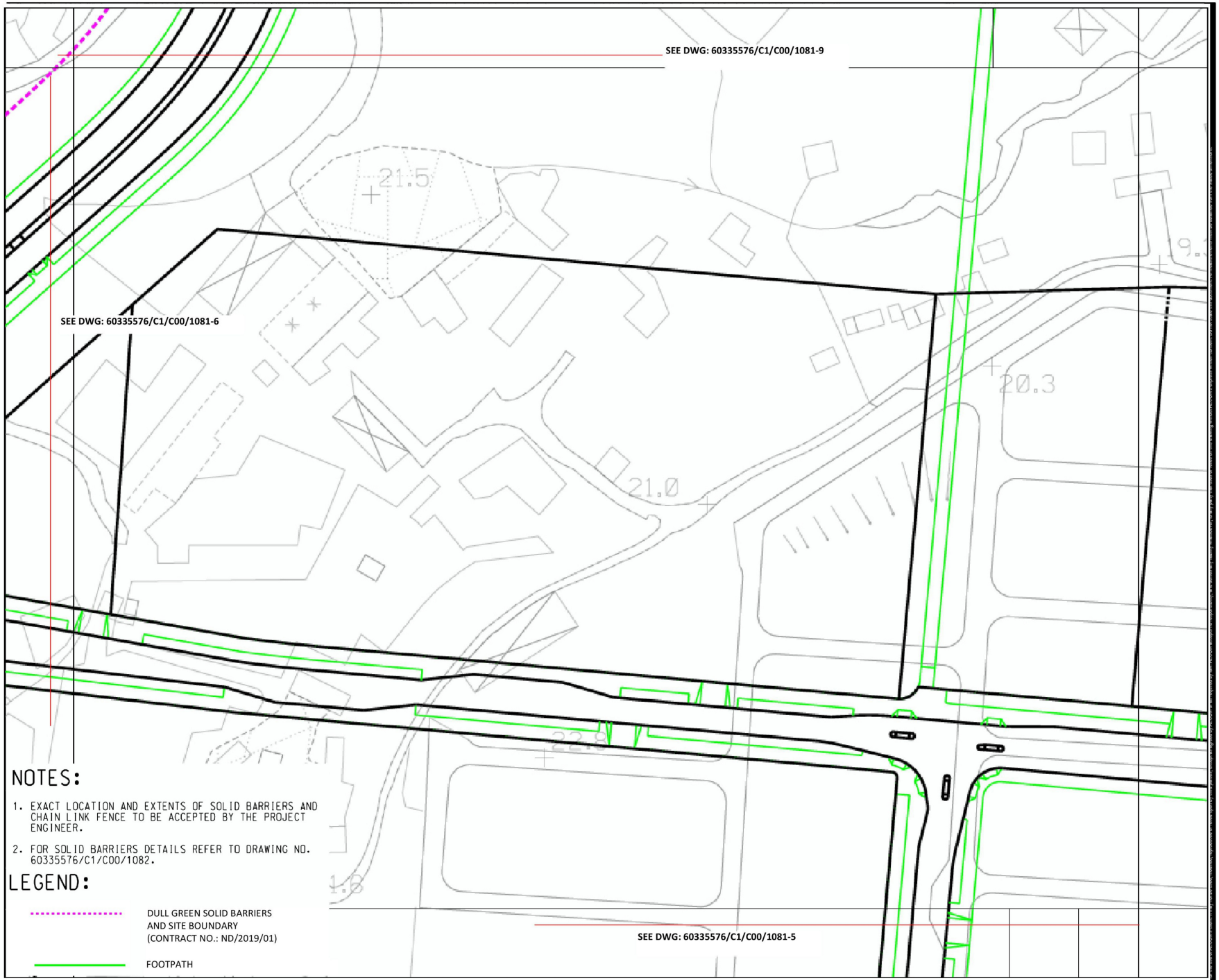
CONTRACT NO. ND/2019/01

SHEET TITLE

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER

60335576/C1/C00/1081-8



NOTES:

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

LEGEND:

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

FOOTPATH

BKREJV

TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO D5

CONTRACT TITLE:

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

CLIENT

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

CONSULTANT

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www.aecom.com

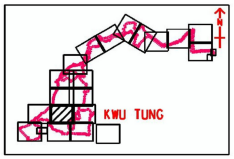
SUB-CONSULTANTS

STATUS

SCALE 比例 — A3 1:1000

DIMENSION UNIT 尺寸單位 — METRES

KEY PLAN



PROJECT NO. 項目編號 — 60335576

CONTRACT NO. 合約編號 — ND/2019/01

SHEET TITLE 圖紙名稱

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER 圖紙編號

60335576/C1/C00/1081-7

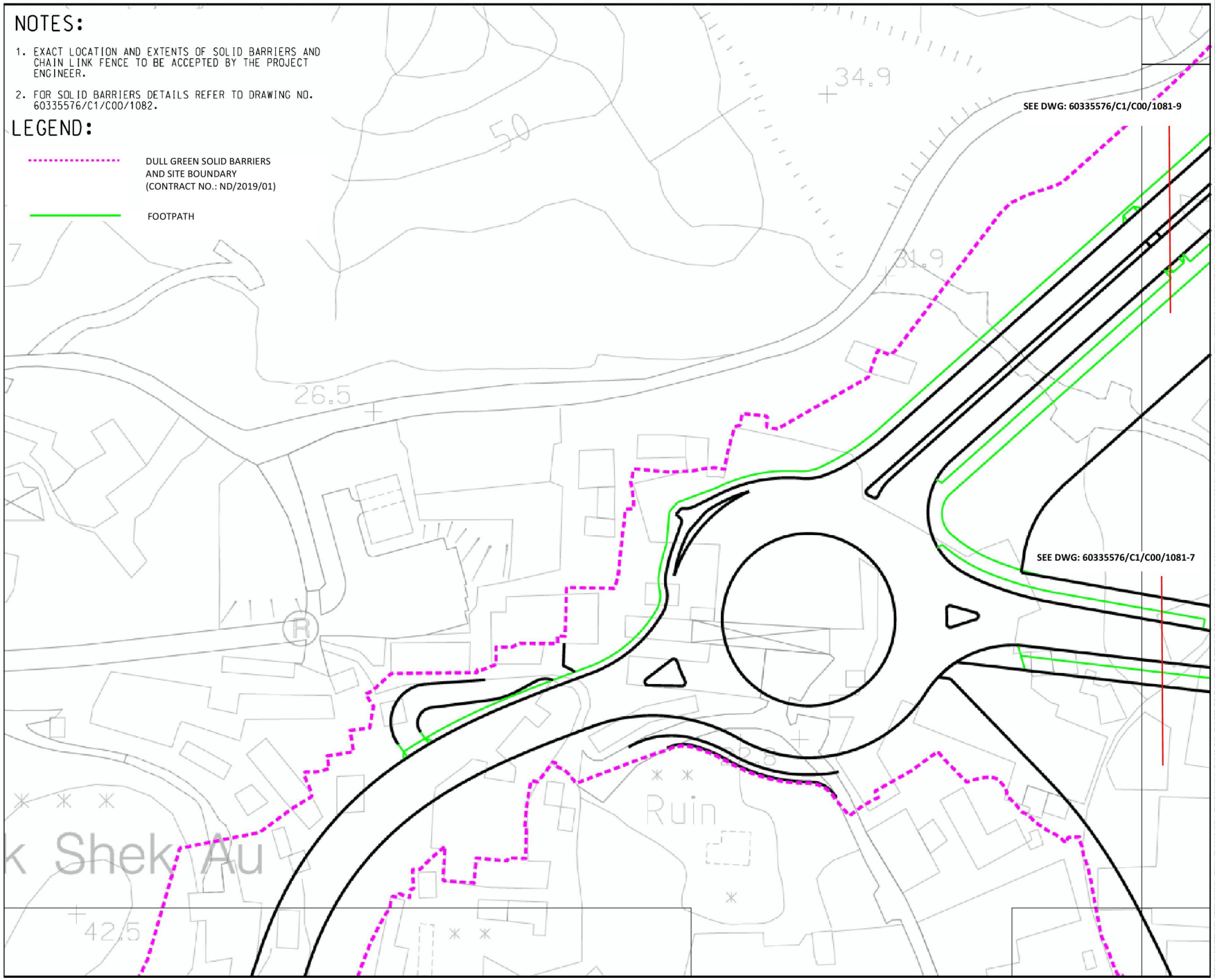
NOTES:

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

LEGEND:

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

FOOTPATH



BKREJV

TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO D5

CONTRACT TITLE:

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

CLIENT

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

CONSULTANT

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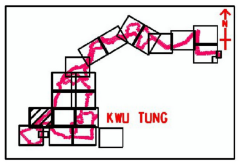
www.aecom.com

SUB-CONSULTANTS

STATUS

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

KEY PLAN



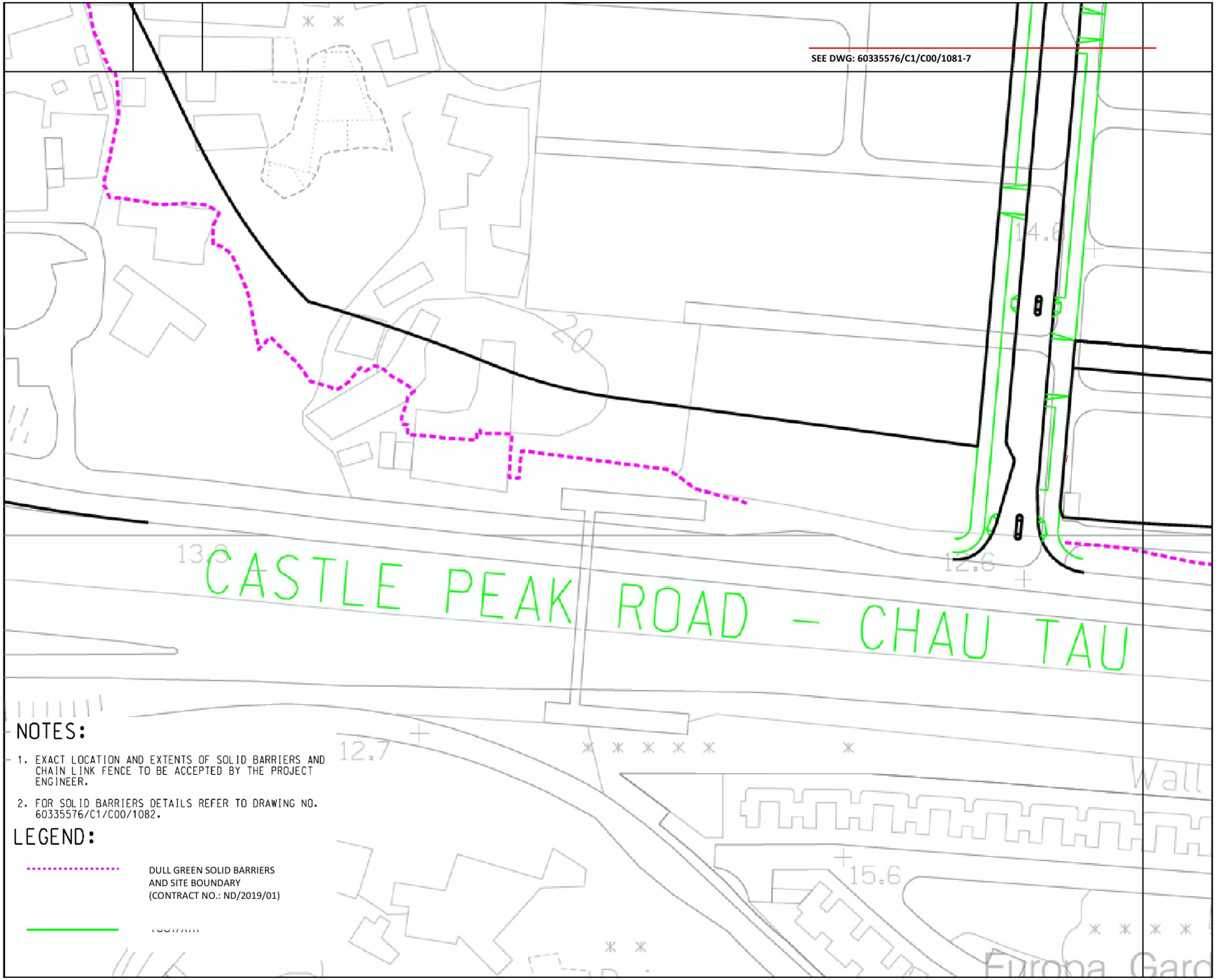
PROJECT NO.	**CONTRACT NO.**
60335576	ND/2019/01

SHEET TITLE

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER

60335576/C1/C00/1081-6



NOTES:

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

LEGEND:

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

FOOTPATH

BKREJV

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

CONTRACT TITLE:

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

CLIENT
業主

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT
AECOM Asia Company Ltd.
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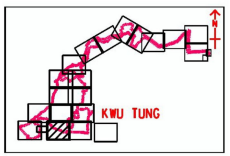
SUB-CONSULTANTS

STATUS

SCALE 比例
A3 1:1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN

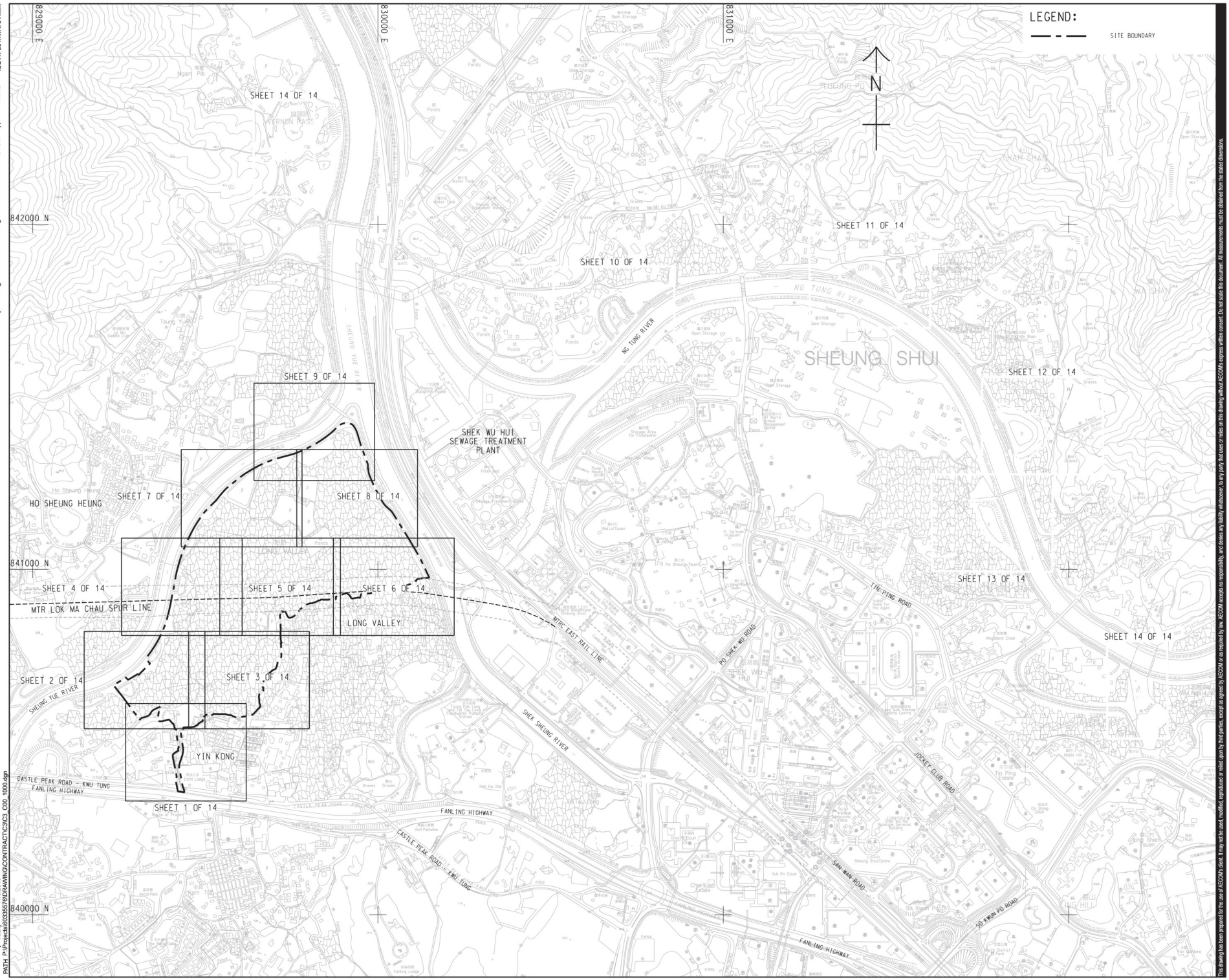


PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/01

SHEET TITLE
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
60335576/C1/C00/1081-5



Sang Hing - Kuly Venture

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

CLIENT
業主

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

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

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

STATUS
階段

SCALE 比例
A1 1 : 5000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/03

SHEET TITLE
圖紙名稱
KEY PLAN OF GENERAL LAYOUT

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

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Project Management Initials:
Designer: KCTL
Checked: CYCH
Approved: IHWL
ISO A1 594mm x 841mm
Plot File by: Yauky 11/6/2019
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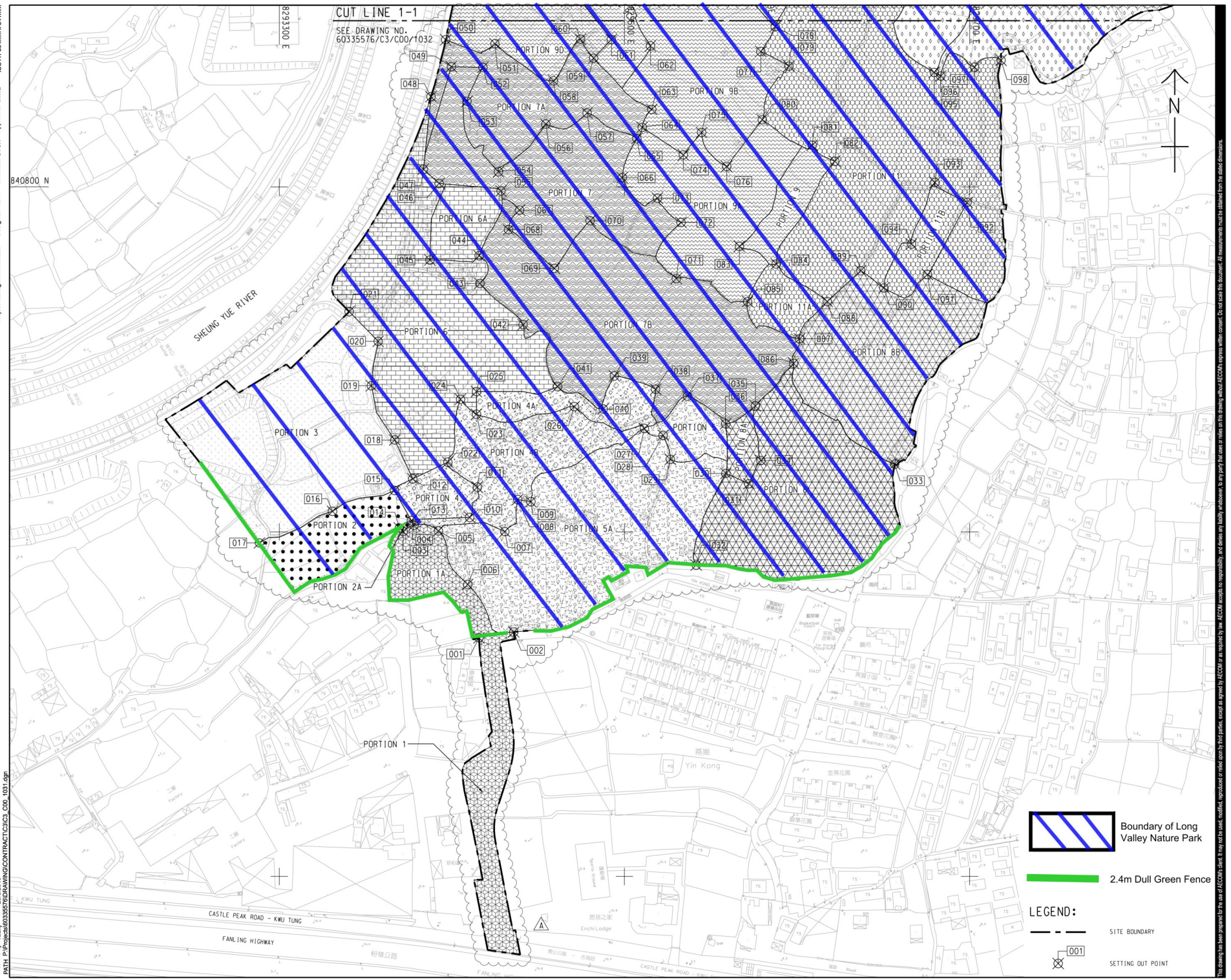

ISO A1 594mm x 841mm

Project Management Initials:
Designer: KCTL
Checked: CYCH
Approved: IHWL

Plot File by: Yauky
29/8/2019
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Sang Hing - Kuly Joint Venture

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

CLIENT
業主

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

CONSULTANT
工程顧問公司

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ISSUE/REVISION
修訂

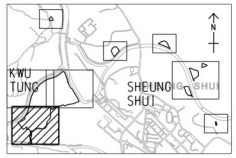
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	AUG-19	TENDER ADDENDUM NO. 3	CYCH
-	JUN-19	TENDER DRAWING	CYCH

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 40000



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/03

SHEET TITLE 圖紙名稱
PORTION OF SITE

SHEET 1 OF 5

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

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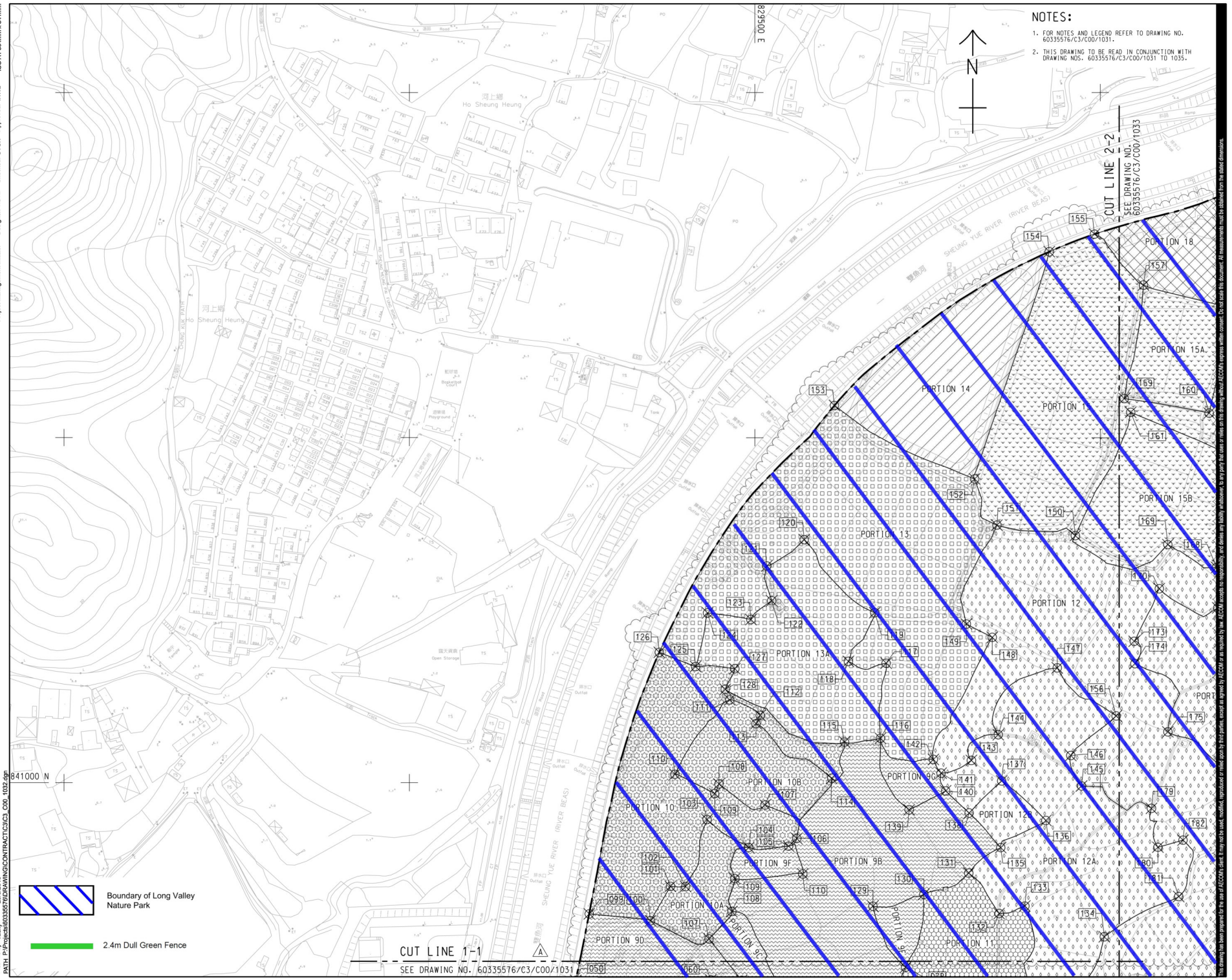

Project Management Initials: Designer: KCTL Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm

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

Sang Hing - Kuly Joint Venture

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

CLIENT
業主

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工程顧問公司

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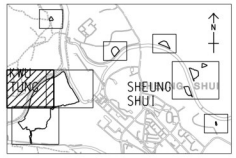
A	AUG-19	TENDER ADDENDUM NO. 3	CYCH
-	JUN-19	TENDER DRAWING	CYCH

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 40000



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/03

SHEET TITLE 圖紙名稱
PORTION OF SITE

SHEET 2 OF 5

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

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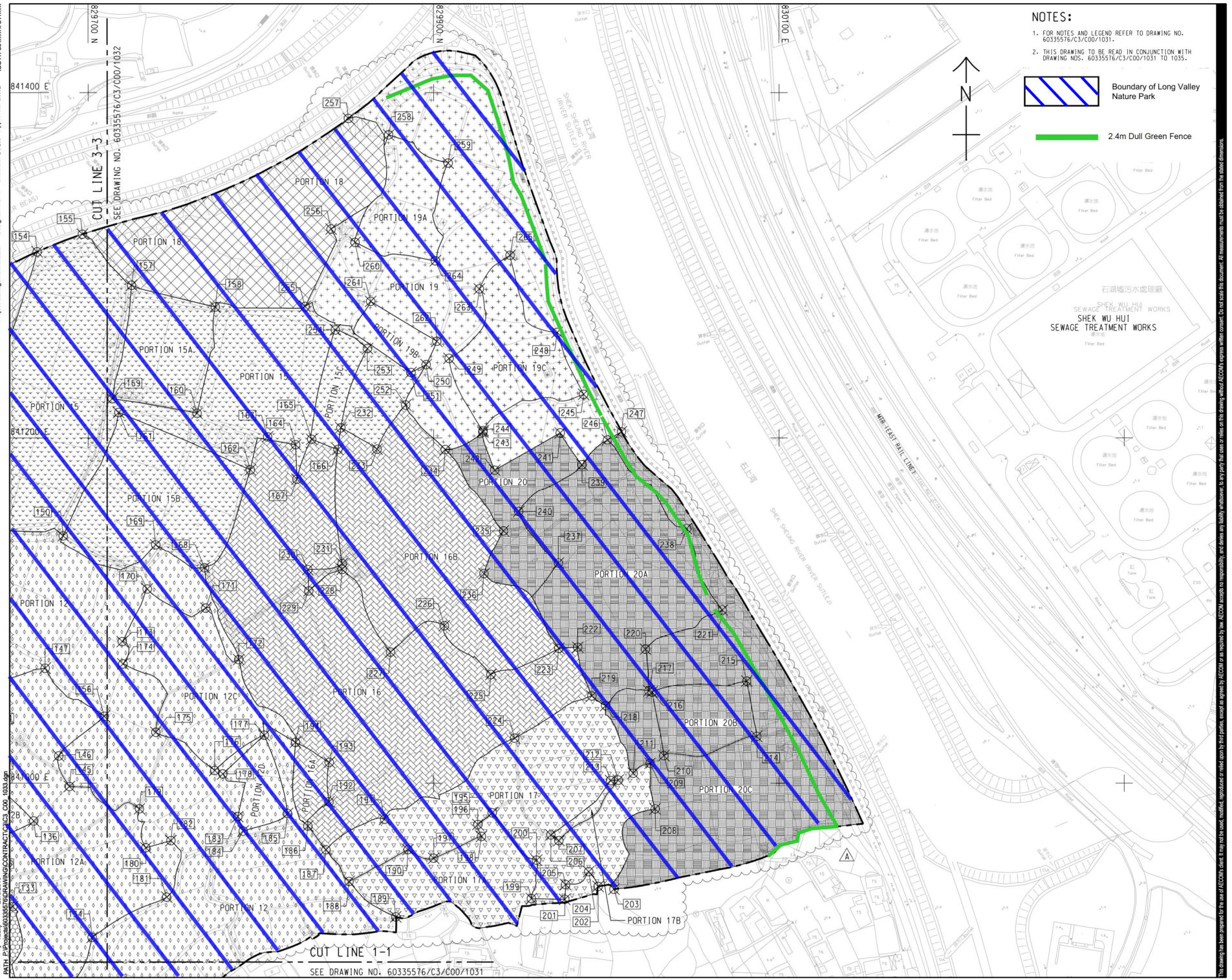

ISO A1 594mm x 841mm

Approved: IHWL

Checked: CYCH

Designer: KCTL

Project Management Initials:

Plot File by: Yauky
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C3_C00_1033.dgn
29/8/2019

Sang Hing - Kuly Joint Venture

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

CLIENT
業主

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

CONSULTANT
工程顧問公司

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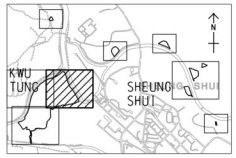
A	AUG-19	TENDER ADDENDUM NO. 3	CYCH
-	JUN-19	TENDER DRAWING	CYCH

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 40000



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/03

SHEET TITLE 圖紙名稱
PORTION OF SITE

SHEET 3 OF 5

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

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SETTING OUT POINTS

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

SETTING OUT DATA FOR S.O.L. YKR

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

Sang Hing - Kuly Venture

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

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

CONSULTANT 工程顧問公司
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ISSUE/REVISION 修訂

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

STATUS 階段

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

KEY PLAN 索引圖 A1 1 : 40000

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

SHEET TITLE 圖紙名稱
YIN KONG ROAD - ROAD SETTING OUT PLAN

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

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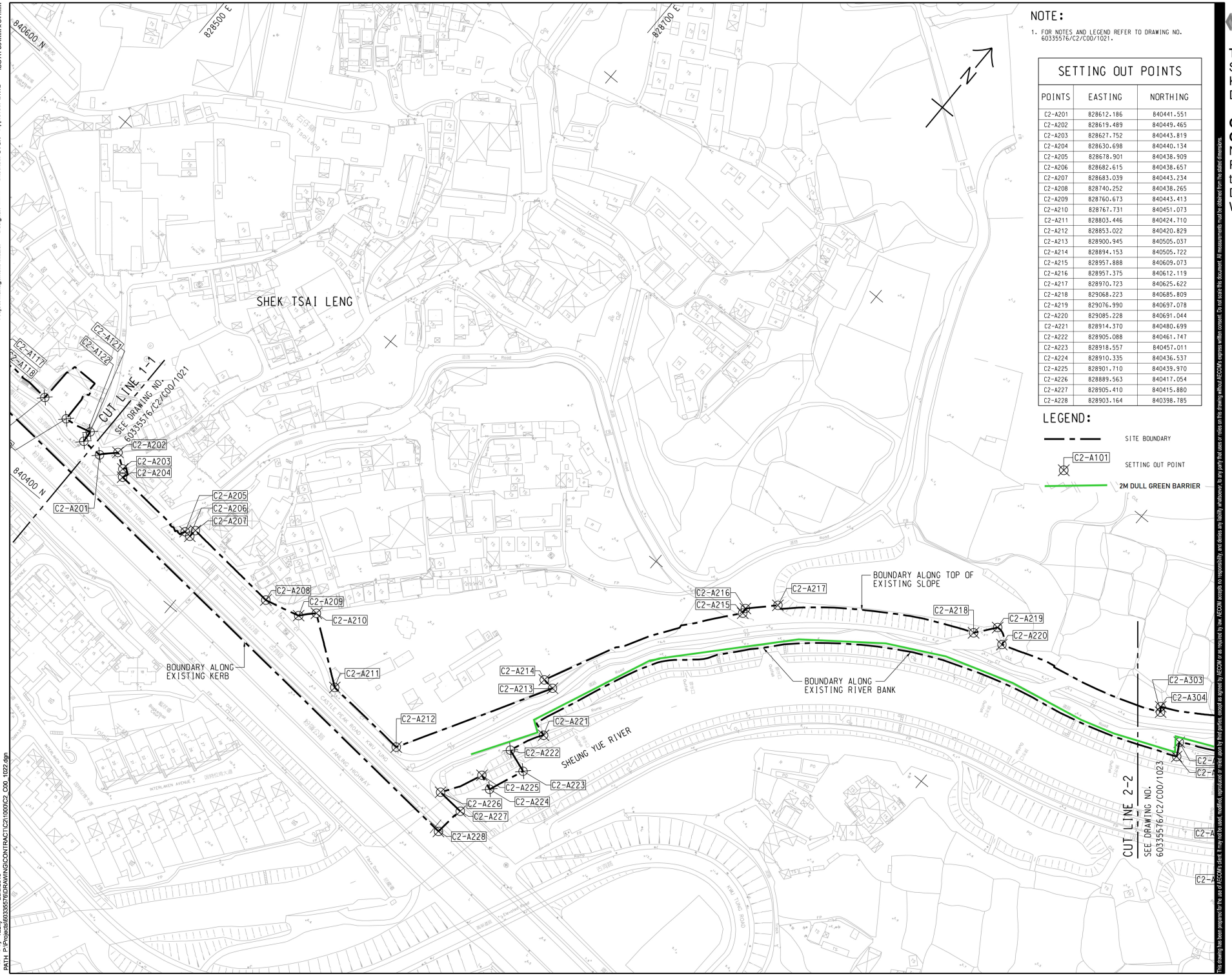
Project Management Initials: Designer: KCTL Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm
Plot File by: Yauky 11/6/2019
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C3\C3_C00_2001.dgn

Figure 15

Hoarding Plan

EP-469/2013



NOTE:

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

SETTING OUT POINTS

POINTS	EASTING	NORTHING
C2-A201	828612.186	840441.551
C2-A202	828619.489	840449.465
C2-A203	828627.752	840443.819
C2-A204	828630.698	840440.134
C2-A205	828678.901	840438.909
C2-A206	828682.615	840438.657
C2-A207	828683.039	840443.234
C2-A208	828740.252	840438.265
C2-A209	828760.673	840443.413
C2-A210	828767.731	840451.073
C2-A211	828803.446	840424.710
C2-A212	828853.022	840420.829
C2-A213	828900.945	840505.037
C2-A214	828894.153	840505.722
C2-A215	828957.888	840609.073
C2-A216	828957.375	840612.119
C2-A217	828970.723	840625.622
C2-A218	829068.223	840685.809
C2-A219	829076.990	840697.078
C2-A220	829085.228	840691.044
C2-A221	828914.370	840480.699
C2-A222	828905.088	840461.747
C2-A223	828918.557	840457.011
C2-A224	828910.335	840436.537
C2-A225	828901.710	840439.970
C2-A226	828889.563	840417.054
C2-A227	828905.410	840415.880
C2-A228	828903.164	840398.785

LEGEND:

SITE BOUNDARY

C2-A101 SETTING OUT POINT

2M DULL GREEN BARRIER

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

Plot File by: Yauky 20/8/2019
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C2\1000\C2_C00_1022.dgn

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俊和－群利聯營體
CW-KL IV

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

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

CLIENT
業主

土木工程拓展署
Civil Engineering and Development Department

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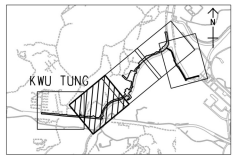
IR 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	SEP-19	TENDER DRAWING	CYCH

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 N.T.S.



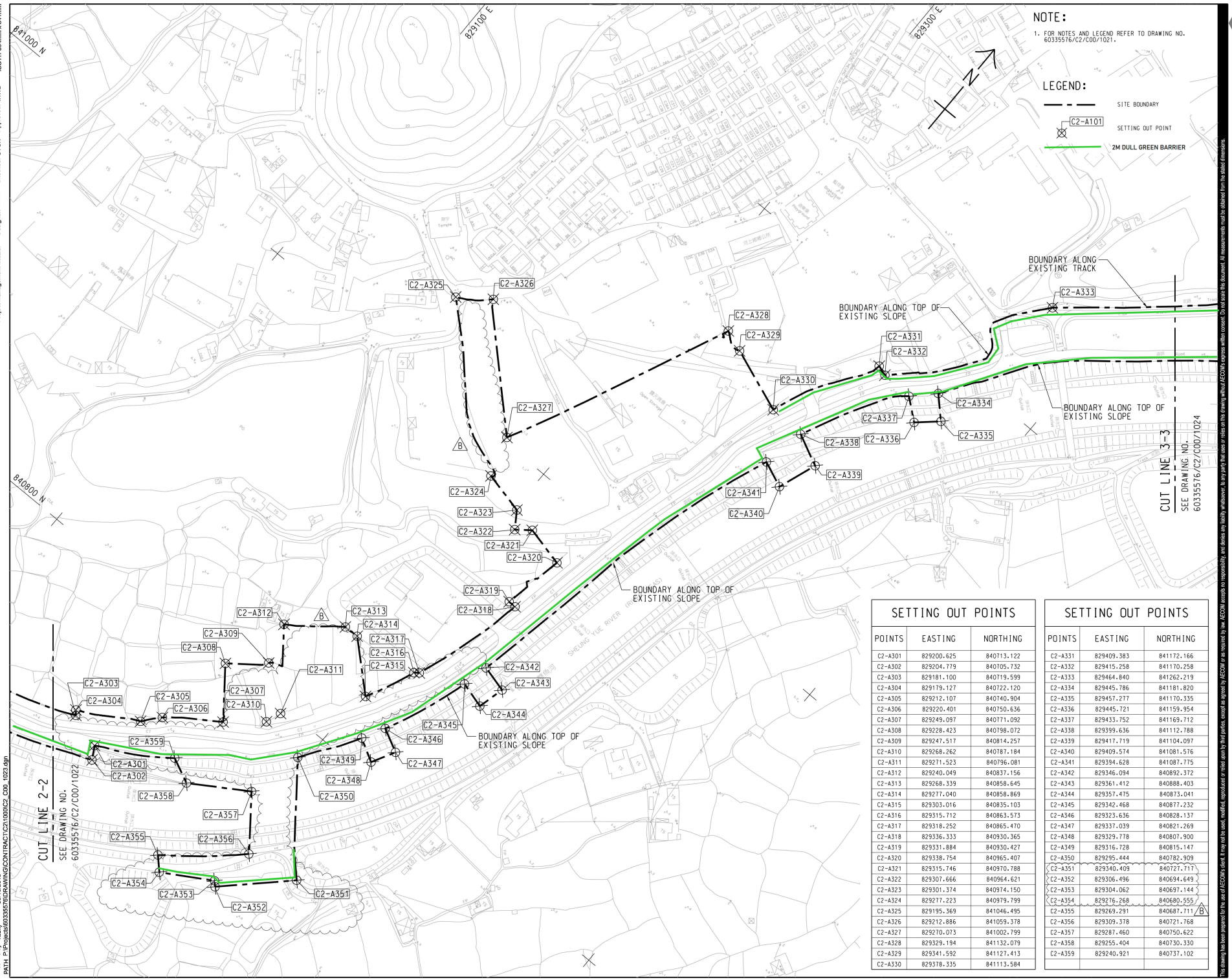
PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/02

SHEET TITLE 圖紙名稱
SITE OF WORKS

SHEET 2 OF 5

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



SETTING OUT POINTS

POINTS	EASTING	NORTHING
C2-A301	829200.625	840713.122
C2-A302	829204.779	840705.732
C2-A303	829181.100	840719.599
C2-A304	829179.127	840722.120
C2-A305	829212.107	840740.904
C2-A306	829220.401	840750.636
C2-A307	829249.097	840771.092
C2-A308	829228.423	840798.072
C2-A309	829247.517	840814.257
C2-A310	829268.262	840787.184
C2-A311	829271.523	840796.081
C2-A312	829240.049	840837.156
C2-A313	829268.339	840858.645
C2-A314	829277.040	840858.869
C2-A315	829303.016	840835.103
C2-A316	829315.712	840863.573
C2-A317	829318.252	840865.470
C2-A318	829336.333	840930.365
C2-A319	829331.884	840930.427
C2-A320	829338.754	840965.407
C2-A321	829315.746	840970.788
C2-A322	829307.666	840964.621
C2-A323	829301.374	840974.150
C2-A324	829277.223	840979.799
C2-A325	829195.369	841046.495
C2-A326	829212.886	841059.378
C2-A327	829270.073	841002.799
C2-A328	829329.194	841132.079
C2-A329	829341.592	841127.413
C2-A330	829378.335	841113.584

SETTING OUT POINTS

POINTS	EASTING	NORTHING
C2-A331	829409.383	841172.166
C2-A332	829415.258	841170.258
C2-A333	829464.840	841262.219
C2-A334	829445.786	841181.820
C2-A335	829457.277	841170.335
C2-A336	829445.721	841159.954
C2-A337	829433.752	841169.712
C2-A338	829399.636	841112.788
C2-A339	829417.719	841104.097
C2-A340	829409.574	841081.576
C2-A341	829394.628	841087.775
C2-A342	829346.094	840892.372
C2-A343	829361.412	840888.403
C2-A344	829357.475	840873.041
C2-A345	829342.468	840877.232
C2-A346	829323.636	840828.137
C2-A347	829337.039	840821.269
C2-A348	829329.778	840807.900
C2-A349	829316.728	840815.147
C2-A350	829295.444	840782.909
C2-A351	829340.409	840727.717
C2-A352	829306.496	840694.649
C2-A353	829304.062	840697.144
C2-A354	829276.268	840680.555
C2-A355	829269.291	840687.711
C2-A356	829309.378	840721.768
C2-A357	829287.460	840750.622
C2-A358	829255.404	840730.330
C2-A359	829240.921	840737.102

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

Plot File by: Yauky 30/10/2019
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C2\1000\C2_C00_1023.dgn

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俊和－群利聯營體
CW-KL IV

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

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

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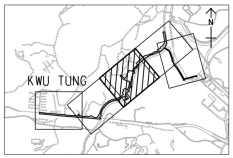
B	NOV-19	TENDER ADDENDUM NO. 3	CYCH
A	OCT-19	TENDER ADDENDUM NO. 2	CYCH
-	SEP-19	TENDER DRAWING	CYCH

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN A1 N.T.S.
索引圖



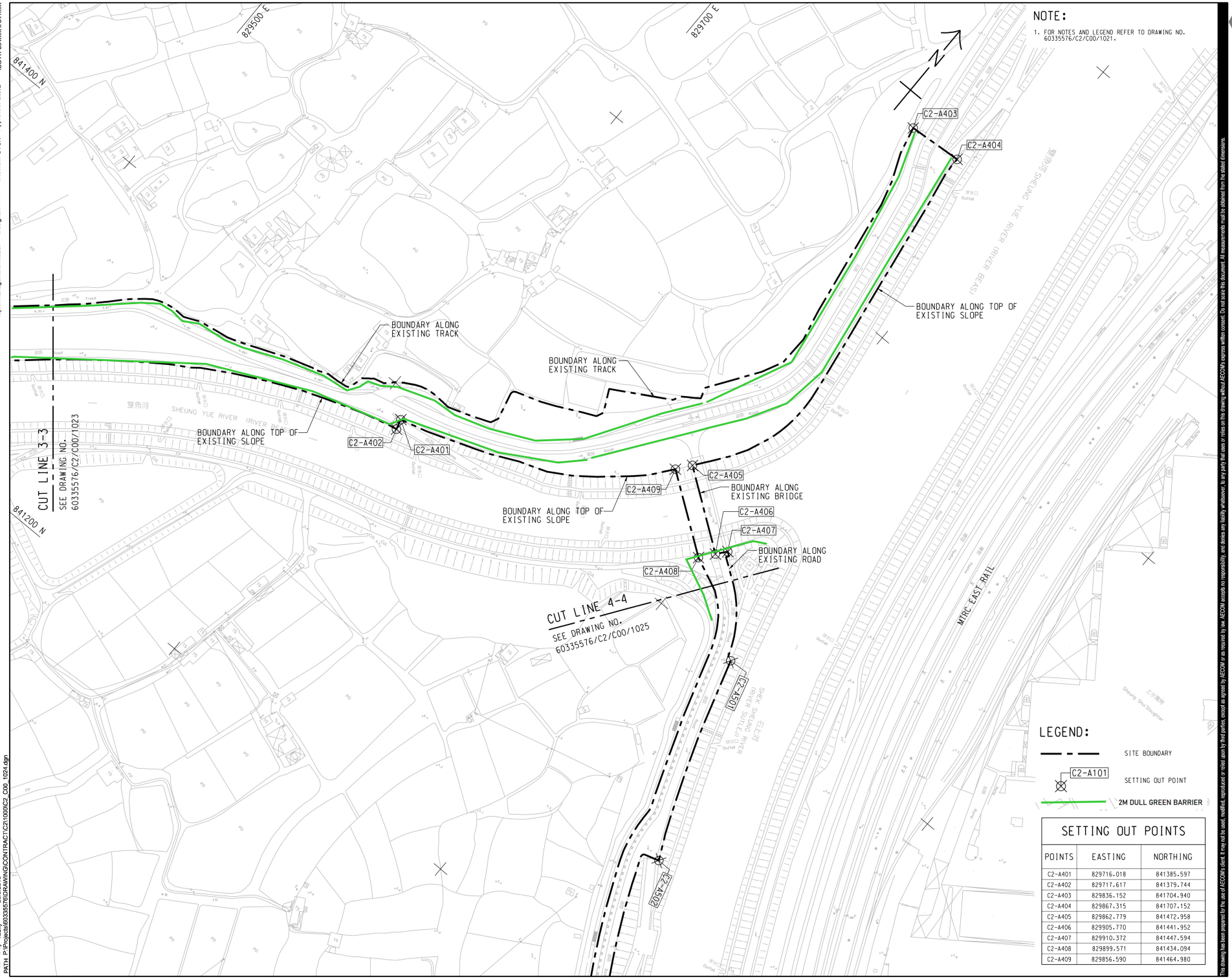
PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/02

SHEET TITLE 圖紙名稱
SITE OF WORKS

SHEET 3 OF 5

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



SETTING OUT POINTS

POINTS	EASTING	NORTHING
C2-A401	829716.018	841385.597
C2-A402	829717.617	841379.744
C2-A403	829836.152	841704.940
C2-A404	829867.315	841707.152
C2-A405	829862.779	841472.958
C2-A406	829905.770	841441.952
C2-A407	829910.372	841447.594
C2-A408	829899.571	841434.094
C2-A409	829856.590	841464.980

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

Plot File by: Yauky 20/8/2019
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C2\1000\C2_C00_1024.dgn

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俊和－群利聯營體
CW-KL JV

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

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

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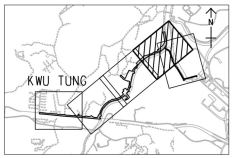
STATUS 階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 N.T.S.



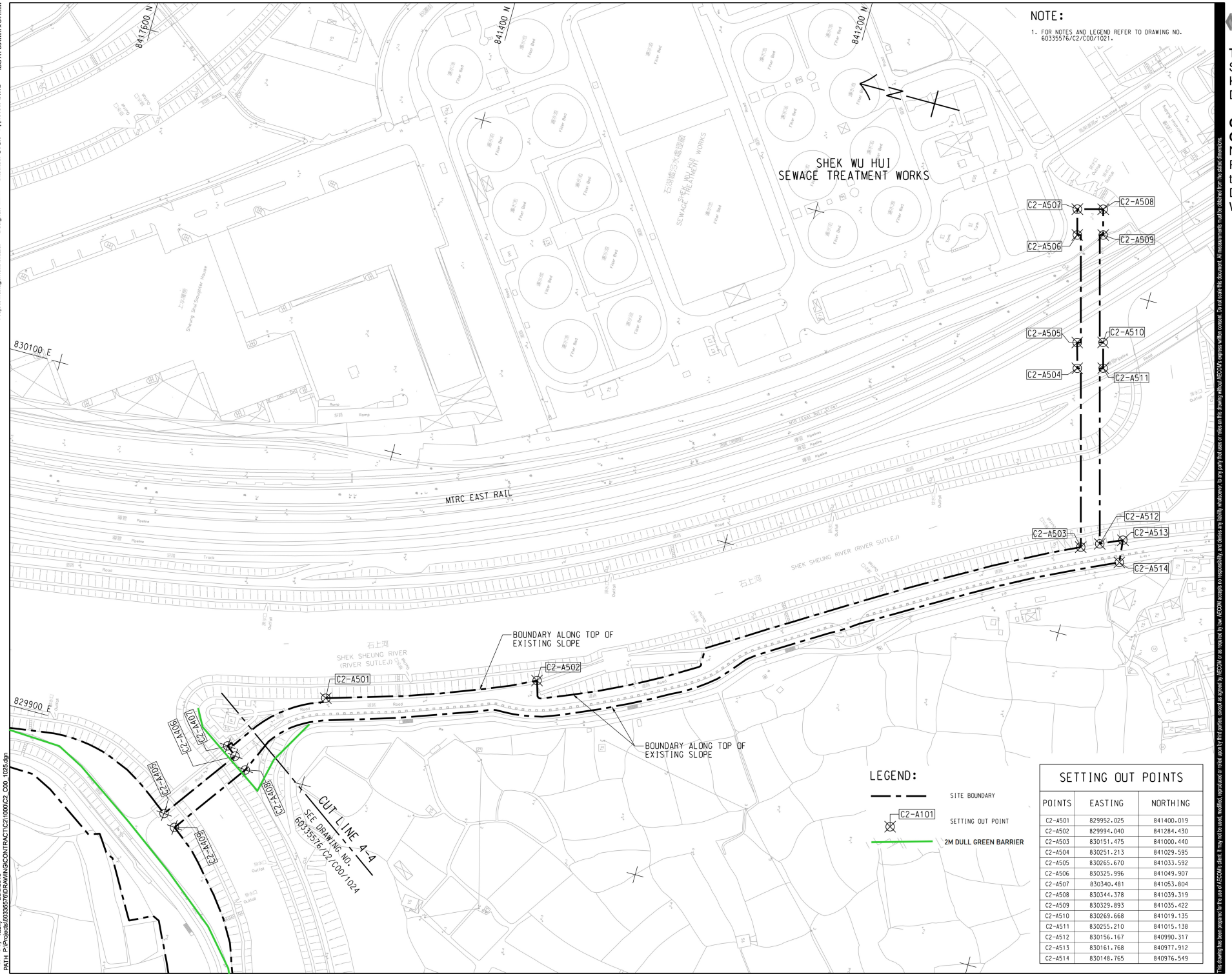
PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/02

SHEET TITLE 圖紙名稱
SITE OF WORKS

SHEET 4 OF 5

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



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

Project Management Initials: Designer: ELHY Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm
Plot File by: Yauky 20/8/2019
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C2\1000\C2_C00_1025.dgn

俊和－群利聯營體
CW-KL IV

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

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

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業主

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IR 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
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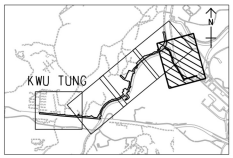
STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 N.T.S.



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/02

SHEET TITLE 圖紙名稱
SITE OF WORKS

SHEET 5 OF 5

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

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Figure 16

Hoarding Plan

EP-473/2013/A

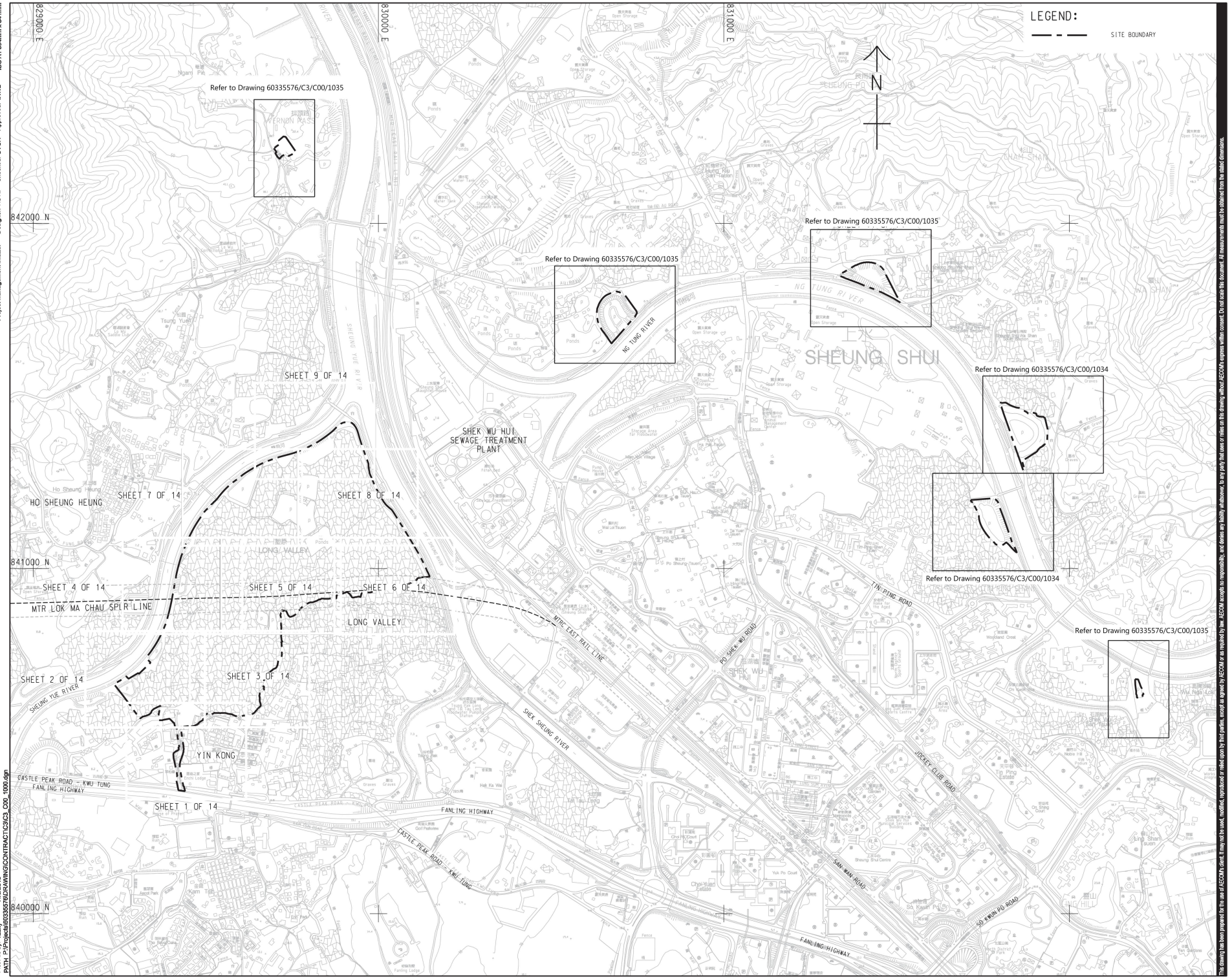
Summary of submission (EP-473/2013/A)

Submission of Layout Plan

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

Table of Summary of Submission

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



Sang Hing - Kuly Venture

Title of Designated Project
Fanling Bypass Eastern Section

CLIENT
業主

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

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STATUS
階段

SCALE 比例
A1 1 : 5000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/03

SHEET TITLE
圖紙名稱
KEY PLAN OF GENERAL LAYOUT

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

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

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

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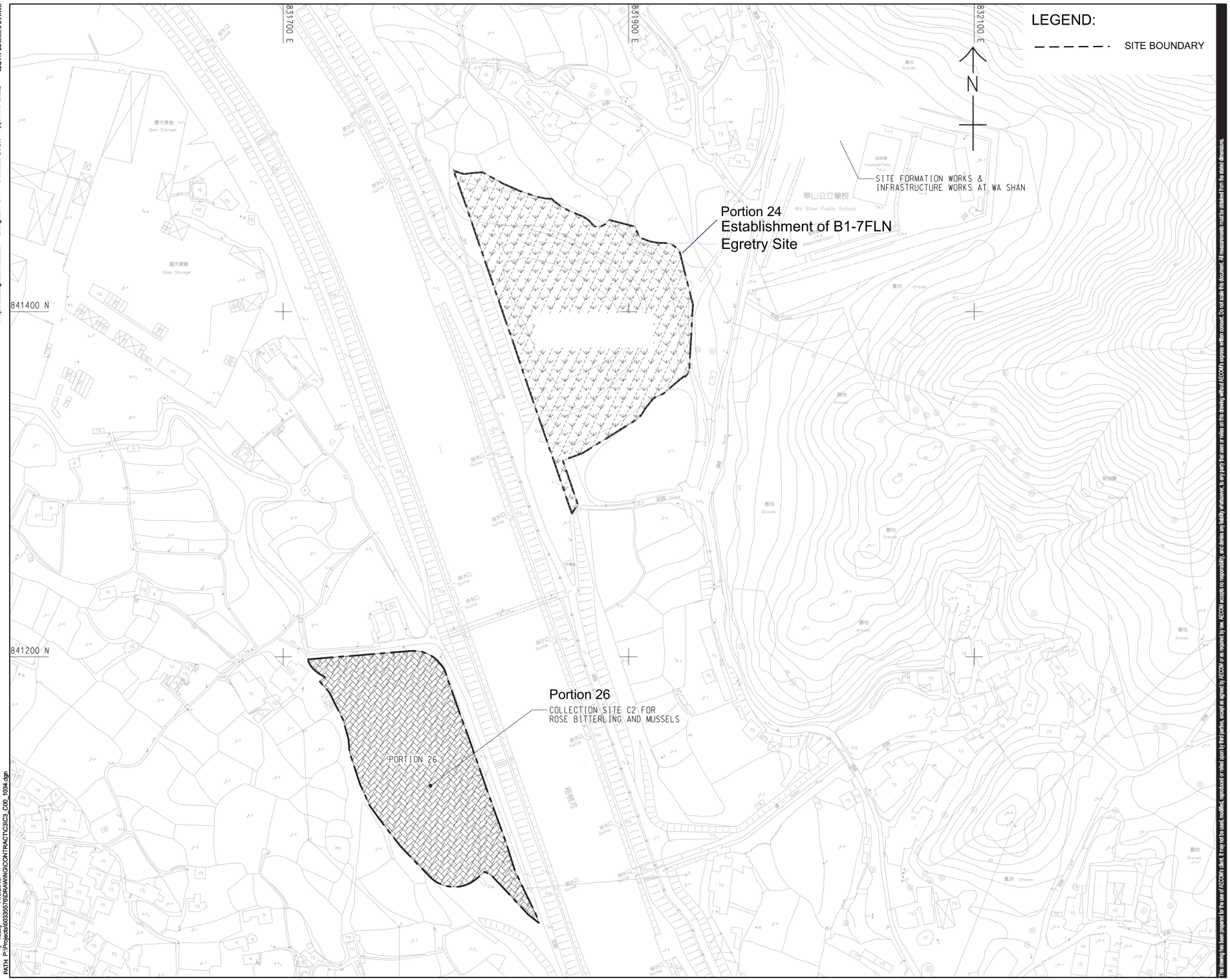

Project Management Initials: Designer: KCTL Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm

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

Sang Hing - Kuly Venture

Title of Designated Project
Fanling Bypass Eastern Section

CLIENT 業主

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

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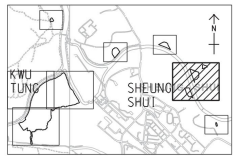
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對
-	JUN-19	TENDER DRAWING	CYCH

STATUS 階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 40000



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/03

SHEET TITLE 圖紙名稱
PORTION OF SITE

SHEET 4 OF 5

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

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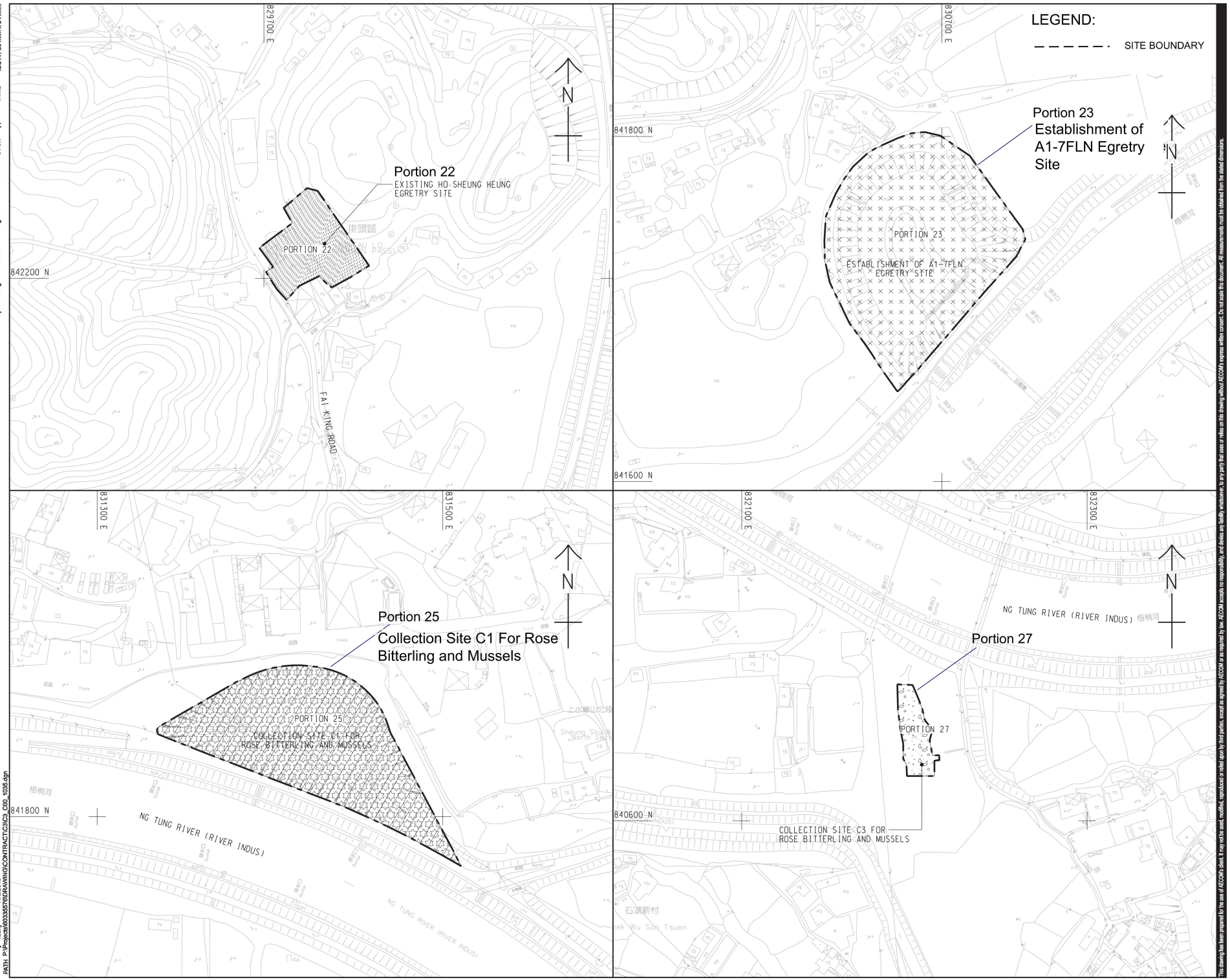

Sang Hing - Kuly Venture

Title of Designated Project
Fanling Bypass Eastern Section

CLIENT
業主

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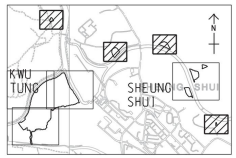
STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 40000



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/03

SHEET TITLE 圖紙名稱
PORTION OF SITE

SHEET 5 OF 5

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

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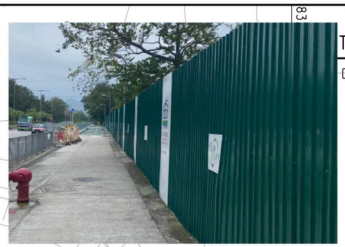
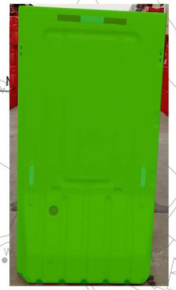
Project Management Initials: Designer: KCTL Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm

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

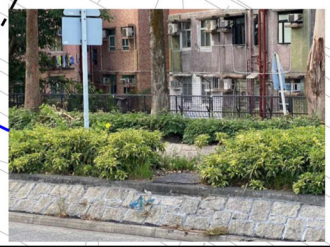


CEDD HOARDING TYPE III IN SOLID DULL GREEN COLOUR

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



2 METRE HIGH GREEN WATER FILLED BARRIER



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

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

T LINE 1-1

DRAWING NO. 60335576/C5A/C00/1052

GENERAL NOTES:

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

B

LEGEND:

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

N

Ma Sik Road Sewage Pumping Station

馬適路污水泵房

Cycling Track

ROAD

Good View

美景路

Road

AECOM

PROJECT

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

CONTRACT TITLE:

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

CLIENT

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

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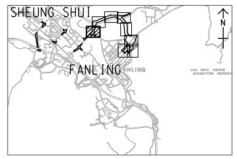
-	NOV-19	TENDER DRAWING	RPCM

STATUS

SCALE A1 1 : 500

DIMENSION UNIT METRES

KEY PLAN A1 1 : 70000



PROJECT NO. 60335576

CONTRACT NO. ND/2019/04

SHEET TITLE

HOARDING PLAN

SHEET 1 OF 8

SHEET NUMBER

60335576/C5A/C00/1051B

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

NOTES:

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

Reasons for not providing additional barriers along the riverbank:

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

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

c) There is no need for villagers to go through the site area. Temporary access will be provided by water barriers for villagers.

d) Erection of additional barriers will destroy the DSD maintenance access and will influence the slope stability

Existing chain link fence at the toe of the slope

CUT LINE 1-1

SEE DRAWING NO. 60335576/C

LEGEND:

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

AECOM

PROJECT
項目

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

CONTRACT TITLE:

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

CLIENT
業主

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

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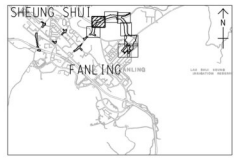
-	NOV-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 70000



PROJECT NO. 項目編號: 60335576

CONTRACT NO. 合約編號: ND/2019/04

SHEET TITLE 圖紙名稱: HOARDING PLAN

SHEET 2 OF 8

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

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

Plot File by: ZENGLV2 2019/12/13
PATH: p:\projects\60335576\drawing\contract\c5a\a1000\C5A_C00_1052.dgn

NOTES:

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

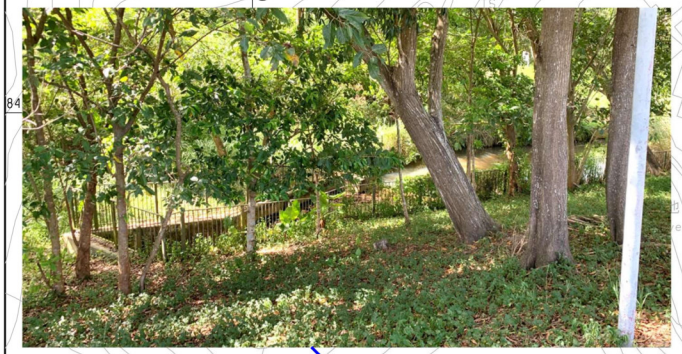
Reasons for not providing additional barriers along the riverbank:

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

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

c) There is no need for villagers to go through the site area. Temporary access will be provided by water barriers for villagers.

d) Erection of additional barriers will destroy the DSD maintenance access and will influence the slope stability



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

Siu Hang San Tsuen Watercourse

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

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

LEGEND:

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

CUT LINE 3-3

SEE DRAWING NO. 60335576/C5A/C00/1054

832600 E

832700 E

832800 E

840900 N

840800 N

5576/C5A/C00/1052

AECOM

PROJECT 項目

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

CONTRACT TITLE:

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

CLIENT 業主

土木工程拓展署 Civil Engineering and Development Department

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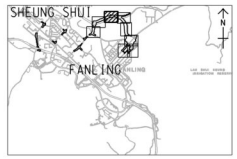
A	JAN-20	TENDER ADDENDUM NO. 2	RPCM
-	NOV-19	TENDER DRAWING	RPCM

STATUS 階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 70000



PROJECT NO. 項目編號: 60335576

CONTRACT NO. 合約編號: ND/2019/04

SHEET TITLE 圖紙名稱: HOARDING PLAN

SHEET 3 OF 8

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

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

Plot File by: ZENGLY2 2020/1/11
PATH: p:\projects\60335576\Drawing\CONTRACT\C5A\1000\C5A_C00_1053.dgn

NOTE:

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

Reasons for not providing additional barriers along the riverbank:

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

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

c) There is no need for villagers to go through the site area. Temporary access will be provided by water barriers for villagers.

d) Erection of additional barriers will destroy the DSD maintenance access and will influence the slope stability

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

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

Existing Steel Railing around the Park

Entrance to Residence

Existing Steel Railing Provided

Existing Steel Railing Provided

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

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

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

NG TUNG RIVER (RIVER INDUS)

MA WAT RIVER

840900 N

840800 N

833000 E

LEGEND:

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

AECOM

PROJECT
項目

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CONTRACT TITLE:

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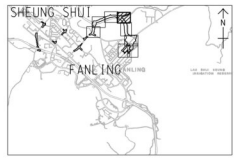
-	NOV-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 70000



PROJECT NO. 項目編號: 60335576

CONTRACT NO. 合約編號: ND/2019/04

SHEET TITLE 圖紙名稱: HOARDING PLAN

SHEET 4 OF 8

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

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

Reasons for not providing additional barriers along the riverbank:

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

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

c) There is no need for villagers to go through the site area. Temporary access will be provided by water barriers for villagers.

d) Erection of additional barriers will destroy the DSD maintenance access and will influence the slope stability

NOTES:

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

840600 N

840500 N

833100 E

833000 E

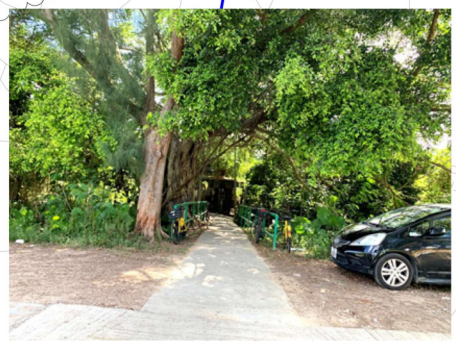
CUT LINE 4-4
SEE DRAWING NO. 60335576/C5A/C00/1054

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

麻笏河 MA WAT RIVER

泥路

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



LEGEND:

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

AECOM

PROJECT
項目

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

CONTRACT TITLE:

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

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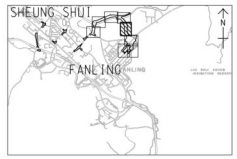
STATUS
階段

SCALE
比例
A1 1 : 500

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖
A1 1 : 70000



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ND/2019/04

SHEET TITLE
圖紙名稱
HOARDING PLAN

SHEET 5 OF 8

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

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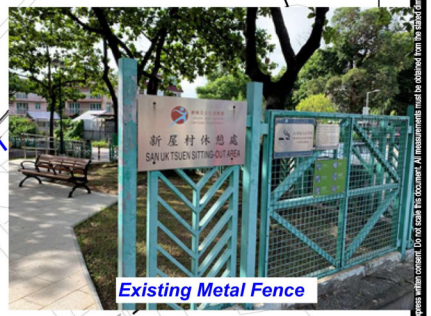
Project Management Initials: Designer: JLCT Checked: RPCM Approved: IHWL ISO A1 594mm x 841mm

Plot File by: ZENGLY2 2019/12/13
PATH: P:\projects\60335576\drawing\contract\c5a\a1000\C5A_C00_1055.dgn

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

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



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

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

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

Reasons for not providing additional barriers along the riverbank:

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

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

c) There is no need for villagers to go through the site area. Temporary access will be provided by water barriers for villagers.

d) Erection of additional barriers will destroy the DSD maintenance access and will influence the slope stability

LEGEND:

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

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

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

CUT LINE 6-6
SEE DRAWING NO. 60

ELECTRICITY SUB-STATION
FANLING NORTH TEMPORARY SEWAGE PUMPING STATION
STORMWATER PLANT ROOM
UNDERGROUND SUMP PIT PLANT ROOM
MA SIK ROAD
SHA TAU KOK ROAD - LUNG YEUK TAU

AECOM

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

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

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

CONSULTANT
AECOM Asia Company Ltd.
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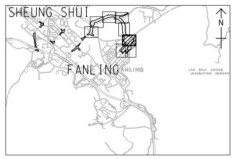
ISSUE/REVISION

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

STATUS

SCALE A1 1 : 500
DIMENSION UNIT

KEY PLAN A1 1 : 70000



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

SHEET TITLE
HOARDING PLAN

SHEET 6 OF 8

SHEET NUMBER
60335576/C5A/C00/1056A

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

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

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

NOTES:

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

LEGEND:

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

AECOM

PROJECT
項目

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

CONTRACT TITLE:

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

CLIENT
業主

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

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

STATUS
階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 70000

PROJECT NO. 項目編號: 60335576

CONTRACT NO. 合約編號: ND/2019/04

SHEET TITLE 圖紙名稱: HOARDING PLAN

SHEET 7 OF 8

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

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NOTES:

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

Reasons for not providing additional barriers along the riverbank:

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

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

c) There is no need for villagers to go through the site area. Temporary access will be provided by water barriers for villagers.

d) Erection of additional barriers will destroy the DSD maintenance access and will influence the slope stability

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

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

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

WORKS BY OTHERS

REPROVISIONED REFUSE COLLECTION POINT

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

LEGEND:

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

AECOM

PROJECT
項目

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

CONTRACT TITLE:

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

CLIENT
業主

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

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

STATUS
階段

SCALE
比例
A1 1 : 500

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖
A1 1 : 70000

PROJECT NO.
項目編號
60335576

CONTRACT NO.
合約編號
ND/2019/04

SHEET TITLE
圖紙名稱
HOARDING PLAN

SHEET 8 OF 8

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

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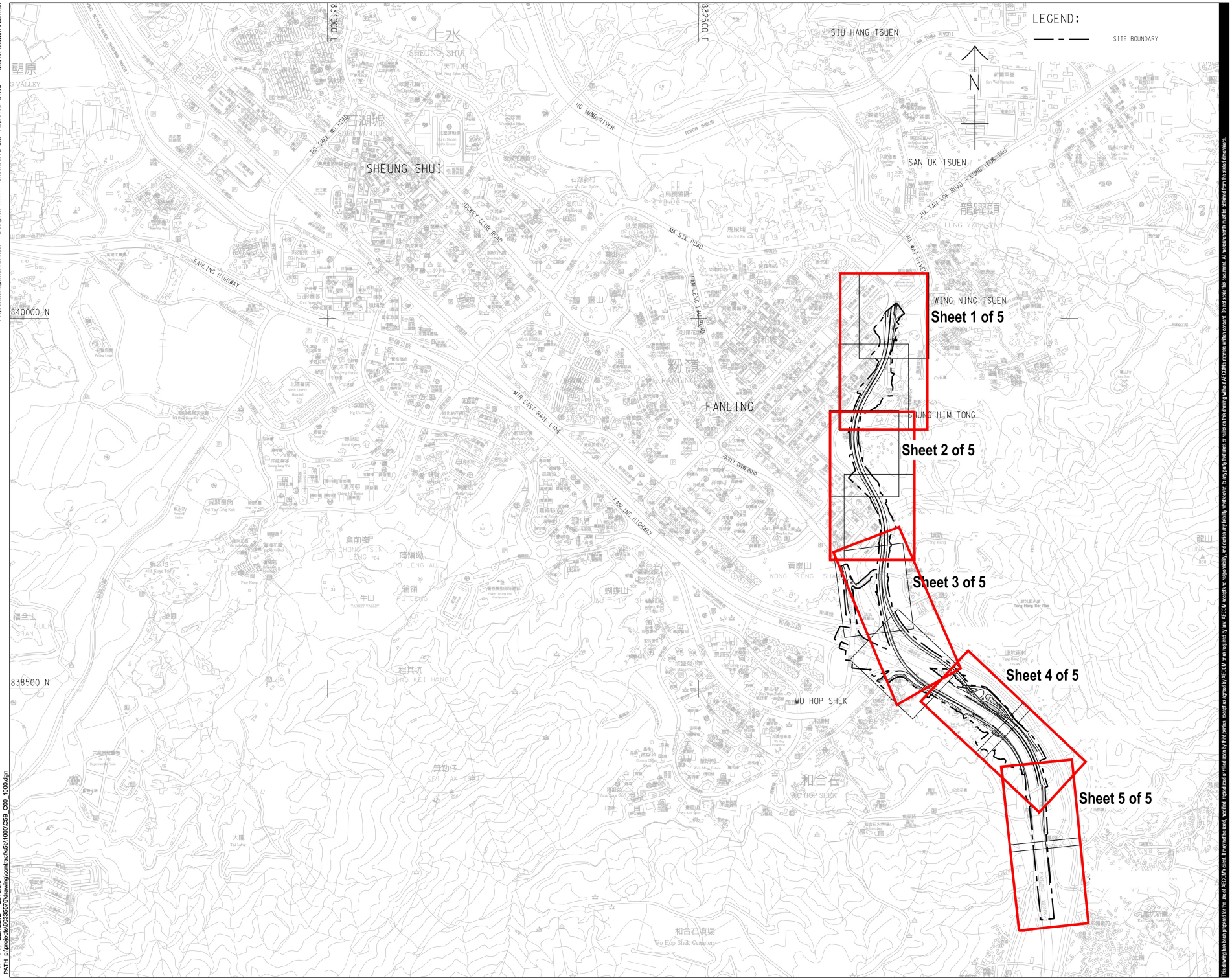

CRCC - Paul Y Joint Venture

Title of Designated Project:
Fanling Bypass Eastern Section

CONTRACT TITLE: **ND/2019/05**

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

CLIENT
業主

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

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

STATUS
階段

SCALE 比例
A1 1 : 7000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/05

SHEET TITLE
圖紙名稱
KEY PLAN AND LOCATION PLAN

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

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

Plot File by: ZENGLY2 2019/8/19
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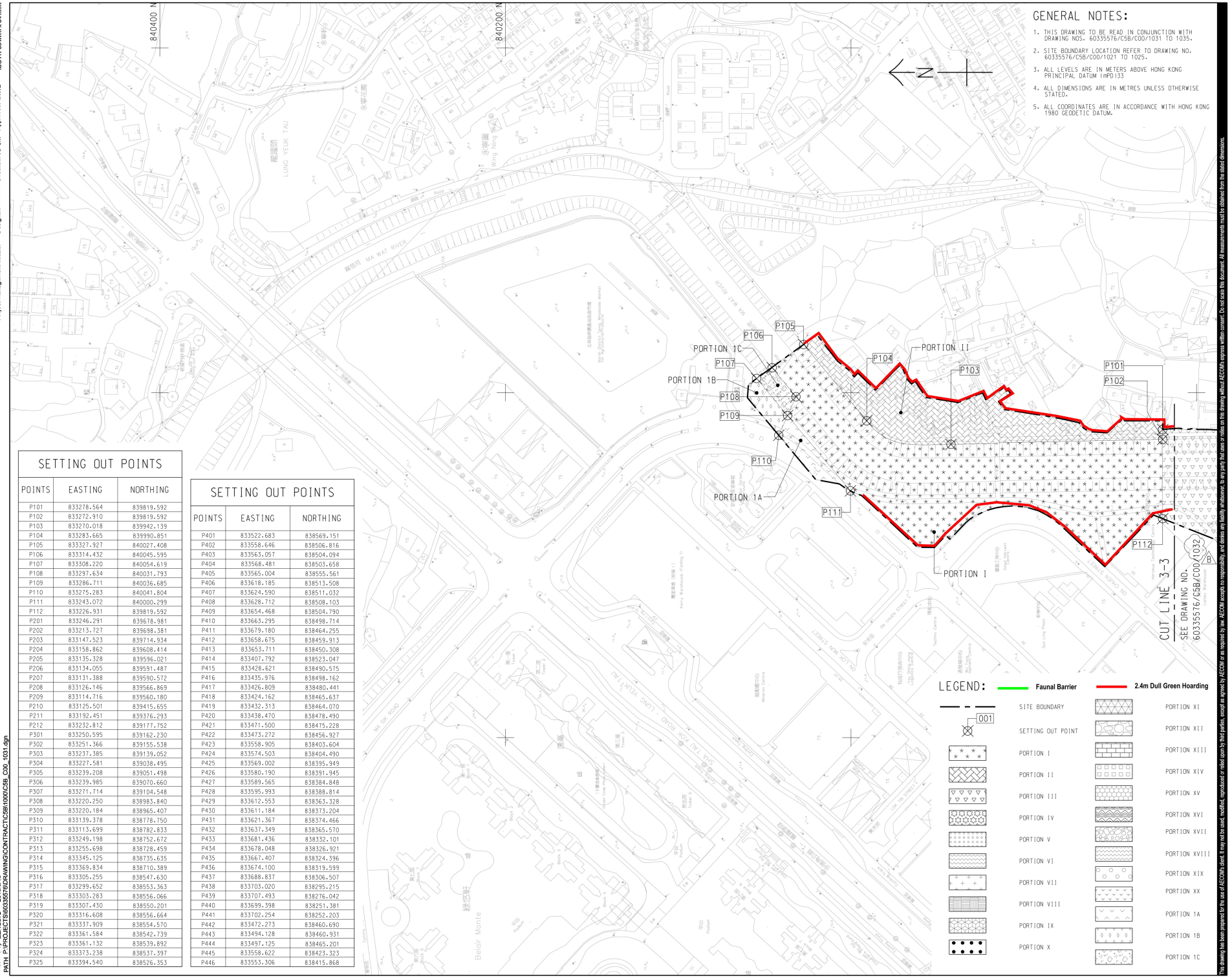

SETTING OUT POINTS

POINTS	EASTING	NORTHING
P101	833278.564	839819.592
P102	833272.910	839819.592
P103	833270.018	839942.139
P104	833283.665	839990.851
P105	833327.927	840027.408
P106	833314.432	840045.595
P107	833308.220	840054.619
P108	833297.634	840031.793
P109	833286.711	840036.685
P110	833275.283	840041.804
P111	833243.072	840000.299
P112	833226.931	839819.592
P201	833246.291	839678.981
P202	833213.727	839698.381
P203	833147.523	839714.934
P204	833158.862	839608.414
P205	833135.328	839596.021
P206	833134.055	839591.487
P207	833131.388	839590.572
P208	833126.146	839566.869
P209	833114.716	839560.180
P210	833125.501	839415.655
P211	833192.451	839376.293
P212	833232.812	839177.752
P301	833250.595	839162.230
P302	833251.366	839155.538
P303	833237.385	839139.052
P304	833227.581	839038.495
P305	833239.208	839051.498
P306	833239.985	839070.660
P307	833271.714	839104.548
P308	833220.250	838983.840
P309	833220.184	838965.407
P310	833139.378	838778.750
P311	833113.699	838782.833
P312	833249.198	838752.672
P313	833255.698	838728.459
P314	833345.125	838735.635
P315	833369.834	838710.389
P316	833305.255	838547.630
P317	833299.652	838553.363
P318	833303.283	838556.066
P319	833307.430	838550.201
P320	833316.608	838556.664
P321	833337.909	838554.570
P322	833361.584	838542.739
P323	833361.132	838539.892
P324	833373.238	838537.397
P325	833394.540	838526.353

SETTING OUT POINTS

POINTS	EASTING	NORTHING
P401	833522.683	838569.151
P402	833558.646	838506.816
P403	833563.057	838504.094
P404	833568.481	838503.658
P405	833565.004	838555.561
P406	833618.185	838513.508
P407	833624.590	838511.032
P408	833628.712	838508.103
P409	833654.468	838504.790
P410	833663.295	838498.714
P411	833679.180	838464.255
P412	833658.675	838459.913
P413	833653.711	838450.308
P414	833407.792	838523.047
P415	833428.621	838490.575
P416	833435.976	838498.162
P417	833426.809	838480.441
P418	833424.162	838465.637
P419	833432.313	838464.070
P420	833438.470	838478.490
P421	833471.500	838475.228
P422	833473.272	838456.927
P423	833558.905	838403.604
P424	833574.503	838404.490
P425	833569.002	838395.949
P426	833580.190	838391.945
P427	833589.565	838384.848
P428	833595.993	838388.814
P429	833612.553	838363.328
P430	833611.184	838373.204
P431	833621.367	838374.466
P432	833637.349	838365.570
P433	833681.436	838332.101
P434	833678.048	838326.921
P435	833667.407	838324.396
P436	833674.100	838319.599
P437	833688.837	838306.507
P438	833703.020	838295.215
P439	833707.493	838276.042
P440	833699.398	838251.381
P441	833702.254	838252.203
P442	833472.273	838460.690
P443	833494.128	838460.931
P444	833497.125	838465.201
P445	833558.622	838423.323
P446	833553.306	838415.868

CRCC - Paul Y Joint Venture

Title of Designated Project:
Fanling Bypass Eastern Section

CONTRACT TITLE: **ND/2019/05**

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

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業主

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

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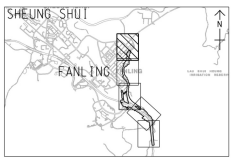
IR 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
B	AUG-19	TENDER ADDENDUM NO.3	RPCM
A	JUL-19	TENDER ADDENDUM NO.2	RPCM
-	JUN-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/05

SHEET TITLE
圖紙名稱
PORTION OF SITE

SHEET 1 OF 5

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

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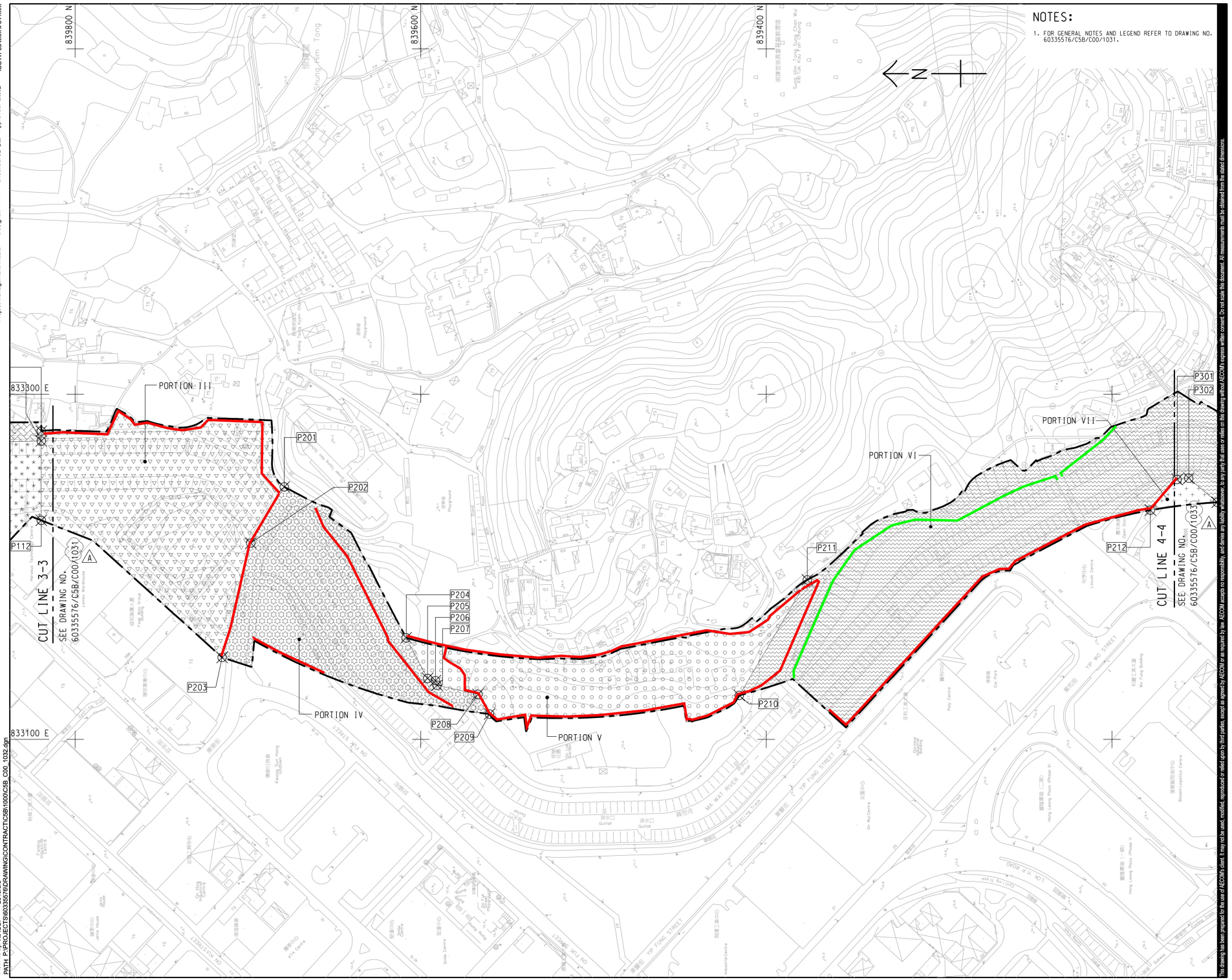

Project Management Initials: Designer: WHWY Checked: RPCM Approved: IHWL ISO A1 594mm x 841mm

Plot File by: XIAODP 2019/8/8
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CRCC - Paul Y Joint Venture

Title of Designated Project:
Fanling Bypass Eastern Section

CONTRACT TITLE: **ND/2019/05**

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

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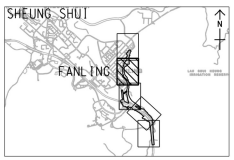
A	AUG-19	TENDER ADDENDUM NO.3	RPCM
-	JUN-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 70000



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/05

SHEET TITLE 圖紙名稱
PORTION OF SITE

SHEET 2 OF 5

SHEET NUMBER 圖紙編號
60335576/C5B/C00/1032A

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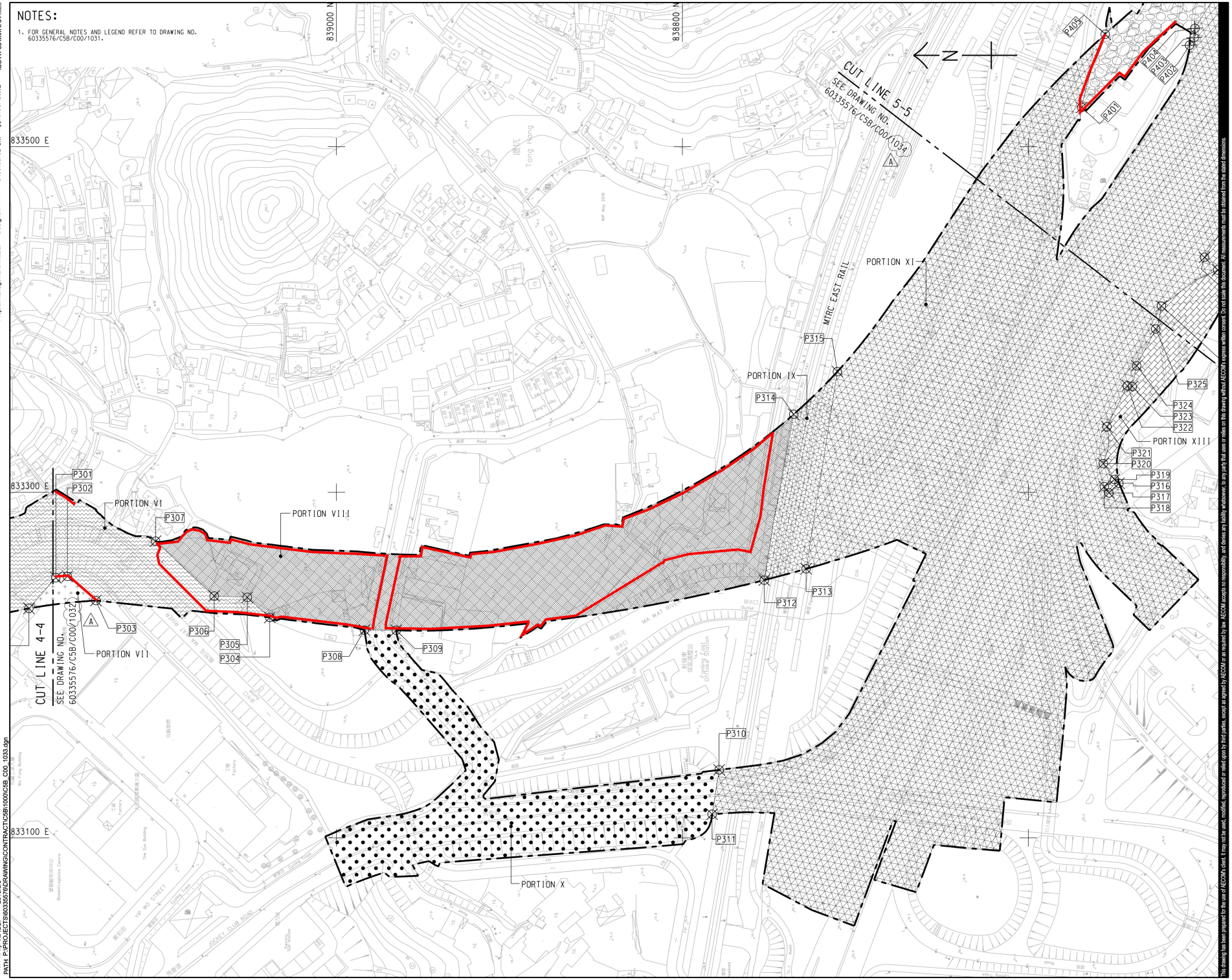

CRCC - Paul Y Joint Venture

Title of Designated Project:
Fanling Bypass Eastern Section

CONTRACT TITLE: **ND/2019/05**

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

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業主

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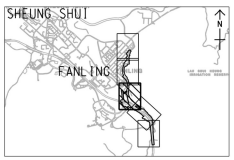
-	JUN-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 70000



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/05

SHEET TITLE 圖紙名稱
PORTION OF SITE

SHEET 3 OF 5

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

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

Plot File by: XIAODP 2019/8/8
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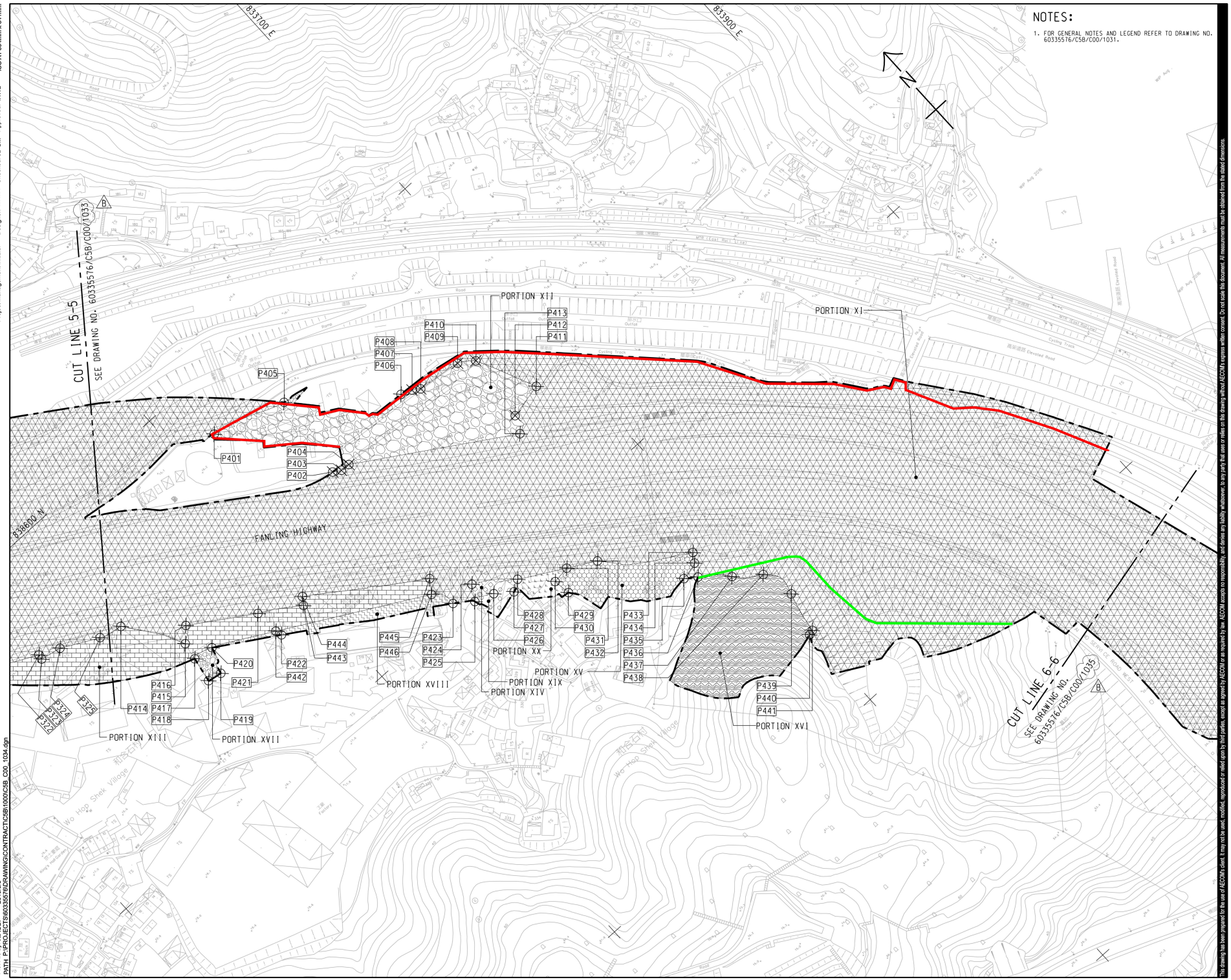

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Plot File by: XIAODP 2019/8/8
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CRCC - Paul Y Joint Venture

Title of Designated Project:
Fanling Bypass Eastern Section

CONTRACT TITLE: **ND/2019/05**

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

CLIENT
業主

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

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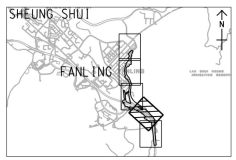
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
B	AUG-19	TENDER ADDENDUM NO.3	RPCM
A	JUL-19	TENDER ADDENDUM NO.2	RPCM
-	JUN-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 70000



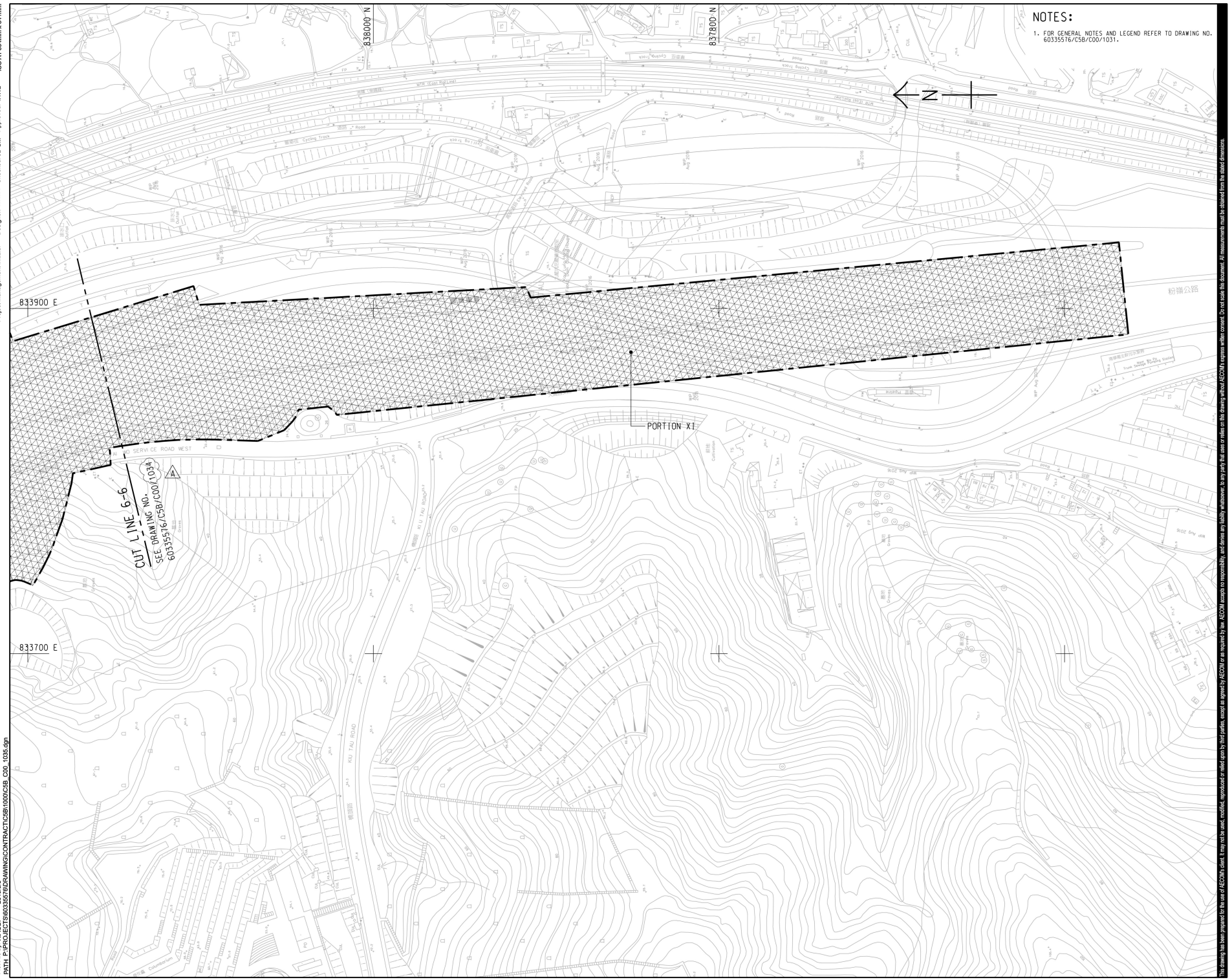
PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/05

SHEET TITLE 圖紙名稱
PORTION OF SITE

SHEET 4 OF 5

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



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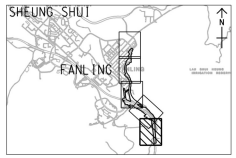
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	AUG-19	TENDER ADDENDUM NO.3	RPCM
-	JUN-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例
A1 1 : 1000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 70000



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/05

SHEET TITLE 圖紙名稱
PORTION OF SITE

SHEET 5 OF 5

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

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Project Management Initials: Designer: WHWY Checked: RPCM Approved: IHWL ISO A1 594mm x 841mm
Plot File by: XIAODP 2019/8/8
PATH: P:\PROJECTS\60335576\DRAWING\CONTRACT\C5B\1000\C5B_C00_1035.dgn

Figure 17

Hoarding Plan

EP-475/2013/A

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

NOTES:

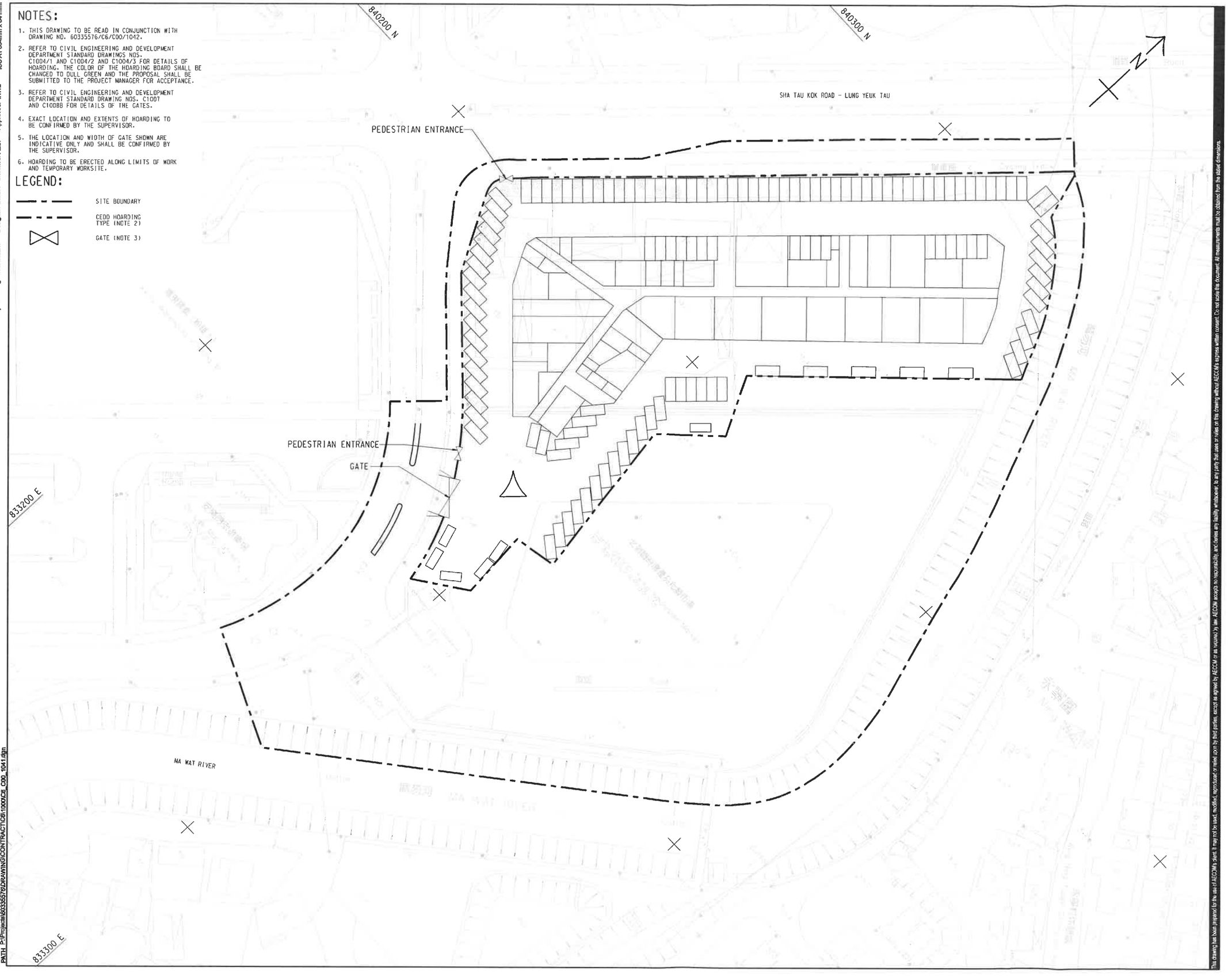
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NO. 60335576/C6/C00/1042.
2. REFER TO CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT STANDARD DRAWINGS NOS. C1004/1 AND C1004/2 AND C1004/3 FOR DETAILS OF HOARDING. THE COLOR OF THE HOARDING BOARD SHALL BE CHANGED TO DULL GREEN AND THE PROPOSAL SHALL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

LEGEND:

SITE BOUNDARY

CEDD HOARDING TYPE (NOTE 2)

GATE (NOTE 3)



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

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AECOM

PROJECT
項目

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

CONTRACT TITLE:

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

CLIENT
業主

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

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

STATUS
階段

SCALE 比例
A1 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/06

SHEET TITLE
圖紙名稱

HOARDING PLAN
(INTERIM STAGE)

SHEET NUMBER
圖紙編號

60335576/C6/C00/1041

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

NOTES:

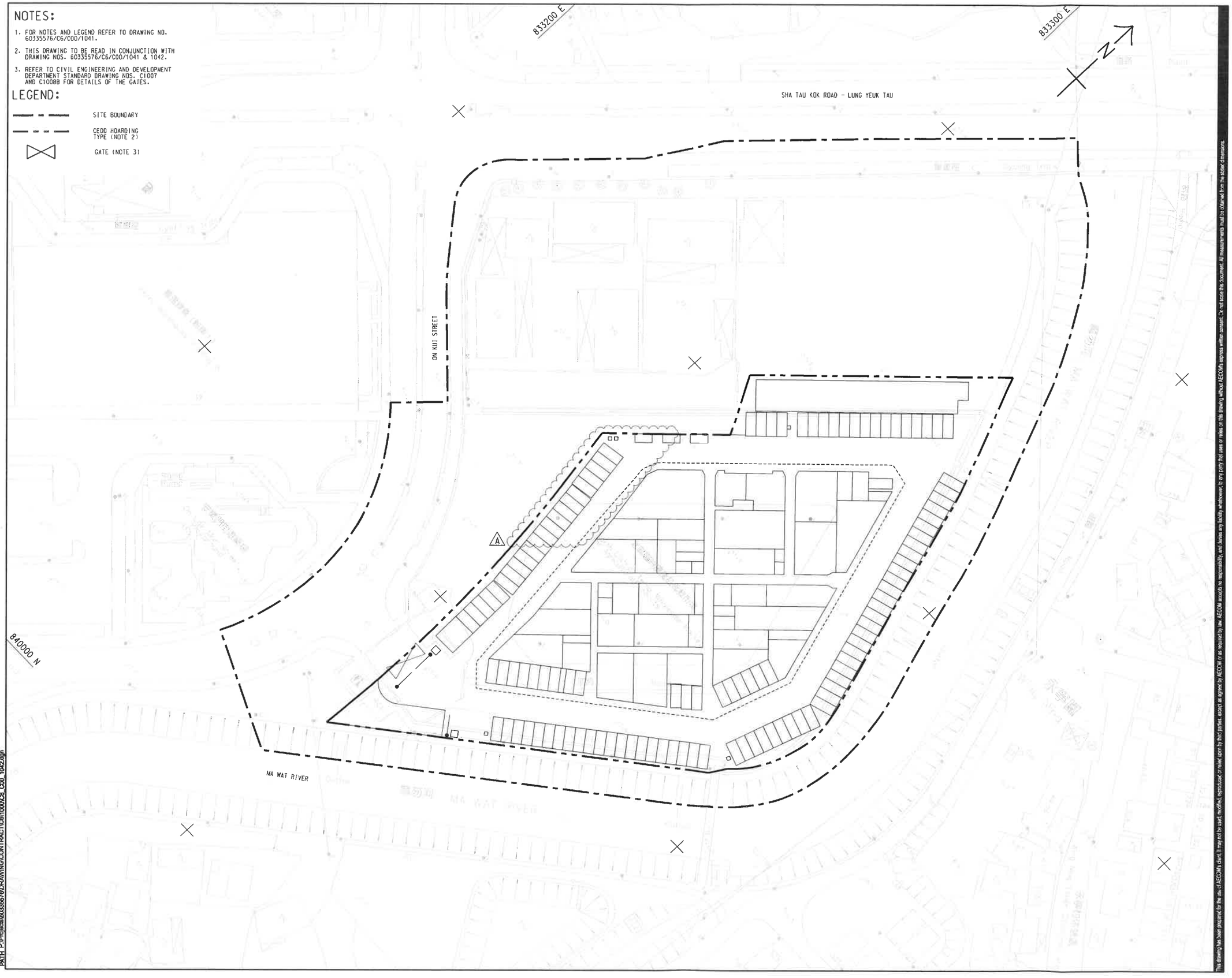
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C6/C00/1041.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C6/C00/1041 & 1042.
3. REFER TO CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT STANDARD DRAWING NOS. C1007 AND C10088 FOR DETAILS OF THE GATES.

LEGEND:

SITE BOUNDARY

CEDD HOARDING TYPE (NOTE 2)

GATE (NOTE 3)



Plot File by: Yauky 20/6/2019
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PROJECT
項目

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

CONTRACT TITLE:

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

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VR 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對
A	JUN-19	TENDER ADDENDUM NO. 2	ALUI
-	FEB-19	TENDER DRAWING	ALUI

STATUS
階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN
說明圖

PROJECT NO. 項目編號: 60335576

CONTRACT NO. 合約編號: ND/2019/06

SHEET TITLE
圖紙名稱

HOARDING PLAN
(FINAL STAGE)

SHEET NUMBER
圖紙編號

60335576/C6/C00/1042A

APPENDIX A
CONSTRUCTION PROGRAMME

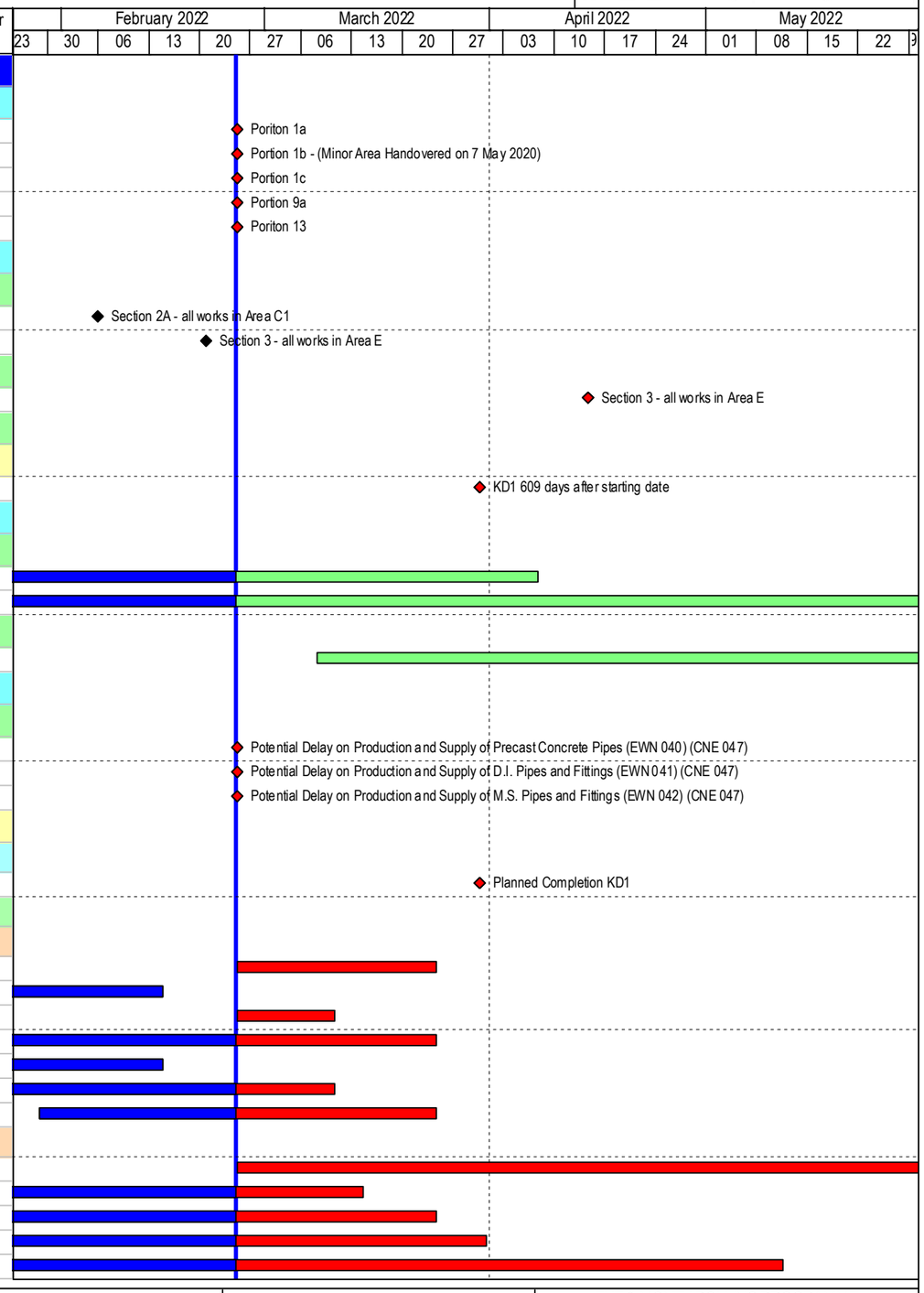
Construction Programme of ND/2019/01

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

AECOM

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
Revised Programme (2022-02-25) Rev.0						
2.0 - Site Access Dates						
AD-1000	Poriton 1a	0	25-Feb-22*		-234	CD(7d)
AD-1010	Portion 1b - (Minor Area Handovered on 7 May 2020)	0	25-Feb-22*		-234	CD(7d)
AD-1020	Portion 1c	0	25-Feb-22*		-50	CD(7d)
AD-1150	Portion 9a	0	25-Feb-22*		-50	CD(7d)
AD-1240	Poriton 13	0	25-Feb-22*		-50	CD(7d)
3.0 - Site Completion Dates						
3.1 Sectional Work Completion (Orignial Contract Completion Date)						
SC0-1010	Section 2A - all works in Area C1	0		06-Feb-22 A		CD(7d)
SC0-1030	Section 3 - all works in Area E	0		21-Feb-22 A		CD(7d)
3.2 Planned Sectional Work Completeion						
SC-1030	Section 3 - all works in Area E	0		14-Apr-22*	-52	CD(7d)
4.0 - Key Dates						
4.2 Planned Key Date Completion						
KD-1000	KD1 609 days after starting date	0		30-Mar-22*	-236	CD(7d)
6.0 - Prelimiaries and General Requirements						
6.2 - General Submissions						
GS-1230	Submission of Major Method Statements	42	06-Dec-19 A	07-Apr-22	648	CD(7d)
GS-1290	Preparation and Submission of Fully Corodinated BIM	1434	21-Aug-20 A	28-Jan-26*	8	CD(7d)
6.3 - Subletting Packages						
SP-1180	E&M works and Lift Installation for Pak Shek Au Pedestrian Subway	110	08-Mar-22	25-Jun-22	648	CD(7d)
7.0 Construction						
Section 1						
S1-1022	Potential Delay on Production and Supply of Precast Concrete Pipes (EWN 040) (CNE 047)	0		25-Feb-22	-111	CD(7d)
S1-1024	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0		25-Feb-22	-183	CD(7d)
S1-1026	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0		25-Feb-22	-183	CD(7d)
Portion 10a in Area H, H1, H2 (Soil Treatment & Provision of Site Access & EVA to MWSC)						
KD1 - Provision of Site Access and EVA to MWSC						
S1K1-1000	Planned Completion KD1	0		30-Mar-22	-236	CD(7d)
Civil Works						
Road D1 (Stage 1)						
S1K1-2000	Construct & maintain Temporary drainage	24	25-Feb-22	24-Mar-22	-188	WD(6d)
S1K1-2009	Underground Fresh & Flushing watermains (under footpath)	0	14-Aug-21 A	15-Feb-22 A		WD(6d)
S1K1-2010	Pressure test for Fresh & Flushing watermains (around 190m)	12	25-Feb-22	10-Mar-22	-125	WD(6d)
S1K1-2014	Underground utilities (under footpath)	24	03-May-21 A	24-Mar-22	-137	WD(6d)
S1K1-2016	Road works - Formation & Sub base	0	27-Oct-21 A	15-Feb-22 A		WD(6d)
S1K1-2018	Road works - Road kerb	12	15-Nov-21 A	10-Mar-22	-176	WD(6d)
S1K1-2020	Road works - Laying bituminous paving	24	29-Jan-22 A	24-Mar-22	-188	WD(6d)
Road D1 (Stage 2) Castle Peak road junction						
S1K1-2024	Construct & maintain Temporary drainage	179	25-Feb-22	03-Oct-22	-148	WD(6d)
S1K1-2026	Underground Drainage ELS & Excavation (around 40m)	15	18-Oct-21 A	14-Mar-22	-104	WD(6d)
S1K1-2028	Underground Drainage (around 40m)	24	20-Dec-21 A	24-Mar-22	-113	WD(6d)
S1K1-2030	Underground Sewerage (around 40m)	30	20-Dec-21 A	31-Mar-22	-119	WD(6d)
S1K1-2032	Underground Fresh & Flushing watermains (around 40m)	59	24-Jan-22 A	11-May-22	-148	WD(6d)



Build King – Richwell Engineering Joint Venture

Planned Work
Critical Work
Actual Work
Milestone
Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-02)

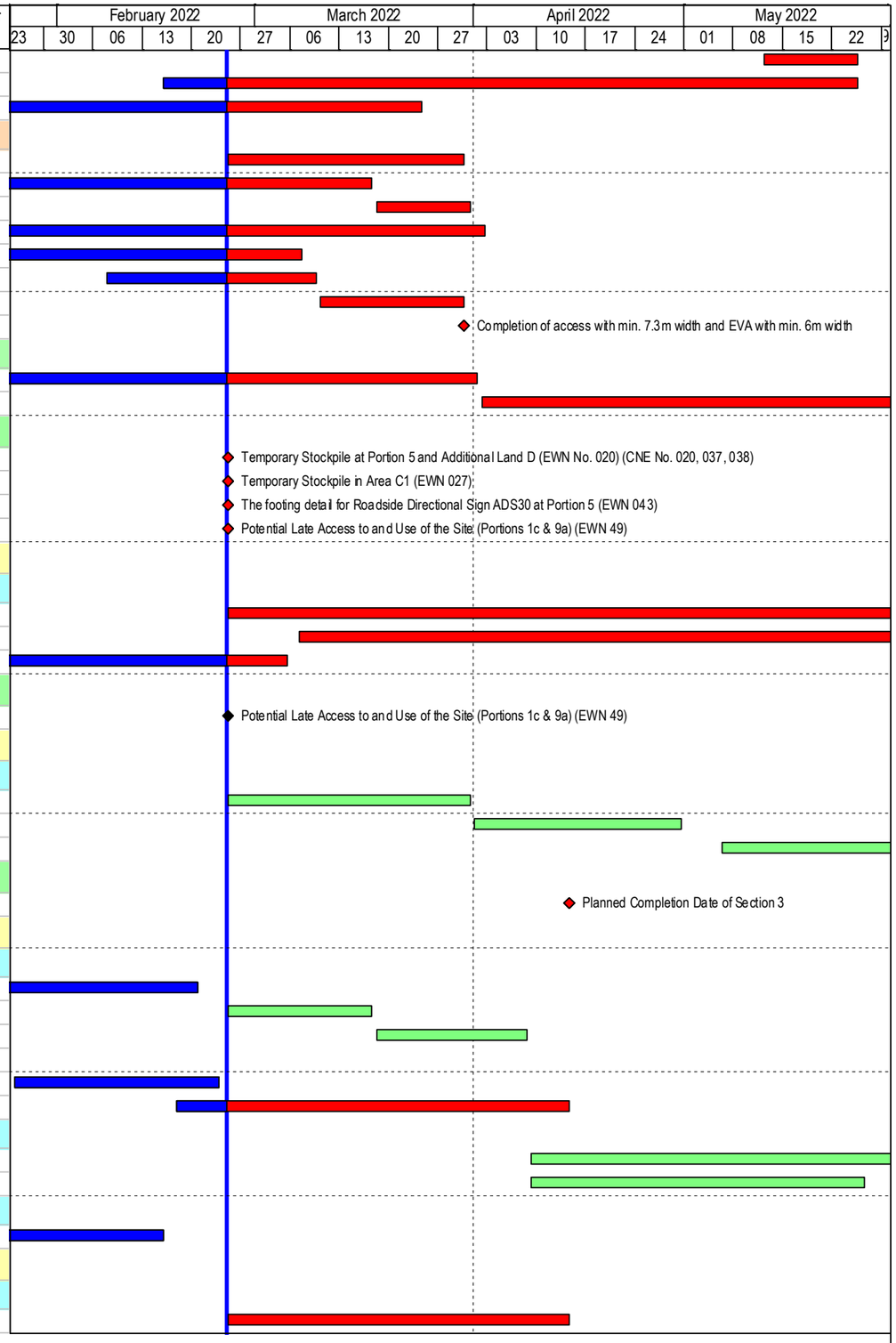
Data Date: 25-Feb-22 **Run Date: 28-Feb-21**

Project ID: ND201901-RP-24.0-1
Lauyout: ND201901-3MRP with logo

THE 3-MONTH ROLLING PROGRAMME

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
S1K1-2033	Pressure test for Fresh & Flushing watermains (around 40m)	12	12-May-22	25-May-22	-148	WD(6d)
S1K1-2034	Underground utilities (around 40m)	60	16-Feb-22 A	25-May-22	-148	WD(6d)
S1K1-3008	DfMA SMH KT2002 - Assembly on site	24	10-Jan-22 A	24-Mar-22	-113	WD(6d)
Road L1						
S1K1-2100	Construct & maintain Temporary drainage	29	25-Feb-22	30-Mar-22	-193	WD(6d)
S1K1-2108	Underground Fresh & Flushing watermains (under footpath)	18	20-Aug-21 A	17-Mar-22	-184	WD(6d)
S1K1-2109	Pressure test for Fresh & Flushing watermains (around 120m)	12	18-Mar-22	31-Mar-22	-45	WD(6d)
S1K1-2110	Underground utilities (under footpath)	30	05-Nov-21 A	02-Apr-22	-45	WD(6d)
S1K1-2112	Road works - Formation & Sub base	9	15-Nov-21 A	07-Mar-22	-193	WD(6d)
S1K1-2114	Road works - Road kerb	11	08-Feb-22 A	09-Mar-22	-193	WD(6d)
S1K1-2116	Road works - Laying bituminous paving	18	10-Mar-22	30-Mar-22	-193	WD(6d)
S1K1-2130	Completion of access with min. 7.3m width and EVA with min. 6m width	0		30-Mar-22	-236	CD(7d)
Smart Road Lightings System Installation						
S1K1-3010	Submissions and Approval of smart road lighting system design and shop drawings	36	10-Sep-20 A	01-Apr-22	-132	CD(7d)
S1K1-3020	Procurement and delivery of smart road lighting system	90	02-Apr-22	30-Jun-22	-132	CD(7d)
Section 2A						
S2A-1006	Temporary Stockpile at Portion 5 and Additional Land D (EWN No. 020) (CNE No. 020, 037, 038)	0		25-Feb-22	-110	CD(7d)
S2A-1008	Temporary Stockpile in Area C1 (EWN 027)	0		25-Feb-22	-110	CD(7d)
S2A-1010	The footing detail for Roadside Directional Sign ADS30 at Portion 5 (EWN 043)	0		25-Feb-22	-109	CD(7d)
S2A-1012	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)	0		25-Feb-22	-109	CD(7d)
Portion 5 in Area C1 (Soil Treatment & Interface with HD's Contractors)						
Soil Treatment						
S2AP5-2000	Construct & maintain Temporary drainage	80	25-Feb-22	06-Jun-22	-96	WD(6d)
S2AP5-2020	Remaining works (Site formation, proof rolling, chain Link fence, open channel)	72	07-Mar-22	06-Jun-22	-96	WD(6d)
S2AP5-2022	Remove Temporary Stockpiling of excavated material (100,000 m3)	8	17-Jul-21 A	05-Mar-22	-96	WD(6d)
Section 2B						
S2B-1002	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)	0		25-Feb-22	271	CD(7d)
Portion 9a in Area C2 (Soil Treatment & Interface with HD's Contractors)						
Preparation work/Tree Survey/Site Clearance/GI						
S2BP9a-1010	Tree survey and prepare tree felling and transplant report	30	25-Feb-22	31-Mar-22	161	WD(6d)
S2BP9a-1012	Approval & Acceptance of Tree Felling Application	30	01-Apr-22	30-Apr-22	201	CD(7d)
S2BP9a-1020	Site clearance	60	06-May-22	18-Jul-22	166	WD(6d)
Section 3						
S3-1000	Planned Completion Date of Section 3	0		14-Apr-22	-52	CD(7d)
Portion 1a in Area E (Soil Treatment & Interface with HKHS's Contractors)						
Preparation work/Tree Survey/Site Clearance/GI						
S3P1a-1020	Site Clearance & Tree felling	0	25-Nov-21 A	21-Feb-22 A		WD(6d)
S3P1a-1040	Prepare Arsenic Assessment Report	18	25-Feb-22	17-Mar-22	803	WD(6d)
S3P1a-1050	Arsenic Treatment Plan	18	18-Mar-22	08-Apr-22	803	WD(6d)
S3P1a-1060	Notificatioan and Approval of Asbestos Abatement Programme	0	04-Oct-21 A	25-Jan-22 A		CD(7d)
S3P1a-1070	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	0	26-Jan-22 A	24-Feb-22 A		WD(6d)
S3P1a-1080	Site Formation and Construct Chain Link fence	41	18-Feb-22 A	14-Apr-22	-44	WD(6d)
Soil Treatment						
S3P1a-2000	Construct & maintain Temporary drainage	84	09-Apr-22	23-Jul-22	1025	WD(6d)
S3P1a-2010	Remove soil (original assumed 17334m3) (1 / 13 EGI completed, interim soil to be excavated / treated : 1260m3 / 400m3)	36	09-Apr-22	26-May-22	803	WD(6d)
Interface with HKHS's contractor to carry out GI						
S3P1a-3010	HKHS Contractor to carry out GI in Area E	0	28-Oct-21 A	16-Feb-22 A		WD(6d)
Portion 7 in Area E (Soil Treatment & Interface with HKHS's Contractors)						
Soil Treatment						
S3P7-2000	Construct & maintain Temporary drainage	41	25-Feb-22	14-Apr-22	-44	WD(6d)



Build King – Richwell Engineering Joint Venture

Planned Work
Critical Work
Actual Work
Milestone
Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-02)

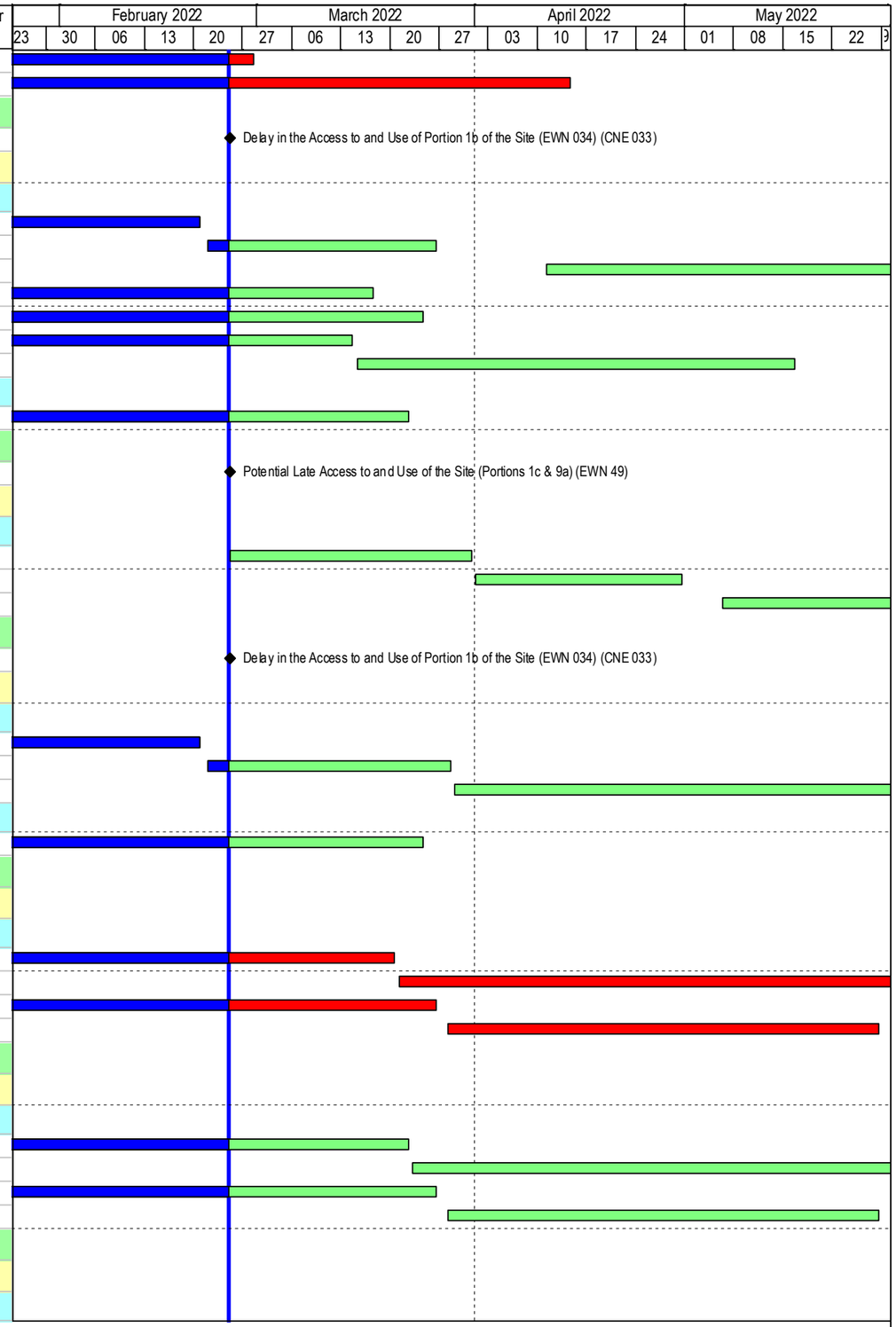
Data Date: 25-Feb-22 **Run Date: 28-Feb-21**

Project ID: ND201901-RP-24.0-1
Lauyout: ND201901-3MRP with logo

THE 3-MONTH ROLLING PROGRAMME

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
S3P7-2010	Remove soil (original assumed 15718m3) (3 / 4 EGI completed, interim soil to be excavated / treated : 6300m3 / 2000m3)	3	20-Apr-21 A	28-Feb-22	-26	WD(6d)
S3P7-2020	Backfilling to the formation levels & Construct Chain Link Fence	41	25-Oct-21 A	14-Apr-22	-44	WD(6d)
Section 4A						
S4-1002	Delay in the Access to and Use of Portion 1b of the Site (EWN 034) (CNE 033)	0		25-Feb-22	90	CD(7d)
Portion 1b in Area D1 (Soil Treatment & Interface with HD's Contractors)						
Preparation work/Tree Survey/Site Clearance/GI						
S4AP1b-1010	Tree survey and prepare tree felling and transplant report	0	03-Sep-21 A	21-Feb-22 A		WD(6d)
S4AP1b-1012	Approval & Acceptance of Tree Felling Application	30	22-Feb-22 A	26-Mar-22	90	CD(7d)
S4AP1b-1020	Site Clearance & Tree Felling	60	11-Apr-22	25-Jun-22	63	WD(6d)
S4AP1b-1025	Ground investigation (0 / 3 GI completed)	18	20-Jan-22 A	17-Mar-22	142	WD(6d)
S4AP1b-1030	Environmental ground investigation and lab test (3/4 completed)	24	10-Jan-22 A	24-Mar-22	136	WD(6d)
S8P9b-3136	Submit and Approval of Asbestos Abatement Programme	18	28-Dec-21 A	14-Mar-22	81	CD(7d)
S8P9b-3146	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	48	15-Mar-22	16-May-22	63	WD(6d)
Soil Treatment						
S4AP1b-2002	Remove soil (Grid SA4AG6)	22	22-Dec-21 A	22-Mar-22	259	WD(6d)
Section 4B						
S4B-1002	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)	0		25-Feb-22	183	CD(7d)
Portion 1c in Area D2 (Soil Treatment & Interface with HD's Contractors)						
Preparation work/Tree Survey/Site Clearance/GI						
S4BP1c-1010	Tree survey and prepare tree felling and transplant report	30	25-Feb-22	31-Mar-22	149	WD(6d)
S4BP1c-1012	Approval & Acceptance of Tree Felling Application	30	01-Apr-22	30-Apr-22	187	CD(7d)
S4BP1c-1020	Site Clearance & Tree Felling	60	06-May-22	18-Jul-22	154	WD(6d)
Section 4C						
S4C-1002	Delay in the Access to and Use of Portion 1b of the Site (EWN 034) (CNE 033)	0		25-Feb-22	44	CD(7d)
Portion 1b in Area D3 (Soil Treatment & Interface with ArchSD's Contractors)						
Preparation work/Tree Survey/Site Clearance/GI						
S4CP1b-1010	Tree survey and prepare tree felling and transplant report	0	03-Sep-21 A	21-Feb-22 A		WD(6d)
S4CP1b-1012	Approval & Acceptance of Tree Felling Application	32	22-Feb-22 A	28-Mar-22	44	CD(7d)
S4CP1b-1020	Site Clearance & Tree Felling	60	29-Mar-22	14-Jun-22	32	WD(6d)
Interface with ArchSD's Wet Market Contractor to carry out GI						
S4CP1b-3010	ArchSD's Wet Market Contractor to carry out GI in Area D3	24	07-Jan-22 A	24-Mar-22	257	WD(6d)
Section 6A						
Portion 1e in Area G1 (Soil Treatment & Forming Hammerhead)						
Preparation work/Tree Survey/Site Clearance/GI						
S6AP1e-1012	Approval & Acceptance of Tree Felling Application	24	11-Nov-21 A	20-Mar-22	-21	CD(7d)
S6AP1e-1020	Site Clearance & Tree Felling	60	21-Mar-22	06-Jun-22	-18	WD(6d)
S6AP1e-1060	Notificatioan and Approval of Asbestos Abatement Programme	30	27-Jan-21 A	26-Mar-22	-13	CD(7d)
S6AP1e-1070	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	48	28-Mar-22	28-May-22	-12	WD(6d)
Section 6B						
Portion 1e in Area G2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S6BP1e-1012	Approval & Acceptance of Tree Felling Application	26	11-Nov-21 A	22-Mar-22	861	CD(7d)
S6BP1e-1020	Site Clearance & Tree Felling	60	23-Mar-22	08-Jun-22	697	WD(6d)
S6BP1e-1060	Notificatioan and Approval of Asbestos Abatement Programme	30	27-Jan-21 A	26-Mar-22	871	CD(7d)
S6BP1e-1070	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	48	28-Mar-22	28-May-22	705	WD(6d)
Section 7 (Subject to excision)						
KD2 - Portion 11b in Area K (Laying sewer rising mains and connect to existing MBR)						
Sewerage Works						



Build King – Richwell Engineering Joint Venture

Planned Work
Critical Work
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Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-02)

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THE 3-MONTH ROLLING PROGRAMME

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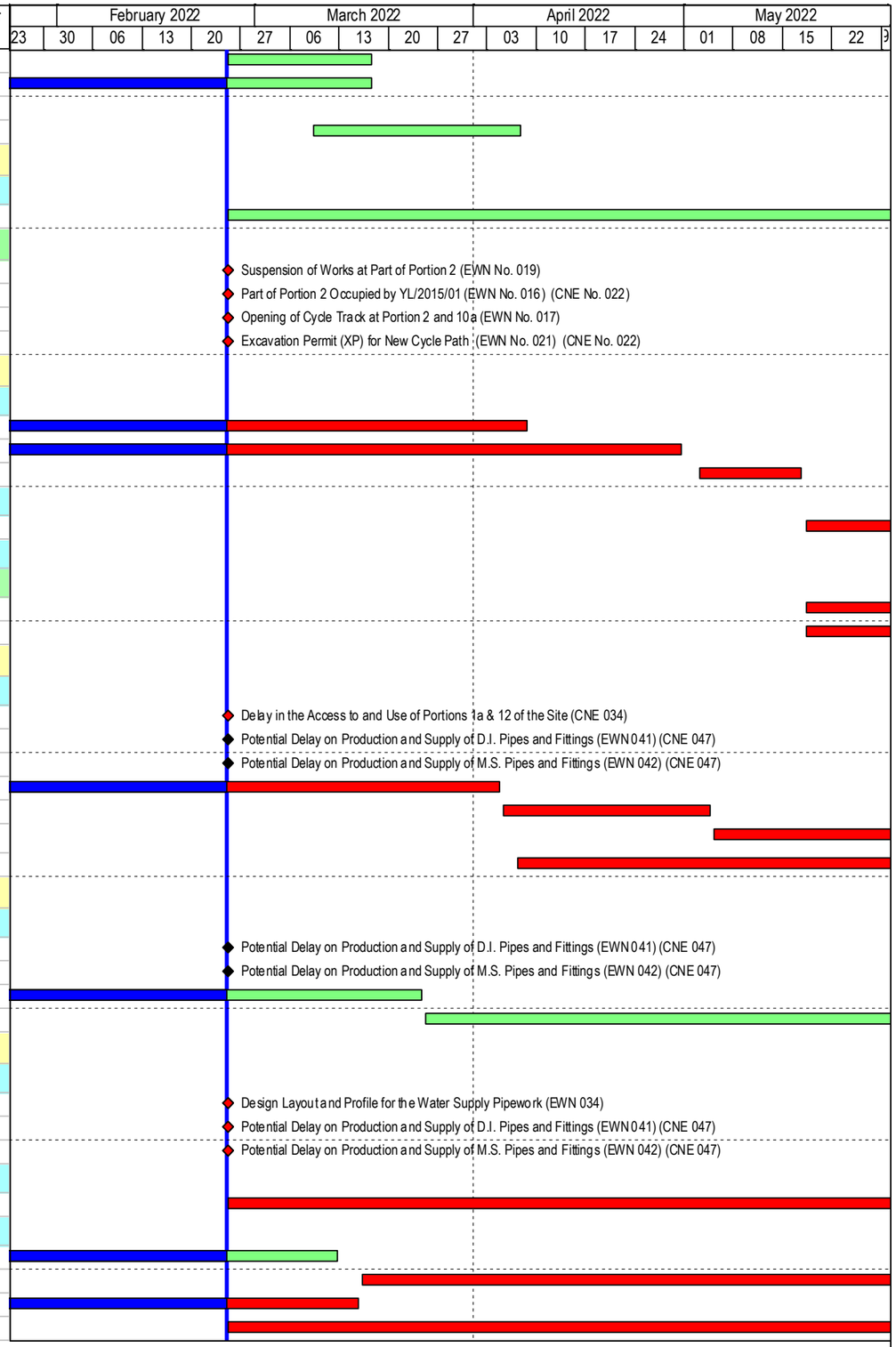
Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
S7P11b-1015	Construct & maintain Temporary drainage	18	25-Feb-22	17-Mar-22	270	WD(6d)
S7P11b-1060	Construction of MBR	18	08-Apr-21 A	17-Mar-22	270	WD(6d)
S7P11b-1070	E&M Installation for MBR	0	19-Jul-21 A	25-Jan-22 A		WD(6d)
S7P11b-1080	Testing & Commissioning (T&C) of E&M equipment for MBR	30	09-Mar-22	07-Apr-22	333	CD(7d)
Portion 4 in Area K (Complete Temp. Noise Barriers along Castle Peak Road)						
KD9 - Complete the temporary noise barriers along Castle Peak Road in Area I, J, K						
S7P11b-3010	Erection of temporary noise barrier in Area K, Portion 11b (115m, 1 gang)	130	25-Feb-22	04-Aug-22	175	WD(6d)
Section 8						
S8-1012	Suspension of Works at Part of Portion 2 (EWN No. 019)	0		25-Feb-22	-528	CD(7d)
S8-1014	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016) (CNE No. 022)	0		25-Feb-22	-528	CD(7d)
S8-1016	Opening of Cycle Track at Portion 2 and 10a (EWN No. 017)	0		25-Feb-22	-528	CD(7d)
S8-1018	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)	0		25-Feb-22	-528	CD(7d)
Portion 2 in Area A (Soil Treatment & Construction of Pak Shek Au Junction)						
Preparation work						
S8P2-0016	Site clearance / Tree Felling (Stage 2)	36	16-Nov-21 A	08-Apr-22	-427	WD(6d)
S8P2-0018	Construction of temporary road	52	24-Nov-21 A	30-Apr-22	-443	WD(6d)
S8P2-0020	Traffic diversion to temp road	12	03-May-22	17-May-22	-443	WD(6d)
Soil Treatment						
S8P2-2010	Remove soil (original assumed 6898m3) (0/1 EGI completed, interim soil to be excavated / treated : 0m3/0m3) Clean Soil	26	18-May-22*	17-Jun-22	-443	WD(6d)
Civil Work						
Construction of Pak Shek Au Junction						
S8P2-4100	Cut slope with soil nail construction at existing slope KS34	180	18-May-22	19-Dec-22	-274	WD(6d)
S8P2-4110	Expose existing UU & ELS for Drainage & Water Main	100	18-May-22	14-Sep-22	-274	WD(6d)
Portion 1a in Area A (Soil Treatment, Slope, Retaining Wall, Noise Barrier, Drainage & Roadwork)						
Preparation work						
S8P1a-0100	Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034)	0		25-Feb-22	-284	CD(7d)
S8P1a-0102	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0		25-Feb-22	162	CD(7d)
S8P1a-0104	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0		25-Feb-22	162	CD(7d)
S8P1a-1002	Tree survey and prepare tree felling and transplant report	33	26-Jul-21 A	04-Apr-22	-232	WD(6d)
S8P1a-1004	Approval & Acceptance of Tree Felling Application	30	05-Apr-22	04-May-22	-283	CD(7d)
S8P1a-1010	Site clearance	48	05-May-22	02-Jul-22	-229	WD(6d)
S8P1a-1050	Archaeologiacl Survey	72	07-Apr-22	07-Jul-22	-196	WD(6d)
Portion 3 in Area A (Soil Treatment, Drainage & Roadwork)						
Preparation work						
S8P3-0102	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0		25-Feb-22	393	CD(7d)
S8P3-0104	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0		25-Feb-22	393	CD(7d)
S8P3-1008	Approval & Acceptance of Tree Felling Application & Tree Felling	24	13-Apr-21 A	24-Mar-22	65	WD(6d)
S8P3-1010	Site clearance	60	25-Mar-22	10-Jun-22	65	WD(6d)
Portion 5 in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S8P5-0102	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0		25-Feb-22	0	CD(7d)
S8P5-0104	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0		25-Feb-22	0	CD(7d)
S8P5-0106	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0		25-Feb-22	0	CD(7d)
Construction according to CSD for Alternative on Bored Pile Wall						
S8P5-2005	Construct & maintain Temporary drainage	602	25-Feb-22	06-Mar-24	0	WD(6d)
Civil Work						
S8P5-4000.02	Road P1 (pipe laying SMH1006 to 1005) - Underground Drainage work	14	24-Sep-21 A	12-Mar-22	2	WD(6d)
S8P5-4002	Divert Local Road	345	16-Mar-22	16-May-23	0	WD(6d)
S8P5-4004.00	Roadwork - Formation, Sub base, Road Kerbs and Laying Bitumen (North bound Carriageway) CH 400 to CH 539	16	25-Nov-21 A	15-Mar-22	0	WD(6d)
S8P5-4014	Drainage works across DJ watermain (SMH1006a and pipe laying to 1006)	145	25-Feb-22	22-Aug-22	0	WD(6d)



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Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-02)

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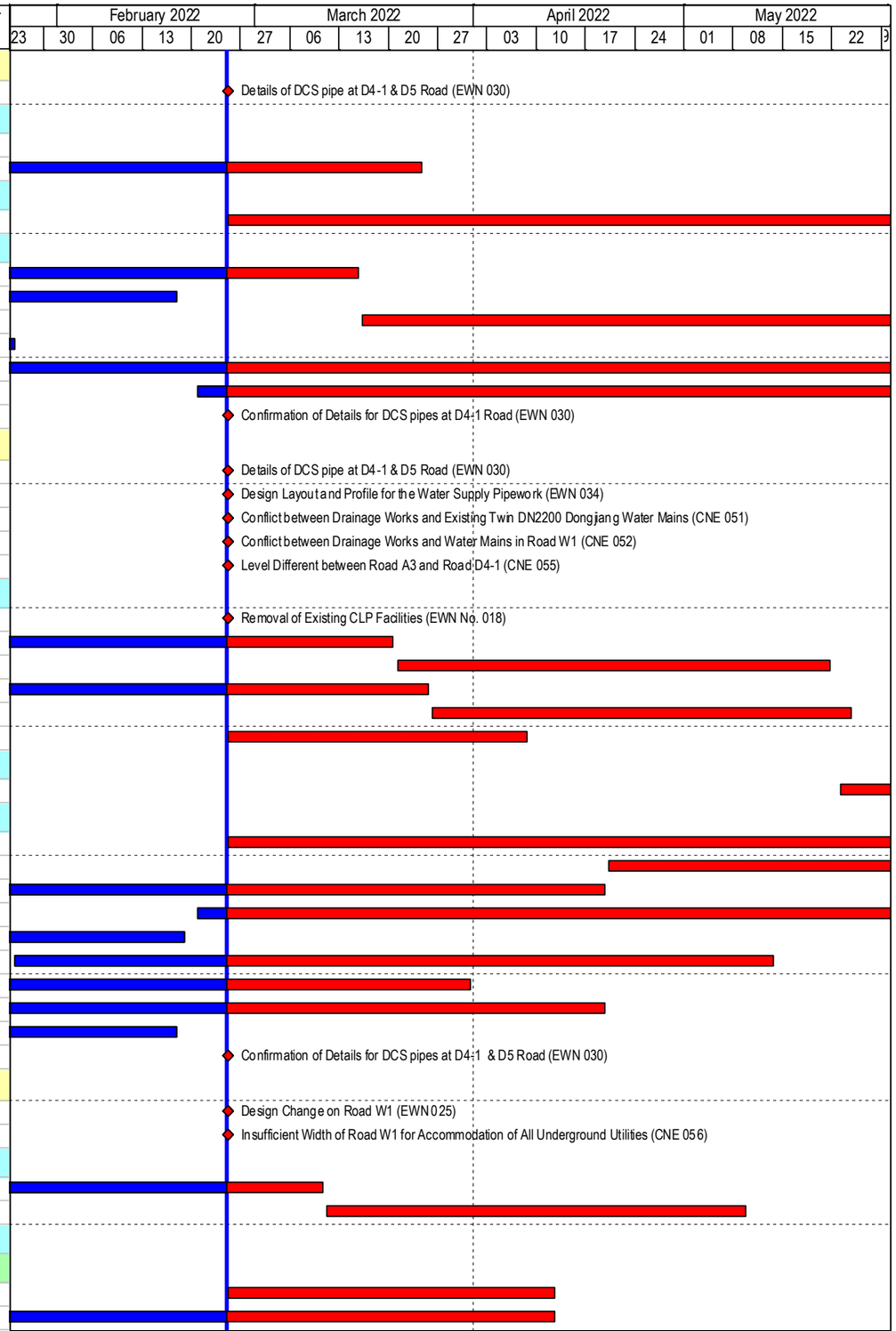
Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
Portion 6a & 6b in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)						
S8P6a-0002	Details of DCS pipe at D4-1 & D5 Road (EWN 030)	0		25-Feb-22	-208	CD(7d)
Preparation work/Tree Survey/Site Clearance/GI						
S8P6a-1004	Approval & Acceptance of Tree Felling Application & Tree Felling	0	16-Jun-20 A	25-Jan-22 A		WD(6d)
S8P6a-1010	Site Clearance & Tree Felling	24	15-Feb-20 A	24-Mar-22	0	WD(6d)
Construction according to CSD for Alternative on Bored Pile Wall						
S8P6a-2004	Construct & maintain Temporary drainage	595	25-Feb-22	27-Feb-24	0	WD(6d)
Civil Work						
S8P6a-4000.02	Road D4 Underground Drainage work (between SMH 5001F - 5001C2)	16	18-Oct-21 A	15-Mar-22	0	WD(6d)
S8P6a-4010.02	Road D4 (SMH5001B1 - 5001A & pipe laying to 5001B) - Underground Drainage work	0	15-Dec-21 A	18-Feb-22 A		WD(6d)
S8P6a-4010.06	Road D4 (between SMH1002A and KT1001) - Underground Drainage work	60	16-Mar-22	31-May-22	0	WD(6d)
S8P6a-4014.02	Construction of Concrete Barrier Stem Wall KB01 Stage 2 (Bay 3)	0	10-Jan-22 A	26-Jan-22 A		WD(6d)
S8P6a-4018.01	Construction of Concrete Barrier Footing KB01 Stage 3 (Bay 4 to 12)	76	15-Jan-22 A	31-May-22	0	WD(6d)
S8P6a-4018.02	Construction of Concrete Barrier Stem Wall KB01 Stage 3 (Bay 4 to 12)	138	21-Feb-22 A	13-Aug-22	0	WD(6d)
S8P6a-4054	Confirmation of Details for DCS pipes at D4-1 Road (EWN 030)	0		25-Feb-22*	-208	CD(7d)
Portion 9b & 9d in Area A (Soil Treatment, Slope, Retaining Wall, Drainage & Roadwork)						
S8P9b-0003	Details of DCS pipe at D4-1 & D5 Road (EWN 030)	0		25-Feb-22	-208	CD(7d)
S8P9b-0004	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0		25-Feb-22	-136	CD(7d)
S8P9b-3112	Conflict between Drainage Works and Existing Twin DN2200 Dongjiang Water Mains (CNE 051)	0		25-Feb-22	-136	CD(7d)
S8P9b-3114	Conflict between Drainage Works and Water Mains in Road W1 (CNE 052)	0		25-Feb-22	-136	CD(7d)
S8P9b-3116	Level Different between Road A3 and Road D4-1 (CNE 055)	0		25-Feb-22	-136	CD(7d)
Preparation work/Tree Survey/Site Clearance/GI						
S8P9b-0006	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Feb-22	-223	CD(7d)
S8P9b-1002	Submission & Acceptance of Tree Felling Application	24	05-May-21 A	20-Mar-22	-223	CD(7d)
S8P9b-1010	Site clearance & Tree Felling	48	21-Mar-22	21-May-22	-154	WD(6d)
S8P9b-1015	Ground investigation (10 / 13 GI completed)	25	22-Feb-21 A	25-Mar-22	-159	WD(6d)
S8P9b-1025	Verification of Ground Condition & Design Review by Project Manager	60	26-Mar-22	24-May-22	-196	CD(7d)
S8P9b-1040	Arsenic Treatment Plan (Stage 2)	36	25-Feb-22	08-Apr-22	-218	WD(6d)
Soil Treatment						
S8P9b-2010	Remove soil (original assumed 15758m3) (0 / 8 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	40	23-May-22*	09-Jul-22	-134	WD(6d)
Civil Work						
S8P9b-3015	Construct & maintain Temporary drainage	814	25-Feb-22	21-Nov-24	-224	WD(6d)
S8P9b-3030	Excavation for retaining wall (4701m3)	96	20-Apr-22	13-Aug-22	-224	WD(6d)
S8P9b-3040.02	Construction of retaining wall KW04 (3/3 footing completed & 0/3 stem wall completed)	42	24-Dec-21 A	19-Apr-22	-224	WD(6d)
S8P9b-3040.04	Construction of retaining wall KW03 (0/3 footing completed & 0/3 stem wall completed) Stage 1	90	21-Feb-22 A	17-Jun-22	-126	WD(6d)
S8P9b-3057.02	Construction of Underground Drainage Manhole M3.22 to SMH KT5004	0	22-Nov-21 A	19-Feb-22 A		WD(6d)
S8P9b-3057.04	Construction of Underground Drainage Manhole SMH KT5001A to M3.20	61	26-Jan-22 A	13-May-22	-171	WD(6d)
S8P9b-3058.02	Road D5 - Construction of Underground Drainage Manhole SMH KT7104 to SMH KT7105 (Works Recommenced)	30	23-Dec-21 A	31-Mar-22	-212	WD(6d)
S8P9b-3058.04	Road D5 - Construction of Underground Drainage Manhole SMH KT7102 to SMH KT7103	42	17-Jan-22 A	19-Apr-22	-224	WD(6d)
S8P9b-3060.01	Construction of Underground Sewerage Manhole FMH 7.01 to 7.05	0	22-Nov-21 A	18-Feb-22 A		WD(6d)
S8P9b-3100	Confirmation of Details for DCS pipes at D4-1 & D5 Road (EWN 030)	0		25-Feb-22*	-208	CD(7d)
Portion 8a in Area A (Soil Treatment, Reservoirs, Slope, Drainage & Roadwork)						
S8P8a-1106	Design Change on Road W1 (EWN025)	0		25-Feb-22	-181	CD(7d)
S8P8a-3090	Insufficient Width of Road W1 for Accommodation of All Underground Utilities (CNE 056)	0		25-Feb-22	-181	CD(7d)
Preparation work/Tree Survey/Site Clearance/GI						
S8P8a-1030	Ground investigation (2 / 3 GI completed) to Fresh Water Service Reservoir	12	21-Dec-20 A	10-Mar-22	-10	WD(6d)
S8P8a-1046	Verification of Ground Condition & Design Review by Project Manager (to Fresh Water Service Reservoir)	60	11-Mar-22	09-May-22	-12	CD(7d)
Forming Site Access and Site Formation						
Stage 1 General Excavation near Flushing Water Servie Reservior (Excavation Volume 52834 m3)						
S8P8a-1105	Construct & maintain Temporary drainage	39	25-Feb-22	12-Apr-22	-146	WD(6d)
S8P8a-1160	General excavation for remaining of Road W1	39	11-Jun-20 A	12-Apr-22	-146	WD(6d)



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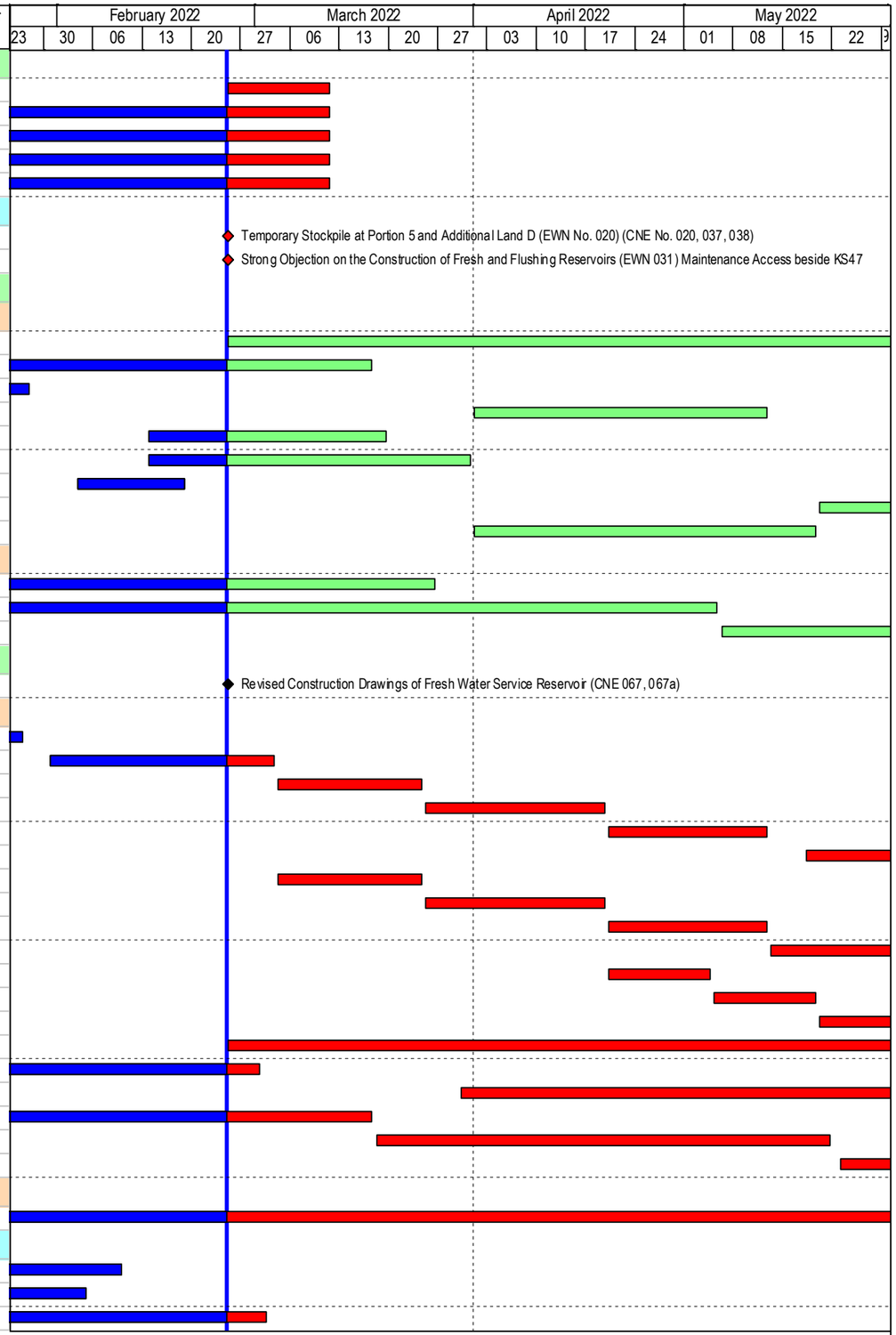
Stage 2 General Excavation near Fresh Water Servie Reservior (Excavation Volume 299396 m3)						
S8P8a-1208	Construct & maintain Temporary drainage	13	25-Feb-22	11-Mar-22	-72	WD(6d)
S8P8a-1220	General excavation for New Feature KS47 and adjacent road	13	01-Dec-20 A	11-Mar-22	-72	WD(6d)
S8P8a-1230	General excavation for New Feature KS49 and adjacent road	13	11-Jan-21 A	11-Mar-22	-72	WD(6d)
S8P8a-1240	General excavation for area surrounding Fresh Water Service Reservoir	13	01-Dec-20 A	11-Mar-22	-72	WD(6d)
S8P8a-1250	General excavation for remaining of Road W2	13	14-Dec-20 A	11-Mar-22	-72	WD(6d)
KD8 - complete all works for fresh water and flushing water services reservoirs, pipe laying & road						
S8K8-6000	Temporary Stockpile at Portion 5 and Additional Land D (EWN No. 020) (CNE No. 020, 037, 038)	0		25-Feb-22	-188	CD(7d)
S8K8-6002	Strong Objection on the Construction of Fresh and Flushing Reservoirs (EWN 031) Maintenance Access beside KS47	0		25-Feb-22	-76	CD(7d)
Construction of Kwu Tung North Flushing Water Service Reservoir (KTN FLWSR)						
Civil Works						
S8K8-1005	Construct & maintain Temporary drainage	210	25-Feb-22	09-Nov-22	61	WD(6d)
S8K8-1030.052	Construction of Outlet Chamber	18	07-Jun-21 A	17-Mar-22	79	WD(6d)
S8K8-1030.25	Construction of Retaining wall at GL 15	0	10-Jan-22 A	28-Jan-22 A		WD(6d)
S8K8-1030.26	Construction of Retaining wall GL 12 - 15 at GL G	30	01-Apr-22	12-May-22	67	WD(6d)
S8K8-1030.27	Construction of Retaining wall GL 12 - 15 at GL A	20	14-Feb-22 A	19-Mar-22	61	WD(6d)
S8K8-1030.28	Construction of Retaining wall GL 12 - 15 at GL D	30	14-Feb-22 A	31-Mar-22	61	WD(6d)
S8K8-1030.30	Construction of Columns Stage 2 (8 / 8 Nos completed)	0	04-Feb-22 A	19-Feb-22 A		WD(6d)
S8K8-1030.46	Construction of Roof Slab bay 4 (GL 12 - 15 & GL D - G)	36	20-May-22	02-Jul-22	61	WD(6d)
S8K8-1030.47	Construction of Roof Slab bay 4a (GL 12 - 15 & GL A - D)	36	01-Apr-22	19-May-22	61	WD(6d)
E&M Works						
S8K8-2010	Design and Approval for E&M works for KTN FLWSR	30	01-Feb-21 A	26-Mar-22	155	CD(7d)
S8K8-2020	Submission and Approval of E&M plants & materials for KTN FLWSR	70	01-Feb-21 A	05-May-22	115	CD(7d)
S8K8-2030	Procurement of E&M equipment for KTN FLWSR	60	06-May-22	04-Jul-22	115	CD(7d)
Construction of Kwu Tung North Freshwater Service Reservoir (KTN FWSR)						
S8K8-6034	Revised Construction Drawings of Fresh Water Service Reservoir (CNE 067, 067a)	0		25-Feb-22	24	CD(7d)
Civil Works						
S8K8-1000.00	Base Slab - bay 1	0	17-Jan-22 A	27-Jan-22 A		WD(6d)
S8K8-1000.02	Base Slab - bay2 & bay 4	6	31-Jan-22 A	03-Mar-22	-72	WD(6d)
S8K8-1000.04	Base Slab - bay3 & bay 6	18	04-Mar-22	24-Mar-22	0	WD(6d)
S8K8-1000.06	Base Slab - bay5 & bay 7	18	25-Mar-22	19-Apr-22	0	WD(6d)
S8K8-1000.08	Base Slab - bay 8	18	20-Apr-22	12-May-22	0	WD(6d)
S8K8-1000.10	Base Slab - bay 9	18	18-May-22	08-Jun-22	-4	WD(6d)
S8K8-1000.20	Pad Footing - GL 3-5 / C-G (No. 12)	18	04-Mar-22	24-Mar-22	-72	WD(6d)
S8K8-1000.22	Pad Footing - GL 6-8 / C-G (No. 11) Stage 1	18	25-Mar-22	19-Apr-22	-72	WD(6d)
S8K8-1000.26	Pad Footing - GL 9-11 / C-G (No. 10)	18	20-Apr-22	12-May-22	-72	WD(6d)
S8K8-1000.28	Pad Footing - GL 3-5 / L-Q (No. 15)	18	13-May-22	02-Jun-22	-72	WD(6d)
S8K8-1000.40	Cover Slab - No. 19	12	20-Apr-22	04-May-22	-72	WD(6d)
S8K8-1000.42	Cover Slab - No. 18	12	05-May-22	19-May-22	-72	WD(6d)
S8K8-1000.44	Cover Slab - No. 17 Stage 1	12	20-May-22	02-Jun-22	-72	WD(6d)
S8K8-3000	Construct & maintain Temporary drainage	547	25-Feb-22	28-Dec-23	0	WD(6d)
S8K8-3025	Construction of Sub soil drainage (Stage 1)	4	06-Dec-21 A	01-Mar-22	-4	WD(6d)
S8K8-3026	Construction of Sub soil drainage (Stage 2)	48	30-Mar-22	31-May-22	-4	WD(6d)
S8K8-3042	Up Hill Recieving Pit - Form Temporary road and GI works	18	06-Jan-22 A	17-Mar-22	-184	WD(6d)
S8K8-3044	Up Hill Recieving Pit - Temporary Cut & Soil Nail	50	18-Mar-22	21-May-22	-184	WD(6d)
S8K8-3046	Up Hill Recieving Pit - Pipe Pile along Access Road (194 nos.)	50	23-May-22	21-Jul-22	-184	WD(6d)
E&M Works						
S8K8-4010	Design and Approval for E&M works for KTN FWSR	98	20-Dec-21 A	02-Jun-22	-90	CD(7d)
Remaining Civil Work in Portion 8a Area A						
S8P8a-2310	Slopeworks for KS47 - Slope cutting and soil nail installation Row F + Row G (125 Nos Soil nails) + Berm & U channel	0	07-Jun-21 A	10-Feb-22 A		WD(6d)
S8P8a-2360	Slopeworks for KS49 - Slope cutting and soil nail installation Row I + Row J + Row K (45 Nos Soil nails) +Berm & U chann	0	03-Jun-21 A	05-Feb-22 A		WD(6d)
S8P8a-2550	Construction of Temporary Road on Additional Land E	5	23-Dec-21 A	02-Mar-22	-157	WD(6d)



Build King – Richwell Engineering Joint Venture

Planned Work
Critical Work
Actual Work
Milestone
Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-02)

Data Date: 25-Feb-22 **Run Date: 28-Feb-21**

Project ID: ND201901-RP-24.0-1
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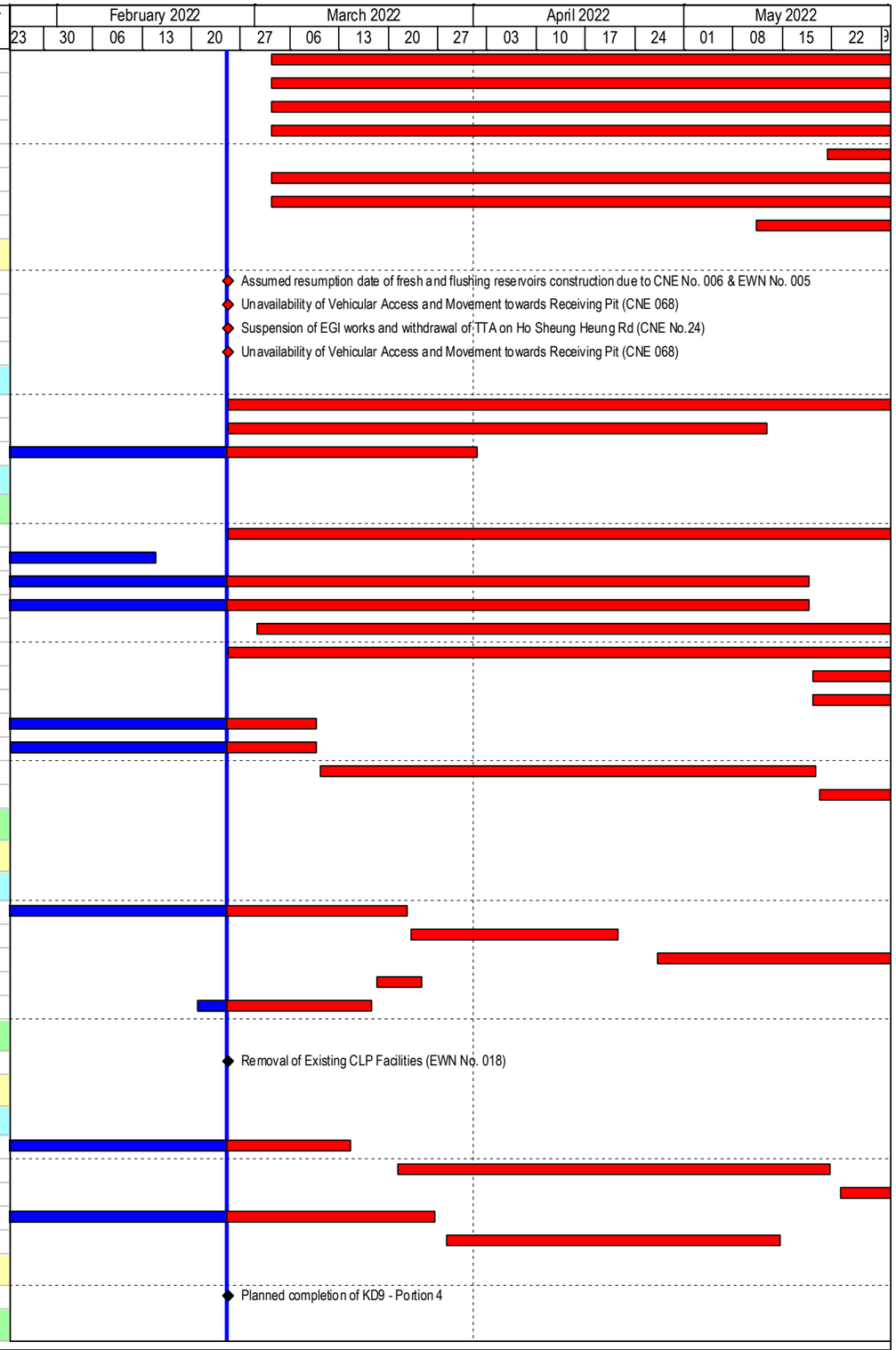
THE 3-MONTH ROLLING PROGRAMME

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
S8P8a-2558	Construct & maintain Temporary drainage	240	03-Mar-22	20-Dec-22	-118	WD(6d)
S8P8a-2560	Excavation for retaining wall KW06 bay 1 - bay 7 (3666m3)	100	03-Mar-22	06-Jul-22	-151	WD(6d)
S8P8a-2628	Construct & maintain Temporary drainage	242	03-Mar-22	22-Dec-22	-73	WD(6d)
S8P8a-2630	Excavation for retaining wall KW05 bay 1 - bay 9 (2750m3)	112	03-Mar-22	20-Jul-22	-157	WD(6d)
S8P8a-2632	Construction of retaining wall KW05 bay 1 - bay 9 (1350m3)	180	21-May-22	22-Dec-22	-73	WD(6d)
S8P8a-2658	Construct & maintain Temporary drainage	273	03-Mar-22	02-Feb-23	-151	WD(6d)
S8P8a-2660	Excavation for retaining wall KW11 bay 1 - bay 11 (3360m3)	120	03-Mar-22	29-Jul-22	-151	WD(6d)
S8P8a-2662	Construction of retaining wall KW11 bay 1 - bay 11 (1650m3)	220	11-May-22	02-Feb-23	-151	WD(6d)
Portion 8b in Area A (Soil Treatment & Install Watermains by Trenchless / Open Trench Method)						
S8P8b-1002	Assumed resumption date of fresh and flushing reservoirs construction due to CNE No. 006 & EWN No. 005	0		25-Feb-22	-410	CD(7d)
S8P8b-1003	Unavailability of Vehicular Access and Movement towards Receiving Pit (CNE 068)	0		25-Feb-22	-351	CD(7d)
S8P8b-1004	Suspension of EGI works and withdrawal of TTA on Ho Sheung Heung Rd (CNE No.24)	0		25-Feb-22	-410	CD(7d)
S8P8b-1005	Unavailability of Vehicular Access and Movement towards Receiving Pit (CNE 068)	0		25-Feb-22	-162	CD(7d)
Preparation work						
S8P8b-1010	Site clearance & Tree Felling	90	25-Feb-22	17-Jun-22	-332	WD(6d)
S8P8b-1022	Remaining Environmental ground investigation and laboratory test (2 / 8 EGI)	60	25-Feb-22*	12-May-22	-284	WD(6d)
S8P8b-1070	Approval & Acceptance of Tree Felling Application	36	22-Jan-22 A	01-Apr-22	-332	CD(7d)
Construction of Watermains						
Construction of watermains by trenchless method						
S8P8b-4000	Construct & maintain Temporary drainage	945	25-Feb-22	08-May-25	-258	WD(6d)
S8P8b-4008	Construction of launching pit at Portion 8b near Sheung Yue River	0	29-Apr-21 A	15-Feb-22 A		WD(6d)
S8P8b-4010	Construction of receiving pit at Portion 8b near Sheung Yue River	65	22-Nov-21 A	18-May-22	-195	WD(6d)
S8P8b-4010.02	Sheung Yue River - Preparation, Submission and Approval for ADMS Monitoring System	65	10-Jan-22 A	18-May-22	-224	WD(6d)
S8P8b-4010.04	Sheung Yue River - Preparation, Submission and Approval for ADMS Monitoring Tower	74	01-Mar-22	01-Jun-22	-222	WD(6d)
S8P8b-4010.06	Sheung Yue River - Preparation, Submission and Approval for Drilling and Inclined Grouting below MTR railway	141	25-Feb-22	17-Aug-22	-224	WD(6d)
S8P8b-4010.08	Sheung Yue River - Construction of ADMS Monitoring Tower	14	19-May-22	04-Jun-22	-224	WD(6d)
S8P8b-4012.04	Sheung Yue River - Procurement & Testing of DN1200 Jacking pipes	74	19-May-22	15-Aug-22	-195	WD(6d)
S8P8b-4062	Up Hill Pipe Jacking Pit - Formal notification to Lo Wu Saddle Club	11	25-Jan-22 A	09-Mar-22	-94	WD(6d)
S8P8b-4064	Up Hill Pipe Jacking Pit - Procurement for ELS	11	25-Jan-22 A	09-Mar-22	-94	WD(6d)
S8P8b-4066	Up Hill Pipe Jacking Pit - Pipe Pile Construction (136 nos.)	55	10-Mar-22	19-May-22	-94	WD(6d)
S8P8b-4068	Up Hill Pipe Jacking Pit - ELS, Excavation & Toe Grouting	60	20-May-22	30-Jul-22	-94	WD(6d)
Section 9						
Portion 12 in Area F (Soil Treatment & Interface with EMSD's Contractors)						
Preparation work/Tree Survey/Site Clearance/GI						
S9P12-1010	Tree survey and prepare tree felling and transplant report	22	23-Aug-21 A	22-Mar-22	-118	WD(6d)
S9P12-1012	Approval & Acceptance of Tree Felling Application	30	23-Mar-22	21-Apr-22	-145	CD(7d)
S9P12-1020	Site Clearance & Tree Felling	60	27-Apr-22	09-Jul-22	-114	WD(6d)
S9P12-1025	Ground investigation (0 / 1 GI completed)	6	18-Mar-22	24-Mar-22	-30	WD(6d)
S9P12-1030	Environmental Ground investigation and laboratory test (0 / 2 EGI completed)	18	21-Feb-22 A	17-Mar-22	-30	WD(6d)
Section 10A						
S10A-1002	Removal of Existing CLP Facilities (EWN No. 018)	0		25-Feb-22	58	CD(7d)
Portion 1e in Area J (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S10AP1e-1012	Approval & Acceptance of Tree Felling Application	18	11-Nov-21 A	14-Mar-22	-144	CD(7d)
S10AP1e-1020	Site Clearance & Tree Felling	48	21-Mar-22	21-May-22	-117	WD(6d)
S10AP1e-1030	Environmental ground investigation and lab test (1 EGI) (another 1 EGI in other portion represent part of this portion)	18	23-May-22	13-Jun-22	-117	WD(6d)
S10AP1e-1060	Notificatioan and Approval of Asbestos Abatement Programme	30	27-Jan-21 A	26-Mar-22	-136	CD(7d)
S10AP1e-1070	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	36	28-Mar-22	14-May-22	-111	WD(6d)
Portion 4 in Area J (Soil Treatment & Temp. Noise Barriers along Castle Peak Road)						
S10AP4-1000	Planned completion of KD9 - Portion 4	0		25-Feb-22	419	CD(7d)
Section 11						



Build King – Richwell Engineering Joint Venture

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Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-02)

Data Date: 25-Feb-22 **Run Date: 28-Feb-21**

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THE 3-MONTH ROLLING PROGRAMME

Date	Revision	Checked	Approved
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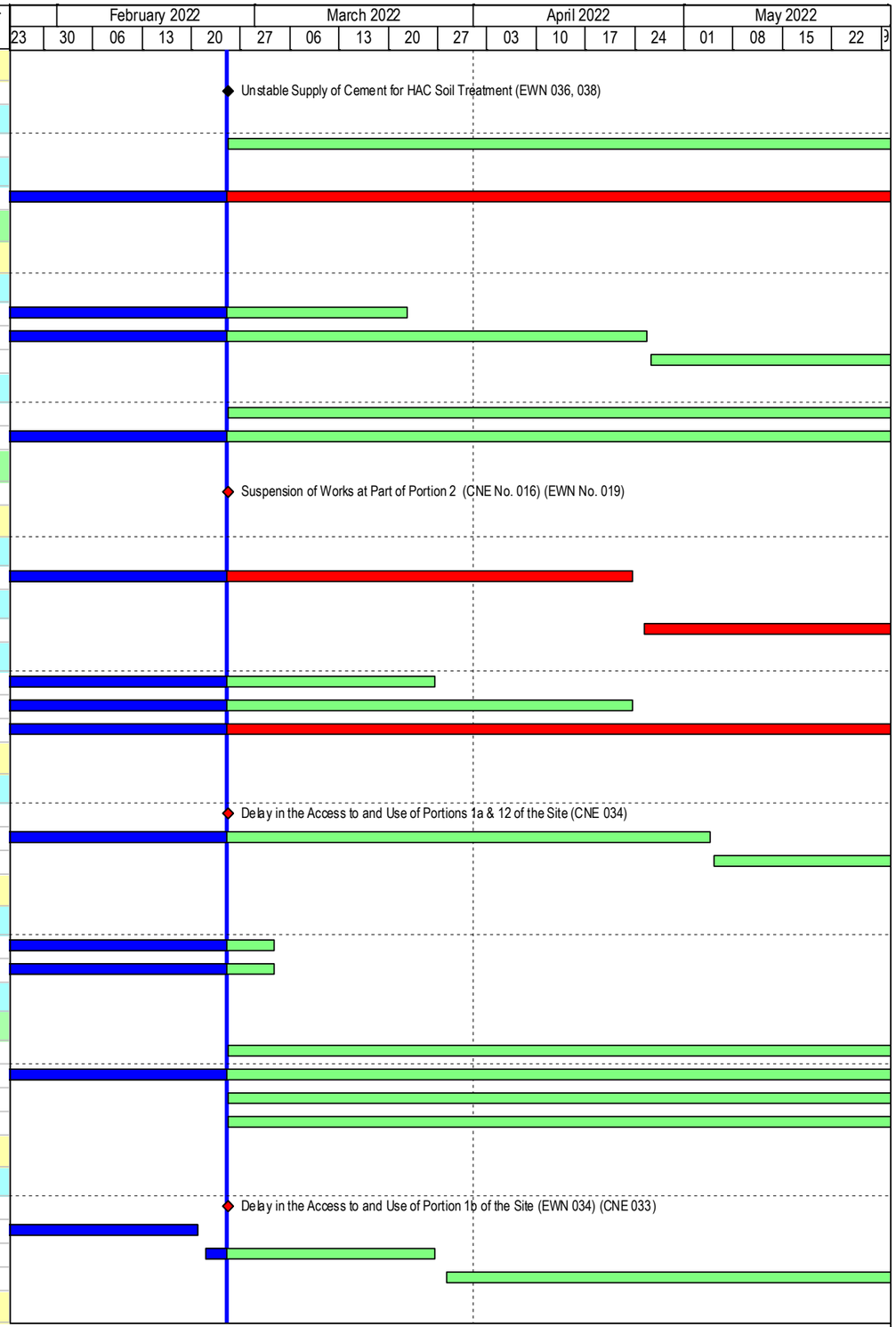
Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
Portion 6b in Area B (Soil Treatment & Operation of HAC Soil Treatment Plant)						
S11P6b-1002	Unstable Supply of Cement for HAC Soil Treatment (EWN 036, 038)	0		25-Feb-22	938	CD(7d)
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant						
S11P6b-2005	Construct & maintain Temporary drainage	1021	25-Feb-22	07-Aug-25	124	WD(6d)
Operation and Dismantling of the Soil Treatment Plant						
S11P6b-3010	Provide treatment to high arsenic-containing soil	875	03-Dec-20 A	08-Feb-25*	0	WD(6d)
Section 12A						
Portion 10b in Area L1 (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S12P10b-1012	Approval & Acceptance of Tree Felling Application	22	16-Dec-20 A	22-Mar-22	502	WD(6d)
S12P10b-1020	Site Clearance & Tree Felling	47	04-Oct-21 A	25-Apr-22	477	WD(6d)
S12P10b-1040	Prepare Arsenic Assessment Report	36	26-Apr-22	09-Jun-22	477	WD(6d)
Civil Work						
S12P10b-3000	Construct & maintain Temporary drainage	474	25-Feb-22	28-Sep-23	254	WD(6d)
S12P10b-3010	Underground utilities & Drainage work (158m drain and 5 M/H)	414	13-Oct-21 A	20-Jul-23	254	WD(6d)
Section 13						
S13-1012	Suspension of Works at Part of Portion 2 (CNE No. 016) (EWN No. 019)	0		25-Feb-22	-7	CD(7d)
Portion 2 in Area N (Soil Treatment, Slope, Drainage & Pak Shek Au Junction)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P2-1030	Site clearance	46	06-Dec-21 A	23-Apr-22	-6	WD(6d)
Soil Treatment						
S13P2-2010	Remove soil (original assumed 10854m3) (0 / 3 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	32	25-Apr-22	02-Jun-22	-6	WD(6d)
Civil Works						
S13P2- 3150	Revised Slope KS38 - Approval & Acceptance of Initial Tree Survey report	30	15-Jan-21 A	26-Mar-22	669	CD(7d)
S13P2- 3170	Revised Slope KS38 - Approval & Acceptance of tree felling and transplant report	28	16-Apr-21 A	23-Apr-22	669	CD(7d)
S13P2- 4010	West Quadrant - Site formation of south roundabout	101	03-Jan-22 A	30-Jun-22	-69	WD(6d)
Portion 1a in Area N (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P1a-0900	Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034)	0		25-Feb-22	-234	CD(7d)
S13P1a-1000	Tree survey and prepare tree felling and transplant report	54	04-Aug-21 A	04-May-22	321	WD(6d)
S13P1a-1002	Approval & Acceptance of Tree Felling Application	30	05-May-22	03-Jun-22	394	CD(7d)
Portion 7 in Area N (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P7-1030	Prepare Arsenic Assessment Report	6	16-Jul-20 A	03-Mar-22	652	WD(6d)
S13P7-1040	Arsenic Treatment Plan	6	09-Nov-20 A	03-Mar-22	652	WD(6d)
Civil Work						
Underground Utilities						
S13P7-3000	Construct & maintain Temporary drainage	467	25-Feb-22	20-Sep-23	625	WD(6d)
S13P7-3011	Underground drainage (309m drain and 8 M/H)	238	18-Jun-21 A	19-Dec-22	652	WD(6d)
S13P7-3012	Underground sewage (about 150m and 3 M/H)	351	25-Feb-22	04-May-23	625	WD(6d)
S13P7-3013	Underground watermains	327	25-Feb-22	31-Mar-23	629	WD(6d)
Portion 1b in Area N (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P1b-0900	Delay in the Access to and Use of Portion 1b of the Site (EWN 034) (CNE 033)	0		25-Feb-22	-234	CD(7d)
S13P1b-1000	Tree survey and prepare tree felling and transplant report	0	03-Sep-21 A	21-Feb-22 A		WD(6d)
S13P1b-1002	Approval & Acceptance of Tree Felling Application	30	22-Feb-22 A	26-Mar-22	743	CD(7d)
S13P1b-1010	Site clearance	60	28-Mar-22	13-Jun-22	599	WD(6d)
Portion 6a & 5 in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)						



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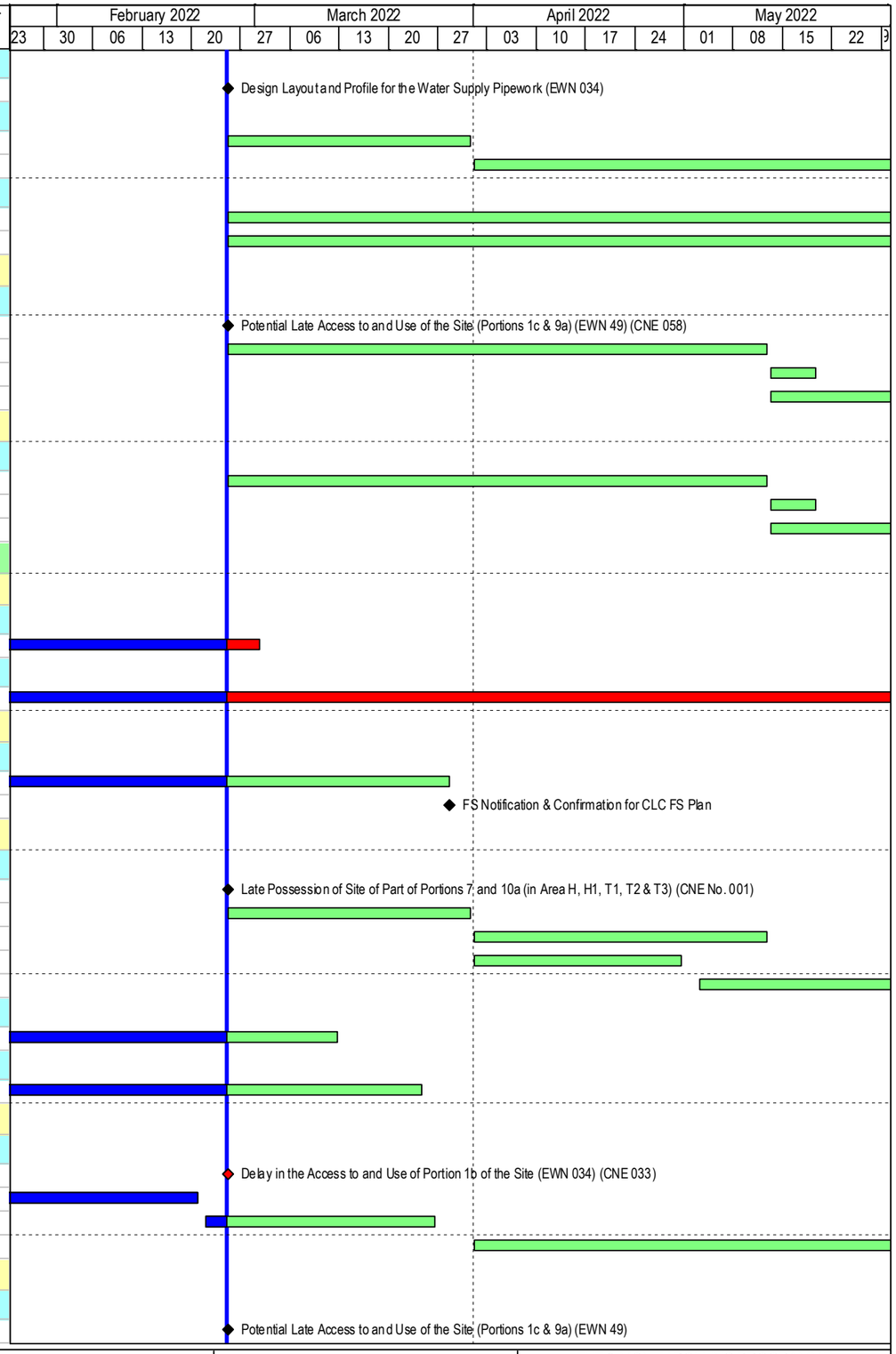
Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
Preparation work/Tree Survey/Site Clearance/GI						
S13P6a-1003	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0		25-Feb-22	628	CD(7d)
Soil Treatment						
S13P6a-2010	Remove soil (original assumed 566m3) (1 / 1 EGI completed, interim soil to be excavated / treated : 0m3 /0m3) Clean Soil	30	25-Feb-22*	31-Mar-22	581	WD(6d)
S13P6a-2020	Backfilling to the formation levels	60	01-Apr-22	17-Jun-22	581	WD(6d)
Civil Work						
S13P6a-3000	Construct & maintain Temporary drainage	575	25-Feb-22	31-Jan-24	868	WD(6d)
S13P6a-3012	Drainage works across DJ watermain	160	25-Feb-22	08-Sep-22	511	WD(6d)
Portion 1c in Area N (Soil Treatment, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P1c-1000	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49) (CNE 058)	0		25-Feb-22	578	CD(7d)
S13P1c-1010	Site clearance	60	25-Feb-22	12-May-22	471	WD(6d)
S13P1c-1015	Ground investigation (0 /1 GI completed)	6	13-May-22	19-May-22	480	WD(6d)
S13P1c-1020	Environmental ground investigation and laboratory test (0 / 2 EGI completed)	15	13-May-22	30-May-22	471	WD(6d)
Portion 9a in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)						
Preparation work/Tree Survey/Site Clearance/GI						
S13P9a-1010	Site clearance	60	25-Feb-22	12-May-22	605	WD(6d)
S13P9a-1015	Ground investigation (0 / 1 GI completed)	6	13-May-22	19-May-22	614	WD(6d)
S13P9a-1020	Environmental ground investigation and laboratory test (1 EGI in other portion represent this portion)	15	13-May-22	30-May-22	605	WD(6d)
Section 14						
Portion 7 in Area S3 (Soil Treatment & Operation of HAC Soil Treatment Plant)						
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant						
S14P7S3-2010	Set up, testing and commissioning high arsenic-containing soil treatment plant (KD4) (CSD for Treated soil Stock pile)	4	06-Oct-20 A	01-Mar-22	0	WD(6d)
Operation and Dismantling of the Soil Treatment Plant						
S14P7S3-3010	Stock Pile of Treated Soil	758	20-Nov-20 A	19-Sep-24	0	WD(6d)
Portion 16 in Area Q (Soil Treatment & Construction of CLC)						
KD7 - Complete the construction works of Community Liaison Centre in Area Q						
S14P16-3050	BS works / ABWF works / Internal cleaning / Moving-in furniture / FS Installation	27	10-May-21 A	28-Mar-22	812	WD(6d)
S14P16-3060	FS Notification & Confirmation for CLC FS Plan	0		28-Mar-22	998	CD(7d)
Portion 7 in Area T1, T2, T3 (Soil Treatment & Temp. Noise Barrier along Castle Peak Road)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P7T-1001	Late Possession of Site of Part of Portions 7 and 10a (in Area H, H1, T1, T2 & T3) (CNE No. 001)	0		25-Feb-22	349	CD(7d)
S14P7T-1010	Tree survey and prepare tree felling and transplant report (Area T1)	30	25-Feb-22	31-Mar-22	253	WD(6d)
S14P7T-1020	Site clearance (Area T1)	30	01-Apr-22	12-May-22	279	WD(6d)
S14P7T-1022	Approval & Acceptance of Tree felling Application (Area T1)	30	01-Apr-22	30-Apr-22	314	CD(7d)
S14P7T-1024	Tree felling works (Area T1)	30	03-May-22	08-Jun-22	257	WD(6d)
Land Contamination Assessment						
S14P7T-1063	Submit and acceptance of Contamination Assessment Report (CAR) & Remediation Action Plan (RAP)	14	04-Dec-20 A	12-Mar-22	135	WD(6d)
KD9 - Complete the temporary noise barriers along Castle Peak Road in Area T1, T2, T3, H, H1, I, J						
S14P7T-3000	Construct temporary noise barrier along Castle Peak Road in Area T2 and T3 (100m)	24	26-Apr-21 A	24-Mar-22	145	WD(6d)
Portion 1b in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P1b-0900	Delay in the Access to and Use of Portion 1b of the Site (EWN 034) (CNE 033)	0		25-Feb-22	-234	CD(7d)
S14P1b-1010	Tree survey and prepare tree felling and transplant report	0	25-Oct-21 A	21-Feb-22 A		WD(6d)
S14P1b-1015	Approval & Acceptance of Tree felling Application	30	22-Feb-22 A	26-Mar-22	824	CD(7d)
S14P1b-1020	Site Clearance & Tree Felling	48	01-Apr-22	02-Jun-22	665	WD(6d)
Portion 1c & 9a in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P1c-1000	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49)	0		25-Feb-22	754	CD(7d)



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ND/2019/01 - 3 Month Rolling Programme (2022-02)

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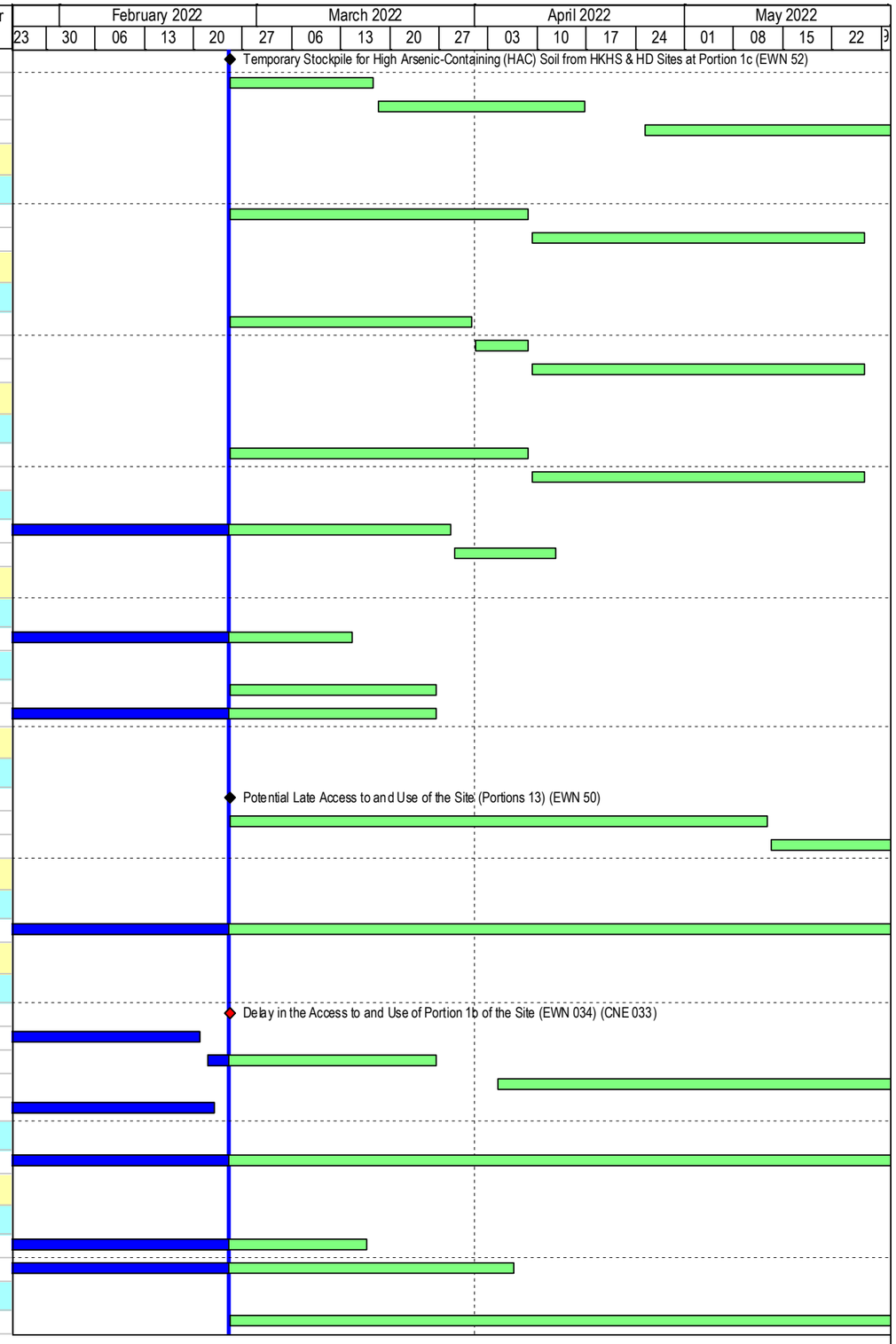
Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
S14P1c-1001	Temporary Stockpile for High Arsenic-Containing (HAC) Soil from HKHS & HD Sites at Portion 1c (EWN 52)	0		25-Feb-22	754	CD(7d)
S14P1c-1010	Tree survey and prepare tree felling and transplant report	18	25-Feb-22	17-Mar-22	613	WD(6d)
S14P1c-1012	Approval & Acceptance of Tree felling Application	30	18-Mar-22	16-Apr-22	758	CD(7d)
S14P1c-1020	Site Clearance & Tree Felling	48	25-Apr-22	22-Jun-22	615	WD(6d)
Portion 6a in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P6a-1040	Prepare Arsenic Assessment Report	36	25-Feb-22	08-Apr-22	779	WD(6d)
S14P6a-1050	Arsenic Treatment Plan	36	09-Apr-22	26-May-22	779	WD(6d)
Portion 6b in Area S2 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P6b-1017	Tree felling	30	25-Feb-22	31-Mar-22	743	WD(6d)
S14P6b-1025	Ground investigation (0 / 1 GI completed)	6	01-Apr-22	08-Apr-22	743	WD(6d)
S14P6b-1040	Prepare Arsenic Assessment Report	36	09-Apr-22	26-May-22	743	WD(6d)
Portion 1f in Area R (Soil Treatment & Construction of Interim CLC)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P1f-1040	Prepare Arsenic Assessment Report	36	25-Feb-22	08-Apr-22	839	WD(6d)
S14P1f-1050	Arsenic Treatment Plan	36	09-Apr-22	26-May-22	839	WD(6d)
Interim Community Liaison Centre (CLC)						
S14P1f-2030	Occupation of interim CLC	27	18-May-20 A	28-Mar-22	998	CD(7d)
S14P1f-2040	Dismanlting of interim CLC	12	29-Mar-22	12-Apr-22	812	WD(6d)
Portion 9c in Area S1 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P9c-1014	Tree felling	15	19-Jul-21 A	14-Mar-22	860	WD(6d)
Soil Treatment						
S14P9c-2000	Construct & maintain Temporary drainage	26	25-Feb-22	26-Mar-22	1119	WD(6d)
S14P9c-2020	Backfilling to the formation levels	26	18-Oct-21 A	26-Mar-22	1119	WD(6d)
Portion 13 in Area S4 (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P13-1000	Potential Late Access to and Use of the Site (Portions 13) (EWN 50)	0		25-Feb-22	1777	CD(7d)
S14P13-1010	Tree survey and prepare tree felling and transplant report	60	25-Feb-22	12-May-22	137	WD(6d)
S14P13-1012	Approval & Acceptance of Tree felling Application	30	13-May-22	17-Jun-22	137	WD(6d)
Cycle Track from Area H to Area N						
Underground Utilities underneath Cycle Track						
S14CT-1030.01	Underground Utilities in Portion 5 (Stage 1)	76	01-Dec-21 A	31-May-22	669	WD(6d)
Portion 1b (Soil Treatment & Civil Works)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P1b-1000	Delay in the Access to and Use of Portion 1b of the Site (EWN 034) (CNE 033)	0		25-Feb-22	-234	CD(7d)
S14P1b-1100	Tree survey and prepare tree felling and transplant report	0	03-Sep-21 A	21-Feb-22 A		WD(6d)
S14P1b-1102	Approval & Acceptance of Tree felling Application	30	22-Feb-22 A	26-Mar-22	309	CD(7d)
S14P1b-1104	Site clearance & Tree felling	60	04-Apr-22	20-Jun-22	249	WD(6d)
S14P1b-1106	Ground investigation (2 / 2 GI completed)	0	25-Aug-21 A	23-Feb-22 A		WD(6d)
Civil Works						
S14P1b-1300	Underground Drainage (around 120m, 4 nos MH)	96	25-Jan-22 A	24-Jun-22	897	WD(6d)
Portion 3 (Soil Treatment & Civil Works)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P3-1102	Approval & Acceptance of Tree felling Application	20	13-May-21 A	16-Mar-22	913	CD(7d)
S14P3-1104	Site clearance & Tree felling	34	03-Jun-21 A	06-Apr-22	729	WD(6d)
Soil Treatment						
S14P3-1200	Construct & maintain Temporary drainage	117	25-Feb-22	20-Jul-22	830	WD(6d)



Build King – Richwell Engineering Joint Venture

Planned Work
Critical Work
Actual Work
Milestone
Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-02)

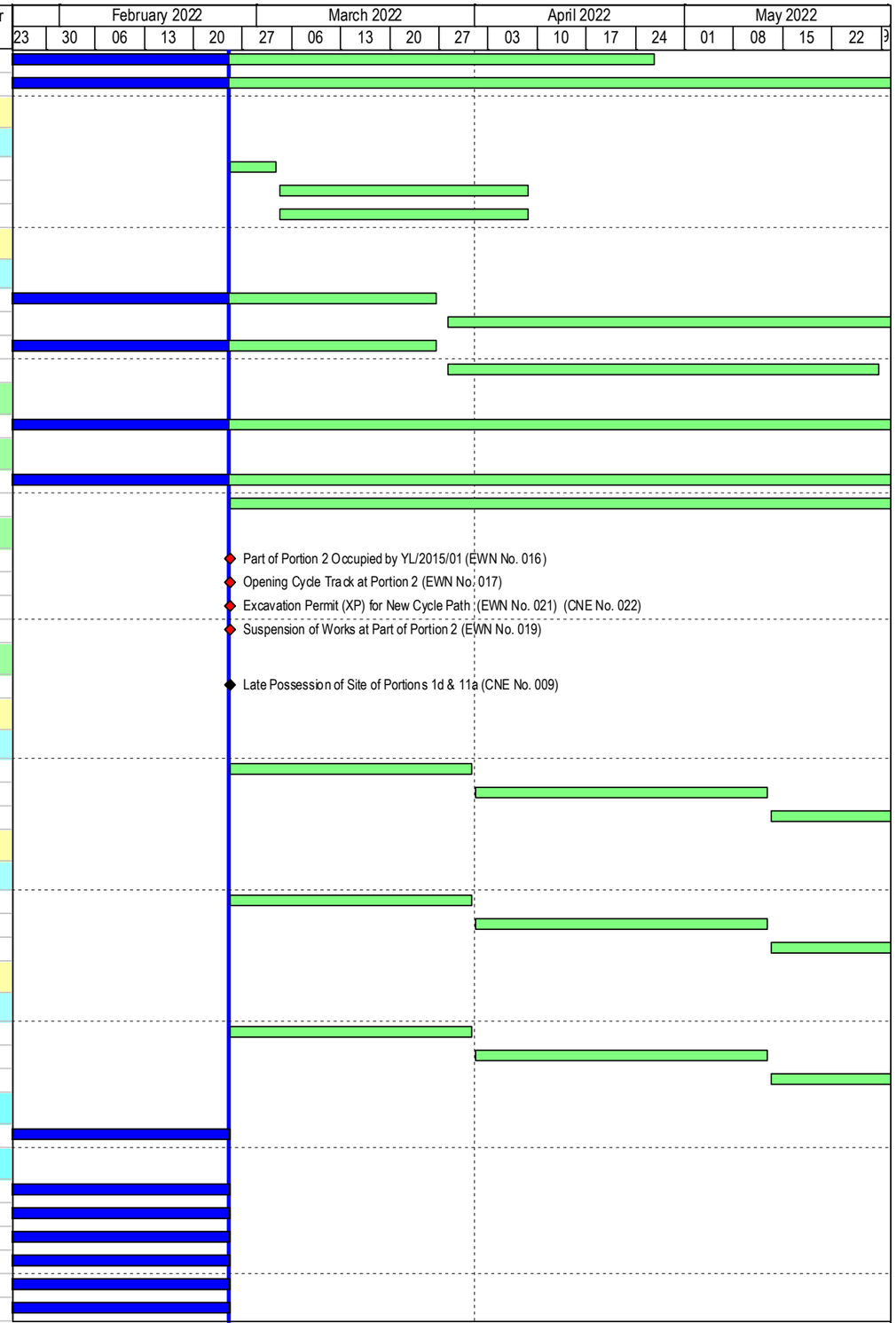
Data Date: 25-Feb-22 **Run Date: 28-Feb-21**

Project ID: ND201901-RP-24.0-1
Lauyout: ND201901-3MRP with logo

THE 3-MONTH ROLLING PROGRAMME

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
S14P3-1202	Remove soil (original assumed 4061m3) (2 / 2 EGI completed, interim soil to be excavated / treated : 16200m3 / 7200m3)	48	03-Jun-21 A	26-Apr-22	721	WD(6d)
S14P3-1204	Backfilling to the formation levels	83	15-Nov-21 A	20-Jul-22	830	WD(6d)
Portion 5 (Soil Treatment & Civil Works)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P5-1107	Environmental ground investigation and laboratory test within MTR zone (1 / 1 EGI)	6	25-Feb-22	03-Mar-22	763	WD(6d)
S14P5-1108	Prepare Arsenic Assessment Report	30	04-Mar-22	08-Apr-22	763	WD(6d)
S14P5-1110	Arsenic Treatment Plan	30	04-Mar-22	08-Apr-22	763	WD(6d)
Portion 1e (Soil Treatment)						
Preparation work/Tree Survey/Site Clearance/GI						
S14P1e-2010	Approval & Acceptance of Tree felling Application	30	11-Nov-21 A	26-Mar-22	859	CD(7d)
S14P1e-2020	Site clearance & Tree felling	60	28-Mar-22	13-Jun-22	695	WD(6d)
S6AP1e-3040	Notificatioan and Approval of Asbestos Abatement Programme	30	27-Jan-21 A	26-Mar-22	873	CD(7d)
S6AP1e-3050	Set up Containment Area, Removal and Disposal of Asbestos and Clean up Works	48	28-Mar-22	28-May-22	707	WD(6d)
Section 15						
S15-1000	Presevation and protection of tree	1385	06-Dec-19 A	10-Dec-25	27	CD(7d)
Section 18 (Subject to excision)						
S18-1040	Watermain laying work in Portion 5	315	20-Sep-21 A	17-Mar-23	46	WD(6d)
S18-1050	Watermain laying work in Portion 6a & 6b	380	25-Feb-22	08-Jun-23	307	WD(6d)
Section 20 (Subject to excision)						
S20-1012	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016)	0		25-Feb-22	-251	CD(7d)
S20-1016	Opening Cycle Track at Portion 2 (EWN No. 017)	0		25-Feb-22	-251	CD(7d)
S20-1018	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)	0		25-Feb-22	-251	CD(7d)
S20-1020	Suspension of Works at Part of Portion 2 (EWN No. 019)	0		25-Feb-22	-251	CD(7d)
Section 21 (Subject to excision)						
S21-1013	Late Possession of Site of Portions 1d & 11a (CNE No. 009)	0		25-Feb-22	795	CD(7d)
Portion 1b in Area M (Soil Treatment)						
Preparation work						
S21P1b-1010	Tree survey and prepare tree felling and transplant report	30	25-Feb-22	31-Mar-22	644	WD(6d)
S21P1b-1012	Approval & Acceptance of Tree felling Application	30	01-Apr-22	12-May-22	644	WD(6d)
S21P1b-1020	Site Clearance & Tree Felling	60	13-May-22	23-Jul-22	644	WD(6d)
Portion 1d in Area M (Soil Treatment & Demolition of Existing CLC)						
Preparation work						
S21P1d-1010	Tree survey and prepare tree felling and transplant report	30	25-Feb-22	31-Mar-22	644	WD(6d)
S21P1d-1012	Approval & Acceptance of Tree felling Application	30	01-Apr-22	12-May-22	644	WD(6d)
S21P1d-1020	Site Clearance & Tree Felling	60	13-May-22	23-Jul-22	644	WD(6d)
Portion 11a in Area M (Soil Treatment)						
Preparation work						
S21P11a-1010	Tree survey and prepare tree felling and transplant report	30	25-Feb-22	31-Mar-22	639	WD(6d)
S21P11a-1012	Approval & Acceptance of Tree felling Application	30	01-Apr-22	12-May-22	639	WD(6d)
S21P11a-1020	Site Clearance & Tree Felling	60	13-May-22	23-Jul-22	639	WD(6d)
8.0 - PMI / CE						
PC-1012	Change to the Area of Area M (PMI 160, CE 168)	0	22-Dec-21 A	25-Feb-22	644	WD(6d)
9.0 - Major EWN / CNE						
EC-1006	Strong Objection on the Construction of Service Reservoirs at Portions 8a & 8b (CNE No. 006) (EWN No. 005)	0	18-Mar-20 A	25-Feb-22	-410	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-Feb-22	-528	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-Feb-22	-528	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-Feb-22	-223	CD(7d)
EC-1026	Handling of Unlawful Occupied Property Affected by the Works (CNE No. 014)	0	21-Aug-20 A	25-Feb-22	1777	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-Feb-22	1777	CD(7d)



Build King – Richwell Engineering Joint Venture

Planned Work
Critical Work
Actual Work
Milestone
Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-02)

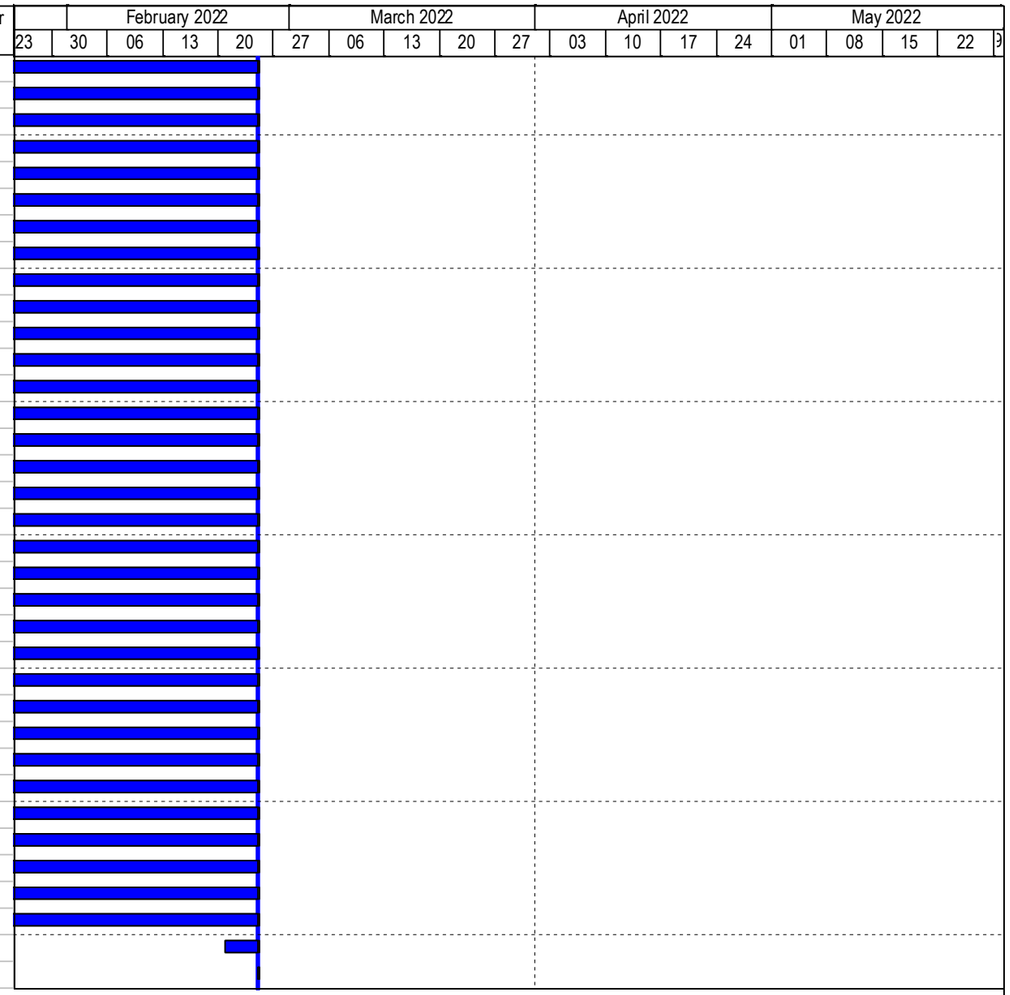
Data Date: 25-Feb-22 **Run Date: 28-Feb-21**

Project ID: ND201901-RP-24.0-1
Lauyout: ND201901-3MRP with logo

THE 3-MONTH ROLLING PROGRAMME

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

Activity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar
EC-1028	Suspension of Works at Part of Portion 2 (CNE No. 016) (EWN No. 019)	0	31-Aug-20 A	25-Feb-22	-528	CD(7d)
EC-1029	Temporary Stockpile at Portion 5 and Additional Land D (EWN No. 020) (CNE No. 020, 037, 038)	0	15-Sep-20 A	25-Feb-22	-188	CD(7d)
EC-1030	Excavation Permit (XP) for New Cycle Path (EWN No. 021) (CNE No. 022)	0	19-Oct-20 A	25-Feb-22	-528	CD(7d)
EC-1036	Suspension of EGI works and withdrawal of TTA on Ho Sheung Heung Rd (CNE No.24)	0	08-Jan-21 A	25-Feb-22	-410	CD(7d)
EC-1039	Design Change on Road W1 (EWN 025)	0	22-Mar-21 A	25-Feb-22	-181	CD(7d)
EC-1040	Temporary Stockpile in Area C1 (EWN 027)	0	31-May-21 A	25-Feb-22	-110	CD(7d)
EC-1042	Details of DCS pipe at D4-1 & D5 Road (EWN 030)	0	21-May-21 A	25-Feb-22	-208	CD(7d)
EC-1043	Strong Objection on the Construction of Fresh and Flushing Reservoir at Portions 8a and 8b (EWN 031) Maintenance Access	0	09-Jun-21 A	25-Feb-22	-76	CD(7d)
EC-1045	Delay in the Access to and Use of Portion 1b of the Site (CNE 033)	0	06-Jul-21 A	25-Feb-22	-234	CD(7d)
EC-1046	Delay in the Access to and Use of Portions 1a & 12 of the Site (CNE 034)	0	06-Jul-21 A	25-Feb-22	-284	CD(7d)
EC-1049	Entrustment of Works for Installation of District Cooling System (DCS) pipelines along Road D4-1 (EWN 033)	0	18-Aug-21 A	25-Feb-22	1777	CD(7d)
EC-1050	Design Layout and Profile for the Water Supply Pipework (EWN 034)	0	17-Sep-21 A	25-Feb-22	-136	CD(7d)
EC-1051	Unstable Supply of Cement for HAC Soil Treatment (EWN 036, 038) (CNE 049)	0	27-Sep-21 A	25-Feb-22	938	CD(7d)
EC-1052	Shortage of Cement Supply due to "Energy Consumption Dual Control Policy" (EWN 039) (CNE 049)	0	06-Oct-21 A	25-Feb-22	1777	CD(7d)
EC-1053	Potential Delay on Production and Supply of Precast Concrete Pipes (EWN 040) (CNE 047)	0	06-Oct-21 A	25-Feb-22	-111	CD(7d)
EC-1054	Potential Delay on Production and Supply of D.I. Pipes and Fittings (EWN 041) (CNE 047)	0	11-Oct-21 A	25-Feb-22	-183	CD(7d)
EC-1055	Potential Delay on Production and Supply of M.S. Pipes and Fittings (EWN 042) (CNE 047)	0	16-Oct-21 A	25-Feb-22	-183	CD(7d)
EC-1056	Inclement Weather on 8th October 2021 (CNE 036)	0	08-Oct-21 A	25-Feb-22	1777	CD(7d)
EC-1057	Tropical Cyclone Warning Signal No.8 on 9th October 2021 (CNE 039)	0	09-Oct-21 A	25-Feb-22	1777	CD(7d)
EC-1058	Tropical Cyclone Warning Signal No.8 on 13th October 2021 (CNE 040)	0	13-Oct-21 A	25-Feb-22	1777	CD(7d)
EC-1059	The footing detail for Roadside Directional Sign ADS30 at Portion 5 (EWN 043)	0	22-Oct-21 A	25-Feb-22	-109	CD(7d)
EC-1061	Suspension of Concretes Supply due to Cement Shortage (EWN 045) (CNE 046)	0	02-Nov-21 A	25-Feb-22	1777	CD(7d)
EC-1062	Potential Late Access to and Use of the Site (Portions 1c & 9a) (EWN 49) (CNE 058)	0	13-Dec-21 A	25-Feb-22	-109	CD(7d)
EC-1063	Potential Late Access to and Use of the Site (Portions 13) (EWN 50) (CNE 057)	0	13-Dec-21 A	25-Feb-22	1777	CD(7d)
EC-1064	Extra Time on Production and Delivery of Road Lighting Products (EWN 51)	0	13-Dec-21 A	25-Feb-22	-96	CD(7d)
EC-1065	Temporary Stockpile for High Arsenic-Containing (HAC) Soil from HKHS & HD Sites at Portion 1c (EWN 52)	0	04-Jan-22 A	25-Feb-22	754	CD(7d)
EC-1066	Shortage of Aggregate Supply before Chinese New Year 2022 (CNE 048) (EWN 001.6, 001.8)	0	29-Nov-21 A	25-Feb-22	1777	CD(7d)
EC-1067	Conflict between Drainage Works and Existing Twin DN2200 Dongjiang Water Mains (CNE 051)	0	29-Nov-21 A	25-Feb-22	-136	CD(7d)
EC-1068	Conflict between Drainage Works and Water Mains in Road W1 (CNE 052)	0	02-Dec-21 A	25-Feb-22	-136	CD(7d)
EC-1069	Level Different between Road A3 and Road D4-1 (CNE 055)	0	08-Dec-21 A	25-Feb-22	-136	CD(7d)
EC-1070	Insufficient Width of Road W1 for Accommodation of All Underground Utilities (CNE 056)	0	04-Jan-22 A	25-Feb-22	-181	CD(7d)
EC-1071	Revised Construction Drawings of Fresh Water Service Reservoir (CNE 067, 067a)	0	14-Dec-21 A	25-Feb-22	24	CD(7d)
EC-1072	Unavailability of Vehicular Access and Movement towards Receiving Pit (CNE 068)	0	29-Dec-21 A	25-Feb-22	-162	CD(7d)
EC-1074	Works affected by the New Constructed 1650mm dia. Drain Pipe along Ho Sheung Heung Road at Portion 8b (CNE 072)	0	21-Feb-22 A	25-Feb-22	-351	CD(7d)
EC-1075	Works affecred by the Sever Outbreak of Omicron (CNE 073)	0	25-Feb-22 A	25-Feb-22	1777	CD(7d)



Build King – Richwell Engineering Joint Venture

Planned Work
Critical Work
Actual Work
Milestone
Milestone Critical

ND/2019/01 - 3 Month Rolling Programme (2022-02)

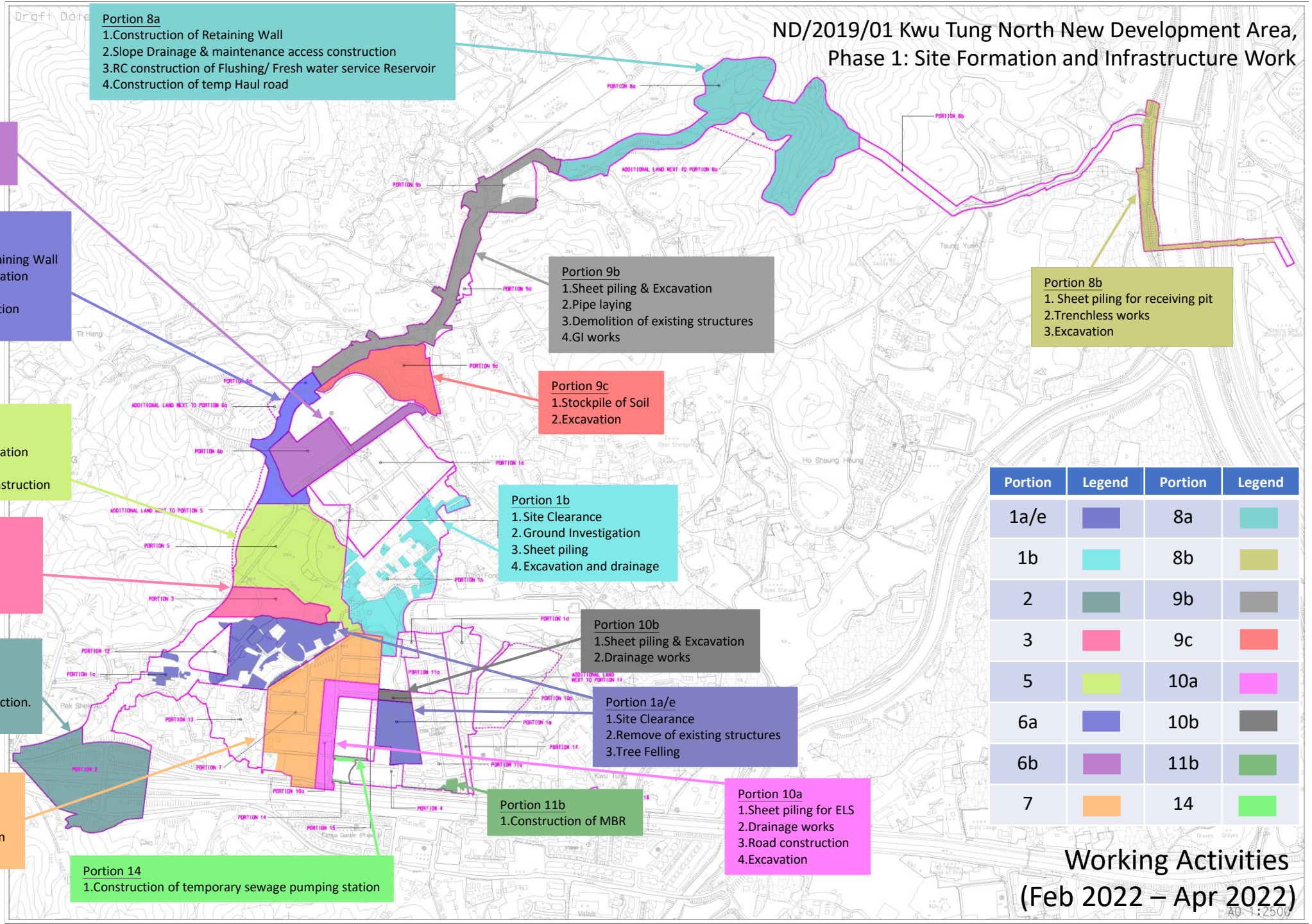
Data Date: 25-Feb-22 **Run Date: 28-Feb-21**

Project ID: ND201901-RP-24.0-1
Lauyout: ND201901-3MRP with logo

THE 3-MONTH ROLLING PROGRAMME

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

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



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

Portion 6b
1. Operation of HAC treatment facility

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

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

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

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

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

Portion 14
1.Construction of temporary sewage pumping station

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

Portion 9c
1.Stockpile of Soil
2.Excavation

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

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

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

Portion 11b
1.Construction of MBR

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

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

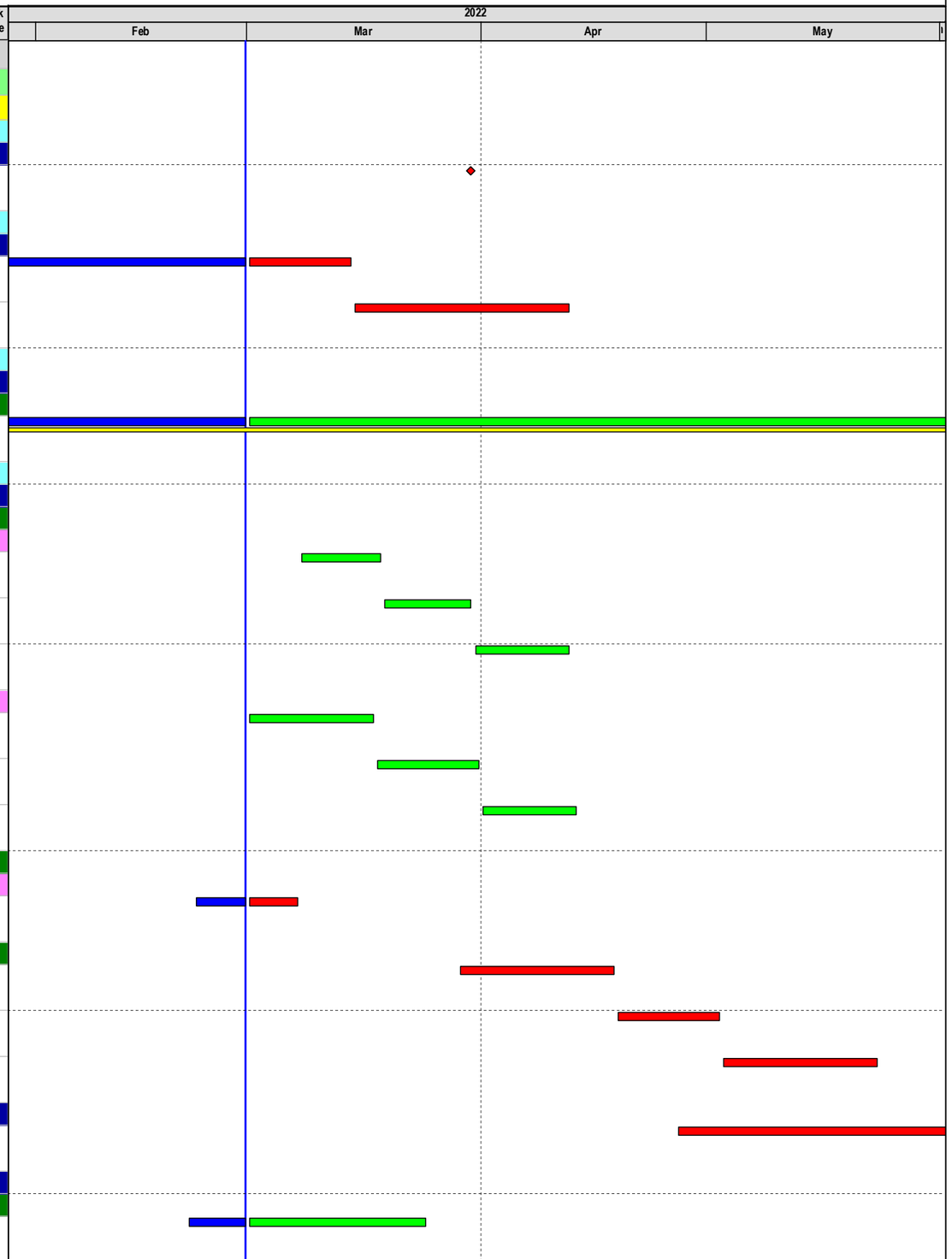
Portion	Legend	Portion	Legend
1a/e		8a	
1b		8b	
2		9b	
3		9c	
5		10a	
6a		10b	
6b		11b	
7		14	

Working Activities (Feb 2022 – Apr 2022)

Construction Programme of ND/2019/02

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

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
ND-2019-02 KTNNDA Phase 1:Roads and Drains between		1739	1222	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	537	
Programme Data		1739	1222	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	537	
Preliminaries		1739	1222	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	537	
Subletting		0	0			30-Mar-22	30-Mar-22	0	
Specialist Subcontractors		0	0			30-Mar-22	30-Mar-22	0	
SC-1190	Award of subcontract - ABWF works	0	0				30-Mar-22*	0	
Statutory Submission		104	36			07-Dec-21 A	12-Apr-22	-878	
TPRP		104	36			07-Dec-21 A	12-Apr-22	-878	
TPRP-1040	Tree Felling Proposal Submission and Approval for FMH1.30A	80	12			07-Dec-21 A	14-Mar-22	-878	0
TPRP-1050	Tree Felling and Transplant (26 nos)	24	24			15-Mar-22	12-Apr-22	-878	0
Site Offices & Preliminaries		1739	1222	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	537	
Site Offices & Preliminaries		1739	1222	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	537	
Temporary office for RE		1739	1222	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	537	
SP-1000b	Maintenance of container office	1739	1222	30-Sep-20	04-Jul-25	30-Sep-20 A	04-Jul-25	537	0
Contractor's Design		170	158	27-Feb-21	13-Jun-22	17-Feb-22 A	05-Aug-22	56	
Temporary Works Design		91	84			22-Feb-22 A	23-May-22	16	
Footbridge FK2		37	37			01-Mar-22	13-Apr-22	46	
Formwork Design (Bridge Pier)		30	30			08-Mar-22	12-Apr-22	21	
TWD-1310	Formwork and Falsework Design (Bridge Pier)- 1st submission to PM & review	10	10			08-Mar-22*	18-Mar-22	21	
TWD-1320	Formwork and Falsework Design (Bridge Pier) - Review and Resubmission	10	10			19-Mar-22	30-Mar-22	21	
TWD-1330	Formwork and Falsework Design (Bridge Pier) - 2nd submission to PM & Approval	10	10			31-Mar-22	12-Apr-22	21	
Formwork Design (Bridge Deck)		37	37			01-Mar-22	13-Apr-22	46	
TWD-1340	Formwork and Falsework Design (Bridge Deck)- 1st submission to PM & review	15	15			01-Mar-22*	17-Mar-22	46	
TWD-1350	Formwork and Falsework Design (Bridge Deck) - Review and Resubmission	12	12			18-Mar-22	31-Mar-22	46	
TWD-1360	Formwork and Falsework Design (Bridge Deck) - 2nd submission to PM & Approval	10	10			01-Apr-22	13-Apr-22	46	
Visitor Centre		14	7			22-Feb-22 A	07-Mar-22	3	
Formwork Design		14	7			22-Feb-22 A	07-Mar-22	3	
TWD-1110	Formwork and Falsework Design - 2nd submission to PM & Approval	14	7			22-Feb-22 A	07-Mar-22	3	
Pipeworks		56	56			29-Mar-22	23-May-22	-213	
TWD-1190	Formwork and Falsework Design for Manhole - 1st submission to PM & review	21	21			29-Mar-22*	18-Apr-22	-213	
TWD-1200	Formwork and Falsework Design for Manhole - Review and Resubmission	14	14			19-Apr-22	02-May-22	-213	
TWD-1205	Formwork and Falsework Design for Manhole - 2nd submission to PM & Approval	21	21			03-May-22	23-May-22	-213	
Footbridge FK2 Road lighting		74	74	27-Feb-21	15-Jun-21	27-Apr-22	25-Jul-22	1	
RD-1000	Preparation of Road Lighting system (PS section 30)	74	74	27-Feb-21	15-Jun-21	27-Apr-22	25-Jul-22	1	0
E&M and BS		142	132	07-Aug-21	13-Jun-22	17-Feb-22 A	05-Aug-22	47	
Visitor Centre		49	42	07-Aug-21	30-Sep-21	21-Feb-22 A	19-Apr-22	110	
ConD-1170	Visitor Centre - Resubmission to relevant Government Dep.	28	21	07-Aug-21	08-Sep-21	21-Feb-22 A	24-Mar-22	110	0



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

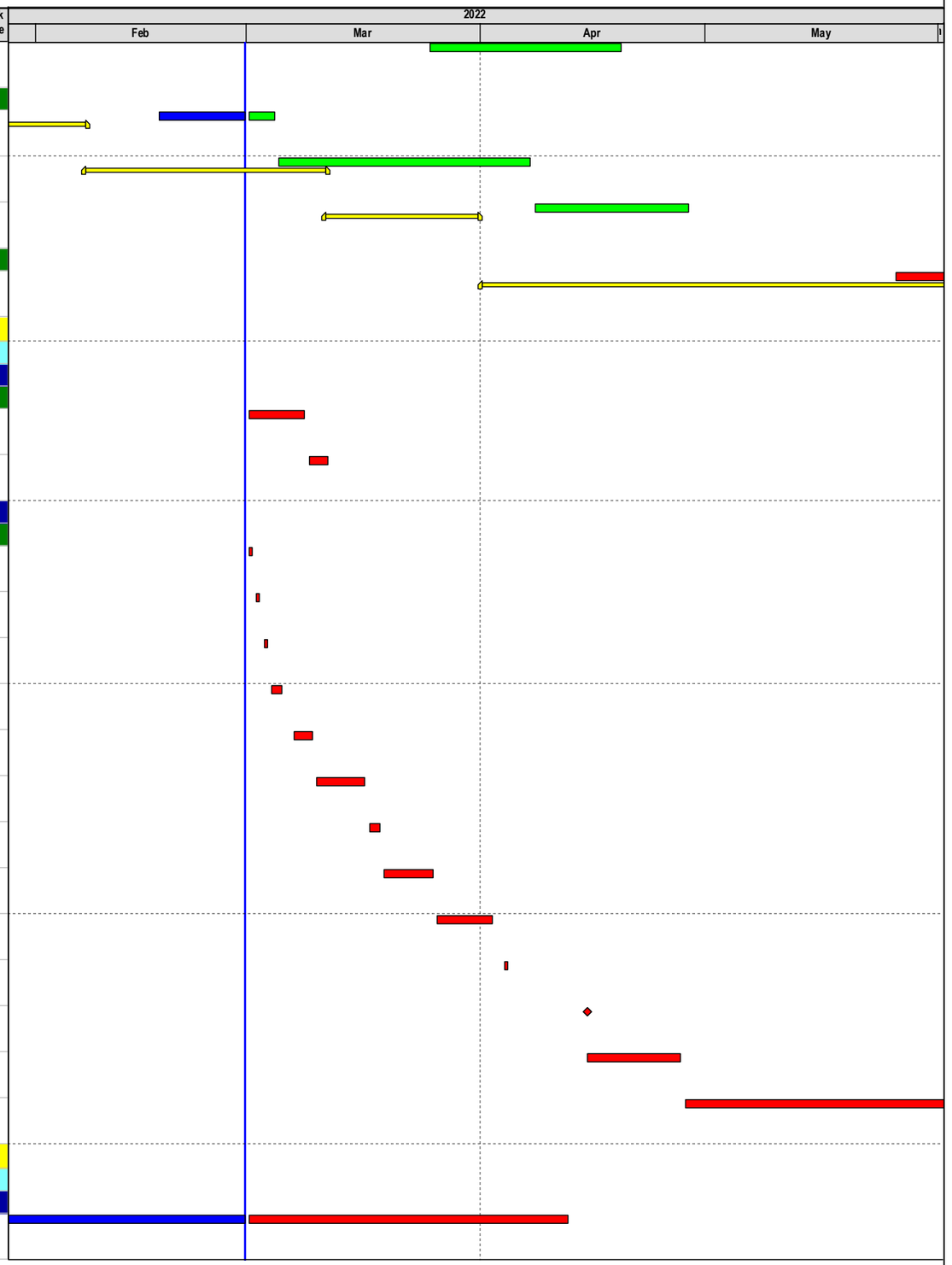
Data Date: 28-Feb-22
Project Start: 03-Feb-20
Project End: 30-Dec-26
Baseline: Monthly Markup Programme (Feb 2021) (Accepted on 15 April 2021)
Page : 1 of 8

Three Months Rolling Programme (Feb to May 2022)

Date	Revision	Checked	Approved
28-Feb-22	Rev 0 (Three Months Rolling Progr...	TW	ZL

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

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
ConD-1200	Visitor Centre - Review and approval	21	21	09-Sep-21	30-Sep-21	25-Mar-22	19-Apr-22	110	0
Sewage Pumping Station		60	50	18-Jan-22	31-Mar-22	17-Feb-22 A	28-Apr-22	129	
ConD-1150	Sewage Pumping Station - 2nd submission to PM & approval	14	4	18-Jan-22	07-Feb-22	17-Feb-22 A	04-Mar-22	129	0
ConD-1180	Sewage Pumping Station - 1st submission to relevant Government Dep.	28	28	07-Feb-22	11-Mar-22	05-Mar-22	07-Apr-22	129	0
ConD-1210	Sewage Pumping Station - Re-submission and approval	18	18	11-Mar-22	31-Mar-22	08-Apr-22	28-Apr-22	129	0
FootBridge		60	60	01-Apr-22	13-Jun-22	26-May-22	05-Aug-22	1	
ConD-1100	Preparation of E&M and BS works for Link Bridge (PS section 13,29,30,31,32,33,37 and 41)	60	60	01-Apr-22	13-Jun-22	26-May-22	05-Aug-22	1	0
Works in Section 1		87	87	02-Jun-21	04-Jun-21	01-Mar-22	13-Jun-22	-193	
Portion 1 - Road & Drains		87	87	02-Jun-21	04-Jun-21	01-Mar-22	13-Jun-22	-193	
Sewer Installation from KT1.26A to KT1.23 by Pipejacking (CE-023)		10	10			01-Mar-22	11-Mar-22	-116	
Pipe-Jacking (KT1.26A to KT1.23)		10	10			01-Mar-22	11-Mar-22	-116	
P1-2090	Demolish the guide rail, Breaking the thrust wall at Jacking Pit	7	7			01-Mar-22	08-Mar-22	-116	0
P1-2100	Demolish & removal the hoisting frame at Jacking Pit	3	3			09-Mar-22	11-Mar-22	-116	0
Drainage Installation from KT6003A to KT2003 by Pipejacking (CE-023)		87	87	02-Jun-21	04-Jun-21	01-Mar-22	13-Jun-22	-206	
Pipe Jacking (KT6003A to KT2003)		87	87	02-Jun-21	04-Jun-21	01-Mar-22	13-Jun-22	-206	
P1-7250	Relocate working platform	1	1			01-Mar-22	01-Mar-22	-198	2
P1-7260	Dismantle remaining waling	1	1			02-Mar-22	02-Mar-22	-198	0
P1-7270	Handover the site to VTECH	1	1			03-Mar-22	03-Mar-22	-198	5
P1-7280	Setting up 5 tonne hosting frame	2	2			04-Mar-22	05-Mar-22	-198	0
P1-7340	Pre-treatment grouting works	3	3			07-Mar-22	09-Mar-22	-198	2
P1-7350	Setup entrance ring & guide rail	6	6			10-Mar-22	16-Mar-22	-198	0
P1-7360	Setup working platform	2	2			17-Mar-22	18-Mar-22	-198	5
P1-7370	Setup Thrust Wall	6	6			19-Mar-22	25-Mar-22	-198	0
P1-7375	Install Slurry Pipe and Power Cable	7	7			26-Mar-22	02-Apr-22	-198	0
P1-7377	Dismantle 5 tonnes hoisting frame	1	1			04-Apr-22	04-Apr-22	-198	0
P1-7380	Target date of deliver 2.1m dia TBM to site	0	0				15-Apr-22*	-206	2
P1-7400	Set Up Pipe Jacking TBM	11	11	02-Jun-21	04-Jun-21	15-Apr-22	27-Apr-22	-206	0
P1-7410	Pipe Jacking from KT6003A to KT2003 (2.1 dia) (115m ~3m/day)	38	38			28-Apr-22	13-Jun-22	-206	5
Works in Section 2		166	106	27-Feb-21	17-Sep-22	16-Dec-21 A	06-Jul-22	519	
Portion 2 - Road & Drains		147	87	13-Jul-21	30-Aug-21	16-Dec-21 A	13-Jun-22	-878	
Pre-construction works		54	36			16-Dec-21 A	12-Apr-22	-878	
P2-1065	Coordination with UU owner to arrange diversion / abandon	54	36			16-Dec-21 A	12-Apr-22	-878	3



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Page : 2 of 8

Three Months Rolling Programme (Feb to May 2022)

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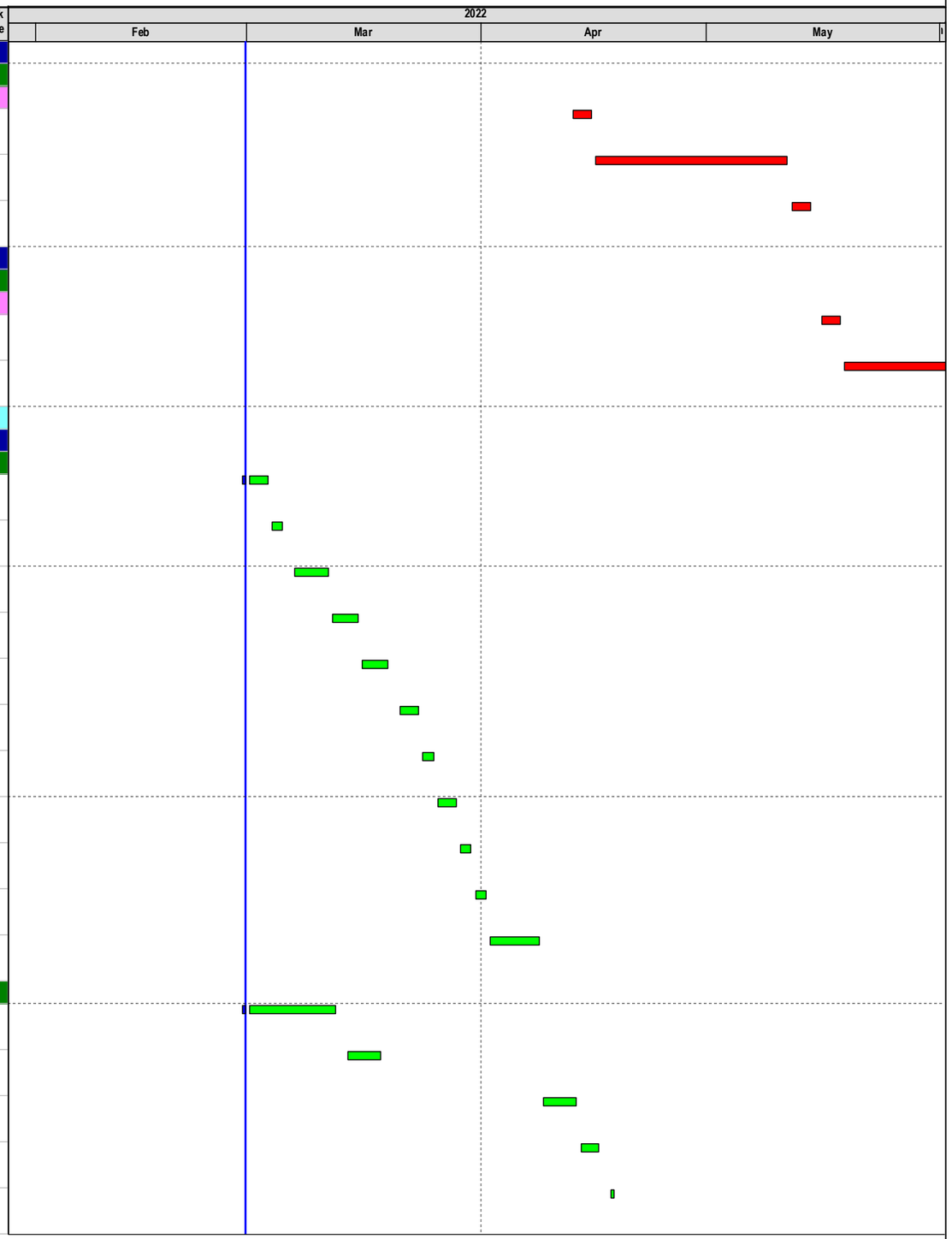
ND/2019/02 - Kwu Tung North New Development Area Phase 1: Roads & Drains between Kwu Tong North New Development Area and Shek Wu Hui

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
Sewer Installation from KT1.29A to KT1.30A by pipejacking		27	27	13-Jul-21	30-Aug-21	13-Apr-22	14-May-22	-878	
Launching shaft at FMH_KT1.30A		27	27	13-Jul-21	30-Aug-21	13-Apr-22	14-May-22	-878	
ELS		27	27	13-Jul-21	30-Aug-21	13-Apr-22	14-May-22	-878	
P2-3140	Set up TTA at Castle Peak Road Carriageway (westbound)	3	3	13-Jul-21	15-Jul-21	13-Apr-22	15-Apr-22	-878	0
P2-3150	ELS for inspection shaft at FMH_KT1.30A	21	21	16-Jul-21	26-Aug-21	16-Apr-22	11-May-22	-878	6
P2-3160	Install decking at KT1.30A & release TTA	3	3	27-Aug-21	30-Aug-21	12-May-22	14-May-22	-878	0
Sewer Installation from KT1.30A to KT1.32A by pipejacking		24	24			16-May-22	13-Jun-22	-878	
Receiving shaft at FMH_KT1.32A		24	24			16-May-22	13-Jun-22	-878	
ELS		24	24			16-May-22	13-Jun-22	-878	
P2-7190	Set up TTA at Castle Peak Road Carriageway (westbound)	3	3			16-May-22	18-May-22	-878	0
P2-7200	ELS for inspection shaft at FMH_KT1.32A	21	21			19-May-22	13-Jun-22	-878	6
Portion 3 - Road & Drains		125	94	11-May-22	17-Sep-22	20-Jan-22 A	21-Jun-22	531	
Drainage Outfall_6013 constuction by Open Cut (By CE-067)		79	76			28-Feb-22 A	30-May-22	549	
Outfall_6013		36	33			28-Feb-22 A	08-Apr-22	549	
P3-4020-50	Outfall Baseslab (Incl concreting)	3	3			28-Feb-22 A	03-Mar-22	549	0
P3-4020-60	Dismantle Base slab Formwork	2	2			04-Mar-22	05-Mar-22	549	0
P3-4020-70	Outfall Wall (Incl concreting)	5	5			07-Mar-22	11-Mar-22	549	0
P3-4020-80	Dismantle 1st pour Wall Formwork	3	3			12-Mar-22	15-Mar-22	549	0
P3-4020-90	Outfall Wall 2nd pour (Incl concreting)	4	4			16-Mar-22	19-Mar-22	549	0
P3-4020-92	Dismantle 2nd pour Wall Formwork	3	3			21-Mar-22	23-Mar-22	549	0
P3-4020-94	Partillay Reintatement (Rockfill)	2	2			24-Mar-22	25-Mar-22	549	0
P3-4020-96	Dismantle 1st Layer of Strut	2	2			26-Mar-22	28-Mar-22	549	0
P3-4020-98	Remove Riverside sheet pile	2	2			29-Mar-22	30-Mar-22	549	0
P3-4020-99	Casting of outfall (River Side)	2	2			31-Mar-22	01-Apr-22	549	0
P3-4021	Remove remining side sheet pile & rock fill	5	5			02-Apr-22	08-Apr-22	549	0
Manhole SMH_KT6013A		76	76			28-Feb-22 A	30-May-22	549	
P3-5250.1	Installation of strut S3	12	11			28-Feb-22 A	12-Mar-22	566	2
P3-5260	Soft Excavation to F.L ; (approx. 8.5m depth)	5	5			14-Mar-22	18-Mar-22	566	2
P3-5280	Formwork for the manhole of KT1.36A (lower portion)	4	4			09-Apr-22	13-Apr-22	549	3
P3-5290	Rebar fixing for the manhole of KT1.36A (lower portion)	3	3			14-Apr-22	16-Apr-22	549	3
P3-5295	Concreting for the lower portion of manhole KT1.36A (lower portion)	1	1			18-Apr-22	18-Apr-22	549	2



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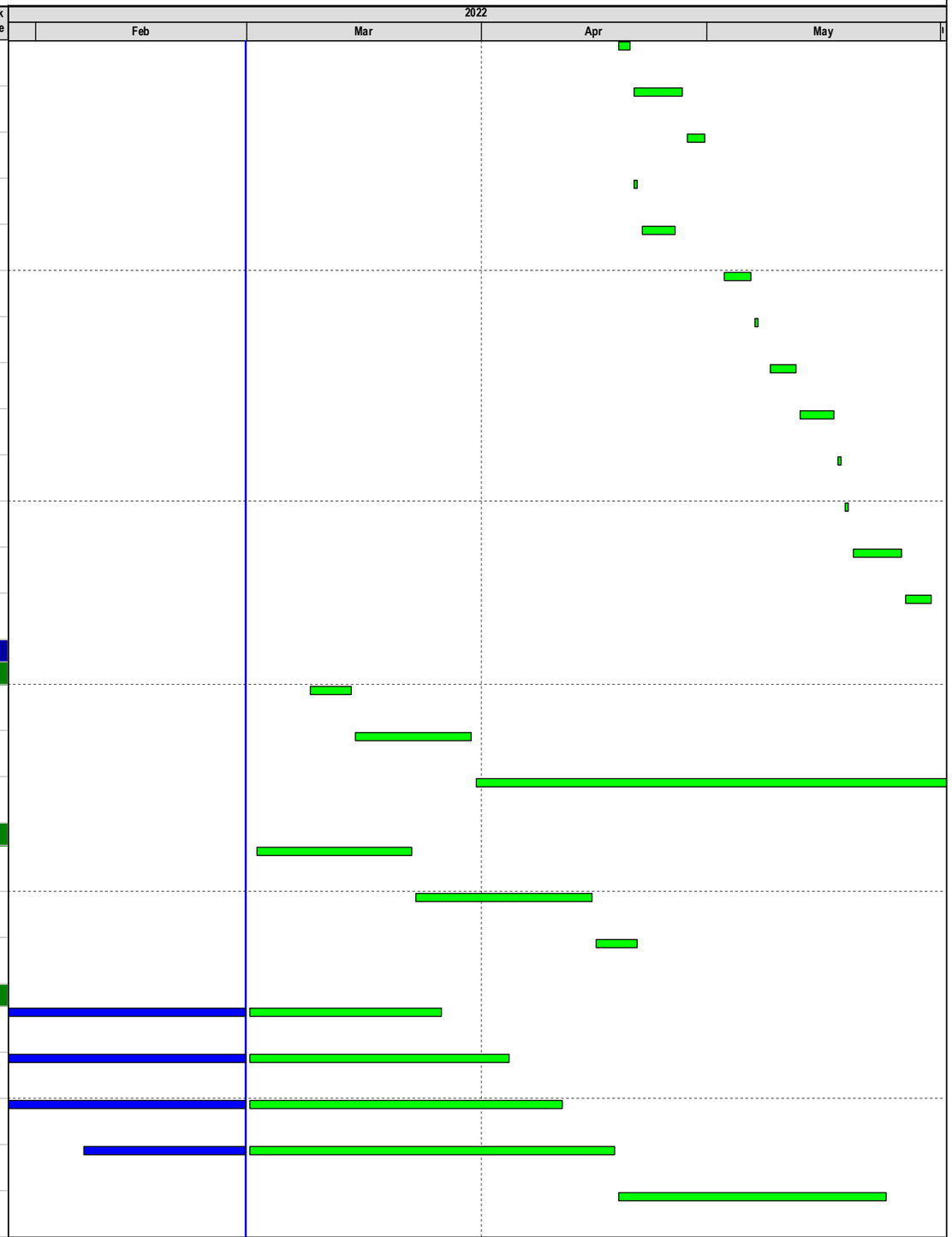
Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
P3-5297	Dismantle of formwork	2	2			19-Apr-22	20-Apr-22	549	2
P3-5297.1	Backfill lower part of Manhole	6	6			21-Apr-22	27-Apr-22	549	2
P3-5297.3	Dismantle the 3rd strut & waling	3	3			28-Apr-22	30-Apr-22	549	2
P3-5300	Blinding layer for lower portion of KT6013A	1	1			21-Apr-22	21-Apr-22	553	2
P3-5310	Formwork for lower portion of KT6013A	4	4			22-Apr-22	26-Apr-22	553	2
P3-5320	Rebar fixing for lower portion of manhole of KT6013A	4	4			03-May-22	06-May-22	549	2
P3-5330	Concreting for lower portion of manhole of KT6013A	1	1			07-May-22	07-May-22	549	2
P3-5610	Formwork for middle portion of KT1.36A	4	4			09-May-22	12-May-22	549	2
P3-5620	Rebar fixing for middle portion of manhole of KT1.36A	4	4			13-May-22	17-May-22	549	2
P3-5630	Concreting for middle portion of manhole of KT1.36A	1	1			18-May-22	18-May-22	549	2
P3-5640	Dismantle of formwork	1	1			19-May-22	19-May-22	549	2
P3-5650	Backfill to Middle Part of Manhole	6	6			20-May-22	26-May-22	549	2
P3-5660	Dismantle the 2nd strut & waling	3	3			27-May-22	30-May-22	549	2
Sewer Pipeline Installation (KT1.33A to KT1.41A)		125	94	11-May-22	17-Sep-22	20-Jan-22 A	21-Jun-22	500	
KT1.39A - KT1.38A (99m) (Pipe Jacking by CE-074)		85	85			09-Mar-22	18-Jun-22	436	
P3-2552	Set up concrete block platform for Pipe Jacking	5	5			09-Mar-22	14-Mar-22	436	2
P3-2554	Set up Pipe Jacking Equipment	14	14			15-Mar-22	30-Mar-22	436	2
P3-2556	Pipe Jacking of Twins 800 Concrete Pipe (1.39 to 1.38) (2 x 99m ~3m/d)	66	66			31-Mar-22	18-Jun-22	436	2
KT1.39A - KT1.40A (99m) (Pipe Jacking by CE-074)		43	43			02-Mar-22	21-Apr-22	498	
P3-5470	Soft Excavation to 2nd strut level & Installation of strut S2	18	18			02-Mar-22*	22-Mar-22	498	2
P3-5480	Soft Excavation to 3rd strut level & Installation of strut S3	20	20			23-Mar-22	15-Apr-22	498	2
P3-5490	Soft Excavation to F.L ; (approx. 8.5m depth)	5	5			16-Apr-22	21-Apr-22	498	2
KT1.38A - KT1.37A (99m) (Open Cut by CE-075)		107	76	19-Jul-22	17-Sep-22	20-Jan-22 A	30-May-22	518	
P3-2210	Soft Excavation to 1st strut level (99m @12m / Bay & 2d / Bay)	30	23	19-Jul-22	09-Aug-22	20-Jan-22 A	26-Mar-22	532	2
P3-2210.1	Installation of strut S1 (99m @12m / Bay & 4d / Bay)	32	30			24-Jan-22 A	04-Apr-22	529	2
P3-2220	Soft Excavation to 2nd strut level (99m @12m / Bay & 2d / Bay)	20	35	23-Jul-22	13-Aug-22	28-Jan-22 A	11-Apr-22	519	2
P3-2220.1	Installation of strut S2 (99m @12m / Bay & 4d / Bay)	32	41			07-Feb-22 A	18-Apr-22	518	2
P3-2250	Soft Excavation to F.L ; (99m @12m / Bay & 3d / Bay)	30	30	10-Aug-22	07-Sep-22	19-Apr-22	24-May-22	518	2



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Page : 4 of 8

Three Months Rolling Programme (Feb to May 2022)

Date	Revision	Checked	Approved
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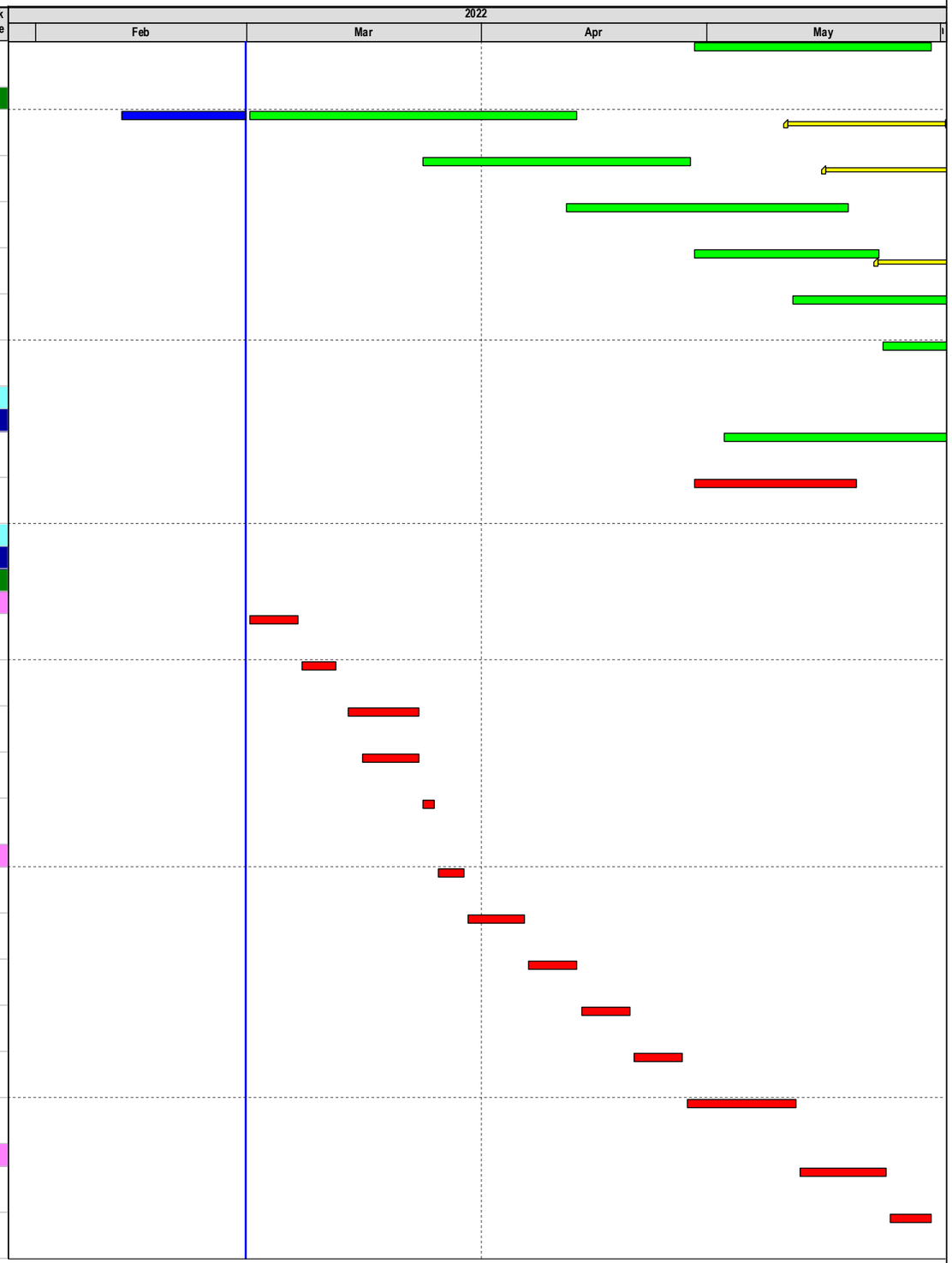
Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
P3-2260	Bedding & Pipe Laying (Twins 800 Concrete Pipe)	26	26	27-Aug-22	17-Sep-22	29-Apr-22	30-May-22	518	2
KT1.37A - KT1.36A (90m) (Open Cut by CE-068)		108	94	11-May-22	02-Jul-22	12-Feb-22 A	21-Jun-22	492	
P3-2005	Sheet Pile Installation for open trench at KT1.37A - KT1.36A	42	37	11-May-22	01-Jun-22	12-Feb-22 A	13-Apr-22	492	2
P3-2010	Soft Excavation to 1st strut level	30	30	16-May-22	07-Jun-22	24-Mar-22	28-Apr-22	492	2
P3-2010.1	Installation of strut S1	32	32			12-Apr-22	19-May-22	492	2
P3-2020	Soft Excavation to 2nd strut level	20	20	23-May-22	16-Jun-22	29-Apr-22	23-May-22	492	2
P3-2020.1	Installation of strut S2	32	32			12-May-22	18-Jun-22	492	2
P3-2070	Soft Excavation to F.L ; (approx. 8.5m depth)	24	24	02-Jun-22	02-Jul-22	24-May-22	21-Jun-22	492	2
Portion 4 - Road & Drains		56	56	27-Feb-21	23-Oct-21	29-Apr-22	06-Jul-22	95	
Pre-construction works		56	56	27-Feb-21	23-Oct-21	29-Apr-22	06-Jul-22	95	
P4-1050	Trial Pit (3nos.), Submission & Approval of GI Report	54	54	27-Feb-21	10-May-21	03-May-22*	06-Jul-22	95	3
P4-1060	Circulation & Approval of TTAs	18	18	27-Sep-21	23-Oct-21	29-Apr-22	20-May-22	1	0
Portion 7 - Kwu Tung North Sewage Pumping station		76	76			01-Mar-22	30-May-22	0	
Sewage Pumping Station		76	76			01-Mar-22	30-May-22	0	
Excavation		76	76			01-Mar-22	30-May-22	0	
1st Stage		22	22			01-Mar-22	25-Mar-22	0	
P7-3119	Soft Excavation to 2nd strut level (+1.47mPD for Portion 1 & 2, ~600cu.m)	6	6			01-Mar-22	07-Mar-22	0	1
P7-3120	Installation of strut S2 (+2.2mPD for for Portion 1 & 2)	5	5			08-Mar-22	12-Mar-22	0	1
P7-3125	Sheetpile Installation for Middle part wall (~24m; approx. 60nos)	9	9			14-Mar-22	23-Mar-22	0	5
P7-3126	Dewatering Well Installation outside the sheetpile wall (4nos)	7	7			16-Mar-22	23-Mar-22	0	5
P7-3126.1	Pumping Test	2	2			24-Mar-22	25-Mar-22	0	5
2nd Stage		39	39			26-Mar-22	12-May-22	0	
P7-3126.2	Cut and Fill of slope to form platform for installation of strut at Portion 3	3	3			26-Mar-22	29-Mar-22	0	5
P7-3126.3	Installation of strut at Portion 3 (+4.5mPD)	6	6			30-Mar-22	06-Apr-22	0	5
P7-3127	Soft Excavation to temp slope of Portion 1 & 2 and extend the slope to Portion 4 (600cu m)	6	6			07-Apr-22	13-Apr-22	0	1
P7-3128	Installation of 2nd level of strut at Portion 3 (+2.2mPD)	6	6			14-Apr-22	20-Apr-22	0	1
P7-3129	Cut and Fill of slope to form platform for installation of strut at Portion 4 to 6 (600 cu m)	6	6			21-Apr-22	27-Apr-22	0	1
P7-3130	Installation of strut S1 (+4.5mPD) at Portion 4 , 5 and 6	12	12			28-Apr-22	12-May-22	0	1
3rd Stage		15	15			13-May-22	30-May-22	0	
P7-3135	Soft Excavation to 2nd strut level (+1.47mPD) at Portion 4 to 6 (~980cu.m)	10	10			13-May-22	24-May-22	0	1
P7-3140	Soft Excavation from +1.47mPD to -0.3mPD at Portion 1 & 2 (~355 cu m)	5	5			25-May-22	30-May-22	0	5



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Page : 5 of 8

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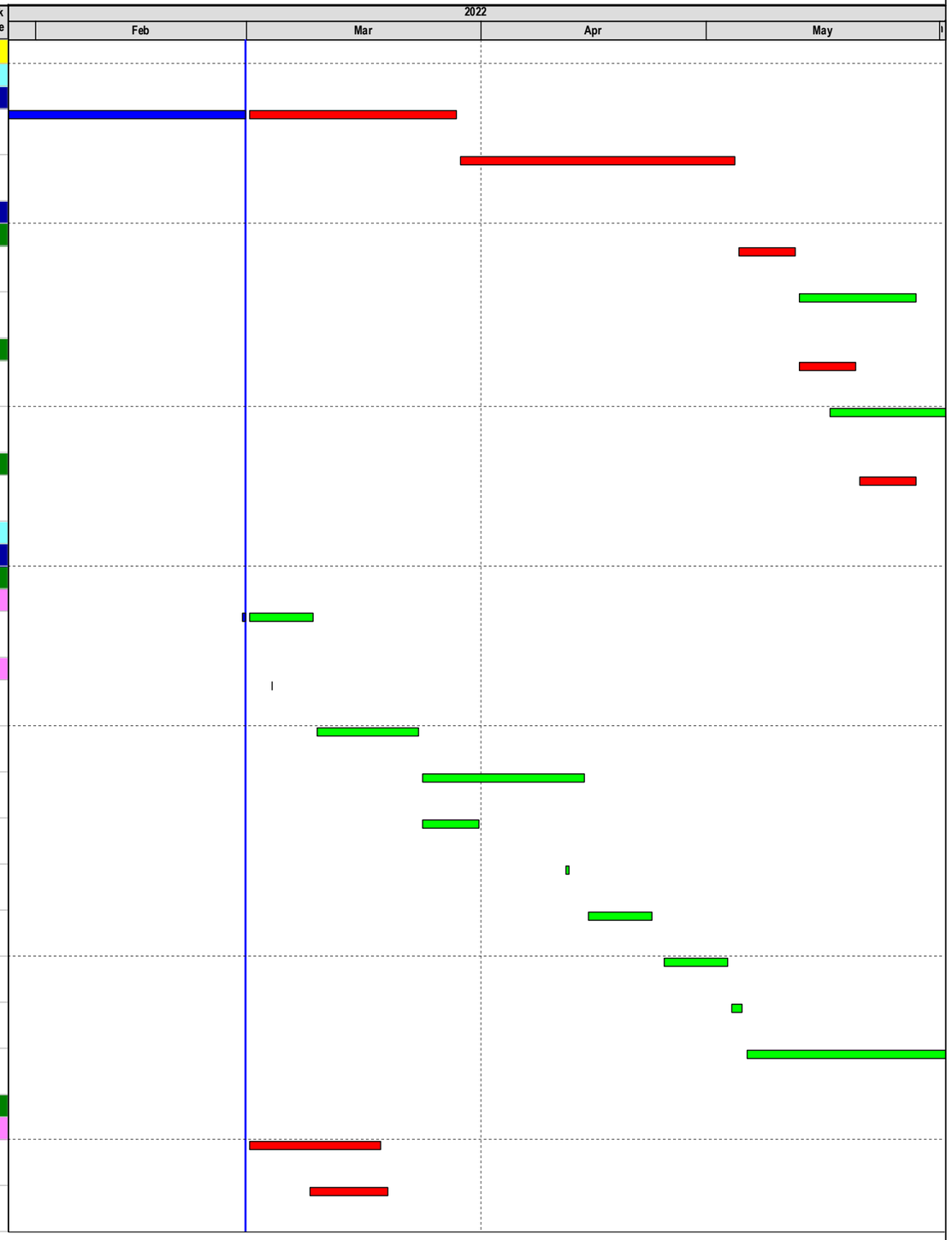
Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
Works in Section 3		162	96	11-May-21	05-Jul-21	09-Dec-21 A	23-Jun-22	35	
Portion 8 - Roads & Drains		162	96			09-Dec-21 A	23-Jun-22	30	
Pre-construction works		120	54			09-Dec-21 A	04-May-22	1	
P8-1060	KT1.40 - KT1.41 Application & Approval for the relocation of existing power cables, street lights and	90	24			09-Dec-21 A	28-Mar-22	1	2
P8-1070	KT1.40 - KT1.41 Relocation of existing power cables by CLP, street lights and pillar boxes by Hyd	30	30			29-Mar-22	04-May-22	1	2
Sewer Pipeline Installation		42	42			05-May-22	23-Jun-22	30	
KT1.40A - KT1.41A (99m) (Open Cut by CE-071)		21	21			05-May-22	28-May-22	37	
P3-5130	Expose Utilites by Hand excavation (KT1.40A to 1.41A)	7	7			05-May-22	12-May-22	1	2
P3-5140	Sheet Pile Installation (Open Trench from 1.41A to 1.40A)	14	14			13-May-22	28-May-22	37	2
KT1.41A - KT1.47A (99m) (Open Cut by CE-076)		35	35			13-May-22	23-Jun-22	30	
P8-2400	Expose Utilites by Hand excavation (KT1.41A to 1.47A)	7	7			13-May-22	20-May-22	1	2
P8-2410	Sheet Pile Installation (KT1.41A to 1.47A)	32	32			17-May-22	23-Jun-22	30	2
KT1.47A - KT6.03A (85m) (Open Cut)		7	7			21-May-22	28-May-22	1	
P8-5300	Expose Utilites by Hand excavation (KT1.47A to KT6.03A)	7	7			21-May-22	28-May-22	1	2
Portion 9 - Footbridge		92	86	11-May-21	05-Jul-21	28-Feb-22 A	11-Jun-22	45	
Footbridge Construction		92	86	11-May-21	05-Jul-21	28-Feb-22 A	11-Jun-22	45	
South River Embankment		92	86	05-Jul-21	05-Jul-21	28-Feb-22 A	11-Jun-22	45	
Abutment FK2-04M		10	8	05-Jul-21	05-Jul-21	28-Feb-22 A	09-Mar-22	45	
P9-1320	Curing, Remove Formwork for Abutment wall & modify Falsework for bridge deck construction	10	8	05-Jul-21	05-Jul-21	28-Feb-22 A	09-Mar-22	45	0
Superstructure		83	83			04-Mar-22	11-Jun-22	45	
P9-1637	Delivery of pier formwork	0	0			04-Mar-22	04-Mar-22*	0	3
P9-1640	Falsework & formwork erection of Pier	12	12			10-Mar-22	23-Mar-22	45	3
P9-1643	Erection of Falsework and Soffit Formwork for Bridge Deck	18	18			24-Mar-22	14-Apr-22	45	5
P9-1650	Rebar Fixing of Pier	7	7			24-Mar-22	31-Mar-22	55	2
P9-1660	Concreting the Pier	1	1			12-Apr-22	12-Apr-22	47	0
P9-1670	Rebar Fixing of Bridge Deck	8	8			15-Apr-22	23-Apr-22	45	2
P9-1680	Formwork for Bridge Deck	7	7			25-Apr-22	03-May-22	45	2
P9-1690	Concreting of Bridge Deck	2	2			04-May-22	05-May-22	45	0
P9-1700	Curing & Removal of all temporary works	31	31			06-May-22	11-Jun-22	45	3
North River Embankment		86	86	11-May-21	28-Jun-21	01-Mar-22	11-Jun-22	1	
Abutment FK2-01M		56	56	11-May-21	28-Jun-21	01-Mar-22	06-May-22	1	
P9-1120	Pile cutting to Pile Cut-Off level & Install Capping Plate (-0.09mPD)	16	16	11-May-21	17-May-21	01-Mar-22	18-Mar-22	1	0
P9-1130	Formwork and falsework for Pile Cap	10	10	18-May-21	31-May-21	09-Mar-22	19-Mar-22	1	1



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Page : 6 of 8

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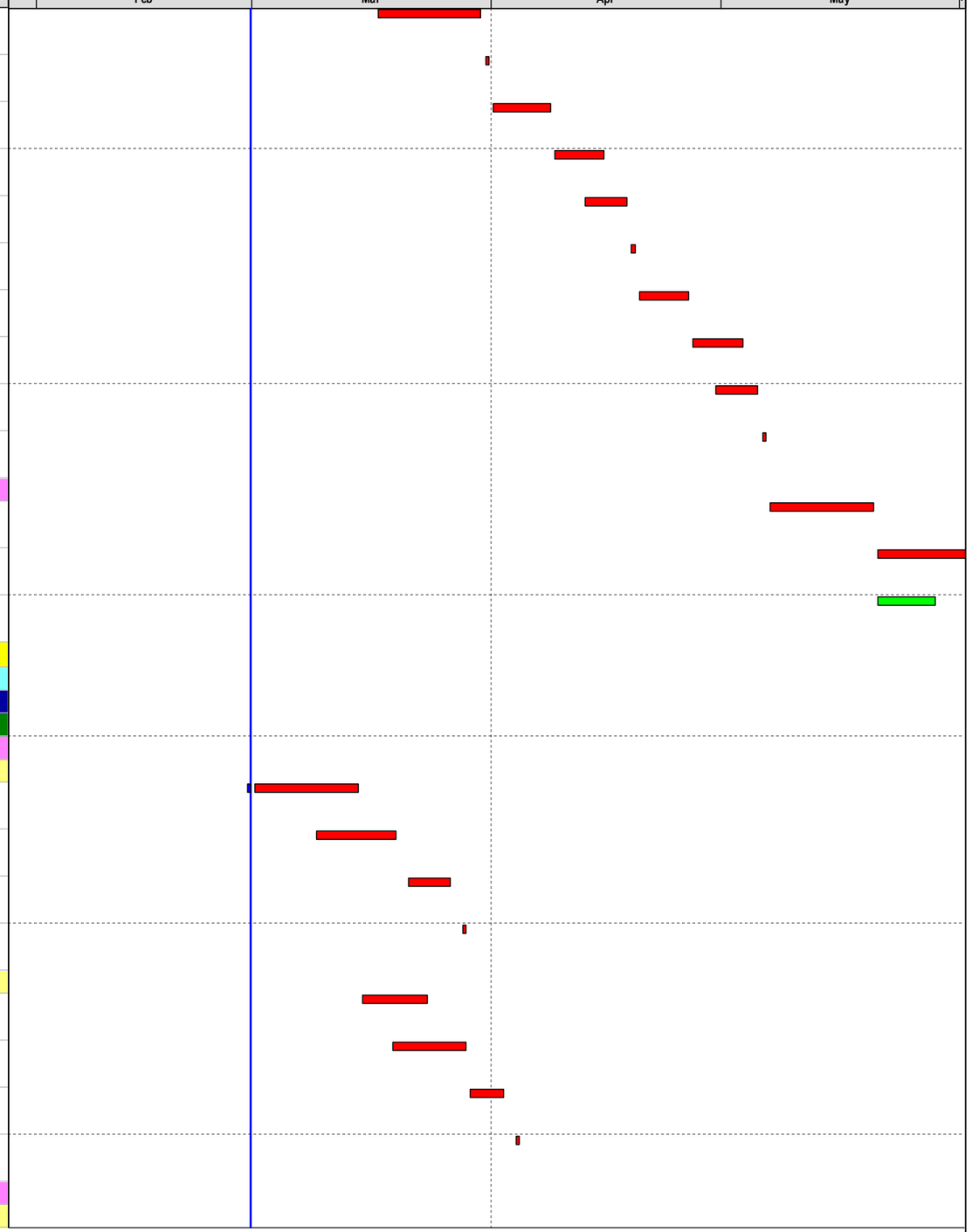
P9-1140	Rebar fixing for Pile Cap	12	12	25-May-21	11-Jun-21	17-Mar-22	30-Mar-22	1	1
P9-1150	Concreting the Pile Cap (approx. 200m3)	1	1	12-Jun-21	12-Jun-21	31-Mar-22	31-Mar-22	1	0
P9-1155	Curing & Remove Formwork for Pile Cap	6	6			01-Apr-22	08-Apr-22	1	3
P9-1160	Rebar fixing for Abutment wall for 1st pour	6	6	15-Jun-21	21-Jun-21	09-Apr-22	15-Apr-22	1	0
P9-1170	Formwork and falsework for Abutment Wall for 1st pour	5	5	18-Jun-21	26-Jun-21	13-Apr-22	18-Apr-22	1	1
P9-1180	Concreting the Abutment wall (1st pour)	1	1	28-Jun-21	28-Jun-21	19-Apr-22	19-Apr-22	1	0
P9-1185	Curing & Remove Formwork	6	6			20-Apr-22	26-Apr-22	1	0
P9-1189	Rebar fixing for Abutment wall for 2nd pour	5	5			27-Apr-22	03-May-22	1	0
P9-1193	Formwork and falsework for Abutment Wall for 2nd pour	4	4			30-Apr-22	05-May-22	1	1
P9-1197	Concreting the Abutment wall (2nd pour)	1	1			06-May-22	06-May-22	1	0
Superstructure		30	30			07-May-22	11-Jun-22	1	
P9-1600	Falsework & formwork erection of Pier	12	12			07-May-22	20-May-22	1	3
P9-1605	Erection of Falsework and Soffit Formwork for Bridge Deck	18	18			21-May-22	11-Jun-22	1	5
P9-1610	Rebar Fixing of Pier	7	7			21-May-22	28-May-22	11	2
Works in Section 4		76	76			28-Feb-22 A	30-May-22	-5	
Portion 10 - Visitor Centre		76	76			28-Feb-22 A	30-May-22	-5	
Visitor Centre		76	76			28-Feb-22 A	30-May-22	-5	
Substructure and Retaining Wall		76	76			28-Feb-22 A	30-May-22	-5	
Low Level Pile Cap and Basement Slab		30	30			28-Feb-22 A	04-Apr-22	-4	
1st Bay		24	24			28-Feb-22 A	28-Mar-22	-15	
P10-2110.32	Laying of Waterproofing Membrane and testing	12	12			28-Feb-22 A	14-Mar-22	-15	1
P10-2110.33	Rebar fixing of Pile Cap and Slab	10	10			09-Mar-22	19-Mar-22	-15	1
P10-2110.43	Base Slab Shutters	6	6			21-Mar-22	26-Mar-22	-15	1
P10-2110.53	Base Slab and Pile Cap Concreting (1st Bay)	1	1			28-Mar-22	28-Mar-22	-15	1
2nd Bay		18	18			15-Mar-22	04-Apr-22	-4	
P10-2110.093	Laying of Waterproofing Membrane and testing	8	8			15-Mar-22	23-Mar-22	-4	1
P10-2110.103	Rebar fixing of Pile Cap and Slab	8	8			19-Mar-22	28-Mar-22	-4	1
P10-2110.113	Base Slab Shutters	5	5			29-Mar-22	02-Apr-22	-4	1
P10-2110.123	Base Slab and Pile Cap Concreting (2nd Bay)	1	1			04-Apr-22	04-Apr-22	-4	1
Basement Wall and U-trough		52	52			29-Mar-22	30-May-22	-5	
Basement Wall Bay 1		52	52			29-Mar-22	30-May-22	-15	



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

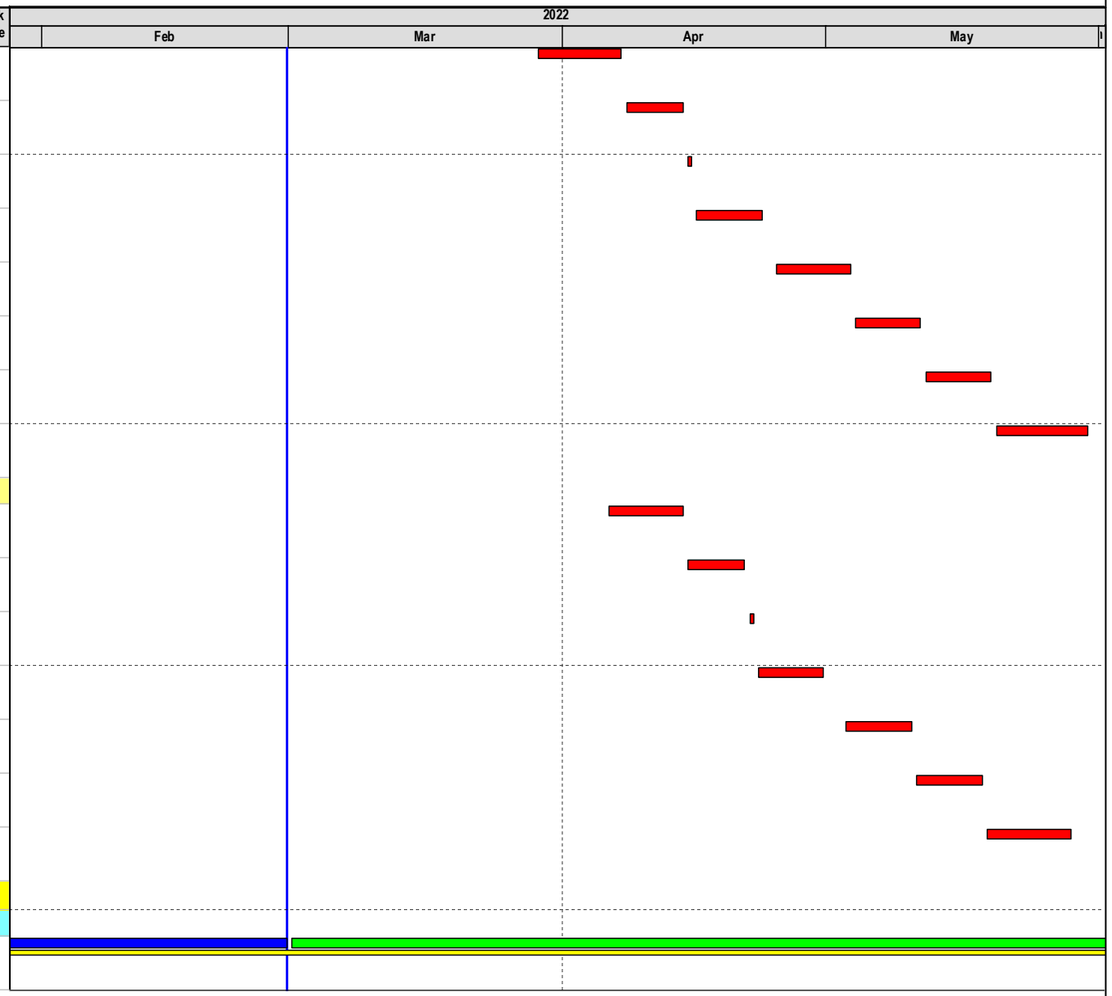
Data Date: 28-Feb-22
Project Start: 03-Feb-20
Project End: 30-Dec-26
Baseline: Monthly Markup Programme (Feb 2021) (Accepted on 15 April 2021)
Page : 7 of 8

Three Months Rolling Programme (Feb to May 2022)

Date	Revision	Checked	Approved
28-Feb-22	Rev 0 (Three Months Rolling Progr...	TW	ZL

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

Activity ID	Activity Name	Original Duration	Remaining Duration	BL1 Start	BL1 Finish	Start	Finish	Total Float	Time Risk Allowance
P10-2120.11	Basement wall Rebar Fixing to +4.5mPD	8	8			29-Mar-22	07-Apr-22	-15	2
P10-2120.21	Basement wall Formwork to +4.5mPD	6	6			08-Apr-22	14-Apr-22	-15	2
P10-2120.31	Concreting of Basement wall to +4.5mPD	1	1			15-Apr-22	15-Apr-22	-15	2
P10-2120.41	Acheive Early Strength of concrete to retain earth pressure (up to +3.5mPD)	7	7			16-Apr-22	23-Apr-22	-15	2
P10-2120.51	Dismantling of wall formwork and soil backfill to +3.5mPD with testing	7	7			25-Apr-22	03-May-22	-15	2
P10-2120.61	Dismantle of Corner strut at +3.5mPD	7	7			04-May-22	11-May-22	-15	2
P10-2120.71	Extend working Platform to +7.6mPD	7	7			12-May-22	19-May-22	-15	2
P10-2120.81	Basement wall Rebar Fixing to +7.6mPD	9	9			20-May-22	30-May-22	-15	2
Basement Wall Bay 2		45	45			06-Apr-22	28-May-22	-4	
P10-2120.106	Basement wall Rebar Fixing to +4.5mPD	8	8			06-Apr-22	14-Apr-22	-4	2
P10-2120.116	Basement wall Formwork to +4.5mPD	6	6			15-Apr-22	21-Apr-22	-4	2
P10-2120.126	Concreting of Basement wall to +4.5mPD	1	1			22-Apr-22	22-Apr-22	-4	2
P10-2120.136	Acheive Early Strength of concrete to retain earth pressure (up to +3.5mPD)	7	7			23-Apr-22	30-Apr-22	-4	2
P10-2120.146	Dismantling of wall formwork and soil backfill to +3.5mPD with testing	7	7			03-May-22	10-May-22	-4	2
P10-2120.166	Extend working Platform to +7.6mPD	7	7			11-May-22	18-May-22	-4	2
P10-2120.176	Basement wall Rebar Fixing to +7.6mPD	9	9			19-May-22	28-May-22	-4	2
Works in Section 5		578	228	30-Dec-20	10-Oct-22	30-Dec-20 A	29-Nov-22	68	
Portion 11 - Village Resite Area		578	228	30-Dec-20	10-Oct-22	30-Dec-20 A	29-Nov-22	68	
P11-1005	Temporary Storage Area	578	228	30-Dec-20	10-Oct-22	30-Dec-20 A	29-Nov-22	68	0



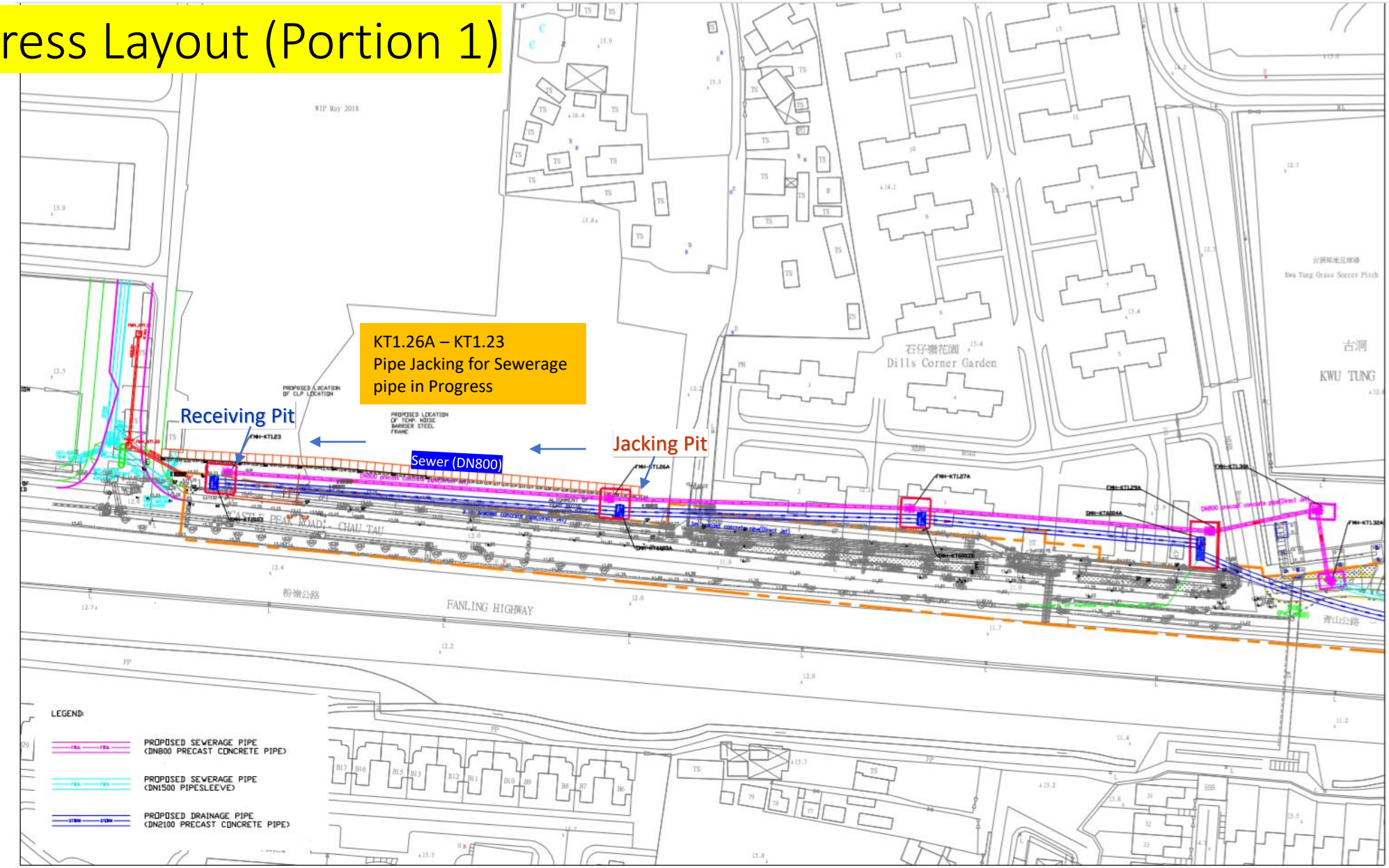
Primary Baseline
Actual Work
Remaining Work
Critical Remaining Work
Baseline Milestone
Critical ...
Non-Crit...

Data Date: 28-Feb-22
Project Start: 03-Feb-20
Project End: 30-Dec-26
Baseline: Monthly Markup Programme (Feb 2021) (Accepted on 15 April 2021)
Page : 8 of 8

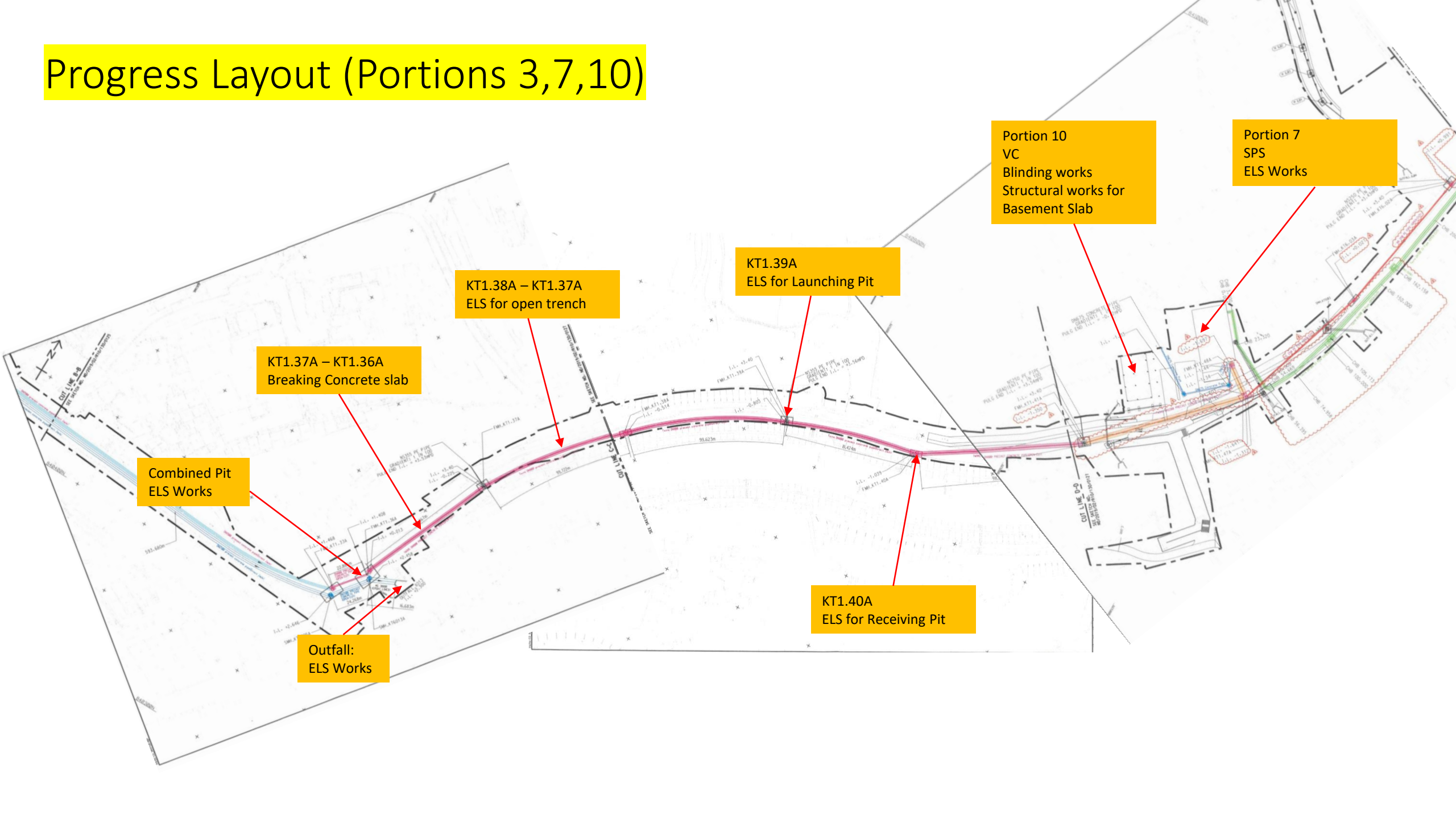
Three Months Rolling Programme (Feb to May 2022)

Date	Revision	Checked	Approved
28-Feb-22	Rev 0 (Three Months Rolling Progr...	TW	ZL

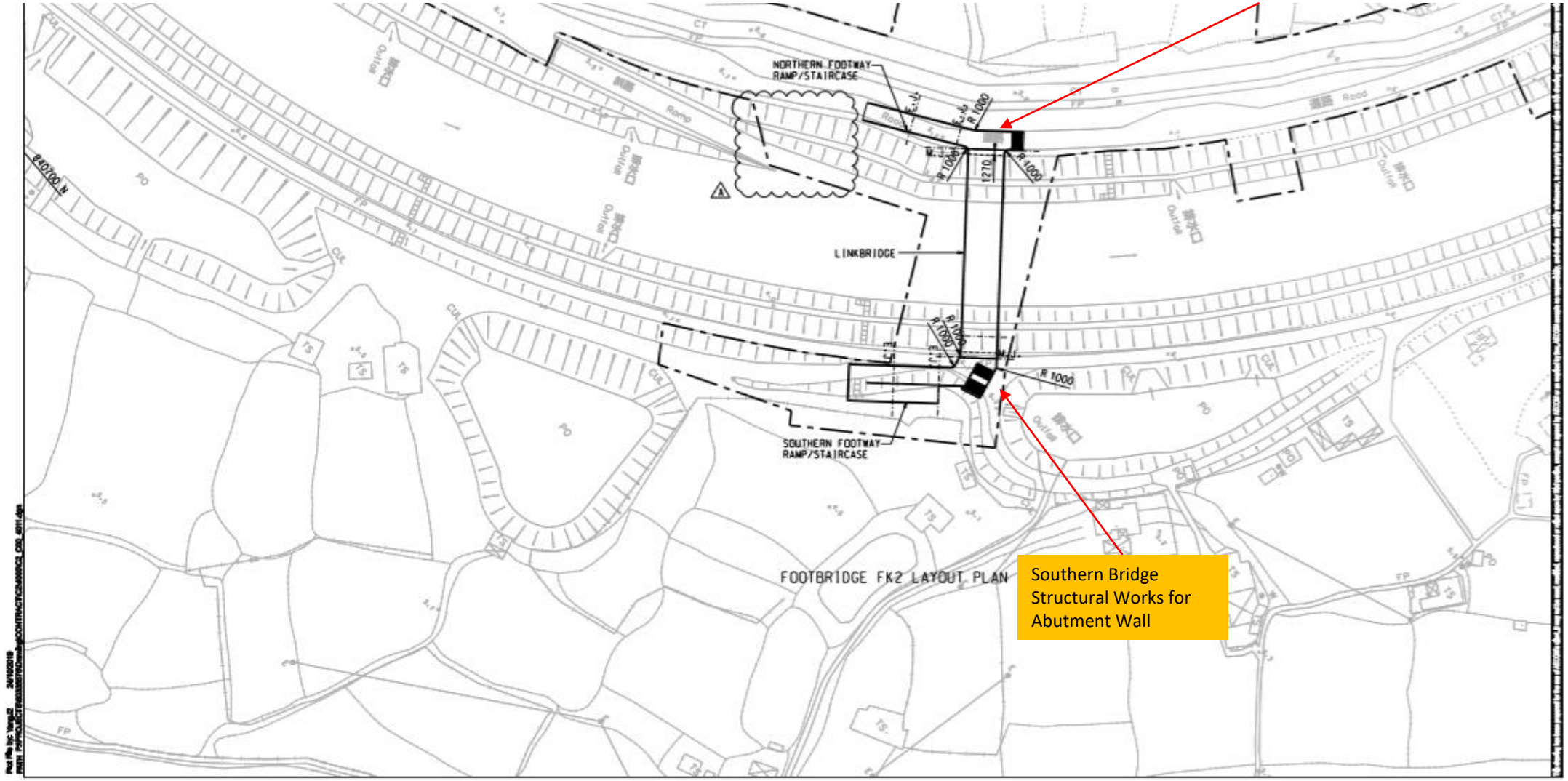
Progress Layout (Portion 1)



Progress Layout (Portions 3,7,10)



Progress Layout (Portion 9)



Construction Programme of ND/2019/03

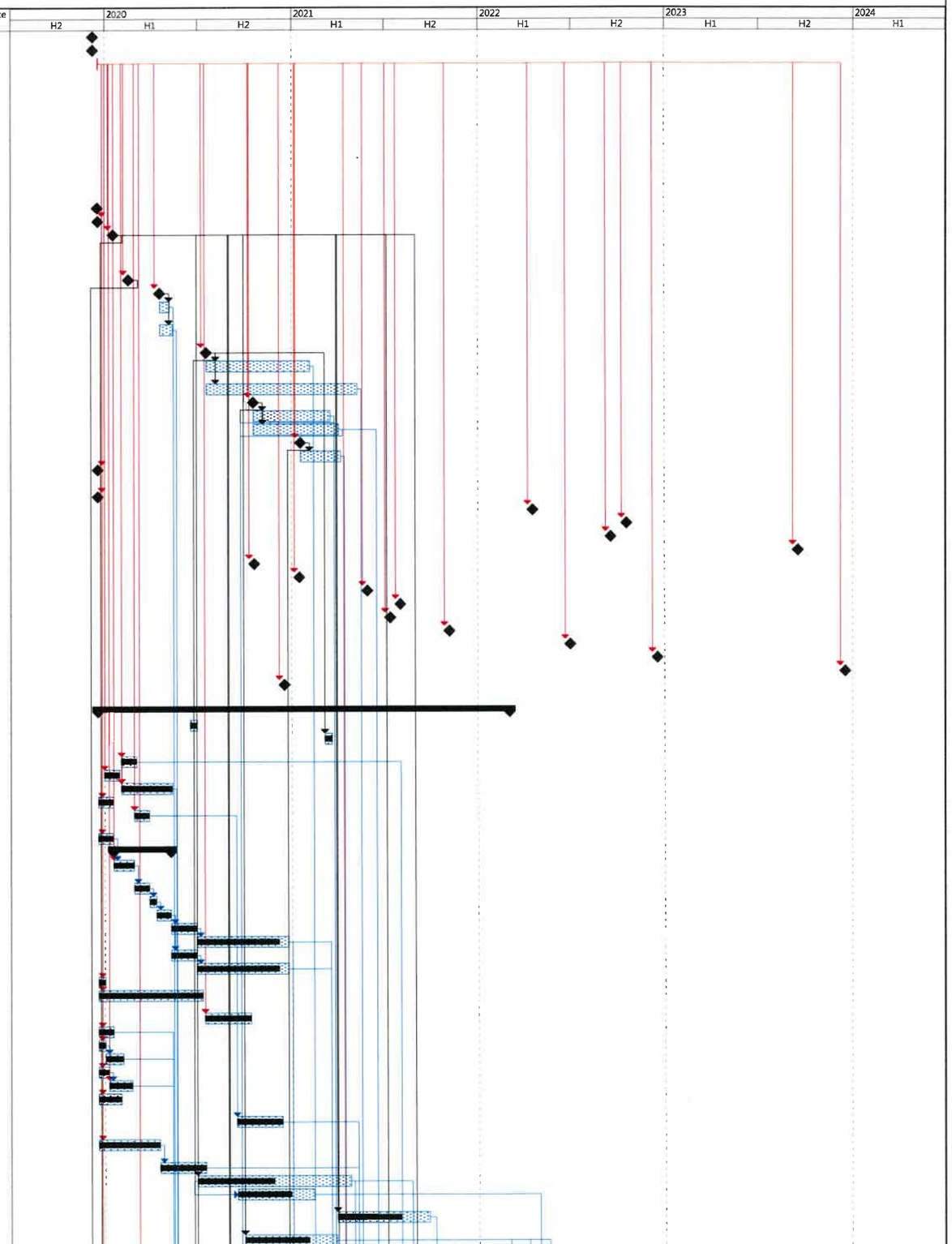
Contract No. ND/2019/03

Sang Hing - Kuly Joint Venture

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

Project Programme of the Works

ID		Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
1		**Contract Key Dates**	0 days	Tue 19/12/10	Tue 19/12/10			1516 days	0%	
2		**1.1 Contract Date**	**0 days**	**Tue 19/12/10**	**Tue 19/12/10**			**1516 days**	0%	
3		**1.2 Starting Date**	**1 day**	**Thu 19/12/19**	**Thu 19/12/19**		**,59,61,62,63,42,5,57,45,47,44,43,3' days,6FS+30 days,7FS+60 days,8FS+121 days,11FS+212 days,14FS+304 days,19,17FS+396 days,55,56,22FS+851 days,23FS+1034 days,24FS+1003 days,26FS+273 days,27FS+394 days,28FS+528 days,29FS+592 days,30FS+572 ...**	-371 days	0%	
4		**1.3 Site Access Dates**	0 days	Thu 19/12/19	Thu 19/12/19			1507 days	0%	
5		Portions 25, 26, 27	0 days	Thu 19/12/19	Thu 19/12/19	3		1506 days	0%	
6		Portions 1, 5, 6A, 7, 8A, 9A, 9C, 9E, 9F, 9G, 10A, 10B, 11A, 11B, 12A, 12C, 12D, 13A, 15B, 15C, 16, 17, 19A, 19B, 19C, 20A, 20B	0 days	Sat 20/1/18	Sat 20/1/18	3FS+30 days	,70,71,73,82,141,232,253,275,305,(days,77FS+30 days,78,79	332 days	0%	
7		Portions 23, 24	0 days	Mon 20/2/17	Mon 20/2/17	3FS+60 days	349	1446 days	0%	
8		Portions 15A, 18, 19, 20, 20C, 22	0 days	Sat 20/4/18	Sat 20/4/18	3FS+121 days	9,10	1360 days	0%	
9		Delay of Site Access Dates: Portion 15A, 18, 19, 20 (Structure has not been handed over)	19 days	Sun 20/4/19	Thu 20/5/7	8	209,276,306	1366 days	0%	
10		Delay of Site Access Dates: Portion 22 (Structure has not been handed over)	25 days	Sun 20/4/19	Wed 20/5/13	8	350	1360 days	0%	
11		Portions 1A, 2, 2A, 3, 4, 4A, 4B, 5A, 6, 8, 7A, 7B	0 days	Sat 20/7/18	Sat 20/7/18	3FS+212 days	83,126,142,233,277,39,12,13	52.4 days	0%	
12		Delay of Site Access for Area with Structure & Tudigong in Portion 1A	203 days	Sun 20/7/19	Sat 21/2/6	11	117	1091 days	0%	
13		Delay of Site Access Dates: 4B,5A	296 days	Sun 20/7/19	Mon 21/5/10	11	145	52.4 days	0%	
14		Portions 8B, 9, 9B, 9D, 10, 11, 12, 12B, 13, 14	0 days	Sun 20/10/18	Sun 20/10/18	3FS+304 days	223,254,307,15,16	1035 days	0%	
15		Delay of Site Access Date: Portion 9D	151 days	Mon 20/10/19	Thu 21/3/18	14	234,237	1051 days	0%	
16		Delay of Site Access for Area with Structure in Portion 8B, 9B	167 days	Mon 20/10/19	Sat 21/4/3	14	234,241	1035 days	0%	
17		Portions 15, 16A, 16B, 17A, 17B, 21	0 days	Mon 21/1/18	Mon 21/1/18	3FS+396 days	334,255,278,308,18	-371 days	0%	
18		Delay of Site Access for Area with Structure in Portion 16B	79 days	Tue 21/1/19	Wed 21/4/7	17	262	1031 days	0%	
19		Works Area WA1	0 days	Thu 19/12/19	Thu 19/12/19	3		1506 days	0%	
20										
21		**1.4 Completion of the works**	**0 days**	**Thu 19/12/19**	**Thu 19/12/19**	**3**		**1506 days**	0%	
22		Section 1	0 days	Mon 22/4/18	Mon 22/4/18	3FS+851 days		655 days	0%	
23		Section 2	0 days	Tue 22/10/18	Tue 22/10/18	3FS+1034 days		472 days	0%	
24		Section 3	0 days	Sat 22/9/17	Sat 22/9/17	3FS+1003 days		503 days	0%	
25		Section 3A	0 days	Sun 23/9/17	Sun 23/9/17	3FS+1368 days		138 days	0%	
26	✓	Section 4	0 days	Wed 20/10/21	Wed 20/10/21	3FS+273 days		0 days	100%	
27	✓	Section 5	0 days	Sat 21/1/16	Sat 21/1/16	3FS+394 days		0 days	100%	
28		Section 6	0 days	Sun 21/5/30	Sun 21/5/30	3FS+528 days		978 days	0%	
29		Section 7	0 days	Mon 21/8/2	Mon 21/8/2	3FS+592 days		914 days	0%	
30		Section 8	0 days	Tue 21/7/13	Tue 21/7/13	3FS+572 days		934 days	0%	
31		Section 9	0 days	Sat 21/11/6	Sat 21/11/6	3FS+688 days		818 days	0%	
32		Section 10	0 days	Thu 22/6/30	Thu 22/6/30	3FS+924 days		582 days	0%	
33		Section 11	0 days	Sun 22/12/18	Sun 22/12/18	3FS+1095 days		411 days	0%	
34		Section 11A	0 days	Mon 23/12/18	Mon 23/12/18	3FS+1460 days		46 days	0%	
35		Section 12	0 days	Fri 20/12/18	Fri 20/12/18	3FS+365 days		1141 days	0%	
36										
37		**2. Preliminary works**	**805 days**	**Fri 19/12/20**	**Thu 22/3/3**			**701 days**	**81%**	
38	✓	Set up Project Manager's Accommodation in WA1 (1st part)	14 days	Wed 20/6/17	Tue 20/6/30			0 days	100%	
39	✓	Set up Project Manager's Accommodation in Portion 3 (2nd part)	14 days	Mon 21/3/8	Sun 21/3/21	11		0 days	100%	
40	✓	Prepare, submit & Approve ICE	30 days	Mon 20/2/3	Tue 20/3/3	3	178	0 days	100%	
41	✓	Prepare, submit & Approve Traffic Consultant	30 days	Wed 20/1/1	Thu 20/1/30	3		0 days	100%	
42	✓	Prepare, submit & Approve Landscape Team Leader	100 days	Mon 20/2/3	Tue 20/5/12	3	75	0 days	100%	
43	✓	Prepare, submit & Approve Agricultural Specialist	30 days	Fri 19/12/20	Sat 20/1/18	3		0 days	100%	
44	✓	Prepare, submit & Approve Constructed / Treatment Wetland Specialist	30 days	Fri 20/2/28	Sat 20/3/28	3	64	0 days	100%	
45	✓	Prepare, submit & Approve Ecological Team Leader	30 days	Fri 19/12/20	Sat 20/1/18	3	47	0 days	100%	
46	✓	**Habitat Survey**	**112 days**	**Sun 20/1/19**	**Sat 20/5/9**			**0 days**	**100%**	
47	✓	Submission/approval of Habitat Surveys Method Statement and Programme	40 days	Sun 20/1/19	Thu 20/2/27	3,45	48	0 days	100%	
48	✓	Habitat Surveys	30 days	Fri 20/2/28	Sat 20/3/28	47	49	0 days	100%	
49	✓	Submission of Habitat Record	14 days	Sun 20/3/29	Sat 20/4/11	48	50	0 days	100%	
50	✓	Approval of Habitat Survey Record	28 days	Sun 20/4/12	Sat 20/5/9	49	53,51	0 days	100%	
51	✓	Prepare and Submit Wetland Restoration Proposal	50 days	Sun 20/5/10	Sun 20/6/28	50	52	0 days	100%	
52		Approval of Wetland Restoration Proposal	180 days	Mon 20/6/29	Fri 20/12/25	51	237,258,281,311	1089 days	90%	
53	✓	Prepare and Submit Wetland Creation Proposal	50 days	Sun 20/5/10	Sun 20/6/28	50	54	0 days	100%	
54		Approval of Wetland Cretation Proposal	180 days	Mon 20/6/29	Fri 20/12/25	53	237,258,281,311	1089 days	90%	
55	✓	Prepare and Submit Ecological Protection Plan	14 days	Fri 19/12/20	Thu 20/1/2	3		0 days	100%	
56	✓	Prepare, Submit and Approval of Maintenance Proposal for Stage 1 Maintenance Works	204 days	Fri 19/12/20	Fri 20/7/10	3		0 days	100%	
57	✓	Prepare, submit & Approve G.I. Contractor	90 days	Wed 20/7/15	Mon 20/10/12	3		0 days	100%	
58	✓	Prepare and submit Smart Card Sysytem	30 days	Fri 19/12/20	Sat 20/1/18	3	75	0 days	100%	
59	✓	Prepare, submit Draft Safety Plan	14 days	Fri 19/12/20	Thu 20/1/2	3	60	0 days	100%	
60	✓	Review & Approve Safety Plan	35 days	Fri 20/1/3	Thu 20/2/6	59	75	0 days	100%	
61	✓	Prepare, Submit Draft Environmental Management Plan	21 days	Fri 19/12/20	Thu 20/1/9	3	62	0 days	100%	
62	✓	Review & Approve Environmental Management Plan	45 days	Fri 20/1/10	Sun 20/2/23	3,61	75	0 days	100%	
63	✓	Prepare, submit & Approve Site Management Plan for Trip Ticket System	45 days	Fri 19/12/20	Sun 20/2/2	3		0 days	100%	
64	✓	Submission and Approval of Construction Method for water treatment wetland	90 days	Tue 20/9/15	Sun 20/12/13	44	145	0 days	100%	
65	✓	Submission of Proposal for Source of Water for Water Treatment Wetland	120 days	Fri 19/12/20	Fri 20/4/17	3	66	0 days	100%	
66	✓	Approval of Source of Water for Water Treatment Wetland	90 days	Sat 20/4/18	Thu 20/7/16	65	145	0 days	100%	
67		Design/submission/approval of Lodging Facilities	300 days	Tue 20/6/30	Sun 21/4/25	6	131,68SS,130	19 days	50%	
68		Design / Submission / approval of Sewerage System of Lodging Facilities	150 days	Wed 20/9/16	Fri 21/2/12	67SS	134	461 days	70%	
69		Design/submission/approval of alluminium roofing system, timber for wall/floor/soffit for Birdhide	180 days	Tue 21/3/30	Sat 21/9/25	6	159	640 days	70%	
70		Design/submission/approval of E&M works for Facilities	180 days	Wed 20/9/30	Sun 21/3/28	6	134,184,171,136,162,161	328 days	70%	



Revised Programme: February 2022

Data Date : 2022-2-3

Task | Milestone | Rolled Up Task | Rolled Up Milestone | Split | Project Summary | Progress

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

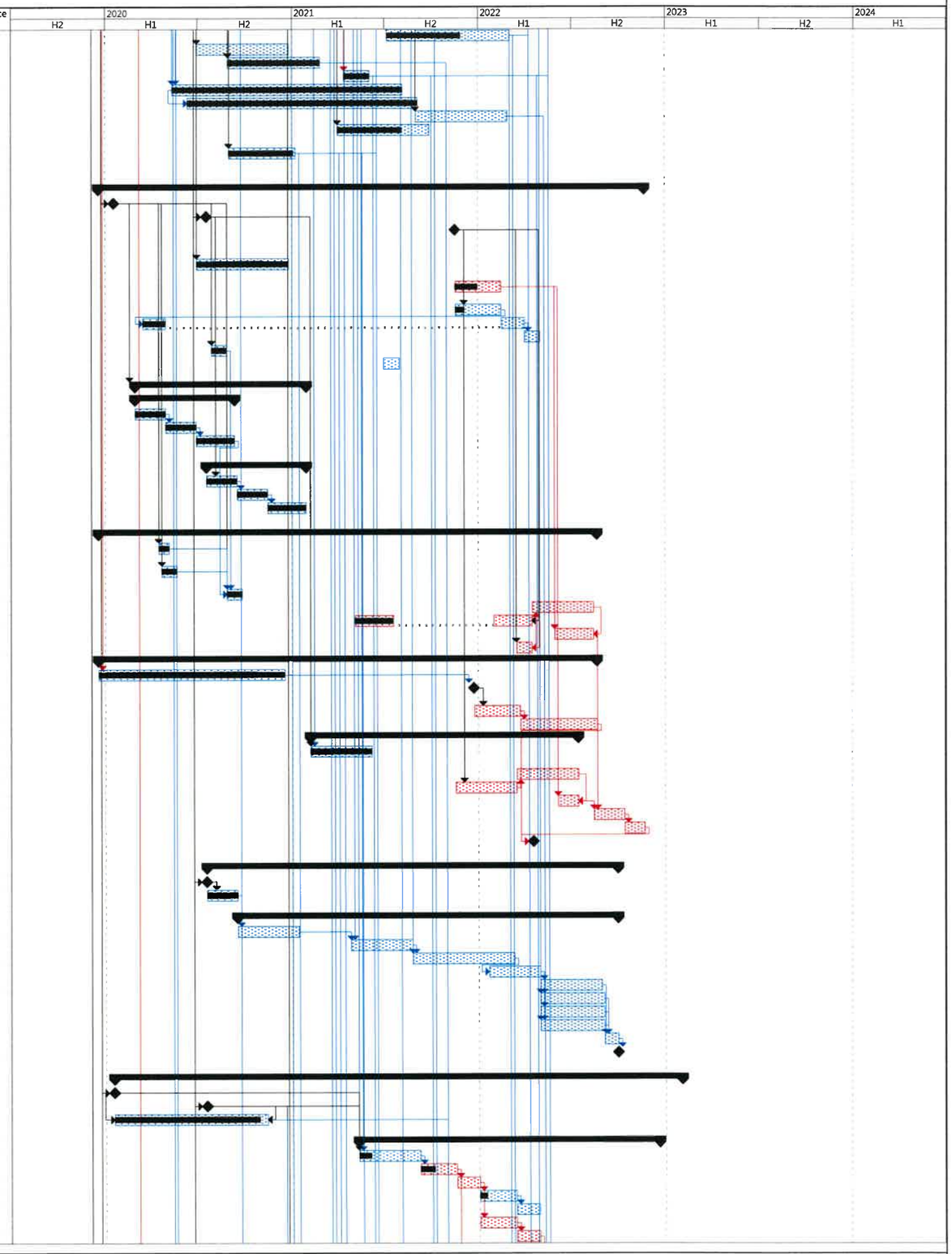
Contract No. ND/2019/03

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
71	Design/submission/approval of Plumbing works for Facilities	240 days	Wed 21/7/7	Thu 22/3/3	6	162,171	108 days	60%	
72	Design/submission/approval and supply of Lighting	180 days	Tue 20/6/30	Sat 20/12/26	6		1133 days	0%	
73	Design/submission/approval and supply of park facilities	180 days	Sun 20/8/30	Thu 21/2/25	6	165	0 days	100%	
74	Submission and Approval for Fire Extinguisher	50 days	Wed 21/4/14	Wed 21/6/2	3	161,171,191,198,290,184	0 days	100%	
75	Tree survey and submission	450 days	Wed 20/5/13	Thu 21/8/5	42,60,62,58	76SS+30 days	0 days	100%	
76	Tree felling / Site clearance	450 days	Fri 20/6/12	Sat 21/9/4	75SS+30 days		0 days	100%	
77	Design/submission/approval of Entrance gantry signages	180 days	Wed 21/9/1	Sun 22/2/27	6FS+30 days	173	142 days	0%	
78	Design/submission/approval of Irrigation system for landscape softworks	180 days	Thu 21/4/1	Mon 21/9/27	6		858 days	70%	
79	Design/submission/approval of Irrigation Channel and other associated facilities	130 days	Tue 20/9/1	Fri 21/1/8	6	244,265,295,324	178 days	97%	
80									
81	**3. Section 1 of the works (Portions 1 and 1A)**	**1068 days**	**Fri 19/12/20**	**Mon 22/11/21**			**438 days**	54%	
82	Site Access in Portion 1	0 days	Sat 20/1/18	Sat 20/1/18	6	106,92FS+30 days,105,104,90	0 days	100%	
83	Site Access in Portion 1A	0 days	Sat 20/7/18	Sat 20/7/18	11	117,99	0 days	100%	
84	Compensation Event No. 39 (PMI-038)- Widening of Yin Kong Road and Revising Associated Facilities	0 days	Wed 21/11/17	Wed 21/11/17		87,108FF+150 days,119,110	-187 days	0%	
85	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		0 days	100%	
86	Design/submission/approval and supply of Road Lighting System along Yin Kong Road (PMI 038, CE039)	90 days	Wed 21/11/17	Mon 22/2/14		109,120	-113 days	50%	
87	Application for XP for constructionof Yin Kong Road	90 days	Thu 21/11/18	Tue 22/2/15	84	88	642 days	20%	
88	Prepare TTA for TMLG and approval from TD and RMO	90 days	Mon 20/3/16	Fri 22/4/1	87	89	642 days	50%	
89	Application of Traffic Advice and Road Work Advice	30 days	Sat 22/4/2	Sun 22/5/1	88		642 days	0%	
90	Submission of Utilities Detection Report	30 days	Wed 20/7/29	Thu 20/8/27	82	106	0 days	100%	
91	Additional Widening works for Yin Kong Road (to be approved by Relevant Department)	30 days	Thu 21/7/1	Fri 21/7/30			917 days	0%	
92	**Relocation of Utilities (by Others)**	**335 days**	**Sun 20/3/1**	**Fri 21/1/29**	**82FS+30 days**		**0 days**	**100%**	
93	**Relocation of CLP Pole at Yin Kong Road in (Portion 1)**	**195 days**	**Sun 20/3/1**	**Fri 20/9/11**			**0 days**	**100%**	
94	Planning for Relocation	60 days	Sun 20/3/1	Wed 20/4/29		95	0 days	100%	
95	Construction of New Pole	60 days	Thu 20/4/30	Sun 20/6/28	94	96	0 days	100%	
96	Outage and Diversion of Underground Cable	75 days	Mon 20/6/29	Fri 20/9/11	95	106	0 days	100%	
97									
98	**Relocation of CLP Pole at Yin Kong Road (Portion 1A)**	**195 days**	**Sun 20/7/19**	**Fri 21/1/29**			**0 days**	**100%**	
99	Planning for Relocation	60 days	Sun 20/7/19	Wed 20/9/16	83	100	0 days	100%	
100	Construction of New Pole	60 days	Thu 20/9/17	Sun 20/11/15	99	101	0 days	100%	
101	Outage and Diversion of Underground Cable	75 days	Mon 20/11/16	Fri 21/1/29	100		0 days	100%	
102									
103	**Site Works (under Portion 1)**	**975 days**	**Fri 19/12/20**	**Sat 22/8/20**			**-124 days**	49%	
104	Compensation Event No. 002 - Construction of Chain Link Fence and Gate adjacent to Yin Kong Road	21 days	Thu 20/4/16	Wed 20/5/6	82	106	0 days	100%	
105	Compensation Event No. 003 - Reprovision of Hoarding and gate at Enchi Lodge	30 days	Wed 20/4/22	Thu 20/5/21	82	106	0 days	100%	
106	Remove existing fencing and site clearance	30 days	Fri 20/8/28	Sat 20/9/26	82,90,96,104,105		0 days	100%	
107	Road widening	120 days	Sat 22/4/16	Sat 22/8/13	108,110	109FF	-217 days	0%	
108	Drainage works	150 days	Wed 21/5/5	Fri 22/4/15	84FF+150 days	107,110FF	-217 days	50%	7 days
109	Lighting and installation of street fruniture	76 days	Mon 22/5/30	Sat 22/8/13	86,107FF	121	-217 days	0%	4 days
110	Additional Dwarf Wall	30 days	Thu 22/3/17	Fri 22/4/15	84,108FF	107	-217 days	0%	
111	**Construction of Pai Lau**	**975 days**	**Fri 19/12/20**	**Sat 22/8/20**			**-124 days**	**60%**	
112	Instruction from PM	365 days	Fri 19/12/20	Fri 20/12/18	3	113	0 days	100%	
113	Compensation Event No. 36 (PMI-036)- Design and Construction of Yin Kong Village Pai Lau	0 days	Fri 21/12/24	Fri 21/12/24	112	114	-124 days	0%	
114	Design/Submission/approval	90 days	Fri 21/12/24	Wed 22/3/23	113	115	-124 days	0%	
115	Construction of Pai Lau	150 days	Thu 22/3/24	Sat 22/8/20	114	123	-124 days	0%	7 days
116	**Site Works (under Portion 1A)**	**523 days**	**Sun 21/2/7**	**Thu 22/7/14**			**-187 days**	**30%**	
117	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	120 days	Sun 21/2/7	Sun 21/6/6	83,12		0 days	100%	
118	Road Widening	120 days	Thu 22/3/17	Thu 22/7/14	119	120FF	-187 days	0%	
119	Drainage works	120 days	Wed 21/11/17	Wed 22/3/16	84	118	-187 days	0%	7 days
120	Lighting and installation of street fruniture	40 days	Sun 22/6/5	Thu 22/7/14	86,118FF	121	-187 days	0%	4 days
121	Paving block on footway	60 days	Sun 22/8/14	Wed 22/10/12	109,120	122	-217 days	0%	
122	bituminous pavement on carriageway	40 days	Thu 22/10/13	Mon 22/11/21	121	123	-217 days	0%	
123	**Completion of Section 1 of the works**	**0 days**	**Mon 22/4/18**	**Mon 22/4/18**	**122,115**		**-217 days**	**0%**	
124									
125	**4. Section 2 of the works (Portions 2 and 2A)**	**803 days**	**Sat 20/7/18**	**Thu 22/9/29**			**19 days**	5%	
126	Site Access in Portions 2 and 2A	0 days	Sat 20/7/18	Sat 20/7/18	11	127	0 days	100%	
127	General site clearance / demolition work / Removal of Asbesto Containing Material	60 days	Sun 20/7/19	Wed 20/9/16	126	129	0 days	100%	
128	**Construction of lodging facility & associated facilities**	**743 days**	**Thu 20/9/17**	**Thu 22/9/29**			**19 days**	**0%**	
129	Excavation and formation preparation	120 days	Thu 20/9/17	Thu 21/1/14	127	130	120 days	0%	
130	Construction of foundation / pavement	120 days	Mon 21/4/26	Mon 21/8/23	129,67	131	19 days	0%	
131	Supply of logging units	200 days	Tue 21/8/24	Fri 22/3/11	130,67	132FS-50 days	19 days	0%	
132	Installation of lodging units	100 days	Fri 22/1/21	Sat 22/4/30	131FS-50 days	133,134,135,136	19 days	0%	3 days
133	Installation of furniture / facility	120 days	Sun 22/5/1	Sun 22/8/28	132	137	24 days	0%	
134	Installation of E&M works	125 days	Sun 22/5/1	Fri 22/9/2	70,68,132	137	19 days	0%	5 days
135	Installation of Fire Services	125 days	Sun 22/5/1	Fri 22/9/2	132	137	19 days	0%	
136	Installation of plumbing works	125 days	Sun 22/5/1	Fri 22/9/2	70,132	137	19 days	0%	5 days
137	Testing and commissioning	27 days	Sat 22/9/3	Thu 22/9/29	136,134,135,133	138	19 days	0%	
138	**Completion of Section 2 of the works**	**0 days**	**Thu 22/9/29**	**Thu 22/9/29**	**137**		**19 days**	**0%**	
139									
140	**5. Section 3 of the works (Portions 3, 4, 4A, 4B, 5, 5A, 6 & 6A)**	**1111 days**	**Sat 20/1/18**	**Thu 23/2/2**			**365 days**	**23%**	
141	Site Access in Portions 5 and 6A	0 days	Sat 20/1/18	Sat 20/1/18	6	145,143SS	0 days	100%	
142	Site Access in Portions 3, 4, 4A, 4B, 5A and 6	0 days	Sat 20/7/18	Sat 20/7/18	11	156,145,143FF+20 days	0 days	100%	
143	General site clearance / demolition work / Removal of Asbesto Containing Material	300 days	Sun 20/1/19	Fri 20/11/13	141SS,142FF+20 days	165,156	1176 days	95%	
144	**Construction of water treatment wetland**	**588 days**	**Tue 21/5/11**	**Mon 22/12/19**			**410 days**	**14%**	
145	Excavation for sedimentation pond	120 days	Tue 21/5/11	Tue 21/9/7	64,141,142,66,13	146	28.4 days	20%	
146	Excavation for macophyte zones - down stream	71 days	Wed 21/9/8	Wed 21/11/17	145	147,153	-138 days	40%	
147	Bedding preparation	45 days	Thu 21/11/18	Sat 22/1/1	146	148,150	-138 days	0%	
148	Excavation for macophyte zones - mid stream	72 days	Sun 22/1/2	Mon 22/3/14	147	149	645 days	20%	
149	Bedding preparation	45 days	Tue 22/3/15	Thu 22/4/28	148		645 days	0%	
150	Excavation for macophyte zones - upstream	72 days	Sun 22/1/2	Mon 22/3/14	147	151	-138 days	0%	
151	Bedding preparation	45 days	Tue 22/3/15	Thu 22/4/28	150	152,201	-138 days	0%	



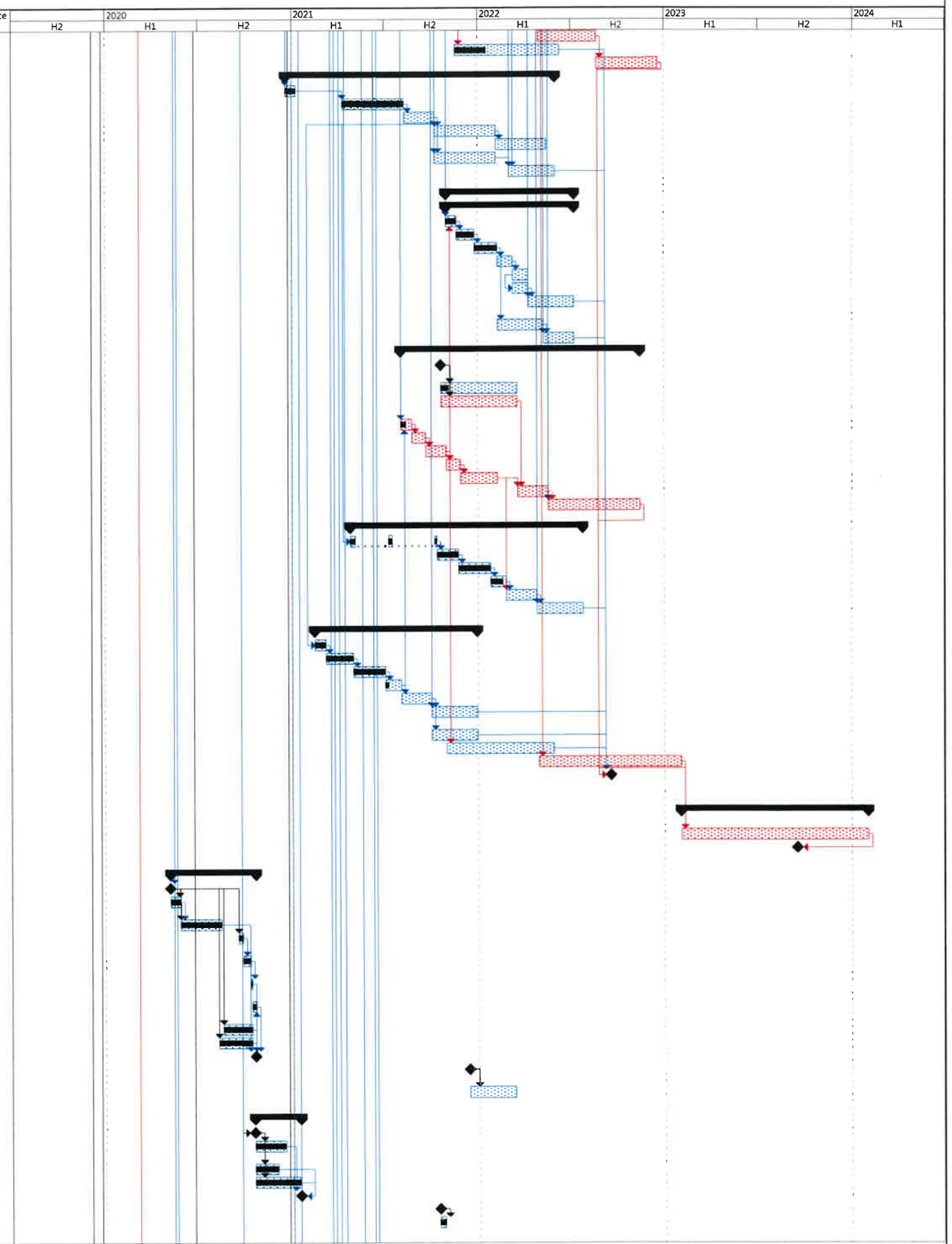
Revised Programme: February 2022

Data Date : 2022-2-3

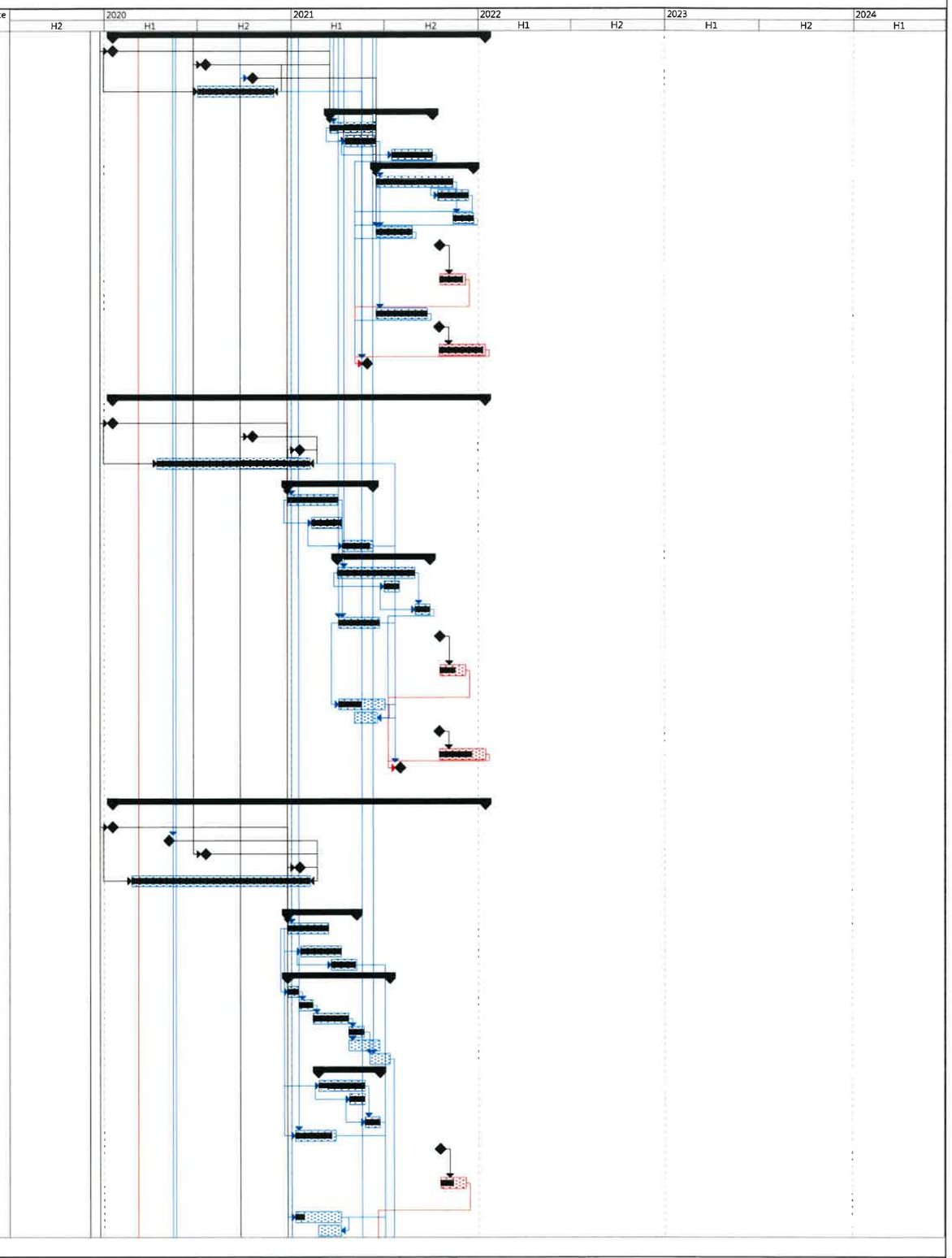
Task | Milestone | Rolled Up Task | Rolled Up Milestone | Split | Project Summary | Progress

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

ID		Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
152		Excavation for open water zone	115 days	Fri 22/4/29	Sun 22/8/21	151	154	-93 days	0%	
153		Construction of wetland broadwalk	205 days	Thu 21/11/18	Fri 22/6/10	146	202	99 days	30%	
154		Construction of Inlet and outlet structures	120 days	Mon 22/8/22	Mon 22/12/19	152	202	-93 days	0%	
155		**Construction of birdhide**	**528 days**	**Mon 20/12/21**	**Wed 22/6/1**			**611 days**	**22%**	
156	✓	Excavation and formation preparation	21 days	Mon 20/12/21	Sun 21/1/10	142,143	157	0 days	100%	
157	✓	Construction of base slab	120 days	Mon 21/4/12	Mon 21/8/9	156	158	0 days	100%	
158		Installation of steel structural frame	60 days	Tue 21/8/10	Fri 21/10/8	157	159,186,161,193	134 days	0%	
159		Installation of timber wall / roof	120 days	Sat 21/10/9	Sat 22/2/5	158,69	160	627 days	0%	4 days
160		Installation of timber rised flooring	100 days	Sun 22/2/6	Mon 22/5/16	159		627 days	0%	
161		Installation of E&M, Fire Services System	120 days	Sat 21/10/9	Sat 22/2/5	158,70,74	162	134 days	0%	
162		Testing & commissioning	90 days	Fri 22/3/4	Wed 22/6/1	70,71,161	202	108 days	0%	
163		**Construction of farmer's forum / open area**	**251 days**	**Sun 21/10/31**	**Fri 22/7/8**			**71 days**	**23%**	
164		**Construction of tea house pavilion**	**251 days**	**Sun 21/10/31**	**Fri 22/7/8**			**71 days**	**36%**	
165	✓	Construction of base slab	21 days	Sun 21/10/31	Sat 21/11/20	143,180,73	166	0 days	100%	
166	✓	Construction of walls with columns	35 days	Sun 21/11/21	Sat 21/12/25	165	167	0 days	100%	
167	✓	Installation of roof steel structure	45 days	Sun 21/12/26	Tue 22/2/8	166	168,172	0 days	100%	
168		Installation of recycled timber strip for roof	30 days	Wed 22/2/9	Thu 22/3/10	167	169	71 days	0%	
169		Installation of recycled timber strip for walls	30 days	Fri 22/3/11	Sat 22/4/9	168	170SS	71 days	0%	
170		Supply and installation of bench	30 days	Fri 22/3/11	Sat 22/4/9	169SS	171	71 days	0%	
171		Installation of plumbing works / E&M works with testing & commissioning	90 days	Sun 22/4/10	Fri 22/7/8	170,70,71,74	202	71 days	0%	
172		Construction of paving slab for open area	90 days	Wed 22/2/9	Mon 22/5/9	167	173	71 days	0%	4 days
173		Construction of entrance gantry signages	60 days	Tue 22/5/10	Fri 22/7/8	172,77	202	71 days	0%	4 days
174		**Construction of Type 1 storage house**	**469 days**	**Tue 21/8/3**	**Mon 22/11/14**			**445 days**	**3%**	
175	✓	Compensation Event No. 58 (PMI-059)-Type 1 Storage House Revision	0 days	Thu 21/10/21	Thu 21/10/21		176,177	0 days	100%	
176		Design of Fire Services (CE No. 058)	150 days	Thu 21/10/21	Sat 22/3/19	175		685 days	10%	
177		Design of Plumbing Works (CE No. 058) & Approval by WSD	150 days	Thu 21/10/21	Sat 22/3/19	175	183	-58 days	0%	
178		Excavation and formation preparation	21 days	Tue 21/8/3	Mon 21/8/23	40,196	179	-19 days	50%	
179		Construction of base slab	28 days	Tue 21/8/24	Mon 21/9/20	178	180	-19 days	0%	
180		Construction of walls and roof	40 days	Tue 21/9/21	Sat 21/10/30	179	181,165,200	-19 days	0%	
181		Installation of aluminium louvre / GMS door	28 days	Sun 21/10/31	Sat 21/11/27	180	182	-19 days	0%	
182		Installation of recycled timber strip / external finishing	73 days	Sun 21/11/28	Tue 22/2/8	181	190,183	-19 days	0%	3 days
183		Installation of Plumbing Works (CE No. 058)	60 days	Sun 22/3/20	Wed 22/5/18	182,177	184	-58 days	0%	
184		Installation of E&M works & Fire Services with testing & commissioning	180 days	Thu 22/5/19	Mon 22/11/14	70,74,183	202	-58 days	0%	
185		**Construction of outdoor classroom shelter**	**455.2 days**	**Mon 21/4/26**	**Mon 22/7/25**			**54.8 days**	**49%**	
186	✓	Excavation and formation preparation	21 days	Mon 21/4/26	Wed 21/10/13	158	187	0 days	100%	
187	✓	Construction of base slab	42 days	Wed 21/10/13	Wed 21/11/24	186	188	0 days	100%	
188	✓	Construction of concrete columns	63 days	Wed 21/11/24	Wed 22/1/26	187	189	0 days	100%	3 days
189		Installation of steel roof frame with corrugated sheet	30 days	Wed 22/1/26	Fri 22/2/25	188	190	54.8 days	80%	
190		Installation of recycled timber strip roofing	60 days	Fri 22/2/25	Tue 22/4/26	189,182	191	54.8 days	0%	
191		Installation of E&M works and Fire Services with testing & comissioning	90 days	Tue 22/4/26	Mon 22/7/25	190,74	202	54.8 days	0%	
192		**Construction of storage compositing facility**	**319 days**	**Mon 21/2/15**	**Thu 21/12/30**			**261 days**	**45%**	
193	✓	Excavation and formation preparation	22 days	Mon 21/2/15	Mon 21/3/8	158	194	0 days	100%	
194	✓	Construction of base slab	54 days	Tue 21/3/9	Sat 21/5/1	193	195	0 days	100%	
195	✓	Construction of concrete columns	63 days	Sun 21/5/2	Sat 21/7/3	194	196	0 days	100%	3 days
196		Installation of steel roof frame with corrugated sheet	30 days	Sun 21/7/4	Mon 21/8/2	195	197,178	10.5 days	20%	
197		Installation of recycled timber strip roofing	60 days	Tue 21/8/3	Fri 21/10/1	196	198,199	261 days	0%	
198		Installation of E&M works & Fire Services with testing & commissioning	90 days	Sat 21/10/2	Thu 21/12/30	197,74	202	261 days	0%	
199		**Construction of entry landing with drop bar**	**90 days**	**Sat 21/10/2**	**Thu 21/12/30**	**197**	**202**	**261 days**	**0%**	
200		**Construction of walkway**	**210 days**	**Sun 21/10/31**	**Sat 22/5/28**	**180**	**202**	**112 days**	**0%**	
201		**Landscaping softworks**	**280 days**	**Fri 22/4/29**	**Thu 23/2/2**	**151**	**202,205**	**-138 days**	**0%**	
202		**Completion of Section 3 of the works**	**0 days**	**Sat 22/9/17**	**Sat 22/9/17**	**,162,171,173,184,191,198,199,**		**-138 days**	**0%**	
203										
204		**6. Section 3A of the works (Establishment works for Section 2 and 3)**	**365 days**	**Fri 23/2/3**	**Fri 24/2/2**			**-138 days**	**0%**	
205		Establishment works for landscape softworks	365 days	Fri 23/2/3	Fri 24/2/2	201	206FF	-138 days	0%	
206		**Completion of Section 3A of the Works**	**0 days**	**Sun 23/9/17**	**Sun 23/9/17**	**205FF**		**-138 days**	**0%**	
207										
208	✓	**7. Section 4 of the works (Portion 18)**	**167 days**	**Thu 20/5/7**	**Wed 20/10/21**			**0 days**	**100%**	
209	✓	Site Access in Portion 18	0 days	Thu 20/5/7	Thu 20/5/7	9	210,211,216,217,212	0 days	100%	
210	✓	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	20 days	Fri 20/5/8	Wed 20/5/27	209	211	0 days	100%	
211	✓	General maintenance to exisitng wetland	80 days	Thu 20/5/28	Sat 20/8/15	209,210	218	0 days	100%	7 days
212	✓	Compensation Event No. 020 - Inclement Weather Conditions in August 2020	8.5 days	Fri 20/9/18	Sat 20/9/26	209	213	0 days	100%	
213	✓	Compensation Event No. 021 - Inclement Weather Conditions in September 2020	14.5 days	Sat 20/9/26	Sat 20/10/10	212	214	0 days	100%	
214	✓	Compensation Event No. 028 - Inclement Weather Conditions in October 2020	3 days	Sun 20/10/11	Tue 20/10/13	213	218	0 days	100%	
215	✓	Compensation Event No. 026 - Provision of Root Barriers behind Gabion Walls of Irrigation Channel	8 days	Wed 20/10/14	Wed 20/10/21	216	218	0 days	100%	
216	✓	Construction of Irrigation Channel	56 days	Wed 20/8/19	Tue 20/10/13	209	215	0 days	100%	
217	✓	Construction of Metal Wire Railing	65 days	Mon 20/8/10	Tue 20/10/13	209	218	0 days	100%	
218	✓	**Completion of Section 4 of the works**	**0 days**	**Wed 20/10/21**	**Wed 20/10/21**	**211,217,214,215**		**0 days**	**100%**	
219	✓	Compensation Event No. 69 (PMI-055)- Additional Stairway at Portion 18	0 days	Tue 21/12/14	Tue 21/12/14		220	0 days	100%	
220		Additional Stariway at Portion 18	90 days	Tue 21/12/14	Sun 22/3/13	219		691 days	0%	
221										
222	✓	**8. Section 5 of the works (Portion 14)**	**90 days**	**Sun 20/10/18**	**Sat 21/1/16**			**0 days**	**100%**	
223	✓	Site Access in Portion 14	0 days	Sun 20/10/18	Sun 20/10/18	14	226,224,225	0 days	100%	
224	✓	General site clearance / demolition work / Removal of Asbesto Containing Material	60 days	Mon 20/10/19	Thu 20/12/17	223	227	0 days	100%	
225	✓	General maintenance to exisiting wetland	45 days	Mon 20/10/19	Wed 20/12/2	223	227FF	0 days	100%	
226	✓	Boundary Structure - Metal Wire Railing	90 days	Mon 20/10/19	Sat 21/1/16	223	227FF	0 days	100%	
227		**Completion of Section 5 of the works**	**0 days**	**Sat 21/1/16**	**Sat 21/1/16**	**226FF,225FF,224**		**0 days**	**0%**	
228	✓	Compensation Event No. 32 (PMI-032) - Soil Replacement Works in P	0 days	Sat 21/10/16	Sat 21/10/16		229	0 days	100%	
229	✓	Soil Replacement Works	10 days	Sat 21/10/16	Mon 21/10/25	228		0 days	100%	
230										



ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
231	**9. Section 6 of the works (Portions 8,8A,8B and 9,9A~9G)**	**728 days**	**Sat 20/1/18**	**Sat 22/1/15**			**0 days**	**99%**	
232	Site Access in Portions 8A, 9A, 9C, 9E, 9F, 9G	0 days	Sat 20/1/18	Sat 20/1/18	6	237,235SS	0 days	100%	
233	Site Access in Portion 8	0 days	Sat 20/7/18	Sat 20/7/18	11	235FF+10 days,237	0 days	100%	
234	Site Access in Portions 8B, 9, 9B, 9D	0 days	Sun 20/10/18	Sun 20/10/18	15,16	235FF+10 days,237,241	0 days	100%	
235	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	150 days	Fri 20/7/3	Sun 20/11/29	232SS,233FF+10 days,234FF+10 days	250	0 days	100%	
236	**Wetland Restoration / Wetland Creation**	**200 days**	**Fri 21/3/19**	**Mon 21/10/4**			**0 days**	**100%**	
237	Excavation	90 days	Fri 21/3/19	Wed 21/6/16	232,54,52,233,234,15	238SS+30 days	0 days	100%	
238	Backfilling	60 days	Sun 21/4/18	Wed 21/6/16	237SS+30 days	239SS+90 days,241,244,247	0 days	100%	
239	Agricultural Planting	80 days	Sat 21/7/17	Mon 21/10/4	238SS+90 days	250	0 days	100%	
240	**Construction of Storage Sheds**	**190 days**	**Thu 21/6/17**	**Thu 21/12/23**			**0 days**	**100%**	
241	Construction of concrete structure	150 days	Thu 21/6/17	Sat 21/11/13	238,234,16	242FS-30 days,243	0 days	100%	4 days
242	Installation of Alluminium Window/Louvre and GMS Door with recycle timber decoration	60 days	Fri 21/10/15	Mon 21/12/13	241FS-30 days	250	0 days	100%	
243	Installation of GMS roofing structure with recycle timber	40 days	Sun 21/11/14	Thu 21/12/23	241	250	0 days	100%	
244	Construction of Channel	70 days	Thu 21/6/17	Wed 21/8/25	238,79	250	0 days	100%	7 days
245	Compensation Event No. 49 (PMI-048) - Provision of Additional Catchpits in Irrigation Channel and Modification of Existing Catchpits in Existing Concrete Rectangular Channel	0 days	Tue 21/10/19	Tue 21/10/19		246	0 days	100%	
246	Provision of Additional Catchpits in Irrigation Channel and Modification of Existing Catchpits in Existing Concrete Rectangular Channel	50 days	Tue 21/10/19	Tue 21/12/7	245	250	-191 days	90%	
247	Construction of walkway	100 days	Thu 21/6/17	Fri 21/9/24	238	250	0 days	100%	7 days
248	Compensation Event No. 61 (PMI-052)- Construction of Drainage Ditches at Long Valley	0 days	Mon 21/10/18	Mon 21/10/18		249	0 days	100%	
249	Construction of Drainage Ditches in Section 6	90 days	Mon 21/10/18	Sat 22/1/15	248	250	-230 days	95%	
250	**Completion of Section 6 of the works**	**0 days**	**Sun 21/5/30**	**Sun 21/5/30**	39,243,244,247,235,242,249,24		**-230 days**	**0%**	
251									
252	**10. Section 7 of the works (Portions 10,10A,10B, 13,13A and 16,16A,16B)**	**728 days**	**Sat 20/1/18**	**Sat 22/1/15**			**0 days**	**87%**	
253	Site Access in Portions 10A, 10B, 13A, 16	0 days	Sat 20/1/18	Sat 20/1/18	6	258,256SS	0 days	100%	
254	Site Access in Portions 10, 13	0 days	Sun 20/10/18	Sun 20/10/18	14	256FF+20 days	0 days	100%	
255	Site Access in Portions 16A, 16B	0 days	Mon 21/1/18	Mon 21/1/18	17	256FF+20 days	0 days	100%	
256	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	300 days	Tue 20/4/14	Sun 21/2/7	253SS,254FF+20 days,255FF+20 days	272	0 days	100%	
257	**Wetland Restoration / Wetland Creation**	**167 days**	**Sat 20/12/26**	**Thu 21/6/10**			**53 days**	**97%**	
258	Excavation	100 days	Sat 20/12/26	Sun 21/4/4	253,54,52	259SS+47 days,265	0 days	100%	
259	Backfilling	60 days	Thu 21/2/11	Sun 21/4/11	258SS+47 days	260SS+60 days	0 days	100%	
260	Agricultural Planting	60 days	Mon 21/4/12	Thu 21/6/10	259SS+60 days	272	53 days	90%	
261	**Construction of storage sheds**	**180 days**	**Sat 21/4/3**	**Wed 21/9/29**			**0 days**	**100%**	
262	Construction of concrete structure	150 days	Sat 21/4/3	Mon 21/8/30	18	263SS+90 days,264	0 days	100%	
263	Installation of Alluminium Window/Louvre and GMS Door with recycle timber decoration	30 days	Fri 21/7/2	Sat 21/7/31	262SS+90 days	264SS+30 days	0 days	100%	
264	Installation of GMS roofing structure with recycle timber	30 days	Tue 21/8/31	Wed 21/9/29	263SS+30 days,262	272	0 days	100%	
265	Construction of Channel	80 days	Mon 21/4/5	Wed 21/6/23	79,258	268SS,272	0 days	100%	7 days
266	Compensation Event No. 49 (PMI-048) - Provision of Additional Catchpits in Irrigation Channel and Modification of Existing Catchpits in Existing Concrete Rectangular Channel	0 days	Tue 21/10/19	Tue 21/10/19		267	0 days	100%	
267	Provision of Additional Catchpits in Irrigation Channel and Modification of Existing Catchpits in Existing Concrete Rectangular Channel	50 days	Tue 21/10/19	Tue 21/12/7	266	272	-127 days	60%	
268	Construction of walkway	90 days	Mon 21/4/5	Sat 21/7/3	265SS	269FF-15 days,272	30 days	50%	6 days
269	Construction of entry landing with drop bar	45 days	Wed 21/5/5	Fri 21/6/18	268FF-15 days	272	45 days	0%	
270	Compensation Event No. 61 (PMI-052)- Construction of Drainage Ditches at Long Valley	0 days	Mon 21/10/18	Mon 21/10/18		271	0 days	100%	
271	Construction of Drainage Ditches in Section 7	90 days	Mon 21/10/18	Sat 22/1/15	270	272	-166 days	70%	
272	**Completion of Section 7 of the works**	**0 days**	**Mon 21/8/2**	**Mon 21/8/2**	30,264,265,268,269,256,271,26		**-166 days**	**0%**	
273									
274	**11. Section 8 of the works (Portions 7,7A,7B, 17,17A,17B, 19,19A,19B,19C, 20,20A,20B&20C)**	**728 days**	**Sat 20/1/18**	**Sat 22/1/15**			**748 days**	**77%**	
275	Site Access in Portions 7, 17, 19A, 19B, 19C, 20A, 20B	0 days	Sat 20/1/18	Sat 20/1/18	6	281,279SS	0 days	100%	
276	Site Access in Portions 19, 20, 20C	0 days	Thu 20/5/7	Thu 20/5/7	9	279FF+20 days	0 days	100%	
277	Site Access in Portions 7A, 7B	0 days	Sat 20/7/18	Sat 20/7/18	11	279FF+20 days	0 days	100%	
278	Site Access in Portions 17A, 17B	0 days	Mon 21/1/18	Mon 21/1/18	17	279FF+20 days	0 days	100%	
279	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	350 days	Mon 20/2/24	Sun 21/2/7	275SS,276FF+20 days,277FF+20 days,278FF+20 days		0 days	100%	
280	**Wetland Restoration / Wetland Creation**	**135 days**	**Sat 20/12/26**	**Sun 21/5/9**			**65 days**	**99%**	
281	Excavation	80 days	Sat 20/12/26	Mon 21/3/15	275,54,52	282SS+25 days,292SS+60 days,285SS,295SS	0 days	100%	
282	Backfilling	80 days	Wed 21/1/20	Fri 21/4/9	281SS+25 days	283SS+60 days	0 days	100%	
283	Agricultural Planting	50 days	Sun 21/3/21	Sun 21/5/9	282SS+60 days	302	65 days	95%	
284	**Construction of Type 2 storage house**	**199 days**	**Sat 20/12/26**	**Mon 21/7/12**			**935 days**	**60%**	
285	Excavation and formation preparation	21 days	Sat 20/12/26	Fri 21/1/15	281SS	286	0 days	100%	
286	Construction of base slab	28 days	Sat 21/1/16	Fri 21/2/12	285	287	0 days	100%	
287	Construction of walls and roof	70 days	Sat 21/2/13	Fri 21/4/23	286	288,289	0 days	100%	
288	Installation of aluminium louvre / GMS door	30 days	Sat 21/4/24	Sun 21/5/23	287	290	0 days	100%	
289	Installation of recycled timber strip / external finishing	60 days	Sat 21/4/24	Tue 21/6/22	287		955 days	0%	
290	Installation of E&M works with testing & commissioning	40 days	Thu 21/6/3	Mon 21/7/12	288,74	302	1 day	0%	
291	**Construction of storage sheds**	**120 days**	**Wed 21/2/24**	**Wed 21/6/23**			**0 days**	**100%**	
292	Construction of concrete structure	90 days	Wed 21/2/24	Mon 21/5/24	281SS+60 days	293SS+60 days,294	0 days	100%	
293	Installation of Alluminium Window/Louvre and GMS Door with recycle timber decoration	30 days	Sun 21/4/25	Mon 21/5/24	292SS+60 days	294SS+21 days	0 days	100%	
294	Installation of GMS roofing structure with recycle timber	30 days	Tue 21/5/25	Wed 21/6/23	293SS+21 days,292	302	0 days	100%	
295	Construction of Channel	80 days	Sat 21/1/9	Mon 21/3/29	79,281SS	298SS,302	106 days	90%	7 days
296	Compensation Event No. 49 (PMI-048) - Provision of Additional Catchpits in Irrigation Channel and Modification of Existing Catchpits in Existing Concrete Rectangular Channel	0 days	Tue 21/10/19	Tue 21/10/19		297	0 days	100%	
297	Provision of Additional Catchpits in Irrigation Channel and Modification of Existing Catchpits in Existing Concrete Rectangular Channel	50 days	Tue 21/10/19	Tue 21/12/7	296	302	-147 days	50%	
298	Construction of walkway	90 days	Sat 21/1/9	Thu 21/4/8	295SS	299FF,302	96 days	20%	7 days
299	Construction of entry landing with drop bar	45 days	Tue 21/2/23	Thu 21/4/8	298FF		1030 days	0%	

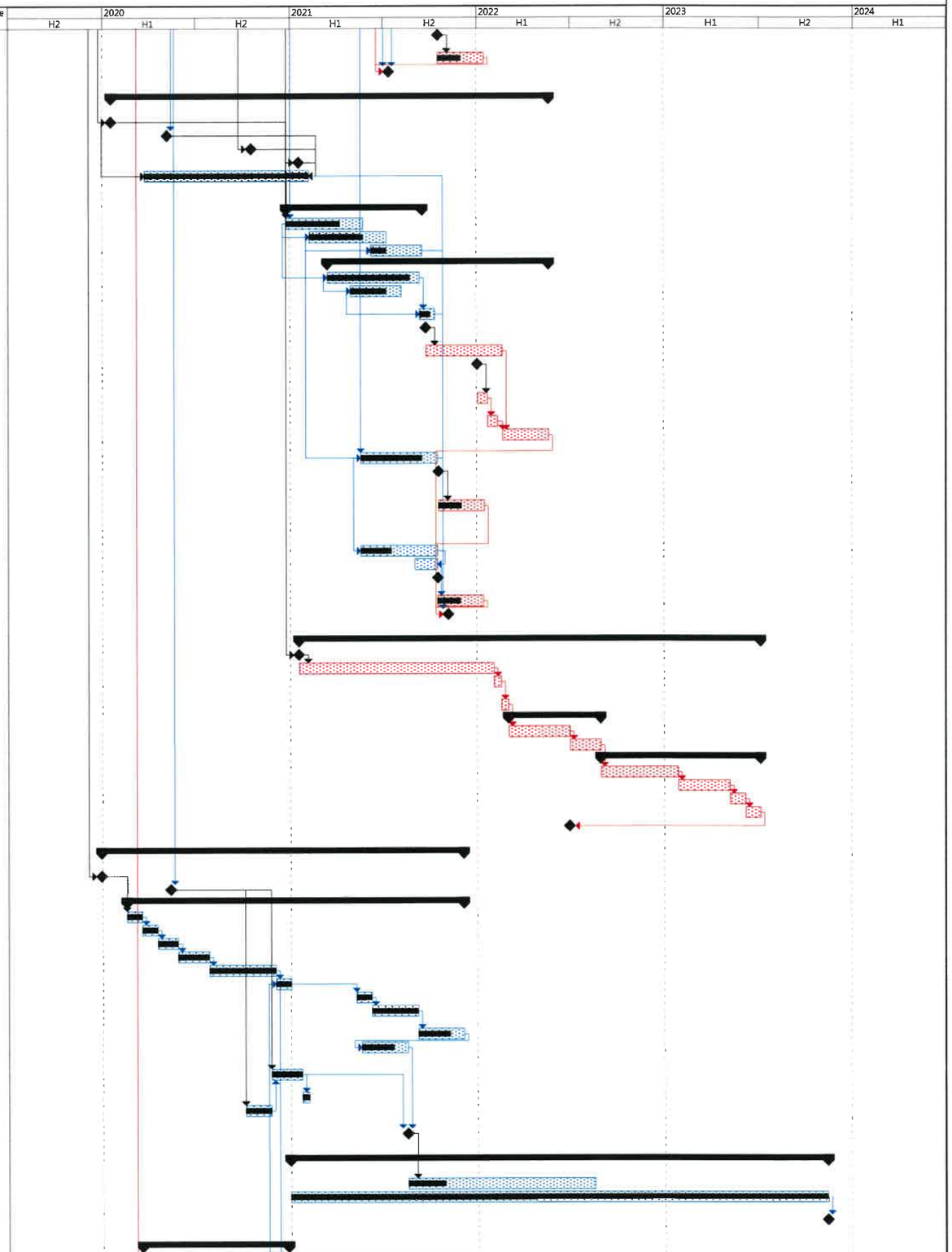


Contract No. ND/2019/03

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

Project Programme of the Works

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
300	Compensation Event No. 61 (PMI-052)- Construction of Drainage Ditches at Long Valley	0 days	Mon 21/10/18	Mon 21/10/18		301	0 days	100%	
301	Construction of Drainage Ditches in Section 8	90 days	Mon 21/10/18	Sat 22/1/15	300	302	-186 days	50%	
302	**Completion of Section 8 of the works**	**0 days**	**Tue 21/7/13**	**Tue 21/7/13**	**283,290,294,295,298,301,297**		**-186 days**	**0%**	
303									
304	**12. Section 9 of the works (Portions 11,11A,11B, 12,12A~12D, and 15,15A~15C)**	**854 days**	**Sat 20/1/18**	**Sat 22/5/21**			**622 days**	**59%**	
305	Site Access in Portions 11A, 11B, 12A, 12C, 12D, 15B, 15C	0 days	Sat 20/1/18	Sat 20/1/18	6	311,309SS	0 days	100%	
306	Site Access in Portion 15A	0 days	Thu 20/5/7	Thu 20/5/7	9	309FF+20 days	0 days	100%	
307	Site Access in Portions 11, 12, 12B	0 days	Sun 20/10/18	Sun 20/10/18	14	309FF+20 days	0 days	100%	
308	Site Access in Portion 15	0 days	Mon 21/1/18	Mon 21/1/18	17	309FF+20 days	0 days	100%	
309	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	320 days	Wed 20/3/25	Sun 21/2/7	305SS,306FF+20 days,307FF+20 days,308FF+20 days	331	0 days	100%	
310	**Wetland Restoration / Wetland Creation**	**265 days**	**Sat 20/12/26**	**Thu 21/9/16**			**869 days**	**60%**	
311	Excavation	150 days	Sat 20/12/26	Mon 21/5/24	305,54,52	312SS+45 days,315SS+80 days	984 days	70%	
312	Backfilling	150 days	Tue 21/2/9	Thu 21/7/8	311SS+45 days	313SS+120 days,324SS+100 days	939 days	70%	
313	Agricultural Planting	100 days	Wed 21/6/9	Thu 21/9/16	312SS+120 days	331	51 days	30%	
314	**Construction of storage sheds**	**432 days**	**Tue 21/3/16**	**Sat 22/5/21**			**622 days**	**43%**	
315	Construction of concrete structure	180 days	Tue 21/3/16	Sat 21/9/11	311SS+80 days	316SS+45 days,317	47 days	90%	
316	Installation of Alluminium Window/Louvre and GMS Door with recycle timber decoration	100 days	Fri 21/4/30	Sat 21/8/7	315SS+45 days	317SS+21 days	909 days	70%	
317	Installation of GMS roofing structure with recycle timber	30 days	Sun 21/9/12	Mon 21/10/11	316SS+21 days,315	331	26 days	70%	3 days
318	Compensation Event No. 59 (PMI-060) - Provision of Dangerous Goods Store at Storage Shed 30	0 days	Fri 21/9/24	Fri 21/9/24		319	-196 days	0%	
319	Design of Fire Services	150 days	Fri 21/9/24	Sun 22/2/20	318	323	-196 days	0%	
320	Compensation Event No. 76 (PMI-070) - Additional Fill Slope Foundation Works for Storage Shed 30	0 days	Mon 22/1/3	Mon 22/1/3		321	-187 days	0%	
321	Construction of Fill Slope Foundation Works for Storage Shed SS30	20 days	Mon 22/1/3	Sat 22/1/22	320	322	-187 days	0%	
322	Construction of Storage Shed SS30	20 days	Sun 22/1/23	Fri 22/2/11	321	323	-187 days	0%	
323	Installation of E&M works & Fire Services with testing & commissioning	90 days	Mon 22/2/21	Sat 22/5/21	319,322	331	-196 days	0%	
324	Construction of Channel	150 days	Thu 21/5/20	Sat 21/10/16	312SS+100 days,79	327SS,331	21 days	80%	4 days
325	Compensation Event No. 49 (PMI-048) - Provision of Additional Catchpits in Irrigation Channel and Modification of Existing Catchpits in Existing Concrete Rectangular Channel	0 days	Tue 21/10/19	Tue 21/10/19		326	0 days	100%	
326	Provision of Additional Catchpits in Irrigation Channel and Modification of Existing Catchpits in Existing Concrete Rectangular Channel	90 days	Tue 21/10/19	Sun 22/1/16	325	331	-71 days	50%	
327	Construction of walkway	150 days	Thu 21/5/20	Sat 21/10/16	324SS	328FF,331	21 days	40%	4 days
328	Construction of entry landing with drop bar	45 days	Thu 21/9/2	Sat 21/10/16	327FF	330	45 days	0%	
329	Compensation Event No. 61 (PMI-052)- Construction of Drainage Ditches at Long Valley	0 days	Mon 21/10/18	Mon 21/10/18			0 days	100%	
330	Construction of Drainage Ditches in Section 9	90 days	Sun 21/10/17	Fri 22/1/14	328	331	0 days	50%	
331	**Completion of Section 9 of the works**	**0 days**	**Sat 21/11/6**	**Sat 21/11/6**	**313,317,324,327,309,330,326,**		**-196 days**	**0%**	
332									
333	**13. Section 10 of the works (Portion 21)**	**899 days**	**Mon 21/1/18**	**Thu 23/7/6**			**-371 days**	**0%**	
334	Site Access in Portion 21	0 days	Mon 21/1/18	Mon 21/1/18	17	335	-371 days	0%	
335	Local Objection for commencement of Works	381 days	Tue 21/1/19	Thu 22/2/3	334	336	-371 days	0%	
336	General site clearance / demolition work / Removal of Asbesto Containing Material	14 days	Fri 22/2/4	Thu 22/2/17	335	337	-371 days	0%	
337	Erect site hoarding	14 days	Fri 22/2/18	Thu 22/3/3	336	339	-371 days	0%	
338	**Archaeological Impacts Mitigation Measures**	**180 days**	**Fri 22/3/4**	**Tue 22/8/30**			**-371 days**	**0%**	
339	Archaeological survey	120 days	Fri 22/3/4	Fri 22/7/1	337	340	-371 days	0%	
340	Archaeological impact assessment	60 days	Sat 22/7/2	Tue 22/8/30	339	342	-371 days	0%	
341	**Site formation work and infrastructure works at Wa Shan**	**310 days**	**Wed 22/8/31**	**Thu 23/7/6**			**-371 days**	**0%**	
342	Site formation / slope works	150 days	Wed 22/8/31	Fri 23/1/27	340	343	-371 days	0%	4 days
343	Drainage works	100 days	Sat 23/1/28	Sun 23/5/7	342	344	-371 days	0%	4 days
344	Paving block on footway	30 days	Mon 23/5/8	Tue 23/6/6	343	345	-371 days	0%	
345	bituminous pavement on carriageway	30 days	Wed 23/6/7	Thu 23/7/6	344	346FF	-371 days	0%	
346	**Completion of Section 10 of the works**	**0 days**	**Thu 22/6/30**	**Thu 22/6/30**	**345FF**		**-371 days**	**0%**	
347									
348	**14. Section 11 of the works (Portions 22, 23, 24 and remainder works)**	**706 days**	**Tue 19/12/31**	**Sun 21/12/5**			**551 days**	**93%**	
349	Site Access in Portions 23, 24	0 days	Tue 19/12/31	Tue 19/12/31	7	352	0 days	100%	
350	Site Access in Portion 22	0 days	Wed 20/5/13	Wed 20/5/13	10	363,365	0 days	100%	
351	**Egretray Site Protion 23 & 24**	**657 days**	**Tue 20/2/18**	**Sun 21/12/5**			**551 days**	**91%**	
352	General site clearance	30 days	Tue 20/2/18	Wed 20/3/18	349	353	0 days	100%	
353	Erect site hoarding (Deleted)	30 days	Thu 20/3/19	Fri 20/4/17	352	354	0 days	100%	
354	Preliminary Survey	40 days	Sat 20/4/18	Wed 20/5/27	353	355	0 days	100%	
355	Submission of mehtodology for translocation	60 days	Thu 20/5/28	Sun 20/7/26	354	356	0 days	100%	
356	Approval of Methodology for Translocation	130 days	Mon 20/7/27	Thu 20/12/3	355	357,376	0 days	100%	
357	Translocation works	30 days	Fri 20/12/4	Sat 21/1/2	356,377	358	0 days	100%	
358	Planting in Portion 23 & 24	30 days	Mon 21/5/10	Tue 21/6/8	357	359	0 days	100%	
359	Provision of Railing and Gate at Portion 23 (Under PMI 026 / CE 019)	90 days	Wed 21/6/9	Mon 21/9/6	358	360	0 days	100%	
360	Establishmnet of A1-7FLN Egretray Site (Portion 23)	90 days	Tue 21/9/7	Sun 21/12/5	359	361FS-200 days	551 days	70%	10 days
361	Establishment of B1-7FLN Egretray Site (Portion 24)	90 days	Thu 21/5/20	Tue 21/8/17	360FS-200 days	366	488 days	70%	10 days
362									
363	Preparation Works for Landscaping work at existing Ho Sheung Heung Egretry Site (Portion 22)	60 days	Wed 20/11/25	Sat 21/1/23	350,365	366,364	0 days	100%	10 days
364	Planting for Ho Sheung Heung Egretry Site	14 days	Sun 21/1/24	Sat 21/2/6	363		0 days	100%	
365	Compensation Event No. 017 - Removal of Existing Unsafe Sheds	50 days	Tue 20/10/6	Tue 20/11/24	350	363	0 days	100%	
366	**Completion of Section 11 of the works**	**0 days**	**Tue 21/8/17**	**Tue 21/8/17**	**363,361**	**369**	**488 days**	**0%**	
367									
368	**15. Section 11A of the works (Establishment works for Section 11)**	**1050 days**	**Fri 21/1/1**	**Thu 23/11/16**			**78 days**	**79%**	
369	Establishment works	365 days	Wed 21/8/18	Wed 22/8/17	366		534 days	20%	
370	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		371	0 days	100%	
371	**Completion of Section 11A of the works**	**0 days**	**Thu 23/11/16**	**Thu 23/11/16**	**370**		**32 days**	**0%**	
372									
373	**16. Section 12 of the works (Portions 25, 26 and 27)**	**284 days**	**Wed 20/3/18**	**Sun 20/12/27**			**0 days**	**100%**	



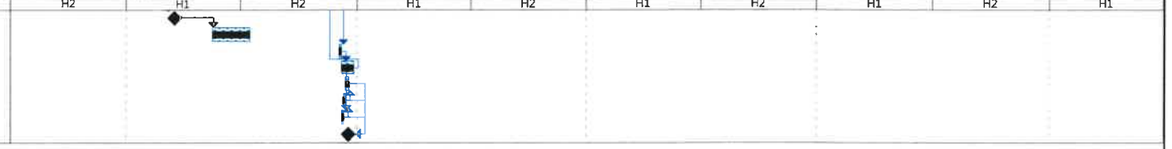
Revised Programme: February 2022

Data Date : 2022-2-3

Task | Milestone | Rolled Up Task | Rolled Up Milestone | Split | Project Summary | Progress

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

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



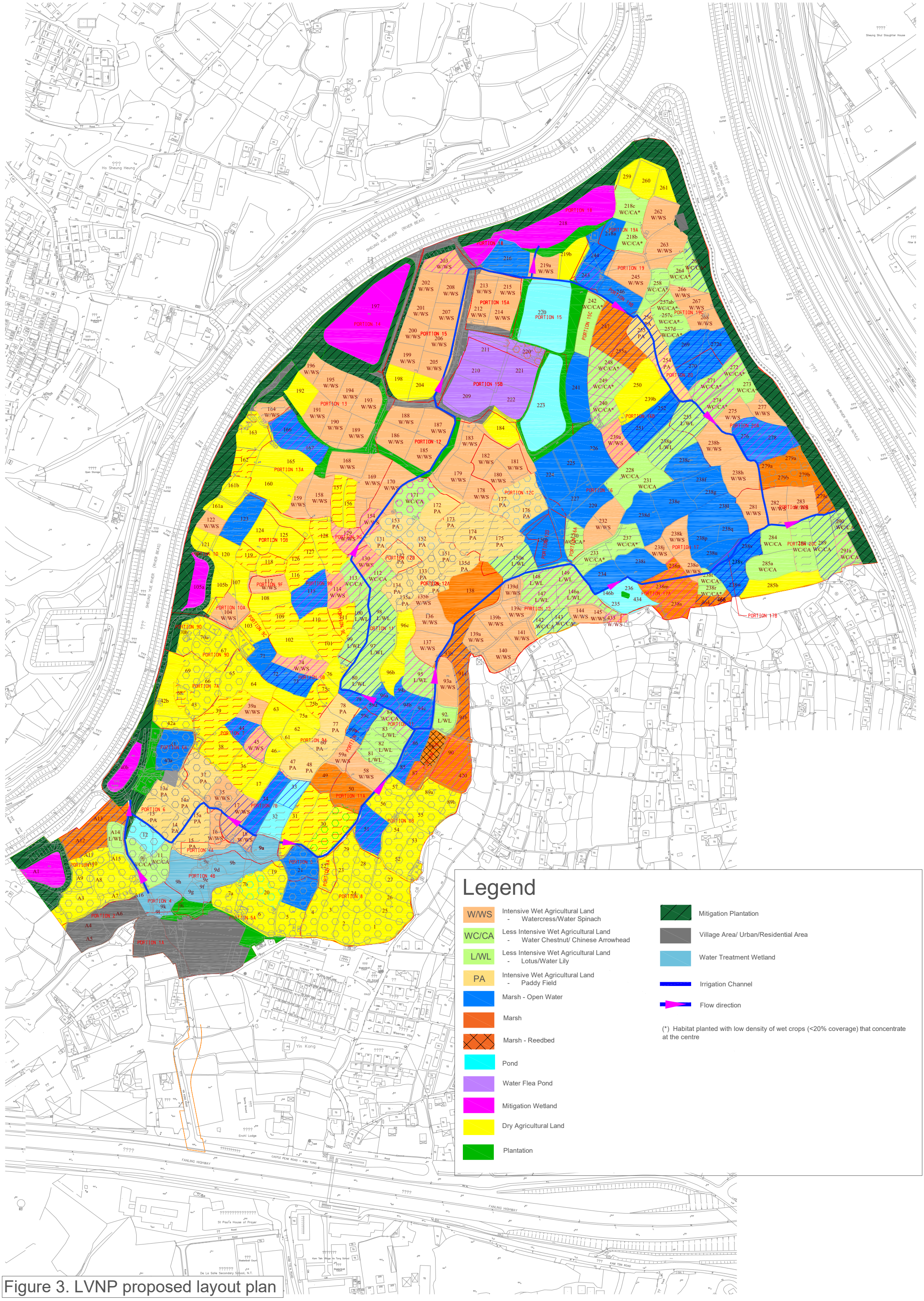


Figure 3. LVNP proposed layout plan

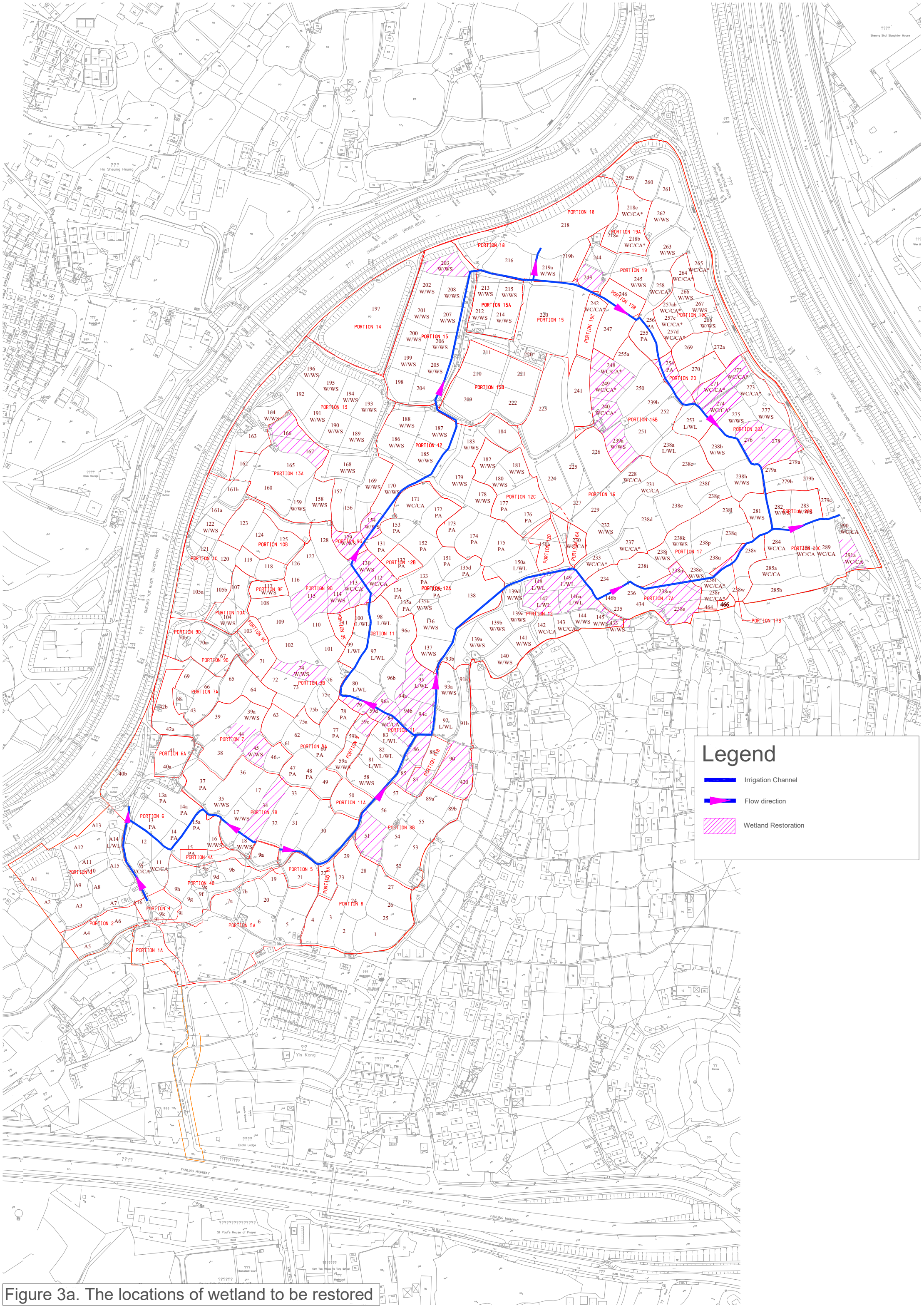


Figure 3a. The locations of wetland to be restored

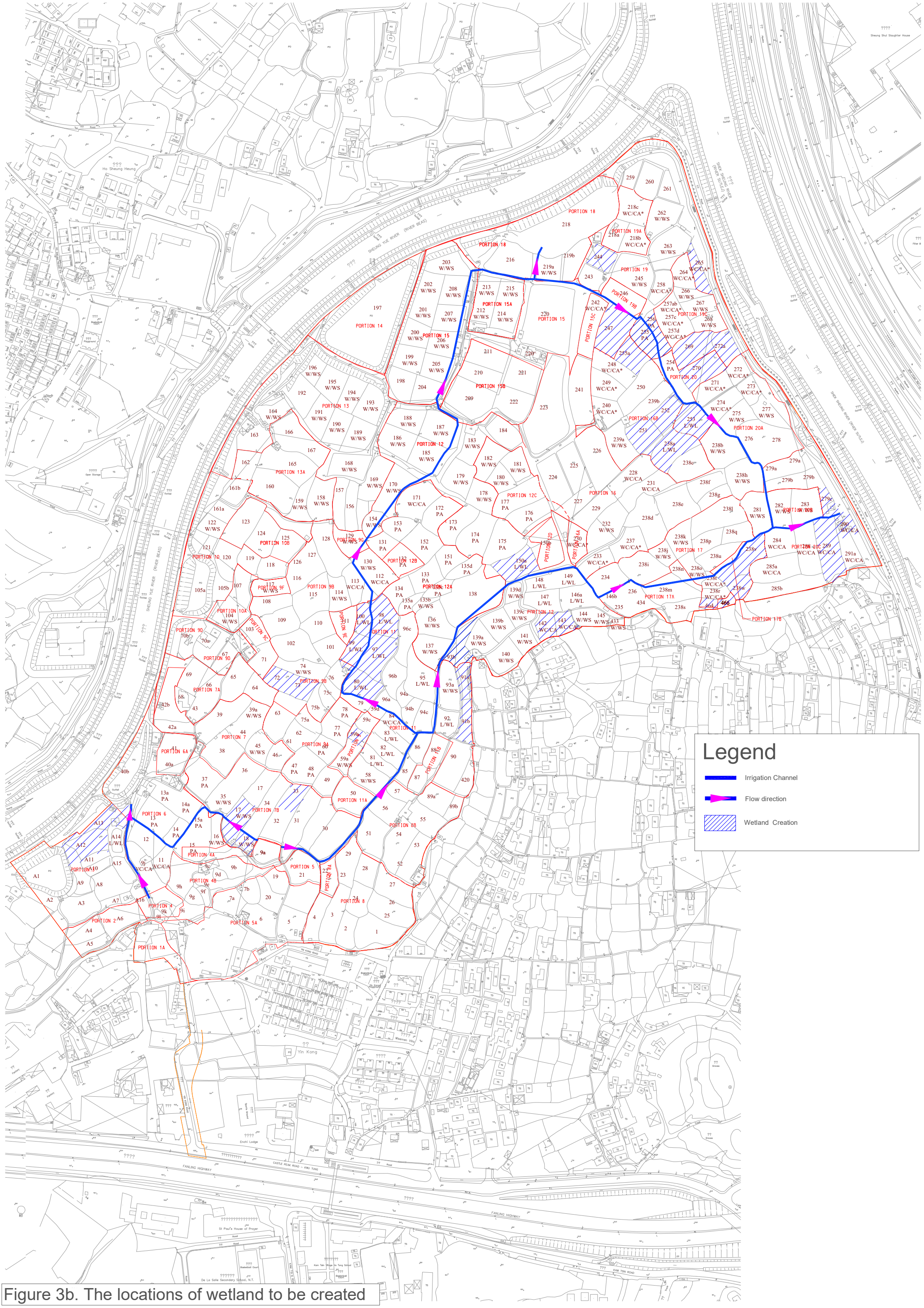


Figure 3b. The locations of wetland to be created

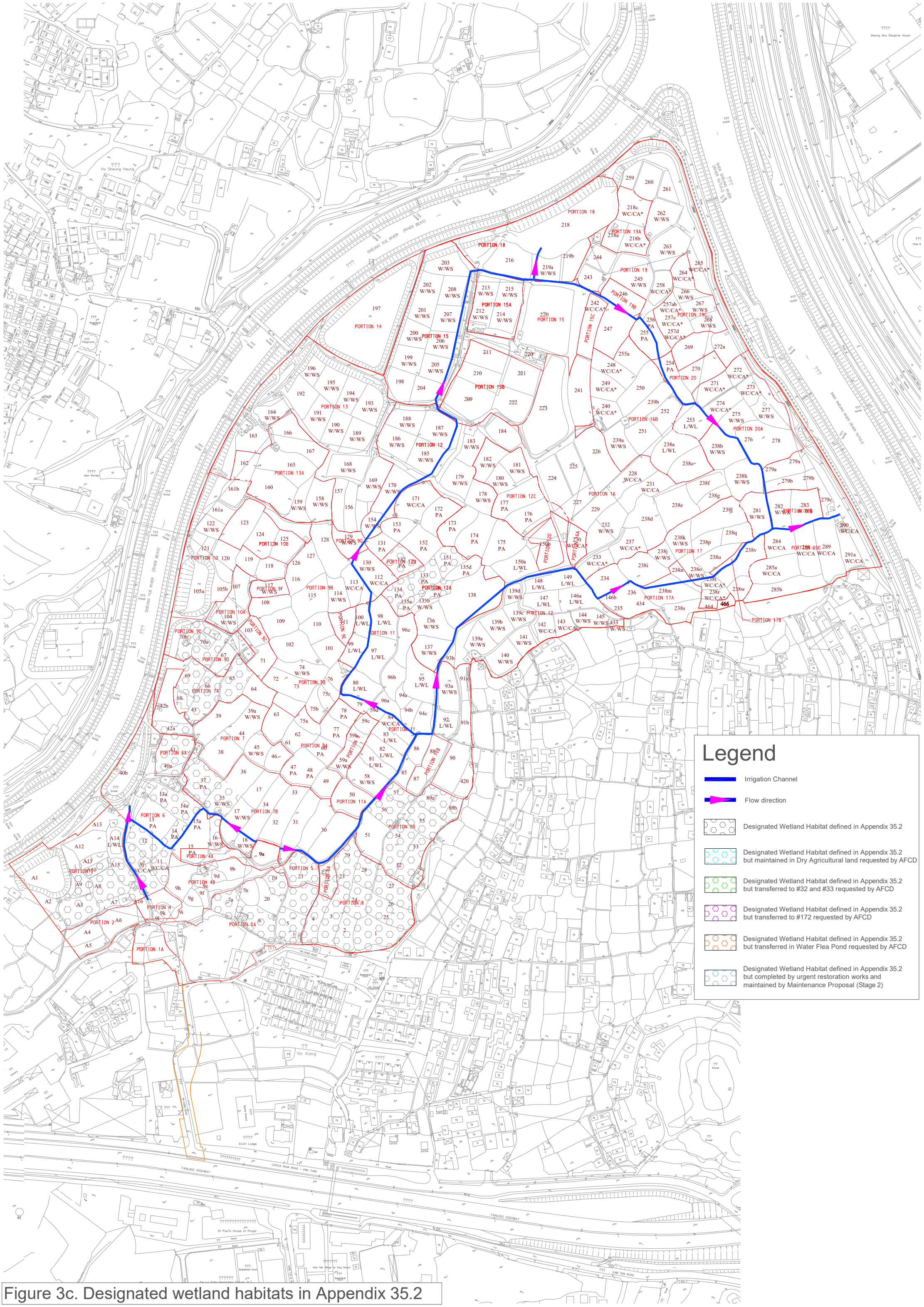


Figure 3c. Designated wetland habitats in Appendix 35.2

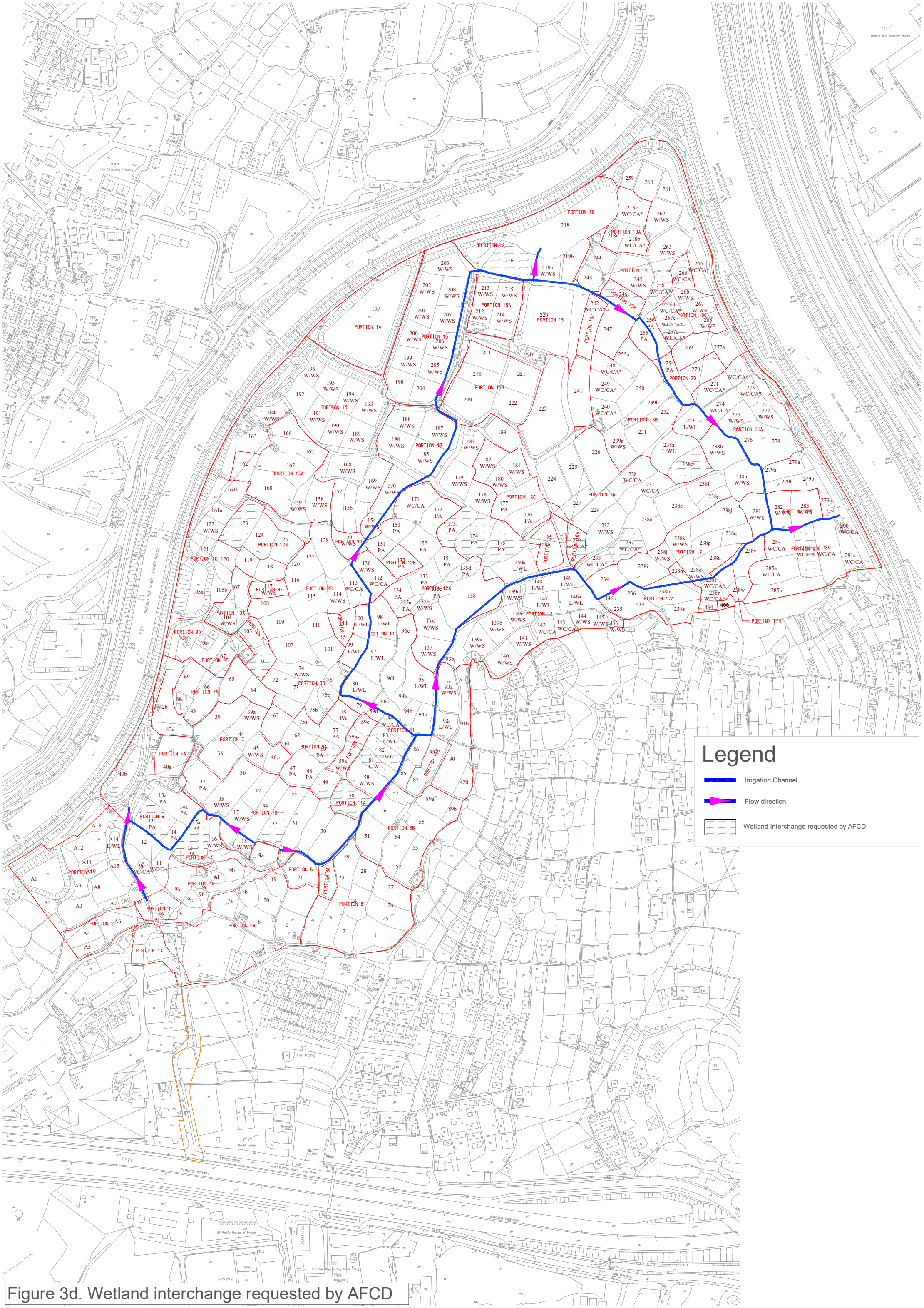
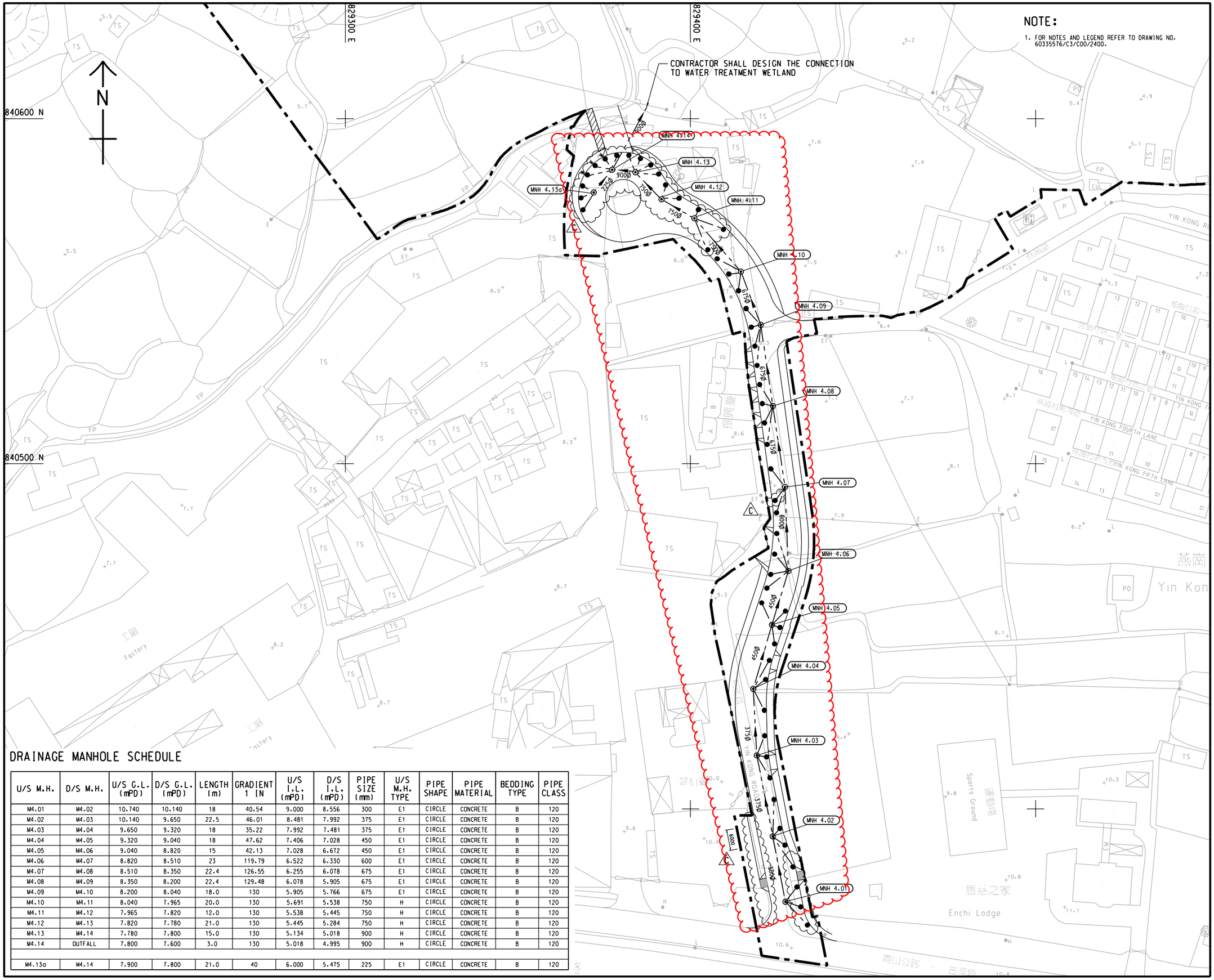


Figure 3d. Wetland interchange requested by AFCD



DRAINAGE MANHOLE SCHEDULE

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

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

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

CONSULTANT
AECOM

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

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

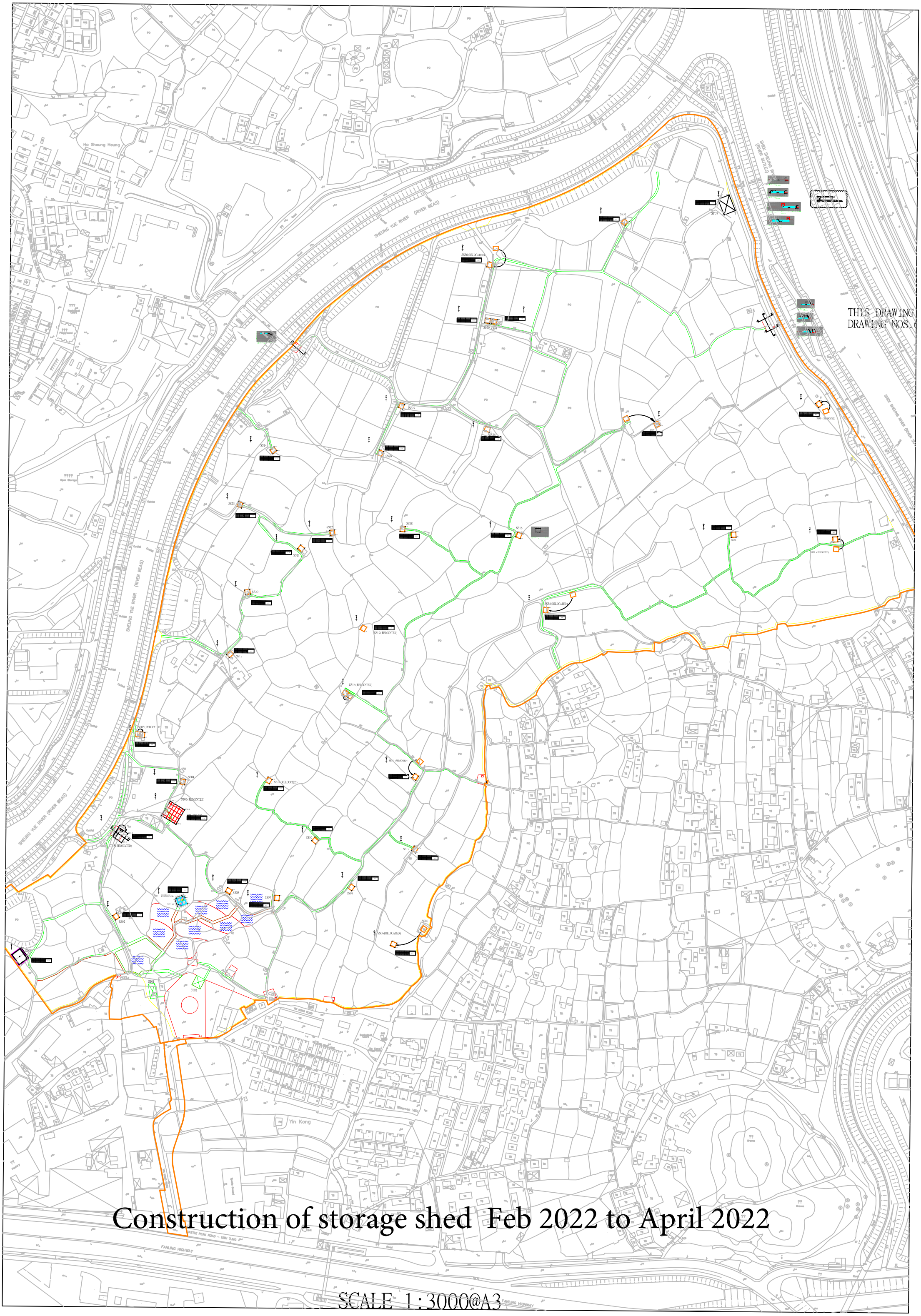
REMARK :
1. SUPERSEDE DRG NO. 60335576/C3/C00/2410

TITLE
YIN KONG ROAD - ROAD DRAINAGE LAYOUT

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

26/8/2021 Y:\TO\TO_ND_2019_03\C3_Site Sketch\C3_SK0052C.dgn

Y:\TO\TO_ND_2019_03\C3_Site Sketch\C3_SK0052C.dgn 26/8/2021 9:12:34



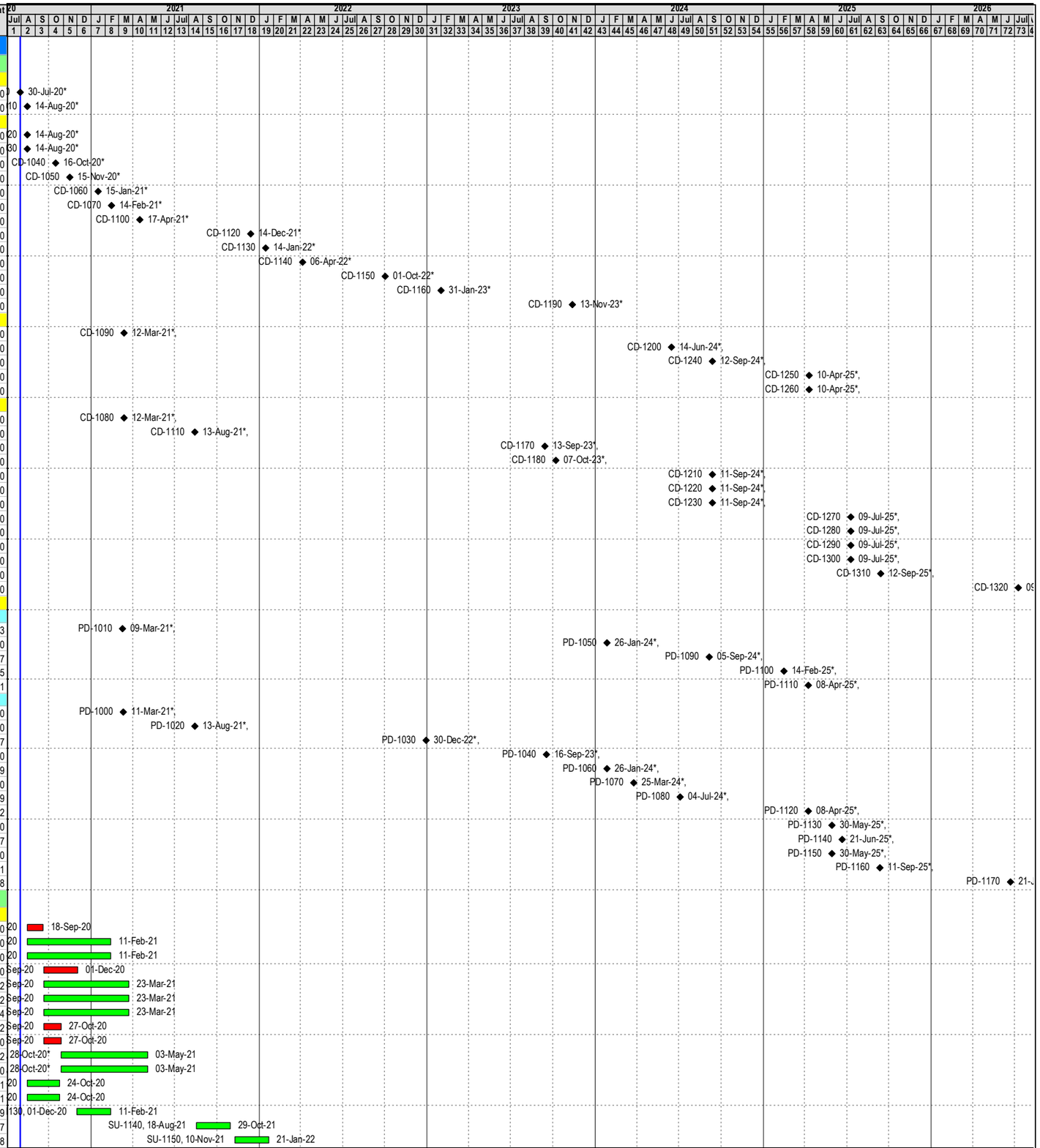
THIS DRAWING
DRAWING NOS.

Construction of storage shed Feb 2022 to April 2022

SCALE 1:3000@A3

Construction Programme of ND/2019/04

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



◆ Milestone

Actual Work

Remaining Work

Critical Remaining Work

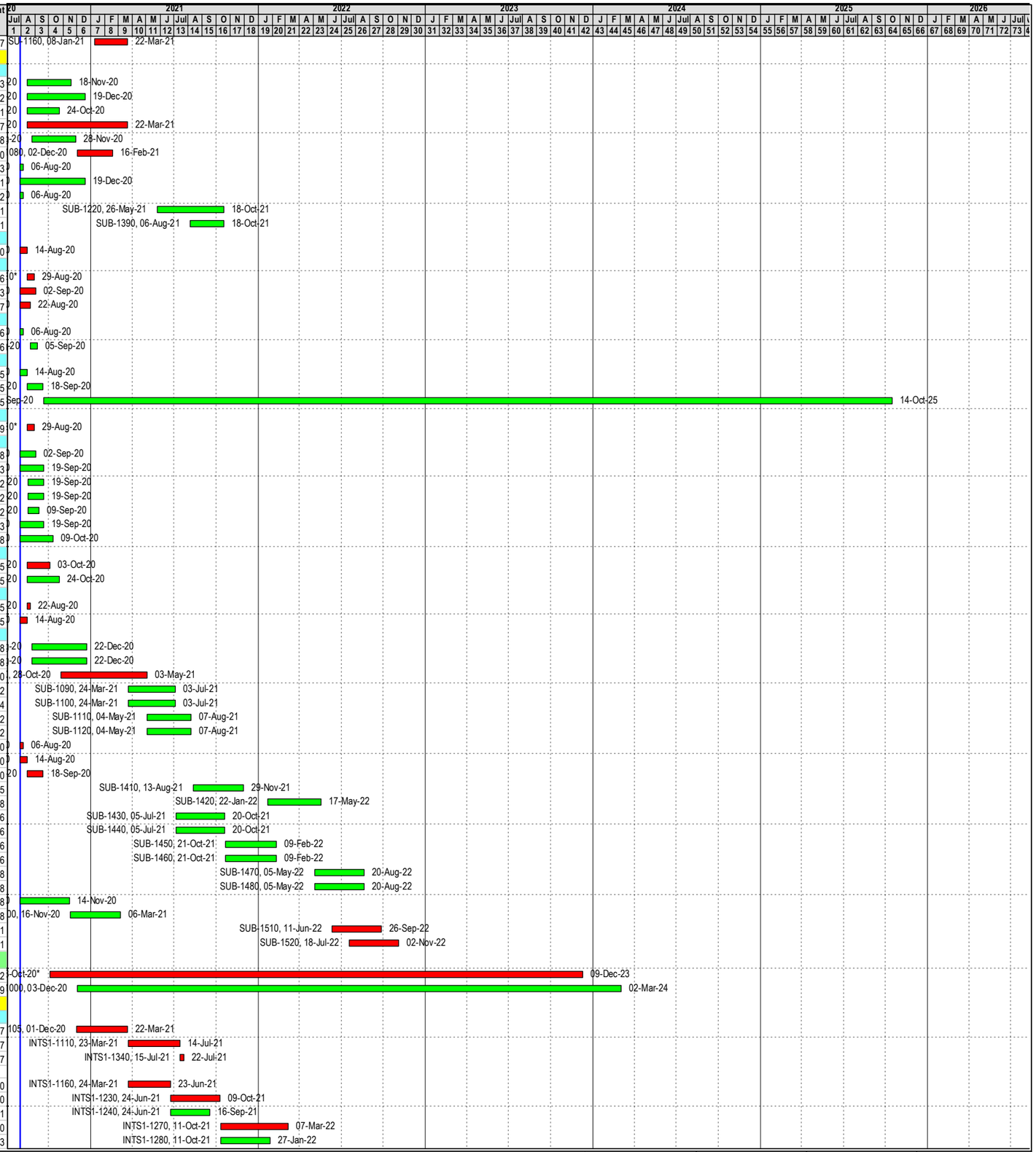
Data Date: 30-Jul-20
Project Start: 30-Jul-20
Project End: 09-Jul-26

ND/2019/04

Preliminary Works Programme

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

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



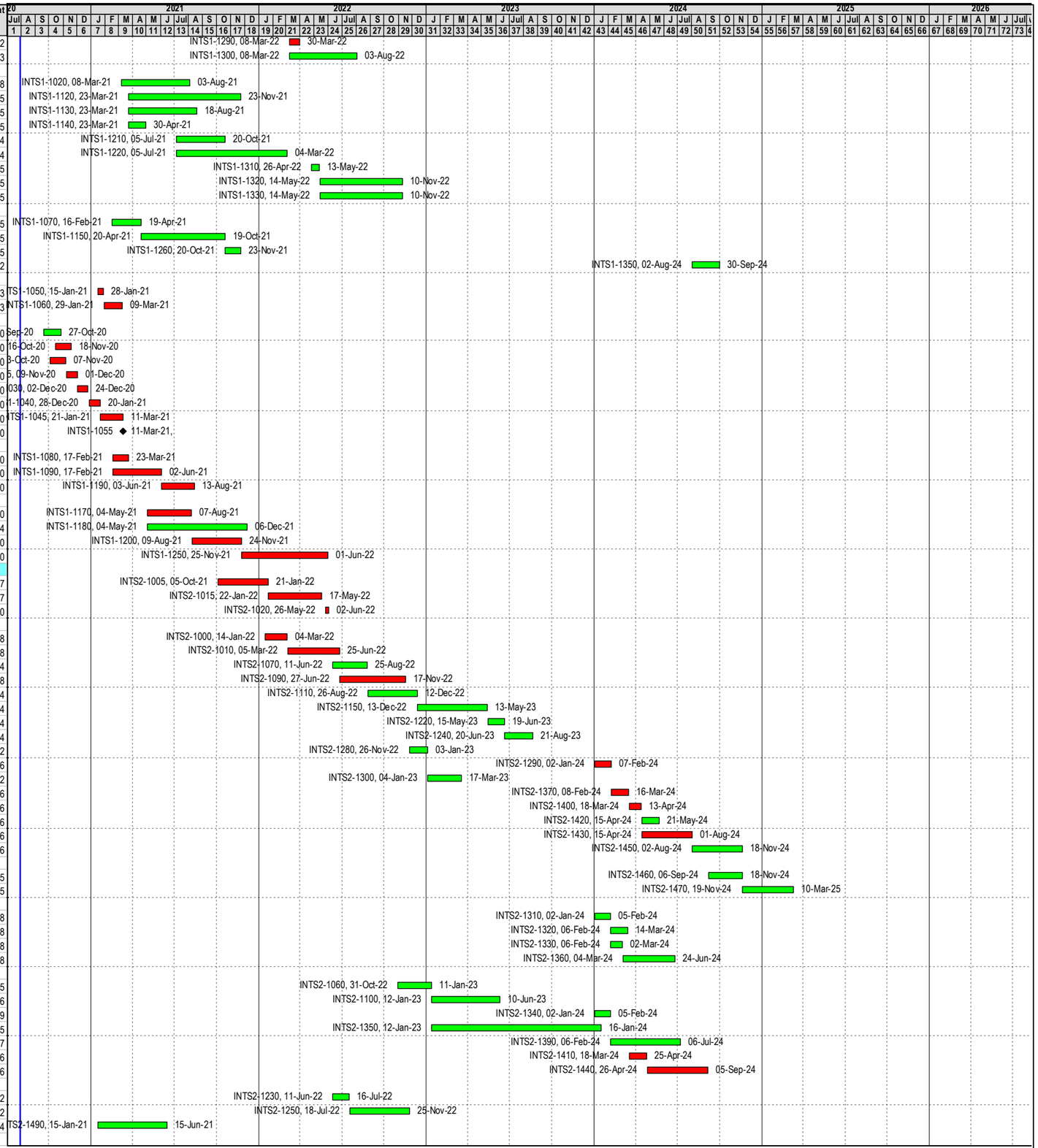
Actual Work
Remaining Work
Critical Remaining Work
◆ Milestone

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

ND/2019/04
Preliminary Works Programme

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

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



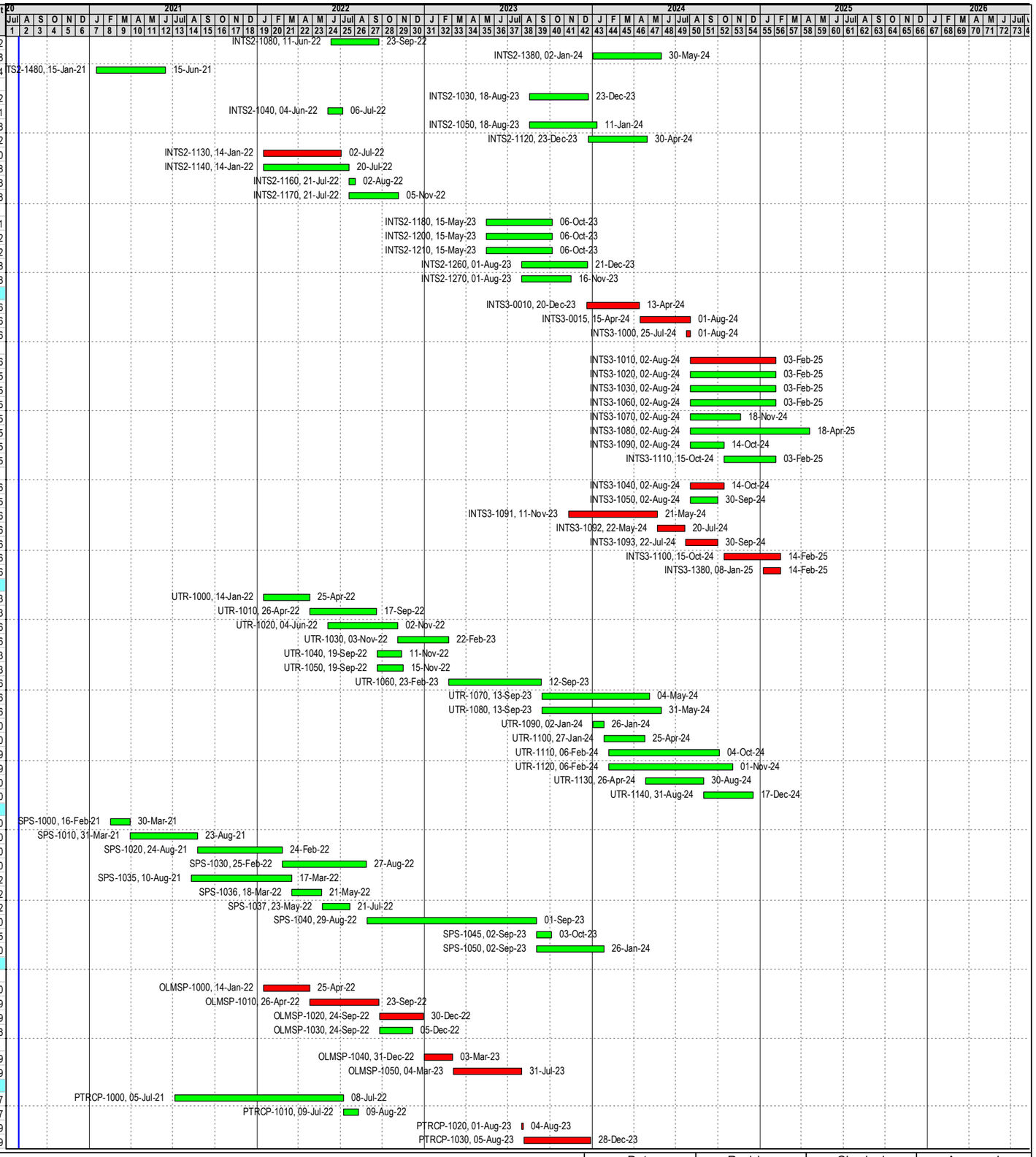
Actual Work ◆ Milestone
Remaining Work
Critical Remaining Work

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

ND/2019/04
Preliminary Works Programme

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

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



Actual Work ◆ Milestone

Remaining Work

Critical Remaining Work

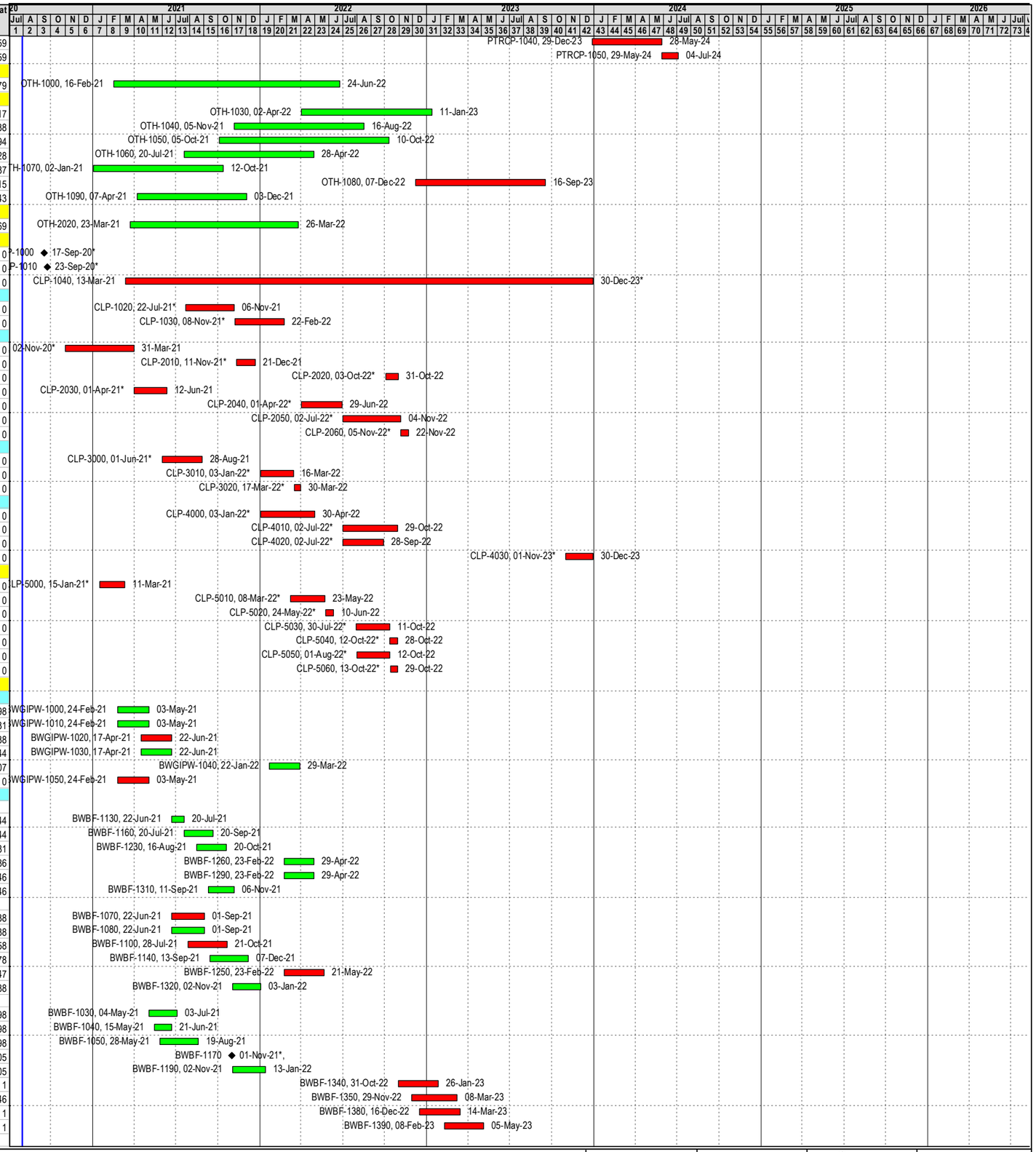
Data Date: 30-Jul-20
Project Start: 30-Jul-20
Project End: 09-Jul-26

ND/2019/04

Preliminary Works Programme

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

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



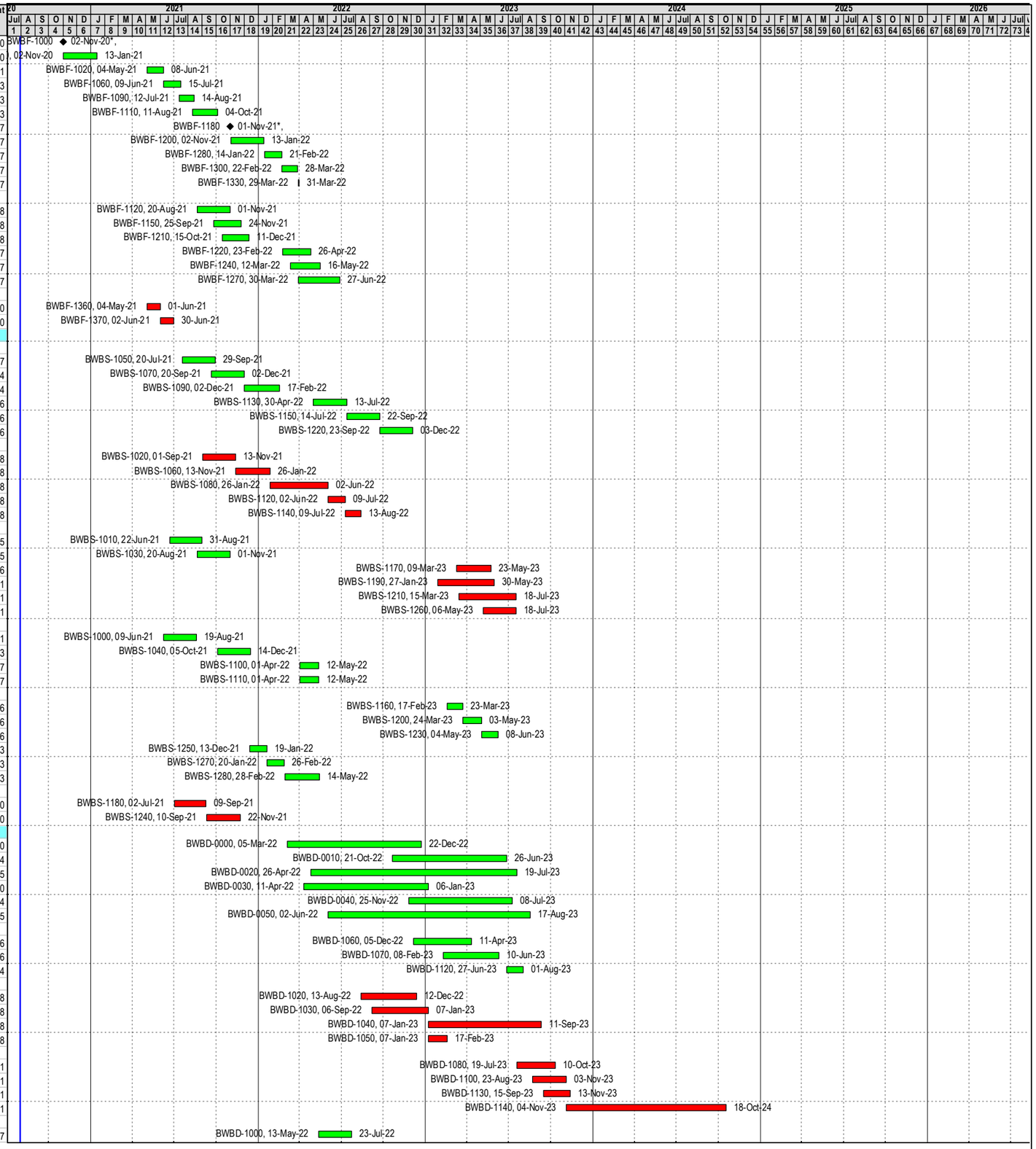
Actual Work ◆ ◆ Milestone
Remaining Work
Critical Remaining Work

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

ND/2019/04
Preliminary Works Programme

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

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



◆ Milestone

Actual Work

Remaining Work

Critical Remaining Work

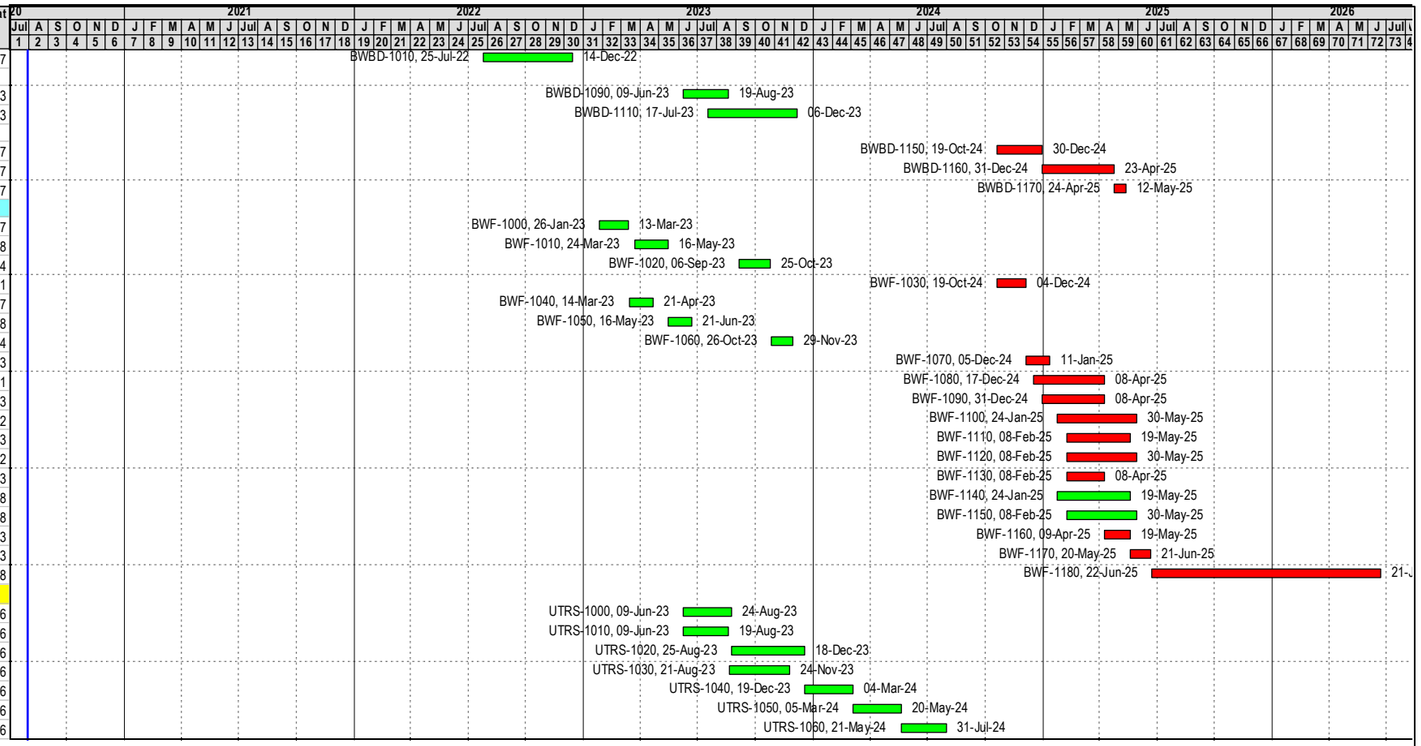
Data Date: 30-Jul-20
Project Start: 30-Jul-20
Project End: 09-Jul-26

ND/2019/04

Preliminary Works Programme

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

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



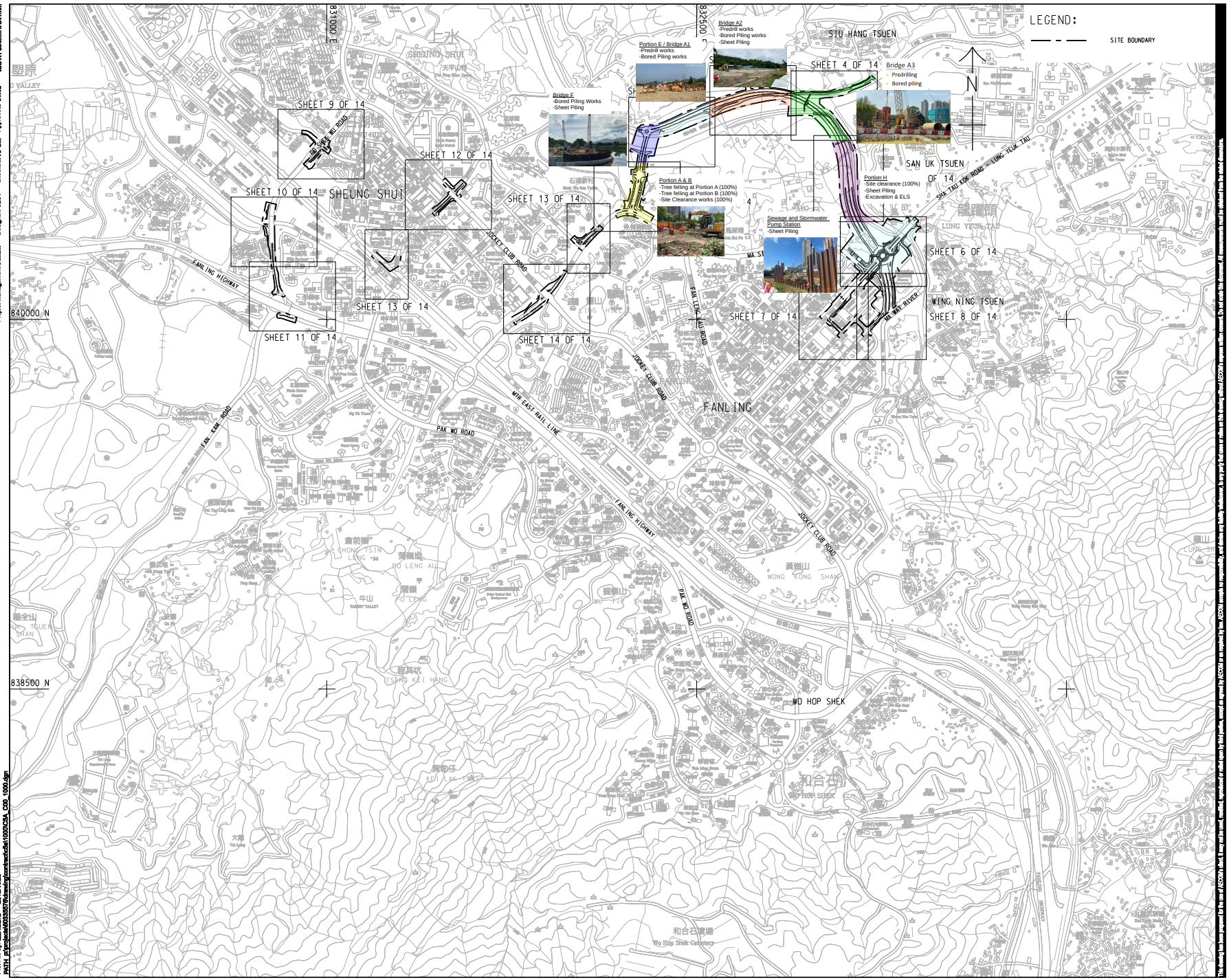
Actual Work
Remaining Work
Critical Remaining Work
◆ Milestone

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

ND/2019/04

Preliminary Works Programme

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



AECOM

PROJECT

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

CONTRACT TITLE:

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

CLIENT

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

CONSULTANT

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

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

STATUS

SCALE A1 1 : 7000

DIMENSION UNIT METRES

KEY PLAN

PROJECT NO. 60335576

CONTRACT NO. ND/2019/04

SHEET TITLE

KEY PLAN AND LOCATION PLAN

SHEET NUMBER

60335576/C5A/C00/1000

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

Plot File by: ZENGXU2 2019/11/23
PATH: P:\Projects\60335576\Drawing\Commercial\ac1000\C5A_C00_1000.dgn

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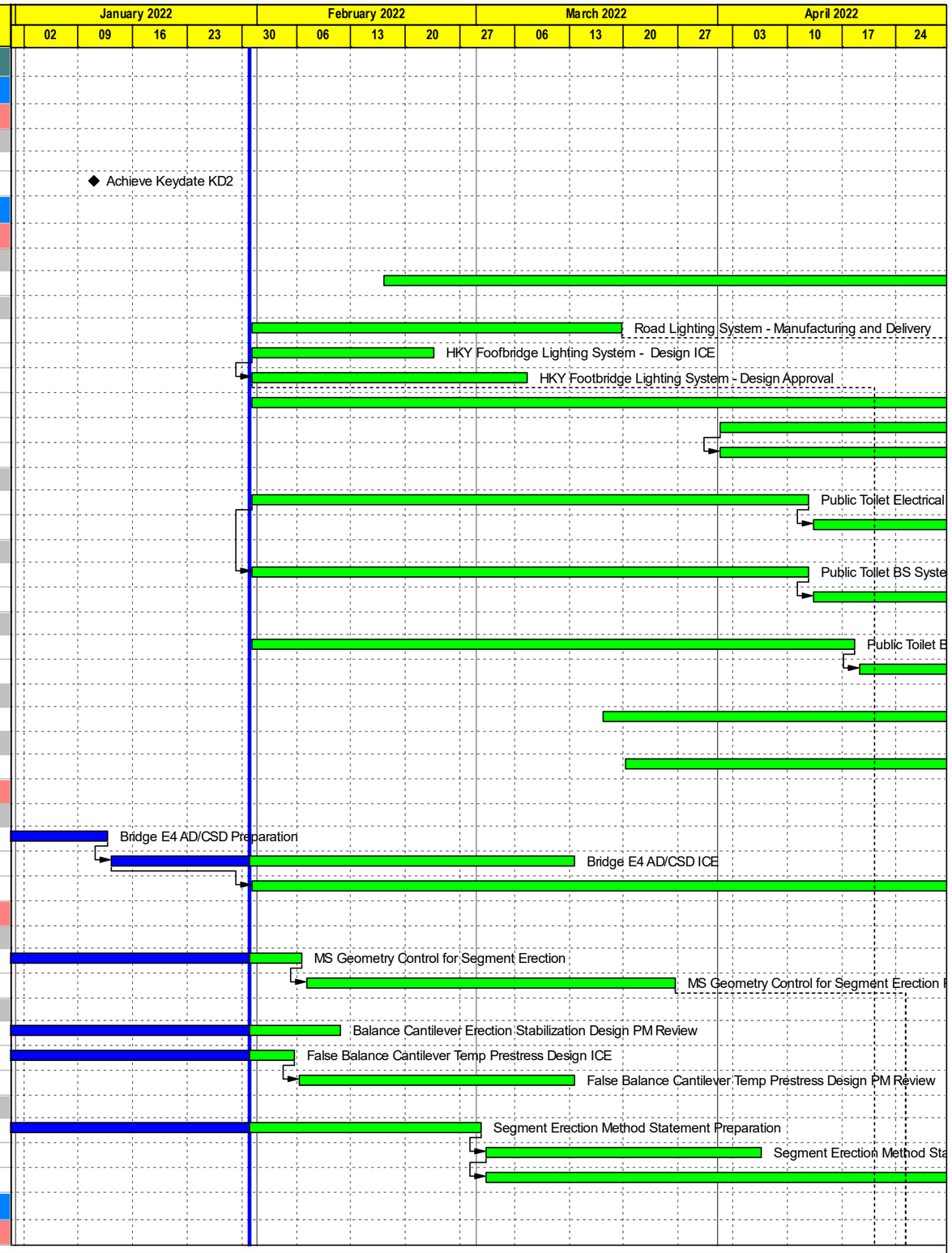
Construction Programme of ND/2019/05

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
ND/2019/05 - DPR10 Update 31 Jan 2022				
1.0 - Contract Data Part 1				
1.3 - Completion Date				
1.3.1 - Key Dates				
Key Date KD2				
KD2-1	Achieve Keydate KD2	0		11-Jan-22 A
2.0 - Preliminary Works				
2.3 - Contractor's Design (PS 1,109)				
2.3.3 - (c) Lift Installation E&M				
CDc-100	Lift Install E&M - Prep/Submit Design	120	17-Feb-22	16-Jun-22
2.3.4 - (d) Lighting System				
CDd-135	Road Lighting System - Manufacturing and Delivery	48	31-Jan-22	19-Mar-22
CDd-150	HKY Foofbridge Lighting System - Design ICE	24	31-Jan-22	23-Feb-22
CDd-160	HKY Footbridge Lighting System - Design Approval	36	31-Jan-22	07-Mar-22
CDd-170	BBI Lighting System - Prep/Submit Design	102	31-Jan-22	12-May-22
CDd-180	BBI Lighting System - Design ICE	42	01-Apr-22	12-May-22
CDd-190	BBI Lighting System - Design Approval	60	01-Apr-22	30-May-22
2.3.5 - (e) BBI Public Toilet Electrical System				
CDe-100	Public Toilet Electrical System - Procurement	72	31-Jan-22	12-Apr-22
CDe-110	Public Toilet Electrical System - Prep/Submit Design	78	13-Apr-22	29-Jun-22
2.3.6 - (f) BBI Public Toilet BS System				
CDf-100	Public Toilet BS System - Procurement	72	31-Jan-22	12-Apr-22
CDf-110	Public Toilet BS System - Prep/Submit Design	78	13-Apr-22	29-Jun-22
2.3.7 - (g) BBI Public Toilet Bio-treatment Plant				
CDg-100	Public Toilet Bio-treatment Plant - Procurement	78	31-Jan-22	18-Apr-22
CDg-110	Public Toilet Bio-treatment Plant - Prep/Submit Design	78	19-Apr-22	05-Jul-22
2.3.8 - (h) Traffic Control and Surveillance System (TCSS)				
CDh-110	TCSS - Prep/Submit Design	78	17-Mar-22	02-Jun-22
2.3.9 - (i) Traffic Detector System				
CDi-110	Traffic Detector System - Prep/Submit Design	90	20-Mar-22	17-Jun-22
2.4 - Cost Saving Design				
2.4.10 - Bridge E4				
AD-121	Bridge E4 AD/CSD Preparation	0	22-Apr-21 A	12-Jan-22 A
AD-122	Bridge E4 AD/CSD ICE	42	13-Jan-22 A	13-Mar-22
AD-123	Bridge E4 AD/CSD Approval	90	31-Jan-22	30-Apr-22
2.5 - Segment Erection Design and Calculation				
2.5.1 - Geometry Control				
AD-150	MS Geometry Control for Segment Erection	7	25-Apr-21 A	06-Feb-22
AD-152	MS Geometry Control for Segment Erection PM Review	48	07-Feb-22	26-Mar-22
2.5.3 - Temporary Works				
AD-812	Balance Cantilever Erection Stabilization Design PM Review	12	07-May-21 A	11-Feb-22
AD-862	False Balance Cantilever Temp Prestress Design ICE	6	01-Sep-21 A	05-Feb-22
AD-872	False Balance Cantilever Temp Prestress Design PM Review	36	06-Feb-22	13-Mar-22
2.5.4 Method Statement				
AD-882	Segment Erection Method Statement Preparation	30	25-Apr-21 A	01-Mar-22
AD-892	Segment Erection Method Statement ICE	36	02-Mar-22	06-Apr-22
AD-902	Segment Erection Method Statement PM Review	60	02-Mar-22	30-Apr-22
3.0 - Site Establishment Works				
3.1 - Portion I & IA Site Set-up				



CRCC - Paul Y. Joint Venture

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

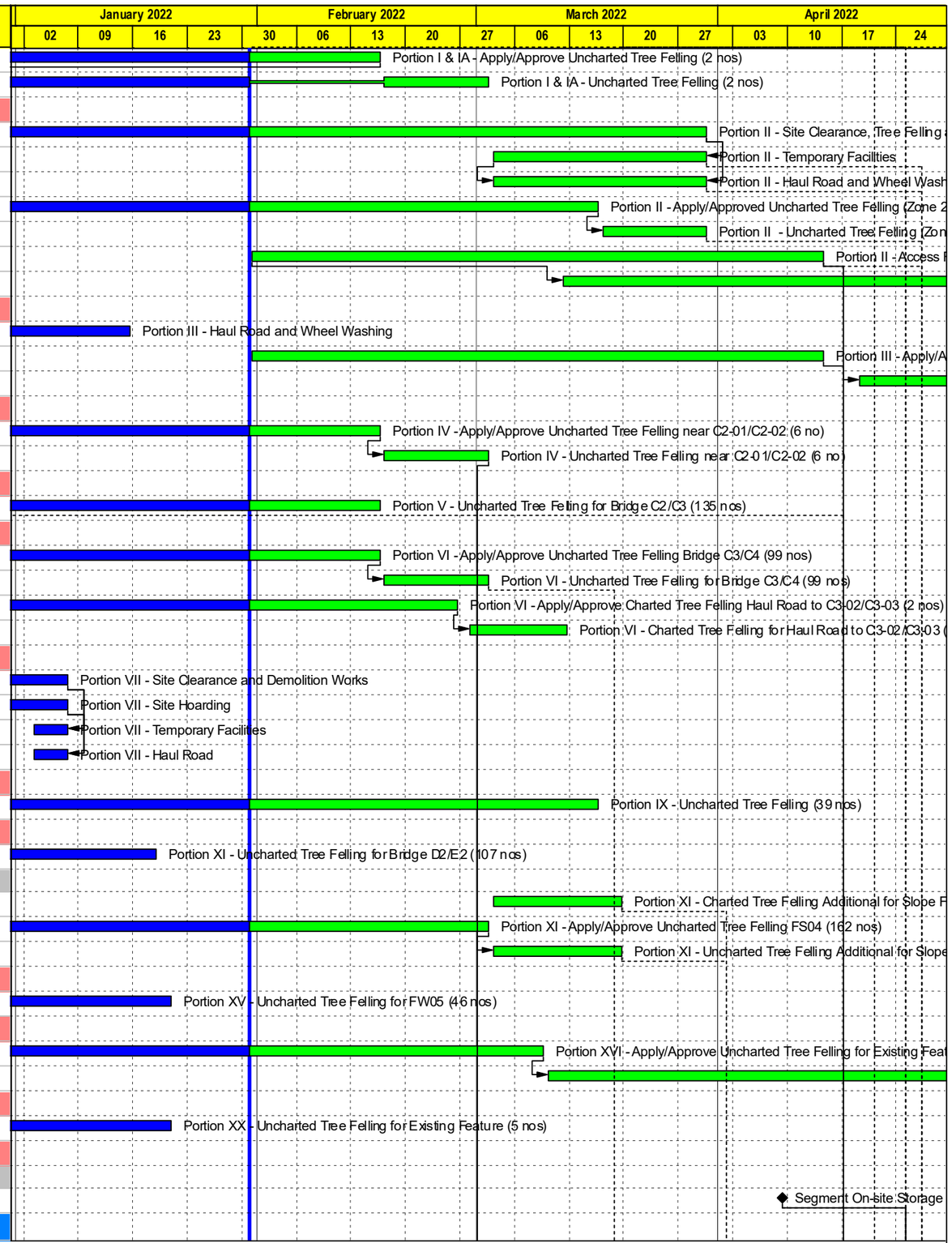
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme - Feb 2022

Proj ID : 3MRP-23
Layout : ND201905 3MRP
Date : Page 1 of 11

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

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
01-222	Portion I & IA - Apply/Approve Uncharted Tree Felling (2 nos)	12	10-Apr-21 A	16-Feb-22
01-233	Portion I & IA - Uncharted Tree Felling (2 nos)	12	15-Dec-21 A	02-Mar-22
3.3 - Portion II Site Set-up				
02-102	Portion II - Site Clearance, Tree Felling and Demolition Works	48	13-Sep-21 A	30-Mar-22
02-105	Portion II - Temporary Facilities	24	03-Mar-22	30-Mar-22
02-106	Portion II - Haul Road and Wheel Washing	24	03-Mar-22	30-Mar-22
02-140	Portion II - Apply/Approved Uncharted Tree Felling (Zone 2)	36	31-Dec-21 A	16-Mar-22
02-150	Portion II - Uncharted Tree Felling (Zone 2)	12	17-Mar-22	30-Mar-22
02-155	Portion II - Access Road from Lung Ywe Tau	60	31-Jan-22	14-Apr-22
02-160	Portion II - Bailey Bridge Construction	42	12-Mar-22	05-May-22
3.4 - Portion III Site Set-up				
03-106	Portion III - Haul Road and Wheel Washing	0	24-Jul-21 A	15-Jan-22 A
03-135	Portion III - Apply/Approve Charted Tree Felling Haul Road to C1-02 (8 nos)	60	31-Jan-22	14-Apr-22
03-150	Portion III - Charted Tree Felling for Haul Road to C1-02 (8 nos)	12	19-Apr-22	03-May-22
3.5 - Portion IV Site Set-up				
04-112	Portion IV - Apply/Approve Uncharted Tree Felling near C2-01/C2-02 (6 no)	12	20-May-21 A	16-Feb-22
04-120	Portion IV - Uncharted Tree Felling near C2-01/C2-02 (6 no)	12	17-Feb-22	02-Mar-22
3.6 - Portion V Site Set-up				
05-120	Portion V - Uncharted Tree Felling for Bridge C2/C3 (135 nos)	12	04-Oct-21 A	16-Feb-22
3.7 - Portion VI Site Set-up				
06-112	Portion VI - Apply/Approve Uncharted Tree Felling Bridge C3/C4 (99 nos)	12	07-Jul-21 A	16-Feb-22
06-120	Portion VI - Uncharted Tree Felling for Bridge C3/C4 (99 nos)	12	17-Feb-22	02-Mar-22
06-130	Portion VI - Apply/Approve Charted Tree Felling Haul Road to C3-02/C3-03 (2 nos)	21	08-Nov-21 A	26-Feb-22
06-150	Portion VI - Charted Tree Felling for Haul Road to C3-02/C3-03 (2 nos)	12	28-Feb-22	12-Mar-22
3.8 - Portion VII Site Set-up				
07-102	Portion VII - Site Clearance and Demolition Works	0	24-Nov-21 A	07-Jan-22 A
07-104	Portion VII - Site Hoarding	0	24-Nov-21 A	07-Jan-22 A
07-105	Portion VII - Temporary Facilities	0	03-Jan-22 A	07-Jan-22 A
07-106	Portion VII - Haul Road	0	03-Jan-22 A	07-Jan-22 A
3.10 - Portion IX Site Survey				
09-115	Portion IX - Uncharted Tree Felling (39 nos)	36	15-Dec-21 A	16-Mar-22
3.12 - Portion XI Site Set-up				
11-030	Portion XI - Uncharted Tree Felling for Bridge D2/E2 (107 nos)	0	18-Dec-21 A	19-Jan-22 A
3.12.4 - Tai Wo Service Road West Site Set-up				
11-460	Portion XI - Charted Tree Felling Additional for Slope FS04 (106 nos)	15	03-Mar-22	19-Mar-22
11-480	Portion XI - Apply/Approve Uncharted Tree Felling FS04 (162 nos)	24	28-Aug-21 A	02-Mar-22
11-500	Portion XI - Uncharted Tree Felling Additional for Slope FS04 (162 nos)	15	03-Mar-22	19-Mar-22
3.16 - Portion XV				
15-150	Portion XV - Uncharted Tree Felling for FW05 (46 nos)	0	15-Dec-21 A	21-Jan-22 A
3.17 - Portion XVI				
16-130	Portion XVI - Apply/Approve Uncharted Tree Felling for Existing Feature (164 nos)	30	24-Sep-21 A	09-Mar-22
16-150	Portion XVI - Uncharted Tree Felling for Existing Feature (164 nos)	60	10-Mar-22	25-May-22
3.21 - Portion XX				
20-150	Portion XX - Uncharted Tree Felling for Existing Feature (5 nos)	0	14-Dec-21 A	21-Jan-22 A
3.23 - Segment Storage Facilities				
3.23.2 - On-site Segment Storage				
SS-1020	Segment On-site Storage - Commence Segment Delivery	0	09-Apr-22	
4.0 - Bridge Construction				



CRCC - Paul Y. Joint Venture

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

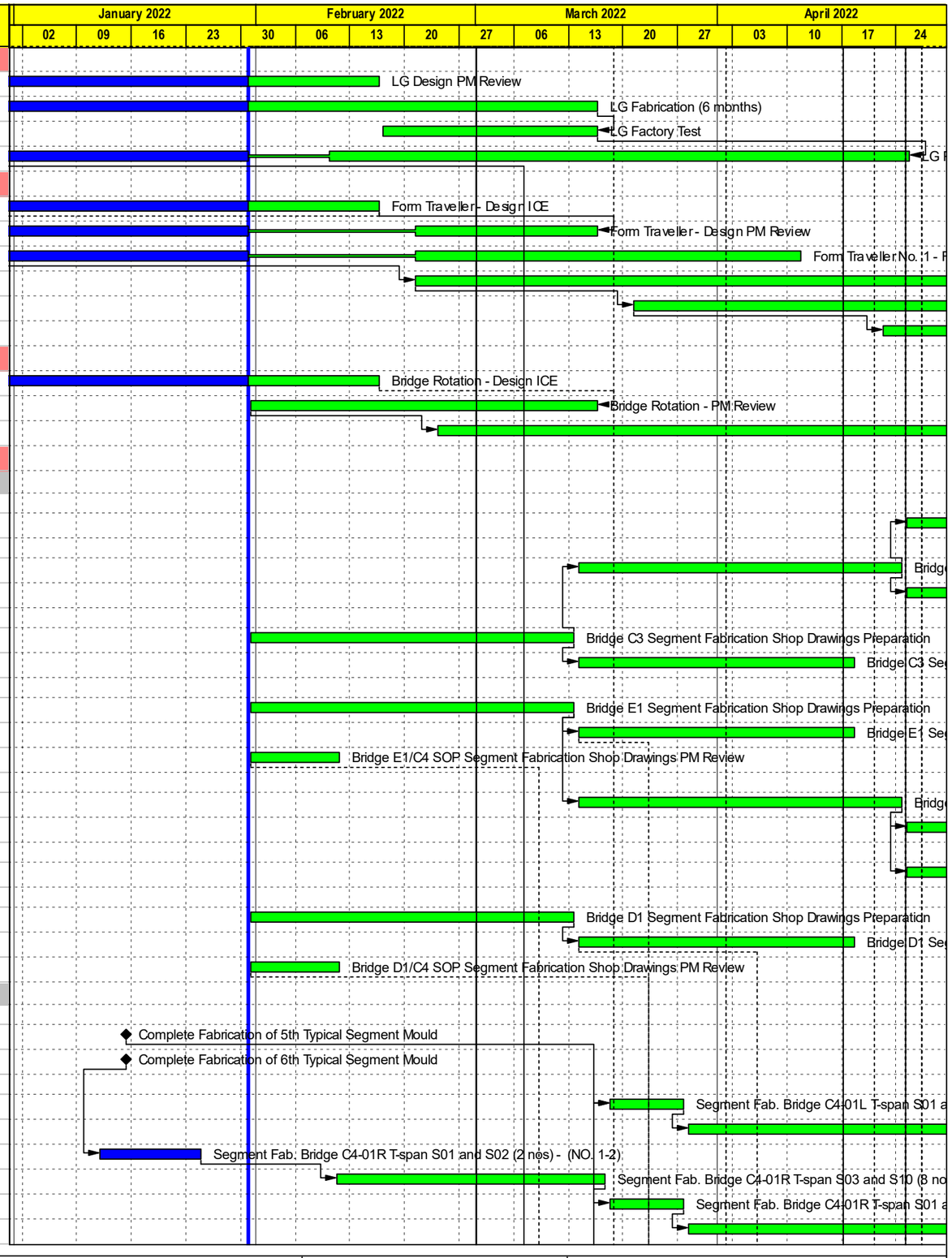
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme - Feb 2022

Proj ID : 3MRP-23
Layout : ND201905 3MRP
Date : Page 2 of 11

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

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
4.1 - Launching Gantry				
LG-104	LG Design PM Review	12	23-Oct-21 A	16-Feb-22
LG-105	LG Fabrication (6 months)	36	10-May-21 A	16-Mar-22
LG-106	LG Factory Test	24	17-Feb-22	16-Mar-22
LG-107	LG Packing and Delivery	60	01-Dec-21 A	25-Apr-22
4.2 - Form Traveller				
E2-7402	Form Traveller - Design ICE	12	15-Dec-21 A	16-Feb-22
E2-7403	Form Traveller - Design PM Review	21	18-Dec-21 A	16-Mar-22
E2-7404	Form Traveller No. 1 - Fabrication and Delivery	42	18-Dec-21 A	11-Apr-22
E2-7405	Form Traveller No. 2 - Fabrication and Delivery	72	21-Feb-22	21-May-22
E2-7406	Form Traveller No. 3 - Fabrication and Delivery	72	21-Mar-22	20-Jun-22
E2-7407	Form Traveller No. 4 - Fabrication and Delivery	72	22-Apr-22	19-Jul-22
4.3 - Bridge Rotation System				
E2-1502	Bridge Rotation - Design ICE	12	15-Nov-21 A	16-Feb-22
E2-1503	Bridge Rotation - PM Review	36	31-Jan-22	16-Mar-22
E2-1504	Bridge Rotation - Fabrication and Delivery	84	24-Feb-22	09-Jun-22
4.3 - Segment Fabrication				
4.3.1 - Shop Drawings				
- Bridge C1				
AD-510	Bridge C1 Segment Fabrication Shop Drawings Preparation	42	25-Apr-22	05-Jun-22
- Bridge C2				
AD-520	Bridge C2 Segment Fabrication Shop Drawings Preparation	42	14-Mar-22	24-Apr-22
AD-522	Bridge C2 Segment Fabrication Shop Drawings PM Review	36	25-Apr-22	30-May-22
- Bridge C3				
AD-530	Bridge C3 Segment Fabrication Shop Drawings Preparation	42	31-Jan-22	13-Mar-22
AD-532	Bridge C3 Segment Fabrication Shop Drawings PM Review	36	14-Mar-22	18-Apr-22
- Bridge E1				
AD-560	Bridge E1 Segment Fabrication Shop Drawings Preparation	42	31-Jan-22	13-Mar-22
AD-562	Bridge E1 Segment Fabrication Shop Drawings PM Review	36	14-Mar-22	18-Apr-22
AD-567	Bridge E1/C4 SOP Segment Fabrication Shop Drawings PM Review	12	31-Jan-22	11-Feb-22
- Bridge E3				
AD-580	Bridge E3 Segment Fabrication Shop Drawings Prepararion	42	14-Mar-22	24-Apr-22
AD-582	Bridge E3 Segment Fabrication Shop Drawings PM Review	36	25-Apr-22	30-May-22
- Bridge E4				
AD-590	Bridge E4 Segment Fabrication Shop Drawings Preparation	42	25-Apr-22	05-Jun-22
- Bridge D1				
AD-540	Bridge D1 Segment Fabrication Shop Drawings Preparation	42	31-Jan-22	13-Mar-22
AD-542	Bridge D1 Segment Fabrication Shop Drawings PM Review	36	14-Mar-22	18-Apr-22
AD-547	Bridge D1/C4 SOP Segment Fabrication Shop Drawings PM Review	12	31-Jan-22	11-Feb-22
4.3.2 - Off-Site Fabrication				
- Preparation Works				
OSF-165	Complete Fabrication of 5th Typical Segment Mould	0	15-Jan-22 A	
OSF-170	Complete Fabrication of 6th Typical Segment Mould	0	15-Jan-22 A	
- Bridge C4				
OSF-0780	Segment Fab. Bridge C4-01L T-span S01 and S02 (2 nos) - (NO. 1-1)	10	18-Mar-22	27-Mar-22
OSF-0783	Segment Fab. Bridge C4-01L T-span S03 and S10 (8 nos) - (NO. 1-1)	35	28-Mar-22	01-May-22
OSF-0790	Segment Fab. Bridge C4-01R T-span S01 and S02 (2 nos) - (NO. 1-2)	0	12-Jan-22 A	25-Jan-22 A
OSF-0792	Segment Fab. Bridge C4-01R T-span S03 and S10 (8 nos) - (NO. 1-2)	35	11-Feb-22	17-Mar-22
OSF-0795	Segment Fab. Bridge C4-01R T-span S01 and S02 (2 nos) - (NO. 1-2)	10	18-Mar-22	27-Mar-22
OSF-0815	Segment Fab. Bridge C4-01R T-span S03 and S10 (8 nos) - (NO. 1-2)	35	28-Mar-22	01-May-22



CRCC - Paul Y. Joint Venture

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

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

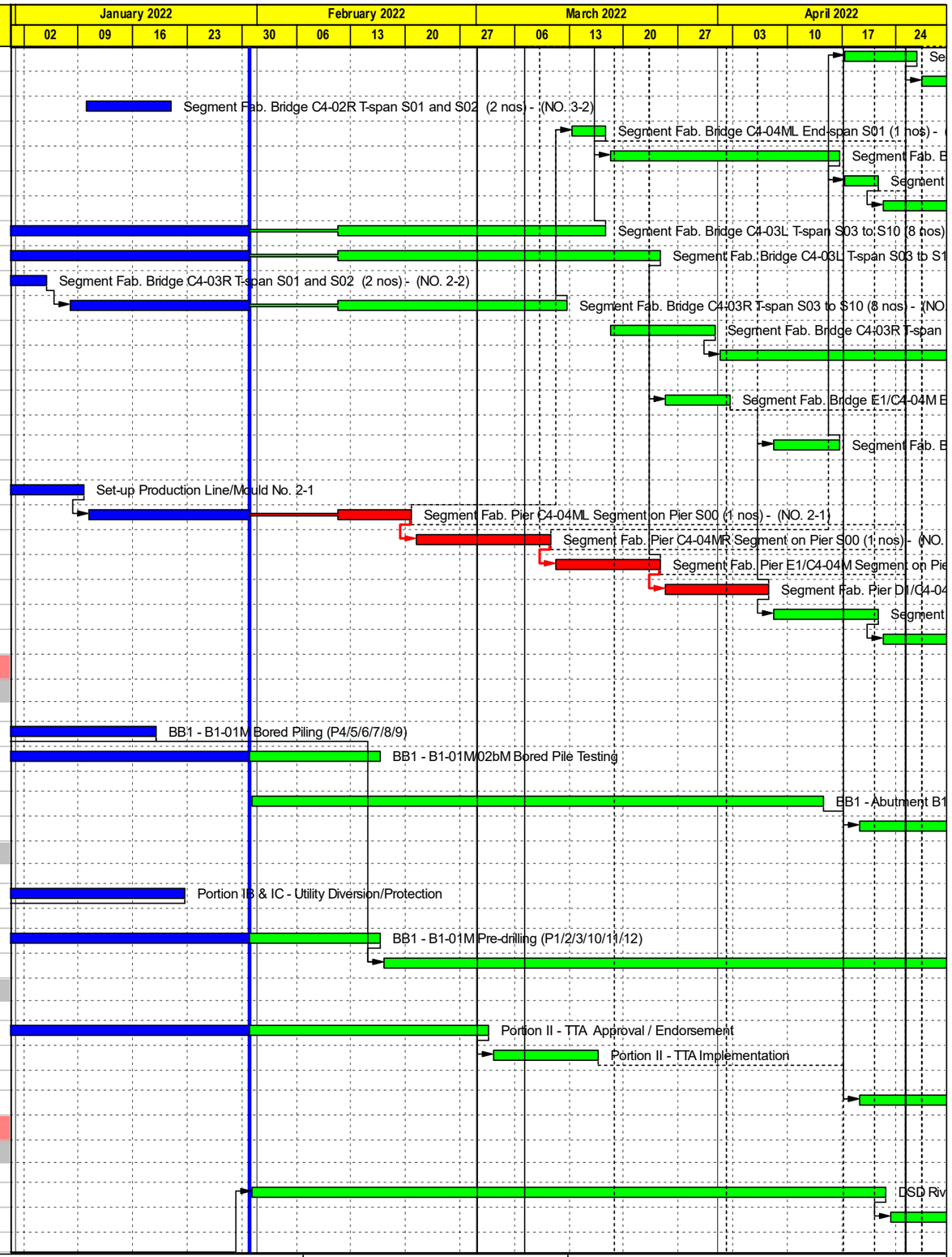
3-Month Rolling Programme - Feb 2022

Proj ID : 3MRP-23
Layout : ND201905 3MRP
Date : Page 3 of 11

3-Month Rolling Programme

Date	Revision	Checked	Approved
01-Feb-22	Feb 2022		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
OSF-0820	Segment Fab. Bridge C4-02L T-span S01 and S02 (2 nos) - (NO. 3-1)	10	17-Apr-22	26-Apr-22
OSF-0823	Segment Fab. Bridge C4-02L T-span S03 and S09 (7 nos) - (NO. 3-1)	35	27-Apr-22	31-May-22
OSF-0830	Segment Fab. Bridge C4-02R T-span S01 and S02 (2 nos) - (NO. 3-2)	0	10-Jan-22 A	21-Jan-22 A
OSF-0860	Segment Fab. Bridge C4-04ML End-span S01 (1 nos) - (NO. 2-2)	5	13-Mar-22	17-Mar-22
OSF-0865	Segment Fab. Bridge C4-04ML End-span S02 to S07 (6 nos) - (NO. 2-2)	30	18-Mar-22	16-Apr-22
OSF-0870	Segment Fab. Bridge C4-04MR End-span S01 (1 nos) - (NO. 2-2)	5	17-Apr-22	21-Apr-22
OSF-0890	Segment Fab. Bridge C4-04MR End-span S02 to S07 (6 nos) - (NO. 2-2)	30	22-Apr-22	21-May-22
OSF-0903	Segment Fab. Bridge C4-03L T-span S03 to S10 (8 nos) - (NO. 1-1)	35	03-Dec-21 A	17-Mar-22
OSF-0907	Segment Fab. Bridge C4-03L T-span S03 to S10 (8 nos) - (NO. 3-1)	42	17-Dec-21 A	24-Mar-22
OSF-0910	Segment Fab. Bridge C4-03R T-span S01 and S02 (2 nos) - (NO. 2-2)	0	27-Dec-21 A	05-Jan-22 A
OSF-0912	Segment Fab. Bridge C4-03R T-span S03 to S10 (8 nos) - (NO. 2-2)	30	08-Jan-22 A	12-Mar-22
OSF-0915	Segment Fab. Bridge C4-03R T-span S01 and S02 (2 nos) - (NO. 3-2)	14	18-Mar-22	31-Mar-22
OSF-0930	Segment Fab. Bridge C4-03R T-span S03 to S10 (8 nos) - (NO. 3-2)	56	01-Apr-22	26-May-22
- Bridge E1				
OSF-0940	Segment Fab. Bridge E1/C4-04M End-span S01 (1 nos) - (NO. 3-1)	9	25-Mar-22	02-Apr-22
- Bridge D1				
OSF-1160	Segment Fab. Bridge D1/C4-04M End-span S01 (1 nos) - (NO. 3-1)	9	08-Apr-22	16-Apr-22
Segment on Pier				
OSF-1298	Set-up Production Line/Mould No. 2-1	0	15-Dec-21 A	09-Jan-22 A
OSF-1300	Segment Fab. Pier C4-04ML Segment on Pier S00 (1 nos) - (NO. 2-1)	10	10-Jan-22 A	20-Feb-22
OSF-1310	Segment Fab. Pier C4-04MR Segment on Pier S00 (1 nos) - (NO. 2-1)	18	21-Feb-22	10-Mar-22
OSF-1320	Segment Fab. Pier E1/C4-04M Segment on Pier S00 (1 nos) - (NO. 2-1)	14	11-Mar-22	24-Mar-22
OSF-1330	Segment Fab. Pier D1/C4-04M Segment on Pier S00 (1 nos) - (NO. 2-1)	14	25-Mar-22	07-Apr-22
OSF-1340	Segment Fab. Pier C3/C2-04ML Segment on Pier S00 (1 nos) - (NO. 2-1)	14	08-Apr-22	21-Apr-22
OSF-1350	Segment Fab. Pier C3/C2-04MR Segment on Pier S00 (1 nos) - (NO. 2-1)	14	22-Apr-22	05-May-22
4.4 - Bridge B1				
4.4.1 - Substructure Portion I and 1A				
- Piling				
B1-1131	BB1 - B1-01M Bored Piling (P4/5/6/7/8/9)	0	16-Sep-21 A	19-Jan-22 A
B1-1140	BB1 - B1-01M/02bM Bored Pile Testing	12	09-Nov-21 A	16-Feb-22
- Pier				
B1-0009	BB1 - Abutment B1-01M Method Statement Preparation	60	31-Jan-22	14-Apr-22
B1-0010	BB1 - Abutment B1-01M Method Statement ICE	18	19-Apr-22	11-May-22
4.4.2 - Substructure Portion 1B and 1C				
- Preparation Works				
B1-222	Portion IB & IC - Utility Diversion/Protection	0	08-Sep-21 A	22-Jan-22 A
- Piling				
B1-0028	BB1 - B1-01M Pre-drilling (P1/2/3/10/11/12)	12	17-Aug-21 A	16-Feb-22
B1-0030	BB1 - B1-01M Bored Piling (P1/2/3/10/11/12)	63	17-Feb-22	06-May-22
4.4.3 - Substructure Portion II				
- Preparation Works				
B1-112	Portion II - TTA Approval / Endorsement	24	15-Dec-21 A	02-Mar-22
B1-113	Portion II - TTA Implementation	12	03-Mar-22	16-Mar-22
- Piling				
B1-0040	BB1 - Portion II Pre-drilling	12	19-Apr-22	03-May-22
4.5 - Bridge B2				
4.5.1 - Substructure				
- Preparation Works				
B2-0050	DSD River Guage - Procurement	64	31-Jan-22	22-Apr-22
B2-0060	DSD River Guage - Installation + T&C	24	23-Apr-22	23-May-22
- Piling				



CRCC - Paul Y. Joint Venture

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

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

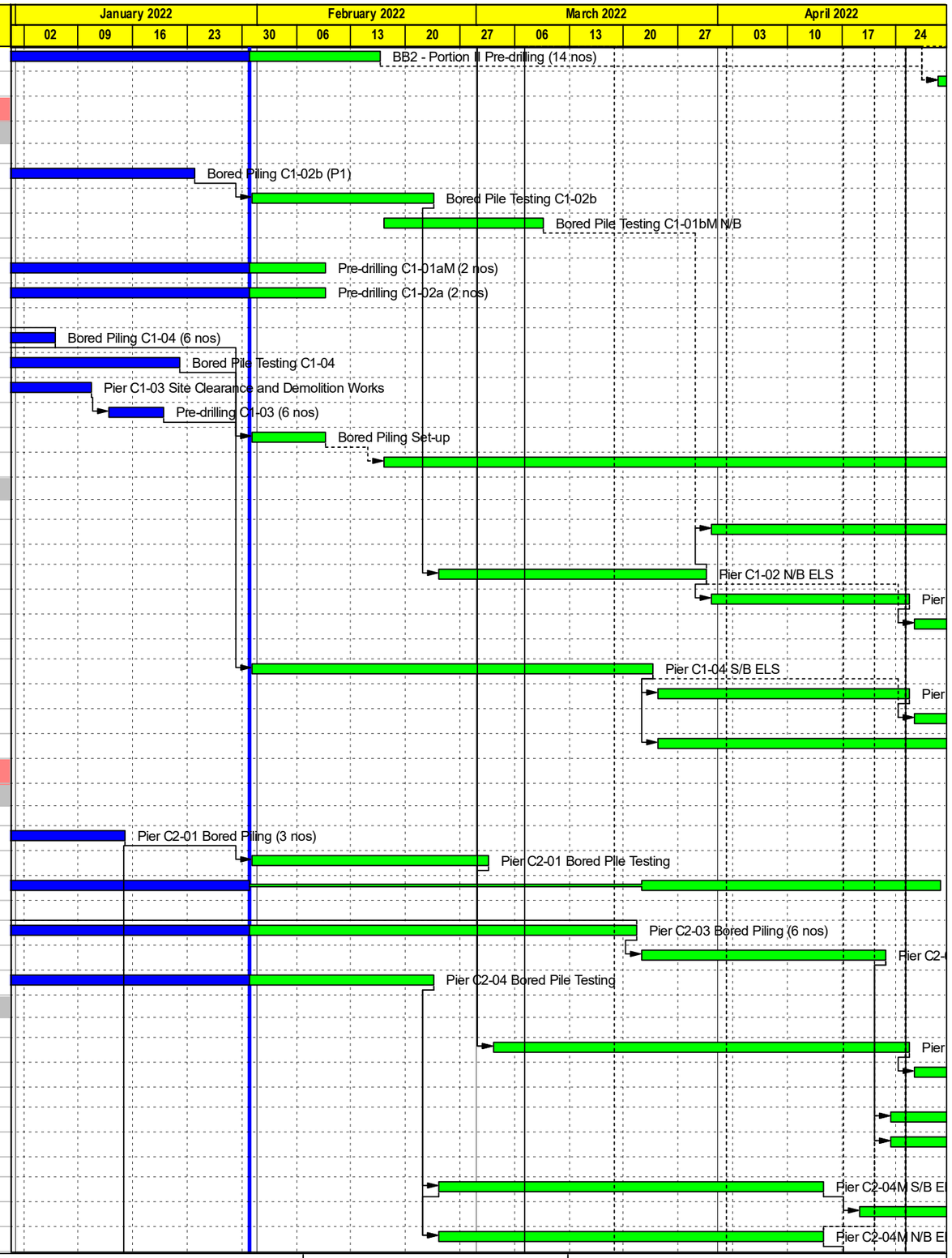
3-Month Rolling Programme - Feb 2022

Proj ID : 3MRP-23
Layout : ND201905 3MRP
Date : Page 4 of 11

3-Month Rolling Programme

Date	Revision	Checked	Approved
01-Feb-22	Feb 2022		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
B2-0100	BB2 - Portion II Pre-drilling (14 nos)	12	22-Oct-21 A	16-Feb-22
B2-0110	BB2 - Bored Piling Set-up	6	29-Apr-22	06-May-22
4.6 - Bridge C1				
4.6.1 - Foundation				
4.6.3 - Portion I				
C1-1121	Bored Piling C1-02b (P1)	0	31-Dec-21 A	24-Jan-22 A
C1-1122	Bored Pile Testing C1-02b	18	31-Jan-22	23-Feb-22
C1-1135	Bored Pile Testing C1-01bM N/B	18	17-Feb-22	09-Mar-22
4.6.4 - Portion II				
C1-1200	Pre-drilling C1-01aM (2 nos)	6	22-Dec-21 A	09-Feb-22
C1-1215	Pre-drilling C1-02a (2 nos)	6	31-Dec-21 A	09-Feb-22
4.6.5 - Portion III				
C1-1420	Bored Piling C1-04 (6 nos)	0	06-Sep-21 A	06-Jan-22 A
C1-1425	Bored Pile Testing C1-04	0	16-Oct-21 A	22-Jan-22 A
C1-1428	Pier C1-03 Site Clearance and Demolition Works	0	12-Oct-21 A	10-Jan-22 A
C1-1430	Pre-drilling C1-03 (6 nos)	0	13-Jan-22 A	20-Jan-22 A
C1-1433	Bored Piling Set-up	6	31-Jan-22	09-Feb-22
C1-1435	Bored Piling C1-03 (6 nos)	72	17-Feb-22	18-May-22
4.6.2 - Pier				
- C1-01M				
C1-1160	Pier C1-01M N/B ELS	30	31-Mar-22	11-May-22
- C1-02				
C1-1140	Pier C1-02 N/B ELS	30	24-Feb-22	30-Mar-22
C1-1145	Pier C1-02 N/B Pile Cap	18	31-Mar-22	25-Apr-22
C1-1150	Pier C1-02 N/B Column	30	26-Apr-22	01-Jun-22
- C1-04				
C1-1480	Pier C1-04 S/B ELS	42	31-Jan-22	23-Mar-22
C1-1485	Pier C1-04 S/B Pile Cap	24	24-Mar-22	25-Apr-22
C1-1490	Pier C1-04 S/B Column	18	26-Apr-22	18-May-22
C1-1500	Pier C1-04 N/B ELS	42	24-Mar-22	18-May-22
4.7 - Bridge C2				
4.7.1 - Foundation				
- Portion IV				
C2-1035	Pier C2-01 Bored Piling (3 nos)	0	28-Oct-21 A	15-Jan-22 A
C2-1040	Pier C2-01 Bored Pile Testing	24	31-Jan-22	02-Mar-22
C2-1070	Pier C2-02 Bored Piling (6 nos)	30	20-Oct-21 A	29-Apr-22
- Portion V				
C2-1200	Pier C2-03 Bored Piling (6 nos)	40	10-Dec-21 A	21-Mar-22
C2-1205	Pier C2-03 Bored Pile Testing	24	22-Mar-22	22-Apr-22
C2-1230	Pier C2-04 Bored Pile Testing	18	07-Oct-21 A	23-Feb-22
4.7.2 - Pier				
- C2-01				
C2-1160	Pier C2-01 ELS	42	03-Mar-22	25-Apr-22
C2-1165	Pier C2-01 Pile Cap	30	26-Apr-22	01-Jun-22
- C2-03				
C2-1440	Pier C2-03 S/B ELS	42	23-Apr-22	14-Jun-22
C2-1460	Pier C2-03 N/B ELS	42	23-Apr-22	14-Jun-22
- C2-04				
C2-1480	Pier C2-04M S/B ELS	42	24-Feb-22	14-Apr-22
C2-1485	Pier C2-04M S/B Pile Cap	24	19-Apr-22	18-May-22
C2-1500	Pier C2-04M N/B ELS	42	24-Feb-22	14-Apr-22



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

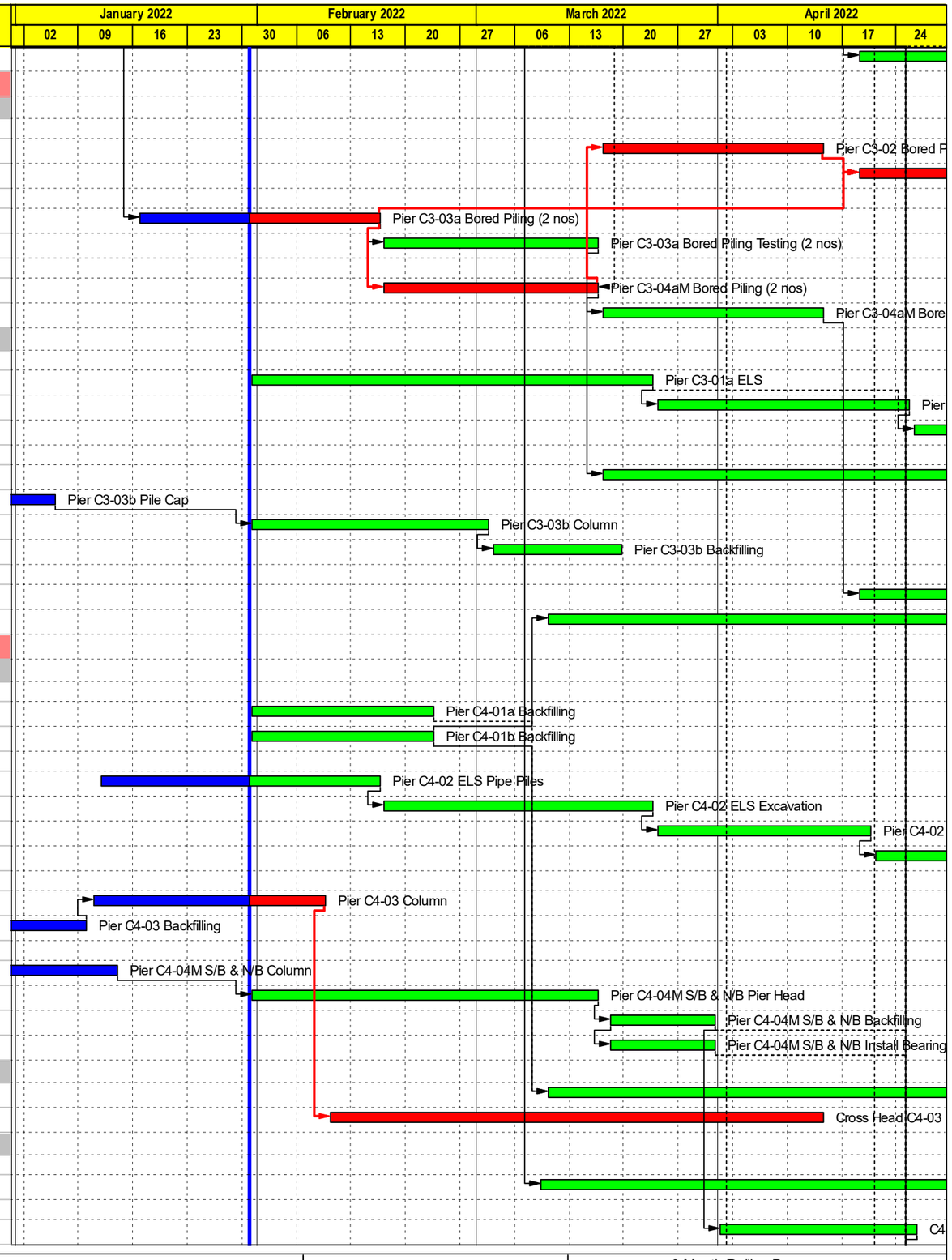
3-Month Rolling Programme - Feb 2022

Proj ID : 3MRP-23
Layout : ND201905 3MRP
Date : Page 5 of 11

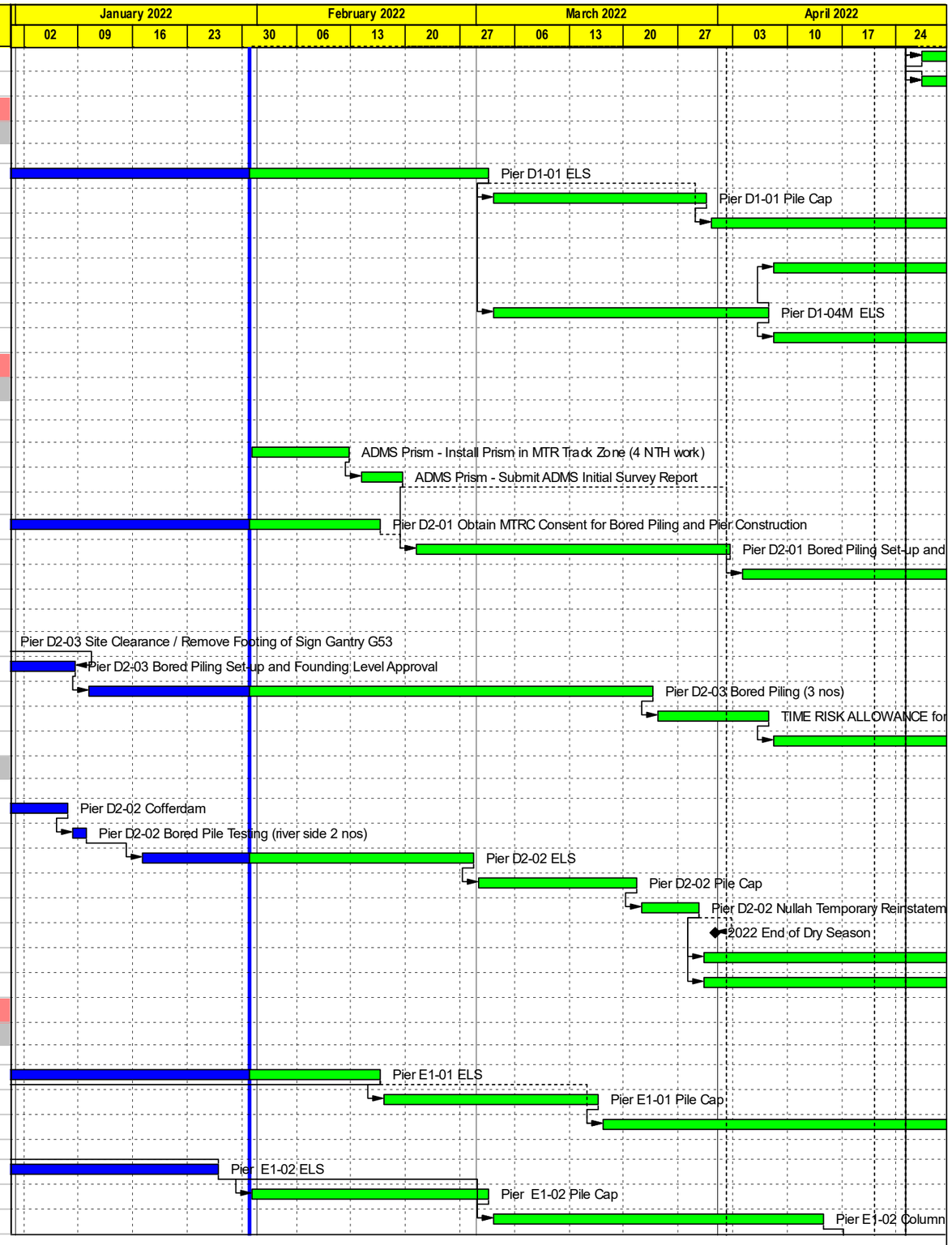
3-Month Rolling Programme

Date	Revision	Checked	Approved
01-Feb-22	Feb 2022		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
C2-1505	Pier C2-04M N/B Pile Cap	24	19-Apr-22	18-May-22
4.8 - Bridge C3				
4.8.2 - Foundation				
- C3-02				
C3-1070	Pier C3-02 Bored Piling Stage 1 (2 nos)	24	17-Mar-22	14-Apr-22
C3-1075	Pier C3-02 Bored Piling Stage 2 (2 nos)	24	19-Apr-22	18-May-22
- C3-03				
C3-1110	Pier C3-03a Bored Piling (2 nos)	12	17-Jan-22 A	16-Feb-22
C3-1120	Pier C3-03a Bored Piling Testing (2 nos)	24	17-Feb-22	16-Mar-22
- C3-04M				
C3-7280	Pier C3-04aM Bored Piling (2 nos)	24	17-Feb-22	16-Mar-22
C3-7290	Pier C3-04aM Bored Piling Testing (2 nos)	24	17-Mar-22	14-Apr-22
4.8.3 - Pier				
- C3-01				
C3-1210	Pier C3-01a ELS	42	31-Jan-22	23-Mar-22
C3-1215	Pier C3-01a Pile Cap	24	24-Mar-22	25-Apr-22
C3-1220	Pier C3-01a Column	24	26-Apr-22	25-May-22
- C3-03				
C3-1400	Pier C3-03a ELS	42	17-Mar-22	11-May-22
C3-1455	Pier C3-03b Pile Cap	0	01-Dec-21 A	06-Jan-22 A
C3-1470	Pier C3-03b Column	24	31-Jan-22	02-Mar-22
C3-1475	Pier C3-03b Backfilling	15	03-Mar-22	19-Mar-22
- C3-04				
C3-1500	Pier C3-04aM ELS	42	19-Apr-22	09-Jun-22
C3-1550	Pier C3-04bM ELS	42	10-Mar-22	03-May-22
4.9 - Bridge C4				
4.9.3 - Pier				
- C4-01				
C4-1225	Pier C4-01a Backfilling	18	31-Jan-22	23-Feb-22
C4-1265	Pier C4-01b Backfilling	18	31-Jan-22	23-Feb-22
- C4-02				
C4-1351	Pier C4-02 ELS Pipe Piles	12	12-Jan-22 A	16-Feb-22
C4-1352	Pier C4-02 ELS Excavation	30	17-Feb-22	23-Mar-22
C4-1355	Pier C4-02 Footing	20	24-Mar-22	20-Apr-22
C4-1370	Pier C4-02 Column	36	21-Apr-22	04-Jun-22
- C4-03				
C4-5520	Pier C4-03 Column	6	11-Jan-22 A	09-Feb-22
C4-5525	Pier C4-03 Backfilling	0	31-Dec-21 A	10-Jan-22 A
- C4-04M				
C4-5560	Pier C4-04M S/B & N/B Column	0	01-Dec-21 A	14-Jan-22 A
C4-5562	Pier C4-04M S/B & N/B Pier Head	36	31-Jan-22	16-Mar-22
C4-5565	Pier C4-04M S/B & N/B Backfilling	12	18-Mar-22	31-Mar-22
C4-5568	Pier C4-04M S/B & N/B Install Bearing	12	18-Mar-22	31-Mar-22
4.9.4 - Pier Head and Portal Beam				
C4-5590	Portal Beam C4-01	78	10-Mar-22	16-Jun-22
C4-5605	Cross Head C4-03	54	10-Feb-22	14-Apr-22
4.9.5 - Bridge Deck				
- T-span C4-03				
C4-2355	Launching Gantry Modular Assembly on ground	74	09-Mar-22	10-Jun-22
- End-span C4-04M				
C4-2395	C4-04M SOP Temporary Support	18	01-Apr-22	26-Apr-22



Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
C4-2400	C4-04M S/B Segment on Pier	24	27-Apr-22	26-May-22
C4-2410	C4-04M N/B Segment on Pier	24	27-Apr-22	26-May-22
4.10 - Bridge D1				
4.10.2 - Pier				
- D1-01				
D1-1250	Pier D1-01 ELS	24	15-Nov-21 A	02-Mar-22
D1-1255	Pier D1-01 Pile Cap	24	03-Mar-22	30-Mar-22
D1-1260	Pier D1-01 Column	36	31-Mar-22	18-May-22
- D1-03				
D1-5530	Pier D1-03 ELS	24	08-Apr-22	11-May-22
- D1-04M				
D1-5570	Pier D1-04M ELS	30	03-Mar-22	07-Apr-22
D1-5575	Pier D1-04M Pile Cap	30	08-Apr-22	18-May-22
4.11 - Bridge D2				
4.11.1 - Foundation				
- Portion VIII				
- ADMS				
ADMS-15	ADMS Prism - Install Prism in MTR Track Zone (4 NTH work)	9	31-Jan-22	12-Feb-22
ADMS-16	ADMS Prism - Submit ADMS Initial Survey Report	6	14-Feb-22	19-Feb-22
- Bored Piling				
D2-1118	Pier D2-01 Obtain MTRC Consent for Bored Piling and Pier Construction	12	05-Jul-21 A	16-Feb-22
D2-1120	Pier D2-01 Bored Piling Set-up and Piling Platform	36	21-Feb-22	02-Apr-22
D2-1130	Pier D2-01 Bored Piling by RCD (4 nos. @ 16d/pile due MTR restriction)	64	04-Apr-22	24-Jun-22
- Portion XI				
- Pier D2-03				
D2-1215	Pier D2-03 Site Clearance / Remove Footing of Sign Gantry G53	0	08-Nov-21 A	31-Dec-21 A
D2-1225	Pier D2-03 Bored Piling Set-up and Founding Level Approval	0	01-Dec-21 A	08-Jan-22 A
D2-1230	Pier D2-03 Bored Piling (3 nos)	42	10-Jan-22 A	23-Mar-22
D2-1235	TIME RISK ALLOWANCE for D2-03 Bored Piling	12	24-Mar-22	07-Apr-22
D2-1240	Pier D2-03 Bored Pile Testing	24	08-Apr-22	11-May-22
4.11.2 - Pier				
- D2-02				
D2-1550	Pier D2-02 Cofferdam	0	11-Oct-21 A	07-Jan-22 A
D2-1555	Pier D2-02 Bored Pile Testing (river side 2 nos)	0	08-Jan-22 A	10-Jan-22 A
D2-1560	Pier D2-02 ELS	22	17-Jan-22 A	28-Feb-22
D2-1565	Pier D2-02 Pile Cap	18	01-Mar-22	21-Mar-22
D2-1575	Pier D2-02 Nullah Temporary Reinstatement	7	22-Mar-22	29-Mar-22
D2-1578	2022 End of Dry Season	0		31-Mar-22*
D2-1579	Pier D2-02 Column	24	30-Mar-22	30-Apr-22
D2-1583	Tower Crane 3 - Foundation	42	30-Mar-22	24-May-22
4.12 - Bridge E1				
4.12.2 - Pier				
- E1-01				
E1-1250	Pier E1-01 ELS	12	16-Nov-21 A	16-Feb-22
E1-1255	Pier E1-01 Pile Cap	24	17-Feb-22	16-Mar-22
E1-1260	Pier E1-01 Column	36	17-Mar-22	03-May-22
- E2-02				
E1-1350	Pier E1-02 ELS	0	04-Dec-21 A	27-Jan-22 A
E1-1355	Pier E1-02 Pile Cap	24	31-Jan-22	02-Mar-22
E1-1370	Pier E1-02 Column	36	03-Mar-22	14-Apr-22



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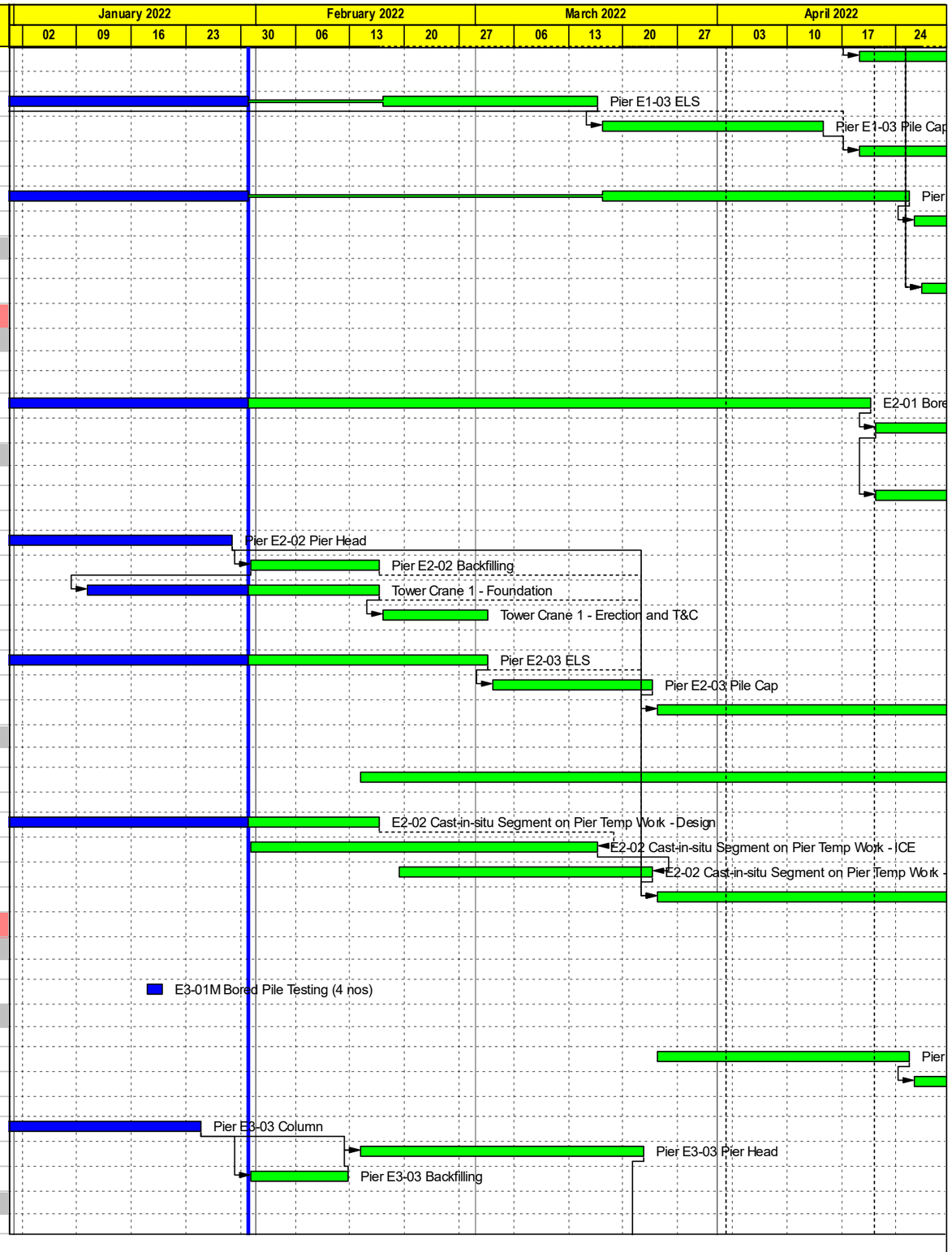
3-Month Rolling Programme - Feb 2022

Proj ID : 3MRP-23
Layout : ND201905 3MRP
Date : Page 7 of 11

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

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
E1-1372	Pier E1-02 Pier Head	24	19-Apr-22	18-May-22
- E1-03				
E1-5530	Pier E1-03 ELS	24	22-Dec-21 A	16-Mar-22
E1-5535	Pier E1-03 Pile Cap	24	17-Mar-22	14-Apr-22
E1-5540	Pier E1-03 Column	36	19-Apr-22	01-Jun-22
- E1-04				
E1-5570	Pier E1-04M ELS	30	22-Dec-21 A	25-Apr-22
E1-5575	Pier E1-04M Pile Cap	30	26-Apr-22	01-Jun-22
4.12.4 - Bridge Deck				
- End-span D1/C4-04M				
E1-2050	E1/C4-04M Segment on Pier	24	27-Apr-22	26-May-22
4.13 - Bridge E2				
4.13.1 - Foundation				
- Portion VIII				
- Bored Piling				
E2-1130	E2-01 Bored Piling by RCD (6 nos @ 16d/pile due to MTR restriction and CE 33)	62	20-Dec-21 A	20-Apr-22
E2-1140	E2-01 Bored Pile Testing (6 nos)	18	21-Apr-22	13-May-22
4.13.2 - Pier				
- E2-01				
E2-1510	Pier E2-01 ELS - Sheet Piles	24	21-Apr-22	20-May-22
- E2-02				
E2-1572	Pier E2-02 Pier Head	0	15-Dec-21 A	29-Jan-22 A
E2-1575	Pier E2-02 Backfilling	12	31-Jan-22	16-Feb-22
E2-1577	Tower Crane 1 - Foundation	12	10-Jan-22 A	16-Feb-22
E2-1578	Tower Crane 1 - Erection and T&C	12	17-Feb-22	02-Mar-22
- E2-03				
E2-6020	Pier E2-03 ELS	24	15-Nov-21 A	02-Mar-22
E2-6025	Pier E2-03 Pile Cap	18	03-Mar-22	23-Mar-22
E2-6030	Pier E2-03 Column	42	24-Mar-22	18-May-22
4.13.3 - Bridge Deck				
- T-span E2-01				
E2-2161	E2-01 Obtain MTRC Consent for Deck Construction	120	14-Feb-22	12-Jul-22
- T-span E2-02				
E2-7410	E2-02 Cast-in-situ Segment on Pier Temp Work - Design	12	25-Oct-21 A	16-Feb-22
E2-7411	E2-02 Cast-in-situ Segment on Pier Temp Work - ICE	36	31-Jan-22	16-Mar-22
E2-7412	E2-02 Cast-in-situ Segment on Pier Temp Work - PM Review	28	19-Feb-22	23-Mar-22
E2-7415	E2-02 Cast-in-situ Segment on Pier / Table Top	72	24-Mar-22	23-Jun-22
4.14 - Bridge E3				
4.14.1 - Foundation				
- Pier E3-01M (Portion XI)				
E3-1040	E3-01M Bored Pile Testing (4 nos)	0	18-Jan-22 A	20-Jan-22 A
4.14.2 - Pier				
- E3-01M				
E3-1315	Pier E3-01M Pile Cap	24	24-Mar-22	25-Apr-22
E3-1320	Pier E3-01M Column	42	26-Apr-22	16-Jun-22
- E3-03				
E3-5540	Pier E3-03 Column	0	29-Dec-21 A	25-Jan-22 A
E3-5542	Pier E3-03 Pier Head	32	14-Feb-22	22-Mar-22
E3-5545	Pier E3-03 Backfilling	9	31-Jan-22	12-Feb-22
4.14.4 - Bridge Deck				
- T-span E3-03				



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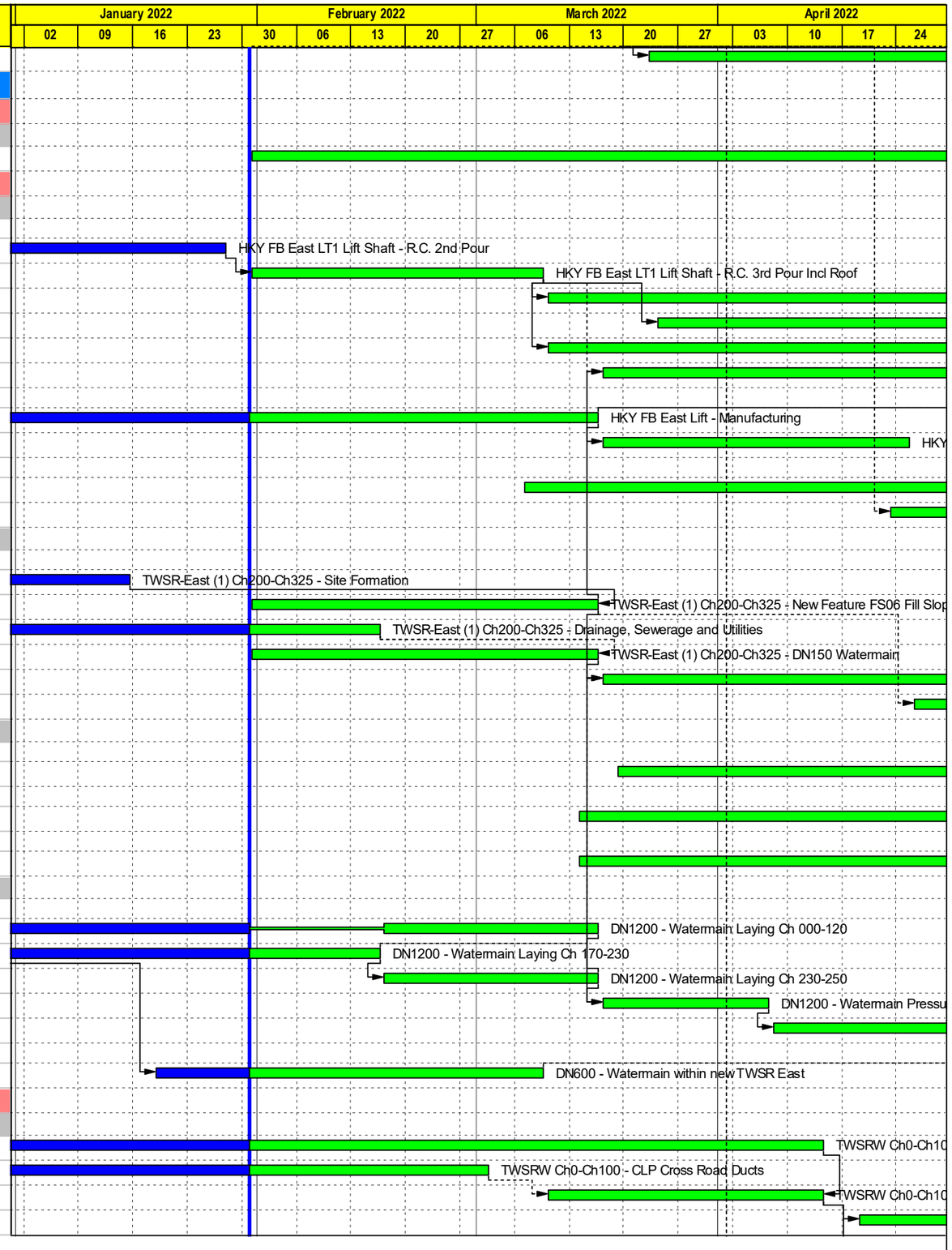
3-Month Rolling Programme - Feb 2022

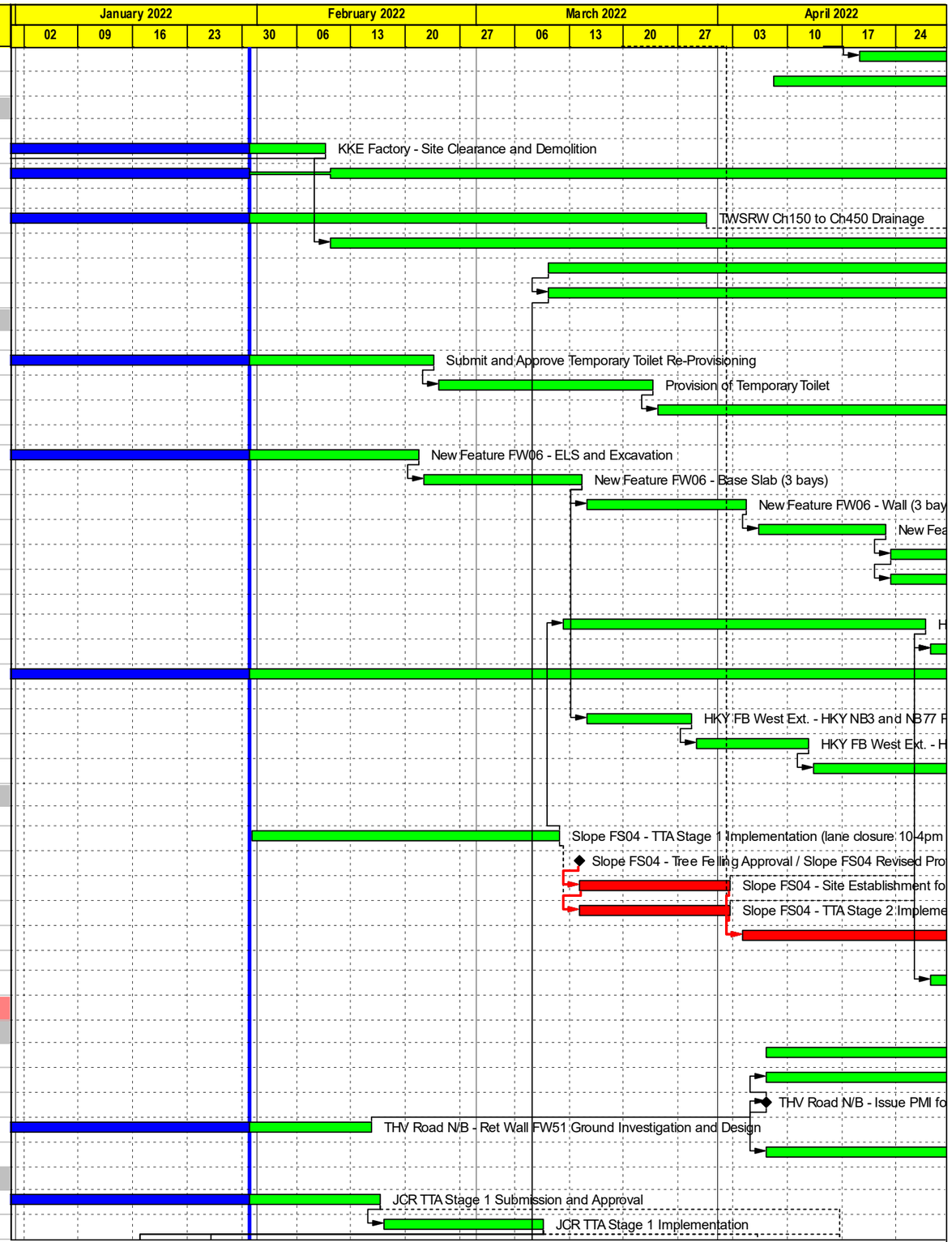
Proj ID : 3MRP-23
Layout : ND201905 3MRP
Date : Page 8 of 11

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

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
E3-2350	E3-03 Cast-in-situ Segment on Pier / Table Top	48	23-Mar-22	24-May-22
5.0 - Fanling Highway Associated Works				
5.2 - Fanling Highway Noise Barrier				
5.2.3 - Noise Barrier NB109				
FHY-1491	Fanling Highway TTA Stage 2 - Preparation / 1st Submission	84	31-Jan-22	18-May-22
5.3 - Tai Wo Service Road East (TWSR-East)				
5.3.1 - TWSR-East HKY FB Extension				
- Lift and Stairs Structure				
FBE-1225	HKY FB East LT1 Lift Shaft - R.C. 2nd Pour	0	15-Dec-21 A	28-Jan-22 A
FBE-1230	HKY FB East LT1 Lift Shaft - R.C. 3rd Pour Incl Roof	30	31-Jan-22	09-Mar-22
FBE-1233	HKY FB East LT1 Lift Shaft - L-shape Retaining Wall FW03 + Railing	42	10-Mar-22	03-May-22
FBE-1235	HKY FB East LT1 Lift Shaft - Steel Works	72	24-Mar-22	23-Jun-22
FBE-1248	HKY FB East - R.C. Stairs	72	10-Mar-22	09-Jun-22
FBE-1265	HKY FB East - R.C. Stairs	72	17-Mar-22	16-Jun-22
- Lift Installation				
FBE-1275	HKY FB East Lift - Manufacturing	36	17-Oct-20 A	16-Mar-22
FBE-1280	HKY FB East Lift - Delivery	30	17-Mar-22	25-Apr-22
- HKY FB Extension Deck				
FBE-1340	HKY FB East Steel Deck - Off-site Fabrication/Delivery	120	07-Mar-22	02-Aug-22
FBE-1352	HKY FB East - Lighting System Procurement and Delivery	125	23-Apr-22	21-Sep-22
5.3.2 - TWSR East (1) Adjacent to Cycle Track				
- Ch200 to Ch325				
TSE-2050	TWSR-East (1) Ch200-Ch325 - Site Formation	0	01-Sep-21 A	15-Jan-22 A
TSE-2055	TWSR-East (1) Ch200-Ch325 - New Feature FS06 Fill Slope	36	31-Jan-22	16-Mar-22
TSE-2060	TWSR-East (1) Ch200-Ch325 - Drainage, Sewerage and Utilities	12	01-Sep-21 A	16-Feb-22
TSE-2070	TWSR-East (1) Ch200-Ch325 - DN150 Watermain	36	31-Jan-22	16-Mar-22
TSE-2080	TWSR-East (1) Ch200-Ch325 - Road Works	48	17-Mar-22	18-May-22
TSE-2085	TWSR-East (1) Ch200-Ch325 - Road Lighting including Cabling	18	26-Apr-22	18-May-22
5.3.3 - TWSR-East Bus-Bus Interchange				
- Bus-Bus Interchange Shelter				
BBI-1205	BBI Covered Walkway - Fabrication and Delivery	120	19-Mar-22	15-Aug-22
- Bus-Bus Interchange Road Works				
BBI-1305	BBI - Application for Lighting Removal	60	14-Mar-22	28-May-22
- TWSR East (2) Entry to BBI from Fanling Highway				
BBI-1415	BBI - Application for Lighting Removal	60	14-Mar-22	28-May-22
5.3.6 - PMI 027 - DN1200 and DN600 Watermain Diversion				
- DN1200 Watermain				
PMI027-140	DN1200 - Watermain Laying Ch 000-120	24	24-Nov-21 A	16-Mar-22
PMI027-160	DN1200 - Watermain Laying Ch 170-230	12	22-Dec-21 A	16-Feb-22
PMI027-170	DN1200 - Watermain Laying Ch 230-250	24	17-Feb-22	16-Mar-22
PMI027-180	DN1200 - Watermain Pressure Test	18	17-Mar-22	07-Apr-22
PMI027-185	DN1200 - Watermain Swabbing & Sterilization	18	08-Apr-22	03-May-22
- DN600 Watermain				
PMI027-210	DN600 - Watermain within new TWSR East	30	19-Jan-22 A	09-Mar-22
5.4 - Tai Wo Service Road West (TWSR-West)				
5.4.2 - TWSR-West Ch000 to Ch200				
TSW-4105	TWSRW Ch0-Ch100 - CLP Ducts+Towngas+Other Utilities	60	30-Jun-21 A	14-Apr-22
TSW-4108	TWSRW Ch0-Ch100 - CLP Cross Road Ducts	24	01-Nov-21 A	02-Mar-22
TSW-4110	TWSRW Ch0-Ch100 N/B - Roadworks+Footpath+Cycletrack+Run-in	30	10-Mar-22	14-Apr-22
TSW-4115	TWSRW Ch100-Ch150 N/B - Drainage and Sewerage	24	19-Apr-22	18-May-22



Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
TSW-4120	TWSRW Ch100-Ch150 - CLP Ducts+Towngas+Other Utilities	36	19-Apr-22	01-Jun-22
TSW-4127	TWSRW TTA Stage 1B - Submission and Approval	72	08-Apr-22	08-Jul-22
5.4.3 - TWSR-West Ch200 to Ch450				
- KKE Factory Compound				
TSW-4427	KKE Factory - Site Clearance and Demolition	6	01-Nov-21 A	09-Feb-22
TSW-4428	KKE Factory - Retaining Wall FW52	78	15-Sep-21 A	18-May-22
- Ch200 to Ch450				
TSW-4430	TWSRW Ch150 to Ch450 Drainage	48	01-Apr-21 A	30-Mar-22
TSW-4435	TWSRW Ch150 to Ch450 - DN450 Watermain Include Testing	120	10-Feb-22	08-Jul-22
TSW-4438	TWSRW Ch150 to Ch450 - DN150 Flushing Watermain Include Testing	120	10-Mar-22	05-Aug-22
TSW-4440	TWSRW Ch150-Ch450 - CLP Ducts+Towngas+Other Utilities	120	10-Mar-22	05-Aug-22
5.4.4 - TWSR-West Ch450 to Ch600				
- Existing Toilet Demolition				
TSW-3001	Submit and Approve Temporary Toilet Re-Provisioning	18	29-Dec-21 A	23-Feb-22
TSW-3002	Provision of Temporary Toilet	24	24-Feb-22	23-Mar-22
TSW-3003	Demolish Existing Toilet	42	24-Mar-22	18-May-22
- New Feature FW06				
TSW-3011	New Feature FW06 - ELS and Excavation	16	22-Nov-21 A	21-Feb-22
TSW-3012	New Feature FW06 - Base Slab (3 bays)	18	22-Feb-22	14-Mar-22
TSW-3013	New Feature FW06 - Wall (3 bays)	18	15-Mar-22	04-Apr-22
TSW-3014	New Feature FW06 - Backfilling	12	06-Apr-22	22-Apr-22
TSW-3015	New Feature FW06 - Drainages	18	23-Apr-22	16-May-22
TSW-3016	New Feature FW06 - Village Access Road	24	23-Apr-22	23-May-22
- Lift				
TSW-4535	HKY FB West Ext. - TTA Submission and Approval	36	12-Mar-22	27-Apr-22
TSW-4540	HKY FB West Ext. - TTA Implementation (1 lane - 2 way traffic)	18	28-Apr-22	20-May-22
TSW-4570	HKY FB West Ext. - Lift Manufacturing	78	19-Jan-21 A	11-May-22
- Noise Barrier NB77				
TSW-4680	HKY FB West Ext. - HKY NB3 and NB77 Pre-drilling	12	15-Mar-22	28-Mar-22
TSW-4685	HKY FB West Ext. - HKY NB3 and NB77 - H-pile Set-up	12	29-Mar-22	12-Apr-22
TSW-4690	HKY FB West Ext. - HKY NB3 and NB77 H-pile Bay 4+5 (6 nos+12 nos)	60	13-Apr-22	28-Jun-22
5.4.5 - TWSR-West Ch600 to Ch800				
- Ch600 to Ch800 Slope Works				
TSW-1123	Slope FS04 - TTA Stage 1 Implementation (lane closure 10-4pm only)	32	31-Jan-22	11-Mar-22
TSW-1124	Slope FS04 - Tree Felling Approval / Slope FS04 Revised Profile	0		14-Mar-22*
TSW-1125	Slope FS04 - Site Establishment for Slope Works	18	14-Mar-22	02-Apr-22
TSW-1130	Slope FS04 - TTA Stage 2 Implementation (without lane closure)	18	14-Mar-22	02-Apr-22
TSW-1135	Slope FS04 - Top Slope Excavation	30	04-Apr-22	14-May-22
- Ch600 to Ch800 Road Works				
TSW-1164	TSWRW Ch600 to Ch700 N/B - TTA Submission and Approval	56	28-Apr-22	06-Jul-22
5.5 - Jockey Club Road				
5.5.2 - Tong Hang Village Road (THV Road)				
JCR-2180	THV TTA Stage 1 Implementation	72	07-Apr-22	07-Jul-22
JCR-2181	THV Road N/B - Application for Lighting Removal	72	07-Apr-22	07-Jul-22
JCR-2190	THV Road N/B - Issue PMI for Ret Wall FW51	0	07-Apr-22	
JCR-2192	THV Road N/B - Ret Wall FW51 Ground Investigation and Design	11	01-Apr-21 A	15-Feb-22
JCR-2193	THV Road N/B - Ret Wall FW51 Preparation Work	42	07-Apr-22	31-May-22
5.5.3 - North Bound				
JCR-2335	JCR TTA Stage 1 Submission and Approval	12	31-Dec-21 A	16-Feb-22
JCR-2340	JCR TTA Stage 1 Implementation	18	17-Feb-22	09-Mar-22



CRCC - Paul Y. Joint Venture

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

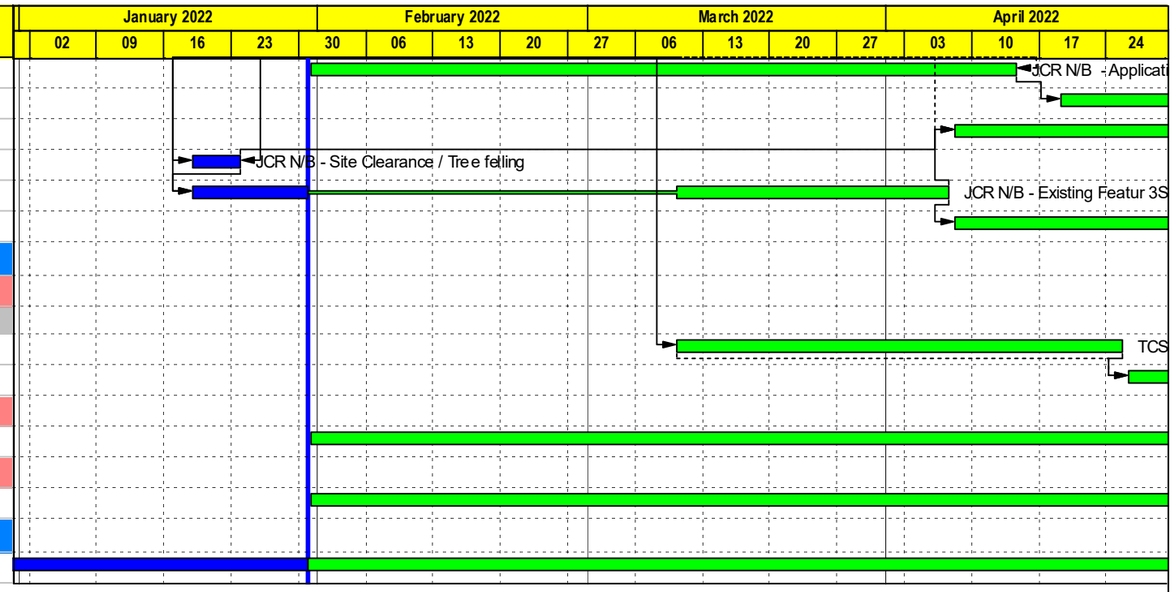
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme - Feb 2022

Proj ID : 3MRP-23
Layout : ND201905 3MRP
Date : Page 10 of 11

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

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish
JCR-2350	JCR N/B - Application for Lighting Removal	60	31-Jan-22	14-Apr-22
JCR-2360	JCR N/B - Lighting Removal/Install Temporary Lighting	18	19-Apr-22	11-May-22
JCR-2370	JCR N/B - Slope Works FS05 - Site Clearance / Tree Felling	18	08-Apr-22	03-May-22
JCR-2390	JCR N/B - Site Clearance / Tree felling	0	19-Jan-22 A	24-Jan-22 A
JCR-2400	JCR N/B - Existing Featur 3SW-C/F63 - Excavate Loose Fill	24	19-Jan-22 A	07-Apr-22
JCR-2410	JCR N/B - Existing Featur 3SW-C/F63 - Rockfill	42	08-Apr-22	01-Jun-22
6.0 - TCSS Works				
6.1 - Key Date 1				
6.1.1 - TWSRW & FH N/B				
TCS-124	TCSS Ducts - TWSRW Ch150-Ch450	36	10-Mar-22	25-Apr-22
TCS-126	TCSS Ducts - TWSRW Ch450-Ch600	36	26-Apr-22	09-Jun-22
6.2 - Key Date 3A and Section 9A				
TCS-300	Tolo/Fanling Highway Section 4 - Submit /Approve Interface Management Plan	120	31-Jan-22	30-Jun-22
6.3 - Key Date 3B and Section 9B				
TCS-370	Traffic Defector System - Submit /Approve Interface Management Plan	72	31-Jan-22	03-May-22
7.0 - Miscellaneous Works				
MIS-100	Preservation and Protection of Trees	150	28-Oct-20 A	05-Aug-22



CRCC - Paul Y. Joint Venture

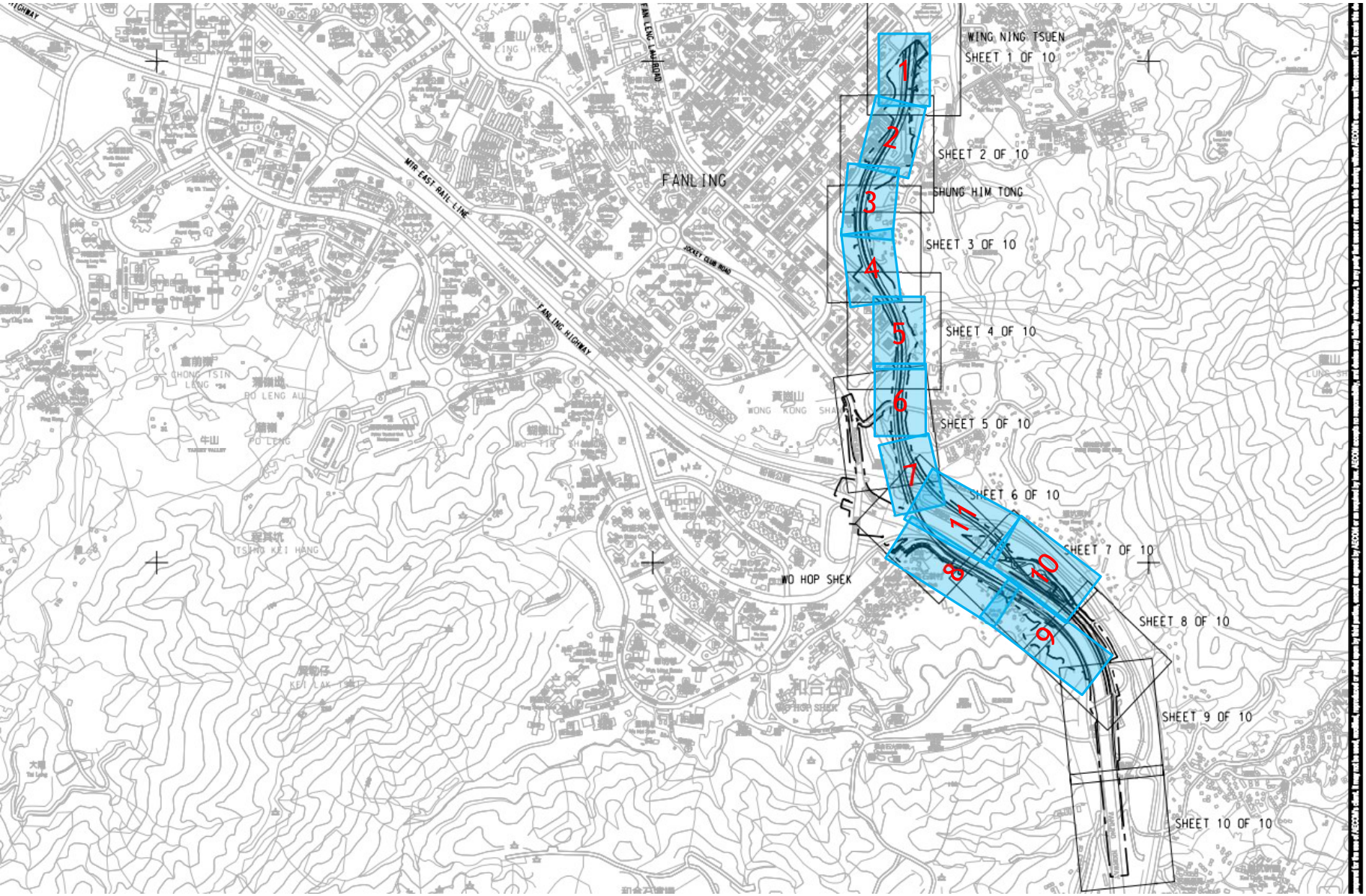
Remaining Level of Ef...
Actual Work
Remaining Work
Critical Remaining Work
Milestone

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

3-Month Rolling Programme - Feb 2022

Proj ID : 3MRP-23
Layout : ND201905 3MRP
Date : Page 11 of 11

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



CONSULTANT

AECOM Asia Company Ltd.
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SUB-CONSULTANTS

ISSUE/REVISION

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

STATUS

SCALE

A1 1 : 7000

DIMENSION UNIT

METRES

KEY PLAN

PROJECT NO.

60335576

CONTRACT NO.

ND/2019/05

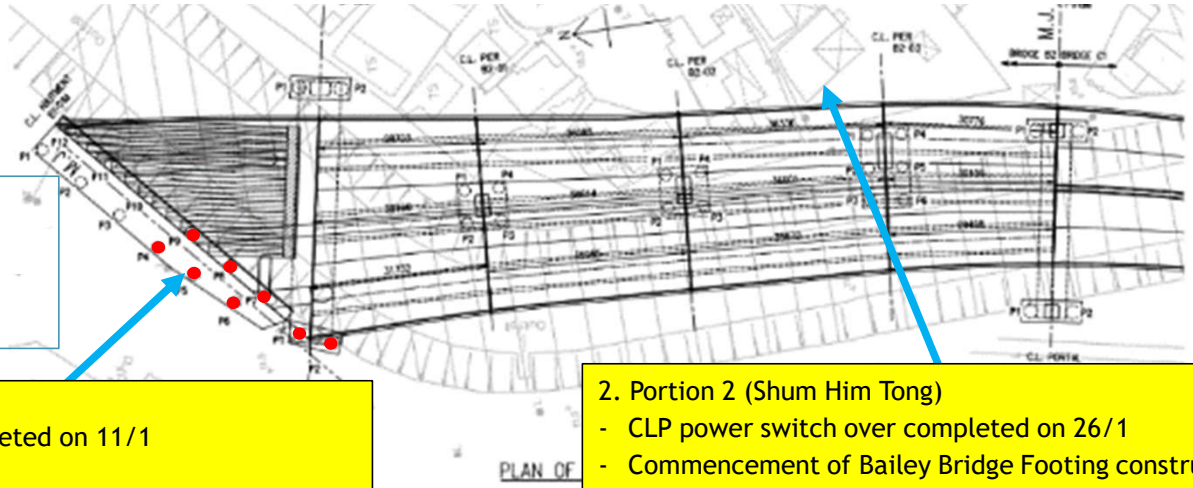
SHEET TITLE

KEY PLAN AND LOCATION PLAN

1 North Team

Legend:

- Bored Pile in progress
- Bored Pile Completed



1. Portion 1 (On Kui St)
- Last Bore Hole completed on 11/1
- Last Concrete on19/1
- **CLP diversion at Portion II completed on 26/1**
- B1 CLP pole removed on 26/1
- Bored piling at B1-01 resumed on 27/1
- Bored Piling - ES:16/9/21 EF:8/4/22
- **Target completion 9 Mar 22. Still on track against R9**

2. Portion 2 (Shum Him Tong)
- CLP power switch over completed on 26/1
- Commencement of Bailey Bridge Footing construction after pedestrian diversion. Target commencement on 15/2
- Bored Piling - ES:20/4/22 EF:2/11/22
- **Target commencement 17 Mar 22. Still on track against R9**

Portion II - Pedestrian diversion in progress

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

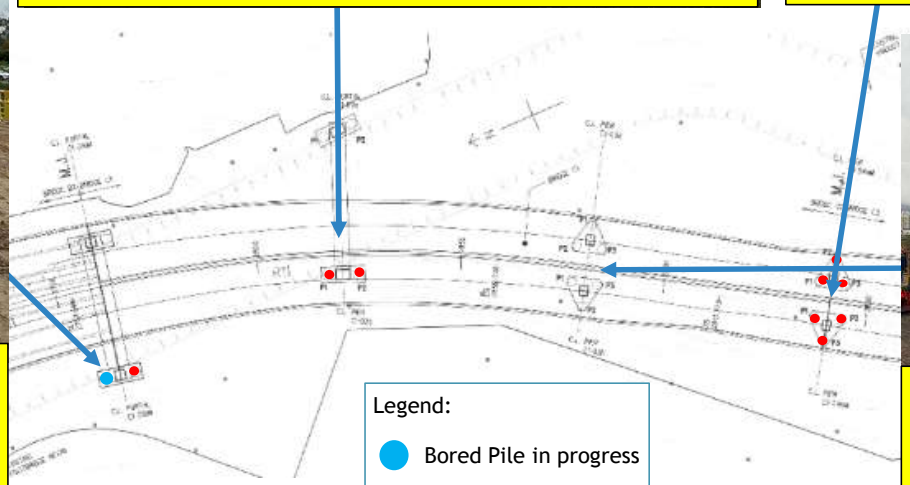
Bailey Bridge Offsite Pre-Assemble

Portion II - Hoarding Construction near 董事屋

2 North Team

2. C1-01b
- Pile piling at C1-01b for piling platform in progress
- Bored Piling - ES:28/5/22 EF:11/6/22
- **Target completion 12 Jan 22. Ahead against R9**

3. C1-02b
- Bored piling completed on 22 Jan 22.
- Bored Piling - ES:14/5/22 EF:27/5/22
- **Target completion 26 Jan 22. Ahead against R9**

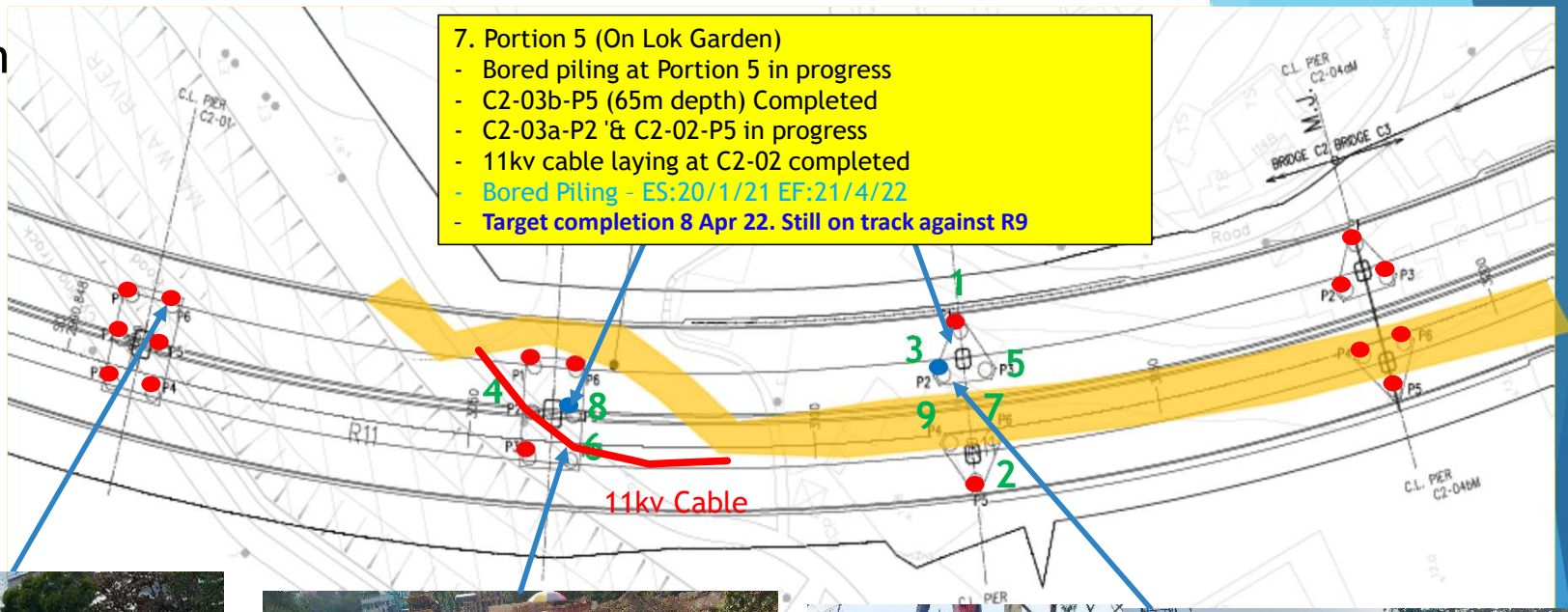


5. Portion 3 (C1-04)
- Interface core test completed
- Sonic tests to be carried out on 17 Feb 2022
- Bored Piling test - ES:29/12/21 EF:26/01/22
- **Target completion 17 Feb 22. Slippage against R9**

4. Portion 3 (C1-03)
- On-site sorting after demolition completed.
- Bored pile in progress
- TTA scheme no. 214 to be implemented on 23 Feb 2022
- Bored Piling predrill - ES:18/12/21 EF:04/02/22
- **Target completion 19 Jan 22. On track against R9**

3 North Team

Legend:
- Bored Pile in progress
- Bored Pile Completed



7. Portion 5 (On Lok Garden)
- Bored piling at Portion 5 in progress
- C2-03b-P5 (65m depth) Completed
- C2-03a-P2 '& C2-02-P5 in progress
- 11kv cable laying at C2-02 completed
- Bored Piling - ES:20/1/21 EF:21/4/22
- **Target completion 8 Apr 22. Still on track against R9**

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

Portion 5
- **11kv cable laying at C2-02 completed**

Portion 5 Bored pile in progress

4

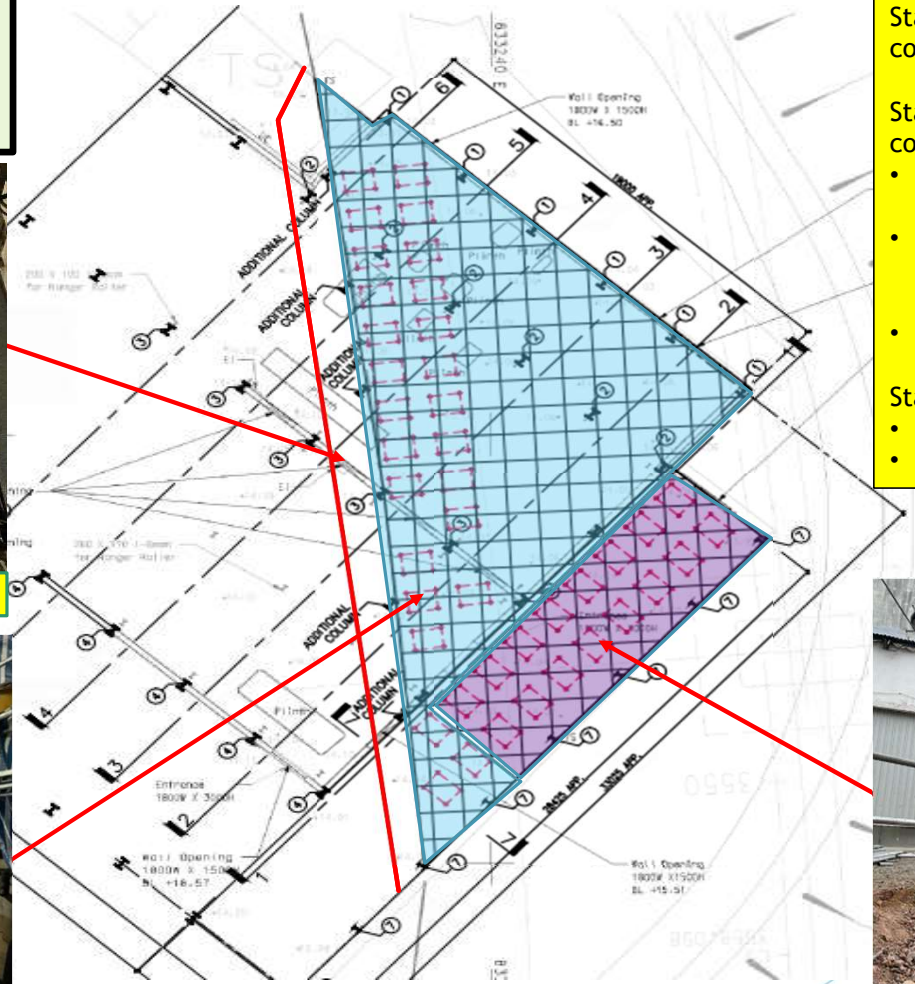
- North Team

  Area Highlighted

  - HD Warehouse

Erected Temporary Protection Barrier

Modification works in progress



11. Portion 6 HD Factory
Stage 1 Demolition Works for HD Warehouse completed on 07/01/22

Stage 2 Modification Works for HD Warehouse commenced on 07/02/22

- Temporary protection barrier completed on 11/02/2022
- Modification Works (additional permanent structural members and new boundary wall are in progress)
- Target completion date: 28/02/2022

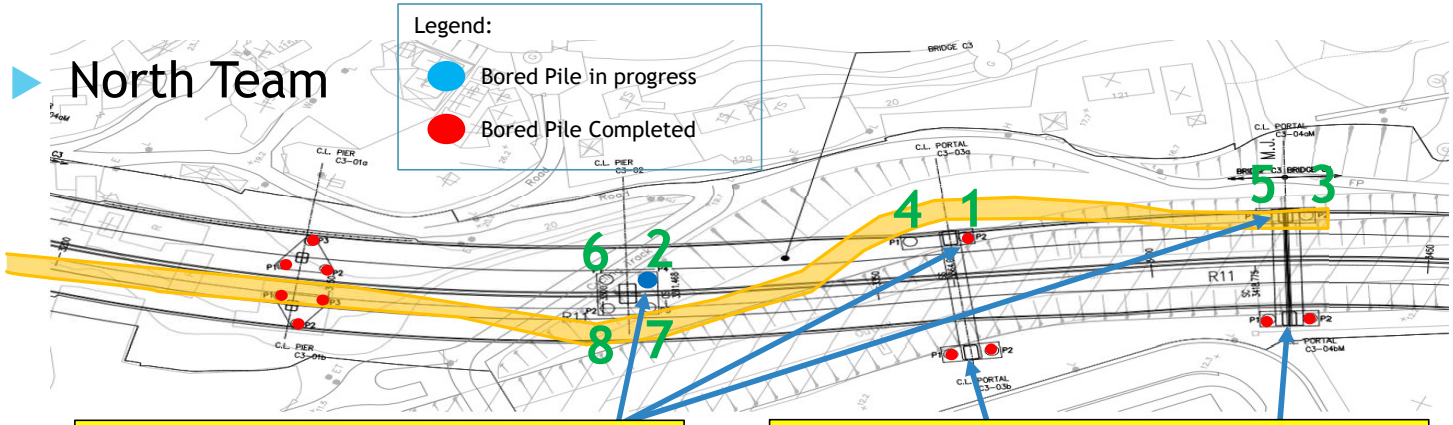
Stage 3 Demolition Works for HD Warehouse

- Target commencement date: 01/03/22
- Target completion date: 22/03/22

Stage 1 Demolition works Completed

4

North Team



8. Portion 6 (Village side)
- C3-03a & C3-02 Bored Pile in progress
- C3-04a Hual Road is completed
- Bored Piling – ES:29/12/21 EF:26/3/22
- **Target completion 26 Mar 22. On track against R9**

9. Portion 6 (Yip Fung St)
- C3-03b pile cap backfilling is in progress
- Pile cap – ES:21/3/22 EF:11/4/22. Ahead against R9
- C3-04b pipe pile wall construction completed on26 Jan 2022
- Excavation works is in progress
- **Target ELS completion 26 Jan 21. On track against R9**

Portion 6 (Yip Fung St)
ELS for C3-04b pipe pile wall is completed
Excavation work is in progress

Portion 6
C3-02-P4 Bored Pile is in progress

Portion 6
C3-03a-P2 Bored Pile completed

Portion 6 (Yip Fung St)
C3-03b pile cap backfilling is in progress

C3-04a Haul Road
Pipe piling at C3-04a is completed

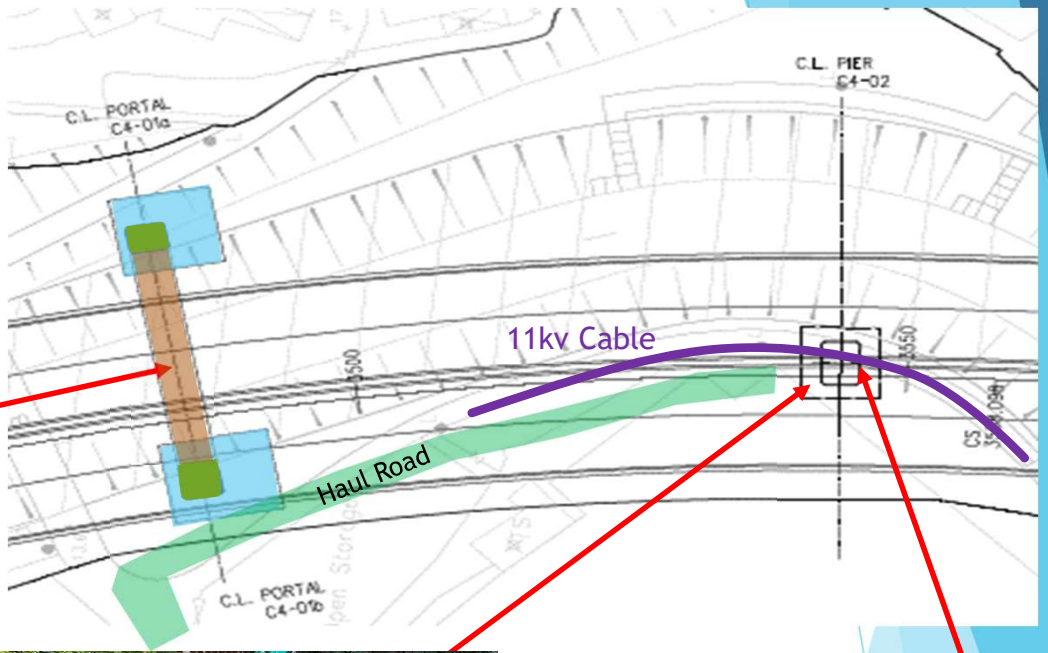
5

- North Team

  Area Highlighted

  - HD (C4-01 & C4-02)

Erected Truss for C4-01 Portal Beam Construction



10. Portion 6

C4-01 portal beam

- C4-01 truss is completed on 10 Feb 2022
- Falsework & formwork erection is in progress
- Haul road to C4-02 is completed

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

C4-02

- 1st Stage ELS pipe piling construction completed and 2nd Stage will be followed after 11kV cable slewing and lowering down platform.

- C4-02 ELS pipe pile – ES:18/1/22 EF:17/2/22
- **Target completion 6 Feb 2022. Slippage against R9**

C4-02 1st Stage ELS Pipe Piling Completed

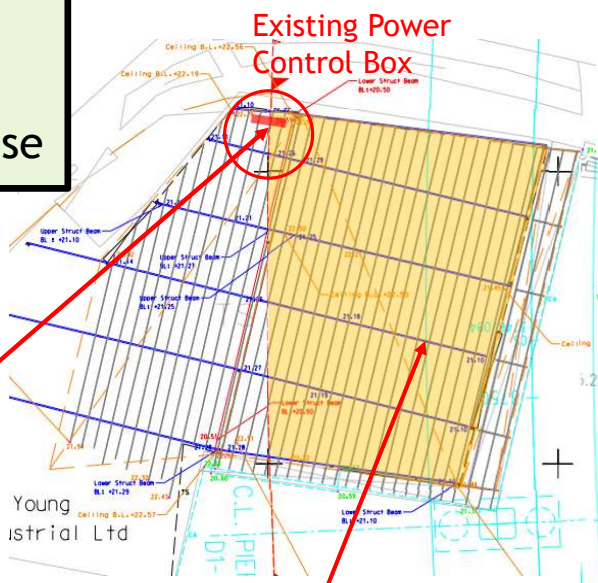
11kV Cable Slewing and lowing down platform in Progress

- North Team

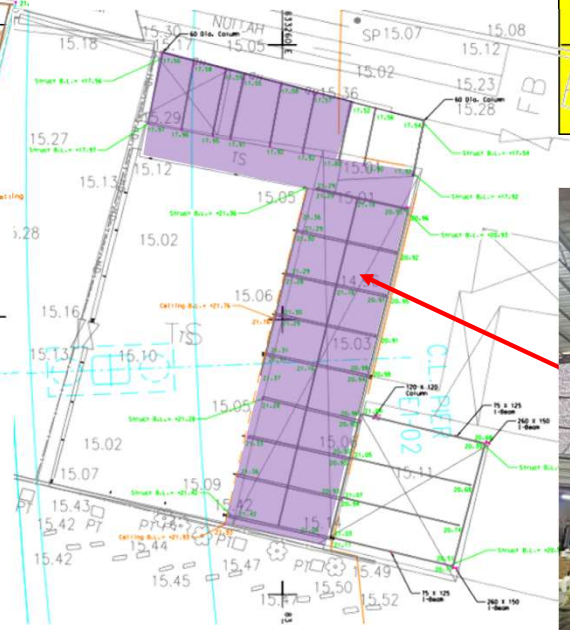
  Area Highlighted

  – Man Young Warehouse

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



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

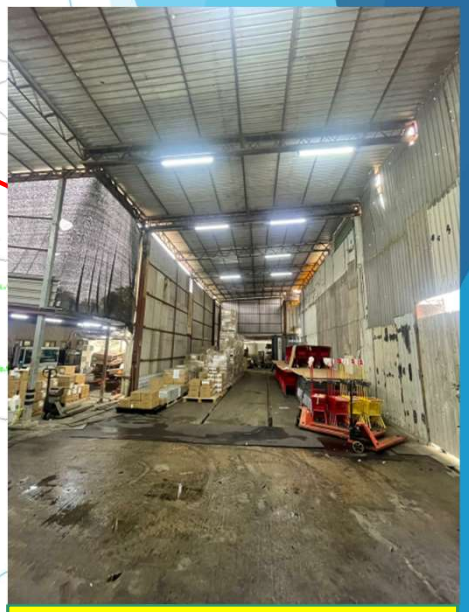


Portion 8
Kim Hoi Warehouse near D1-02 (Part 3)

- Method Statement for Modification works was submitted on 27-Jan-2022
- Target commencement date: 21-Feb-2022
- Target completion date: 21-March-2022

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

- Initial survey completed and modification design proposal scheduled to submit on 18/02/22



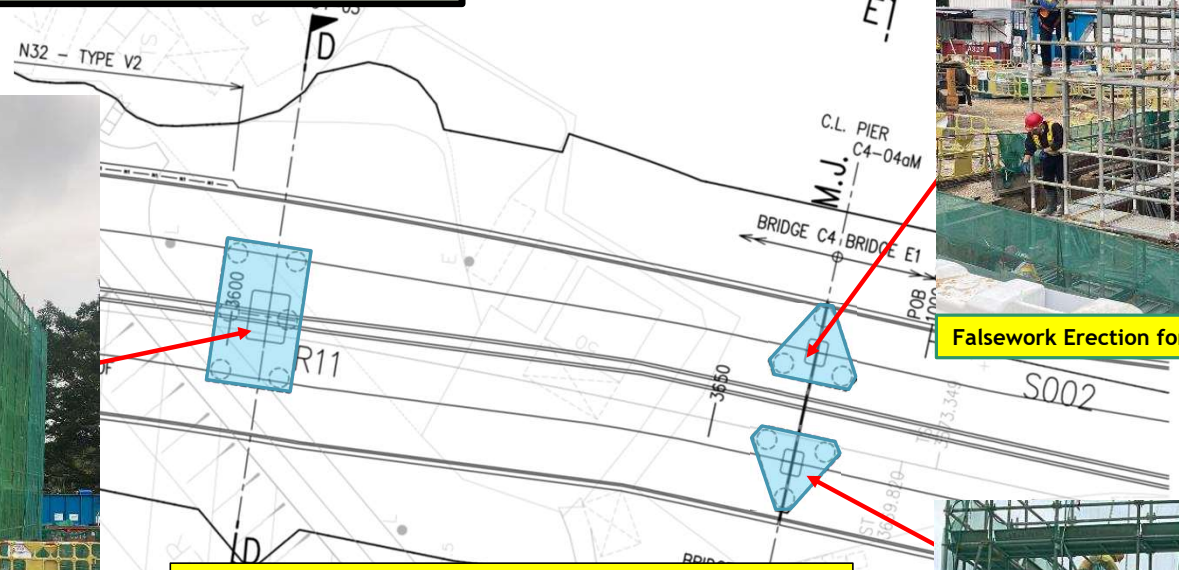
Portion 8
Kim Hoi Warehouse near E1-02 (Part 4)

6

- North Team

Area Highlighted – C4-03 & C4-04

3rd Pour C4-03 Column Concreting completed



11. Portion 8 (CTC yard)
- C4-03 Column Construction completed on 12/02/22.
- C4-03 column – ES:20/12/21 EF:12/1/22
- **Target completion 12 Feb 2022. Slippage against R9**

- Falsework Erection for C4-04aM & C4-04bM Pier Head Completed
- Erection of steel mould for C4-04B completed on 12/02/2022
- Rebar fixing for C4-04B in progress
- C4-04 pier head – ES:28/1/22 EF:7/3/22
- **Target completion 19 Mar 2022. Slippage against R9**

Falsework Erection for C4-04aM Pier Head Construction Completed.

C4-04bM Pier Head Construction in progress

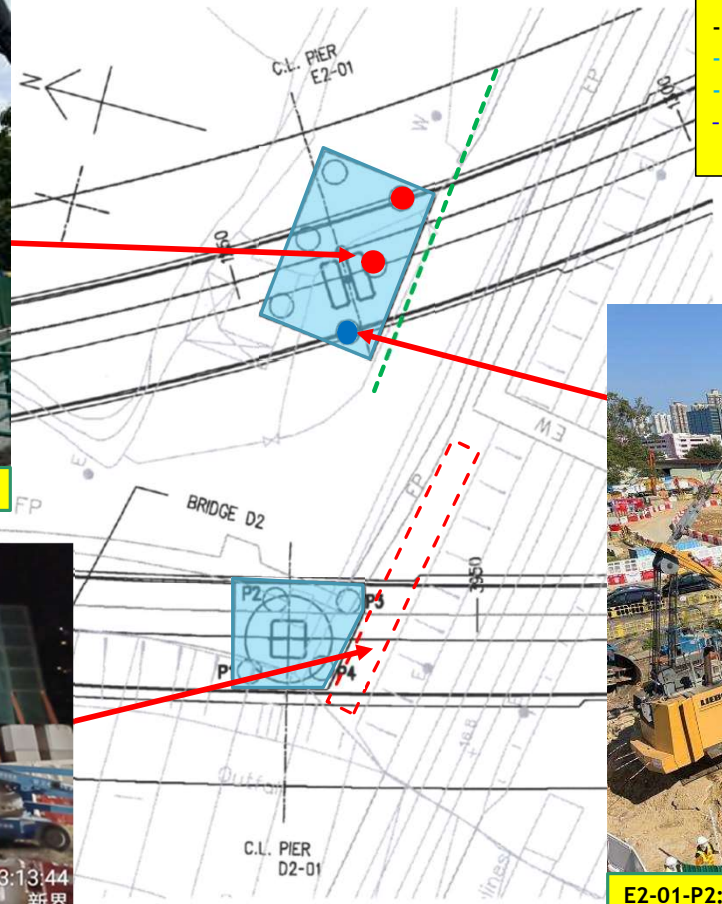
7

- North Team

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

14. Portion 8 (MTR trackside)
- Catch fence erection completed on 8/02/22.
- Joint manual survey carried out bi-weekly.
- Bored piling at E2-01 commenced on 20/12/21
- D2-01 Bored Piling – ES:10/2/22 EF:7/4/22
- E2-01 Bored Piling – ES:6/12/21 EF:5/3/22
- **Target completion of E2-01 on 30 April 2022. Slippage against R9**

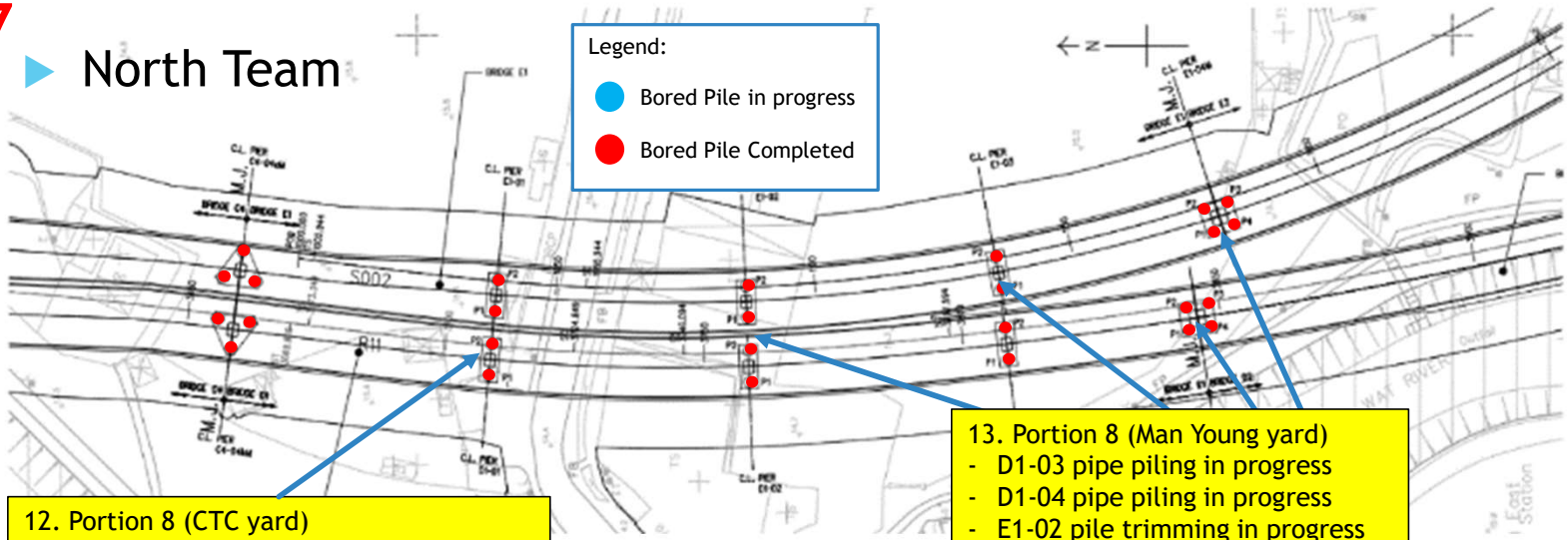
E2-01-P3: Bored Pile Concreting completed



Catch Fence Panel Erection Completed

E2-01-P2: Driving temp. casing and excavation

North Team



12. Portion 8 (CTC yard)
- Blinding layer at D1-01 & E1-01 pile cap completed, pile trimming in progress.
- ELS – ES:12/5/22 EF:9/6/22
- **on track against R9**

13. Portion 8 (Man Young yard)
- D1-03 pipe piling in progress
- D1-04 pipe piling in progress
- E1-02 pile trimming in progress
- E1-03 excavation in progress
- E1-04 pipe piling completed
- ELS - ES:10/6/22 EF:5/8/22
- **On track against R9**

D1-04 ELS Pipe Piling in Progress

D1-03 ELS Pipe Piling in Progress

D1-01/ E1-01 Blinding Layer Completed

E1-02 Pile Trimming in Progress

E1-03 Excavation in Progress

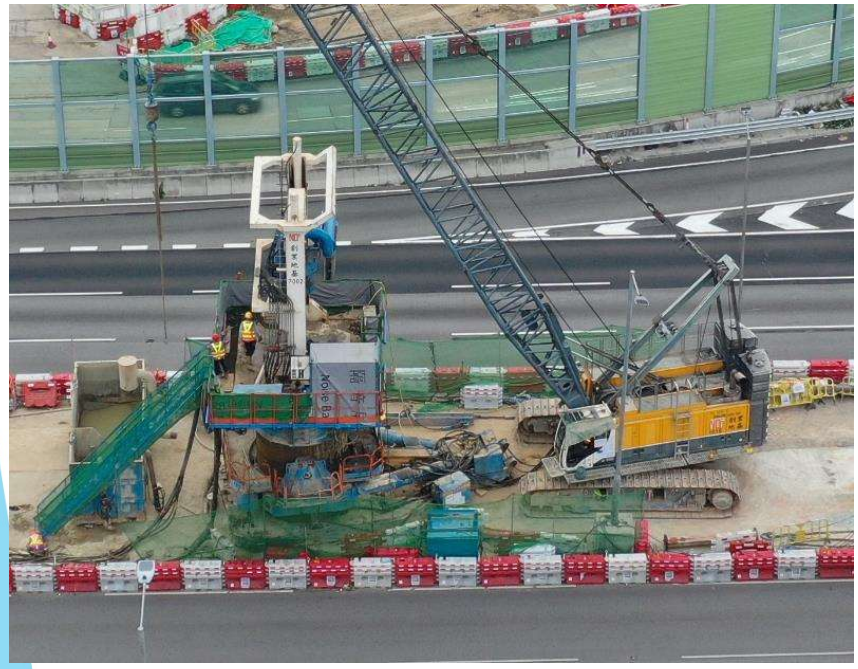
E1-04 ELS Pipe Piling Completed

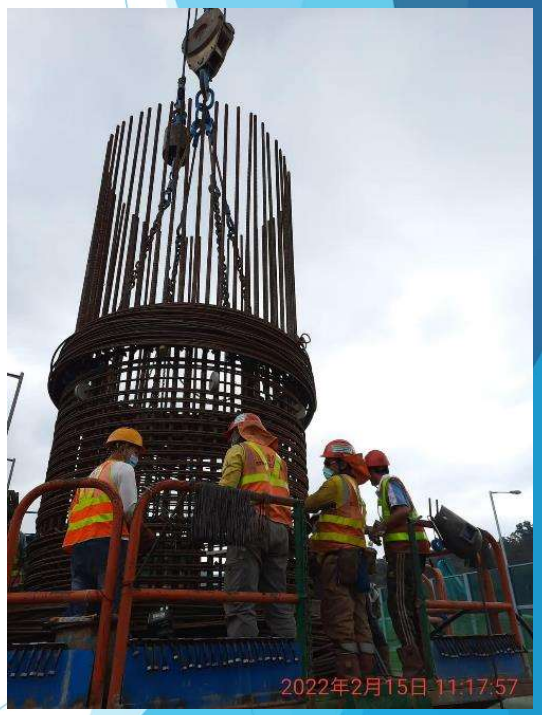
South Team - Area Highlighted

D2-02 **Construction Drainage Impact Assessment (CDIA) submitted. Temporary ELS by concrete block (3 layers will be applied) outside pipepile as contingency measure in case. Still aims to complete pile cap by 31 March 2022**

South Team - Area Highlighted

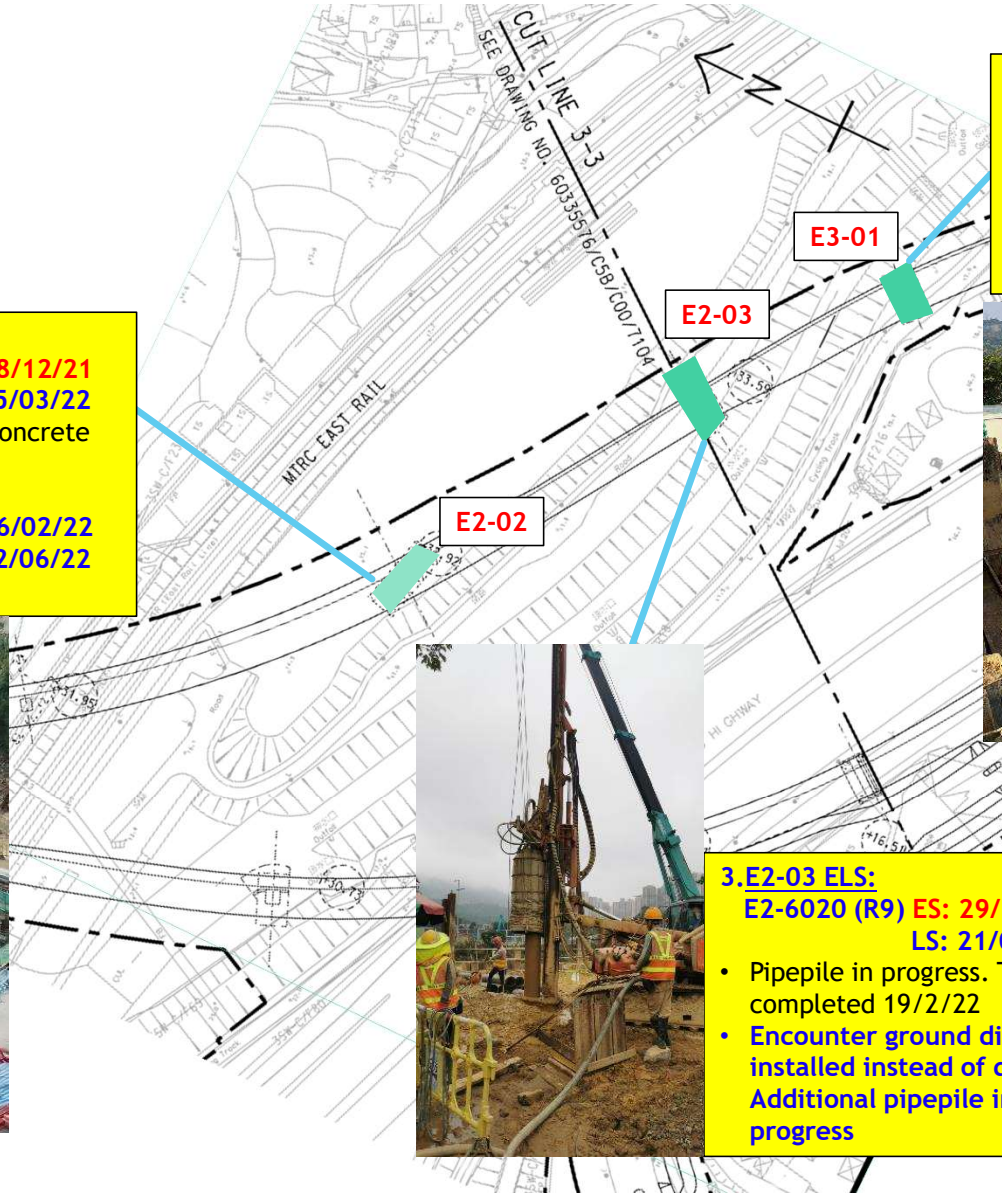
D2-03 Pile P3 to be placed concrete on 17 February 2022 with about 200m3 concrete.





7 & 11

South Team



1.E2-02 Backfilling
E2-1575 (R9) ES: 13/12/21 EF: 28/12/21
LS: 02/03/22 LF: 15/03/22

- Remove steel mould, make good concrete surface in progress

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

- Mini pile completed

2. E3-01 ELS
E3-1310 (R9) ES:11/01/22 EF:17/02/22
LS: 18/02/22 LF: 24/03/22

- ELS in progress
- **Cycling track side sheetpile clash with existing WSD bend block (abandon), design review**

3.E2-03 ELS:
E2-6020 (R9) ES: 29/11/21 EF: 12/01/22
LS: 21/03/22 LF: 06/05/22

- Pipepile in progress. Target pipepile work completed 19/2/22
- **Encounter ground difficult, only 12m sheetpile installed instead of design length 14m. Additional pipepile in river bank side in progress**

South Team - Area Highlighted

Kei Kee **After partial demolish Kei Kee steel roof, FW52 bay 3 and Dn 1650 storm drain construction commenced.**
Grade 200 rock fill is to replace the undesired soil layer during construction. Kei Kee demolish its roof top in progress.

South Team

1.D2-02 ELS for Cap
D2-1560 (R9) ES: 18/12/21 EF: 31/01/21
LS: 18/12/21 LF: 31/01/21

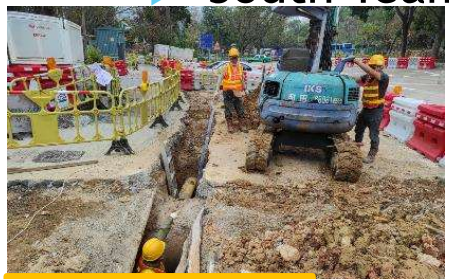
- Demolition of existing retaining wall completed
- Break up slab at river side in progres
- 1st waling in land side completed
- Excavation in land side
- **Concurrent work (land and river side)**
- **08:00 to 23:00 works daily and work on Sunday**

2. D2-03 Bored Pilling Works (3 Nrs)
D2-1230 (R9) ES: 16/12/21 EF: 09/02/22
LS: 30/12/22 LF: 21/02/22

- Piling P3 in progress
- Target Concreting on 16/02/22
- **Restricted Hr for Fanling Hightway (i.e. 10:00 to 16:00 for loading and unloding daily, and relax to commence 09:00 on Sat)**

8 & 9

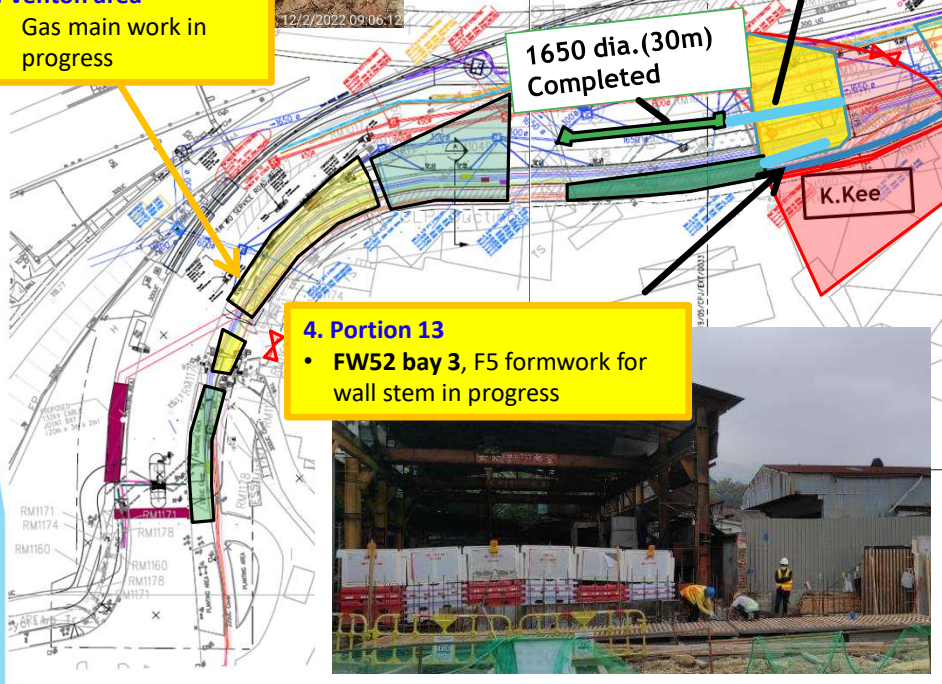
- South Team



1. Venton area
- Gas main work in progress

2. Portion 18 (K. Kee)
- Dn 1650 storm drain in progress (Partial ~15.5/25m completed)

3. Provide temp toilet and Demolition Existing Toilet TSW-3002 and TSW 3003(R9) ES: 20/01/22 EF: 12/02/22)
- Existing toilet stop service on 10 Feb 22
- Tree felling in front of toilet in progress



4. Portion 13
- **FW52 bay 3**, F5 formwork for wall stem in progress

5. Portion 18
- Dn 600 sewer in progress

- Drainage and Sewage (For Dn600 or above)
- Total: 865.7m
- On or Before Jan 22: 208m (24.03%)
- Feb 15.5m (1.79%)
- Overall completion%: 25.82%

- Drainage/sewer work across K.Kee area need to divide into serval phases in order to maintain access
- Some drainage/ sewer need to commence after UU laying, removal of toilet, diversion of TWSRW

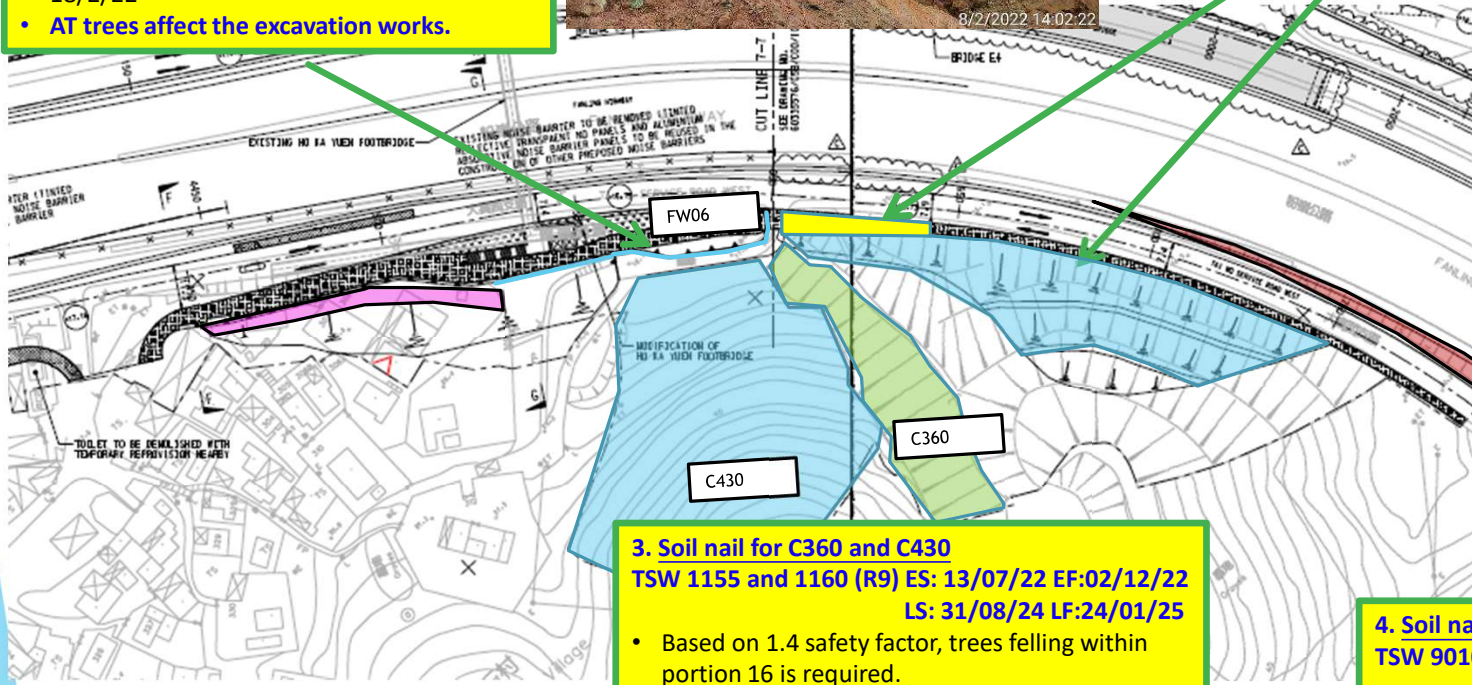
South Team

1. FW06 - Excavation
TSW 3011 (R9) ES: 22/11/21 EF:11/12/21
LS: 29/11/21 LF:18/12/21

- Excavation bay 3 in progress
- 2nd plateload test target commenced 18/2/22
- **AT trees affect the excavation works.**

2. FS 04 – Site Establishment for Slope works
TSW 1125 (R9) ES: 29/12/21 EF: 19/01/22
LS: 20/01/22 LF:12/02/22

-Site clearance completed for CLP 132 ducts laying (highlight in yellow)
-Area fence off and awaiting tree felling for slope works



3. Soil nail for C360 and C430
TSW 1155 and 1160 (R9) ES: 13/07/22 EF:02/12/22
LS: 31/08/24 LF:24/01/25

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

4. Soil nail for C78
TSW 9010 (R9) ES: 10/04/24 EF:06/07/24
LS: 30/09/24 LF:24/12/24

South Team

1. E3-02 ELS
E3-1350 (R9) ES:22/5/22 EF:28/6/22
LS:23/7/22 LF:26/8/22
- Need to maintain access for piling work of E3-01

E3-02

2. Excavation for drainage works after road diversion in progress

3. DN1200 and DN600 water main laying
PMI027 (R9) ES:04/10/21 EF:25/03/22
- Green line – completed
- Black rectangle – pipe laying in progress
- **Target connection on Mar 22. On Track**

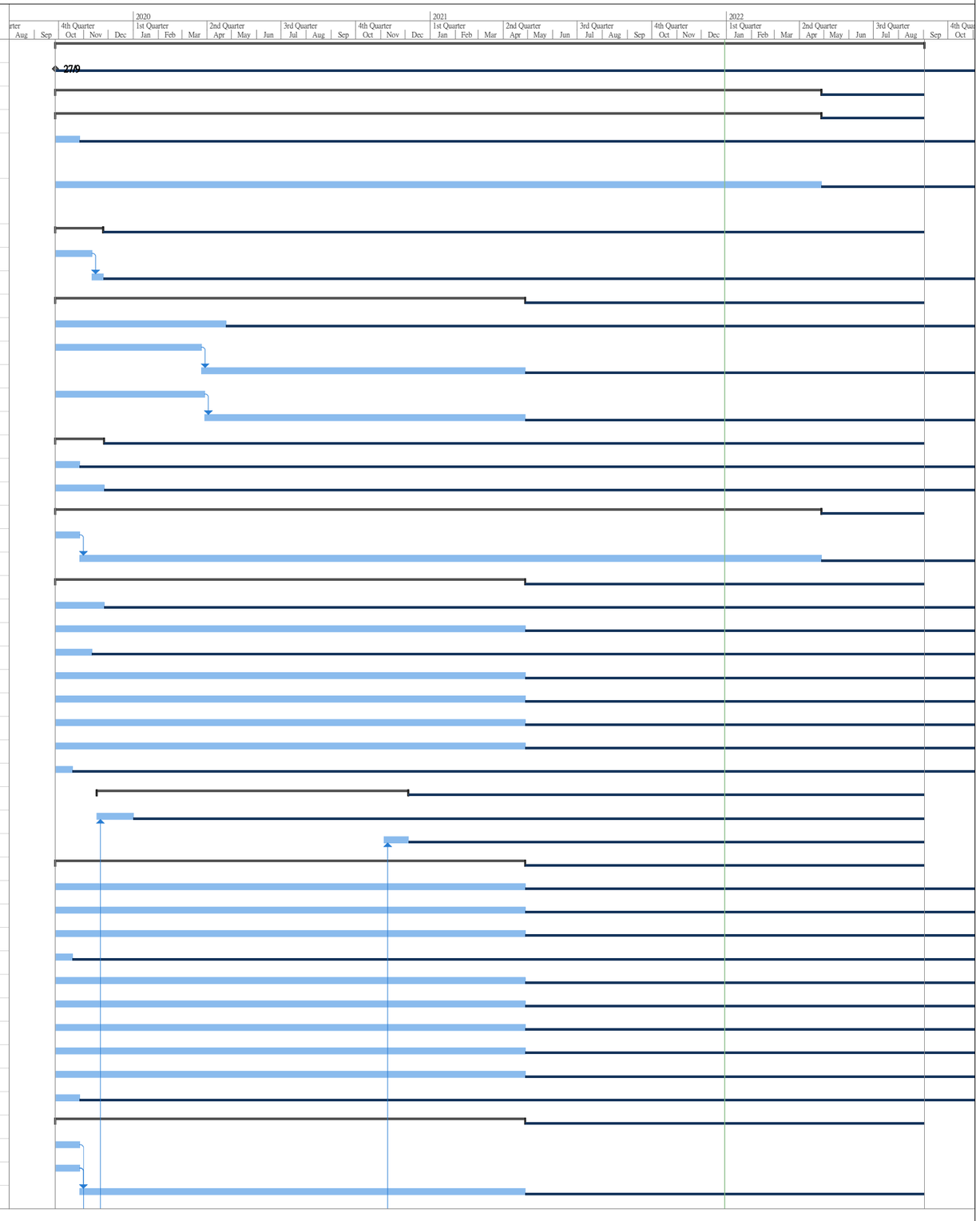
E3-03

4. E3-03 Column
E3-5542(R9) ES:31/12/21 EF:21/01/22
LS:08/01/22 LF:28/01/22
- Modification of falsework
- Pier head mould target delivery on 19/02/22
- **Due to enhanced land border transportation restriction, delivery of Pier head mould is affected**

5. HKY FB Lift Shaft LT1 (3rd pour)
FBE-1230 (R9) ES:13/12/21 EF:26/02/22
LS:10/02/22 LF:02/03/22
- 3rd pour target cast on 18/2/22
- **Progress affected due to compulsory test of Covid 19**

Construction Programme of ND/2019/06

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



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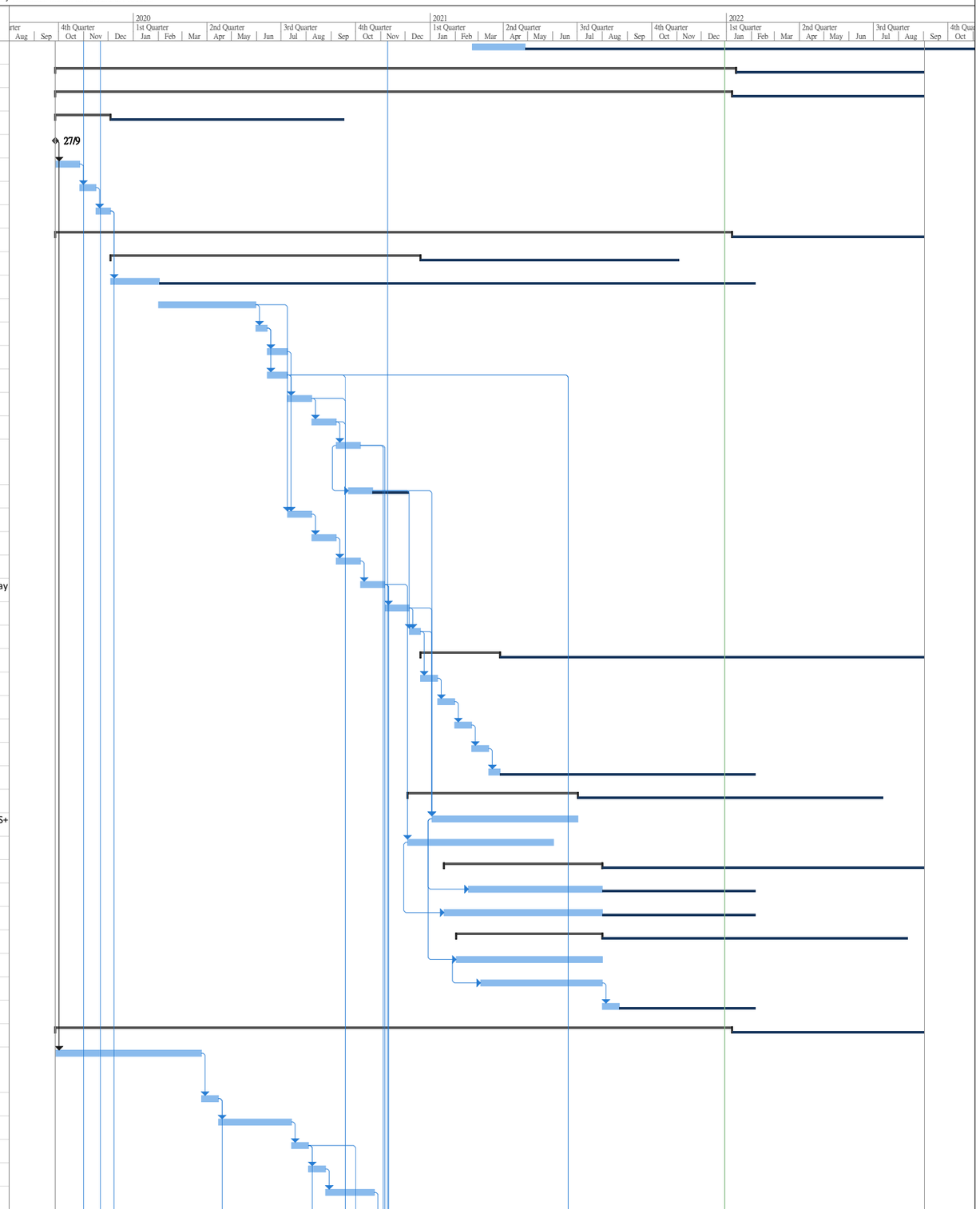
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
49		As-build survey	65 days	Mon 22/2/21	Tue 27/4/21	649 days		
50		**Section 1 of the Works**	**839 days**	**Fri 27/9/19**	**Wed 12/1/22**	**232 days**		
51		**Works for Portion 4**	**834 days**	**Fri 27/9/19**	**Fri 7/1/22**	**237 days**		
52		**General for Portion 4**	**68 days**	**Fri 27/9/19**	**Tue 3/12/19**	**288 days**		
53		Access date of Portion 4	0 days	**Fri 27/9/19**	**Fri 27/9/19**	0 days		54,91
54		Site clearance and tree felling	30 days	Fri 27/9/19	Sat 26/10/19	0 days	53	55
55		Breaking up existing paving	20 days	Sun 27/10/19	Fri 15/11/19	0 days	54	56
56		Excavation for management office building	18 days	Sat 16/11/19	Tue 3/12/19	0 days	55	59,116
57		**Management Office Building**	**834 days**	**Fri 27/9/19**	**Fri 7/1/22**	**237 days**		
58		**Civil and strucutral works**	**382 days**	**Wed 4/12/19**	**Sat 19/12/20**	**319 days**		
59		Construction of foundation from G.L. E-H / 1-3	60 days	Wed 4/12/19	Sat 1/2/20	735 days	56	
60		Idling due to COVID-9 infection	120 days	Sat 1/2/20	Sat 30/5/20	0 days		61,68
61		Construction of foundation from G.L. A-E / 1-3	14 days	Sun 31/5/20	Sat 13/6/20	0 days	60	63,62
62		Construction of G/F slabs from G.L. E-H / 1-3	25 days	Sun 14/6/20	Wed 8/7/20	0 days	61	68
63		Construction for G/F slabs from G.L. A-E/1-3	25 days	Sun 14/6/20	Wed 8/7/20	0 days	61	120,64,153,164
64		Construction for G/F to R/F columns and wall from G.L. A-E/1-3	30 days	Thu 9/7/20	Fri 7/8/20	0 days	63	120,65
65		Construction for R/F slabs and beams from G.L. A-E/1-3	30 days	Sat 8/8/20	Sun 6/9/20	0 days	64	120,66
66		Construction for transformer room upper slab, columns and walls at G.L. B-C/1-3	30 days	Mon 7/9/20	Tue 6/10/20	0 days	65	67SS+15 days,100,101
67		Construction for UR/F slabs and beams at G.L. B-C/1-3	30 days	Tue 22/9/20	Wed 21/10/20	45 days	66SS+15 days	73,81
68		Construction of columns and walls from G/F to R/F for G.L. E-H/	30 days	Thu 9/7/20	Fri 7/8/20	0 days	60,62	69
69		Construction of slabs and beams for R/F for G.L. E-H/1-3	30 days	Sat 8/8/20	Sun 6/9/20	0 days	68	70
70		Construction of water tanks at R/F from G.L. E-H/1-3	30 days	Mon 7/9/20	Tue 6/10/20	0 days	69	71
71		Construction of R/F to UR/F columns and walls from G.L. C-H/1-	30 days	Wed 7/10/20	Thu 5/11/20	0 days	70	72,100,82FS+28 day
72		Construction of UR/F beams and slabs from G.L. C-H/1-3	30 days	Fri 6/11/20	Sat 5/12/20	0 days	71	73,81
73		Construction of Parapet walls	14 days	Sun 6/12/20	Sat 19/12/20	0 days	67,72	75,81FS+14 days
74		**Roofing works**	**98 days**	**Sun 20/12/20**	**Sat 27/3/21**	**523 days**		
75		Cememt sand screeding on roof slab	21 days	Sun 20/12/20	Sat 9/1/21	0 days	73	76
76		Waterproofing works for roof	21 days	Sun 10/1/21	Sat 30/1/21	0 days	75	77
77		Construction of 40mm insulation layer	21 days	Sun 31/1/21	Sat 20/2/21	0 days	76	78
78		Construction of 40mm cement sand rendering	21 days	Sun 21/2/21	Sat 13/3/21	0 days	77	79
79		300 x 300mm roofing concrete tiles	14 days	Sun 14/3/21	Sat 27/3/21	315 days	78	
80		**External walls and internal walls**	**210 days**	**Fri 4/12/20**	**Thu 1/7/21**	**376 days**		
81		External wall block work and finishing	180 days	Sun 3/1/21	Thu 1/7/21	0 days	67,72,73FS+14 days	84SS+45 days,87SS+
82		Internal wall block and finishing	180 days	Fri 4/12/20	Tue 1/6/21	0 days	71FS+28 days	85SS+45 days
83		**Installation of windows and doors**	**195 days**	**Mon 18/1/21**	**Sat 31/7/21**	**397 days**		
84		Installation of external windows and doors	165 days	Wed 17/2/21	Sat 31/7/21	189 days	81SS+45 days	
85		Installation of internal doors	195 days	Mon 18/1/21	Sat 31/7/21	189 days	82SS+45 days	
86		**Interior fitting-out, finishes and fixtures**	**180 days**	**Tue 2/2/21**	**Sat 31/7/21**	**376 days**		
87		Erection of interior fitting-out and finishes	180 days	Tue 2/2/21	Sat 31/7/21	0 days	81SS+30 days	88SS+30 days
88		Installation of fixtures	150 days	Thu 4/3/21	Sat 31/7/21	0 days	87SS+30 days	89
89		Handrail installation for MOB	21 days	Sun 1/8/21	Sat 21/8/21	168 days	88	
90		**Building services works for Wholesale Market**	**834 days**	**Fri 27/9/19**	**Fri 7/1/22**	**237 days**		
91		Submissions of BS equipment and materials (including BS items of Wholesale Market)	180 days	Fri 27/9/19	Tue 24/3/20	0 days	53	92
92		Approval for BS equipment and materials	21 days	Wed 25/3/20	Tue 14/4/20	0 days	91	93,99
93		Submissions of CBWD and CSD drawings	90 days	Wed 15/4/20	Mon 13/7/20	0 days	92	94
94		Approval for CBWD and CSD drawings	21 days	Tue 14/7/20	Mon 3/8/20	0 days	93	117,121,95
95		Approval and confirmed all construction drawings	21 days	Tue 4/8/20	Mon 24/8/20	0 days	94	96
96		Production of BIM model	60 days	Tue 25/8/20	Fri 23/10/20	0 days	95	97



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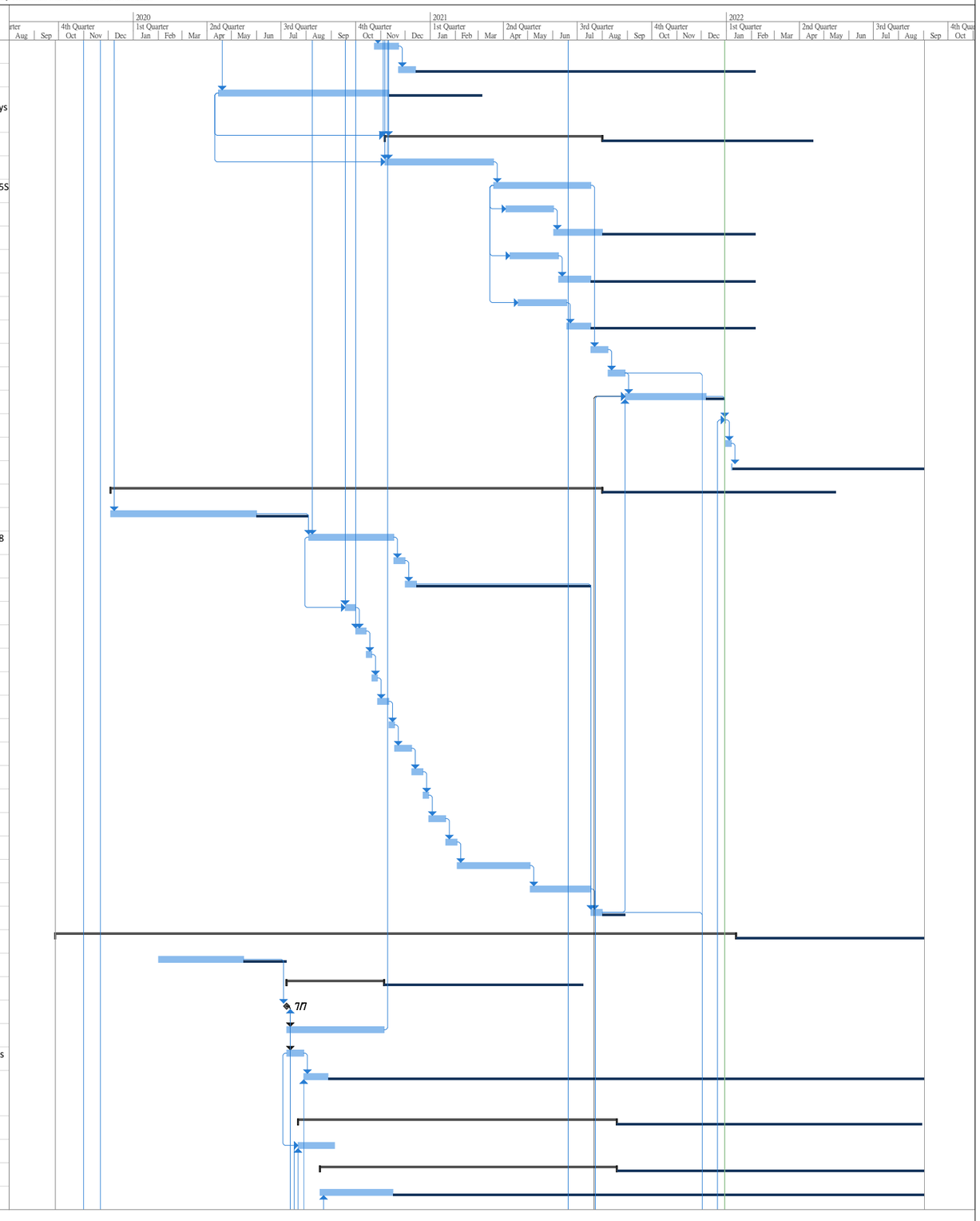
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
97		Submission of BIM model	30 days	Sat 24/10/20	Sun 22/11/20	0 days	96	98
98		Approval for BIM model	21 days	Mon 23/11/20	Sun 13/12/20	419 days	97	
99		Production and delivery of BS equipment (including BS items of Wholesale Market)	210 days	Wed 15/4/20	Tue 10/11/20	115 days	92	100SS+90 days,101SS+90 days
100		**Installation of BS equipment**	**268 days**	**Fri 6/11/20**	**Sat 31/7/21**	**260 days**	**99SS+90 days,71,66**	
101		Materials preparation for MVAC box	134 days	Fri 6/11/20	Fri 19/3/21	0 days	99SS+90 days,71,66	102
102		MVAC box installation	120 days	Sat 20/3/21	Sat 17/7/21	0 days	101	103SS+15 days,105S
103		Materials preparation for electical installation	59 days	Sun 4/4/21	Tue 1/6/21	0 days	102SS+15 days	104
104		Electical installation	60 days	Wed 2/6/21	Sat 31/7/21	189 days	103	
105		Materials preparation for fire services installation	60 days	Fri 9/4/21	Mon 7/6/21	0 days	102SS+20 days	106
106		Fire services installation	40 days	Tue 8/6/21	Sat 17/7/21	203 days	105	
107		Materials preparation for plumbing and drainage works	60 days	Mon 19/4/21	Thu 17/6/21	0 days	102SS+30 days	108
108		Plumbing and drainage installation	30 days	Fri 18/6/21	Sat 17/7/21	203 days	107	
109		Installation of switch panel	21 days	Sun 18/7/21	Sat 7/8/21	0 days	102	110
110		Installation of emergency generator	21 days	Sun 8/8/21	Sat 28/8/21	0 days	109	111,432
111		Testing and commissioning of BS equipment	100 days	Sun 29/8/21	Mon 6/12/21	23 days	133,110,426SS+30 days,428SS+14 days	112
112		Inspection of BS installations inclunding Fire Services by Authori	1 day	Thu 30/12/21	Thu 30/12/21	0 days	111,433SS	113
113		Remedial works after inspection	7 days	Fri 31/12/21	Thu 6/1/22	0 days	112	114
114		Re-insepction of BS installations by Authorities	1 day	Fri 7/1/22	Fri 7/1/22	237 days	113	
115		**Transformer Room**	**606 days**	**Wed 4/12/19**	**Sat 31/7/21**	**288 days**		
116		Coordination with CLP for power supply and cable entry	180 days	Wed 4/12/19	Sun 31/5/20	64 days	56	117
117		Construction for power supply and cable entry	105 days	Tue 4/8/20	Mon 16/11/20	0 days	116,94	120SS+45 days,118
118		Inform CLP for cable laying	14 days	Tue 17/11/20	Mon 30/11/20	0 days	117	119
119		Cable laying by CLP	14 days	Tue 1/12/20	Mon 14/12/20	215 days	118	133
120		Interior finishing for transformer room	13 days	Fri 18/9/20	Wed 30/9/20	0 days	117SS+45 days,64,63,65	121
121		Fitting-out and E&M works	13 days	Thu 1/10/20	Tue 13/10/20	0 days	120,94	122
122		Installation of power panel	7 days	Wed 14/10/20	Tue 20/10/20	0 days	121	123
123		Installation check	7 days	Wed 21/10/20	Tue 27/10/20	0 days	122	124
124		Inform CLP for inspection	14 days	Wed 28/10/20	Tue 10/11/20	0 days	123	125
125		Inspection for transformer room	7 days	Wed 11/11/20	Tue 17/11/20	0 days	124	126
126		Rectification works to the inspection results	21 days	Wed 18/11/20	Tue 8/12/20	0 days	125	127
127		Re-inform CLP for inspection	14 days	Wed 9/12/20	Tue 22/12/20	0 days	126	128
128		Re-inspection for transformer room	7 days	Wed 23/12/20	Tue 29/12/20	0 days	127	129
129		Confirm from CLP for transformer and switchboard delivery	21 days	Wed 30/12/20	Tue 19/1/21	0 days	128	130
130		Delivery of CLP transformer and switchboard	14 days	Wed 20/1/21	Tue 2/2/21	0 days	129	131
131		Cable testing by CLP	90 days	Wed 3/2/21	Mon 3/5/21	0 days	130	132
132		Installation of power meter by CLP	75 days	Tue 4/5/21	Sat 17/7/21	0 days	131	133
133		Power feeding by CLP	14 days	Sun 18/7/21	Sat 31/7/21	28 days	132,119	111,432
134		**Works for Portion 3**	**839 days**	**Fri 27/9/19**	**Wed 12/1/22**	**232 days**		
135		Idling due to COVID-9 infection	105 days	Sat 1/2/20	Fri 15/5/20	53 days		137
136		**General for Portion 3**	**120 days**	**Tue 7/7/20**	**Wed 4/11/20**	**245 days**		
137		Access date of Portion 3 (184 days after starting date)	0 days	Tue 7/7/20	Tue 7/7/20	0 days	918,135	138,139,437,852
138		Site clearance and tree felling	120 days	Wed 8/7/20	Wed 4/11/20	0 days	137	33
139		Construction for fencing to the final stage	21 days	Wed 8/7/20	Tue 28/7/20	0 days	137	140,142SS+14 days
140		Construction for ground investigation according to drawing no. 60335576/C6/C00/7501	30 days	Wed 29/7/20	Thu 27/8/20	735 days	818,139	
141		**Site formation**	**393 days**	**Wed 22/7/20**	**Wed 18/8/21**	**376 days**		
142		Breaking up existing paving	45 days	Wed 22/7/20	Fri 4/9/20	0 days	918,139SS+14 days	155SS+7 days
143		**Excavation for underground drainage and pipeline construction**	**366 days**	**Tue 18/8/20**	**Wed 18/8/21**	**379 days**		
144		FMH-1.03 -> FMH-1.04 and FMH-1.02 - > FMH-1.01	90 days	Tue 18/8/20	Sun 15/11/20	655 days	195	



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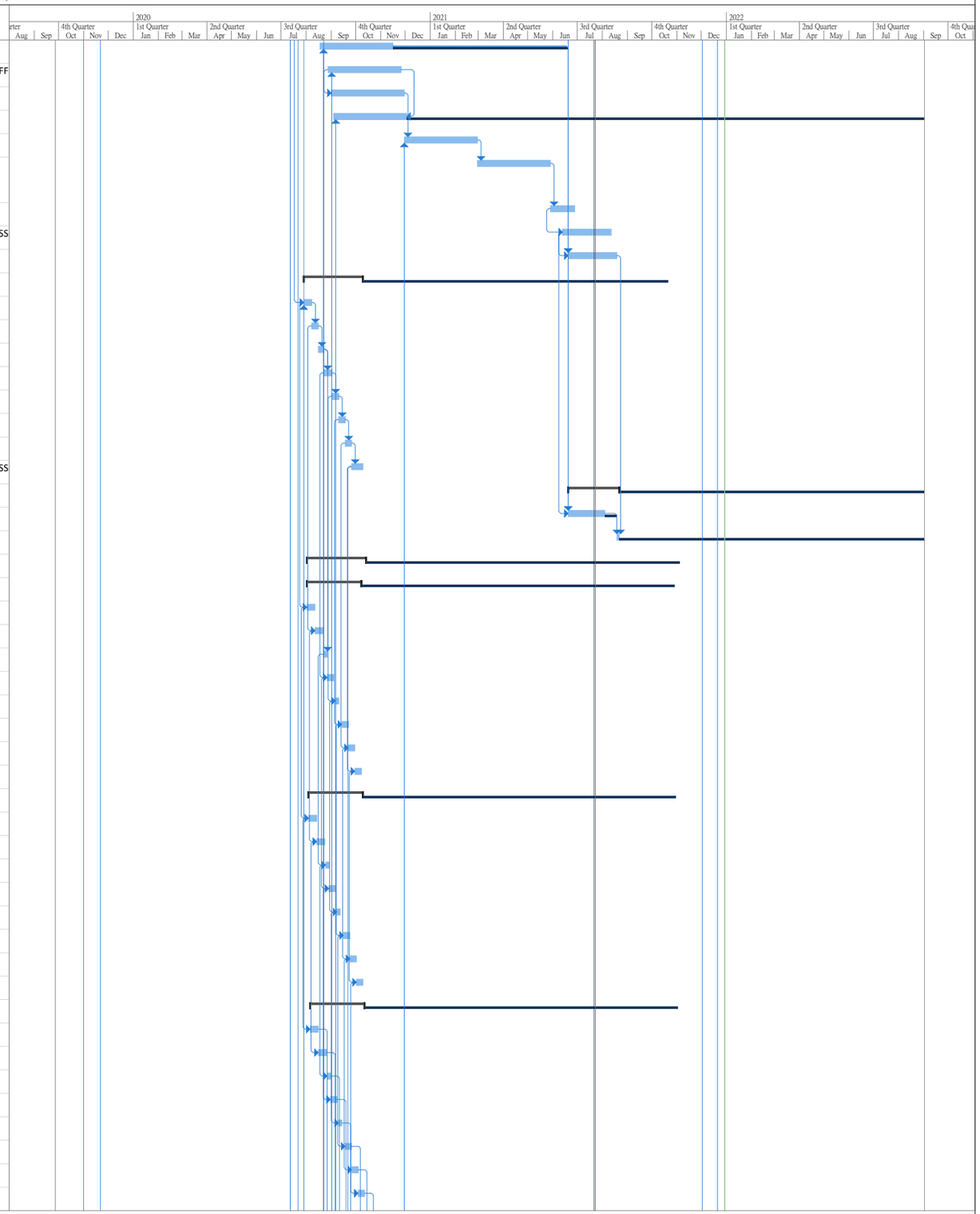
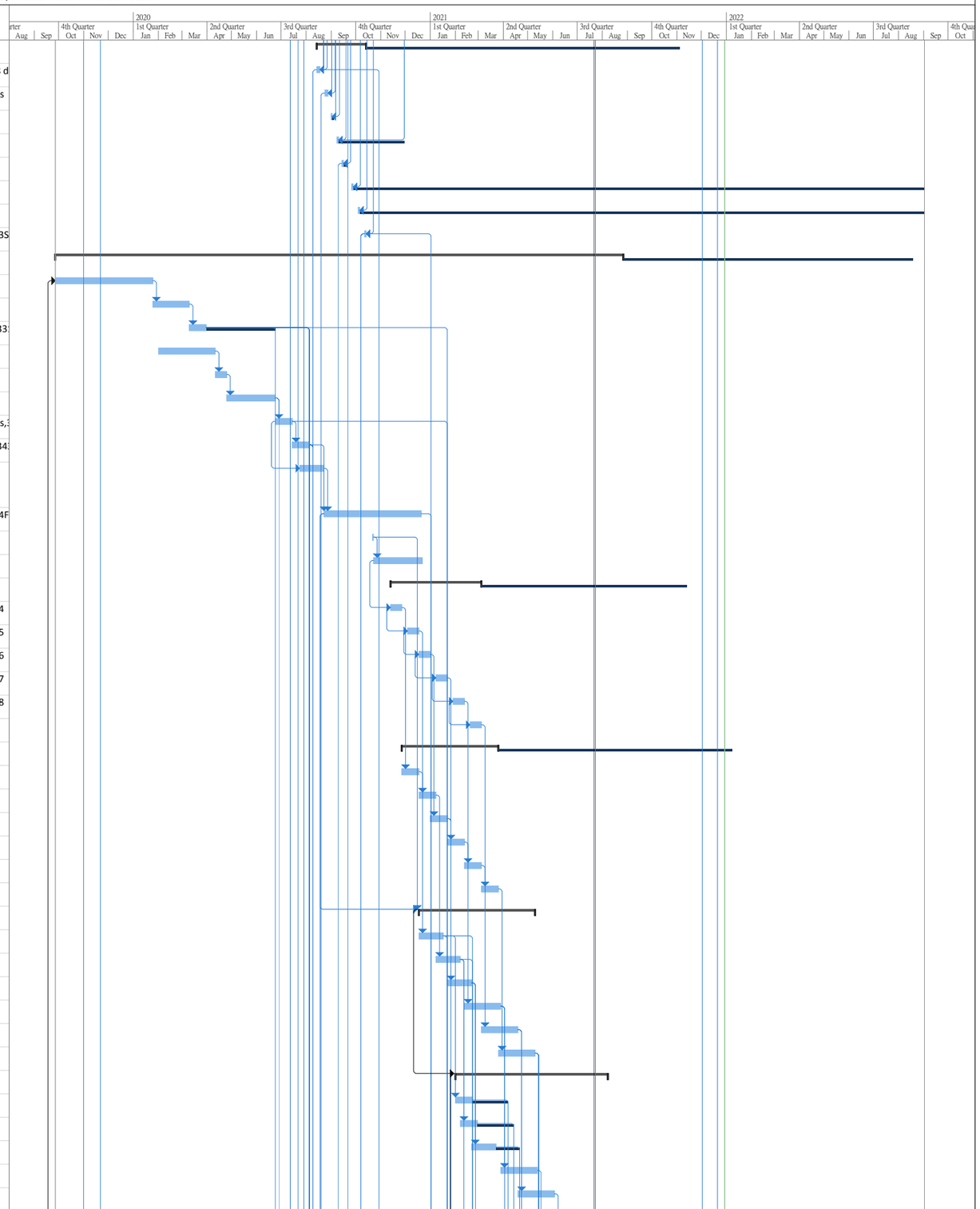
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
145		C6_1.5 -> C6_2.2 -> C6_2.3 -> C6_2.4	90 days	Tue 18/8/20	Sun 15/11/20	216 days	195	153,164
146		FMH-2.06 -> FMH-2.05 -> FMH-2.04	90 days	Fri 28/8/20	Wed 25/11/20	0 days	196	147SS+4 days,148FF
147		C6_1.4 -> C6_1.3 -> C6_1.2	90 days	Tue 1/9/20	Sun 29/11/20	0 days	146SS+4 days	149
148		FMH-2.04 -> FMH-2.03 -> FMH-2.02 -> FMH-2.01	90 days	Fri 4/9/20	Wed 2/12/20	638 days	146FF+7 days,197	
149		C6_1.2 -> C6_1.1B -> C6_1.1 -> C6_1.1A	90 days	Mon 30/11/20	Sat 27/2/21	0 days	147,198	150
150		Coordination with AECOM for handover of overlapping area for underground works constrcution	90 days	Sun 28/2/21	Fri 28/5/21	0 days	149	151
151		DP2.21 -> C6_2.1 -> C6_2.1A -> C6_1.1A	30 days	Sat 29/5/21	Sun 27/6/21	0 days	150	152SS+15 days
152		DP2.21 with U-channel construction near MOB	60 days	Sun 13/6/21	Wed 11/8/21	0 days	151SS+15 days	153SS+7 days,164SS
153		C6_2.4 -> C6_2.5	60 days	Sun 20/6/21	Wed 18/8/21	0 days	145,63,152SS+7 days	165
154		**Excavation for footing construction**	**73 days**	**Wed 29/7/20**	**Fri 9/10/20**	**376 days**		
155		F5 -> F4 -> F3 -> F2 -> F1	10 days	Wed 29/7/20	Fri 7/8/20	0 days	142SS+7 days,918	156,168SS+4 days
156		F11 and F10 -> F17 and F16	8 days	Sat 8/8/20	Sat 15/8/20	0 days	155	157,169SS+4 days
157		F28	7 days	Sun 16/8/20	Sat 22/8/20	0 days	156	158,170
158		F27 -> F26 - > F25 -> F24	10 days	Sun 23/8/20	Tue 1/9/20	0 days	157	159,171SS+4 days
159		F9 -> F8 -> F7	8 days	Wed 2/9/20	Wed 9/9/20	0 days	158	160,172SS+4 days
160		F16 -> F15 -> F14 -> F13	8 days	Thu 10/9/20	Thu 17/9/20	0 days	159	161,173SS+4 days
161		F22 -> F21 -> F20 -> F19	8 days	Fri 18/9/20	Fri 25/9/20	0 days	160	162,174SS+4 days
162		F6 -> F12 -> F18 -> F23	14 days	Sat 26/9/20	Fri 9/10/20	0 days	161	175SS+4 days,481SS
163		**Underground drainage construction**	**63 days**	**Sun 20/6/21**	**Sat 21/8/21**	**376 days**		
164		Remaining U-channel and drainage construction	45 days	Sun 20/6/21	Tue 3/8/21	15 days	145,63,152SS+7 days	165
165		Connection to the existing manhole	3 days	Thu 19/8/21	Sat 21/8/21	376 days	164,153	
166		**Footing construction**	**73 days**	**Sun 2/8/20**	**Tue 13/10/20**	**386 days**		
167		**Vertical blinding and blind layers construction**	**67 days**	**Sun 2/8/20**	**Wed 7/10/20**	**386 days**		
168		F5 -> F4 -> F3 -> F2 -> F1	10 days	Sun 2/8/20	Tue 11/8/20	0 days	155SS+4 days	177SS+2 days
169		F11, F10 and F9 -> F17 and F16	10 days	Wed 12/8/20	Fri 21/8/20	0 days	156SS+4 days	178SS+2 days
170		F28	4 days	Sun 23/8/20	Wed 26/8/20	0 days	157	179SS+2 days
171		F27 -> F26 - > F25 -> F24	8 days	Thu 27/8/20	Thu 3/9/20	0 days	158SS+4 days	180SS+2 days
172		F8 -> F7	4 days	Sun 6/9/20	Wed 9/9/20	0 days	159SS+4 days	181SS+2 days
173		F16 -> F15 -> F14 -> F13	8 days	Mon 14/9/20	Mon 21/9/20	0 days	160SS+4 days	182SS+2 days
174		F22 -> F21 -> F20 -> F19	8 days	Tue 22/9/20	Tue 29/9/20	0 days	161SS+4 days	183SS+2 days
175		F6 -> F12 -> F18 -> F23	8 days	Wed 30/9/20	Wed 7/10/20	0 days	162SS+4 days	184SS+2 days
176		**Steel fixing for footings**	**67 days**	**Tue 4/8/20**	**Fri 9/10/20**	**386 days**		
177		F5 -> F4 -> F3 -> F2 -> F1	10 days	Tue 4/8/20	Thu 13/8/20	0 days	168SS+2 days	186SS+2 days
178		F11, F10 and F9 -> F17 and F16	10 days	Fri 14/8/20	Sun 23/8/20	0 days	169SS+2 days	187SS+2 days
179		F28	4 days	Tue 25/8/20	Fri 28/8/20	0 days	170SS+2 days	188SS+2 days
180		F27 -> F26 - > F25 -> F24	8 days	Sat 29/8/20	Sat 5/9/20	0 days	171SS+2 days	189SS+2 days
181		F8 -> F7	4 days	Tue 8/9/20	Fri 11/9/20	0 days	172SS+2 days	190SS+2 days
182		F16 -> F15 -> F14 -> F13	8 days	Wed 16/9/20	Wed 23/9/20	0 days	173SS+2 days	191SS+2 days
183		F22 -> F21 -> F20 -> F19	8 days	Thu 24/9/20	Thu 1/10/20	0 days	174SS+2 days	192SS+2 days
184		F6 -> F12 -> F18 -> F23	8 days	Fri 2/10/20	Fri 9/10/20	0 days	175SS+2 days	193SS+2 days
185		**Formwork erection for footings**	**67 days**	**Thu 6/8/20**	**Sun 11/10/20**	**386 days**		
186		F5 -> F4 -> F3 -> F2 -> F1	10 days	Thu 6/8/20	Sat 15/8/20	0 days	177SS+2 days	195FF+2 days
187		F11, F10 and F9 -> F17 and F16	10 days	Sun 16/8/20	Tue 25/8/20	0 days	178SS+2 days	196FF+2 days
188		F28	4 days	Thu 27/8/20	Sun 30/8/20	0 days	179SS+2 days	197FF+2 days
189		F27 -> F26 - > F25 -> F24	8 days	Mon 31/8/20	Mon 7/9/20	0 days	180SS+2 days	198FF+2 days
190		F8 -> F7	4 days	Thu 10/9/20	Sun 13/9/20	0 days	181SS+2 days	199FF+2 days
191		F16 -> F15 -> F14 -> F13	8 days	Fri 18/9/20	Fri 25/9/20	0 days	182SS+2 days	200FF+2 days
192		F22 -> F21 -> F20 -> F19	8 days	Sat 26/9/20	Sat 3/10/20	0 days	183SS+2 days	201FF+2 days
193		F6 -> F12 -> F18 -> F23	8 days	Sun 4/10/20	Sun 11/10/20	0 days	184SS+2 days	202FF+2 days



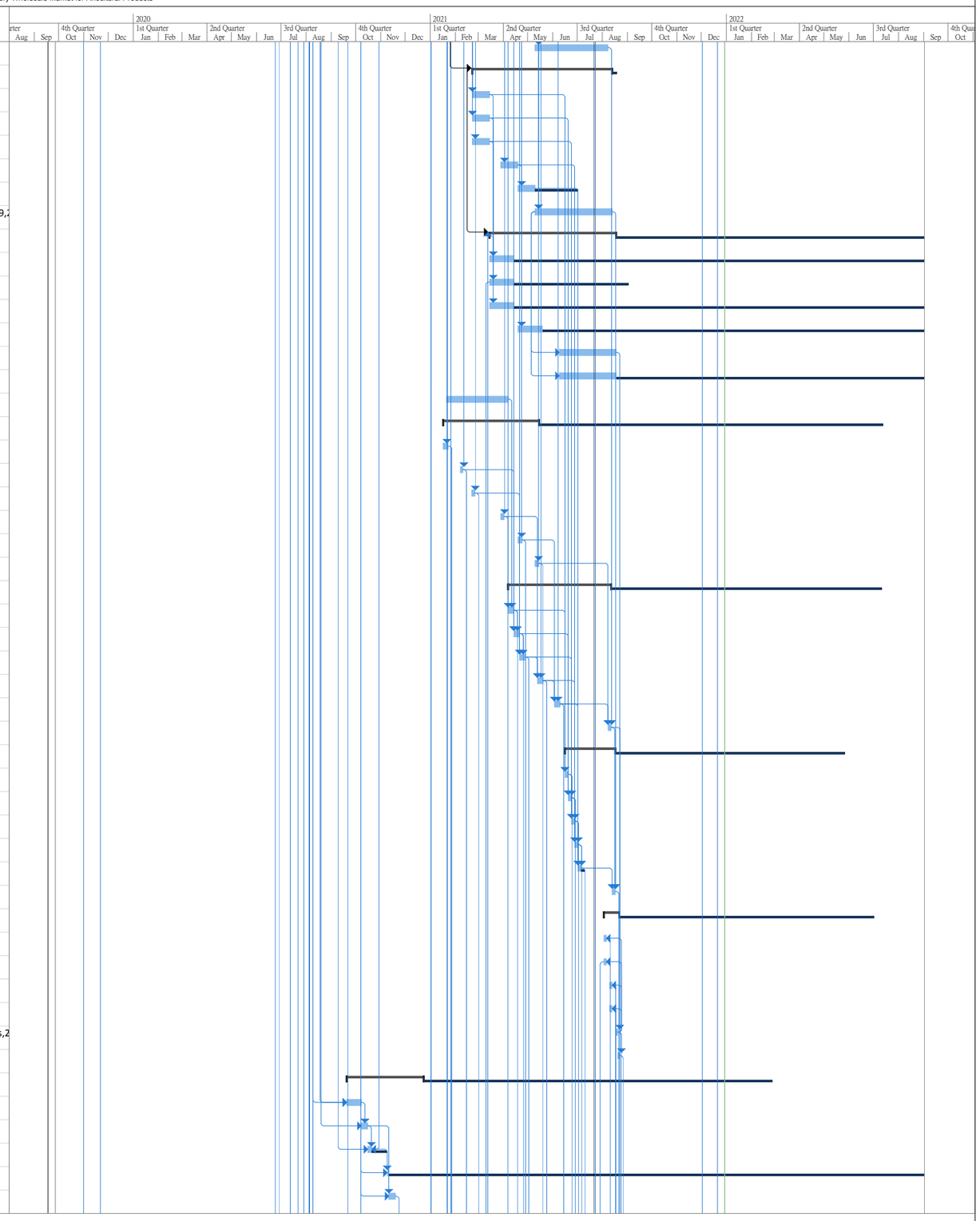
Project: ND/2019/06
Data Date: 2021-11-01
Revised Programme (Rev. 8A)

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

ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
194		**Casting concrete for footings**	**61 days**	**Fri 14/8/20**	**Tue 13/10/20**	**386 days**		
195		F5 -> F4 -> F3 -> F2 -> F1	4 days	Fri 14/8/20	Mon 17/8/20	0 days	186FF+2 days	144,145,288SS+28 d
196		F11, F10 and F9 -> F17 and F16	4 days	Mon 24/8/20	Thu 27/8/20	0 days	187FF+2 days	146,289SS+30 days
197		F28	1 day	Tue 1/9/20	Tue 1/9/20	2 days	188FF+2 days	148
198		F27 -> F26 - > F25 -> F24	2 days	Tue 8/9/20	Wed 9/9/20	81 days	189FF+2 days	149
199		F8 -> F7	2 days	Mon 14/9/20	Tue 15/9/20	4 days	190FF+2 days	290SS+28 days
200		F16 -> F15 -> F14 -> F13	2 days	Sat 26/9/20	Sun 27/9/20	704 days	191FF+2 days	
201		F22 -> F21 -> F20 -> F19	2 days	Sun 4/10/20	Mon 5/10/20	696 days	192FF+2 days	
202		F6 -> F12 -> F18 -> F23	2 days	Mon 12/10/20	Tue 13/10/20	0 days	193FF+2 days	292SS+30 days,293S
203		**Construction for Steel Canopy**	**700 days**	**Fri 27/9/19**	**Thu 26/8/21**	**357 days**		
204		Searching for steel fabricator	120 days	Fri 27/9/19	Fri 24/1/20	0 days	863SS	205
205		Preparation for shop drawing of steel canopy	45 days	Sat 25/1/20	Mon 9/3/20	0 days	204	206
206		Shop drawing submission for approval	21 days	Tue 10/3/20	Mon 30/3/20	85 days	205	324,334,337,343,33
207		Idling due to COVID-9 infection	70 days	Sat 1/2/20	Fri 10/4/20	0 days		208
208		Change of steel fabricator	14 days	Sat 11/4/20	Fri 24/4/20	0 days	207	209
209		Re-preparation for shop drawing of steel canopy	60 days	Sat 25/4/20	Tue 23/6/20	0 days	208	210,331
210		Re-Shop drawing submission for approval	21 days	Wed 24/6/20	Tue 14/7/20	0 days	209	211,212SS+30 days,
211		Approval of shop drawings	21 days	Wed 15/7/20	Tue 4/8/20	0 days	210	213,349,334,337,34
212		Material preparation for steel canopy (materials testing in Mainland China)	30 days	Fri 24/7/20	Sat 22/8/20	0 days	210SS+30 days	213
213		Fabrication and delivery for steel colum (under +18.1mPD)	120 days	Sun 23/8/20	Sun 20/12/20	0 days	211,212	288SS+28 days,294F
214		Updated information provided for steel column (above +18.1mPD)	1 day	Thu 22/10/20	Thu 22/10/20	0 days		230,215
215		Revise shop drawings for submission	60 days	Fri 23/10/20	Mon 21/12/20	0 days	214	217SS+21 days
216		**Submission of revised shop drawings for approval**	**112 days**	**Fri 13/11/20**	**Thu 4/3/21**	**253 days**		
217		Submission of Area 1 shop drawings	14 days	Fri 13/11/20	Thu 26/11/20	0 days	215SS+21 days	218SS+21 days,224
218		Submission of Area 2 shop drawings	14 days	Fri 4/12/20	Thu 17/12/20	0 days	217SS+21 days	219SS+14 days,225
219		Submission of Area 3 shop drawings	14 days	Fri 18/12/20	Thu 31/12/20	0 days	218SS+14 days	220SS+21 days,226
220		Submission of Area 4 shop drawings	14 days	Fri 8/1/21	Thu 21/1/21	0 days	219SS+21 days	221SS+21 days,227
221		Submission of Area 5 shop drawings	14 days	Fri 29/1/21	Thu 11/2/21	0 days	220SS+21 days	222SS+21 days,228
222		Submission of Area 6 shop drawings	14 days	Fri 19/2/21	Thu 4/3/21	0 days	221SS+21 days	229
223		**Approval of revised shop drawings for approval**	**119 days**	**Fri 27/11/20**	**Thu 25/3/21**	**288 days**		
224		Approval of Area 1 shop drawings	21 days	Fri 27/11/20	Thu 17/12/20	0 days	217	231
225		Approval of Area 2 shop drawings	21 days	Fri 18/12/20	Thu 7/1/21	0 days	218	232
226		Approval of Area 3 shop drawings	21 days	Fri 1/1/21	Thu 21/1/21	0 days	219	233,324
227		Approval of Area 4 shop drawings	21 days	Fri 22/1/21	Thu 11/2/21	0 days	220	234
228		Approval of Area 5 shop drawings	21 days	Fri 12/2/21	Thu 4/3/21	0 days	221	235
229		Approval of Area 6 shop drawings	21 days	Fri 5/3/21	Thu 25/3/21	0 days	222	236
230		**Fabrication for steel colum (above +18.1mPD)**	**143 days**	**Fri 18/12/20**	**Sun 9/5/21**	**0 days**	**213SS+60 days,214**	**237SS+45 days**
231		Fabrication for steel colum (above +18.1mPD) for Area 1	30 days	Fri 18/12/20	Sat 16/1/21	0 days	224	238,245,260
232		Fabrication for steel colum (above +18.1mPD) for Area 2	30 days	Fri 8/1/21	Sat 6/2/21	0 days	225	239,246,261
233		Fabrication for steel colum (above +18.1mPD) for Area 3	30 days	Fri 22/1/21	Sat 20/2/21	0 days	226	240,247,262
234		Fabrication for steel colum (above +18.1mPD) for Area 4	45 days	Fri 12/2/21	Sun 28/3/21	0 days	227	241,248,263
235		Fabrication for steel colum (above +18.1mPD) for Area 5	45 days	Fri 5/3/21	Sun 18/4/21	0 days	228	242,249,264
236		Fabrication for steel colum (above +18.1mPD) for Area 6	45 days	Fri 26/3/21	Sun 9/5/21	0 days	229	243,250,265
237		**Fabrication for steel frame and truss**	**188 days**	**Mon 1/2/21**	**Sat 7/8/21**	**0 days**	**230SS+45 days**	**244SS+21 days**
238		Fabrication for steel frame and truss for Area 1	21 days	Mon 1/2/21	Sun 21/2/21	44 days	231	267
239		Fabrication for steel frame and truss for Area 2	21 days	Sun 7/2/21	Sat 27/2/21	45 days	232	268
240		Fabrication for steel frame and truss for Area 3	30 days	Sun 21/2/21	Mon 22/3/21	29 days	233	269
241		Fabrication for steel frame and truss for Area 4	45 days	Mon 29/3/21	Wed 12/5/21	0 days	234	270
242		Fabrication for steel frame and truss for Area 5	45 days	Mon 19/4/21	Wed 2/6/21	0 days	235	271



ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
243		Fabrication for steel frame and truss for Area 6	90 days	Mon 10/5/21	Sat 7/8/21	0 days	236	272
244		**Fabrication for bracing and secondary steel member**	**172 days**	**Mon 22/2/21**	**Thu 12/8/21**	**6 days**	**237SS+21 days**	**251SS+15 days**
245		Fabrication for bracing and secondary steel member for Area 1	21 days	Mon 22/2/21	Sun 14/3/21	0 days	231	252,274
246		Fabrication for bracing and secondary steel member for Area 2	21 days	Mon 22/2/21	Sun 14/3/21	0 days	232	253,275
247		Fabrication for bracing and secondary steel member for Area 3	21 days	Mon 22/2/21	Sun 14/3/21	0 days	233	254,276
248		Fabrication for bracing and secondary steel member for Area 4	21 days	Mon 29/3/21	Sun 18/4/21	0 days	234	255,277
249		Fabrication for bracing and secondary steel member for Area 5	21 days	Mon 19/4/21	Sun 9/5/21	53 days	235	278
250		Fabrication for bracing and secondary steel member for Area 6	95 days	Mon 10/5/21	Thu 12/8/21	0 days	236	257SS+30 days,279,
251		**Fabrication for skylight steel frame structure**	**156 days**	**Mon 15/3/21**	**Tue 17/8/21**	**380 days**	**244SS+15 days,333**	
252		Fabrication for skylight steel frame structure for Area 1	30 days	Mon 15/3/21	Tue 13/4/21	506 days	245	
253		Fabrication for skylight steel frame structure for Area 2	30 days	Mon 15/3/21	Tue 13/4/21	141 days	246	353SS+7 days
254		Fabrication for skylight steel frame structure for Area 3	30 days	Mon 15/3/21	Tue 13/4/21	506 days	247	
255		Fabrication for skylight steel frame structure for Area 4	30 days	Mon 19/4/21	Tue 18/5/21	471 days	248	
256		Fabrication for skylight steel frame structure for Area 5	70 days	Wed 9/6/21	Tue 17/8/21	0 days	250SS+30 days	285
257		Fabrication for skylight steel frame structure for Area 6	70 days	Wed 9/6/21	Tue 17/8/21	380 days	250SS+30 days	
258		Stop of delivery for fabricated Materials due to spread of COVIN-1	76 days	Thu 21/1/21	Tue 6/4/21	0 days		267
259		**Delivery for steel colum (above +18.1mPD)**	**118 days**	**Sun 17/1/21**	**Fri 14/5/21**	**424 days**		
260		Delivery for steel colum (above +18.1mPD) for Area 1	6 days	Sun 17/1/21	Fri 22/1/21	0 days	231	296
261		Delivery for steel colum (above +18.1mPD) for Area 2	3 days	Sun 7/2/21	Tue 9/2/21	0 days	232	268,297
262		Delivery for steel colum (above +18.1mPD) for Area 3	4 days	Sun 21/2/21	Wed 24/2/21	0 days	233	298,269
263		Delivery for steel colum (above +18.1mPD) for Area 4	4 days	Mon 29/3/21	Thu 1/4/21	0 days	234	299,270
264		Delivery for steel colum (above +18.1mPD) for Area 5	5 days	Mon 19/4/21	Fri 23/4/21	0 days	235	300,271
265		Delivery for steel colum (above +18.1mPD) for Area 6	5 days	Mon 10/5/21	Fri 14/5/21	0 days	236	301,272
266		**Delivery for steel frame and truss**	**127 days**	**Wed 7/4/21**	**Wed 11/8/21**	**333 days**		
267		Delivery for steel frame and truss for Area 1	7 days	Wed 7/4/21	Tue 13/4/21	0 days	238,258	303,274,268
268		Delivery for steel frame and truss for Area 2	7 days	Wed 14/4/21	Tue 20/4/21	0 days	261,267,239	304,275,269
269		Delivery for steel frame and truss for Area 3	7 days	Wed 21/4/21	Tue 27/4/21	0 days	262,268,240	305,270,276
270		Delivery for steel frame and truss for Area 4	7 days	Thu 13/5/21	Wed 19/5/21	0 days	241,263,269	306,271,277
271		Delivery for steel frame and truss for Area 5	7 days	Thu 3/6/21	Wed 9/6/21	0 days	242,264,270	307,272,278
272		Delivery for steel frame and truss for Area 6	4 days	Sun 8/8/21	Wed 11/8/21	0 days	243,265,271	308FF+2 days,279
273		**Delivery for bracing and secondary steel member**	**62 days**	**Wed 16/6/21**	**Mon 16/8/21**	**283 days**		
274		Delivery for bracing and secondary steel member for Area 1	4 days	Wed 16/6/21	Sat 19/6/21	0 days	267,245	310,275
275		Delivery for bracing and secondary steel member for Area 2	4 days	Sun 20/6/21	Wed 23/6/21	0 days	268,274,246	311,276
276		Delivery for bracing and secondary steel member for Area 3	4 days	Thu 24/6/21	Sun 27/6/21	0 days	247,269,275	312,277
277		Delivery for bracing and secondary steel member for Area 4	4 days	Mon 28/6/21	Thu 1/7/21	0 days	248,270,276	313,278
278		Delivery for bracing and secondary steel member for Area 5	4 days	Fri 2/7/21	Mon 5/7/21	4 days	249,271,277	314,279
279		Delivery for bracing and secondary steel member for Area 6	4 days	Fri 13/8/21	Mon 16/8/21	0 days	250,272,278	315
280		**Delivery for skylight steel frame structure**	**19 days**	**Tue 3/8/21**	**Sat 21/8/21**	**314 days**		
281		Delivery for skylight steel frame structure for Area 1	3 days	Tue 3/8/21	Thu 5/8/21	0 days	285FF-14 days	317
282		Delivery for skylight steel frame structure for Area 2	3 days	Tue 3/8/21	Thu 5/8/21	0 days	285FF-14 days	353SS+7 days,318
283		Delivery for skylight steel frame structure for Area 3	3 days	Tue 10/8/21	Thu 12/8/21	0 days	285FF-7 days	319
284		Delivery for skylight steel frame structure for Area 4	3 days	Tue 10/8/21	Thu 12/8/21	0 days	285FF-7 days	320
285		Delivery for skylight steel frame structure for Area 5	2 days	Wed 18/8/21	Thu 19/8/21	0 days	256	321,281FF-14 days,2
286		Delivery for skylight steel frame structure for Area 6	2 days	Fri 20/8/21	Sat 21/8/21	0 days	285	322
287		**Installation for steel column (under +18.1mPD)**	**95 days**	**Sun 20/9/20**	**Wed 23/12/20**	**430 days**		
288		Area 1 - F5, F4, F3, F11, F10, F9	18 days	Sun 20/9/20	Wed 7/10/20	0 days	195SS+28 days,213SS+28 days	289
289		Area 2 - F17, F16, F28	8 days	Thu 8/10/20	Thu 15/10/20	0 days	196SS+30 days,288	290,292
290		Area 3 -F1, F2, F7, F8	5 days	Fri 16/10/20	Tue 20/10/20	19 days	195FF+28 days,289,199SS+28 days	291
291		Area 3 -F6	2 days	Mon 9/11/20	Tue 10/11/20	660 days	202SS+28 days,290	
292		Area 4 -F12, F13, F14, F15	8 days	Wed 11/11/20	Wed 18/11/20	0 days	202SS+30 days,289	293



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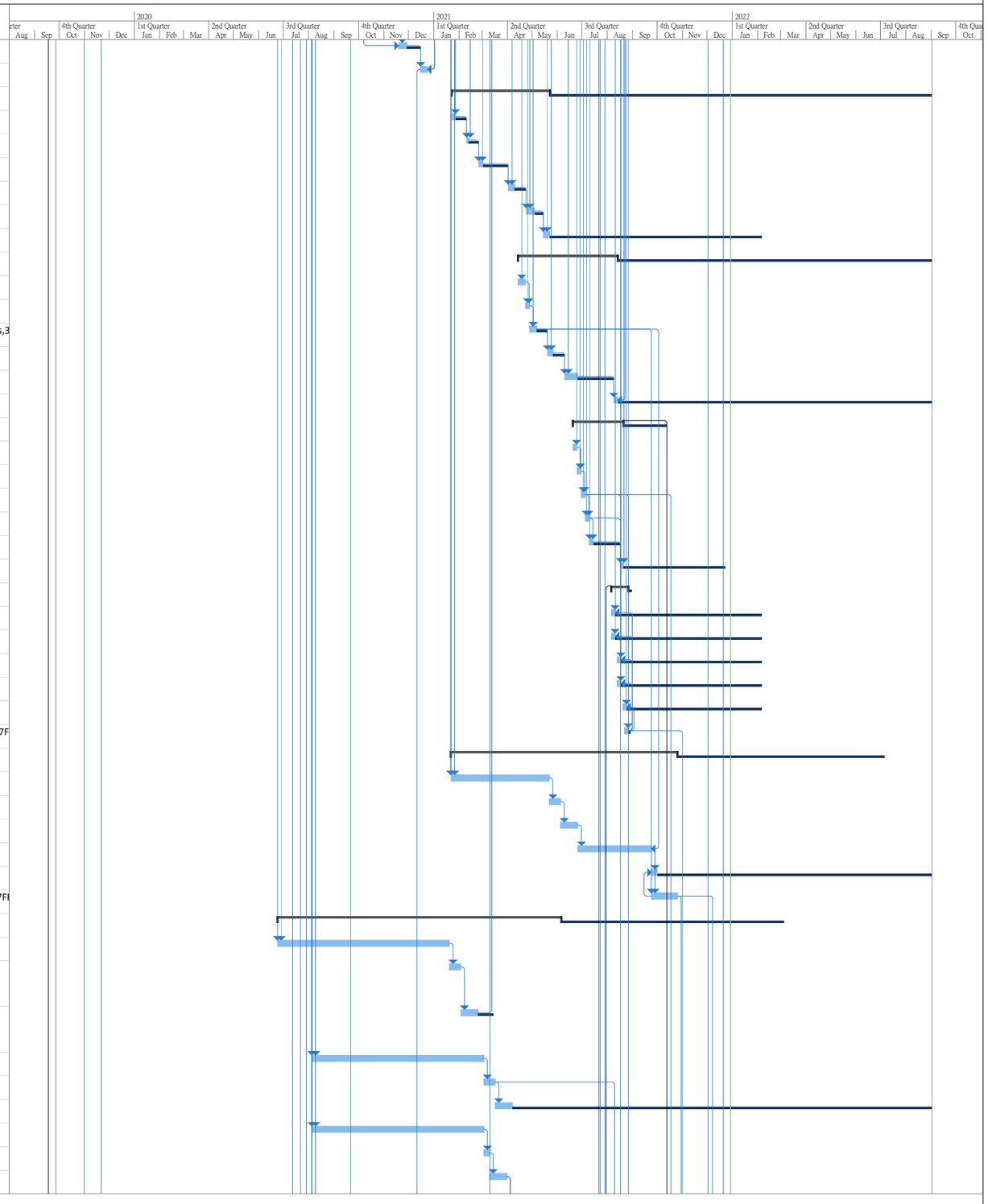
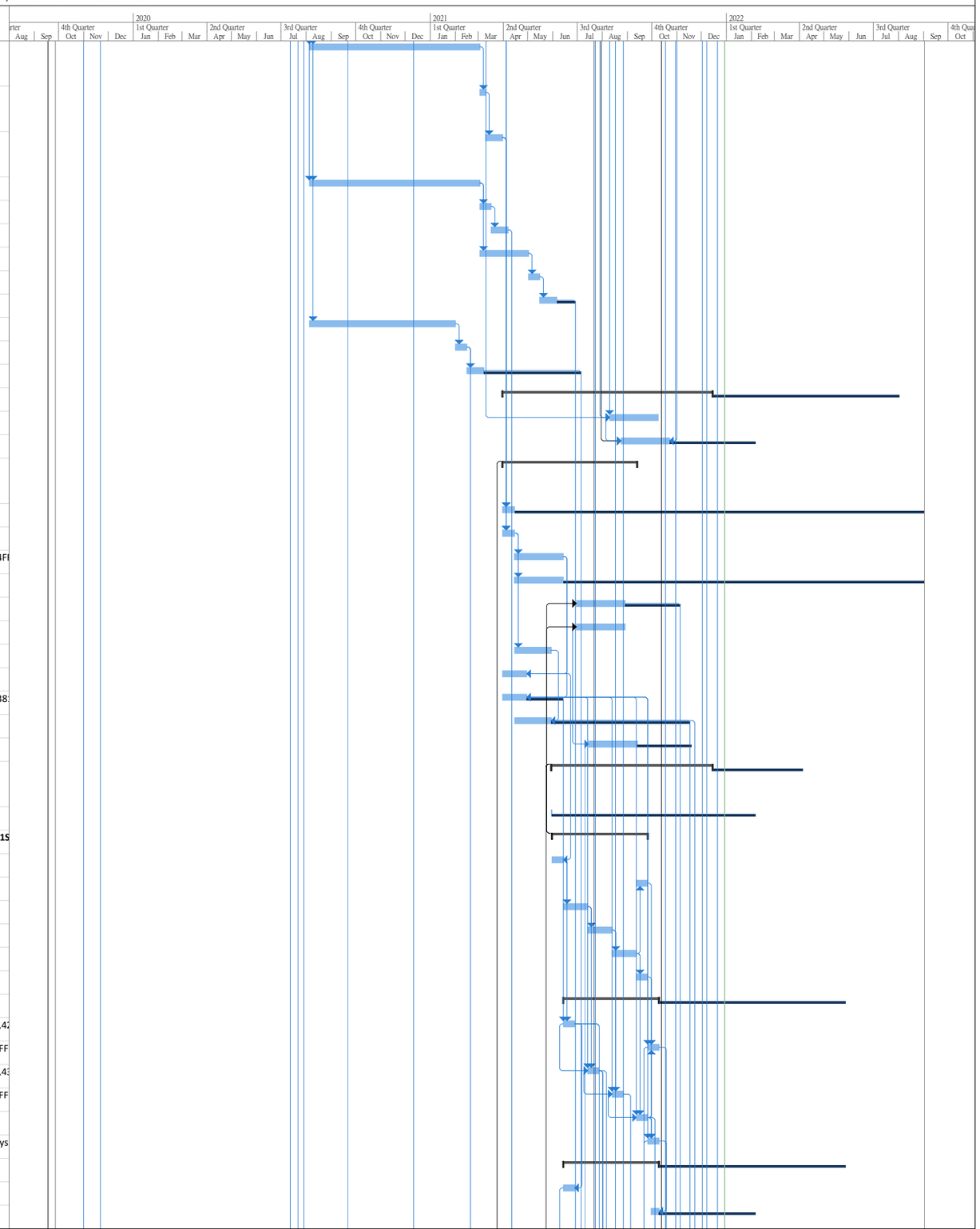
Task, Split, Milestone, Summary, Project Summary, Inactive Task, Inactive Milestone, Inactive Summary, Manual Task, Duration-only, Manual Summary Rollup, Manual Summary, Start-only, Finish-only, External Tasks, External Milestone, Deadline, Critical, Critical Split, Progress, Manual Progress, Slack

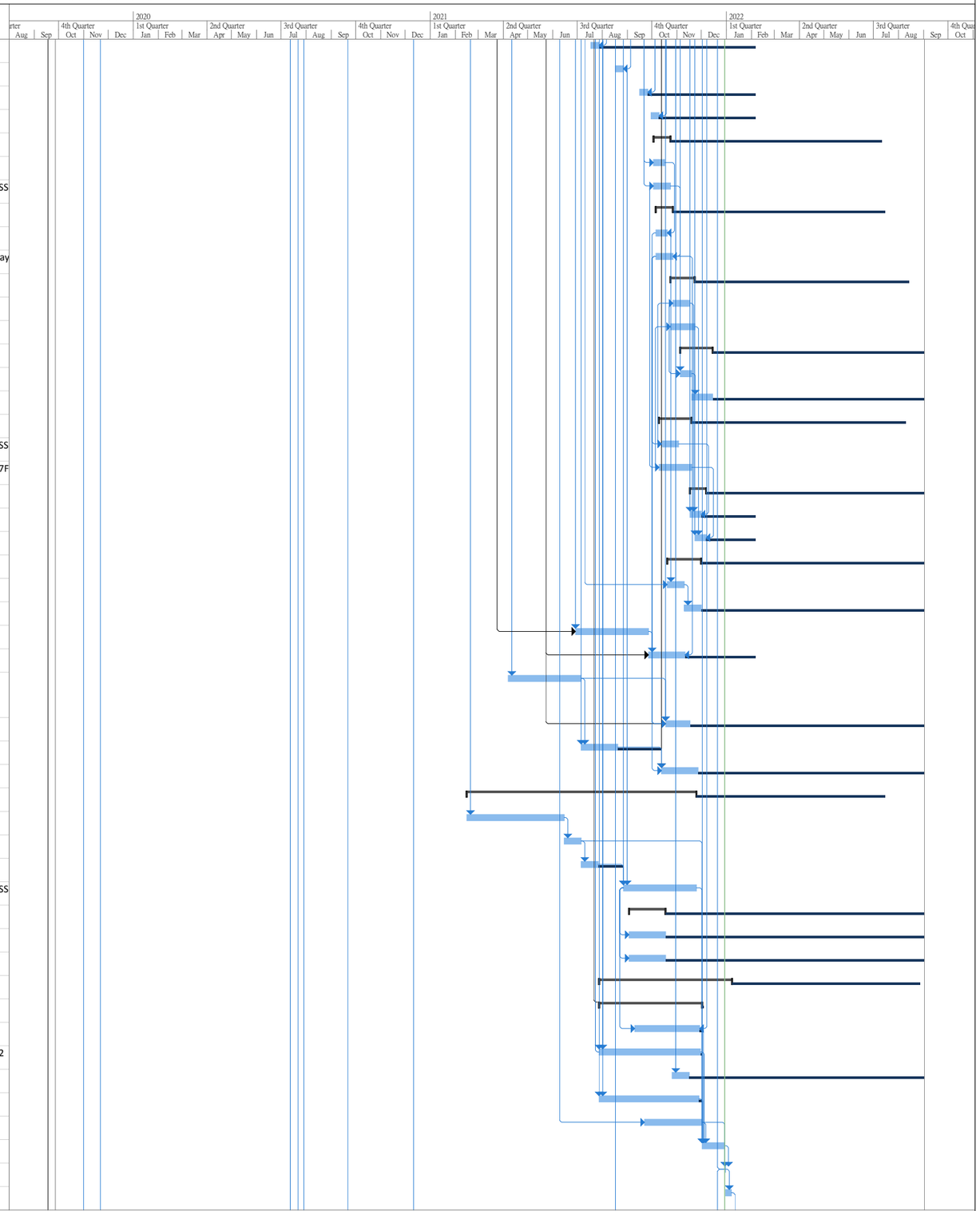
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
293		Area 5 - F18, F19, F20, F21, F22	10 days	Thu 19/11/20	Sat 28/11/20	17 days	202SS+30 days,292	294
294		Area 6 - F23, F24, F25, F26, F27	8 days	Wed 16/12/20	Wed 23/12/20	0 days	202FF+30 days,293,213FF+3 days	475SS+14 days
295		**Installation for steel column (above +18.1mPD)**	**120 days**	**Sat 23/1/21**	**Sat 22/5/21**	**467 days**		
296		Area 1 - F5, F4, F3, F11, F10, F9	5 days	Sat 23/1/21	Wed 27/1/21	13 days	260	297
297		Area 2 - F17, F16, F28	3 days	Wed 10/2/21	Fri 12/2/21	12 days	296,261	298
298		Area 3 -F1, F2, F6, F7, F8	5 days	Thu 25/2/21	Mon 1/3/21	31 days	262,297	299
299		Area 4 -F12, F13, F14, F15	8 days	Fri 2/4/21	Fri 9/4/21	14 days	263,298	300
300		Area 5 - F18, F19, F20, F21, F22	10 days	Sat 24/4/21	Mon 3/5/21	11 days	264,299	301
301		Area 6 - F23, F24, F25, F26, F27	8 days	Sat 15/5/21	Sat 22/5/21	259 days	265,300	
302		**Installation for steel frame and truss**	**122 days**	**Wed 14/4/21**	**Fri 13/8/21**	**384 days**		
303		Area 1 - F5, F4, F3, F11, F10, F9	9 days	Wed 14/4/21	Thu 22/4/21	0 days	267	304
304		Area 2 - F17, F16, F28	5 days	Fri 23/4/21	Tue 27/4/21	0 days	268,303	305
305		Area 3 -F1, F2, F6, F7, F8	9 days	Wed 28/4/21	Thu 6/5/21	13 days	304,269	329,327FF-10 days,3
306		Area 4 -F12, F13, F14, F15	7 days	Thu 20/5/21	Wed 26/5/21	14 days	305,270	307
307		Area 5 - F18, F19, F20, F21, F22	16 days	Thu 10/6/21	Fri 25/6/21	44 days	306,271	308
308		Area 6 - F23, F24, F25, F26, F27	5 days	Mon 9/8/21	Fri 13/8/21	384 days	307,272FF+2 days	
309		**Installation for bracing and secondary steel member**	**62 days**	**Sun 20/6/21**	**Fri 20/8/21**	**53 days**		**416**
310		Area 1 - F5, F4, F3, F11, F10, F9	5 days	Sun 20/6/21	Thu 24/6/21	0 days	274	311
311		Area 2 - F17, F16, F28	5 days	Fri 25/6/21	Tue 29/6/21	0 days	310,275	312
312		Area 3 -F1, F2, F6, F7, F8	5 days	Wed 30/6/21	Sun 4/7/21	0 days	311,276	313,414,421,556
313		Area 4 -F12, F13, F14, F15	5 days	Mon 5/7/21	Fri 9/7/21	0 days	312,277	314,556
314		Area 5 - F18, F19, F20, F21, F22	5 days	Sat 10/7/21	Wed 14/7/21	33 days	313,278	315
315		Area 6 - F23, F24, F25, F26, F27	4 days	Tue 17/8/21	Fri 20/8/21	124 days	314,279	
316		**Installation for skylight system steel frame structure**	**21 days**	**Fri 6/8/21**	**Thu 26/8/21**	**4 days**		**354SS+14 days**
317		Area 1 - F5, F4, F3, F11, F10, F9	5 days	Fri 6/8/21	Tue 10/8/21	179 days	281,322FF-21 days	
318		Area 2 - F17, F16, F28	5 days	Fri 6/8/21	Tue 10/8/21	179 days	282,322FF-18 days	
319		Area 3 -F1, F2, F6, F7, F8	5 days	Fri 13/8/21	Tue 17/8/21	172 days	283,322FF-15 days	
320		Area 4 -F12, F13, F14, F15	5 days	Fri 13/8/21	Tue 17/8/21	172 days	284,322FF-12 days	
321		Area 5 - F18, F19, F20, F21, F22	5 days	Fri 20/8/21	Tue 24/8/21	165 days	285,322FF-9 days	
322		Area 6 - F23, F24, F25, F26, F27	5 days	Sun 22/8/21	Thu 26/8/21	2 days	286	354FF+14 days,317F
323		**Construction for steel staircase**	**277 days**	**Fri 22/1/21**	**Mon 25/10/21**	**253 days**		
324		Design for steel staircase	120 days	Fri 22/1/21	Fri 21/5/21	0 days	206,210,226	325
325		Submission for steel staircase	14 days	Sat 22/5/21	Fri 4/6/21	0 days	324	326
326		Approval for steel staircase	21 days	Sat 5/6/21	Fri 25/6/21	0 days	325	327
327		Fabrication for steel staircase	90 days	Sat 26/6/21	Thu 23/9/21	0 days	326,305FF-10 days	329,328
328		Delivery for steel staircase	7 days	Fri 24/9/21	Thu 30/9/21	336 days	329SS-14 days,327	
329		Installation for steel staircase	32 days	Fri 24/9/21	Mon 25/10/21	0 days	327,305	328SS-14 days,427F
330		**Design issues for roof of steel canopy**	**347 days**	**Wed 24/6/20**	**Sat 5/6/21**	**272 days**		
331		Skylight secondary steelwork members design and their fixing	210 days	Wed 24/6/20	Tue 19/1/21	0 days	206,209	332
332		Submission for skylight secondary steelwork members design and their fixing	14 days	Wed 20/1/21	Tue 2/2/21	0 days	331	333
333		Approval for the desing of skylight secondary steelwork members and their fixing	21 days	Wed 3/2/21	Tue 23/2/21	19 days	332	251
334		Design for glazing panel with Aluminum frame	210 days	Wed 5/8/20	Tue 2/3/21	0 days	206,211	335
335		Submission for glazing panel with Aluminum frame	14 days	Wed 3/3/21	Tue 16/3/21	0 days	334	336,353
336		Approval for design for glazing panel with Aluminum frame	21 days	Wed 17/3/21	Tue 6/4/21	513 days	335	
337		Design for Purlin cleat and layout drawing	210 days	Wed 5/8/20	Tue 2/3/21	0 days	206,211	338
338		Submission for Purlin cleat and layout drawing	7 days	Wed 3/3/21	Tue 9/3/21	0 days	337	339
339		Approval for design for Purlin cleat and layout drawing	21 days	Wed 10/3/21	Tue 30/3/21	0 days	338	356,357



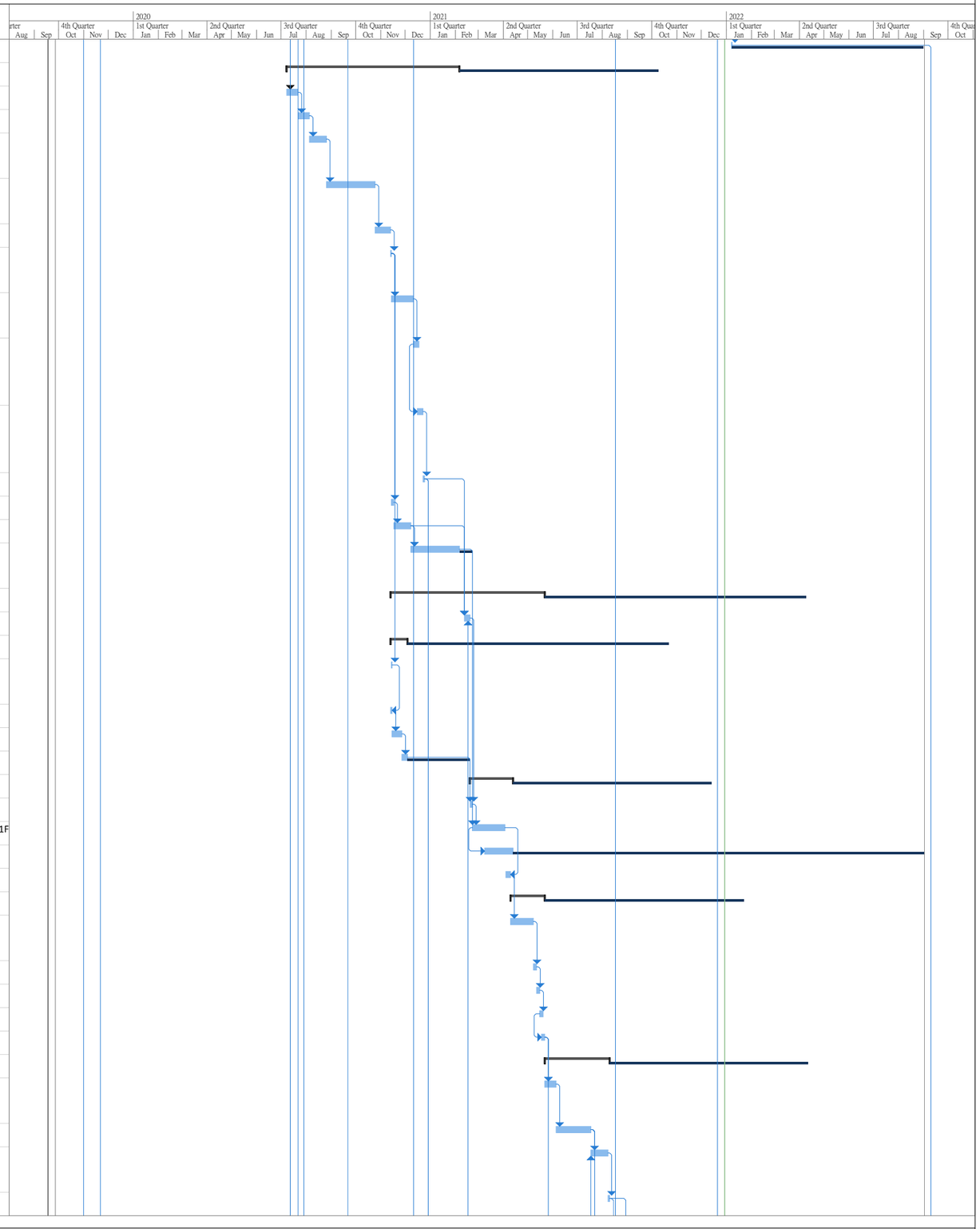
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
340		Design for metal roof cladding system and PMMA skylight system design calculation and shop drawing	210 days	Wed 5/8/20	Tue 2/3/21	0 days	206,211	341
341		Submission for metal roof cladding system and PMMA skylight system design calculation and shop drawing	7 days	Wed 3/3/21	Tue 9/3/21	0 days	340	342
342		Approval for metal roof cladding system and PMMA skylight system design calculation and shop drawing	21 days	Wed 10/3/21	Tue 30/3/21	0 days	341	356,357
343		Design for sliding roof hatch or hydraulic swing hatch door	210 days	Wed 5/8/20	Tue 2/3/21	0 days	206,211	344,346
344		Submission for sliding roof hatch or hydraulic swing hatch door	14 days	Wed 3/3/21	Tue 16/3/21	0 days	343	345
345		Approval for sliding roof hatch or hydraulic swing hatch door	21 days	Wed 17/3/21	Tue 6/4/21	0 days	344	413
346		Design for guardrail for roof	60 days	Wed 3/3/21	Sat 1/5/21	0 days	343	347
347		Submission for guardrail for roof	14 days	Sun 2/5/21	Sat 15/5/21	0 days	346	348
348		Approval for guardrail for roof	21 days	Sun 16/5/21	Sat 5/6/21	23 days	347	411
349		Design for solar pannel and the steel supporting frame	180 days	Wed 5/8/20	Sun 31/1/21	0 days	211	350
350		Submission for solar pannel and the steel supporting frame	14 days	Mon 1/2/21	Sun 14/2/21	0 days	349	351,418
351		Approval for solar pannel and the steel supporting frame	21 days	Mon 15/2/21	Sun 7/3/21	120 days	350	415
352		**Construction for roof of steel canopy**	**259 days**	**Wed 31/3/21**	**Tue 14/12/21**	**230 days**		
353		Fabrication and delivery for glazing panel with Aluminum frame	60 days	Tue 10/8/21	Fri 8/10/21	0 days	335,253SS+7 days,282SS+7 days	354SS+14 days
354		Installation for glazing panel with Aluminum frame	60 days	Tue 24/8/21	Fri 22/10/21	106 days	353SS+14 days,316SS+14 days,322FF+14 days	
355		**Materials preparation and delivery for Purlin cleat, rockwood insulation, skylight PMMA Pannel**	**166 days**	**Wed 31/3/21**	**Sun 12/9/21**	**0 days**		**411SS+90 days**
356		Purlin cleat steel raw	15 days	Wed 31/3/21	Wed 14/4/21	505 days	339,342	
357		Prepare fabrication drawing	15 days	Wed 31/3/21	Wed 14/4/21	0 days	339,342	358,359,362
358		Under Liner	60 days	Thu 15/4/21	Sun 13/6/21	0 days	357	363FF-45 days,364FF
359		Alum Halter	60 days	Thu 15/4/21	Sun 13/6/21	445 days	357	
360		Rockwool insulation	60 days	Wed 30/6/21	Sat 28/8/21	68 days	369SS+30 days	400
361		Top Liner (Coil)	60 days	Wed 30/6/21	Sat 28/8/21	0 days	369SS+30 days	366SS+15 days
362		Skylight PMMA Panel (expected for glazing panel)	45 days	Thu 15/4/21	Sat 29/5/21	0 days	357	365FF
363		Purlin	30 days	Wed 31/3/21	Thu 29/4/21	0 days	358FF-45 days	370FF+45 days
364		GMS. Gutter in mill finish	30 days	Wed 31/3/21	Thu 29/4/21	45 days	358FF-45 days	377,378,379,380,38
365		Skylight GMS edge capping w/. PE coating	45 days	Thu 15/4/21	Sat 29/5/21	171 days	362FF	406,407
366		Main Roof GMS. Edge capping w/. PE coating	60 days	Thu 15/7/21	Sun 12/9/21	67 days	361SS+15 days	409SS+30 days
367		**Installation for Purlin cleat, rockwood insulation, skylight PMMA Pannel**	**199 days**	**Sun 30/5/21**	**Tue 14/12/21**	**111 days**		**412SS+7 days,414SS+30 days**
368		Approval to the installation sequences by AECOM	1 day	Sun 30/5/21	Sun 30/5/21	251 days		
369		**Install purlin**	**118 days**	**Mon 31/5/21**	**Sat 25/9/21**	**0 days**		**360SS+30 days,361S**
370		Area 1	14 days	Mon 31/5/21	Sun 13/6/21	0 days	363FF+45 days	377,372
371		Area 2	14 days	Sun 12/9/21	Sat 25/9/21	0 days	374	378
372		Area 3	30 days	Mon 14/6/21	Tue 13/7/21	0 days	370	373,379
373		Area 4	30 days	Wed 14/7/21	Thu 12/8/21	0 days	372	374,380
374		Area 5	30 days	Fri 13/8/21	Sat 11/9/21	0 days	373	375,381,371
375		Area 6	14 days	Sun 12/9/21	Sat 25/9/21	0 days	374	382
376		**Install under liner**	**118 days**	**Mon 14/6/21**	**Sat 9/10/21**	**230 days**		
377		Area 1	14 days	Mon 14/6/21	Sun 27/6/21	0 days	364,370	379SS+7 days,430,4
378		Area 2	14 days	Sun 26/9/21	Sat 9/10/21	0 days	364,371,381	391SS+7 days,385FF
379		Area 3	14 days	Wed 14/7/21	Tue 27/7/21	0 days	364,372,377SS+7 days	380SS+3 days,428,4
380		Area 4	14 days	Fri 13/8/21	Thu 26/8/21	0 days	364,373,379SS+3 days	381SS+3 days,387FF
381		Area 5	14 days	Sun 12/9/21	Sat 25/9/21	0 days	364,374,380SS+3 days	382,378,388FF
382		Area 6	14 days	Sun 26/9/21	Sat 9/10/21	0 days	364,375,381	389FF,392SS+7 days
383		**Install alum. Halter**	**118 days**	**Mon 14/6/21**	**Sat 9/10/21**	**230 days**		
384		Area 1	14 days	Mon 14/6/21	Sun 27/6/21	0 days	377FF	431SS+100 days
385		Area 2	10 days	Thu 30/9/21	Sat 9/10/21	119 days	378FF	



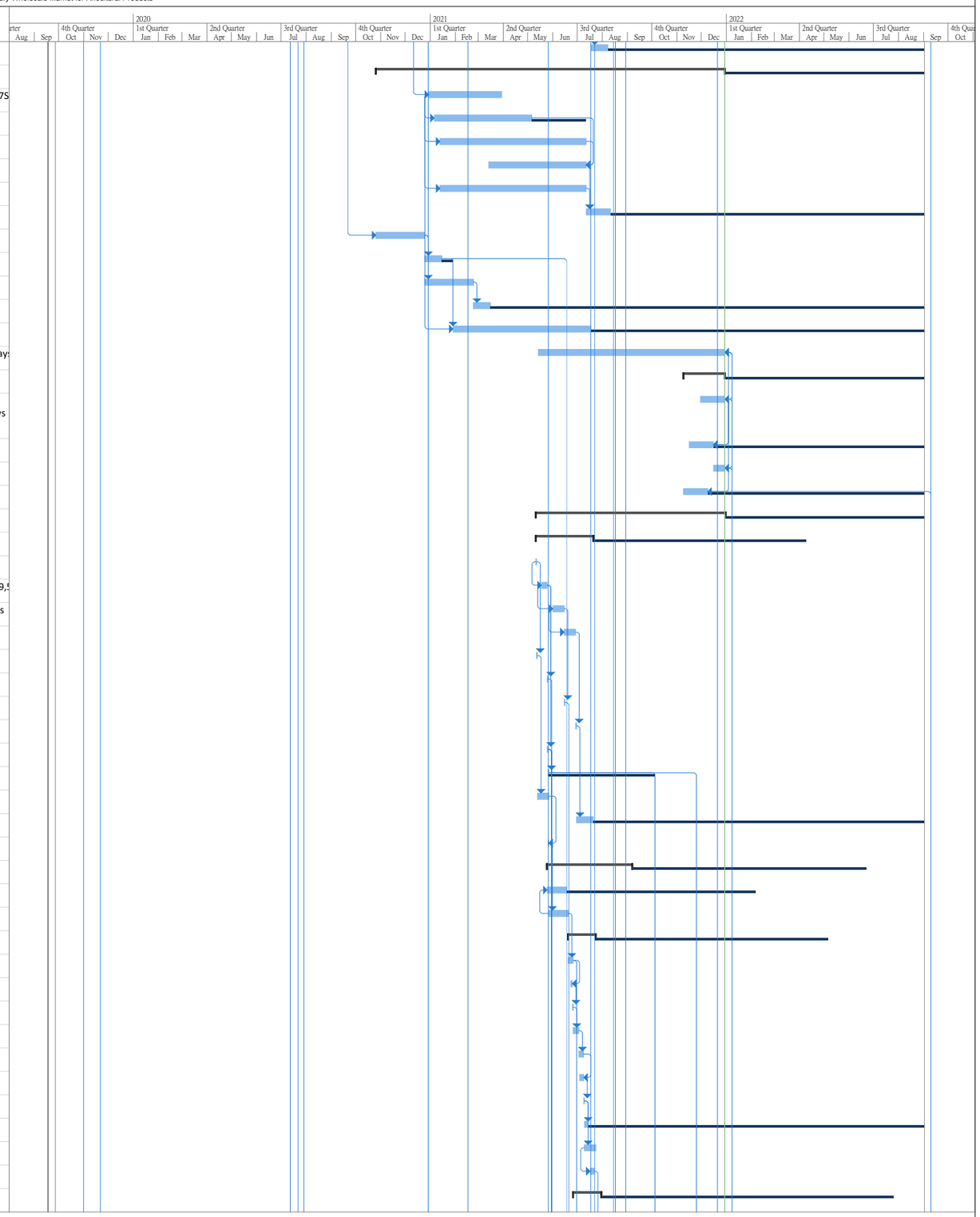
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
386		Area 3	10 days	Sun 18/7/21	Tue 27/7/21	193 days	379FF	
387		Area 4	10 days	Tue 17/8/21	Thu 26/8/21	0 days	380FF	421
388		Area 5	10 days	Thu 16/9/21	Sat 25/9/21	133 days	381FF	
389		Area 6	10 days	Thu 30/9/21	Sat 9/10/21	119 days	382FF	
390		**Install rockwool**	**21 days**	**Sun 3/10/21**	**Sat 23/10/21**	**261 days**		
391		Area 1, 2	14 days	Sun 3/10/21	Sat 16/10/21	0 days	378SS+7 days	394FF+3 days
392		Area 3, 4, 5, 6	21 days	Sun 3/10/21	Sat 23/10/21	0 days	382SS+7 days	395FF+3 days,404SS
393		**Install top liner**	**21 days**	**Wed 6/10/21**	**Tue 26/10/21**	**261 days**		
394		Area 1,2	14 days	Wed 6/10/21	Tue 19/10/21	0 days	391FF+3 days	409,403SS+7 days
395		Area 3,4,5,6	21 days	Wed 6/10/21	Tue 26/10/21	0 days	392FF+3 days	412FF,414SS+12 day
396		**Louvre Install completer**	**30 days**	**Sun 24/10/21**	**Mon 22/11/21**	**264 days**		
397		Area 1,2	21 days	Wed 27/10/21	Tue 16/11/21	0 days	403SS+14 days	400SS+9 days,406
398		Area 3,4,5,6	30 days	Sun 24/10/21	Mon 22/11/21	0 days	404SS+14 days	407
399		**Install gutter**	**40 days**	**Fri 5/11/21**	**Tue 14/12/21**	**261 days**		
400		Area 1,2	14 days	Fri 5/11/21	Thu 18/11/21	0 days	360,397SS+9 days	401
401		Area 3,4,5,6	26 days	Fri 19/11/21	Tue 14/12/21	261 days	400	
402		**Install skylight PMMA panel**	**40 days**	**Sun 10/10/21**	**Thu 18/11/21**	**264 days**		
403		Area 1,2	21 days	Wed 13/10/21	Tue 2/11/21	0 days	394SS+7 days	406FF+3 days,397SS
404		Area 3,4,5,6	40 days	Sun 10/10/21	Thu 18/11/21	0 days	392SS+7 days	398SS+14 days,407F
405		**Install Skylight edge capping**	**20 days**	**Wed 17/11/21**	**Mon 6/12/21**	**269 days**		
406		Area 1,2	14 days	Wed 17/11/21	Tue 30/11/21	67 days	365,397,403FF+3 days	
407		Area 3,4,5,6	14 days	Tue 23/11/21	Mon 6/12/21	61 days	365,398,404FF+7 days	
408		**Install Main roof edge capping**	**42 days**	**Wed 20/10/21**	**Tue 30/11/21**	**275 days**		
409		Area 1,2	21 days	Wed 20/10/21	Tue 9/11/21	0 days	366SS+30 days,394	410
410		Area 3,4,5,6	21 days	Wed 10/11/21	Tue 30/11/21	275 days	409	
411		Fabrication and delivery for guardrail for roof	90 days	Tue 29/6/21	Sun 26/9/21	0 days	348,355SS+90 days	412
412		Installation of guardrail for roof	45 days	Mon 27/9/21	Wed 10/11/21	87 days	367SS+7 days,411,395FF	
413		Fabrication and delivery for sliding roof hatch or hydraulic swing hatch door	90 days	Wed 7/4/21	Mon 5/7/21	0 days	345	414,415
414		Installation for sliding roof hatch or hydraulic swing hatch door	30 days	Mon 18/10/21	Tue 16/11/21	289 days	413,367SS+30 days,312,395SS+12 days	
415		Fabrication for steel supporting frame for solar pannel	45 days	Tue 6/7/21	Thu 19/8/21	54 days	351,413	416
416		Installation for solar pannel and the steel supporting frame	45 days	Wed 13/10/21	Fri 26/11/21	279 days	415,309,395SS+7 days	
417		**Hanging fan and lighting system for steel canopy**	**283 days**	**Mon 15/2/21**	**Wed 24/11/21**	**233 days**		
418		Design for hanging fan and lighting system	120 days	Mon 15/2/21	Mon 14/6/21	0 days	350	419
419		Submission for hanging fan and lighting system	21 days	Tue 15/6/21	Mon 5/7/21	0 days	418	420,432
420		Approval for hanging fan and lighting system	21 days	Tue 6/7/21	Mon 26/7/21	31 days	419	421
421		Installation for hanging fan and lighting system	90 days	Fri 27/8/21	Wed 24/11/21	0 days	420,312,387	423SS+7 days,427SS
422		**Interior fitting-out, finishes and fixtures**	**45 days**	**Fri 3/9/21**	**Sun 17/10/21**	**319 days**		
423		Erection of interior fitting-out and finishes	45 days	Fri 3/9/21	Sun 17/10/21	319 days	421SS+7 days	
424		Installation of fixtures	45 days	Fri 3/9/21	Sun 17/10/21	319 days	421SS+7 days	
425		**Building services works**	**164 days**	**Wed 28/7/21**	**Fri 7/1/22**	**232 days**		
426		**Installation of BS equipment**	**127 days**	**Wed 28/7/21**	**Wed 1/12/21**	**2 days**		**111SS+30 days**
427		MVAC system installation	80 days	Fri 10/9/21	Sun 28/11/21	3 days	421SS+14 days,329FF+14 days	432
428		Electical System installation	125 days	Wed 28/7/21	Mon 29/11/21	2 days	377,379	111SS+14 days,432
429		Installation of electical distribution boards	21 days	Tue 26/10/21	Mon 15/11/21	290 days	329	
430		Fire Services System installation	123 days	Wed 28/7/21	Sat 27/11/21	4 days	377,379	432
431		Plumbing and drainage installation	71 days	Wed 22/9/21	Wed 1/12/21	0 days	384SS+100 days	433,432
432		Testing and commissioning of BS equipment	28 days	Thu 2/12/21	Wed 29/12/21	0 days	133,110,421,419,427,428,430,431	433
433		Inspection of BS installations inclunding Fire Services by Authoritie	1 day	Thu 30/12/21	Thu 30/12/21	0 days	432,431	434,806SS,112SS
434		Remedial works after inspection	7 days	Fri 31/12/21	Thu 6/1/22	0 days	433	435



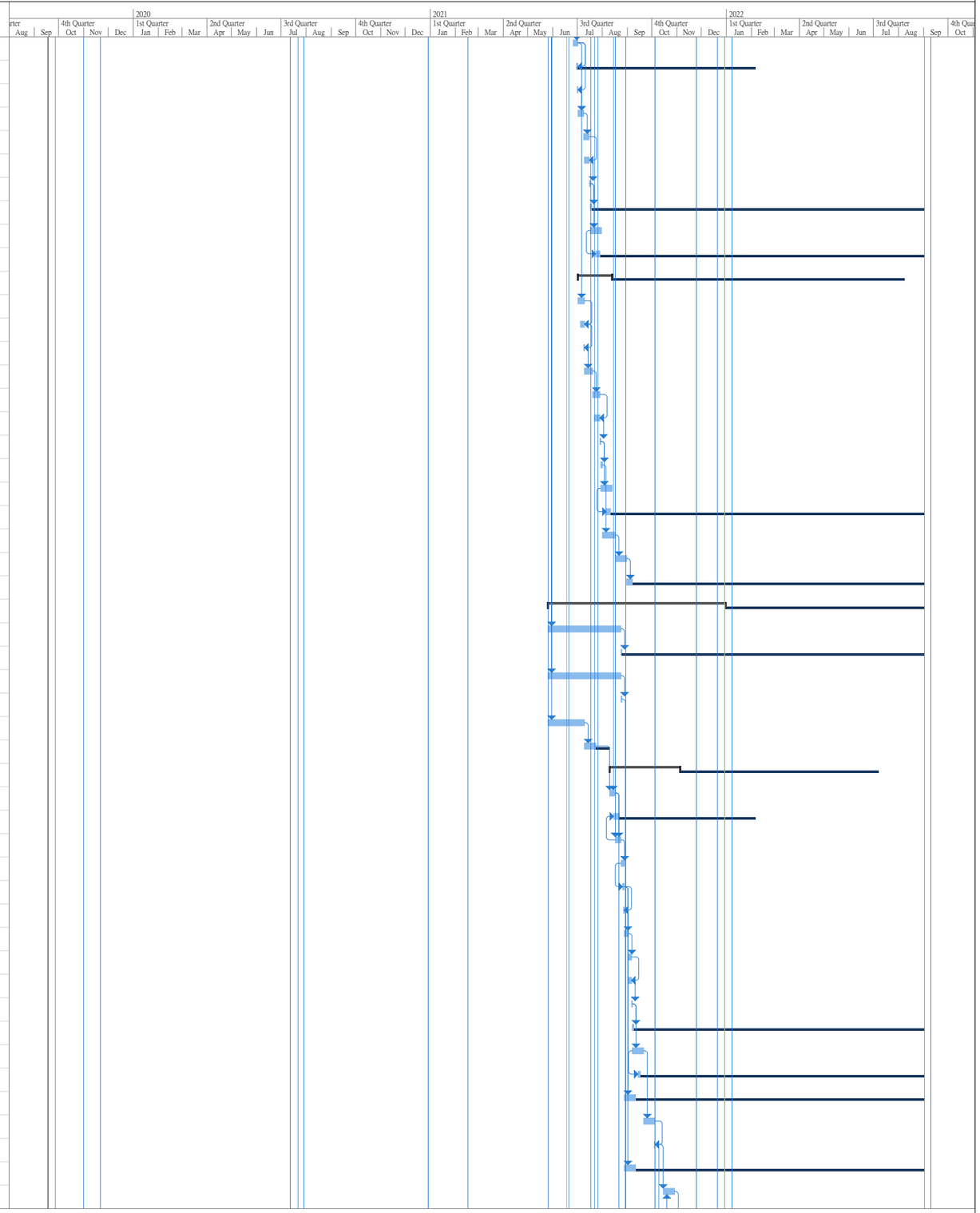
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
435		Re-insepction of BS installations by Authorities	1 day	Fri 7/1/22	Fri 7/1/22	236 days	434	811FF
436		**Demolision and re-provision works for toilet and RCB**	**213 days**	**Wed 8/7/20**	**Fri 5/2/21**	**245 days**		
437		Undergound Utilities detection	14 days	Wed 8/7/20	Tue 21/7/20	0 days	137	438
438		PR plan for relocation of toilet and RCB	14 days	Wed 22/7/20	Tue 4/8/20	0 days	437	439
439		Re-provision of toilet and RCB before demolish the existing toilet and RCB	21 days	Wed 5/8/20	Tue 25/8/20	0 days	438	440
440		TTA submission for temporary diversion of public footpath near Ma Wat River	60 days	Wed 26/8/20	Sat 24/10/20	0 days	439	441
441		Temporay diversion of public footpath near Ma Wat River	19 days	Sun 25/10/20	Thu 12/11/20	0 days	440	442
442		Re-opening of public footpath near Ma Wat River according to AECOM instruction	1 day	Fri 13/11/20	Fri 13/11/20	0 days	441	453,443,447
443		Instruction from AECOM for tree trimming and additional lighting provided for the footpath at Wing Ning Wai	27 days	Sat 14/11/20	Thu 10/12/20	0 days	442	444
444		Arrangement for trees trimming between Wing Ning Wai Footbridge and the footbridge at On Chuen Street adjacent to Shung Him Tong Village along Ma Wat River	7 days	Fri 11/12/20	Thu 17/12/20	0 days	443	445SS+5 days
445		Arrangement of temporary solar lighting between Wing Ning Wai Footbridge and the footbridge at On Chuen Street adjacent to Shung Him Tong Village along Ma Wat River	7 days	Wed 16/12/20	Tue 22/12/20	0 days	444SS+5 days	446
446		Re-temporary diversion of public footpath near Ma Wat River	2 days	Wed 23/12/20	Thu 24/12/20	0 days	445	451,820,830
447		Temporary enclosure for demolish the existing public toilet	3 days	Sat 14/11/20	Mon 16/11/20	0 days	442	448
448		Demolish the existing toilet	21 days	Tue 17/11/20	Mon 7/12/20	0 days	447	451,449
449		Construction of temporary 900mm dia. Stormwater drain next to the existing public toilet	60 days	Tue 8/12/20	Fri 5/2/21	16 days	448	459
450		**Site formation and mini-pile works**	**190 days**	**Fri 13/11/20**	**Fri 21/5/21**	**322 days**		
451		Site formation for mini-pile works	7 days	Fri 12/2/21	Thu 18/2/21	0 days	823,448,446	458
452		**Pre-drill works**	**21 days**	**Fri 13/11/20**	**Thu 3/12/20**	**322 days**		
453		Temporary fence off for pre-drill works due to unable for temporary diversion of public footpath near Ma Wat River	1 day	Sat 14/11/20	Sat 14/11/20	0 days	442	454FF
454		Mobilization of S.I. Drilling Rig	2 days	Fri 13/11/20	Sat 14/11/20	0 days	453FF	455
455		Pre-Drill works (4nos)	12 days	Sun 15/11/20	Thu 26/11/20	0 days	454	456
456		Completion Log Report	7 days	Fri 27/11/20	Thu 3/12/20	77 days	455	458
457		**Mini Pile Works**	**53 days**	**Fri 19/2/21**	**Mon 12/4/21**	**245 days**		
458		Mobilization of Percussive Drilling Rig	3 days	Fri 19/2/21	Sun 21/2/21	0 days	456,451	459
459		Drilling Works by 2 rigs (40nos.)	40 days	Mon 22/2/21	Fri 2/4/21	0 days	458,449	460SS+15 days,461F
460		Grouting works (40nos.)	35 days	Tue 9/3/21	Mon 12/4/21	507 days	459SS+15 days	
461		Post Drilling (2nos.)	6 days	Sun 4/4/21	Fri 9/4/21	0 days	459FF+7 days	463
462		**Loading test**	**42 days**	**Sat 10/4/21**	**Fri 21/5/21**	**245 days**		
463		Allow for the mini piles to gain sufficient strength of the grout selection of the test pile by AECOM	28 days	Sat 10/4/21	Fri 7/5/21	0 days	461	464
464		Setup loading test platform by Kentledge Method	4 days	Sat 8/5/21	Tue 11/5/21	0 days	463	465
465		Loading Test Reading (1nos. Of load test pile)	4 days	Wed 12/5/21	Sat 15/5/21	0 days	464	466
466		Demobilization of loading test platform	4 days	Sun 16/5/21	Wed 19/5/21	0 days	465	467SS+2 days
467		Site Clearance	4 days	Tue 18/5/21	Fri 21/5/21	0 days	466SS+2 days	469,836
468		**Ramp structure and road works**	**80 days**	**Sat 22/5/21**	**Mon 9/8/21**	**245 days**		
469		Cutting mini-pile and provide anchorage reinforcements from mini piles to base slab of the ramp structure (40 nos.)	14 days	Sat 22/5/21	Fri 4/6/21	0 days	467	470
470		Construction for ramp structure	43 days	Sat 5/6/21	Sat 17/7/21	0 days	469	471,839,473
471		Backfilling to the adjacent road level due to revised drawings (around +11.6mPD)	21 days	Sun 18/7/21	Sat 7/8/21	0 days	470,838	472
472		Relocation of site layout	2 days	Sun 8/8/21	Mon 9/8/21	0 days	471	554,710



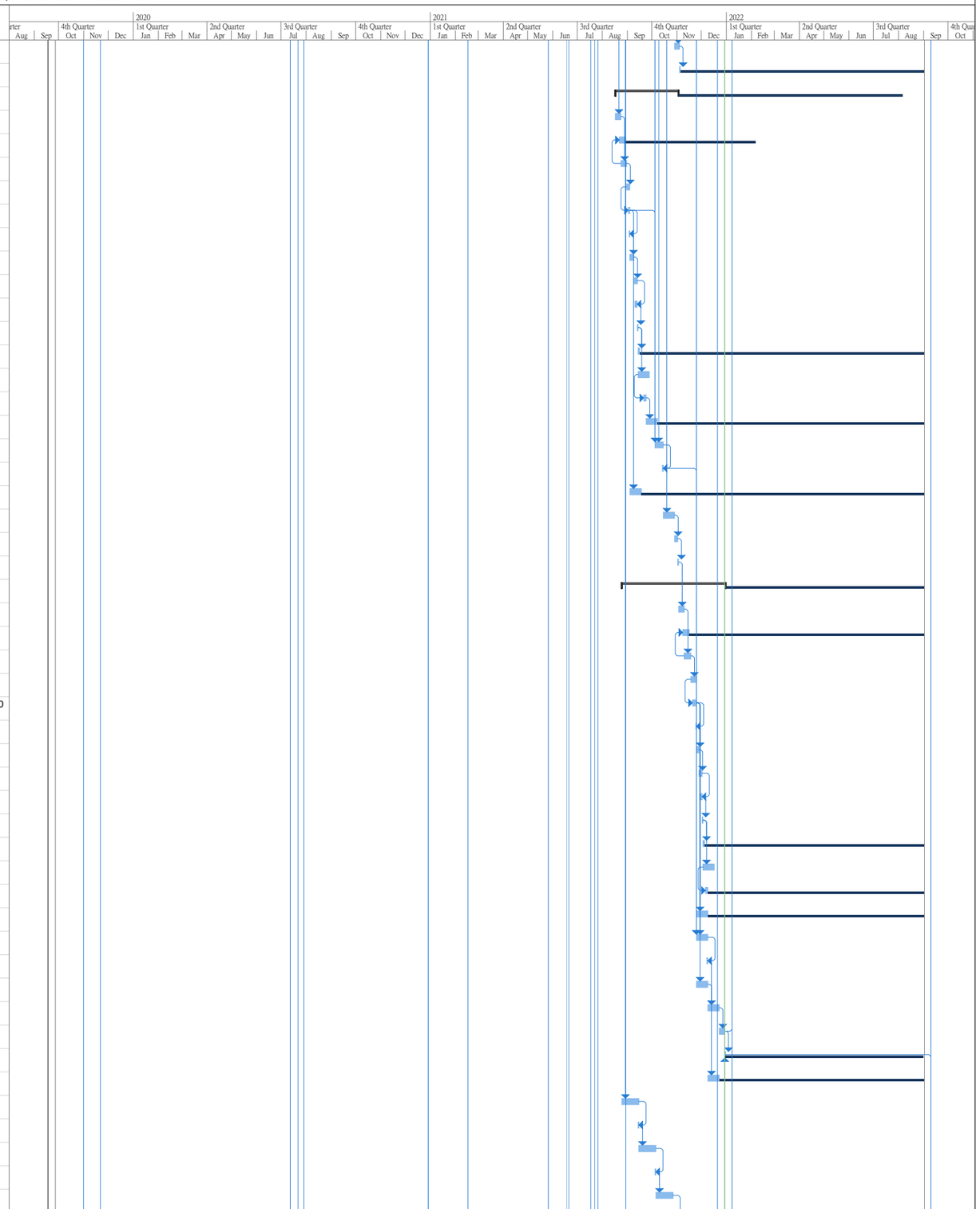
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
473		Construction of steel vehicle parapet and thrie bear	21 days	Sun 18/7/21	Sat 7/8/21	390 days	470	
474		**Road works and On-grade slab**	**430 days**	**Mon 26/10/20**	**Wed 29/12/21**	**246 days**		
475		Backfilling to the bottom of on-grade slab	90 days	Wed 30/12/20	Mon 29/3/21	0 days	294SS+14 days	485SS+30 days,477S
476		Cable draw pits constrcution	120 days	Wed 6/1/21	Wed 5/5/21	67 days	475SS+7 days	478FF
477		Construction for Cable trough	180 days	Wed 13/1/21	Sun 11/7/21	0 days	475SS+14 days	478FF
478		Cable ducts laying	120 days	Sun 14/3/21	Sun 11/7/21	0 days	476FF,477FF	480
479		Construction for water trench as per revised drawings	180 days	Wed 13/1/21	Sun 11/7/21	0 days	475SS+14 days	480
480		Laying of the power cables	30 days	Mon 12/7/21	Tue 10/8/21	387 days	478,479	
481		Submission for paneling of on-grade slab works	60 days	Mon 26/10/20	Thu 24/12/20	0 days	162SS+30 days	482,483
482		Approval for paneling of on-grade slab works	21 days	Fri 25/12/20	Thu 14/1/21	14 days	481	485,840
483		Submission for paneling of carriageway works	60 days	Fri 25/12/20	Mon 22/2/21	0 days	481	484
484		Approval for paneling of carriageway works	21 days	Tue 23/2/21	Mon 15/3/21	535 days	483	
485		Casting concrete for on-grade slab	170 days	Fri 29/1/21	Sat 17/7/21	411 days	475SS+30 days,482	
486		Casting concrete for carriageway	230 days	Fri 14/5/21	Wed 29/12/21	0 days	614FF,666FF	488FF,489FF-60 day
487		**Street furniture and road marking**	**51 days**	**Tue 9/11/21**	**Wed 29/12/21**	**246 days**		
488		Construction for Street furniture as per drawing no. 60335576/C6/C00/1202	30 days	Tue 30/11/21	Wed 29/12/21	0 days	486FF	490FF,489FF-14 days,491FF-21 days
489		Construction for road lighting	30 days	Tue 16/11/21	Wed 15/12/21	260 days	488FF-14 days,486FF-60 days	
490		Road marking as per drawing no. 60335576/C6/C00/1602	14 days	Thu 16/12/21	Wed 29/12/21	0 days	488FF	857FF
491		Miscellouces installation such as flag posts and mail boxes	30 days	Tue 9/11/21	Wed 8/12/21	266 days	488FF-21 days	811FF
492		**Additional Carriageway Steel Cover**	**234 days**	**Tue 11/5/21**	**Thu 30/12/21**	**245 days**		
493		**Preliminary to the additional carriageway steel cover**	**71 days**	**Tue 11/5/21**	**Tue 20/7/21**	**262 days**		
494		Design of carriageway steel cover confrimed for East side	1 day	Tue 11/5/21	Tue 11/5/21	0 days		495SS+7 days,498
495		Design of carriageway steel cover confrimed for West side	7 days	Tue 18/5/21	Mon 24/5/21	0 days	494SS+7 days	496SS+14 days,499,5
496		Design of carriageway steel cover confrimed for South side	14 days	Tue 1/6/21	Mon 14/6/21	0 days	495SS+14 days	500,497SS+14 days
497		Design of carriageway steel cover confrimed for superstructure	14 days	Tue 15/6/21	Mon 28/6/21	0 days	496SS+14 days	501
498		PMI issued for footing construction East side	1 day	Wed 12/5/21	Wed 12/5/21	0 days	494	504
499		PMI issued for footing construction West side	1 day	Tue 25/5/21	Tue 25/5/21	0 days	495	551
500		PMI issued for footing construction South side	1 day	Tue 15/6/21	Tue 15/6/21	0 days	496	627
501		PMI issued for steelwork construction	1 day	Tue 29/6/21	Tue 29/6/21	0 days	497	505
502		PMI issued for constrcution of direct link	1 day	Tue 25/5/21	Tue 25/5/21	0 days	495	503,547,549
503		PMI issued for constrcution of in-take fresh water pipes	1 day	Wed 26/5/21	Wed 26/5/21	131 days	502	589,610
504		Materials preparation for footing construction	14 days	Thu 13/5/21	Wed 26/5/21	0 days	498	506FF
505		Materials preparation for steelworks	21 days	Wed 30/6/21	Tue 20/7/21	408 days	501	
506		Mobilization of machine	1 day	Wed 26/5/21	Wed 26/5/21	0 days	504FF	509
507		**Construction for footings and tie beams for East side**	**105 days**	**Tue 25/5/21**	**Mon 6/9/21**	**288 days**		
508		Preparation of sheetpile for construction	24 days	Tue 25/5/21	Thu 17/6/21	233 days	509SS-2 days	
509		ELS sheetpile construction (total 232.5no. Expected 10nos per d	24 days	Thu 27/5/21	Sat 19/6/21	0 days	506	508SS-2 days,511
510		**F1, F2, T1 and T2 construction**	**34 days**	**Sun 20/6/21**	**Fri 23/7/21**	**286 days**		
511		Excavation for F1, F2, T1 and T2	6 days	Sun 20/6/21	Fri 25/6/21	0 days	509	512FF-1 day,522
512		Dispoal of excavated Materials for F1, F2, T1 and T2	2 days	Wed 23/6/21	Thu 24/6/21	0 days	511FF-1 day	513
513		Blinding layer for F1, F2, T1 and T2	1 day	Fri 25/6/21	Fri 25/6/21	0 days	512	514
514		Formwork erection for F1, F2, T1 and T2	7 days	Sat 26/6/21	Fri 2/7/21	0 days	513	515
515		Steel fixing for F1, F2, T1 and T2	6 days	Sat 3/7/21	Thu 8/7/21	0 days	514	516FF
516		Installation of holding down bolts (total 1nos. Of column)	5 days	Sun 4/7/21	Thu 8/7/21	0 days	515FF	517
517		Casting concrete for F1, F2, T1 and T2	1 day	Fri 9/7/21	Fri 9/7/21	0 days	516	518,519
518		Removal of formwork for F1, F2, T1 and T2	4 days	Sat 10/7/21	Tue 13/7/21	415 days	517	
519		Curing for F1, F2, T1 and T2	14 days	Sat 10/7/21	Fri 23/7/21	0 days	517	520SS+7 days
520		Removal of Sheetpile	5 days	Sat 17/7/21	Wed 21/7/21	0 days	519SS+7 days	629
521		**F3, F4, T3 and T4 construction**	**35 days**	**Sat 26/6/21**	**Fri 30/7/21**	**360 days**		



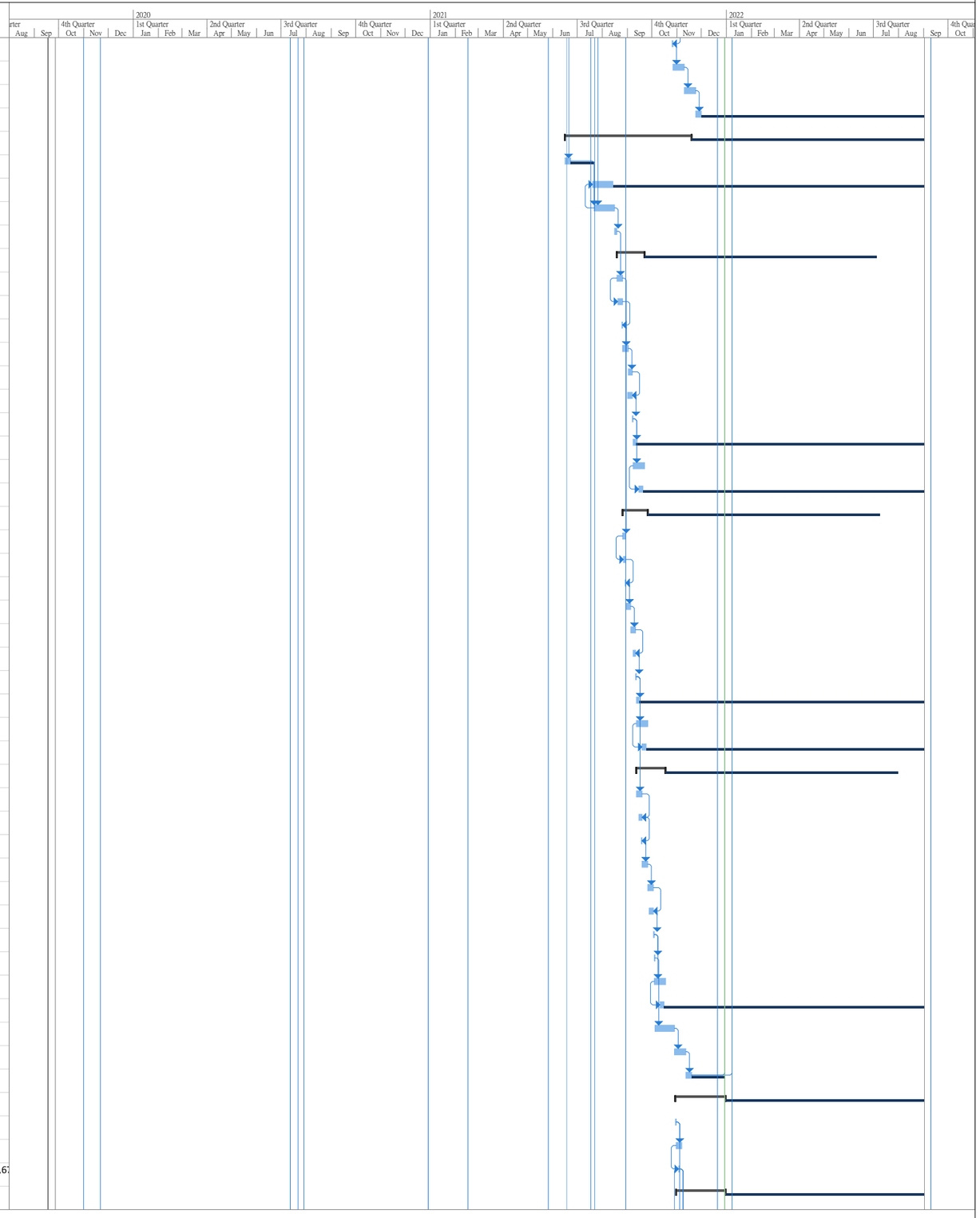
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
522		Excavation for F3, F4, T3 and T4	6 days	Sat 26/6/21	Thu 1/7/21	0 days	511	523FF,533,524FF
523		Dispoal of excavated Materials for F3, F4, T3 and T4	2 days	Wed 30/6/21	Thu 1/7/21	219 days	522FF	
524		Blinding layer for F3, F4, T3 and T4	1 day	Thu 1/7/21	Thu 1/7/21	0 days	522FF	525
525		Formwork erection for F3, F4, T3 and T4	7 days	Fri 2/7/21	Thu 8/7/21	0 days	524	526
526		Steel fixing for F3, F4, T3 and T4	7 days	Fri 9/7/21	Thu 15/7/21	0 days	525	527FF
527		Installation of holding down bolts (total 3nos. Of column)	6 days	Sat 10/7/21	Thu 15/7/21	0 days	526FF	528
528		Casting concrete for F3, F4, T3 and T4	1 day	Fri 16/7/21	Fri 16/7/21	0 days	527	529,530
529		Removal of formwork for F3, F4, T3 and T4	2 days	Sat 17/7/21	Sun 18/7/21	410 days	528	
530		Curing for F3, F4, T3 and T4	14 days	Sat 17/7/21	Fri 30/7/21	0 days	528	531SS+7 days
531		Removal of Sheetpile	5 days	Sat 24/7/21	Wed 28/7/21	400 days	530SS+7 days	
532		**F5 to F8 and T5 to T10 construction**	**42 days**	**Fri 2/7/21**	**Thu 12/8/21**	**360 days**		
533		Excavation for F5 to F8 and T5 to T10	8 days	Fri 2/7/21	Fri 9/7/21	0 days	522	534FF
534		Dispoal of excavated Materials for F5 to F8 and T5 to T10	5 days	Mon 5/7/21	Fri 9/7/21	0 days	533FF	535FF
535		Blinding layer for F5 to F8 and T5 to T10	1 day	Fri 9/7/21	Fri 9/7/21	0 days	534FF	536
536		Formwork erection for F5 to F8 and T5 to T10	10 days	Sat 10/7/21	Mon 19/7/21	0 days	535	537
537		Steel fixing for F5 to F8 and T5 to T10	9 days	Tue 20/7/21	Wed 28/7/21	0 days	536	538FF
538		Installation of holding down bolts (total 5nos. Of column)	7 days	Thu 22/7/21	Wed 28/7/21	0 days	537FF	539
539		Casting concrete for F5 to F8 and T5 to T10	1 day	Thu 29/7/21	Thu 29/7/21	0 days	538	540,541
540		Removal of formwork for F5 to F8 and T5 to T10	2 days	Fri 30/7/21	Sat 31/7/21	0 days	539	543
541		Curing for F5 to F8 and T5 to T10	14 days	Fri 30/7/21	Thu 12/8/21	0 days	539	542SS+7 days
542		Removal of Sheetpile	5 days	Fri 6/8/21	Tue 10/8/21	387 days	541SS+7 days	
543		Re-construction to the underground drainage construction	16 days	Sun 1/8/21	Mon 16/8/21	0 days	540	544
544		Backfilling works to the formation level	14 days	Tue 17/8/21	Mon 30/8/21	0 days	543	545
545		Carriageway concrete casting for P34, P35, P38, P39, P42 and P4	7 days	Tue 31/8/21	Mon 6/9/21	360 days	544	
546		**Construction for footings and tie beams for West side**	**219 days**	**Wed 26/5/21**	**Thu 30/12/21**	**245 days**		
547		TTA coordination and application for in-take fresh water pipes	90 days	Wed 26/5/21	Mon 23/8/21	0 days	502	548
548		Approval of TTA for in-take fresh water pipes constrcution	1 day	Tue 24/8/21	Tue 24/8/21	373 days	547	
549		XP application for in-take fresh water pipes	90 days	Wed 26/5/21	Mon 23/8/21	0 days	502	550
550		Approval of XP for in-take fresh water pipes	1 day	Tue 24/8/21	Tue 24/8/21	0 days	549	617
551		Coordination with AFCD and AECOM for overlapping area	45 days	Wed 26/5/21	Fri 9/7/21	0 days	499	552
552		Site clearance to the area of F13 to F17 for construction	14 days	Sat 10/7/21	Fri 23/7/21	17 days	551	554
553		**F15 to F17 and T19 to T22 construction**	**87 days**	**Tue 10/8/21**	**Thu 4/11/21**	**245 days**		
554		Breaking up existing concrete pavment and disposal	7 days	Tue 10/8/21	Mon 16/8/21	0 days	552,472	556,575
555		Preparation of sheetpile for construction	7 days	Sun 15/8/21	Sat 21/8/21	168 days	556SS-2 days	
556		ELS sheetpile construction (total 68no. Expected 10nos per da	7 days	Tue 17/8/21	Mon 23/8/21	0 days	554,312,313	555SS-2 days,557
557		Excavation for F15 to F17 and T19 to T22	4 days	Tue 24/8/21	Fri 27/8/21	0 days	556	558SS+2 days
558		Dispoal of excavated Materials for F15 to F17 and T19 to T22	2 days	Thu 26/8/21	Fri 27/8/21	0 days	557SS+2 days	559FF,567,570
559		Blinding layer for F15 to F17 and T19 to T22	1 day	Fri 27/8/21	Fri 27/8/21	0 days	558FF	560
560		Formwork erection for F15 to F17 and T19 to T22	5 days	Sat 28/8/21	Wed 1/9/21	0 days	559	561
561		Steel fixing for F15 to F17 and T19 to T22	4 days	Thu 2/9/21	Sun 5/9/21	0 days	560	562FF
562		Installation of holding down bolts (total 4nos. Of column)	4 days	Thu 2/9/21	Sun 5/9/21	0 days	561FF	563
563		Casting concrete for F15 to F17 and T19 to T22	1 day	Mon 6/9/21	Mon 6/9/21	0 days	562	564,565
564		Removal of formwork for F15 to F17 and T19 to T22	2 days	Tue 7/9/21	Wed 8/9/21	358 days	563	
565		Curing for F15 to F17 and T19 to T22	14 days	Tue 7/9/21	Mon 20/9/21	0 days	563	566SS+7 days,568
566		Removal of Sheetpile	3 days	Tue 14/9/21	Thu 16/9/21	350 days	565SS+7 days	
567		Construction of underground drainage	14 days	Sat 28/8/21	Fri 10/9/21	356 days	558	
568		Constrcution of in-take fresh water pipes	14 days	Tue 21/9/21	Mon 4/10/21	0 days	565	569FF
569		Inspection of in-take fresh water pipes	1 day	Mon 4/10/21	Mon 4/10/21	0 days	568FF	571,589
570		Constrcution of direct link and associated draw pits	14 days	Sat 28/8/21	Fri 10/9/21	356 days	558	
571		Backfilling to the formation level	14 days	Fri 15/10/21	Thu 28/10/21	0 days	569,590	572



ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
572		Casting concrete for road pavement	6 days	Fri 29/10/21	Wed 3/11/21	0 days	571	573
573		handover the area	1 day	Thu 4/11/21	Thu 4/11/21	301 days	572	
574		**F13, F14, T17 and T18 construction**	**78 days**	**Tue 17/8/21**	**Tue 2/11/21**	**276 days**		
575		Breaking up existing concrete pavment and disposal	7 days	Tue 17/8/21	Mon 23/8/21	0 days	554	577
576		Preparation of sheetpile for construction	7 days	Sun 22/8/21	Sat 28/8/21	161 days	577SS-2 days	
577		ELS sheetpile construction (total 50no. Expected 10nos per da	7 days	Tue 24/8/21	Mon 30/8/21	0 days	575	576SS-2 days,578
578		Excavation for F13, F14, T17 and T18	4 days	Tue 31/8/21	Fri 3/9/21	0 days	577	579SS+2 days
579		Dispoal of excavated Materials for F13, F14, T17 and T18	2 days	Thu 2/9/21	Fri 3/9/21	0 days	578SS+2 days	580FF,591,589
580		Blinding layer for F13, F14, T17 and T18	1 day	Fri 3/9/21	Fri 3/9/21	0 days	579FF	581
581		Formwork erection for F13, F14, T17 and T18	5 days	Sat 4/9/21	Wed 8/9/21	0 days	580	582
582		Steel fixing for F13, F14, T17 and T18	4 days	Thu 9/9/21	Sun 12/9/21	0 days	581	583FF
583		Installation of holding down bolts (total 3nos. Of column)	3 days	Fri 10/9/21	Sun 12/9/21	0 days	582FF	584
584		Casting concrete for F13, F14, T17 and T18	1 day	Mon 13/9/21	Mon 13/9/21	0 days	583	585,586
585		Removal of formwork for F13, F14, T17 and T18	2 days	Tue 14/9/21	Wed 15/9/21	351 days	584	
586		Curing for F13, F14, T17 and T18	14 days	Tue 14/9/21	Mon 27/9/21	0 days	584	587SS+7 days
587		Removal of Sheetpile	3 days	Tue 21/9/21	Thu 23/9/21	0 days	586SS+7 days	588
588		Construction of underground drainage	14 days	Fri 24/9/21	Thu 7/10/21	329 days	587	
589		Constrcution of in-take fresh water pipes	10 days	Tue 5/10/21	Thu 14/10/21	0 days	503,579,569	590FF
590		Inspection of in-take fresh water pipes	1 day	Thu 14/10/21	Thu 14/10/21	0 days	589FF	571,592,610
591		Constrcution of direct link and associated draw pits	14 days	Sat 4/9/21	Fri 17/9/21	349 days	579	
592		Backfilling to the formation level	14 days	Fri 15/10/21	Thu 28/10/21	0 days	590	593
593		Casting concrete for road pavement	4 days	Fri 29/10/21	Mon 1/11/21	0 days	592	594
594		handover the area	1 day	Tue 2/11/21	Tue 2/11/21	0 days	593	596
595		**F9 to F12 and T11 to T16 construction**	**128 days**	**Wed 25/8/21**	**Thu 30/12/21**	**245 days**		
596		Breaking up existing concrete pavment and disposal	7 days	Wed 3/11/21	Tue 9/11/21	0 days	594	598
597		Preparation of sheetpile for construction	8 days	Mon 8/11/21	Mon 15/11/21	290 days	598SS-2 days	
598		ELS sheetpile construction (total 75no. Expected 10nos per da	8 days	Wed 10/11/21	Wed 17/11/21	0 days	596	597SS-2 days,599
599		Excavation for F9 to F12 and T11 to T16	7 days	Thu 18/11/21	Wed 24/11/21	0 days	598	600SS+2 days
600		Dispoal of excavated Materials for F9 to F12 and T11 to T16	5 days	Sat 20/11/21	Wed 24/11/21	0 days	599SS+2 days	601FF,609,612,610
601		Blinding layer for F9 to F12 and T11 to T16	1 day	Wed 24/11/21	Wed 24/11/21	0 days	600FF	602
602		Formwork erection for F9 to F12 and T11 to T16	3 days	Thu 25/11/21	Sat 27/11/21	0 days	601	603
603		Steel fixing for F9 to F12 and T11 to T16	4 days	Sun 28/11/21	Wed 1/12/21	0 days	602	604FF
604		Installation of holding down bolts (total 5nos. Column)	3 days	Mon 29/11/21	Wed 1/12/21	0 days	603FF	605
605		Casting concrete for F9 to F12 and T11 to T16	1 day	Thu 2/12/21	Thu 2/12/21	0 days	604	606,607
606		Removal of formwork for F9 to F12 and T11 to T16	2 days	Fri 3/12/21	Sat 4/12/21	271 days	605	
607		Curing for F9 to F12 and T11 to T16	14 days	Fri 3/12/21	Thu 16/12/21	0 days	605	608SS+3 days
608		Removal of Sheetpile	3 days	Mon 6/12/21	Wed 8/12/21	267 days	607SS+3 days	
609		Construction of underground drainage	14 days	Thu 25/11/21	Wed 8/12/21	267 days	600	
610		Constrcution of in-take fresh water pipes	14 days	Thu 25/11/21	Wed 8/12/21	0 days	600,503,590	611FF
611		Inspection of in-take fresh water pipes	1 day	Wed 8/12/21	Wed 8/12/21	0 days	610FF	613
612		Constrcution of direct link and associated draw pits	14 days	Thu 25/11/21	Wed 8/12/21	0 days	600	616
613		Backfilling and compaction of road formation	14 days	Thu 9/12/21	Wed 22/12/21	0 days	611	614
614		Casting concrete for road pavement	7 days	Thu 23/12/21	Wed 29/12/21	0 days	613	615,486FF
615		handover the area	1 day	Thu 30/12/21	Thu 30/12/21	244 days	614,666	811FF
616		Constrcution of remaining direct link	14 days	Thu 9/12/21	Wed 22/12/21	253 days	612	
617		Constrcution of remaining in-take fresh water pipes (part 1)	21 days	Wed 25/8/21	Tue 14/9/21	0 days	550	618FF
618		Inspection of remaining in-take fresh water pipes (part 1)	1 day	Tue 14/9/21	Tue 14/9/21	0 days	617FF	619
619		Constrcution of remaining in-take fresh water pipes (part 2)	21 days	Wed 15/9/21	Tue 5/10/21	0 days	618	620FF
620		Inspection of remaining in-take fresh water pipes (part 2)	1 day	Tue 5/10/21	Tue 5/10/21	0 days	619FF	621
621		Constrcution of remaining in-take fresh water pipes (part 3)	21 days	Wed 6/10/21	Tue 26/10/21	0 days	620	622FF



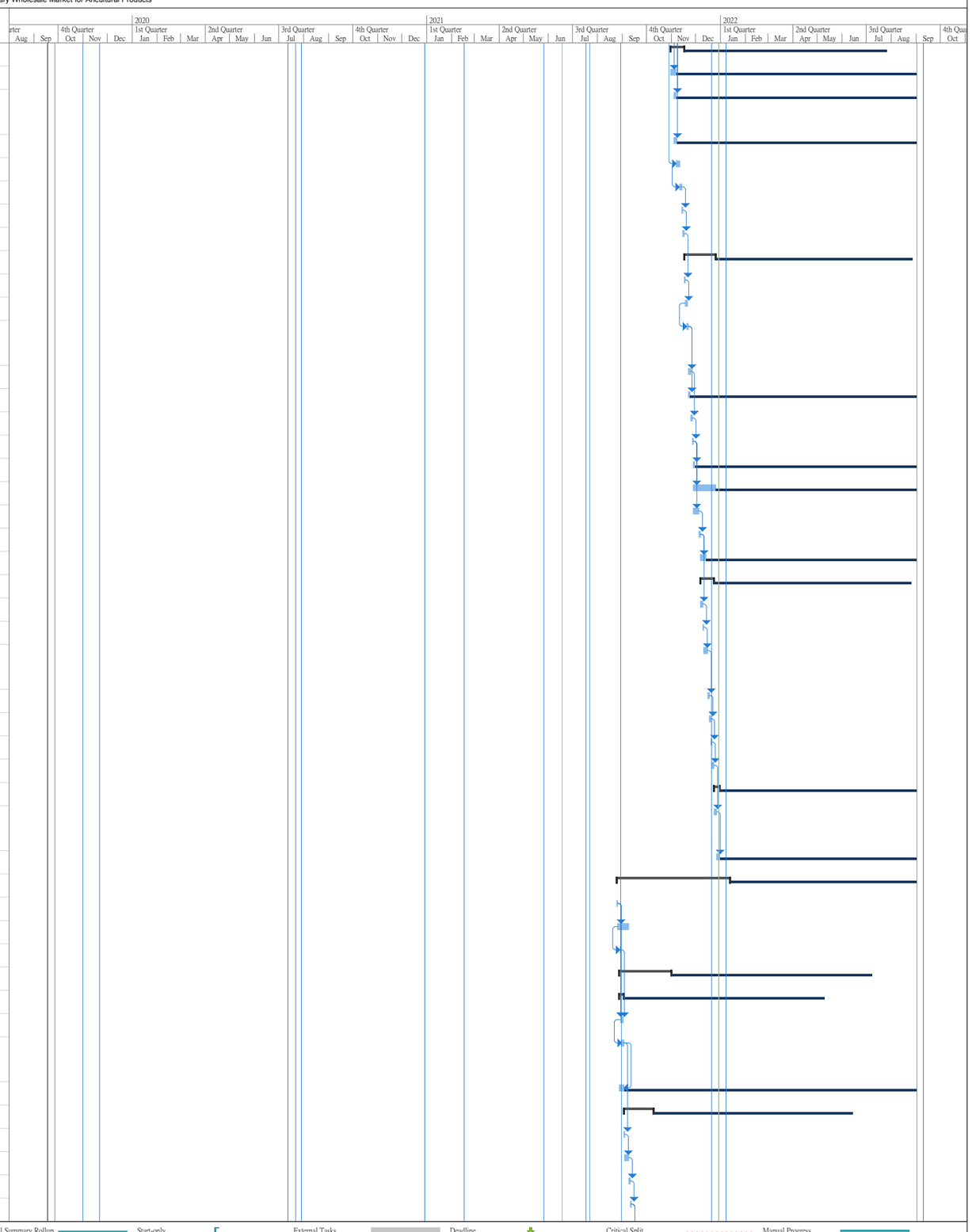
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
622		Inspection of remaining in-take fresh water pipes (part 3)	1 day	Tue 26/10/21	Tue 26/10/21	0 days	621FF	623
623		Inform WSD for connection to existing water supply point	14 days	Wed 27/10/21	Tue 9/11/21	0 days	622	624
624		Connection to existing water supply point by WSD	14 days	Wed 10/11/21	Tue 23/11/21	0 days	623	625
625		Reinstatement of the footpath	7 days	Wed 24/11/21	Tue 30/11/21	275 days	624	
626		**Construction for footings and tie beams for South side**	**156 days**	**Wed 16/6/21**	**Thu 18/11/21**	**287 days**		
627		Demolish to the construction undergound drainage works (From	7 days	Wed 16/6/21	Tue 22/6/21	29 days	500	629
628		Preparation of sheetpile for construction	25 days	Tue 20/7/21	Fri 13/8/21	384 days	629SS-2 days	
629		ELS sheetpile construction (total 246no. Expected 10nos per day	25 days	Thu 22/7/21	Sun 15/8/21	0 days	627,520	628SS-2 days,630
630		Concrete block installation (total 32 nos. expected 10nos. Per da	3 days	Mon 16/8/21	Wed 18/8/21	0 days	629	632
631		**F18 to F21 and T23 to T28 construction**	**34 days**	**Thu 19/8/21**	**Tue 21/9/21**	**286 days**		
632		Excavation for F18 to F21 and T23 to T28	7 days	Thu 19/8/21	Wed 25/8/21	0 days	630	633SS+1 day,643
633		Dispoal of excavated Materials for F18 to F21 and T23 to T28	6 days	Fri 20/8/21	Wed 25/8/21	0 days	632SS+1 day	634FF
634		Blinding layer for F18 to F21 and T23 to T28	1 day	Wed 25/8/21	Wed 25/8/21	0 days	633FF	635
635		Formwork erection for F18 to F21 and T23 to T28	7 days	Thu 26/8/21	Wed 1/9/21	0 days	634	636
636		Steel fixing for F18 to F21 and T23 to T28	5 days	Thu 2/9/21	Mon 6/9/21	0 days	635	637FF
637		Installation of holding down bolts (total 6nos. Of column)	6 days	Wed 1/9/21	Mon 6/9/21	0 days	636FF	638
638		Casting concrete for F18 to F21 and T23 to T28	1 day	Tue 7/9/21	Tue 7/9/21	0 days	637	639,640
639		Removal of formwork for F18 to F21 and T23 to T28	3 days	Wed 8/9/21	Fri 10/9/21	356 days	638	
640		Curing for F18 to F21 and T23 to T28	14 days	Wed 8/9/21	Tue 21/9/21	0 days	638	641SS+7 days
641		Removal of Sheetpile	5 days	Wed 15/9/21	Sun 19/9/21	347 days	640SS+7 days	
642		**F22, F23 and T29, T30 construction**	**31 days**	**Thu 26/8/21**	**Sat 25/9/21**	**286 days**		
643		Excavation for F22, F23 and T29, T30	4 days	Thu 26/8/21	Sun 29/8/21	0 days	632	644SS+1 day
644		Dispoal of excavated Materials for F22, F23 and T29, T30	3 days	Fri 27/8/21	Sun 29/8/21	0 days	643SS+1 day	645FF
645		Blinding layer for F22, F23 and T29, T30	1 day	Sun 29/8/21	Sun 29/8/21	0 days	644FF	646
646		Formwork erection for F22, F23 and T29, T30	6 days	Mon 30/8/21	Sat 4/9/21	0 days	645	647
647		Steel fixing for F22, F23 and T29, T30	6 days	Sun 5/9/21	Fri 10/9/21	0 days	646	648FF
648		Installation of holding down bolts (total 3nos. Of column)	3 days	Wed 8/9/21	Fri 10/9/21	0 days	647FF	649
649		Casting concrete for F22, F23 and T29, T30	1 day	Sat 11/9/21	Sat 11/9/21	0 days	648	650,651,654
650		Removal of formwork for F22, F23 and T29, T30	3 days	Sun 12/9/21	Tue 14/9/21	352 days	649	
651		Curing for F22, F23 and T29, T30	14 days	Sun 12/9/21	Sat 25/9/21	0 days	649	652SS+7 days
652		Removal of Sheetpile	5 days	Sun 19/9/21	Thu 23/9/21	343 days	651SS+7 days	
653		**F24 to F26 and T31 to T34 construction**	**36 days**	**Sun 12/9/21**	**Sun 17/10/21**	**286 days**		
654		Excavation for F24 to F26 and T31 to T34	7 days	Sun 12/9/21	Sat 18/9/21	0 days	649	655FF
655		Dispoal of excavated Materials for F24 to F26 and T31 to T34	4 days	Wed 15/9/21	Sat 18/9/21	0 days	654FF	656FF
656		Blinding layer for F24 to F26 and T31 to T34	1 day	Sat 18/9/21	Sat 18/9/21	0 days	655FF	657
657		Formwork erection for F24 to F26 and T31 to T34	7 days	Sun 19/9/21	Sat 25/9/21	0 days	656	658
658		Steel fixing for F24 to F26 and T31 to T34	7 days	Sun 26/9/21	Sat 2/10/21	0 days	657	659FF
659		Installation of holding down bolts (total 5nos. Of column)	5 days	Tue 28/9/21	Sat 2/10/21	0 days	658FF	660
660		Casting concrete for F24 to F26 and T31 to T34	1 day	Sun 3/10/21	Sun 3/10/21	0 days	659	661,662
661		Removal of formwork for F24 to F26 and T31 to T34	1 day	Mon 4/10/21	Mon 4/10/21	0 days	660	664
662		Curing for F24 to F26 and T31 to T34	14 days	Mon 4/10/21	Sun 17/10/21	0 days	660	663SS+7 days
663		Removal of Sheetpile	5 days	Mon 11/10/21	Fri 15/10/21	321 days	662SS+7 days	
664		Re-construction of the underground sewerage system	24 days	Tue 5/10/21	Thu 28/10/21	0 days	661	665
665		Backfilling to the formation level	14 days	Fri 29/10/21	Thu 11/11/21	0 days	664	666
666		Casting concrete for road pavement	7 days	Fri 12/11/21	Thu 18/11/21	41 days	665	615,486FF
667		**Additional Covered Walkway Constrcution**	**62 days**	**Sat 30/10/21**	**Thu 30/12/21**	**245 days**		
668		Issue of PMI for additional covered walkway construction	1 day	Sat 30/10/21	Sat 30/10/21	0 days		669,673
669		Materials preparation for structure works	7 days	Sun 31/10/21	Sat 6/11/21	0 days	668	670SS+3 days
670		Mobilization of works	1 day	Wed 3/11/21	Wed 3/11/21	0 days	669SS+3 days	675,676SS+4 days,6
671		**Constrcution of covered walkway**	**61 days**	**Sun 31/10/21**	**Thu 30/12/21**	**245 days**		



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

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

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



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Data Date: 2021-11-01
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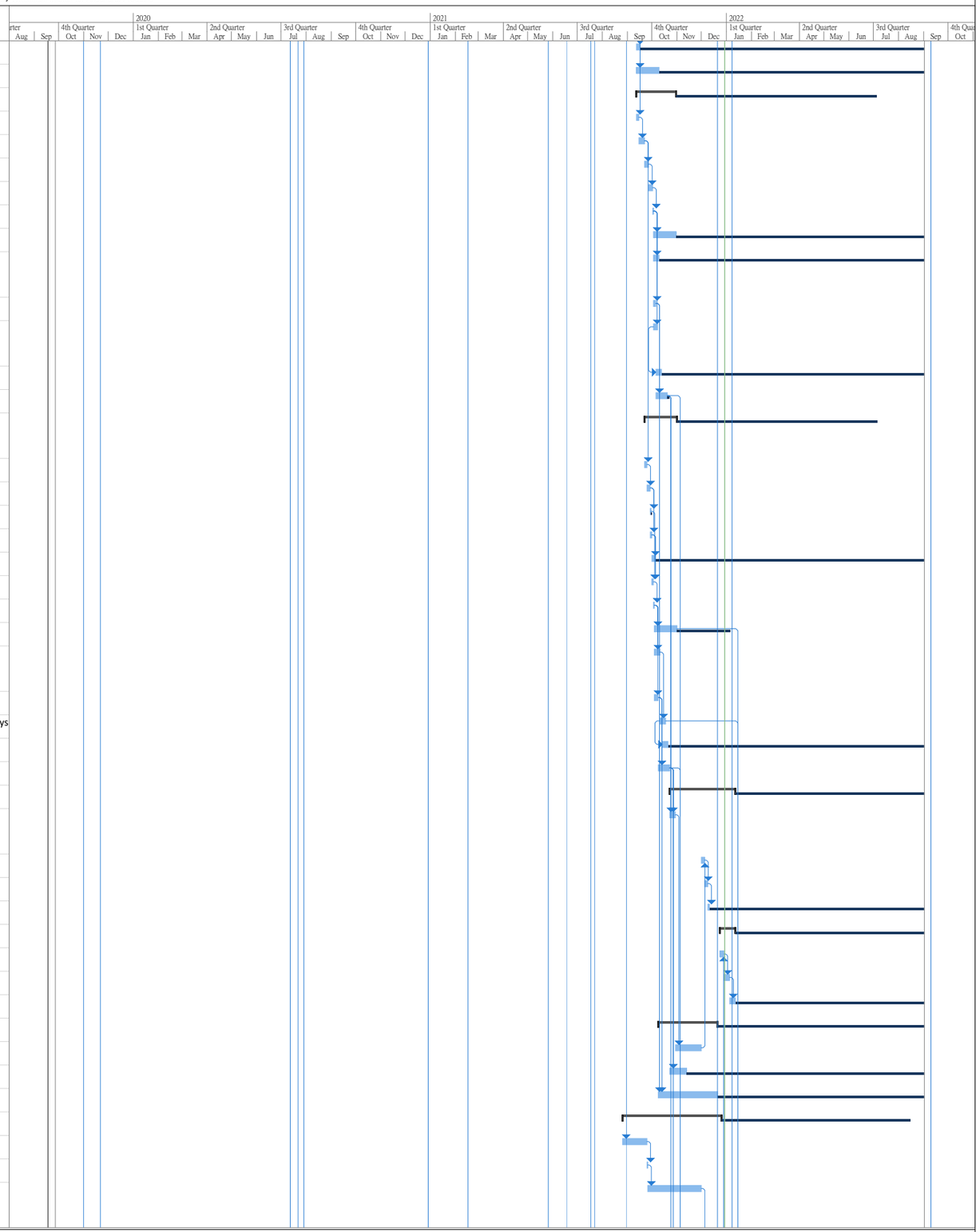
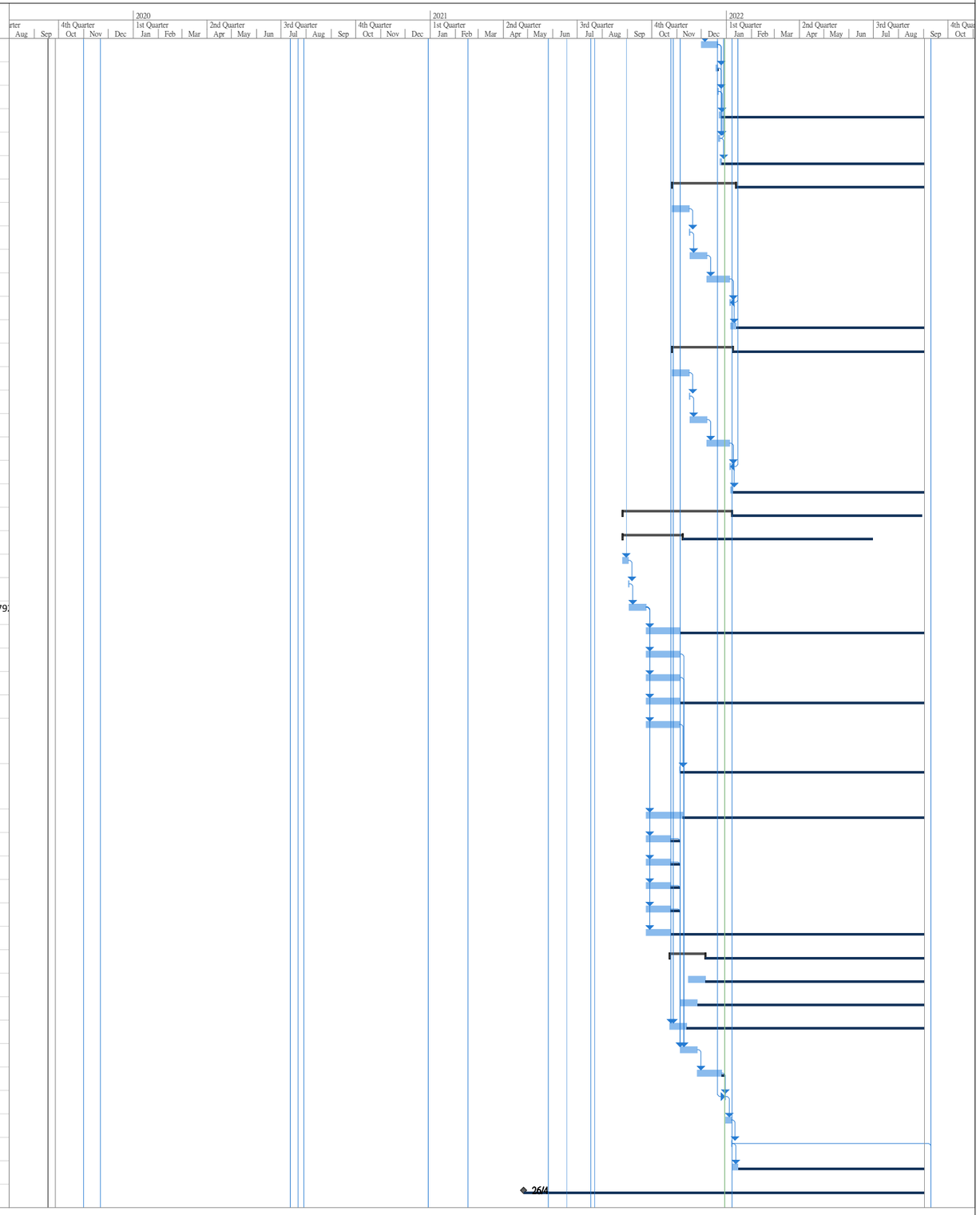
Task | Milestone | Project Summary | Inactive Milestone | Manual Task | Manual Summary Rollup | Start-only | External Tasks | Deadline | Critical Split | Manual Progress
Split | Summary | Inactive Task | Inactive Summary | Duration-only | Manual Summary | Finish-only | External Milestone | Critical | Progress | Slack

ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
718		Removal of formwork	4 days	Sun 12/9/21	Wed 15/9/21	351 days	717	
719		Curing to the concrete	28 days	Sun 12/9/21	Sat 9/10/21	327 days	717	
720		**Construction of walls, columns and roof**	**49 days**	**Sun 12/9/21**	**Sat 30/10/21**	**247 days**		
721		Scaffolding erection as working platform	3 days	Sun 12/9/21	Tue 14/9/21	0 days	717	722
722		Internal formwork erection for walls, columns and roof	7 days	Wed 15/9/21	Tue 21/9/21	0 days	721	723,733
723		Steel fixing for walls, columns and roof	5 days	Wed 22/9/21	Sun 26/9/21	0 days	722	724
724		External formwork erection for walls and columns	5 days	Mon 27/9/21	Fri 1/10/21	0 days	723	725
725		Casting concrete	1 day	Sat 2/10/21	Sat 2/10/21	0 days	724	729,726,727,728
726		Curing to the concrete	28 days	Sun 3/10/21	Sat 30/10/21	306 days	725	
727		Time constraint for removal of formwork (by early strength method)	7 days	Sun 3/10/21	Sat 9/10/21	327 days	725	
728		Removal of external formwork	3 days	Sun 3/10/21	Tue 5/10/21	0 days	725	731,758
729		Removal of internal formwork and soffit formwork for water tank	5 days	Sun 3/10/21	Thu 7/10/21	0 days	725	730SS+3 days
730		Re-prop to the beams and slabs	7 days	Wed 6/10/21	Tue 12/10/21	324 days	729SS+3 days	
731		Removal of falsework and re-prop system	14 days	Wed 6/10/21	Tue 19/10/21	3 days	728	804,803,747
732		**Construction of roof slab, walls and columns for pump house**	**40 days**	**Wed 22/9/21**	**Sun 31/10/21**	**247 days**		
733		Falsework and working platform erection	3 days	Wed 22/9/21	Fri 24/9/21	0 days	722	734
734		Formwork erection for interanl side wall and columns	4 days	Sat 25/9/21	Tue 28/9/21	0 days	733	736,735
735		Formwork erection for roof slab	1 day	Wed 29/9/21	Wed 29/9/21	1 day	734	738
736		Steel fixing for wall and columns	2 days	Wed 29/9/21	Thu 30/9/21	0 days	734	737,738
737		Formwork erection for external side of wall and columns	4 days	Fri 1/10/21	Mon 4/10/21	332 days	736	
738		Steel fixing for roof slab and beams	2 days	Fri 1/10/21	Sat 2/10/21	0 days	735,736	739
739		Casting concrete	1 day	Sun 3/10/21	Sun 3/10/21	0 days	738	740,741,742
740		Curing to the concrete	28 days	Mon 4/10/21	Sun 31/10/21	66 days	739	774FF
741		Time constraint for removal of formwork (by early strength method)	7 days	Mon 4/10/21	Sun 10/10/21	0 days	739	743
742		Removal of external formwork	5 days	Mon 4/10/21	Fri 8/10/21	0 days	739	745,758
743		Removal of internal formwork and soffit formwork for pump	7 days	Mon 11/10/21	Sun 17/10/21	0 days	741	781FF,744SS+3 days
744		Re-prop to the beams and slabs	7 days	Thu 14/10/21	Wed 20/10/21	316 days	743SS+3 days	
745		Removal of re-prop system	14 days	Sat 9/10/21	Fri 22/10/21	0 days	742	804,803,747,757
746		**Waterproofing works**	**81 days**	**Sat 23/10/21**	**Tue 11/1/22**	**233 days**		
747		Erection of working platform for internal finishing works and application of waterproofing works	7 days	Sat 23/10/21	Fri 29/10/21	0 days	745,731	756
748		Application of waterproofing coating on wall & ceiling	4 days	Wed 1/12/21	Sat 4/12/21	0 days	756	749
749		Removal of erected working platform for waterproofing wokrs	4 days	Sun 5/12/21	Wed 8/12/21	0 days	748	750
750		Application of waterproofing coating on floor slab	2 days	Thu 9/12/21	Fri 10/12/21	265 days	749	
751		**Water tightness test**	**19 days**	**Fri 24/12/21**	**Tue 11/1/22**	**233 days**		
752		In-fill water	5 days	Fri 24/12/21	Tue 28/12/21	0 days	767	753
753		Water absorption for the structure	7 days	Wed 29/12/21	Tue 4/1/22	0 days	752	754
754		Water tightness test	7 days	Wed 5/1/22	Tue 11/1/22	233 days	753	
755		**Finishing works**	**73 days**	**Sat 9/10/21**	**Mon 20/12/21**	**255 days**		
756		Internal finishing works for water tank	32 days	Sat 30/10/21	Tue 30/11/21	0 days	747	748
757		Internal finishing works for pump house	21 days	Sat 23/10/21	Fri 12/11/21	293 days	745	
758		External finishing works	73 days	Sat 9/10/21	Mon 20/12/21	255 days	742,728	
759		**Cat ladder**	**122 days**	**Thu 26/8/21**	**Sat 25/12/21**	**233 days**		
760		Preparation of shop drawing for cat ladders	30 days	Thu 26/8/21	Fri 24/9/21	0 days	705	761
761		Submission of shop drawing for cat ladders	1 day	Sat 25/9/21	Sat 25/9/21	0 days	760	762
762		Resubmission and approval of shop drawing for cat ladders	66 days	Sun 26/9/21	Tue 30/11/21	0 days	761	763



ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
763		Fabrication of cat ladder	20 days	Wed 1/12/21	Mon 20/12/21	0 days	762	765,764FS-2 days
764		Erection of working platform for cat ladder inside the water tanl	2 days	Sun 19/12/21	Mon 20/12/21	1 day	763FS-2 days	767
765		Delivery of cat ladder	1 day	Tue 21/12/21	Tue 21/12/21	0 days	763	767,766FS+1 day
766		Installation of cat ladder outside the water tank	2 days	Thu 23/12/21	Fri 24/12/21	251 days	765FS+1 day	
767		Installation of cat ladder inside the water tank	2 days	Wed 22/12/21	Thu 23/12/21	0 days	764,765	768,752
768		Removal of working platform inside the water tanks	2 days	Fri 24/12/21	Sat 25/12/21	250 days	767	
769		**Handrail**	**79 days**	**Tue 26/10/21**	**Wed 12/1/22**	**232 days**		
770		Preparation of shop drawing for handrail	21 days	Tue 26/10/21	Mon 15/11/21	0 days		771
771		Submission of shop drawing for handrail	1 day	Tue 16/11/21	Tue 16/11/21	0 days	770	772
772		Approval of shop drawing for handrail	21 days	Wed 17/11/21	Tue 7/12/21	0 days	771	773
773		Fabrication of handrail	28 days	Wed 8/12/21	Tue 4/1/22	0 days	772	774
774		Delivery of handrail	1 day	Wed 5/1/22	Wed 5/1/22	0 days	773,740FF	775
775		Installation of handrail	7 days	Thu 6/1/22	Wed 12/1/22	232 days	774	
776		**Door**	**75 days**	**Tue 26/10/21**	**Sat 8/1/22**	**236 days**		
777		Preparation of shop drawing for door	21 days	Tue 26/10/21	Mon 15/11/21	0 days		778
778		Submission of shop drawing for door	1 day	Tue 16/11/21	Tue 16/11/21	0 days	777	779
779		Approval of shop drawing for door	21 days	Wed 17/11/21	Tue 7/12/21	0 days	778	780
780		Fabrication of door	28 days	Wed 8/12/21	Tue 4/1/22	0 days	779	781
781		Delivery of door	1 day	Wed 5/1/22	Wed 5/1/22	0 days	780,743FF	782
782		Installation of door and relevant touch up works	3 days	Thu 6/1/22	Sat 8/1/22	236 days	781	
783		**E&M works**	**135 days**	**Thu 26/8/21**	**Fri 7/1/22**	**234 days**		
784		**Document preparation**	**74 days**	**Thu 26/8/21**	**Sun 7/11/21**	**234 days**		
785		Preparation of Combine Building Services Drawings	7 days	Thu 26/8/21	Wed 1/9/21	0 days	705	786
786		Submission of Combine Building Services Drawings	1 day	Thu 2/9/21	Thu 2/9/21	0 days	785	787
787		Approval to the Combine Building Services Drawings	21 days	Fri 3/9/21	Thu 23/9/21	0 days	786	788,789,790,791,79
788		Preparation of upgrading to emergency generator	42 days	Fri 24/9/21	Thu 4/11/21	301 days	787	
789		Water pump preprartion and delivery	42 days	Fri 24/9/21	Thu 4/11/21	0 days	787	804
790		Water pump panel preparation and delivery	42 days	Fri 24/9/21	Thu 4/11/21	0 days	787	804
791		Electrical panel preparation and delivery	42 days	Fri 24/9/21	Thu 4/11/21	301 days	787	
792		Preparation of upgrading switch board in management office building	41 days	Fri 24/9/21	Wed 3/11/21	0 days	787	793
793		Delivery of upgrading switch board in management office building	1 day	Thu 4/11/21	Thu 4/11/21	301 days	792	
794		Preparation for 240A cable	45 days	Fri 24/9/21	Sun 7/11/21	298 days	787	
795		Preparation for 200mm gate valve	30 days	Fri 24/9/21	Sat 23/10/21	12 days	787	804
796		Preparation for 200mm Y-trap	30 days	Fri 24/9/21	Sat 23/10/21	12 days	787	804
797		Preparation for 200mm non-return valve	30 days	Fri 24/9/21	Sat 23/10/21	12 days	787	804
798		Preparation for 250mm roltex	30 days	Fri 24/9/21	Sat 23/10/21	12 days	787	804
799		Preparation for Fire hydrant	30 days	Fri 24/9/21	Sat 23/10/21	313 days	787	
800		**Eletrical works installation**	**44 days**	**Sat 23/10/21**	**Sun 5/12/21**	**270 days**		
801		Installation of updagrding to emergency generator	21 days	Mon 15/11/21	Sun 5/12/21	270 days		
802		Installation of upgrading switch board in management office l	21 days	Fri 5/11/21	Thu 25/11/21	280 days		
803		Installation to the fitting works in pump house	21 days	Sat 23/10/21	Fri 12/11/21	293 days	745,731	
804		Water pipe works installation	21 days	Fri 5/11/21	Thu 25/11/21	0 days	789,790,795,796,797,798,745,731	805
805		Testing and commissioning of BS equipment	30 days	Fri 26/11/21	Sat 25/12/21	4 days	804	806
806		Inspection of BS installations inclunding Fire Services by Authori	1 day	Thu 30/12/21	Thu 30/12/21	0 days	805,433SS	807
807		Remedial works after inspection	7 days	Fri 31/12/21	Thu 6/1/22	0 days	806	808
808		Re-insepction of BS installations by Authorities	1 day	Fri 7/1/22	Fri 7/1/22	0 days	807	811FF,809
809		Relocation from Interim Stage Market to Final Stage Market	7 days	Sat 8/1/22	Fri 14/1/22	230 days	808	
810		Orignal Completion date of Section 1 of the Works	0 days	Mon 26/4/21	Mon 26/4/21	494 days		



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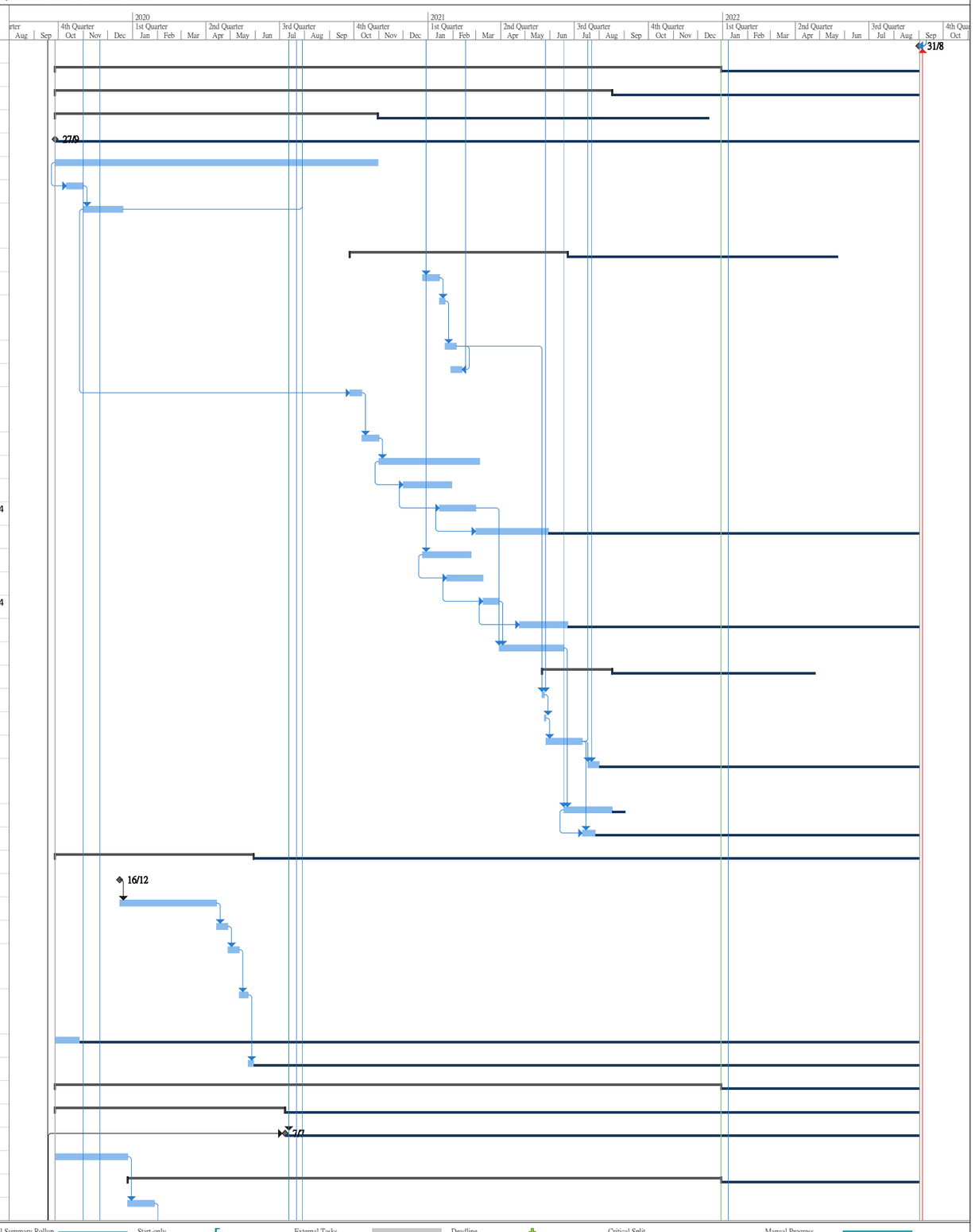
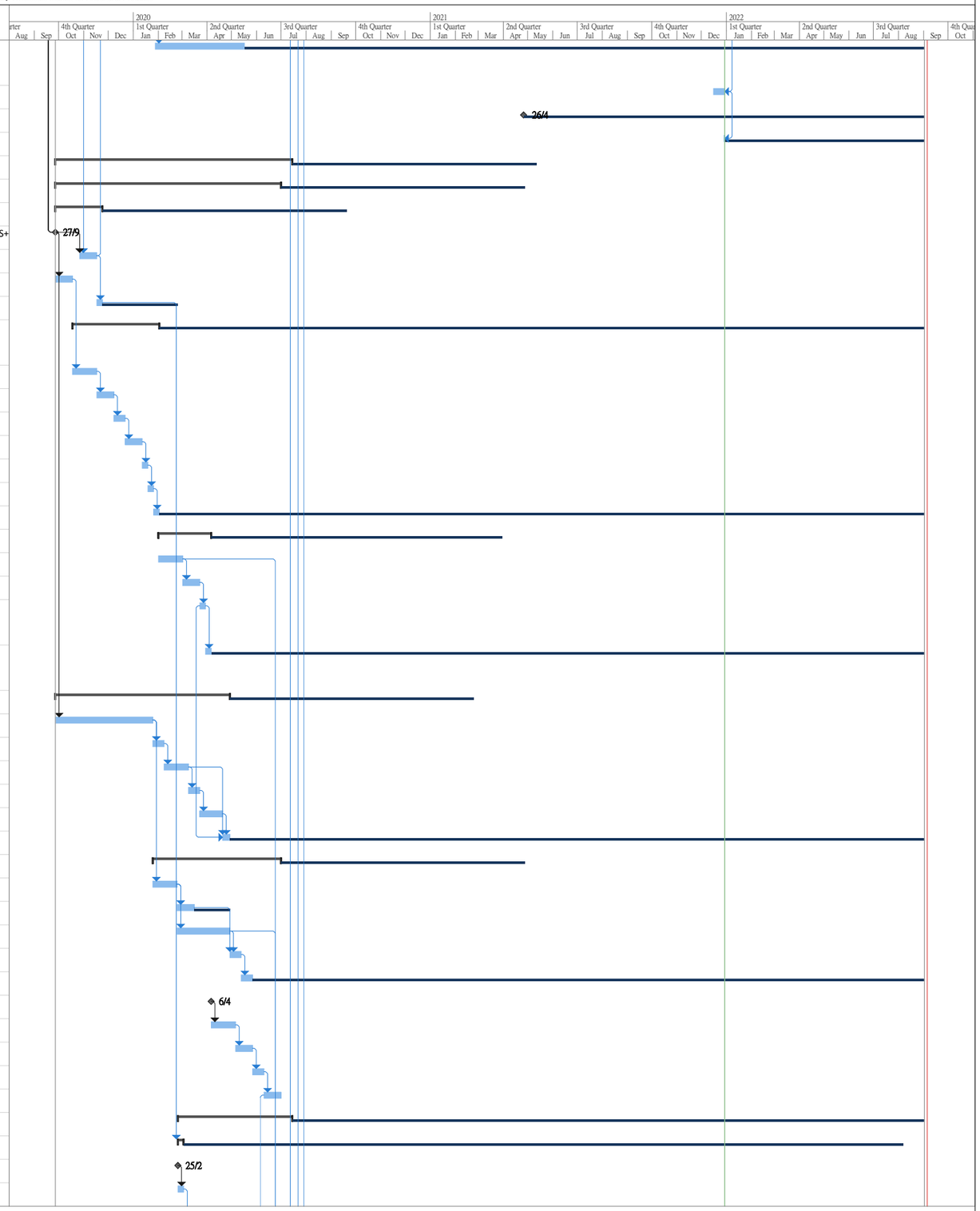
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
811		Revised completion date of Section 1 of the Works	0 days	Wed 31/8/22	Wed 31/8/22	1 day	435FF,491FF,615FF,808FF,929	
812		**Section 2 of the Works**	**825 days**	**Fri 27/9/19**	**Wed 29/12/21**	**246 days**		
813		**Works for Portion 6**	**690 days**	**Fri 27/9/19**	**Mon 16/8/21**	**381 days**		
814		**General for Portion 6**	**400 days**	**Fri 27/9/19**	**Fri 30/10/20**	**410 days**		
815		Access date of Portion 6	0 days	Fri 27/9/19	Fri 27/9/19	1071 days		
816		Site clearance and tree felling	400 days	Fri 27/9/19	Fri 30/10/20	0 days		817SS+14 days
817		Construction for geotechnical instrumentation (D57 and D37)	21 days	Fri 11/10/19	Thu 31/10/19	0 days	816SS+14 days	818
818		Construction for ground investigation (7 nos.) according to drawing no. 60335576/C6/C00/7501	49 days	Fri 1/11/19	Thu 19/12/19	0 days	817	140,824SS+330 days
819		**Slope and landscape works**	**270 days**	**Sat 26/9/20**	**Tue 22/6/21**	**335 days**		
820		Excavation from exsiting level to +5mPD by open cut method	21 days	Fri 25/12/20	Thu 14/1/21	0 days	446	821
821		Replacement of existing soil to Grade 200 rock fill under FW21 as per revised drawing	7 days	Fri 15/1/21	Thu 21/1/21	0 days	820	822
822		Rockfill to the bottom of FW21	14 days	Fri 22/1/21	Thu 4/2/21	0 days	821	836,823FF+7 days
823		Backfilling from bottom to Ramp structure bottom level	14 days	Fri 29/1/21	Thu 11/2/21	0 days	822FF+7 days	451
824		Trail pit construction as per drawing no. I/ND/2019/06/60335576/C6/C00/7501	15 days	Sat 26/9/20	Sat 10/10/20	0 days	818SS+330 days	825
825		Confirmed design review of the slope improvement	21 days	Sun 11/10/20	Sat 31/10/20	0 days	824	826
826		Excavation for the loose fill Materials from CH 108 to CH 266	125 days	Sun 1/11/20	Fri 5/3/21	0 days	825	827SS+30 days
827		Replace the loose fill to rockfill from CH 108 to CH 266	60 days	Tue 1/12/20	Fri 29/1/21	0 days	826SS+30 days	828SS+45 days
828		Installation of grasscrete from CH 108 to CH 266	45 days	Fri 15/1/21	Sun 28/2/21	0 days	827SS+45 days	829SS+45 days,834
829		Construction of walkway along the slope crest from CH 108 to CH 2	90 days	Mon 1/3/21	Sat 29/5/21	460 days	828SS+45 days	
830		Excavation for the loose fill Materials from CH 30 to CH 100	60 days	Fri 25/12/20	Mon 22/2/21	0 days	446	831SS+30 days
831		Replace the loose fill to rockfill from CH 30 to CH 100	45 days	Sun 24/1/21	Tue 9/3/21	0 days	830SS+30 days	832SS+45 days
832		Installation of grasscrete from CH 0 to CH 108	20 days	Wed 10/3/21	Mon 29/3/21	0 days	831SS+45 days	833SS+45 days,834
833		Construction of walkway along the slope crest from CH 30 to CH10	60 days	Sat 24/4/21	Tue 22/6/21	436 days	832SS+45 days	
834		Landscape and planting works	80 days	Tue 30/3/21	Thu 17/6/21	0 days	828,832	840
835		**FW21 and road works**	**87 days**	**Sat 22/5/21**	**Mon 16/8/21**	**252 days**		
836		Preparation of formation to FW21	3 days	Sat 22/5/21	Mon 24/5/21	0 days	822,467	837
837		Blinding concrete casting for FW21	2 days	Tue 25/5/21	Wed 26/5/21	0 days	836	838
838		Construction for new feature FW21	45 days	Thu 27/5/21	Sat 10/7/21	0 days	837	839,471,841
839		Backfilling to adjacent road level as per revised drawing (around +11.6mPD)	14 days	Sun 18/7/21	Sat 31/7/21	397 days	838,470	
840		Construction of fence with footing	60 days	Fri 18/6/21	Mon 16/8/21	16 days	834,482	841SS+7 days
841		Construction of steel vehicle parapet and thrie bear	16 days	Sun 11/7/21	Mon 26/7/21	402 days	840SS+7 days,838	
842		**Road works construction at On Kui Street**	**246 days**	**Fri 27/9/19**	**Fri 29/5/20**	**825 days**		
843		TTA and XP granted	0 days	Mon 16/12/19	Mon 16/12/19	0 days		844
844		TTA set up for revising shoulder to suit for interim stage	120 days	Mon 16/12/19	Mon 13/4/20	0 days	843	845
845		Demolish the existing shoulder	14 days	Tue 14/4/20	Mon 27/4/20	0 days	844	846
846		Re-construction the shoulder as per drawing no. 60335576/C6/C00/1001	14 days	Tue 28/4/20	Mon 11/5/20	0 days	845	847
847		Construction for street furniture as per drawing no. 60335576/C6/C00/1201	11 days	Tue 12/5/20	Fri 22/5/20	0 days	846	849
848		Fence construction along Ma Wai River	30 days	Fri 27/9/19	Sat 26/10/19	1041 days		
849		Road marking as per drawing no. 60335576/C6/C00/1601	7 days	Sat 23/5/20	Fri 29/5/20	825 days	847	
850		**Works for Portion 5**	**825 days**	**Fri 27/9/19**	**Wed 29/12/21**	**246 days**		
851		**General for Portion 5**	**285 days**	**Fri 27/9/19**	**Tue 7/7/20**	**786 days**		
852		Access date of Portion 5 (184 days after starting date)	0 days	Tue 7/7/20	Tue 7/7/20	786 days	863SS+184 days,137	
853		Earthworks	90 days	Fri 27/9/19	Wed 25/12/19	0 days		855
854		**Street furniture and road marking**	**735 days**	**Thu 26/12/19**	**Wed 29/12/21**	**246 days**		
855		Removal of exisiting gate	33 days	Thu 26/12/19	Mon 27/1/20	0 days	853	856



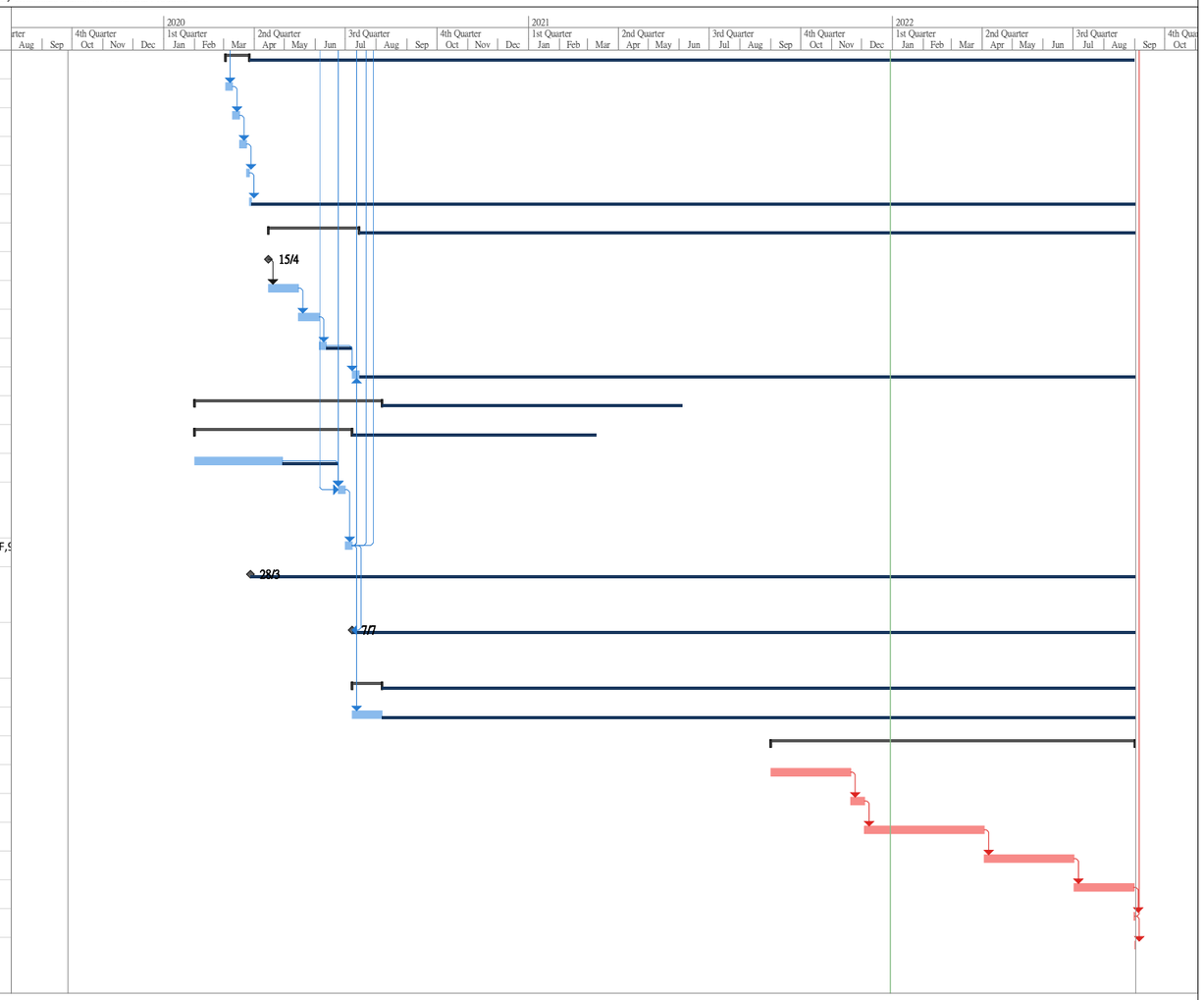
Project: ND/2019/06
Data Date: 2021-11-01
Revised Programme (Rev. 8A)

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

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



ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors	Successors
902		**Underground drainage works**	**24 days**	**Tue 3/3/20**	**Thu 26/3/20**	**887 days**		
903		Excavation for underground drainage	7 days	Tue 3/3/20	Mon 9/3/20	0 days	901	904
904		Underground drainage pipelaying	7 days	Tue 10/3/20	Mon 16/3/20	0 days	903	905
905		Construction of manhole	7 days	Tue 17/3/20	Mon 23/3/20	0 days	904	906
906		Connection to the existing manhole	3 days	Tue 24/3/20	Thu 26/3/20	0 days	905	907
907		Road marking as per drawing no. 60335576/C6/C00/1601	2 days	Fri 27/3/20	Sat 28/3/20	887 days	906	
908		**Container office - Modification works**	**91 days**	**Wed 15/4/20**	**Tue 14/7/20**	**779 days**		
909		PMI for container office modification works	0 days	Wed 15/4/20	Wed 15/4/20	0 days		910
910		Desgin submission for contanier office modification works	30 days	Wed 15/4/20	Thu 14/5/20	0 days	909	911
911		Design approval for container office modification works	21 days	Fri 15/5/20	Thu 4/6/20	0 days	910	912
912		Material preparation for contanier office modification works	7 days	Fri 5/6/20	Thu 11/6/20	26 days	911	913
913		Construction of container offices modification works	7 days	Wed 8/7/20	Tue 14/7/20	779 days	912,918	
914		**Change of Market Stage**	**188 days**	**Sat 1/2/20**	**Thu 6/8/20**	**301 days**		
915		**From Existing Stage to Iterim Stage Arrangement**	**158 days**	**Sat 1/2/20**	**Tue 7/7/20**	**245 days**		
916		Idling due to COVID-9 infection	88 days	Sat 1/2/20	Tue 28/4/20	56 days		917
917		Notice to stall traders for relocation to Interim Market (30 days before the key date)	7 days	Wed 24/6/20	Tue 30/6/20	0 days	916,897SS+14 days,890,876	918
918		Relocation of stall traders from existing NDTWM to Interim Market	7 days	Wed 1/7/20	Tue 7/7/20	0 days	917	922,142,137,920FF,9
919		Original Key Date completion of interim North District Temporary Wholesale Market for Agricultural Products	0 days	Sat 28/3/20	Sat 28/3/20	888 days		
920		Revised Key Date completion of interim North District Temporary Wholesale Market for Agricultural Products	0 days	Tue 7/7/20	Tue 7/7/20	786 days	918FF	
921		**Completion of Reinstatement of interim NDTWM**	**30 days**	**Wed 8/7/20**	**Thu 6/8/20**	**756 days**		
922		Carrying out reinstatement works	30 days	Wed 8/7/20	Thu 6/8/20	756 days	918	
923		**Fabrication & Installation of Additional Steel Cover**	**365 days**	**Wed 1/9/21**	**Wed 31/8/22**	**0 days**		
924		**Design of Additional Steel Cover of Covered Walkway**	80 days	Wed 1/9/21	Fri 19/11/21	0 days		925
925		Approval of Design	14 days	Sat 20/11/21	Fri 3/12/21	0 days	924	926
926		Fabrication	120 days	Sat 4/12/21	Sat 2/4/22	0 days	925	927
927		On Site Installation	90 days	Sun 3/4/22	Fri 1/7/22	0 days	926	928
928		E&M and FS Installation	60 days	Sat 2/7/22	Tue 30/8/22	0 days	927	929
929		Inspection of BS Installations inclunding Fire Services Inspection	1 day	Wed 31/8/22	Wed 31/8/22	0 days	928	930,811
930		**Handover of the Superstructure of Additional Steel Covered Walkway**	1 day	Thu 1/9/22	Thu 1/9/22	0 days	929	



創 業 工 程 建 設 有 限 公 司

NEW CONCEPTS ENGINEERING DEVELOPMENT LTD.

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

Site Layout Plan

地盤平面圖

圖示 **Legends:**

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

Fire Extinguisher
滅火筒

MANAGEMENT OFFICE BUILDING

NDTWM Carpark Area

Water Tank & Pump House

GATE (TO BE CONSTRUCTED BY OTHERS)

Containers

Vehicle Access

Material Storage area

Vehicle Access

Material Storage area

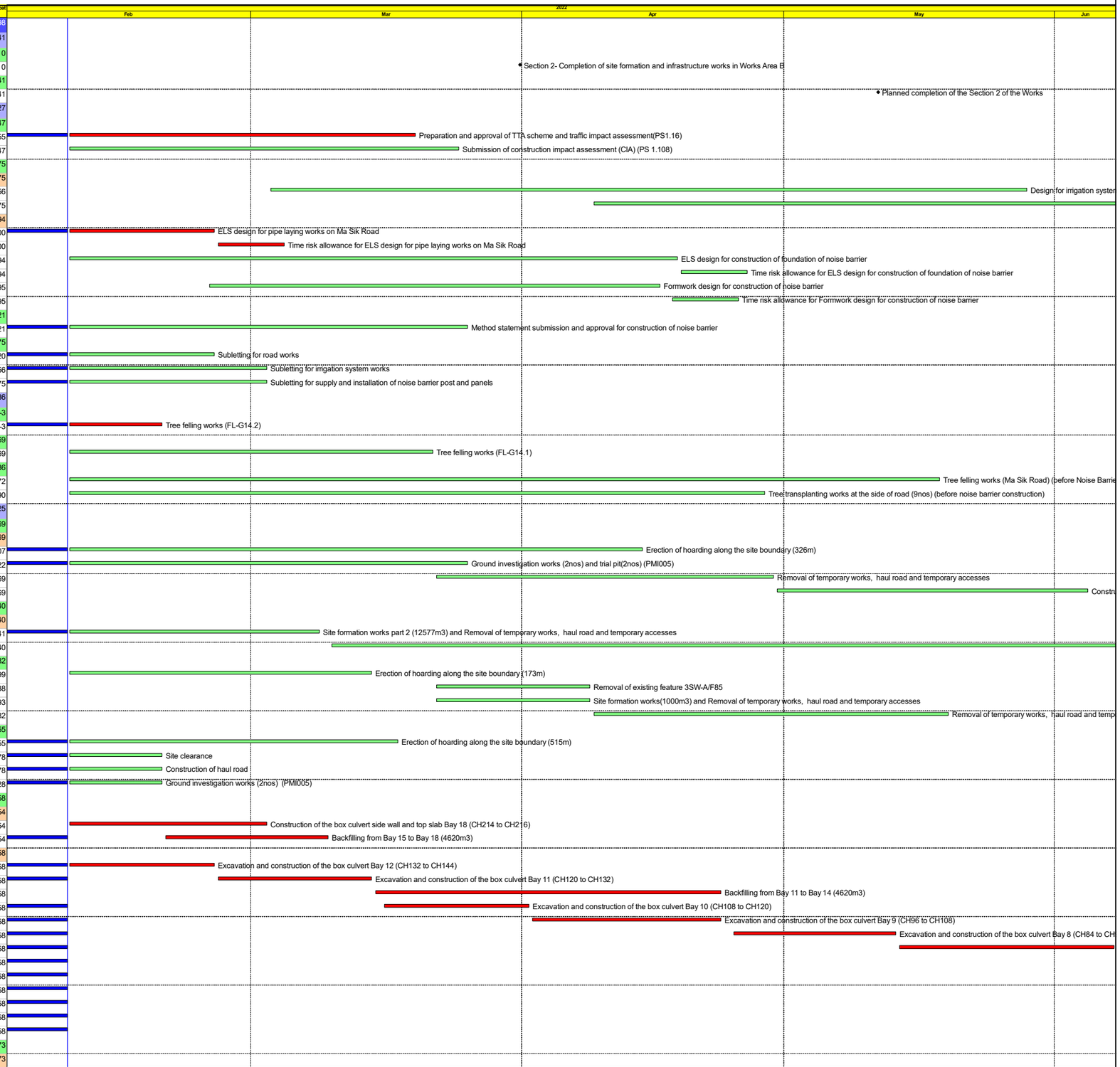
Outfall

MA WAT RIVER 麻笏河 MA WAT RIVER

Construction Programme of ND/2019/07

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

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works		1416	31-Aug-20 A	16-Jul-24	-198
Key Dates and Sectional Completion of the Works		41	31-Mar-22	11-May-22	-41
Contractual Sectional Completion of the Works		0	31-Mar-22	31-Mar-22	0
KDS1020	Section 2- Completion of site formation and infrastructure works in Works Area B	0		31-Mar-22*	0
Planned Sectional Completion of the Works		0	11-May-22	11-May-22	-41
KDS1110	Planned completion of the Section 2 of the Works	0		11-May-22	-41
Preliminaries, Contractor's Design, Method Statement Submission and Approval		570	30-Dec-20 A	22-Jul-22	527
General Submission		450	30-Dec-20 A	24-Mar-22	647
PGS1200	Preparation and approval of TTA scheme and traffic impact assessment(PS1.16)	290	30-Dec-20 A	19-Mar-22	-155
PGS1230	Submission of construction impact assessment (CIA) (PS 1.108)	45	08-Feb-22	24-Mar-22	647
Contractor's Design Submission and Approval		221	09-Oct-21 A	22-Jul-22	275
Permanent Works Design		122	03-Mar-22	22-Jul-22	275
PWD1030	Design for irrigation system	75	03-Mar-22	28-May-22	156
PWD1040	Design for noise barrier panel	90	09-Apr-22	22-Jul-22	275
Major Temporary Works Design		146	09-Oct-21 A	26-Apr-22	94
TWD1030	ELS design for pipe laying works on Ma Sik Road	60	09-Oct-21 A	24-Feb-22	-100
TWD1035	Time risk allowance for ELS design for pipe laying works on Ma Sik Road	7	25-Feb-22	04-Mar-22	-100
TWD1050	ELS design for construction of foundation of noise barrier	60	08-Feb-22	18-Apr-22	94
TWD1055	Time risk allowance for ELS design for construction of foundation of noise barrier	7	19-Apr-22	26-Apr-22	94
TWD1060	Formwork design for construction of noise barrier	45	24-Feb-22	16-Apr-22	95
TWD1065	Time risk allowance for Formwork design for construction of noise barrier	7	18-Apr-22	25-Apr-22	95
Major Construction Works Method Statement		60	29-Dec-21 A	25-Mar-22	121
MS1580	Method statement submission and approval for construction of noise barrier	60	29-Dec-21 A	25-Mar-22	121
Tendering and Procurement for Major Subcontractor		250	26-Mar-21 A	02-Mar-22	275
TDS1070	Subletting for road works	120	26-Mar-21 A	24-Feb-22	120
TDS1110	Subletting for irrigation system works	100	05-May-21 A	02-Mar-22	156
TDS1140	Subletting for supply and installation of noise barrier post and panels	30	01-Dec-21 A	02-Mar-22	275
Tree Works and Submission of the tree survey report and tree preservation and removal prc		253	12-Aug-21 A	18-May-22	86
Tree Works in Area FL-G14.2		36	12-Aug-21 A	18-Feb-22	-3
TWS1140	Tree felling works (FL-G14.2)	36	12-Aug-21 A	18-Feb-22	-3
Tree Works in Area FL-G14.1		36	08-Feb-22	21-Mar-22	69
TWS1170	Tree felling works (FL-G14.1)	36	08-Feb-22	21-Mar-22	69
Tree Works on Ma Sik Road		100	08-Feb-22	18-May-22	86
TWS1200	Tree felling works (Ma Sik Road) (before Noise Barrier Construction)	80	08-Feb-22	18-May-22	72
TWS1210	Tree transplanting works at the side of road (9nos) (before noise barrier construction)	80	08-Feb-22	28-Apr-22	90
Section 1- Site Formation and Infrastructure Works in Area A		659	09-Aug-21 A	24-Nov-22	325
Site Formation (Portion I- Area A 11042m2)		206	09-Aug-21 A	04-Jun-22	469
Remaining Site Formation Works after trees felled in FL-G14.1 & FL-G14.2		206	09-Aug-21 A	04-Jun-22	469
S1-SF1011	Erection of hoarding along the site boundary (326m)	100	09-Aug-21 A	14-Apr-22	507
S1-SF1051	Ground investigation works (2nos) and trial pit(2nos) (PMI005)	80	30-Oct-21 A	25-Mar-22	122
S1-SF1185	Removal of temporary works, haul road and temporary accesses	30	22-Mar-22	29-Apr-22	469
S1-SF1190	Construction of open channel (45m)	28	30-Apr-22	04-Jun-22	469
Site Formation (Portion II- Area A 21900m2)		131	03-Jan-22 A	16-Jun-22	40
Site Formation Works in South Part of Portion II		131	03-Jan-22 A	16-Jun-22	40
S1-SF1415	Site formation works part 2 (12577m3) and Removal of temporary works, haul road and temporary accesses	75	03-Jan-22 A	08-Mar-22	41
S1-SF1417	Site formation works part 3 (12577m3) and Removal of temporary works, haul road and temporary accesses	78	10-Mar-22	16-Jun-22	40
Site Formation (Portion III- Area A 4900m2)		81	08-Feb-22	19-May-22	482
S1-SF1450	Erection of hoarding along the site boundary (173m)	30	08-Feb-22	14-Mar-22	99
S1-SF1546	Removal of existing feature 3SW-A/F85	15	22-Mar-22	08-Apr-22	138
S1-SF1640	Site formation works(1000m3) and Removal of temporary works, haul road and temporary accesses	15	22-Mar-22	08-Apr-22	93
S1-SF1650	Removal of temporary works, haul road and temporary accesses	30	09-Apr-22	19-May-22	482
Site Formation (Portion IV- Area A 3800m2)		40	25-Nov-21 A	17-Mar-22	155
S1-SF1765	Erection of hoarding along the site boundary (515m)	40	27-Jan-22 A	17-Mar-22	155
S1-SF1780	Site clearance	20	30-Dec-21 A	18-Feb-22	178
S1-SF1800	Construction of haul road	21	23-Dec-21 A	18-Feb-22	178
S1-SF1810	Ground investigation works (2nos) (PMI005)	21	25-Nov-21 A	18-Feb-22	128
Box Culvert BC3 and Outfall 10		295	09-Nov-21 A	24-Nov-22	-158
Box Culvert BC3 (CH168 to CH216)		33	07-Jan-22 A	09-Mar-22	-154
S1-BC0880	Construction of the box culvert side wall and top slab Bay 18 (CH214 to CH216)	20	08-Feb-22	02-Mar-22	-154
S1-BC0890	Backfilling from Bay 15 to Bay 18 (4620m3)	31	07-Jan-22 A	09-Mar-22	-154
Box Culvert BC3 (CH0 to CH168)		295	09-Nov-21 A	24-Nov-22	-158
S1-BC0920	Excavation and construction of the box culvert Bay 12 (CH132 to CH144)	30	09-Nov-21 A	24-Feb-22	-158
S1-BC0930	Excavation and construction of the box culvert Bay 11 (CH120 to CH132)	30	17-Nov-21 A	14-Mar-22	-158
S1-BC0940	Backfilling from Bay 11 to Bay 14 (4620m3)	31	15-Mar-22	23-Apr-22	-158
S1-BC0950	Excavation and construction of the box culvert Bay 10 (CH108 to CH120)	30	10-Nov-21 A	01-Apr-22	-158
S1-BC0960	Excavation and construction of the box culvert Bay 9 (CH96 to CH108)	30	12-Nov-21 A	23-Apr-22	-158
S1-BC0970	Excavation and construction of the box culvert Bay 8 (CH84 to CH96)	30	12-Nov-21 A	13-May-22	-158
S1-BC0980	Excavation and construction of the box culvert Bay 7 (CH72 to CH84)	30	03-Dec-21 A	07-Jun-22	-158
S1-BC1000	Excavation and construction of the box culvert Bay 6 (CH60 to CH72)	30	04-Dec-21 A	25-Jun-22	-158
S1-BC1010	Excavation and construction of the box culvert Bay 5 (CH48 to CH60)	30	06-Dec-21 A	20-Jul-22	-158
S1-BC1020	Excavation and construction of the box culvert Bay 4 (CH36 to CH48)	30	08-Dec-21 A	06-Aug-22	-158
S1-BC1030	Excavation and construction of the box culvert Bay 3 (CH24 to CH36)	30	10-Dec-21 A	30-Aug-22	-158
S1-BC1050	Excavation and construction of the box culvert Bay 2 (CH12 to CH24)	30	11-Jan-22 A	20-Oct-22	-158
S1-BC1060	Excavation and construction of the box culvert Bay 1 and inspection chamber (CH0 to CH12)	40	11-Jan-22 A	24-Nov-22	-158
Noise Barrier NB63		14	29-Apr-22	17-May-22	73
Noise Barrier NB63(Bay 1 to Bay 6)		14	29-Apr-22	17-May-22	73



Actual Work
Remaining Work
Critical Remaining Work
Milestone

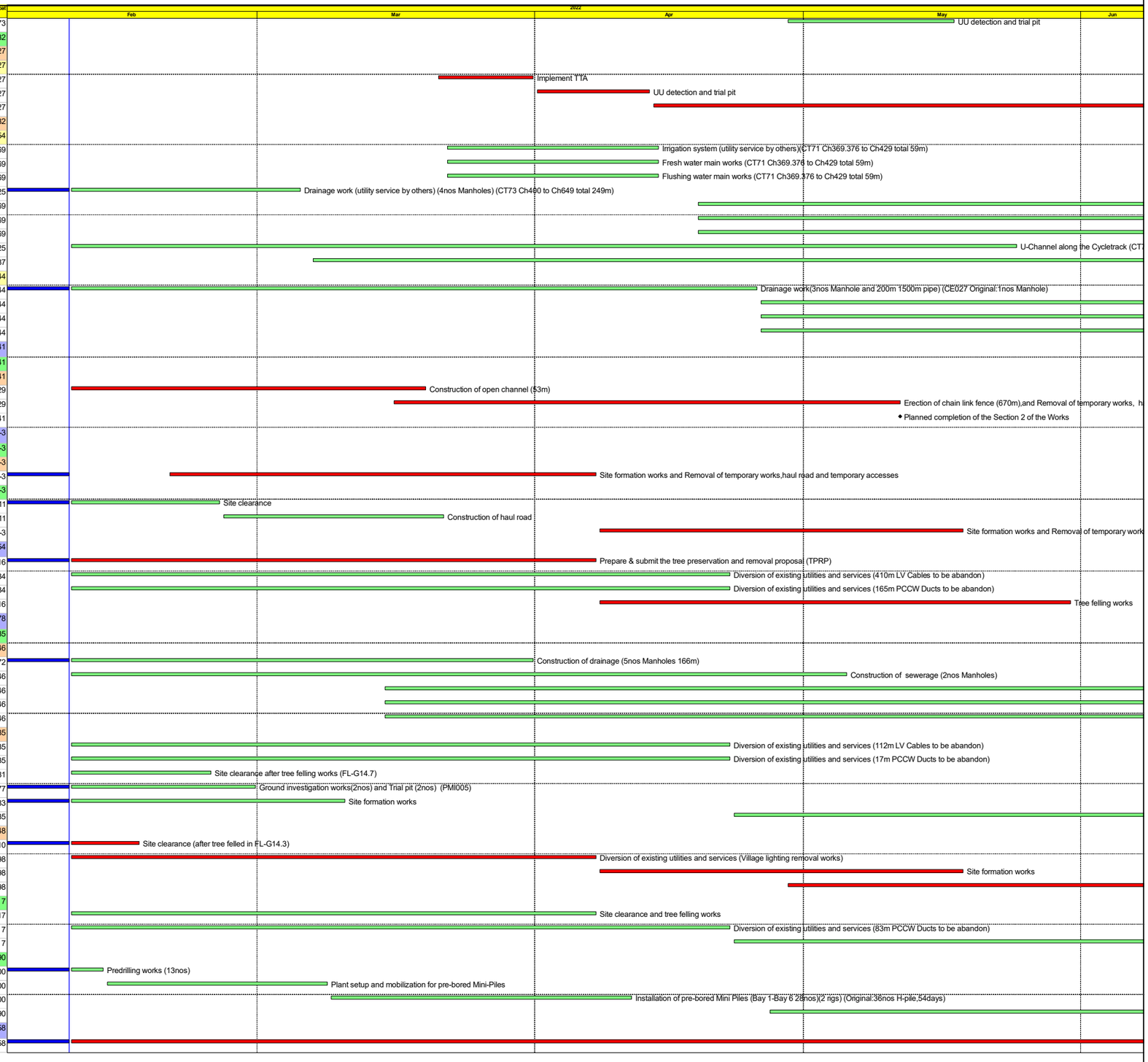
中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

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

Date	Revision	Checked	Approved
15-Feb-22	A	LDS	CLX

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

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
S1-NB1020	UU detection and trial pit	14	29-Apr-22	17-May-22	73
Drainage,Sewerage, Waterworks and Road Works		547	27-Sep-21 A	30-Jul-22	332
Along Ma Sik Road		80	21-Mar-22	29-Jun-22	-127
TTA -Closure of Ma Sik Road Eastbound Slow Lane between Wo Tai Street and Site Boundary		80	21-Mar-22	29-Jun-22	-127
S1-CS1240	Implement TTA	10	21-Mar-22	31-Mar-22	-127
S1-CS1260	UU detection and trial pit	10	01-Apr-22	13-Apr-22	-127
S1-CS1265	Sheetpile works and excavation	60	14-Apr-22	29-Jun-22	-127
Along Proposed Cycletrack and Footpath		547	27-Sep-21 A	30-Jul-22	332
Works in Portion I		141	27-Sep-21 A	30-Jul-22	154
S1-CS1460	Irrigation system (utility service by others)(CT71 Ch369.376 to Ch429 total 59m)	20	22-Mar-22	14-Apr-22	69
S1-CS1465	Fresh water main works (CT71 Ch369.376 to Ch429 total 59m)	20	22-Mar-22	14-Apr-22	69
S1-CS1468	Flushing water main works (CT71 Ch369.376 to Ch429 total 59m)	20	22-Mar-22	14-Apr-22	69
S1-CS1470	Drainage work (utility service by others) (4nos Manholes) (CT73 Ch400 to Ch649 total 249m)	85	27-Sep-21 A	05-Mar-22	125
S1-CS1472	Irrigation system (CT73 Ch100 to Ch400 total 300m)	85	19-Apr-22	30-Jul-22	69
S1-CS1473	Fresh water main works (CT73 Ch100 to Ch400 total 300m)	85	19-Apr-22	30-Jul-22	69
S1-CS1474	Flushing water main works (CT73 Ch100 to Ch400 total 300m)	85	19-Apr-22	30-Jul-22	69
S1-CS1475	U-Channel along the Cycletrack (CT73 Ch100 to Ch400 total 300m)	85	08-Feb-22	24-May-22	125
S1-CS1477	Drainage work (utility service by others) (3nos Manholes) (CT73 Ch100 to Ch400 total 300m)	85	07-Mar-22	21-Jun-22	187
Works in Portion III(CT76 Ch100 to Ch298.277)		485	02-Oct-21 A	16-Jul-22	344
S1-CS1570	Drainage work(3nos Manhole and 200m 1500m pipe) (CE027 Original:1nos Manhole)	80	02-Oct-21 A	25-Apr-22	344
S1-CS1580	Irrigation system (utility service by others)(198m)	67	26-Apr-22	16-Jul-22	344
S1-CS1590	Fresh water main works (198m)	67	26-Apr-22	16-Jul-22	344
S1-CS1600	Flushing water main works (198m)	67	26-Apr-22	16-Jul-22	344
Section 2- Site Formation and Infrastructure Works in Area B		93	08-Feb-22	11-May-22	-41
Site Formation and Infrastructure Works in Area B1 & B2		93	08-Feb-22	11-May-22	-41
Site Formation Works after trees felled in FL-G14.9		93	08-Feb-22	11-May-22	-41
S2-SF2380	Construction of open channel (53m)	35	08-Feb-22	19-Mar-22	-29
S2-SF2390	Erection of chain link fence (670m),and Removal of temporary works, haul road and temporary accesses	43	16-Mar-22	11-May-22	-29
S2-SF2400	Planned completion of the Section 2 of the Works	0		11-May-22	-41
Section 3- Site Formation and Infrastructure Works in Area C		127	05-Nov-21 A	18-May-22	-3
Site Formation and Infrastructure Works in Portion I Area C (13990m2)		75	05-Nov-21 A	07-Apr-22	-3
Site Formation Works after trees felled in FL-G14.7 partial and FL-G14.2		75	05-Nov-21 A	07-Apr-22	-3
S3-SF1120	Site formation works and Removal of temporary works,haul road and temporary accesses	75	05-Nov-21 A	07-Apr-22	-3
Site Formation and Infrastructure Works in Portion IV Area C (10730m2)		127	09-Nov-21 A	18-May-22	-3
S3-SF1195	Site clearance	25	09-Nov-21 A	24-Feb-22	11
S3-SF1200	Construction of haul road	21	25-Feb-22	21-Mar-22	11
S3-SF1250	Site formation works and Removal of temporary works,haul road and temporary accesses	30	08-Apr-22	18-May-22	-3
Section 4- Site Formation and Infrastructure Works in Area D		113	09-Dec-21 A	30-May-22	54
S4-SF1015	Prepare & submit the tree preservation and removal proposal (TPRP)	75	09-Dec-21 A	07-Apr-22	-16
S4-SF1025	Diversion of existing utilities and services (410m LV Cables to be abandon)	60	08-Feb-22	22-Apr-22	84
S4-SF1030	Diversion of existing utilities and services (165m PCCW Ducts to be abandon)	60	08-Feb-22	22-Apr-22	84
S4-SF1040	Tree felling works	40	08-Apr-22	30-May-22	-16
Section 5- Site Formation and Infrastructure Works in Area E and Remainder of the Works		212	08-Nov-21 A	04-Aug-22	78
Road L1		212	08-Nov-21 A	04-Aug-22	35
Road L1 in Portion I (P700 CH 175 to CH245)		123	05-Jan-22 A	11-Jun-22	46
S5-RD1040	Construction of drainage (5nos Manholes 166m)	70	05-Jan-22 A	31-Mar-22	72
S5-RD1042	Construction of sewerage (2nos Manholes)	70	08-Feb-22	05-May-22	46
S5-RD1045	Construction of Irrigation system (168m)	70	15-Mar-22	11-Jun-22	46
S5-RD1060	Fresh water main works (168m)	70	15-Mar-22	11-Jun-22	46
S5-RD1070	Flushing water main works (168m)	70	15-Mar-22	11-Jun-22	46
Road L1 in Portion IV (P600 CH 194 to CH393, P700 CH100 to CH175)		212	08-Nov-21 A	04-Aug-22	35
S5-RD1148	Diversion of existing utilities and services (112m LV Cables to be abandon)	60	08-Feb-22	22-Apr-22	35
S5-RD1149	Diversion of existing utilities and services (17m PCCW Ducts to be abandon)	60	08-Feb-22	22-Apr-22	35
S5-RD1150	Site clearance after tree felling works (FL-G14.7)	14	08-Feb-22	23-Feb-22	81
S5-RD1160	Ground investigation works(2nos) and Trial pit (2nos) (PMI005)	35	08-Nov-21 A	28-Feb-22	77
S5-RD1177	Site formation works	30	09-Nov-21 A	10-Mar-22	83
S5-RD1180	Construction of drainage (17nos Manholes)	85	23-Apr-22	04-Aug-22	35
Road L1 in Portion V (P600 CH 100 to CH194)		145	11-Jan-22 A	04-Aug-22	-148
S5-RD1275	Site clearance (after tree felled in FL-G14.3)	14	11-Jan-22 A	15-Feb-22	-10
S5-RD1278	Diversion of existing utilities and services (Village lighting removal works)	50	08-Feb-22	07-Apr-22	-198
S5-RD1315	Site formation works	30	08-Apr-22	18-May-22	-198
S5-RD1345	Construction of drainage works (8nos Manholes)	80	29-Apr-22	04-Aug-22	-198
Road L2		110	08-Feb-22	23-Jun-22	7
S5-RD1480	Site clearance and tree felling works	50	08-Feb-22	07-Apr-22	17
S5-RD1485	Diversion of existing utilities and services (83m PCCW Ducts to be abandon)	60	08-Feb-22	22-Apr-22	7
S5-RD1495	Site formation works	50	23-Apr-22	23-Jun-22	7
Noise Barrier NB62		129	09-Dec-21 A	21-Jul-22	90
S5-NB1000	Predrilling works (13nos)	16	09-Dec-21 A	11-Feb-22	100
S5-NB1020	Plant setup and mobilization for pre-bored Mini-Piles	21	12-Feb-22	08-Mar-22	100
S5-NB1040	Installation of pre-bored Mini Piles (Bay 1-Bay 6 28nos)(2 rigs) (Original:36nos H-pile,54days)	28	09-Mar-22	11-Apr-22	100
S5-NB1060	Excavation and construction of base slabs and wall stems(Bay 1-bay6)	70	27-Apr-22	21-Jul-22	90
Section 6-Completion of Preservation And Protection Of Existing Trees		1146	31-Aug-20 A	16-Jul-24	-158
S6-CS1000	Preservation and protection of trees	1146	31-Aug-20 A	16-Jul-24	-158

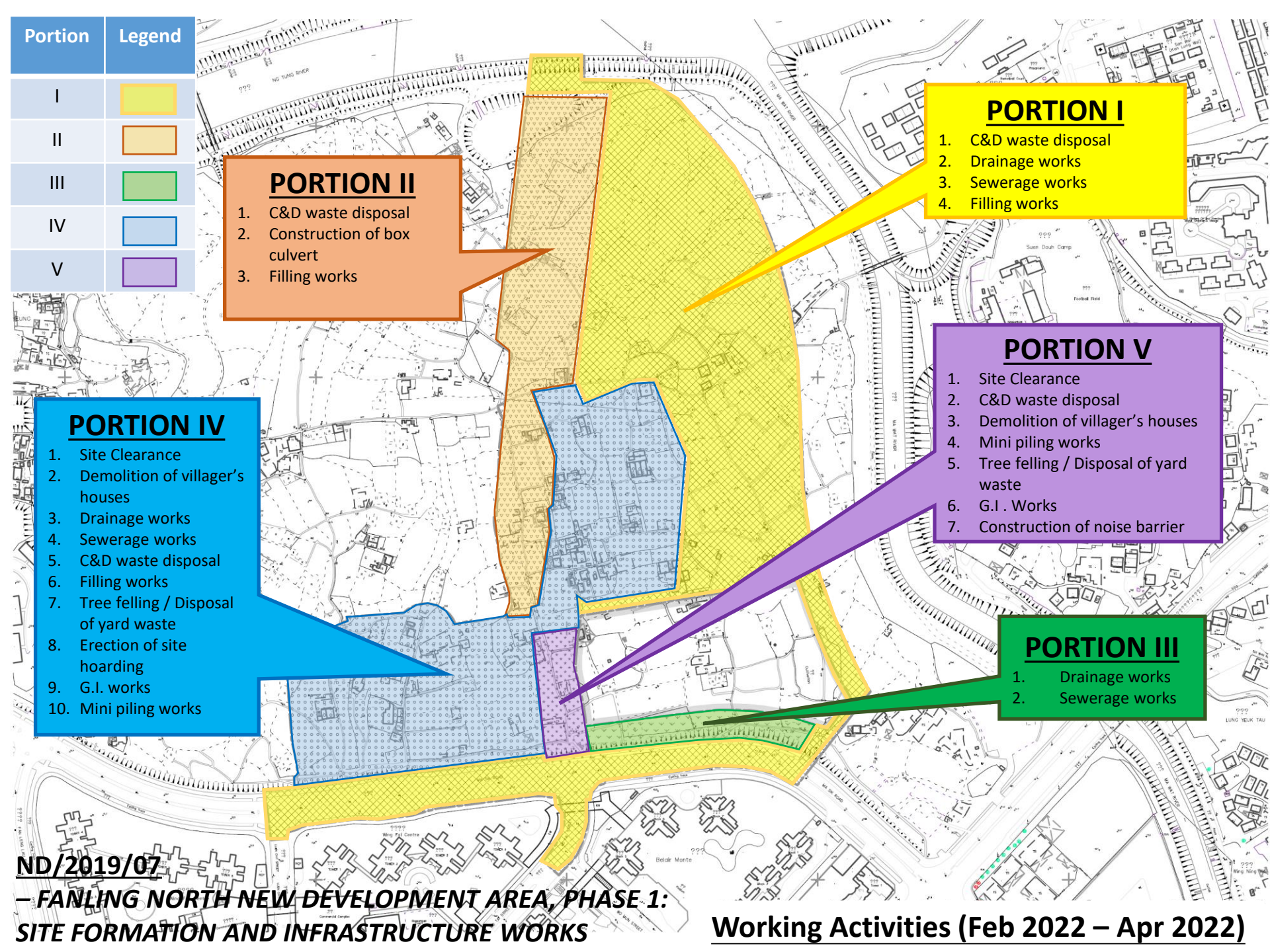


Actual Work
Remaining Work
Critical Remaining Work
Milestone

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

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

Date	Revision	Checked	Approved
15-Feb-22	A	LDS	CLX



ND/2019/07

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

Working Activities (Feb 2022 – Apr 2022)

APPENDIX B
ACTION AND LIMIT LEVELS

Appendix B - Action and Limit Levels

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

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

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

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

Table B-3 Action and Limit Levels for Construction Noise

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Table B-7 Vibration Limit for Construction Vibration Monitoring

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

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

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

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

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

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

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

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

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

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

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

APPENDIX C
COPIES OF CALIBRATION CERTIFCATES

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

TEST REPORT

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

Test Report No.:	36237
Date of Issue:	2022-01-10
Date Received:	2022-01-07
Date Tested:	2022-01-07
Date Completed:	2022-01-10
Next Due Date:	2022-03-09
Page:	1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for Calibration:

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

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.121

****

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

PATRICK TSE
General Manager

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

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

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

By Linear Regression of Y on X

Slope , mw = **0.9264** **Intercept, bw =** **12.6773**

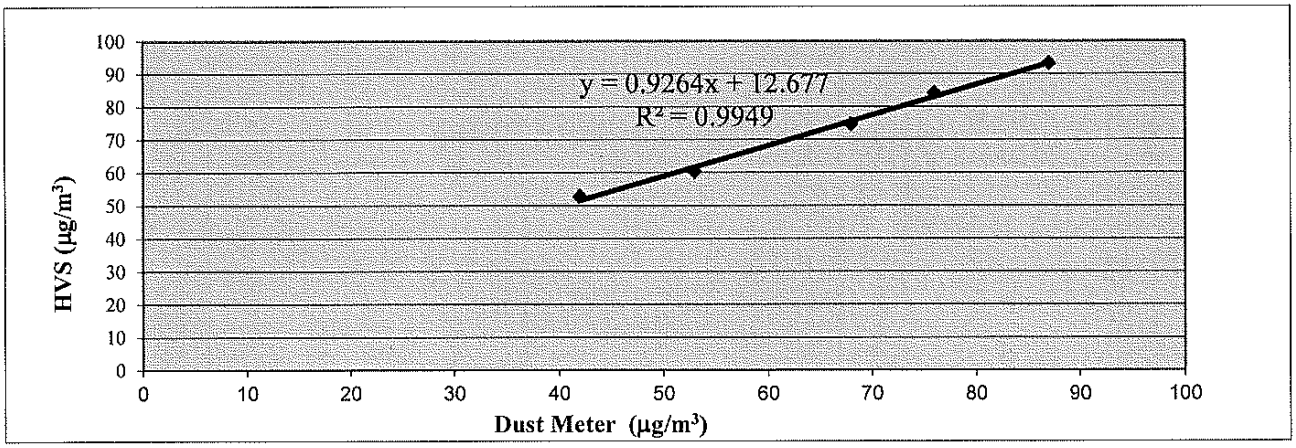
Correlation coefficient* = **0.9974**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	73.1
Particaulate Concentration by Dust Meter (µg/m^3)	65.2
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m^3)] **1.121**



QC Reviewer: LLL MMM HLL Signature: Date: 7/1/2022

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WELLAB LIMITED
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TEST REPORT

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

Test Report No.:	36237A
Date of Issue:	2022-01-10
Date Received:	2022-01-07
Date Tested:	2022-01-07
Date Completed:	2022-01-10
Next Due Date:	2022-03-09
Page:	1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for Calibration:

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

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.135

****

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

PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-02	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23808	2203
Calibration Date:	7-Jan-22	7-Jan-22
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (µg/m^3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	42	53
2	51	60
3	66	75
4	76	84
5	87	93
Average	**64.4**	**73.1**

By Linear Regression of Y on X

Slope , mw = **0.9135** **Intercept, bw =** **14.2498**

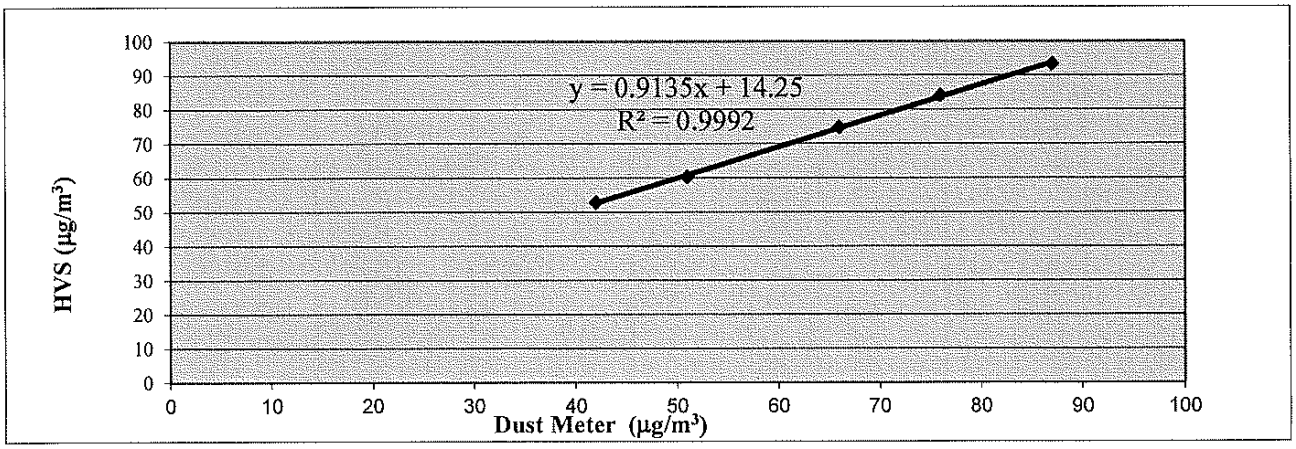
Correlation coefficient* = **0.9996**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	73.1
Particaulate Concentration by Dust Meter (µg/m^3)	64.4
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = | K=High Volume Sampler / Dust Meter, (µg/m^3) | **1.135**



QC Reviewer: LLL MMW MPR Signature: hli Date: 7/1/2022

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TEST REPORT

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

Test Report No.:	36237B
Date of Issue:	2022-01-10
Date Received:	2022-01-07
Date Tested:	2022-01-07
Date Completed:	2022-01-10
Next Due Date:	2022-03-09
Page:	1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for Calibration:

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X23809
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-03

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.088

****

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

PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-03	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23809	2203
Calibration Date:	7-Jan-22	7-Jan-22
Location:	Wellab Office (Calibration Room)	

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

By Linear Regression of Y on X

Slope , mw = **1.0267** **Intercept, bw =** **4.0842**

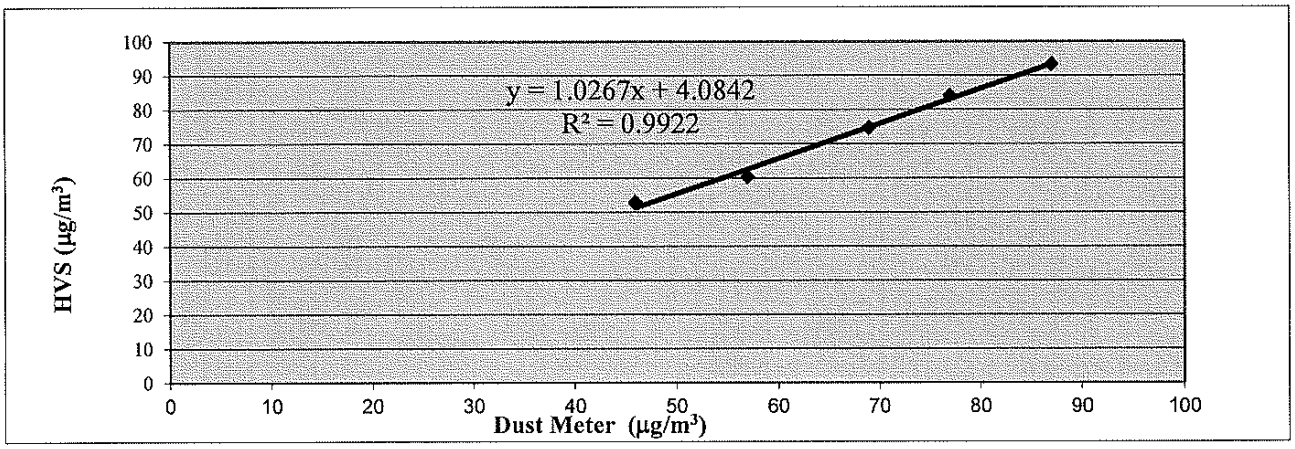
Correlation coefficient* = **0.9961**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	73.1
Particaulate Concentration by Dust Meter (µg/m^3)	67.2
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m^3)] **1.088**



QC Reviewer: LZL MAN HBZ Signature: Li Date: 7/1/2022

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TEST REPORT

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

Test Report No.:	36237C
Date of Issue:	2022-01-10
Date Received:	2022-01-07
Date Tested:	2022-01-07
Date Completed:	2022-01-10
Next Due Date:	2022-03-09
Page:	1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for Calibration:

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X23810
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-04

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.114

****

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

PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-04	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23810	2203
Calibration Date:	7-Jan-22	7-Jan-22
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (µg/m^3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	46	53
2	55	60
3	68	75
4	76	84
5	83	93
Average	**65.6**	**73.1**

By Linear Regression of Y on X

Slope , mw = **1.1000** **Intercept, bw =** **0.9171**

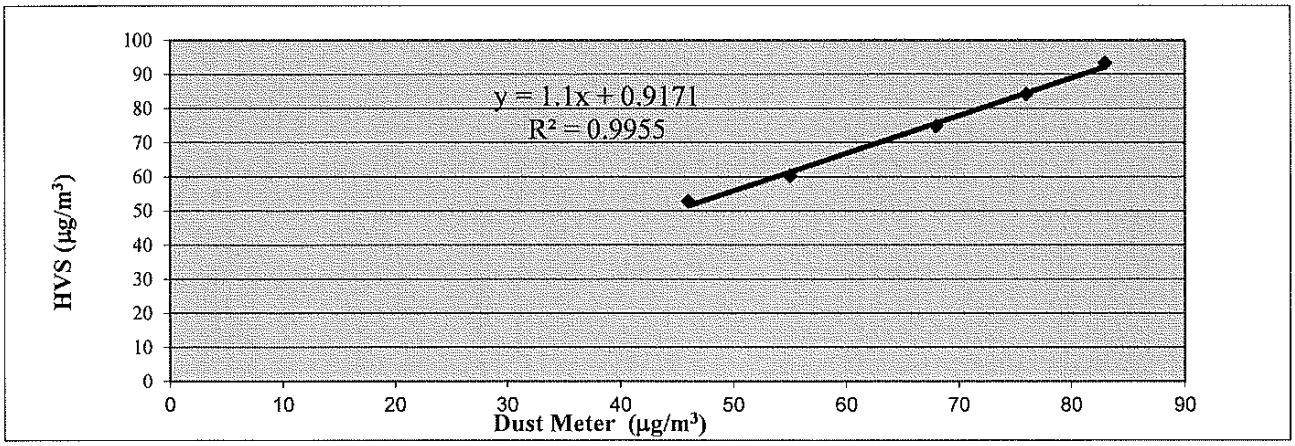
Correlation coefficient* = **0.9977**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	73.1
Particaulate Concentration by Dust Meter (µg/m^3)	65.6
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m^3)] **1.114**



QC Reviewer: LZZ MAN HZZ Signature: hu Date: 7/1/2022

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TEST REPORT

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

Test Report No.:	36236A
Date of Issue:	2022-01-03
Date Received:	2021-12-31
Date Tested:	2021-12-31
Date Completed:	2022-01-03
Next Due Date:	2022-03-02
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.	: 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)	1.108

****

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

Patrick Tse
PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-06	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24477	2203
Calibration Date:	31-Dec-21	31-Dec-21
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (µg/m^3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	30	35
2	48	53
3	60	66
4	74	83
5	83	90
Average	**59.0**	**65.4**

By Linear Regression of Y on X

Slope , mw = **1.0618** **Intercept, bw =** **2.7543**

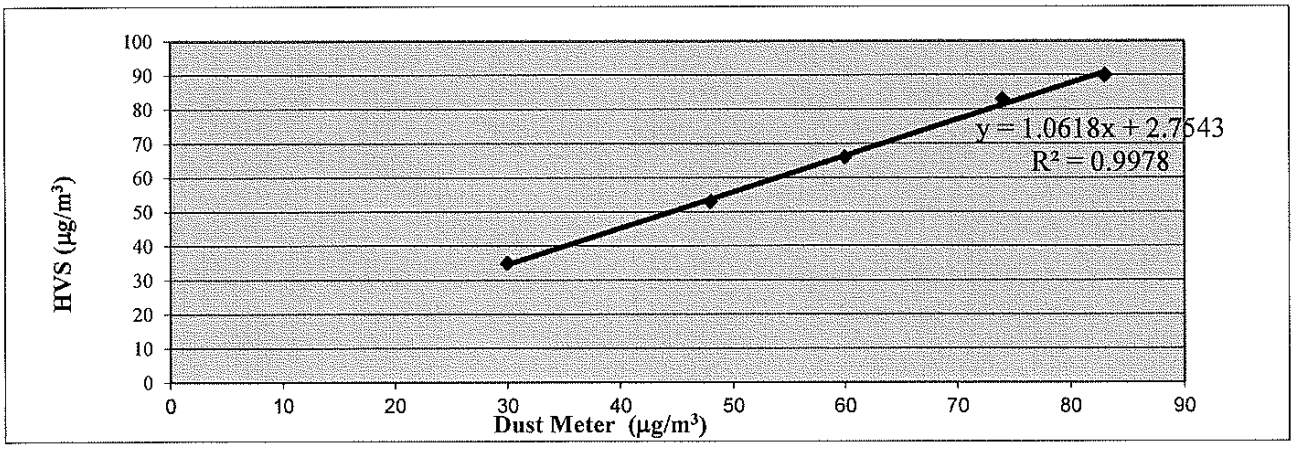
Correlation coefficient* = **0.9989**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	65.4
Particaulate Concentration by Dust Meter (µg/m^3)	59.0
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m^3)] **1.108**



QC Reviewer: Lee Man Hoe Signature: Lee Date: 31/12/2021

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TEST REPORT

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

Test Report No.:	36237D
Date of Issue:	2022-01-10
Date Received:	2022-01-07
Date Tested:	2022-01-07
Date Completed:	2022-01-10
Next Due Date:	2022-03-09
Page:	1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for Calibration:

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

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.097

****

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

PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-07	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24475	2203
Calibration Date:	7-Jan-22	7-Jan-22
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (µg/m^3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	46	53
2	52	60
3	69	75
4	79	84
5	87	93
Average	**66.6**	**73.1**

By Linear Regression of Y on X

Slope , mw = **0.9552** **Intercept, bw =** **9.4631**

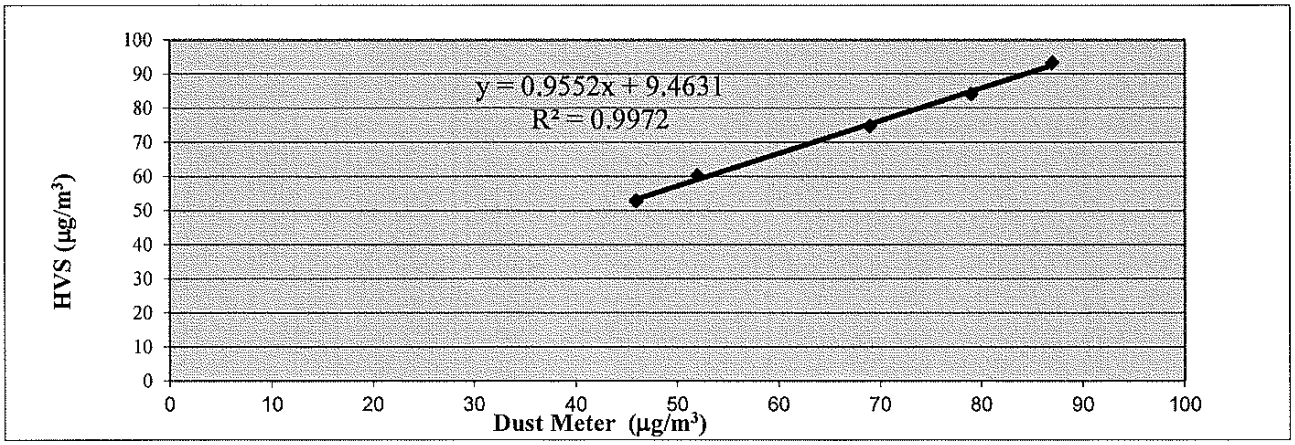
Correlation coefficient* = **0.9986**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	73.1
Particaulate Concentration by Dust Meter (µg/m^3)	66.6
Measureing time, (min)	60

Set Correlation Factor , SCF

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



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

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TEST REPORT

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

Test Report No.:	36236B
Date of Issue:	2022-01-03
Date Received:	2021-12-31
Date Tested:	2021-12-31
Date Completed:	2022-01-03
Next Due Date:	2022-03-02
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.	: X24479
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-08

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.116

****

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

PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-08	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24479	2203
Calibration Date:	31-Dec-21	31-Dec-21
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration (µg/m^3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	26	35
2	47	53
3	58	66
4	79	83
5	83	90
Average	**58.6**	**65.4**

By Linear Regression of Y on X

Slope , mw = **0.9478** **Intercept, bw =** **9.8610**

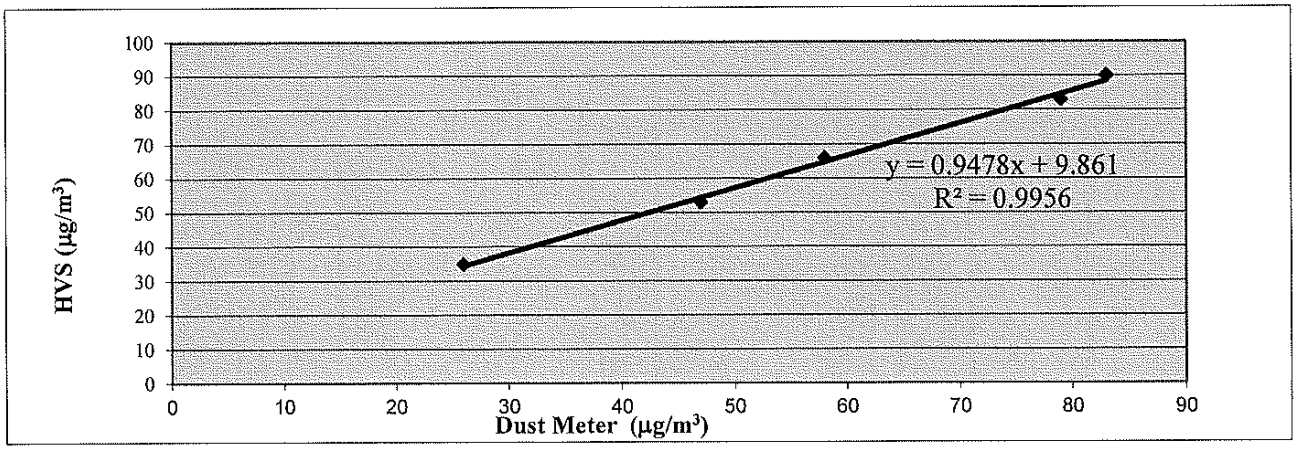
Correlation coefficient* = **0.9978**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	65.4
Particaulate Concentration by Dust Meter (µg/m^3)	58.6
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m^3)] **1.116**



QC Reviewer: [illegible] Signature: [illegible] Date: 31/12/2021

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TEST REPORT

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

Test Report No.:	36236C
Date of Issue:	2022-01-03
Date Received:	2021-12-31
Date Tested:	2021-12-31
Date Completed:	2022-01-03
Next Due Date:	2022-03-02
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.	: 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)	1.101

****

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

PATRICK TSE
Laboratory Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-09	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X23811	2203
Calibration Date:	31-Dec-21	31-Dec-21
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
	Dust Meter	**HVS**
Calibration Point	Mass Concentration (µg/m^3) **X-axis**	Mass concentration (µg/m^3) **Y-axis**
1	24	35
2	46	53
3	63	66
4	79	83
5	85	90
Average	**59.4**	**65.4**

By Linear Regression of Y on X

Slope , mw = **0.8930** **Intercept, bw =** **12.3578**

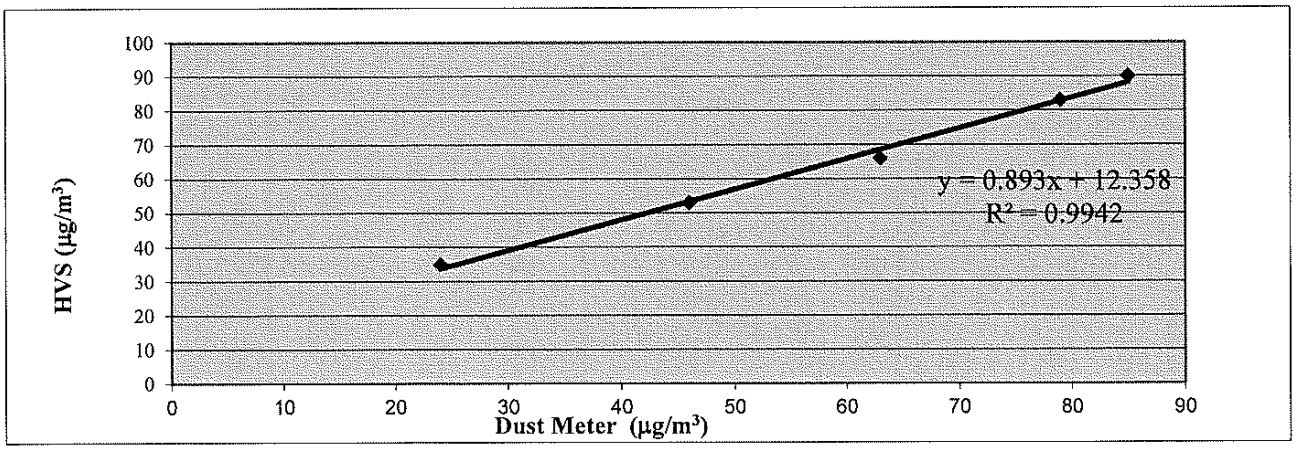
Correlation coefficient* = **0.9971**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler (µg/m^3)	65.4
Particaulate Concentration by Dust Meter (µg/m^3)	59.4
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, (µg/m^3)] **1.101**



QC Reviewer: MAN HZZ Signature: Date: 31/12/2021

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TEST REPORT

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

Test Report No.:	36236D
Date of Issue:	2022-01-03
Date Received:	2021-12-31
Date Tested:	2021-12-31
Date Completed:	2022-01-03
Next Due Date:	2022-03-02
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.	: 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)	1.065

****

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

PATRICK TSE
General Manager

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

Dust Meter	Dust Meter	High Volume Sampler
Equipment No.:	WA-01-10	WA-12-09
Model No. :	AEROCET-831	TE-5170
Serial No.	X24478	2203
Calibration Date:	31-Dec-21	31-Dec-21
Location:	Wellab Office (Calibration Room)	

Calibration of 1 hr TSP		
Calibration Point	**Dust Meter**	**HVS**
	Mass Concentration ($\mu g/m^3$) **X-axis**	Mass concentration ($\mu g/m^3$) **Y-axis**
1	32	35
2	50	53
3	59	66
4	80	83
5	86	90
Average	**61.4**	**65.4**

By Linear Regression of Y on X

Slope , mw = **1.0077** **Intercept, bw =** **3.5280**

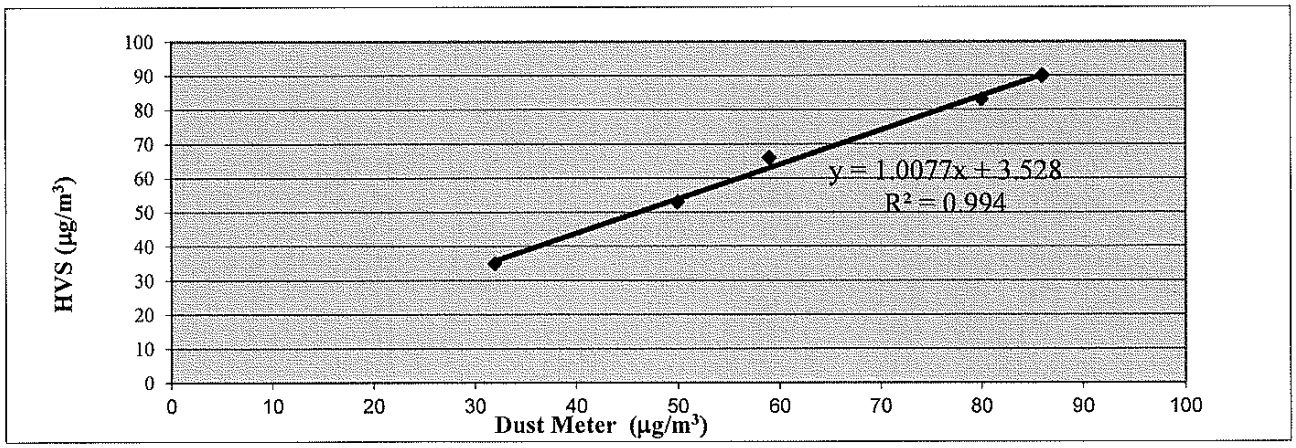
Correlation coefficient* = **0.9970**

*If Correlation Coefficient < 0.90, check and recalibrate.

Set Correlation Factor	
Particaulate Concentration by High Volume Sampler ($\mu g/m^3$)	65.4
Particaulate Concentration by Dust Meter ($\mu g/m^3$)	61.4
Measureing time, (min)	60

Set Correlation Factor , SCF

SCF = [K=High Volume Sampler / Dust Meter, ($\mu g/m^3$)] **1.065**



QC Reviewer: LEE MUN HOE Signature: Date: 31/12/2021

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

File No. WMA20002/20/0010

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

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

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

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	12.3	3.57	63.02	8.4	2.95
2	10.5	3.30	58.24	7.1	2.71
3	7.8	2.84	50.23	5.7	2.43
4	5.9	2.47	43.72	4.1	2.06
5	3.5	1.90	33.73	2.5	1.61

By Linear Regression of Y on X

Slope , mw = 0.0456 **Intercept, bw =** 0.0826

Correlation coefficient* = 0.9981

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

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

Remarks:

Conducted by: HL Signature: Date: 17/1/22
Checked by: MAN HOI Signature: Date: 17/1/2022

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

File No. WMA20002/17/0010

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

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

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

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	14.2	3.81	67.29	9.7	3.15
2	11.7	3.46	61.10	8.0	2.86
3	9.7	3.15	55.66	6.5	2.58
4	6.8	2.64	46.64	4.4	2.12
5	3.4	1.87	33.05	2.5	1.60

By Linear Regression of Y on X

Slope , mw = 0.0458 **Intercept, bw =** 0.0459

Correlation coefficient* = 0.9979

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **3.97**

Remarks:

Conducted by: Ho Ka Chu Signature: Date: 21/1/22

Checked by: LEE MAN HEI Signature: Date: 21/1/2022

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

File No. WMA20002/03/0010

Station KTN-DMS4A - Temporary Structure at Pak Shek Au

Operator: KC

Date: 26-Jan-22

Next Due Date: 25-Mar-22

Equipment No.: WA-11-03

Serial No. 3225

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

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

Calibration of RSP Sampler

Calibration Point	ORIFICE					HVS	
	ΔH(orifice), in. of water	Del Hc (1)	Qstd (2) (CFM)	Qa (3) (CFM) **X -axis**	Qa (3) (m^3/min) **X -axis**	ΔW (HVS), in. of water	$[\Delta W \times (Ta + 30) / Pa]^{1/2}$ **Y-axis**
1	8.7	8.92	52.75	51.45	1.46	9.5	2.00
2	7.4	7.59	48.67	47.47	1.34	8.4	1.88
3	5.5	5.64	42.00	40.96	1.16	6.8	1.69
4	3.4	3.49	33.07	32.25	0.91	5.1	1.47
5	2.7	2.77	29.50	28.77	0.81	4.1	1.31

By Linear Regression of Y on X

Slope , mw = 0.0293 **Intercept, bw =** 0.4929

Correlation coefficient* = 0.9981

(1) DEL Hc = ΔH x (Pa/760*298/Ta)

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

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

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

Set Point Flow Rate., SFR

SFR = 1.13 x (760/Pa) x (Ta/298) = 38.94

Sampler Well - Type Manometer Set Point, SSP

SSP = [(mw x SFR + bw)^2 x Pa] / (Ta + 30) = 6.34

Remarks:

Conducted by: Ho Ka Ho Signature: Date: 26/1/22

Checked by: Lee Man Hon Signature: Date: 26/1/2022

TISCH Environmental

RECALIBRATION DUE DATE:
January 28, 2022

Certificate of Calibration

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

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

Data Tabulation

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

Calculations

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

For subsequent flow rate calculations:

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

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

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg

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

RECALIBRATION

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

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

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

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Website: www.wellab.com.hk

TEST REPORT

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

Test Report No.:	34872C
Date of Issue:	2021-03-08
Date Received:	2021-03-05
Date Tested:	2021-03-05
Date Completed:	2021-03-08
Next Due Date:	2022-03-07
Page:	1 of 1

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

Certificate of Calibration

Item for calibration:

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

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

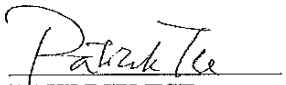
Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

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



PATRICK TSE
General Manager

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TEST REPORT

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

Test Report No.:	34872E
Date of Issue:	2021-03-08
Date Received:	2021-03-05
Date Tested:	2021-03-05
Date Completed:	2021-03-08
Next Due Date:	2022-03-07
Page:	1 of 1

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

Certificate of Calibration

Item for calibration:

Description	: Sound Level Meter
Manufacturer	: BSWA
Model No.	: BSWA 308
Serial No.	: 580008
Equipment No.	: WN-01-06

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

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Patrick Tse
PATRICK TSE
General Manager

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TEST REPORT

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

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

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

Certificate of Calibration

Item for calibration:

Description	: Sound Level Meter
Manufacturer	: BSWA
Model No.	: BSWA 308
Serial No.	: 580011
Equipment No.	: WN-01-08

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

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PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab Limited**
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Room 1701, Technology Park,
18 On Lai Street,
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Test Report No.:	34873A
Date of Issue:	2021-03-15
Date Received:	2021-03-12
Date Tested:	2021-03-12
Date Completed:	2021-03-15
Next Due Date:	2022-03-14
Page:	1 of 1

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

Certificate of Calibration

Item for calibration:

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

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

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General Manager

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TEST REPORT

APPLICANT: **Wellab Limited**
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Shatin, NT, Hong Kong

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

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

Certificate of Calibration

Item for calibration:

Description	: Sound Level Meter
Manufacturer	: BSWA
Model No.	: BSWA 308
Serial No.	: 580017
Equipment No.	: WN-01-10

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

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PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab Limited**
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Room 1808, Technology Park,
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Test Report No.:	35658
Date of Issue:	2021-08-23
Date Received:	2021-08-20
Date Tested:	2021-08-20
Date Completed:	2021-08-23
Next Due Date:	2022-08-22
Page:	1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for Calibration:

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

Test Conditions:

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

Methodology:

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

Results:

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

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

****

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TEST REPORT

APPLICANT: **Wellab Limited**
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Room 1701, Technology Park,
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Test Report No.:	35909
Date of Issue:	2021-10-04
Date Received:	2021-10-02
Date Tested:	2021-10-02
Date Completed:	2021-10-04
Next Due Date:	2022-10-03
Page:	1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for calibration:

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

Test conditions:

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

Methodology:

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

Results:

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

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TEST REPORT

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Test Report No.:	35909A
Date of Issue:	2021-10-04
Date Received:	2021-10-02
Date Tested:	2021-10-02
Date Completed:	2021-10-04
Next Due Date:	2022-10-03
Page:	1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for calibration:

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

Test conditions:

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

Methodology:

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

Results:

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

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A)**
RM 1808, Technology Park,
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Test Report No.:	36157
Date of Issue:	2021-12-07
Date Received:	2021-12-06
Date Tested:	2021-12-06 to 2021-12-07
Date Completed:	2021-12-07

ATTN: **Miss Mei Ling Tang**

Page: 1 of 2

Certificate of Calibration

Item for calibration:

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

Test conditions:

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

Test Specifications:

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

Methodology:

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

****

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General Manager

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TEST REPORT

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

Certificate of Calibration

Results:

Conductivity performance checking

	Instrument Readings (µS/cm)	Accetance Criteria	Comment
KCl stock solution (12890 µS/cm)	13100	12246-13534	Pass

Temperature performance checking

Reference thermometer-E431 Readings (°C)	Instrument Readings (°C)	Correction (°C)	Comment
20.0	19.998	+0.002	N/A

pH performance checking

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

D.O. performance checking

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

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

Turbidity performance checking

Turbidity stock solution	Instrument Readings (NTU)	Accetance Criteria	Comment
10 NTU	10.13	9.0-11.0	Pass
50 NTU	48.66	45.0-55.0	Pass
100 NTU	101.4	90.0-110.0	Pass

Depth performance checking

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

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

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TEST REPORT

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

Test Report No.:	36159A
Date of Issue:	2021-12-20
Date Received:	2021-12-17
Date Tested:	2021-12-17 to 2021-12-20
Date Completed:	2021-12-20

ATTN: **Miss Mei Ling Tang**

Certificate of Calibration

Item for calibration:

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

Test conditions:

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

Test Specifications:

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

Methodology:

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

****

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

PATRICK TSE
General Manager

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TEST REPORT

Test Report No.:	36159A
Date of Issue:	2021-12-20
Date Received:	2021-12-17
Date Tested:	2021-12-17 to 2021-12-20
Date Completed:	2021-12-20
Page:	2 of 2

Certificate of Calibration

Results:

Conductivity performance checking

	Instrument Readings (µS/cm)	Accetance Criteria	Comment
KCl stock solution (12890 µS/cm)	12800	12246-13534	Pass

Temperature performance checking

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

pH performance checking

	Instrument Readings (pH unit)	Accetance Criteria	Comment
pH QC buffer 4.00	3.99	4.00 ± 0.10	Pass
pH QC buffer 6.86	6.87	6.86 ± 0.10	Pass
pH QC buffer 9.18	9.23	9.18 ± 0.10	Pass

D.O. performance checking

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

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Accetance Criteria	Comment
7.94	8.07	Difference between Titration value and instrument reading <0.2mg/L	Pass

Turbidity performance checking

Turbidity stock solution	Instrument Readings (NTU)	Accetance Criteria	Comment
10 NTU	10.16	9.0-11.0	Pass
50 NTU	51.28	45.0-55.0	Pass
100 NTU	103.6	90.0-110.0	Pass

Depth performance checking

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

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

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

CALIBRATION CERTIFICATE

For Gas Analyser: Rasi 700 BIO

With Serial Number: **330055**

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

Measuring Installations:

Measurement with certified test gases:

CO/O2 Cylinder-nr. 88772 NO Cylinder-nr. 72126
CO/H2/O2 Cylinder-nr. D5CPTH5 NO2 Cylinder-nr. 88778
CO2/CH4/H2S Cylinder nr. 1421177

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

Measuring Results:

El. Chemical	Nominal Value	Tolerance Value	Actual Value
O2 in Vol. %	0,00	+/- 0,2	0.02
O2 in Vol. %	2.01	+/- 0,2	2.02
O2 in Vol. %	10.00	+/-0,3	10.03
NDIR:			
CH4 in Vol%	60.0	+/-1.8	60.0
CO2 in Vol%	40.0	+/-1.2	40.0
T Air in °C	125.0	+/- 1,0	124.7
T Gas in °C	250.0	+/- 2,0	249.6
Draft in hPa	Measuring range are according to specifications	+/- 0,03	Values are within specified tolerances
Pressure in Hpa	Measuring range are according to specifications	+/-0.03	Not installed

Special Remarks_____

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

Calibration Due: 16/03/22

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

CALIBRATION CERTIFICATE

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

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

*References are traceable to NIST or equivalent.

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

Authorized by: _____

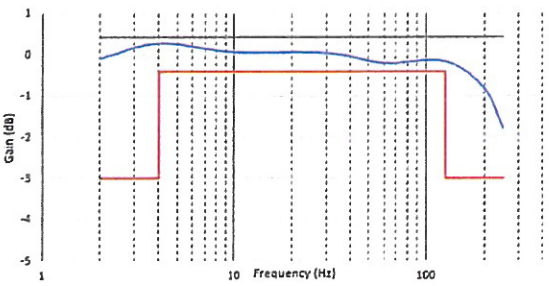
(Anson Kan)

Date: 21 February 2022

Frequency Responses UM17121

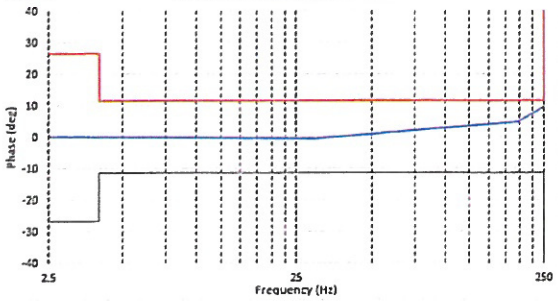
Vertical

Frequency Response of UM17121



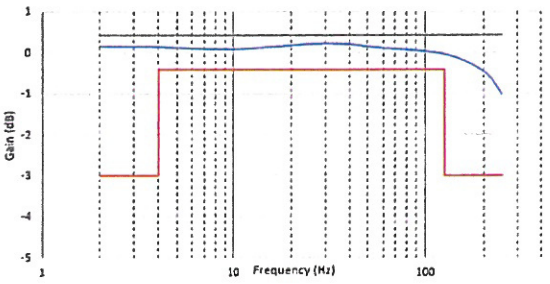
Vertical

Phase Response of UM17121



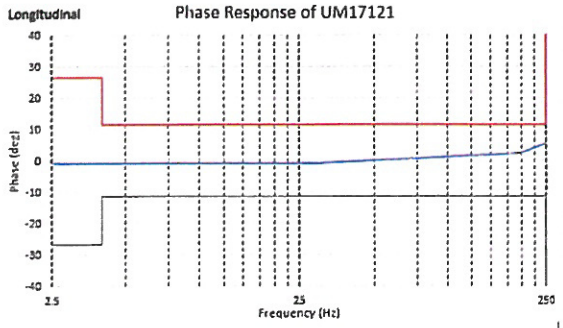
Longitudinal

Frequency Response of UM17121



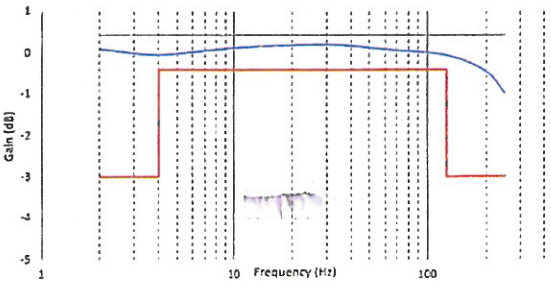
Longitudinal

Phase Response of UM17121



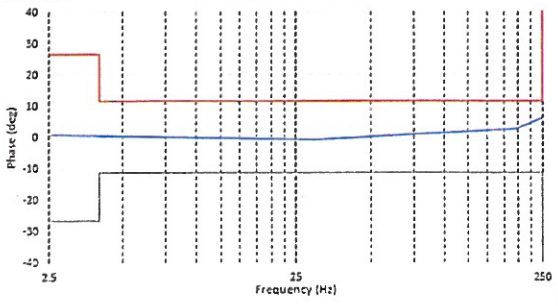
Transverse

Frequency Response of UM17121



Transverse

Phase Response of UM17121



CALIBRATION CERTIFICATE

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

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

*References are traceable to NIST or equivalent.

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

Authorized by: _____

(Anson Kan)

Date: 21 February 2022

CALIBRATION CERTIFICATE

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

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

*References are traceable to NIST or equivalent.

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Authorized by: _____

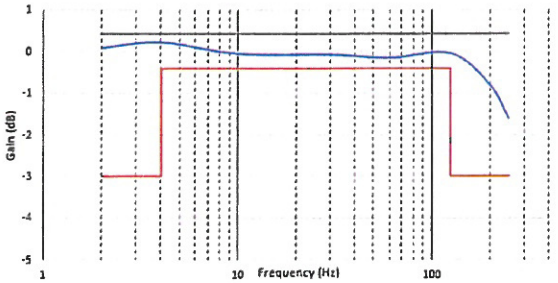
(Anson Kan)

Date: 21 February 2022

Frequency Responses UM17124

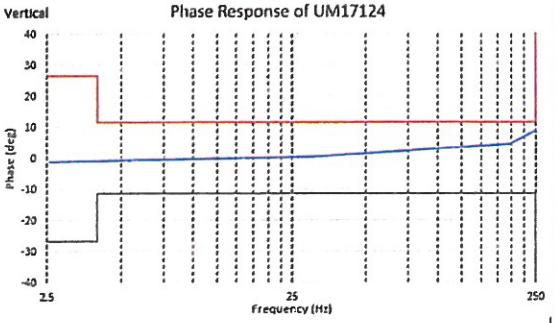
Vertical

Frequency Response of UM17124



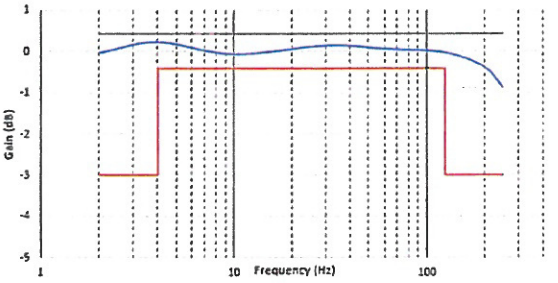
Vertical

Phase Response of UM17124



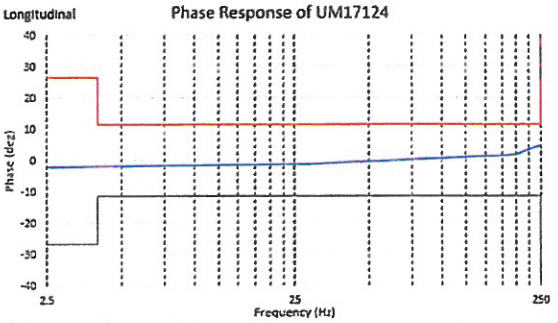
Longitudinal

Frequency Response of UM17124



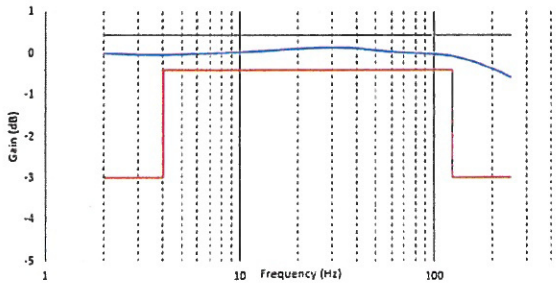
Longitudinal

Phase Response of UM17124



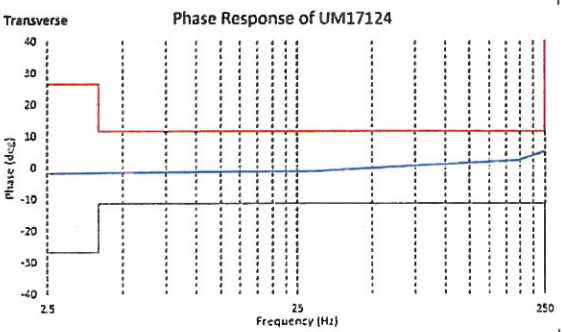
Transverse

Frequency Response of UM17124



Transverse

Phase Response of UM17124



CALIBRATION CERTIFICATE

Calibration Item:	TRIAXIAL GEOPHONE (Calibration with main unit UM17124)
Part Number:	721A2901
Serial No.:	UM17124
Calibration Date:	21 February 2022
Next Calibration Date:	21 February 2023
Method Used:	In-house Method B3-001
In-house Testing Procedure No.:	B3-001

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

*References are traceable to NIST or equivalent.

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

Authorized by: _____

(Anson Kan)

Date: 21 February 2022

CALIBRATION CERTIFICATE

Calibration Item:	Micromate System ISEE (Calibration with Geophone UM17126)
Model No.:	721A2501
Serial No.:	UM17126
Calibration Date:	28 February 2022
Next Calibration Date:	28 February 2023
Method Used:	In-house Method B3-001
In-house Testing Procedure No.:	B3-001

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

*References are traceable to NIST or equivalent.

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Authorized by: _____

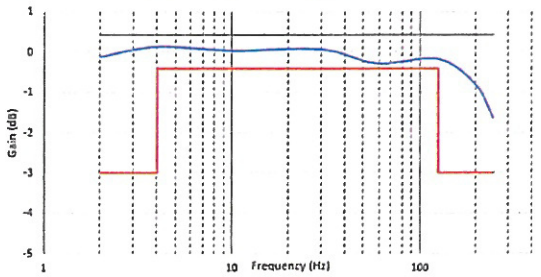
(Anson Kan)

Date: 28 February 2022

Frequency Responses UM17126

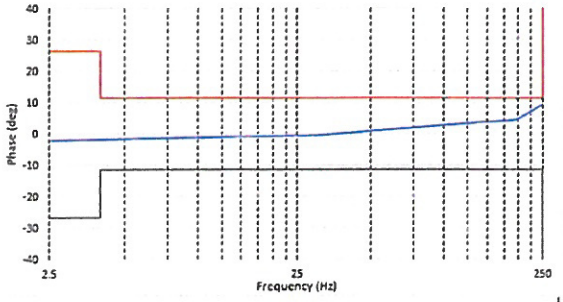
Vertical

Frequency Response of UM17126



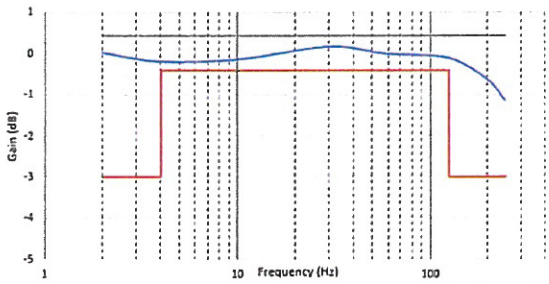
Vertical

Phase Response of UM17126



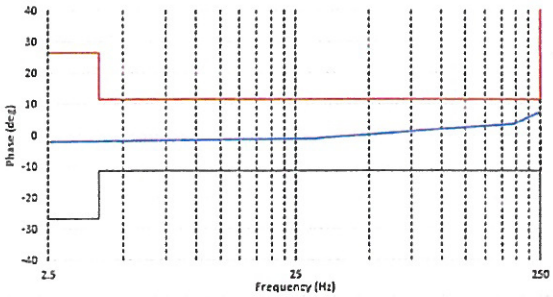
Longitudinal

Frequency Response of UM17126



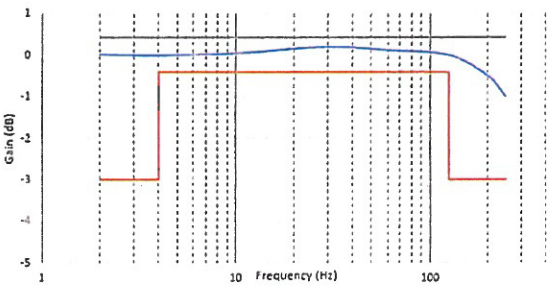
Longitudinal

Phase Response of UM17126



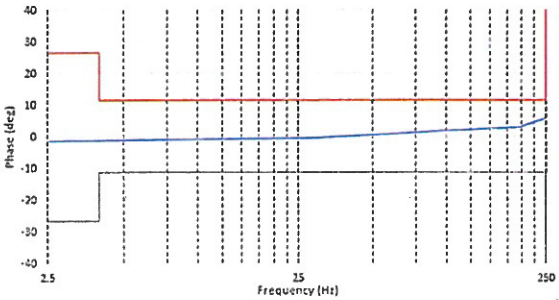
Transverse

Frequency Response of UM17126



Transverse

Phase Response of UM17126



CALIBRATION CERTIFICATE

Calibration Item:	TRIAXIAL GEOPHONE (Calibration with main unit UM17126)
Part Number:	721A2901
Serial No.:	UM17126
Calibration Date:	28 February 2022
Next Calibration Date:	28 February 2023
Method Used:	In-house Method B3-001
In-house Testing Procedure No.:	B3-001

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

*References are traceable to NIST or equivalent.

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Authorized by: _____

(Anson Kan)

Date: 28 February 2022

APPENDIX D
ENVIRONMENTAL MONITORING SCHEDULES

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

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

Remarks:
*Monitoring session would be conducted by portable TSP monitor.

Environmental Permit(s)	Contract No.	Air Quality Stations	Noise Stations
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	**1hr TSP and 24hr TSP** KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)	--
EP-468/2013/A	ND/2019/03		
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	**24hr RSP (Arsenic)** KTN-DMS4A - Temporary Structure at Pak Shek Au	--
EP-468/2013/A	ND/2019/03		
EP-467/2013/A EP-468/2013/A[(1)]	ND/2019/01	--	CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung
EP-468/2013/A[(2)]	ND/2019/01	--	CP-KTN-NMS3 -Fung Kong Garden
EP-469/2013[(3)]	ND/2019/02	--	CP-KTN-NMS6 - Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery
EP-470/2013	ND/2019/01	--	CP-KTN-NMS5 - N/A
EP-473/2013/A[(4)]	ND/2019/03	**1hr TSP and 24hr TSP** FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark	--
	ND/2019/04		--
EP-473/2013/A[(5)]	ND/2019/05	**1hr TSP and 24hr TSP** FLN-DMS3 - House near Tong Hang	--
EP-473/2013/A[(6)]	ND/2019/03	**1hr TSP** FLN-DMS5 - Noble Hill **24hr TSP** FLN-DMS5A - Good View New Village	--
	ND/2019/04		--
EP-473/2013/A[(7)]	ND/2019/05	--	CP-FLN-NMS2 - Scattered Village Houses in Tong Hang
EP-473/2013/A[(8)]	ND/2019/04	--	CP-FLN-NMS1 - Belair Monte
	ND/2019/05	--	
EP-475/2013/A	ND/2019/06	--	

Remarks:

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

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

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

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

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

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

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

#Night-time avifauna monitoring in Long Valley

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

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

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

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 (March 2022)

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

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)
Remarks:
*Monitoring session would be conducted by portable TSP monitor.

Environmental Permit(s)	Contract No.	Air Quality Stations	Noise Stations
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	**1hr TSP and 24hr TSP** KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)	--
EP-468/2013/A	ND/2019/03		
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	**24hr RSP (Arsenic)** KTN-DMS4A - Temporary Structure at Pak Shek Au	--
EP-468/2013/A	ND/2019/03		
EP-467/2013/A EP-468/2013/A[(1)]	ND/2019/01	--	CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung
EP-468/2013/A[(2)]	ND/2019/01	--	CP-KTN-NMS3 -Fung Kong Garden
EP-469/2013[(3)]	ND/2019/02	--	CP-KTN-NMS6 - Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery
EP-470/2013	ND/2019/01	--	CP-KTN-NMS5 - N/A
EP-473/2013/A[(4)]	ND/2019/03	**1hr TSP and 24hr TSP** FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark	--
	ND/2019/04		--
EP-473/2013/A[(5)]	ND/2019/05	**1hr TSP and 24hr TSP** FLN-DMS3 - House near Tong Hang	--
EP-473/2013/A[(6)]	ND/2019/03	**1hr TSP** FLN-DMS5 - Noble Hill **24hr TSP** FLN-DMS5A - Good View New Village	--
	ND/2019/04		--
EP-473/2013/A[(7)]	ND/2019/05	--	CP-FLN-NMS2 - Scattered Village Houses in Tong Hang
EP-473/2013/A[(8)]	ND/2019/04	--	CP-FLN-NMS1 - Belair Monte
	ND/2019/05	--	
EP-475/2013/A	ND/2019/06	--	

Remarks:

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

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

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

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

Water Quality Monitoring Stations

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

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

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

Contract No. NDO 04/2019

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

Tentative Impact Ecological Monitoring Schedule (March 2022)

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

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

#Night-time avifauna monitoring in Long Valley

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

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

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

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

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

Appendix E - 1-hour TSP Monitoring Results

Location FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
4-Feb-22	13:00	Sunny	34.4
4-Feb-22	14:00	Sunny	39.1
4-Feb-22	15:00	Sunny	42.2
9-Feb-22	9:00	Cloudy	46.4
9-Feb-22	10:00	Cloudy	52.8
9-Feb-22	11:00	Cloudy	50.1
15-Feb-22	13:00	Sunny	38.4
15-Feb-22	14:00	Sunny	45.9
15-Feb-22	15:00	Sunny	55.5
21-Feb-22	9:00	Rainy	37.2
21-Feb-22	10:00	Rainy	49.3
21-Feb-22	11:00	Rainy	53.0
25-Feb-22	13:00	Sunny	42.5
25-Feb-22	14:00	Sunny	47.8
25-Feb-22	15:00	Sunny	57.3
		Minimum	34.4
		Maximum	57.3
		Average	46.1

Location FLN-DMS3 - House near Tong Hang			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
4-Feb-22	13:00	Sunny	34.7
4-Feb-22	14:00	Sunny	37.2
4-Feb-22	15:00	Sunny	37.5
9-Feb-22	9:00	Cloudy	64.8
9-Feb-22	10:00	Cloudy	67.6
9-Feb-22	11:00	Cloudy	75.6
15-Feb-22	13:00	Sunny	75.3
15-Feb-22	14:00	Sunny	58.1
15-Feb-22	15:00	Sunny	61.9
21-Feb-22	9:00	Rainy	38.7
21-Feb-22	10:00	Rainy	41.7
21-Feb-22	11:00	Rainy	50.6
25-Feb-22	13:00	Sunny	84.7
25-Feb-22	14:00	Sunny	92.2
25-Feb-22	15:00	Sunny	95.4
		Minimum	34.7
		Maximum	95.4
		Average	61.1

Appendix E - 1-hour TSP Monitoring Results

Location FLN-DMS5 - Noble Hill			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
4-Feb-22	9:00	Cloudy	28.2
4-Feb-22	10:00	Cloudy	29.1
4-Feb-22	11:00	Cloudy	25.7
10-Feb-22	13:00	Cloudy	84.5
10-Feb-22	14:00	Cloudy	85.3
10-Feb-22	15:00	Cloudy	74.7
16-Feb-22	9:00	Sunny	98.8
16-Feb-22	10:00	Sunny	106.1
16-Feb-22	11:00	Sunny	112.0
22-Feb-22	13:00	Rainy	18.2
22-Feb-22	14:00	Rainy	23.5
22-Feb-22	15:00	Rainy	21.4
28-Feb-22	9:00	Sunny	114.0
28-Feb-22	10:00	Sunny	135.6
28-Feb-22	11:00	Sunny	140.0
		Minimum	18.2
		Maximum	140.0
		Average	73.1

Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
4-Feb-22	13:00	Cloudy	11.8
4-Feb-22	14:00	Cloudy	11.2
4-Feb-22	15:00	Cloudy	11.5
10-Feb-22	9:00	Cloudy	54.7
10-Feb-22	10:00	Cloudy	48.8
10-Feb-22	11:00	Cloudy	45.6
16-Feb-22	13:00	Sunny	82.5
16-Feb-22	14:00	Sunny	90.0
16-Feb-22	15:00	Sunny	92.7
22-Feb-22	13:00	Rainy	37.3
22-Feb-22	14:00	Rainy	22.4
22-Feb-22	15:00	Rainy	9.4
28-Feb-22	9:00	Sunny	60.5
28-Feb-22	10:00	Sunny	54.0
28-Feb-22	11:00	Sunny	49.7
		Minimum	9.4
		Maximum	92.7
		Average	45.5

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			
4-Feb-22	Cloudy	292.6	3.4032	3.4748	0.0716	5815.4	5839.4	24.0	1.21	1.20	1.21	1737.5	41.2
8-Feb-22	Cloudy	289.8	3.3358	3.4105	0.0747	5839.4	5863.4	24.0	1.22	1.21	1.21	1747.1	42.8
14-Feb-22	Sunny	290.1	3.3195	3.3791	0.0596	5863.4	5887.4	24.0	1.22	1.21	1.21	1747.1	34.1
20-Feb-22	Cloudy	289.3	3.2785	3.3907	0.1122	5887.4	5911.4	24.0	1.22	1.21	1.21	1749.5	64.1
24-Feb-22	Sunny	292.1	3.3070	3.4219	0.1149	5911.4	5935.4	24.0	1.20	1.21	1.21	1736.5	66.2
												Min	34.1
												Max	66.2
												Average	49.7

Location FLN-DMS3 - House near Tong Hang

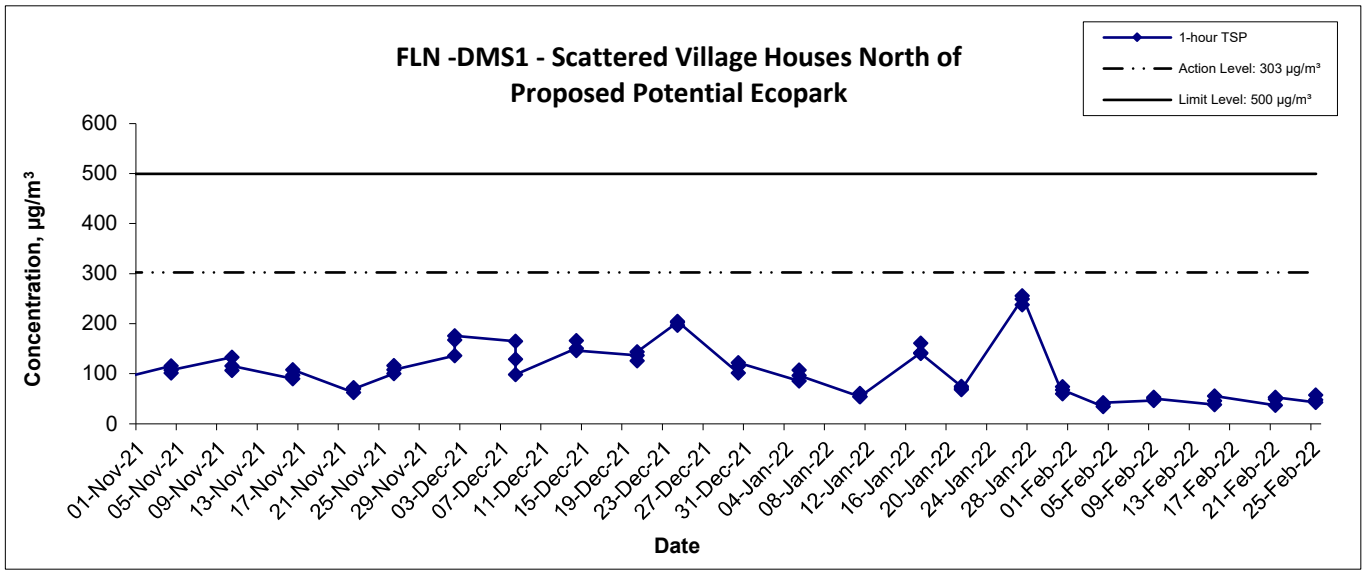
Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. (µg/m^3)
			Initial	Final		Initial	Final		Initial	Final			
4-Feb-22	Cloudy	292.6	3.2767	3.3188	0.0421	6858.7	6882.7	24.0	1.23	1.22	1.22	1762.5	23.9
8-Feb-22	Cloudy	289.8	3.3727	3.4131	0.0404	6882.7	6906.7	24.0	1.23	1.23	1.23	1772.1	22.8
14-Feb-22	Sunny	290.1	3.3479	3.3863	0.0384	6906.7	6930.7	24.0	1.23	1.23	1.23	1772.1	21.7
20-Feb-22	Cloudy	289.3	3.4880	3.5355	0.0475	6930.7	6954.7	24.0	1.23	1.23	1.23	1774.5	26.8
24-Feb-22	Sunny	292.1	3.3288	3.3985	0.0697	6954.7	6978.7	24.0	1.22	1.23	1.22	1761.5	39.6
												Min	21.7
												Max	39.6
												Average	26.9

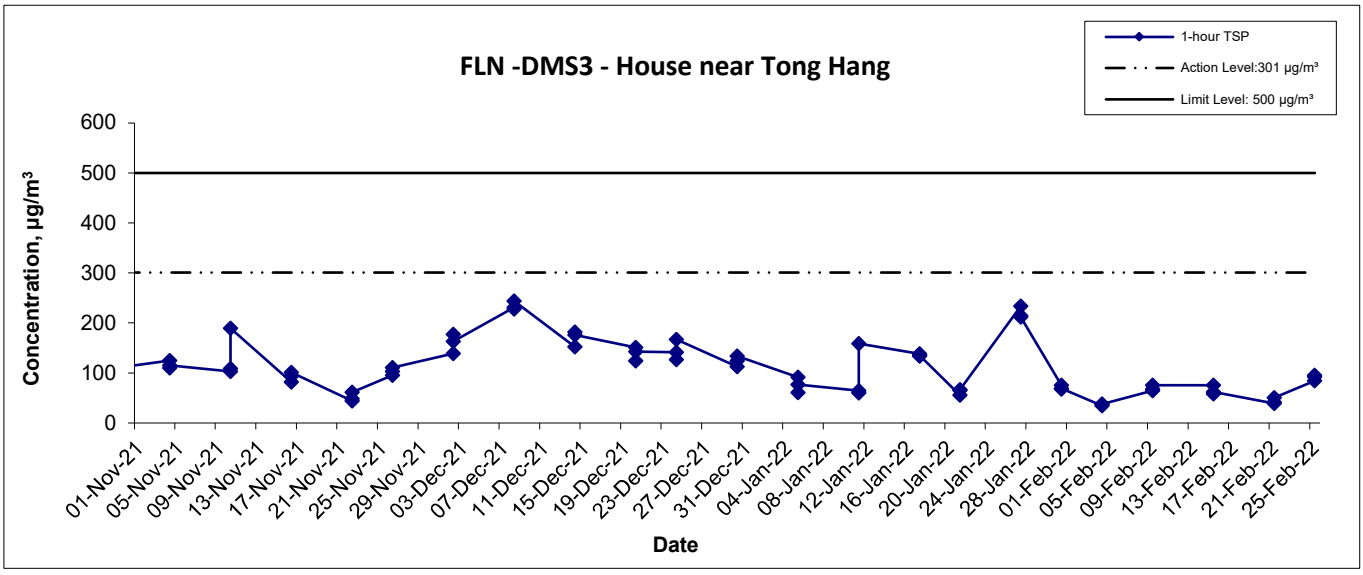
Appendix E - 24-hour TSP Monitoring Results

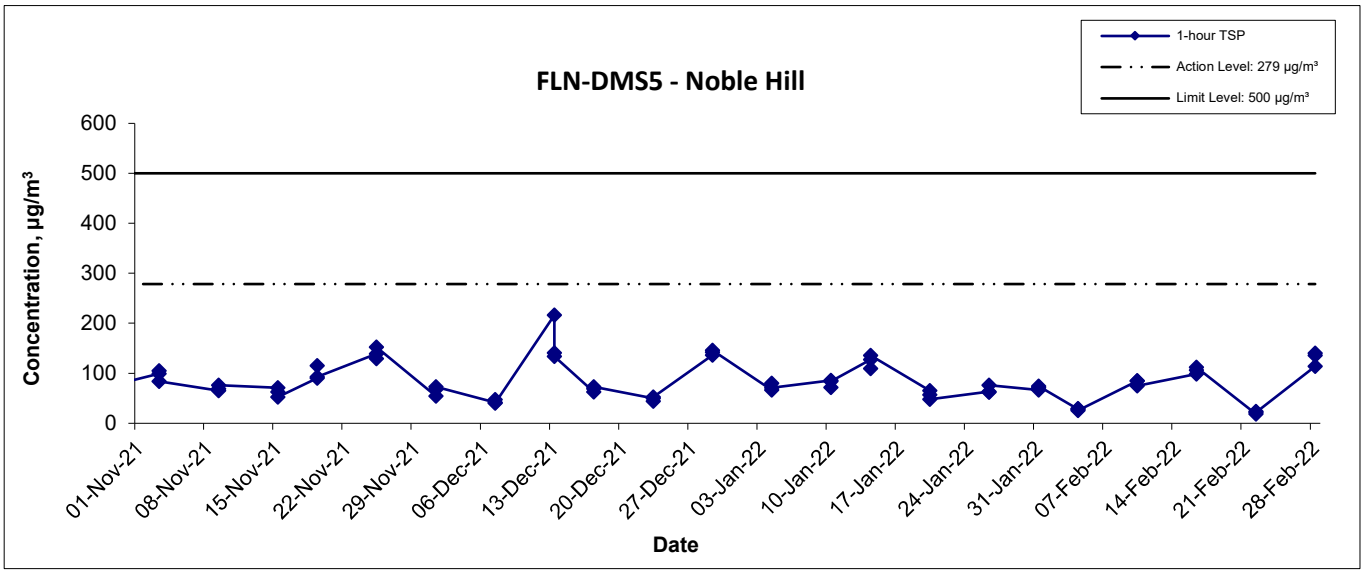
Location FLN-DMS5A - Good View New Village			
Date	Time	Weather	Particulate Concentration (μg/m^3)
4-Feb-22	12:00	Cloudy	45.5
10-Feb-22	9:00	Cloudy	53.3
16-Feb-22	12:00	Sunny	150.5
22-Feb-22	10:00	Rainy	31.6
28-Feb-22	9:05	Sunny	124.6
		Minimum	31.6
		Maximum	150.5
		Average	81.1

Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration (μg/m^3)
4-Feb-22	12:00	Cloudy	16.8
10-Feb-22	9:00	Cloudy	39.2
16-Feb-22	12:00	Sunny	106.3
22-Feb-22	10:00	Rainy	16.0
28-Feb-22	9:00	Sunny	57.8
		Minimum	16.0
		Maximum	106.3
		Average	47.2

1-hr TSP Concentration Levels

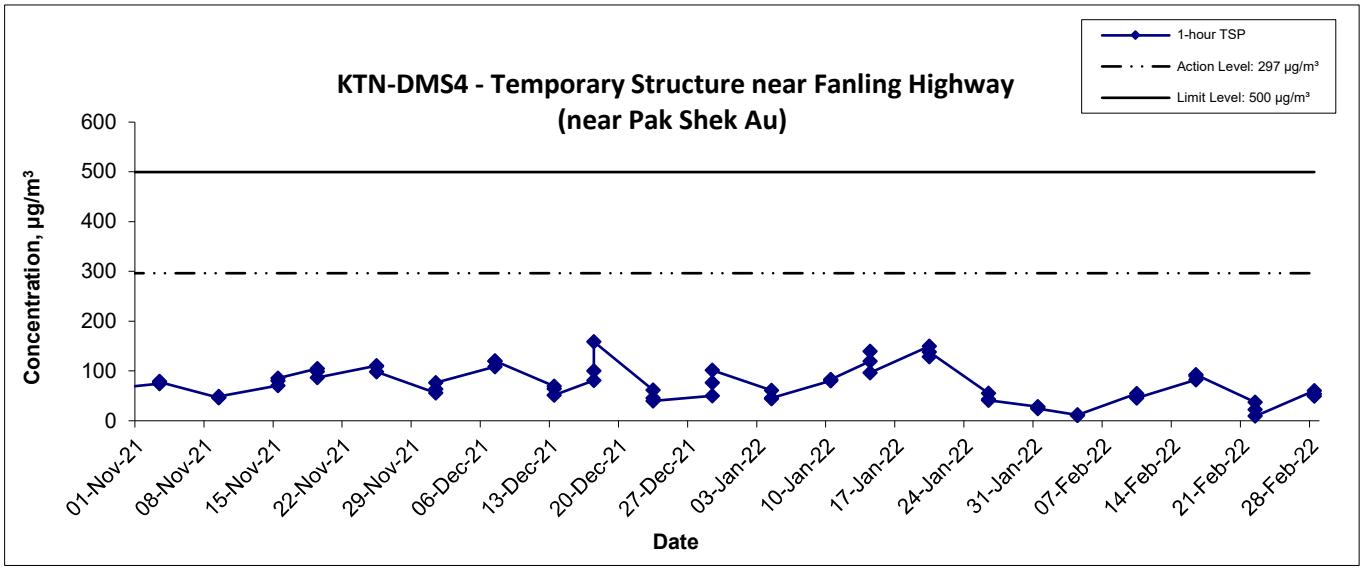






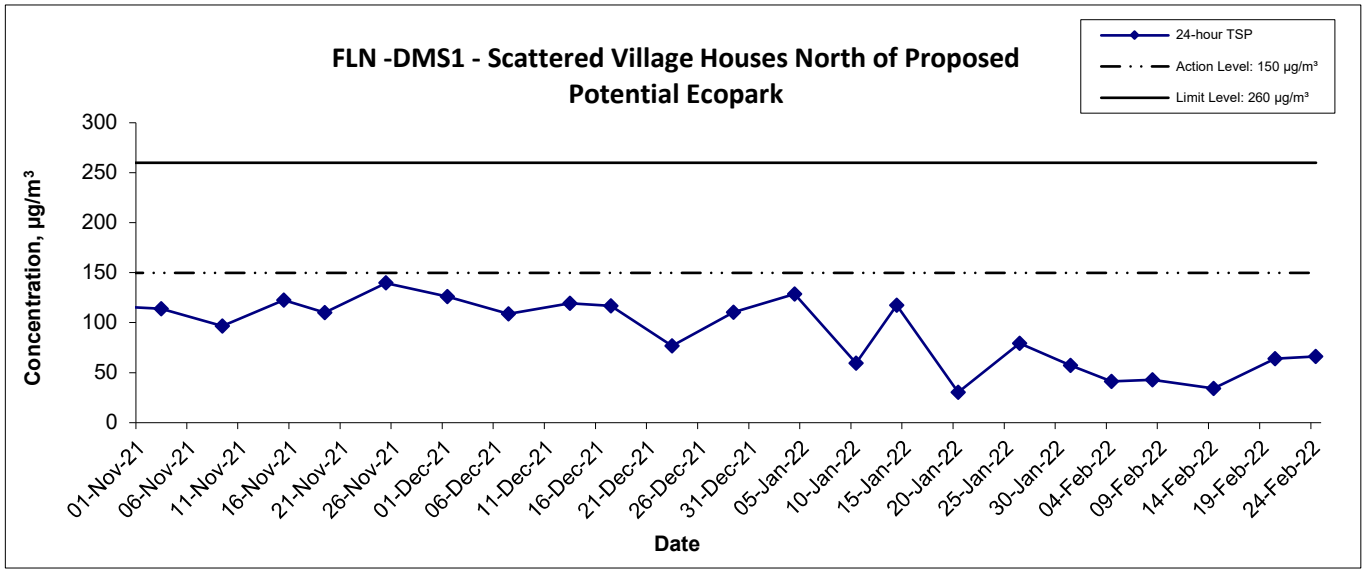
Title: Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	Scale: N.T.S	Project No.: WMA20002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

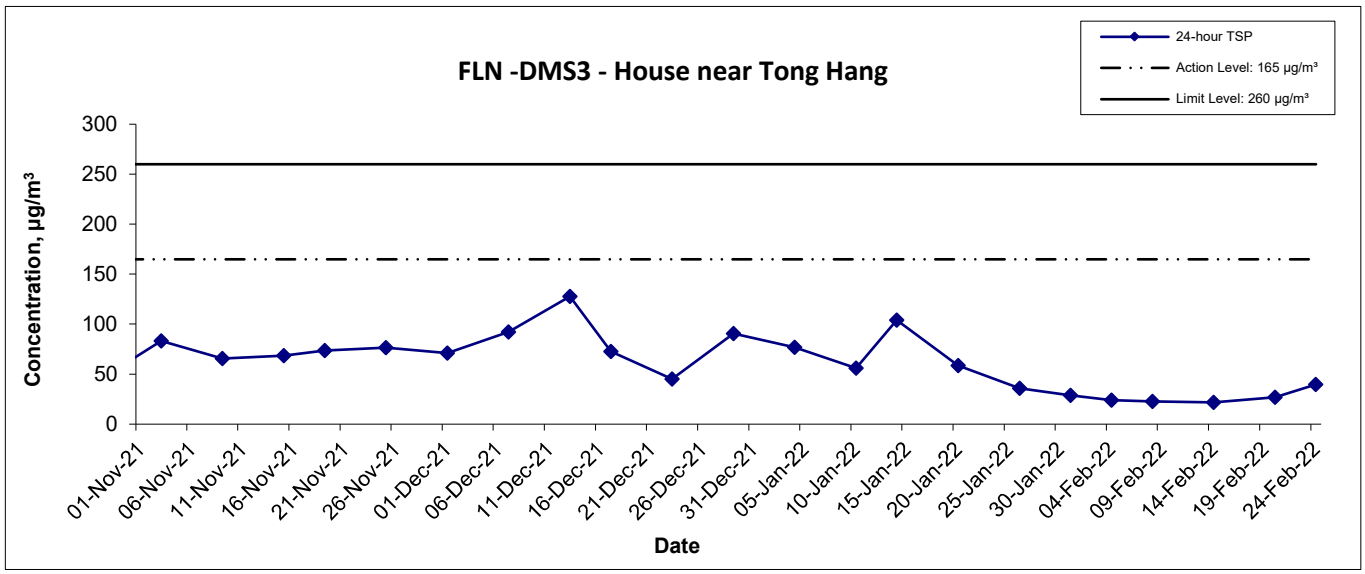
1-hr TSP Concentration Levels

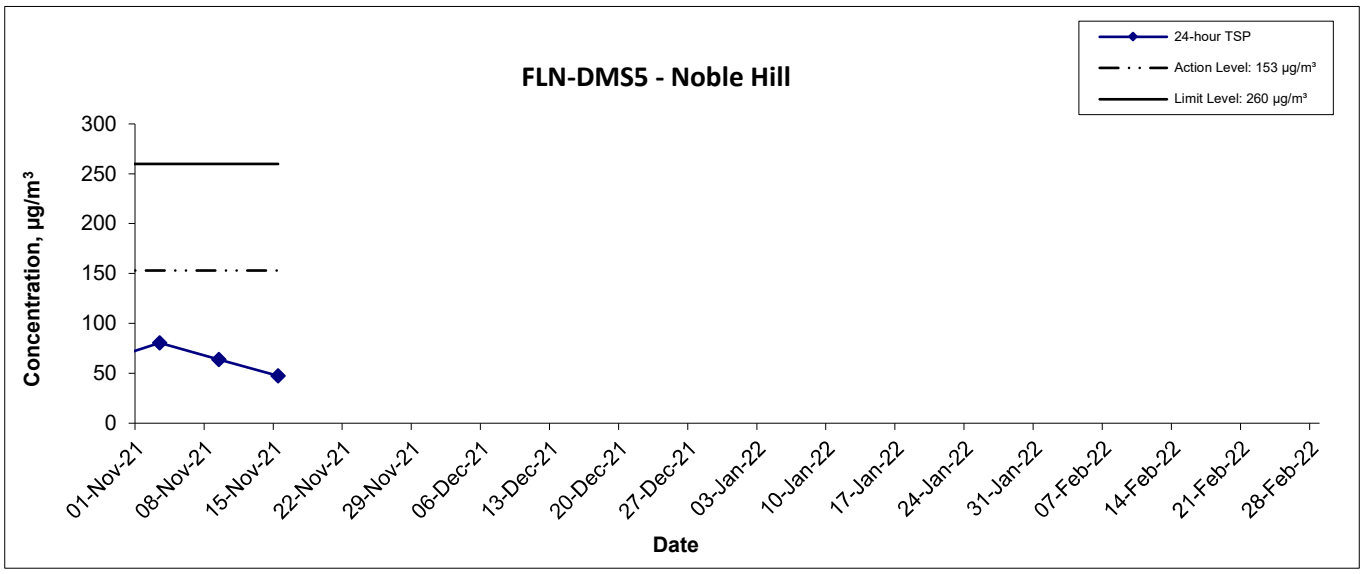


Title	Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	Scale N.T.S Date Feb 22	Project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

24-hr TSP Concentration Levels

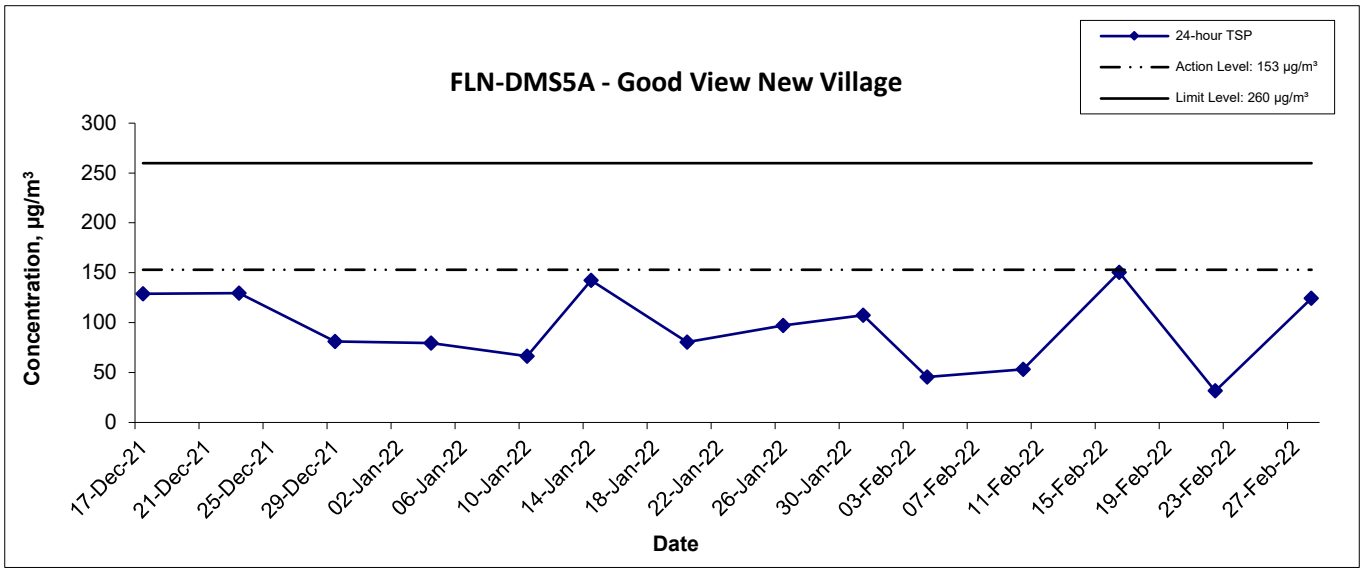


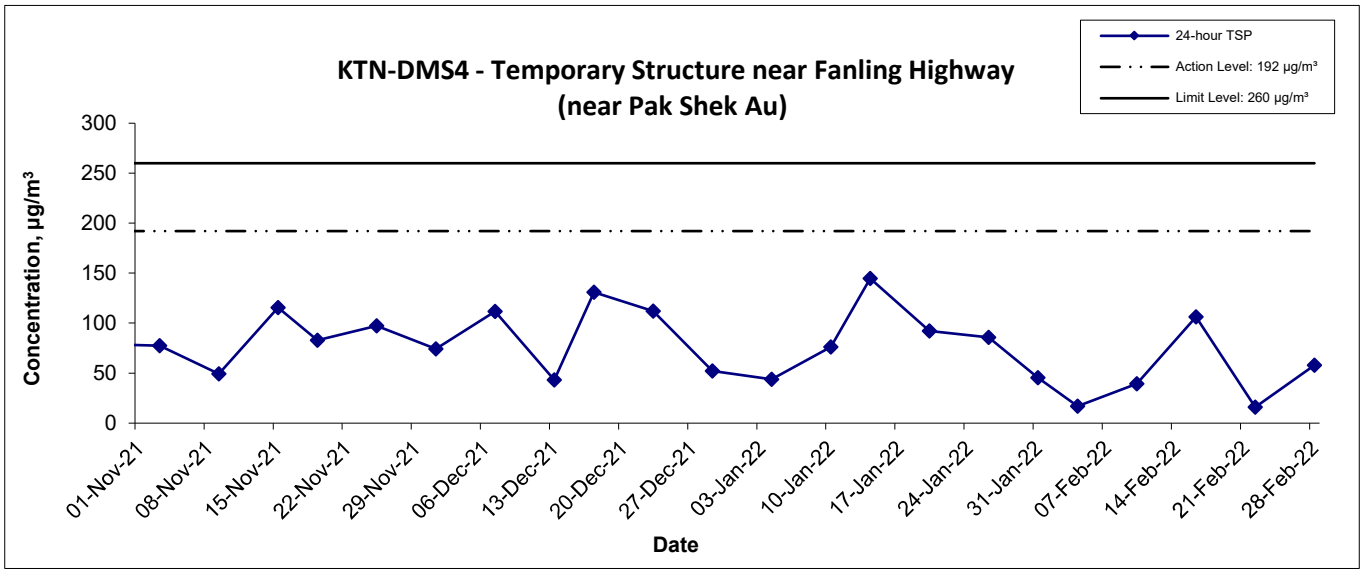




Title: Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 24-hour TSP Monitoring Results	Scale: N.T.S	Project No.: WMA20002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

24-hr TSP Concentration Levels



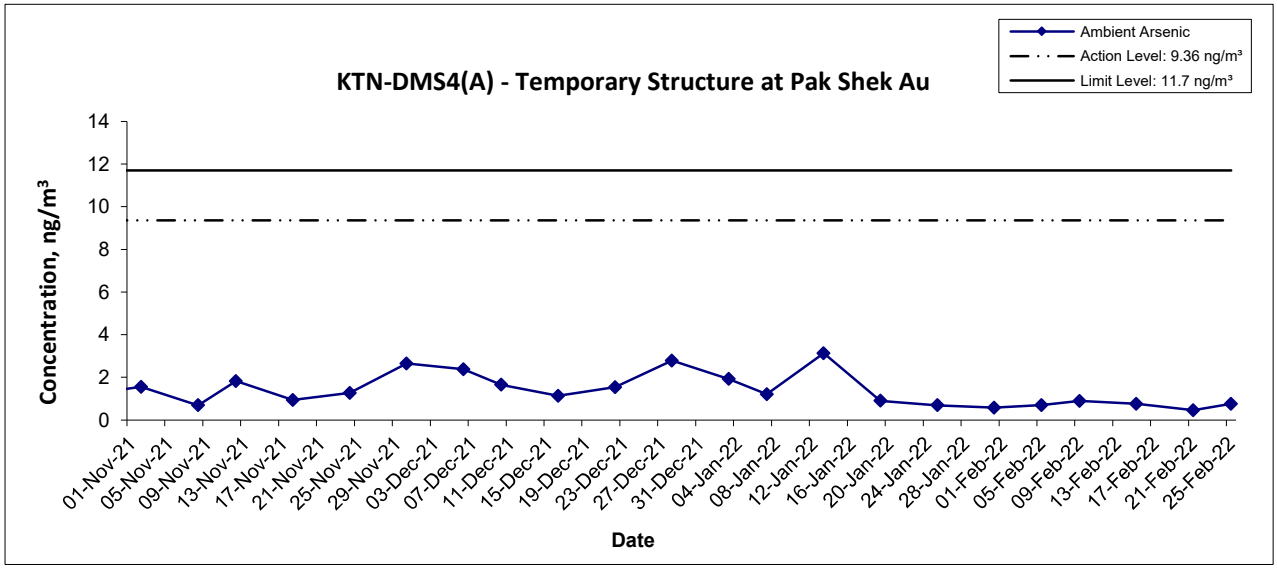


Title		Scale	Project No.	
	Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas	N.T.S	WMA20002	WELLAB 匯力 consulting . testing . research
	Graphical Presentation of 24-hour TSP Monitoring Results	Date: Feb 22	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-Feb-22	1.1	1580.4	0.70
9-Feb-22	1.4	1572.9	0.89
15-Feb-22	1.2	1574.1	0.76
21-Feb-22	0.7	1575.9	0.46
25-Feb-22	1.2	1578.6	0.76

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	WELLAB 匯力 consulting . testing . research
	Date: Feb 22	Appendix: E	

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Website : www.wellab.com.hk

TEST REPORT

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

ATTN: **Ms Ivy Tam**

Report No.:	36312
Date of Issue:	2022-02-11
Date Received:	2022-02-07
Date Tested:	2022-02-07
Date Completed:	2022-02-11
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36312
Project No. : WMA 20002
Project Title: Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 µg

Results:

Sample ID	210906/021
Sample No.	36312-1
Arsenic (µg)	1.1

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

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

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

PATRICK TSE
General Manager

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TEST REPORT

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

Report No.:	QC 36312
Date of Issue:	2022-02-11
Date Received:	2022-02-07
Date Tested:	2022-02-07
Date Completed:	2022-02-11

ATTN: **Ms Ivy Tam**

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.09	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	110	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	98	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	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 36312

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General Manager

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TEST REPORT

Report No.:	QC 36312
Date of Issue:	2022-02-11
Date Received:	2022-02-07
Date Tested:	2022-02-07
Date Completed:	2022-02-11
Page:	2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	101	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	9	RPD≤20%

Serial dilution check

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36312

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TEST REPORT

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

ATTN: **Ms Ivy Tam**

Report No.:	36326-V1
Date of Issue:	2022-03-14
Date Received:	2022-02-10
Date Tested:	2022-02-10
Date Completed:	2022-02-15
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36326
Project No. : WMA 20002
Project Title: Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 µg

Results:

Sample ID	210906/022
Sample No.	36326-1
Arsenic (µg)	1.4

Remarks: 1) < = less than
2) Results for the test material reported as received
3) This report supersedes the one dated 2022/02/15 with certificate number 36326

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TEST REPORT

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

Report No.:	QC 36326
Date of Issue:	2022-02-15
Date Received:	2022-02-10
Date Tested:	2022-02-10
Date Completed:	2022-02-15
Page:	1 of 2

ATTN: **Ms Ivy Tam**

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.09	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	101	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	99	90-110

Interference check solution A

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

Interference check solution AB

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36326

****

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General Manager

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TEST REPORT

Report No.:	QC 36326
Date of Issue:	2022-02-15
Date Received:	2022-02-10
Date Tested:	2022-02-10
Date Completed:	2022-02-15

QC report:

Matrix Spike

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

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	6	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	104	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36326

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TEST REPORT

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

ATTN: **Ms Ivy Tam**

Report No.:	36349
Date of Issue:	2022-02-21
Date Received:	2022-02-15
Date Tested:	2022-02-15
Date Completed:	2022-02-21
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36349
Project No. : WMA 20002
Project Title: Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 μg

Results:

Sample ID	210906/023
Sample No.	36349-1
Arsenic (μg)	1.2

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

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PATRICK TSE
General Manager

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TEST REPORT

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

ATTN: **Ms Ivy Tam**

Report No.:	QC 36349
Date of Issue:	2022-02-21
Date Received:	2022-02-15
Date Tested:	2022-02-15
Date Completed:	2022-02-21
Page:	1 of 2

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.09	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	103	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	107	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	106	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36349

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General Manager

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TEST REPORT

Report No.:	QC 36349
Date of Issue:	2022-02-21
Date Received:	2022-02-15
Date Tested:	2022-02-15
Date Completed:	2022-02-21

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	88	75-125

Filter Duplicate

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

Serial dilution check

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36349

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TEST REPORT

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

ATTN: **Ms Ivy Tam**

Report No.:	36373
Date of Issue:	2022-02-28
Date Received:	2022-02-22
Date Tested:	2022-02-22
Date Completed:	2022-02-28
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36373
Project No. : WMA 20002
Project Title: Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 µg

Results:

Sample ID	210906/024
Sample No.	36373-1
Arsenic (µg)	0.72

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

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

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

PATRICK TSE
General Manager

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

TEST REPORT

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

Report No.:	QC 36373
Date of Issue:	2022-02-28
Date Received:	2022-02-22
Date Tested:	2022-02-22
Date Completed:	2022-02-28

ATTN: **Ms Ivy Tam**

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.09	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	95	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	102	90-110

Interference check solution A

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

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	88	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36373

****

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TEST REPORT

Report No.:	QC 36373
Date of Issue:	2022-02-28
Date Received:	2022-02-22
Date Tested:	2022-02-22
Date Completed:	2022-02-28
Page:	2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	91	75-125

Filter Duplicate

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

Serial dilution check

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36373

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TEST REPORT

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

ATTN: **Ms Ivy Tam**

Report No.:	36401
Date of Issue:	2022-03-03
Date Received:	2022-03-02
Date Tested:	2022-03-02
Date Completed:	2022-03-03
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 36401
Project No. : WMA 20002
Project Title: Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 µg

Results:

Sample ID	210906/025
Sample No.	36401-1
Arsenic (µg)	1.2

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

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TEST REPORT

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

Report No.:	QC 36401
Date of Issue:	2022-03-03
Date Received:	2022-02-22
Date Tested:	2022-02-22
Date Completed:	2022-03-03

ATTN: **Ms Ivy Tam**

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.09	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	102	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 (%)	93	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36401

****

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TEST REPORT

Report No.:	QC 36401
Date of Issue:	2022-03-03
Date Received:	2022-02-22
Date Tested:	2022-02-22
Date Completed:	2022-03-03
Page:	2 of 2

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	91	75-125

Filter Duplicate

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

Serial dilution check

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36401

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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-Feb-22	Sunny	13:45	71.1	72.4	69.0	70.9	69.9
		13:50	70.7	72.7	68.3		
		13:55	70.3	71.7	68.6		
		14:00	71.8	74.1	68.7		
		14:05	70.7	72.7	66.5		
		14:10	70.8	73.8	66.4		
9-Feb-22	Cloudy	10:15	71.7	73.8	68.1	72.9	
		10:20	71.1	73.4	68.3		
		10:25	74.2	77.7	68.6		
		10:30	72.1	75.4	62.8		
		10:35	71.9	74.3	68.4		
		10:40	74.9	77.0	72.1		
15-Feb-22	Sunny	13:00	69.6	71.8	67.0	69.9	
		13:05	70.1	72.8	66.4		
		13:10	70.4	72.2	65.8		
		13:15	69.8	72.4	66.5		
		13:20	69.0	72.2	61.8		
		13:25	70.4	73.0	64.7		
25-Feb-22	Sunny	09:01	68.4	71.9	61.2	70.2	
		09:06	72.2	75.9	60.1		
		09:11	71.4	74.8	62.8		
		09:16	68.5	71.9	63.2		
		09:21	70.4	74.8	62.4		
		09:26	68.3	72.2	60.7		

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-Feb-22	Sunny	15:30	54.6	56.4	52.5	54.8	59.6
		15:35	55.9	57.6	53.3		
		15:40	55.1	55.8	54.1		
		15:45	54.7	55.7	53.6		
		15:50	54.2	54.9	53.2		
		15:55	54.3	55.3	53.4		
9-Feb-22	Cloudy	09:30	58.2	59.3	56.4	62.8	
		09:35	61.4	62.9	56.2		
		09:40	65.3	70.2	56.4		
		09:45	62.6	66.9	58.4		
		09:50	64.7	69.5	59.0		
		09:55	60.8	62.6	58.6		
15-Feb-22	Sunny	14:20	56.5	57.1	53.5	57.9	
		14:25	56.1	58.5	53.4		
		14:30	57.1	58.6	54.9		
		14:35	60.7	61.4	56.5		
		14:40	57.4	59.1	55.5		
		14:45	57.8	59.0	56.1		
25-Feb-22	Sunny	13:05	64.3	64.3	59.5	62.1	
		13:10	61.8	63.8	58.9		
		13:15	63.1	62.9	58.7		
		13:20	61.4	63.9	58.5		
		13:25	60.3	62.1	58.4		
		13:30	60.0	61.5	58.6		

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}
10-Feb-22	Cloudy	09:30	53.8	56.8	48.4	53.9	58.6
		09:35	57.4	59.3	45.4		
		09:40	50.2	52.4	45.4		
		09:45	49.3	51.1	44.9		
		09:50	51.5	53.9	47.8		
		09:55	55.3	58.6	50.1		
16-Feb-22	Sunny	09:10	58.7	61.0	52.6	59.9	
		09:15	60.5	61.4	52.9		
		09:20	63.5	65.5	52.3		
		09:25	58.1	60.3	53.2		
		09:30	57.4	60.3	52.4		
		09:35	58.0	62.5	50.2		
25-Feb-22	Sunny	09:37	54.8	58.6	46.9	59.1	
		09:42	63.8	55.6	47.4		
		09:47	52.7	55.9	46.9		
		09:52	57.4	61.3	47.1		
		09:57	60.1	64.5	48.5		
		10:02	55.9	56.4	47.5		

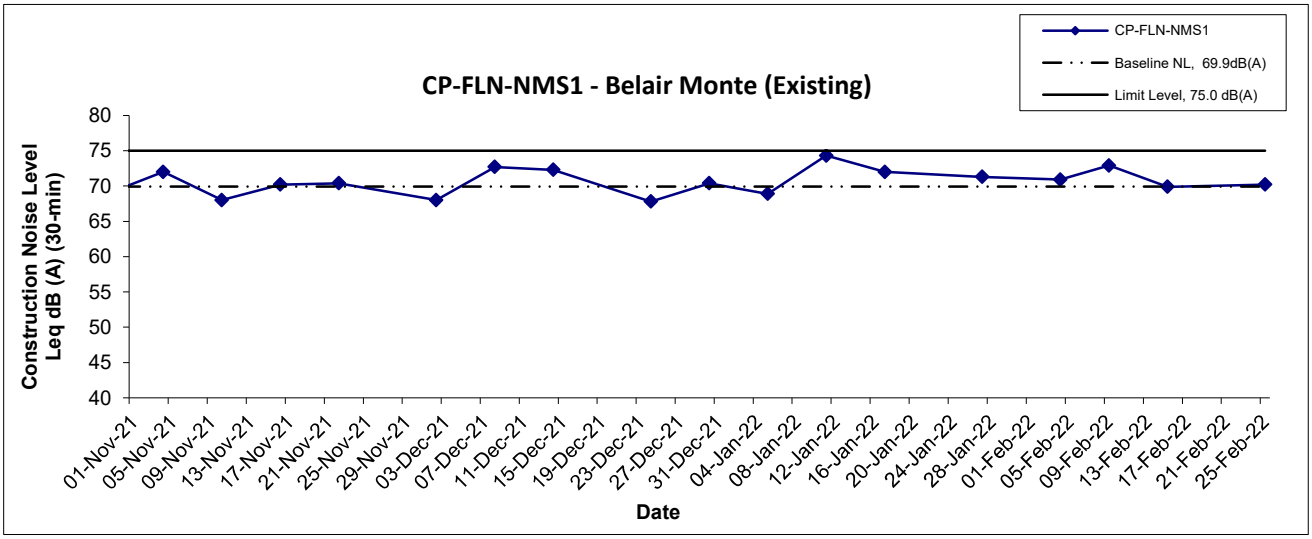
Location CP-KTN-NMS3 - Fung Kong Garden (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
10-Feb-22	Cloudy	10:15	50.1	53.4	40.9	46.4	51.6
		10:20	44.1	45.2	40.3		
		10:25	41.4	42.9	40.3		
		10:30	48.1	48.3	39.7		
		10:35	45.3	48.8	40.6		
		10:40	42.9	45.0	40.1		
16-Feb-22	Sunny	09:50	56.9	57.0	54.0	55.3	
		09:55	55.0	55.8	54.0		
		10:00	54.9	55.8	54.0		
		10:05	54.8	55.8	54.1		
		10:10	55.3	56.3	54.3		
		10:15	54.2	55.0	52.7		
25-Feb-22	Sunny	10:15	55.5	54.9	45.6	52.1	
		10:20	54.4	58.6	45.0		
		10:25	49.3	51.4	45.0		
		10:30	51.3	55.2	44.4		
		10:35	48.2	51.0	43.5		
		10:40	46.8	48.2	43.0		

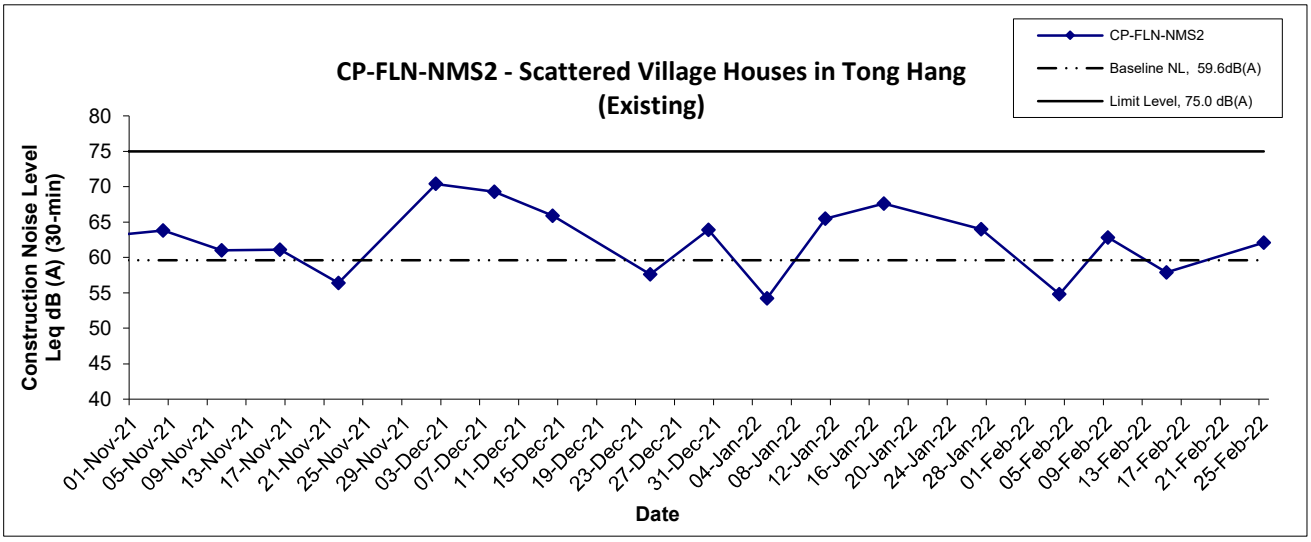
Appendix F - Noise Monitoring Results

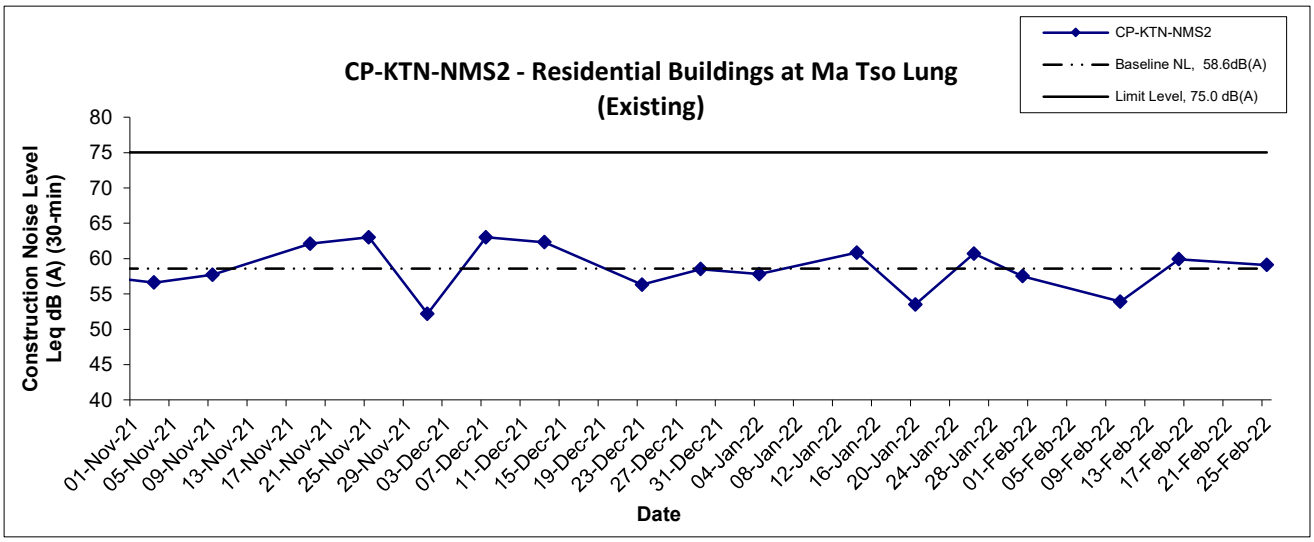
Location CP-KTN-NMS5 - N/A							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
10-Feb-22	Cloudy	16:50	64.7	66.9	57.9	64.2	57.2
		16:55	60.9	63.4	58.3		
		17:00	64.8	67.5	60.7		
		17:05	59.6	58.9	58.5		
		17:10	59.6	60.9	58.3		
		17:15	68.4	71.8	59.2		
16-Feb-22	Sunny	14:00	64.8	67.6	61.4	64.0	
		14:05	65.1	67.1	62.4		
		14:10	63.8	65.2	62.4		
		14:15	63.9	64.9	62.3		
		14:20	63.0	64.0	61.8		
		14:25	63.0	63.9	61.9		
25-Feb-22	Sunny	10:50	55.0	56.1	53.5	55.5	
		10:55	56.3	59.8	53.1		
		11:00	55.7	56.6	53.6		
		11:05	56.2	59.2	53.2		
		11:10	54.2	54.4	53.2		
		11:15	55.0	55.6	53.0		

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}
10-Feb-22	Cloudy	11:05	53.4	55.6	42.3	57.0	55.1
		11:10	53.9	55.8	41.1		
		11:15	60.4	59.3	41.2		
		11:20	49.0	49.6	40.2		
		11:25	55.2	59.4	42.4		
		11:30	60.2	61.6	43.1		
16-Feb-22	Sunny	10:40	55.4	56.4	54.3	58.5	
		10:45	56.9	57.5	54.3		
		10:50	59.8	62.1	54.2		
		10:55	56.3	58.5	52.6		
		11:00	61.0	61.2	54.6		
		11:05	58.9	60.6	54.4		
25-Feb-22	Sunny	11:28	55.1	58.4	49.7	59.3	
		11:33	59.4	58.3	48.9		
		11:38	64.4	68.7	52.7		
		11:43	58.7	60.9	48.8		
		11:48	54.4	54.4	48.4		
		11:53	52.5	55.5	47.4		

Noise Levels

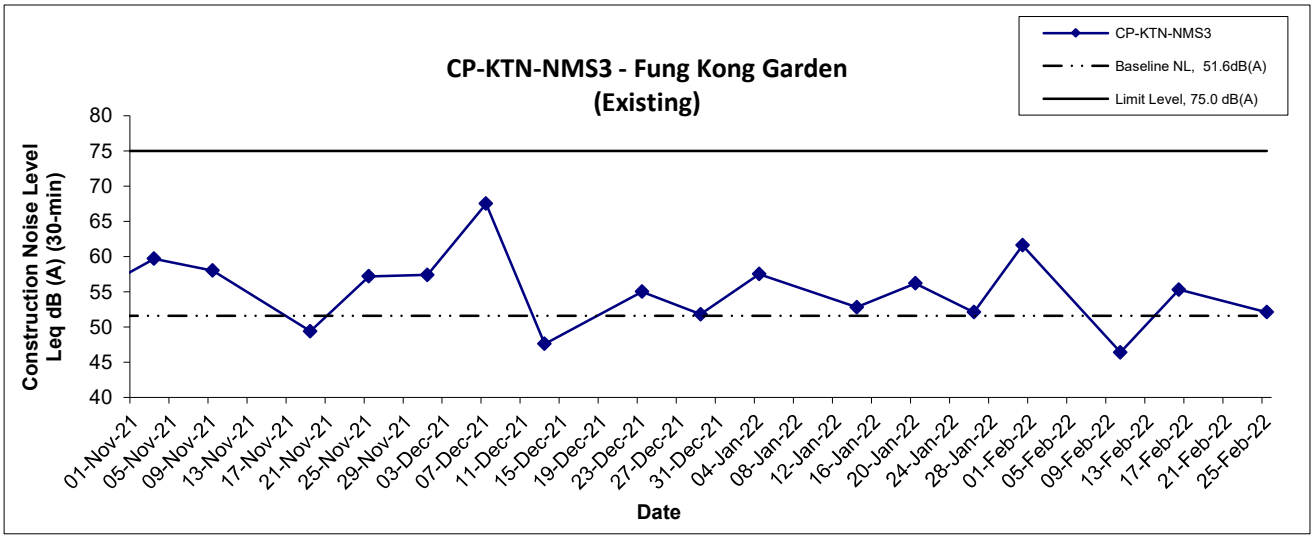


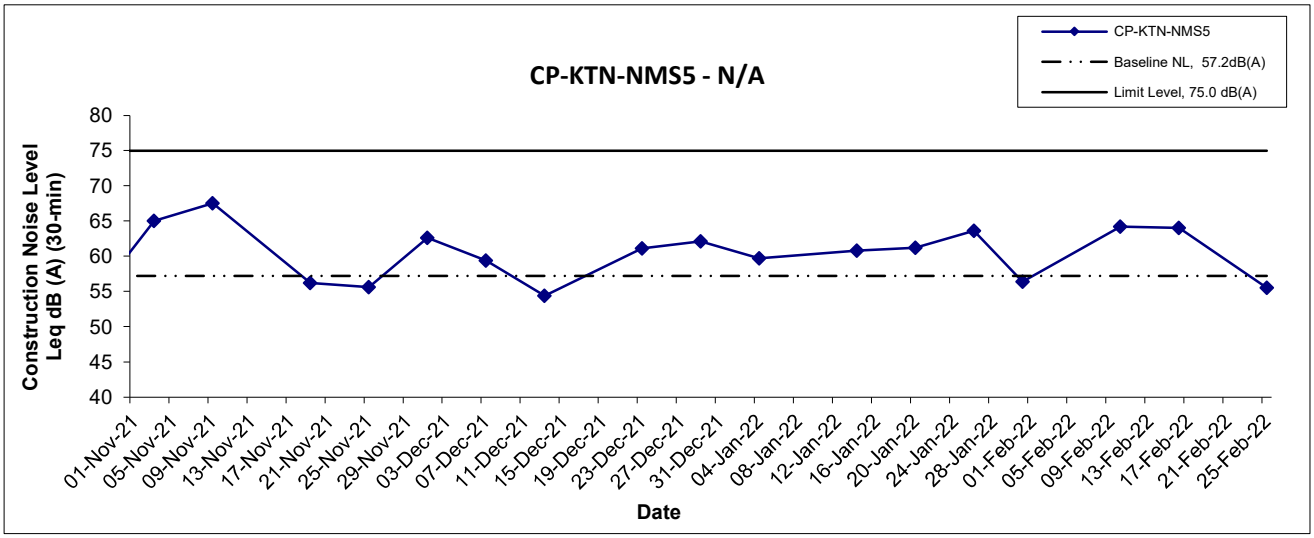


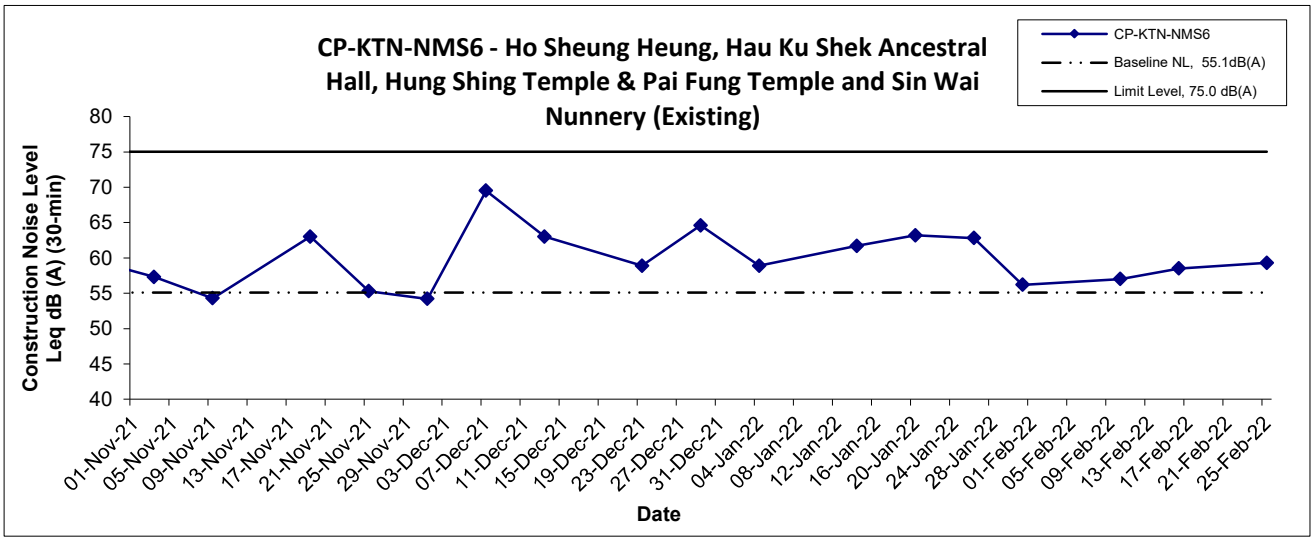


Title: Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S Date: Feb 22	Project No.: WMA20002 Appendix: F	WELLAB 匯力 consulting . testing . research

Noise Levels







Title: Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S Date: Feb 22	Project No.: WMA20002 Appendix: F	WELLAB 匯力 consulting . testing . research

APPENDIX G
WATER QUALITY MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

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

Location: SYR-CS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)		Arsenic (µg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
4-Feb-22	Cloudy	12:02	Middle	0.2	17.4 17.5	17.5	7.3 7.3	7.3	0.1 0.1	0.1	76.0 75.8	75.9	7.3 7.3	7.3	5.3 5.5	5.4	10 8	9.0	7 6	6.5
7-Feb-22	Cloudy	11:16	Middle	0.2	17.8 17.8	17.8	7.1 7.1	7.1	0.1 0.1	0.1	61.5 61.3	61.4	5.8 5.8	5.8	5.1 5.1	5.1	11 9	10.0	7 7	7.0
9-Feb-22	Cloudy	13:45	Middle	0.1	17.7 17.7	17.7	7.2 7.2	7.2	0.1 0.1	0.1	70.3 70.0	70.2	6.7 6.7	6.7	6.4 6.2	6.3	5 5	5.0	6 7	6.5
11-Feb-22	Sunny	11:20	Middle	0.2	18.3 18.3	18.3	7.6 7.6	7.6	0.1 0.1	0.1	23.6 23.5	23.6	2.2 2.2	2.2	9.4 9.5	9.5	40 36	38.0	7 7	7.0
14-Feb-22	Sunny	12:10	Middle	0.2	18.7 18.7	18.7	7.4 7.4	7.4	0.4 0.4	0.4	65.2 65.0	65.1	6.1 6.1	6.1	8.3 8.2	8.3	8 8	8.0	6 6	6.0
16-Feb-22	Sunny	09:34	Middle	0.1	18.3 18.3	18.3	7.7 7.7	7.7	0.2 0.2	0.2	13.8 13.5	13.7	1.3 1.3	1.3	10.6 10.5	10.6	10 10	10.0	15 14	14.5
18-Feb-22	Sunny	10:35	Middle	0.1	18.1 18.1	18.1	7.5 7.5	7.5	0.1 0.1	0.1	19.6 18.5	19.1	1.9 1.8	1.9	7.9 8.0	8.0	8 7	7.5	9 9	9.0
21-Feb-22	Rainy	12:38	Middle	0.3	11.6 11.6	11.6	7.9 7.9	7.9	0.4 0.4	0.4	75.5 75.5	75.5	8.2 8.2	8.2	18.5 18.2	18.4	13 12	12.5	10 10	10.0
23-Feb-22	Sunny	12:08	Middle	0.2	14.5 14.6	14.6	7.7 7.7	7.7	0.2 0.2	0.2	93.3 93.3	93.3	9.5 9.5	9.5	14.0 14.0	14.0	10 12	11.0	6 6	6.0
25-Feb-22	Sunny	11:40	Middle	0.2	17.2 17.2	17.2	7.3 7.3	7.3	0.4 0.4	0.4	64.9 64.6	64.8	6.2 6.2	6.2	6.6 6.6	6.6	14 17	15.5	6 6	6.0
28-Feb-22	Sunny	10:26	Middle	0.2	18.6 18.6	18.6	6.9 6.9	6.9	0.2 0.2	0.2	33.1 33.0	33.1	3.1 3.1	3.1	5.4 5.4	5.4	7 8	7.5	5 6	5.5

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

Location: SYR-IS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)		Arsenic (μg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
4-Feb-22	Cloudy	11:41	Middle	0.2	18.9 18.9	18.9	7.2 7.2	7.2	0.3 0.3	0.3	84.1 84.0	84.1	7.8 7.8	7.8	10.8 10.4	10.6	29 31	30.0	3 3	3.0
7-Feb-22	Cloudy	11:28	Middle	0.2	17.8 17.8	17.8	7.3 7.3	7.3	0.2 0.2	0.2	67.1 66.9	67.0	6.4 6.4	6.4	18.5 18.6	18.6	25 30	27.5	5 4	4.5
9-Feb-22	Cloudy	13:06	Middle	0.3	18.0 18.0	18.0	7.2 7.2	7.2	0.2 0.2	0.2	65.6 65.7	65.7	6.2 6.2	6.2	21.1 20.6	20.9	26 28	27.0	4 4	4.0
11-Feb-22	Sunny	11:45	Middle	0.5	19.6 19.6	19.6	7.8 7.8	7.8	0.2 0.2	0.2	67.6 67.5	67.6	6.2 6.2	6.2	40.5 40.8	40.7	72 74	73.0	7 8	7.5
14-Feb-22	Sunny	12:25	Middle	0.2	20.3 20.3	20.3	7.4 7.4	7.4	0.3 0.3	0.3	80.1 80.1	80.1	7.2 7.2	7.2	20.2 20.1	20.2	31 29	30.0	5 5	5.0
16-Feb-22	Sunny	09:53	Middle	0.3	19.3 19.3	19.3	7.9 7.8	7.9	0.3 0.3	0.3	68.0 67.7	67.9	6.3 6.2	6.3	20.1 20.3	20.2	32 37	34.5	5 6	5.5
18-Feb-22	Sunny	10:53	Middle	0.5	18.3 18.3	18.3	7.8 7.8	7.8	0.2 0.2	0.2	73.3 72.3	72.8	6.9 6.8	6.9	28.1 28.2	28.2	45 42	43.5	7 6	6.5
21-Feb-22	Rainy	12:54	Middle	0.3	11.7 11.7	11.7	7.6 7.6	7.6	0.1 0.1	0.1	74.8 74.8	74.8	8.1 8.1	8.1	39.6 39.6	39.6	36 40	38.0	9 9	9.0
23-Feb-22	Sunny	12:17	Middle	0.3	15.3 15.3	15.3	7.5 7.4	7.5	0.1 0.1	0.1	86.2 86.0	86.1	8.6 8.6	8.6	39.5 40.6	40.1	33 36	34.5	6 6	6.0
25-Feb-22	Sunny	11:58	Middle	0.3	18.2 18.2	18.2	7.3 7.3	7.3	0.2 0.2	0.2	78.7 78.6	78.7	7.4 7.4	7.4	12.1 12.2	12.2	24 22	23.0	6 6	6.0
28-Feb-22	Sunny	10:58	Middle	0.3	19.9 19.9	19.9	7.3 7.3	7.3	0.3 0.3	0.3	69.0 69.0	69.0	6.3 6.3	6.3	19.1 20.0	19.6	31 26	28.5	6 6	6.0

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

Location: NTR-CS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
4-Feb-22	Cloudy	10:04	Middle	0.3	18.5 18.5	18.5	7.1 7.1	7.1	0.1 0.1	0.1	109.5 109.4	109.5	10.3 10.3	10.3	5.0 5.0	5.0	8 8	8.0
7-Feb-22	Cloudy	13:25	Middle	0.2	18.0 18.0	18.0	7.2 7.1	7.2	0.1 0.1	0.1	86.2 86.1	86.2	8.2 8.1	8.2	7.0 7.1	7.1	12 12	12.0
9-Feb-22	Cloudy	11:50	Middle	0.1	17.6 17.5	17.6	7.3 7.3	7.3	0.1 0.1	0.1	103.2 103.3	103.3	9.9 9.9	9.9	6.5 6.4	6.5	6 7	6.5
11-Feb-22	Sunny	10:46	Middle	0.1	19.5 19.5	19.5	7.7 7.7	7.7	0.1 0.1	0.1	100.5 100.5	100.5	9.2 9.2	9.2	8.9 9.0	9.0	11 10	10.5
14-Feb-22	Sunny	13:37	Middle	0.2	21.9 21.9	21.9	7.3 7.3	7.3	0.1 0.1	0.1	109.6 109.8	109.7	9.6 9.6	9.6	5.2 5.3	5.3	8 8	8.0
16-Feb-22	Sunny	11:33	Middle	0.1	21.9 21.9	21.9	8.1 8.1	8.1	0.1 0.1	0.1	100.5 100.5	100.5	8.8 8.8	8.8	10.8 10.7	10.8	10 8	9.0
18-Feb-22	Sunny	10:03	Middle	0.1	17.7 17.7	17.7	7.7 7.7	7.7	0.1 0.1	0.1	88.5 88.5	88.5	8.4 8.4	8.4	10.1 10.1	10.1	12 12	12.0
21-Feb-22	Rainy	14:36	Middle	0.3	12.6 12.6	12.6	7.5 7.5	7.5	0.1 0.1	0.1	81.9 81.7	81.8	8.7 8.7	8.7	27.4 27.6	27.5	20 19	19.5
23-Feb-22	Sunny	13:01	Middle	0.3	15.8 15.9	15.9	7.0 7.0	7.0	0.1 0.1	0.1	94.6 94.6	94.6	9.4 9.4	9.4	4.5 4.6	4.6	3 3	3.0
25-Feb-22	Sunny	13:52	Middle	0.3	22.9 23.0	23.0	7.2 7.2	7.2	0.1 0.1	0.1	119.6 119.8	119.7	10.3 10.3	10.3	3.2 3.1	3.2	4 3	3.5
28-Feb-22	Sunny	11:24	Middle	0.3	20.7 20.7	20.7	7.6 7.6	7.6	0.1 0.1	0.1	117.9 118.1	118.0	10.6 10.6	10.6	6.7 6.7	6.7	10 10	10.0

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

Location: NTR-IS1

Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
4-Feb-22	Cloudy	11:20	Middle	0.3	18.1 18.1	18.1	7.2 7.2	7.2	0.1 0.1	0.1	71.8 71.8	71.8	6.8 6.8	6.8	5.8 5.9	5.9	8 7	7.5
7-Feb-22	Cloudy	11:53	Middle	0.3	17.5 17.5	17.5	7.1 7.1	7.1	0.1 0.1	0.1	74.4 74.2	74.3	7.1 7.1	7.1	6.7 6.9	6.8	12 12	12.0
9-Feb-22	Cloudy	11:00	Middle	0.6	17.9 17.9	17.9	7.2 7.2	7.2	0.1 0.1	0.1	67.5 67.6	67.6	6.4 6.4	6.4	6.1 6.1	6.1	7 7	7.0
11-Feb-22	Sunny	09:28	Middle	0.6	18.2 18.2	18.2	8.0 8.0	8.0	0.1 0.1	0.1	62.5 62.0	62.3	5.9 5.9	5.9	8.1 8.0	8.1	6 5	5.5
14-Feb-22	Sunny	12:48	Middle	0.3	19.8 19.9	19.9	7.3 7.3	7.3	0.1 0.1	0.1	72.3 72.2	72.3	6.6 6.6	6.6	5.7 5.7	5.7	8 8	8.0
16-Feb-22	Sunny	10:29	Middle	0.5	19.3 19.3	19.3	7.9 7.9	7.9	0.1 0.1	0.1	64.2 64.2	64.2	5.9 5.9	5.9	10.6 10.7	10.7	10 10	10.0
18-Feb-22	Sunny	09:00	Middle	0.7	17.2 17.2	17.2	8.0 7.9	8.0	0.1 0.1	0.1	67.1 67.0	67.1	6.5 6.4	6.5	10.2 10.1	10.2	13 12	12.5
21-Feb-22	Rainy	14:03	Middle	0.5	12.1 12.1	12.1	7.7 7.7	7.7	0.1 0.1	0.1	86.1 85.7	85.9	9.3 9.2	9.3	27.6 27.7	27.7	20 25	22.5
23-Feb-22	Sunny	12:39	Middle	0.4	14.4 14.4	14.4	7.3 7.3	7.3	0.1 0.1	0.1	88.1 88.0	88.1	9.0 9.0	9.0	44.5 44.8	44.7	25 28	26.5
25-Feb-22	Sunny	12:37	Middle	0.4	18.5 18.6	18.6	7.2 7.2	7.2	0.1 0.1	0.1	79.6 79.5	79.6	7.5 7.4	7.5	3.6 3.7	3.7	3 3	3.0
28-Feb-22	Sunny	12:20	Middle	0.3	22.7 22.8	22.8	8.7 8.6	8.7	0.1 0.1	0.1	80.7 80.5	80.6	7.0 6.9	7.0	5.8 5.8	5.8	10 10	10.0

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

Location: SHST-IS2

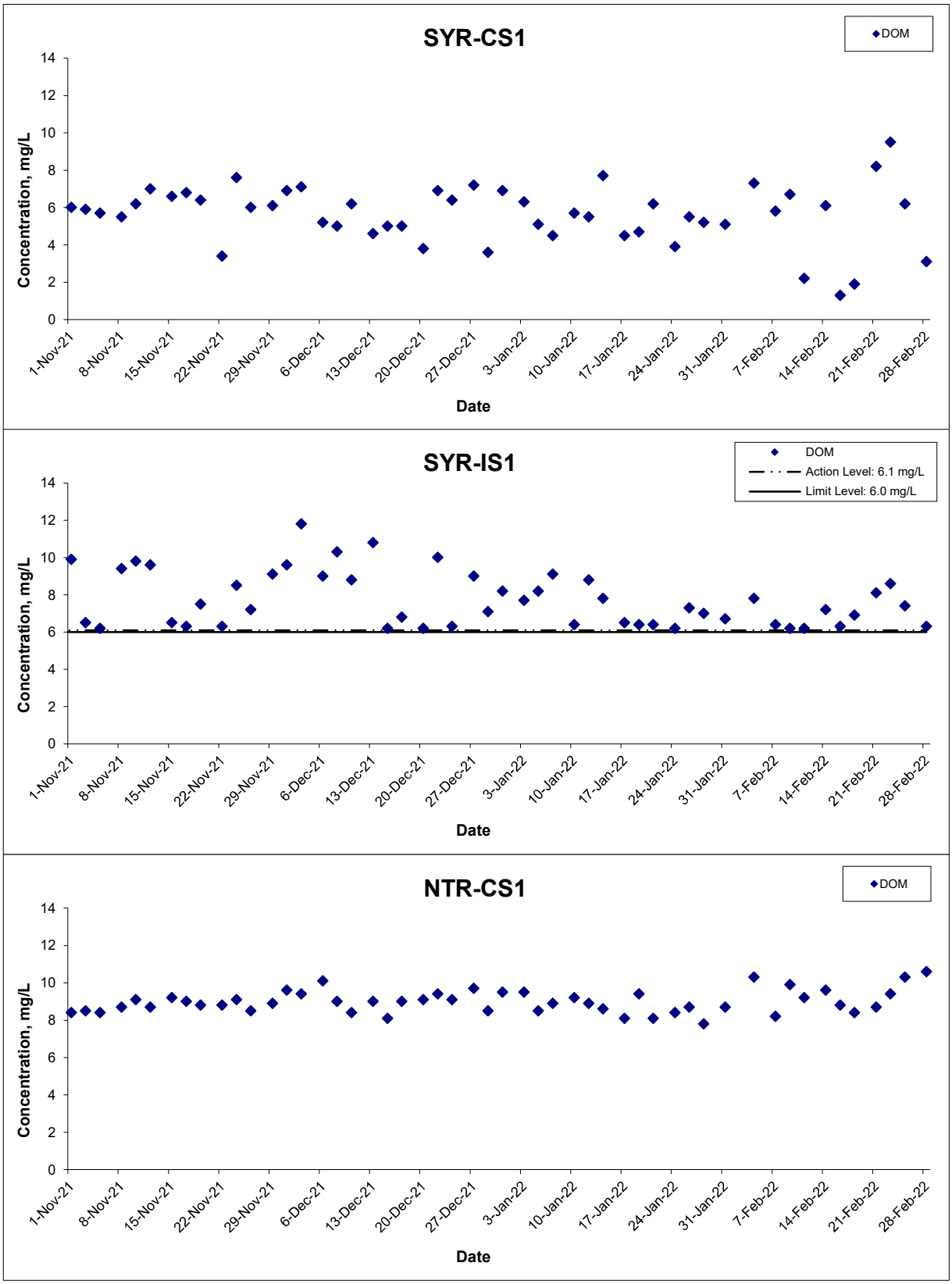
Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
4-Feb-22	Cloudy	10:30	Middle	0.3	17.4 17.4	17.4	7.5 7.5	7.5	0.1 0.1	0.1	96.5 96.4	96.5	9.2 9.2	9.2	5.0 5.1	5.1	4 5	4.5
7-Feb-22	Cloudy	14:00	Middle	0.3	17.1 17.1	17.1	7.5 7.5	7.5	0.1 0.1	0.1	92.8 92.7	92.8	9.0 8.9	9.0	7.7 7.7	7.7	9 10	9.5
9-Feb-22	Cloudy	11:17	Middle	0.1	16.9 16.9	16.9	7.5 7.5	7.5	0.1 0.1	0.1	93.5 93.2	93.4	9.0 9.0	9.0	7.7 7.7	7.7	7 7	7.0
11-Feb-22	Sunny	09:45	Middle	0.1	18.1 18.1	18.1	8.3 8.3	8.3	0.1 0.1	0.1	85.2 84.9	85.1	8.0 8.0	8.0	9.3 9.3	9.3	6 7	6.5
14-Feb-22	Sunny	14:10	Middle	0.2	20.8 20.8	20.8	7.4 7.4	7.4	0.1 0.1	0.1	87.5 87.4	87.5	7.8 7.8	7.8	5.7 5.7	5.7	6 6	6.0
16-Feb-22	Sunny	10:46	Middle	0.1	18.9 18.9	18.9	8.2 8.2	8.2	0.1 0.1	0.1	87.3 87.1	87.2	8.1 8.1	8.1	10.5 11.0	10.8	8 8	8.0
18-Feb-22	Sunny	09:21	Middle	0.1	16.9 16.9	16.9	7.9 7.9	7.9	0.1 0.1	0.1	81.2 81.2	81.2	7.9 7.9	7.9	11.7 11.9	11.8	13 14	13.5
21-Feb-22	Rainy	15:11	Middle	0.5	11.8 11.8	11.8	7.4 7.4	7.4	0.1 0.1	0.1	86.2 86.2	86.2	9.3 9.3	9.3	26.2 26.1	26.2	17 14	15.5
23-Feb-22	Sunny	13:37	Middle	0.4	16.9 16.9	16.9	7.3 7.3	7.3	0.2 0.2	0.2	96.4 96.4	96.4	9.3 9.3	9.3	15.3 15.1	15.2	8 8	8.0
25-Feb-22	Sunny	14:30	Middle	0.4	20.5 20.5	20.5	7.2 7.2	7.2	0.1 0.1	0.1	99.3 99.4	99.4	8.9 8.9	8.9	4.0 4.0	4.0	3 3	3.0
28-Feb-22	Sunny	12:00	Middle	0.4	20.4 20.4	20.4	7.7 7.7	7.7	0.1 0.1	0.1	92.5 92.3	92.4	8.3 8.3	8.3	7.4 7.3	7.4	8 8	8.0

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

Location: MWR-IS3

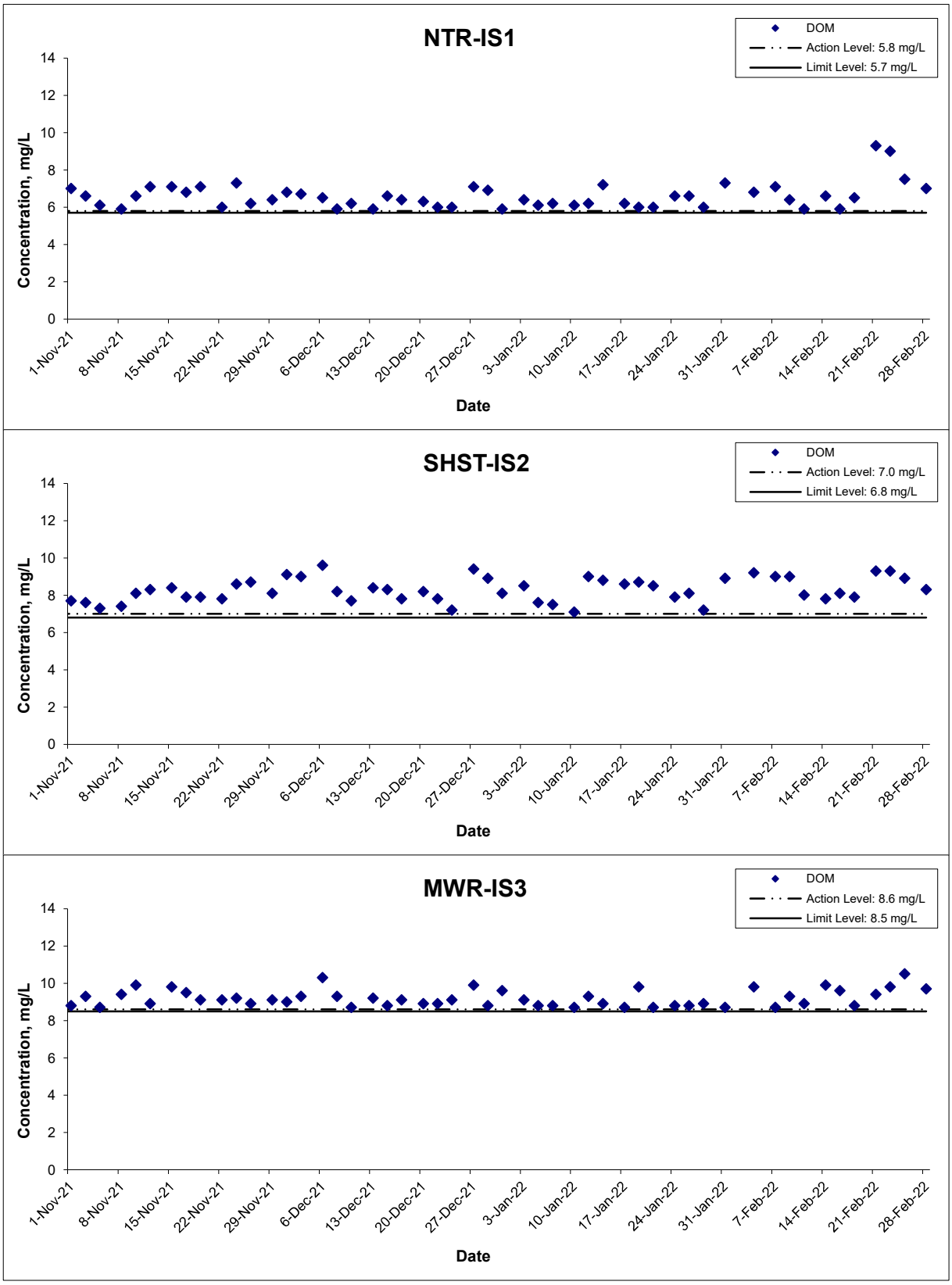
Date	Weather Condition	Start Time	Sampling Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
4-Feb-22	Cloudy	10:12	Middle	0.2	18.7 18.7	18.7	7.3 7.3	7.3	0.1 0.1	0.1	104.6 104.8	104.7	9.8 9.8	9.8	3.6 3.4	3.5	6 6	6.0
7-Feb-22	Cloudy	13:43	Middle	0.2	18.0 18.0	18.0	7.3 7.3	7.3	0.1 0.1	0.1	91.5 91.7	91.6	8.7 8.7	8.7	5.5 5.6	5.6	14 14	14.0
9-Feb-22	Cloudy	11:35	Middle	0.2	17.5 17.5	17.5	7.3 7.3	7.3	0.1 0.1	0.1	97.6 97.6	97.6	9.3 9.3	9.3	5.1 5.3	5.2	7 7	7.0
11-Feb-22	Sunny	10:26	Middle	0.1	19.8 19.8	19.8	8.1 8.1	8.1	0.2 0.2	0.2	97.1 97.4	97.3	8.9 8.9	8.9	9.2 9.3	9.3	10 11	10.5
14-Feb-22	Sunny	13:56	Middle	0.2	22.0 22.0	22.0	7.3 7.3	7.3	0.1 0.1	0.1	112.7 112.8	112.8	9.9 9.9	9.9	4.6 4.5	4.6	11 12	11.5
16-Feb-22	Sunny	11:19	Middle	0.1	19.3 19.3	19.3	8.1 8.1	8.1	0.1 0.1	0.1	104.0 104.0	104.0	9.6 9.6	9.6	5.7 5.7	5.7	6 5	5.5
18-Feb-22	Sunny	09:52	Middle	0.1	17.5 17.5	17.5	7.8 7.8	7.8	0.1 0.1	0.1	91.3 91.7	91.5	8.7 8.8	8.8	8.9 8.9	8.9	9 11	10.0
21-Feb-22	Rainy	15:37	Middle	0.4	12.4 12.3	12.4	7.7 7.7	7.7	0.1 0.1	0.1	88.3 88.0	88.2	9.4 9.4	9.4	32.3 32.4	32.4	23 22	22.5
23-Feb-22	Sunny	13:15	Middle	0.3	16.1 16.1	16.1	7.3 7.2	7.3	0.1 0.1	0.1	99.4 99.4	99.4	9.8 9.8	9.8	7.3 7.3	7.3	7 7	7.0
25-Feb-22	Sunny	14:13	Middle	0.3	21.2 21.2	21.2	7.1 7.1	7.1	0.1 0.1	0.1	117.8 118.1	118.0	10.5 10.5	10.5	2.9 2.8	2.9	4 4	4.0
28-Feb-22	Sunny	11:42	Middle	0.3	20.4 20.4	20.4	7.7 7.7	7.7	0.1 0.1	0.1	107.9 108.0	108.0	9.7 9.7	9.7	8.8 8.7	8.8	12 12	12.0

Dissolved Oxygen (Middle)



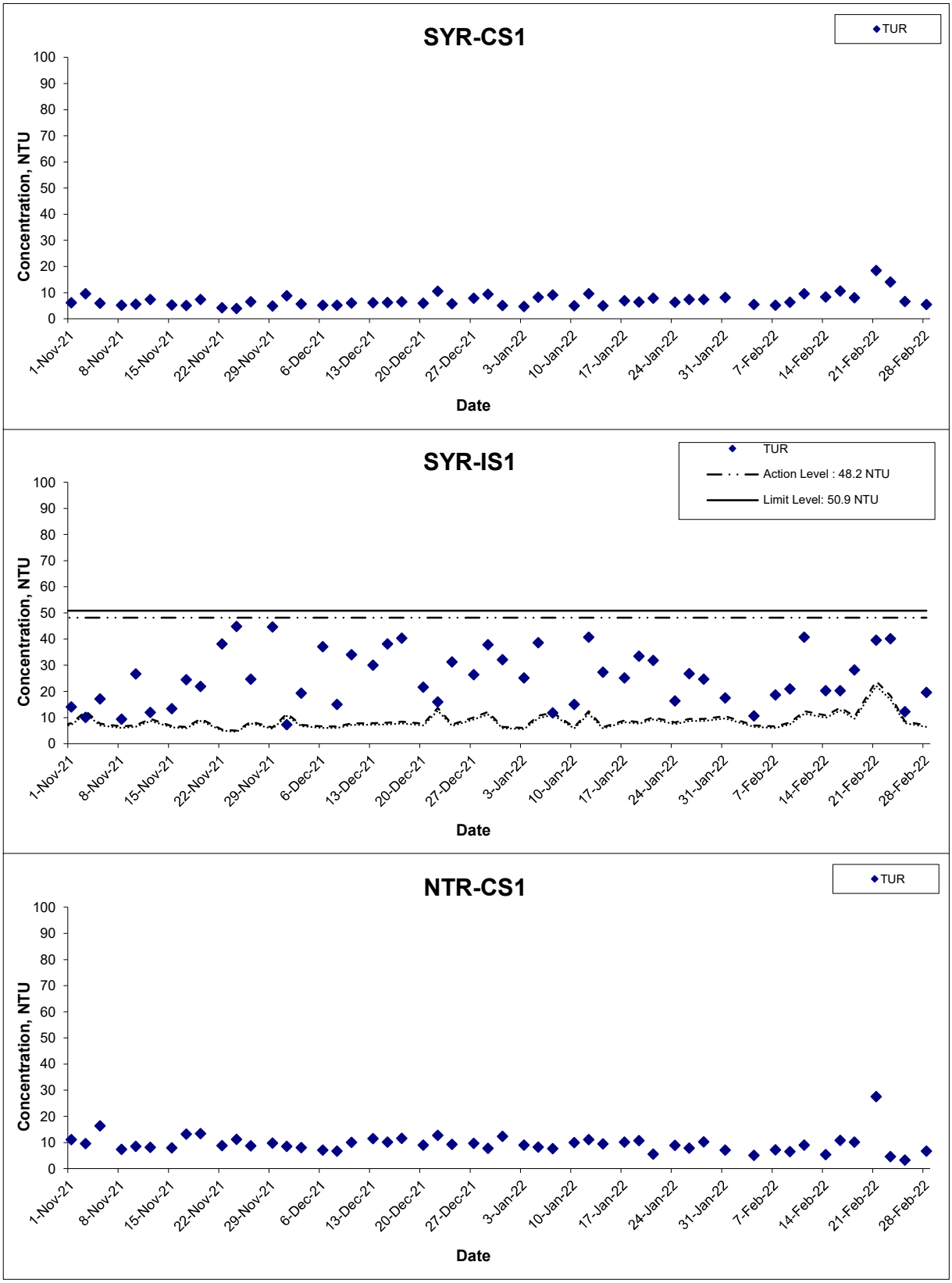
Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S Date: Feb 22	Project No.: WMA20002 Appendix: G	WELLAB 匯力 consulting . testing . research

Dissolved Oxygen (Middle)



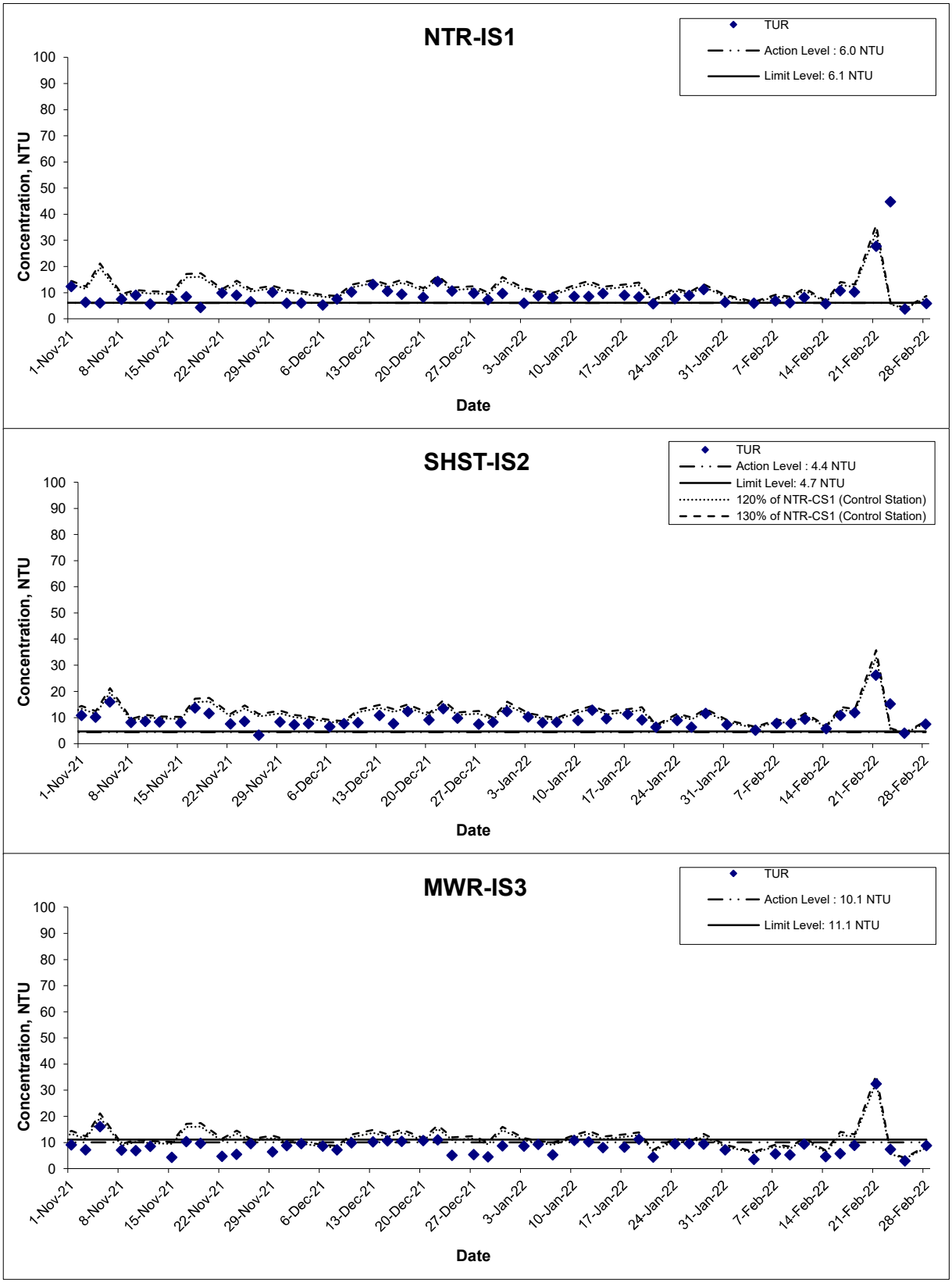
Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S Date: Feb 22	Project No.: WMA20002 Appendix: G	WELLAB 匯力 consulting . testing . research

Turbidity (Depth-averaged)



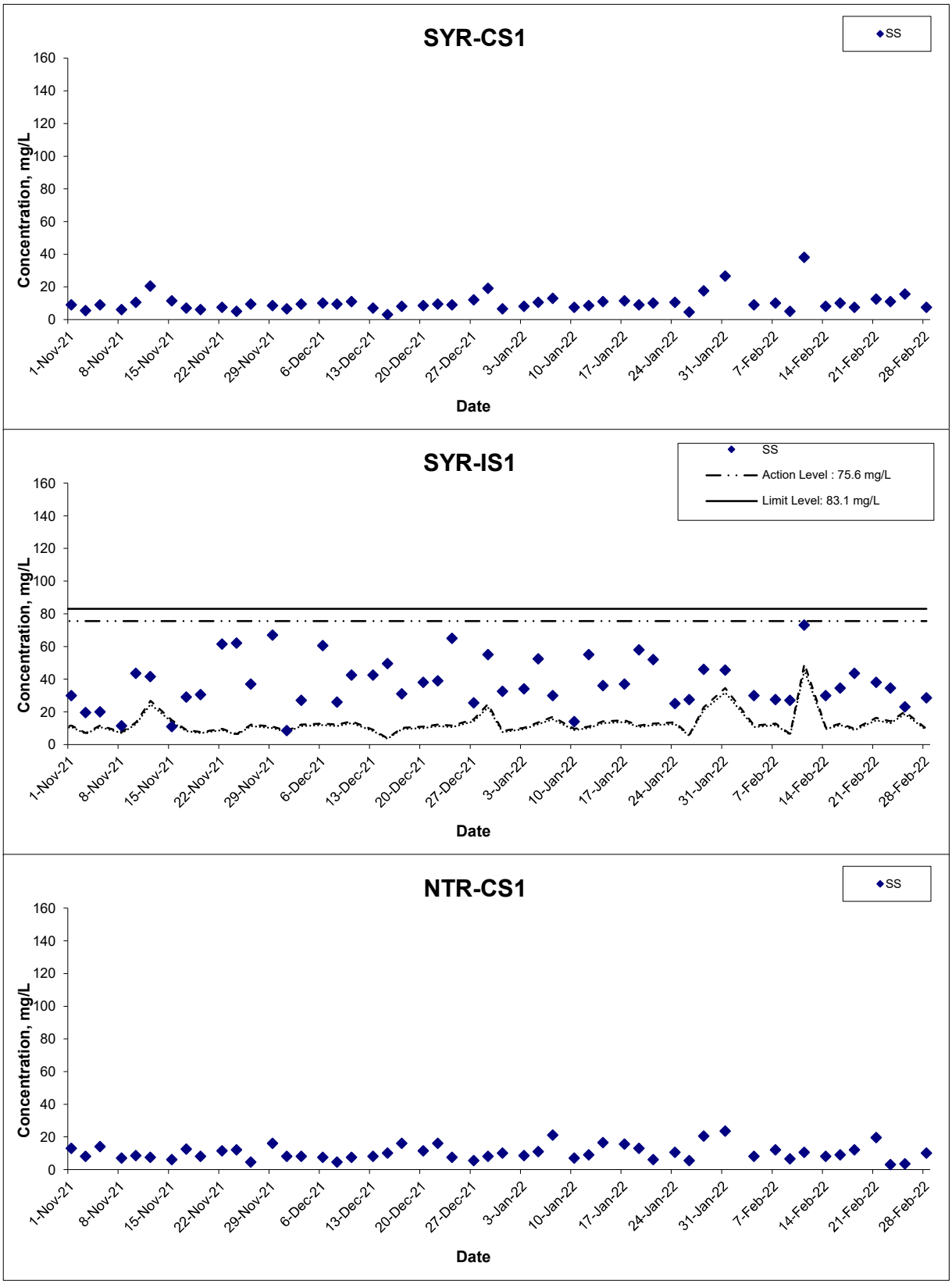
Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S Date: Feb 22	Project No.: WMA20002 Appendix: G	WELLAB 匯力 consulting . testing . research

Turbidity (Depth-averaged)



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

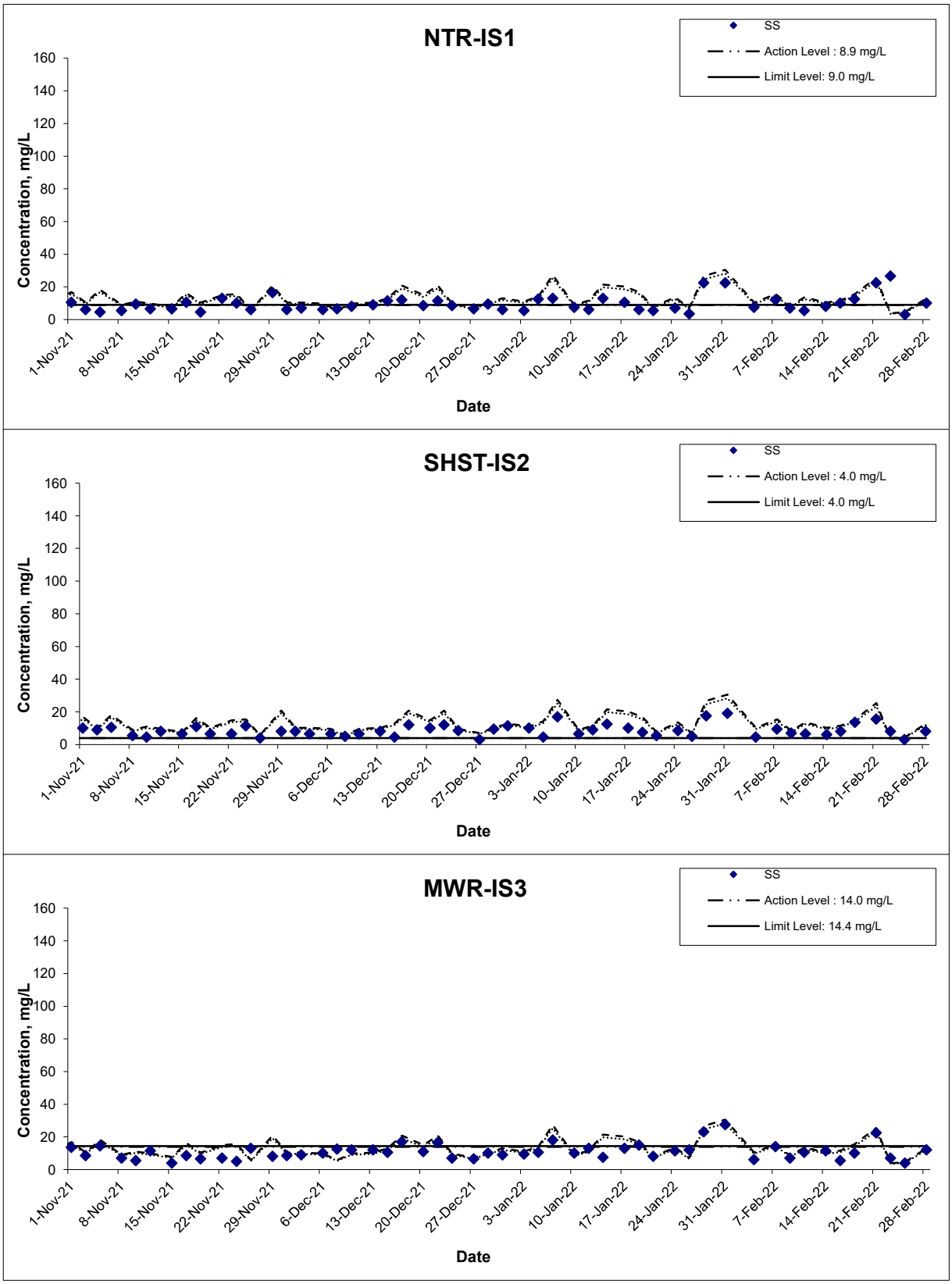
Suspended Solids (Depth-averaged)



Remark: The graphical point at zero concentration is presented as <2.5 mg/L

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

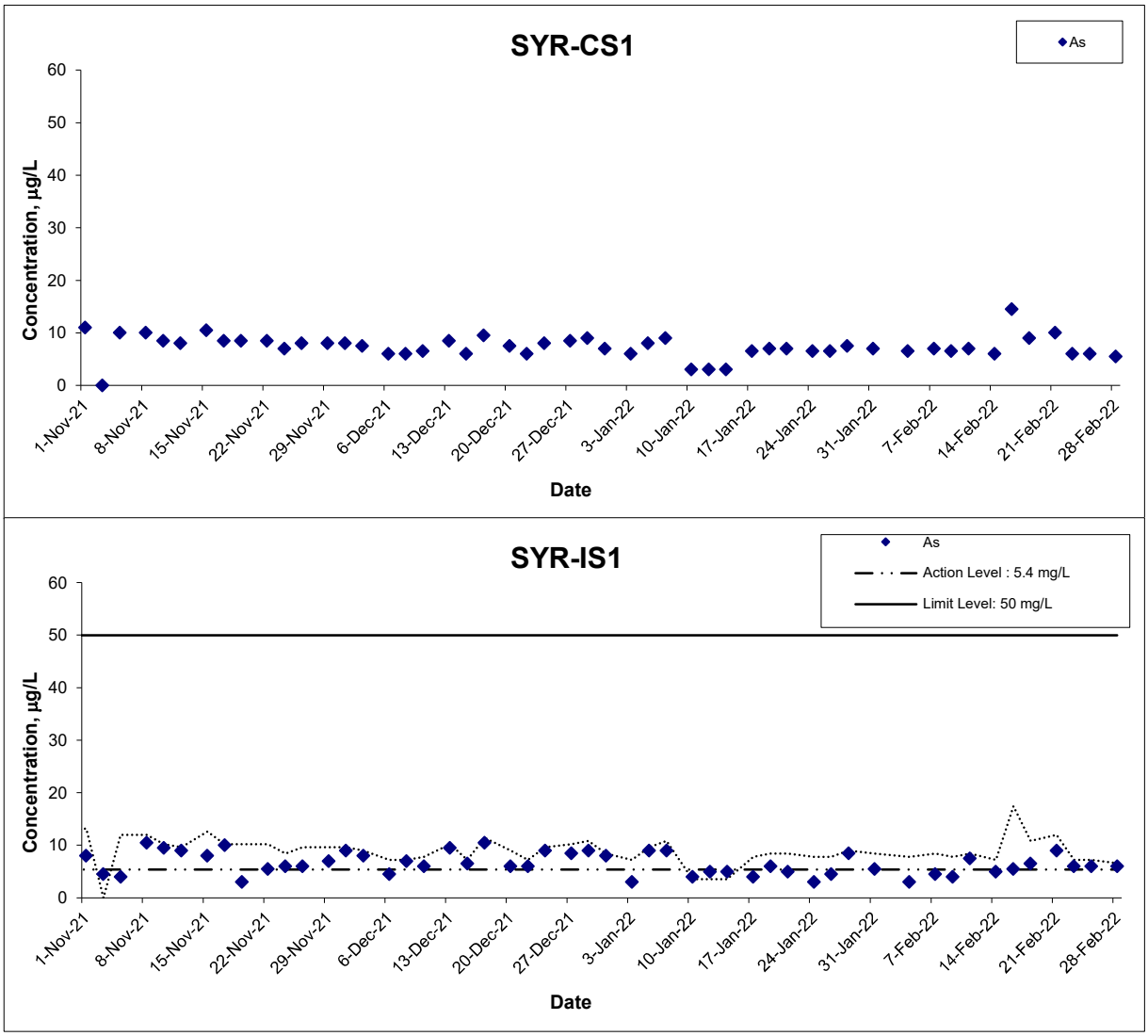
Suspended Solids (Depth-averaged)



Remark: The graphical point at zero concentration is presented as <2.5 mg/L

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

Arsenic (Depth-averaged)



Remark: The graphical point at zero concentration is presented as <1 µg/L

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

APPENDIX H
LABORATORY TESTING REPORTS FOR LABORATORY ANALYSIS

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

TEST REPORT

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

ATTN: **Mr. Antony Leung**

Report No.:	36296
Date of Issue:	2022-02-10
Date Received:	2022-02-04
Date Tested:	2022-02-04
Date Completed:	2022-02-10
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36296
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220204
Sampling Date : 2022-02-04

Tests Requested & Methodology:

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

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36296-2	36296-3	36296-5	36296-6
Total Suspended Solids dried at 103-105°C (mg/L)	10	8	29	31
Arsenic (µg/L)	7	6	3	3

Remarks: 1) < = less than

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

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

PATRICK TSE
General Manager

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

TEST REPORT

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

ATTN: **Mr. Antony Leung**

Report No.:	36296A
Date of Issue:	2022-02-10
Date Received:	2022-02-04
Date Tested:	2022-02-04
Date Completed:	2022-02-10
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36296A
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220204
Sampling Date : 2022-02-04

Tests Requested & Methodology:

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

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36296-8	36296-9	36296-11	36296-12
Total Suspended Solids dried at 103-105°C (mg/L)	8	8	8	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36296-14	36296-15	36296-17	36296-18
Total Suspended Solids dried at 103-105°C (mg/L)	4	5	6	6

Remarks: 1) < = less than

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PATRICK TSE
General Manager

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TEST REPORT

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

ATTN: **Mr. Antony Leung**

Report No.:	36298
Date of Issue:	2022-02-11
Date Received:	2022-02-07
Date Tested:	2022-02-07
Date Completed:	2022-02-11
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36298
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220207
Sampling Date : 2022-02-07

Tests Requested & Methodology:

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

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36298-2	36298-3	36298-5	36298-6
Total Suspended Solids dried at 103-105°C (mg/L)	11	9	25	30
Arsenic (μg/L)	7	7	5	4

Remarks: 1) < = less than

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General Manager

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TEST REPORT

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

ATTN: **Mr. Antony Leung**

Report No.:	36298A
Date of Issue:	2022-02-11
Date Received:	2022-02-07
Date Tested:	2022-02-07
Date Completed:	2022-02-11
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36298A
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220207
Sampling Date : 2022-02-07

Tests Requested & Methodology:

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

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36298-8	36298-9	36298-11	36298-12
Total Suspended Solids dried at 103-105°C (mg/L)	12	12	12	12

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36298-14	36298-15	36298-17	36298-18
Total Suspended Solids dried at 103-105°C (mg/L)	9	10	14	14

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
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Shatin, N.T.

ATTN: **Mr. Antony Leung**

Report No.:	36313
Date of Issue:	2022-02-15
Date Received:	2022-02-09
Date Tested:	2022-02-09
Date Completed:	2022-02-15
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36313
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220209
Sampling Date : 2022-02-09

Tests Requested & Methodology:

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

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36313-2	36313-3	36313-5	36313-6
Total Suspended Solids dried at 103-105°C (mg/L)	5	5	26	28
Arsenic (μg/L)	6	7	4	4

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Antony Leung**

Report No.:	36313A
Date of Issue:	2022-02-15
Date Received:	2022-02-09
Date Tested:	2022-02-09
Date Completed:	2022-02-15
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36313A
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220209
Sampling Date : 2022-02-09

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36313-8	36313-9	36313-11	36313-12
Total Suspended Solids dried at 103-105°C (mg/L)	6	7	7	7

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36313-14	36313-15	36313-17	36313-18
Total Suspended Solids dried at 103-105°C (mg/L)	7	7	7	7

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
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ATTN: **Mr. Antony Leung**

Report No.:	36316
Date of Issue:	2022-02-15
Date Received:	2022-02-11
Date Tested:	2022-02-11
Date Completed:	2022-02-15
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36316
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220211
Sampling Date : 2022-02-11

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36316-2	36316-3	36316-5	36316-6
Total Suspended Solids dried at 103-105°C (mg/L)	40	36	72	74
Arsenic (μg/L)	7	7	7	8

Remarks: 1) < = less than

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ATTN: **Mr. Antony Leung**

Report No.:	36316A
Date of Issue:	2022-02-15
Date Received:	2022-02-11
Date Tested:	2022-02-11
Date Completed:	2022-02-15
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36316A
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220211
Sampling Date : 2022-02-11

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36316-8	36316-9	36316-11	36316-12
Total Suspended Solids dried at 103-105°C (mg/L)	11	10	6	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36316-14	36316-15	36316-17	36316-18
Total Suspended Solids dried at 103-105°C (mg/L)	6	7	10	11

Remarks: 1) < = less than

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Mr. Antony Leung**

Report No.:	36328
Date of Issue:	2022-02-16
Date Received:	2022-02-14
Date Tested:	2022-02-14
Date Completed:	2022-02-16
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36328
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220214
Sampling Date : 2022-02-14

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36328-2	36328-3	36328-5	36328-6
Total Suspended Solids dried at 103-105°C (mg/L)	8	8	31	29
Arsenic (µg/L)	6	6	5	5

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
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Shatin, N.T.

ATTN: **Mr. Antony Leung**

Report No.:	36328A
Date of Issue:	2022-02-16
Date Received:	2022-02-14
Date Tested:	2022-02-14
Date Completed:	2022-02-16
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36328A
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220214
Sampling Date : 2022-02-14

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36328-8	36328-9	36328-11	36328-12
Total Suspended Solids dried at 103-105°C (mg/L)	8	8	8	8

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36328-14	36328-15	36328-17	36328-18
Total Suspended Solids dried at 103-105°C (mg/L)	6	6	11	12

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Antony Leung**

Report No.:	36334
Date of Issue:	2022-02-18
Date Received:	2022-02-16
Date Tested:	2022-02-16
Date Completed:	2022-02-18
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36334
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220216
Sampling Date : 2022-02-16

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36334-2	36334-3	36334-5	36334-6
Total Suspended Solids dried at 103-105°C (mg/L)	10	10	32	37
Arsenic (µg/L)	15	14	5	6

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
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18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Antony Leung**

Report No.:	36334A
Date of Issue:	2022-02-18
Date Received:	2022-02-16
Date Tested:	2022-02-16
Date Completed:	2022-02-18
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36334A
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220216
Sampling Date : 2022-02-16

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36334-8	36334-9	36334-11	36334-12
Total Suspended Solids dried at 103-105°C (mg/L)	10	8	10	10

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36334-14	36334-15	36334-17	36334-18
Total Suspended Solids dried at 103-105°C (mg/L)	8	8	6	5

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Mr. Antony Leung**

Report No.:	36340
Date of Issue:	2022-02-24
Date Received:	2022-02-18
Date Tested:	2022-02-18
Date Completed:	2022-02-24
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36340
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220218
Sampling Date : 2022-02-18

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36340-2	36340-3	36340-5	36340-6
Total Suspended Solids dried at 103-105°C (mg/L)	8	7	45	42
Arsenic (µg/L)	9	9	7	6

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Antony Leung**

Report No.:	36340A
Date of Issue:	2022-02-24
Date Received:	2022-02-18
Date Tested:	2022-02-18
Date Completed:	2022-02-24
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36340A
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220218
Sampling Date : 2022-02-18

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36340-8	36340-9	36340-11	36340-12
Total Suspended Solids dried at 103-105°C (mg/L)	12	12	13	12

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36340-14	36340-15	36340-17	36340-18
Total Suspended Solids dried at 103-105°C (mg/L)	13	14	9	11

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
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ATTN: **Mr. Antony Leung**

Report No.:	36344
Date of Issue:	2022-02-25
Date Received:	2022-02-21
Date Tested:	2022-02-21
Date Completed:	2022-02-25
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36344
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220221
Sampling Date : 2022-02-21

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36344-2	36344-3	36344-5	36344-6
Total Suspended Solids dried at 103-105°C (mg/L)	13	12	36	40
Arsenic (µg/L)	10	10	9	9

Remarks: 1) < = less than

**********END OF REPORT**********

PREPARED AND CHECKED BY:
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PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
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Shatin, N.T.

ATTN: **Mr. Antony Leung**

Report No.:	36344A
Date of Issue:	2022-02-25
Date Received:	2022-02-21
Date Tested:	2022-02-21
Date Completed:	2022-02-25
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36344A
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220221
Sampling Date : 2022-02-21

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36344-8	36344-9	36344-11	36344-12
Total Suspended Solids dried at 103-105°C (mg/L)	20	19	20	25

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36344-14	36344-15	36344-17	36344-18
Total Suspended Solids dried at 103-105°C (mg/L)	17	14	23	22

Remarks: 1) < = less than

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Mr. Antony Leung**

Report No.:	36354
Date of Issue:	2022-02-28
Date Received:	2022-02-23
Date Tested:	2022-02-23
Date Completed:	2022-02-28
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36354
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220223
Sampling Date : 2022-02-23

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36354-2	36354-3	36354-5	36354-6
Total Suspended Solids dried at 103-105°C (mg/L)	10	12	33	36
Arsenic (µg/L)	6	6	6	6

Remarks: 1) < = less than

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ATTN: **Mr. Antony Leung**

Report No.:	36354A
Date of Issue:	2022-02-28
Date Received:	2022-02-23
Date Tested:	2022-02-23
Date Completed:	2022-02-28
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36354A
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220223
Sampling Date : 2022-02-23

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36354-8	36354-9	36354-11	36354-12
Total Suspended Solids dried at 103-105°C (mg/L)	3	3	25	28

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36354-14	36354-15	36354-17	36354-18
Total Suspended Solids dried at 103-105°C (mg/L)	8	8	7	7

Remarks: 1) < = less than

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ATTN: **Mr. Antony Leung**

Report No.:	36362
Date of Issue:	2022-03-03
Date Received:	2022-02-25
Date Tested:	2022-02-25
Date Completed:	2022-03-03
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36362
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220225
Sampling Date : 2022-02-25

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 µg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36362-2	36362-3	36362-5	36362-6
Total Suspended Solids dried at 103-105°C (mg/L)	14	17	24	22
Arsenic (µg/L)	6	6	6	6

Remarks: 1) < = less than

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ATTN: **Mr. Antony Leung**

Report No.:	36362A
Date of Issue:	2022-03-03
Date Received:	2022-02-25
Date Tested:	2022-02-25
Date Completed:	2022-03-03
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36362A
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220225
Sampling Date : 2022-02-25

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36362-8	36362-9	36362-11	36362-12
Total Suspended Solids dried at 103-105°C (mg/L)	4	3	3	3

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36362-14	36362-15	36362-17	36362-18
Total Suspended Solids dried at 103-105°C (mg/L)	3	3	4	4

Remarks: 1) < = less than

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ATTN: **Mr. Antony Leung**

Report No.:	36367
Date of Issue:	2022-03-04
Date Received:	2022-02-28
Date Tested:	2022-02-28
Date Completed:	2022-03-04
Page:	1 of 1

Sample Description : 4 liquid samples as received from client said to be water
Laboratory No. : 36367
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220228
Sampling Date : 2022-02-28

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	36367-2	36367-3	36367-5	36367-6
Total Suspended Solids dried at 103-105°C (mg/L)	7	8	31	26
Arsenic (μg/L)	5	6	6	6

Remarks: 1) < = less than

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ATTN: **Mr. Antong Leung**

Report No.:	36367A
Date of Issue:	2022-03-04
Date Received:	2022-02-28
Date Tested:	2022-02-28
Date Completed:	2022-03-04
Page:	1 of 1

Sample Description : 8 liquid samples as received from client said to be water
Laboratory No. : 36367A
Project No. : WMA20002
Project Name : Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Custody No. : WMA20002/220228
Sampling Date : 2022-02-28

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids dried at 103-105°C	APHA 17ed 2540 D	2.5 mg/L

Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	36367-8	36367-9	36367-11	36367-12
Total Suspended Solids dried at 103-105°C (mg/L)	10	10	10	10

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	36367-14	36367-15	36367-17	36367-18
Total Suspended Solids dried at 103-105°C (mg/L)	8	8	12	12

Remarks: 1) < = less than

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APPENDIX I
QUALITY CONTROL REPORTS FOR SS AND ARSENIC LABORATORY ANALYSIS

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Mr. Antony Leung**

Report No.:	QC36296
Date of Issue:	2022-02-10
Date Received:	2022-02-04
Date Tested:	2022-02-04
Date Completed:	2022-02-10
Page:	1 of 1

QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (μg/L)	<0.2	N/A	<0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	110	96	80-120
Arsenic (%)	87	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	86	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	3	RPD≤5%
Arsenic (%)	5	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36296.

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
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Report No.:	QC36298
Date of Issue:	2022-02-11
Date Received:	2022-02-07
Date Tested:	2022-02-07
Date Completed:	2022-02-11

ATTN: **Mr. Antony Leung**

Page: 1 of 1

QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (μg/L)	<0.2	N/A	<0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	101	99	80-120
Arsenic (%)	94	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	104	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	2	RPD≤5%
Arsenic (%)	1	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36298.

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Report No.:	QC36313
Date of Issue:	2022-02-15
Date Received:	2022-02-09
Date Tested:	2022-02-09
Date Completed:	2022-02-15
Page:	1 of 1

QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (μg/L)	<0.2	N/A	<0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	102	101	80-120
Arsenic (%)	95	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	81	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	3	RPD≤5%
Arsenic (%)	3	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36313.

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Report No.:	QC36316
Date of Issue:	2022-02-15
Date Received:	2022-02-11
Date Tested:	2022-02-11
Date Completed:	2022-02-15
Page:	1 of 1

QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (μg/L)	<0.2	N/A	<0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	104	105	80-120
Arsenic (%)	105	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	84	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	0	3	RPD≤5%
Arsenic (%)	1	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36316.

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APPLICANT: **Wellab Limited (EM&A Department)**
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ATTN: **Mr. Antony Leung**

Report No.:	QC36328
Date of Issue:	2022-02-16
Date Received:	2022-02-14
Date Tested:	2022-02-14
Date Completed:	2022-02-16
Page:	1 of 1

QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (μg/L)	<0.2	N/A	<0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	105	103	80-120
Arsenic (%)	93	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	86	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	4	5	RPD≤5%
Arsenic (%)	2	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36328.

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ATTN: **Mr. Antony Leung**

Report No.:	QC36334
Date of Issue:	2022-02-18
Date Received:	2022-02-16
Date Tested:	2022-02-16
Date Completed:	2022-02-18
Page:	1 of 1

QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (μg/L)	<0.2	N/A	<0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	99	107	80-120
Arsenic (%)	109	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	116	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	4	4	RPD≤5%
Arsenic (%)	3	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36334.

**********END OF REPORT**********

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General Manager

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Website : www.wellab.com.hk

TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Antony Leung**

Report No.:	QC36340
Date of Issue:	2022-02-24
Date Received:	2022-02-18
Date Tested:	2022-02-18
Date Completed:	2022-02-24
Page:	1 of 1

QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (μg/L)	<0.2	N/A	<0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	102	101	80-120
Arsenic (%)	100	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	86	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	3	RPD≤5%
Arsenic (%)	9	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36340.

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

Report No.:	QC36344
Date of Issue:	2022-02-25
Date Received:	2022-02-21
Date Tested:	2022-02-21
Date Completed:	2022-02-25

ATTN: **Mr. Antony Leung**

Page: 1 of 1

QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (μg/L)	<0.2	N/A	<0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	100	102	80-120
Arsenic (%)	97	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	91	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	3	RPD≤5%
Arsenic (%)	1	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36344.

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

Report No.:	QC36354
Date of Issue:	2022-02-28
Date Received:	2022-02-23
Date Tested:	2022-02-23
Date Completed:	2022-02-28
Page:	1 of 1

ATTN: **Mr. Antony Leung**

QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (μg/L)	<0.2	N/A	<0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	101	103	80-120
Arsenic (%)	104	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	105	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	4	2	RPD≤5%
Arsenic (%)	9	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36354.

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TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

Report No.:	QC36362
Date of Issue:	2022-03-03
Date Received:	2022-02-25
Date Tested:	2022-02-25
Date Completed:	2022-03-03
Page:	1 of 1

ATTN: **Mr. Antony Leung**

QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (μg/L)	<0.2	N/A	<0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	101	108	80-120
Arsenic (%)	98	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	94	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	3	RPD≤5%
Arsenic (%)	3	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36362.

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General Manager

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Website : www.wellab.com.hk

TEST REPORT

APPLICANT: **Wellab Limited (EM&A Department)**
Rm 1714, Technology Park,
18 On Lai Street,
Shatin, N.T.

ATTN: **Mr. Antony Leung**

Report No.:	QC36367
Date of Issue:	2022-03-04
Date Received:	2022-02-28
Date Tested:	2022-02-28
Date Completed:	2022-03-04
Page:	1 of 1

QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	<0.5
Arsenic (μg/L)	<0.2	N/A	<0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	98	103	80-120
Arsenic (%)	95	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	96	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	4	RPD≤5%
Arsenic (%)	5	N/A	RPD≤20%

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 36367.

**********END OF REPORT**********

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PATRCIK TSE
General Manager

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APPENDIX J
LANDFILL GAS MONITORING RESULTS

Contract No. ND/2019/01

Development of Kwu Tung North & Fanling North New Development Area, Phase 1: Kwu Tung North New Development Area, Phase 1: Site formation & Infrastucture works

堆填區附近區域(Consultation Zone)每月氣體監察記錄

			氧氣 O2	甲烷 CH4	二氧化碳 CO_2
日期及時間	位置	氣體及安全標準	>19%	<10% LEL	<0.5%
26-02-2022 10:03	CZ PT 1		20.03	0.03	0.01
26-02-2022 9:54	CZ container 1		20.12	0.01	0.01
26-02-2022 9:56	CZ container 2		20.08	0.07	0.01
26-02-2022 9:58	CZ container 3		20.07	0.08	0.01
26-02-2022 10:00	CZ container 4		20.06	0.09	0.01
26-02-2022 9:52	CZ container 5		20.14	0.01	0.01

Prepared by : Roy Yuen (Safety Officer) Date : 26-02-2022

APPENDIX K
BUILT HERITAGE MONITORING RESULTS

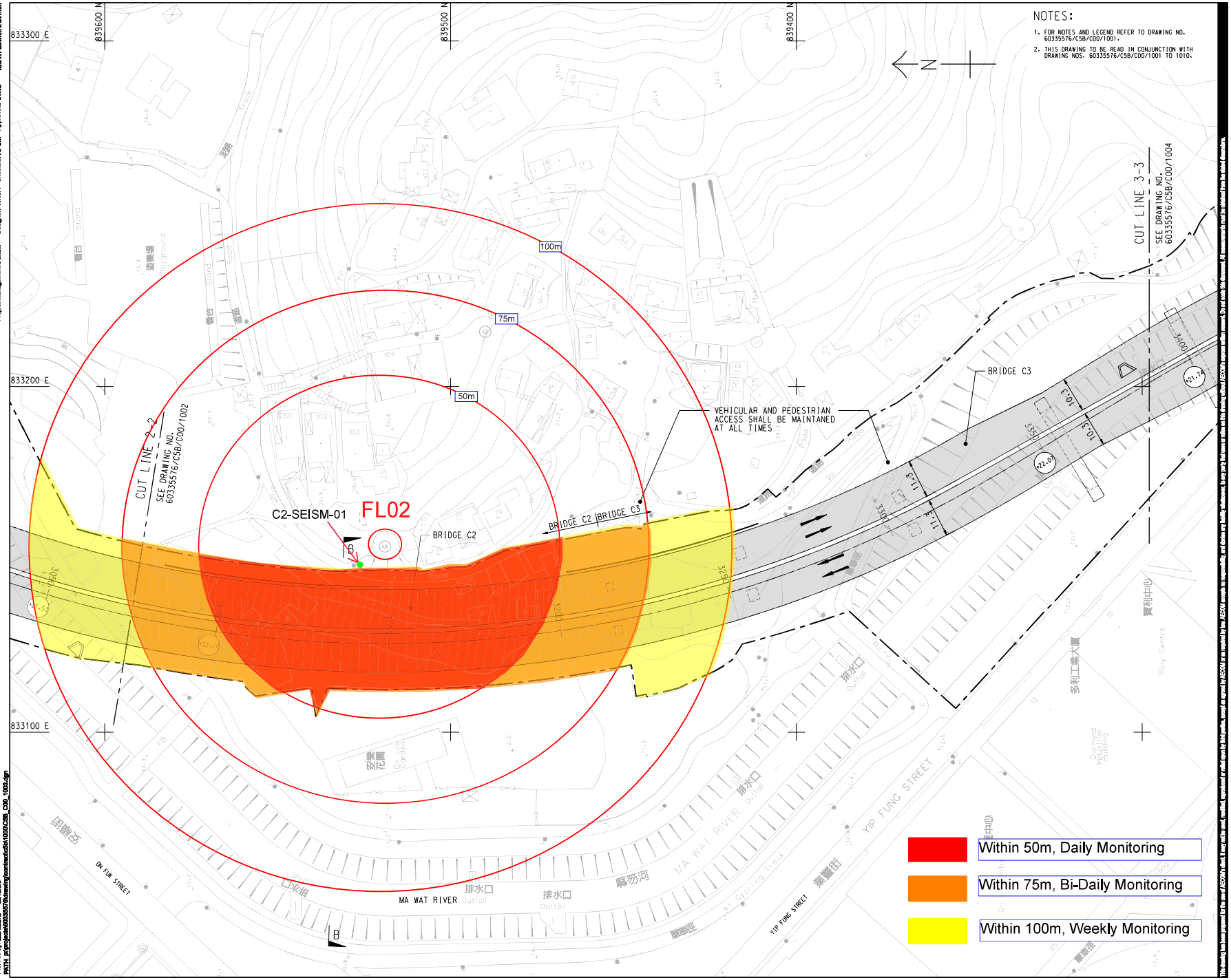
Summary of vibration readings at FL02
(C2-SEISM-01)

CRCC – Paul Y. Joint Venture

Table 2.3: Vibration Limit from PNAP APP-137 & PS 34.01(2)

TYPE OF BUILDING	GUIDE VALUES OF MAXIMUM PPV* (MM/SEC)	
	TRANSIENT VIBRATION	CONTINUOUS VIBRATION
Vibration-sensitive / dilapidated buildings#	7.5	3.0

Date	Max. PPV recorded (mm/s)	Serial no. of device (Micromate/ Supergraph)
04 Feb 2022	0.206	UM17121
05 Feb 2022	0.079	UM17124
07 Feb 2022	0.100	UM17126
08 Feb 2022	0.069	UM17124
09 Feb 2022	0.079	UM17121
10 Feb 2022	0.072	UM17126
11 Feb 2022	0.113	UM17121
12 Feb 2022	0.081	UM17124
14 Feb 2022	0.202	UM17126
15 Feb 2022	0.267	UM17121
16 Feb 2022	0.259	UM17126
17 Feb 2022	0.339	UM17124
18 Feb 2022	0.202	UM17121
19 Feb 2022	0.188	UM17126
21 Feb 2022	0.221	UM17124
22 Feb 2022	0.220	UM17126
23 Feb 2022	0.252	UM17121
24 Feb 2022	0.201	UM17124
25 Feb 2022	0.633	UM17121
26 Feb 2022	0.316	UM17126
28 Feb 2022	0.135	UM17124



AECOM

PROJECT

DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

CONTRACT TITLE:

FANLING NORTH NEW DEVELOPMENT AREA, PHASE 1: FANLING BYPASS EASTERN SECTION (SHUNG HIM TONG TO KAU LUNG HANG)

CLIENT

CEDD 土木工程拓展署 Civil Engineering and Development Department

CONSULTANT

AECOM Asia Company Ltd.
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SUB-CONSULTANTS

ISSUE/REVISION

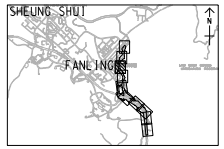
NO.	DATE	DESCRIPTION	CHK.
-	JUN-19	TENDER DRAWING	RPCM

STATUS

SCALE A1 1 : 500

DIMENSION UNIT METRES

KEY PLAN A1 1 : 70000



PROJECT NO. 60335576

CONTRACT NO. ND/2019/05

SHEET TITLE

GENERAL LAYOUT

SHEET 3 OF 10

SHEET NUMBER

60335576/C5B/C00/1003

Project Management Initials: Designer: WHWY Checked: RPCM Approved: IHWL ISO A1 594mm x 841mm

Plot File by: ZENGXU2 2019/06/6
PATH: p:\projects\60335576\working\cad\c5b\1000\C5B_C00_1003.dgn

Summary of vibration readings at FL27
(C1-SEISM-04)

CRCC – Paul Y. Joint Venture

Table 2.3: Vibration Limit from PNAP APP-137 & PS 34.01(2)

TYPE OF BUILDING	GUIDE VALUES OF MAXIMUM PPV* (MM/SEC)	
	TRANSIENT VIBRATION	CONTINUOUS VIBRATION
Vibration-sensitive / dilapidated buildings#	7.5	3.0

Date	Max. PPV recorded (mm/s)	Serial no. of device (Micromate/ Supergraph)
04 Feb 2022	0.058	UM17121
05 Feb 2022	0.064	UM17126
07 Feb 2022	0.064	UM17124
08 Feb 2022	0.149	UM17126
09 Feb 2022	0.152	UM17121
10 Feb 2022	0.167	UM17124
11 Feb 2022	0.098	UM17124
12 Feb 2022	0.576	UM17126
14 Feb 2022	0.096	UM17121
15 Feb 2022	0.094	UM17124
16 Feb 2022	0.086	UM17121
17 Feb 2022	0.085	UM17126
18 Feb 2022	0.084	UM17121
19 Feb 2022	0.088	UM17126
21 Feb 2022	0.087	UM17124
22 Feb 2022	0.09	UM17124
23 Feb 2022	0.087	UM17126
24 Feb 2022	0.103	UM17121
25 Feb 2022	0.083	UM17126
26 Feb 2022	0.085	UM17121
28 Feb 2022	0.084	UM17124

ISO A1 594mm x 841mm

Approved: IHWL

Checked: RPCM

Designer: WHWY

Project Management Initials:

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.

CUT LINE 1-1
SEE DRAWING NO. 60335576/C5B/C00/1001

BRIDGE B2
BRIDGE C1
BRIDGE C2

OUTFALL

TSUNG KYAM CHURCH

75m
50m
100m

FL27

C1-SEISM-04

C2-SEISM-01

EXISTING REFUSE COLLECTION SHALL BE RETAINED

EXISTING TOILET SHALL BE RETAINED

EXISTING BUILDINGS TO BE DEMOLISHED

VEHICULAR AND PEDESTRIAN ACCESS SHALL BE MAINTANED AT ALL TIMES

VEHICULAR AND PEDESTRIAN ACCESS SHALL BE MAINTANED AT ALL TIMES

MA WAT RIVER

CUT LINE 2-2
SEE DRAWING NO. 60335576/C5B/C00/1003

KUI SIK STREET
ON CHUEN STREET
ON KUI STREET
KUSIK STREET
LOK TUNG STREET
ON CHEN STREET

Within 50m, Daily Monitoring

Within 75m, Bi-Daily Monitoring

Within 100m, Weekly Monitoring

Plot File by: ZENGLY2 2019/9/9
PATH: p:\projects\60335576\drawing\contract\c5b\1000\C5B_C00_1002.dgn

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AECOM

PROJECT
項目

DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

CONTRACT TITLE:

FANLING NORTH NEW DEVELOPMENT AREA, PHASE 1: FANLING BYPASS EASTERN SECTION (SHUNG HIM TONG TO KAU LUNG HANG)

CLIENT
顧主

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT
工程顧問公司

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SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

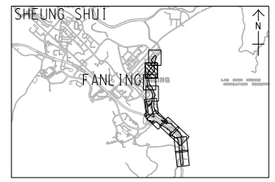
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核查
-	JUN-19	TENDER DRAWING	RPCM

STATUS
階段

SCALE 比例
A1 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 70000



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/05

SHEET TITLE 圖紙名稱
GENERAL LAYOUT

SHEET 2 OF 10

SHEET NUMBER 圖紙編號
60335576/C5B/C00/1002

APPENDIX L
ECOLOGICAL MONITORING RESULTS

Appendix L1a. Avifauna Species Recorded for Water Birds Monitoring, 31 January & 4 February 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			31/1/2022 (T1 & T2), 4/2/2022 (T3 & T5)					
					Weather Condition			Fine/ Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.62, 1.59					
					Start Time			1100, 1200					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv										4
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv						3				
Black Kite	*Milvus migrans*	黑鳶	R, WV			1							5
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R			2			2				
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			4	3	8	10	27		
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	3	3	6		8				5
Cinereous Tit	*Parus cinereus*	蒼背山雀	R						1				
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU			1		1				1
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC							1		
Common Kestrel	*Falco tinnunculus*	紅隼	CaM, WV	Cap. 586					2				1
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM				1						
Crested Bunting	*Emberiza lathami*	鳳頭鵐	RR	LC					1				
Crested Serpent Eagle	*Spilornis cheela*	蛇鵰	UR	Cap.586, (VU)									2
Eastern Buzzard	*Buteo japonicus*	普通鵟	WV	Cap.586									1
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)	1	3			27				3

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			31/1/2022 (T1 & T2), 4/2/2022 (T3 & T5)					
					Weather Condition			Fine/ Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.62, 1.59					
					Start Time			1100, 1200					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV						10				
Eurasian Teal	*Anas crecca*	綠翅鴨	WV	RC							5		
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R						4				
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	CWV	PRC	3								1
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	4	6	3		4		2		4
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV				4			1	1		
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	1	1	4		1		1		
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R										73
Little Bunting	*Emberiza pusilla*	小鵐	CPM, WV						25				
Little Grebe	*Tachybaptus ruficollis*	小鸊鷉	R	LC	1								
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	1	8	7		3	3			
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC				4			2		
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R						1				
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R									6	1
Oriental Magpie	*Pica serica*	喜鵲	R									1	
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R						1				
Pied Avocet	*Recurvirostra avosetta*	反嘴鷸	WV	RC				1			8		

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			31/1/2022 (T1 & T2), 4/2/2022 (T3 & T5)					
					Weather Condition			Fine/ Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.62, 1.59					
					Start Time			1100, 1200					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Red-rumped Swallow	*Cecropis daurica*	金腰燕	UPM										13
Richard's Pipit	*Anthus richardi*	理氏鷚	WV, PM				1						
Rock Dove	*Columba livia*	原鴿	R						7				1
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R						80				200
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		2		3		5				
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石鴴	WV						5				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		2	3	2	1	9				
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R						2				
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)					2				
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC						1	3		
Total No. of Species					9	8	11	4	24	4	9	2	17
Total No. of Conservation Interest Species					7	5	6	3	9	3	7	0	8
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			31/1/2022 (T1 & T2), 4/2/2022 (T3 & T5)					
					Weather Condition			Fine/ Sunny					
					Tidal Condition			High					
					Tide Level (m)			1.62, 1.59					
					Start Time			1100, 1200					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
EN: Endangered in IUCN Red List Status
(EN): Endangered in China Red Data Book Status
NT: Near Threatened in IUCN Red List Status
CR: Critically Endangered in IUCN Red List Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix L1b. Avifauna Species Recorded for Water Birds Monitoring, 31 January & 4 February 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			31/1/2022 (T1 & T2), 4/2/2022 (T3 & T5)					
					Weather Condition			Fine/ Fine					
					Tidal Condition			Low					
					Tide Level (m)			1.32, 0.25					
					Start Time			1400, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv						1				1
Black Kite	*Milvus migrans*	黑鳶	R, WV			3							
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		2				20				3
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			4		42				8
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	4	5	6	1	2	3			2
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU		1	1						1
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			1			3			
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R						1				
Common Myna	*Acridotheres tristis*	家八哥	UR						3				
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM							3			
Crested Myna	*Acridotheres cristatellus*	八哥	R						35				6
Daurian Redstart	*Phoenicurus auroreus*	北紅尾鴝	WV				1		2				
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)	2				16				
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV						2				
Eurasian Teal	*Anas crecca*	綠翅鴨	WV	RC						2			
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R			20							

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			31/1/2022 (T1 & T2), 4/2/2022 (T3 & T5)					
					Weather Condition			Fine/ Fine					
					Tidal Condition			Low					
					Tide Level (m)			1.32, 0.25					
					Start Time			1400, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	CWV	PRC	3								
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	1	1	3	1		2			1
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC		2	4						2
Little Bunting	*Emberiza pusilla*	小鵐	CPM, WV						6				
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	3	8	4	2		8			2
Little Grebe	*Tachybaptus ruficollis*	小鸊鷉	R	LC	3						2		
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC						10			
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R						1				
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R						5				
Olive-backed Pipit	*Anthus hodgsoni*	樹鷚	WV			2	4		4				
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R						2				
Pied Avocet	*Recurvirostra avosetta*	反嘴鷸	WV	RC									
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R						10				
Richard's Pipit	*Anthus richardi*	理氏鷚	WV, PM						2				
Rock Dove	*Columba livia*	原鴿	R		3	2				4			3
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R					50					50

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			31/1/2022 (T1 & T2), 4/2/2022 (T3 & T5)					
					Weather Condition			Fine/ Fine					
					Tidal Condition			Low					
					Tide Level (m)			1.32, 0.25					
					Start Time			1400, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Sooty-headed Bulbul	*Pycnonotus aurigaster*	白喉紅臀鵯	UR						11				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		1	1	1		12				4
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石鵲	WV						2				1
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R						2				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		2	1			10				
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R						1				
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)					1				
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC						11			
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R									1	
Total No. of Species					10	11	10	4	24	9	1	1	13
Total No. of Conservation Interest Species					6	5	7	3	4	7	1	0	6
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			31/1/2022 (T1 & T2), 4/2/2022 (T3 & T5)					
					Weather Condition			Fine/ Fine					
					Tidal Condition			Low					
					Tide Level (m)			1.32, 0.25					
					Start Time			1400, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
EN: Endangered in IUCN Red List Status
(EN): Endangered in China Red Data Book Status
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CR: Critically Endangered in IUCN Red List Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix L1c. Avifauna Species Recorded for Water Birds Monitoring, 8 & 11 February 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			8/2/2022 (T1 & T2), 11/2/2022 (T3 & T5)					
					Weather Condition			Overcast, Overcast					
					Tidal Condition			High					
					Tide Level (m)			1.62, 1.74					
					Start Time			1300, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv										2
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv										2
Black Kite	*Milvus migrans*	黑鳶	R, WV			1	1						5
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		1	13			4				
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			5	4	7	34	16		
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	2	7	4		7				
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			1		4				
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R						1				
Crested Bunting	*Emberiza lathami*	鳳頭鵐	RR	LC					1				
Crested Serpent Eagle	*Spilornis cheela*	蛇鵰	UR	Cap.586, (VU)									2
Daurian Redstart	*Phoenicurus auroreus*	北紅尾鴝	WV						1				
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)		1			14				8
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV						5				
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	CWV	PRC	1		2						
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	1	3					2		

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			8/2/2022 (T1 & T2), 11/2/2022 (T3 & T5)					
					Weather Condition			Overcast, Overcast					
					Tidal Condition			High					
					Tide Level (m)			1.62, 1.74					
					Start Time			1300, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV							1			
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC		2	6						2
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R		4								3
Little Bunting	*Emberiza pusilla*	小鵐	CPM, WV						6				
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)		5	7			2			
Little Grebe	*Tachybaptus ruficollis*	小鸊鷉	R	LC		1							
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC						5			
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R									7	
Northern Lapwing	*Vanellus vanellus*	鳳頭麥雞	SWV	NT, LC						2			
Oriental Magpie	*Pica serica*	喜鵲	R				1		1				2
Pied Avocet	*Recurvirostra avosetta*	反嘴鷸	WV	RC				1	1	10	7		
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	(LC)	1	1							
Red-rumped Swallow	*Cecropis daurica*	金腰燕	UPM				5						25
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R		2								
Richard's Pipit	*Anthus richardi*	理氏鷚	WV, PM						1				
Rock Dove	*Columba livia*	原鴿	R			9							
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R					3	201				5

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			8/2/2022 (T1 & T2), 11/2/2022 (T3 & T5)					
					Weather Condition			Overcast, Overcast					
					Tidal Condition			High					
					Tide Level (m)			1.62, 1.74					
					Start Time			1300, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R				2		2				3
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石鵖	WV						5				
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R						3				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			2	3		11	1			8
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R						1				
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC			1	1		4			
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R									3	
Total No. of Species					7	11	12	4	19	8	3	2	12
Total No. of Conservation Interest Species					4	6	7	3	5	6	3	0	3
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			8/2/2022 (T1 & T2), 11/2/2022 (T3 & T5)					
					Weather Condition			Overcast, Overcast					
					Tidal Condition			High					
					Tide Level (m)			1.62, 1.74					
					Start Time			1300, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
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WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix L1d. Avifauna Species Recorded for Water Birds Monitoring, 8 & 11 February 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			8/2/2022 (T1 & T2), 11/2/2022 (T3 & T5)					
					Weather Condition			Overcast, Overcast					
					Tidal Condition			Low					
					Tide Level (m)			0.85, 1.29					
					Start Time			1000, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv		1								
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv						2				
Black Kite	*Milvus migrans*	黑鳶	R, WV				1						1
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		3	2			1				
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC						36			
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	1	1	4		1	3			
Cinereous Tit	*Parus cinereus*	蒼背山雀	R		2								
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU			1						
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			1			1			1
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R		2				1				
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM			1							
Crested Myna	*Acridotheres cristatellus*	八哥	R		2				1				
Daurian Redstart	*Phoenicurus auroreus*	北紅尾鴝	WV		1		1						
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)					11				
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV						1				

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			8/2/2022 (T1 & T2), 11/2/2022 (T3 & T5)					
					Weather Condition			Overcast, Overcast					
					Tidal Condition			Low					
					Tide Level (m)			0.85, 1.29					
					Start Time			1000, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Eurasian Teal	*Anas crecca*	綠翅鴨	WV	RC						8			
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	CWV	PRC	6	1							
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	4	1				4			
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV				1						
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC		3	3		1				
Grey Wagtail	*Motacilla cinerea*	灰鶺鴒	WV				1		1				
Hair-crested Drongo	*Dicrurus hottentottus*	髮冠卷尾	PM, SV			6							
Little Bunting	*Emberiza pusilla*	小鵐	CPM, WV						1				
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	3	4	5						
Little Grebe	*Tachybaptus ruficollis*	小鸊鷉	R	LC		1							
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC						5			
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R			1			1				
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R						5				
Olive-backed Pipit	*Anthus hodgsoni*	樹鷚	WV			16							
Oriental Magpie	*Pica serica*	喜鵲	R						1				
Pied Avocet	*Recurvirostra avosetta*	反嘴鷸	WV	RC						13			
Red-billed Blue Magpie	*Urocissa erythrorhyncha*	紅咀藍鵲	R			7							

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			8/2/2022 (T1 & T2), 11/2/2022 (T3 & T5)					
					Weather Condition			Overcast, Overcast					
					Tidal Condition			Low					
					Tide Level (m)			0.85, 1.29					
					Start Time			1000, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Red-throated Pipit	*Anthus cervinus*	紅喉鷚	CPM, WV	RC					1				
Richard's Pipit	*Anthus richardi*	理氏鷚	WV, PM						3				3
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R						100				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R			4	2		4				
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石鴝	WV				2		4				
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R				1						
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			1	2		9				
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R			1			3	1			
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC			1		2	9			
Total No. of Species					10	15	14	0	21	9	0	0	3
Total No. of Conservation Interest Species					4	6	6	0	5	8	0	0	1
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			8/2/2022 (T1 & T2), 11/2/2022 (T3 & T5)					
					Weather Condition			Overcast, Overcast					
					Tidal Condition			Low					
					Tide Level (m)			0.85, 1.29					
					Start Time			1000, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
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NT: Near Threatened in IUCN Red List Status
CR: Critically Endangered in IUCN Red List Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix L1e. Avifauna Species Recorded for Water Birds Monitoring, 15 &18 February 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			15/2/2022 (T1 & T2), 18/2/2022 (T3 & T5)					
					Weather Condition			Fine, Overcast					
					Tidal Condition			High					
					Tide Level (m)			1.50, 1.62					
					Start Time			1000, 1100					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Black Kite	*Milvus migrans*	黑鳶	R, WV			1							1
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC						60			
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	1	4	4		2	1			
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU			1		1				
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			1			4			
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R			1							
Daurian Redstart	*Phoenicurus auroreus*	北紅尾鴝	WV			1	1						
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)					12				
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R		4								
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	CWV	PRC	3								
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	1	2							
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV				1						
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	1	3	3		1				
Grey Wagtail	*Motacilla cinerea*	灰鶺鴒	WV				1						
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	2	4	5						

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			15/2/2022 (T1 & T2), 18/2/2022 (T3 & T5)					
					Weather Condition			Fine, Overcast					
					Tidal Condition			High					
					Tide Level (m)			1.50, 1.62					
					Start Time			1000, 1100					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Olive-backed Pipit	*Anthus hodgsoni*	樹鷚	WV			3							
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R						2				
Pied Avocet	*Recurvirostra avosetta*	反嘴鷸	WV	RC						1			
Red-rumped Swallow	*Cecropis daurica*	金腰燕	UPM										20
Richard's Pipit	*Anthus richardi*	理氏鷚	WV, PM				3						
Rock Dove	*Columba livia*	原鴿	R		1								
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R						50				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R				2		2				
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石鴴	WV				2		2				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			1	2		8	1			
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC			1			17			
Zitting Cisticola	*Cisticola juncidis*	棕扇尾鶯	PM, WV	LC					1				
Total No. of Species					9	7	13	0	10	6	0	0	2
Total No. of Conservation Interest Species					5	4	5	0	5	5	0	0	0
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			15/2/2022 (T1 & T2), 18/2/2022 (T3 & T5)					
					Weather Condition			Fine, Overcast					
					Tidal Condition			High					
					Tide Level (m)			1.50, 1.62					
					Start Time			1000, 1100					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
EN: Endangered in IUCN Red List Status
(EN): Endangered in China Red Data Book Status
NT: Near Threatened in IUCN Red List Status
CR: Critically Endangered in IUCN Red List Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix L1f. Avifauna Species Recorded for Water Birds Monitoring, 15 &18 February 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			15/2/2022 (T1 & T2), 18/2/2022 (T3 & T5)					
					Weather Condition			Fine, Overcast					
					Tidal Condition			Low					
					Tide Level (m)			1.31, 1.40					
					Start Time			1400, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R									8	
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv										28
Besra	*Accipiter virgatus*	松雀鷹	R, CPM	Cap.586									1
Black Kite	*Milvus migrans*	黑鳶	R, WV										2
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		2	3			43			30	108
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			3		21	55			1
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R						2			4	
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	2	3	4		4				4
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU		1	1						2
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			1			1			
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R		1								
Common Redshank	*Tringa totanus*	紅腳鷸	PM	RC			1						
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM		1					1			
Common Myna	*Acridotheres tristis*	家八哥	UR							20			
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM							3			

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			15/2/2022 (T1 & T2), 18/2/2022 (T3 & T5)					
					Weather Condition			Fine, Overcast					
					Tidal Condition			Low					
					Tide Level (m)			1.31, 1.40					
					Start Time			1400, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Crested Myna	*Acridotheres cristatellus*	八哥	R		5				308	76		50	
Daurian Redstart	*Phoenicurus auroreus*	北紅尾鴝	WV				1						
Eastern Buzzard	*Buteo japonicus*	普通鵟	WV	Cap.586			1						
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)	2				4				
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV				2		1				
Eurasian Teal	*Anas crecca*	綠翅鴨	WV	RC						6			
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	CWV	PRC	3								
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	3	2	4						6
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)					1				
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV				2			8			
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	1	2	7						3
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R				8						85
Large-billed Crow	*Corvus macrorhynchus*	大嘴烏鴉	R				2						
Little Bunting	*Emberiza pusilla*	小鵐	CPM, WV						5		1		5
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	4	5	4						8
Little Grebe	*Tachybaptus ruficollis*	小䴙䴘	R	LC	2	2							
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC					3	7			

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			15/2/2022 (T1 & T2), 18/2/2022 (T3 & T5)					
					Weather Condition			Fine, Overcast					
					Tidal Condition			Low					
					Tide Level (m)			1.31, 1.40					
					Start Time			1400, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R			1							
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R						5			7	
Olive-backed Pipit	*Anthus hodgsoni*	樹鷚	WV				11						1
Oriental Magpie	*Pica serica*	喜鵲	R				1						
Pied Avocet	*Recurvirostra avosetta*	反嘴鷸	WV	RC				1	1				
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	(LC)					17				
Plain Prinia	*Prinia inornata*	純色鷦鶯	R						1			1	
Red-throated Pipit	*Anthus cervinus*	紅喉鷚	CPM, WV	RC					1				
Rock Dove	*Columba livia*	原鴿	R			5							
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R				6		140				25
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		2	3	4						7
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石鴝	WV						3				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		3	3	3	3	11				13
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R				1	3	4				1
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC			1		1	8			
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R									1	
Total No. of Species					7	13	14	4	24	9	3	4	16

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			15/2/2022 (T1 & T2), 18/2/2022 (T3 & T5)					
					Weather Condition			Fine, Overcast					
					Tidal Condition			Low					
					Tide Level (m)			1.31, 1.40					
					Start Time			1400, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Total No. of Conservation Interest Species					2	4	5	3	6	5	3	0	4

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
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WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix L1i. Avifauna Species Recorded for Water Birds Monitoring, 21 & 25 February, 2022, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/2/2022 (T1 & T2), 25/2/2022 (T3 & T5)					
					Weather Condition			Rainy, Sunny					
					Tidal Condition			High					
					Tide Level (m)			2.01, 2.17					
					Start Time			1300, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R									6	
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv										5
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv						1				1
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R						36			12	130
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC						39	10		
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R						2				
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)					3	4			4
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU									1
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC						1			
Common Redshank	*Tringa totanus*	紅腳鷸	PM	RC					1				
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM						1				
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM					1	1	10			1
Crested Myna	*Acridotheres cristatellus*	八哥	R						60				190
Daurian Redstart	*Phoenicurus auroreus*	北紅尾鴝	WV				1						
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)			2		3	2			4

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/2/2022 (T1 & T2), 25/2/2022 (T3 & T5)					
					Weather Condition			Rainy, Sunny					
					Tidal Condition			High					
					Tide Level (m)			2.01, 2.17					
					Start Time			1300, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV						3	1			5
Eurasian Teal	*Anas crecca*	綠翅鴨	WV	RC						12	4		
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R		1								
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	CWV	PRC	17								
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	15	7				2			
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV							1			
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	4	6					3		1
Grey Wagtail	*Motacilla cinerea*	灰鶺鴒	WV						1				
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R										11
Little Bunting	*Emberiza pusilla*	小鵐	CPM, WV						4				
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	6	7		1		4			1
Little Grebe	*Tachybaptus ruficollis*	小鸊鷉	R	LC	2								
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC						6			20
Marsh Sandpiper	*Tringa stagnatilis*	澤鷸	PM, WV	RC						1			
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R			8			13				
Northern Shoveler	*Spatula clypeata*	琵嘴鴨	WV	RC						6			
Olive-backed Pipit	*Anthus hodgsoni*	樹鷚	WV		3								

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/2/2022 (T1 & T2), 25/2/2022 (T3 & T5)					
					Weather Condition			Rainy, Sunny					
					Tidal Condition			High					
					Tide Level (m)			2.01, 2.17					
					Start Time			1300, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R						2				
Pied Avocet	*Recurvirostra avosetta*	反嘴鷸	WV	RC						40	5	2	
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	(LC)	1								
Plain Prinia	*Prinia inornata*	純色鷦鶯	R						4	1			1
Red-throated Pipit	*Anthus cervinus*	紅喉鷚	CPM, WV	RC						6			
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R						2			3	
Rock Dove	*Columba livia*	原鴿	R		1								
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R							6			
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		1		1		7				1
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石鴴	WV				3		6				
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R		3	5							
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		2	2	3	4	30	2			4
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R					2	2			5	
White-rumped munia	*Lonchura striata*	白腰文鳥	R										
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)			1		2				
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC			4	1		23			
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R									5	2

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/2/2022 (T1 & T2), 25/2/2022 (T3 & T5)					
					Weather Condition			Rainy, Sunny					
					Tidal Condition			High					
					Tide Level (m)			2.01, 2.17					
					Start Time			1300, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Total No. of Species					12	6	7	5	21	19	4	6	17
Total No. of Conservation Interest Species					6	3	3	2	4	13	4	1	6
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/2/2022 (T1 & T2), 25/2/2022 (T3 & T5)					
					Weather Condition			Rainy, Sunny					
					Tidal Condition			High					
					Tide Level (m)			2.01, 2.17					
					Start Time			1300, 1500					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
EN: Endangered in IUCN Red List Status
(EN): Endangered in China Red Data Book Status
NT: Near Threatened in IUCN Red List Status
CR: Critically Endangered in IUCN Red List Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix L1j. Avifauna Species Recorded for Water Birds Monitoring, 21 & 25 February 2022, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/2/2022 (T1 & T2), 25/2/2022 (T3 & T5)					
					Weather Condition			Rainy, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			0.52, 1.32					
					Start Time			0900, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R									3	
Black Kite	*Milvus migrans*	黑鳶	R, WV										1
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R				1		5				2
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				34		10			
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	4		1		11	3			
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC						3			
Common Kestrel	*Falco tinnunculus*	紅隼	CaM, WV	Cap. 586					1				
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R			1							
Common Myna	*Acridotheres tristis*	家八哥	UR						7			3	
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM				1		1				
Crested Myna	*Acridotheres cristatellus*	八哥	R						3			6	2
Daurian Redstart	*Phoenicurus auroreus*	北紅尾鴝	WV						1				
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)				8	20				3
Eurasian Teal	*Anas crecca*	綠翅鴨	WV	RC				2					
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R			2							

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/2/2022 (T1 & T2), 25/2/2022 (T3 & T5)					
					Weather Condition			Rainy, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			0.52, 1.32					
					Start Time			0900, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	CWV	PRC	3	1							
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	3	4	2		1				
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV			2							
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	7	6							
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R										26
Little Bunting	*Emberiza pusilla*	小鵐	CPM, WV						2				
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	12	4	2						
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	(LC)						2			
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鶥	R				3		7				
Olive-backed Pipit	*Anthus hodgsoni*	樹鷚	WV		7	1	1		1				
Pied Avocet	*Recurvirostra avosetta*	反嘴鷸	WV	RC				17		6			
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	(LC)	1								
Plain Prinia	*Prinia inornata*	純色鷦鶯	R						2				
Red-rumped Swallow	*Cecropis daurica*	金腰燕	UPM										3
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R				2		5				1
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石鴝	WV						2				
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R		18								

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/2/2022 (T1 & T2), 25/2/2022 (T3 & T5)					
					Weather Condition			Rainy, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			0.52, 1.32					
					Start Time			0900, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		1	4	1		11	1			2
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R					2					
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)					2				
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC			1		3	9			2
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R										
Zitting Cisticola	*Cisticola juncidis*	棕扇尾鶯	PM, WV	LC					10			7	
Total No. of Species					9	9	10	5	19	7	0	4	9
Total No. of Conservation Interest Species					6	4	4	4	7	6	0	1	2
Note:													

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date			21/2/2022 (T1 & T2), 25/2/2022 (T3 & T5)					
					Weather Condition			Rainy, Sunny					
					Tidal Condition			Low					
					Tide Level (m)			0.52, 1.32					
					Start Time			0900, 0900					
					Abundance								
					Transect Walk								
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
EN: Endangered in IUCN Red List Status
(EN): Endangered in China Red Data Book Status
NT: Near Threatened in IUCN Red List Status
CR: Critically Endangered in IUCN Red List Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix L1k. Waterbirds Recorded in February 2022

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	LC	T5: Dry Agricultural Land	Common resident and winter visitor. Widely distributed in Hong Kong.
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	RC	T3: River bed T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, Pond, In flight	Common passage migrant. Found in Deep Bay area, Long Valley, Kam Tin.
Chinese Pond Heron	*Ardeola bacchus*	池鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, in flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, Pond, In flight	Common resident. Widely distributed in Hong Kong.
Common Greenshank	*Tringa nebularia*	青腳鷸	RC	T3: River bed T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, Pond	Abundant passage migrant and winter visitor. Found in Deep Bay area.
Common Kingfisher	*Alcedo atthis*	普通翠鳥		T1: River bank, In flight T3: River bank, In flight	Common passage migrant and winter visitor. Widely distributed in wetland habitat throughout Hong Kong.
Common Redshank	*Tringa totanus*	紅腳鷸	RC	T3: River bed T5: Dry Agricultural Land	Common resident and migrant. Found in Tai Po Kau, Deep Bay area, Check Lap Kok, Cheung Chau, Soko Islands.
Common Sandpiper	*Actitis hypoleucos*	磯鷸		T1: River bed T2: River bed T3: River bed T5: Shallow Water Habitat	Common passage migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.
Common Snipe	*Gallinago gallinago*	扇尾沙錐		T5: Dry Agricultural Land, Shallow Water Habitat	Common passage migrant and winter visitor. Found in Long Valley, Chau Tau, Sai Kung.
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	(LC)	T1: River bank T2: River bank T3: River bank T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Resident and common passage migrant. Widely distributed in Hong Kong.

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Eurasian Teal	*Anas crecca*	綠翅鴨	RC	T5: Pond	Common winter visitor. Found in Deep Bay area, Shuen Wan, Tai Lam Chung Reservoir, Victoria Harbour, Urban Park.
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	PRC	T1: River bed, In flight T2: River bed, In flight T3: In flight	Common winter visitor. Widely distributed in coastal areas throughout Hong Kong.
Great Egret	*Ardea alba*	大白鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, In flight T5: Dry Agricultural Land, Shallow Water Habitat, Pond, In flight	Common resident and winter visitor. Widely distributed in Hong Kong.
Green Sandpiper	*Tringa ochropus*	白腰草鷸		T2: River bank, River bed T3: River bank, River bed T5: Shallow Water Habitat	Uncommon passage migrant and winter visitor. Found in Deep Bay area, Shuen Wan, Long Valley, Kam Tin, Shek Kong, Ho Chung.
Grey Heron	*Ardea cinerea*	蒼鷺	PRC	T1: River bank, River bed, In flight T2: River bank, River bed, In flight T3: River bank, River bed, In flight T5: 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	*Egretta garzetta*	小白鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, In flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, Pond, In flight	Common resident. Widely distributed in coastal area throughout Hong Kong.
Little Grebe	*Tachybaptus ruficollis*	小䴙䴘	LC	T1: River bed T2: River bed T5: Pond	Common resident. Found in Deep Bay area.
Little Ringed Plover	*Charadrius dubius*	金眶鴴	(LC)	T5: Dry Agricultural Land, Shallow Water Habitat	Common winter visitor and passage migrant. Widely distributed in freshwater areas throughout Hong Kong.
Marsh Sandpiper	*Tringa stagnatilis*	澤鷸	RC	T5: Shallow Water Habitat	Abundant winter visitor and migrant. Found in Deep Bay area, Shuen Wan, Long Valley, Kam Tin, Sai Kung.

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Northern Lapwing	*Vanellus vanellus*	鳳頭麥雞	NT, LC	T5: Shallow Water Habitat	Scarce winter visitor. Found in Mai Po, Long Valley, Check Lap Kok, Ho Chung, Tai Long Wan, Tai Po, Castle Peak coast.
Pied Avocet	*Recurvirostra avosetta*	反嘴鷸	RC	T5: Wet Agricultural Land, Shallow Water Habitat, Pond, In flight.	Abundant winter visitor. Found in Deep Bay area.
Pied Kingfisher	*Ceryle rudis*	斑魚狗	(LC)	T1: River bank, In flight T2: River bank, In flight T5: In flight	Uncommon resident. Widely distributed in lakes and ponds throughout Hong Kong.
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥		T3: River bank T5: Dry Agricultural Land, Shallow Water Habitat, In flight	Common resident. Widely distributed in wetland throughout Hong Kong.
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	(LC)	T1: River bank T3: River bank T5: Dry Agricultural Land, In flight	Common resident. Widely distributed in coastal areas throughout Hong Kong.
Wood Sandpiper	*Tringa glareola*	林鷸	LC	T1: River bank T2: River bank T5: Wet Agricultural Land, Shallow Water Habitat, Pond	Common passage migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Note: R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net) Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586) CR: Rare in China Red Data Book Status VU: Vulnerable in IUCN Red List Status (VU): Vulnerable in China Red Data Book Status EN: Endangered in IUCN Red List Status (EN): Endangered in China Red Data Book Status NT: Near Threatened in IUCN Red List Status CR: Critically Endangered in IUCN Red List Status RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002) WAL: Wet Agricultural Land DAL: Dry Agricultural Land SWH: Shallow Water Habitat P: Pond *Source: Hong Kong Biodiversity Database, AFCD (https://www.afcd.gov.hk/English/conservation/hkbiodiversity/database/search.php)					

Appendix L1l. Birds Recorded in February 2022

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Asian Koel	*Eudynamys scolopacea*	噪鵑	R	
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv	
Besra	*Accipiter virgatus*	松雀鷹	R, CPM	Cap.586
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv	
Black Kite	*Milvus migrans*	黑鳶	R, WV	(RC), Cap.586
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R	
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	R, WV	LC
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R	
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)
Cinereous Tit	*Parus cinereus*	蒼背山雀	R	
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC
Common Kestrel	*Falco tinnunculus*	紅隼	CaM, WV	Cap. 586
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R	
Common Myna	*Acridotheres tristis*	家八哥	UR	
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM	
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM	
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R	
Crested Bunting	*Emberiza lathami*	鳳頭鵐	RR	LC
Crested Myna	*Acridotheres cristatellus*	八哥	R	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Crested Serpent Eagle	*Spilornis cheela*	蛇鵰	UR	Cap.586, (VU)
Daurian Redstart	*Phoenicurus auroreus*	北紅尾鴝	WV	
Dusky Warbler	*Phylloscopus fuscatus*	褐柳鶯	PM, WV	
Eastern Buzzard	*Buteo japonicus*	普通鵟	WV	Cap.586
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV	
Eurasian Teal	*Anas crecca*	綠翅鴨	WV	RC
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R	
Great Cormorant	*Phalacrocorax carbo*	普通鸕鷀	CWV	PRC
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV	
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC
Grey Wagtail	*Motacilla cinerea*	灰鶺鴒	WV	
Hair-crested Drongo	*Dicrurus hottentottus*	髮冠卷尾	PM, SV	
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R	
Large-billed Crow	*Corvus macrorhynchus*	大嘴烏鴉	R	
Little Bunting	*Emberiza pusilla*	小鵐	CPM, WV	
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)
Little Grebe	*Tachybaptus ruficollis*	小鸊鷉	R	LC
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	(LC)

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R	
Marsh Sandpiper	*Tringa stagnatilis*	澤鷸	PM, WV	RC
Masked Laughingthrush	*Pterorhinus perspicillatus*	黑臉噪鸝	R	
Northern Lapwing	*Vanellus vanellus*	鳳頭麥雞	SWV	NT, LC
Northern Shoveler	*Spatula clypeata*	琵嘴鴨	WV	RC
Olive-backed Pipit	*Anthus hodgsoni*	樹鷚	WV	
Oriental Magpie	*Pica serica*	喜鵲	R	
Oriental Magpie Robin	*Copsychus saularis*	鵲鴝	R	
Pied Avocet	*Recurvirostra avosetta*	反嘴鷸	WV	RC
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	(LC)
Plain Prinia	*Prinia inornata*	純色鱂鶯	R	
Red-billed Blue Magpie	*Urocissa erythrorhyncha*	紅咀藍鵲	R	
Red-rumped Swallow	*Cecropis daurica*	金腰燕	UPM	
Red-throated Pipit	*Anthus cervinus*	紅喉鷚	CPM, WV	RC
Red-whiskered bulbul	*Pycnonotus jocosus*	紅耳鵯	R	
Richard's Pipit	*Anthus richardi*	理氏鷚	WV, PM	
Rock Dove	*Columba livia*	原鴿	R	
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R	
Spotted Munia	*Lonchura punctulata*	斑文鳥	R	
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石鴴	WV	
Swinhoe's White-eye	*Zosterops simplex*	暗綠繡眼鳥	R	

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R	
White-headed Munia	*Lonchura maja*	白頭文鳥	R	
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV	
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R	
Zitting Cisticola	*Cisticola juncidis*	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 L1m. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 4 February 2022, T5

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 4/2/2022					
					Start Time: 18:15					
					Abundance					
					WAL	DAL	SWH	P	Heard	Flight
Asian Koel	Eudynamys scolopacea	噪鵑	R						3	
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	R, WV	LC		1				
Black-winged Stilt	Himantopus himantopus	黑翅長腳鷸	PM	RC	4		24	3		
Collared Crow	Corvus torquatus	白頸鴉	UR	LC, VU						2
Common Greenshank	Tringa nebularia	青腳鷸	PM, WV	RC			3			
Common Snipe	Gallinago gallinago	扇尾沙錐	WV, PM							3
Crested Myna	Acridotheres cristatellus	八哥	R						30	27
Grey Heron	Ardea cinerea	蒼鷺	WV	PRC		1				2
House Swift	Apus nipalensis	小白腰雨燕	SpM, R							30
Pied Avocet	Recurvirostra avosetta	反嘴鷸	WV	RC				15		5
White-breasted Waterhen	Amaurornis phoenicurus	白胸苦惡鳥	R						1	1
Wood Sandpiper	Tringa glareola	林鷸	PM, WV	LC			15			
Total No. of Species					1	2	3	2	2	7
Total No. of Conservation Interest Species					1	2	3	2	0	3

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; RR – Rare resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
EN: Endangered in IUCN Red List Status

(EN): Endangered in China Red Data Book Status
NT: Near Threatened in IUCN Red List Status
CR: Critically Endangered in IUCN Red List Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land; DAL: Dry Agricultural Land; SWH: Shallow W

Appendix L1n. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 18 February 2022, T5

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 18/2/2022					
					Start Time: 18:15					
					Abundance					
					WAL	DAL	SWH	P	Heard	Flight
Asian Koel	*Eudynamys scolopacea*	噪鵑	R						4	
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R						20	
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				32		
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)						1
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC			1			
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM							2
Crested Myna	Acridotheres cristatellus	八哥	R						30	
Eurasian Teal	*Anas crecca*	綠翅鴨	WV	RC						6
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)			1			
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC						2
Pied Avocet	*Recurvirostra avosetta*	反嘴鷸	WV	RC				8	2	
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R						1	
Wood Sandpiper	*Tringa glareola*	林鷸	PM, WV	LC			10			3
Total No. of Species					0	0	3	W	5	5
Total No. of Conservation Interest Species					0	0	3	w	1	4

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; RR – Rare resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant; OV - Occasional visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance (Cap.586)
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status

(VU): Vulnerable in China Red Data Book Status
EN: Endangered in IUCN Red List Status
(EN): Endangered in China Red Data Book Status
NT: Near Threatened in IUCN Red List Status
CR: Critically Endangered in IUCN Red List Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern; PGC=Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow W

Appendix L2. Mammal Species Recorded for Ecologically Sensitive Habitat Monitoring, 17 & 22 February 2022

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 17/2/2022, 22/2/2022				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Domestic Cat	*Felis catus*	野貓	Uncommon	-	+				
Domestic Dog	*Canis lupus familiaris*	野狗	Common	-	+		++	+	
Japanese Pipistrelle	*Pipistrellus abramus*	東亞家蝠	Very Common	Cap. 170	++	+	+	+	+
Short-nosed Fruit Bat	*Cynopterus sphinx*	短吻果蝠	Very Common	Cap. 170, I, NT			+		
Total No. of species					3	1	3	2	1
Total No. of Conservation Interest Species					1	1	2	1	1

Note:

Cap. 170: Species under protection of Wild Animals Protection Ordinance (Cap. 170)

NT: Near Threatened in the Red List of China's Vertebrates

I: Indeterminate in China Red Data Book Status

+: species recorded within transect routes

++: species commonly recorded within transect routes

+++: dominant species within transect routes

Appendix L3. Herpetofauna Species Recorded for Ecologically Sensitive Habitat Monitoring, 17 & 22 February 2022

Common Name	Species Name	Chinese Name	Conservation Status	Date: 17/2/2022, 22/2/2022				
				Relative Abundance				
				Transect Walk				
				T1	T3	T4	T5	T6
Amphibian								
Asian Common Toad	*Bufo melanostictus*	黑眶蟾蜍	-				++	
Reptile								
Bowring's Gecko	*Hemidactylus bowringii*	原尾蜥虎	-	+				
Chinese gecko	*Gekko chinensis*	中國壁虎	-	+	+			
Total No. of species				2	1	0	1	0
Total No. of Conservation Interest Species				0	0	0	0	0

Note://
+: species recorded within transect routes
++: species commonly recorded within transect routes
+++: dominant species within transect routes

Appendix L4. Butterfly Species Recorded Ecologically Sensitive Habitat Monitoring, 17 & 22 February 2022

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 17/2/2022, 22/2/2022				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Common Grass Yellow	*Eurema hecabe*	寬邊黃粉蝶	Very common	-			+		
Indian Cabbage White	*Pieris canidia*	東方菜粉蝶	Very common	-	++		+		
Indian Red Admiral	*Vanessa indica indica*	大紅蛺蝶	Uncommon	-	+				
Red-base Jezebel	*Delias pasithoe*	報喜斑粉蝶	Very common	-			+	+	
Total No. of species					2	0	3	1	0
Total No. of Conservation Interest Species					0	0	0	0	0

Note:
+: species recorded within transect routes
++: species commonly recorded within transect routes
+++: dominant species within transect routes

Appendix L5. Odonata Species Recorded for Ecologically Sensitive Habitat Monitoring 17 & 22 February 2022

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 17/2/2022 22/2/2022				
					Relative Abundance				
					Transect Walk				
					T1	T3	T4	T5	T6
Wandering Glider	*Pantala flavescens*	黃蜻	Abundant	-			+		
Total No. of species					0	0	1	0	0
Total No. of Conservation Interest Species					0	0	0	0	0

Note:

+: species recorded within transect routes

++: species commonly recorded within transect routes

+++: dominant species within transect routes

APPENDIX M
WEATHER CONDITION

APPENDIX M –
GENERAL WEATHER CONDITIONS DURING THE MONITORING PERIOD

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1 February 2022	14.3	84	1.2
2 February 2022	15.6	88	1
3 February 2022	13.4	85	1
4 February 2022	14.4	69	-
5 February 2022	15.2	69	-
6 February 2022	16	75	-
7 February 2022	16.4	85	Trace
8 February 2022	17.1	78	Trace
9 February 2022	16.1	77	-
10 February 2022	17	81	-
11 February 2022	18.6	81	-
12 February 2022	18.7	83	-
13 February 2022	17.2	86	1.2
14 February 2022	17	75	1.2
15 February 2022	17.6	77	-

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
16 February 2022	16.9	77	-
17 February 2022	15.6	86	4
18 February 2022	15.9	84	Trace
19 February 2022	12.4	92	21.3
20 February 2022	8.5	94	43.4
21 February 2022	8.8	95	43.3
22 February 2022	10.7	96	39.9
23 February 2022	12.1	77	11
24 February 2022	12.6	72	-
25 February 2022	15.3	70	-
26 February 2022	16.8	76	-
27 February 2022	17.6	79	-
28 February 2022	18.9	70	-

* The above information was extracted from the daily weather summary by Hong Kong Observatory.

APPENDIX N
EVENT ACTION PLANS

Appendix N:

Table N-1: Event / Action Plan for Air Quality

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; and 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Notify Contractor.	1. Identify source, investigate the causes of exceedance and propose remedial measures 2. Rectify any unacceptable practice and implement remedial measures; and 3. Amend working methods agreed with ER if appropriate.
2. Exceedance for two or more consecutive samples	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Advise the ER and Contractor on the effectiveness of the proposed remedial measures; 4. Repeat measurements	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and 5. Supervise	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Identify source, investigate the causes of exceedance and propose remedial measures 2. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 3. Implement the

	to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC, ER and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; and 8. If exceedance stops, cease additional monitoring.	Implementation of remedial measures.		agreed proposals; and 4. Amend proposal if appropriate.
LIMIT LEVEL				
1.Exceedance for one sample	Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor, IEC and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET, ER and Contractor on possible remedial measures; 4. Advise the ER and ET on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; and 5. Amend proposal if appropriate.

		measures.		
2.Exceedance for two or more consecutive samples	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC, Contractor and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and 5. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise and ensure remedial measures properly implemented; and 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; 5. Resubmit proposals if problem still not under control; 6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

Table N-2: Event / Action Plan for Construction Noise

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
Action Level	1. Notify IEC, ER and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss jointly with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the monitoring data submitted by the ET; 2. Review the construction methods and proposed remedial measures by the Contractor, and advise the ET and ER if the proposed remedial measures would be sufficient; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify the Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented	1. Submit noise mitigation proposals to ER and copy to the IEC and ET; 2. Implement noise mitigation proposals.
Limit Level	1. Identify source; 2. Inform IEC, ER and Contractor; 3. Repeat measurements to confirm findings; 4. Increase the monitoring frequency; 5. Carry out analysis of Contractor's working procedures with the ER and Contractor to determine possible mitigation to be implemented; 6. Inform IEC, ER and Contractor the causes and actions taken for the exceedances;	1. Discuss amongst the ER, ET, and Contractor on the potential remedial actions; 2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify the Contractor; 3. Require the Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to the ER and copy to the ET and IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problems still not under control; 5. Stop the relevant portion of works as

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
	7. Assess effectiveness of Contractor's remedial actions and keep IEC informed of the results; 8. If exceedance stops, cease additional monitoring.		Contractor to stop that portion of work until the exceedance is abated.	determined by the ER until the exceedance is abated.

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

Table N-3: Event / Action Plan for Water Quality

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
Action level being exceeded by one sampling day	1. Conduct addition site investigation on the same day; 2. Inform IEC, Contractor and ER; 3. Check monitoring data, all plant, equipment, Contractor's working methods and other relative information; 4. Review proposals on remedial measures submitted by Contractor; 5. Discuss remedial measures with IEC and Contractor and ER; and 6. Review submit proposal and ensure the effectiveness of the implemented mitigation measures.	1. Discuss with ET, ER and Contractor on the implemented mitigation measures; 2. Review proposals on remedial measures submitted by Contractor and advise the ER accordingly; and 3. Review submit proposal and advise the ET and ER on the Effectiveness of the implemented mitigation measures.	1. Review proposals on remedial measures submitted by Contractor; 2. Discuss with IEC, ET and Contractor on the Implemented mitigation measures; 3. Make agreement on the remedial measures to be implemented; and 4. Supervise the implementation of agreed remedial measures.	1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the noncompliance in writing; 3. Rectify unacceptable practice; 4. Check all plant and equipment; 5. Consider changes of working methods; 6. Discuss with ER, ET and IEC and submit proposal of remedial measures to ER and IEC; and 7. Implement the agreed mitigation measures.
Action level being exceeded by more than one consecutive sampling days	1. Conduct addition site investigation on the same day; 2. Inform IEC, Contractor and ER; 3. Check monitoring data, all plant, equipment,	1. Discuss with ET, Contractor and ER on the implemented mitigation measures; 2. Review the proposed remedial measures submitted by Contractor and advise	1. Discuss with ET, IEC and Contractor on the proposed mitigation measures; 2. Make agreement on the remedial measures to be implemented; and	1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the non-compliance in writing; 3. Rectify unacceptable

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
	Contractor's working methods and other relative information; 4. Discuss remedial measures with IEC, contractor and ER; and 5. Review submit proposal and ensure the agreed remedial measures are implemented	the ER accordingly; and 3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.	3. Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures	practice; 4. Check all plant and equipment and consider changes of working methods; 5. Discuss with ET, IEC and ER and submit proposal of remedial measures to ER and IEC within 3 working days of notification; and 6. Implement the agreed mitigation measures.
Limit level being exceeded by one sampling day	1. Conduct addition site investigation on the same day; 2. Inform IEC, Contractor and ER; 3. Rectify unacceptable practice; 4. Check monitoring data, all plant, equipment, Contractor's working methods and other relative information; 5. Consider changes of working methods; 6. Discuss mitigation measures with IEC, ER and Contractor; 7. Review the submit	1. Discuss with ET, Contractor and ER on the implemented mitigation measures; 2. Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and 3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.	1. Discuss with ET, IEC and Contractor on the implemented remedial measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the remedial measures to be implemented; and 4. Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures.	1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the noncompliance in writing; 3. Rectify unacceptable practice; 4. Check all plant and equipment and consider changes of working methods; 5. Discuss with ET, IEC and ER and submit proposal of additional mitigation measures to ER and IEC within 3 working days of

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
	proposal and ensure the agreed remedial measures are implemented;			notification; and 6. Implement the agreed remedial measures.
Limit level being exceeded by more than one consecutive sampling days	1. Conduct addition site investigation on the same day; 2. Inform IEC, contractor and ER; 3. Check monitoring data, all plant, equipment, Contractor's working methods and other relative information; 4. Discuss mitigation measures with IEC, ER and Contractor; and 5. Review the submit proposal and ensure the agreed remedial measures are implemented.	1. Discuss with ET, Contractor and ER on the implemented mitigation measures; 2. Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and 3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.	1. Discuss with ET, IEC and Contractor on the implemented remedial measures 2. Request Contractor to critically review the working methods; 3. Make agreement on the remedial measures to be implemented; 4. Discuss with ET and IEC on the effectiveness of the implemented mitigation measures; and 5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the dredging activities until no exceedance of Limit level.	1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the noncompliance in writing; 3. Rectify Unacceptable practice; 4. Check all plant and equipment and consider changes of working methods; 5. Discuss with ET, IEC and ER and submit proposal of additional mitigation measures to ER and IEC within 3 working days of notification; and 6. Implement the agreed remedial measures. 7. As directed by the ER, to slow down or stop all or part of the dredging activities until no exceedance of Limit level.

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

Table N-4: Actions in the event of LFG being detected

Parameter	Monitoring Results	Actions
O_2	<19% v/v	Increase underground ventilation to restore O_2 to >19% v/v
	<18% v/v	Stop works, evacuate all personnel, prohibit entry, and increase ventilation to restore O_2 level to >19%
CH_4	>10% LEL	Prohibit hot works, increase ventilation to restore CH4 to <10% LEL
	>20% LEL	Stop works, evacuate all personnel, increase ventilation further to restore CH_4 to <10% LEL
CO_2	>0.5% v/v	Increase ventilation to restore C O_2 to <0.5% v/v
	>1.5% v/v	Stop works, evacuate all personnel, increase ventilation further to restore CO_2 to <0.5%

Note: Depending on the results of the measurements, actions required will vary and should be set down by the Safety Officer or another appropriately qualified person. As a minimum these should encompass those actions specified in the above table.

Table N-5: Event / Action Plan for Ambient Arsenic Monitoring

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; and 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate
2. Exceedance for two or more consecutive samples	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Advise the ER and Contractor on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC, ER and Contractor on remedial	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 2. Implement the agreed proposals; and 3. Amend proposal if appropriate.

	actions required; 7. If exceedance continues, arrange meeting with IEC and ER; and 8. If exceedance stops, cease additional monitoring.			
LIMIT LEVEL				
1.Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor, IEC and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET, ER and Contractor on possible remedial measures; 4. Advise the ER and ET on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; and 5. Amend proposal if appropriate.
2.Exceedance for two or more consecutive samples	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consultation with the ET and IEC, agree with the Contractor on the	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification;

	procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC, Contractor and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures	remedial measures to be implemented; 4. Supervise and ensure remedial measures properly implemented; and 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedanceis abated.	3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

Table N-6.1 Action and Limit Levels and Responses to Evidence of Disturbance to Waterbirds using in Ng Tung, Sheung Yue and Shek Sheung Rivers

Action Level	Response	Limit Level	Response
Construction Phase			
Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the Action Level response is triggered.	Investigate cause and if cause identified as related to NDAs project instigate remedial action to remove or reduce source of disturbance.	Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the Limit Level response is triggered.	Investigate cause and if caused identified as related to NDAs project instigate remedial action. Review and adjust LVNP management measures to improve conditions for affected species.
Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Action Level response is triggered.	Investigate cause and if cause identified as related to NDAs project instigate remedial action to remove or reduce source of disturbance.	Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Limit Level response is triggered.	Investigate cause and if caused identified as related to NDAs project instigate remedial action. Review and adjust LVNP management measures to improve conditions for affected species.

* Whether numbers are significant will depend on species and season and should be determined following collection and evaluation of Baseline survey data.

Table N-6.2 Action and Limit Levels and Responses to Evidence of Declines in Aquatic Fauna

Action Level	Response	Limit Level	Response
Construction Phase			
Reduction in species diversity such that Action Level response is triggered.	Investigate cause and if cause identified as related to Project instigate remedial action to remove or reduce source of disturbance.	Reduction in taxa diversity such that Limit Level response is triggered.	Investigate cause and if caused identified as related to Project instigate remedial action.

* Whether numbers are significant will depend on species and season. Significance threshold for each species should be reviewed following collection of Baseline survey data.

Table N-6.3 Action and Limit Levels and Responses to Evidence of Declines in non-aquatic Fauna

Action Level	Response	Limit Level	Response

Construction Phase			
Reduction in species diversity such that Action Level response is triggered.	Investigate cause and if cause identified as related to Project instigate remedial action to remove or reduce source of disturbance.	Reduction in taxa diversity such that Limit Level response is triggered.	Investigate cause and if caused identified as related to Project instigate remedial action.

* Whether numbers are significant will depend on species and season. Significance threshold for each species should be reviewed following collection of Baseline survey data.

APPENDIX O
SUMMARY OF EXCEEDANCE

Appendix O: Exceedance Report

(A) Exceedance Report for Air Quality

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Air Quality	1-hr TSP	0	0	0	0
	24-hr TSP	0	0	0	0
	24-hr RSP (Ambient Arsenic)	0	0	0	0

(B) Exceedance Report for Construction Noise

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Noise	$L_{eq(30\ min.)}$ dB(A)	0	0	0	0

(C) Exceedance Report for Water Quality

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Water Quality	DO	0	0	0	0
	Turbidity	0	1	0	1
	SS	0	1	0	1
	Arsenic	0	0	0	0

(D) Exceedance Report for Landfill Gas

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Landfill Gas	O_2 (% v/v) CH_4 (% LEL) CO_2 (%v/v)	0	0	0	0

(E) Exceedance Report for Built Heritage Monitoring

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Cultural Heritage	Built Heritage Monitoring	0	0	0	0

APPENDIX P
SITE AUDIT SUMMARY

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/01 – Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Work

Weekly Site Inspection Record Summary

Checklist Reference Number	220208
Date	8 February 2022 (Tuesday)
Time	09:30-11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• No environmental deficiency was identified during site inspection.	
	G. Landfill Gas Hazard	
	• No environmental deficiency was identified during site inspection.	
	H. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	I. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	J. Ecology	
	• No environmental deficiency was identified during site inspection.	
	K. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:220131), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		8 February 2022
Checked by	Dr. Priscilla Choy		8 February 2022

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/01 – Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Work

Weekly Site Inspection Record Summary

Checklist Reference Number	220217
Date	17 February 2022 (Thursday)
Time	13:30-14:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• No environmental deficiency was identified during site inspection.	
	G. Landfill Gas Hazard	
	• No environmental deficiency was identified during site inspection.	
	H. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	I. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	J. Ecology	
	• No environmental deficiency was identified during site inspection.	
	K. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:220208), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		17 February 2022
Checked by	Dr. Priscilla Choy		17 February 2022

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/01 – Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Work

Weekly Site Inspection Record Summary

Checklist Reference Number	220222
Date	22 February 2022 (Tuesday)
Time	09:30-10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• No environmental deficiency was identified during site inspection.	
	G. Landfill Gas Hazard	
	• No environmental deficiency was identified during site inspection.	
	H. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	I. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	J. Ecology	
	• No environmental deficiency was identified during site inspection.	
	K. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:220217), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		24 February 2022
Checked by	Dr. Priscilla Choy		24 February 2022

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/02 – Kwu Tung North New Development Area, Phase 1: Roads and Drains between Kwu Tung North New Development and Shek Wu Hui

Weekly Site Inspection Record Summary

Checklist Reference Number	220209
Date	9 February 2022 (Wednesday)
Time	09:30 – 10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• 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	
220209-R01	• Erect 2m high dull green site barrier around active works area.	H 1, H 7
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:220131), item 210131-R01 was remarked as 220209-R01. Follow-up action is needed to be reviewed. Other environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		9 February 2021
Checked by	Dr. Priscilla Choy		9 February 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	220218
Date	18 January 2022 (Friday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
220218-R01	• Drip tray should be provided for chemical storage.	E 14
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:220209), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		24 February 2021
Checked by	Dr. Priscilla Choy		24 February 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	220223
Date	23 January 2022 (Wednesday)
Time	09:30 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220223-R02	• To enhance water mitigation measure to prevent surface runoff to pavement.	D 3
	E. Waste / Chemical Management	
220223-R01	• Drip tray should be provided for chemical storage.	E 14
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:220218), item 220218-R01 was remarked as 220223-R01. Follow-up action is needed to be reviewed.	

	Name	Signature	Date
Recorded by	Antony Leung		24 February 2021
Checked by	Dr. Priscilla Choy		24 February 2021

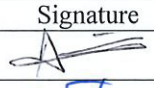
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	220204
Date	4 February 2022 (Friday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220204-O01	• To enhance water mitigation measures around water stream near 巨賓, exposed slope of the stream should be covered properly.	D 3
	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.:220128), follow-up action was required for item 220128-R02, which was remarked as 220204 – O01.	

	Name	Signature	Date
Recorded by	Adrian Lam		7 February 2022
Checked by	Dr. Priscilla Choy		7 February 2022

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/03 – Kwu Tung North New Development Area, Phase 1: Development of Long Valley Nature Park

Weekly Site Inspection Record Summary

Checklist Reference Number	220211
Date	11 February 2022 (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	
220211-O01	• To enhance water mitigation measures around water stream near 巨賓, exposed slope of the stream should be covered to prevent further debris from entering irrigation water channels.	D (3 & 7)
	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.:220204), follow-up action was required for item 220204-O01, which was remarked as 220211 – O01.	

	Name	Signature	Date
Recorded by	Adrian Lam		14 February 2022
Checked by	Dr. Priscilla Choy		14 February 2022

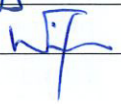
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/03 – Kwu Tung North New Development Area, Phase 1: Development of Long Valley Nature Park

Weekly Site Inspection Record Summary

Checklist Reference Number	220218
Date	18 February 2022 (Friday)
Time	14:00 – 14:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
220218-R03	• Dusty stockpiles should be properly covered.	B 2
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220218-O01	• To enhance water mitigation measures around water stream near 巨寶, exposed slope of the stream should be covered to prevent further debris from entering irrigation water channels.	D 7
220218-R02	• Wheel-washing bay should be cleared and cleaned regularly.	D 12iv
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
220218-R01	• 2m high solid dull green site barrier should be properly maintained.	G 1
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.:220211), follow-up action was required for item 220211-O01, which was remarked as 220218 – O01.	

	Name	Signature	Date
Recorded by	Adrian Lam		22 February 2022
Checked by	Dr. Priscilla Choy		22 February 2022

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/03 – Kwu Tung North New Development Area, Phase 1: Development of Long Valley Nature Park

Weekly Site Inspection Record Summary

Checklist Reference Number	220225
Date	25 February 2022 (Friday)
Time	14:00 – 14:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220225-O01	• To enhance water mitigation measures around water stream near 巨賓, exposed slope of the stream should be covered to prevent further debris from entering irrigation water channels.	D 7
220225-R01	• Wheel-washing bay should be cleared and cleaned regularly.	D 12iv
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.:220218), follow-up action was required for item 220218-O01 and 220218-R02, which was remarked as 220225-O01 & 220225-R01.	

	Name	Signature	Date
Recorded by	Adrian Lam		3 March 2022
Checked by	Dr. Priscilla Choy		3 March 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220204
Date	4 February 2022 (Friday)
Time	09:30-11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
220204-R01	• Faded NRMM label shall be replaced.	B 24
220204-R03	• Faded NRMM label shall be replaced. (Bridge F)	B 24
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220204-R02	• Clear the sediment and provide desilting facilities inside the drainage.	D 6
	E. Waste / Chemical Management	
220204-R04	• General refuse should be disposed of regularly.	E 1, E1ii
	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.: 220127), item 220127-R01 and 220127-R02 were remarked as 220204-R01 and 220204-R02. Follow-up action is needed to be reviewed.	

	Name	Signature	Date
Recorded by	Antony Leung		4 February 2022
Checked by	Dr. Priscilla Choy		4 February 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220211
Date	11 February 2022 (Friday)
Time	09:30-11:00

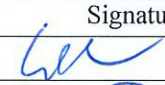
Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
220211-R03	• Faded NRMM label shall be replaced. (Bridge F)	B 24
220211-R04	• Exposed haul road should be watered regularly.	B 1
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220211-R01	• Clear the sediment and provide desilting facilities inside the drainage.	D 6
	E. Waste / Chemical Management	
220211-R02	• General refuse should be disposed of regularly.	E 1, E1ii
	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.: 220127), item 220204-R02, 220204-R03 and 220204-R04 were remarked as 220211-R01, 220211-R02 and 220211-R03. Follow-up action is needed to be reviewed. Other environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		14 February 2022
Checked by	Dr. Priscilla Choy		14 February 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220216
Date	16 February 2022 (Wednesday)
Time	09:30-11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
220216-R01	• Faded NRMM label shall be replaced. (Bridge F)	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.: 220211), item 220211-R03 was remarked as 220216-R01. Follow-up action is needed to be reviewed. Other environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		16 February 2022
Checked by	Dr. Priscilla Choy		16 February 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220223
Date	23 February 2022 (Wednesday)
Time	11:00-12:00

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	
220223-O01	• Direct the muddy stagnant water to de-silting facility before discharge to drainage and U-channel. (Portion B)	D 13i &D 13ii
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 220216), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		1 March 2022
Checked by	Dr. Priscilla Choy		1 March 2022

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/05 – 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	220207
Date	7 February 2022 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
220207-R03	• Display Valid NRMM label on regulated machine.	B 24
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220207-R01	• To ensure all vehicles cleared of mud before leaving the site.	D 11
220207-R02	• To enhance water mitigation measure to prevent muddy runoff.	D 3
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 220131), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		8 February 2022
Checked by	Dr. Priscilla Choy		8 February 2022

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/05 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section between Shung Him Tong to Kau Lung Hang

Weekly Site Inspection Record Summary

Checklist Reference Number	220217
Date	17 February 2022 (Thursday)
Time	09:00 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220217-R01	• Remove the construction materials inside the temporary drainage.	D 6
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 220207), all environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		17 February 2022
Checked by	Dr. Priscilla Choy		17 February 2022

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/05 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section between Shung Him Tong to Kau Lung Hang

Weekly Site Inspection Record Summary

Checklist Reference Number	220221
Date	21 February 2022 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220221-R01	• To enhance water mitigation measure to prevent surface runoff to drainage.	D 3
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 220217), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		24 February 2022
Checked by	Dr. Priscilla Choy		24 February 2022

Weekly Site Inspection Record Summary

Checklist Reference Number	220228
Date	28 February 2022 (Monday)
Time	14:00 – 15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
220228-R01	• Dusty worksite shall be watered regularly.	B 1
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220228-R02	• To enhance water mitigation measure to prevent surface runoff to drainage.	D 3
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 220221), all environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Antony Leung		1 March 2022
Checked by	Dr. Priscilla Choy		1 March 2022

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/06 – 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	220210
Date	10 February 2022 (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.: 220131), all environmental deficiency has been rectified by the contractor.	

	Name	Signature	Date
Recorded by	Adrian Lam		11 February 2022
Checked by	Dr. Priscilla Choy		11 February 2022

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/06 – Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products

Weekly Site Inspection Record Summary

Checklist Reference Number	220215
Date	15 February 2022 (Tuesday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• 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.: 220210), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		16 February 2022
Checked by	Dr. Priscilla Choy		16 February 2022

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/06 – Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products

Weekly Site Inspection Record Summary

Checklist Reference Number	220224
Date	24 February 2022 (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.: 220215), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		24 February 2022
Checked by	Dr. Priscilla Choy		24 February 2022

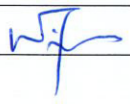
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Weekly Site Inspection Record Summary

Checklist Reference Number	220204
Date	4 February 2022 (Friday)
Time	11:00 – 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. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 220128), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Antony Leung		4 February 2022
Checked by	Dr. Priscilla Choy		4 February 2022

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Weekly Site Inspection Record Summary

Checklist Reference Number	220211
Date	11 February 2022 (Friday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 220204), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		14 February 2022
Checked by	Dr. Priscilla Choy		14 February 2022

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Weekly Site Inspection Record Summary

Checklist Reference Number	220218
Date	18 February 2022 (Friday)
Time	13:30 – 14:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 220211), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		22 February 2022
Checked by	Dr. Priscilla Choy		22 February 2022

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Weekly Site Inspection Record Summary

Checklist Reference Number	220225
Date	25 February 2022 (Friday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 220218), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Marco Ma		1 March 2022
Checked by	Dr. Priscilla Choy		1 March 2022

APPENDIX Q
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
Construction Dust Impact							
S3.8	D1	Mitigation measures in form of regular watering under a good site practice should be adopted. Watering once per hour on exposed worksites and haul road is proposed to achieve dust removal efficiency of 92.1%. While the above watering frequencies are to be followed, the extent of watering may vary depending on actual site conditions but should be sufficient to maintain an equivalent intensity of no less than 1.7 L/m2 to achieve the respective dust removal efficiencies	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	#
S3.8	D2	The Contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation.	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	^
S3.8	D3	Following dust suppression measures should also be incorporated by the Contractor to control the dust nuisance throughout the construction Phase • Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; • Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; • A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones; • The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle; • Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores;	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	* ^ ^ ^ ^

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
		• When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period. • The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials; • Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously; • Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; • Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; • Any skip hoist for material transport should be totally enclosed by impervious sheeting; • Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides; • Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed; • Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or					^ ^ ^ ^ ^ N/A N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and • Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.					^ ^
S3.8	D4	Implement regular dust monitoring under EM&A programme during the construction stage.	Monitoring of dust impact	Contractor	Selected representative dust monitoring station	Construction phase	^
Noise Impact (Construction Phase)							
S4.9	N1	Implement the following good site management practices: • Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; • Machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; • Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works; • Mobile plant should be sited as far away from NSRs as possible and practicable; • Material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	Control construction airborne noise	Contractor	All construction sites	Construction phase	^ ^ ^ ^ ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S4.9	N2	Install temporary site hoarding (approx 2.4m high) located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.	Reduce the construction noise levels at low-level zone of NSRs through partial screening.	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N3	Install movable noise barriers and full enclosure and acoustic mat, screen the noisy plants including air compressor and generator.	Screen the noisy plant items to be used at all construction sites	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N4	Use of "Quiet" Plant and Working Methods	Reduce the noise levels of plant items	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N5	Sequencing operation of construction plants where practicable.	Operate sequentially within the same work site to reduce the construction airborne noise	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N6	Implement a noise monitoring under EM&A programme.	Monitor the construction noise levels at the selected representative locations	Contractor	Selected representative noise monitoring stations	Construction phase	^
Water Quality Impact (Construction Phase)							
S5.7	W1	<u>Construction Runoff and Site Drainage</u> In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures should be provided and the Storm Water Pollution Control Plan is given below. where appropriate, should include the following: **Stormwater Pollution Control Plan** • At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with	Control construction runoff	Contractor	All construction sites	Construction phase	#

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities. The design of the temporary on-site drainage system will be undertaken by the Contractor prior to the commencement of construction. • Diversion of natural stormwater should be provided as far as possible. The design of temporary on-site drainage should prevent runoff going through site surface, construction machinery and equipments in order to avoid or minimize polluted runoff. Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8m^3 capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to 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					# ^ ^

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
		surface excavation works during the rainy seasons (April to September). All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means. • All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas. • Measures should be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, it should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities. • All open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m3 should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. • Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. • Precautions to be taken at any time of year when rainstorms are					^ # ^ ^ ^

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
		likely, actions to be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events.					^
		• All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities should be provided at every construction site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.					^
		• Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources. The oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for the oil interceptors to prevent flushing during heavy rain.					N/A
		• 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.					^

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
		• Regular environmental audit on the construction site should be carried out in order to prevent any malpractices. Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the meander, wetlands and fish ponds.					^
S5.7	W2	*Stream Diversion* • In order to prevent sediment transport during riverbank works, deployment of silt curtain should be implemented, especially when construction works encroach or occur in close distance to water body. It is recommended to carry out all the riverbank works and diversion works within a cofferdam or diaphragm wall and the work areas on riverbed should be kept in dry condition.	Minimize water quality impact due to stream diversion	Contractor	All streams that required diversion	Construction phase	N/A
S5.7	W3	*Groundwater from Contaminated Area* • For other inaccessible sites, site investigation is required when they are resumed and handed over to the Project Proponent to identify if contaminated groundwater is found. • If the investigation results indicated that the groundwater to be generated from construction works would be contaminated, the contaminated groundwater should be either discharged into recharged wells, or properly treated in compliance with the	Minimize water quality impact due to potential groundwater from contaminated area	Contractor	All identified groundwater-contaminated areas	Construction phase	N/A N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		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 WPCO through the Regional Offices of EPD.					N/A N/A
S5.7	W4	*Sewage from Workforce* Portable chemical toilets and sewage holding tanks should be provided for handling the construction sewage generated by the workforce. A licensed Contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance. Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. Regular environmental audit on the construction site should be conducted in order to provide an	Handling of site sewage	Contractor	All construction sites	Construction Phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the Project would not cause water quality impact after undertaking all required measures.					
Waste Management (Construction Waste)							
S7.6	WM1	*Waste Reduction Measures* Waste reduction is best achieved at the planning and design phase, as well as by ensuring the implementation of good site practices. The following recommendations are proposed to achieve reduction: • segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal; • proper storage and site practices to minimize the potential for damage and contamination of construction materials; • plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste; • sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc); • provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.	Reduce waste generation	Contractor	All construction sites where practicable	Prior to the commencement of construction	^ ^ ^ N/A ^

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
S7.6	WM2	Prepare Waste Management Plan and submit to the Engineer for approval	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	^
S7.6	WM3	*Good Site Practice* The following good site practices are recommended throughout the construction activities: • Nomination of an approved personnel, such as a site manager, to be responsible for the implementation of good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; • Training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling; • Provision of sufficient waste disposal points and regular collection for disposal; • Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; • Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	^ ^ ^ ^ #
S7.6	WM4	*Storage of Waste*	Minimize waste impacts from	Contractor	All construction	Construction	

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
		The following recommendation should be implemented to minimize the impacts: • Waste such as soil should be handled and stored well to ensure secure containment; • Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; • Different locations should be designated to stockpile each material to enhance reuse;	storage		sites	phase	^ * ^
S7.6	WM5	*Collection and Transportation of Waste* The following recommendation should be implemented to minimize the impacts: • Remove waste in timely manner; • Employ the trucks with cover or enclosed containers for waste transportation; • Obtain relevant waste disposal permits from the appropriate authorities; and • Disposal of waste should be done at licensed waste disposal facilities.	Minimize waste impact from storage	Contractor	All construction sites	Construction phase	^ ^ ^ ^
S7.6	WM6	*Excavated and C&D Material* Wherever practicable, C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at Public Fill Reception Facilities areas or reclamation sites. The following mitigation measures should be implemented in handling the excavated and C&D materials:	Minimize waste impacts from excavated and C&D material	Contractor	All construction sites	Construction phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		• Maintain temporary stockpiles and reuse excavated fill material for backfilling; • Carry out on-site sorting; • Deliver surplus artificial hard materials to Tuen Mun Area 38 recycling plant or its successor for recycling into subsequent useful products; • Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; and • Implement a recording system for the amount of waste generated, recycled and disposed of for checking; Standard formwork should be used as far as practicable in order to minimize the arising of C&D waste. The use of more durable formwork (e.g. metal hoarding) or plastic facing should be encouraged in order to enhance the possibility of recycling. The purchasing of construction materials should be carefully planned in order to avoid over ordering and wastage. Wheel wash facilities have to be provided at the site entrance before the trucks leaving the works area.					^ N/A N/A N/A ^ N/A ^
S7.6	WM7	<u>*Contaminated Soil*</u> As a precaution, it is recommended that standard good site practice should be implemented during the construction phase to minimize any potential exposure to contaminated soils or groundwater. The	Remediate contaminated soil	Contractor	All construction sites where applicable	Construction phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		details of mitigation measures to minimize the potential environmental implications arising from the handling of contaminated materials refer to Land Contamination Section.					
S7.6	WM8	*Chemical Waste* If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producers. Chemical wastes should be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Control the chemical waste and ensure proper storage, handling and disposal	Contractor	All construction sites	Construction phase	^
S7.6	WM9	*General Waste* • General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling. • Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean. • A reputable waste collector should be employed to remove general refuse on a daily basis.	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction phase	^ ^ ^
S7.6	WM10	*Sewage*	Minimize production of sewage	Contractor	All construction	Construction phase	

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		• The WMP should document the locations and number of portable chemical toilets depending on the number of workers, land availability, site condition and activities. • Regularly collection by licensed collectors should be arranged to minimize potential environmental impacts.	impacts		sites		N/A N/A
S7.6	WM11	Topsoil reuse – Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical. This is considered a general measure for good site practice.	Good site practice	Contractor/ Project Proponent	Onsite	Construction phase	N/A
Land Contamination							
S 8.4	LC2	Detailed site investigation (SI) for all inaccessible potentially contaminated sites in 2 NDAs	Verify the land contamination potential before the commencement of construction	Project Proponent Detailed Design Consultant Contractor	All inaccessible potentially contaminated sites in 2 NDAs as listed in the CAP	After the land is resumed and handed over to the Project Proponent	N/A
S 8.5	LC3	Preparation and submission of supplementary Contamination Assessment Report (CAR) and Remediation Action Plan (RAP) for all inaccessible potentially contaminated sites in 2 NDAs to EPD for agreement if land contamination is confirmed	Present the findings of SI and evaluate the potential environmental and human health impacts Recommend appropriate mitigation measures for the	Project Proponent/ Detailed Design Consultant	All inaccessible potentially contaminated sites in 2 NDAs as listed in the CAP	Prior to the commencement of any proposed construction works if land	N/A

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
			contaminated soil and groundwater identified in the assessment if remediation is required			contamination is confirmed and remediation is required	
S 8.5	LC4	Preparation and submission of Remediation Report to EPD for agreement	Demonstrate that the decontamination work is adequate and is carried out in accordance with the endorsed supplementary CAR and RAP	Project Proponent/ Detailed Design Consultant	All inaccessible potentially contaminated sites in 2 NDAs as listed in the CAP	Prior to the commencement of any proposed construction works if land contamination is confirmed and remediation is required	N/A
S 8.6	LC5	Re-appraisal of surveyed sites (if they become part of the land requirement for NDA development) that were not identified as potentially contaminated or could not be accessed for visual inspection during the site survey	Verify the land contamination potential due to potential change of land uses before the commencement of construction	Project Proponent/ Detailed Design Consultant	All surveyed sites (if they become part of the land requirement for NDA development (that were not identified as potentially contaminated or	After the land is resumed and handed over to the Project Proponent.	N/A

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
					could not be accessed for visual inspection during the site survey as listed in the CAP		
S 8.7.2 and Appendix 8.4	LC6	Treatment of arsenic-containing soil "Solidification/Stabilization" (S/S) treatment method was proposed for the treatment of arsenic-containing soil. Toxicity Characteristic Leaching Procedure (TCLP) test should be undertaken after S/S in order to ensure that the contaminant will not leach to the environment. Unconfined Compressive Strength (UCS) test should be conducted, and not less than 1MPa should be met prior to the backfilling or stockpiled for future reuse within the study area.	To treat the arsenic containing soil	Government Developer/ Contractor	KTN NDA	Prior to commencement of construction works within KTN NDA	N/A
S 8.7.2 and Appendix 8.4	LC7	Excavation and Transportation • Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety; • In case the soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table; • Excavation should be carried out during dry season as far as possible to minimize runoff from excavated soils; • Stockpiling site(s) should be lined with impermeable sheeting and bunded. Stockpiles should be properly covered by	To minimize the potential environmental impacts arising from the handling of contaminated materials	Contractor	KTN NDA	Prior to commencement of construction works within KTN NDA	N/A ^

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
		impermeable sheeting to reduce dust emission during dry season or contaminated run-off during rainy season. Watering should be avoided on stockpiles of soil to minimize runoff; • Supply of suitable backfill material after excavation, if require; Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or run-off, and truck bodies and tailgates should be sealed to prevent any discharge during transport or during wet season; • Speed control for the trucks carrying excavated materials should be enforced; and Vehicle wheel washing facilities at the site's exit points should be established and used.					
S 8.7.2 and Appendix 8.4	LC8	Solidification/Stabilization • The loading, unloading, handling, transfer or storage of cement should be carried out in an enclosed system; • Mixing process and other associated material handling activities should be properly scheduled to minimize potential noise impact and dust emission; • The mixing facilities should be sited as far apart as practicable from the nearby noise sensitive receivers; • Mixing of soil and cement / water / other additive(s) should be undertaken at a solidification plant to minimize the potential for leaching;	To minimize the potential environmental impacts arising from the handling of contaminated materials	Contractor	KTN NDA	The course of treatment	N/A ^ ^ ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		• Runoff from the solidification / stabilization area should be prevented by constructing a concrete bund along the perimeter of the solidification / stabilization area; • If stockpile of treated soil is required, the stockpiling site(s) should be lined with impermeable sheeting and bunded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or site run-off during rainy season; and If necessary, there should be clear and separated areas for stockpiling of untreated and treated materials.					^ ^
S 8.7.2 and Appendix 8.4	LC9	<u>Safety Measures</u> • Set up a list of safety measures for site workers; • Provide written information and training on safety for site workers; • Keep a log-book and plan showing the zones requiring treatment and clean zones; • Maintain a hygienic working environment; • Avoid dust generation; • Provide face and respiratory protection gear to site workers if necessary; • Provide personal protective clothing (e.g. chemical resistant • jackboot, liquid tight gloves) to site workers if necessary; • Provide first aid training and materials to site worker; • Bulk earth moving equipment should be utilized as much as	To minimize the potential adverse effects on health and safety of construction workers	Contractor	KTN NDA	The course of treatment	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		possible to minimize worker Eating, drinking and smoking should not be allowed in the excavation areas and treatment area to avoid inadvertent ingestion of arsenic containing soil.					
Landfill Gas Hazard							
S10.6	LFG1	• Underground rooms or void should be avoided as far as practicable in the proposed developments within the Consultation Zone and should be avoided totally in the proposed developments within the MTLL. • Buildings or structures within the MTLL should be at ground level with raised floor slabs which are less prone to gas ingress. • For the high risk category, the use of active control of gas, including barriers and detection systems are recommended. These measures include the control of gas by mechanical means e.g. ventilation of spaces with air to dilute gas, or extraction of gas using fans or blowers. • For the low risk category, the provision of barriers to the movement of gas is recommended. Measures recommended include the use of membranes in floors or walls, or in trenches, coupled with high permeability vents such as nofines gravel in trenches or voids/permeable layers below structures. • The need and practicality of incorporating such measures should be reviewed in the detailed Qualitative LFG Hazards	To minimize the risk of LFG hazards to occupants within MTLL and its 250m Consultation Zone	Government / Developer/ Detailed Design Consultant within MTLL and its 250m Consultation Zone	Buildings within MTLL and its 250m Consultation Zone	Detailed design phase	N/A

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
		Assessment (QLFGHA) during the detailed design stage for developments within the 250m Consultation Zone and within MTLL. Recommendations on the detailed precautionary and protection measures to be adopted should be given in the QLFGHA. • The design and construction method of the proposed development within MTLL (i.e. the proposed recreational area in site E1-1) should be provided to EPD for agreement in the design stage to ensure compatibility with the landfill restoration facilities and aftercare works within MTLL, such that these facilities and works will not be affected by the construction or operation of the proposed development.					
S10.6	LFG2	• During all works, safety procedures should be implemented to minimize the risks of fires and explosions, asphyxiation of workers (especially in confined space) and toxicity effects resulting from contact with contaminated soils and groundwater. • Safety officers, specifically trained with regard to LFG and leachate related hazards and the appropriate actions to take in adverse circumstances, should be present on all worksites throughout the works. • All personnel who work on site and all visitors to the site should be made aware of the possibility of ignition of gas in the vicinity of the works, the possible presence of contaminated water and	To minimize the risk of LFG hazards to the staff and visitors within MTLL and its 250m Consultation Zone	Contractor	Construction sites within MTLL and its 250m Consultation Zone	Construction phase	^ ^ ^

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
		the need to avoid physical contact with it. • Those staff who work in, or have responsibility for "at risk" areas, including bore pilling and excavation works, should receive appropriate training on working in areas susceptible to LFG. • Enhanced personal hygiene practices including washing thoroughly after working and eating only in "clean" areas should be adopted where contact may have been made with any groundwater which is thought to be contaminated with leachate. • Any offices / quarters set up on site should take precautions against LFG ingress, such as being raised off the ground. Other storage premizes, e.g. shipping containers, where this is not possible should be well ventilated prior to entry. • Adequate precautions to prevent the accumulation of LFG under site buildings and within storage shed should be taken by raising buildings off the ground where appropriate and"airing" storage containers prior to entry by personnel and ensuring adequate ventilation at all times. • Smoking and naked flames should be prohibited within confined spaces. "No Smoking" and "No Naked Flame" notices in Chinese and English should be posted prominently around the construction site. Safety notices should be posted warning of the potential hazards.					^ ^ ^ ^

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
		• Welding, flame-cutting or other hot works may only be carried out in confined spaces when controlled by a "permit to work" procedure, properly authorized by the Safety Officer. The permit to work procedure should set down clearly the requirements for continuous monitoring of methane, carbon dioxide and oxygen throughout the period during which the hot works are in progress. The procedure should also require the presence of an appropriately qualified person who shall be responsible for reviewing the gas measurements as they are made, and who shall have executive responsibility for suspending the work in the event of unacceptable or hazardous conditions. Only those workers who are appropriately trained and fully aware of the potentially hazardous conditions which may arise should be permitted to carry out hot works in confined areas. • During the construction works, adequate fire extinguishers and breathing apparatus sets should be made available on site and appropriate training given in their use. • Ongoing gas monitoring should be considered for offices, stores etc set up on site.					^ N/A ^ ^
S10.6	LFG3	Utility Companies • The developers should make the utility companies aware of the location and features of the site within the Consultation Zone during the respective detailed design stage as part of the	To minimize the risk of LFG hazards to the occupants, maintenance personnel, visitors and other users	Government / Developer within MTLL and its 250m	Buildings within MTLL and its 250m Consultation Zone	Operation phase	N/A

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
		QLFGHA. • The utilities companies should have a responsibility to train and ensure their staff to take appropriate precautions at all times when entering enclosed spaces or plant rooms. • Should utility installation be required in site E1-1, the developers should make the utility companies aware of the potential constraints imposed by the landfill restoration facilities and aftercare works to ensure these facilities and works will remain unaffected. Appropriate precautionary measures against landfill gas should also be taken should utility installation be required within the MTLL. Building Management • The management committee of the building estate will hold a special responsibility to ensure that the occupants of the building, its staff and maintenance workers are protected from LFG and that visitors to the site are also made aware as to the dangers and the precautions required to be taken. • Of primary importance to satisfactorily upholding this responsibility will be to ensure that strict procedures for maintaining control over all temporary and /or permanent works proposed at the site are reviewed with regard to the LFG hazard. This needs to be accompanied by a comprehensive contingency plan in case of incidents, including liaison with EPD officers,	within MTLL and its 250m Consultation Zone	Consultation Zone			

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
		Fire Services Department, Landfill Restoration Contractors and others, as necessary. • All construction and maintenance (including utilities) personnel working at the site should be made aware of the hazards of LFG and its possible presence on site. This should be achieved through a combination of posting warning signs in prominent places and also by access to detailed information on LFG hazards and the designs and procedural means by which these hazards are being minimized on site. In addition, entry to confined spaces such as refuse/store rooms, drainage manholes etc. should be preceded by a period of "airing" the space by opening the door widely allowing fresh air to enter. Where appropriate, monitoring of gas should also precede entry. • Any proposed modifications or additions to the building structure should be subject to a further assessment of LFG hazard, particularly in areas where a gas membrane has been installed. Any penetrations of the membrane must be repaired as soon as possible after detection or works completion using similar products. • The building management company should also make arrangement with Landfill Restoration Contractor so that they are advised of all situations which may potentially threaten the safety of the building occupants resulting from any accidents or					

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
		failures at the landfill site. The building management company should also have available suitable gas monitoring equipment for any ad hoc investigations necessary relating to LFG and be in a position to undertake any future routine monitoring of gas which may be considered necessary soloing completion of the defects correction period. • To ensure that all the above protection and precautionary measures and issues pertaining to LFG are properly and consistently addressed by future users and owners of the site, it is recommended that a comprehensive LFG hazard management system be developed by the owner of the building or its property management agency. The system should be developed by the developers of the sites as part of the QLFGHA before the occupation of the building and implemented during its operational phase.					
Cultural Heritage (Pre-construction Phase)							
S11.6.1	CH1	<u>Undertaking Further Archaeological Survey to Cover the Outstanding Areas</u> Further archaeological surveys to cover the outstanding areas of the not-yet-surveyed-area with medium archaeological potential 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	To confirm and verify the findings of the EIA	Project Proponent/ Contractor/ Qualified Archaeologist	In the not-yet-surveyed-areas with medium archaeological potential located in the areas within Areas D1-11, A3-5,	After land resumption but before construction	N/A

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
		professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance. It should be noted that the scope of further archaeological survey is based on the current proposed alignment. Any additional works areas which have not been covered by the current archaeological impact assessment should be covered as soon as possible. Subject to the findings of the archaeological survey to be conducted after land resumption, additional mitigation measures would be designed and implemented before the commencement of construction works to mitigate the adverse impact.			A3-6, B1-1, and B1-7,		
S11.6.1	CH2	Undertaking Survey-cum-Rescue Excavation A Survey-cum-Rescue Excavation should be conducted after land resumption and before the commencement of construction works to define the precise archaeological deposits extent and to preserve the archaeological resources by record. The excavation should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	In KTN NDA, for Site 3 and In FLN NDA for Site 5.	After land resumption but before construction commencement of the zone	N/A

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S11.6.1	CH3	Undertaking Preservation in-situ for Site 7 Preservation in-situ of the cultivation deposits in Site 7 is proposed. If disturbance to the site by the design of the Central Park is unavoidable, further archaeological survey should be conducted after land resumption prior to the pre-construction stage to assess the feasibility to incorporate Site 7 into the design of the development plan of the proposed zone. Appropriate followup actions, including preservation of the significant archaeological deposits in-situ in the Central Park, would then be considered with the consent of AMO. The recommended mitigation measure of preservation in-situ with further archaeological survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance.	To preserve the archaeological resources as far as possible.	Project Proponent/ Contractor/ Qualified Archaeologist	Site 7 in FLN NDA	After land resumption prior to preconstruction stage of the proposed Central Park (Area C2-8, Zoning O)	N/A
S11.6.1	CH4	Undertaking Induction Training Induction training should be provided to the construction Contractor before the commencement of the excavation works in Spots A, D, F to H. An induction will be conducted as part of the environmental health and safety induction programme to all site staff before they are deployed on site. The induction will include an introduction on the historical development of the Site, the possible archaeological remains that may be encountered during ground excavation works as well as	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

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
		the reporting procedures in case suspected archaeological remains are identified. A set of the presentation material (in the form of power point presentation) with content details will be prepared by an archaeologist and submitted to AMO for reference and record purpose. The first induction briefing will be video recorded and it will be used as induction briefing material for new site staff.					
S11.6.1	CH5	Undertaking Archaeological Impact Assessment before Construction at A1 It is recommended that an Archaeological Impact Assessment to be conducted in the impacted area in Area B1-8 and B1-9 at A1 (Sheung Shui Wa Shan Site of Archaeological Interest) after land resumption and before construction when detail construction work information is available to determine the need for further archaeological follow up actions.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	Area B1-8 and B1-9 zoned as R4 and R3 in A1	After land resumption but before construction	N/A
S11.6.1	CH6	Undertaking Archaeological Impact Assessment before Construction within A1 but except Area B1-8 and B1-9 Should there be any development work within the Sheung Shui Wa Shan Site of Archaeological Interest, it is recommended that an Archaeological Impact Assessment is required after land resumption and before construction when detail construction work information is available to determine the need for further archaeological follow up actions.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible.	Project Proponent/ Contractor/ Qualified Archaeologist	Area within A1 except Area B1-8 and B1-9 in R4 &R3 zoning	After land resumption but before construction	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S11.6.2	CH7	Undertaking baseline condition survey and baseline vibration impact assessment In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 7.5mm/s could be adopted for graded historic buildings) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report. The condition survey of graded historic building should be submitted to AMO for information.	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	G303 and G308	Preconstruction stage before commencement of construction works during Schedule 3 study	N/A
S11.6.2	CH8	Undertaking baseline condition survey and baseline vibration impact assessment In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 7.5mm/s and 15mm/s could be adopted for graded historic buildings and historic buildings	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	KT57, FL05, FL18, and FL2	Preconstruction stage before commencement of construction works	N/A

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		respectively) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report. The condition survey of graded historic building should be submitted to AMO for information.					
S11.6.2	CH9	Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out the Project Proponent.	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	Ancillary structures of G303, HKT01, HKT02, Entrance Gate of HKT03, HKT04, KT01 to KT10, KT13, KT36, KT39, KT40, KT41, KT43, KT45, KT47, KT50, KT54, KT62 to KT63, KT69, FL01, FL16, and FL35	Prior to Removal / Relocation of features before commenceme nt of construction works during Schedule 3 study	N/A
S11.6.2	CH10	Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	KT12 and KT61	Prior to Removal / Relocation of features before commencement of construction works	N/A

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		features will be carried out by the Project Proponent.					
S11.6.2	CH11	Relocation of Built Heritages Relocation of built heritages to a reasonable location nearby may be required.	To preserve the directly impacted sites by relocation	Project Proponent/ Contractor	HKT01, HKT02, Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of construction works	N/A
S11.6.2	CH12	Drainage System and Access Route Design For the retained built heritage items in developable area, drainage system and access route would be designed to prevent the persevered flooding and maintain the accessibility to the built heritage.	To prevent the persevered flooding and maintain the accessibility to the built heritage	Contractor /Detailed Design consultant	The retained built heritage items	Pre-construction phase	N/A
Cultural Heritage (Construction Phase)							
S11.6.1	CH13	Inform Upon Archaeological Discovery Pursuant to the Antiquities and Monuments Ordinance, the construction Contractor should inform the AMO immediately in case of discovery of antiquities or supposed antiquities in the course of excavation works in construction phase.	Special attention should be given to areas evaluated to have archaeological potential or significance.	Contractor	All soil excavation works	Immediately upon discovery during excavation works	N/A
S11.6.2	CH14	Watertable Monitoring Since the construction works and development activities may induce change in the watertable. It is recommended the Contractor should	To minimize the potential impacts to the built heritage items by the change of	Contractor	Within NDAs	Construction phase	N/A

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		ensure that the change of watertable induced by the construction works and development activities will not result in settlement of built heritage.	watertable induced by the works during the Construction phase				
S11.6.2	CH15	Conducting Construction Vibration Monitoring and Structural Strengthening Measures Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment	^
Landscape and Visual Impact (Detailed Design, Prior to Construction, Construction and Operation Phases)							
S.12.9	LV1	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed design consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as the areas become available, to achieve early establishment	N/A

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S.12.9 MM1	LV2	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A
S.12.9 MM2	LV3	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant	Throughout NDAs	Prior to Construction	N/A

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		shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines. All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated. Construction time frame should also be considered and designs seek to keep it to a practical minimum.					
S12.9 MM14.4	LV 4	Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed. For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	All watercourses, particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern Section	Prior to Construction and Construction Phase	^

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		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.					
Landscape and Visual (Construction)							
S.12.9 MM3	LV5	Open Space Provision - the principles adopted in the RODP planning ensure that public open space systems are incorporated. All requirements for open space areas stipulated in the planning documents for the formulation of the Preliminary Layout Plan should be adhered to.	Reprovision of open space. Enhance visual amenity of the area and improve the overall landscape character	Government Developer/ Detailed Design Consultant/ Contractor/	Onsite as stipulated in the planning documents for the formulation of the Preliminary Layout Plan	Prior to Construction and Construction Phas	N/A
S.12.9 MM4	LV6	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A

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		detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained					
S.12.9 MM5	LV7	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.	Transplant Trees where suitable for transplantation	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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S.12.9 MM6	LV8	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM7	LV9	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable	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

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		locations. Native species such as *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii* are suggested.					
S.12.9 MM8	LV10	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii,*					N/A

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		Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda. In addition some understory vegetation may be planted including shrubs such as *Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii*. The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.					
S.12.9 MM9	LV11	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. building edges, piers).	Soften hard surfaces and facilities	Government / Developer/ Detailed Design Consultant/ Contractor	On appropriate structures	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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S.12.9 MM10	LV12	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Developer/ Detailed Design Consultant/ Contractor	On appropriate buildings	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM11	LV13	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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S.12.9 MM12	LV14	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	To soften the hard, straight edges and provide greening along roads.	Government / Developer/ Detailed Design Consultant/ Contractor	On viaducts or along roads	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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S.12.9 MM13 & EIA Annex 13	LV15	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on- wetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM14.1	LV16	Reprovision of Natural Stream – Where natural streams are unavoidably affected along some of their length, they can be diverted to avoid the proposed new developments and retain the integrity of the whole stream. Detailed design of any stream diversion should follow the Guidelines in ETWB Technical Circular (Works) No. 5/2005 (Protection of natural streams/rivers from adverse impacts arising from construction works) and appropriate construction methods should be used. Two short stretches of the Ma Tso Lung Stream will be affected by Project in the KTN NDA; by the LMC Eastern Connection Road on the western border of Site F1-3 and further upstream by Site E-2.	Achieve a natural stream, similar to existing, including wetland planting provision for embankments	Government / Developer/ Detailed Design Consultant/ Contractor	Streams and channelized watercourses e.g. a Ma Tso Lung and Siu Han San Tsuen	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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		At both these locations, the stream will be reprovisioned and maintain the flow between unaffected sections of the stream. The reprovisioned stream will be provided with a natural bed and banks, as well as having an area of marsh/ pool next to it and trees and shrubs further from the banks. (See E2, E14 and E24 also)					
S12.9 MM14.2	LV17	Stream Buffer Planting –Providing a minimum 10 m buffer with planting (where there is a general presumption against any development taking place) along streams where they flow close to developments, confers a degree of protection to the stream course and its associated vegetation. For the stream at Ma Tso Lung in KTN NDA, the middle and upper sections will be designated as Green Belt zone where there is a general presumption against development as buffer to the stream. 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	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

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		flows through an Open Space area D1-3. In this Open Space zone a 10m buffer is proposed in which natural vegetation will be retained and enhanced and human activities will be limited in order to avoid direct impacts to the stream bed and to minimize potential indirect impacts to the stream and riparian corridor. (See E3 also)					
S12.9 MM14.3	LV18	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Developer/ Detailed Design Consultant/ Contractor	Channelized watercourse, particularly the Ma Wat River Channel Diversion	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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S12.9 MM15	LV19	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
S.12.9 MM16	LV20	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non- reflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	Throughout NDAs	Construction Phase	^

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S.12.9 MM17	LV21	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Developer/ Contractor	Throughout NDAs	Construction and Operation Phases	N/A
Ecology (Prior to Construction Phase or throughout the project)							
S. 13.9	E1	Egretry Habitat Creation & Management Plan (EHCMP) and Woodland Planting and Management Plan (WPMP)	Compensate for loss of Man Kam To Road egretry. Compensate for loss of secondary woodland and hillside plantation of ecological significance.	Project Proponent/ Detailed Design Consultant (EHCMP and WPMP).	FLN area A1-7 (egretry compensation). KTN areas E1-8 and G1-3 (woodland compensation).	Detailed design phase	N/A

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S. 13.9	E2	Detailed design of development along lower reaches of Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream in OU zones F1-2 and F1-3 and detailed design of LMC Loop Eastern Connection Road with restoration of diverted stream and riparian corridor, permanent barrier and underpass on the at-grade section Compensation for the loss of seasonally wet grassland at Ma Tso Lung by habitat restoration and enhancement along diverted section of Ma Tso Lung Stream	Minimize impacts on Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream and riparian corridor of importance to species of conservation significance.	Project Proponent/ Detailed Design Consultant. (design of Ma Tso Lung Stream diversion and buffer zone habitat restoration measures)	KTN areas F1-2 and F1-3 and LMC Loop Eastern Connection Road.	Detailed design and construction phases.	N/A
S13.9	E3	Detailed design, implementation and management of Siu Hang San Tsuen Stream to have 10m wide vegetated buffer in Open Space zone D1-3, Fanling Bypass to cross stream on viaduct.	Minimize impacts on Siu Hang San Tsuen Stream and stream fauna.	PlanD, Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	FLN area D1-3.	Detailed design, construction and operation phases.	N/A
S.13.9	E4	Long Valley Nature Park (LVNP) designation, design and implementation. Enhancement of non-wetland habitats in LVNP. Planning for the advanced provision of alternative foraging habitat along main river channels for large waterbirds.	Compensate for wetland loss arising from the project and protection of Long Valley from adverse ecological impacts including provision of additional/alternative habitat for	Project Proponent/ Detailed Design Consultant (Long Valley Nature Park Habitat Creation &	Long Valley KTN area C1-9 and any suitable areas to be identified during the planning stage	Detailed design phase	N/A

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			large waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Management Plan)			
S13.9	E5	Stringent planning control requirements in Long Valley north and west of Sheung Yue River, including Ho Sheung Heung egretry.	Protect these wetland areas from indirect impacts to habitats and fauna especially breeding ardeids foraging in these areas and utilizing flight-lines from Ho Sheung Heung egretry. Avoid habitat loss and disturbance to fauna of conservation significance, especially nesting ardeids Maintenance of ecological linkages with Deep Bay ecosystem and avoidance of severance of these linkages, especially for waterbirds	PlanD.	KTN areas C2-1 and C2-2 , Ho Sheung Heung egretry and areas north of Long Valley along the Ng Tung River to the Shenzhen River	Detailed design phase	N/A
S13.9	E6	Planning for creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; and detailed design of Open Space areas and development areas along river corridors.	Minimize disturbance to large waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Project Proponent/ Detailed Design Consultant/ Contractor/	Area along Ng Tung, Sheung Yue and Shek Sheung River	Detailed design, construction and operational phases.	N/A

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			Maintain ecological linkages within NDA Project Area and between Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.	Maintenance Authority			
S13.9	E7	Building setback and mounding in locations near Long Valley. KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries).	Minimization of disturbance impacts to fauna using Long Valley.	PlanD	KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries.	Detailed design phase	N/A
S13.9	E8	Preparation and implementation of Guidelines for building design measures to minimize mortality and light and glare impacts to fauna. Guidelines to address the following measures: Use opaque, non-transparent, non-reflective noise barriers for all developments associated with the Project. Measures to include the following: • Fritting, or the placement of ceramic lines or dots on glass,	Minimize mortality and disturbance impacts on fauna, especially mammals and birds.	PlanD/ Project Proponent/ Developer/ Detailed Design Consultant	Near Long Valley	Detailed design phase	N/A

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		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					
	E9	Not used					N/A
S13.8	E10	Review development footprint and layout of proposed developments in KTN areas D1-11a and G1-5 to avoid/minimize direct and indirect impacts on secondary woodland at Ho Sheung Heung and shrubland at Crest Hill.	Minimize loss of secondary woodland and shrubland of ecological value.	Project Proponent/Detailed Design Consultant	KTN areas D1-11a and G1-5 to avoid/minimize direct and indirect impacts on	Detailed design phase	N/A

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					secondary woodland at Ho Sheung Heung and Crest Hill		

S13.9	E11	No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north or east of KTN D1-5 and east of D1-9 and C2-3, construction hours restricted to 09.00 to 17.30 during 1 March to 31 July on new pedestrian bridge over the Sheung Yue River, new pedestrian bridge over the tidal section of the Ng Tung River and existing bridge between KTN areas C2-2 and C1-8. Review Design and construction methods for all bridges especially those on the Sheung Yue and tidal Ng Tung Rivers and adopt methods which minimize impacts on Long Valley and the rivers, and disturbance and fragmentation impacts on fauna. No overlap in construction of bridges over main river channels. Measures to ensure no hydrological disruption to Long Valley Watercourse and water supply to Long Valley to be designed at the detailed design stage for the rechannelisation of the Long Valley Watercourse and the development of areas through which it passes, including KTN area B3-12. Contingency plan to address any disruption to be included in LVNP HCMP. Avoid removal or interference with screen planting undertaken under the Construction of Cycle Tracks and Associated Supporting Facilities from Sha Po Tsuen to Shek Sheung project.	Minimize disturbance impacts (including cumulative impacts with cycle track project) to flight-lines of breeding ardeids.	Project Proponent/ Detailed Design Consultant Contractor	Along and within Sheung Yue and Ng Tung Rivers, Long Valley, Long Valley and watercourse upstream areas including KTN area B3-12	Detailed design/ construction phase.	^

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Ecology (Construction Phase)							
S13.9	E12	Compensatory egretry habitat provision and establishment. Review condition and location of egretries before commencement of works. Formulate and implement additional mitigation measures as appropriate. Phasing of works near and within Man Kam To Road Egretry outside breeding season	Compensate for loss of Man Kam To Road egretry habitat. Avoid mortality of breeding egrets	Project Proponent/ Detailed Design Consultant/ Contractor	FLN area A1-7 500m from Man Kam To Road Egretry.	Construction phase.	^
S13.9	E13	Review design and construction methods for bridges, especially those on the Sheung Yue and tidal Ng Tung Rivers, and adopt measures which minimize impacts on rivers and disturbance and fragmentation impacts on fauna. No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north and east of KTN area D1-5 and east of D1-9 and C2-3 and restriction of working hours on new pedestrian bridges over the Sheung Yue River and tidal Ng Tung River to 09.00 to 17.30 during the ardeid breeding season (1 March to 31 July) Provision of alternative foraging habitat along main river channels for large waterbirds.	Minimize impacts on rivers and disturbance and fragmentation impacts on fauna	Project Proponent/ Detailed Design Consultant/ Contractor	Along and within the Sheung Yue, Ng Tung and Shek Sheung Rivers	Detailed design and construction phases.	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S13.9	E14	Buffer zone of 15-30m as appropriate on both sides (not less than 45m total width) of Ma Tso Lung Stream north of the point where it is crossed by the LMC Loop Eastern Connection Road, and Ma Tso Lung Stream diversion during construction of the LMC Loop Eastern Connection Road; development along lower reaches of Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream in OU zones in KTN areas F1-2 and F1-3 to be set back beyond buffer. Construction and maintenance of permanent 1.2m high solid faunal barrier at all at-grade sections of LMC Loop eastern connection Road north of junction with road D4 within 15-30m as appropriate of Ma Tso Lung Stream buffer and construction of faunal underpass beneath road. Compensation for the loss of seasonally wet grassland at Ma Tso Lung by habitat restoration and enhancement along diverted section of Ma Tso Lung Stream.	Minimize impacts direct and indirect impacts of habitat loss, disturbance, pollution and fragmentation on Ma Tso Lung Stream and marsh and riparian corridor of importance to species of conservation significance.	PlanD/ Project Proponent/ Developer/ Detailed Design Consultant/ Contractor. (Design of Ma Tso Lung Stream diversion and buffer zone habitat restoration measures)	KTN areas H1-1, F12 and F1-3 and Lok Ma Chau Loop Eastern Connection Road.	Detailed design and construction phases.	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S.13.9	E15	Creation and enhancement of proposed Long Valley Nature Park and creation and enhancement of wetland and buffer planting within LVNP.	Compensate for wetland loss arising from the project	Project Proponent/ Contractor (LVNP Detailed Habitat Creation & Management Plan)	Long Valley, (KTN area C1-9).	Construction phase.	^
S13.9	E16	Creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; provision of Open Space areas and development areas along river corridors; Design and erection of 2m high solid dull green site barrier fence between river channel and any active works area along or adjacent to Ng Tung, Sheung Yue and Shek Sheung Rivers. Ng Tung, Sheung Yue and Shek Sheung Rivers screen planting.	Minimize disturbance to waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Detailed Design Consultant/ Contractor	Ng Tung, Sheung Yue and Shek Sheung Rivers	Detailed design and Construction phases.	^
S13.9	E17	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance on edge of development areas, including along any roads adjacent to or penetrating into areas/habitats of ecological importance. Erection of a 2m high dull green site barrier fence at the edge of the	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna. Measures to minimize flight- line impacts to birds, especially breeding	Contractor	Interface between areas/habitats/ fauna/ flora of ecological importance (e.g. KTN areas B1-3,	Construction phase.	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		works area or 30m from Ma Tso Lung Stream and tributaries, whichever distance is the greater.	ardeids.		C1-5, C1- 6, C1-9, C2-2, C2-4, C2-5, D1-8, E1-8, G1- 3, H1-1, Ma Tso Lung Stream and tributaries; FLN areas A1-3, A1-7 and A1-9) and works areas; and around any works areas north of the Fanling Bypass and north of the Ng Tung River west of the western terminus of the Fanling Bypass. Riparian corridor of Ma Tso Lung Stream and tributaries.		

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S13.9	E18	Compensatory woodland planting, management and maintenance.	Compensate for loss of secondary woodland and hillside plantation of ecological significance.	Project Proponent/ Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A
S13.9	E19	Use opaque, non-transparent, non-reflective noise barriers for all construction sites. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Contractor	All construction sites	Construction phase.	^
S13.9	E20	Pre-site clearance check for presence of flora or fauna of conservation significance and bat roosts. If any are found, measures should be proposed and implemented to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement. Pre-site clearance check on all construction sites and pre –works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of protected plant species/specimens of conservation significance. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works,	Minimize impacts to flora and fauna of conservation significance. Minimize impacts to protected fauna and flora species. Formulate and implement mitigation measures to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation.	Government/ Developer/ Contractor/ Ecologist	All construction sites.	Prior to clearance of vegetation and structures.	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		Pre-site clearance of construction sites in Crest Hill area, KTN areas D1-7, D1-11 and G1-5 (where Eurasian Hobby was recorded) and on Cheung Po Tau, FLN area A3-1 (where Grey Nightjar was recorded) for presence of any breeding birds/breeding sites. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement. Pre-site clearance check on all construction sites for presence of Chinese Bullfrog, translocation to suitable areas including LVNP.					
S13.9	E21	Pre-works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of flora or fauna of conservation significance and bat roosts. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement. Pre-site clearance check on all construction sites for presence of reptile species of conservation significance, capture and translocate to	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

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		receptor site; review translocation options in respect to species in Ma Tso Lung area and determine whether release locally or elsewhere is appropriate. Seek agreement of relevant authorities including AFCD in respect of proposed measures then implement Pre-works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of Small Snakehead and *Sommaniathelphusa zanklon*. Capture any *Sommaniathelphusa zanklon* found and translocate to Ma Tso Lung Stream/ other suitable areas including LVNP					
S13.9	E22	Prevention of dust, run-off and pollutants impacting Deep Bay catchment area and areas of ecological importance.	Avoid increase to pollution entering ecologically sensitive Deep Bay ecosystem.	Contractor	All construction sites.	Construction	N/A
Specific Mitigation Measures for Designated Projects							
DP2- Castle Peak Road Diversion (Major Improvement)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.A9	LV1-DP2	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity		Detailed Design Consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as soon as the	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		strips, and open space sites.				areas become available, to achieve early establishment	
S.12.A9 MM14.4	LV4-DP2	Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed. For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream. Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	All watercourses, particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern Section	Prior to Construction and Construction Phase	N/A
S.12.A9 MM4	LV5-DP2	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of	Protect and Preserve Trees	Government/ Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor"s works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.					
S.12.A9 MM5	LV6-DP2	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 Interim Guidelines for Tree Transplanting Works under Highways Department's VegetationMaintenance Ambit" should be referred to.	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	*Onsite where possible, otherwise consider offsite locations*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9	LV7-	Slope Landscaping – Site formation should be reduced as far as possible.	To avoid substantial slope	Government	*Onsite*	Prior to	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
MM6	DP2	Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Detailed Design Consultant/ Contractor		Construction, Construction Phase & Maintenance in Operation Phase	
S.12.A9 MM8	LV9-DP2	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus tiliaceus, Liquidambar formosana, Sapium discolor,*	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	*In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		Schefflera heptaphylla and Ilex rotunda. *In addition some understory vegetation may be planted including shrubs such as Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii.* The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.					
S.12.A9 MM9	LV10-DP2	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government Detailed Design Consultant/ Contractor	*On appropriate structures*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV11-DP2	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and	Government Detailed	*Along roads, around*	Prior to Construction,	N/A

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			buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Design Consultant/ Contractor	*suitable built structures, or around VSRs to contain their view out to the NDA structures.*	Construction Phase & Maintenance in Operation Phase	
S.12.A9 MM12	LV12-DP2	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	To soften the hard, straight edges and provide greening along roads.	Government Detailed Design Consultant/ Contractor	*On viaducts or along roads.*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM13 & EIA Annex 13	LV13-DP2	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance onwetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design	*Onsite where possible. Otherwise consider offsite locations*	Prior to Construction, Construction Phase &	N/A

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		along the embankments and beds of modified/ reprovisioned watercourses.		Consultant/ Contractor/ Maintenance Authority		Maintenance in Operation Phase	
S.12.A9 MM14.3	LV14-DP2	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well asconsideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Detailed Design Consultant/ Contractor	*Channelized watercourse, particularly the Ma Wat River Channel Diversion*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM15	LV15-DP2	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung 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/	*E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA*	Prior to Construction, Construction Phase Maintenance	N/A

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				Maintenance Authority		in Operation Phase	
Landscape and Visual (Construction)							
S.12.A9 MM16	LV16-DP2	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	*Throughout NDAs*	Construction Phase	^
S.12.A9 MM17	LV17-DP2	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	*Throughout NDAs*	Construction and Operation Phases	^
Ecology (Detailed Design, Construction and Operational Phases)							
S13.9	E2-DP2	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor/ Maintenance Authority	Within NDA.	Detailed design phase, Construction phase and Operation phase.	^

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Ecology (Construction Phase)							
S.13.9	E3-DP2	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.	Contractor.	Interface between areas/habitats of ecological importance (KTN area B1-3) and works areas.	Construction phase.	^
S13.9	E4-DP2	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN NDA areas E1-8 and G1-3.	Construction phase.	N/A
Cultural Heritage (Construction Phase)							
S11.6.2	CH5-DP2	Conducting Construction Vibration Monitoring and Structural Strengthening Measures Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment,	N/A
DP3- KTN NDA Road P1 and P2 (New Road) and associated new Kwu Tung Interchange (New Road) and Pak Shek Au Interchange Improvement (Major Improvement)							

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Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.A9	LV1-DP3	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed Design Consultant/ Contractor	*Throughout NDAs,*	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	^
S.12.A9 MM14.4	LV4-DP3	Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed. For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream. Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	*All watercourses, particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern Section*	Prior to Construction and Construction Phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S.12.A9 MM4	LV5-DP3	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor‟s works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.	Protect and Preserve Trees	Government Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction and Construction Phase	N/A
S.12.A9 MM5	LV6-DP3	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government	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

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
		departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit" should be referred to.					
S.12.A9 MM6	LV7-DP3	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM7	LV8-DP3	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensate orytrees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open	Compensate for trees and shrubs lost due to the Project.	Government Detailed Design Consultant/ Contractor	*Onsite where possible. Otherwise consider offsite locations*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica,* and *Rhododendron simsii* are suggested.					
S.12.A9 MM8	LV9-DP3	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda. In addition some understory vegetation may be planted including shrubs such as Atalantia buxifolia, Diospyros vaccinioides, Gardenia*	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	*In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii. The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.					
S.12.A9 MM9	LV10-DP3	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government Detailed Design Consultant/ Contractor	*On appropriate structures*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV11-DP3	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment	Government Detailed Design Consultant/ Contractor	*Along roads, around suitable built structures, or around*	Prior to Construction, Construction Phase & Maintenance	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
			and create a pleasant pedestrian environment		*VSRs to contain their view out to the NDA structures.*	in Operation Phase	
S.12.A9 MM12	LV12-DP3	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	To soften the hard, straight edges and provide greening along roads.	Government Detailed Design Consultant/ Contractor	*On viaducts or along roads.*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM13 EIA Annex 13	LV13-DP3	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance onwetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance	*Onsite where possible. Otherwise consider offsite locations*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
				Authority			
S.12.A9 MM14.3	LV14-DP3	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Detailed Design Consultant/ Contractor	*Channelized watercourse, particularly the Ma Wat River Channel Diversion*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM15	LV15-DP3	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.		Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	*E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA*	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A

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
Landscape and Visual (Construction)							
S.12.A9 MM16	LV16-DP3	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	*Throughout NDAs*	Construction Phase	N/A
S.12.A9 MM17	LV17-DP3	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	*Throughout NDAs*	Construction and Operation Phases	N/A
Ecology (Detailed Design, Construction and Operational Phases)							
S13.9	E3-DP3	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor Maintenance Authority.	Throughout.	Detailed design, Construction and Operation phases.	^
Ecology (Construction Phase)							
S.13.9	E4-DP3	Creation of proposed Long Valley Nature Park and creation and	Compensate for wetland loss	Project	Long Valley	Construction	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		enhancement of wetland and woodland areas and buffer planting within LVNP.	arising from the project.	Proponent/ Contractor (LVNP Detailed Habitat Creation & Management Plan).		phase.	
S.13.9	E5-DP3	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance on edge of development areas, including along any roads adjacent to or penetrating into areas/habitats of ecological importance.	Minimize dust,disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna. Measures to minimize flightline impacts to birds,	Contractor.	Interface between areas/habitats of ecological importance (KTN areas B1-3, H1-1) and works areas.	Construction phase.	N/A
S13.9	E6-DP3	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A
DP4- KTN NDA Road D1 to D5 (New Road)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.A9	LV1-DP4	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use,		Detailed Design Consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.				all planting, this should be installed as soon as the areas become available, to achieve early establishment	
S.12.A9 MM1	LV2-DP4	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and 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.A9 MM2	LV3-DP4	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant/	Throughout NDAs	Prior to Construction	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines. All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated. Construction time frame should also be considered and designs seek to keep it to a practical minimum.					
S.12.A9 MM4	LV4-DP4	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical	Protect and Preserve Trees	Government / Detailed Design Consultant/	Onsite	Prior to Construction and Construction Phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.		Contractor			
S.12.A9 MM5	LV5-DP4	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.	Transplant Trees where suitable for transplantation	Government / Detailed Design Consultant/ Contractor	Onsite possible. Consider locations where Otherwise offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.					
S.12.A9 MM6	LV6-DP4	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government Detailed Design Consultant/ Contractor	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM7	LV7-DP4	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.	Compensate for trees and shrubs lost due to the Project.	Government Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		Compensatory planting for shrubs should be considered in suitable locations. Native species such as Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii are suggested..					
S.12.A9 MM8	LV8-DP4	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, XanthoxlyumavicennaeHibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda. In addition some understory vegetation may be planted including	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		shrubs such as Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii. The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.					
S.12.A9 MM9	LV9-DP4	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government / Detailed Design Consultant/ Contractor	On appropriate structures	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV10-DP4	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures , or around VSRs to contain their view	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
			environment		out to the NDA structures.		
S.12.A9 MM12	LV11-DP4	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	To soften the hard, straight edges and provide greening along roads.	Government Detailed Design Consultant/ Contractor	On viaducts or along roads.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM13 & EIA Annex 13	LV12-DP4	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on-wetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ re-provisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM15	LV13-DP4	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs.	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design	E1-7 and C1-9 (LVNP) in KNT	Prior to Construction,	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.		Consultant/ Contractor/ Maintenance Authority	NDA and generally throughout NDA	Construction Phase Maintenance in Operation Phase	
Landscape and Visual (Construction)							
S.12.A9 MM16	LV14-DP4	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor			N/A
S.12.A9 MM17	LV15-DP4	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	Throughout NDAs	Construction and Operation Phases	N/A
Ecology (Prior to Detailed Design Prior to Construction Phase)							
S. 13.9	E1-DP4	Egretry Habitat Creation & Management Plan (EHCMP) and Woodland Planting and Management Plan (WPMP)	Compensate for loss of Man Kam To Road egretry. Compensate for loss of	Project Proponent/ Detailed Design Consultant	FLN area A1-7 (egretry compensation).	Detailed design phase.	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
			secondary woodland and hillside plantation of ecological significance.	(EHCMP and WPMP).	KTN areas E1-8 and G1-3 (woodland compensation).		
Ecology (Detailed Design, Construction and Operational Phases)							
S13.9	E2-DP4	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor Maintenance Authority.	Throughout.	Throughout.	N/A
Ecology (Construction Phase)							
S.13.9	E3-DP4	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.	Contractor.	Interface between areas/habitats of ecological importance (KTN areas B1-3, E1-8, G1-3 and H1-1) and works areas	Construction phase.	N/A
S13.9	E4-DP4	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A
S13.8	E5-DP4	Maintenance of compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Maintenance Authority.	KTN areas E1-8 and G1-3.	Operation phase	N/A

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Cultural Heritage (Pre-construction Phase)							
S11.6.1	CH1-DP4	Undertaking Survey-cum-Rescue Excavation A Survey-cum-Rescue Excavation should be conducted after land resumption and before the commencement of construction works to define the precise archaeological deposits extent and to preserve the archaeological resources by record. The excavation should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible.	Project Proponent / Contractor/ Qualified Archaeologist	In KTN NDA, for Site 1	After land resumption but before Construction commencement of the zones	N/A
S11.6.1	CH2-DP4	Undertaking Further Archaeological Survey to Cover the Outstanding Areas Further archaeological surveys to cover the outstanding areas of the not-yet-surveyed-area with medium archaeological potential located with areas with proposed development as presented in **Figure 11.9** should be implemented after land resumption to confirm and verify the findings of the EIA. The survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance. It should be noted that the scope of further archaeological survey is based on the current proposed alignment. Any additional works areas which have not been covered by the current archaeological impact assessment should be covered as	To confirm and verify the findings of the EIA	Project Proponent/ Contractor/ Qualified Archaeologist	In the not-yet-surveyed- areas with medium archaeological potential located within the work extent of DP4	After land resumption but before construction	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		soon as possible. Subject to the findings of the archaeological survey to be conducted after land resumption, additional mitigation measures would be designed and implemented before the commencement of construction works to mitigate the adverse impact.					
S11.6.1	CH3-DP4	Undertaking Induction Training Induction training should be provided to the construction Contractor before the commencement of the excavation works in Spot E. An induction will be conducted as part of the environmental health and safety induction programme to all site staff before they are deployed on site. The induction will include an introduction on the historical development of the Site, the possible archaeological remains that may be encountered during ground excavation works as well as the reporting procedures in case suspected archaeological remains are identified. A set of the presentation material (in the form of power point presentation) with content details will be prepared by an archaeologist and submitted to AMO for reference and record purpose. The first induction briefing will be video recorded and it will be used as induction briefing material for new site staff.	To preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	Spot E	Before the commencement of the excavation works and before site staff are deployed on site	N/A
S11.6.2	CH4-DP4	Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record.	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	Entrance Gate of HKT03, KT16, KT17 and KT18	Prior to Removal / Relocation of features before commencement of construction	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		Liaison with and obtaining agreement from the descendants of these features will be carried out by the Project Proponent.				works	
S11.6.2	CH5-DP4	Undertaking baseline condition survey and baseline vibration impact assessment In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 15mm/s could be adopted for historic buildings) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	HKT03 (Main Building) and G308	Preconstruction stage before commencement of construction works	N/A
S11.6.2	CH6-DP4	Relocation of Built Heritages Relocation of built heritages to a reasonable location nearby may be required.	To preserve the directly impacted sites by relocation	Project Proponent/ Contractor	Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of construction works	N/A
Cultural Heritage (Construction Phase)							

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S11.6.2	CH7-DP4	Conducting Construction Vibration Monitoring and Structural Strengthening Measures Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment,	N/A
DP5- New sewage pumping stations (SPSs) in KTN NDA							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.B9	S.12.B9	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed Design Consultant/ Contractor/	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	N/A
S.12.B9 MM1	LV2-DP5	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized	Reduce topographical changes and minimize land	Government / Detailed	Throughout NDAs, particularly for	Prior to Construction	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	resumption	Design Consultant/ Contractor/	reservoirs		
S.12.B9 MM2	LV3-DP5	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines.	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant/	Throughout NDAs	Throughout NDAs	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated Construction time frame should also be considered.					
S.12.B9 MM4	LV4-DP5	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor‟s works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.	Protect and Preserve Trees	Government Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S.12.B9 MM5	LV5-DP5	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit" should be referred to.	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite location.	Prior to Construction,, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM6	LV6-DP5	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character.	Government/ Detailed Design Consultant/	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		Technical Guidelines on Landscape Treatment for Slopes.	To ensure man-made slopes are as visually amenable as possible.				
S.12.B9 MM7	LV7-DP5	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica,* and *Rhododendron simsii* are suggested.	Compensate for trees and shrubs lost due to the Project.	Government/ Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM8	LV8-DP5	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/	In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD	Prior to Construction, Construction Phase & Maintenance in Operation	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda. In addition some understory vegetation may be planted including shrubs such as Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus omentosa, Rhaphiolepis indica, and Rhododendron simsii.* The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and		Maintenance Authority		Phase	

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		shrubs which would be inappropriate for further planting.					
S.12.B9 MM9	LV9-DP5	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government / Detailed Design Consultant/ Contractor	*On appropriate structures*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM10	LV10-DP5	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Detailed Design Consultant/ Contractor	*On appropriate buildings*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9 MM11	LV11-DP5	Screen Planting – Tall screen/buffer trees and shrubs should be implanted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	*Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.B9	LV12-	Enhancement Planting along Embankment - For channelized watercourses,	Minimize the necessity of	Government /	*Channelized*	Prior to	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
MM14.3	DP5	if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.	watercourse modification, protect watercourses where possible and enhance channelized watercourses	Detailed Design Consultant/ Contractor	*watercourse, particularly the Ma Wat River Channel Diversion*	Construction, Construction Phase & Maintenance in Operation Phase	
Landscape and Visual (Construction)							
S.12.B9 MM16	LV13-DP5	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	*Throughout NDAs*	Construction Phase	N/A
S.12.B9	LV14-	Light Control – Construction day and night time lighting should be	To minimize glare impact to	Government /	*Throughout NDAs*	Construction	^

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MM17	DP5	controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	adjacent VSRs	Contractor		and Operation Phases	
Ecology (Construction Phase)							
S.13.9	E1-DP5	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.	Contractor.	*Interface between areas/habitats of ecological importance and works areas (all sides of KTN area F1-2).*	Construction phase.	N/A
DP7-Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works (SWHSTW)							
Landscape and Visual (Construction Phase and Operational Phase)							
S.12.9 MM4	LV1-DP7	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction and Construction Phase	N/A

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		A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.					
S.12.9 MM9	LV2-DP7	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. building edges, piers).	Soften hard surfaces and facilities	Government / Detailed Design Consultant/ Contractor	*On appropriate structures*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM10	LV3-DP7	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Detailed Design Consultant/ Contractor	*On appropriate buildings*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
DP10- Fanling Bypass Eastern Section (New Road)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.D9	LV1-	General Good Practice Measures - For areas unavoidably disturbed by		Detailed Design	*Throughout NDAs,*	Prior to	^

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	DP10	the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Consultant/ Contractor		Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	
S.12.D9 MM1	LV2-DP10	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	Reduce topographical changes and minimize land resumption	Government/ Detailed Design Consultant/ Contractor	*Throughout NDAs, particularly for reservoirs*	Prior to Construction	N/A
S.12.D9 MM4	LV3-DP10	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical	Protect and Preserve Trees	Government/ Detailed Design Consultant/	*Onsite*	Prior to Construction and Construction Phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.		Contractor			
S.12.D9 MM5	LV4-DP10	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.	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

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.					
S.12.D9 MM6	LV5-DP10	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government/ Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM7	LV6-DP10	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.	Compensate for trees and shrubs lost due to the Project.	Government/ Detailed Design Consultant/ Contractor	*Onsite where possible. Otherwise consider offsite locations*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		Compensatory planting for shrubs should be considered in suitable locations. Native species such as *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii* are suggested.					
S.12.D9 MM8	LV7-DP10	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda*. In addition some understory vegetation may be planted including	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	*In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		shrubs such as *Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii.* *The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.*					
S.12.D9 MM9	LV8-DP10	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government/ Detailed Design Consultant/ Contractor	*On appropriate structures*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM11	LV9-DP10	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian	Government/ Detailed Design Consultant/ Contractor	*Along roads, around suitable built structures, or around VSRs to contain their view*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
			environment		*out to the NDA structures.*		
S.12.D9MM12	LV10-DP10	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	To soften the hard, straight edges and provide greening along roads.	Government/ Detailed Design Consultant/ Contractor	*On viaducts or along roads.*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM14.3	LV11-DP10	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government/ Detailed Design Consultant/ Contractor	*Channelized watercourse, particularly the Ma Wat River Channel Diversion*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.					
Landscape and Visual (Construction)							
S.12.D9 MM16	LV12-DP10	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	*Throughout NDAs*	Construction Phase	^
S.12.D9 MM17	LV13-DP10	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	*Throughout NDAs*	Construction and Operation phases	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
Ecology (Detailed Design, Construction and Operational Phases)							
S13.8	E1-DP10	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor Maintenance Authority.	*Throughout NDAs*	Detailed design, construction and Operation phases.	^
Ecology (Construction Phase)							
S13.9	E3-DP10	Lower reaches of Siu Hang San Tsuen Stream to have 10m wide vegetated buffer in Open Space Zone D1-3 and Fanling Bypass to cross stream on viaduct.	Minimize impacts on Siu Hang San Tsuen Stream and stream fauna.	Contractor.	*FLN area D1-3.*	Construction phase.	N/A
S.13.9	E4-DP10	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna. Measures to minimize flight-line impacts to birds, especially breeding ardeids.	Contractor.	*Interface between areas/habitats of ecological importance and works areas (all of the north side of the Bypass works areas west of interchange with Sha Tau Kok Road).*	Construction phase.	N/A
Cultural Heritage (Construction Phase)							
S11.6.2	CH4-DP10	Conducting Construction Vibration Monitoring and Structural Strengthening Measures	To minimize the potential impacts during Construction	Contractor.	*Identified potential vibration impacted*	Construction phase, with details	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	phase on any identified potential vibration impacted built heritage features		*built heritage features*	specified in baseline condition survey and baseline vibration impact assessment,	
DP12-Reprovision of temporary wholesale market in FLN NDA							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.D9	LV1-DP12	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed design consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	N/A
S.12.D9 MM1	LV2-DP12	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity.	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.					
S.12.D9 MM2	LV3-DP12	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	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant	Throughout NDAs	Prior to Construction	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated. Construction time frame should also be considered and designs seek to keep it to a practical minimum.					
S.12.D9 MM4	LV4-DP12	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		include details of tree protection measures for those trees to be retained.					
S.12.D9 MM5	LV5-DP12	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.	Transplant Trees where suitable for transplantation	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM6	LV6-DP12	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of	To avoid substantial slope cutting and fill slopes. To prevent erosion and	Government / Detailed Design Consultant/	Onsite	Prior to Construction, Construction Phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
		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.	subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Contractor		& Maintenance in Operation Phase	
S.12.D9 MM7	LV7-DP12	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica*, and	Compensate for trees and shrubs lost due to the Project.	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

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
		Rhododendron simsii are suggested.					
S.12.D9 MM11	LV8-DP12	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
Landscape and Visual (Construction)							

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
S.12.D9 MM16	LV9-DP12	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	Throughout NDAs	Construction Phase	N/A
S.12.D9 MM17	LV10-DP12	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	Throughout NDAs	Construction and Operation Phases	N/A

Implementation status:

^ Mitigation measure was fully implemented

* Observation/reminder was made during site audit but improved/rectified by the contractor

\# Observation/reminder was made during site audit but not yet improved/rectified by the contractor

X Non-compliance of mitigation measure

• Non-compliance but rectified by the contractor

N/A Not Applicable at this stage as no such site activities were conducted in the reporting period

APPENDIX R
WASTE GENERATION IN THE REPORTING MONTH

Waste Flow Table of ND/2019/01

Name of Department: Civil Engineering and Development Department

Monthly Summary Waste Flow Table for 2022

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete (a)	Reused in the Contract (b)	Reused in Other Projects (c)	Disposed as Public Fill (d)	Imported Fill (e)	Metals	Paper / Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
January	17.001	0.000	9.565	4.775	2.661	1.060	0.004	0.278	0.004	47.200	1.918
February	6.211	0.000	5.760	0.000	0.451	0.496	0.000	0.178	0.000	129.600	2.085
March	0.000										
April	0.000										
May	0.000										
June	0.000										
Sub-total	23.212	0.000	15.325	4.775	3.112	1.556	0.004	0.456	0.004	176.800	4.003
July	0.000										
August	0.000										
September	0.000										
October	0.000										
November	0.000										
December	0.000										
Total	23.212	0.000	15.325	4.775	3.112	1.556	0.004	0.456	0.004	176.800	4.003

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	**Hard Rock and Large Broken Concrete**	**Reused in the Contract**	**Reused in Other Projects**	**Disposed as Public Fill**	**Imported Fill**	**Metals**	**Paper / Cardboard Packaging**	**Plastics (see Note 3)**	**Chemical Waste**	**Others, e.g. general refuse**
(in '000m^3)	**(in '000m^3)**	**(in '000m^3)**	**(in '000m^3)**	**(in '000m^3)**	**(in '000m^3)**	**(in '000kg)**	**(in '000kg)**	**(in '000kg)**	**(in '000kg)**	**(in '000m^3)**
1,310.619	300.000	1,010.619	0.000	0.000	0.000	20.000	10.000	20.000	0.500	10.000

Notes: (1) The performance target are given in PS Clause 1.115(14)
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
(4) The Contractor shall also submit the latest forecast of the amount of C&D materials expected to be generated from the Works, together with a break down of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m^3.
(5) Conversion factors for reporting purpose:
in-situ: rock = 2.5 tonnes/m^3; soil = 2.0 tonnes/m^3
excavated: rock = 2.0 tonnes/m^3; soil = 1.8 tonnes/m^3
broken concrete and bitumen = 2.4 tonnes/m^3
C&D Waste = 0.9 tonnes/m^3
Slurry = 1.0 tonnes/m3
(6) Numbers are rounded off to the nearest three decimal places
* Forecast
(7) Total Quantity Generated = a+b+c+d

Waste Flow Table of ND/2019/02

俊和－群利聯營體
CW－KL JV

Name of Department: CEDD

Appendix F

Contract No.: ND/2019/02

Year **2022**

Waste Flow Table

Month	Total Quantity Generated (a) = (c)+(d)+(e)	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of Non-Inert C&D Wastes Generated Monthly				
		Hard Rock and Large Broken Concrete (b)	Reused in the Contract (c)	Reused in other Projects (d)	Disposed as Public Fill* (e)	Imported Fill (f)	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse#
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
Jan	252.48	0.00	0.00	0.00	252.48	576.91	0.00	0.00	0.00	0.00	8.24
Feb	8.76	0.00	0.00	0.00	8.76	0.00	0.00	0.00	0.00	0.00	9.34
Mar											
Apr											
May											
June											
Sub-total	261.24	0.00	0.00	0.00	261.24	576.91	0.00	0.00	0.00	0.00	17.58
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	261.24	0.00	0.00	0.00	261.24	576.91	0.00	0.00	0.00	0.00	17.58

Notes:

(1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.

(3) Broken concrete for recycling into aggregates.

Waste Flow Table of ND/2019/03

Contract No.: ND/2019/03

Name of Department: CEDD

Monthly Summary Waste Flow Table for 2022 (Year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill*	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
Jan	1.82	0	0	0.38	1.44	0	0	0	0	0	0.09
Feb	0.36	0	0	0.10	0.25	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0
Jun	0	0	0	0	0	0	0	0	0	0	0
Sub-Total	0	0	0	0	0	0	0	0	0	0	0
Jul	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0
Sep	0	0	0	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0	0	0	0	0	0	0
Nov	0	0	0	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	0	0	0	0	0	0
Total	2.18	0	0	0.48	1.69	0	0	0	0	0	0.09

*Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
5	2	1	1	5	10	3	3	1	1	3

*Remark: Figure to be revised if necessary

Notes:

(1) The performance targets are given in ETWB Technical Circular PS Clause 6(14).
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
(4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m3. (ETWB Technical Circular PS Clause 5(4)(b) refers).
[Delete Note (4) and the table above on the forecast, where inapplicable].

Waste Flow Table of ND/2019/04

DCK JV

Appendix F
Contract No.: ND/2019/04

Monthly Summary Waste Flow Table for 2022 (Year)

Month	Total Quantity Generated	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of Non-Inert C&D Wastes Generated Monthly				
		Hard Rock and Large Broken Concrete (a)	Reused in the Contract (b)	Reused in other Projects (c)	Disposed as Public Fill (d)	Imported Fill (e)	Metals (f)	Paper/ cardboard packaging (g)	Plastics (h)	Chemical Waste (i)	Others, e.g. general refuse (j)
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
Jan	4,848.68	0.00	0.00	0.00	4,804.00	0.00	0.00	0.04	0.00	0.00	44.64
Feb	3,655.87	0.00	0.00	0.00	3,649.51	0.00	0.00	0.04	0.00	0.00	6.32
Mar	0.00										
Apr	0.00										
May	0.00										
June	0.00										
Sub-total	8,504.55	0.00	0.00	0.00	8,453.51	0.00	0.00	0.04	0.00	0.00	50.96
July	0.00										
Aug	0.00										
Sept	0.00										
Oct	0.00										
Nov	0.00										
Dec	0.00										
Sub-total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	8,504.55	0.00	0.00	0.00	8,453.51	0.00	0.00	0.04	0.00	0.00	50.96

Notes:

(1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
(3) Broken concrete for recycling into aggregates.
(4) Total quantity generated = a+b+c+d+e+f+g+h+i+j

Waste Flow Table of ND/2019/05

Monthly Summary Waste Flow Table for 2022 (year)

Name of Person completing the record: Louise Poon (EO)

Project : Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang) Contract No.: ND/2019/05

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated (a) = (b)+ (c)+(d)+(e)	Hard Rock and Large Broken Concrete (b)	*Reused in the Contract (c)	Reused in other Projects (d)	Disposed as Public Fill (e)	Imported Fill (f)	Metals (g)	Paper/ cardboard packaging/ (h)	Plastics (i) (see Note 3)	Yard Waste (j)	Chemical Waste (k)	Others, e.g. general refuse (l)
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 kg)
Total in 2021	27.516	0.000	3.480	0.000	24.036	2.484	17.294	3.041	1.831	184.229	24.882	1501.610
Jan-22	4.709	0.000	0.426	0.000	4.283	0.000	95.790	0.818	0.183	36.710	0.000	121.720
Feb-22	5.086	0.000	0.048	0.000	5.038	0.000	0.005	0.033	0.006	39.770	0.000	52.190
Mar-22												
Apr-22												
May-22												
Jun-22												
Sub-total	9.795	0.000	0.474	0.000	9.321	0.000	95.795	0.851	0.189	76.480	0.000	173.910
Jul-22												
Aug-22												
Sep-22												
Oct-22												
Nov-22												
Dec-22												
Total in 2022	9.795	0.000	0.474	0.000	9.321	0.000	95.795	0.851	0.189	76.480	0.000	173.910
Total of the Project since 2020	40.207	0.000	4.479	0.000	35.728	3.426	113.093	4.061	2.030	577.633	24.882	2252.740

*Approx. estimation for each dump truck is 6m3/truck or 12 ton/truck

Total Quantity of Inert C&D Materials Generated: 40.207 (in '000m3) (a) = (b)+ (c)+(d)+(e)

Waste Flow Table of ND/2019/06

Notes: (1) The performance targets are given in PS Clause 1.102(14).
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
*(4) The *Contractor* shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the *works*, together with a breakdown of the nature where the amount of C&D materials expected to be generated from the works is equal to or exceeding 50,000m3. [Delete Note (4) and the table above on the forecast, where inapplicable].
(5) Total Quantity Generated, A=B+C+D+E+F

Monthly Summary Waste Flow Table for __2022__(year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in the other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000kg	in '000kg	in '000kg	in '000kg	in '000m3
	A	B	C	D	E	F	G	H	I	J	K
Jan	0.157	0	0	0	0.157	0	0	0	0	0	0.035
Feb	0.060	0	0	0	0.060	0	0	0	0	0	0.029
Mar											
Apr											
May											
June											
Sub-total	0.217	0	0	0	0.217	0	0	0	0	0	0.064
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total	0.217	0.000	0.000	0.000	0.217	0.000	0.000	0.000	0.000	0.000	0.064

Notes: (1) The performance targets are given in PS Clause 1.102(14).
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
*(4) The *Contractor* shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the *works*, together with a breakdown of the nature where the amount of C&D materials expected to be generated from the works is equal to or exceeding 50,000m3. [Delete Note (4) and the table above on the forecast, where inapplicable].
(5) Total Quantity Generated, A=B+C+D+E+F

Waste Flow Table of ND/2019/07

Monthly Summary Waste Flow Table for _2022__ (year)

Name of Person completing the record: KM LUI (EO)

Project : Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Contract No.: ND/2019/07

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete (a)	Reused in the Contract (b)	Reused in other Projects (c)	Disposed as Public Fill (d)	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000T)	(in '000T)	(in '000T)	(in '000T)	(in '000T)	(in '000T)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 T)
Jan	0.949	0	0	0	0.949	8.930	0.0002	0	0.008	0	0.446
Feb	0.368	0	0	0	0.368	0	0	0	0	0	0.116
Mar											
Apr											
May											
Jun											
Sub-total	1.317	0.000	0.000	0.000	1.317	8.930	0.000	0.000	0.008	0.000	0.562
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
Total	4.375	0.000	1.514	0.000	2.861	129.949	0.017	1.446	0.022	212.240	5.223

Notes:

(1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.

(3) Broken concrete for recycling into aggregates.

(4) Total Quantity Gernerated = a+b+c+d..

APPENDIX S
COMPLAINT LOG

Appendix S - Complaint Log

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2020-07-01	Public Road at Portion 6a (ND/2019/01)	13th July 2020	The EPD visit on 13 July 2020 was to respond the complaint received from the 2nd week in July regarding the dust problem in public road of Portion 6a. Mr. Tse (EPD) observed muddy wheel track on the public road, and he expressed that the public road should keep free of mud even it was inside the project area. He also advised BKRWJV (the Contractor) to clean up the muddy wheel track and provide rectified photos to him.	A designated person is provided at the ingress/egress for vehicle washing before the wheel washing facility is in use, this is to make sure all vehicle are free of mud before leaving the site. And, the designated person is also responsible for cleaning the public road if any mud is found on it.	Closed
COM-2020-11-01	Portion 4 and Portion 7 near Dills Corner Garden (ND/2019/01)	11th November 2020	The EPD inspection at Portion 4 on 11 November 2020 was to respond the complaint regarding the dust problem near Dills Corner Garden referred by a District Council Member. No construction activities was carried out and no obvious dust emission was observed. EPD advised BKRWJV (the Contractor) to increase the height of temporary water barrier and install sprinklers on bare ground. Another EPD inspection was conducted on 26 November 2020 at	The height of temporary water barrier was increased at Portion 4. Sprinklers were installed on bare ground at Portion 4 and on top soil at Portion 7. Manual water spraying were provided regularly. Hydroseeding will be provided on soil surface at Portion 4 for long-term measures. Proper implementation of dust mitigation measures will be continuously reviewed and monitored to avoid potential dust impact on site.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			Portion 7 for the dust complaint. During inspection, no obvious dust emission was observed and potential dust may generate from top soil which appear to be dry. EPD advised the Contractor to install sprinklers on top soil for dust suppression.		
COM-2020-11-02	Works Area A & B (ND/2019/05)	27th November 2020	The complainant complained about the noise generated from the alarm of scissors platform during works for PM's site accommodation on Sunday and called the police force. Police officer has checked that Construction Noise Permit has been applied for the construction work. Also, the complainant complained about the reflective blue color of roof material of site office.	Permit-to-Work system was properly implemented for works at restricted hours. The PME used have been checked in compliance with the valid Construction Noise Permit (CNP No.: GW-RN0788-20). Acoustics mats were erected between works area and noise sensitive receivers. Scissor platform or noisy work activities will be arranged and minimized to be used on Sunday or evening time on weekdays. Specific training for the quieter works arrangement was provided to workers. Also, the blue roof will be covered by non-reflective green roof material.	Closed
COM-2021-01-01	Ma Tso Lung Road (ND/2019/01)	7th January 2021	A complaint regarding soil deposited on Ma Tso Lung Road was referred by EPD verbally.	No soil / mud deposit or mud track were observed along the Ma Tso Lung Road during investigation and site inspection between Contractor, the *Supervisor*, ET and IEC. The road condition of Ma Tso Lung Road will be closely monitored and the public road will be regularly cleaned if mud deposit was observed. Wheel washing facilities at every site entrance will be regularly monitored to ensure proper implementation of dust control measures.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2021-01-02	Ma Tso Lung Road (Near L/P VD5622) (ND/2019/01)	13th January 2021	A complaint was received from 1823 regarding the suspected odour emitted from muddy water discharged.	Water sample collected from the wastewater treatment facility was clear and no odour was detected. Sewage from chemical toilet was collected on a regular basis by licensed collector. Brownish wastewater was observed discharging upstream of the site from an unknown factory to the uncharted channel which may be potential source of the odour.	Closed
COM-2021-01-03	CTC Storage Yard (ND/2019/05)	22nd January 2021	A complaint was referred from EPD regarding the noise generated before 7 a.m. on weekdays and machinery noise generated on Sunday from CTC Storage Yard.	No attendance record of workers working for CTC Storage Yard earlier than 8 a.m. and on Sunday (day of complaint) was recorded. To ensure strict compliance to Noise Control Ordinance and prevent noise nuisance to the nearby villages, the Contractor has implemented the following enhancement measures: 1. Issue a memo to the relevant sub-contractor on restricted working hour. 2. Conduct specific training to sub-contractor frontline supervisor and works. 3. Apply a construction noise permit for the suspected location.	Closed
COM-2021-01-04	Ho Sheung Heung (ND/2019/02)	28th January 2021	A complaint was received from 1823 regarding an idling construction vehicle near Ho Sheung Heung to operate the engine for over 10	Ad-hoc training was provided to workers on switching off idling engines when awaiting on site. Poster for “Switching off idling engines” was posted at site entrance to alert workers on the	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			minutes. Also, the complainant complained on noise nuisance from the speaker during meeting.	issue. For noise nuisance from the meeting, the speaker volume in the future event will be lower as much as possible.	
COM-2021-02-01	CTC Storage Yard (ND/2019/05)	4th February 2021	A complaint was received from EPD call on 2nd February 2021 regarding a noise complaint from a Tong Hang villager about noise from CTC storage yard at around 19:00 – 20:00 on 1st February 2021.	The suspected cause of the complaint was the delivery of a rotary drilling rig by a tractor lorry arrived at CTC Storage Yard at around 19:00 at 1st February 2021. The delivery time was restricted due to the oversized tractor lorry (width >2.4m and length protruded >1.4m at tractor tail). No loading and unloading was conducted during the time of complaint. For follow up action, the Contractor will apply Construction Noise Permit for any foreseeable delivery that may not be finished before restricted hours and will notify possible affected village representatives in advance.	Closed
COM-2021-02-02	CTC Storage Yard (ND/2019/05)	16th February 2021	A complaint was received from EPD call on 10th February 2021 regarding a noise complaint from a Tong Hang villager about some impact noise from CTC Storage yard at Sunday's daytime (7th February 2021).	Under investigation, erection of chain link fence for separating works area and adjacent village house was conducted by a sub-contractor on 7th February 2021 without notification to the Contractor. Sub-contractor has been reminded that any work within site area shall be conducted after instruction by the Contractor and permit-to-work system on restricted hours works shall be strictly followed.	Closed
COM-2021-02-03	CTC Storage Yard (ND/2019/05)	2nd March 2021	A complaint was received from EPD call on 24th February 2021 regarding a noise complaint from a Tong Hang villagers about some machinery noise	Further enhancement on erection of acoustics mats and mobile acoustics mat panels was conducted at strategic location at E1-01 for mitigation of the noise impact to the nearby	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			and dust from CTC Storage yard. Joint site inspection of the Contractor, the *supervisor* and EPD was conducted on the same day for the bored piling at CTC Storage Yard and check on the noise and dust mitigation measures. EPD requested to enhance noise and dust mitigation measures for grabbing operation of the Rotary Drill Rig for construction of piles of E1-01.	sensitive receivers. Regular water spraying has been applied to suppress the dust from grabbing procedure and the skip.	
COM-2021-03-01	Ma Tso Lung Shun Yee San Tsuen (ND/2019/01)	1st March 2021	A complaint was referred from EPD regarding fly-tipping of C&D waste near Ma Tso Lung Shun Yee San Tsuen and muddy public road.	Under investigation, the suspected site near Shun Yee San Tsuen was out of project site boundary. Internal trip ticket system was properly implemented for dump trucks transported from project site to other approved alternative disposal ground. Also, dump trucks were properly washed and mechanical cover of dump trucks were closed while leaving the site. For follow up action, banners and flags were displayed on site to promote the environmental protection awareness. Regular training was provided to remind the dump truck drivers that illegal dumping is strictly prohibited.	Closed
COM-2021-03-02	CTC Storage Yard (ND/2019/05)	15th March 2021	A complaint was received from EPD call and an inspection by EPD was conducted on 9th March 2021 regarding a dust complaint from a Tong Hang villager. The complainant	For follow up action, the Contractor provided training to remind frontline supervisors and workers to wet the auger before movement when it was dried for preventing any occasional situation that the auger was dried.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			complained that rotary drill rig shall be equipped with enclosure for dust control and rotary drill rig had exhaust disturbance. Also, the complainant requested to improve wheel washing at site entrance.	The Contractor provided training to brief frontline supervisor and the operators to prevent exhaust disturbance. Also, the drill rigs exhaust pipe shall not face to the public area. If it is avoidable, screens shall be arranged to divert the exhaust gas. An additional cut-off drain was constructed and notice signs were erected for notifying drivers to give wheel washing in front of the cut-off drains.	
COM-2021-03-03	Ma Tso Lung Road (ND/2019/01)	9th April 2021	A complaint was referred from EPD on 23 March 2021 regarding muddy public access road along Ma Tso Lung Road.	The muddy access road was found generated from a nearby private factory where the access road is not hard paved. The Contractor arranged water browser to help clean up the section of road on 24th and 25th March 2021 respectively. Also, dump truck were properly washed at project site exit near Ma Tso Lung Road.	Closed
COM-2021-04-01	Long Valley, Kwu Tung (ND/2019/03)	9th April 2021	A complaint was referred from EPD regarding to associated impacts arising from construction works at Long Valley Nature Park, causing nuisance and affecting the habitat and ecological value in Long Valley.	Construction works for development of Long Valley Nature Park are conducted according to the recommended mitigation measures stated in Habitat Creation and Management Plan. Wetland creation and restoration works are in progress which include provision of paddy field, turning abandoned agricultural lands into wet agricultural land and provision of open water habitat with bird island. Irrigation channel is under construction for provision of reliable water supply to farmland. For construction works, the following significant mitigation measures are implemented: 1. Provide noise barriers to minimize noise nuisance to adjacent field where Greater Painted-	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				snipe was found; 2. Arrange concrete pump for concreting works to minimise noise impact; 3. Provide water spraying on the exposed earth to dampen the dusty surface; 4. Provide shade cloth to separate works area and marsh where Greater Painted-snipe were found; 5. Demarcation of temporary vehicle access to prohibit vehicle across the farmland; 6. Provide 2m dull green site boundary fence along Long Valley work areas; and 7. Block the main accesses by temporary barrier to avoid human disturbance.	
COM-2021-04-02	Close to junction of Ma Wat River and Ng Tung River (ND/2019/04, ND/2019/05, ND/2019/06)	23rd April 2021	A complaint was referred from EPD regarding to suspected polluting effluent discharged from Ma Wat River near junction of Ma Wat River and Ng Tung River.	Under investigation, muddy water was observed from a small stream of Ma Wat River which is outside project site boundary. Contractor's wastewater treatment facilities and mitigation measures on water quality were checked. Latest discharge monitoring results shows the discharge quality in compliance with the limit stated in the discharge licence. The following mitigation measures will keep implemented and inspected: 1. Installation of silt curtain, geotextiles and concrete blocks for excavation works at Ng Tung River with regular inspection; 2. Exposed slope paved with concrete to prevent muddy runoff; 3. Setting up wastewater treatment plants at	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				several locations of the site area; 4. Bund/seal off works area near river and set up with dewatering system; 5. Spare water pumps and sand bags for emergency use during heavy rain; 6. Regular training to the operators of wastewater treatment facilities; and 7. Regular checking and maintenance of the wastewater treatment facilities and desilting tank.	
COM-2021-04-03	Near Shek Wu San Tsuen, Sheung Shui (ND/2019/04)	28th April 2021	A complaint was referred from EPD regarding to construction dust arising from dump trucks from construction sites near Shek Wu San Tsuen.	No obvious dust emission was observed during EPD inspection on 28th and 29th April 2021, However, potential dust impact may arise from sandy materials found on public road and exposed ground surface. For follow up action, soil debris were removed at public road. Water spraying was provided on the exposed ground surface. Also, all dump trucks are covered properly and wheel wash is provided before leaving site. Implemented of the mitigation measures will keep reviewed and monitored.	Closed
COM-2021-05-01	Near Tong Hang section of Ma Wat River (ND/2019/05)	17th May 2021	A complaint was referred from EPD regarding to suspected polluting effluent discharged from construction sites near Ma Wat River.	Under investigation, no pollution from works areas near Ma Wat River was observed. For wastewater pollution control, all wastewater treatment facilities have been setup at discharge points. According to the latest discharge monitoring results on April 2021, no non-compliance to limit set in discharge licence was recorded. Regular maintenance and services of the facilities have been conducted. Close monitoring	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				with checklist has been conducted by operators of the facilities. Mitigation measures such as sealing gaps between concrete blocks/water barriers/pipe pile walls have been implemented to prevent leakage. Implementation of the mitigation measures will keep reviewed and closely monitored.	
COM-2021-09-01	Chau Tau Road near the CLP Chau Tau Substation (ND/2019/01)	2nd September 2021	A complaint was referred by EPD and an inspection by EPD was conducted on 3 September 2021 regarding a muddy public access road at Chau Tau Road near the CLP Chau Tau Substation.	Ad-hoc site inspection was conducted on 2 Sep 2021 at Chau Tau Road near the CLP Chau Tau Substation, no muddy wheel track or soil deposit was observed. No concrete lorry was observed using the Chau Tau Road near the CLP Chau Tau Substation. Concreting at Portion 5 was observed during EPD inspection on 3 September 2021, wheel washing bay and manual wheel washing was provided at site exit, all vehicles were properly washed and no muddy track was observed at Chau Tau Road. The Contractor has been implement following mitigation measure upon received the complaint: • Rearranged the traffic route and informed the concrete lorry drivers not to use Chau Tau Road; • Keep monitoring the effectiveness of the wheel washing facilities at site exist; and • Clean up the public road immediately if soil deposit was observed.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2021-09-02	Not specified (ND/2019/01)	3rd September 2021	A complaint was referred by EPD regarding C&D waste stored on site.	Refer to the photos provided by the complainant, the mentioned C&D waste mainly felled trees mixed with general refuse and temporary stored within the site boundary, Ad-hoc site inspection was conducted by Contractor and RSS on 3rd September 2021, all C&D waste were stored within the site boundary, no odour perceived during site inspection. The Contractor has been implement following mitigation measure upon received the complaint: • Sort out the non-inert waste from the felled trees; • Remove the general refuse if possible, otherwise, coved by tarpaulin sheet; and • Relocate or transport the yard waste to other places which are not easy visible by public. Implementation of the mitigation measures will keep reviewed and closely monitored to ensure no adverse impact will be generated from the construction works of the Project.	Closed
COM-2021-11-01	Close to Shek Wu San Tsuen (ND/2019/04)	3rd November 2021	A complaint was referred from EPD on 22th November 2021, about various issues including suspected environmental nuisances from the captioned Project from a member of public on 3rd Nov 2021. He followed-up again on 19th Nov 2021.	Site inspection was conducted by contractor and EPD inspectors on 25th November 2021, no obvious dust emission was observed within site boundary. The potential dust impact may arise from sandy materials found at public road which is under DSD maintenance. Air quality monitoring was carried out at location FLN-DMS1 - Scattered Village	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				Houses North of Proposed Potential Ecopark and Location FLN-DMS5 - Noble Hill near Shek Wu San Tsuen in accordance with the EM&A manual. With reference to the air quality monitoring data collected in Nov 2021, all monitoring data were complied with the action and limit level and no exceedance was recorded. The Contractor has been implement following mitigation measure upon received the complaint: • 工程團隊亦已於接近民居並正在進行大型工程(例如建造大口徑樁)位置安裝了各種隔音屏障，例如在大型機器的發電機上加上隔音布、在圍板加上隔音屏障 • 增加自動灑水系統	
COM-2021-12-01	On Kui Street along Ma Wat River (ND/2019/05)	13rd December 2021	AECOM referred to public complaints received by 1823 on 13 December 2021 regarding "中鐵建保華聯營公司粉嶺地盤工人沖建築泥水落河 污染河道。"	Refer to the photo attached in the above complaint, it is suspected that there were bentonite slurry leaking from the flexible pipe joint near works area of pier C2-01 and the cause of incident as blow: • Tightness of flexible pipe joint • Worker's awareness and knowledge on proper handling of pipe leakage • Readiness of contingency tools and equipment for the pipe leakage The Contractor has been implement following mitigation measure upon received the complaint: • Doubling pipe clamps at each joint to strengthen the connection tightness and	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				seal • Briefing workers for proper spillage handling • Well readiness of contingency tools and equipment for handling of leakage • Designating responsible supervisor for regular pipeline condition check and monitoring • Daily inspection for pipeline condition by responsible supervisors before works • Erection of bunding/sandbags along the works area to effectively stop any potential leakage/surface runoff • Review and updated Environmental Management Plans (EMP) covering Site Specific Procedures for Muddy runoff/leakage Control (See CSF submission, ref. no. CSF/HSE/002115) on 21 Dec 2021 • Specific trainings of proper handling of leakage adjacent to the river/drainage for JV managerial and supervisory staff	
COM-2022-01-01	Close to Shek Wu San Tsuen (ND/2019/04)	13rd January 2022	A complaint was referred from EPD on 14 Jan 2022 from a public member alleged the captioned Project of "我們每個工作天都會受到高噪音和震動的影響，在沒有足夠的保障下，使近距離的民居十分擔心，屋裂有惡化跡象，兒童/長者難有	Contractor have carried out daily noise monitoring and vibration monitoring. No exceedance was recorded. The monitoring results are displayed on the notice board for easy reference. For noise control measures, QPME label are affixed to generators and acoustic noise barriers are mounted on powered mechanical equipments such as	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			寧靜環境，成人在家中工作、兒童做功課在噪雜的環保下，難以適應，我們很希望受到合理的重視和改善，使實際環境不會太差。”	excavators, crawler cranes and vibration hammers and installed along hoarding to minimize noise nuisance to neighborhood. Based on the findings of investigation, no exceedance of noise and vibration monitoring was found. Contractor will ensure that the construction works carried out must comply with the condition stated in the Noise Control Ordinance and to implement mitigation measures proposed in the Project Implementation Schedule.	
COM-2022-01-02	Near Sheung Yue River (ND/2019/02)	28th January 2022	A complaint was received from 1823 on 28 Jan 2022 regarding “在雙魚河河邊單車徑附近的工程，一個多月來，當工人沒有工作期間，所有機械都沒有熄匙，當機械運作時，產生很大的嗓音及很多廢氣。 理解工人有工作時，機械運作是正常，但一個月來工人沒工作時，機械依然運作，產生問題嚴重，要求部門跟進及處理。”	Investigation was conducted by contractor on 4 Feb 2022. All plants are turned off when awaiting more than 3 min. Dark smoke monitoring for the powered mechanical equipment had been carried out. No dark smoke was recorded. Based on the findings of investigation, no exceedance of noise and air monitoring was found. Follow-up Actions had been conducted on 4 Feb 2022. Mitigation measures are implemented. Dull green barriers are installed around active works areas to prevent dust emitted to the public. QPME is used to minimize noise nuisance to the neighbourhood. Specific environmental training about Noise and Smoke Control for Plants was provided to frontline staff on 4 Feb 2022. The frontline staff was reminded to switch off idling equipment for	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				preventing recurrence of idling construction equipment awaiting on site, and carry out routine maintenance of plant and equipment for mitigating unwanted noise and air pollutant emissions.	
COM-2022-02-01	Ng Tung River (ND/2019/04)	17th February 2022	EPD received 2 complaints from members of public about suspected disposal of foam waste and illegal discharge from the captioned Project to Ng Tung River on 13 & 16 Feb 2022 respectively. Details of complaint case received on 13 Feb 2022: 「本人途經唔上水悟洞河近馬屎埔新村附近地盤發現河道有大量懷疑發泡膠影響何到魚類生物, 要求環境保護署或相關部門進行跟進」 Details of complaint case received on 16 Feb 2022: 「2022年2月10日下午三時，發現梧桐河面出現乳白色，懷疑與附近工程泥漿水有關，懷疑經雨水渠排出。」	Investigation was conducted by contractor. It is found that no foam has been used on site. No construction works was carried out during 9 Feb to 14 Feb 2022 at A3 piling platform as two suspected close contact cases for A3-02 piling platform team was found. The bored piling works and A3 piling platform welding works was suspended from 9 Feb 2022 and resumed on 14 Feb 2022 after the whole team received negative results. Mitigation measures are implemented, there is a silt curtain enclosing the opened workfronts and the openings of the A3 piling platform. Hence, the platform and other workfronts along the river have no discharge to the river. In addition, it is reported that suspected contaminated water was discharging to Ma Wat River from surrounding industrial buildings near C5 contract site. Based on the findings of investigation, no foam	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				has been used by on site and no suspected contaminated water was discharged from the project. Thus, the complaint cases are not caused by our project.	

APPENDIX T
SUMMARY OF SUCCESSFUL PROSECUTION

Appendix T - Summary of Successful Prosecution

Date of Successful Prosecution	Details of the Successful Prosecution	Status	Follow Up
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APPENDIX U
SUMMARY TABLE FOR REQUIRED SUBMISSION UNDER ENVIRONMENTAL PERMIT

DP2	EP-466/2013	Castle Peak Road Diversion				
CEDD Contract No. ND/2019/01 - Site Formation and Infrastructural Works at KTN NDA						
Construction commencement date		12-Aug-20				
Operation commencement date		tbc				

EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 2 March 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Submitted by Pre-Construction ET	
2.4	Management organization of the main construction companies	Before construction	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	
2.6	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	**To Conduct -** A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer <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 Approva**l - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	Deposited 13 May 2021	
2.8	Landscape Plan	Others	**Deposit**	at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures of the Project	*	
2.10	Traffic Noise Mitigation Measure (implement)	Before operation	**Implement--** all noise mitigation measures as shown in Figure 4 of this Permit	before commencement of operation	*	
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	
3.4	Monthly EM&A Report	During construction	**Submit**	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by Construction Phase ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

DP3	EP-467/2013/A	Kwu Tung North New Development Area Road P1 and P2 and Associated New Kwu Tung Interchange and Pak Shek Au Interchange Improvement				
CEDD Contract No. ND/2019/01 - Site Formation and Infrastructural Works at KTN NDA						
Construction commencement date		**12-Aug-20**				
Operation commencement date		**tbc**				

EP Condition		Requirements and Sumbissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 2 March 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Submitted by Pre-Construction ET	
2.4	Management organization of the main construction companies	Before construction	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	
2.6	Traffic Noise Mitigation Plan	Before construction	**For Approval**	no later than 1 month before the commencement of consturction	Deposited 31 July 2019	EPD Approved 9 August 2019
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records	Others	**Deposit** - A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical lanscape features at Locatoins KT38, KT44 and KT52	prior to the commencement of the respective removal or relocation works	Deposited 10 February 2021	
2.8	Landscape Plan	Others	**Deposit**	at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures of the Project	Deposited 13 May 2021	
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	
3.4	Monthly EM&A Report	During construction	**Submit**	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by Construction Phase ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

DP4	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5				
CEDD Contract No. ND/2019/01 - Site Formation and Infrastructural Works at KTN NDA						
Construction commencement date		**1-Jun-20**				
Operation commencement date		**tbc**				

EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 2 March 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Submitted by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
2.6	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	**To Conduct -** A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer Note: The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	*	
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at locations HKT03, KT16, KT17 and KT18	prior to the commencement of the respective removal or relocation works	*	
		Others	**For Approva**l - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	Deposited 13 May 2021	
2.8	Compensatory Tree Planting Plan	Before construction	**For Approval**	prior to the commencement of construction	*	
2.9	Habitat Creation and Management Plan	Others	**For Approval**	prior to the commencement of construction of relevant part of the Project	Submitted 20 October 2020	EPD approved 4 November 2020
2.10	Traffic Noise Mitigation Plan	Before construction	**For Approval**	no later than 1 month before commencement of construction	Submitted 31 July 2019	EPD approved 9 August 2019
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	
3.4	Monthly EM&A Report	During construction	**Submit**	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by Construction Phase ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

DP5	EP-469/2013	Sewage Pumping Stations in Kwu Tung North New Development Area				
CEDD Contract No. ND/2019/02 - Kwu Tung North New Development Area, Phase 1: Roads and Drains between Kwu Tung North New Development Area and Shek Wu Hui						
Construction commencement date			**28-Oct-20**			
Operation commencement date			**tbc**			

EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notify 14 October 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Submitted by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 17 September 2020	
2.5	Location Plans	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 15 October 2020	
2.6	Landscape Plan	Before construction	**Deposit**	at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures	*	
3.1	Change in EM&A requirements/ programme	Others	**Seek prior approval from the Director --** justified by ET leader and verified by IEC	before implementation		
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	
3.4	Monthly EM&A Report	During construction	**Submit**	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by Construction Phase ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

DP7	EP-470/2013	Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works			
CEDD Contract No. ND/2019/01 - Site Formation and Infrastructural Works at KTN NDA					
Construction commencement date		**23-Mar-20**			
Operation commencement date		**tbc**			

EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notify 22 January 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Submitted by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	
3.4	Monthly EM&A Report	During construction	**Submit**	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by Construction Phase ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

DP4	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5				
CEDD Contract No. ND/2019/03 - Development of Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park						
Construction commencement date		**3-Jul-20**				
Operation commencement date		**tbc**				
EP Condition		**Requirements and Submissions**			**Submission Status**	**Remarks**
		Period	**Action**	**Timeframe**		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 28 April 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Submitted by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 18 June 2020	
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 18 June 2020	
					Revised Version Deposited 19 February 2021	
2.6	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	**To Conduct -** A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer Note: The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	*	
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at locations HKT03, KT16, KT17 and KT18	prior to the commencement of the respective removal or relocation works	Deposited 13 May 2021	
		Others	**For Approval** - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	N/A	
2.8	Compensatory Tree Planting Plan	Before construction	**For Approval**	prior to the commencement of construction	N/A	
2.9	Habitat Creation and Management Plan	Others	**For Approval**	prior to the commencement of construction of relevant part of the Project	Submitted 20 October 2020	EPD approved 4 November 2020
2.10	Traffic Noise Mitigation Plan	Before construction	**For Approval**	no later than 1 month before commencement of construction	Submitted 31 July 2019	EPD approved 9 August 2019
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	
3.4	Monthly EM&A Report	During construction	**Submit**	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by Construction Phase ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

DP10	EP-473/2013/A	Fanling Bypass Eastern Section				
CEDD Contract No. ND/2019/03 - Development of Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park						
Construction commencement date			**6-Oct-20**			
Operation commencement date			**tbc**			
EP Condition		**Requirements and Submissions**			**Submission Status**	**Remarks**
		Period	**Action**	**Timeframe**		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 10 August 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Submitted by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 18 September 2020	
2.5	Location Plans	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 18 September 2020	
2.6	Relocation Plan for Rose Bitterling	Before construction	**Approval**	before the commencement of construction	Submitted 5 November 2020	EPD approved 9 November 2020
2.7	Egretry Habitat Creation and Management Plan	Before construction	**Approval**	before the commencement of construction	Submitted 20 October 2020	EPD approved 4 November 2020
2.8	Detailed Design of Siu Hang San Tsuen Stream	Before construction	**Deposit**	before the commencement of construction	Deposited 13 May 2021	
2.9	Traffic Noise Mitigation Plan	Before construction	**Approval**	no later than 1 month before the commencement of construction	N/A	
2.10	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	**To Conduct -** A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer Note: The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	N/A	
2.11	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	**Deposit** - A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at FL19	prior to the commencement of the respective removal or relocation works	N/A	
		Others	**For Approval** - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	N/A	
3.1	Change in EM&A requirements/ programme	Others	**Seek prior approval from the Director --** justified by ET leader and verified by IEC	before implementation		
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	
3.4	Monthly EM&A Report	During construction	**Submit**	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by Construction Phase ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing --** the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload --** All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

DP10	EP-473/2013/A	Fanling Bypass Eastern Section

CEDD Contract No. ND/2019/04 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)

Construction commencement date	**23-Feb-21**		
Operation commencement date	**tbc**		

EP Condition		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 8 September 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Submitted by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 17 Mar 2021	
2.5	Location Plans	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 10 December 2021	
2.6	Relocation Plan for Rose Bitterling	Before construction	**Approval**	before the commencement of construction	N/A	
2.7	Egretry Habitat Creation and Management Plan	Before construction	**Approval**	before the commencement of construction	N/A	
2.8	Detailed Design of Siu Hang San Tsuen Stream	Before construction	**Deposit**	before the commencement of construction	Deposited 13 May 2021	
2.9	Traffic Noise Mitigation Plan	Before construction	**Approval**	no later than 1 month before the commencement of construction	Submitted 11 September 2020	EPD Approved 8 October 2020
2.10	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	**To Conduct -** A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer Note: The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	*	
2.11	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	**Deposit** - A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at FL19	prior to the commencement of the respective removal or relocation works	*	
		Others	**For Approva**l - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	*	
3.1	Change in EM&A requirements/ programme	Others	**Seek prior approval from the Director --** justified by ET leader and verified by IEC	before implementation		
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	
3.4	Monthly EM&A Report	During construction	**Submit**	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by Construction Phase ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

DP14	EP-546/2017	Fanling North Temporary Sewage Pumping Station				
CEDD Contract No. ND/2019/04 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)						
Construction commencement date			**16-Feb-21**			
Operation commencement date			**tbc**			
EP Condition		**Requirements and Submissions**			**Submission Status**	**Remarks**
		Period	**Action**	**Timeframe**		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 1 month prior to the commencement of construction	Notified 8 September 2020	
1.14	Commencement date of opeation	Before operation	**Notify in writing**	no later than 1 month prior to the commencement of operation	N/A	
2.4	IEC Audit Report	After construction	**Deposit**	within one month upon completion of the construction works	N/A	

DP10	EP-473/2013/A	Fanling Bypass Eastern Section				
CEDD Contract No. ND/2019/05 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)						
Construction commencement date			**1-Aug-20**			
Operation commencement date			**tbc**			
EP Condition		**Requirements and Submissions**			**Submission Status**	**Remarks**
		Period	**Action**	**Timeframe**		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 15 June 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Submitted by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 28 May 2020	
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 28 May 2020	
2.6	Relocation Plan for Rose Bitterling	Before construction	**Approval**	before the commencement of construction	N/A	
2.7	Egretry Habitat Creation and Management Plan	Before construction	**Approval**	before the commencement of construction	N/A	
2.8	Detailed Design of Siu Hang San Tsuen Stream	Before construction	**Deposit**	before the commencement of construction	Deposited 13 May 2021	
2.9	Traffic Noise Mitigation Plan	Before construction	**Approval**	no later than 1 month before the commencement of construction	Submitted 11 September 2020	EPD Approved 8 October 2020
2.10	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	**To Conduct -** A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	Submitted 1 September 2020	
2.11	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	**Deposit** - A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at FL19	prior to the commencement of the respective removal or relocation works	-	
		Others	**For Approval** - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	-	
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction	Submited by Pre-construction ET	
					Submitted 1 September 2020	for EP Condition 2.10
3.4	Monthly EM&A Report	During construction	**Submit**	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by Construction Phase ET monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

DP12	EP-475/2013/A	Reprovision of temporary Wholesale Market in Fanling North New Development Area				
Contract No. ND/2019/06 - Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products						
Construction commencement date		**29-Oct-19**				
Operation commencement date		**tbc**				
EP Condition		**Requirements and Submissions**			**Submission Status**	**Remarks**
		Period	**Action**	**Timeframe**		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 15 October 2019	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Submitted by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 14 October 2019	
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 14 October 2019	
2.6	Landscape Plan	Others	**Deposit**	at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures of the Project	*	
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction	Submited by Pre-construction ET	
3.4	Monthly EM&A Report	During construction	**Submit**	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by Construction Phase ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available