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 September 2020

(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. 11 (September 2020)

13 October 2020
BY EMAIL

Dear Sir,

We refer to email of 13 October 2020 attaching the Monthly Environmental Monitoring and Audit Report No. 11 prepared by the Environmental Team (ET) of the captioned.

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

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

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

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EXECUTIVE SUMMARY

Introduction

1. This is the 11th 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 September 2020.

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/2019/03 - 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
Contract No. ND/2019/05 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	1st August 2020

Works Contracts	Environmental Permit No.	Designated Project (DP)	Commencement date of construction
(Shung Him Tong to Kau Lung Hang)			
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

Environmental Monitoring and Audit Progress

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

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

EM&A Activities		Works Contracts			
		ND/2019/01	ND/2019/03	ND/2019/05	ND/2019/06
1-hr Total Suspended Particulates (TSP) Monitoring		1,7,11,17,23,29 Sep 2020	1, 3, 7, 9,11,15,17,21,23 ,29,30 Sep 2020	3, 9, 15, 21,25,30 Sep 2020	N/A
24-hr TSP Monitoring		1,7,11,17,23,29 Sep 2020	1,2,7,8,11,14,17, 18,23,24,29,30 Sep 2020	2,8,14,18,24, 30 Sep 2020	
24-hr RSP (Ambient Arsenic) Monitoring for Land Contamination		4,10,16,22,28 Sep 2020		N/A	N/A
Noise Monitoring		1,11,17,23,29 Sep 2020	N/A#	3,9,15,21,30 Sep 2020	
Landfill Gas Monitoring		26 Sep 2020	N/A	N/A	N/A
Ecological Survey	Monitoring of Measures to Minimise Disturbance to Water Birds on Sheung Yue River, and Long Valley	N/A*	8,15,22,29 Sep 2020	N/A*	N/A*
	Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream	23 Sep 2020		N/A*	N/A*
	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	18, 25 Sep 2020	N/A*	25 Sep 2020	N/A*
Environmental Site Inspection		1,8,14,22,29 Sep 2020	4,11,17,25,29 Sep 2020	9,14,21,28 Sep 2020	3,11,17,23,29 Sep 2020

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)
N/A# – Since the distance between noise monitoring station CP-FLN-NMS2 and site boundary of corresponding contract under EP exceeds 300m. The monitoring station is not applicable to the contract.

Breaches of Action and Limit Levels

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

Table III Summary Table for Events Recorded in the Reporting Month

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

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

Land Contamination

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

Landfill Gas Monitoring

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

Ecological Monitoring

10. 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 H**.

Complaint Log

11. No environmental complaint was received in the reporting month.

Notification of Summons and Successful Prosecutions

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

Reporting Changes

13. 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

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

Contract No.	Site Activities (October and November 2020)
ND/2019/01	(a) Ground Investigation, Site Clearance, Tree Felling in Portion 1f; (b) Site Clearance, Ground Investigation, Construct temporary road in Portion 2 (c) Tree Survey, Site Clearance in Portion 3 (d) Construct temporary noise barrier, construct open channel and sand trap in Portion 4 (e) Site Clearance, temporary slope cutting temporary soil nailing in Portion 5 (f) Site Clearance, temporary slope cutting temporary soil nailing, sheetpiling and excavation, pipes laying in Portion 6a (g) Completion of Soil Treatment Facility, Pilot trial for Ex-situ cement mixing (ECM) for soil treatment, provide soil treatment for HAC soil by ECM in Portion 6b; (h) Site Clearance, Tree felling, Construction of temporary road for alternative Po Lau Road, Land contamination assessment in Area T1, T2 & T3 in Portion 7; (i) Ground Investigation, Construction of Retaining Wall, cut slope and soil nailing works in Portion 8a; (j) Tree Survey, Site Clearance, Ground Investigation in Portion 9b&9d (k) Stockpile of soil in Portion 9c; (l) Site Clearance, Tree felling, Excavation, Pipes Laying in Portion 10a; and (m) Site Clearance, Demolition of existing structure in 10b
ND/2019/03	(a) Road and Drainage work, Soil Replacing in Portion 1; (b) Portion 2 to Portion 20 - Recommended initial maintenance work - Erection of Permanent Boundary Structure at Portion 18 in Portion 2 to 20 - Installation of Lockable Gate at Portion 18 - Construction of Irrigation Channel - Geotechnical Works in Long Valley(Trail Pits & Drill Hole) - Construction of Temporary Road in Long Valley - Demolition of Existing Construction in Handed over Area - Construction works of storage shed and type 2 Storage House - Wetland Creation & Restoration works after Obtaining Approval from AFCD

	(c) Site clearance and Demolition in Portion 22 (d) Fish Cage Placing for Pre-Translocation in Portion 23 and 24 (e) Fence off Portion 26
ND/2019/05	(a) Site Clearance (b) Establishment of Temporary Site (c) Tree Felling (d) Trial Pits (e) Installation of site hoarding, fencing and temp. facilities (f) Construction of PM's Site Accommodation/Ground Investigation/Pre-drilling
ND/2019/06	(a) Construction of Management Office Building; (b) Breaking up the concrete surface and disposal of C&D material off site at Portion 3 (c) Construction of footings of steel canopy of final stage market (d) Tree felling at Portion 3 and 6 (e) Fabrication of Container type toilets for relocation of public toilet (f) Fabrication and welding test of columns and steel truss of steel canopy in China. (g) Application of coating for columns and steel truss of steel canopy in China. (h) Site clearance and concreting of blinding layer for erection of container type toilets. (i) Erection of temporary public toilet. Connection of electricity and water supply for the container type toilets. (j) Demolition of existing public toilet. (k) Relocation of Refuse Collection Point (RCP).

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 11th EM&A Report which summarises the key findings of the EM&A programme in September 2020.

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: **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 to Ma Tso Lung Stream and Siu Hang San Tsuen Stream, and Long Valley, Monitoring of Measures to Minimise Impacts on Ecological Sensitive

Habitats from Disturbance and Pollution , result and observation during the Reporting Month

Section 9: **Environmental Site Inspection -** summarises the audit findings of the weekly site inspections undertaken within the reporting month.

Section 10: **Environmental Non-conformance -** summarises any monitoring exceedance, environmental complaints, environmental summons and successful prosecutions within the reporting month.

Section 11: **Future Key Issues -** summarises the impact forecast, proposed mitigation measures and monitoring schedule for the upcoming months.

Section 12: **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 Q**.

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. Daniel Sin	9777 2100	
Contract No. ND/2019/03 Contractor (Sang Hing Kuly Joint Venture)	Site Agent	Mr. Tang Wing Kai	9300 7037	--
	Environmental Officer	Mr. Chow Ka Wing	9184 6351	
	Environmental Supervisor	Mr. Ken Kwok	9732 4360	
Contract No. ND/2019/05 Contractor (CRCC – Paul Y. Joint Venture)	Site Agent	Mr. Francis Suen	6672 0311	--
	Environmental Officer	Mr. Pan Fong	9436 9435	
Contract No. ND/2019/06 Contractor (New Concepts Engineering Development Ltd.)	Site Agent	Mr. Anson Chan	9349 1320	2363 2162
	Environmental Officer	Mr. Alex Choy	9409 9608	
	Environmental Coordinator	Ms. Mildred Hung	9460 2745	

Summary of Construction Works Undertaken During Reporting Month

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

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

Contract No.	Site Activities (September 2020)
ND/2019/01	(a) Site Clearance in Portion 1f (b) Site clearance, Ground Investigation, Tree felling in Portion 2 (c) Sampling and testing for site trial for In-situ cement mixing (ICM) for soil treatment works, construct open channel and sand trap, site trial of sheetpiling in Portion 4 (d) Site Clearance, temporary slope cutting temporary soil nailing in Portion 5 (e) Site Clearance, temporary slope cutting temporary soil nailing, sheetpiling and excavation in Portion 6a (f) Set up Soil Treatment Facility, Site trial for ex-situ cement mixing (ECM) for soil treatment works in Portion 6b (g) Site Clearance, Construction of temporary road for alternative Po Lau Road, Land contamination assessment in Area T1, T2 & T3 in Portion 7 (h) Site Clearance, Construction of Retaining Wall , cut slope and soil nailing works in Portion 8a (i) Stockpile of soil in Portion 9c (j) Site Clearance, Tree felling, sheetpiling and excavation works in Portion 10a (k) Site Clearance in Portion 10b (l) Gate installation, construct temporary access in Portion 11a
ND/2019/03	(a) Road and Drainage work, Soil Replacing in Portion 1; (b) Initial Restoration Work at Long Valley, Construction works of storage shed and Type 2 Storage House, construction of metal wire railing and site clearance in Portion 2 to 20; (c) Pre-relocation survey in Portion 23 and 24
ND/2019/05	(a) Site Clearance (d) Establishment of Temporary Site (e) Tree Felling (f) Trial Pits (g) Installation of site hoarding, fencing and temp. facilities (h) Construction of PM's Site Accommodation (i) Ground Investigation/Pre-drilling
ND/2019/06	(a) Construction of Management Office Building (b) Breaking up the concrete surface and disposal of C&D material off site at Portion 3 is in progress

Contract No.	Site Activities (September 2020)
	(c) Construction of footings of steel canopy of final stage market is in progress (d) Road rectification works at On Kui Street near the run-in/out of interim stage market. (e) Tree felling at Portion 6 near the existing public toilet is in progress. (f) Fabrication of Container type toilets for relocation of public toilet. (g) Fabrication and welding test of columns and steel truss of steel canopy in China.

Construction Programme

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

Status of Environmental Licences, Notifications and Permits

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

Table 2.4 Status of Environmental Licenses, Notifications and Permits

Contract No.	Permit / License No.	Valid Period		Status
		From	To	
Environmental Permit (EP)				
ND/2019/01	EP-466/2013	21/11/2013	N/A	Valid
	EP-467/2013/A	27/01/2017	N/A	Valid
	EP-468/2013/A	27/01/2017	N/A	Valid
	EP-470/2013	21/11/2013	N/A	Valid
ND/2019/03	EP-468/2013/A	27/01/2017	N/A	Valid
ND/2019/05	EP-473/2013/A	21/11/2013	N/A	Valid
ND/2019/06	EP-475/2013/A	13/01/2017	N/A	Valid
Construction Noise Permit (CNP)				
ND/2019/01	GW-RN0378-20	16/06/2020	15/09/2020	Expired during reporting month
	GW-RN0353-20	08/06/2020	07/09/2020	Expired during reporting month
	GW-RN0540-20	29/07/2020	16/01/2021	Valid
ND/2019/05	GW-RN0578-20	11/08/2020	03/02/2021	Valid
	GW-RN0691-20	24/09/2020	22/03/2021	Valid
ND/2019/06	GW-RN0507-20	25/07/2020	24/01/2021	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation				
ND/2019/01	451792	11/12/2019	N/A	Valid
ND/2019/03	452216	24/12/2019	N/A	Valid
	452332	31/12/2019	N/A	Valid
	452333	31/12/2019	N/A	Valid
ND/2019/05	454323	13/03/2020	N/A	Valid
ND/2019/06	449369	24/09/2019	N/A	Valid
Billing Account for Disposal of Construction Waste				
ND/2019/01	7036265	17/01/2020	N/A	Valid

ND/2019/03	7036378	22/01/2020	N/A	Valid
ND/2019/05	7036901	01/04/2020	N/A	Valid
ND/2019/06	7035473	17/10/2019	N/A	Valid
Registration of Chemical Waste Producer				
ND/2019/01	5213-545-B2578-01	10/01/2020	N/A	Valid
ND/2019/03	5213-623-S4231-01	14/04/2020	N/A	Valid
ND/2019/05	5213-625-C4464-01	20/05/2020	N/A	Valid
ND/2019/06	5213-625-N2716-01	02/10/2019	N/A	Valid
Effluent Discharge License under Water Pollution Control Ordinance				
ND/2019/01	WT00036071-2020	22/06/2020	30/06/2025	Valid
	WT00036073-2020	22/06/2020	30/06/2025	Valid
	WT00036067-2020	22/06/2020	30/06/2025	Valid
	WT00036076-2020	22/06/2020	30/06/2025	Valid
	WT00036075-2020	22/06/2020	30/06/2025	Valid
ND/2019/03	WT00035847-2020	12/08/2020	31/08/2025	Valid
ND/2019/05	Ref. Number: 455137	N/A	N/A	EPD received application on 14 April 2020
ND/2019/06	WT00035415-2019	20/03/2020	31/03/2025	Valid

3 AIR QUALITY MONITORING

Monitoring Requirements

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

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

Monitoring Location

3.3 Impact air quality monitoring was conducted at the monitoring stations under the Works Contracts, as shown in **Figure 1 and Figure 2** according to Table 1.1 of Updated EM&A Manual. **Table 3.1** describes the location of the air quality monitoring station.

Table 3.1 Location for Air Quality Monitoring Locations

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

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

Monitoring Equipment

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

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

3.5 The proposed use of portable direct reading dust meters was submitted to IEC and obtained agreement from the IEC as stated in Section 2.4.5 of the Updated EM&A Manual.

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

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

Table 3.2 Air Quality Monitoring Equipment

Monitoring Station	Equipment	Manufacturer	Model and Make	Quantity
KTN-DMS4	Dust Monitor (1-hour and 24-hour TSP)	Met One Instruments	AEROCET-831	3
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 dust meter is placed at least 1.3 meters above ground.
- Remove the red rubber cap from the AEROCET-831 inlet nozzle.
- Turn on the power switch that is located on the right side of the AEROCET-831.
- On power up the product intro screen is displayed for 3 seconds. The intro screen displays the product name and firmware version.
- Then the main counter screen will be displayed.
- Press the START button. Internal vacuum pump start running. After 1 minute the pump will stop and the 0.5µm and 5µm channels will show the cumulative counts of particles larger than 0.5µm and 5µm per cubic foot.
- The AEROCET-831 is now checked out and ready for use.
- To switch off the AEROCET-831 power to stop the measuring after sampling.
- Information such as sampling date, time, and display value and site condition were recorded during the monitoring period.

Maintenance/Calibration

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

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

24-hour TSP Air Quality Monitoring

Instrumentation

(TISCH Model: TE-5170)

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

HVS Installation

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

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

Filters Preparation

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

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

Operating/Analytical Procedures

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

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

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

Maintenance/Calibration

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

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

Results and Observations

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

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

Monitoring Station	Concentration (µg/m3)		Action Level, µg/m^3	Limit Level, µg/m^3
	Average	Range		
FLN -DMS1	87.4	65.2-117.9	303	500
FLN -DMS3	85.7	43.1-135.9	301	500
KTN-DMS4	51.4	26.5-68.1	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/m^3	Limit Level, µg/m^3
	Average	Range		
FLN -DMS1	38.2	24.1-81.1	150	260
FLN -DMS3	41.4	21.6-86.6	165	260
KTN-DMS4	104.8	68.5-148.8	192	260

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

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

Table 3.6 Observation at Dust Monitoring Stations

Monitoring Station	Major Dust Source
FLN -DMS1	Road traffic
FLN -DMS3	Road traffic
KTN-DMS4	Excavation, 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 J** 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 (Leq) 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	Belair Monte
ND/2019/05	CP-FLN-NMS2[2]	Scattered Village Houses in Tong Hang
ND/2019/01	CP-KTN-NMS2[3]	Residential Buildings at Ma Tso Lung
	CP-KTN-NMS3[4]	Fung Kong Garden
ND/2019/01	CP-KTN-NMS5	N/A

Remark:
[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],[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.

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 (Leq) and percentile sound pressure level (Lx) 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
'SVANTEK' Integrating Sound Level Meter	SVANTEK	SVAN 955	1
		SVAN 977	1
Sound & Vibration Analyser	BSWA	BSWA 801	2
Sound Level Meter	BSWA	BSWA 308	2
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	$L_{10(30\ min.)}$ 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/2019/05	CP-FLN-NMS2[3]				
ND/2019/01	CP-KTN NMS2[4]				Free-field[1]
	CP-KTN NMS3[5]				
ND/2019/01	CP-KTN NMS5				

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],[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 Methodology and QA/QC Procedures

- The microphone head of the sound level meter was positioned at 1m from the exterior of the noise sensitive facade 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 summarised 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 I.**

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	66.1-68.6	69.9	75
ND/2019/05	CP-FLN-NMS2[1]	55.7-62.3	59.6	
ND/2019/01	CP-KTN NMS2[2]	54.1-57.7	58.6	
	CP-KTN NMS3[3]	52.0-62.2	51.6	
ND/2019/01	CP-KTN NMS5	51.5-58.8	57.2	

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],[3]: 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 was received during the reporting. No Action/Limit Level exceedance was recorded. The summary of exceedance record in reporting month is shown in **Appendix K**.

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	Belair Monte (Existing)	Road Traffic at Ma Sik Road
ND/2019/05	CP-FLN-NMS2[1]	Scattered Village House in Tong Hang (Existing)	Road Traffic near Tong Hang
ND/2019/01	CP-KTN NMS2[2]	Residential Buildings at Ma Tso Lung (Existing)	Road Traffic near Ma Tso Lung
ND/2019/01	CP-KTN NMS3[3]	Fung Kong Garden (Existing)	Road Traffic near Fung Kong Garden
ND/2019/01	CP-KTN NMS5	N/A	Other construction site

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

5 WATER QUALTY MONITORING

Monitoring Requirements

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

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

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

Monitoring Parameters, Frequency

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

Table 5.1 Water Quality Monitoring Parameters and Frequency

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

Results and Observations

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

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

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

6 LAND CONTAMINATION (AMBIENT ARSENIC MONITORING)

Monitoring Requirements

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

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

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

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

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

Monitoring Location

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

Table 6.1 Location of Ambient Arsenic Monitoring station

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

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

Monitoring Equipment

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

Table 6.2 Ambient Arsenic Monitoring Equipment

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

Monitoring Parameters, Frequency and Duration

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

Table 6.3 Impact Ambient Arsenic Monitoring Parameters, Frequency and Duration

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

Monitoring Methodology and QA/QC Procedure

24-hour RSP Monitoring

Instrumentation

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

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

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

Operating/analytical procedures for the operation of HVS

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

Maintenance/Calibration

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

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

Laboratory Measurement / Analysis

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

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

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

Results and Observations

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

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

Monitoring Date	Monitoring Station	Concentration (ng/m^3)	Action Level (ng/m^3)	Limit Level, (ng/m^3)
04/09/2020	KTN-DMS-4A	3.78	9.36	11.7
10/09/2020		1.22		
16/09/2020		0.67		
22/09/2020		1.41		
28/09/2020		2.02		

6.15 All ambient arsenic monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedances were recorded.

Event and Action Plan

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

7 LANDFILL GAS MONITORING

Monitoring Requirement

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

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

Monitoring Parameters and Frequency

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

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

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

Monitoring Locations

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

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

Monitoring Equipment

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

Table 7.1 Landfill Gas Monitoring Equipment

Equipment	Model and Make	Quantity
Portable gas detector	RKI Eagle (Serial No. E094106)	1

Results and Observations

7.8 In the reporting month, landfill gas monitoring was carried out by the Contractor at the aforesaid locations on 1 occasion with 5 monitoring stations. No Limit Level exceedance for landfill gas monitoring was recorded in the reporting month. The monitoring results are provided in **Appendix G**. Copies of calibration certificates are attached in **Appendix C**.

Event and Action Plan

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

8 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

8.1 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).

8.2 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.

8.3 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

8.4 High tide and low tide avifauna monitoring is required to be carried out on weekly basis.

Additional night-time avifauna monitoring in Long Valley is required to be carried out twice monthly from September to April.

Date of avifauna monitoring: 8th , 15th , 22nd ,29th September 2020

Date of night-time monitoring: 22nd , 29th September 2020

Monitoring Location

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

- T3. Sheung Yue River
- T5. Long Valley

For Sheung Yue River, only one bank of the river was followed as the waterbirds utilizing the river channel were easily visible.

8.6 The location of Transects T3 and T5 is shown in **Figure 7** for reference.

Monitoring Parameters

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

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

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

8.9 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

8.10 In total, 53 species of birds were recorded during the bird surveys within assessment area. Among the recorded birds, there were 19 species of waterbirds. The detailed list of waterbirds and all recorded birds are shown in **Appendix H1k and H1l** respectively.

8.11 Among the two 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. Juveniles of *Gallinula chloropus* was found in shallow water habitat.

8.12 Along the transect T5 in Long Valley, species with conservation interest such as *Himantopus himantopus* which is a passage migrant, and *Tringa glareola*, which is a passage migrant and winter visitor, were also commonly observed in shallow water habitat. A high abundance of *Himantopus himantopus* and *Tringa glareola* were found roosting at night-time in wet agricultural lands and shallow water habitats. Passage migrant and winter visitor *Gallinago gallinago* and *Anthus richardi*, winter visitor *Ardea cinerea, Charadrius alexandrines* and *Saxicola stejnegeri*, passage migrant *Sturnia sinensis*, and scarce passage migrant *Hydrophasianus chirurgus* were observed in Long Valley for the first time since the first monitoring month. Human disturbances including soil turning with excavator was noted on 8th , 15th and 22nd September 2020, vegetation clearance was observed on 22nd September 2020, and bird repelling alarm was heard on 29th September 2020.

8.13 Transect T3 was conducted along the Sheung Yue River. Bird species such as *Ardeola bacchus, Actitis hypoleucos* and *Egretta garzetta* were commonly noted. Fishing activities were observed along the river during the survey.

8.14 Avifauna monitoring in construction phase was conducted during the reporting month and the detailed results are attached in **Appendix H1**.

8.15 For avifauna monitoring's high tide session at Transect T5 on 15th September 2020, a small part of the transect route was inaccessible due to active construction site. The transect route was adjusted to cover and complete the area included in the original transect. The adjusted route are shown in **Figure 7**.

Photo 1. Inaccessible part of transect T5 during high tide avifauna monitoring session on 15th September 2020

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

Monitoring Requirements and Protocol

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

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

Monitoring Frequency

8.18 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 would be performed respectively.

Date of aquatic fauna monitoring: 23rd September 2020

Monitoring Location

8.19 During the Reporting Month, the monitoring location 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

8.20 The location of Monitoring Stations shown in **Figure 8** for reference.

Monitoring Parameters

8.21 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

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

Monitoring Result

8.23 In the survey of aquatic fauna, total 18 aquatic invertebrate species were found, including worms, snails and insects, were recorded in Ma Tso Lung Stream. 5 fish species were recorded including *Oreochromis niloticus* and *Barbodes semifasciolatus*. No aquatic macroinvertebrate species of conservation importance were recorded.

8.24 Aquatic faunal monitoring in construction phase was conducted during the Reporting Month and the results are attached in **Appendix H2 to H3**.

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

Monitoring Requirements and Protocol

8.25 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.

8.26 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

8.27 Mammal survey would 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 would be observed. Mammals directly observed would be recorded, and identification would be made as accurate as possible form the field signs observed.

8.28 Bat survey would 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 would be estimated using a scale from one (single individual recorded) to five (very abundant). Nomenclature of mammal will be based on Shek (2006).

Herpetofauna survey (Amphibians and Reptiles)

8.29 Amphibian surveys would 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 would be recorded, supplemented by visual observation of eggs, tadpoles, adult frogs, and toads.

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

Insect survey (Butterfly and Dragonfly)

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

Monitoring Frequency

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

Date of Monitoring surveys of ecological sensitive receivers: 18th , 25th September 2020

Monitoring Location

8.33 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;
- 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

8.34 The location of Transects is shown in **Figure 9** for reference.

Monitoring Parameters

8.35 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

8.36 During the survey, a total of 3 mammal species were recorded from transects T1, T4, T5 and T6. Domestic cat, *Felis catus* was found at T1, and Domestic dog, *Canis lupus familiaris,* was found at T1, T4, T5 and T6, where associated with human settlements.

8.37 Bat species, *Cynopterus sphinx* was observed roosting in the tent-shaped shelter under fronds of Chinese Fan-palm during daytime survey of birds and herpetofauna, and found in flight at nighttime at T1, T4, T5 and T6.

8.38 According to EIA, echolocation calls of bats were recorded. The structure of the echolocation calls from these 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 impossible, and some species remain unidentified from the recordings).

Herpetofauna (Amphibians and Reptiles)

8.39 Along the transects, total 13 herpetofauna species were observed. Species including toad, frog, gecko and lizard were noted near wetland habitats and watercourse. Transect T1 has higher species diversity and abundance than other transects.

Insects (Butterfly and Dragonfly)

8.40 During the insect survey, total 27 butterflies species and 14 odonata species were recorded from transects. Transect T1 had higher butterfly species diversity than other transects. Uncommon species *Iambrix salsala* and *Neopithecops zalmora* were found in transect T1 and T5 respectively.

8.41 Transect T1 and T6 had higher dragonfly species diversity than T4 and T5. Most of the dragonfly species recorded were also common and abundant in Hong Kong.

8.42 Ecological sensitive receivers such as mammals, insects (butterflies and dragonflies), and herptofauna monitoring in construction phase was conducted during the reporting month and the results are attached in **Appendix H4 to H7**.

Results and Observation

Details of the Influencing Factors

Major Activities

8.43 During the survey of Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley, anthropogenic activities such as grass cutting in Long Valley and fishing at the river banks were observed.

8.44 The anthropogenic activities affected only a small area of habitat in Long Valley during the monitoring, but might sill pose minor disturbances to the birds. It was observed that *Egretta garzetta* utilized the agricultural land with soil turning in progress, and that *Charadrius dubius* and *Charadrius alexandrines* were found on the agricultural land in close proximity to the bird repelling alarm.

8.45 During the survey of Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream and Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from

Disturbance and Pollution, no major anthropogenic disturbances were observed. No major environmental pollution was found during the monitoring. However, litter such as tissue paper was found in the monitoring station MS_06 and MS_07.

Weather Conditions

8.46 During the Monitoring of avifauna on 15th September 2020, Amber Rainstorm Warning Signal and Thunderstorm Warning were hoisted during low tide. In addition, according to the observation during survey, temperature and the rain flow record in the Reporting Month (Reference: http://www.weather.gov.hk/wxinfo/pastwx/metob202009.htm), weather condition might pose influence towards the monitoring result.

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

8.48 The detailed Ecological monitoring results are attached in **Appendix H**.

9 ENVIRONMENTAL SITE INSPECTION

Site Audits

9.1 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 9.1** and **Appendix L**.

Table 9.1 Summary of Site Audit

Environmental Site Inspection	Works Contracts			
	ND/2019/01	ND/2019/03	ND/2019/05	ND/2019/06
Weekly site audit with representative of the *Supervisor's* Representative and the Contractor	1st,8th,14th,22nd,29th September 2020	4th,11th,17th,25th,29th September 2020	9th,14th,21st ,28th September 2020	3rd,11th,17th,23rd,29th September 2020
Joint Site Audit with representative of the *Supervisor's* Representative, the Contractor and IEC	14th September 2020	25th September 2020	9th September 2020	11th September 2020

9.2 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 9.2**.

Table 9.2 Observations and Recommendations during Site Audits

	Date	Observations and Recommendations	Follow-up
Contract No.: ND/2019/01			
Air Quality	22/09/2020	NRMM label should be replaced on regulated machine.	Improvement/Rectification was observed during follow-up audit session on 29 September 2020.
Water Quality	01/09/2020	Mud or debris in channel should be cleared regularly.	Improvement/Rectification was observed during follow-up audit session on 8 September 2020.
Waste/ Chemical Management	01/09/2020	Oil leakage from equipment should be avoided.	Improvement/Rectification was observed during follow-up audit session on 8 September 2020.
	08/09/2020	Chemical waste, waste oil should be stored properly in designated area.	Improvement/Rectification was observed during follow-up audit session on 14 September 2020.
	14/09/2020	Chemical containers should be put in designated area properly.	Improvement/Rectification was observed during follow-up audit session on 22 September 2020.
	22/09/2020	Chemical containers should be stored properly in designated area.	Improvement/Rectification was observed during follow-up audit session on 29 September 2020.
Land Contamination	08/09/2020	Holes are observed on the impermeable sheeting covering arsenic-containing soil, contractor was reminded to renew the impermeable sheeting.	Improvement/Rectification was observed during follow-up audit session on 14 September 2020.
Contract No.: ND/2019/03			
Air Quality	28/08/2020	Stockpile of dusty materials should be covered by impervious sheeting or sprayed with water.	Improvement/Rectification was observed during follow-up audit session on 4 September 2020.
	04/09/2020	Contractor was reminded to replace the impervious materials for covering dusty stockpile.	Improvement/Rectification was observed during follow-up audit session on 11 September 2020.
Waste / Chemical Management	04/09/2020	General refuse should be disposed of properly.	Improvement/Rectification was observed during follow-up audit session on 11 September 2020.

Contract No.: ND/2019/05			
Air Quality	09/09/2020	Non-road Mobile Machinery (NRMM) label should be displayed on regulated machines.	Improvement/Rectification was observed during follow-up audit session on 14 September 2020.
Waste / Chemical Management	31/08/2020	Chemical waste should be stored properly in designated area.	Improvement/Rectification was observed during follow-up audit session on 9 September 2020.
	09/09/2020	Chemical waste, waste oil should be stored properly in designated areas.	Improvement/Rectification was observed during follow-up audit session on 14 September 2020.
	21/09/2020	Chemical containers should be stored properly in designated areas.	Improvement/Rectification was observed during follow-up audit session on 28 September 2020.
	28/09/2020	Chemical containers should be stored in designated area properly.	Follow-up action is needed to be reported in the following month.
Contract No.: ND/2019/06			
Water Quality	17/09/2020	Contractor was reminded to clear the debris at the drainage near site boundary.	Improvement/Rectification was observed during follow-up audit session on 23 September 2020
Waste / Chemical Management	27/08/2020	Chemical waste, waste oil should be stored properly in designated area.	Improvement/Rectification was observed during follow-up audit session on 3 September 2020
	23/09/2020	Chemical containers should be stored properly in designated area.	Improvement/Rectification was observed during follow-up audit session on 29 September 2020
	23/09/2020	Oil leakage should be avoided and put the equipment on impervious sheeting.	Improvement/Rectification was observed during follow-up audit session on 29 September 2020

Implementation Status of Environmental Mitigation Measures

9.3 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 M**. The photographic records of measures as stipulated in EP to mitigate

environmental impacts in the reporting month are presented in **Table 9.3.**

Table 9.3 Photographic Records and Implementation Status of Measures

EP No.	Condition	Photographic Record	Implementation Status
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 10**)	^[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 11**)	^[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

Solid and Liquid Waste Management Status

9.4 Waste generated from Contract No. ND/2019/01, ND/2019/05 and ND/2019/06 include inert

construction and demolition (C&D) materials and non-inert C&D wastes.

9.5 The amount of wastes generated by the construction works of the Contract No. ND/2019/01, ND/2019/03, ND/2019/05 and Contract No. ND/2019/06 during the reporting month is shown in **Appendix N**.

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

10 ENVIRONMENTAL NON-CONFORMANCE

Summary of Exceedances

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

10.2 Ecological monitoring was carried out in the Reporting Month. The Action and limit level will be compared after the issue of Final Baseline Ecological Report.

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

Summary of Environmental Non-Compliance

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

Summary of Environmental Complaint

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

Summary of Environmental Summon and Successful Prosecution

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

11 FUTURE KEY ISSUES

Key Issues in the Coming Two Months

11.1 The major site activities, potential environmental impacts and recommended mitigation measures for the coming two months are shown in **Table 11.1.**

Table 11.1 Summary Table for Site Activities, Potential Environmental Impacts and Recommended Mitigation Measures in the coming Two Months

Contract No.	Site Activities (October and November 2020)	Potential Environmental Impact	Control Measures
ND/2019/01	(a) Ground Investigation, Site Clearance, Tree Felling in Portion 1f;	Dust impact from exposed site surfaces during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from drill rigs, other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
		Timber waste	1. Sorting, cutting & delivering the suitable timber to shredding facilities for recycling and reuse
	(b) Site Clearance, Ground Investigation, Construct temporary road in Portion 2	Dust impact from exposed site surfaces during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck

			5. Speed control for the site vehicles
		Noise from drill rigs, other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	(c) Tree Survey, Site Clearance in Portion 3	Dust impact from exposed site surfaces during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from grass trimmer or other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	(d) Construct temporary noise barrier, construct open channel and sand trap in Portion 4	Dust impact from exposed site surfaces during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from hand-held breaker or other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	(e) Site Clearance, temporary slope cutting temporary soil nailing in Portion 5	Dust impact from exposed site surfaces during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser

			4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from grass trimmer or other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
		Wash water from dust suppression sprays	1. Appropriate & sufficient desilting/sedimentation devices provided on site for treatment before discharge 2. Establish sediment control measure (retention pit with soil berm) at near all excavation area / low-lying region
	(f) Site Clearance, temporary slope cutting temporary soil nailing, sheetpiling and excavation, pipes laying in Portion 6a	Dust impact from exposed site surfaces during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from grass trimmer or other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
		Wash water from dust suppression sprays	1. Appropriate & sufficient desilting/sedimentation devices provided on site for treatment before discharge 2. Establish sediment control measure (retention pit with soil berm) at near all excavation area / low-lying region
	(g) Completion of Soil Treatment Facility, Pilot trial for Ex-situ cement mixing (ECM) for soil treatment, provide soil treatment for HAC soil by ECM in Portion 6b;	Dust impact from active works area, exposed site surfaces and unpaved roads, particularly during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck

			5. Speed control for the site vehicles
		Noise from concrete mixing backhoes, other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
		Dust from Arsenic-containing soil	1.Cover the Arsenic-containing soil with impervious sheeting to prevent dust emission or run-off during heavy rain
	(h) Site Clearance, Tree felling, Construction of temporary road for alternative Po Lau Road, Land contamination assessment in Area T1, T2 & T3 in Portion 7;	Dust impact from active works area, exposed site surfaces and unpaved roads, particularly during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from grass trimmer or other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	(i) Ground Investigation, Construction of Retaining Wall, cut slope and soil nailing works in Portion 8a;	Dust impact from active works area, exposed site surfaces and unpaved roads, particularly during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from drill rigs, other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers

		Runoff and drainage from the works area	1. Appropriate & sufficient desilting/sedimentation devices provided on site for treatment before discharge 2. Well maintain the drainage system to prevent the spillage of wastewater 3. Establish sediment control measure (retention pit with soil berm) at near all excavation area / low-lying region 4. Covering stockpiling area by impervious sheets 5. Slope stabilization (such as hydroseeding)
		Fuel and lubricants from maintenance of construction vehicles and mechanical equipment.	1. Sufficient drip tray & spill kit on site 2. Store chemical containers in chemical storage area/on drip-tray
	(j) Tree Survey, Site Clearance, Ground Investigation in Portion 9b&9d	Dust impact from exposed site surfaces during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from grass trimmer or other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	(k)Stockpile of soil in Portion 9c;	Dust from stockpiles in dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations
		Wash water from dust suppression sprays Runoff and drainage from the works area	1. Appropriate & sufficient desilting/sedimentation devices provided on site for treatment before discharge 2. Establish sediment control measure (retention pit with soil berm) at near all excavation area / low-lying region

	(l) Site Clearance, Tree felling, Excavation, Pipes Laying in Portion 10a; and	Dust impact from active works area, exposed site surfaces and unpaved roads, particularly during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from grass trimmer or other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	(m) Site Clearance, Demolition of existing structure in 10b	Dust impact from active works area, exposed site surfaces and unpaved roads, particularly during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from concrete breaker or other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
ND/2019/03	(a) Road and Drainage work, Soil Replacing in Portion 1;	Dust impact from active works area, exposed site surfaces and unpaved roads, particularly during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from concrete breaker or other plants	1. Well-maintained plant and equipment

			2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	(b)Portion 2 to Portion 20		
	- Recommended initial maintenance work	Dust impact from active works area, exposed site surfaces and unpaved roads, particularly during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
	- Erection of Permanent Boundary Structure at Portion 18 in Portion 2 to 20	Dust impact from exposed area	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
	- Installation of Lockable Gate at Portion 18	Noise from electric breaker, other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	- Construction of Irrigation Channel	Dust impact from active works area, exposed site surfaces and unpaved roads, particularly during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from concrete breaker or other plants	1. Well-maintained plant and equipment

			2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	- Geotechnical Works in Long Valley(Trail Pits & Drill Hole)	Dust impact from active works area, exposed site surfaces and unpaved roads, particularly during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from drill rigs, other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	- Construction of Temporary Road in Long Valley	Dust impact from active works area, exposed site surfaces and unpaved roads, particularly during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from roadworks	1. Well-maintained plant and equipment 2. Enclose relatively noisy mechanical part by noise isolating mat 3. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	- Demolition of Existing Construction in Handed over Area	Dust impact from exposed area	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser

			4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from concrete breaker or other plants	1. Well-maintained plant and equipment 2. Enclose relatively noisy mechanical part by noise isolating mat 3. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	- Construction works of storage shed and type 2 Storage House	Dust impact from exposed area	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from concrete breaker or other plants	1. Well-maintained plant and equipment 2. Enclose relatively noisy mechanical part by noise isolating mat 3. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	- Wetland Creation & Restoration works after Obtaining Approval from AFCD	N/A	N/A
	(c) Site clearance and Demolition in Portion 22	Dust impact from exposed area	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles

		Noise from concrete breaker or other plants	1. Well-maintained plant and equipment 2. Enclose relatively noisy mechanical part by noise isolating mat 3. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	(d) Fish Cage Placing for Pre-Translocation in Portion 23 and 24	N/A	N/A
	(e) Fence off Portion 26	Dust impact from exposed area	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
ND/2019/05	(a) Site Clearance	Dust impact from exposed area	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from concrete breaker or other plants	1. Well-maintained plant and equipment 2. Enclose relatively noisy mechanical part by noise isolating mat 3. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	(b) Establishment of Temporary Site	Dust impact from exposed area	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations

			3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
	(c) Tree Felling	Dust impact from exposed area	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from grass trimmer or other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
		Timber waste	1. Sorting, cutting & delivering the suitable timber to shredding facilities for recycling and reuse
	(d) Trial Pits	Dust impact from active works area, exposed site surfaces and unpaved roads, particularly during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from excavator, other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	(e) Installation of site hoarding, fencing and temp. facilities	Dust impact from active works area, exposed site surfaces and unpaved roads,	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations

		particularly during dry weather	3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
	(f) Construction of PM's Site Accommodation Ground Investigation/Pre-drilling	Dust impact from active works area, exposed site surfaces and unpaved roads, particularly during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from drill rigs, other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
ND/2019/06	(a) Construction of Management Office Building;	Dust impact from active works area, exposed site surfaces and unpaved roads, particularly during dry weather	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from drill rigs, other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
		Runoff and drainage from the works area	1. Appropriate & sufficient desilting/sedimentation devices provided on site for treatment before discharge 2. Well maintain the drainage system to prevent the spillage of wastewater

			3. Establish sediment control measure (retention pit with soil berm) at near all excavation area / low-lying region 4. Covering stockpiling area by impervious sheets 5. Slope stabilization (such as hydroseeding)
	(b) Breaking up the concrete surface and disposal of C&D material off site at Portion 3	Dust impact from exposed area	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from concrete breaker or other plants	1. Well-maintained plant and equipment 2. Enclose relatively noisy mechanical part by noise isolating mat 3. Deployment of proprietary noise barriers for noisy works near sensitive receivers
		Fuel and lubricants from maintenance of construction vehicles and mechanical equipment.	1. Sufficient drip tray & spill kit on site 2. On-site sorting and screening for reuse (e.g. backfilling, hard paving the haul road & reuse in other projects) 3. Store chemical containers in chemical storage area/on drip-tray
	(c) Construction of footings of steel canopy of final stage market	Dust impact from exposed area	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles

		Fuel and lubricants from maintenance of construction vehicles and mechanical equipment.	1. Sufficient drip tray & spill kit on site 2. Store chemical containers in chemical storage area/on drip-tray
	1. Tree felling at Portion 3 and 6	Dust impact from exposed area	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from grass trimmer or other plants	1. Well-maintained plant and equipment 2. Deployment of proprietary noise barriers for noisy works near sensitive receivers
		Timber waste	1. Sorting, cutting & delivering the suitable timber to shredding facilities for recycling and reuse
	2. Fabrication of Container type toilets for relocation of public toilet	Dust impact from exposed area	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
	3. Fabrication and welding test of columns and steel truss of steel canopy in China.	Dust impact from exposed area	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck

			5. Speed control for the site vehicles
	4. Application of coating for columns and steel truss of steel canopy in China.	Fuel and lubricants from maintenance of construction vehicles and mechanical equipment.	1. Sufficient drip tray & spill kit on site 2. Store chemical containers in chemical storage area/on drip-tray
	5. Site clearance and concreting of blinding layer for erection of container type toilets.	Dust impact from exposed area	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from concrete breaker or other plants	1. Well-maintained plant and equipment 2. Enclose relatively noisy mechanical part by noise isolating mat 3. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	6. Erection of temporary public toilet. Connection of electricity and water supply for the container type toilets.	Dust impact from exposed area	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from electric breaker or other plants	1. Well-maintained plant and equipment 2. Enclose relatively noisy mechanical part by noise isolating mat 3. Deployment of proprietary noise barriers for noisy works near sensitive receivers

	7. Demolition of existing public toilet.	Dust impact from exposed area	1. Covering stockpiling area by impervious sheets 2. Spraying all dusty material with water immediately prior to any loading transfer operations 3. Keep the haul road wet by water sprinkler or water bowser 4. Cover the dusty material on the dump truck 5. Speed control for the site vehicles
		Noise from concrete breaker or other plants	1. Well-maintained plant and equipment 2. Enclose relatively noisy mechanical part by noise isolating mat 3. Deployment of proprietary noise barriers for noisy works near sensitive receivers
	8. Relocation of Refuse Collection Point (RCP).	Accumulation of refuse on site	1.Clear the refuse on site regularly 2.Provide rubbish bins for workforces

Monitoring Schedule for the Next Month

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

Construction Programme for the Next Month

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

12 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

12.1 This Monthly EM&A Report presents the EM&A work undertaken in September 2020 in accordance with Updated EM&A Manual.

12.2 No Action/Limit Level exceedance were recorded for air quality, construction noise, ambient arsenic, and landfill gas monitoring.

Contract No. ND/2019/01

12.3 Environmental site inspection were conducted on 1st,8th,14th,22nd,29th September 2020 by ET in the reporting month.

Contract No. ND/2019/03

12.4 Environmental site inspection were conducted on 4th,11th,17th,25th,29th September 2020 by ET in the reporting month.

Contract No. ND/2019/05

12.5 Environmental site inspections were conducted on 9th,14th,21st,28th September 2020 by ET in the reporting month.

Contract No. ND/2019/06

12.6 Environmental site inspections were conducted on 3rd,11th,17th,23rd,29th September 2020 by ET in the reporting month.

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

12.8 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

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

Air Quality Impact

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

Water Impact

- To prevent any surface runoff discharge into nearby drainage or stream;
- To divert all the water generated from construction site to de-silting facilities with enough

handling capacity before discharge; and
- To ensure the drainage facilities would not be clogged with waste to avoid overflow.

Waste/Chemical Management

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

Landscape & Visual Impact

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

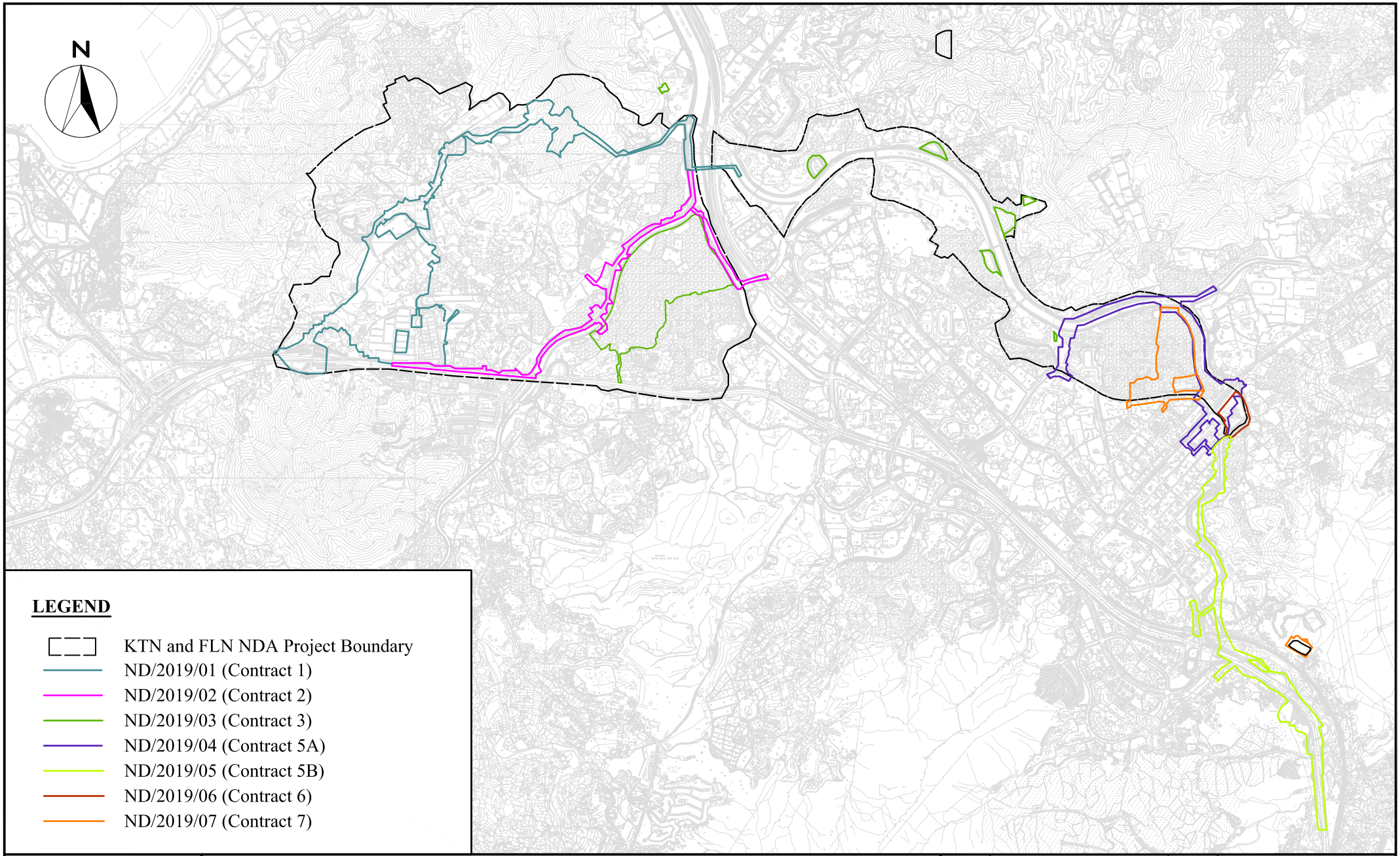
Landfill Gas Hazard

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

Land Contamination

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

DRAWING(S)



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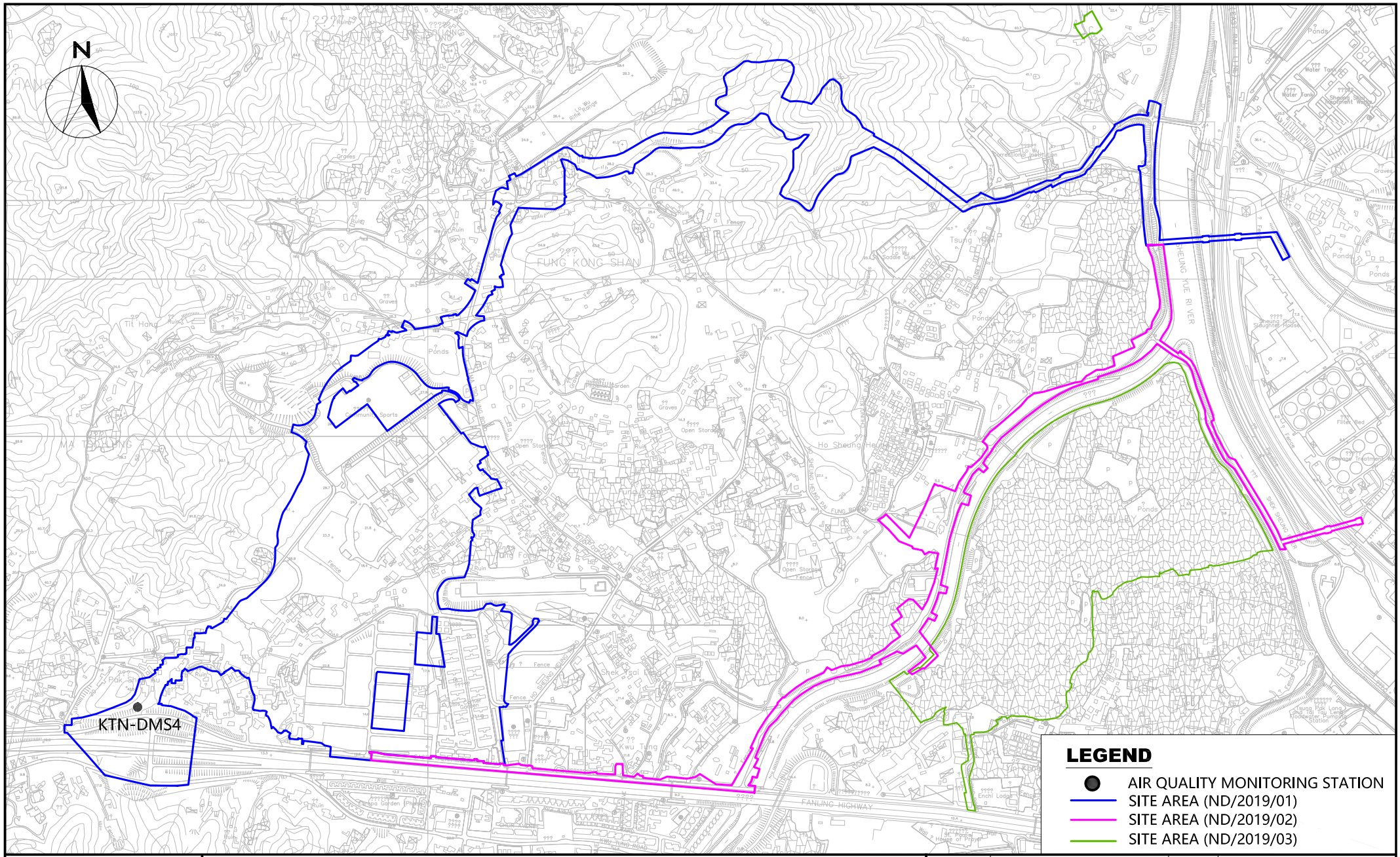
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

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

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

FIGURE(S)



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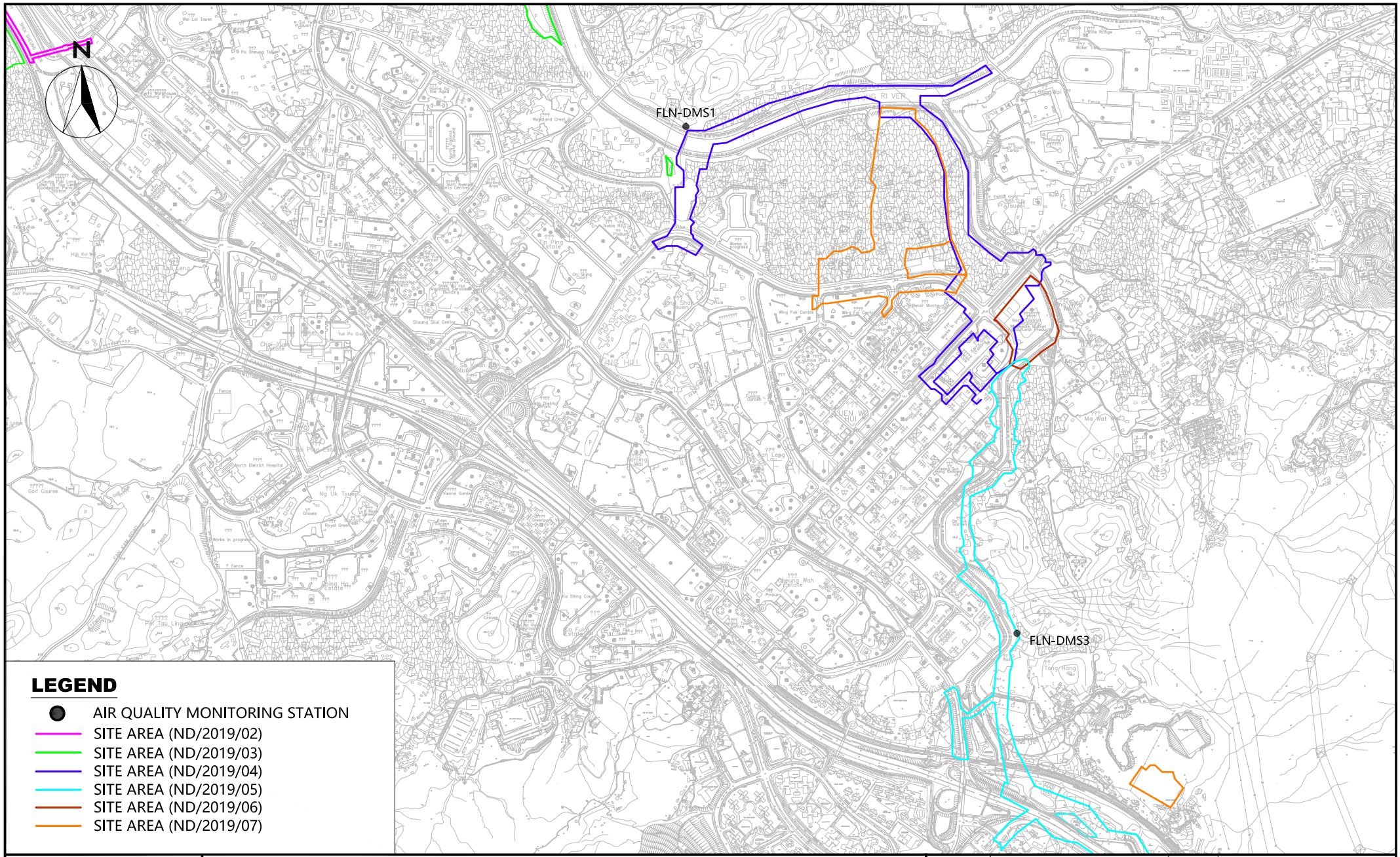
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Air Quality Monitoring Station (KTN)

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



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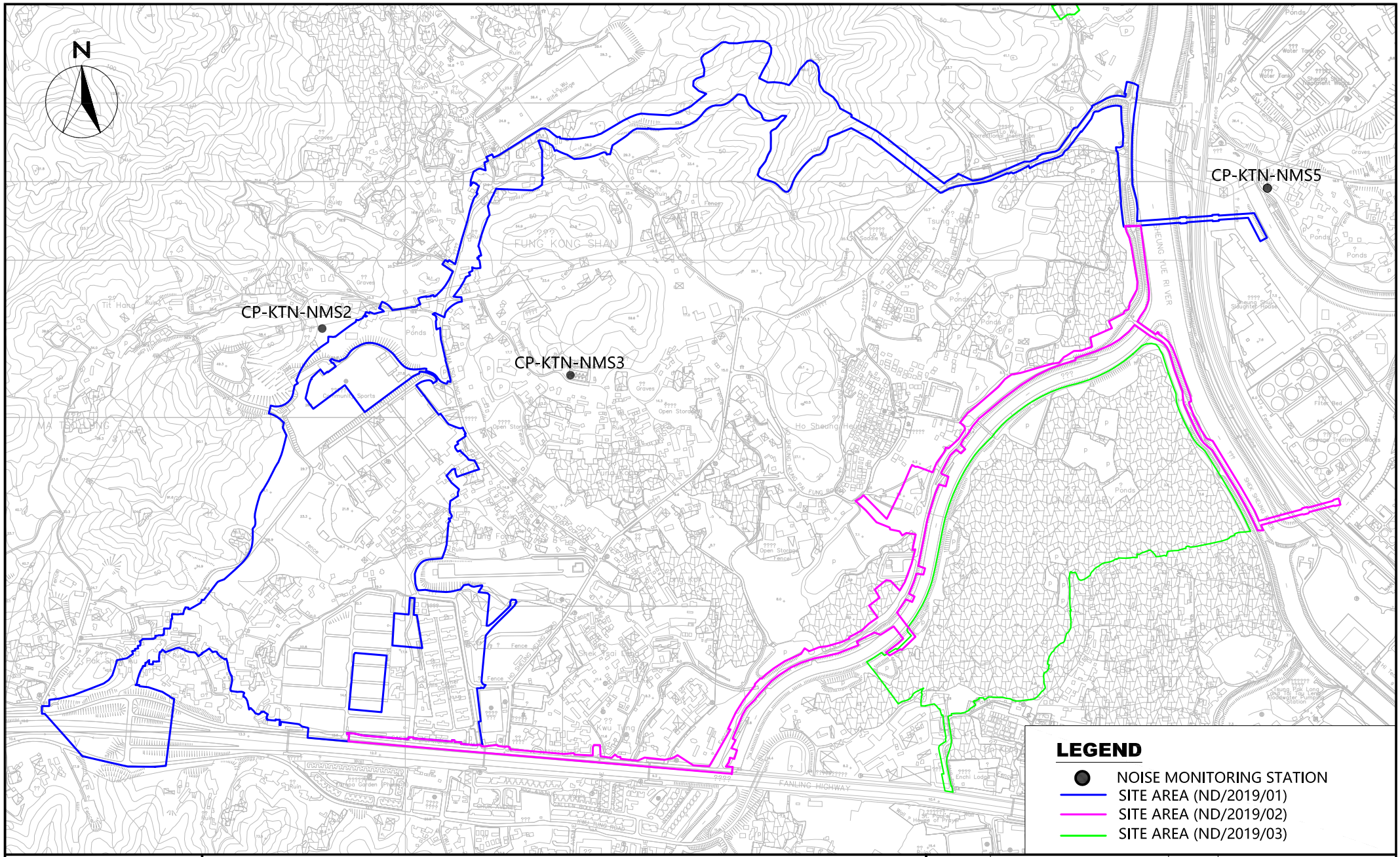
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Air Quality Monitoring Station (FLN)

SCALE	A4 @ 1:40000	DATE	AUG 2020
CHECK	KL	DRAWN	NL
PROJECT No.	WMA20002	FIGURE NO. 2	REV —



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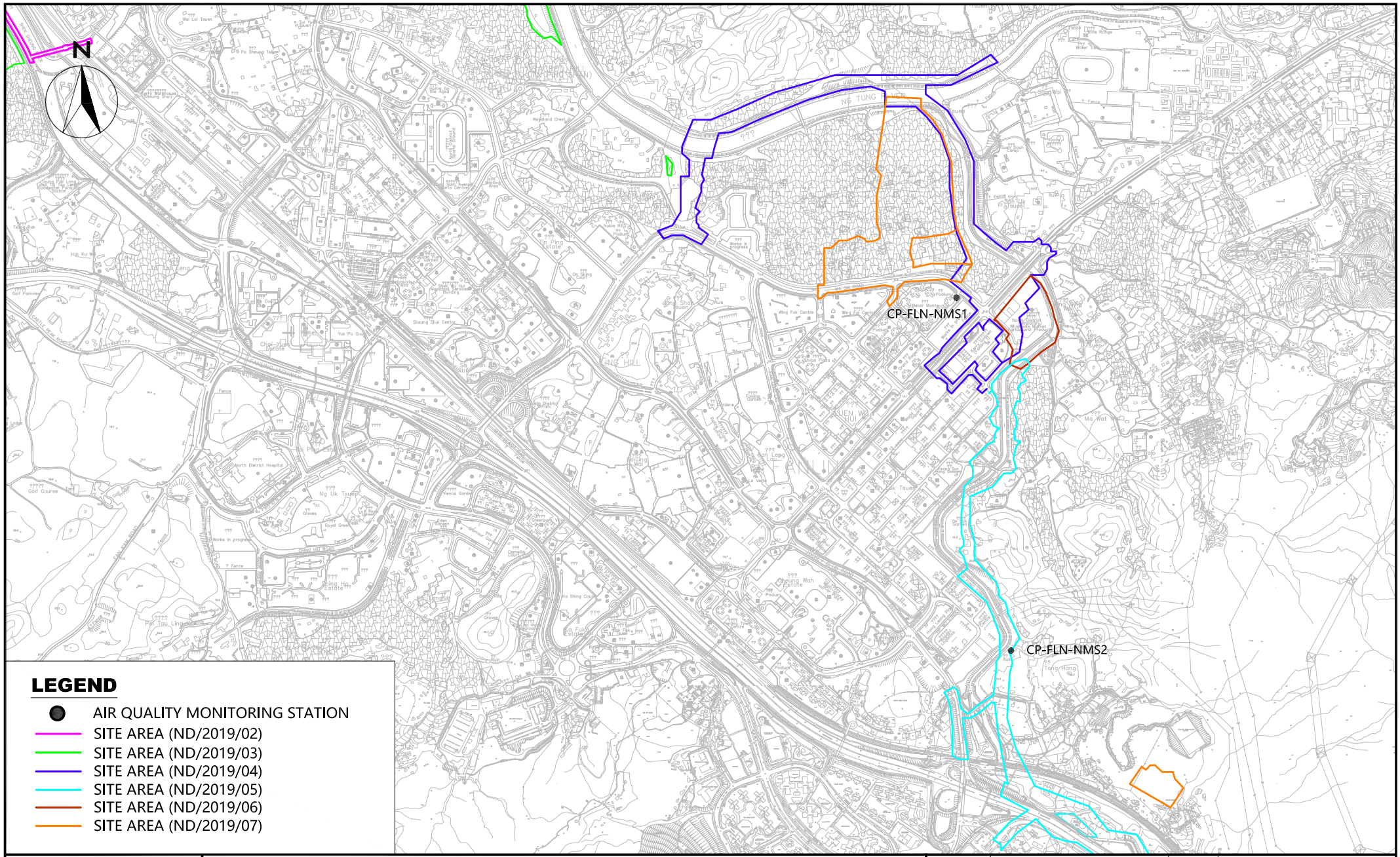
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Noise Monitoring Station (KTN)

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



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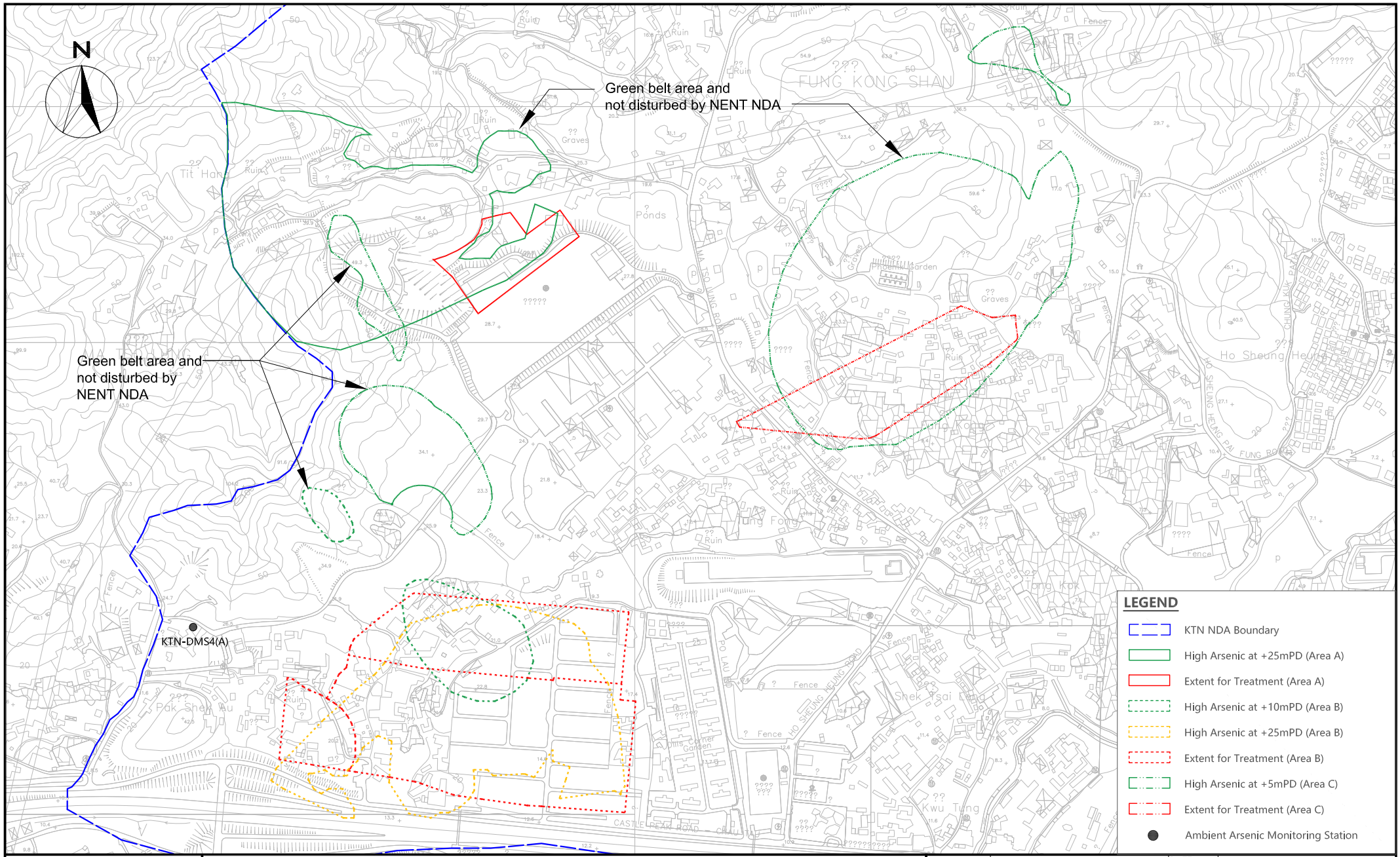
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Noise Monitoring Stations (FLN)

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



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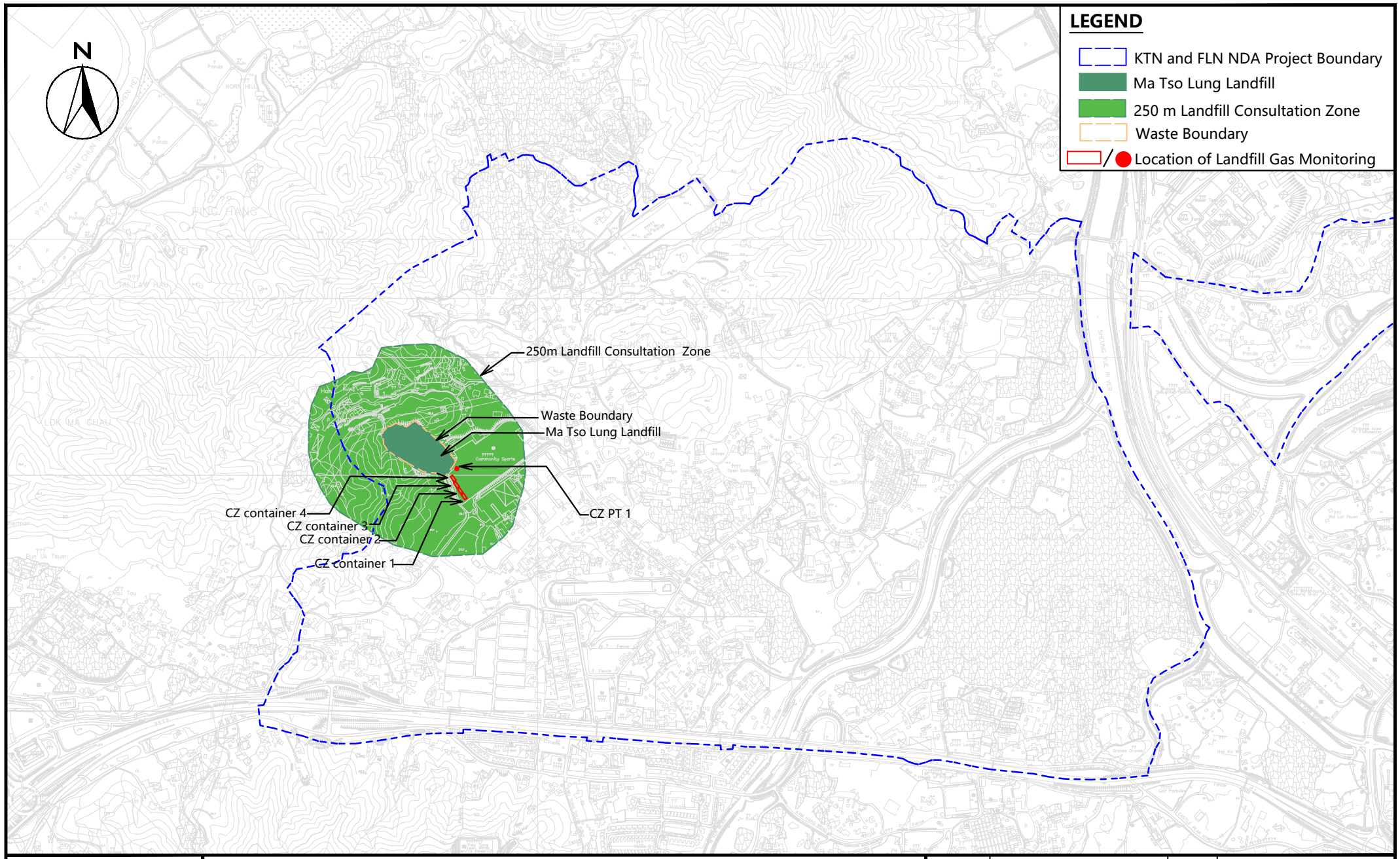
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Ambient Arsenic Monitoring Station

SCALE	1:20000 (A4)	DATE	Jun 2020
CHECK	IT	DRAWN	ML
PROJECT No.	WMA20002	FIGURE NO. 5	REV -



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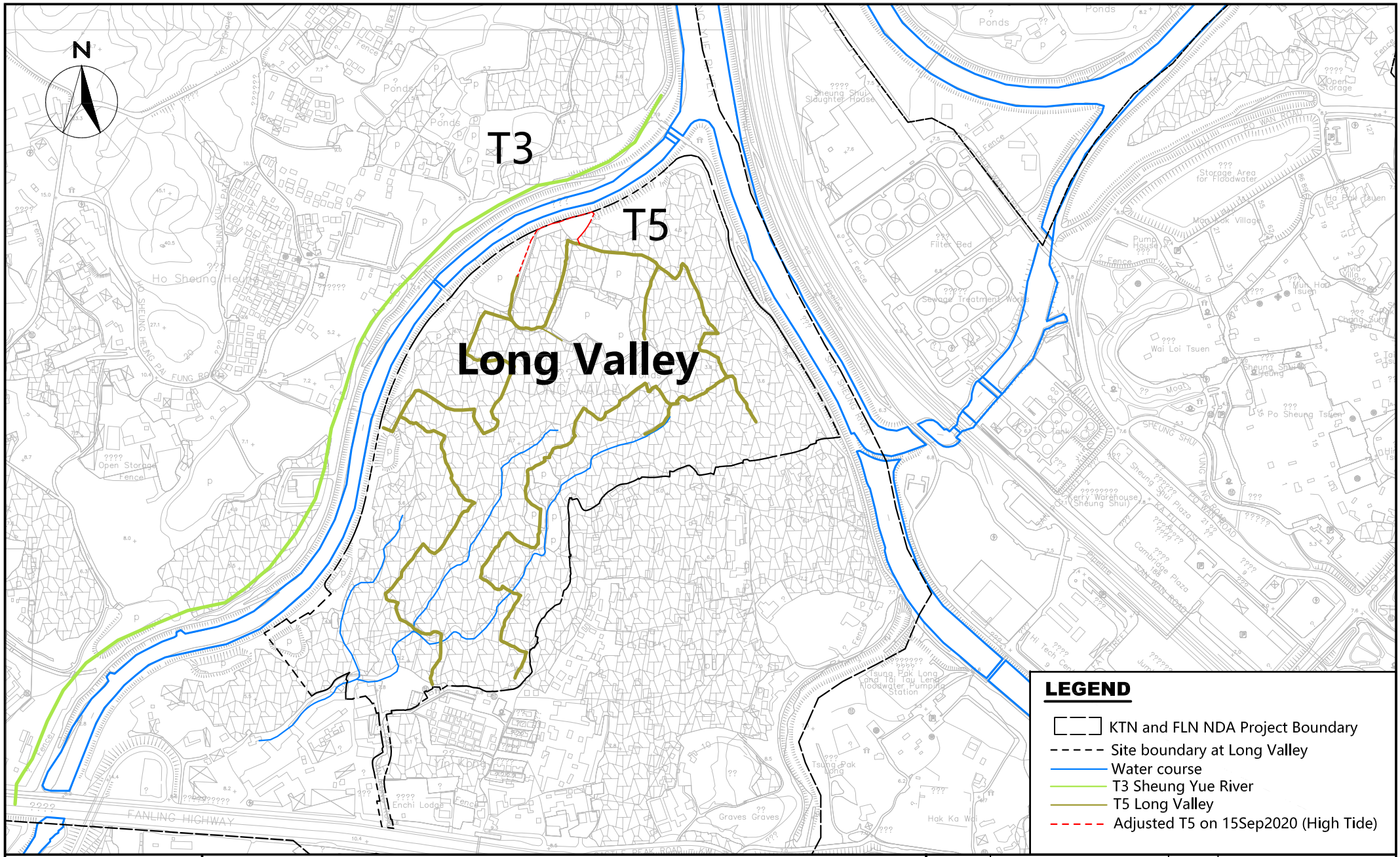
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Landfill Gas Monitoring

SCALE	A4 @ 1:40000	DATE	Aug 2020
CHECK	KL	DRAWN	KIKI
PROJECT No.	WMA20002	FIGURE NO. 6	REV —



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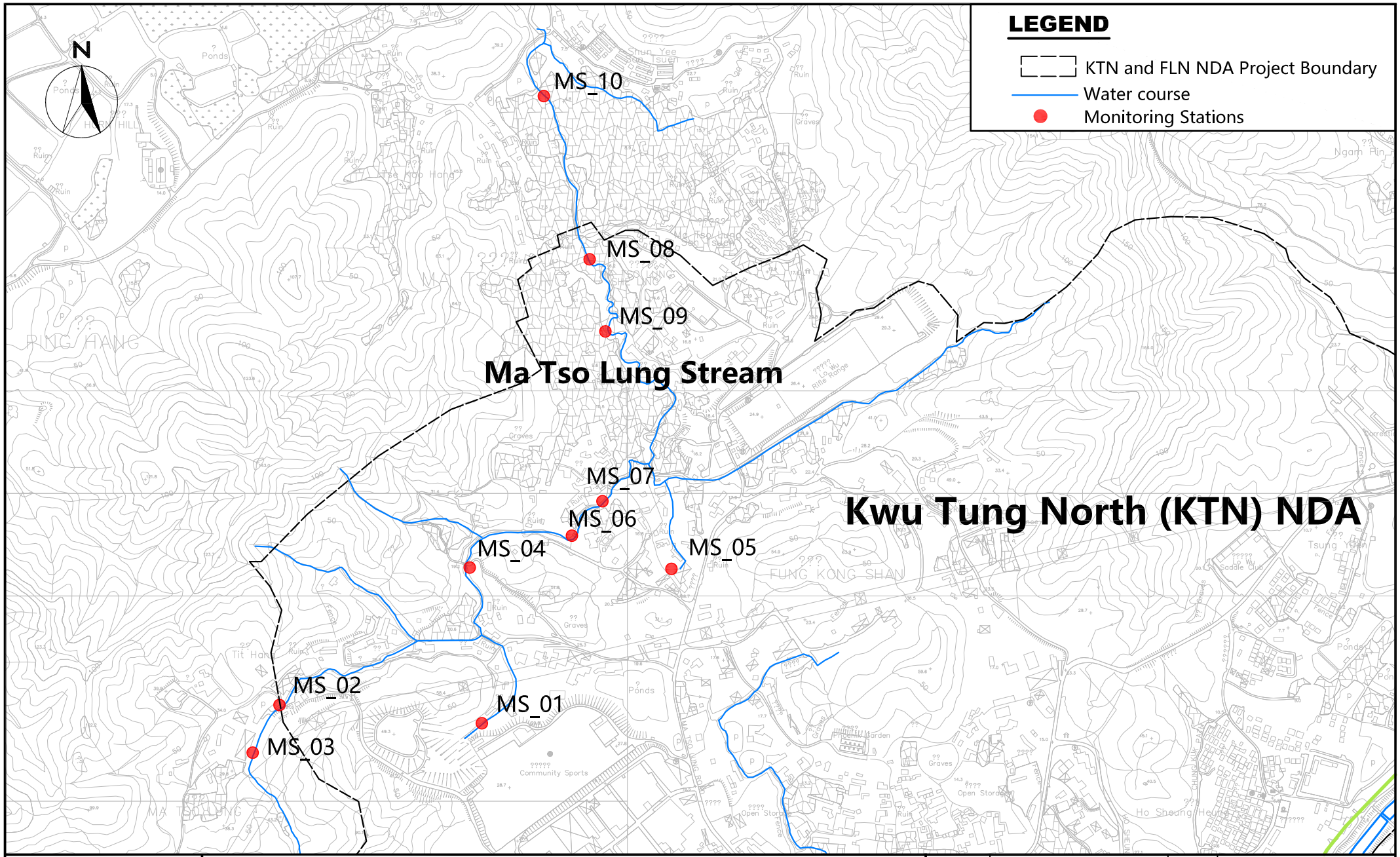
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Transect Routes For Water Birds on Sheung Yue River and Long Valley (T3 & T5)

SCALE	A4 @ 1:20000	DATE	MAY 2020
CHECK	IT	DRAWN	KIKI
PROJECT No.	WMA20002	FIGURE NO. 7	REV —



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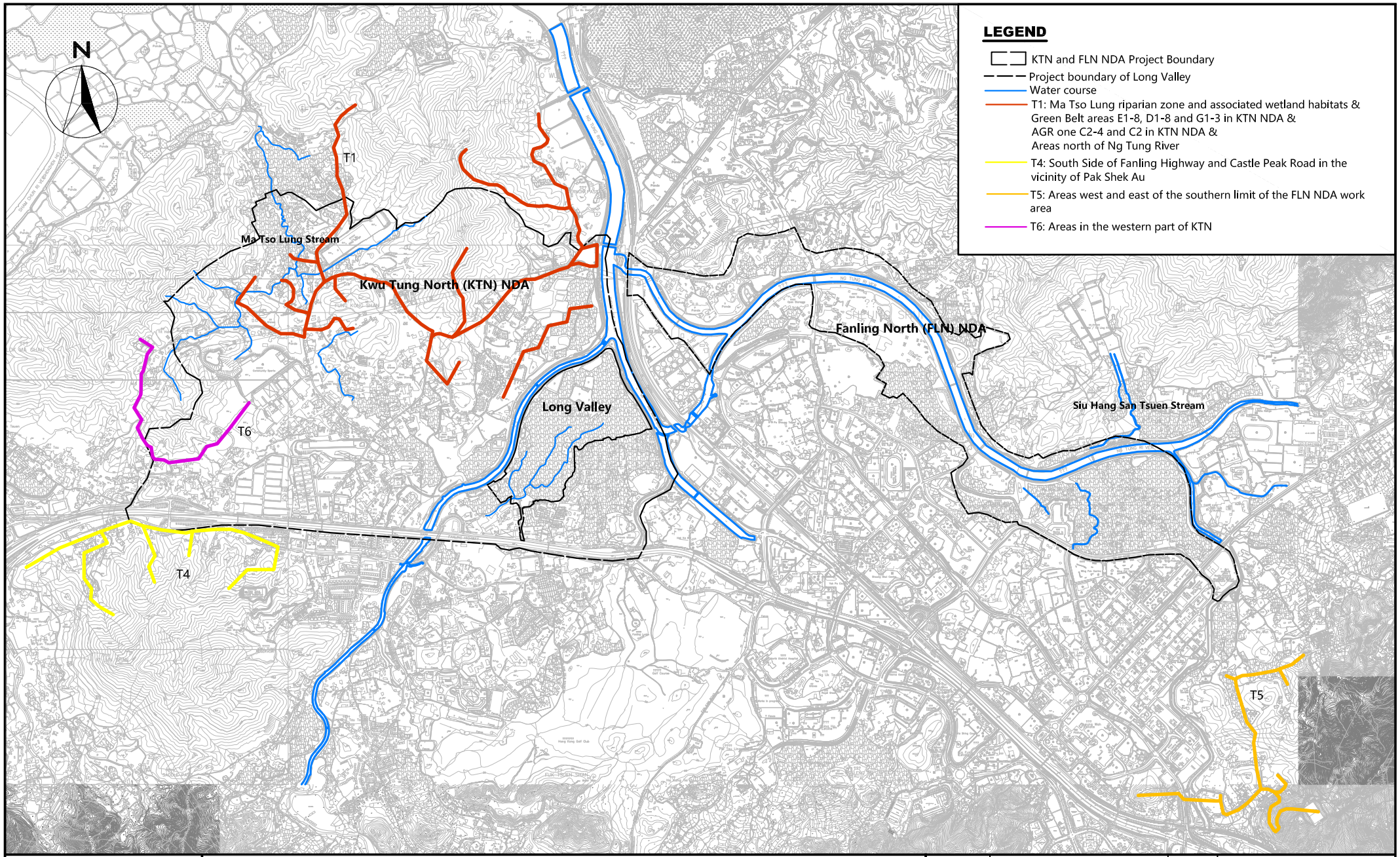
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs

Location of Monitoring Stations at Ma Tso Lung Stream

SCALE	A4 @ 1:23000	DATE	MAY 2020
CHECK	IT	DRAWN	KIKI
PROJECT No.	WMA20002	FIGURE NO. 8	REV —



WELLAB 匯力
consulting . testing . research

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

Location of Transect Route of Ecological Sensitive Habitats (Non-Aquatic Fauna) Transect Route (T1,T4,T5 & T6)

SCALE	A4 @ 1:70000	DATE	AUG 2020
CHECK	KL	DRAWN	NL
PROJECT No.	WMA20002	FIGURE NO. 9	REV —

NOTES:

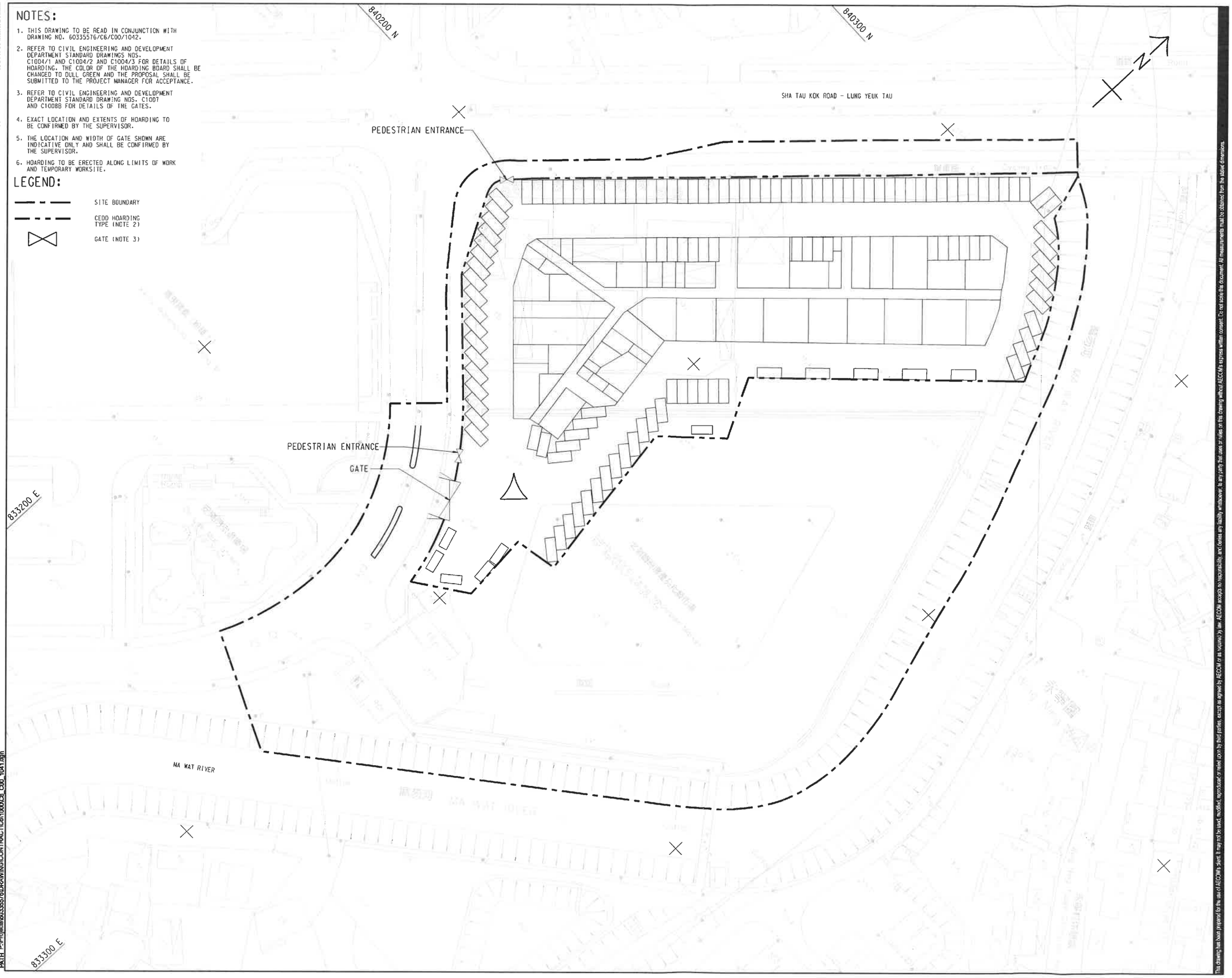
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NO. 60335576/C6/C00/1042.
2. REFER TO CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT STANDARD DRAWINGS NOS. C1004/1 AND C1004/2 AND C1004/3 FOR DETAILS OF HOARDING. THE COLOR OF THE HOARDING BOARD SHALL BE CHANGED TO DULL GREEN AND THE PROPOSAL SHALL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



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 Civil Engineering and Development Department

CONSULTANT 工程顧問公司

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ISSUE/REVISION 修訂

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

STATUS 階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖

Figure 10.1 Hoarding Plan of EP-475/2013/A (ND/2019/06)

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

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

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NOTES:

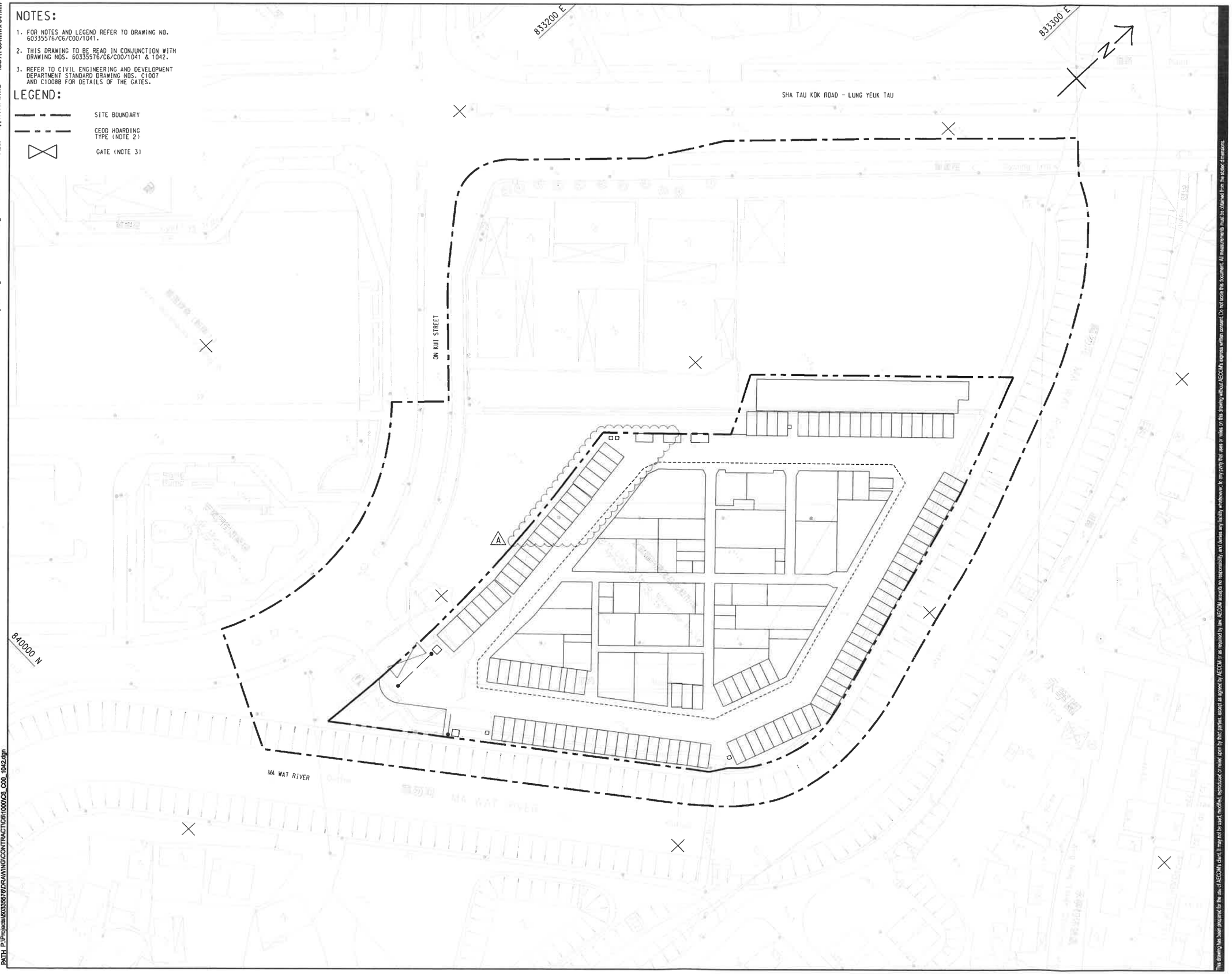
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C6/C00/1041.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C6/C00/1041 & 1042.
3. REFER TO CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT STANDARD DRAWING NOS. C1007 AND C1008B FOR DETAILS OF THE GATES.

LEGEND:

SITE BOUNDARY

CEDD HOARDING TYPE (NOTE 2)

GATE (NOTE 3)



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

Plot File by: Yauky 26/6/2019
PATH P:\Projects\60335576\DRAWING\CONTRACT\C6\1000\C6_C00_1042.dgn

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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

CLIENT 業主

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ISSUE/REVISION 修訂

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

STATUS 階段

SCALE 比例: A1 1 : 500

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖

Figure 10.2
Hoarding Plan of
EP-475/2013/A
(ND/2019/06)

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

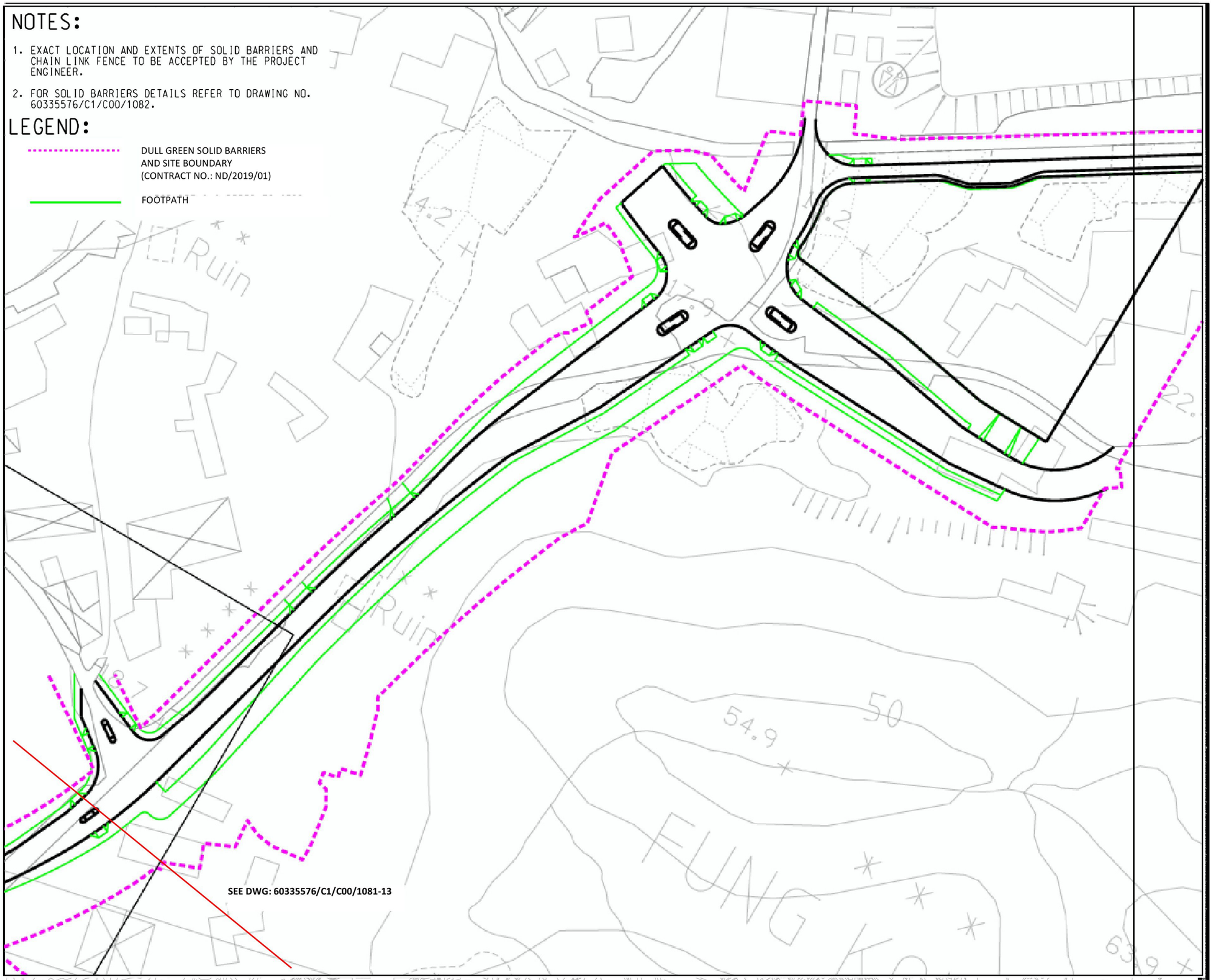
NOTES:

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

LEGEND:

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

FOOTPATH



BKREJV

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

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

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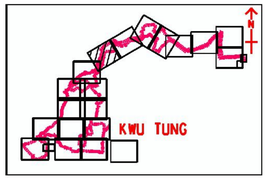
Figure 11.1
Hoarding Plan of
EP-468/2013/A
(ND/2019/01)

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

60335576/C1/C00/1081-14

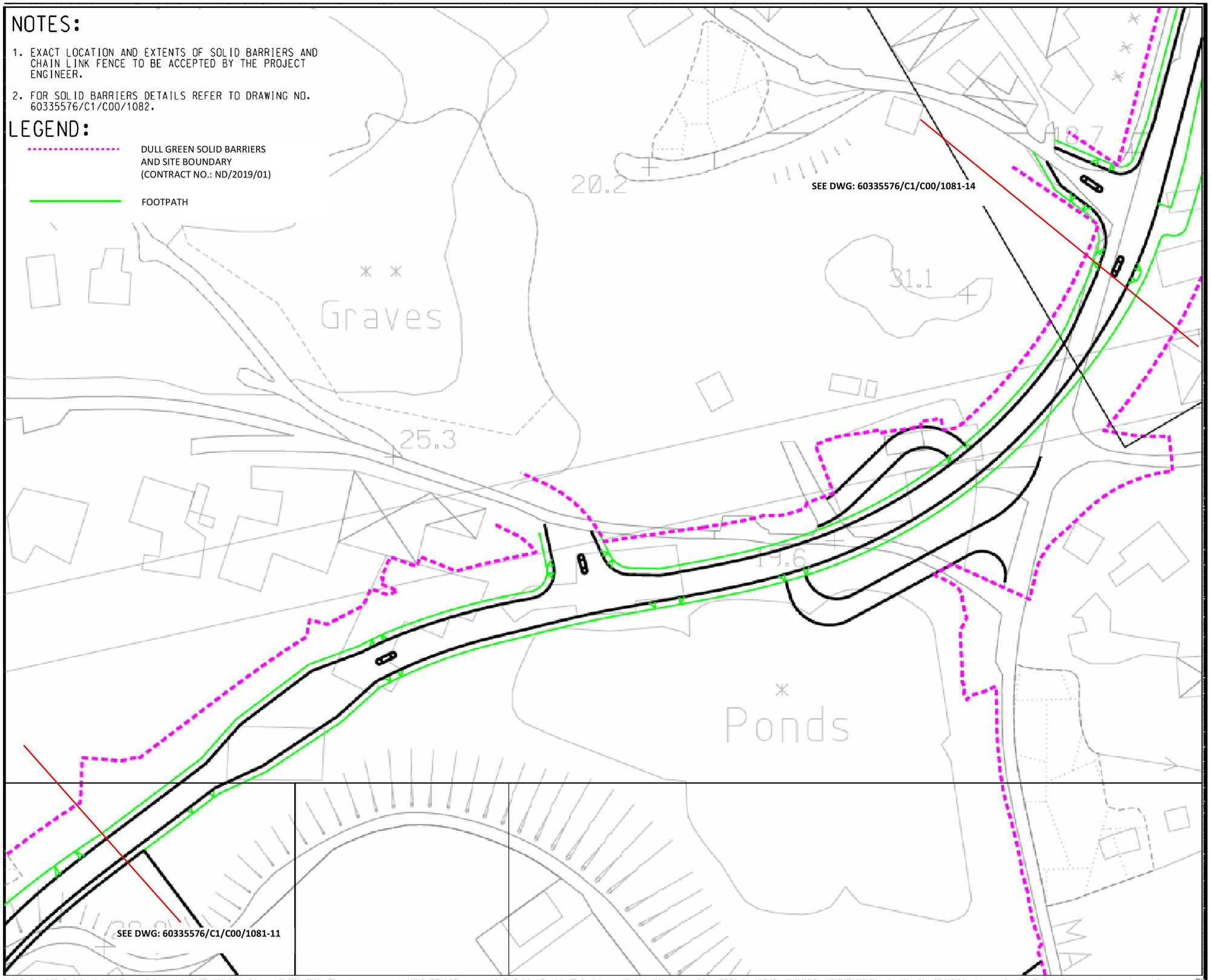
NOTES:

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

LEGEND:

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

FOOTPATH



BKREJV

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

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

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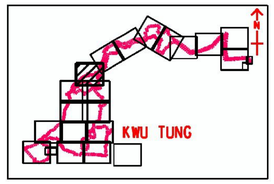
Figure 11.2
Hoarding Plan of
EP-468/2013/A
(ND/2019/01)

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
60335576/C1/C00/1081-13

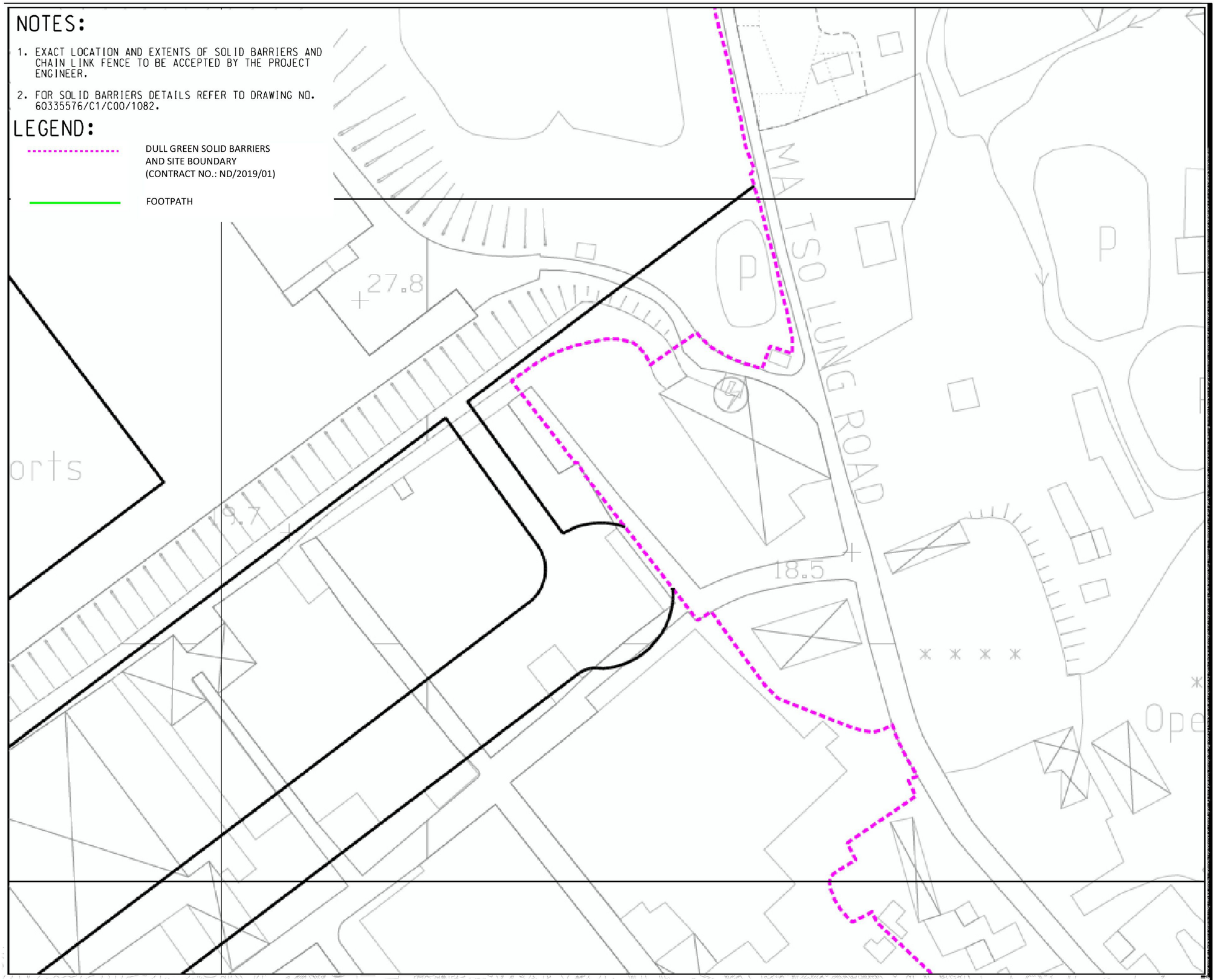
NOTES:

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

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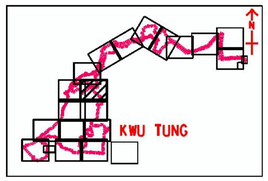
Figure 11.3
Hoarding Plan of
EP-468/2013/A
(ND/2019/01)

STATUS

SCALE A3 1:1000
DIMENSION UNIT METRES

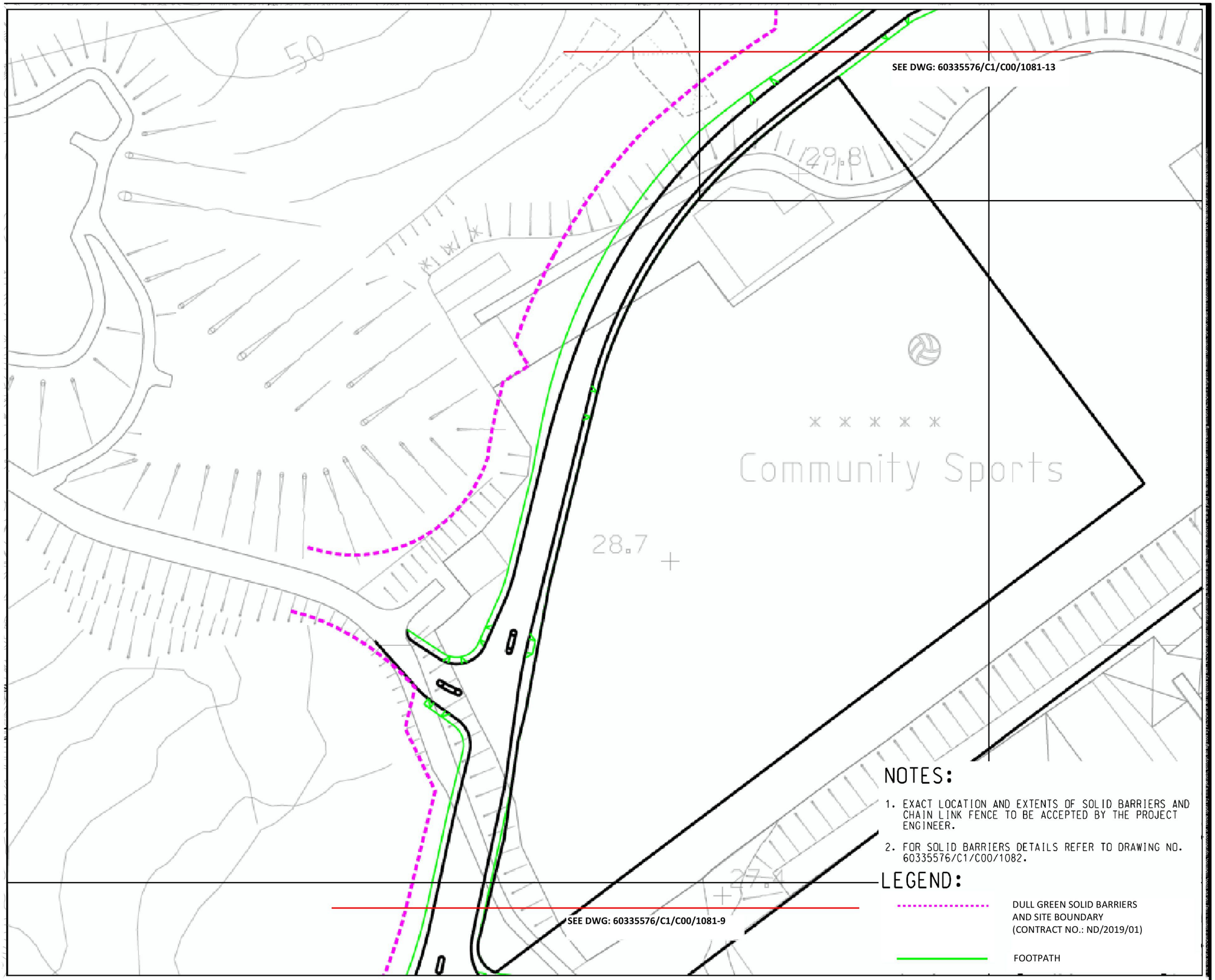
KEY PLAN



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

SHEET TITLE
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
60335576/C1/C00/1081-12



BKREJV

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

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

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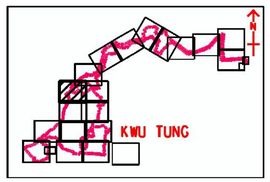
Figure 11.4
Hoarding Plan of EP-468/2013/A (ND/2019/01)

STATUS

SCALE A3 1:1000
DIMENSION UNIT METRES

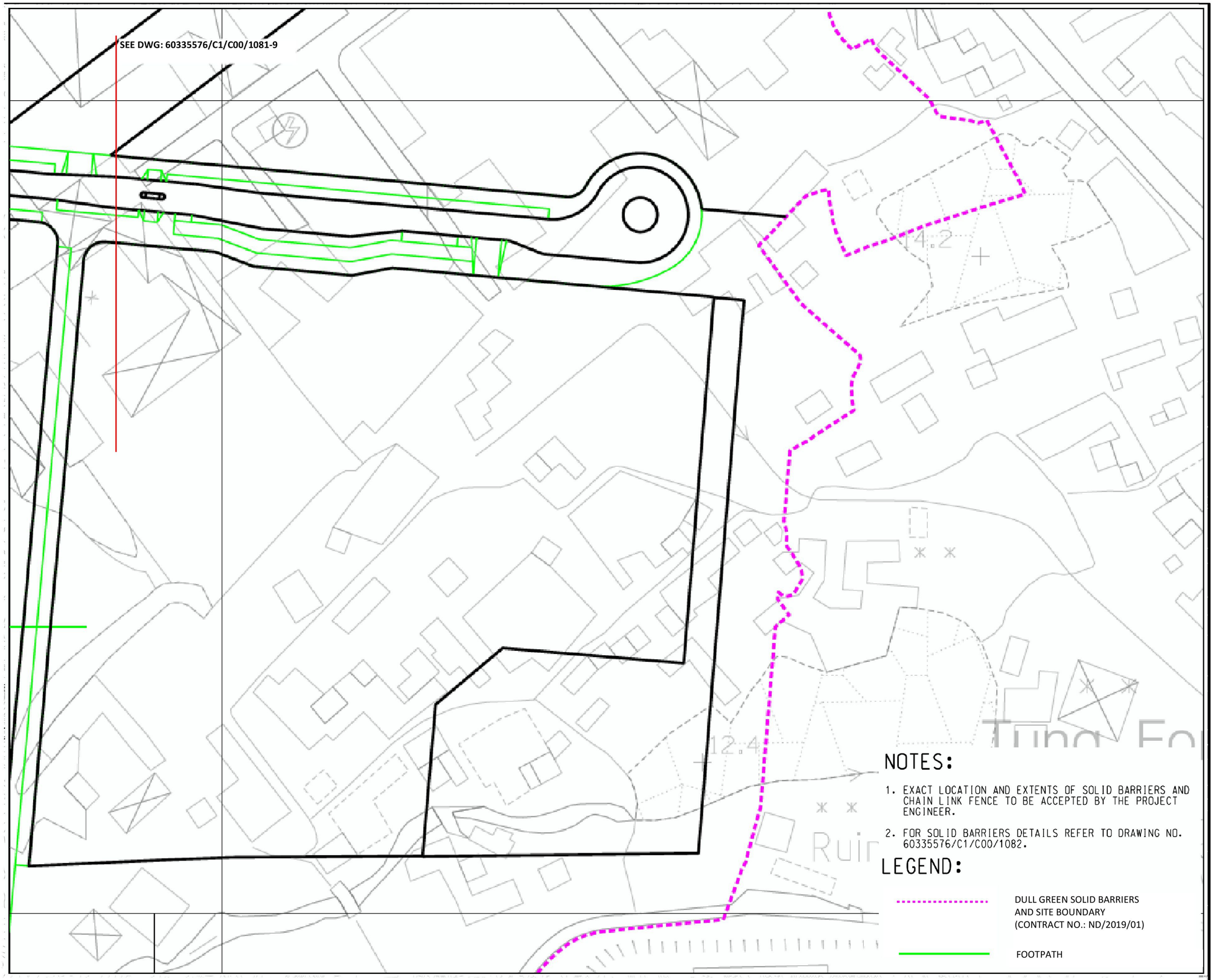
KEY PLAN



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

SHEET TITLE
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
60335576/C1/C00/1081-11



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

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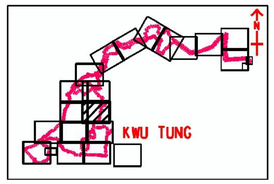
Figure 11.5
Hoarding Plan of
EP-468/2013/A
(ND/2019/01)

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

60335576/C1/C00/1081-10

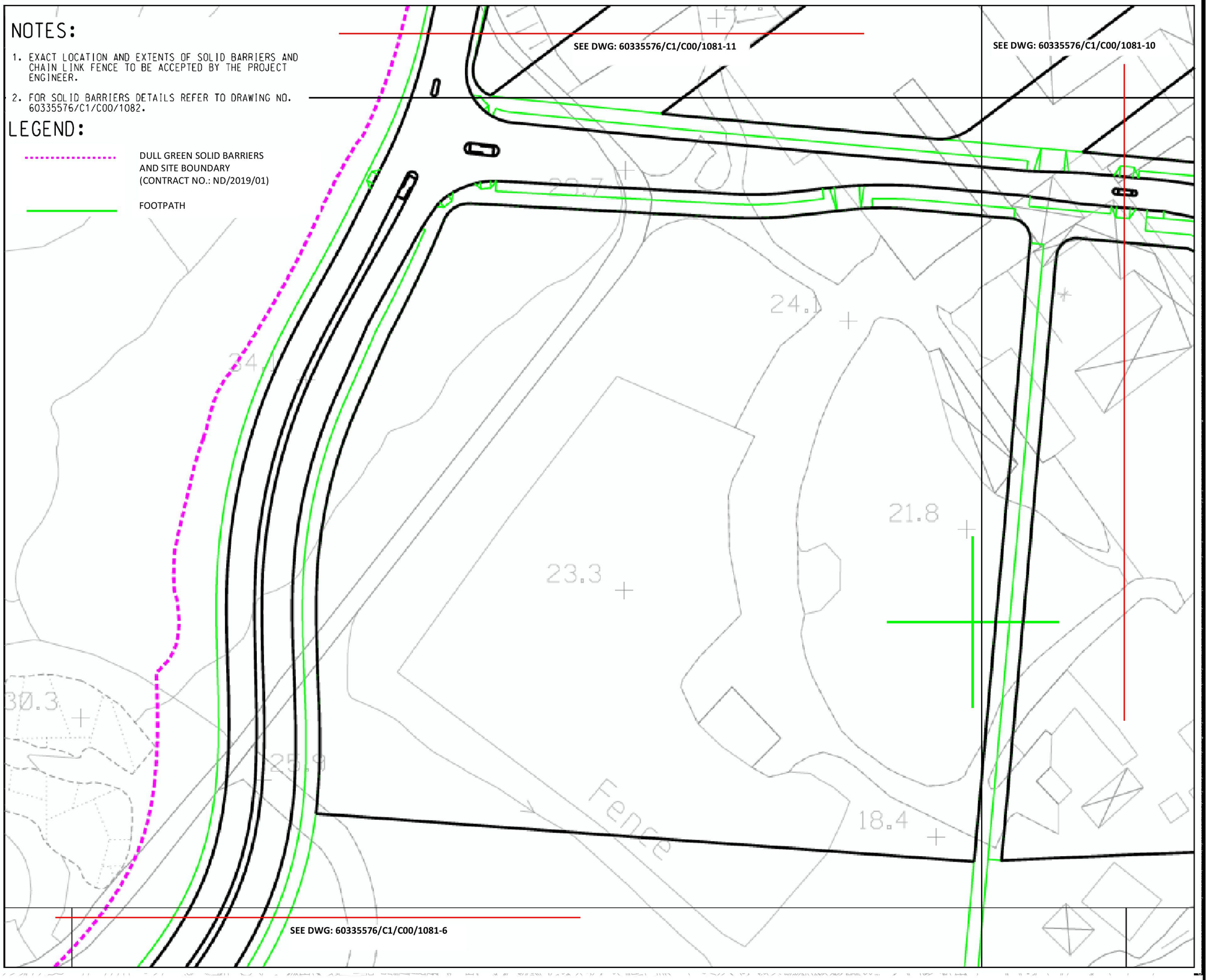
NOTES:

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

LEGEND:

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

FOOTPATH



BKREJV

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

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

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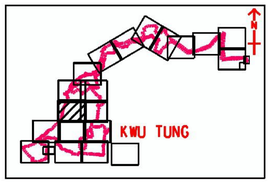
Figure 11.6
Hoarding Plan of
EP-468/2013/A
(ND/2019/01)

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

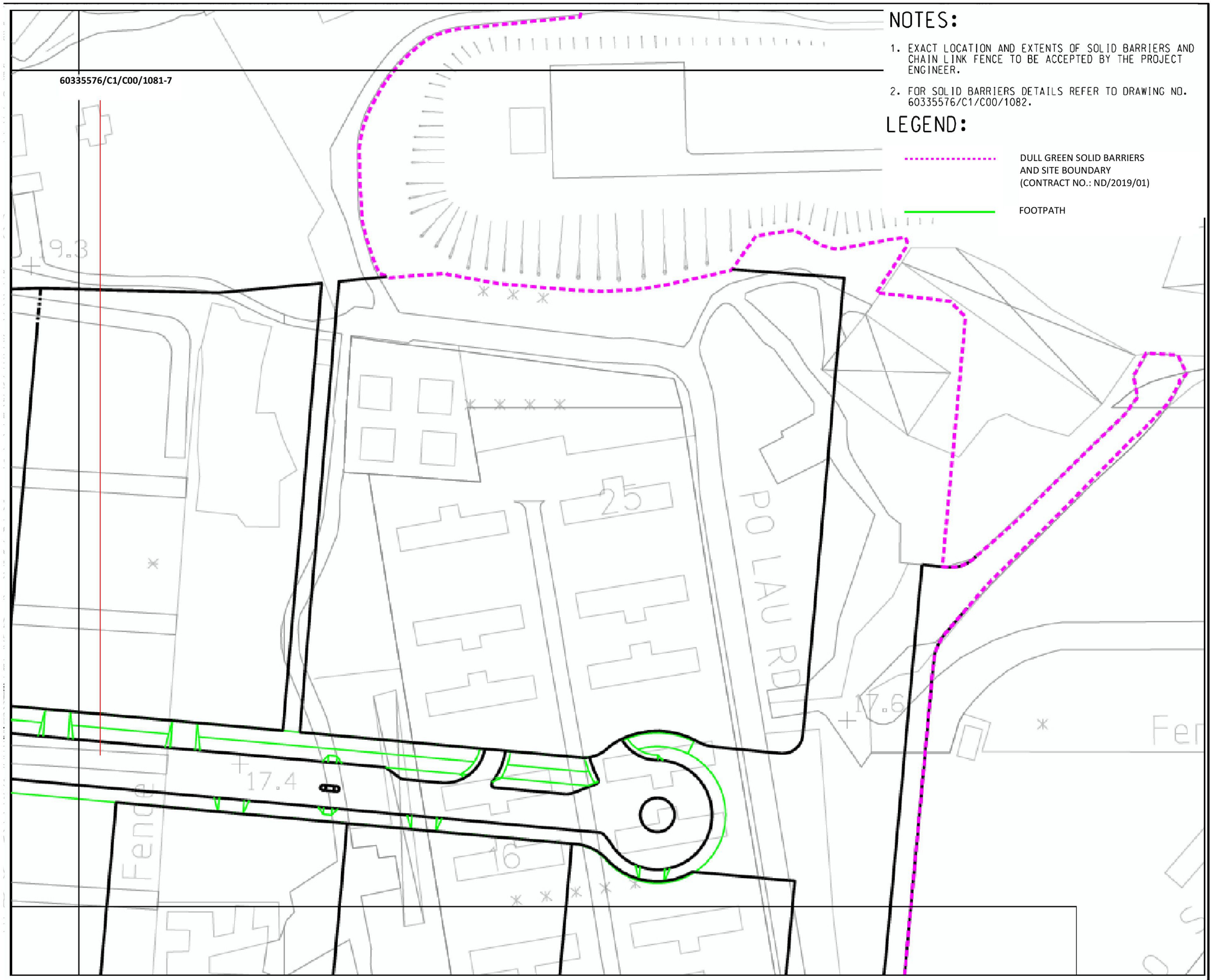
CONTRACT NO. 合約編號: ND/2019/01

SHEET TITLE
圖紙名稱

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
圖紙編號

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

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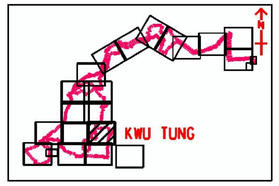
Figure 11.7
Hoarding Plan of
EP-468/2013/A
(ND/2019/01)

STATUS
階段

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

KEY PLAN
索引圖



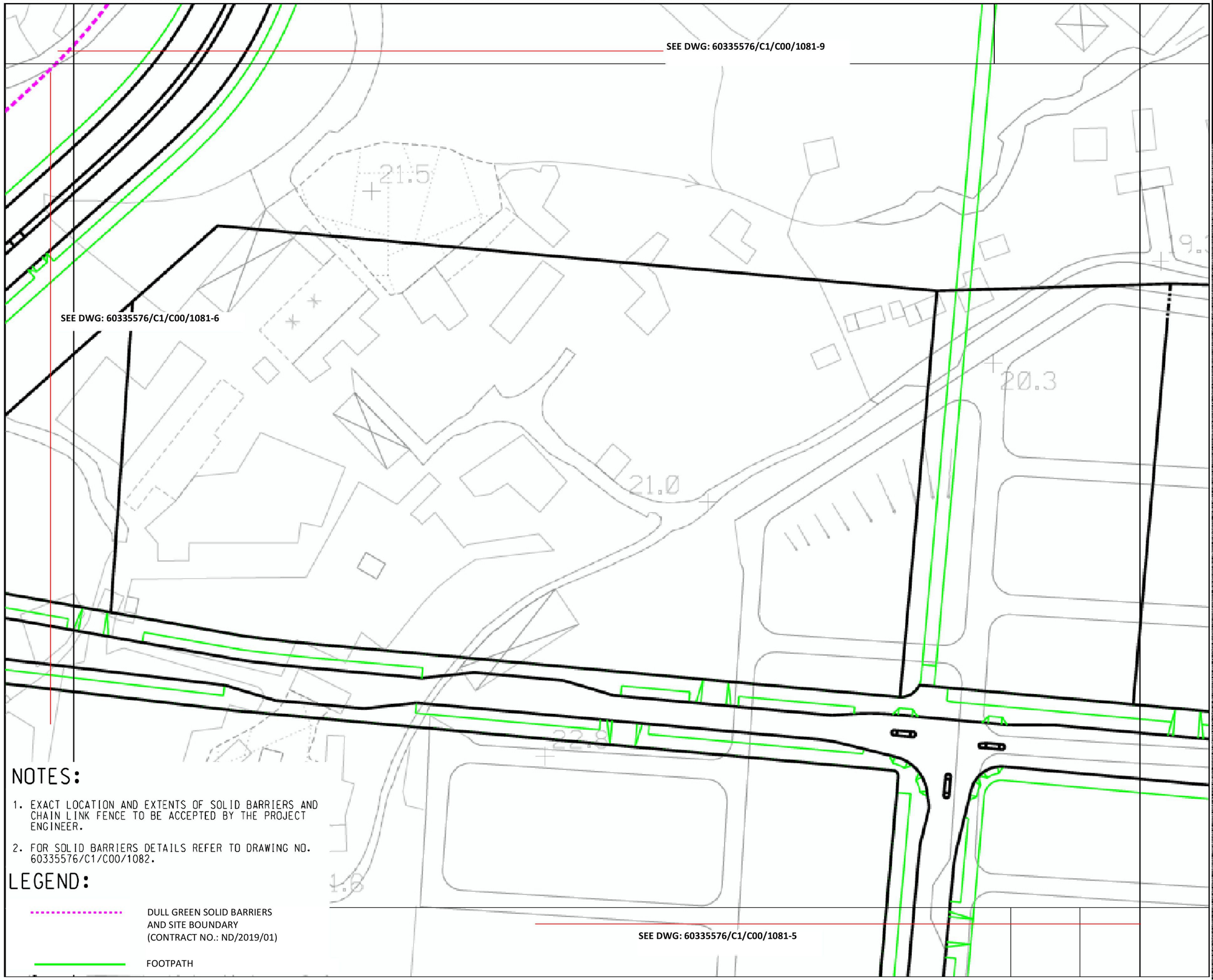
PROJECT NO. 項目編號: 60335576
CONTRACT NO. 合約編號: ND/2019/01

SHEET TITLE
圖紙名稱

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
圖紙編號

60335576/C1/C00/1081-8



BKREJV

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

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

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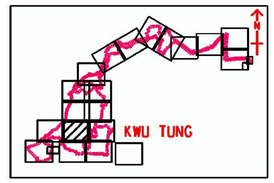
Figure 11.8
Hoarding Plan of
EP-468/2013/A
(ND/2019/01)

STATUS

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

KEY PLAN



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

SHEET TITLE
DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
60335576/C1/C00/1081-7

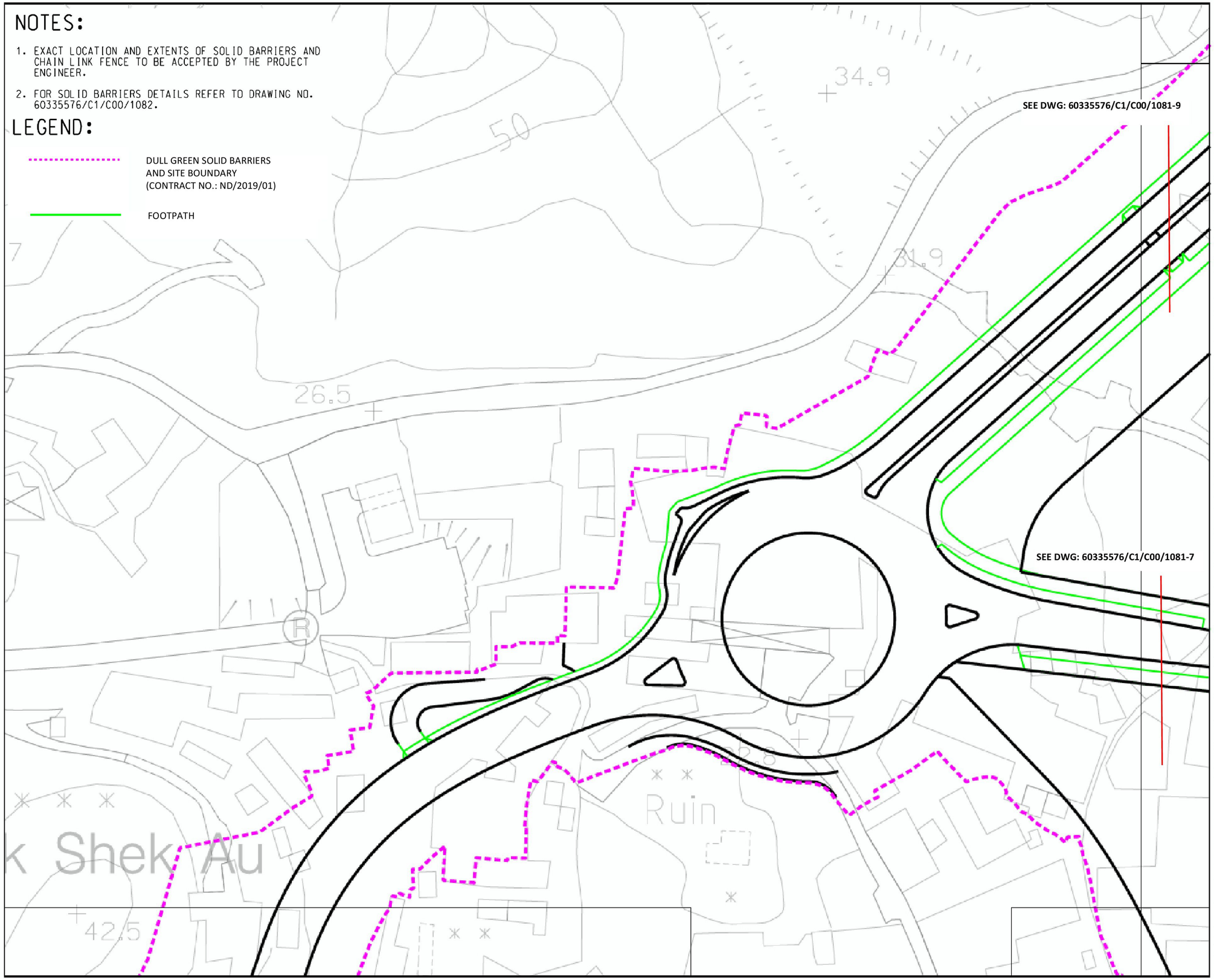
NOTES:

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

LEGEND:

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

FOOTPATH



BKREJV

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

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

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

CONSULTANT 工程顧問公司
AECOM Asia Company Ltd.
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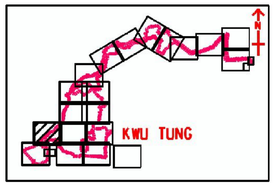
SUB-CONSULTANTS 分判工程顧問公司

Figure 11.9
Hoarding Plan of EP-468/2013/A (ND/2019/01)

STATUS 階段

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

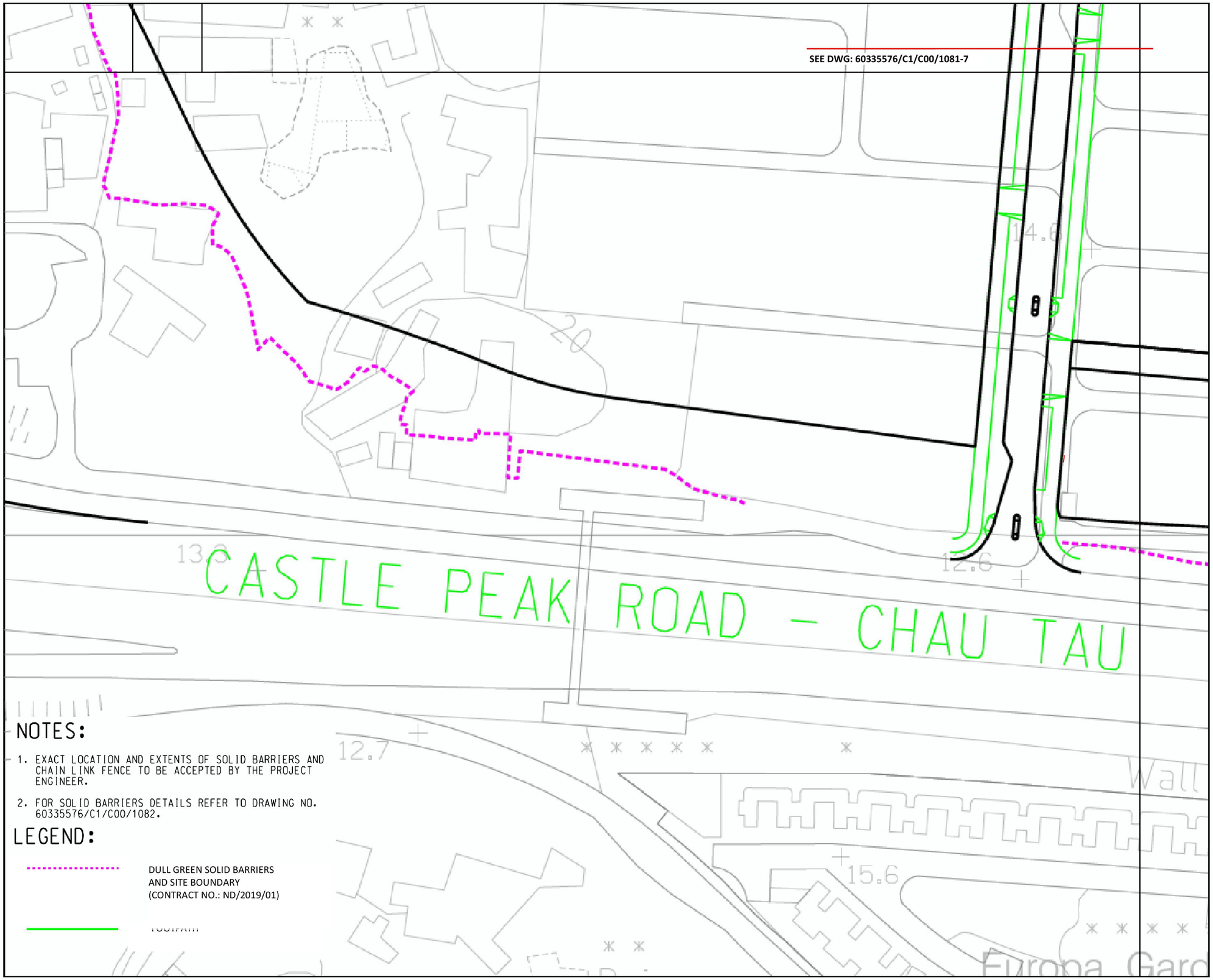
KEY PLAN 索引圖



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
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
CEDD Civil Engineering and Development Department

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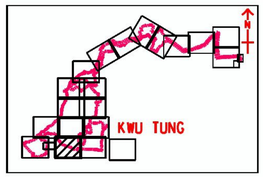
Figure 11.10
Hoarding Plan of
EP-468/2013/A
(ND/2019/01)

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

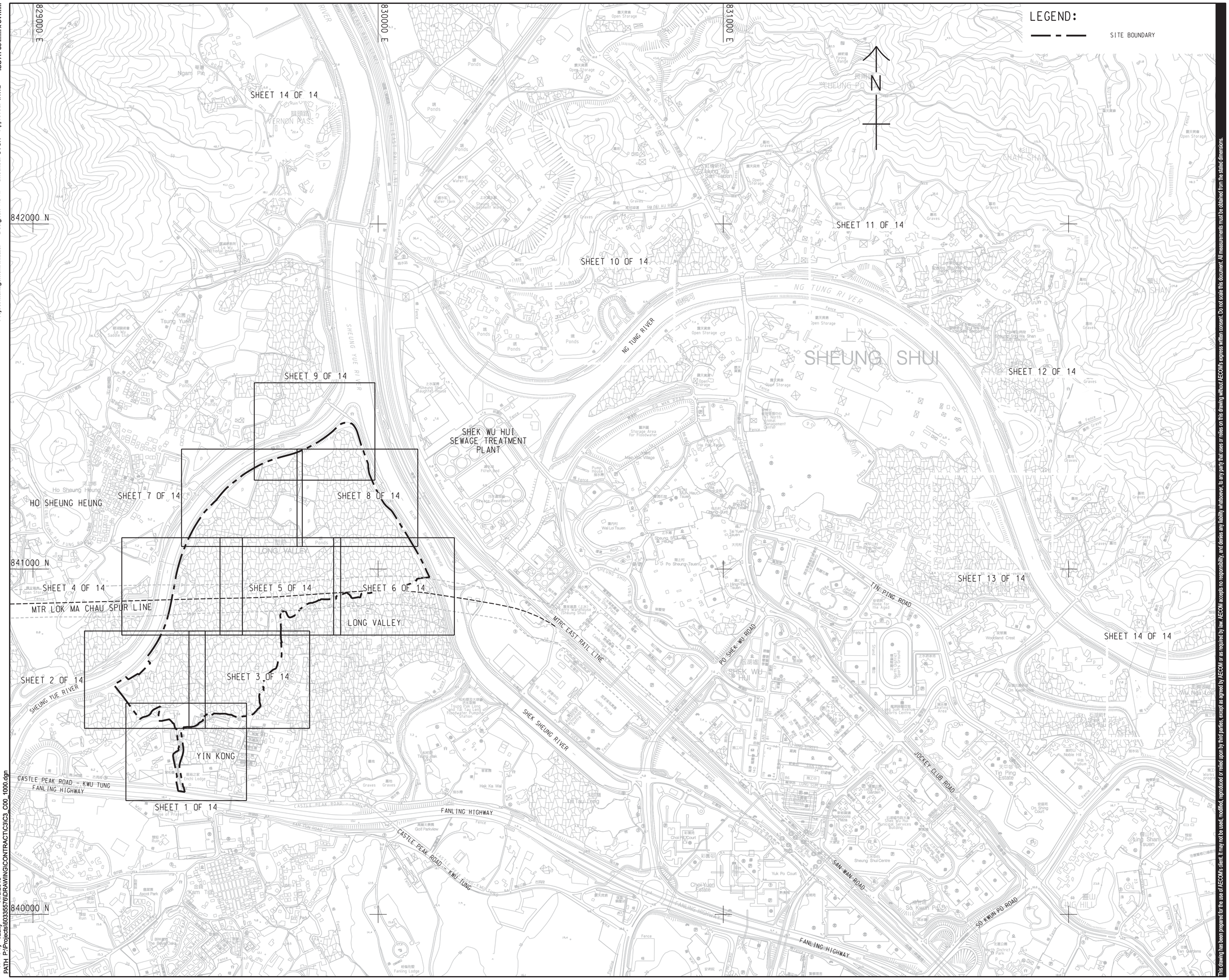
CONTRACT NO. 合約編號: ND/2019/01

SHEET TITLE
圖紙名稱

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER
圖紙編號

60335576/C1/C00/1081-5



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

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

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Sang Hing - Kuly Venture

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

CLIENT 業主

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT 工程顧問公司

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Figure 11.11
Hoarding Plan of
EP-468/2013/A
(ND/2019/03)

ISSUE/REVISION 修訂

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

STATUS 階段

SCALE 比例: A1 1 : 5000

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖

PROJECT NO. 項目編號: 60335576

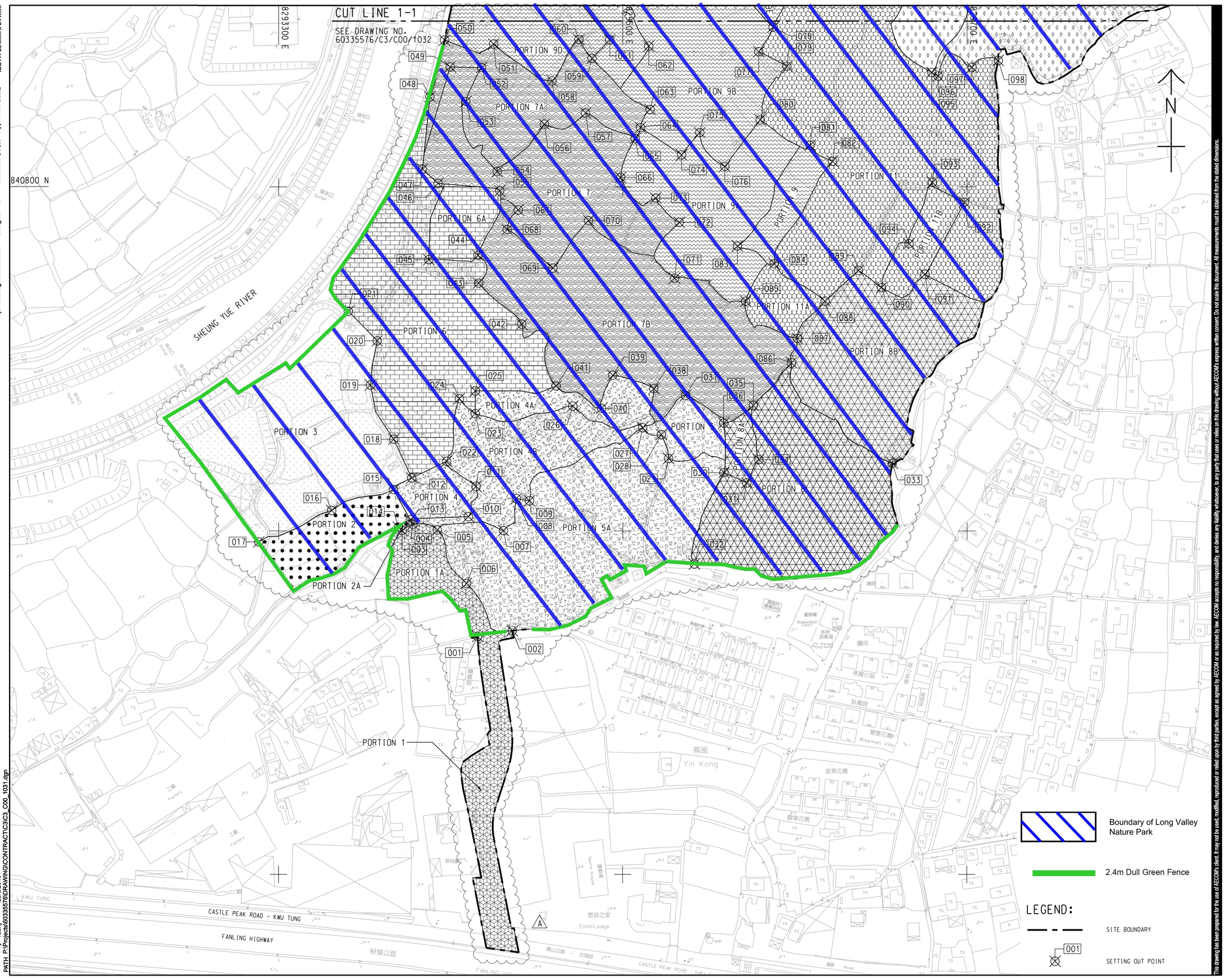
CONTRACT NO. 合約編號: ND/2019/03

SHEET TITLE 圖紙名稱

KEY PLAN OF
GENERAL LAYOUT

SHEET NUMBER 圖紙編號

60335576/C3/C00/1000



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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Figure 11.12
Hoarding Plan of
EP-468/2013/A
(ND/2019/03)

ISSUE/REVISION 修訂

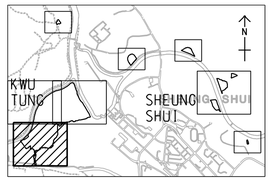
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	AUG-19	TENDER ADDENDUM NO. 3	CYCH
-	JUN-19	TENDER DRAWING	CYCH

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

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_1031.dgn

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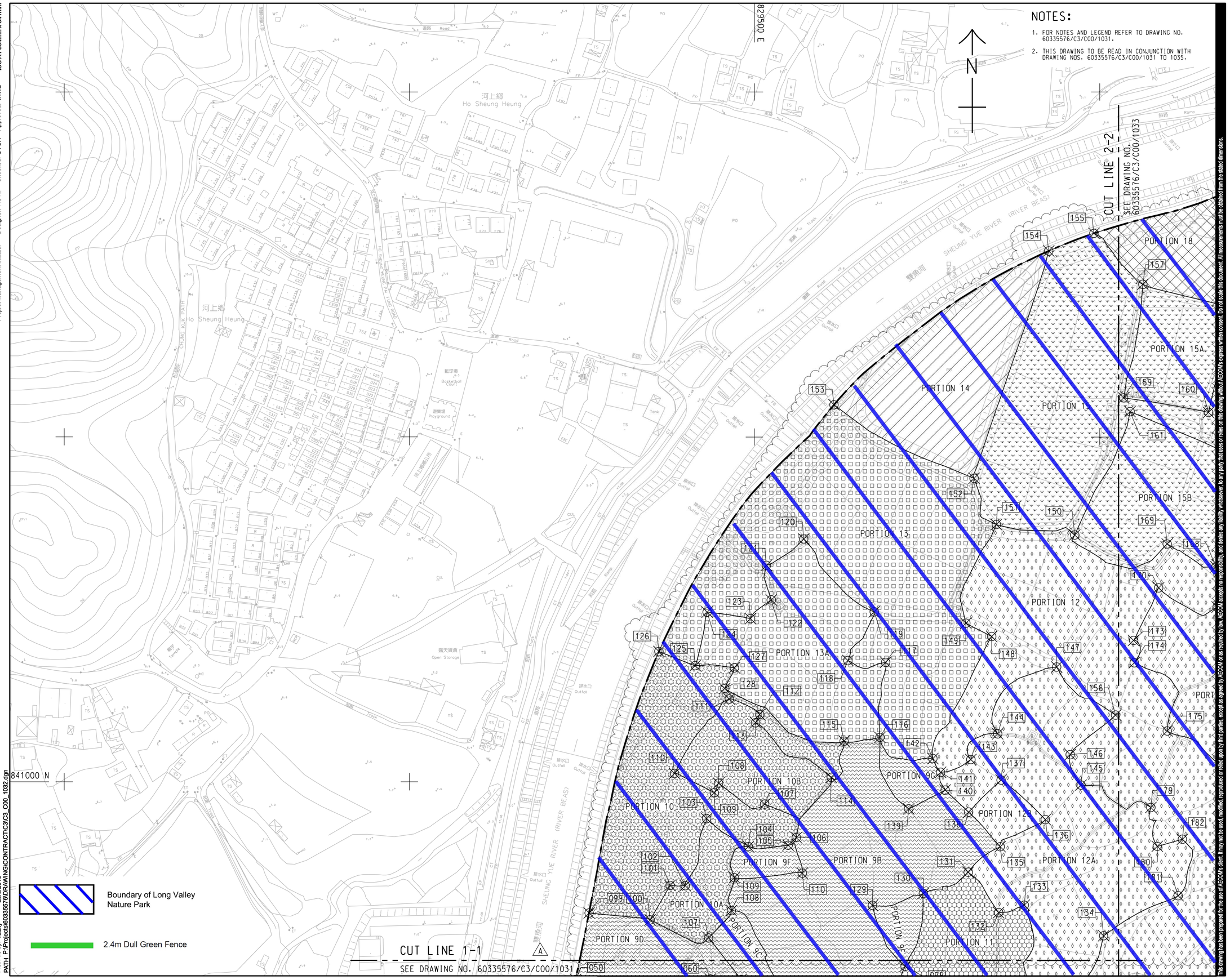

Sang Hing - Kuly Joint Venture

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

CLIENT
業主

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

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Figure 11.13
Hoarding Plan of
EP-468/2013/A
(ND/2019/03)

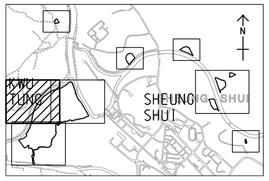
ISSUE/REVISION
修訂

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

STATUS
階段

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

KEY PLAN 索引圖 A1 1 : 40000



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

SHEET TITLE
圖紙名稱
PORTION OF SITE

SHEET 2 OF 5

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

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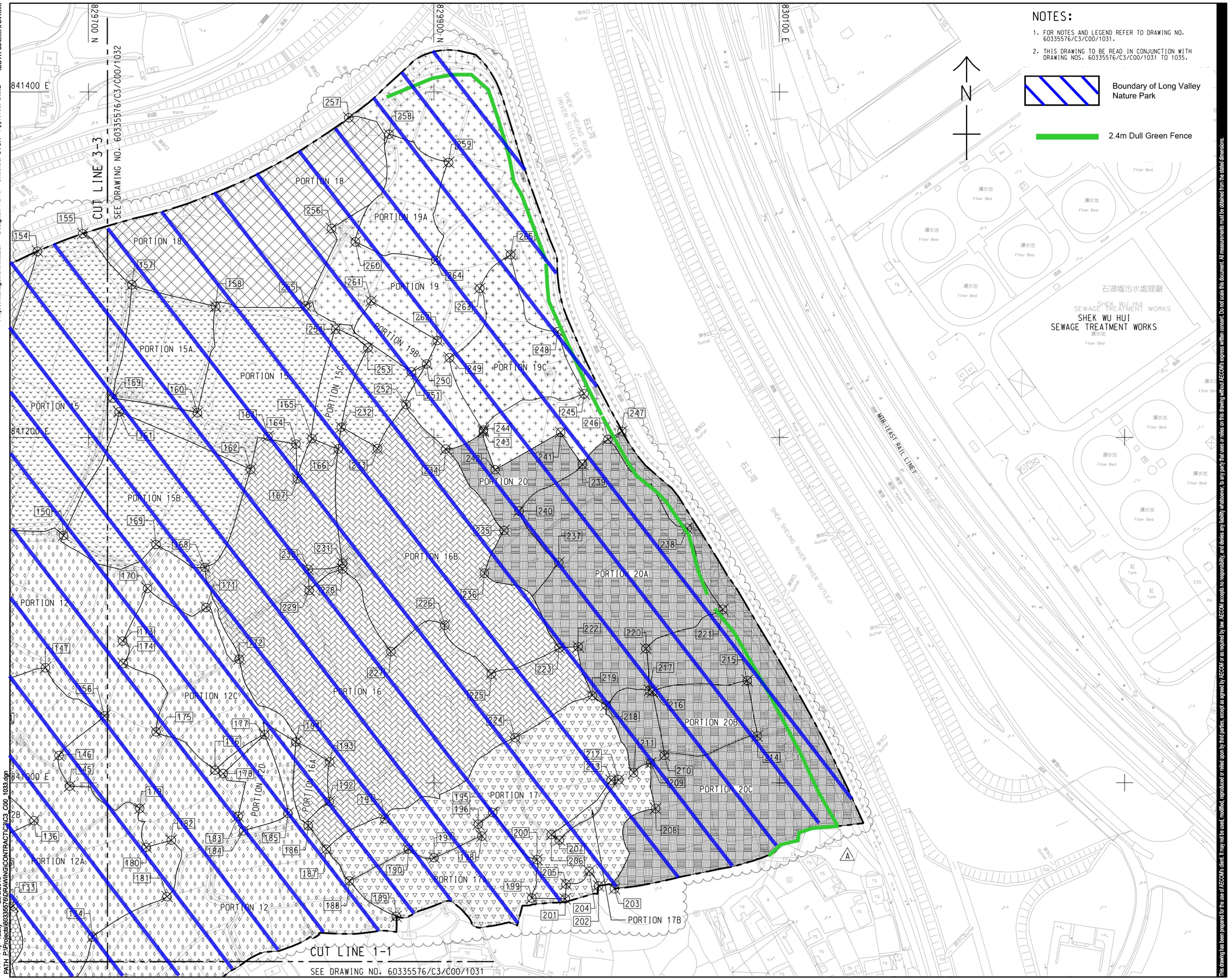
Project Management Initials: Designer: KCTL Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm

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



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_1033.dgn

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Sang Hing - Kuly Joint Venture

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

CLIENT 業主

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT 工程顧問公司

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Figure 11.14
Hoarding Plan of
EP-468/2013/A
(ND/2019/03)

ISSUE/REVISION 修訂

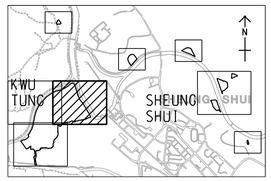
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	AUG-19	TENDER ADDENDUM NO. 3	CYCH
-	JUN-19	TENDER DRAWING	CYCH

STATUS 階段

SCALE 比例: A1 1 : 1000

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖 A1 1 : 40000



PROJECT NO. 項目編號: 60335576

CONTRACT NO. 合約編號: ND/2019/03

SHEET TITLE 圖紙名稱

PORTION OF SITE

SHEET 3 OF 5

SHEET NUMBER 圖紙編號

60335576/C3/C00/1033A

NOTES:

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

LEGEND:

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

SETTING OUT POINTS

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

SETTING OUT DATA FOR S.O.L. YKR

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

SECTION A-A

Sang Hing - Kuly Venture

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

CLIENT 業主

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT 工程顧問公司

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Figure 11.15 Hoarding Plan of EP-468/2013/A (ND/2019/03)

ISSUE/REVISION 修訂

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

STATUS 階段

SCALE 比例: 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 11/8/2019
PATH: P:\Projects\60335576\DRAWING\CONTRACT\C3\C3_C00_2001.dgn

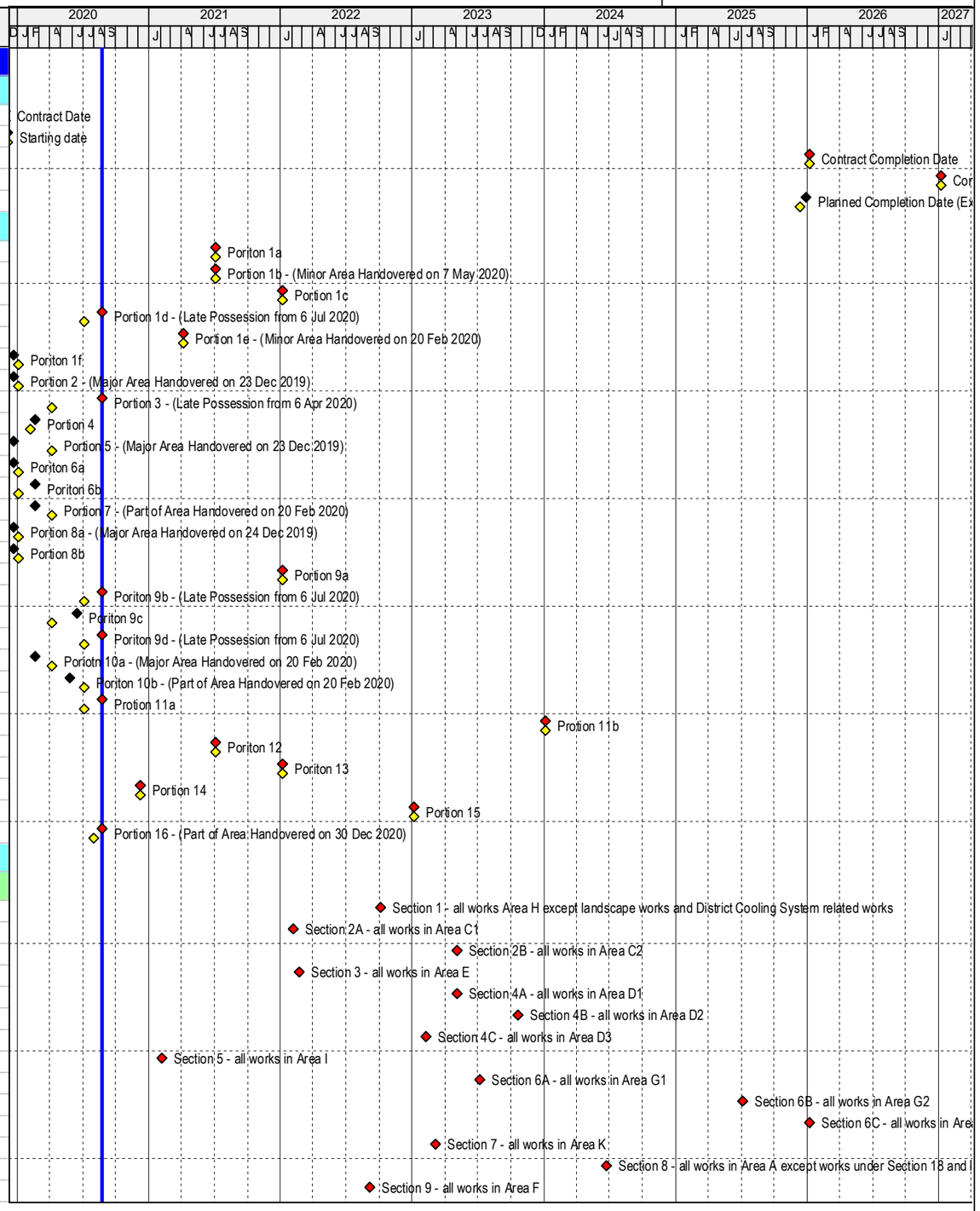
APPENDIX A
CONSTRUCTION PROGRAMME

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

AECOM

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

Activity ID	Activity Name	Dur (d)	emainin Duration	Start	Finish	Total Float	Calendar
Revised Programme (2020-08-31)							
1.0 - Contract Date							
CD-1000	Contract Date	0	0	28-Nov-19 A			CD (7d)
CD-1010	Starting date	0	0	06-Dec-19 A			CD (7d)
CD-1020	Contract Completion Date	0	0		06-Jan-26*	0	CD (7d)
CD-1030	Contract Completion Date (with Establishment)	0	0		06-Jan-27*	0	CD (7d)
CD-1040	Planned Completion Date (Exclude Establishment)	0	0		27-Dec-25	11	CD (7d)
2.0 - Site Access Date							
AD-1000	Poriton 1a	0	0	06-Jul-21*		0	CD (7d)
AD-1010	Portion 1b - (Minor Area Handovered on 7 May 2020)	0	0	06-Jul-21*		0	CD (7d)
AD-1020	Portion 1c	0	0	06-Jan-22*		0	CD (7d)
AD-1030	Portion 1d - (Late Possession from 6 Jul 2020)	0	0	25-Aug-20*		-50	CD (7d)
AD-1040	Portion 1e - (Minor Area Handovered on 20 Feb 2020)	0	0	06-Apr-21*		0	CD (7d)
AD-1050	Poriton 1f	0	0	23-Dec-19 A			CD (7d)
AD-1060	Portion 2 - (Major Area Handovered on 23 Dec 2019)	0	0	23-Dec-19 A			CD (7d)
AD-1070	Portion 3 - (Late Possession from 6 Apr 2020)	0	0	25-Aug-20*		-141	CD (7d)
AD-1080	Portion 4	0	0	20-Feb-20 A			CD (7d)
AD-1090	Portion 5 - (Major Area Handovered on 23 Dec 2019)	0	0	23-Dec-19 A			CD (7d)
AD-1100	Poriton 6a	0	0	23-Dec-19 A			CD (7d)
AD-1110	Poriton 6b	0	0	20-Feb-20 A			CD (7d)
AD-1120	Portion 7 - (Part of Area Handovered on 20 Feb 2020)	0	0	20-Feb-20 A			CD (7d)
AD-1130	Portion 8a - (Major Area Handovered on 24 Dec 2019)	0	0	24-Dec-19 A			CD (7d)
AD-1140	Portion 8b	0	0	24-Dec-19 A			CD (7d)
AD-1150	Portion 9a	0	0	06-Jan-22*		0	CD (7d)
AD-1160	Poriton 9b - (Late Possession from 6 Jul 2020)	0	0	25-Aug-20*		-50	CD (7d)
AD-1170	Poriton 9c	0	0	16-Jun-20 A			CD (7d)
AD-1180	Poriton 9d - (Late Possession from 6 Jul 2020)	0	0	25-Aug-20*		-50	CD (7d)
AD-1190	Poriotn 10a - (Major Area Handovered on 20 Feb 2020)	0	0	20-Feb-20 A			CD (7d)
AD-1200	Poriton 10b - (Part of Area Handovered on 20 Feb 2020)	0	0	28-May-20 A			CD (7d)
AD-1210	Protion 11a	0	0	25-Aug-20*		-50	CD (7d)
AD-1220	Protion 11b	0	0	06-Jan-24*		0	CD (7d)
AD-1230	Poriton 12	0	0	06-Jul-21*		0	CD (7d)
AD-1240	Poriton 13	0	0	06-Jan-22*		0	CD (7d)
AD-1250	Portion 14	0	0	07-Dec-20*		0	CD (7d)
AD-1260	Portion 15	0	0	06-Jan-23*		0	CD (7d)
AD-1270	Portion 16 - (Part of Area Handovered on 30 Dec 2020)	0	0	25-Aug-20*		-23	CD (7d)
3.0 - Section Completion Date							
3.1 Sectional Work Completion							
SC0-1000	Section 1 - all works Area H except landscape works and District Cooling System related works	0	0		06-Oct-22*	0	CD (7d)
SC0-1010	Section 2A - all works in Area C1	0	0		06-Feb-22*	0	CD (7d)
SC0-1020	Section 2B - all works in Area C2	0	0		06-May-23*	0	CD (7d)
SC0-1030	Section 3 - all works in Area E	0	0		21-Feb-22*	0	CD (7d)
SC0-1040	Section 4A - all works in Area D1	0	0		06-May-23*	0	CD (7d)
SC0-1050	Section 4B - all works in Area D2	0	0		21-Oct-23*	0	CD (7d)
SC0-1060	Section 4C - all works in Area D3	0	0		06-Feb-23*	0	CD (7d)
SC0-1070	Section 5 - all works in Area I	0	0		06-Feb-21*	0	CD (7d)
SC0-1080	Section 6A - all works in Area G1	0	0		06-Jul-23*	0	CD (7d)
SC0-1090	Section 6B - all works in Area G2	0	0		06-Jul-25*	0	CD (7d)
SC0-1100	Section 6C - all works in Area G3	0	0		06-Jan-26*	0	CD (7d)
SC0-1110	Section 7 - all works in Area K	0	0		06-Mar-23*	0	CD (7d)
SC0-1120	Section 8 - all works in Area A except works under Section 18 and landscape works	0	0		21-Jun-24*	0	CD (7d)
SC0-1130	Section 9 - all works in Area F	0	0		06-Sep-22*	0	CD (7d)



Build King RW

Build King – Richwell Engineering Joint Venture

- Planned Work
- Critical Work
- Actual Work
- Milestone
- Milestone Critical
- Summary LOE
- Second Baseli...
- Baseline Milest...

ND/2019/01 - Revised Programme (2020-08)

Project ID: ND201901-RP-8.0
Layout: ND201901-RP with logo
Page 1 of 31

REVISED PROGRAMME (2020-08)			
Date	Revision	Checked	Approved
31-Aug-20	Rev.0	JC	BY

Activity ID	Activity Name	Dur (d)	emainin Duration	Start	Finish	Total Float	Calendar
SC0-1140	Section 10A - all works in Area J	0	0		06-Jul-22*	0	CD (7d)
SC0-1150	Section 10B - all works in Area J1	0	0		06-Apr-23*	0	CD (7d)
SC0-1160	Section 11 - all works in Area B	0	0		06-Jan-26*	0	CD (7d)
SC0-1170	Section 12A - all works in L1 except landscape works and District Cooling System related works	0	0		06-Oct-24*	0	CD (7d)
SC0-1180	Section 12B - all works in L2 except landscape works and District Cooling System related works	0	0		06-Jan-26*	0	CD (7d)
SC0-1190	Section 13 - all works in Area N except landscape works	0	0		06-Jan-26*	0	CD (7d)
SC0-1200	Section 14 - all remaining works not included in other section of works	0	0		06-Jan-26*	0	CD (7d)
SC0-1210	Section 15 - preservation and protection of trees	0	0		06-Jan-26*	0	CD (7d)
SC0-1220	Section 16 - landscape works	0	0		06-Jan-26*	0	CD (7d)
SC0-1230	Section 17 - establishment works	0	0		06-Jan-27*	0	CD (7d)
SC0-1240	Section 18 - the 700mm diameter water mains laying works and associated ancillary structures	0	0		21-Jun-24*	0	CD (7d)
SC0-1250	Section 19A - 3x1200mm water pipes within Road L1 under Area H for District Cooling System and ancillary structures	0	0		06-Jul-22*	0	CD (7d)
SC0-1260	Section 19B - 3x1200mm water pipes within Road L1 under Area L1 for District Cooling System and ancillary structures	0	0		06-Jul-24*	0	CD (7d)
SC0-1270	Section 19C - 3x1200mm water pipes within Road L2 under Area L2 for District Cooling System and ancillary structures	0	0		06-Oct-25*	0	CD (7d)
SC0-1280	Section 20 - the consturciton of Pak Shek Au Pedestrian Subway Cum Cycle Track	0	0		06-Jan-26*	0	CD (7d)
SC0-1290	Section 21 - all works in Area M	0	0		06-Jan-26*	0	CD (7d)
3.2 Planned Sectional Work Completeion							
SC-1000	Section 1 - all works Area H except landscape works and District Cooling System related works	0	0		06-Jan-23*	-92	CD (7d)
SC-1010	Section 2A - all works in Area C1	0	0		12-Oct-21*	117	CD (7d)
SC-1020	Section 2B - all works in Area C2	0	0		02-May-23*	4	CD (7d)
SC-1030	Section 3 - all works in Area E	0	0		21-Feb-22*	0	CD (7d)
SC-1040	Section 4A - all works in Area D1	0	0		27-Jan-23*	99	CD (7d)
SC-1050	Section 4B - all works in Area D2	0	0		04-Oct-23*	17	CD (7d)
SC-1060	Section 4C - all works in Area D3	0	0		28-Oct-22*	101	CD (7d)
SC-1070	Section 5 - all works in Area I	0	0		06-Feb-21*	0	CD (7d)
SC-1080	Section 6A - all works in Area G1	0	0		06-Jul-23*	0	CD (7d)
SC-1090	Section 6B - all works in Area G2	0	0		21-Nov-24*	228	CD (7d)
SC-1100	Section 6C - all works in Area G3	0	0		14-Nov-24*	419	CD (7d)
SC-1110	Section 7 - all works in Area K	0	0		11-Jul-22*	238	CD (7d)
SC-1120	Section 8 - all works in Area A except works under Section 18 and landscape works	0	0		04-Oct-24*	-105	CD (7d)
SC-1130	Section 9 - all works in Area F	0	0		25-Jul-22*	43	CD (7d)
SC-1140	Section 10A - all works in Area J	0	0		28-Feb-22*	128	CD (7d)
SC-1150	Section 10B - all works in Area J1	0	0		06-Apr-23*	0	CD (7d)
SC-1160	Section 11 - all works in Area B	0	0		12-Feb-25*	329	CD (7d)
SC-1170	Section 12A - all works in L1 except landscape works and District Cooling System related works	0	0		06-Oct-24*	1	CD (7d)
SC-1180	Section 12B - all works in L2 except landscape works and District Cooling System related works	0	0		10-Dec-25*	28	CD (7d)
SC-1190	Section 13 - all works in Area N except landscape works	0	0		24-Nov-24*	409	CD (7d)
SC-1200	Section 14 - all remaining works not included in other section of works	0	0		12-Aug-25*	147	CD (7d)
SC-1210	Section 15 - preservation and protection of trees	0	0		27-Feb-25*	313	CD (7d)
SC-1220	Section 16 - landscape works	0	0		10-Dec-25*	27	CD (7d)
SC-1230	Section 17 - establishment works	0	0		10-Dec-26*	27	CD (7d)
SC-1240	Section 18 - the 700mm diameter water mains laying works and associated ancillary structures	0	0		24-Jan-24*	149	CD (7d)
SC-1250	Section 19A - 3x1200mm water pipes within Road L1 under Area H for District Cooling System and ancillary structures	0	0		28-Dec-21*	190	CD (7d)
SC-1260	Section 19B - 3x1200mm water pipes within Road L1 under Area L1 for District Cooling System and ancillary structures	0	0		06-Jul-24*	1	CD (7d)
SC-1270	Section 19C - 3x1200mm water pipes within Road L2 under Area L2 for District Cooling System and ancillary structures	0	0		30-Jun-25*	99	CD (7d)
SC-1280	Section 20 - the consturciton of Pak Shek Au Pedestrian Subway Cum Cycle Track	0	0		27-Dec-25*	11	CD (7d)
SC-1290	Section 21 - all works in Area M	0	0		30-Oct-24*	434	CD (7d)
4.0 - Key Date							
4.1 Key Date Completion							
KD0-1000	KD1 609 days after starting date	0	0		06-Aug-21*	0	CD (7d)
KD0-1010	KD2 655 days after starting date	0	0		21-Sep-21*	0	CD (7d)

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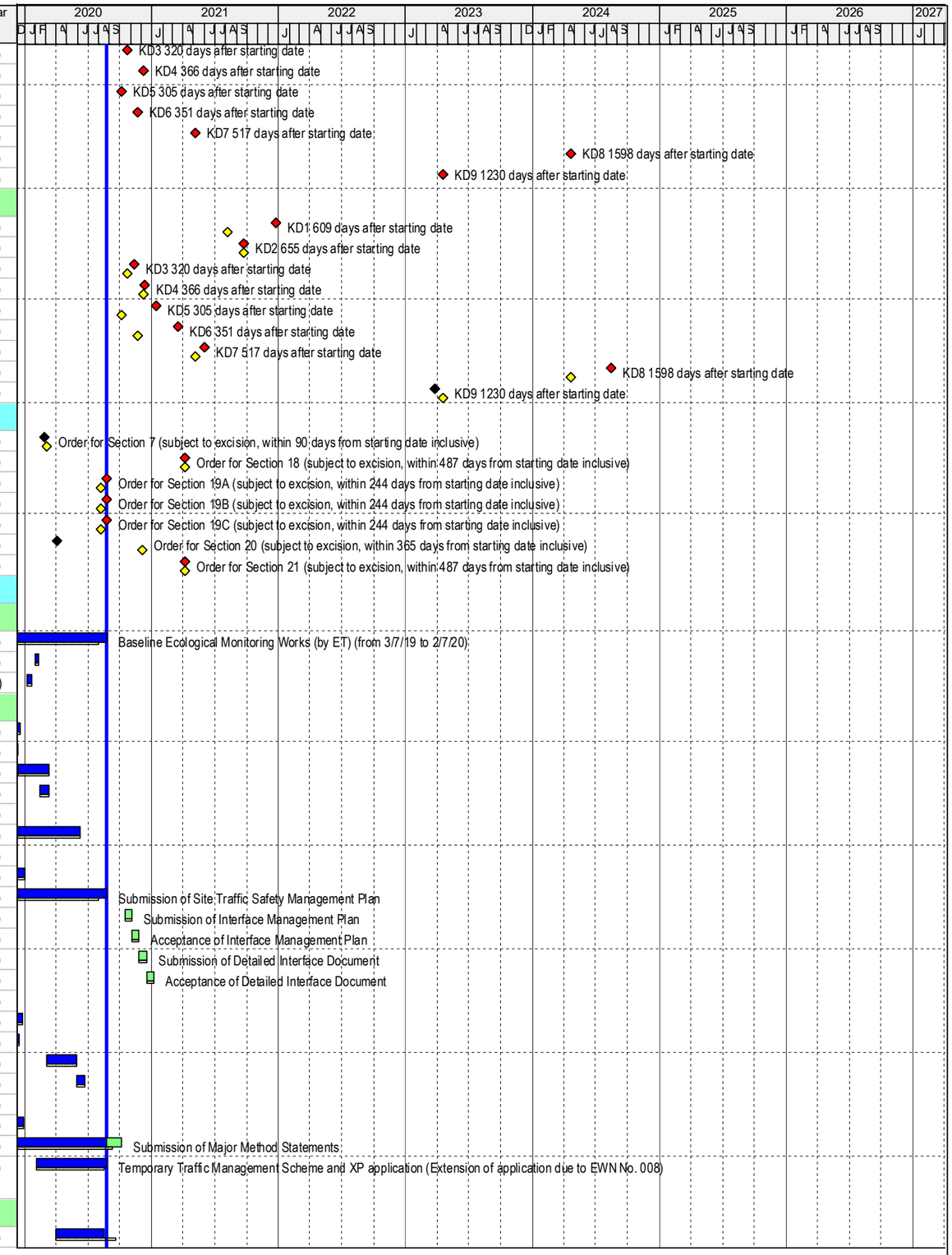
Activity ID	Activity Name	Dur (d)	emainin Duration	Start	Finish	Total Float	Calendar
KD0-1020	KD3 320 days after starting date	0	0		21-Oct-20*	0	CD (7d)
KD0-1030	KD4 366 days after starting date	0	0		06-Dec-20*	0	CD (7d)
KD0-1040	KD5 305 days after starting date	0	0		06-Oct-20*	0	CD (7d)
KD0-1050	KD6 351 days after starting date	0	0		21-Nov-20*	0	CD (7d)
KD0-1060	KD7 517 days after starting date	0	0		06-May-21*	0	CD (7d)
KD0-1070	KD8 1598 days after starting date	0	0		21-Apr-24*	0	CD (7d)
KD0-1080	KD9 1230 days after starting date	0	0		19-Apr-23*	0	CD (7d)
4.2 Planned Key Date Completion							
KD-1000	KD1 609 days after starting date	0	0		23-Dec-21*	-139	CD (7d)
KD-1010	KD2 655 days after starting date	0	0		21-Sep-21*	0	CD (7d)
KD-1020	KD3 320 days after starting date	0	0		10-Nov-20*	-20	CD (7d)
KD-1030	KD4 366 days after starting date	0	0		09-Dec-20*	-3	CD (7d)
KD-1040	KD5 305 days after starting date	0	0		14-Jan-21*	-100	CD (7d)
KD-1050	KD6 351 days after starting date	0	0		17-Mar-21*	-116	CD (7d)
KD-1060	KD7 517 days after starting date	0	0		01-Jun-21*	-26	CD (7d)
KD-1070	KD8 1598 days after starting date	0	0		15-Aug-24*	-115	CD (7d)
KD-1080	KD9 1230 days after starting date	0	0		25-Mar-23*	25	CD (7d)
5.0 - Ordering Date							
OD-1000	Order for Section 7 (subject to excision, within 90 days from starting date inclusive)	0	0		28-Feb-20 A		CD (7d)
OD-1010	Order for Section 18 (subject to excision, within 487 days from starting date inclusive)	0	0		05-Apr-21*	0	CD (7d)
OD-1020	Order for Section 19A (subject to excision, within 244 days from starting date inclusive)	0	0		25-Aug-20*	-19	CD (7d)
OD-1030	Order for Section 19B (subject to excision, within 244 days from starting date inclusive)	0	0		25-Aug-20*	-19	CD (7d)
OD-1040	Order for Section 19C (subject to excision, within 244 days from starting date inclusive)	0	0		25-Aug-20*	-19	CD (7d)
OD-1050	Order for Section 20 (subject to excision, within 365 days from starting date inclusive)	0	0		03-Apr-20 A		CD (7d)
OD-1060	Order for Section 21 (subject to excision, within 487 days from starting date inclusive)	0	0		05-Apr-21*	0	CD (7d)
6.0 - Preliminaries and General Requirements							
6.1 - Preliminaries							
PRE-1020	Baseline Ecological Monitoring Works (by ET) (from 3/7/19 to 2/7/20)	218	0	28-Nov-19 A	25-Aug-20	2326	CD (7d)
PRE-1030	Provision of Waste Water Treatment Facilities	30	0	01-Feb-20 A	10-Feb-20 A		CD (7d)
PRE-1040	Erection of Interim Contractor's Site Accommodation in Additional Land near Portion 1f	15	0	08-Jan-20 A	21-Jan-20 A		WD (6d)
6.2 - General Submission							
GS-1000	Submission of Organization Chart	14	0	06-Dec-19 A	19-Dec-19 A		CD (7d)
GS-1010	Submission of the First Programme	14	0	28-Nov-19 A	11-Dec-19 A		CD (7d)
GS-1020	Acceptance of the First Programme / Revision of First Programme	80	0	12-Dec-19 A	10-Mar-20 A		CD (7d)
GS-1030	Submission / Acceptance of the First Three Month Rolling Programme	0	0	14-Feb-20 A	10-Mar-20 A		CD (7d)
GS-1040	Submission of Draft Construction Health and Safety Plan	14	0	28-Nov-19 A	06-Dec-19 A		CD (7d)
GS-1050	Submission of Construction Health and Safety Plan	35	0	07-Dec-19 A	09-Jun-20 A		CD (7d)
GS-1060	Submission of Draft Environmental Management Plan	21	0	28-Nov-19 A	06-Dec-19 A		CD (7d)
GS-1070	Submission of Environmental Management Plan	45	0	28-Nov-19 A	31-Dec-19 A		CD (7d)
GS-1080	Submission of Site Traffic Safety Management Plan	42	0	06-Dec-19 A	25-Aug-20*	8	CD (7d)
GS-1100	Submission of Interface Management Plan	21	21	15-Oct-20*	04-Nov-20	306	CD (7d)
GS-1120	Acceptance of Interface Management Plan	21	21	05-Nov-20	25-Nov-20	306	CD (7d)
GS-1130	Submission of Detailed Interface Document	21	21	26-Nov-20	16-Dec-20	306	CD (7d)
GS-1140	Acceptance of Detailed Interface Document	21	21	17-Dec-20	06-Jan-21	306	CD (7d)
GS-1160	Submission of Subcontractor Management Plan	30	0	28-Nov-19 A	06-Dec-19 A		CD (7d)
GS-1170	Submission of Site Hoarding Plan	14	0	06-Dec-19 A	27-Dec-19 A		CD (7d)
GS-1180	Submission of Emergency Unit	14	0	06-Dec-19 A	17-Dec-19 A		CD (7d)
GS-1190	Submission of Details for Project Manager's Site Accommodation	28	0	06-Mar-20 A	29-May-20 A		CD (7d)
GS-1200	Acceptance of Details for Project Manager's Site Accommodation	42	0	30-May-20 A	23-Jun-20 A		CD (7d)
GS-1210	Submission of Subcontracting Procedure	9	0	28-Nov-19 A	06-Dec-19 A		CD (7d)
GS-1220	Acceptance of Subcontracting Procedure	21	0	07-Dec-19 A	27-Dec-19 A		CD (7d)
GS-1230	Submission of Major Method Statements	60	42	06-Dec-19 A	05-Oct-20	2284	CD (7d)
GS-1240	Temporary Traffic Management Scheme and XP application (Extension of application due to EWN No. 008)	150	0	04-Feb-20 A	25-Aug-20	-67	CD (7d)
6.3 - Subletting Package							
SP-1010	Project Manager's Site Accommodation	70	0	31-Mar-20 A	17-Aug-20 A		CD (7d)



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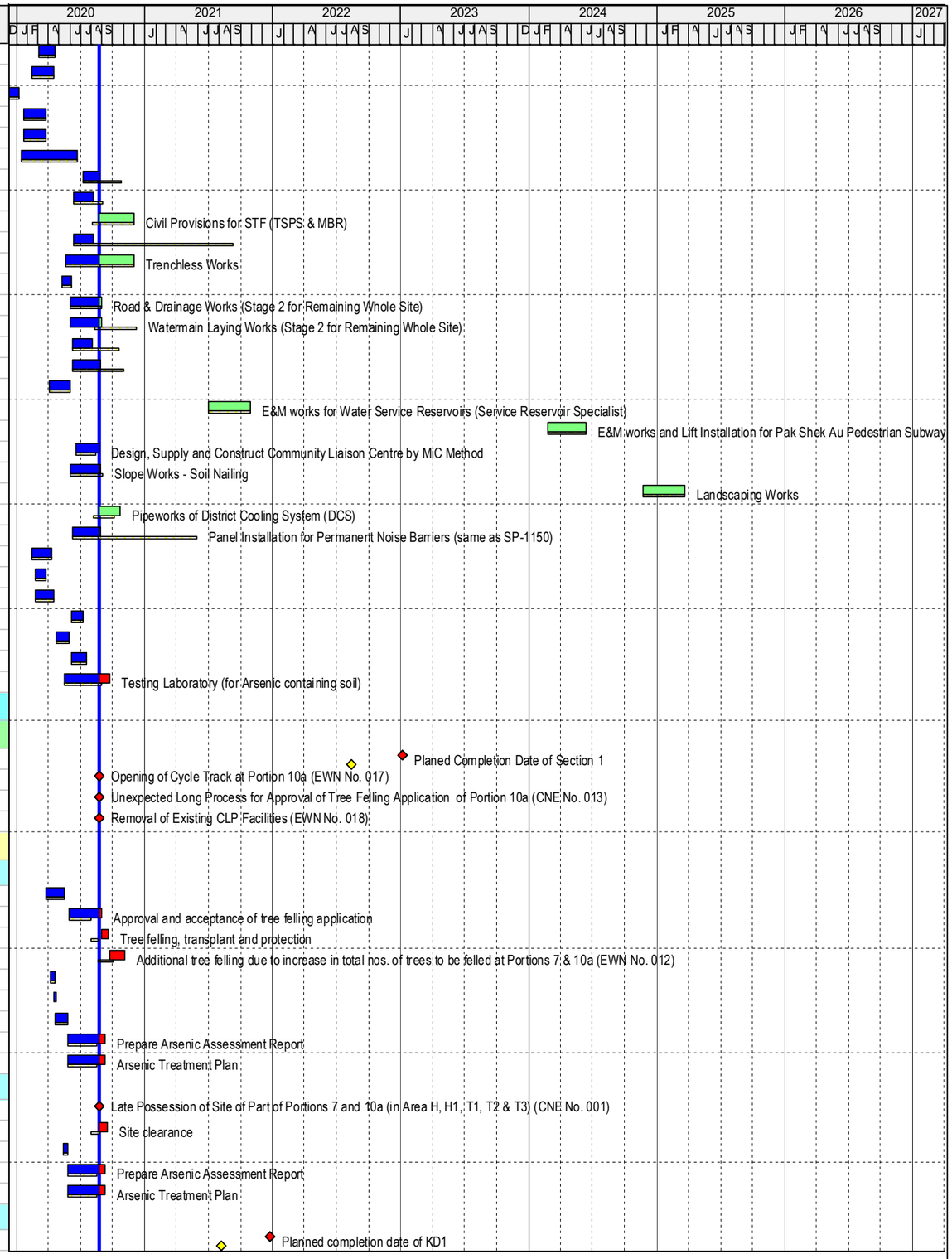
Activity ID	Activity Name	Dur (d)	emainin Duration	Start	Finish	Total Float	Calendar
SP-1020	Site Hoarding	90	0	05-Mar-20 A	20-Apr-20 A		CD (7d)
SP-1030	Independent Checking Engineer Services	70	0	14-Feb-20 A	17-Apr-20 A		CD (7d)
SP-1040	Security System for the site	90	0	07-Dec-19 A	08-Jan-20 A		CD (7d)
SP-1060	Tree Survey	75	0	20-Jan-20 A	24-Mar-20 A		CD (7d)
SP-1070	Ground Investigation and Laboratory Testing	80	0	20-Jan-20 A	24-Mar-20 A		CD (7d)
SP-1080	Site Formation Works (Earthworks)	141	0	16-Jan-20 A	23-Jun-20 A		CD (7d)
SP-1090	Piling Works	90	0	10-Jul-20 A	25-Aug-20 A		CD (7d)
SP-1110	RC Works for Retaining Wall (same as SP-1112)	120	0	11-Jun-20 A	06-Aug-20 A		CD (7d)
SP-1111	Civil Provisions for STF (TSPS & MBR)	99	99	25-Aug-20	01-Dec-20	36	CD (7d)
SP-1112	RC Works for Reservoirs (same as SP-1110)	120	0	11-Jun-20 A	06-Aug-20 A		CD (7d)
SP-1121	Trenchless Works	120	100	20-May-20 A	02-Dec-20	288	CD (7d)
SP-1130	Road & Drainage & Watermain Laying Works (Stage 1 Works along D1 and L1 Road)	120	0	11-May-20 A	05-Jun-20 A		CD (7d)
SP-1131	Road & Drainage Works (Stage 2 for Remaining Whole Site)	120	7	03-Jun-20 A	31-Aug-20	24	CD (7d)
SP-1132	Watermain Laying Works (Stage 2 for Remaining Whole Site)	120	7	03-Jun-20 A	31-Aug-20	370	CD (7d)
SP-1140	Road Lighting Works	90	0	08-Jun-20 A	04-Aug-20 A		CD (7d)
SP-1150	Construction works for Temporary Noise Barrier (same as SP-1230)	120	0	10-Jun-20 A	26-Aug-20 A		CD (7d)
SP-1160	E&M works for MBR Plant and Associated Works (including Sewage Transfer Station)	70	0	02-Apr-20 A	03-Jun-20 A		CD (7d)
SP-1170	E&M works for Water Service Reservoirs (Service Reservoir Specialist)	120	120	30-Jun-21	27-Oct-21	65	CD (7d)
SP-1180	E&M works and Lift Installation for Pak Shek Au Pedestrian Subway	110	110	25-Feb-24	13-Jun-24	89	CD (7d)
SP-1190	Design, Supply and Construct Community Liaison Centre by MiC Method	90	0	17-Jun-20 A	25-Aug-20	-25	CD (7d)
SP-1200	Slope Works - Soil Nailing	120	3	02-Jun-20 A	27-Aug-20	-72	CD (7d)
SP-1210	Landscaping Works	120	120	23-Nov-24	22-Mar-25	140	CD (7d)
SP-1220	Pipeworks of District Cooling System (DCS)	60	60	25-Aug-20	23-Oct-20	392	CD (7d)
SP-1230	Panel Installation for Permanent Noise Barriers (same as SP-1150)	90	2	10-Jun-20 A	26-Aug-20	345	CD (7d)
SP-1240	Traffic Consultant	60	0	14-Feb-20 A	09-Apr-20 A		CD (7d)
SP-1250	Interim Community Liaison Centre	60	0	22-Feb-20 A	24-Mar-20 A		CD (7d)
SP-1260	Condition Survey	60	0	22-Feb-20 A	17-Apr-20 A		CD (7d)
SP-1270	Building Information Modelling (BIM)	60	0	06-Jun-20 A	07-Jul-20 A		CD (7d)
SP-1280	Construction Video Film Production	60	0	23-Apr-20 A	29-May-20 A		CD (7d)
SP-1290	Demolition of Small Building	90	0	04-Jun-20 A	17-Jul-20 A		CD (7d)
SP-1300	Testing Laboratory (for Arsenic containing soil)	60	30	15-May-20 A	23-Sep-20	-62	CD (7d)
7.0 - CONSTRUCTION							
Section 1							
S1-1010	Planed Completion Date of Section 1	0	0		06-Jan-23	-92	CD (7d)
S1-1012	Opening of Cycle Track at Portion 10a (EWN No. 017)	0	0		25-Aug-20	-68	CD (7d)
S1-1014	Unexpected Long Process for Approval of Tree Felling Application of Portion 10a (CNE No. 013)	0	0		25-Aug-20	-105	CD (7d)
S1-1016	Removal of Existing CLP Facilities (EWN No. 018)	0	0		25-Aug-20	-68	CD (7d)
Portion 10a in Area H, H1, H2 (Soil Treatment & Provision of Site Access & EVA to MWSC)							
Preparation work/Tree Survey/Site Clearance/GI							
S1P10a-1010	Tree survey and prepare tree felling and transplant report	30	0	25-Mar-20 A	18-May-20 A		WD (6d)
S1P10a-1020	Approval and acceptance of tree felling application	30	5	30-May-20 A	29-Aug-20	-110	CD (7d)
S1P10a-1030	Tree felling, transplant and protection	18	18	31-Aug-20	19-Sep-20	-93	WD (6d)
S1P10a-1031	Additional tree felling due to increase in total nos. of trees to be felled at Portions 7 & 10a (EWN	36	36	21-Sep-20	04-Nov-20	-93	WD (6d)
S1P10a-1040	Site clearance	10	0	06-Apr-20 A	20-Apr-20 A		WD (6d)
S1P10a-1045	Ground investigation (1 / 1 GI completed)	6	0	15-Apr-20 A	22-Apr-20 A		WD (6d)
S1P10a-1050	Environmental Ground investigation and laboratory test (6 EGI)	22	0	21-Apr-20 A	25-May-20 A		WD (6d)
S1P10a-1060	Prepare Arsenic Assessment Report	15	15	26-May-20 A	10-Sep-20	-49	WD (6d)
S1P10a-1070	Arsenic Treatment Plan	16	15	26-May-20 A	10-Sep-20	-49	WD (6d)
Preparation work/Tree Survey/Site Clearance/GI at Late Possession Area (Area H, H1)							
S1P10a-1100	Late Possession of Site of Part of Portions 7 and 10a (in Area H, H1, T1, T2 & T3) (CNE No. 001)	0	0	25-Aug-20		-127	CD (7d)
S1P10a-1130	Site clearance	20	20	25-Aug-20	16-Sep-20	-105	WD (6d)
S1P10a-1140	Environmental ground investigation and laboratory test (1 EGI)	10	0	12-May-20 A	25-May-20 A		WD (6d)
S1P10a-1150	Prepare Arsenic Assessment Report	15	15	26-May-20 A	10-Sep-20	-64	WD (6d)
S1P10a-1160	Arsenic Treatment Plan	15	15	26-May-20 A	10-Sep-20	-64	WD (6d)
KD1 - Provision of Site Access and EVA to MWSC							
S1K1-1000	Planned completion date of KD1	0	0		23-Dec-21	-139	CD (7d)



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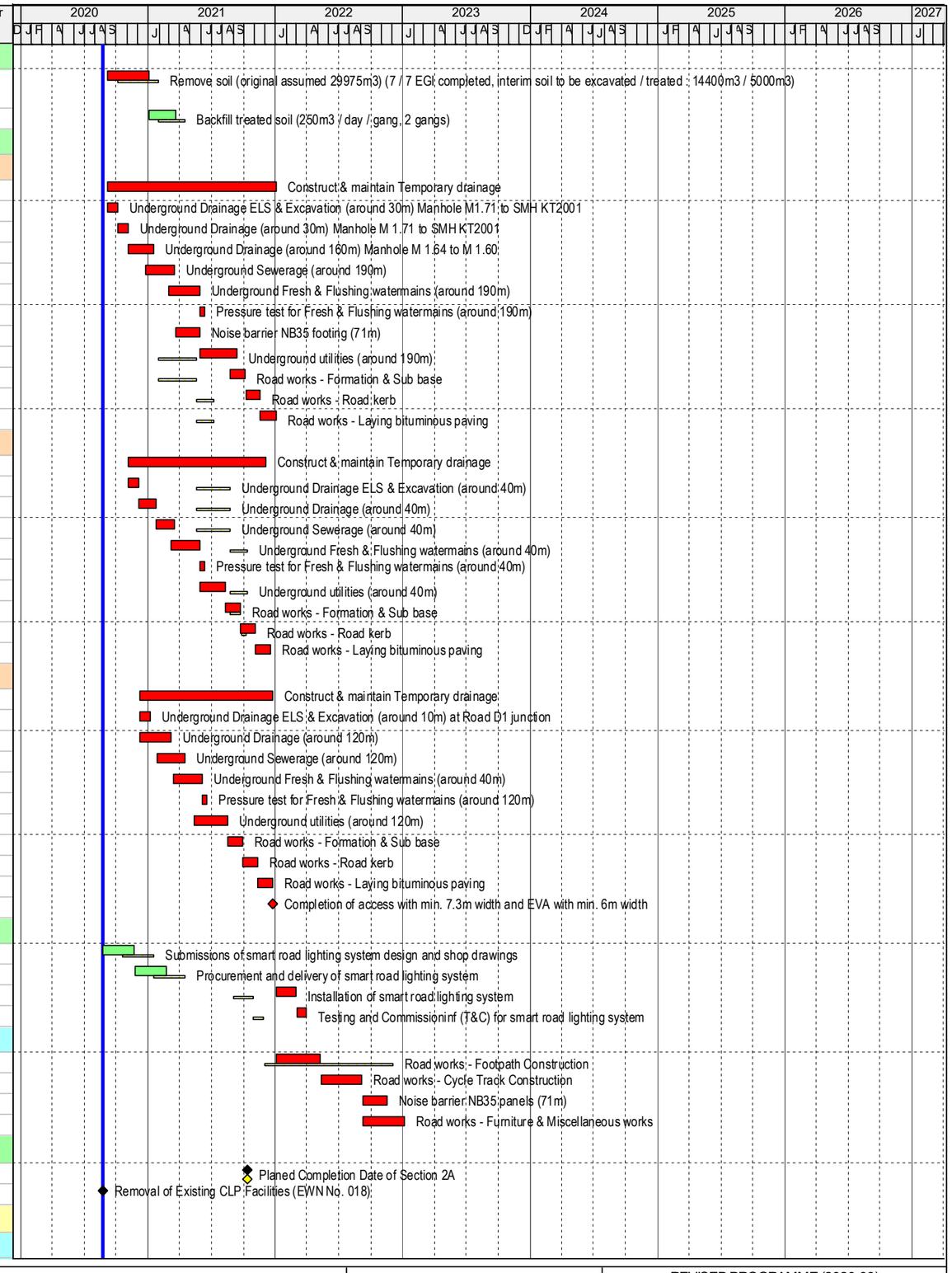
Activity ID	Activity Name	Dur (d)	emainin Duration	Start	Finish	Total Float	Calendar
Soil Treatment							
S1K1-1010	Remove soil (original assumed 29975m3) (7 / 7 EGI completed, interim soil to be excavated / treated : 14400m3 / 5000m3)	96	96	07-Sep-20*	02-Jan-21	-86	WD (6d)
S1K1-1020	Backfill treated soil (250m3 / day / gang, 2 gangs)	62	62	04-Jan-21	19-Mar-21	113	WD (6d)
Civil Work							
Road D1 (Stage 1)							
S1K1-2000	Construct & maintain Temporary drainage	393	393	07-Sep-20	03-Jan-22	-77	WD (6d)
S1K1-2002	Underground Drainage ELS & Excavation (around 30m) Manhole M1.71 to SMH KT2001	24	24	07-Sep-20*	06-Oct-20	-116	WD (6d)
S1K1-2004	Underground Drainage (around 30m) Manhole M 1.71 to SMH KT2001	24	24	07-Oct-20	04-Nov-20	-116	WD (6d)
S1K1-2006	Underground Drainage (around 160m) Manhole M 1.64 to M 1.60	60	60	05-Nov-20	16-Jan-21	-86	WD (6d)
S1K1-2008	Underground Sewerage (around 190m)	66	66	23-Dec-20	16-Mar-21	-86	WD (6d)
S1K1-2009	Underground Fresh & Flushing watermains (around 190m)	72	72	01-Mar-21	28-May-21	-86	WD (6d)
S1K1-2010	Pressure test for Fresh & Flushing watermains (around 190m)	12	12	29-May-21	11-Jun-21	-8	WD (6d)
S1K1-2012	Noise barrier NB35 footing (71m)	54	54	22-Mar-21	28-May-21	-86	WD (6d)
S1K1-2014	Underground utilities (around 190m)	90	90	29-May-21	13-Sep-21	-86	WD (6d)
S1K1-2016	Road works - Formation & Sub base	36	36	24-Aug-21	06-Oct-21	-86	WD (6d)
S1K1-2018	Road works - Road kerb	36	36	07-Oct-21	18-Nov-21	-86	WD (6d)
S1K1-2020	Road works - Laying bituminous paving	36	36	19-Nov-21	03-Jan-22	-77	WD (6d)
Road D1 (Stage 2) Castle Peak road junction							
S1K1-2024	Construct & maintain Temporary drainage	320	320	06-Nov-20	02-Dec-21	-53	WD (6d)
S1K1-2026	Underground Drainage ELS & Excavation (around 40m)	24	24	06-Nov-20	03-Dec-20	-116	WD (6d)
S1K1-2028	Underground Drainage (around 40m)	40	40	04-Dec-20	22-Jan-21	-82	WD (6d)
S1K1-2030	Underground Sewerage (around 40m)	42	42	23-Jan-21	16-Mar-21	-65	WD (6d)
S1K1-2032	Underground Fresh & Flushing watermains (around 40m)	66	66	08-Mar-21	28-May-21	-65	WD (6d)
S1K1-2033	Pressure test for Fresh & Flushing watermains (around 40m)	12	12	29-May-21	11-Jun-21	-17	WD (6d)
S1K1-2034	Underground utilities (around 40m)	60	60	29-May-21	09-Aug-21	-65	WD (6d)
S1K1-2036	Road works - Formation & Sub base	36	36	10-Aug-21	20-Sep-21	-65	WD (6d)
S1K1-2038	Road works - Road kerb	36	36	21-Sep-21	04-Nov-21	-65	WD (6d)
S1K1-2040	Road works - Laying bituminous paving	36	36	05-Nov-21	16-Dec-21	-65	WD (6d)
Rooad L1							
S1K1-2100	Construct & maintain Temporary drainage	312	312	07-Dec-20	23-Dec-21	-116	WD (6d)
S1K1-2102	Underground Drainage ELS & Excavation (around 10m) at Road D1 junction	24	24	07-Dec-20	06-Jan-21	-116	WD (6d)
S1K1-2104	Underground Drainage (around 120m)	72	72	07-Dec-20	06-Mar-21	-116	WD (6d)
S1K1-2106	Underground Sewerage (around 120m)	60	60	28-Jan-21	14-Apr-21	-116	WD (6d)
S1K1-2108	Underground Fresh & Flushing watermains (around 40m)	66	66	15-Mar-21	04-Jun-21	-116	WD (6d)
S1K1-2109	Pressure test for Fresh & Flushing watermains (around 120m)	12	12	05-Jun-21	19-Jun-21	-68	WD (6d)
S1K1-2110	Underground utilities (around 120m)	78	78	14-May-21	16-Aug-21	-116	WD (6d)
S1K1-2112	Road works - Formation & Sub base	36	36	17-Aug-21	28-Sep-21	-116	WD (6d)
S1K1-2114	Road works - Road kerb	36	36	29-Sep-21	11-Nov-21	-116	WD (6d)
S1K1-2116	Road works - Laying bituminous paving	36	36	12-Nov-21	23-Dec-21	-116	WD (6d)
S1K1-2130	Completion of access with min. 7.3m width and EVA with min. 6m width	0	0		23-Dec-21	-116	WD (6d)
Smart Road Lightings System Installation							
S1K1-3010	Submissions of smart road lighting system design and shop drawings	90	90	25-Aug-20	22-Nov-20	221	CD (7d)
S1K1-3020	Procurement and delivery of smart road lighting system	90	90	23-Nov-20	20-Feb-21	221	CD (7d)
S1K1-3030	Installation of smart road lighting system	46	46	04-Jan-22	01-Mar-22	-77	WD (6d)
S1K1-3040	Testing and Commissioninf (T&C) for smart road lighting system	30	30	02-Mar-22	31-Mar-22	-61	CD (7d)
Remaining Road works in Area H							
S1P10a-2010	Road works - Footpath Construction	100	100	04-Jan-22	10-May-22	-77	WD (6d)
S1P10a-2012	Road works - Cycle Track Construction	100	100	11-May-22	06-Sep-22	-77	WD (6d)
S1P10a-2014	Noise barrier NB35 panels (71m)	60	60	07-Sep-22	18-Nov-22	-37	WD (6d)
S1P10a-2016	Road works - Furniture & Miscellaneous works	100	100	07-Sep-22	06-Jan-23	-77	WD (6d)
Section 2A							
S2A-1000	Planed Completion Date of Section 2A	0	0		12-Oct-21	117	CD (7d)
S2A-1002	Removal of Existing CLP Facilities (EWN No. 018)	0	0		25-Aug-20	413	CD (7d)
Portion 5 in Area C1 (Soil Treatment & Interface with HD's Contractors)							
Preparation work/Tree Survey/Site Clearance/GI							



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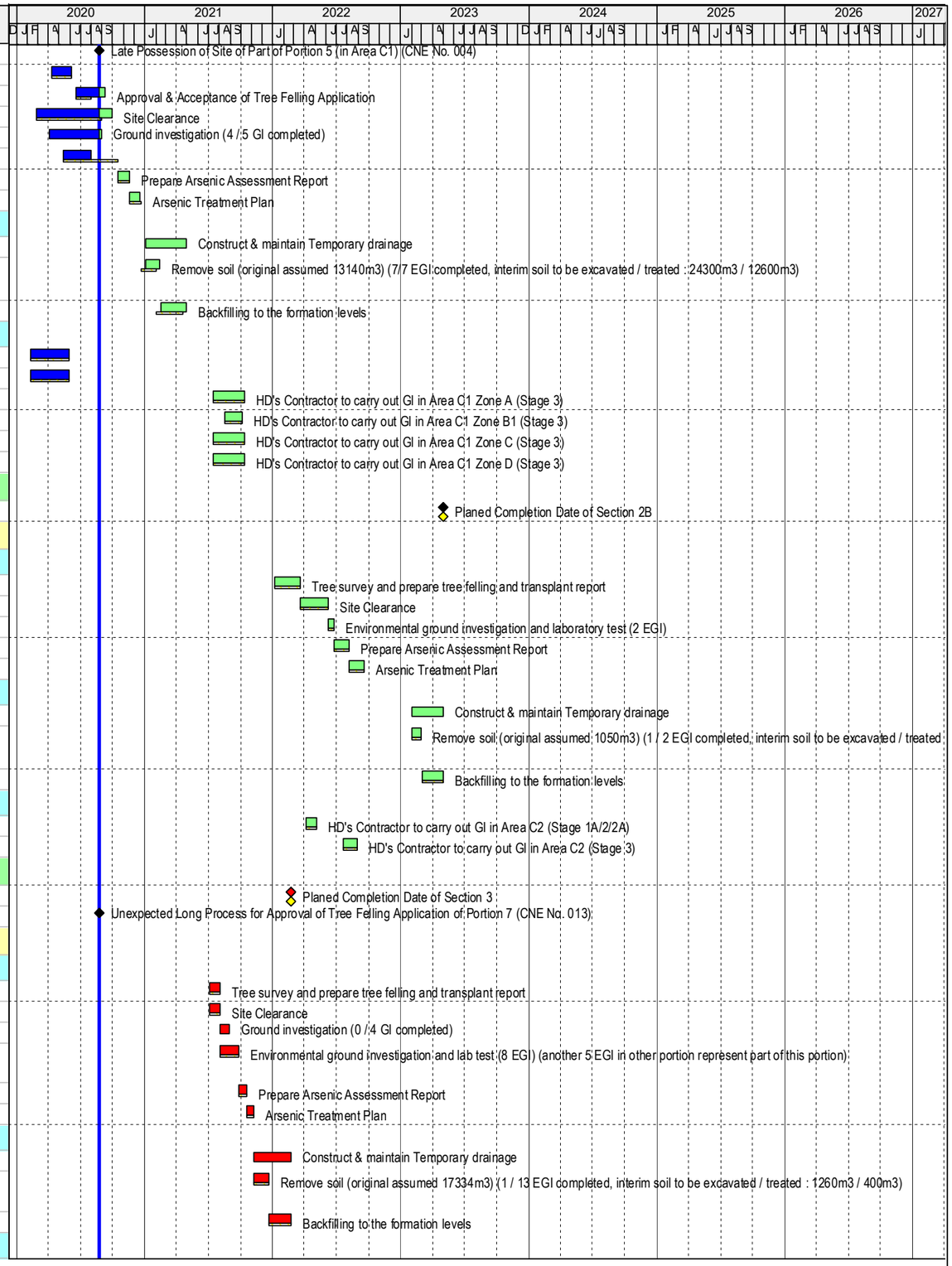
Activity ID	Activity Name	Dur (d)	emainin Duration	Start	Finish	Total Float	Calendar
S2AP5-1000	Late Possession of Site of Part of Portion 5 (in Area C1) (CNE No. 004)	0	0	25-Aug-20		283	CD (7d)
S2AP5-1010	Tree survey and prepare tree felling and transplant report	60	0	08-Apr-20 A	04-Jun-20 A		WD (6d)
S2AP5-1015	Approval & Acceptance of Tree Felling Application	30	15	20-Jun-20 A	08-Sep-20	41	CD (7d)
S2AP5-1020	Site Clearance	60	30	26-Feb-20 A	28-Sep-20	229	WD (6d)
S2AP5-1025	Ground investigation (4 / 5 GI completed)	30	6	03-Apr-20 A	31-Aug-20	229	WD (6d)
S2AP5-1030	Environmental ground investigation and laboratory test (7 EGI)	36	0	14-May-20 A	31-Jul-20 A		WD (6d)
S2AP5-1040	Prepare Arsenic Assessment Report	28	28	14-Oct-20	16-Nov-20	229	WD (6d)
S2AP5-1050	Arsenic Treatment Plan	28	28	17-Nov-20	18-Dec-20	229	WD (6d)
Soil Treatment							
S2AP5-2000	Construct & maintain Temporary drainage	94	94	04-Jan-21	29-Apr-21	229	WD (6d)
S2AP5-2010	Remove soil (original assumed 13140m3) (7/7 EGI completed, interim soil to be excavated / treated : 24300m3 / 12600m3)	34	34	04-Jan-21	11-Feb-21	229	WD (6d)
S2AP5-2020	Backfilling to the formation levels	60	60	16-Feb-21	29-Apr-21	229	WD (6d)
Interface with HD's Contractor to carry out GI							
S2AP5-3010	HD's Contractor to carry out GI in Area C1 (Stage 1)	67	0	10-Feb-20 A	30-May-20 A		CD (7d)
S2AP5-3020	HD's Contractor to carry out GI in Area C1 (Stage 1A/2/2A)	75	0	10-Feb-20 A	30-May-20 A		CD (7d)
S2AP5-3030	HD's Contractor to carry out GI in Area C1 Zone A (Stage 3)	90	90	15-Jul-21*	12-Oct-21	117	CD (7d)
S2AP5-3040	HD's Contractor to carry out GI in Area C1 Zone B1 (Stage 3)	50	50	17-Aug-21*	05-Oct-21	124	CD (7d)
S2AP5-3050	HD's Contractor to carry out GI in Area C1 Zone C (Stage 3)	90	90	15-Jul-21*	12-Oct-21	117	CD (7d)
S2AP5-3060	HD's Contractor to carry out GI in Area C1 Zone D (Stage 3)	90	90	15-Jul-21*	12-Oct-21	117	CD (7d)
Section 2B							
S2B-1000	Planed Completion Date of Section 2B	0	0		02-May-23	4	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	60	60	06-Jan-22	19-Mar-22	114	WD (6d)
S2BP9a-1020	Site Clearance	60	60	21-Mar-22	06-Jun-22	114	WD (6d)
S2BP9a-1030	Environmental ground investigation and laboratory test (2 EGI)	15	15	07-Jun-22	23-Jun-22	114	WD (6d)
S2BP9a-1040	Prepare Arsenic Assessment Report	36	36	24-Jun-22	05-Aug-22	114	WD (6d)
S2BP9a-1050	Arsenic Treatment Plan	36	36	06-Aug-22	17-Sep-22	114	WD (6d)
Soil Treatment							
S2BP9a-2000	Construct & maintain Temporary drainage	72	72	02-Feb-23	02-May-23	4	WD (6d)
S2BP9a-2010	Remove soil (original assumed 1050m3) (1 / 2 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	02-Feb-23*	01-Mar-23	4	WD (6d)
S2BP9a-2020	Backfilling to the formation levels	48	48	02-Mar-23	02-May-23	4	WD (6d)
Interface with HD's Contractor to carry out GI							
S2BP9a-3010	HD's Contractor to carry out GI in Area C2 (Stage 1A/2/2A)	30	30	06-Apr-22*	05-May-22	326	CD (7d)
S2BP9a-3020	HD's Contractor to carry out GI in Area C2 (Stage 3)	40	40	20-Jul-22*	28-Aug-22	251	CD (7d)
Section 3							
S3-1000	Planed Completion Date of Section 3	0	0		21-Feb-22	0	CD (7d)
S3-1002	Unexpected Long Process for Approval of Tree Felling Application of Portion 7 (CNE No. 013)	0	0		25-Aug-20	288	CD (7d)
Portion 1a in Area E (Soil Treatment & Interface with HKHS's Contractors)							
Preparation work/Tree Survey/Site Clearance/GI							
S3P1a-1010	Tree survey and prepare tree felling and transplant report	24	24	06-Jul-21	02-Aug-21	0	WD (6d)
S3P1a-1020	Site Clearance	24	24	06-Jul-21	02-Aug-21	0	WD (6d)
S3P1a-1025	Ground investigation (0 / 4 GI completed)	24	24	03-Aug-21	30-Aug-21	0	WD (6d)
S3P1a-1030	Environmental ground investigation and lab test (8 EGI) (another 5 EGI in other portion represent part of this portion)	45	45	03-Aug-21	24-Sep-21	0	WD (6d)
S3P1a-1040	Prepare Arsenic Assessment Report	18	18	25-Sep-21	18-Oct-21	0	WD (6d)
S3P1a-1050	Arsenic Treatment Plan	18	18	19-Oct-21	08-Nov-21	0	WD (6d)
Soil Treatment							
S3P1a-2000	Construct & maintain Temporary drainage	84	84	09-Nov-21	21-Feb-22	0	WD (6d)
S3P1a-2010	Remove soil (original assumed 17334m3) (1 / 13 EGI completed, interim soil to be excavated / treated : 1260m3 / 400m3)	36	36	09-Nov-21*	20-Dec-21	0	WD (6d)
S3P1a-2020	Backfilling to the formation levels	48	48	21-Dec-21	21-Feb-22	0	WD (6d)
Interface with HKHS's contractor to carry out GI							



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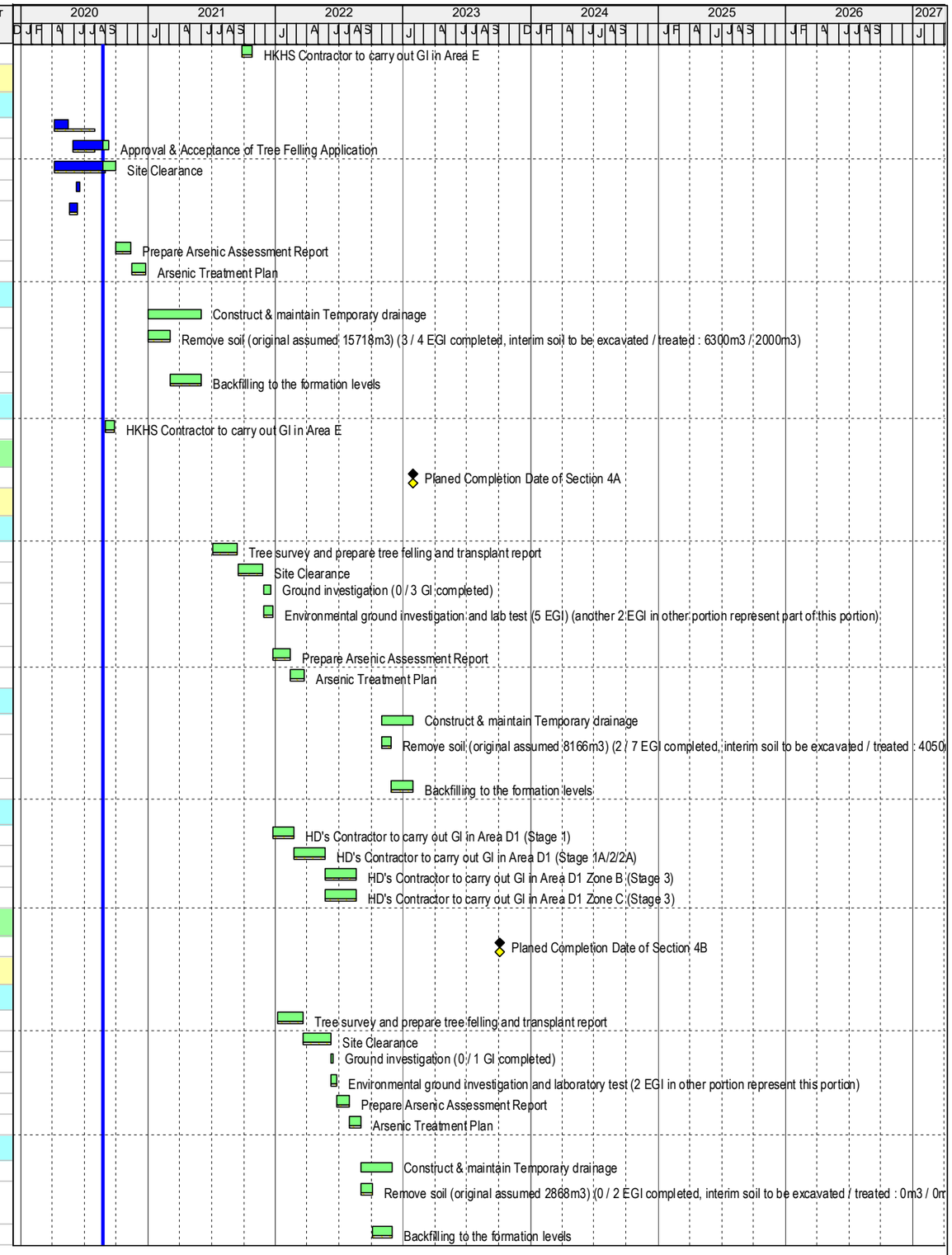
S3P1a-3010	HKHS Contractor to carry out GI in Area E	24	24	25-Sep-21	25-Oct-21	12	WD (6d)
Portion 7 in Area E (Soil Treatment & Interface with HKHS's Contractors)							
Preparation work/Tree Survey/Site Clearance/GI							
S3P7-1010	Tree survey and prepare tree felling and transplant report	60	0	06-Apr-20 A	18-May-20 A		WD (6d)
S3P7-1015	Approval & Acceptance of Tree Felling Application	30	15	30-May-20 A	08-Sep-20	273	CD (7d)
S3P7-1020	Site Clearance	60	30	06-Apr-20 A	28-Sep-20	219	WD (6d)
S3P7-1025	Ground investigation (1 / 1 GI completed)	6	0	08-Jun-20 A	17-Jun-20 A		WD (6d)
S3P7-1030	Environmental ground investigation and lab test (3 EGI) (another 1 EGI in other portion represent part of this portion)	24	0	21-May-20 A	13-Jun-20 A		WD (6d)
S3P7-1040	Prepare Arsenic Assessment Report	36	36	29-Sep-20*	12-Nov-20	219	WD (6d)
S3P7-1050	Arsenic Treatment Plan	36	36	13-Nov-20	24-Dec-20	219	WD (6d)
Soil Treatment							
S3P7-2000	Construct & maintain Temporary drainage	122	122	30-Dec-20	31-May-21	217	WD (6d)
S3P7-2010	Remove soil (original assumed 15718m3) (3 / 4 EGI completed, interim soil to be excavated / treated : 6300m3 / 2000m3)	50	50	30-Dec-20*	02-Mar-21	217	WD (6d)
S3P7-2020	Backfilling to the formation levels	72	72	03-Mar-21	31-May-21	217	WD (6d)
Interface with HKHS's contractor to carry out GI							
S3P7-3010	HKHS Contractor to carry out GI in Area E	24	24	31-Aug-20	26-Sep-20	292	WD (6d)
Section 4A							
S4-1000	Planed Completion Date of Section 4A	0	0		27-Jan-23	99	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	60	60	06-Jul-21	13-Sep-21	208	WD (6d)
S4AP1b-1020	Site Clearance	60	60	14-Sep-21	25-Nov-21	208	WD (6d)
S4AP1b-1025	Ground investigation (0 / 3 GI completed)	18	18	26-Nov-21	16-Dec-21	208	WD (6d)
S4AP1b-1030	Environmental ground investigation and lab test (5 EGI) (another 2 EGI in other portion represent part of this portion)	24	24	26-Nov-21	23-Dec-21	208	WD (6d)
S4AP1b-1040	Prepare Arsenic Assessment Report	36	36	24-Dec-21	10-Feb-22	257	WD (6d)
S4AP1b-1050	Arsenic Treatment Plan	36	36	11-Feb-22	24-Mar-22	257	WD (6d)
Soil Treatment							
S4AP1b-2000	Construct & maintain Temporary drainage	72	72	31-Oct-22	27-Jan-23	80	WD (6d)
S4AP1b-2010	Remove soil (original assumed 8166m3) (2 / 7 EGI completed, interim soil to be excavated / treated : 4050m3 / 2700m3)	24	24	31-Oct-22*	26-Nov-22	80	WD (6d)
S4AP1b-2020	Backfilling to the formation levels	48	48	28-Nov-22	27-Jan-23	80	WD (6d)
Interface with HD's Contractor to carry out GI							
S4AP1b-3010	HD's Contractor to carry out GI in Area D1 (Stage 1)	60	60	24-Dec-21	21-Feb-22	259	CD (7d)
S4AP1b-3020	HD's Contractor to carry out GI in Area D1 (Stage 1A/2/2A)	90	90	22-Feb-22	22-May-22	259	CD (7d)
S4AP1b-3030	HD's Contractor to carry out GI in Area D1 Zone B (Stage 3)	90	90	23-May-22	20-Aug-22	259	CD (7d)
S4AP1b-3040	HD's Contractor to carry out GI in Area D1 Zone C (Stage 3)	90	90	23-May-22	20-Aug-22	259	CD (7d)
Section 4B							
S14B-1000	Planed Completion Date of Section 4B	0	0		04-Oct-23	17	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	60	60	06-Jan-22	19-Mar-22	189	WD (6d)
S4BP1c-1020	Site Clearance	60	60	21-Mar-22	06-Jun-22	189	WD (6d)
S4BP1c-1025	Ground investigation (0 / 1 GI completed)	6	6	07-Jun-22	13-Jun-22	189	WD (6d)
S4BP1c-1030	Environmental ground investigation and laboratory test (2 EGI in other portion represent this port	15	15	07-Jun-22	23-Jun-22	189	WD (6d)
S4BP1c-1040	Prepare Arsenic Assessment Report	30	30	24-Jun-22	29-Jul-22	189	WD (6d)
S4BP1c-1050	Arsenic Treatment Plan	30	30	30-Jul-22	02-Sep-22	189	WD (6d)
Soil Treatment							
S4BP1c-2000	Construct & maintain Temporary drainage	72	72	03-Sep-22	29-Nov-22	189	WD (6d)
S4BP1c-2010	Remove soil (original assumed 2868m3) (0 / 2 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	03-Sep-22*	03-Oct-22	189	WD (6d)
S4BP1c-2020	Backfilling to the formation levels	48	48	05-Oct-22	29-Nov-22	189	WD (6d)



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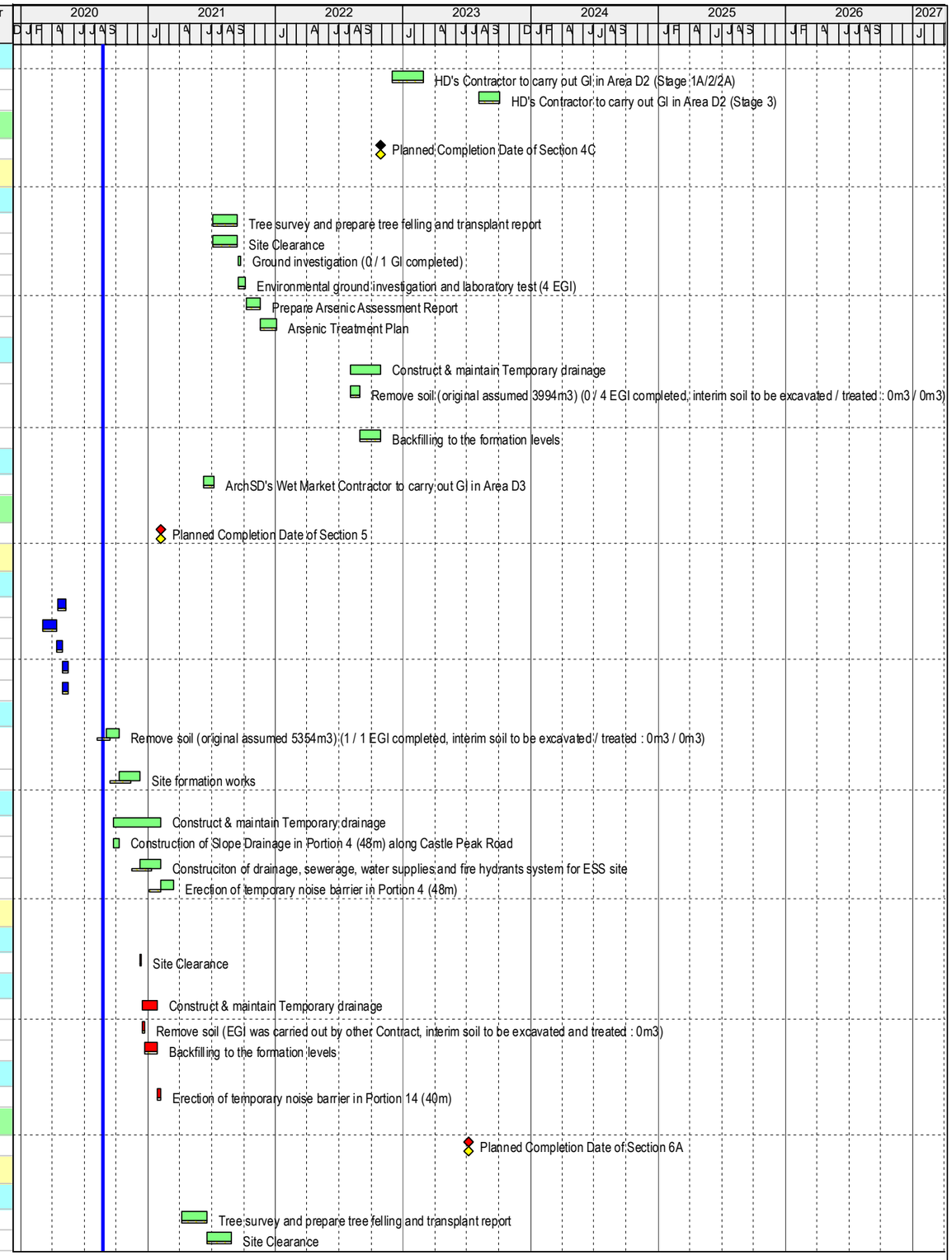
Interface with HD's Contractor to carry out GI							
S4BP1c-3010	HD's Contractor to carry out GI in Area D2 (Stage 1A/2/2A)	90	90	30-Nov-22	27-Feb-23	236	CD (7d)
S4BP1c-3020	HD's Contractor to carry out GI in Area D2 (Stage 3)	60	60	06-Aug-23*	04-Oct-23	17	CD (7d)
Section 4C							
S4C-1000	Planned Completion Date of Section 4C	0	0		28-Oct-22	101	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	60	60	06-Jul-21	13-Sep-21	251	WD (6d)
S4CP1b-1020	Site Clearance	60	60	06-Jul-21	13-Sep-21	251	WD (6d)
S4CP1b-1025	Ground investigation (0 / 1 GI completed)	6	6	14-Sep-21	20-Sep-21	251	WD (6d)
S4CP1b-1030	Environmental ground investigation and laboratory test (4 EGI)	18	18	14-Sep-21	06-Oct-21	251	WD (6d)
S4CP1b-1040	Prepare Arsenic Assessment Report	36	36	07-Oct-21	18-Nov-21	251	WD (6d)
S4CP1b-1050	Arsenic Treatment Plan	36	36	19-Nov-21	03-Jan-22	251	WD (6d)
Soil Treatment							
S4CP1b-2000	Construct & maintain Temporary drainage	72	72	03-Aug-22	28-Oct-22	81	WD (6d)
S4CP1b-2010	Remove soil (original assumed 3994m3) (0 / 4 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	03-Aug-22*	30-Aug-22	81	WD (6d)
S4CP1b-2020	Backfilling to the formation levels	48	48	31-Aug-22	28-Oct-22	81	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	24	07-Jun-21	06-Jul-21	472	WD (6d)
Section 5							
S5-1000	Planned Completion Date of Section 5	0	0		06-Feb-21	0	CD (7d)
Portion 4 in Area I (Soil Treatment & Complete Temp. Noise Barriers along Castle Peak Road)							
Preparation work/Tree Survey/Site Clearance/GI							
S5P4-1010	Tree survey and prepare tree felling and transplant report	60	0	17-Apr-20 A	11-May-20 A		WD (6d)
S5P4-1020	Site Clearance	60	0	05-Mar-20 A	13-Apr-20 A		WD (6d)
S5P4-1030	Environmental ground investigation and laboratory test (1 EGI)	18	0	14-Apr-20 A	29-Apr-20 A		WD (6d)
S5P4-1040	Prepare Arsenic Assessment Report	21	0	30-Apr-20 A	18-May-20 A		WD (6d)
S5P4-1050	Arsenic Treatment Plan	21	0	30-Apr-20 A	18-May-20 A		WD (6d)
Soil Treatment							
S5P4-2010	Remove soil (original assumed 5354m3) (1 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	30	30	02-Sep-20*	08-Oct-20	2	WD (6d)
S5P4-2020	Site formation works	50	50	09-Oct-20	07-Dec-20	2	WD (6d)
KD9 - Complete the temp. noise barriers along Castle Peak Road in Area T1, T2, T3, H, H1, I, J,K							
S5P4-3000	Construct & maintain Temporary drainage	109	109	24-Sep-20	04-Feb-21	2	WD (6d)
S5P4-3005	Construction of Slope Drainage in Portion 4 (48m) along Castle Peak Road	11	11	24-Sep-20	08-Oct-20	2	WD (6d)
S5P4-3010	Construciton of drainage, sewerage, water supplies and fire hydrants system for ESS site	48	48	08-Dec-20	04-Feb-21	2	WD (6d)
S5P4-3020	Erection of temporary noise barrier in Portion 4 (48m)	30	30	05-Feb-21	15-Mar-21	620	WD (6d)
Portion 14 in Area I (Soil Treatment & Complete Temp. Noise Barriers along Castle Peak Road)							
Preparation work/Tree Survey/Site Clearance/GI							
S5P14-1010	Site Clearance	6	6	07-Dec-20	12-Dec-20	0	WD (6d)
Soil Treatment							
S5P14-2000	Construct & maintain Temporary drainage	36	36	14-Dec-20	27-Jan-21	0	WD (6d)
S5P14-2010	Remove soil (EGI was carried out by other Contract, interim soil to be excavated and treated : 0r	6	6	14-Dec-20	19-Dec-20	0	WD (6d)
S5P14-2020	Backfilling to the formation levels	30	30	21-Dec-20	27-Jan-21	0	WD (6d)
KD9 - Complete the temporary noise barriers along Castle Peak Road in Area T1, T2, T3, H, H1, I, J,							
S5P14-3010	Erection of temporary noise barrier in Portion 14 (40m)	9	9	28-Jan-21	06-Feb-21	0	WD (6d)
Sectoin 6A							
S6A-1000	Planned Completion Date of Section 6A	0	0		06-Jul-23	0	CD (7d)
Portion 1e in Area G1 (Soil Treatment & Forming Hammerhead)							
Preparation work/Tree Survey/Site Clearance/GI							
S6AP1e-1010	Tree survey and prepare tree felling and transplant report	60	60	06-Apr-21	17-Jun-21	208	WD (6d)
S6AP1e-1020	Site Clearance	60	60	18-Jun-21	27-Aug-21	208	WD (6d)



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S6AP1e-1025	Ground investigation (0 / 1 GI completed)	6	6	28-Aug-21	03-Sep-21	208	WD (6d)
S6AP1e-1030	Environmental ground investigation and laboratory test (0/1 EGI)	24	24	28-Aug-21	25-Sep-21	208	WD (6d)
S6AP1e-1035	Environmental ground investigation and laboratory test (1/1 EGI completed) in Hammer Head ar	6	0	20-May-20 A	23-May-20 A		WD (6d)
S6AP1e-1040	Prepare Arsenic Assessment Report	36	36	27-Sep-21	09-Nov-21	208	WD (6d)
S6AP1e-1050	Arsenic Treatment Plan	36	36	10-Nov-21	21-Dec-21	208	WD (6d)
Soil Treatment							
S6AP1e-2000	Construct & maintain Temporary drainage	202	202	12-Jul-22	13-Mar-23	49	WD (6d)
S6AP1e-2010	Remove soil (original assumed 14575m3) (1 / 2 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	46	46	12-Jul-22*	02-Sep-22	49	WD (6d)
S6AP1e-2020	Backfilling to the formation levels	60	60	03-Sep-22	15-Nov-22	49	WD (6d)
Remaining Roadwork							
S6AP1e-3010	Forming a hammerhead at hard paved area for public use	96	96	16-Nov-22	13-Mar-23	49	WD (6d)
S6AP1e-3020	Installation of smart road lighting system	18	18	14-Mar-23	03-Apr-23	49	WD (6d)
S6AP1e-3030	T&C for smart road lighting system	30	30	04-Apr-23	03-May-23	64	CD (7d)
Portion 15 in Area G1 (Soil Treatment)							
Preparation work/Tree Survey/Site Clearance/GI							
S6AP15-1010	Tree survey and prepare tree felling and transplant report	24	24	06-Jan-23	06-Feb-23	0	WD (6d)
S6AP15-1020	Site Clearance	24	24	06-Jan-23	06-Feb-23	0	WD (6d)
S6AP15-1030	Environmental ground investigation and lab test (2 EGI)	18	18	07-Feb-23	27-Feb-23	0	WD (6d)
S6AP15-1040	Prepare Arsenic Assessment Report	17	17	28-Feb-23	18-Mar-23	0	WD (6d)
S6AP15-1050	Arsenic Treatment Plan	17	17	20-Mar-23	12-Apr-23	0	WD (6d)
Soil Treatment							
S6AP15-2000	Construct & maintain Temporary drainage	69	69	13-Apr-23	06-Jul-23	0	WD (6d)
S6AP15-2010	Remove soil (original assumed 4828m3) (0 / 2 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	20	20	13-Apr-23*	06-May-23	0	WD (6d)
S6AP15-2020	Backfilling to the formation levels	49	49	08-May-23	06-Jul-23	0	WD (6d)
Section 6B							
S6B-1000	Planned Completion Date of Section 6B	0	0		21-Nov-24	228	CD (7d)
Portion 1e in Area G2 (Soil Treatment)							
Preparation work/Tree Survey/Site Clearance/GI							
S6BP1e-1010	Tree survey and prepare tree felling and transplant report	60	60	06-Apr-21	17-Jun-21	980	WD (6d)
S6BP1e-1020	Site Clearance	60	60	18-Jun-21	27-Aug-21	980	WD (6d)
S6BP1e-1030	Environmental ground investigation and laboratory test (1 EGI)	15	15	28-Aug-21	14-Sep-21	980	WD (6d)
S6BP1e-1040	Prepare Arsenic Assessment Report	36	36	15-Sep-21	29-Oct-21	980	WD (6d)
S6BP1e-1050	Arsenic Treatment Plan	36	36	30-Oct-21	10-Dec-21	980	WD (6d)
Soil Treatment							
S6BP1e-2000	Construct & maintain Temporary drainage	72	72	22-Jun-24	16-Sep-24	234	WD (6d)
S6BP1e-2010	Remove soil (original assumed 1422m3) (0 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	22-Jun-24*	22-Jul-24	234	WD (6d)
S6BP1e-2020	Backfilling to the formation levels	48	48	22-Jul-24	16-Sep-24	234	WD (6d)
Portion 11b in Area G2 (Soil Treatment)							
Preparation work/Tree Survey/Site Clearance/GI							
S6BP11b-1010	Tree survey and prepare tree felling and transplant report	54	54	06-Jan-24	12-Mar-24	180	WD (6d)
S6BP11b-1020	Site Clearance	54	54	13-Mar-24	22-May-24	180	WD (6d)
S6BP11b-1025	Ground investigation (0 / 1 GI completed)	6	6	14-May-24	22-May-24	180	WD (6d)
S6BP11b-1030	Environmental ground investigation and laboratory test (1 EGI)	14	14	22-May-24	07-Jun-24	180	WD (6d)
S6BP11b-1040	Prepare Arsenic Assessment Report	30	30	07-Jun-24	15-Jul-24	180	WD (6d)
S6BP11b-1050	Arsenic Treatment Plan	30	30	15-Jul-24	19-Aug-24	180	WD (6d)
Soil Treatment							
S6BP11b-2000	Construct & maintain Temporary drainage	78	78	19-Aug-24	21-Nov-24	180	WD (6d)
S6BP11b-2010	Remove soil (original assumed 1125m3) (0 / 1 EGI result received, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	19-Aug-24*	16-Sep-24	180	WD (6d)
S6BP11b-2020	Backfilling to the formation levels	48	48	24-Sep-24	21-Nov-24	180	WD (6d)
Section 6C							
S6C-1000	Planned Completion Date of Section 6C	0	0		14-Nov-24	419	CD (7d)

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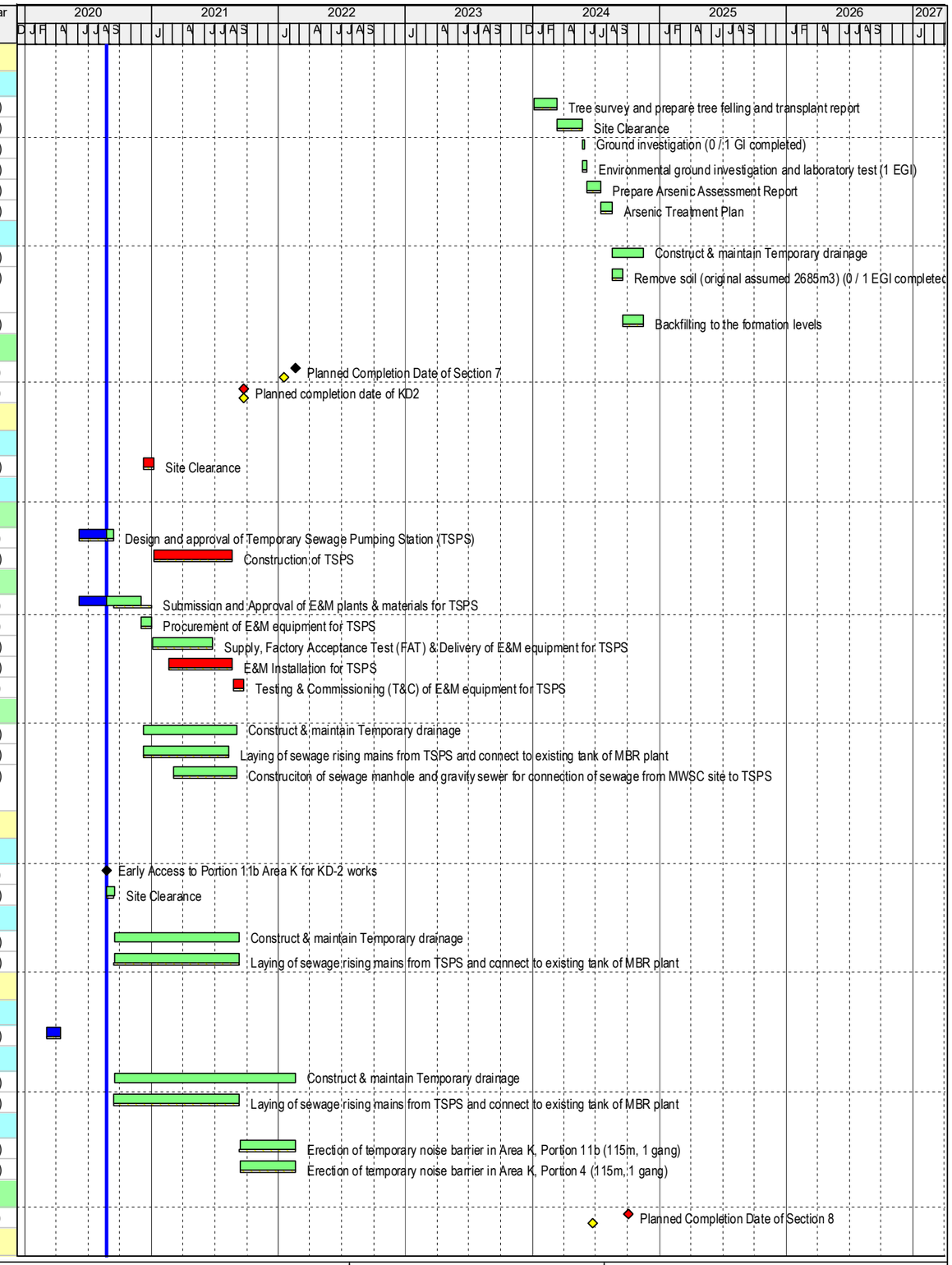
Activity ID	Activity Name	Dur (d)	emainin Duration	Start	Finish	Total Float	Calendar
Portion 11b in Area G3 (Soil Treatment)							
Preparation work/Tree Survey/Site Clearance/GI							
S6CP11b-1010	Tree survey and prepare tree felling and transplant report	54	54	06-Jan-24	12-Mar-24	338	WD (6d)
S6CP11b-1020	Site Clearance	54	54	13-Mar-24	22-May-24	338	WD (6d)
S6CP11b-1025	Ground investigation (0 / 1 GI completed)	6	6	22-May-24	29-May-24	338	WD (6d)
S6CP11b-1030	Environmental ground investigation and laboratory test (1 EGI)	14	14	22-May-24	07-Jun-24	338	WD (6d)
S6CP11b-1040	Prepare Arsenic Assessment Report	30	30	07-Jun-24	15-Jul-24	338	WD (6d)
S6CP11b-1050	Arsenic Treatment Plan	30	30	15-Jul-24	19-Aug-24	338	WD (6d)
Soil Treatment							
S6CP11b-2000	Construct & maintain Temporary drainage	72	72	19-Aug-24	14-Nov-24	338	WD (6d)
S6CP11b-2010	Remove soil (original assumed 2685m3) (0 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	19-Aug-24*	16-Sep-24	338	WD (6d)
S6CP11b-2020	Backfilling to the formation levels	48	48	16-Sep-24	14-Nov-24	338	WD (6d)
Section 7 (Subject to excision)							
S7-1010	Planned Completion Date of Section 7	0	0		19-Feb-22	380	CD (7d)
S7K2-1000	Planned completion date of KD2	0	0		21-Sep-21	0	CD (7d)
Portion 14 in Area K (Complete TSPS with Associated Sewerage)							
Preparation work/Tree Survey/Site Clearance/GI							
S7P14-1010	Site Clearance	24	24	07-Dec-20	06-Jan-21	0	WD (6d)
KD2 - Complete Temporary Sewage Pumping Station and associated rising mains and sewers, and connect							
Design and Civil Construction							
S7P14-2010	Design and approval of Temporary Sewage Pumping Station (TSPS)	90	19	04-Jun-20 A	12-Sep-20	7	CD (7d)
S7P14-2020	Construction of TSPS	185	185	07-Jan-21	21-Aug-21	0	WD (6d)
E&M Works							
S7P14-3010	Submission and Approval of E&M plants & materials for TSPS	110	99	04-Jun-20 A	01-Dec-20	7	CD (7d)
S7P14-3020	Procurement of E&M equipment for TSPS	30	30	02-Dec-20	31-Dec-20	7	CD (7d)
S7P14-3030	Supply, Factory Acceptance Test (FAT) & Delivery of E&M equipment for TSPS	140	140	02-Jan-21	24-Jun-21	5	WD (6d)
S7P14-3040	E&M Installation for TSPS	150	150	20-Feb-21	21-Aug-21	0	WD (6d)
S7P14-3050	Testing & Commissioning (T&C) of E&M equipment for TSPS	31	31	22-Aug-21	21-Sep-21	0	CD (7d)
Sewerage Works							
S7P14-4000	Construct & maintain Temporary drainage	220	220	07-Dec-20	03-Sep-21	15	WD (6d)
S7P14-4010	Laying of sewage rising mains from TSPS and connect to existing tank of MBR plant	200	200	07-Dec-20	11-Aug-21	15	WD (6d)
S7P14-4020	Construciton of sewage manhole and gravity sewer for connection of sewage from MWSC site to TSPS	150	150	05-Mar-21	03-Sep-21	15	WD (6d)
KD2 - Portion 11b in Area K (Complete Temp. Noise Barriers along Castle Peak Road)							
Preparation work							
S7P11b-1000	Early Access to Portion 11b Area K for KD-2 works	0	0		25-Aug-20*	10	CD (7d)
S7P11b-1010	Site Clearance	18	18	25-Aug-20	14-Sep-20	9	WD (6d)
Sewerage Works							
S7P11b-1015	Construct & maintain Temporary drainage	294	294	15-Sep-20	10-Sep-21	9	WD (6d)
S7P11b-1020	Laying of sewage rising mains from TSPS and connect to existing tank of MBR plant	294	294	15-Sep-20	10-Sep-21	9	WD (6d)
Portion 4 in Area K (Complete Temp. Noise Barriers along Castle Peak Road)							
Preparation work							
S7P4-1010	Site Clearance	48	0	05-Mar-20 A	13-Apr-20 A		WD (6d)
Sewerage Works							
S7P4-2000	Construct & maintain Temporary drainage	424	424	15-Sep-20	19-Feb-22	309	WD (6d)
S7P4-2010	Laying of sewage rising mains from TSPS and connect to existing tank of MBR plant	294	294	14-Sep-20	09-Sep-21	10	WD (6d)
KD9 - Complete the temporary noise barriers along Castle Peak Road in Area T1, T2, T3, H, H1, I, J,K							
S7P11b-3010	Erection of temporary noise barrier in Area K, Portion 11b (115m, 1 gang)	130	130	11-Sep-21	19-Feb-22	309	WD (6d)
S7P4-3010	Erection of temporary noise barrier in Area K, Portion 4 (115m, 1 gang)	130	130	11-Sep-21	19-Feb-22	309	WD (6d)
Section 8							
S8-1010	Planned Completion Date of Section 8	0	0		04-Oct-24	-105	CD (7d)
Portion 2 in Area A (Soil Treatment & Construction of Pak Shek Au Junction)							



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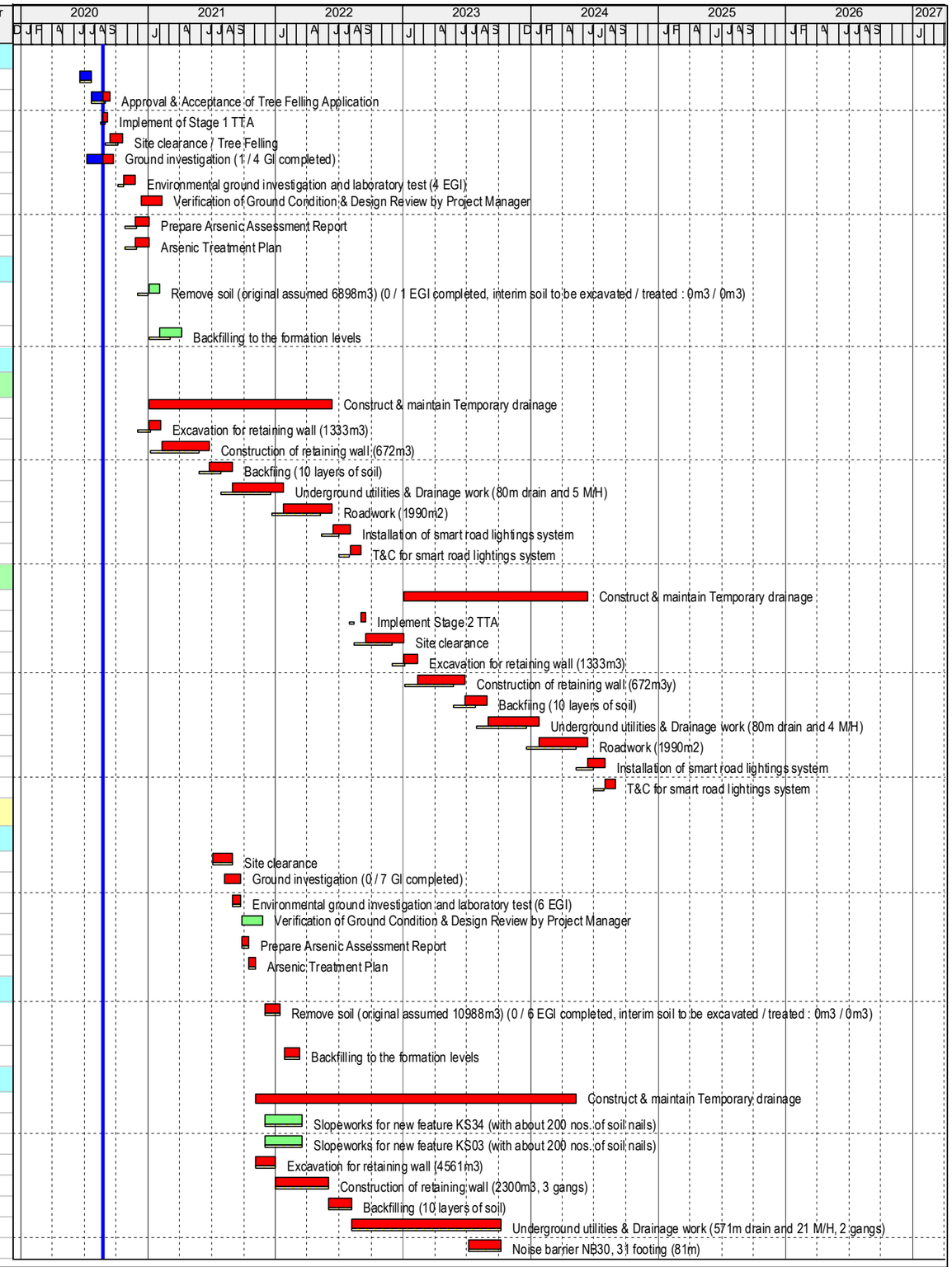
Preparation work/Tree Survey/Site Clearance/GI							
S8P2-0010	Tree Survey and prepare tree felling and transplant report	30	0	19-Jun-20 A	21-Jul-20 A		WD (6d)
S8P2-0015	Approval & Acceptance of Tree Felling Application	30	20	23-Jul-20 A	13-Sep-20	-70	CD (7d)
S8P2-0020	Implement of Stage 1 TTA	12	12	25-Aug-20	07-Sep-20	-55	WD (6d)
S8P2-1010	Site clearance / Tree Felling	30	30	14-Sep-20	20-Oct-20	-60	WD (6d)
S8P2-1015	Ground investigation (1 / 4 GI completed)	30	24	08-Jul-20 A	21-Sep-20	-7	WD (6d)
S8P2-1020	Environmental ground investigation and laboratory test (4 EGI)	30	30	21-Oct-20	25-Nov-20	-60	WD (6d)
S8P2-1025	Verification of Ground Condition & Design Review by Project Manager	60	60	10-Dec-20	07-Feb-21	-73	CD (7d)
S8P2-1030	Prepare Arsenic Assessment Report	30	30	26-Nov-20	02-Jan-21	-59	WD (6d)
S8P2-1040	Arsenic Treatment Plan	30	30	26-Nov-20	02-Jan-21	-59	WD (6d)
Soil Treatment							
S8P2-2010	Remove soil (original assumed 6898m3) (0 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	26	26	04-Jan-21*	02-Feb-21	61	WD (6d)
S8P2-2020	Backfilling to the formation levels	48	48	03-Feb-21	06-Apr-21	61	WD (6d)
Civil Work							
Construction of Pak Shek Au Junction Stage 1							
S8P2-3000	Construct & maintain Temporary drainage	424	424	04-Jan-21	11-Jun-22	-59	WD (6d)
S8P2-3020	Excavation for retaining wall (1333m3)	30	30	04-Jan-21	06-Feb-21	-59	WD (6d)
S8P2-3030	Construction of retaining wall (672m3)	110	110	08-Feb-21	25-Jun-21	-59	WD (6d)
S8P2-3040	Backfiing (10 layers of soil)	54	54	26-Jun-21	28-Aug-21	-59	WD (6d)
S8P2-3050	Underground utilities & Drainage work (80m drain and 5 M/H)	120	120	30-Aug-21	22-Jan-22	-59	WD (6d)
S8P2-3060	Roadwork (1990m2)	110	110	24-Jan-22	11-Jun-22	-59	WD (6d)
S8P2-3070	Installation of smart road lightings system	42	42	13-Jun-22	01-Aug-22	-59	WD (6d)
S8P2-3080	T&C for smart road lightings system	30	30	02-Aug-22	31-Aug-22	-71	CD (7d)
Construction of Pak Shek Au Junction Stage 2							
S8P2-4000	Construct & maintain Temporary drainage	424	424	04-Jan-23	13-Jun-24	-60	WD (6d)
S8P2-4010	Implement Stage 2 TTA	12	12	01-Sep-22	15-Sep-22	-60	WD (6d)
S8P2-4020	Site clearance	90	90	16-Sep-22	03-Jan-23	-60	WD (6d)
S8P2-4030	Excavation for retaining wall (1333m3)	30	30	04-Jan-23	10-Feb-23	-60	WD (6d)
S8P2-4040	Construction of retaining wall (672m3y)	110	110	11-Feb-23	27-Jun-23	-60	WD (6d)
S8P2-4050	Backfiing (10 layers of soil)	54	54	28-Jun-23	30-Aug-23	-60	WD (6d)
S8P2-4060	Underground utilities & Drainage work (80m drain and 4 M/H)	120	120	31-Aug-23	24-Jan-24	-60	WD (6d)
S8P2-4070	Roadwork (1990m2)	110	110	25-Jan-24	13-Jun-24	-60	WD (6d)
S8P2-4080	Installation of smart road lightings system	42	42	13-Jun-24	02-Aug-24	-60	WD (6d)
S8P2-4090	T&C for smart road lightings system	30	30	02-Aug-24	01-Sep-24	-72	CD (7d)
Portion 1a in Area A (Soil Treatment, Slope, Retaining Wall, Noise Barrier, Drainage & Roadwork)							
Preparation work/Tree Survey/Site Clearance/GI							
S8P1a-1010	Site clearance	48	48	06-Jul-21	30-Aug-21	0	WD (6d)
S8P1a-1015	Ground investigation (0 / 7 GI completed)	42	42	05-Aug-21	23-Sep-21	0	WD (6d)
S8P1a-1020	Environmental ground investigation and laboratory test (6 EGI)	20	20	31-Aug-21	23-Sep-21	0	WD (6d)
S8P1a-1025	Verification of Ground Condition & Design Review by Project Manager	60	60	24-Sep-21	22-Nov-21	582	CD (7d)
S8P1a-1030	Prepare Arsenic Assessment Report	17	17	24-Sep-21	15-Oct-21	0	WD (6d)
S8P1a-1040	Arsenic Treatment Plan	17	17	16-Oct-21	04-Nov-21	0	WD (6d)
Soil Treatment							
S8P1a-2010	Remove soil (original assumed 10988m3) (0 / 6 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	33	33	02-Dec-21*	12-Jan-22	0	WD (6d)
S8P1a-2020	Backfilling to the formation levels	35	35	26-Jan-22	10-Mar-22	0	WD (6d)
Civil Work							
S8P1a-3000	Construct & maintain Temporary drainage	743	743	05-Nov-21	11-May-24	0	WD (6d)
S8P1a-3010	Slopeworks for new feature KS34 (with about 200 nos. of soil nails)	84	84	02-Dec-21	16-Mar-22	462	WD (6d)
S8P1a-3020	Slopeworks for new feature KS03 (with about 200 nos. of soil nails)	84	84	02-Dec-21	16-Mar-22	462	WD (6d)
S8P1a-3030	Excavation for retaining wall (4561m3)	45	45	05-Nov-21	29-Dec-21	0	WD (6d)
S8P1a-3040	Construction of retaining wall (2300m3, 3 gangs)	122	122	30-Dec-21	01-Jun-22	0	WD (6d)
S8P1a-3050	Backfilling (10 layers of soil)	54	54	02-Jun-22	05-Aug-22	0	WD (6d)
S8P1a-3060	Underground utilities & Drainage work (571m drain and 21 M/H, 2 gangs)	348	348	06-Aug-22	06-Oct-23	0	WD (6d)
S8P1a-3070	Noise barrier NB30, 31 footing (81m)	78	78	06-Jul-23	06-Oct-23	0	WD (6d)



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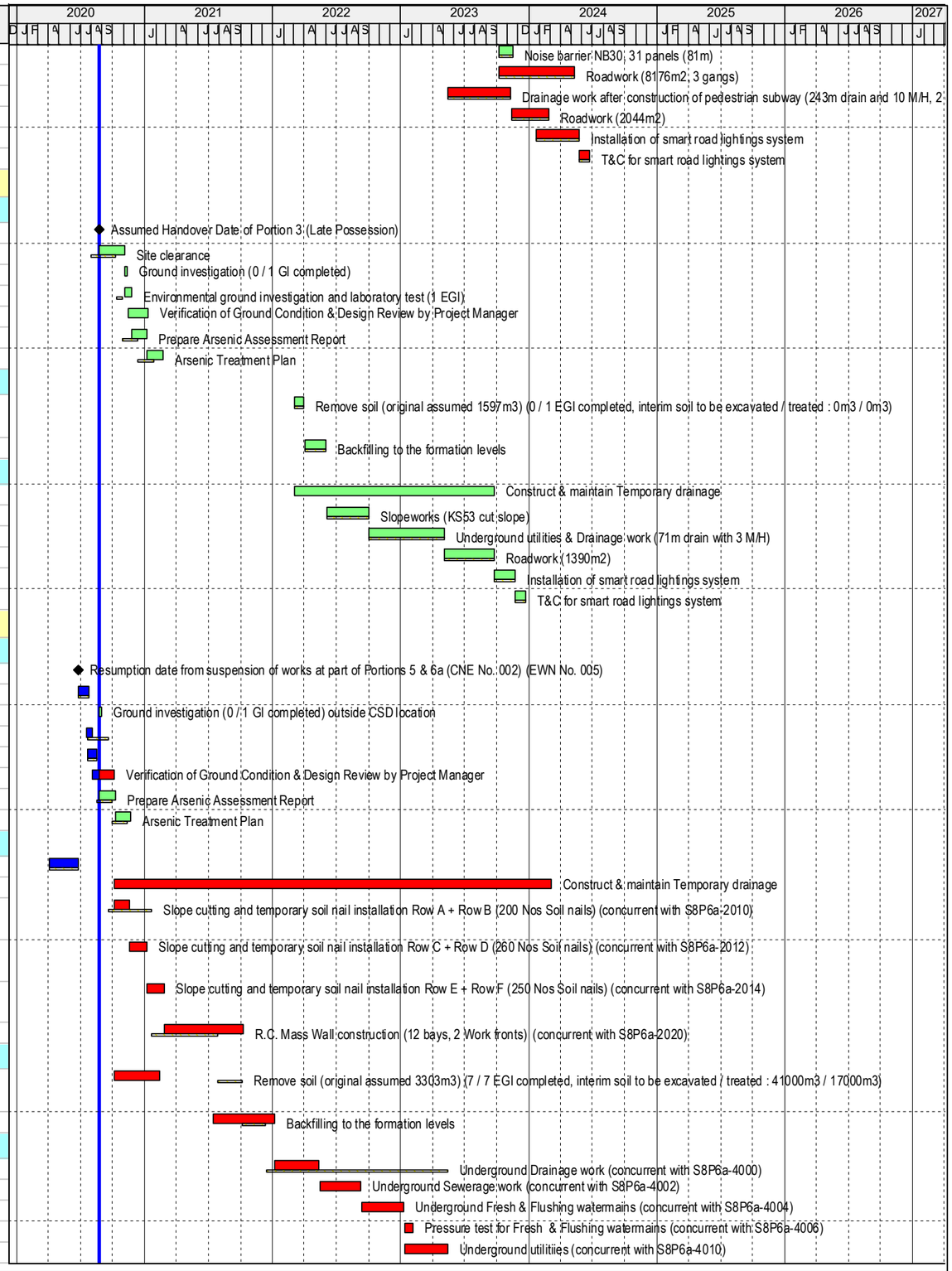
S8P1a-3075	Noise barrier NB30, 31 panels (81m)	35	35	07-Oct-23	17-Nov-23	139	WD (6d)
S8P1a-3080	Roadwork (8176m2, 3 gangs)	174	174	07-Oct-23	11-May-24	0	WD (6d)
S8P1a-3090	Drainage work after construction of pedestrian subway (243m drain and 10 M/H, 2 gangs)	150	150	15-May-23	11-Nov-23	0	WD (6d)
S8P1a-3100	Roadwork (2044m2)	87	87	13-Nov-23	28-Feb-24	0	WD (6d)
S8P1a-3110	Installation of smart road lightings system	95	95	22-Jan-24	22-May-24	0	WD (6d)
S8P1a-3120	T&C for smart road lightings system	30	30	22-May-24	21-Jun-24	0	CD (7d)
Portion 3 in Area A (Soil Treatment, Drainage & Roadwork)							
Preparation work/Tree Survey/Site Clearance/GI							
S8P3-1000	Assumed Handover Date of Portion 3 (Late Possession)	0	0	25-Aug-20*		550	CD (7d)
S8P3-1010	Site clearance	60	60	25-Aug-20	05-Nov-20	447	WD (6d)
S8P3-1015	Ground investigation (0 / 1 GI completed)	6	6	06-Nov-20	12-Nov-20	447	WD (6d)
S8P3-1020	Environmental ground investigation and laboratory test (1 EGI)	15	15	06-Nov-20	23-Nov-20	447	WD (6d)
S8P3-1025	Verification of Ground Condition & Design Review by Project Manager	60	60	13-Nov-20	11-Jan-21	679	CD (7d)
S8P3-1030	Prepare Arsenic Assessment Report	36	36	24-Nov-20	07-Jan-21	447	WD (6d)
S8P3-1040	Arsenic Treatment Plan	36	36	08-Jan-21	22-Feb-21	447	WD (6d)
Soil Treatment							
S8P3-2010	Remove soil (original assumed 1597m3) (0 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	04-Mar-22*	31-Mar-22	142	WD (6d)
S8P3-2020	Backfilling to the formation levels	48	48	01-Apr-22	02-Jun-22	142	WD (6d)
Civil Work							
S8P3-3000	Construct & maintain Temporary drainage	465	465	04-Mar-22	25-Sep-23	142	WD (6d)
S8P3-3005	Slopeworks (KS53 cut slope)	100	100	04-Jun-22	30-Sep-22	142	WD (6d)
S8P3-3010	Underground utilities & Drainage work (71m drain with 3 M/H)	173	173	03-Oct-22	04-May-23	142	WD (6d)
S8P3-3020	Roadwork (1390m2)	120	120	05-May-23	25-Sep-23	142	WD (6d)
S8P3-3030	Installation of smart road lightings system	48	48	26-Sep-23	23-Nov-23	142	WD (6d)
S8P3-3040	T&C for smart road lightings system	30	30	24-Nov-23	23-Dec-23	180	CD (7d)
Portion 5 in Area A (Soil Treatment, Bored Pile Wall (CSD), Drainage & Roadwork)							
Preparation work/Tree Survey/Site Clearance/GI							
S8P5-1000	Resumption date from suspension of works at part of Portions 5 & 6a (CNE No. 002) (EWN No. (	0	0	24-Jun-20 A			CD (7d)
S8P5-1010	Site clearance	24	0	26-Jun-20 A	24-Jul-20 A		WD (6d)
S8P5-1015	Ground investigation (0 / 1 GI completed) outside CSD location	6	6	25-Aug-20	31-Aug-20	27	WD (6d)
S8P5-1020	Ground investigation (3 / 3 GI completed) within CSD loaction	48	0	20-Jul-20 A	04-Aug-20 A		WD (6d)
S8P5-1030	Environmental ground investigation and laboratory test (7 EGI)	20	0	23-Jul-20 A	17-Aug-20 A		WD (6d)
S8P5-1035	Verification of Ground Condition & Design Review by Project Manager	60	41	05-Aug-20 A	04-Oct-20	0	CD (7d)
S8P5-1040	Prepare Arsenic Assessment Report	36	36	25-Aug-20	07-Oct-20	69	WD (6d)
S8P5-1050	Arsenic Treatment Plan	36	36	08-Oct-20	19-Nov-20	69	WD (6d)
Construction according to CSD for Alternative on Bored Pile Wall							
S8P5-2000	Cost Savings Design (CSD) Proposal for Alternative on Bored Pile Wall Scheme	85	0	02-Apr-20 A	26-Jun-20 A		CD (7d)
S8P5-2004	Construct & maintain Temporary drainage	1014	1014	05-Oct-20	05-Mar-24	0	WD (6d)
S8P5-2010	Slope cutting and temporary soil nail installation Row A + Row B (200 Nos Soil nails) (concurrent with S8P6a-2010)	36	36	05-Oct-20	16-Nov-20	0	WD (6d)
S8P5-2012	Slope cutting and temporary soil nail installation Row C + Row D (260 Nos Soil nails) (concurrent with S8P6a-2012)	40	40	17-Nov-20	05-Jan-21	0	WD (6d)
S8P5-2014	Slope cutting and temporary soil nail installation Row E + Row F (250 Nos Soil nails) (concurrent with S8P6a-2014)	40	40	06-Jan-21	24-Feb-21	0	WD (6d)
S8P5-2020	R.C. Mass Wall construction (12 bays, 2 Work fronts) (concurrent with S8P6a-2020)	184	184	25-Feb-21	07-Oct-21	0	WD (6d)
Soil Treatment							
S8P5-3040	Remove soil (original assumed 3303m3) (7 / 7 EGI completed, interim soil to be excavated / treated : 41000m3 / 17000m3)	108	108	05-Oct-20	11-Feb-21	0	WD (6d)
S8P5-3050	Backfilling to the formation levels	144	144	16-Jul-21	06-Jan-22	0	WD (6d)
Civil Work							
S8P5-4000	Underground Drainage work (concurrent with S8P6a-4000)	100	100	07-Jan-22	13-May-22	0	WD (6d)
S8P5-4002	Underground Sewerage work (concurrent with S8P6a-4002)	100	100	14-May-22	09-Sep-22	0	WD (6d)
S8P5-4004	Underground Fresh & Flushing watermains (concurrent with S8P6a-4004)	100	100	12-Sep-22	10-Jan-23	0	WD (6d)
S8P5-4006	Pressure test for Fresh & Flushing watermains (concurrent with S8P6a-4006)	18	18	11-Jan-23	03-Feb-23	0	WD (6d)
S8P5-4010	Underground utilitiies (concurrent with S8P6a-4010)	100	100	11-Jan-23	16-May-23	0	WD (6d)



Build King – Richwell Engineering Joint Venture

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REVISED PROGRAMME (2020-08)			
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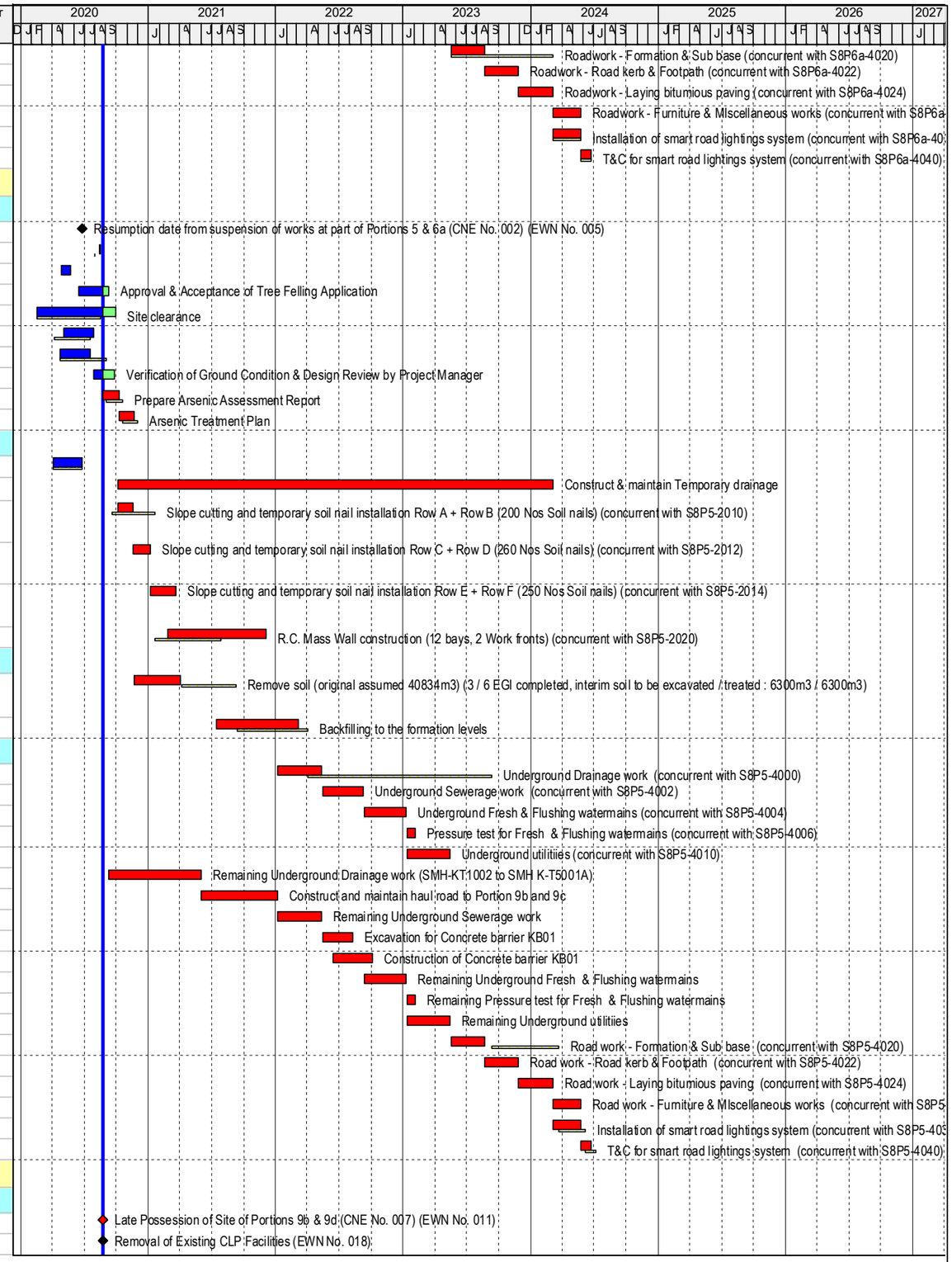
Activity ID	Activity Name	Dur (d)	emainin Duration	Start	Finish	Total Float	Calendar
S8P5-4020	Roadwork - Formation & Sub base (concurrent with S8P6a-4020)	80	80	17-May-23	21-Aug-23	0	WD (6d)
S8P5-4022	Roadwork - Road kerb & Footpath (concurrent with S8P6a-4022)	80	80	22-Aug-23	25-Nov-23	0	WD (6d)
S8P5-4024	Roadwork - Laying bitumious paving (concurrent with S8P6a-4024)	80	80	27-Nov-23	05-Mar-24	0	WD (6d)
S8P5-4026	Roadwork - Furniture & MIscellaneous works (concurrent with S8P6a-4026)	60	60	06-Mar-24	22-May-24	0	WD (6d)
S8P5-4030	Installation of smart road lightings system (concurrent with S8P6a-4030)	60	60	06-Mar-24	22-May-24	0	WD (6d)
S8P5-4040	T&C for smart road lightings system (concurrent with S8P6a-4040)	30	30	22-May-24	21-Jun-24	0	CD (7d)
Portion 6a in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)							
Preparation work/Tree Survey/Site Clearance/GI							
S8P6a-1000	Resumption date from suspension of works at part of Portions 5 & 6a (CNE No. 002) (EWN No. (	0	0	24-Jun-20 A			CD (7d)
S8P6a-1001	Pending Relocation of Existing 4 Nos. of EPD Monitoring Points at Portion 6a & 6b (EWN No. 01	0	0	15-Aug-20 A	17-Aug-20 A		CD (7d)
S8P6a-1002	Tree Survey and prepare tree felling and transplant report	30	0	25-Apr-20 A	23-May-20 A		CD (7d)
S8P6a-1004	Approval & Acceptance of Tree Felling Application	30	15	16-Jun-20 A	08-Sep-20	5	CD (7d)
S8P6a-1010	Site clearance	57	30	15-Feb-20 A	28-Sep-20	3	WD (6d)
S8P6a-1020	Ground investigation (4 /4 GI completed)	57	0	04-May-20 A	27-Jul-20 A		WD (6d)
S8P6a-1030	Environmental ground investigation and laboratory test (6 EGI)	30	0	23-Apr-20 A	18-Jul-20 A		WD (6d)
S8P6a-1035	Verification of Ground Condition & Design Review by Project Manager	60	32	28-Jul-20 A	25-Sep-20	9	CD (7d)
S8P6a-1040	Prepare Arsenic Assessment Report	36	36	25-Aug-20	07-Oct-20	0	WD (6d)
S8P6a-1050	Arsenic Treatment Plan	36	36	08-Oct-20	19-Nov-20	0	WD (6d)
Construction according to CSD for Alternative on Bored Pile Wall							
S8P6a-2000	Cost Savings Design (CSD) Proposal for Alternative on Bored Pile Wall Scheme	85	0	02-Apr-20 A	26-Jun-20 A		CD (7d)
S8P6a-2004	Construct & maintain Temporary drainage	1014	1014	05-Oct-20	05-Mar-24	0	WD (6d)
S8P6a-2010	Slope cutting and temporary soil nail installation Row A + Row B (200 Nos Soil nails) (concurrent with S8P5-2010)	36	36	05-Oct-20	16-Nov-20	0	WD (6d)
S8P6a-2012	Slope cutting and temporary soil nail installation Row C + Row D (260 Nos Soil nails) (concurrent with S8P5-2012)	40	40	17-Nov-20	05-Jan-21	0	WD (6d)
S8P6a-2014	Slope cutting and temporary soil nail installation Row E + Row F (250 Nos Soil nails) (concurrent with S8P5-2014)	60	60	06-Jan-21	19-Mar-21	0	WD (6d)
S8P6a-2020	R.C. Mass Wall construction (12 bays, 2 Work fronts) (concurrent with S8P5-2020)	232	232	25-Feb-21	03-Dec-21	0	WD (6d)
Soil Treatment							
S8P6a-3040	Remove soil (original assumed 40834m3) (3 / 6 EGI completed, interim soil to be excavated / treated : 6300m3 / 6300m3)	108	108	20-Nov-20	01-Apr-21	0	WD (6d)
S8P6a-3050	Backfilling to the formation levels	192	192	16-Jul-21	07-Mar-22	0	WD (6d)
Civil Work							
S8P6a-4000	Underground Drainage work (concurrent with S8P5-4000)	100	100	07-Jan-22	13-May-22	0	WD (6d)
S8P6a-4002	Underground Sewerage work (concurrent with S8P5-4002)	100	100	14-May-22	09-Sep-22	0	WD (6d)
S8P6a-4004	Underground Fresh & Flushing watermains (concurrent with S8P5-4004)	100	100	12-Sep-22	10-Jan-23	0	WD (6d)
S8P6a-4006	Pressure test for Fresh & Flushing watermains (concurrent with S8P5-4006)	18	18	11-Jan-23	03-Feb-23	0	WD (6d)
S8P6a-4008	Underground utilitiies (concurrent with S8P5-4010)	100	100	11-Jan-23	16-May-23	0	WD (6d)
S8P6a-4010	Remaining Underground Drainage work (SMH-KT1002 to SMH K-T5001A)	216	216	08-Sep-20*	02-Jun-21	0	WD (6d)
S8P6a-4012	Construct and maintain haul road to Portion 9b and 9c	179	179	03-Jun-21	06-Jan-22	0	WD (6d)
S8P6a-4014	Remaining Underground Sewerage work	100	100	07-Jan-22	13-May-22	0	WD (6d)
S8P6a-4016	Excavation for Concrete barrier KB01	72	72	14-May-22	08-Aug-22	0	WD (6d)
S8P6a-4018	Construction of Concrete barrier KB01	96	96	13-Jun-22	06-Oct-22	0	WD (6d)
S8P6a-4020	Remaining Underground Fresh & Flushing watermains	100	100	12-Sep-22	10-Jan-23	0	WD (6d)
S8P6a-4022	Remaining Pressure test for Fresh & Flushing watermains	18	18	11-Jan-23	03-Feb-23	0	WD (6d)
S8P6a-4024	Remaining Underground utilitiies	100	100	11-Jan-23	16-May-23	0	WD (6d)
S8P6a-4030	Road work - Formation & Sub base (concurrent with S8P5-4020)	80	80	17-May-23	21-Aug-23	0	WD (6d)
S8P6a-4032	Road work - Road kerb & Footpath (concurrent with S8P5-4022)	80	80	22-Aug-23	25-Nov-23	0	WD (6d)
S8P6a-4034	Road work - Laying bitumious paving (concurrent with S8P5-4024)	80	80	27-Nov-23	05-Mar-24	0	WD (6d)
S8P6a-4036	Road work - Furniture & MIscellaneous works (concurrent with S8P5-4026)	60	60	06-Mar-24	22-May-24	0	WD (6d)
S8P6a-4050	Installation of smart road lightings system (concurrent with S8P5-4030)	60	60	06-Mar-24	22-May-24	0	WD (6d)
S8P6a-4052	T&C for smart road lightings system (concurrent with S8P5-4040)	30	30	22-May-24	21-Jun-24	0	CD (7d)
Portion 9b & 9d in Area A (Soil Treatment, Slope, Retaining Wall, Drainage & Roadwork)							
Preparation work/Tree Survey/Site Clearance/GI							
S8P9b-0005	Late Possession of Site of Portions 9b & 9d (CNE No. 007) (EWN No. 011)	0	0		25-Aug-20	-49	CD (7d)
S8P9b-0006	Removal of Existing CLP Facilities (EWN No. 018)	0	0		25-Aug-20	704	CD (7d)



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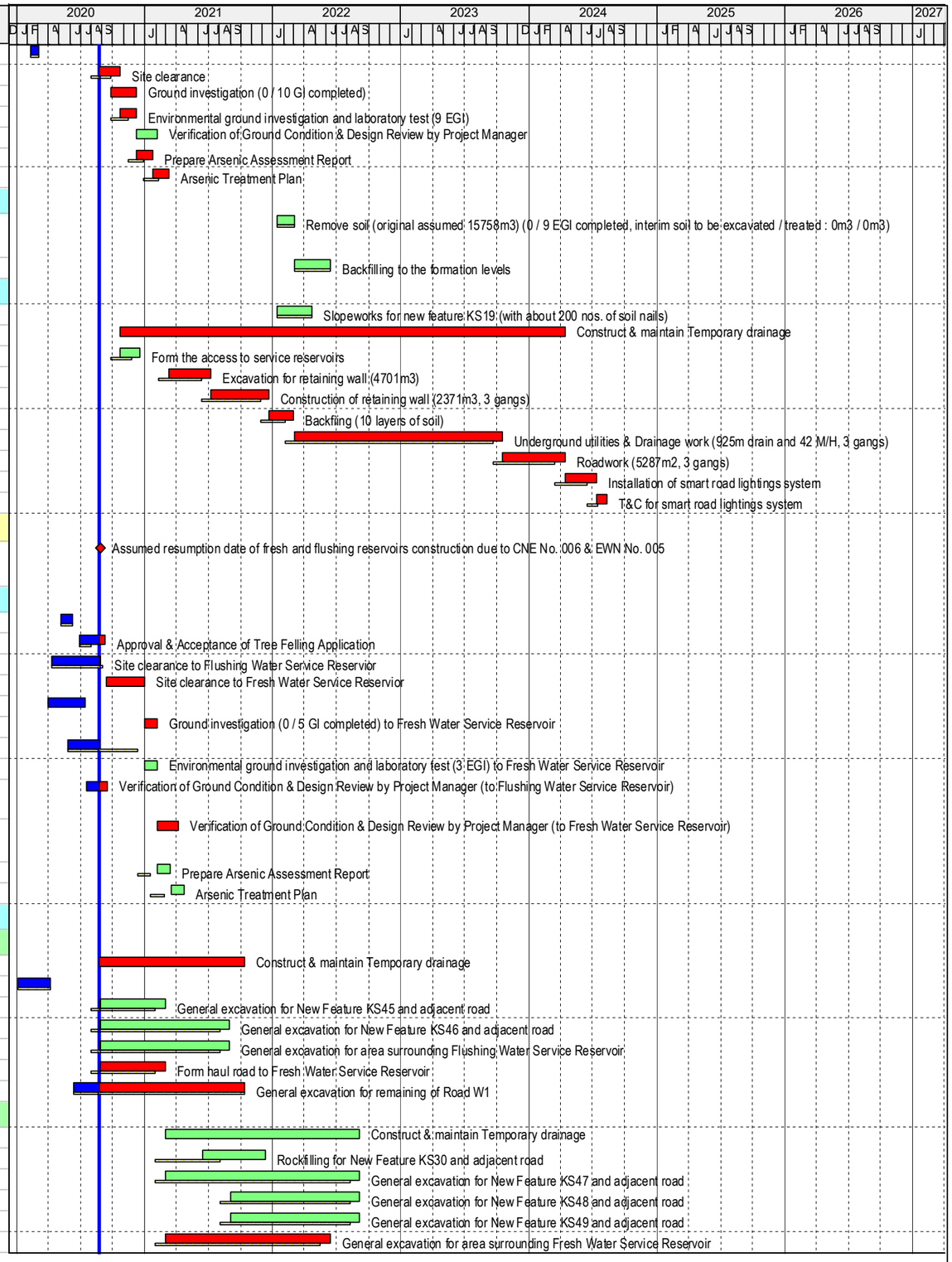
Activity ID	Activity Name	Dur (d)	emainin Duration	Start	Finish	Total Float	Calendar
S8P9b-0010	Liasion with HKPF and submit proposal of protective measures for works near Lo Wu Firing Ran	90	0	10-Feb-20 A	04-Mar-20 A		CD (7d)
S8P9b-1010	Site clearance	48	48	25-Aug-20	21-Oct-20	-42	WD (6d)
S8P9b-1015	Ground investigation (0 / 10 GI completed)	60	60	26-Sep-20	08-Dec-20	-42	WD (6d)
S8P9b-1020	Environmental ground investigation and laboratory test (9 EGI)	40	40	22-Oct-20	08-Dec-20	-42	WD (6d)
S8P9b-1025	Verification of Ground Condition & Design Review by Project Manager	60	60	09-Dec-20	06-Feb-21	836	CD (7d)
S8P9b-1030	Prepare Arsenic Assessment Report	36	36	09-Dec-20	22-Jan-21	-42	WD (6d)
S8P9b-1040	Arsenic Treatment Plan	36	36	23-Jan-21	09-Mar-21	-42	WD (6d)
Soil Treatment							
S8P9b-2010	Remove soil (original assumed 15758m3) (0 / 9 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	40	40	13-Jan-22*	03-Mar-22	361	WD (6d)
S8P9b-2020	Backfilling to the formation levels	80	80	04-Mar-22	13-Jun-22	361	WD (6d)
Civil Work							
S8P9b-3010	Slopeworks for new feature KS19 (with about 200 nos. of soil nails)	80	80	13-Jan-22	23-Apr-22	401	WD (6d)
S8P9b-3015	Construct & maintain Temporary drainage	1029	1029	22-Oct-20	15-Apr-24	-42	WD (6d)
S8P9b-3020	Form the access to service reservoirs	48	48	22-Oct-20	17-Dec-20	523	WD (6d)
S8P9b-3030	Excavation for retaining wall (4701m3)	96	96	10-Mar-21	07-Jul-21	-42	WD (6d)
S8P9b-3040	Construction of retaining wall (2371m3, 3 gangs)	140	140	08-Jul-21	21-Dec-21	-42	WD (6d)
S8P9b-3050	Backfiing (10 layers of soil)	54	54	22-Dec-21	01-Mar-22	-42	WD (6d)
S8P9b-3060	Underground utilities & Drainage work (925m drain and 42 M/H, 3 gangs)	485	485	02-Mar-22	18-Oct-23	-42	WD (6d)
S8P9b-3070	Roadwork (5287m2, 3 gangs)	142	142	19-Oct-23	15-Apr-24	-42	WD (6d)
S8P9b-3080	Installation of smart road lightings system	72	72	15-Apr-24	12-Jul-24	-42	WD (6d)
S8P9b-3090	T&C for smart road lightings system	30	30	12-Jul-24	11-Aug-24	-51	CD (7d)
Portion 8a in Area A (Soil Treatment, Reservoirs, Slope, Drainage & Roadwork)							
S8P8a-1100	Assumed resumption date of fresh and flushing reservoirs construction due to CNE No. 006 & EWN No. 005	0	0		28-Aug-20*	-107	CD (7d)
Preparation work/Tree Survey/Site Clearance/GI							
S8P8a-1002	Tree Survey and prepare tree felling and transplant report	30	0	06-May-20 A	10-Jun-20 A		WD (6d)
S8P8a-1004	Approval & Acceptance of Tree Felling Application	30	15	27-Jun-20 A	10-Sep-20	-42	WD (6d)
S8P8a-1015	Site clearance to Flushing Water Service Reservior	90	4	09-Apr-20 A	28-Aug-20	-31	WD (6d)
S8P8a-1020	Site clearance to Fresh Water Service Reservior	90	90	11-Sep-20	30-Dec-20	-42	WD (6d)
S8P8a-1025	Ground investigation (7 / 7 GI completed) to Flushing Water Service Reservoir	42	0	31-Mar-20 A	15-Jul-20 A		WD (6d)
S8P8a-1030	Ground investigation (0 / 5 GI completed) to Fresh Water Service Reservoir	30	30	31-Dec-20	04-Feb-21	-21	WD (6d)
S8P8a-1040	Environmental ground investigation and laboratory test (6 EGI) to Flushing Water Service Resen	45	0	27-May-20 A	25-Aug-20 A		WD (6d)
S8P8a-1042	Environmental ground investigation and laboratory test (3 EGI) to Fresh Water Service Reservoir	30	30	31-Dec-20	04-Feb-21	87	WD (6d)
S8P8a-1044	Verification of Ground Condition & Design Review by Project Manager (to Flushing Water Service Reservoir)	60	22	18-Jul-20 A	15-Sep-20	-91	CD (7d)
S8P8a-1046	Verification of Ground Condition & Design Review by Project Manager (to Fresh Water Service Reservoir)	60	60	05-Feb-21	05-Apr-21	-24	CD (7d)
S8P8a-1050	Prepare Arsenic Assessment Report	30	30	05-Feb-21	15-Mar-21	87	WD (6d)
S8P8a-1060	Arsenic Treatment Plan	30	30	16-Mar-21	22-Apr-21	87	WD (6d)
Forming Site Access and Site Formation							
Stage 1							
S8P8a-1105	Construct & maintain Temporary drainage	338	338	25-Aug-20 A	13-Oct-21	-72	WD (6d)
S8P8a-1110	Form site access to Flushing Water Service Reservoir	90	0	06-Jan-20 A	08-Apr-20 A		WD (6d)
S8P8a-1120	General excavation for New Feature KS45 and adjacent road	150	150	25-Aug-20 A	01-Mar-21	30	WD (6d)
S8P8a-1130	General excavation for New Feature KS46 and adjacent road	300	300	25-Aug-20 A	31-Aug-21	30	WD (6d)
S8P8a-1140	General excavation for area surrounding Flushing Water Service Reservoir	300	300	25-Aug-20 A	31-Aug-21	30	WD (6d)
S8P8a-1150	Form haul road to Fresh Water Service Reservoir	150	150	28-Aug-20	01-Mar-21	-90	WD (6d)
S8P8a-1160	General excavation for remaining of Road W1	400	338	11-Jun-20 A	13-Oct-21	-72	WD (6d)
Stage 2							
S8P8a-1208	Construct & maintain Temporary drainage	450	450	02-Mar-21	05-Sep-22	10	WD (6d)
S8P8a-1210	Rockfilling for New Feature KS30 and adjacent road	150	150	15-Jun-21	10-Dec-21	150	WD (6d)
S8P8a-1220	General excavation for New Feature KS47 and adjacent road	450	450	02-Mar-21	05-Sep-22	10	WD (6d)
S8P8a-1230	General excavation for New Feature KS48 and adjacent road	300	300	01-Sep-21	05-Sep-22	184	WD (6d)
S8P8a-1240	General excavation for New Feature KS49 and adjacent road	300	300	01-Sep-21	05-Sep-22	162	WD (6d)
S8P8a-1250	General excavation for area surrounding Fresh Water Service Reservoir	380	380	02-Mar-21	14-Jun-22	-90	WD (6d)



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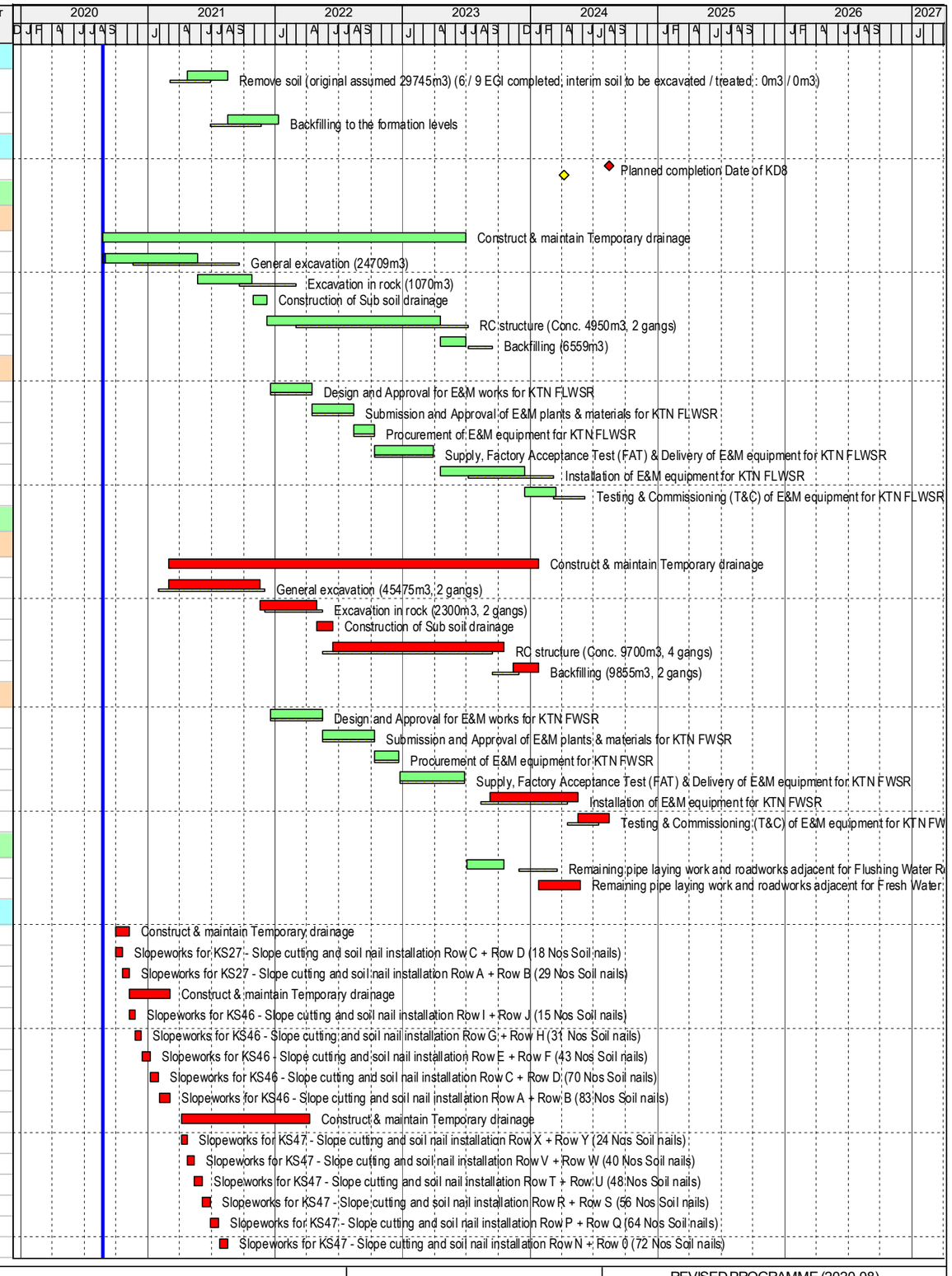
Activity ID	Activity Name	Dur (d)	emainin Duration	Start	Finish	Total Float	Calendar
Soil Treatment							
S8P8a-2010	Remove soil (original assumed 29745m3) (6 / 9 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	95	95	23-Apr-21*	16-Aug-21	97	WD (6d)
S8P8a-2020	Backfilling to the formation levels	120	120	17-Aug-21	10-Jan-22	97	WD (6d)
KD8 - complete all works for fresh water and flushing water services reservoirs, pipe laying and roa							
S8K8-1000	Planned completion Date of KD8	0	0		15-Aug-24	-115	CD (7d)
Construction of Kwu Tung North Flushing Water Service Reservoir (KTN FLWSR)							
Civil Works							
S8K8-1005	Construct & maintain Temporary drainage	864	843	25-Aug-20 A	29-Jun-23	150	WD (6d)
S8K8-1010	General excavation (24709m3)	214	214	25-Aug-20 A	21-May-21	29	WD (6d)
S8K8-1020	Excavation in rock (1070m3)	130	130	22-May-21	26-Oct-21	29	WD (6d)
S8K8-1025	Construction of Sub soil drainage	36	36	27-Oct-21	07-Dec-21	29	WD (6d)
S8K8-1030	RC structure (Conc. 4950m3, 2 gangs)	400	400	08-Dec-21	18-Apr-23	29	WD (6d)
S8K8-1040	Backfilling (6559m3)	60	60	19-Apr-23	30-Jun-23	149	WD (6d)
E&M Works							
S8K8-2010	Design and Approval for E&M works for KTN FLWSR	120	120	17-Dec-21	15-Apr-22	135	CD (7d)
S8K8-2020	Submission and Approval of E&M plants & materials for KTN FLWSR	120	120	16-Apr-22	13-Aug-22	135	CD (7d)
S8K8-2030	Procurement of E&M equipment for KTN FLWSR	60	60	14-Aug-22	12-Oct-22	135	CD (7d)
S8K8-2040	Supply, Factory Acceptance Test (FAT) & Delivery of E&M equipment for KTN FLWSR	140	140	13-Oct-22	30-Mar-23	111	WD (6d)
S8K8-2050	Installation of E&M equipment for KTN FLWSR	200	200	19-Apr-23	15-Dec-23	29	WD (6d)
S8K8-2060	Testing & Commissioning (T&C) of E&M equipment for KTN FLWSR	90	90	16-Dec-23	14-Mar-24	38	CD (7d)
Construction of Kwu Tung North Freshwater Service Reservoir (KTN FWSR)							
Civil Works							
S8K8-3000	Construct & maintain Temporary drainage	864	864	02-Mar-21	26-Jan-24	-24	WD (6d)
S8K8-3010	General excavation (45475m3, 2 gangs)	214	214	02-Mar-21	17-Nov-21	-90	WD (6d)
S8K8-3020	Excavation in rock (2300m3, 2 gangs)	130	130	18-Nov-21	29-Apr-22	-90	WD (6d)
S8K8-3025	Construction of Sub soil drainage	36	36	30-Apr-22	14-Jun-22	-90	WD (6d)
S8K8-3030	RC structure (Conc. 9700m3, 4 gangs)	400	400	15-Jun-22	16-Oct-23	-90	WD (6d)
S8K8-3040	Backfilling (9855m3, 2 gangs)	60	60	15-Nov-23	26-Jan-24	-24	WD (6d)
E&M Works							
S8K8-4010	Design and Approval for E&M works for KTN FWSR	150	150	17-Dec-21	15-May-22	65	CD (7d)
S8K8-4020	Submission and Approval of E&M plants & materials for KTN FWSR	150	150	16-May-22	12-Oct-22	65	CD (7d)
S8K8-4030	Procurement of E&M equipment for KTN FWSR	70	70	13-Oct-22	21-Dec-22	65	CD (7d)
S8K8-4040	Supply, Factory Acceptance Test (FAT) & Delivery of E&M equipment for KTN FWSR	150	150	22-Dec-22	28-Jun-23	51	WD (6d)
S8K8-4050	Installation of E&M equipment for KTN FWSR	200	200	09-Sep-23	17-May-24	-90	WD (6d)
S8K8-4060	Testing & Commissioning (T&C) of E&M equipment for KTN FWSR	90	90	17-May-24	15-Aug-24	-115	CD (7d)
Remaining pipe laying work and roadworks within Road W1 (Adjacnet to Reservoirs)							
S8K8-5010	Remaining pipe laying work and roadworks adjacent for Flushing Water Resevior	90	90	03-Jul-23	17-Oct-23	149	WD (6d)
S8K8-5012	Remaining pipe laying work and roadworks adjacent for Fresh Water Resevior	90	90	27-Jan-24	22-May-24	-24	WD (6d)
Remaining Civil Work in Portion 8a Area A							
S8P8a-2060	Construct & maintain Temporary drainage	31	31	30-Sep-20	07-Nov-20	-88	WD (6d)
S8P8a-2080	Slopeworks for KS27 - Slope cutting and soil nail installation Row C + Row D (18 Nos Soil nails)	15	15	30-Sep-20*	19-Oct-20	-88	WD (6d)
S8P8a-2090	Slopeworks for KS27 - Slope cutting and soil nail installation Row A + Row B (29 Nos Soil nails)	16	16	20-Oct-20	07-Nov-20	-88	WD (6d)
S8P8a-2150	Construct & maintain Temporary drainage	92	92	09-Nov-20	02-Mar-21	-1	WD (6d)
S8P8a-2160	Slopeworks for KS46 - Slope cutting and soil nail installation Row I + Row J (15 Nos Soil nails)	14	14	09-Nov-20	24-Nov-20	-1	WD (6d)
S8P8a-2170	Slopeworks for KS46 - Slope cutting and soil nail installation Row G + Row H (31 Nos Soil nails)	16	16	25-Nov-20	12-Dec-20	-1	WD (6d)
S8P8a-2180	Slopeworks for KS46 - Slope cutting and soil nail installation Row E + Row F (43 Nos Soil nails)	18	18	14-Dec-20	06-Jan-21	-1	WD (6d)
S8P8a-2190	Slopeworks for KS46 - Slope cutting and soil nail installation Row C + Row D (70 Nos Soil nails)	21	21	07-Jan-21	30-Jan-21	-1	WD (6d)
S8P8a-2200	Slopeworks for KS46 - Slope cutting and soil nail installation Row A + Row B (83 Nos Soil nails)	23	23	01-Feb-21	02-Mar-21	-1	WD (6d)
S8P8a-2208	Construct & maintain Temporary drainage	302	302	06-Apr-21	08-Apr-22	-17	WD (6d)
S8P8a-2210	Slopeworks for KS47 - Slope cutting and soil nail installation Row X + Row Y (24 Nos Soil nails)	15	15	06-Apr-21	22-Apr-21	-17	WD (6d)
S8P8a-2220	Slopeworks for KS47 - Slope cutting and soil nail installation Row V + Row W (40 Nos Soil nails)	17	17	23-Apr-21	13-May-21	-17	WD (6d)
S8P8a-2230	Slopeworks for KS47 - Slope cutting and soil nail installation Row T + Row U (48 Nos Soil nails)	18	18	14-May-21	04-Jun-21	-17	WD (6d)
S8P8a-2240	Slopeworks for KS47 - Slope cutting and soil nail installation Row R + Row S (56 Nos Soil nails)	19	19	05-Jun-21	28-Jun-21	-17	WD (6d)
S8P8a-2250	Slopeworks for KS47 - Slope cutting and soil nail installation Row P + Row Q (64 Nos Soil nails)	20	20	29-Jun-21	22-Jul-21	-17	WD (6d)
S8P8a-2260	Slopeworks for KS47 - Slope cutting and soil nail installation Row N + Row 0 (72 Nos Soil nails)	21	21	23-Jul-21*	16-Aug-21	-17	WD (6d)



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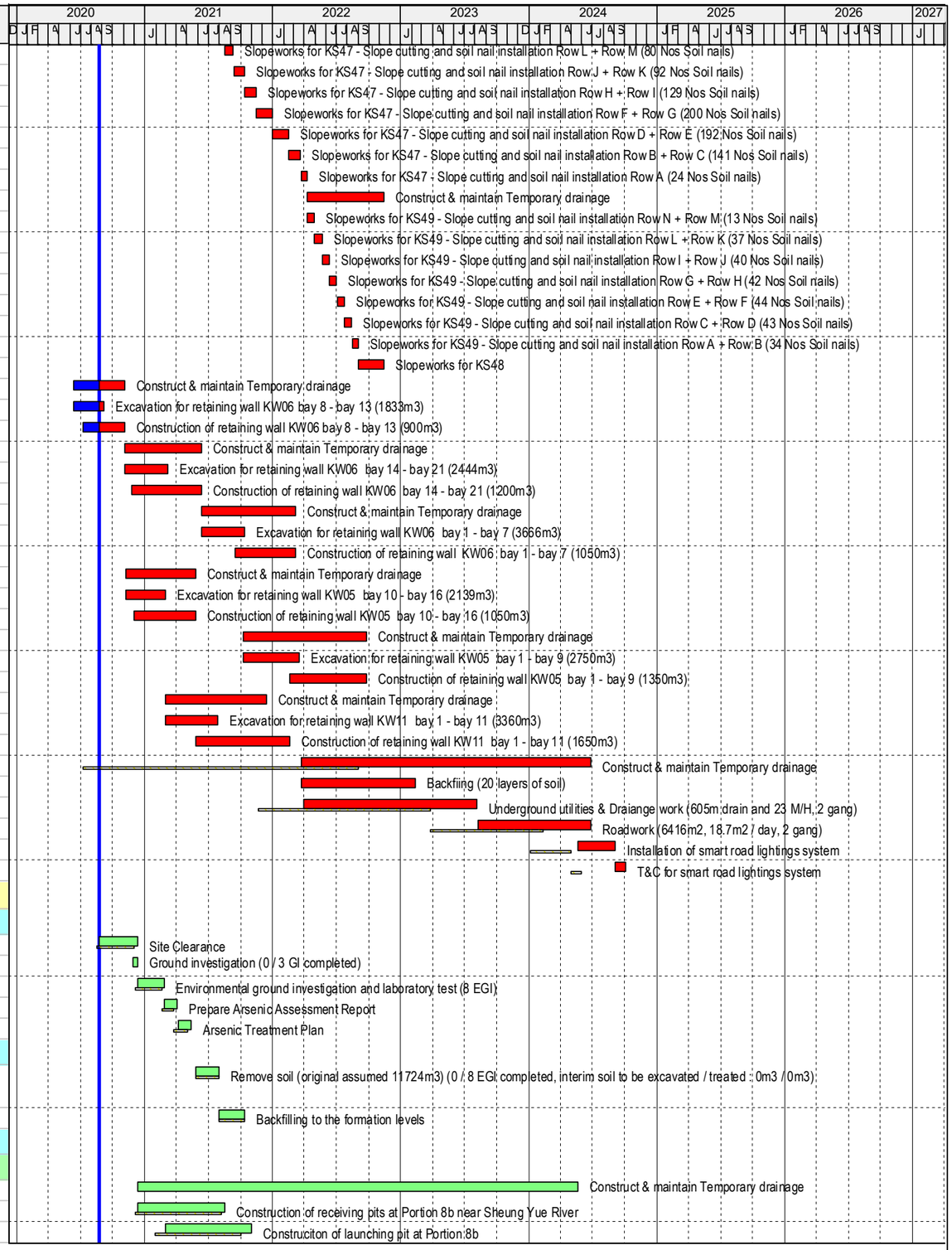
S8P8a-2270	Slopeworks for KS47 - Slope cutting and soil nail installation Row L + Row M (80 Nos Soil nails)	22	22	17-Aug-21	10-Sep-21	-17	WD (6d)
S8P8a-2280	Slopeworks for KS47 - Slope cutting and soil nail installation Row J + Row K (92 Nos Soil nails)	24	24	11-Sep-21	11-Oct-21	-17	WD (6d)
S8P8a-2290	Slopeworks for KS47 - Slope cutting and soil nail installation Row H + Row I (129 Nos Soil nails)	28	28	12-Oct-21	13-Nov-21	-17	WD (6d)
S8P8a-2300	Slopeworks for KS47 - Slope cutting and soil nail installation Row F + Row G (200 Nos Soil nails)	37	37	15-Nov-21	29-Dec-21	-17	WD (6d)
S8P8a-2310	Slopeworks for KS47 - Slope cutting and soil nail installation Row D + Row E (192 Nos Soil nails)	36	36	30-Dec-21	14-Feb-22	-17	WD (6d)
S8P8a-2320	Slopeworks for KS47 - Slope cutting and soil nail installation Row B + Row C (141 Nos Soil nails)	30	30	15-Feb-22	21-Mar-22	-17	WD (6d)
S8P8a-2330	Slopeworks for KS47 - Slope cutting and soil nail installation Row A (24 Nos Soil nails)	15	15	22-Mar-22	08-Apr-22	-17	WD (6d)
S8P8a-2338	Construct & maintain Temporary drainage	179	179	09-Apr-22	15-Nov-22	-17	WD (6d)
S8P8a-2340	Slopeworks for KS49 - Slope cutting and soil nail installation Row N + Row M (13 Nos Soil nails)	14	14	09-Apr-22	28-Apr-22	-17	WD (6d)
S8P8a-2350	Slopeworks for KS49 - Slope cutting and soil nail installation Row L + Row K (37 Nos Soil nails)	17	17	29-Apr-22	20-May-22	-17	WD (6d)
S8P8a-2360	Slopeworks for KS49 - Slope cutting and soil nail installation Row I + Row J (40 Nos Soil nails)	17	17	21-May-22	10-Jun-22	-17	WD (6d)
S8P8a-2370	Slopeworks for KS49 - Slope cutting and soil nail installation Row G + Row H (42 Nos Soil nails)	18	18	11-Jun-22	02-Jul-22	-17	WD (6d)
S8P8a-2380	Slopeworks for KS49 - Slope cutting and soil nail installation Row E + Row F (44 Nos Soil nails)	18	18	04-Jul-22	23-Jul-22	-17	WD (6d)
S8P8a-2390	Slopeworks for KS49 - Slope cutting and soil nail installation Row C + Row D (43 Nos Soil nails)	18	18	25-Jul-22	13-Aug-22	-17	WD (6d)
S8P8a-2400	Slopeworks for KS49 - Slope cutting and soil nail installation Row A + Row B (34 Nos Soil nails)	17	17	15-Aug-22	02-Sep-22	-17	WD (6d)
S8P8a-2440	Slopeworks for KS48	60	60	03-Sep-22	15-Nov-22	-17	WD (6d)
S8P8a-2498	Construct & maintain Temporary drainage	4	58	11-Jun-20 A	03-Nov-20	-72	WD (6d)
S8P8a-2500	Excavation for retaining wall KW06 bay 8 - bay 13 (1833m3)	60	12	11-Jun-20 A	07-Sep-20	-72	WD (6d)
S8P8a-2502	Construction of retaining wall KW06 bay 8 - bay 13 (900m3)	100	58	07-Jul-20 A	03-Nov-20	-72	WD (6d)
S8P8a-2538	Construct & maintain Temporary drainage	178	178	04-Nov-20	11-Jun-21	-72	WD (6d)
S8P8a-2540	Excavation for retaining wall KW06 bay 14 - bay 21 (2444m3)	100	100	04-Nov-20	06-Mar-21	-72	WD (6d)
S8P8a-2542	Construction of retaining wall KW06 bay 14 - bay 21 (1200m3)	160	160	25-Nov-20	11-Jun-21	-72	WD (6d)
S8P8a-2558	Construct & maintain Temporary drainage	218	218	12-Jun-21	05-Mar-22	-72	WD (6d)
S8P8a-2560	Excavation for retaining wall KW06 bay 1 - bay 7 (3666m3)	100	100	12-Jun-21	11-Oct-21	-72	WD (6d)
S8P8a-2562	Construction of retaining wall KW06 bay 1 - bay 7 (1050m3)	140	140	14-Sep-21	05-Mar-22	-72	WD (6d)
S8P8a-2598	Construct & maintain Temporary drainage	158	158	09-Nov-20	24-May-21	-88	WD (6d)
S8P8a-2600	Excavation for retaining wall KW05 bay 10 - bay 16 (2139m3)	90	90	09-Nov-20	27-Feb-21	-88	WD (6d)
S8P8a-2602	Construction of retaining wall KW05 bay 10 - bay 16 (1050m3)	140	140	30-Nov-20	24-May-21	-88	WD (6d)
S8P8a-2628	Construct & maintain Temporary drainage	288	288	07-Oct-21	26-Sep-22	-88	WD (6d)
S8P8a-2630	Excavation for retaining wall KW05 bay 1 - bay 9 (2750m3)	130	130	07-Oct-21	15-Mar-22	-88	WD (6d)
S8P8a-2632	Construction of retaining wall KW05 bay 1 - bay 9 (1350m3)	180	180	18-Feb-22	26-Sep-22	-88	WD (6d)
S8P8a-2658	Construct & maintain Temporary drainage	238	238	01-Mar-21	14-Dec-21	-88	WD (6d)
S8P8a-2660	Excavation for retaining wall KW11 bay 1 - bay 11 (3360m3)	120	120	01-Mar-21	26-Jul-21	-88	WD (6d)
S8P8a-2662	Construction of retaining wall KW11 bay 1 - bay 11 (1650m3)	220	220	25-May-21	17-Feb-22	-88	WD (6d)
S8P8a-3046	Construct & maintain Temporary drainage	665	665	25-Mar-22	25-Jun-24	-88	WD (6d)
S8P8a-3048	Backfiing (20 layers of soil)	262	262	25-Mar-22	11-Feb-23	-88	WD (6d)
S8P8a-3050	Underground utilities & Draiange work (605m drain and 23 M/H, 2 gang)	400	400	31-Mar-22	07-Aug-23	-88	WD (6d)
S8P8a-3060	Roadwork (6416m2, 18.7m2 / day, 2 gang)	260	260	08-Aug-23	25-Jun-24	-88	WD (6d)
S8P8a-3070	Installation of smart road lightings system	90	90	20-May-24	04-Sep-24	-88	WD (6d)
S8P8a-3080	T&C for smart road lightings system	30	30	04-Sep-24	04-Oct-24	-105	CD (7d)
Portion 8b in Area A (Soil Treatment & Install Watermains by Trenchless / Open Trench Method)							
Preparation work/Tree Survey/Site Clearance/GI							
S8P8b-1010	Site Clearance	90	90	25-Aug-20	10-Dec-20	27	WD (6d)
S8P8b-1015	Ground investigation (0 / 3 GI completed)	12	12	27-Nov-20	10-Dec-20	132	WD (6d)
S8P8b-1020	Environmental ground investigation and laboratory test (8 EGI)	60	60	11-Dec-20	25-Feb-21	72	WD (6d)
S8P8b-1030	Prepare Arsenic Assessment Report	30	30	26-Feb-21	01-Apr-21	72	WD (6d)
S8P8b-1040	Arsenic Treatment Plan	30	30	06-Apr-21	11-May-21	72	WD (6d)
Soil Treatment							
S8P8b-2010	Remove soil (original assumed 11724m3) (0 / 8 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	56	56	25-May-21*	30-Jul-21	62	WD (6d)
S8P8b-2020	Backfilling to the formation levels	60	60	31-Jul-21	11-Oct-21	62	WD (6d)
Construction of Watermains							
Construction of watermains by trenchless method							
S8P8b-4000	Construct & maintain Temporary drainage	1015	1015	11-Dec-20	20-May-24	27	WD (6d)
S8P8b-4010	Construction of receiving pits at Portion 8b near Sheung Yue River	200	200	11-Dec-20*	16-Aug-21	27	WD (6d)
S8P8b-4020	Construciton of launching pit at Portion 8b	200	200	02-Mar-21*	01-Nov-21	204	WD (6d)



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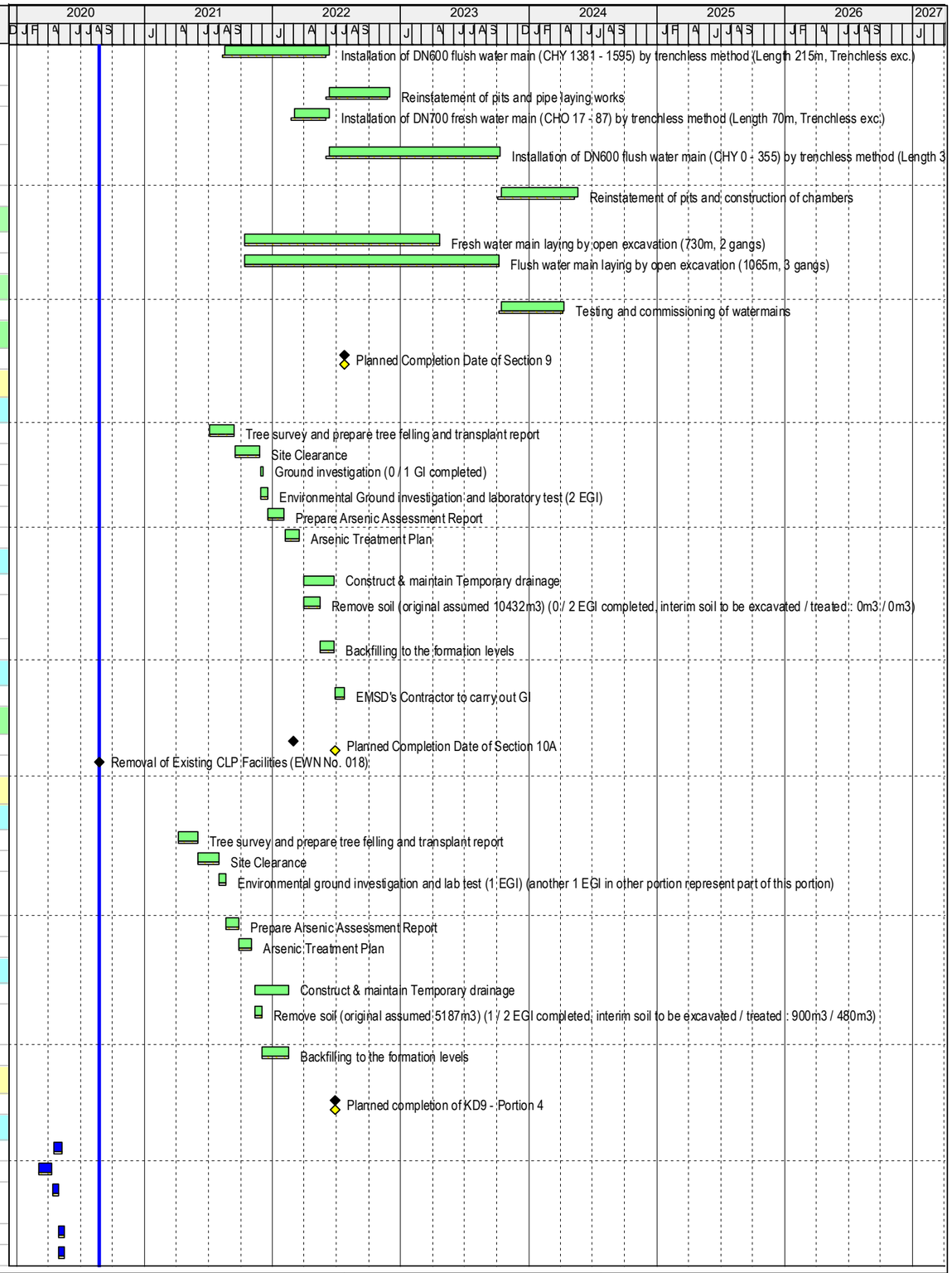
S8P8b-4030	Installation of DN600 flush water main (CHY 1381 - 1595) by trenchless method (Length 215m, Trenchless exc.)	240	240	17-Aug-21	10-Jun-22	27	WD (6d)
S8P8b-4035	Reinstatement of pits and pipe laying works	145	145	11-Jun-22	01-Dec-22	457	WD (6d)
S8P8b-4040	Installation of DN700 fresh water main (CHO 17 - 87) by trenchless method (Length 70m, Trenchless exc.)	80	80	02-Mar-22	10-Jun-22	427	WD (6d)
S8P8b-4050	Installation of DN600 flush water main (CHY 0 - 355) by trenchless method (Length 360m, Trenchless exc.)	400	400	11-Jun-22	12-Oct-23	27	WD (6d)
S8P8b-4060	Reinstatement of pits and construction of chambers	175	175	13-Oct-23	20-May-24	27	WD (6d)
Construction of watermains by open trench method							
S8P8b-5010	Fresh water main laying by open excavation (730m, 2 gangs)	450	450	12-Oct-21	20-Apr-23	202	WD (6d)
S8P8b-5020	Flush water main laying by open excavation (1065m, 3 gangs)	590	590	12-Oct-21	07-Oct-23	62	WD (6d)
Testing and commissioning of watermains							
S8P8b-6010	Testing and commissioning of watermains	144	144	13-Oct-23	11-Apr-24	58	WD (6d)
Section 9							
S9-1000	Planned Completion Date of Section 9	0	0		25-Jul-22	43	CD (7d)
Portion 12 in Area F (Soil Treatment & Interface with EMSD's Contractors)							
Preparation work/Tree Survey/Site Clearance/GI							
S9P12-1010	Tree survey and prepare tree felling and transplant report	60	60	06-Jul-21	13-Sep-21	48	WD (6d)
S9P12-1020	Site Clearance	60	60	14-Sep-21	25-Nov-21	48	WD (6d)
S9P12-1025	Ground investigation (0 / 1 GI completed)	6	6	26-Nov-21	02-Dec-21	60	WD (6d)
S9P12-1030	Environmental Ground investigation and laboratory test (2 EGI)	18	18	26-Nov-21	16-Dec-21	48	WD (6d)
S9P12-1040	Prepare Arsenic Assessment Report	36	36	17-Dec-21	31-Jan-22	48	WD (6d)
S9P12-1050	Arsenic Treatment Plan	36	36	04-Feb-22	17-Mar-22	48	WD (6d)
Soil Treatment							
S9P12-2000	Construct & maintain Temporary drainage	68	68	31-Mar-22	25-Jun-22	37	WD (6d)
S9P12-2010	Remove soil (original assumed 10432m3) (0 / 2 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	34	34	31-Mar-22*	16-May-22	37	WD (6d)
S9P12-2020	Backfilling to the formation levels	34	34	17-May-22	25-Jun-22	37	WD (6d)
Interface with EMSD's Contractor to carry out GI							
S9P12-3010	EMSD's Contractor to carry out GI	24	24	27-Jun-22	25-Jul-22	37	WD (6d)
Section 10A							
S10A-1010	Planned Completion Date of Section 10A	0	0		28-Feb-22	128	CD (7d)
S10A-1011	Removal of Existing CLP Facilities (EWN No. 018)	0	0		25-Aug-20	473	CD (7d)
Portion 1e in Area J (Soil Treatment)							
Preparation work/Tree Survey/Site Clearance/GI							
S10AP1e-1010	Tree survey and prepare tree felling and transplant report	48	48	06-Apr-21	02-Jun-21	121	WD (6d)
S10AP1e-1020	Site Clearance	48	48	03-Jun-21	30-Jul-21	121	WD (6d)
S10AP1e-1030	Environmental ground investigation and lab test (1 EGI) (another 1 EGI in other portion represent part of this portion)	18	18	31-Jul-21	20-Aug-21	121	WD (6d)
S10AP1e-1040	Prepare Arsenic Assessment Report	30	30	21-Aug-21	25-Sep-21	121	WD (6d)
S10AP1e-1050	Arsenic Treatment Plan	30	30	27-Sep-21	02-Nov-21	121	WD (6d)
Soil Treatment							
S10AP1e-2000	Construct & maintain Temporary drainage	76	76	12-Nov-21	15-Feb-22	113	WD (6d)
S10AP1e-2010	Remove soil (original assumed 5187m3) (1 / 2 EGI completed, interim soil to be excavated / treated : 900m3 / 480m3)	17	17	12-Nov-21*	01-Dec-21	113	WD (6d)
S10AP1e-2020	Backfilling to the formation levels	59	59	02-Dec-21	15-Feb-22	113	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	0		28-Jun-22	295	CD (7d)
Preparation work/Tree Survey/Site Clearance/GI							
S10AP4-0010	Tree survey and prepare tree felling and transplant report	48	0	17-Apr-20 A	11-May-20 A		WD (6d)
S10AP4-0020	Site clearance	48	0	05-Mar-20 A	09-Apr-20 A		WD (6d)
S10AP4-0030	Environmental ground investigation and lab test (4 EGI) (another 2 EGI in other portion represent part of this portion)	18	0	14-Apr-20 A	29-Apr-20 A		WD (6d)
S10AP4-0040	Prepare Arsenic Assessment Report	30	0	30-Apr-20 A	18-May-20 A		WD (6d)
S10AP4-0050	Arsenic Treatment Plan	30	0	30-Apr-20 A	18-May-20 A		WD (6d)



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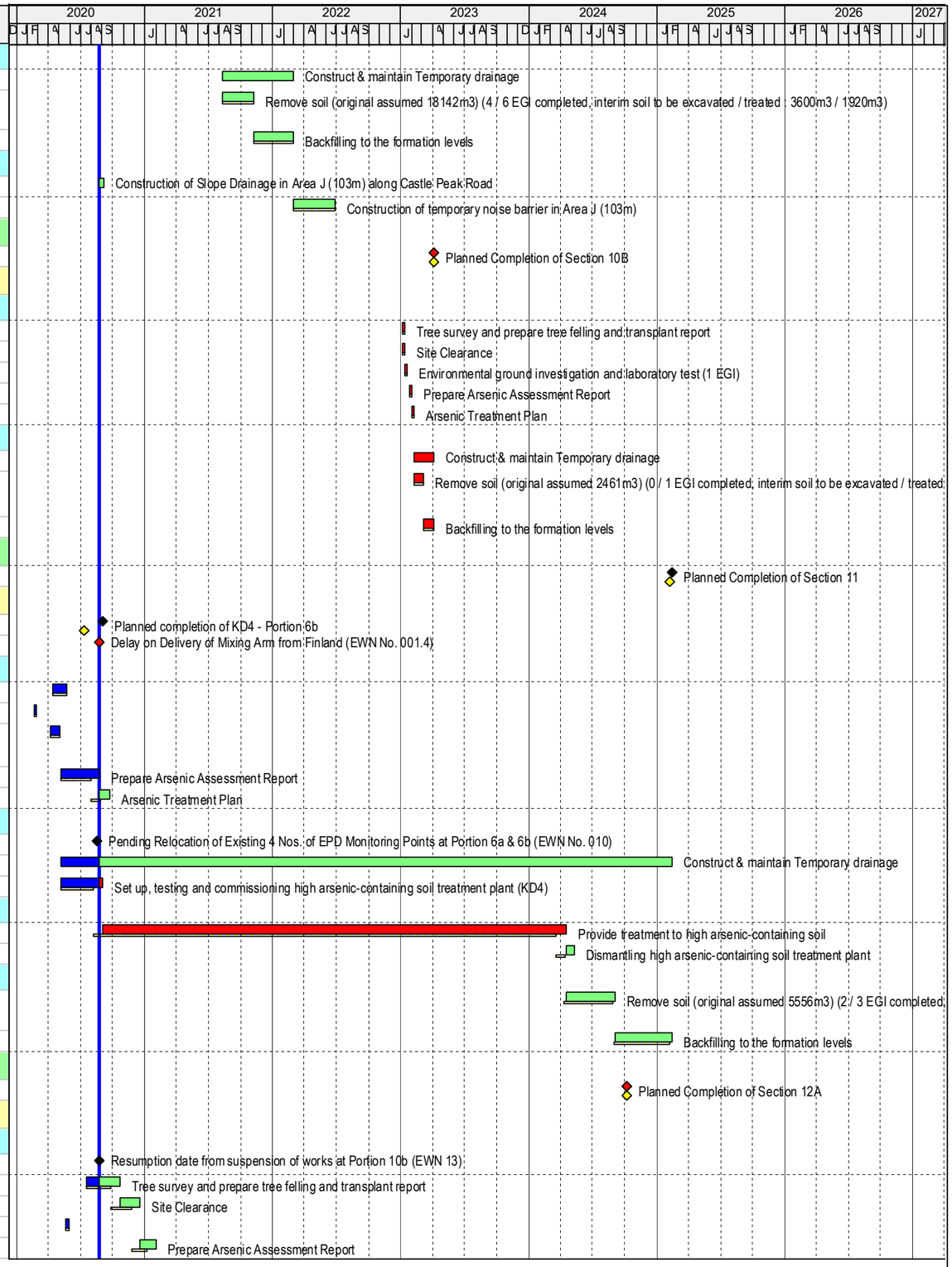
Soil Treatment							
S10AP4-1005	Construct & maintain Temporary drainage	164	164	11-Aug-21	28-Feb-22	102	WD (6d)
S10AP4-1010	Remove soil (original assumed 18142m3) (4 / 6 EGI completed, interim soil to be excavated / treated : 3600m3 / 1920m3)	74	74	11-Aug-21*	08-Nov-21	102	WD (6d)
S10AP4-1020	Backfilling to the formation levels	90	90	09-Nov-21	28-Feb-22	102	WD (6d)
KD9 - Complete the temporary noise barriers along Castle Peak Road in Area T1, T2, T3, H, H1, I, J,							
S10AP4-2000	Construction of Slope Drainage in Area J (103m) along Castle Peak Road	12	12	25-Aug-20	05-Sep-20	822	CD (7d)
S10AP4-2010	Construction of temporary noise barrier in Area J (103m)	96	96	01-Mar-22	28-Jun-22	240	WD (6d)
Section 10B							
S10B-1010	Planned Completion of Section 10B	0	0		06-Apr-23	0	CD (7d)
Portion 15 in Area J1 (Soil Treatment)							
Preparation work/Tree Survey/Site Clearance/GI							
S10BP7-1010	Tree survey and prepare tree felling and transplant report	6	6	06-Jan-23	12-Jan-23	0	WD (6d)
S10BP7-1020	Site Clearance	6	6	06-Jan-23	12-Jan-23	0	WD (6d)
S10BP7-1030	Environmental ground investigation and laboratory test (1 EGI)	7	7	13-Jan-23	20-Jan-23	0	WD (6d)
S10BP7-1040	Prepare Arsenic Assessment Report	6	6	25-Jan-23	31-Jan-23	0	WD (6d)
S10BP7-1050	Arsenic Treatment Plan	6	6	01-Feb-23	07-Feb-23	0	WD (6d)
Soil Treatment							
S10BP7-2000	Construct & maintain Temporary drainage	49	49	08-Feb-23	06-Apr-23	0	WD (6d)
S10BP7-2010	Remove soil (original assumed 2461m3) (0 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	08-Feb-23	07-Mar-23	0	WD (6d)
S10BP7-2020	Backfilling to the formation levels	25	25	08-Mar-23	06-Apr-23	0	WD (6d)
Section 11							
S11-1010	Planned Completion of Section 11	0	0		12-Feb-25	329	CD (7d)
Portion 6b in Area B (Soil Treatment & Operation of HAC Soil Treatment Plant)							
S11P6b-1000	Planned completion of KD4 - Portion 6b	0	0		01-Sep-20	96	CD (7d)
S11P6b-1001	Delay on Delivery of Mixing Arm from Finland (EWN No. 001.4)	0	0		25-Aug-20	-62	CD (7d)
Preparation work/Tree Survey/Site Clearance/GI							
S11P6b-1010	Tree survey and prepare tree felling and transplant report	24	0	14-Apr-20 A	22-May-20 A		WD (6d)
S11P6b-1020	Site Clearance	26	0	20-Feb-20 A	26-Feb-20 A		WD (6d)
S11P6b-1030	Environmental ground investigation and lab test (2 EGI) (another 1 EGI in other portion represent part of this portion)	16	0	07-Apr-20 A	04-May-20 A		WD (6d)
S11P6b-1040	Prepare Arsenic Assessment Report	24	0	05-May-20 A	25-Aug-20	1324	WD (6d)
S11P6b-1050	Arsenic Treatment Plan	24	24	25-Aug-20	21-Sep-20	1324	WD (6d)
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant							
S11P6b-2000	Pending Relocation of Existing 4 Nos. of EPD Monitoring Points at Portion 6a & 6b (EWN No. 01	0	0		17-Aug-20 A		CD (7d)
S11P6b-2005	Construct & maintain Temporary drainage	1400	1323	05-May-20 A	12-Feb-25	268	WD (6d)
S11P6b-2010	Set up, testing and commissioning high arsenic-containing soil treatment plant (KD4)	72	7	05-May-20 A	01-Sep-20	-58	WD (6d)
Operation and Dismantling of the Soil Treatment Plant							
S11P6b-3010	Provide treatment to high arsenic-containing soil	1073	1073	02-Sep-20	18-Apr-24	-58	WD (6d)
S11P6b-3020	Dismantling high arsenic-containing soil treatment plant	24	24	18-Apr-24	12-May-24	450	CD (7d)
Soil Treatment							
S11P6b-4010	Remove soil (original assumed 5556m3) (2 / 3 EGI completed, interim soil to be excavated / treated : 10000m3 / 8000m3)	116	116	18-Apr-24*	05-Sep-24	268	WD (6d)
S11P6b-4020	Backfilling to the formation levels	127	127	05-Sep-24	12-Feb-25	268	WD (6d)
Section 12A							
S12-1000	Planned Completion of Section 12A	0	0		06-Oct-24*	0	CD (7d)
Portion 10b in Area L1 (Soil Treatment, Drainage & Roadwork)							
Preparation work/Tree Survey/Site Clearance/GI							
S12P10b-1005	Resumption date from suspension of works at Portion 10b (EWN 13)	0	0		25-Aug-20	764	CD (7d)
S12P10b-1010	Tree survey and prepare tree felling and transplant report	48	48	20-Jul-20 A	21-Oct-20	573	WD (6d)
S12P10b-1020	Site Clearance	48	48	22-Oct-20	17-Dec-20	573	WD (6d)
S12P10b-1035	Environmental ground investigation and laboratory test (2 of 2 EGI)	15	0	19-May-20 A	29-May-20 A		WD (6d)
S12P10b-1040	Prepare Arsenic Assessment Report	36	36	18-Dec-20	01-Feb-21	573	WD (6d)



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S12P10b-1050	Arsenic Treatment Plan	36	36	02-Feb-21	18-Mar-21	573	WD (6d)
Soil Treatment							
S12P10b-2010	Remove soil (original assumed 440m3) (2 / 2 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	19-Mar-21*	19-Apr-21	573	WD (6d)
S12P10b-2020	Backfilling to the road formation levels	48	48	20-Apr-21	17-Jun-21	573	WD (6d)
Civil Work							
S12P10b-3000	Construct & maintain Temporary drainage	432	432	19-Mar-21	01-Sep-22	573	WD (6d)
S12P10b-3010	Underground utilities & Drainage work (158m drain and 5 M/H)	300	300	18-Jun-21	22-Jun-22	573	WD (6d)
S12P10b-3020	Roadwork (410m2)	60	60	23-Jun-22	01-Sep-22	573	WD (6d)
S12P10b-3030	Installation of smart road lightings system	24	24	02-Sep-22	30-Sep-22	573	WD (6d)
S12P10b-3040	T&C for smart road lightings system	30	30	01-Oct-22	30-Oct-22	706	CD (7d)
Portion 11b in Area L1 (Soil Treatment, Drainage & Roadwork)							
Preparation work/Tree Survey/Site Clearance/GI							
S12P11b-1010	Tree survey and prepare tree felling and transplant report	24	24	06-Jan-24	02-Feb-24	0	WD (6d)
S12P11b-1020	Site Clearance	24	24	06-Jan-24	02-Feb-24	0	WD (6d)
S12P11b-1025	Ground investigation (0 / 1 GI completed)	6	6	03-Feb-24	09-Feb-24	4	WD (6d)
S12P11b-1030	Environmental ground investigation and laboratory test (1 EGI in other portion represent this porl	15	15	29-Jan-24	17-Feb-24	0	WD (6d)
S12P11b-1040	Prepare Arsenic Assessment Report	24	24	19-Feb-24	16-Mar-24	0	WD (6d)
S12P11b-1050	Arsenic Treatment Plan	24	24	18-Mar-24	19-Apr-24	0	WD (6d)
Soil Treatment							
S12P11b-2010	Remove soil (original assumed 269m3) (0 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	19-Apr-24*	20-May-24	0	WD (6d)
S12P11b-2020	Backfilling to the formation levels	31	31	11-May-24	19-Jun-24	0	WD (6d)
Civil Work							
S12P11b-3000	Construct & maintain Temporary drainage	121	121	19-Apr-24	12-Sep-24	0	WD (6d)
S12P11b-3010	Underground utilities & Drainage work (50m drain and 2 M/H)	60	60	19-Jun-24	29-Aug-24	0	WD (6d)
S12P11b-3020	Roadwork (285m2)	18	18	22-Aug-24	12-Sep-24	0	WD (6d)
S12P11b-3030	Installation of smart road lightings system	8	8	12-Sep-24	23-Sep-24	0	WD (6d)
S12P11b-3040	T&C for smart road lightings system	13	13	23-Sep-24	06-Oct-24	0	CD (7d)
Section 12B							
S12B-1010	Planned Completion of Section 12B	0	0		10-Dec-25	28	CD (7d)
Portion 11b in Area L2 (Soil Treatment, Drainage & Roadwork)							
Preparation work/Tree Survey/Site Clearance/GI							
S12BP11b-1010	Tree survey and prepare tree felling and transplant report	48	48	06-Jan-24	05-Mar-24	24	WD (6d)
S12BP11b-1020	Site Clearance	48	48	06-Mar-24	07-May-24	24	WD (6d)
S12BP11b-1030	Environmental ground investigation and laboratory test (1 EGI)	15	15	30-Apr-24	20-May-24	24	WD (6d)
S12BP11b-1040	Prepare Arsenic Assessment Report	36	36	20-May-24	03-Jul-24	24	WD (6d)
S12BP11b-1050	Arsenic Treatment Plan	36	36	03-Jul-24	14-Aug-24	24	WD (6d)
Soil Treatment							
S12BP11b-2010	Remove soil (original assumed 829m3) (0 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	14-Aug-24*	11-Sep-24	24	WD (6d)
S12BP11b-2020	Backfilling to the formation levels	60	60	11-Sep-24	23-Nov-24	24	WD (6d)
Civil Work							
S12BP11b-3000	Construct & maintain Temporary drainage	337	337	14-Aug-24	03-Oct-25	24	WD (6d)
S12BP11b-3010	Underground utilities & Drainage work (95m drain and 4 M/H)	160	160	23-Nov-24	14-Jun-25	37	WD (6d)
S12BP11b-3020	Roadwork (1070m2)	80	80	30-Jun-25	03-Oct-25	24	WD (6d)
S12BP11b-3030	Installation of smart road lightings system	30	30	03-Oct-25	10-Nov-25	24	WD (6d)
S12BP11b-3040	T&C for smart road lightings system	30	30	10-Nov-25	10-Dec-25	28	CD (7d)
Section 13							
S13-1010	Planned Completion of Section 13	0	0		24-Nov-24	289	CD (7d)
S13-1011	Opening Cycle Track at Portion 2 (EWN No. 017)	0	0		25-Aug-20	288	CD (7d)
Portion 2 in Area N (Soil Treatment, Slope, Drainage & Pak Shek Au Junction)							
Preparation work/Tree Survey/Site Clearance/GI							
S13P2-1010	Tree survey and prepare tree felling and transplant report	60	0	12-Mar-20 A	21-Jul-20 A		WD (6d)
S13P2-1012	Approval & Acceptance of Tree Felling Application	30	30	23-Jul-20 A	23-Sep-20	358	CD (7d)

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ND/2019/01 - Revised Programme (2020-08)

Project ID: ND201901-RP-8.0
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REVISED PROGRAMME (2020-08)			
Date	Revision	Checked	Approved
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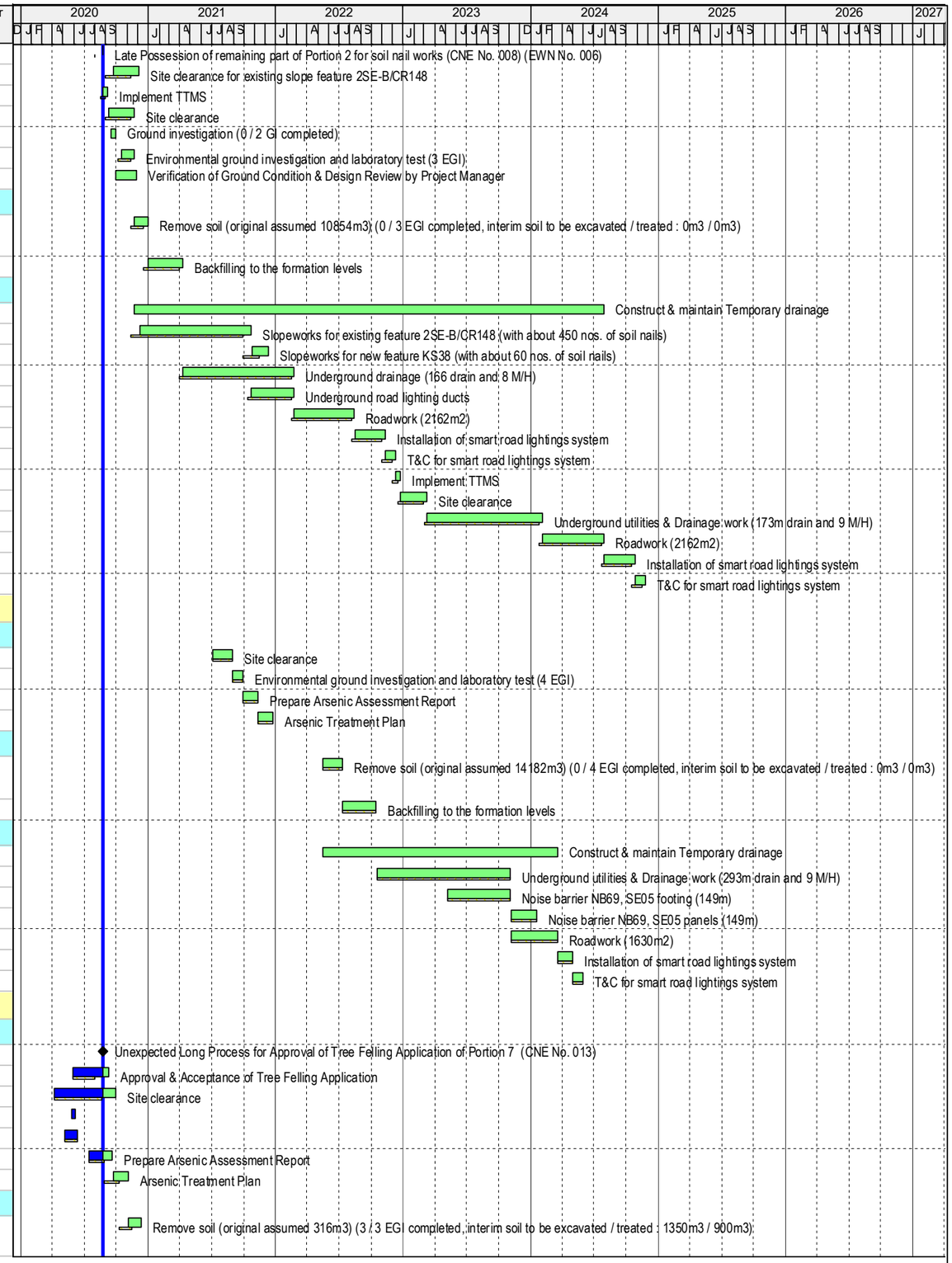
Activity ID	Activity Name	Dur (d)	emainin Duration	Start	Finish	Total Float	Calendar
S13P2-1016	Late Possession of remaining part of Portion 2 for soil nail works (CNE No. 008) (EWN No. 006)	0	0	25-Aug-20	25-Aug-20	388	CD (7d)
S13P2-1018	Site clearance for existing slope feature 2SE-B/CR148	60	60	24-Sep-20	05-Dec-20	291	WD (6d)
S13P2-1020	Implement TTMS	12	12	25-Aug-20	07-Sep-20	233	WD (6d)
S13P2-1030	Site clearance	60	60	08-Sep-20	19-Nov-20	233	WD (6d)
S13P2-1035	Ground investigation (0 / 2 GI completed)	12	12	15-Sep-20	28-Sep-20	275	WD (6d)
S13P2-1040	Environmental ground investigation and laboratory test (3 EGI)	30	30	15-Oct-20	19-Nov-20	233	WD (6d)
S13P2-1045	Verification of Ground Condition & Design Review by Project Manager	60	60	29-Sep-20	27-Nov-20	367	CD (7d)
Soil Treatment							
S13P2-2010	Remove soil (original assumed 10854m3) (0 / 3 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	32	32	20-Nov-20*	29-Dec-20	233	WD (6d)
S13P2-2020	Backfilling to the formation levels	80	80	30-Dec-20	09-Apr-21	233	WD (6d)
Civil Work							
S13P2-3000	Construct & maintain Temporary drainage	1092	1092	20-Nov-20	30-Jul-24	233	WD (6d)
S13P2-3005	Slopeworks for existing feature 2SE-B/CR148 (with about 450 nos. of soil nails)	260	260	07-Dec-20	23-Oct-21	291	WD (6d)
S13P2-3010	Slopeworks for new feature KS38 (with about 60 nos. of soil nails)	40	40	25-Oct-21	09-Dec-21	291	WD (6d)
S13P2-3020	Underground drainage (166 drain and 8 M/H)	260	260	10-Apr-21	22-Feb-22	233	WD (6d)
S13P2-3021	Underground road lighting ducts	100	100	22-Oct-21	22-Feb-22	233	WD (6d)
S13P2-3030	Roadwork (2162m2)	140	140	23-Feb-22	13-Aug-22	233	WD (6d)
S13P2-3040	Installation of smart road lightings system	72	72	15-Aug-22	09-Nov-22	233	WD (6d)
S13P2-3050	T&C for smart road lightings system	30	30	10-Nov-22	09-Dec-22	287	CD (7d)
S13P2-3060	Implement TTMS	12	12	10-Dec-22	23-Dec-22	233	WD (6d)
S13P2-3070	Site clearance	60	60	24-Dec-22	09-Mar-23	233	WD (6d)
S13P2-3080	Underground utilities & Drainage work (173m drain and 9 M/H)	270	270	10-Mar-23	03-Feb-24	233	WD (6d)
S13P2-3090	Roadwork (2162m2)	140	140	05-Feb-24	30-Jul-24	233	WD (6d)
S13P2-3100	Installation of smart road lightings system	72	72	30-Jul-24	25-Oct-24	233	WD (6d)
S13P2-3110	T&C for smart road lightings system	30	30	25-Oct-24	24-Nov-24	289	CD (7d)
Portion 1a in Area N (Soil Treatment, Drainage & Roadwork)							
Preparation work/Tree Survey/Site Clearance/GI							
S13P1a-1010	Site clearance	48	48	06-Jul-21	30-Aug-21	491	WD (6d)
S13P1a-1020	Environmental ground investigation and laboratory test (4 EGI)	24	24	31-Aug-21	28-Sep-21	491	WD (6d)
S13P1a-1030	Prepare Arsenic Assessment Report	36	36	29-Sep-21	11-Nov-21	491	WD (6d)
S13P1a-1040	Arsenic Treatment Plan	36	36	12-Nov-21	23-Dec-21	491	WD (6d)
Soil Treatment							
S13P1a-2010	Remove soil (original assumed 14182m3) (0 / 4 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	46	46	17-May-22*	11-Jul-22	380	WD (6d)
S13P1a-2020	Backfilling to the formation levels	80	80	12-Jul-22	15-Oct-22	380	WD (6d)
Civil Work							
S13P1a-3000	Construct & maintain Temporary drainage	550	550	17-May-22	19-Mar-24	380	WD (6d)
S13P1a-3010	Underground utilities & Drainage work (293m drain and 9 M/H)	314	314	17-Oct-22	04-Nov-23	380	WD (6d)
S13P1a-3020	Noise barrier NB69, SE05 footing (149m)	150	150	08-May-23	04-Nov-23	380	WD (6d)
S13P1a-3025	Noise barrier NB69, SE05 panels (149m)	60	60	06-Nov-23	17-Jan-24	430	WD (6d)
S13P1a-3030	Roadwork (1630m2)	110	110	06-Nov-23	19-Mar-24	380	WD (6d)
S13P1a-3040	Installation of smart road lightings system	30	30	20-Mar-24	29-Apr-24	380	WD (6d)
S13P1a-3050	T&C for smart road lightings system	30	30	29-Apr-24	29-May-24	468	CD (7d)
Portion 7 in Area N (Soil Treatment, Drainage & Roadwork)							
Preparation work/Tree Survey/Site Clearance/GI							
S13P7-1002	Unexpected Long Process for Approval of Tree Felling Application of Portion 7 (CNE No. 013)	0	0		25-Aug-20	843	CD (7d)
S13P7-1005	Approval & Acceptance of Tree Felling Application	30	15	30-May-20 A	08-Sep-20	828	CD (7d)
S13P7-1010	Site clearance	60	30	06-Apr-20 A	28-Sep-20	672	WD (6d)
S13P7-1015	Ground investigation (1 / 1 GI completed)	6	0	27-May-20 A	06-Jun-20 A		WD (6d)
S13P7-1020	Environmental ground investigation and laboratory test (3 EGI)	20	0	08-May-20 A	13-Jun-20 A		WD (6d)
S13P7-1030	Prepare Arsenic Assessment Report	36	23	16-Jul-20 A	19-Sep-20	643	WD (6d)
S13P7-1040	Arsenic Treatment Plan	36	36	21-Sep-20	04-Nov-20	643	WD (6d)
Soil Treatment							
S13P7-2010	Remove soil (original assumed 316m3) (3 / 3 EGI completed, interim soil to be excavated / treated : 1350m3 / 900m3)	30	30	05-Nov-20*	09-Dec-20	643	WD (6d)



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Build King – Richwell Engineering Joint Venture

ND/2019/01 - Revised Programme (2020-08)

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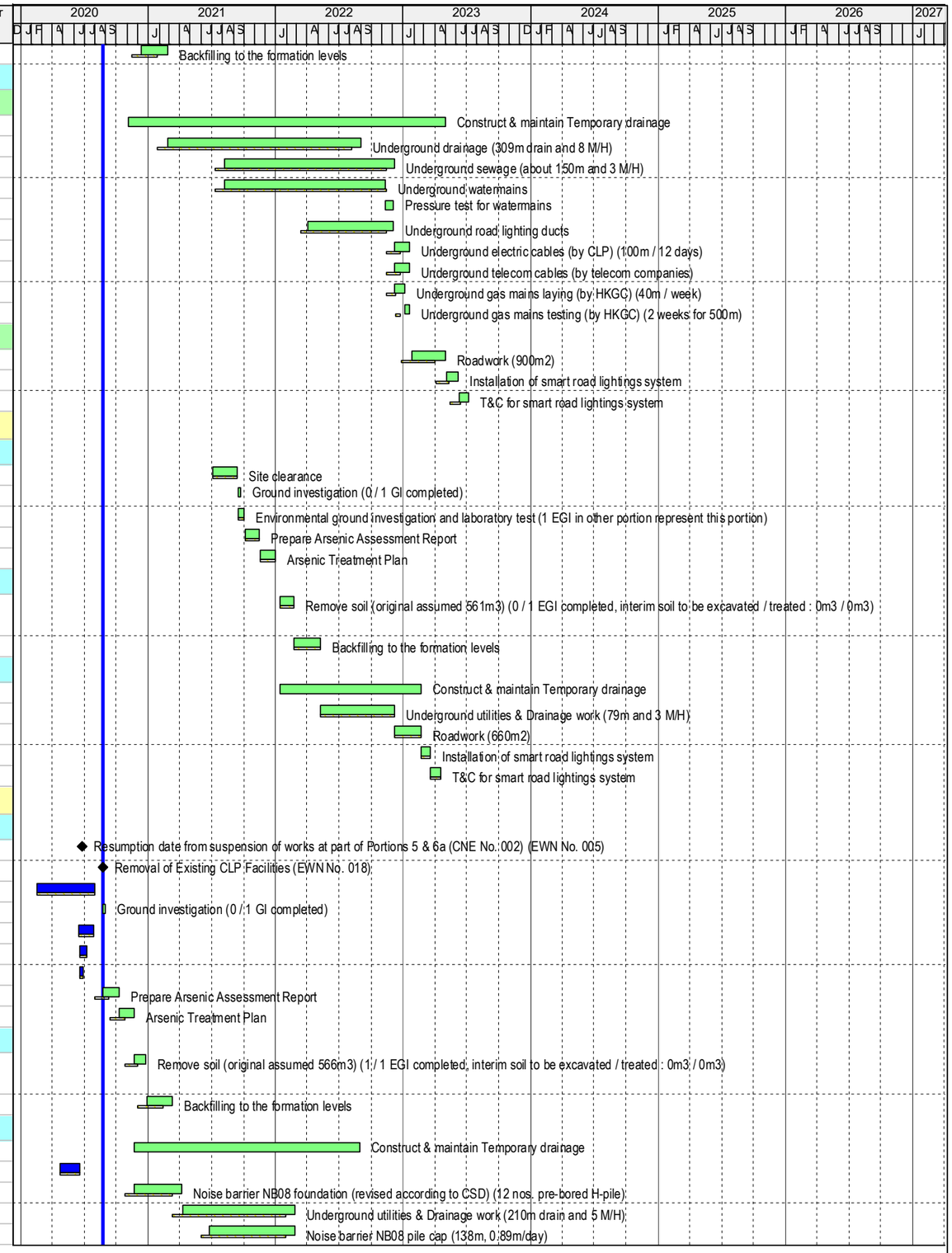
Activity ID	Activity Name	Dur (d)	emainin Duration	Start	Finish	Total Float	Calendar
S13P7-2020	Backfilling to the formation levels	60	60	10-Dec-20	24-Feb-21	643	WD (6d)
Civil Work							
Underground Utilities							
S13P7-3000	Construct & maintain Temporary drainage	737	737	05-Nov-20	03-May-23	643	WD (6d)
S13P7-3011	Underground drainage (309m drain and 8 M/H)	450	450	25-Feb-21	31-Aug-22	643	WD (6d)
S13P7-3012	Underground sewage (about 150m and 3 M/H)	400	400	05-Aug-21	07-Dec-22	643	WD (6d)
S13P7-3013	Underground watermains	376	376	05-Aug-21	09-Nov-22	651	WD (6d)
S13P7-3013.1	Pressure test for watermains	24	24	10-Nov-22	03-Dec-22	801	CD (7d)
S13P7-3014	Underground road lighting ducts	200	200	02-Apr-22	03-Dec-22	646	WD (6d)
S13P7-3025	Underground electric cables (by CLP) (100m / 12 days)	36	36	08-Dec-22	20-Jan-23	643	WD (6d)
S13P7-3026	Underground telecom cables (by telecom companies)	36	36	08-Dec-22	20-Jan-23	643	WD (6d)
S13P7-3027	Underground gas mains laying (by HKGC) (40m / week)	24	24	08-Dec-22	06-Jan-23	643	WD (6d)
S13P7-3028	Underground gas mains testing (by HKGC) (2 weeks for 500m)	14	14	07-Jan-23	20-Jan-23	795	CD (7d)
Roadworks							
S13P7-3020	Roadwork (900m2)	80	80	25-Jan-23	03-May-23	643	WD (6d)
S13P7-3030	Installation of smart road lightings system	30	30	04-May-23	08-Jun-23	643	WD (6d)
S13P7-3040	T&C for smart road lightings system	30	30	09-Jun-23	08-Jul-23	793	CD (7d)
Portion 1b in Area N (Soil Treatment, Drainage & Roadwork)							
Preparation work/Tree Survey/Site Clearance/GI							
S13P1b-1010	Site clearance	60	60	06-Jul-21	13-Sep-21	718	WD (6d)
S13P1b-1015	Ground investigation (0 / 1 GI completed)	6	6	14-Sep-21	20-Sep-21	727	WD (6d)
S13P1b-1020	Environmental ground investigation and laboratory test (1 EGI in other portion represent this porl	15	15	14-Sep-21	02-Oct-21	718	WD (6d)
S13P1b-1030	Prepare Arsenic Assessment Report	36	36	04-Oct-21	15-Nov-21	718	WD (6d)
S13P1b-1040	Arsenic Treatment Plan	36	36	16-Nov-21	29-Dec-21	718	WD (6d)
Soil Treatment							
S13P1b-2010	Remove soil (original assumed 561m3) (0 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	30	30	14-Jan-22*	21-Feb-22	706	WD (6d)
S13P1b-2020	Backfilling to the formation levels	60	60	22-Feb-22	07-May-22	706	WD (6d)
Civil Work							
S13P1b-3000	Construct & maintain Temporary drainage	326	326	14-Jan-22	20-Feb-23	706	WD (6d)
S13P1b-3010	Underground utilities & Drainage work (79m and 3 M/H)	176	176	10-May-22	06-Dec-22	706	WD (6d)
S13P1b-3020	Roadwork (660m2)	60	60	07-Dec-22	20-Feb-23	706	WD (6d)
S13P1b-3030	Installation of smart road lightings system	24	24	21-Feb-23	20-Mar-23	706	WD (6d)
S13P1b-3040	T&C for smart road lightings system	30	30	21-Mar-23	19-Apr-23	873	CD (7d)
Portion 6a & 5 in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)							
Preparation work/Tree Survey/Site Clearance/GI							
S13P6a-1000	Resumption date from suspension of works at part of Portions 5 & 6a (CNE No. 002) (EWN No. (	0	0	24-Jun-20 A			CD (7d)
S13P6a-1002	Removal of Existing CLP Facilities (EWN No. 018)	0	0		25-Aug-20	1116	CD (7d)
S13P6a-1010	Site clearance	60	0	15-Feb-20 A	31-Jul-20 A		WD (6d)
S13P6a-1015	Ground investigation (0 / 1 GI completed)	6	6	25-Aug-20	31-Aug-20	902	WD (6d)
S13P6a-1020	Environmental ground investigation and laboratory test (1 EGI)	15	0	15-Jun-20 A	27-Jul-20 A		WD (6d)
S13P6a-1025	Pre-drilling for Noise Barriers	30	0	17-Jun-20 A	08-Jul-20 A		WD (6d)
S13P6a-1026	Trial pit for Dongjiang watermains	50	0	18-Jun-20 A	29-Jun-20 A		WD (6d)
S13P6a-1030	Prepare Arsenic Assessment Report	36	36	25-Aug-20	07-Oct-20	836	WD (6d)
S13P6a-1040	Arsenic Treatment Plan	36	36	08-Oct-20	19-Nov-20	836	WD (6d)
Soil Treatment							
S13P6a-2010	Remove soil (original assumed 566m3) (1 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	30	30	20-Nov-20*	24-Dec-20	836	WD (6d)
S13P6a-2020	Backfilling to the formation levels	60	60	28-Dec-20	11-Mar-21	856	WD (6d)
Civil Work							
S13P6a-3000	Construct & maintain Temporary drainage	525	525	20-Nov-20	29-Aug-22	836	WD (6d)
S13P6a-3005	Cost Savings Design (CSD) Proposal for Alternative on Noise Barrier (NB08) Foundation	58	0	22-Apr-20 A	19-Jun-20 A		CD (7d)
S13P6a-3010	Noise barrier NB08 foundation (revised according to CSD) (12 nos. pre-bored H-pile)	110	110	20-Nov-20	07-Apr-21	836	WD (6d)
S13P6a-3020	Underground utilities & Drainage work (210m drain and 5 M/H)	265	265	08-Apr-21	25-Feb-22	836	WD (6d)
S13P6a-3030	Noise barrier NB08 pile cap (138m, 0.89m/day)	200	200	26-Jun-21	25-Feb-22	836	WD (6d)



Build King – Richwell Engineering Joint Venture

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Activity ID	Activity Name	Dur (d)	emainin Duration	Start	Finish	Total Float	Calendar
S13P6a-3035	Noise barrier NB08 and NB75 panels (138m)	60	60	26-Feb-22	26-Apr-22	1158	CD (7d)
S13P6a-3040	Roadwork (1212m2, 18.7m2 / day, 1 gang)	150	150	26-Feb-22	29-Aug-22	836	WD (6d)
S13P6a-3050	Installation of smart road lightings system	36	36	30-Aug-22	13-Oct-22	836	WD (6d)
S13P6a-3060	T&C for smart road lightings system	30	30	14-Oct-22	12-Nov-22	1031	CD (7d)
Portion 1c in Area N (Soil Treatment, Drainage & Roadwork)							
Preparation work/Tree Survey/Site Clearance/GI							
S13P1c-1010	Site clearance	60	60	06-Jan-22	19-Mar-22	412	WD (6d)
S13P1c-1015	Ground investigation (0 /1 GI completed)	6	6	21-Mar-22	26-Mar-22	421	WD (6d)
S13P1c-1020	Environmental ground investigation and laboratory test (2 EGI)	15	15	21-Mar-22	07-Apr-22	412	WD (6d)
S13P1c-1025	Site investigation for Noise Barriers	30	30	08-Apr-22	18-May-22	454	WD (6d)
S13P1c-1030	Prepare Arsenic Assessment Report	36	36	08-Apr-22	25-May-22	412	WD (6d)
S13P1c-1040	Arsenic Treatment Plan	36	36	26-May-22	08-Jul-22	412	WD (6d)
Soil Treatment							
S13P1c-2010	Remove soil (original assumed 1784m3) (0 / 2 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	30-Sep-22*	29-Oct-22	342	WD (6d)
S13P1c-2020	Backfilling to the formation levels	48	48	31-Oct-22	24-Dec-22	342	WD (6d)
Civil Work							
S13P1c-3000	Construct & maintain Temporary drainage	462	462	30-Sep-22	24-Apr-24	342	WD (6d)
S13P1c-3010	Underground utilities & Drainage work (217m drain and 5 M/H)	270	270	27-Dec-22	23-Nov-23	342	WD (6d)
S13P1c-3011	Noise barrier NB85 footing (113m, 0.89m/day)	140	140	08-Jun-23	23-Nov-23	342	WD (6d)
S13P1c-3012	Noise barrier NB85 panels (113m)	40	40	24-Nov-23	12-Jan-24	422	WD (6d)
S13P1c-3020	Roadwork (1500m2)	120	120	24-Nov-23	24-Apr-24	342	WD (6d)
S13P1c-3030	Installation of smart road lightings system	42	42	24-Apr-24	15-Jun-24	342	WD (6d)
S13P1c-3040	T&C for smart road lightings system	30	30	15-Jun-24	15-Jul-24	421	CD (7d)
Portion 9a in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)							
Preparation work/Tree Survey/Site Clearance/GI							
S13P9a-1010	Site clearance	60	60	06-Jan-22	19-Mar-22	546	WD (6d)
S13P9a-1015	Ground investigation (0 / 1 GI completed)	6	6	21-Mar-22	26-Mar-22	555	WD (6d)
S13P9a-1020	Environmental ground investigation and laboratory test (1 EGI in other portion represent this porl	15	15	21-Mar-22	07-Apr-22	546	WD (6d)
S13P9a-1025	Site investigation for Noise Barriers	30	30	08-Apr-22	18-May-22	588	WD (6d)
S13P9a-1030	Prepare Arsenic Assessment Report	36	36	08-Apr-22	25-May-22	546	WD (6d)
S13P9a-1040	Arsenic Treatment Plan	36	36	26-May-22	08-Jul-22	546	WD (6d)
Soil Treatment							
S13P9a-2010	Remove soil (original assumed 561m3) (0 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	09-Jul-22*	05-Aug-22	546	WD (6d)
S13P9a-2020	Backfilling to the formation levels	48	48	06-Aug-22	03-Oct-22	546	WD (6d)
Civil Work							
S13P9a-3000	Construct & maintain Temporary drainage	346	346	09-Jul-22	04-Sep-23	546	WD (6d)
S13P9a-3010	Underground utilities & Drainage work (136m drain and 4 M/H)	220	220	05-Oct-22	03-Jul-23	546	WD (6d)
S13P9a-3020	Noise barrier NB75 footing (72m, 0.89m/day)	90	90	11-Mar-23	03-Jul-23	546	WD (6d)
S13P9a-3025	Noise barrier NB75 panels (72m)	30	30	04-Jul-23	07-Aug-23	570	WD (6d)
S13P9a-3030	Roadwork (370m2)	54	54	04-Jul-23	04-Sep-23	546	WD (6d)
S13P9a-3040	Installation of smart road lightings system	24	24	05-Sep-23	04-Oct-23	546	WD (6d)
S13P9a-3050	T&C for smart road lightings system	30	30	05-Oct-23	03-Nov-23	675	CD (7d)
Section 14							
S14-1040	Planed Completion Date of Section 14	0	0		12-Aug-25	27	CD (7d)
Portion 10a in Area H1 (Soil Treatment, UU Diversion & Construction Access to MWSC)							
KD5 - Provision of construction access in Area H1 and between Area H1 and Multi-Welfare Services Com							
S14K5-1000	Planed Completion Date of KD5	0	0		14-Jan-21	-100	CD (7d)
S14K5-1001	Late Possession of Site of Part of Portions 7 and 10a (in Area H, H1, T1, T2 & T3) (CNE No. 001)	0	0		25-Aug-20	-59	CD (7d)
S14K5-1002	Opening of Cycle Track at Portion 10a (EWN No. 017)	0	0		25-Aug-20	-78	CD (7d)
Soil Treatment							
S14K5-1010	Remove soil (original assumed 2143m3) (1 / 1 EGI completed, interim soil to be excavated and treated : 0m3)	24	24	21-Sep-20*	20-Oct-20	-72	WD (6d)
S14K5-1020	Backfilling to the formation levels	42	42	21-Oct-20	09-Dec-20	-72	WD (6d)

Build King – Richwell Engineering Joint Venture

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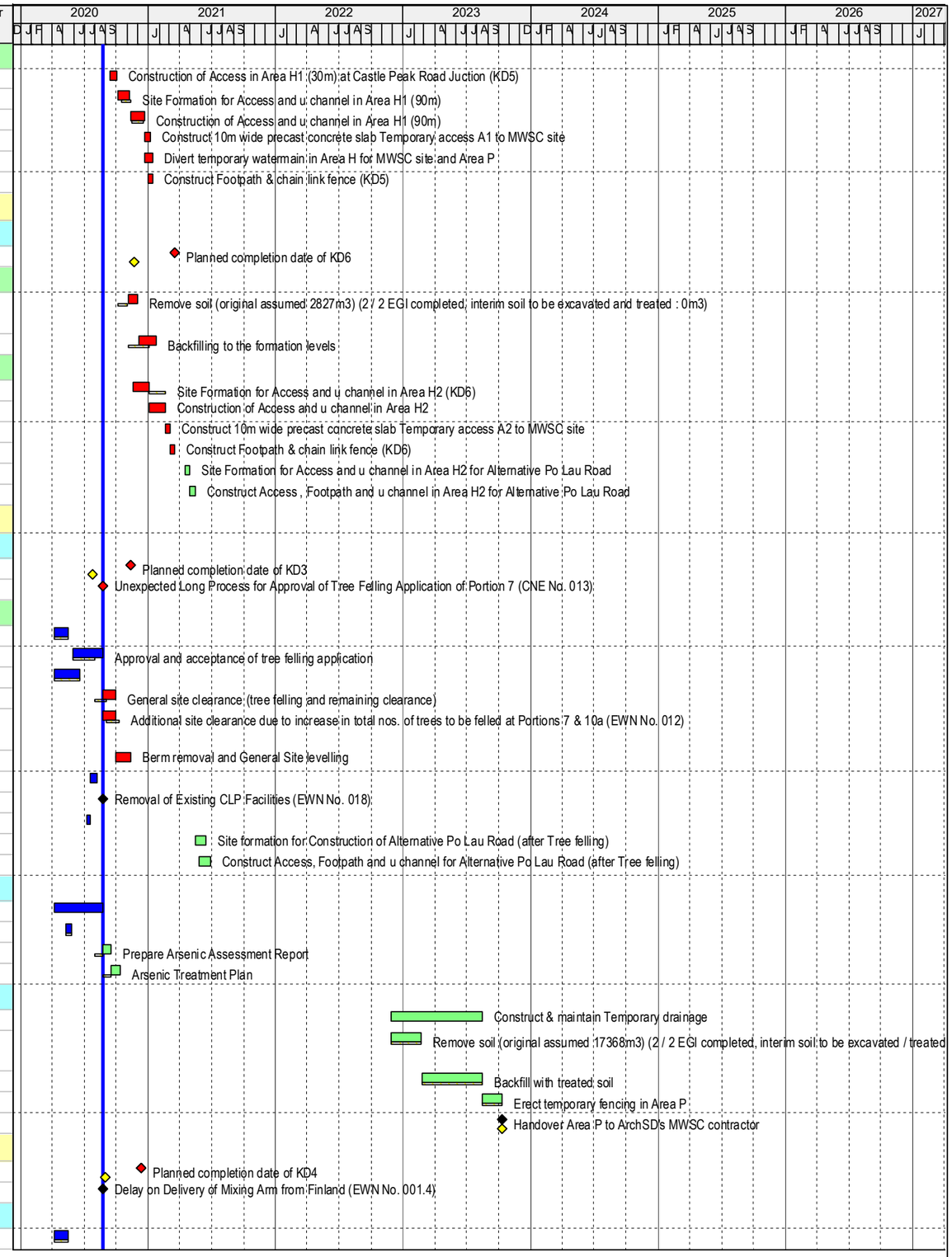
Activity ID	Activity Name	Dur (d)	emainin Duration	Start	Finish	Total Float	Calendar
Civil Works							
S14K5-2000	Construction of Access in Area H1 (30m) at Castle Peak Road Juction (KD5)	16	16	14-Sep-20*	03-Oct-20	-82	WD (6d)
S14K5-2002	Site Formation for Access and u channel in Area H1 (90m)	30	30	05-Oct-20	09-Nov-20	-82	WD (6d)
S14K5-2004	Construction of Access and u channel in Area H1 (90m)	36	36	10-Nov-20	21-Dec-20	-82	WD (6d)
S14K5-2006	Construct 10m wide precast concrete slab Temporary access A1 to MWSC site	12	12	22-Dec-20	07-Jan-21	-82	WD (6d)
S14K5-2007	Divert temporary watermain in Area H for MWSC site and Area P	18	18	22-Dec-20	14-Jan-21	-82	WD (6d)
S14K5-2008	Construct Footpath & chain link fence (KD5)	12	12	31-Dec-20	14-Jan-21	-82	WD (6d)
Portion 10a in Area H2 (Soil Treatment & Construction Access to MWSC)							
KD6 - Provision of construction access in Area H2 and between Area H2 and Multi-Welfare Services Com							
S14K6-1000	Planned completion date of KD6	0	0		17-Mar-21	-116	CD (7d)
Soil Treatment							
S14K6-1010	Remove soil (original assumed 2827m3) (2 / 2 EGI completed, interim soil to be excavated and treated : 0m3)	24	24	05-Nov-20*	02-Dec-20	-93	WD (6d)
S14K6-1020	Backfilling to the formation levels	42	42	03-Dec-20	23-Jan-21	-75	WD (6d)
Civil Works							
S14K6-2000	Site Formation for Access and u channel in Area H2 (KD6)	36	36	19-Nov-20	02-Jan-21	-93	WD (6d)
S14K6-2002	Construction of Access and u channel in Area H2	36	36	04-Jan-21	17-Feb-21	-93	WD (6d)
S14K6-2004	Construct 10m wide precast concrete slab Temporary access A2 to MWSC site	12	12	18-Feb-21	03-Mar-21	-93	WD (6d)
S14K6-2008	Construct Footpath & chain link fence (KD6)	12	12	04-Mar-21	17-Mar-21	-93	WD (6d)
S14K6-2010	Site Formation for Access and u channel in Area H2 for Alternative Po Lau Road	12	12	15-Apr-21	28-Apr-21	991	WD (6d)
S14K6-2012	Construct Access , Footpath and u channel in Area H2 for Alternative Po Lau Road	18	18	29-Apr-21	16-May-21	1219	CD (7d)
Portion 7 in Area P (Soil Treatment & KD3 - Tree Felling, General Site Clearance)							
KD3 - Tree felling, general site clearance (including the berm removal / levelling and general site							
S14P7P-1000	Planned completion date of KD3	0	0		10-Nov-20	-20	CD (7d)
S14P7P-1002	Unexpected Long Process for Approval of Tree Felling Application of Portion 7 (CNE No. 013)	0	0		25-Aug-20	-117	CD (7d)
Preparation work							
S14P7P-1005	Tree survey and prepare tree felling and transplant report	24	0	06-Apr-20 A	18-May-20 A		WD (6d)
S14P7P-1006	Approval and acceptance of tree felling application	30	0	30-May-20 A	25-Aug-20	-19	CD (7d)
S14P7P-1010	General site clearance (before tree felling)	58	0	06-Apr-20 A	18-Jun-20 A		WD (6d)
S14P7P-1020	General site clearance (tree felling and remaining clearance)	30	30	25-Aug-20	28-Sep-20	-16	WD (6d)
S14P7P-1021	Additional site clearance due to increase in total nos. of trees to be felled at Portions 7 & 10a (EWN No. 012)	30	30	25-Aug-20	28-Sep-20	-16	WD (6d)
S14P7P-1023	Berm removal and General Site levelling	34	34	29-Sep-20	10-Nov-20	-16	WD (6d)
S14P7P-1024	Construct Access, Footpath and u channel for Alternative Po Lau Road	12	0	18-Jul-20 A	06-Aug-20 A		WD (6d)
S14P7P-1026	Removal of Existing CLP Facilities (EWN No. 018)	0	0		25-Aug-20	1484	CD (7d)
S14P7P-1028	Site formation for Construction of Alternative Po Lau Road	12	0	10-Jul-20 A	17-Jul-20 A		WD (6d)
S14P7P-1030	Site formation for Construction of Alternative Po Lau Road (after Tree felling)	24	24	17-May-21	15-Jun-21	992	WD (6d)
S14P7P-1032	Construct Access, Footpath and u channel for Alternative Po Lau Road (after Tree felling)	30	30	25-May-21	29-Jun-21	992	WD (6d)
Ground Investigation							
S14P7P-1105	Ground investigation (1 / 1 GI completed)	6	0	06-Apr-20 A	25-Aug-20 A		WD (6d)
S14P7P-1110	Environmental ground investigation and laboratory test (2 EGI)	15	0	09-May-20 A	28-May-20 A		WD (6d)
S14P7P-1120	Prepare Arsenic Assessment Report	20	20	25-Aug-20	16-Sep-20	1196	WD (6d)
S14P7P-1130	Arsenic Treatment Plan	20	20	17-Sep-20	12-Oct-20	1196	WD (6d)
Soil Treatment							
S14P7P-2000	Construct & maintain Temporary drainage	210	210	28-Nov-22	14-Aug-23	565	WD (6d)
S14P7P-2010	Remove soil (original assumed 17368m3) (2 / 2 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	70	70	28-Nov-22*	22-Feb-23	565	WD (6d)
S14P7P-2020	Backfill with treated soil	140	140	23-Feb-23	14-Aug-23	565	WD (6d)
S14P7P-2030	Erect temporary fencing in Area P	48	48	15-Aug-23	11-Oct-23	565	WD (6d)
S14P7P-2040	Handover Area P to ArchSD's MWSC contractor	0	0		11-Oct-23	565	WD (6d)
Portion 7 in Area S3 (Soil Treatment & Operation of HAC Soil Treatment Plant)							
S14P7S3-1000	Planned completion date of KD4	0	0		09-Dec-20	-3	CD (7d)
S14P7S3-1002	Delay on Delivery of Mixing Arm from Finland (EWN No. 001.4)	0	0		25-Aug-20	103	CD (7d)
Preparation work/Tree Survey/Site Clearance/GI							
S14P7S3-1010	Tree survey and prepare tree felling and transplant report	24	0	06-Apr-20 A	18-May-20 A		WD (6d)



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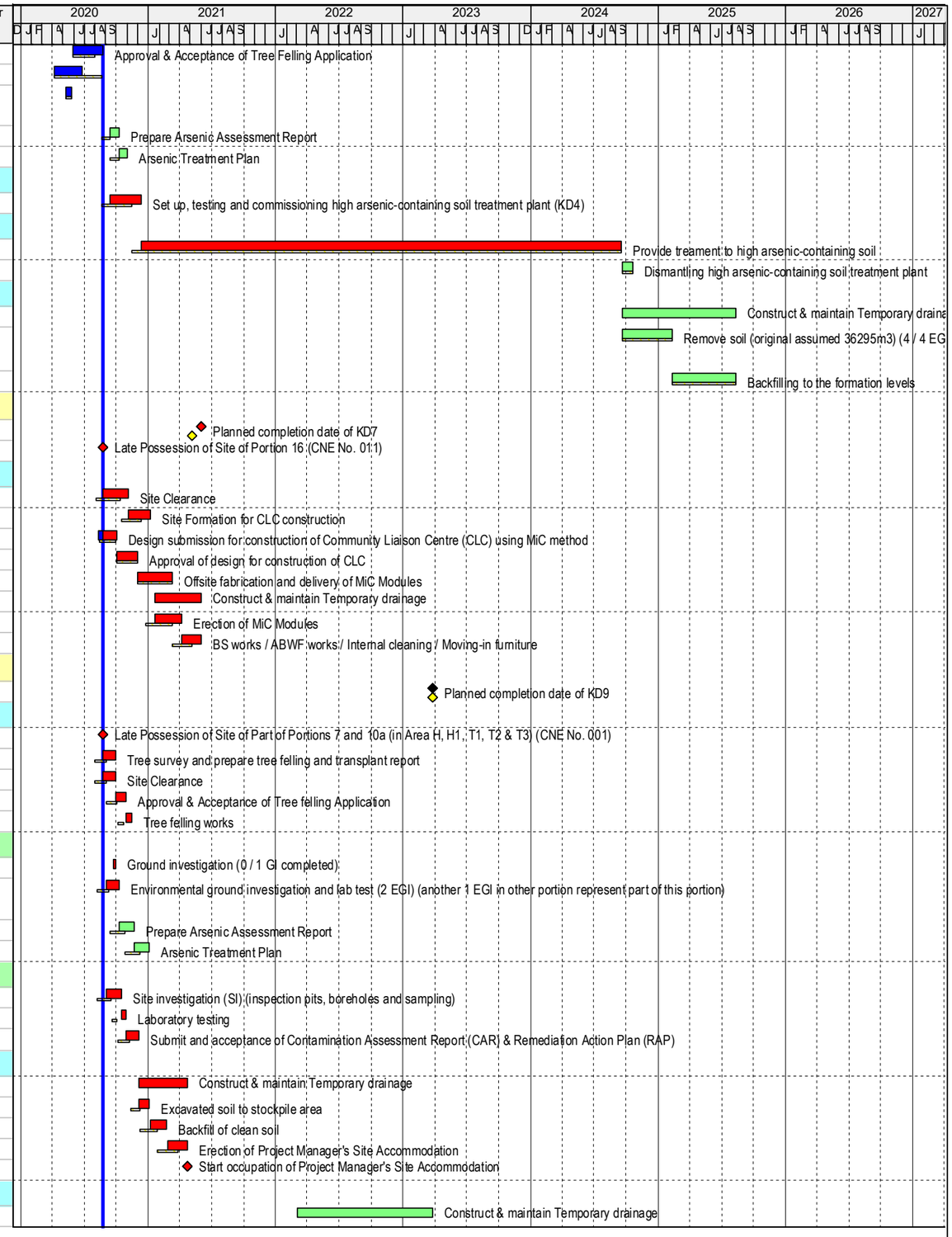
S14P7S3-1015	Approval & Acceptance of Tree Felling Application	30	0	30-May-20 A	25-Aug-20	-4	CD (7d)
S14P7S3-1020	Ground investigation (2 / 2 GI completed)	24	0	06-Apr-20 A	26-Jun-20 A		WD (6d)
S14P7S3-1030	Environmental ground investigation and lab test (3 EGI) (another 1 EGI in other portion represent part of this portion)	24	0	09-May-20 A	28-May-20 A		WD (6d)
S14P7S3-1040	Prepare Arsenic Assessment Report	20	20	14-Sep-20	08-Oct-20	1173	WD (6d)
S14P7S3-1050	Arsenic Treatment Plan	20	20	09-Oct-20	02-Nov-20	1173	WD (6d)
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant							
S14P7S3-2010	Set up, testing and commissioning high arsenic-containing soil treatment plant (KD4)	72	72	14-Sep-20*	09-Dec-20	-3	WD (6d)
Operation and Dismantling of the Soil Treatment Plant							
S14P7S3-3010	Provide treament to high arsenic-containing soil	1118	1118	10-Dec-20*	17-Sep-24	0	WD (6d)
S14P7S3-3020	Dismantling high arsenic-containing soil treatment plant	24	24	19-Sep-24	18-Oct-24	143	WD (6d)
Soil Treatment							
S14P7S3-4000	Construct & maintain Temporary drainage	264	264	19-Sep-24	12-Aug-25	23	WD (6d)
S14P7S3-4010	Remove soil (original assumed 36295m3) (4 / 4 EGI completed, interim soil to be excavated / treated : 19800m3 / 3600m3)	114	114	19-Sep-24*	08-Feb-25	23	WD (6d)
S14P7S3-4020	Backfilling to the formation levels	150	150	10-Feb-25	12-Aug-25	23	WD (6d)
Portion 16 in Area Q (Soil Treatment & Construction of CLC)							
S14P16-1000	Planned completion date of KD7	0	0		01-Jun-21	-26	CD (7d)
S14P16-1002	Late Possession of Site of Portion 16 (CNE No. 011)	0	0		25-Aug-20	-12	CD (7d)
KD7 - Complete the construction works of Community Liaison Centre in Area Q							
S14P16-1010	Site Clearance	60	60	25-Aug-20	05-Nov-20	-10	WD (6d)
S14P16-1020	Site Formation for CLC construction	50	50	06-Nov-20	06-Jan-21	-10	WD (6d)
S14P16-3010	Design submission for construction of Community Liaison Centre (CLC) using MiC method	48	38	10-Aug-20 A	01-Oct-20	-25	CD (7d)
S14P16-3020	Approval of design for construction of CLC	60	60	02-Oct-20	30-Nov-20	-25	CD (7d)
S14P16-3030	Offsite fabrication and delivery of MiC Modules	80	80	01-Dec-20	10-Mar-21	-21	WD (6d)
S14P16-3035	Construct & maintain Temporary drainage	106	106	20-Jan-21	01-Jun-21	-21	WD (6d)
S14P16-3040	Erection of MiC Modules	60	60	20-Jan-21	06-Apr-21	-21	WD (6d)
S14P16-3050	BS works / ABWF works / Internal cleaning / Moving-in furniture	46	46	07-Apr-21	01-Jun-21	-21	WD (6d)
Portion 7 in Area T1, T2, T3 (Soil Treatment & Temp. Noise Barrier along Castle Peak Road)							
S14P7T-1000	Planned completion date of KD9	0	0		25-Mar-23	25	CD (7d)
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	0	25-Aug-20*		-174	CD (7d)
S14P7T-1010	Tree survey and prepare tree felling and transplant report	30	30	25-Aug-20	28-Sep-20	-126	WD (6d)
S14P7T-1020	Site Clearance	30	30	25-Aug-20	28-Sep-20	-141	WD (6d)
S14P7T-1022	Approval & Acceptance of Tree felling Application	30	30	29-Sep-20	28-Oct-20	-152	CD (7d)
S14P7T-1024	Tree felling works	15	15	29-Oct-20	14-Nov-20	-125	WD (6d)
Arsenic Assessment							
S14P7T-1025	Ground investigation (0 / 1 GI completed)	6	6	22-Sep-20	28-Sep-20	-66	WD (6d)
S14P7T-1030	Environmental ground investigation and lab test (2 EGI) (another 1 EGI in other portion represent part of this portion)	30	30	01-Sep-20	07-Oct-20	-72	WD (6d)
S14P7T-1040	Prepare Arsenic Assessment Report	36	36	08-Oct-20	19-Nov-20	1338	WD (6d)
S14P7T-1050	Arsenic Treatment Plan	36	36	20-Nov-20	04-Jan-21	1338	WD (6d)
Land Contamination Assessment							
S14P7T-1061	Site investigation (SI) (inspection pits, boreholes and sampling)	36	36	01-Sep-20	14-Oct-20	-141	WD (6d)
S14P7T-1062	Laboratory testing	12	12	15-Oct-20	29-Oct-20	-141	WD (6d)
S14P7T-1063	Submit and acceptance of Contamination Assessment Report (CAR) & Remediation Action Plan	30	30	30-Oct-20	03-Dec-20	-141	WD (6d)
Project Manager's Site Accommodation							
S14P7T-1100	Construct & maintain Temporary drainage	112	112	04-Dec-20	23-Apr-21	-141	WD (6d)
S14P7T-1110	Excavated soil to stockpile area	24	24	04-Dec-20	04-Jan-21	-141	WD (6d)
S14P7T-1120	Backfill of clean soil	40	40	05-Jan-21	23-Feb-21	-141	WD (6d)
S14P7T-1130	Erection of Project Manager's Site Accommodation	48	48	24-Feb-21	23-Apr-21	-141	WD (6d)
S14P7T-1131	Start occupation of Project Manager's Site Accommodation	0	0	24-Apr-21*		-175	CD (7d)
Soil Treatment							
S14P7T-2025	Construct & maintain Temporary drainage	316	316	04-Mar-22	25-Mar-23	1120	WD (6d)



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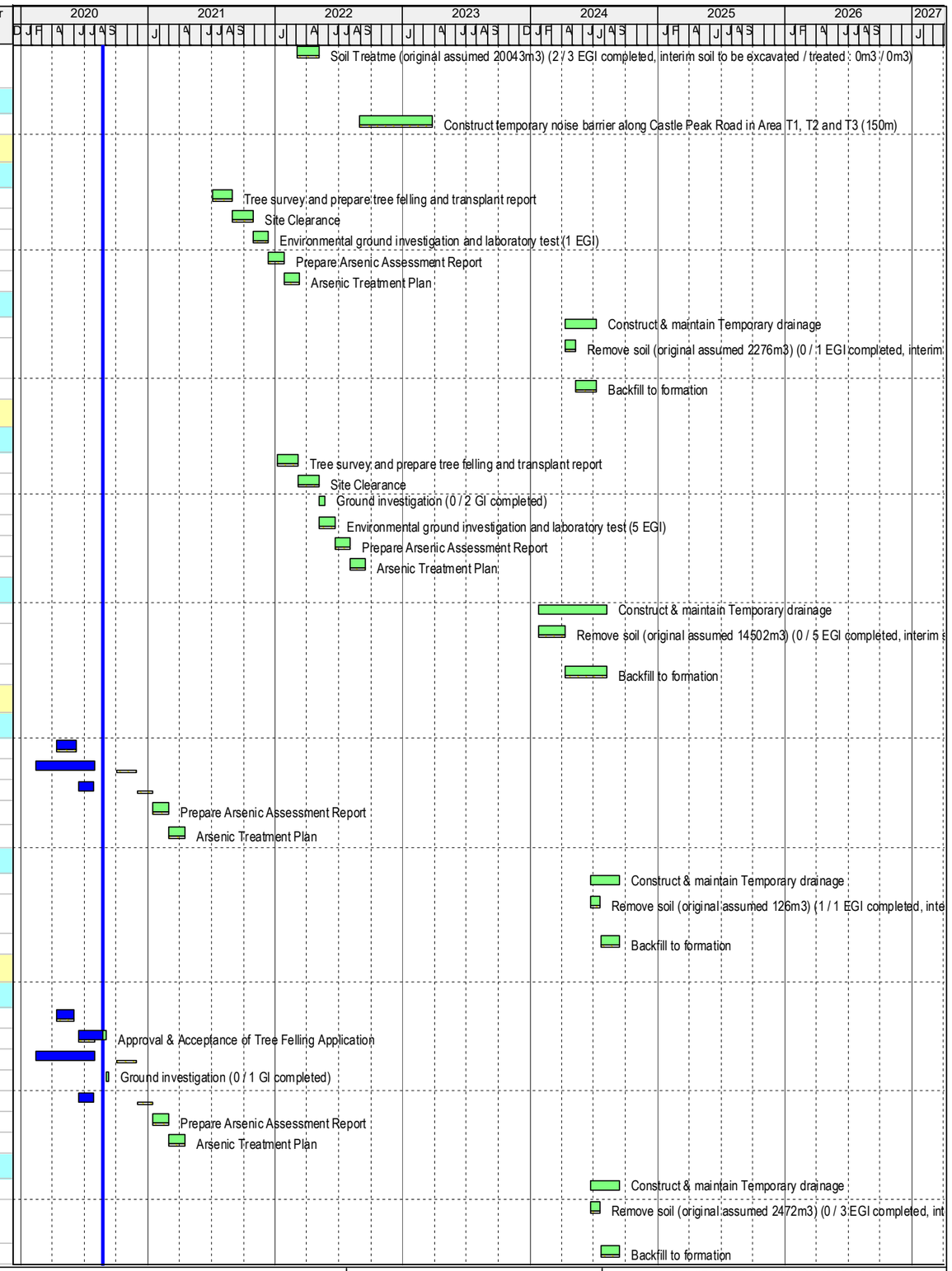
S14P7T-2030	Soil Treatme (original assumed 20043m3) (2 / 3 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	48	48	04-Mar-22*	04-May-22	994	WD (6d)
KD9 - Complete the temporary noise barriers along Castle Peak Road in Area T1, T2, T3, H, H1, I, J,							
S14P7T-3010	Construct temporary noise barrier along Castle Peak Road in Area T1, T2 and T3 (150m)	170	170	31-Aug-22*	25-Mar-23	17	WD (6d)
Portion 1b in Area S2 (Soil Treatment)							
Preparation work/Tree Survey/Site Clearance/GI							
S14P1b-1010	Tree survey and prepare tree felling and transplant report	48	48	06-Jul-21	30-Aug-21	964	WD (6d)
S14P1b-1020	Site Clearance	48	48	31-Aug-21	28-Oct-21	964	WD (6d)
S14P1b-1030	Environmental ground investigation and laboratory test (1 EGI)	36	36	29-Oct-21	09-Dec-21	964	WD (6d)
S14P1b-1040	Prepare Arsenic Assessment Report	36	36	10-Dec-21	24-Jan-22	964	WD (6d)
S14P1b-1050	Arsenic Treatment Plan	36	36	25-Jan-22	10-Mar-22	964	WD (6d)
Soil Treatment							
S14P1b-2000	Construct & maintain Temporary drainage	72	72	12-Apr-24	09-Jul-24	347	WD (6d)
S14P1b-2010	Remove soil (original assumed 2276m3) (0 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	12-Apr-24*	10-May-24	347	WD (6d)
S14P1b-2020	Backfill to formation	48	48	11-May-24	09-Jul-24	347	WD (6d)
Portion 1c & 9a in Area S2 (Soil Treatment)							
Preparation work/Tree Survey/Site Clearance/GI							
S14P1c-1010	Tree survey and prepare tree felling and transplant report	48	48	06-Jan-22	05-Mar-22	728	WD (6d)
S14P1c-1020	Site Clearance	48	48	07-Mar-22	06-May-22	728	WD (6d)
S14P1c-1025	Ground investigation (0 / 2 GI completed)	12	12	07-May-22	21-May-22	752	WD (6d)
S14P1c-1030	Environmental ground investigation and laboratory test (5 EGI)	36	36	07-May-22	20-Jun-22	728	WD (6d)
S14P1c-1040	Prepare Arsenic Assessment Report	36	36	21-Jun-22	02-Aug-22	728	WD (6d)
S14P1c-1050	Arsenic Treatment Plan	36	36	03-Aug-22	14-Sep-22	728	WD (6d)
Soil Treatment							
S14P1c-2000	Construct & maintain Temporary drainage	156	156	27-Jan-24	09-Aug-24	321	WD (6d)
S14P1c-2010	Remove soil (original assumed 14502m3) (0 / 5 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	58	58	27-Jan-24*	12-Apr-24	321	WD (6d)
S14P1c-2020	Backfill to formation	98	98	12-Apr-24	09-Aug-24	321	WD (6d)
Portion 6a in Area S2 (Soil Treatment)							
Preparation work/Tree Survey/Site Clearance/GI							
S14P6a-1010	Tree survey and prepare tree felling and transplant report	48	0	14-Apr-20 A	08-Jun-20 A		WD (6d)
S14P6a-1020	Site Clearance	48	0	15-Feb-20 A	31-Jul-20 A		WD (6d)
S14P6a-1030	Environmental ground investigation and laboratory test (1 EGI in other portion represent this porl	36	0	15-Jun-20 A	27-Jul-20 A		WD (6d)
S14P6a-1040	Prepare Arsenic Assessment Report	36	36	14-Jan-21*	27-Feb-21	1234	WD (6d)
S14P6a-1050	Arsenic Treatment Plan	36	36	01-Mar-21	14-Apr-21	1234	WD (6d)
Soil Treatment							
S14P6a-2000	Construct & maintain Temporary drainage	72	72	22-Jun-24	14-Sep-24	289	WD (6d)
S14P6a-2010	Remove soil (original assumed 126m3) (1 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	22-Jun-24*	20-Jul-24	289	WD (6d)
S14P6a-2020	Backfill to formation	48	48	22-Jul-24	14-Sep-24	289	WD (6d)
Portion 6b in Area S2 (Soil Treatment)							
Preparation work/Tree Survey/Site Clearance/GI							
S14P6b-1010	Tree survey and prepare tree felling and transplant report	48	0	14-Apr-20 A	03-Jun-20 A		WD (6d)
S14P6b-1015	Approval & Acceptance of Tree Felling Application	30	10	16-Jun-20 A	03-Sep-20	1521	CD (7d)
S14P6b-1020	Site Clearance	48	0	15-Feb-20 A	31-Jul-20 A		WD (6d)
S14P6b-1025	Ground investigation (0 / 1 GI completed)	6	6	04-Sep-20	10-Sep-20	1335	WD (6d)
S14P6b-1030	Environmental ground investigation and laboratory test (3 EGI in other portion represent this porl	36	0	15-Jun-20 A	27-Jul-20 A		WD (6d)
S14P6b-1040	Prepare Arsenic Assessment Report	36	36	14-Jan-21	27-Feb-21	1234	WD (6d)
S14P6b-1050	Arsenic Treatment Plan	36	36	01-Mar-21	14-Apr-21	1234	WD (6d)
Soil Treatment							
S14P6b-2000	Construct & maintain Temporary drainage	72	72	22-Jun-24	14-Sep-24	289	WD (6d)
S14P6b-2010	Remove soil (original assumed 2472m3) (0 / 3 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	22-Jun-24*	20-Jul-24	289	WD (6d)
S14P6b-2020	Backfill to formation	48	48	22-Jul-24	14-Sep-24	289	WD (6d)



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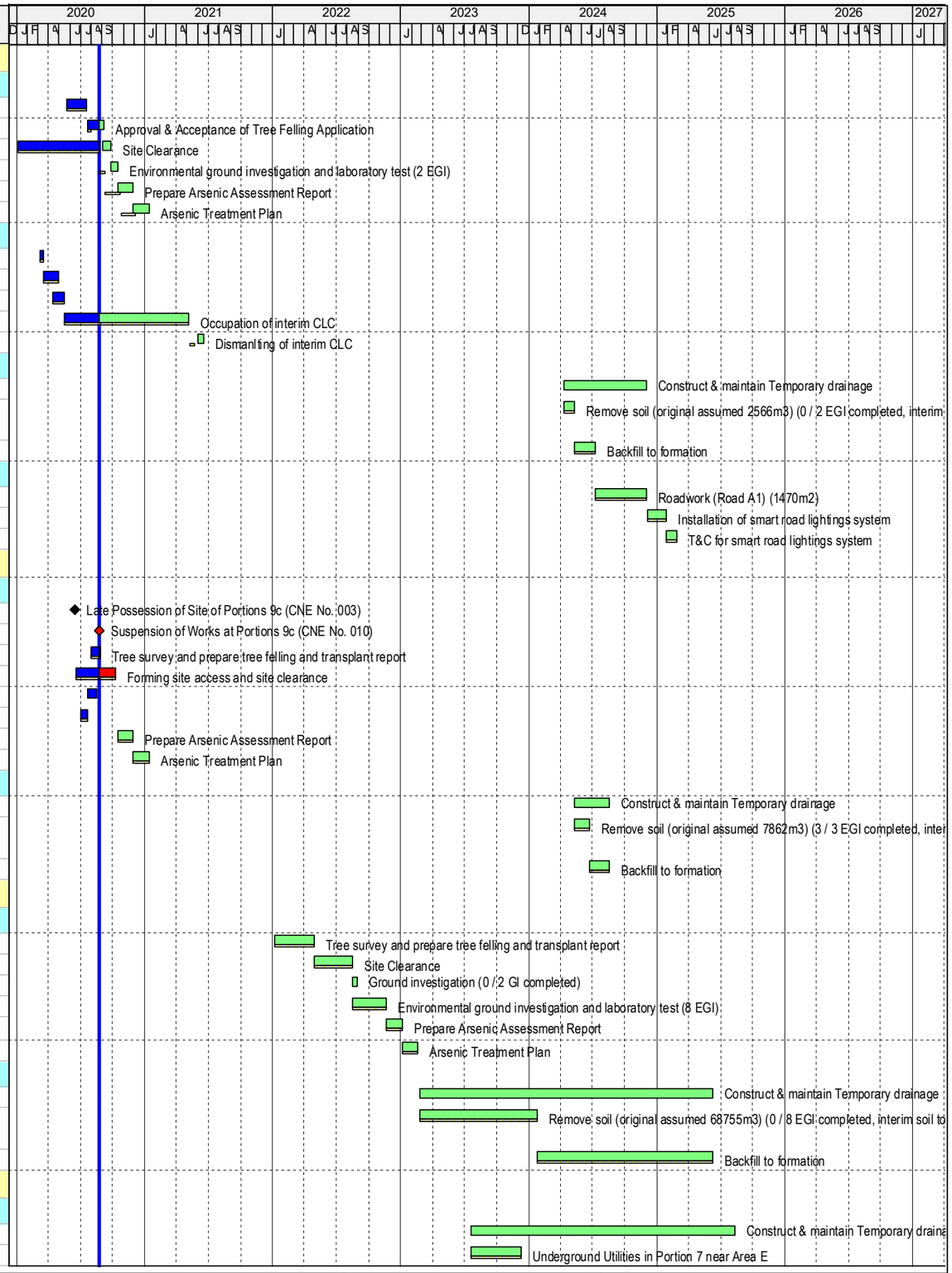
Portion 1f in Area R (Soil Treatment & Construction of Interim CLC & Road A1)							
Preparation work/Tree Survey/Site Clearance/GI							
S14P1f-1010	Tree survey and prepare tree felling and transplant report	24	0	22-May-20 A	20-Jul-20 A		WD (6d)
S14P1f-1015	Approval & Acceptance of Tree Felling Application	30	12	21-Jul-20 A	05-Sep-20	1447	CD (7d)
S14P1f-1020	Site Clearance	60	20	06-Jan-20 A	25-Sep-20	1174	WD (6d)
S14P1f-1030	Environmental ground investigation and laboratory test (2 EGI)	15	15	26-Sep-20	15-Oct-20	1174	WD (6d)
S14P1f-1040	Prepare Arsenic Assessment Report	36	36	16-Oct-20	27-Nov-20	1174	WD (6d)
S14P1f-1050	Arsenic Treatment Plan	36	36	28-Nov-20	12-Jan-21	1174	WD (6d)
Interim Community Liaison Centre (CLC)							
S14P1f-2010	Submissions and approval for proposed interim CLC	48	0	09-Mar-20 A	18-Mar-20 A		CD (7d)
S14P1f-2015	Supply and delivery for proposed interim CLC	20	0	19-Mar-20 A	30-Apr-20 A		CD (7d)
S14P1f-2020	Construction of interim CLC	30	0	14-Apr-20 A	18-May-20 A		WD (6d)
S14P1f-2030	Occupation of interim CLC	352	256	18-May-20 A	07-May-21	1243	CD (7d)
S14P1f-2040	Dismanlting of interim CLC	12	12	02-Jun-21	16-Jun-21	990	WD (6d)
Soil Treatment							
S14P1f-3000	Construct & maintain Temporary drainage	195	195	12-Apr-24	03-Dec-24	154	WD (6d)
S14P1f-3010	Remove soil (original assumed 2566m3) (0 / 2 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	12-Apr-24*	10-May-24	154	WD (6d)
S14P1f-3020	Backfill to formation	48	48	11-May-24	09-Jul-24	154	WD (6d)
Civil Works							
S14P1f-4010	Roadwork (Road A1) (1470m2)	123	123	10-Jul-24	03-Dec-24	154	WD (6d)
S14P1f-4020	Installation of smart road lightings system	45	45	04-Dec-24	28-Jan-25	154	WD (6d)
S14P1f-4030	T&C for smart road lightings system	30	30	29-Jan-25	27-Feb-25	193	CD (7d)
Portion 9c in Area S1 (Soil Treatment)							
Preparation work/Tree Survey/Site Clearance/GI							
S14P9c-1000	Late Possession of Site of Portions 9c (CNE No. 003)	0	0	16-Jun-20 A			CD (7d)
S14P9c-1001	Suspension of Works at Portions 9c (CNE No. 010)	0	0		25-Aug-20	-44	CD (7d)
S14P9c-1010	Tree survey and prepare tree felling and transplant report	24	3	31-Jul-20 A	27-Aug-20	-40	WD (6d)
S14P9c-1020	Forming site access and site clearance	60	38	17-Jun-20 A	09-Oct-20	-75	WD (6d)
S14P9c-1025	Ground investigation (3 / 3 GI completed)	18	0	22-Jul-20 A	17-Aug-20 A		WD (6d)
S14P9c-1030	Environmental ground investigation and laboratory test (3 EGI)	30	0	02-Jul-20 A	21-Jul-20 A		WD (6d)
S14P9c-1040	Prepare Arsenic Assessment Report	36	36	16-Oct-20	27-Nov-20	1297	WD (6d)
S14P9c-1050	Arsenic Treatment Plan	36	36	28-Nov-20	12-Jan-21	1297	WD (6d)
Soil Treatment							
S14P9c-2000	Construct & maintain Temporary drainage	82	82	11-May-24	17-Aug-24	313	WD (6d)
S14P9c-2010	Remove soil (original assumed 7862m3) (3 / 3 EGI completed, interim soil to be excavated / treated : 30000m3 / 30000m3)	34	34	11-May-24*	21-Jun-24	313	WD (6d)
S14P9c-2020	Backfill to formation	48	48	22-Jun-24	17-Aug-24	313	WD (6d)
Portion 13 in Area S4 (Soil Treatment)							
Preparation work/Tree Survey/Site Clearance/GI							
S14P13-1010	Tree survey and prepare tree felling and transplant report	90	90	06-Jan-22	28-Apr-22	80	WD (6d)
S14P13-1020	Site Clearance	90	90	29-Apr-22	16-Aug-22	80	WD (6d)
S14P13-1025	Ground investigation (0 / 2 GI completed)	12	12	17-Aug-22	30-Aug-22	148	WD (6d)
S14P13-1030	Environmental ground investigation and laboratory test (8 EGI)	80	80	17-Aug-22	21-Nov-22	80	WD (6d)
S14P13-1040	Prepare Arsenic Assessment Report	36	36	22-Nov-22	04-Jan-23	80	WD (6d)
S14P13-1050	Arsenic Treatment Plan	36	36	05-Jan-23	18-Feb-23	80	WD (6d)
Soil Treatment							
S14P13-2000	Construct & maintain Temporary drainage	676	676	23-Feb-23	10-Jun-25	77	WD (6d)
S14P13-2010	Remove soil (original assumed 68755m3) (0 / 8 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	276	276	23-Feb-23*	26-Jan-24	77	WD (6d)
S14P13-2020	Backfill to formation	400	400	27-Jan-24	10-Jun-25	77	WD (6d)
Cycle Track from Area H to Area N							
Underground Utilities underneath Cycle Track							
S14CT-1000	Construct & maintain Temporary drainage	610	610	20-Jul-23	11-Aug-25	25	WD (6d)
S14CT-1010	Underground Utilities in Portion 7 near Area E	120	120	20-Jul-23*	09-Dec-23	25	WD (6d)



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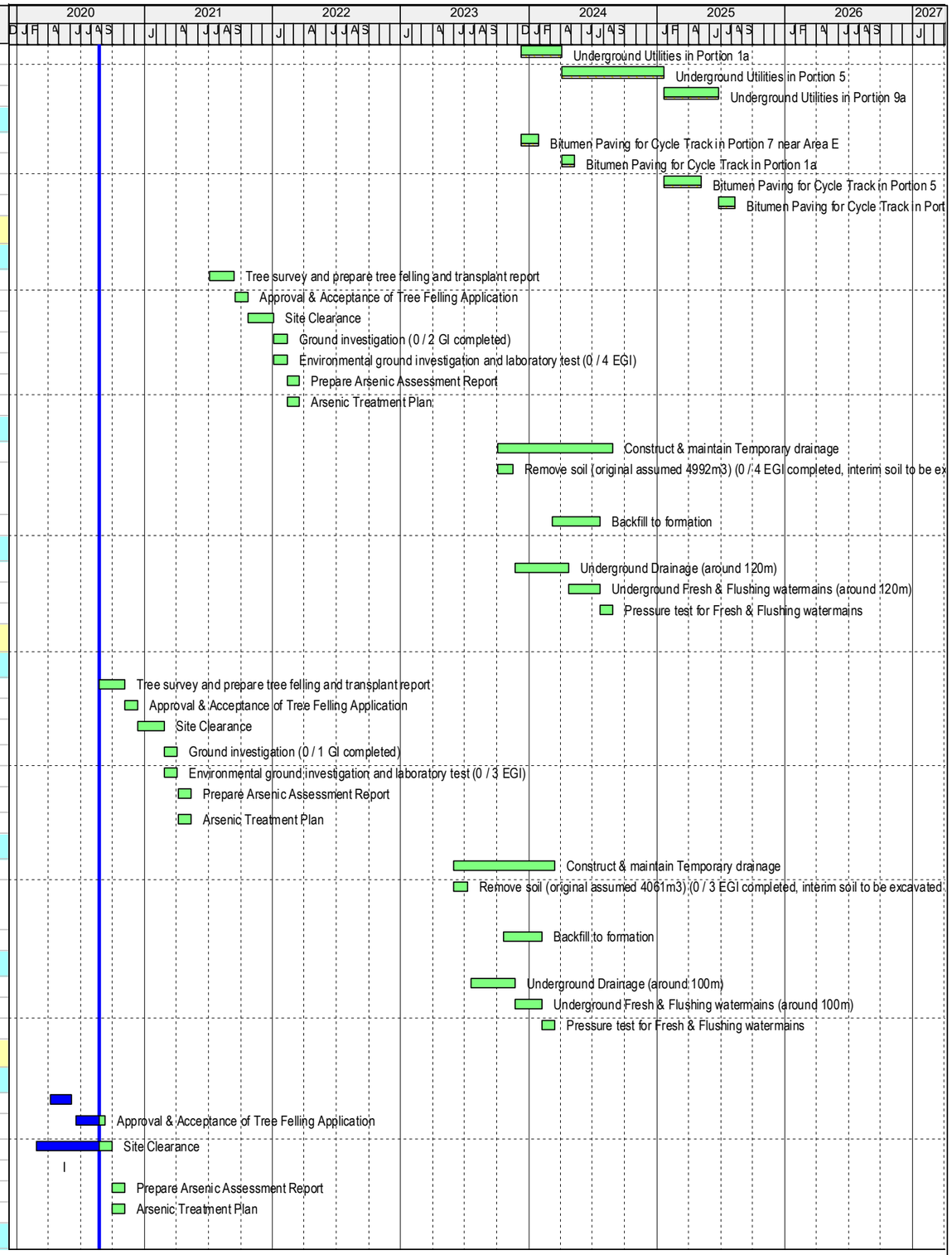
S14CT-1020	Underground Utilities in Portion 1a	90	90	11-Dec-23	03-Apr-24	25	WD (6d)
S14CT-1030	Underground Utilities in Portion 5	240	240	05-Apr-24	22-Jan-25	25	WD (6d)
S14CT-1040	Underground Utilities in Portion 9a	120	120	22-Jan-25	24-Jun-25	25	WD (6d)
Construction of Cycle Track							
S14CT-2010	Bitumen Paving for Cycle Track in Portion 7 near Area E	40	40	11-Dec-23	29-Jan-24	445	WD (6d)
S14CT-2020	Bitumen Paving for Cycle Track in Portion 1a	30	30	05-Apr-24	11-May-24	395	WD (6d)
S14CT-2030	Bitumen Paving for Cycle Track in Portion 5	80	80	22-Jan-25	07-May-25	65	WD (6d)
S14CT-2040	Bitumen Paving for Cycle Track in Portion 9a	40	40	24-Jun-25	11-Aug-25	25	WD (6d)
Portion 1b (Soil Treatment & Civil Works)							
Preparation work/Tree Survey/Site Clearance/GI							
S14P1b-1100	Tree survey and prepare tree felling and transplant report	60	60	06-Jul-21	13-Sep-21	1160	WD (6d)
S14P1b-1102	Approval & Acceptance of Tree Felling Application	30	30	14-Sep-21	21-Oct-21	1160	WD (6d)
S14P1b-1104	Site Clearance	60	60	22-Oct-21	03-Jan-22	1160	WD (6d)
S14P1b-1106	Ground investigation (0 / 2 GI completed)	30	30	04-Jan-22	10-Feb-22	1160	WD (6d)
S14P1b-1108	Environmental ground investigation and laboratory test (0 / 4 EGI)	30	30	04-Jan-22	10-Feb-22	1160	WD (6d)
S14P1b-1110	Prepare Arsenic Assessment Report	30	30	11-Feb-22	17-Mar-22	1160	WD (6d)
S14P1b-1112	Arsenic Treatment Plan	30	30	11-Feb-22	17-Mar-22	1160	WD (6d)
Soil Treatment							
S14P1b-1200	Construct & maintain Temporary drainage	264	264	06-Oct-23	27-Aug-24	700	WD (6d)
S14P1b-1202	Remove soil (original assumed 4992m3) (0 / 4 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	34	34	06-Oct-23	15-Nov-23	700	WD (6d)
S14P1b-1204	Backfill to formation	110	110	07-Mar-24	23-Jul-24	700	WD (6d)
Civil Works							
S14P1b-1300	Underground Drainage (around 120m)	120	120	25-Nov-23	25-Apr-24	700	WD (6d)
S14P1b-1302	Underground Fresh & Flushing watermains (around 120m)	72	72	25-Apr-24	23-Jul-24	700	WD (6d)
S14P1b-1304	Pressure test for Fresh & Flushing watermains	30	30	23-Jul-24	27-Aug-24	700	WD (6d)
Portion 3 (Soil Treatment & Civil Works)							
Preparation work/Tree Survey/Site Clearance/GI							
S14P3-1100	Tree survey and prepare tree felling and transplant report	60	60	25-Aug-20	05-Nov-20	1046	WD (6d)
S14P3-1102	Approval & Acceptance of Tree Felling Application	30	30	06-Nov-20	10-Dec-20	1046	WD (6d)
S14P3-1104	Site Clearance	60	60	11-Dec-20	25-Feb-21	1046	WD (6d)
S14P3-1106	Ground investigation (0 / 1 GI completed)	30	30	26-Feb-21	01-Apr-21	1046	WD (6d)
S14P3-1108	Environmental ground investigation and laboratory test (0 / 3 EGI)	30	30	26-Feb-21	01-Apr-21	1046	WD (6d)
S14P3-1110	Prepare Arsenic Assessment Report	30	30	06-Apr-21	11-May-21	1046	WD (6d)
S14P3-1112	Arsenic Treatment Plan	30	30	06-Apr-21	11-May-21	1046	WD (6d)
Soil Treatment							
S14P3-1200	Construct & maintain Temporary drainage	238	238	31-May-23	15-Mar-24	438	WD (6d)
S14P3-1202	Remove soil (original assumed 4061m3) (0 / 3 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	34	34	31-May-23	11-Jul-23	438	WD (6d)
S14P3-1204	Backfill to formation	90	90	20-Oct-23	06-Feb-24	438	WD (6d)
Civil Works							
S14P3-1300	Underground Drainage (around 100m)	108	108	19-Jul-23	24-Nov-23	438	WD (6d)
S14P3-1302	Underground Fresh & Flushing watermains (around 100m)	60	60	25-Nov-23	06-Feb-24	438	WD (6d)
S14P3-1304	Pressure test for Fresh & Flushing watermains	30	30	07-Feb-24	15-Mar-24	438	WD (6d)
Portion 5 (Soil Treatment & Civil Works)							
Preparation work/Tree Survey/Site Clearance/GI							
S14P5-1100	Tree survey and prepare tree felling and transplant report	60	0	08-Apr-20 A	04-Jun-20 A		WD (6d)
S14P5-1102	Approval & Acceptance of Tree Felling Application	30	15	20-Jun-20 A	10-Sep-20	1103	WD (6d)
S14P5-1104	Site Clearance	60	30	26-Feb-20 A	28-Sep-20	1088	WD (6d)
S14P5-1106	Environmental ground investigation and laboratory test (1 / 1 EGI)	12	0	15-May-20 A	18-May-20 A		WD (6d)
S14P5-1108	Prepare Arsenic Assessment Report	30	30	29-Sep-20	05-Nov-20	1088	WD (6d)
S14P5-1110	Arsenic Treatment Plan	30	30	29-Sep-20	05-Nov-20	1088	WD (6d)
Soil Treatment							



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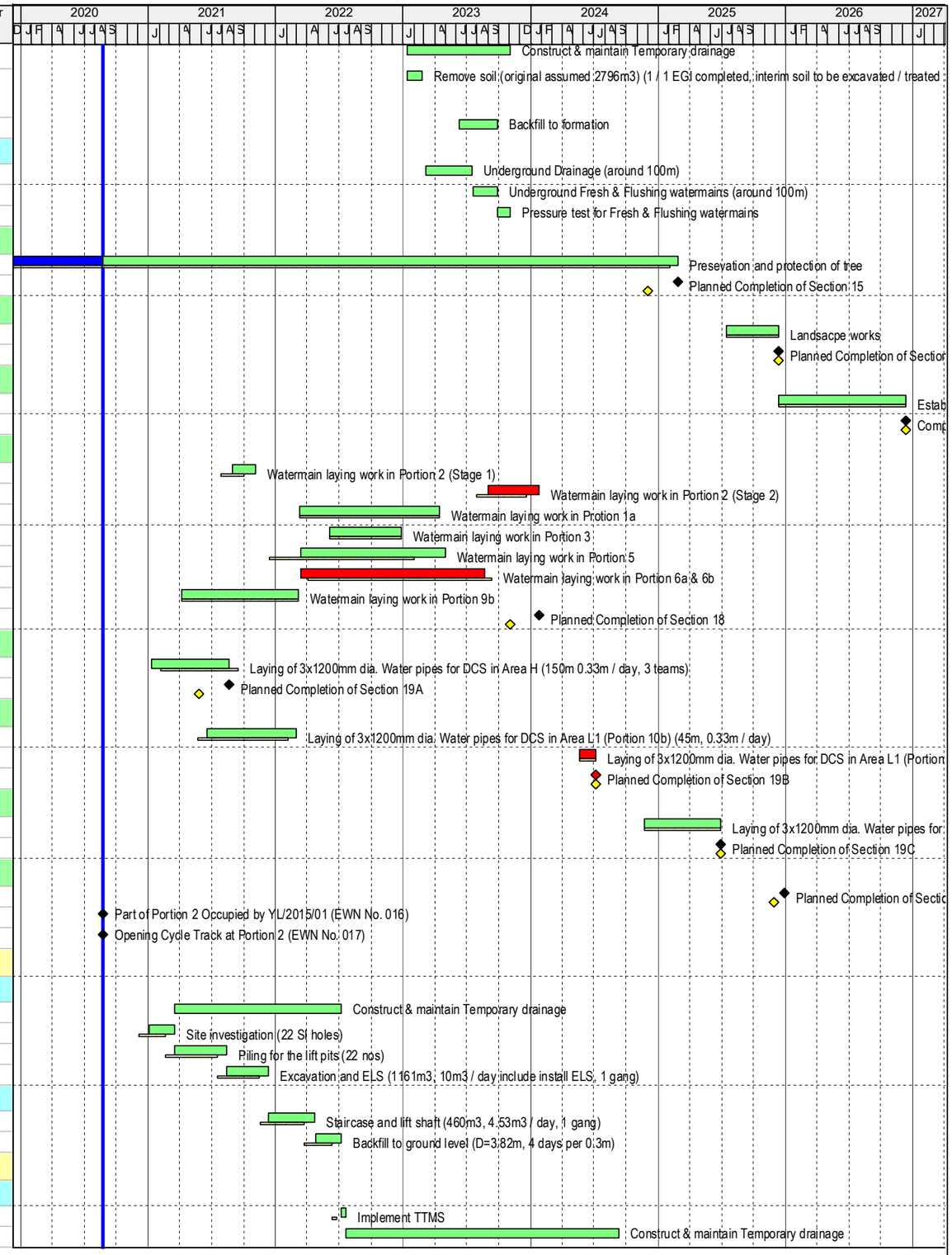
S14P5-1200	Construct & maintain Temporary drainage	238	238	14-Jan-23	03-Nov-23	940	WD (6d)
S14P5-1202	Remove soil (original assumed 2796m3) (1 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	34	34	14-Jan-23*	25-Feb-23	438	WD (6d)
S14P5-1204	Backfill to formation	90	90	12-Jun-23	26-Sep-23	940	WD (6d)
Civil Works							
S14P5-1300	Underground Drainage (around 100m)	108	108	06-Mar-23	18-Jul-23	438	WD (6d)
S14P5-1302	Underground Fresh & Flushing watermains (around 100m)	60	60	19-Jul-23	26-Sep-23	940	WD (6d)
S14P5-1304	Pressure test for Fresh & Flushing watermains	30	30	27-Sep-23	03-Nov-23	940	WD (6d)
Section 15							
S15-1000	Presevation and protection of tree	1825	1648	06-Dec-19 A	27-Feb-25	313	CD (7d)
S15-1010	Planned Completion of Section 15	0	0		27-Feb-25	313	CD (7d)
Section 16							
S16-1000	Landsacpe works	150	150	14-Jul-25	10-Dec-25	27	CD (7d)
S16-1010	Planned Completion of Section 16	0	0		10-Dec-25	27	CD (7d)
Section 17							
S17-1000	Establishment works	365	365	11-Dec-25	10-Dec-26	27	CD (7d)
S17-1010	Completion of Section 17	0	0		10-Dec-26	27	CD (7d)
Section 18 (Subject to excision)							
S18-1000	Watermain laying work in Portion 2 (Stage 1)	55	55	30-Aug-21	04-Nov-21	6	WD (6d)
S18-1010	Watermain laying work in Portion 2 (Stage 2)	120	120	31-Aug-23	24-Jan-24	-60	WD (6d)
S18-1020	Watermain laying work in Protion 1a	323	323	11-Mar-22	14-Apr-23	144	WD (6d)
S18-1030	Watermain laying work in Portion 3	173	173	04-Jun-22	28-Dec-22	242	WD (6d)
S18-1040	Watermain laying work in Portion 5	335	335	15-Mar-22	03-May-23	11	WD (6d)
S18-1050	Watermain laying work in Portion 6a & 6b	428	428	12-Mar-22	21-Aug-23	0	WD (6d)
S18-1070	Watermain laying work in Portion 9b	274	274	06-Apr-21	05-Mar-22	439	WD (6d)
S18-1080	Planned Completion of Section 18	0	0		24-Jan-24	149	CD (7d)
Section 19A (Subject to excision)							
S19A-1000	Laying of 3x1200mm dia. Water pipes for DCS in Area H (150m 0.33m / day, 3 teams)	182	182	11-Jan-21	21-Aug-21	256	WD (6d)
S19A-1010	Planned Completion of Section 19A	0	0		21-Aug-21	319	CD (7d)
Section 19B (Subject to excision)							
S19B-1000	Laying of 3x1200mm dia. Water pipes for DCS in Area L1 (Portion 10b) (45m, 0.33m / day)	210	210	18-Jun-21	01-Mar-22	663	WD (6d)
S19B-1010	Laying of 3x1200mm dia. Water pipes for DCS in Area L1 (Portion 11b) (26m, 0.33m / day, 2 tea	39	39	20-May-24	06-Jul-24	0	WD (6d)
S19B-1020	Planned Completion of Section 19B	0	0		06-Jul-24*	0	CD (7d)
Section 19C (Subject to excision)							
S19C-1000	Laying of 3x1200mm dia. Water pipes for DCS in Area L2 (66m 0.33m / day, 2 teams)	173	173	23-Nov-24	30-Jun-25	24	WD (6d)
S19C-1010	Planned Completion of Section 19C	0	0		30-Jun-25	99	CD (7d)
Section 20 (Subject to excision)							
S20-1010	Planned Completion of Section 20	0	0		27-Dec-25	11	CD (7d)
S20-1015	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016)	0	0	25-Aug-20		142	CD (7d)
S20-1016	Opening Cycle Track at Portion 2 (EWN No. 017)	0	0		25-Aug-20	693	CD (7d)
Construction of Pedestrian Subway cum Cycle Track Stage 1 (South of Castle Peak Road)							
Foundation and ELS							
S20S1-1005	Construct & maintain Temporary drainage	385	385	18-Mar-21	07-Jul-22	9	WD (6d)
S20S1-1010	Site investigation (22 SI holes)	60	60	04-Jan-21	17-Mar-21	9	WD (6d)
S20S1-1020	Piling for the lift pits (22 nos)	120	120	18-Mar-21	12-Aug-21	9	WD (6d)
S20S1-1030	Excavation and ELS (1161m3, 10m3 / day include install ELS, 1 gang)	100	100	13-Aug-21	10-Dec-21	9	WD (6d)
Civil and Structural Work							
S20S1-2010	Staircase and lift shaft (460m3, 4.53m3 / day, 1 gang)	105	105	11-Dec-21	23-Apr-22	9	WD (6d)
S20S1-2020	Backfill to ground level (D=3.82m, 4 days per 0.3m)	60	60	25-Apr-22	07-Jul-22	9	WD (6d)
Construction of Pedestrian Subway cum Cycle Track Stage 2 (North of Castle Peak Road)							
Preparation Work							
S20S2-1010	Implement TTMS	12	12	08-Jul-22	21-Jul-22	9	WD (6d)
S20S2-1015	Construct & maintain Temporary drainage	636	636	22-Jul-22	10-Sep-24	9	WD (6d)



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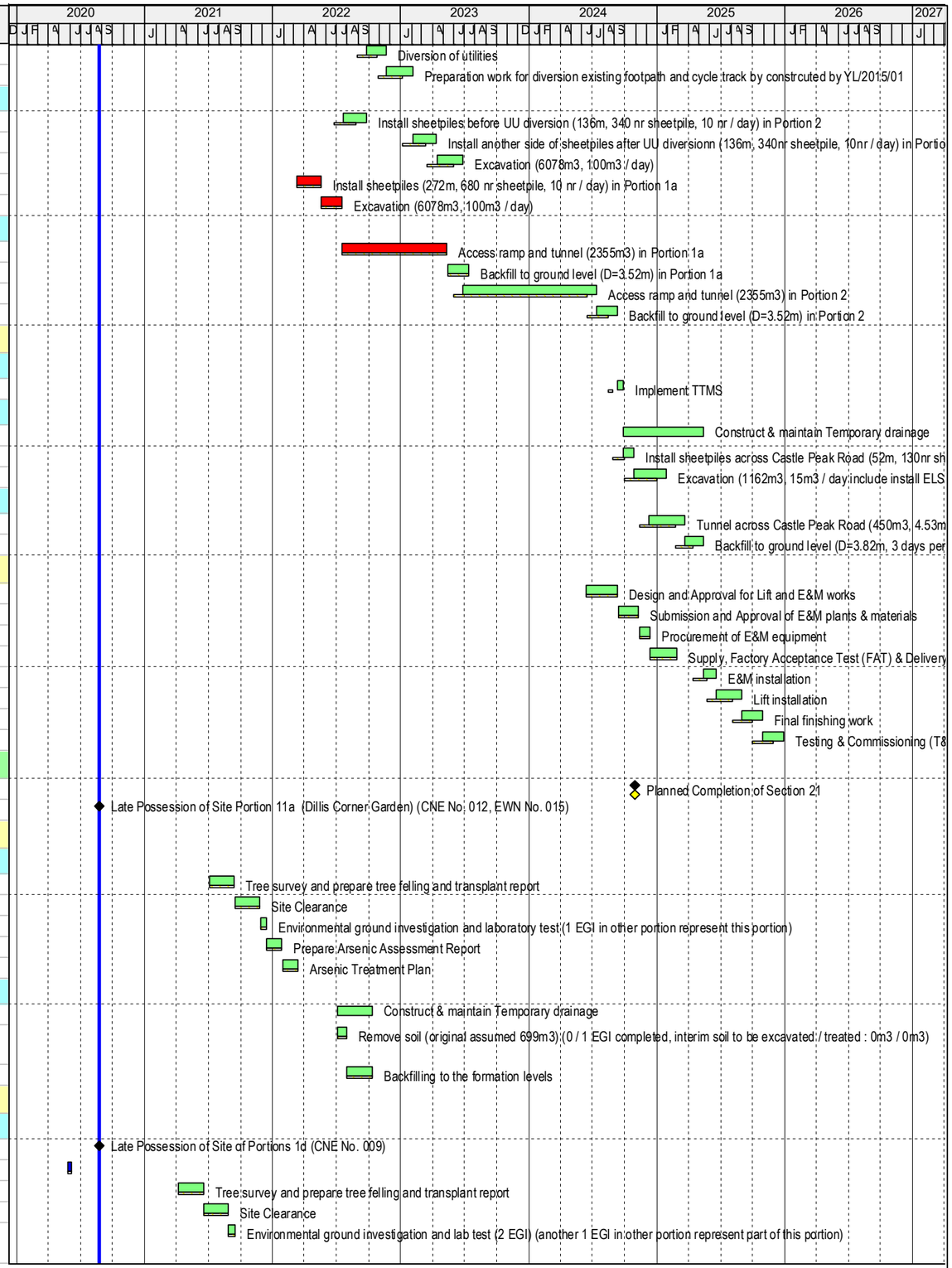
S20S2-1020	Diversion of utilities	48	48	24-Sep-22	21-Nov-22	9	WD (6d)
S20S2-1030	Preparation work for diversion existing footpath and cycle track by constrcuted by YL/2015/01	60	60	22-Nov-22	04-Feb-23	9	WD (6d)
ELS for subway ramp							
S20S2-2010	Install sheetpiles before UU diversion (136m, 340 nr sheetpile, 10 nr / day) in Portion 2	54	54	22-Jul-22	23-Sep-22	9	WD (6d)
S20S2-2020	Install another side of sheetpiles after UU diversionn (136m, 340nr sheetpile, 10nr / day) in Portio	54	54	06-Feb-23	13-Apr-23	9	WD (6d)
S20S2-2030	Excavation (6078m3, 100m3 / day)	60	60	14-Apr-23	26-Jun-23	9	WD (6d)
S20S2-2040	Install sheetpiles (272m, 680 nr sheetpile, 10 nr / day) in Portion 1a	54	54	11-Mar-22	19-May-22	0	WD (6d)
S20S2-2050	Excavation (6078m3, 100m3 / day)	49	49	20-May-22	18-Jul-22	0	WD (6d)
Civil and Structural Work							
S20S2-3010	Access ramp and tunnel (2355m3) in Portion 1a	244	244	19-Jul-22	13-May-23	0	WD (6d)
S20S2-3020	Backfill to ground level (D=3.52m) in Portion 1a	50	50	15-May-23	14-Jul-23	354	WD (6d)
S20S2-3030	Access ramp and tunnel (2355m3) in Portion 2	310	310	27-Jun-23	13-Jul-24	9	WD (6d)
S20S2-3040	Backfill to ground level (D=3.52m) in Portion 2	50	50	13-Jul-24	10-Sep-24	9	WD (6d)
Construction of Pedestrian Subway cum Cycle Track Stage 3 (On the existing Castle Peak Road)							
Preparation Work							
S20S3-1010	Implement TTMS	12	12	10-Sep-24	25-Sep-24	9	WD (6d)
ELS for subway							
S20S3-2000	Construct & maintain Temporary drainage	184	184	25-Sep-24	15-May-25	9	WD (6d)
S20S3-2010	Install sheetpiles across Castle Peak Road (52m, 130nr sheetpile, 5 nr / day)	26	26	25-Sep-24	28-Oct-24	9	WD (6d)
S20S3-2020	Excavation (1162m3, 15m3 / day include install ELS)	75	75	28-Oct-24	27-Jan-25	9	WD (6d)
Civil and Structural Work							
S20S3-3010	Tunnel across Castle Peak Road (450m3, 4.53m3 / day, 1 gang)	80	80	09-Dec-24	20-Mar-25	9	WD (6d)
S20S3-3020	Backfill to ground level (D=3.82m, 3 days per 0.3m)	42	42	20-Mar-25	15-May-25	9	WD (6d)
E&M, Lift Installation and Finishing Work for Pedestrian Subway							
S20ELF-1010	Design and Approval for Lift and E&M works	90	90	14-Jun-24	11-Sep-24	89	CD (7d)
S20ELF-1020	Submission and Approval of E&M plants & materials	60	60	12-Sep-24	10-Nov-24	89	CD (7d)
S20ELF-1030	Procurement of E&M equipment	30	30	11-Nov-24	10-Dec-24	89	CD (7d)
S20ELF-1040	Supply, Factory Acceptance Test (FAT) & Delivery of E&M equipment	60	60	11-Dec-24	26-Feb-25	69	WD (6d)
S20ELF-1050	E&M installation	30	30	15-May-25	20-Jun-25	9	WD (6d)
S20ELF-1060	Lift installation	60	60	20-Jun-25	30-Aug-25	9	WD (6d)
S20ELF-1070	Final finishing work	48	48	30-Aug-25	28-Oct-25	9	WD (6d)
S20ELF-1080	Testing & Commissioning (T&C)	60	60	28-Oct-25	27-Dec-25	11	CD (7d)
Section 21 (Subject to excision)							
S21-1010	Planned Completion of Section 21	0	0		30-Oct-24	434	CD (7d)
S21-1011	Late Possession of Site Portion 11a (Dillis Corner Garden) (CNE No. 012, EWN No. 015)	0	0		25-Aug-20	1670	CD (7d)
Portion 1b in Area M (Soil Treatment)							
Preparation work							
S21P1b-1010	Tree survey and prepare tree felling and transplant report	60	60	06-Jul-21	13-Sep-21	1047	WD (6d)
S21P1b-1020	Site Clearance	60	60	14-Sep-21	25-Nov-21	1047	WD (6d)
S21P1b-1030	Environmental ground investigation and laboratory test (1 EGI in other portion represent this port	15	15	26-Nov-21	13-Dec-21	1047	WD (6d)
S21P1b-1040	Prepare Arsenic Assessment Report	36	36	14-Dec-21	27-Jan-22	1047	WD (6d)
S21P1b-1050	Arsenic Treatment Plan	36	36	28-Jan-22	14-Mar-22	1047	WD (6d)
Soil Treatment							
S21P1b-2000	Construct & maintain Temporary drainage	83	83	04-Jul-22	12-Oct-22	959	WD (6d)
S21P1b-2010	Remove soil (original assumed 699m3) (0 / 1 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	04-Jul-22*	01-Aug-22	959	WD (6d)
S21P1b-2020	Backfilling to the formation levels	59	59	01-Aug-22	12-Oct-22	959	WD (6d)
Portion 1d in Area M (Soil Treatment & Demolition of Existing CLC)							
Preparation work							
S21P1d-0005	Late Possession of Site of Portions 1d (CNE No. 009)	0	0		25-Aug-20	1602	CD (7d)
S21P1d-0010	Demolition of existing Community Liaison Centre (CLC)	14	0	27-May-20 A	05-Jun-20 A		WD (6d)
S21P1d-1010	Tree survey and prepare tree felling and transplant report	60	60	06-Apr-21	17-Jun-21	1121	WD (6d)
S21P1d-1020	Site Clearance	60	60	18-Jun-21	27-Aug-21	1121	WD (6d)
S21P1d-1030	Environmental ground investigation and lab test (2 EGI) (another 1 EGI in other portion represent part of this portion)	15	15	28-Aug-21	14-Sep-21	1121	WD (6d)



Build King – Richwell Engineering Joint Venture

Planned Work
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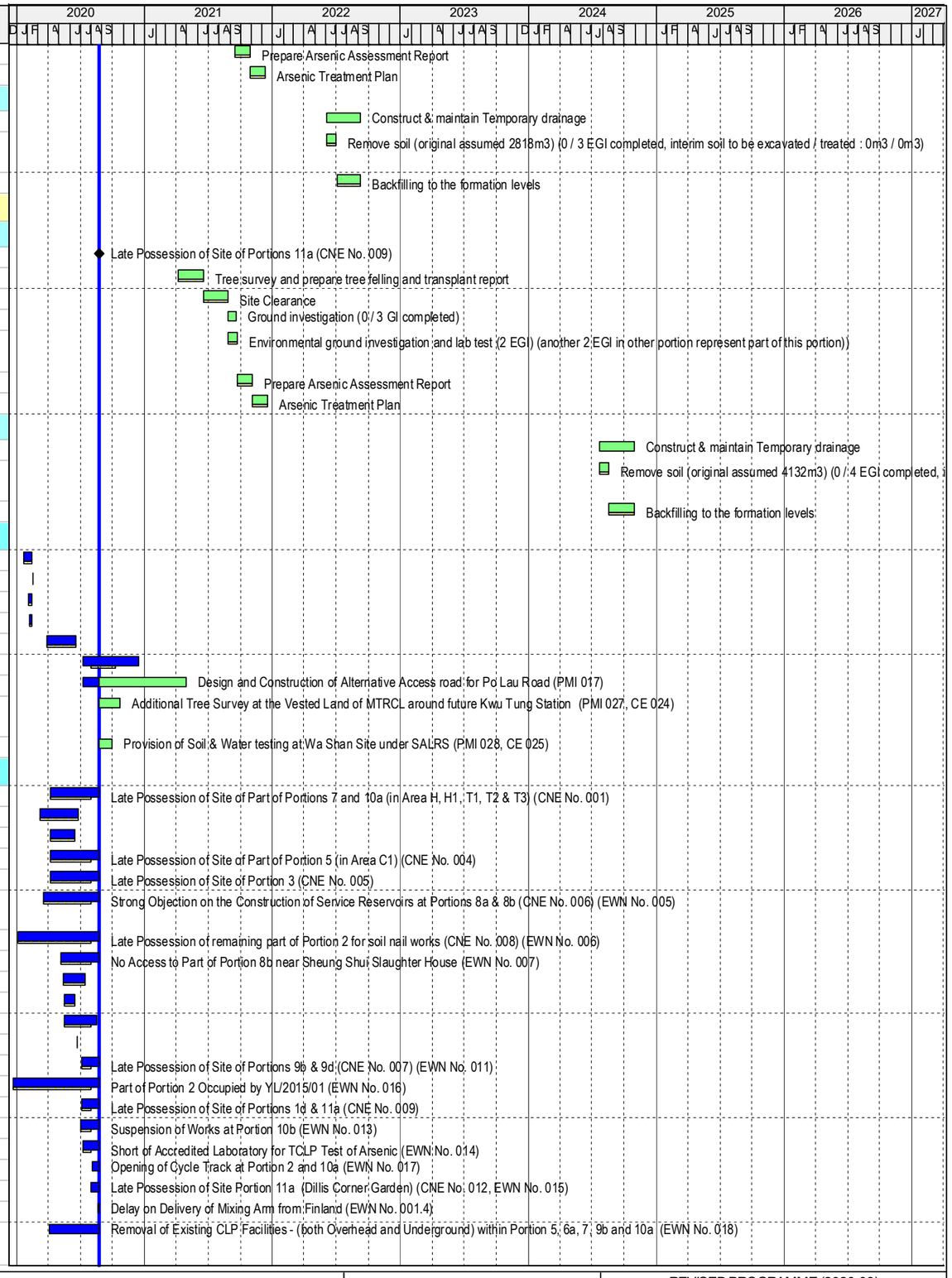
ND/2019/01 - Revised Programme (2020-08)

Project ID: ND201901-RP-8.0
Layout: ND201901-RP with logo

REVISED PROGRAMME (2020-08)

Date	Revision	Checked	Approved
31-Aug-20	Rev.0	JC	BY

Activity ID	Activity Name	Dur (d)	emainin Duration	Start	Finish	Total Float	Calendar
S21P1d-1040	Prepare Arsenic Assessment Report	36	36	15-Sep-21	29-Oct-21	1121	WD (6d)
S21P1d-1050	Arsenic Treatment Plan	36	36	30-Oct-21	10-Dec-21	1121	WD (6d)
Soil Treatment							
S21P1d-2000	Construct & maintain Temporary drainage	83	83	04-Jun-22	09-Sep-22	984	WD (6d)
S21P1d-2010	Remove soil (original assumed 2818m3) (0 / 3 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	04-Jun-22*	02-Jul-22	984	WD (6d)
S21P1d-2020	Backfilling to the formation levels	59	59	04-Jul-22	09-Sep-22	984	WD (6d)
Portion 11a in Area M (Soil Treatment)							
Preparation work							
S21P11a-10005	Late Possession of Site of Portions 11a (CNE No. 009)	0	0		25-Aug-20	1596	CD (7d)
S21P11a-1010	Tree survey and prepare tree felling and transplant report	60	60	06-Apr-21	17-Jun-21	1116	WD (6d)
S21P11a-1020	Site Clearance	60	60	18-Jun-21	27-Aug-21	1116	WD (6d)
S21P11a-1025	Ground investigation (0 / 3 GI completed)	18	18	28-Aug-21	17-Sep-21	1118	WD (6d)
S21P11a-1030	Environmental ground investigation and lab test (2 EGI) (another 2 EGI in other portion represent part of this portion))	20	20	28-Aug-21	20-Sep-21	1116	WD (6d)
S21P11a-1040	Prepare Arsenic Assessment Report	36	36	21-Sep-21	04-Nov-21	1116	WD (6d)
S21P11a-1050	Arsenic Treatment Plan	36	36	05-Nov-21	16-Dec-21	1116	WD (6d)
Soil Treatment							
S21P11a-2000	Construct & maintain Temporary drainage	83	83	22-Jul-24	30-Oct-24	351	WD (6d)
S21P11a-2010	Remove soil (original assumed 4132m3) (0 / 4 EGI completed, interim soil to be excavated / treated : 0m3 / 0m3)	24	24	22-Jul-24*	19-Aug-24	351	WD (6d)
S21P11a-2020	Backfilling to the formation levels	59	59	19-Aug-24	30-Oct-24	351	WD (6d)
8.0 - PMI / CE							
PC-1001	Remove the existing un-wanted vegetation in Area 1.2 within Portion 7 (PMI 001, CE 001)	13	0	20-Jan-20 A	12-Feb-20 A		WD (6d)
PC-1002	Remove the existing un-wanted vegetation in Area 1.3 within Portion 7 (PMI 001, CE 001)	30	0	15-Feb-20 A	18-Feb-20 A		WD (6d)
PC-1003	Remove the existing un-wanted vegetation in Area 2 within Portion 10a (PMI 001, CE 001)	23	0	03-Feb-20 A	12-Feb-20 A		WD (6d)
PC-1004	Remove the existing un-wanted vegetation in Area 3 within Portion 4 (PMI 001, CE 001)	21	0	05-Feb-20 A	12-Feb-20 A		WD (6d)
PC-1005	Site clearance and ground investigation for SALRS at Chuk Yuen Site (PMI 002, CE 002)	60	0	27-Mar-20 A	17-Jun-20 A		WD (6d)
PC-1006	Site clearance and ground investigation for SALRS at Wa Shan Site (PMI 002, CE 002)	60	0	09-Jul-20 A	15-Dec-20 A		WD (6d)
PC-1007	Design and Construction of Alternative Access road for Po Lau Road (PMI 017)	84	200	10-Jul-20 A	28-Apr-21	991	WD (6d)
PC-1008	Additional Tree Survey at the Vested Land of MTRCL around future Kwu Tung Station (PMI 027, CE 024)	48	48	25-Aug-20	21-Oct-20	1840	WD (6d)
PC-1009	Provision of Soil & Water testing at Wa Shan Site under SALRS (PMI 028, CE 025)	30	30	25-Aug-20	28-Sep-20	1858	WD (6d)
9.0 - Major EWN / CNE							
EC-1001	Late Possession of Site of Part of Portions 7 and 10a (in Area H, H1, T1, T2 & T3) (CNE No. 001)	0	0	06-Apr-20 A	25-Aug-20	-174	CD (7d)
EC-1002	Suspension of Works at Part of Portions 5 & 6a (in Area A, N & C1) (CNE No. 002) (EWN No. 00	0	0	09-Mar-20 A	24-Jun-20 A		CD (7d)
EC-1003	Late Possession of Site of Portions 9c (CNE No. 003)	0	0	06-Apr-20 A	16-Jun-20 A		CD (7d)
EC-1004	Late Possession of Site of Part of Portion 5 (in Area C1) (CNE No. 004)	0	0	06-Apr-20 A	25-Aug-20	283	CD (7d)
EC-1005	Late Possession of Site of Portion 3 (CNE No. 005)	0	0	06-Apr-20 A	25-Aug-20	550	CD (7d)
EC-1006	Strong Objection on the Construction of Service Reservoirs at Portions 8a & 8b (CNE No. 006) (EWN No. 005)	0	0	18-Mar-20 A	25-Aug-20	-104	CD (7d)
EC-1007	Late Possession of remaining part of Portion 2 for soil nail works (CNE No. 008) (EWN No. 006)	0	0	06-Jan-20 A	25-Aug-20	388	CD (7d)
EC-1008	No Access to Part of Portion 8b near Sheung Shui Slaughter House (EWN No. 007)	0	0	06-May-20 A	25-Aug-20	143	CD (7d)
EC-1009	Cancellation of TMLG Meeting on 14 May 2020 by Transportation Department (EWN No. 008)	0	0	14-May-20 A	16-Jul-20 A		CD (7d)
EC-1010	Suspension of Works for SALRS at Chuk Yuen Site (EWN No. 009)	0	0	15-May-20 A	15-Jun-20 A		CD (7d)
EC-1011	Pending Relocation of Existing 4 Nos. of EPD Monitoring Points at Portion 6a & 6b (EWN No. 01	0	0	16-May-20 A	17-Aug-20 A		CD (7d)
EC-1012	Significant Increase in Total Nos. of Trees to be Felled at Portions 7 & 10a (EWN No. 012)	0	0	22-Jun-20 A	22-Jun-20 A		CD (7d)
EC-1013	Late Possession of Site of Portions 9b & 9d (CNE No. 007) (EWN No. 011)	0	0	06-Jul-20 A	25-Aug-20	-49	CD (7d)
EC-1014	Part of Portion 2 Occupied by YL/2015/01 (EWN No. 016)	0	0	23-Dec-19 A	25-Aug-20	142	CD (7d)
EC-1015	Late Possession of Site of Portions 1d & 11a (CNE No. 009)	0	0	06-Jul-20 A	25-Aug-20	1596	CD (7d)
EC-1016	Suspension of Works at Portion 10b (EWN No. 013)	0	0	02-Jul-20 A	25-Aug-20	764	CD (7d)
EC-1017	Short of Accredited Laboratory for TCLP Test of Arsenic (EWN No. 014)	0	0	10-Jul-20 A	25-Aug-20	-32	CD (7d)
EC-1018	Opening of Cycle Track at Portion 2 and 10a (EWN No. 017)	0	0	04-Aug-20 A	25-Aug-20	-78	CD (7d)
EC-1019	Late Possession of Site Portion 11a (Dillis Corner Garden) (CNE No. 012, EWN No. 015)	0	0	31-Jul-20 A	25-Aug-20	1670	CD (7d)
EC-1020	Delay on Delivery of Mixing Arm from Finland (EWN No. 001.4)	0	0	20-Aug-20 A	25-Aug-20	-62	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	0	02-Apr-20 A	25-Aug-20	-68	CD (7d)



Build King – Richwell Engineering Joint Venture

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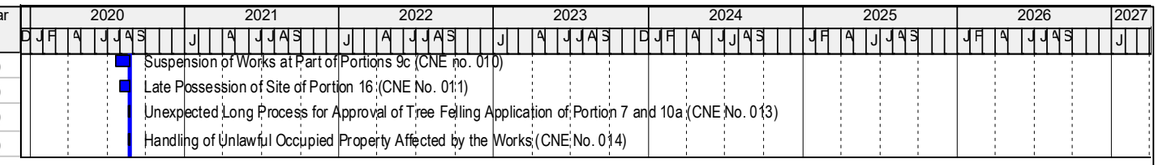
Activity ID	Activity Name	Dur (d)	emainin Duration	Start	Finish	Total Float	Calendar
EC-1022	Suspension of Works at Part of Portions 9c (CNE no. 010)	0	0	21-Jul-20 A	25-Aug-20	-44	CD (7d)
EC-1023	Late Possession of Site of Portion 16 (CNE No. 011)	0	0	02-Aug-20 A	25-Aug-20	-12	CD (7d)
EC-1024	Unexpected Long Process for Approval of Tree Felling Application of Portion 7 and 10a (CNE Nc	0	0	21-Aug-20 A	25-Aug-20	-117	CD (7d)
EC-1025	Handling of Unlawful Occupied Property Affected by the Works (CNE No. 014)	0	0	21-Aug-20 A	25-Aug-20	2326	CD (7d)



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31-Aug-20	Rev. 0	JC	BY

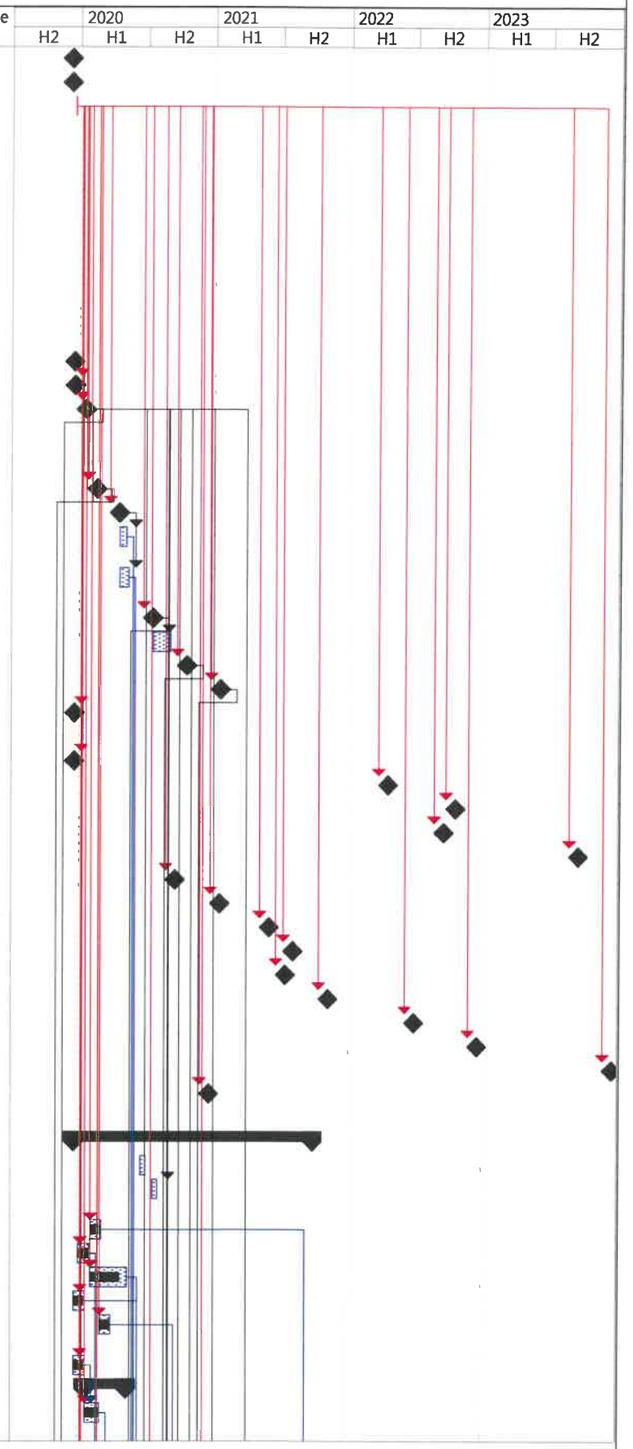
Contract No. ND/2019/03

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
1	**Contract Key Dates**	0 days	Tue 10/12/19	Tue 10/12/19			1470 days	0%	
2	**1.1 Contract Date**	**0 days**	**Tue 10/12/19**	**Tue 10/12/19**			**1470 days**	**0%**	
3	**1.2 Starting Date**	**1 day**	**Thu 19/12/19**	**Thu 19/12/19**		**55,57,58,59,38,5,53,41,43,40,39,3 days,154,6FS+30 days,7FS+60 days,8FS+121 days,11FS+212 days,13FS+304 days,15,14FS+396 days,51,52,18FS+851 days,19FS+1034 days,20FS+1003 days,22FS+273 days,23FS+394 days,24FS+528 days,25FS+592 days,26FS+...**	**0 days**	**0%**	
4	**1.3 Site Access Dates**	0 days	Thu 19/12/19	Thu 19/12/19			1461 days	0%	
5	Portions 25, 26, 27	0 days	Thu 19/12/19	Thu 19/12/19	3		1460 days	0%	
6	Portions 1, 5, 6A, 7, 8A, 9A, 9C, 9E, 9F, 9G, 10A, 10B, 11A, 11B, 12A, 12C, 12D, 13A, 15B, 15C, 16, 17, 19A, 19B, 19C, 20A, 20B	0 days	Sat 18/1/20	Sat 18/1/20	3FS+30 days	,66,67,69,78,122,206,223,241,267,8 days,73FS+30 days,74,75	38 days	0%	
7	Portions 23, 24	0 days	Mon 17/2/20	Mon 17/2/20	3FS+60 days	300	1400 days	0%	
8	Portions 15A, 18, 19, 20, 20C, 22	0 days	Sat 18/4/20	Sat 18/4/20	3FS+121 days	9,10	33 days	0%	
9	Delay of Site Access Dates: Portion 15A, 18, 19, 20 (Structure has not been handed over)	19 days	Sun 19/4/20	Thu 7/5/20	8	190,242,268	33 days	0%	
10	Delay of Site Access Dates: Portion 22 (Structure has not been handed over)	25 days	Sun 19/4/20	Wed 13/5/20	8	301	729 days	0%	
11	Portions 1A, 2, 2A, 3, 4, 4A, 4B, 5A, 6, 8, 7A, 7B	0 days	Sat 18/7/20	Sat 18/7/20	3FS+212 days	79,107,123,207,243,35,12	126 days	0%	
12	Delay of Site Access Dates: 4B,5A	48 days	Sun 19/7/20	Fri 4/9/20	11		1200 days	0%	
13	Portions 8B, 9, 9B, 9D, 10, 11, 12, 12B, 13, 14	0 days	Sun 18/10/20	Sun 18/10/20	3FS+304 days	199,208,224,269	45 days	0%	
14	Portions 15, 16A, 16B, 17A, 17B, 21	0 days	Mon 18/1/21	Mon 18/1/21	3FS+396 days	286,225,244,270	10 days	0%	
15	Works Area WA1	0 days	Thu 19/12/19	Thu 19/12/19	3		1460 days	0%	
16									
17	**1.4 Completion of the works**	**0 days**	**Thu 19/12/19**	**Thu 19/12/19**	**3**		**1460 days**	**0%**	
18	Section 1	0 days	Mon 18/4/22	Mon 18/4/22	3FS+851 days		609 days	0%	
19	Section 2	0 days	Tue 18/10/22	Tue 18/10/22	3FS+1034 days		426 days	0%	
20	Section 3	0 days	Sat 17/9/22	Sat 17/9/22	3FS+1003 days		457 days	0%	
21	Section 3A	0 days	Sun 17/9/23	Sun 17/9/23	3FS+1368 days		92 days	0%	
22	Section 4	0 days	Thu 17/9/20	Thu 17/9/20	3FS+273 days		1187 days	0%	
23	Section 5	0 days	Sat 16/1/21	Sat 16/1/21	3FS+394 days		1066 days	0%	
24	Section 6	0 days	Sun 30/5/21	Sun 30/5/21	3FS+528 days		932 days	0%	
25	Section 7	0 days	Mon 2/8/21	Mon 2/8/21	3FS+592 days		868 days	0%	
26	Section 8	0 days	Tue 13/7/21	Tue 13/7/21	3FS+572 days		888 days	0%	
27	Section 9	0 days	Sat 6/11/21	Sat 6/11/21	3FS+688 days		772 days	0%	
28	Section 10	0 days	Thu 30/6/22	Thu 30/6/22	3FS+924 days		536 days	0%	
29	Section 11	0 days	Sun 18/12/22	Sun 18/12/22	3FS+1095 days		365 days	0%	
30	Section 11A	0 days	Mon 18/12/23	Mon 18/12/23	3FS+1460 days		0 days	0%	
31	Section 12	0 days	Fri 18/12/20	Fri 18/12/20	3FS+365 days		1095 days	0%	
32									
33	**2. Preliminary works**	**646 days**	**Fri 20/12/19**	**Sat 25/9/21**			**814 days**	**35%**	
34	Set up Project Manager's Accommodation in WA1 (1st part)	14 days	Wed 17/6/20	Tue 30/6/20			1266 days	0%	
35	Set up Project Manager's Accommodation in Portion 3 (2nd part)	14 days	Sun 19/7/20	Sat 1/8/20	11		1234 days	0%	
36	Prepare, submit & Approve ICE	30 days	Mon 3/2/20	Tue 3/3/20	3	160	0 days	100%	
37	Prepare, submit & Approve Traffic Consultant	30 days	Wed 1/1/20	Thu 30/1/20	3	81	0 days	100%	
38	Prepare, submit & Approve Landscape Team Leader	100 days	Mon 3/2/20	Tue 12/5/20	3	71,48,50	98 days	80%	
39	Prepare, submit & Approve Agricultural Specialist	30 days	Fri 20/12/19	Sat 18/1/20	3	48,50	0 days	100%	
40	Prepare, submit & Approve Constructed / Treatment Wetland Specialist	30 days	Fri 28/2/20	Sat 28/3/20	3	60	0 days	100%	
41	Prepare, submit & Approve Ecological Team Leader	30 days	Fri 20/12/19	Sat 18/1/20	3	43	0 days	100%	
42	**Habitat Survey**	**112 days**	**Sun 19/1/20**	**Sat 9/5/20**			**0 days**	**100%**	
43	Submission/approval of Habitat Surveys Method Statement and Programme	40 days	Sun 19/1/20	Thu 27/2/20	3,41	44	0 days	100%	



Revised Programme: September 2020

Data Date : 2020-9-3

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

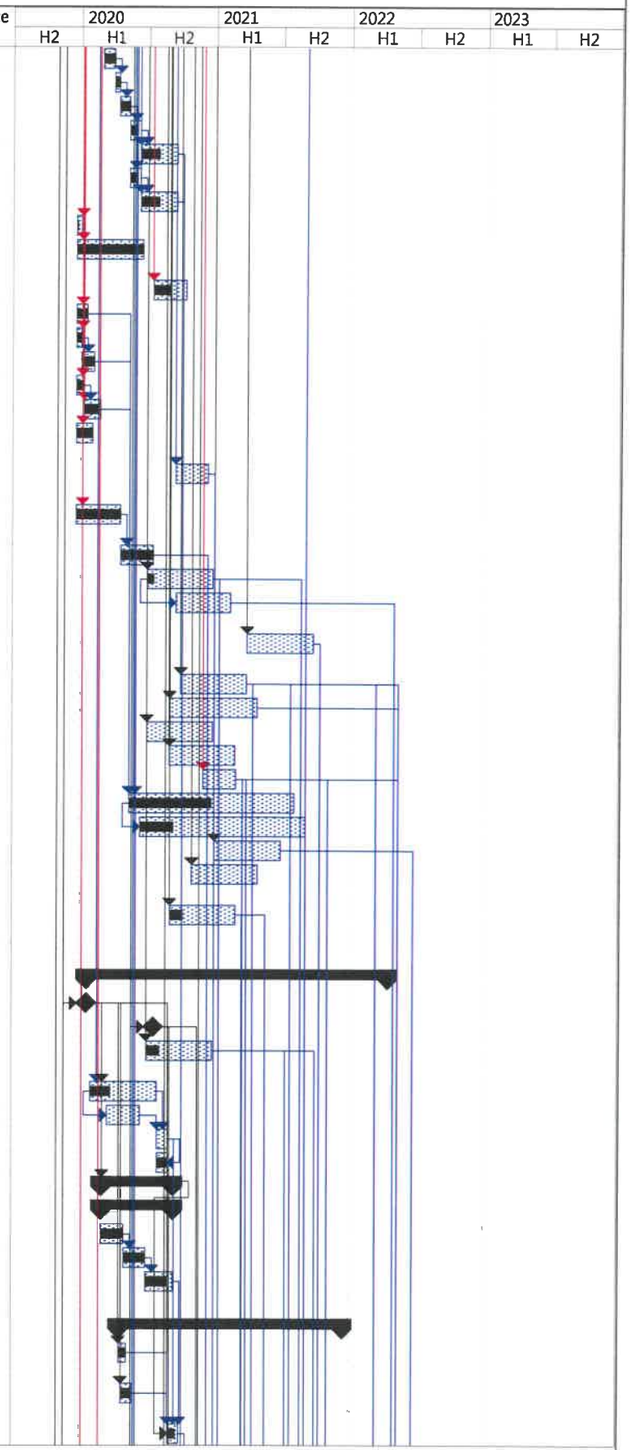
Contract No. ND/2019/03

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
44	✓	Habitat Surveys	30 days	Fri 28/2/20	Sat 28/3/20	43	45	0 days	100%	
45	✓	Submission of Habitat Record	14 days	Sun 29/3/20	Sat 11/4/20	44	46	0 days	100%	
46	✓	Approval of Habitat Survey Record	28 days	Sun 12/4/20	Sat 9/5/20	45	47,49	0 days	100%	
47		Prepare and Submit Wetland Restoration Proposal	30 days	Sun 10/5/20	Mon 8/6/20	46	48	71 days	70%	
48		Approval of Wetland Restoration Proposal	100 days	Tue 9/6/20	Wed 16/9/20	47,38,39	211,228,247,273	21 days	50%	
49		Prepare and Submit Wetland Creation Proposal	30 days	Sun 10/5/20	Mon 8/6/20	46	50	71 days	70%	
50		Approval of Wetland Cretation Proposal	100 days	Tue 9/6/20	Wed 16/9/20	49,38,39	211,228,247,273	21 days	50%	
51		Prepare and Submit Ecological Protection Plan	14 days	Fri 20/12/19	Thu 2/1/20	3		1446 days	20%	
52	✓	Prepare, Submit and Approval of Maintenance Proposal for Stage 1 Maintenance Works	180 days	Fri 20/12/19	Tue 16/6/20	3		0 days	100%	
53		Prepare, submit & Approve G.I. Contractor	90 days	Wed 15/7/20	Mon 12/10/20	3		1162 days	50%	
54	✓	Prepare and submit Smart Card Sysytem	30 days	Fri 20/12/19	Sat 18/1/20	3	71	0 days	100%	
55	✓	Prepare, submit Draft Safety Plan	14 days	Fri 20/12/19	Thu 2/1/20	3	56	0 days	100%	
56	✓	Review & Approve Safety Plan	35 days	Fri 3/1/20	Thu 6/2/20	55	71	0 days	100%	
57	✓	Prepare, Submit Draft Environmental Management Plan	21 days	Fri 20/12/19	Thu 9/1/20	3	58	0 days	100%	
58	✓	Review & Approve Environmental Management Plan	45 days	Fri 10/1/20	Sun 23/2/20	3,57	71	0 days	100%	
59	✓	Prepare, submit & Approve Site Management Plan for Trip Ticket System	45 days	Fri 20/12/19	Sun 2/2/20	3		0 days	100%	
60		Submission and Approval of Construction Method for water treatment wetland	90 days	Tue 15/9/20	Sun 13/12/20	40	126	10 days	0%	
61	✓	Submission of Proposal for Source of Water for Water Treatment Wetland	120 days	Fri 20/12/19	Fri 17/4/20	3	62	0 days	100%	
62	✓	Approval of Source of Water for Water Treatment Wetland	90 days	Sat 18/4/20	Thu 16/7/20	61	126	0 days	100%	
63		Design/submission/approval of Lodging Facilities	180 days	Tue 30/6/20	Sat 26/12/20	6	112,64SS,110	19 days	10%	
64		Design / Submission / approval of Sewerage System of Lodging Facilities	150 days	Wed 16/9/20	Fri 12/2/21	63SS	115	461 days	0%	
65		Design/submission/approval of alluminium roofing system, timber for wall/floor/soffit for Birdhide	180 days	Tue 30/3/21	Sat 25/9/21	6	140	594 days	0%	
66		Design/submission/approval of E&M works for Facilities	180 days	Wed 30/9/20	Sun 28/3/21	6	115,165,152,117,143,142	328 days	0%	
67		Design/submission/approval of Plumbing works for Facilities	240 days	Mon 31/8/20	Tue 27/4/21	6	143,152	418 days	0%	
68		Design/submission/approval and supply of Lighting	180 days	Tue 30/6/20	Sat 26/12/20	6		1087 days	0%	
69		Design/submission/approval and supply of park facilities	180 days	Sun 30/8/20	Thu 25/2/21	6		1026 days	0%	
70		Submission and Approval for Fire Extinguisher	90 days	Tue 1/12/20	Sun 28/2/21	3	142,152,172,179,256,165	45 days	0%	
71		Tree survey and submission	450 days	Wed 13/5/20	Thu 5/8/21	38,56,58,54	72SS+30 days	865 days	50%	
72		Tree felling / Site clearance	450 days	Fri 12/6/20	Sat 4/9/21	71SS+30 days		835 days	20%	
73		Design/submission/approval of Entrance gantry signages	180 days	Fri 1/1/21	Tue 29/6/21	6FS+30 days	158	385 days	0%	
74		Design/submission/approval of Irrigation system for landscape softworks	180 days	Sat 31/10/20	Wed 28/4/21	6		964 days	0%	
75		Design/submission/approval of Irrigation Channel and other associated facilities	180 days	Tue 1/9/20	Sat 27/2/21	6	218,235,261,280	22 days	20%	
76										
77		**3. Section 1 of the works (Portions 1 and 1A)**	**818 days**	**Sat 18/1/20**	**Fri 15/4/22**			**3 days**	**20%**	
78	✓	Site Access in Portion 1	0 days	Sat 18/1/20	Sat 18/1/20	6	81,94,85FS+30 days,93,92	0 days	100%	
79	✓	Site Access in Portion 1A	0 days	Sat 18/7/20	Sat 18/7/20	11	100,99	0 days	100%	
80		Design/submission/approval and supply of Road Lighting System along Yin Kong Road	180 days	Tue 30/6/20	Sat 26/12/20	6FS+30 days	97,101	208 days	20%	
81		Application for XP for constructionof Yin Kong Road	180 days	Fri 31/1/20	Tue 28/7/20	37,78	82SS+45 days,83	24 days	30%	
82		Prepare TTA for TMLG and approval from TD and RMO	90 days	Mon 16/3/20	Sat 13/6/20	81SS+45 days	83	69 days	0%	
83		Application of Traffic Advice and Road Work Advice	30 days	Wed 29/7/20	Thu 27/8/20	81,82	84FF,94	24 days	0%	
84	✓	Submission of Utilities Detection Report	30 days	Wed 29/7/20	Thu 27/8/20	83FF	94	0 days	100%	
85		**Relocation of Utilities (by Others)**	**195 days**	**Sun 1/3/20**	**Fri 11/9/20**	**78FS+30 days**	**94**	**9 days**	**92%**	
86		**Relocation of CLP Pole at Yin Kong Road**	**195 days**	**Sun 1/3/20**	**Fri 11/9/20**			**9 days**	**92%**	
87	✓	Planning for Relocation	60 days	Sun 1/3/20	Wed 29/4/20		88	0 days	100%	
88	✓	Construction of New Pole	60 days	Thu 30/4/20	Sun 28/6/20	87	89	0 days	100%	
89		Outage and Diversion of Underground Cable	75 days	Mon 29/6/20	Fri 11/9/20	88	94	9 days	80%	
90										
91		**Site Works (under Portion 1)**	**610 days**	**Thu 16/4/20**	**Thu 16/12/21**			**3 days**	**14%**	
92	✓	Compensation Event No. 002 - Construction of Chain Link Fence and Gate adjacent to Yin Kong Road	21 days	Thu 16/4/20	Wed 6/5/20	78	94	0 days	100%	
93	✓	Compensation Event No. 003 - Reprovision of Hoarding and gate at Enchi Lodge	30 days	Wed 22/4/20	Thu 21/5/20	78	94	0 days	100%	
94		Remove existing fencing and site clearance	30 days	Fri 28/8/20	Sat 26/9/20	78,83,84,85,89,92,93	95	3 days	70%	



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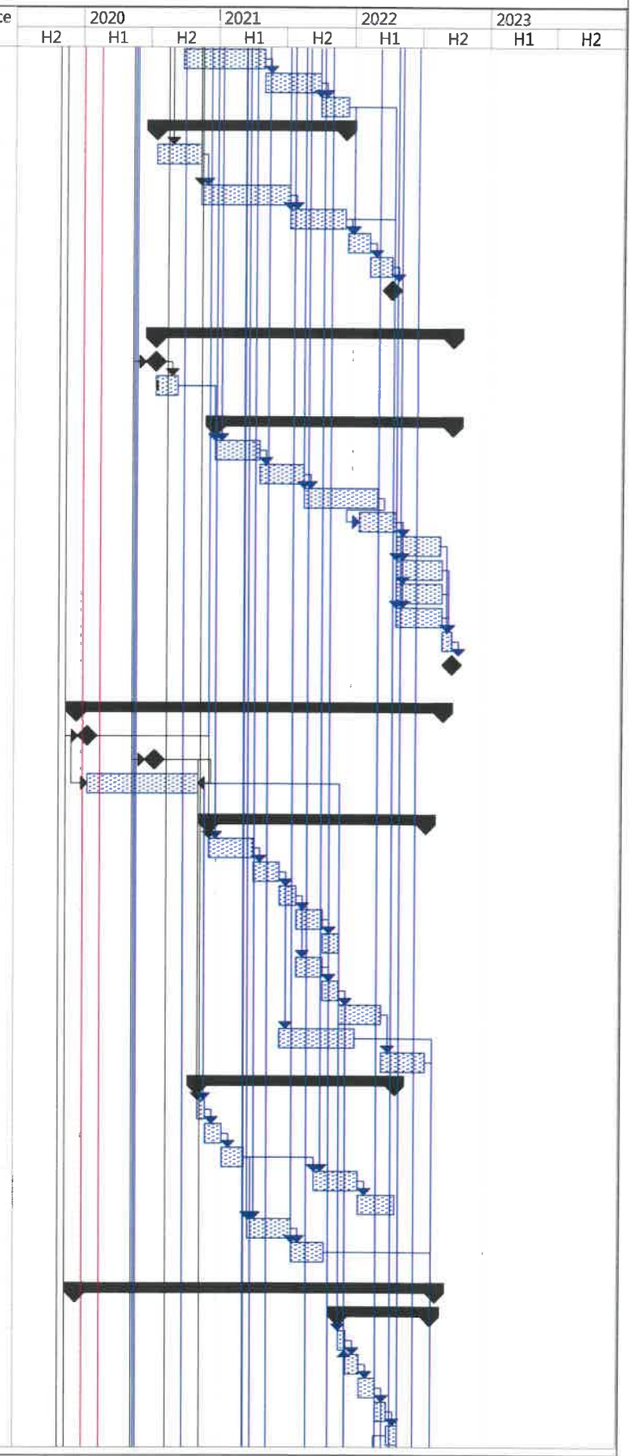
Task | Critical Task | Milestone | Summary | Rolled Up Task | Rolled Up Critical Task | Rolled Up Milestone | Rolled Up Progress | Split | External Tasks | Project Summary | Group By Summary | Progress | Deadline

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
95	Road widening	220 days	Sun 27/9/20	Tue 4/5/21	94	96	3 days	0%	
96	Drainage works	150 days	Wed 5/5/21	Fri 1/10/21	95	97	3 days	0%	7 days
97	Lighting and installation of street fruniture	76 days	Sat 2/10/21	Thu 16/12/21	96,80	102,295	3 days	0%	4 days
98	**Site Works (under Portion 1A)**	**510 days**	**Sun 19/7/20**	**Fri 10/12/21**			**9 days**	**0%**	
99	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	120 days	Sun 19/7/20	Sun 15/11/20	79	100	9 days	0%	
100	Drainage works	240 days	Mon 16/11/20	Tue 13/7/21	79,99	101	9 days	0%	7 days
101	Lighting and installation of street fruniture	150 days	Wed 14/7/21	Fri 10/12/21	100,80	102,295	9 days	0%	4 days
102	Paving block on footway	60 days	Fri 17/12/21	Mon 14/2/22	97,101	103	3 days	0%	
103	bituminous pavement on carriageway	60 days	Tue 15/2/22	Fri 15/4/22	102	104	3 days	0%	
104	**Completion of Section 1 of the works**	**0 days**	**Fri 15/4/22**	**Fri 15/4/22**	**103**		**3 days**	**0%**	
105									
106	**4. Section 2 of the works (Portions 2 and 2A)**	**803 days**	**Sat 18/7/20**	**Thu 29/9/22**			**19 days**	**1%**	
107	Site Access in Portions 2 and 2A	0 days	Sat 18/7/20	Sat 18/7/20	11	108	126 days	0%	
108	General site clearance / demolition work / Removal of Asbesto Containing Material	60 days	Sun 19/7/20	Wed 16/9/20	107	110	120 days	10%	
109	**Construction of lodging facility & associated facilities**	**642 days**	**Sun 27/12/20**	**Thu 29/9/22**			**19 days**	**0%**	
110	Excavation and formation preparation	120 days	Sun 27/12/20	Sun 25/4/21	108,63	111	19 days	0%	
111	Construction of foundation / pavement	120 days	Mon 26/4/21	Mon 23/8/21	110	112	19 days	0%	
112	Supply of logging units	200 days	Tue 24/8/21	Fri 11/3/22	111,63	113FS-50 days	19 days	0%	
113	Installation of lodging units	100 days	Fri 21/1/22	Sat 30/4/22	112FS-50 days	114,115,116,117	19 days	0%	3 days
114	Installation of furniture / facility	120 days	Sun 1/5/22	Sun 28/8/22	113	118	24 days	0%	
115	Installation of E&M works	125 days	Sun 1/5/22	Fri 2/9/22	66,64,113	118	19 days	0%	5 days
116	Installation of Fire Services	125 days	Sun 1/5/22	Fri 2/9/22	113	118	19 days	0%	
117	Installation of plumbing works	125 days	Sun 1/5/22	Fri 2/9/22	66,113	118	19 days	0%	5 days
118	Testing and commissioning	27 days	Sat 3/9/22	Thu 29/9/22	117,115,116,114	119	19 days	0%	
119	**Completion of Section 2 of the works**	**0 days**	**Thu 29/9/22**	**Thu 29/9/22**	**118**		**19 days**	**0%**	
120									
121	**5. Section 3 of the works (Portions 3, 4, 4A, 4B, 5, 5A, 6 & 6A)**	**993 days**	**Fri 20/12/19**	**Wed 7/9/22**			**25 days**	**0%**	
122	Site Access in Portions 5 and 6A	0 days	Sat 18/1/20	Sat 18/1/20	6	126,124SS	38 days	0%	
123	Site Access in Portions 3, 4, 4A, 4B, 5A and 6	0 days	Sat 18/7/20	Sat 18/7/20	11	137,126,124FF+20 days	136 days	0%	
124	General site clearance / demolition work / Removal of Asbesto Containing Material	300 days	Sun 19/1/20	Fri 13/11/20	122SS,123FF+20 days	146,137	38 days	0%	
125	**Construction of water treatment wetland**	**588 days**	**Mon 14/12/20**	**Sun 24/7/22**			**10 days**	**0%**	
126	Excavation for sedimentation pond	120 days	Mon 14/12/20	Mon 12/4/21	60,122,123,62	127	10 days	0%	
127	Excavation for macophyte zones - down stream	71 days	Tue 13/4/21	Tue 22/6/21	126	128,134	10 days	0%	
128	Bedding preparation	45 days	Wed 23/6/21	Fri 6/8/21	127	129,131	10 days	0%	
129	Excavation for macophyte zones - mid stream	72 days	Sat 7/8/21	Sun 17/10/21	128	130	747 days	0%	
130	Bedding preparation	45 days	Mon 18/10/21	Wed 1/12/21	129		747 days	0%	
131	Excavation for macophyte zones - upstream	72 days	Sat 7/8/21	Sun 17/10/21	128	132	10 days	0%	
132	Bedding preparation	45 days	Mon 18/10/21	Wed 1/12/21	131	133,182	10 days	0%	
133	Excavation for open water zone	115 days	Thu 2/12/21	Sat 26/3/22	132	135	55 days	0%	
134	Construction of wetland broadwalk	205 days	Wed 23/6/21	Thu 13/1/22	127	183	247 days	0%	
135	Construction of Inlet and outlet structures	120 days	Sun 27/3/22	Sun 24/7/22	133	183	55 days	0%	
136	**Construction of birdhide**	**536 days**	**Sat 14/11/20**	**Tue 3/5/22**			**38 days**	**0%**	
137	Excavation and formation preparation	21 days	Sat 14/11/20	Fri 4/12/20	123,124	138	38 days	0%	
138	Construction of base slab	45 days	Sat 5/12/20	Mon 18/1/21	137	139	38 days	0%	
139	Installation of steel structural frame	60 days	Tue 19/1/21	Fri 19/3/21	138	140,167,142,174	38 days	0%	
140	Installation of timber wall / roof	120 days	Sun 26/9/21	Sun 23/1/22	139,65	141	594 days	0%	4 days
141	Installation of timber rised flooring	100 days	Mon 24/1/22	Tue 3/5/22	140		594 days	0%	
142	Installation of E&M, Fire Services System	120 days	Mon 29/3/21	Mon 26/7/21	139,66,70	143	328 days	0%	
143	Testing & commissioning	90 days	Tue 27/7/21	Sun 24/10/21	66,67,142	183	328 days	0%	
144	**Construction of farmer's forum / open area**	**978 days**	**Fri 20/12/19**	**Tue 23/8/22**			**25 days**	**0%**	
145	**Construction of tea house pavilion**	**251 days**	**Fri 3/12/21**	**Wed 10/8/22**			**38 days**	**0%**	
146	Construction of base slab	21 days	Fri 3/12/21	Thu 23/12/21	124,162	147	38 days	0%	
147	Construction of walls with columns	35 days	Fri 24/12/21	Thu 27/1/22	146	148	38 days	0%	
148	Installation of roof steel structure	45 days	Fri 28/1/22	Sun 13/3/22	147	149,157	38 days	0%	
149	Installation of recycled timber strip for roof	30 days	Mon 14/3/22	Tue 12/4/22	148	150	38 days	0%	
150	Installation of recycled timber strip for walls	30 days	Wed 13/4/22	Thu 12/5/22	149	151SS	38 days	0%	



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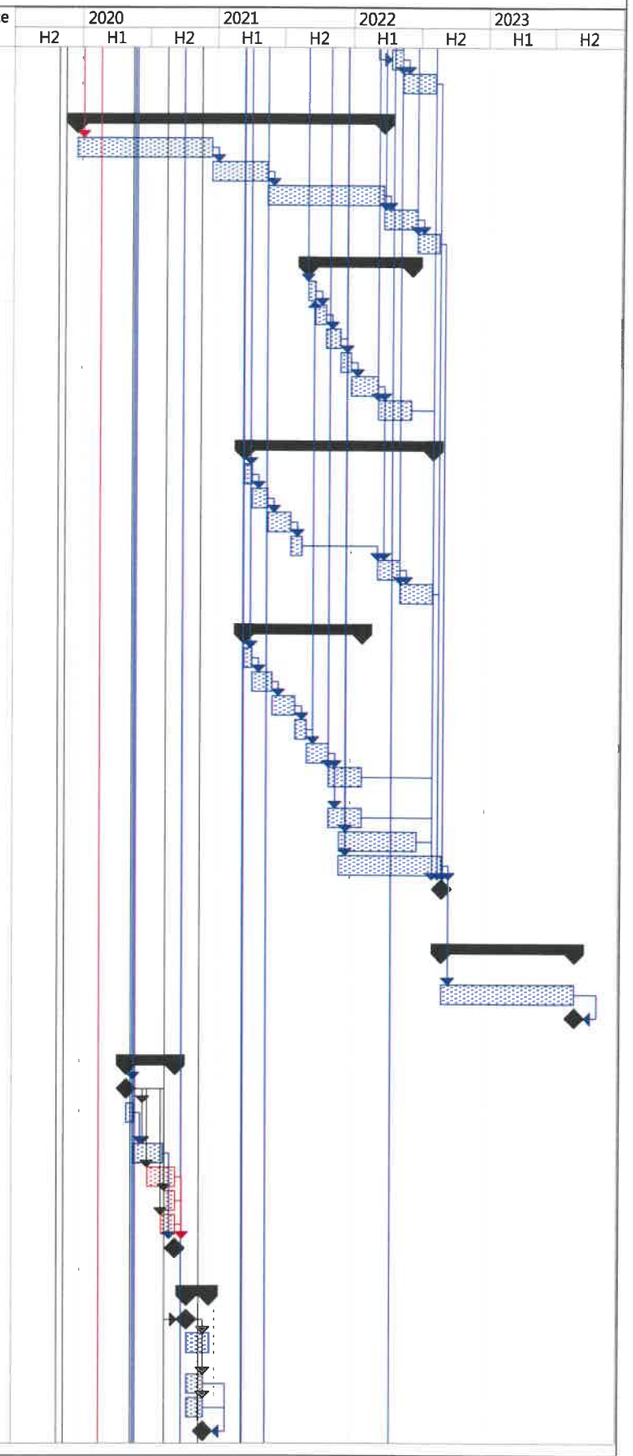
Task | Critical Task | Milestone | Summary | Rolled Up Task | Rolled Up Critical Task | Rolled Up Milestone | Rolled Up Progress | Split | External Tasks | Project Summary | Group By Summary | Progress | Deadline

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
151	Supply and installation of bench	30 days	Wed 13/4/22	Thu 12/5/22	150SS	152	38 days	0%	
152	Installation of plumbing works / E&M works with testing & commissioning	90 days	Fri 13/5/22	Wed 10/8/22	151,66,67,70	183	38 days	0%	
153	**Construction of Pai Lau**	**828 days**	**Fri 20/12/19**	**Sat 26/3/22**			**25 days**	**0%**	
154	Instruction from PM	365 days	Fri 20/12/19	Fri 18/12/20	3	155	25 days	0%	
155	Design/Submission/approval	150 days	Sat 19/12/20	Mon 17/5/21	154	156	25 days	0%	
156	Construction of Pai Lau	313 days	Tue 18/5/21	Sat 26/3/22	155	157	25 days	0%	7 days
157	Construction of paving slab for open area	90 days	Sun 27/3/22	Fri 24/6/22	156,148	158	25 days	0%	4 days
158	Construction of entrance gantry signages	60 days	Sat 25/6/22	Tue 23/8/22	157,73	183	25 days	0%	4 days
159	**Construction of Type 1 storage house**	**280 days**	**Sun 5/9/21**	**Sat 11/6/22**			**38 days**	**0%**	
160	Excavation and formation preparation	21 days	Sun 5/9/21	Sat 25/9/21	36,177	161	38 days	0%	
161	Construction of base slab	28 days	Sun 26/9/21	Sat 23/10/21	160	162	38 days	0%	
162	Construction of walls and roof	40 days	Sun 24/10/21	Thu 2/12/21	161	163,146,181	38 days	0%	
163	Installation of aluminium louvre / GMS door	28 days	Fri 3/12/21	Thu 30/12/21	162	164	38 days	0%	
164	Installation of recycled timber strip / external finishing	73 days	Fri 31/12/21	Sun 13/3/22	163	165,171	38 days	0%	3 days
165	Installation of E&M works & Fire Services with testing & commissioning	90 days	Mon 14/3/22	Sat 11/6/22	164,66,70	183	98 days	0%	
166	**Construction of outdoor classroom shelter**	**509 days**	**Sat 20/3/21**	**Wed 10/8/22**			**38 days**	**0%**	
167	Excavation and formation preparation	21 days	Sat 20/3/21	Fri 9/4/21	139	168	241 days	0%	
168	Construction of base slab	42 days	Sat 10/4/21	Fri 21/5/21	167	169	241 days	0%	
169	Construction of concrete columns	63 days	Sat 22/5/21	Fri 23/7/21	168	170	241 days	0%	3 days
170	Installation of steel roof frame with corrugated sheet	30 days	Sat 24/7/21	Sun 22/8/21	169	171	241 days	0%	
171	Installation of recycled timber strip roofing	60 days	Mon 14/3/22	Thu 12/5/22	170,164	172	38 days	0%	
172	Installation of E&M works and Fire Services with testing & comissioning	90 days	Fri 13/5/22	Wed 10/8/22	171,70	183	38 days	0%	
173	**Construction of storage compositing facility**	**319 days**	**Sat 20/3/21**	**Tue 1/2/22**			**38 days**	**0%**	
174	Excavation and formation preparation	22 days	Sat 20/3/21	Sat 10/4/21	139	175	38 days	0%	
175	Construction of base slab	54 days	Sun 11/4/21	Thu 3/6/21	174	176	38 days	0%	
176	Construction of concrete columns	63 days	Fri 4/6/21	Thu 5/8/21	175	177	38 days	0%	3 days
177	Installation of steel roof frame with corrugated sheet	30 days	Fri 6/8/21	Sat 4/9/21	176	178,160	38 days	0%	
178	Installation of recycled timber strip roofing	60 days	Sun 5/9/21	Wed 3/11/21	177	179,180	228 days	0%	
179	Installation of E&M works & Fire Services with testing & commissioning	90 days	Thu 4/11/21	Tue 1/2/22	178,70	183	228 days	0%	
180	**Construction of entry landing with drop bar**	**90 days**	**Thu 4/11/21**	**Tue 1/2/22**	**178**	**183**	**228 days**	**0%**	
181	**Construction of walkway**	**210 days**	**Fri 3/12/21**	**Thu 30/6/22**	**162**	**183**	**79 days**	**0%**	
182	**Landscaping softworks**	**280 days**	**Thu 2/12/21**	**Wed 7/9/22**	**132**	**183,186**	**10 days**	**0%**	
183	**Completion of Section 3 of the works**	**0 days**	**Wed 7/9/22**	**Wed 7/9/22**	**143,152,158,165,172,179,180,**		**10 days**	**0%**	
184									
185	**6. Section 3A of the works (Establishment works for Section 2 and 3)**	**365 days**	**Thu 8/9/22**	**Thu 7/9/23**			**10 days**	**0%**	
186	Establishment works for landscape softworks	365 days	Thu 8/9/22	Thu 7/9/23	182	187FF	10 days	0%	
187	**Completion of Section 3A of the Works**	**0 days**	**Thu 7/9/23**	**Thu 7/9/23**	**186FF**		**10 days**	**0%**	
188									
189	**7. Section 4 of the works (Portion 18)**	**133 days**	**Thu 7/5/20**	**Thu 17/9/20**			**0 days**	**0%**	
190	Site Access in Portion 18	0 days	Thu 7/5/20	Thu 7/5/20	9	191,192,193,194,195	33 days	0%	
191	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	20 days	Fri 8/5/20	Wed 27/5/20	190	192	33 days	0%	
192	General maintenance to exisitng wetland	80 days	Thu 28/5/20	Sat 15/8/20	190,191	196	33 days	0%	7 days
193	Construction of Storage Shed	77 days	Fri 3/7/20	Thu 17/9/20	190	196	0 days	0%	
194	Construction of Irrigation Channel	30 days	Wed 19/8/20	Thu 17/9/20	190	196	0 days	0%	
195	Construction of Metal Wire Railing	39 days	Mon 10/8/20	Thu 17/9/20	190	196	0 days	0%	
196	**Completion of Section 4 of the works**	**0 days**	**Thu 17/9/20**	**Thu 17/9/20**	**192,193,194,195**		**0 days**	**0%**	
197									
198	**8. Section 5 of the works (Portion 14)**	**60 days**	**Sun 18/10/20**	**Thu 17/12/20**			**45 days**	**0%**	
199	Site Access in Portion 14	0 days	Sun 18/10/20	Sun 18/10/20	13	202,200,201	45 days	0%	
200	General site clearance / demolition work / Removal of Asbesto Containing Material	60 days	Mon 19/10/20	Thu 17/12/20	199		1096 days	0%	
201	General maintenance to exisiting wetland	45 days	Mon 19/10/20	Wed 2/12/20	199	203FF	45 days	0%	
202	Soiling work around the existing Pond	45 days	Mon 19/10/20	Wed 2/12/20	199	203FF	45 days	0%	
203	**Completion of Section 5 of the works**	**0 days**	**Wed 2/12/20**	**Wed 2/12/20**	**202FF,201FF**		**45 days**	**0%**	



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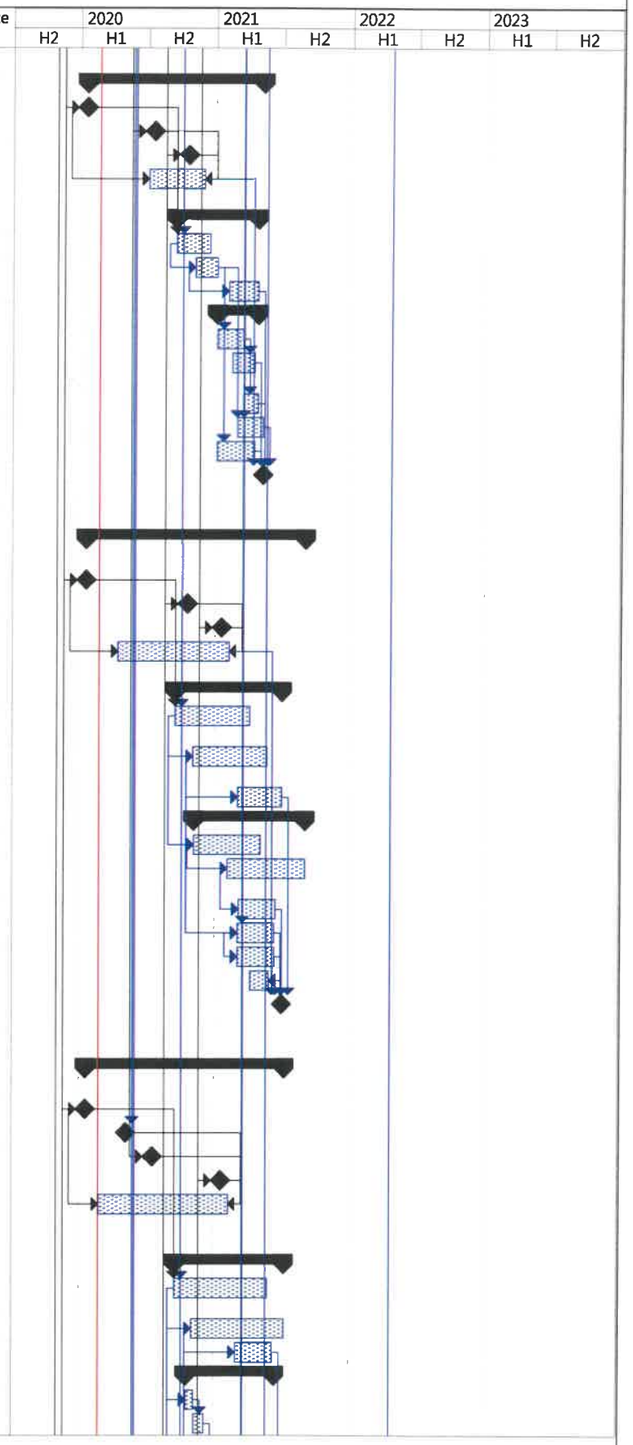
Task | Critical Task | Milestone | Summary | Rolled Up Task | Rolled Up Critical Task | Rolled Up Milestone | Rolled Up Progress | Split | External Tasks | Project Summary | Group By Summary | Progress | Deadline

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
204									
205	**9. Section 6 of the works (Portions 8,8A,8B and 9,9A~9G)**	**476 days**	**Sat 18/1/20**	**Sat 8/5/21**			**22 days**	**0%**	
206	Site Access in Portions 8A, 9A, 9C, 9E, 9F, 9G	0 days	Sat 18/1/20	Sat 18/1/20	6	211,209SS	0 days	100%	
207	Site Access in Portion 8	0 days	Sat 18/7/20	Sat 18/7/20	11	209FF+10 days	306 days	0%	
208	Site Access in Portions 8B, 9, 9B, 9D	0 days	Sun 18/10/20	Sun 18/10/20	13	209FF+10 days	214 days	0%	
209	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	150 days	Fri 3/7/20	Sun 29/11/20	206SS,207FF+10 days,208FF+10 days	220	182 days	0%	
210	**Wetland Restoration / Wetland Creation**	**220 days**	**Thu 17/9/20**	**Sat 24/4/21**			**36 days**	**0%**	
211	Excavation	90 days	Thu 17/9/20	Tue 15/12/20	206,48,50	212SS+50 days	36 days	0%	
212	Backfilling	60 days	Fri 6/11/20	Mon 4/1/21	211SS+50 days	213SS+90 days,215,218,219	36 days	0%	
213	Agricultural Planting	80 days	Thu 4/2/21	Sat 24/4/21	212SS+90 days	220	36 days	0%	
214	**Construction of storage sheds**	**110 days**	**Tue 5/1/21**	**Sat 24/4/21**			**36 days**	**0%**	
215	Construction of concrete structure	70 days	Tue 5/1/21	Mon 15/3/21	212	216FS-30 days,217	36 days	0%	4 days
216	Installation of Alluminium Window/Lourvre and GMS Door with recycle timber decoration	60 days	Sun 14/2/21	Wed 14/4/21	215FS-30 days	220	46 days	0%	
217	Installation of GMS roofing structure with recycle timber	40 days	Tue 16/3/21	Sat 24/4/21	215	220	36 days	0%	
218	Construction of Channel	70 days	Sun 28/2/21	Sat 8/5/21	212,75	220	22 days	0%	7 days
219	Construction of walkway	100 days	Tue 5/1/21	Wed 14/4/21	212	220	46 days	0%	7 days
220	**Completion of Section 6 of the works**	**0 days**	**Sat 8/5/21**	**Sat 8/5/21**	**213,217,218,219,209,216**		**22 days**	**0%**	
221									
222	**10. Section 7 of the works (Portions 10,10A,10B, 13,13A and 16,16A,16B)**	**592 days**	**Sat 18/1/20**	**Wed 1/9/21**			**50 days**	**0%**	
223	Site Access in Portions 10A, 10B, 13A, 16	0 days	Sat 18/1/20	Sat 18/1/20	6	228,226SS	0 days	100%	
224	Site Access in Portions 10, 13	0 days	Sun 18/10/20	Sun 18/10/20	13	226FF+20 days	268 days	0%	
225	Site Access in Portions 16A, 16B	0 days	Mon 18/1/21	Mon 18/1/21	14	226FF+20 days	176 days	0%	
226	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	300 days	Tue 14/4/20	Sun 7/2/21	223SS,224FF+20 days,225FF+20 days	238	176 days	0%	
227	**Wetland Restoration / Wetland Creation**	**287 days**	**Thu 17/9/20**	**Wed 30/6/21**			**33 days**	**0%**	
228	Excavation	200 days	Thu 17/9/20	Sun 4/4/21	223,48,50	229SS+47 days,232SS+50 days	33 days	0%	
229	Backfilling	200 days	Tue 3/11/20	Fri 21/5/21	228SS+47 days	230SS+120 days,235SS+120 days	33 days	0%	
230	Agricultural Planting	120 days	Wed 3/3/21	Wed 30/6/21	229SS+120 days	238	33 days	0%	
231	**Construction of storage sheds**	**300 days**	**Fri 6/11/20**	**Wed 1/9/21**			**50 days**	**0%**	
232	Construction of concrete structure	180 days	Fri 6/11/20	Tue 4/5/21	228SS+50 days	233SS+90 days	50 days	0%	
233	Installation of Alluminium Window/Lourvre and GMS Door with recycle timber decoration	210 days	Thu 4/2/21	Wed 1/9/21	232SS+90 days	234SS+30 days	50 days	0%	
234	Installation of GMS roofing structure with recycle timber	100 days	Sat 6/3/21	Sun 13/6/21	233SS+30 days	238	50 days	0%	
235	Construction of Channel	100 days	Wed 3/3/21	Thu 10/6/21	229SS+120 days,75	236SS,238	53 days	0%	7 days
236	Construction of walkway	100 days	Wed 3/3/21	Thu 10/6/21	235SS	237FF-15 days,238	53 days	0%	6 days
237	Construction of entry landing with drop bar	50 days	Wed 7/4/21	Wed 26/5/21	236FF-15 days	238	68 days	0%	
238	**Completion of Section 7 of the works**	**0 days**	**Wed 30/6/21**	**Wed 30/6/21**	**230,234,235,236,237,226**		**33 days**	**0%**	
239									
240	**11. Section 8 of the works (Portions 7,7A,7B, 17,17A,17B, 19,19A,19B,19C, 20,20A,20B&20C)**	**537 days**	**Sat 18/1/20**	**Thu 8/7/21**			**893 days**	**0%**	
241	Site Access in Portions 7, 17, 19A, 19B, 19C, 20A, 20B	0 days	Sat 18/1/20	Sat 18/1/20	6	247,245SS	0 days	100%	
242	Site Access in Portions 19, 20, 20C	0 days	Thu 7/5/20	Thu 7/5/20	9	245FF+20 days	1300 days	0%	
243	Site Access in Portions 7A, 7B	0 days	Sat 18/7/20	Sat 18/7/20	11	245FF+20 days	1228 days	0%	
244	Site Access in Portions 17A, 17B	0 days	Mon 18/1/21	Mon 18/1/21	14	245FF+20 days	1044 days	0%	
245	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	350 days	Mon 24/2/20	Sun 7/2/21	241SS,242FF+20 days,243FF+20 days,244FF+20 days		1044 days	0%	
246	**Wetland Restoration / Wetland Creation**	**295 days**	**Thu 17/9/20**	**Thu 8/7/21**			**31 days**	**0%**	
247	Excavation	250 days	Thu 17/9/20	Mon 24/5/21	241,48,50	248SS+45 days,258SS+60 days,251SS+30 days	31 days	0%	
248	Backfilling	250 days	Sun 1/11/20	Thu 8/7/21	247SS+45 days	249SS+118 days,261SS+120 days	35 days	0%	
249	Agricultural Planting	100 days	Sat 27/2/21	Sun 6/6/21	248SS+118 days	264	37 days	0%	
250	**Construction of Type 2 storage house**	**239 days**	**Sat 17/10/20**	**Sat 12/6/21**			**31 days**	**0%**	
251	Excavation and formation preparation	21 days	Sat 17/10/20	Fri 6/11/20	247SS+30 days	252	31 days	0%	
252	Construction of base slab	28 days	Sat 7/11/20	Fri 4/12/20	251	253	31 days	0%	

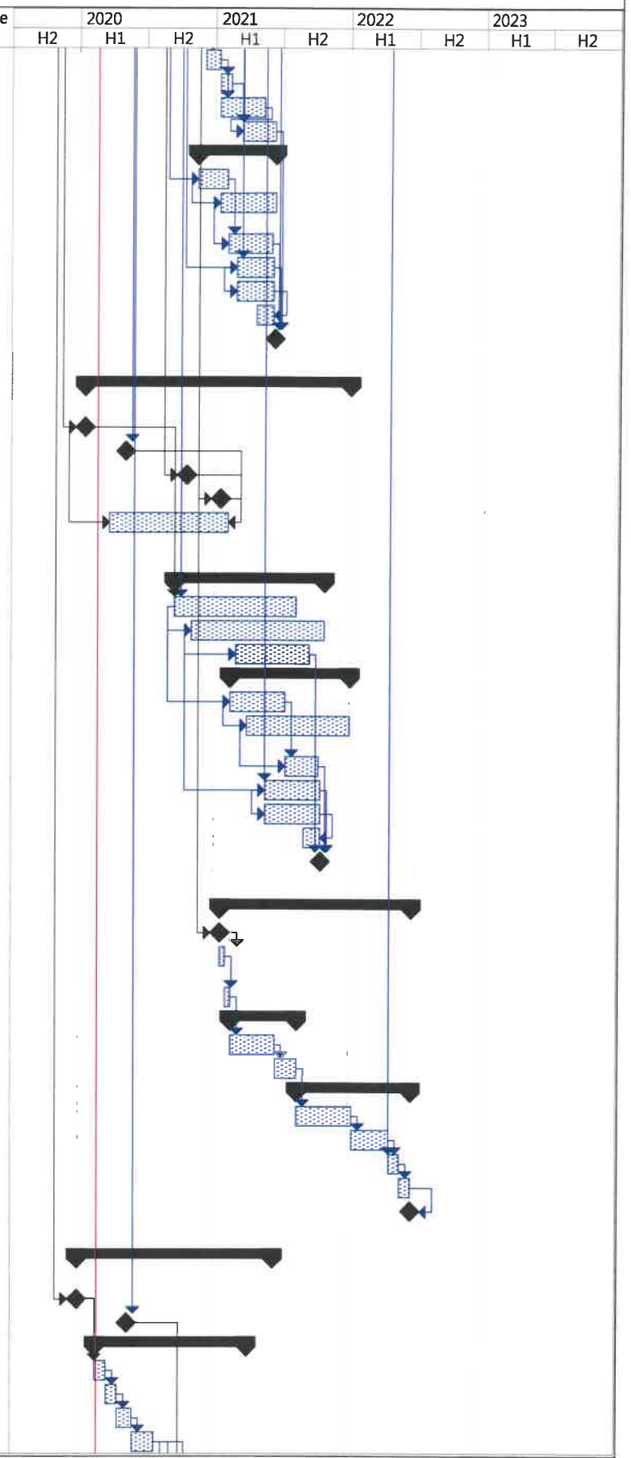


Revised Programme: September 2020

Data Date : 2020-9-3

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

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance
253	Construction of walls and roof	40 days	Sat 5/12/20	Wed 13/1/21	252	254,255	31 days	0%	
254	Installation of aluminium louvre / GMS door	30 days	Thu 14/1/21	Fri 12/2/21	253	256	61 days	0%	
255	Installation of recycled timber strip / external finishing	120 days	Thu 14/1/21	Thu 13/5/21	253	256FS-60 days	31 days	0%	
256	Installation of E&M works with testing & commissioning	90 days	Mon 15/3/21	Sat 12/6/21	255FS-60 days,254,70	264	31 days	0%	
257	**Construction of storage sheds**	**210 days**	**Mon 16/11/20**	**Sun 13/6/21**			**39 days**	**0%**	
258	Construction of concrete structure	80 days	Mon 16/11/20	Wed 3/2/21	247SS+60 days	259SS+60 days,260	39 days	0%	
259	Installation of Alluminium Window/Lourvre and GMS Door with recycle timber decoration	150 days	Fri 15/1/21	Sun 13/6/21	258SS+60 days	260SS+21 days	39 days	0%	
260	Installation of GMS roofing structure with recycle timber	120 days	Fri 5/2/21	Fri 4/6/21	259SS+21 days,258	264	39 days	0%	
261	Construction of Channel	100 days	Mon 1/3/21	Tue 8/6/21	248SS+120 days,75	262SS,264	35 days	0%	7 days
262	Construction of walkway	100 days	Mon 1/3/21	Tue 8/6/21	261SS	263FF,264	35 days	0%	7 days
263	Construction of entry landing with drop bar	45 days	Sun 25/4/21	Tue 8/6/21	262FF	264	35 days	0%	
264	**Completion of Section 8 of the works**	**0 days**	**Sat 12/6/21**	**Sat 12/6/21**	**249,256,260,261,262,263**		**31 days**	**0%**	
265									
266	**12. Section 9 of the works (Portions 11,11A,11B, 12,12A~12D, and 15,15A~15C)**	**717 days**	**Sat 18/1/20**	**Tue 4/1/22**			**713 days**	**0%**	
267	Site Access in Portions 11A, 11B, 12A, 12C, 12D, 15B, 15C	0 days	Sat 18/1/20	Sat 18/1/20	6	273,271SS	0 days	100%	
268	Site Access in Portion 15A	0 days	Thu 7/5/20	Thu 7/5/20	9	271FF+20 days	1300 days	0%	
269	Site Access in Portions 11, 12, 12B	0 days	Sun 18/10/20	Sun 18/10/20	13	271FF+20 days	1136 days	0%	
270	Site Access in Portion 15	0 days	Mon 18/1/21	Mon 18/1/21	14	271FF+20 days	1044 days	0%	
271	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	320 days	Wed 25/3/20	Sun 7/2/21	267SS,268FF+20 days,269FF+20 days,270FF+20 days		1044 days	0%	
272	**Wetland Restoration / Wetland Creation**	**405 days**	**Thu 17/9/20**	**Tue 26/10/21**			**21 days**	**0%**	
273	Excavation	330 days	Thu 17/9/20	Thu 12/8/21	267,48,50	274SS+45 days,277SS+150 days	21 days	0%	
274	Backfilling	360 days	Sun 1/11/20	Tue 26/10/21	273SS+45 days	275SS+120 days,280SS+200 days	21 days	0%	
275	Agricultural Planting	200 days	Mon 1/3/21	Thu 16/9/21	274SS+120 days	283	51 days	0%	
276	**Construction of storage sheds**	**325 days**	**Sun 14/2/21**	**Tue 4/1/22**			**26 days**	**0%**	
277	Construction of concrete structure	150 days	Sun 14/2/21	Tue 13/7/21	273SS+150 days	278SS+45 days,279	26 days	0%	
278	Installation of Alluminium Window/Lourvre and GMS Door with recycle timber decoration	280 days	Wed 31/3/21	Tue 4/1/22	277SS+45 days	279SS+21 days	110 days	0%	
279	Installation of GMS roofing structure with recycle timber	90 days	Wed 14/7/21	Mon 11/10/21	278SS+21 days,277	283	26 days	0%	3 days
280	Construction of Channel	150 days	Thu 20/5/21	Sat 16/10/21	274SS+200 days,75	281SS,283	21 days	0%	4 days
281	Construction of walkway	150 days	Thu 20/5/21	Sat 16/10/21	280SS	282FF,283	21 days	0%	4 days
282	Construction of entry landing with drop bar	45 days	Thu 2/9/21	Sat 16/10/21	281FF	283	21 days	0%	
283	**Completion of Section 9 of the works**	**0 days**	**Sat 16/10/21**	**Sat 16/10/21**	**275,279,280,281,282**		**21 days**	**0%**	
284									
285	**13. Section 10 of the works (Portion 21)**	**518 days**	**Mon 18/1/21**	**Mon 20/6/22**			**10 days**	**0%**	
286	Site Access in Portion 21	0 days	Mon 18/1/21	Mon 18/1/21	14	287	10 days	0%	
287	General site clearance / demolition work / Removal of Asbesto Containing Material	14 days	Tue 19/1/21	Mon 1/2/21	286	288	10 days	0%	
288	Erect site hoarding	14 days	Tue 2/2/21	Mon 15/2/21	287	290	10 days	0%	
289	**Archaeological Impacts Mitigation Measures**	**180 days**	**Tue 16/2/21**	**Sat 14/8/21**			**10 days**	**0%**	
290	Archaeological survey	120 days	Tue 16/2/21	Tue 15/6/21	288	291	10 days	0%	
291	Archaeological impact assessment	60 days	Wed 16/6/21	Sat 14/8/21	290	293	10 days	0%	
292	**Site formation work and infrastructure works at Wa Shan**	**310 days**	**Sun 15/8/21**	**Mon 20/6/22**			**10 days**	**0%**	
293	Site formation / slope works	150 days	Sun 15/8/21	Tue 11/1/22	291	294	10 days	0%	4 days
294	Drainage works	100 days	Wed 12/1/22	Thu 21/4/22	293	295	10 days	0%	4 days
295	Paving block on footway	30 days	Fri 22/4/22	Sat 21/5/22	97,101,294	296	10 days	0%	
296	bituminous pavement on carriageway	30 days	Sun 22/5/22	Mon 20/6/22	295	297FF	10 days	0%	
297	**Completion of Section 10 of the works**	**0 days**	**Mon 20/6/22**	**Mon 20/6/22**	**296FF**		**10 days**	**0%**	
298									
299	**14. Section 11 of the works (Portions 22, 23, 24 and remainder works)**	**529 days**	**Tue 31/12/19**	**Fri 11/6/21**			**555 days**	**0%**	
300	Site Access in Portions 23, 24	0 days	Tue 31/12/19	Tue 31/12/19	7	303	0 days	100%	
301	Site Access in Portion 22	0 days	Wed 13/5/20	Wed 13/5/20	10	312	729 days	0%	
302	**Egretray Site Protion 23 & 24**	**410 days**	**Tue 18/2/20**	**Fri 2/4/21**			**75 days**	**0%**	
303	General site clearance	30 days	Tue 18/2/20	Wed 18/3/20	300	304	75 days	0%	
304	Erect site hoarding	30 days	Thu 19/3/20	Fri 17/4/20	303	305	75 days	0%	
305	Preliminary Survey	40 days	Sat 18/4/20	Wed 27/5/20	304	306	75 days	0%	
306	Submission of mehtodology for translocation	60 days	Thu 28/5/20	Sun 26/7/20	305	324,325,326,307	75 days	0%	



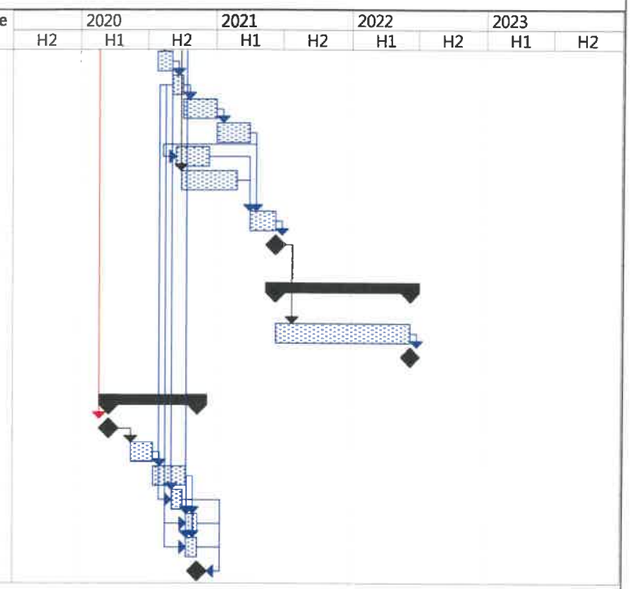
Contract No. ND/2019/03

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
307	Approval of Methodology for Translocation	40 days	Mon 27/7/20	Fri 4/9/20	306	308	75 days	0%	
308	Translocation works	30 days	Sat 5/9/20	Sun 4/10/20	307	309,324SS,325SS,326SS	75 days	0%	
309	Ditch construction at A1-7FLN Egretray Site (Portion 23)	90 days	Mon 5/10/20	Sat 2/1/21	308	310	555 days	0%	
310	Establishmnet of A1-7FLN Egretray Site (Portion 23)	90 days	Sun 3/1/21	Fri 2/4/21	309	313,311FS-200 days	555 days	0%	10 days
311	Establishment of B1-7FLN Egretray Site (Portion 24)	90 days	Tue 15/9/20	Sun 13/12/20	310FS-200 days	313	665 days	0%	10 days
312	Landscaping work at existing Ho Sheung Heung Egretry Site (Portion 22)	150 days	Wed 30/9/20	Fri 26/2/21	301	313	590 days	0%	10 days
313	Removal of temporary facilities	70 days	Sat 3/4/21	Fri 11/6/21	310,311,312	314	555 days	0%	
314	**Completion of Section 11 of the works**	**0 days**	**Fri 11/6/21**	**Fri 11/6/21**	**313**	**317**	**555 days**	**0%**	
315									
316	**15. Section 11A of the works (Establishment works for Section 11)**	**365 days**	**Sat 12/6/21**	**Sat 11/6/22**			**555 days**	**0%**	
317	Establishment works	365 days	Sat 12/6/21	Sat 11/6/22	314	318	555 days	0%	
318	**Completion of Section 11A of the works**	**0 days**	**Sat 11/6/22**	**Sat 11/6/22**	**317**		**555 days**	**0%**	
319									
320	**16. Section 12 of the works (Portions 25, 26 and 27)**	**240 days**	**Wed 18/3/20**	**Fri 13/11/20**			**35 days**	**0%**	
321	Site Access in Portions 25, 26, 27	0 days	Wed 18/3/20	Wed 18/3/20	3FS+90 days	322FS+60 days	35 days	0%	
322	Boundary Site Area	60 days	Mon 18/5/20	Thu 16/7/20	321FS+60 days	323	35 days	0%	
323	Preparation for translocation works	90 days	Fri 17/7/20	Wed 14/10/20	322	325,326	35 days	0%	
324	Collection site C1 (Portion 25)	30 days	Sat 5/9/20	Sun 4/10/20	306,308SS	327FF	75 days	0%	
325	Collection site C2 (Portion 26)	30 days	Thu 15/10/20	Fri 13/11/20	306,323,308SS	327FF	35 days	0%	
326	Collcetion site C3 (Portion 27)	30 days	Thu 15/10/20	Fri 13/11/20	306,323,308SS	327FF	35 days	0%	
327	**Completion of Section 12 of the works**	**0 days**	**Fri 13/11/20**	**Fri 13/11/20**	**324FF,325FF,326FF**		**35 days**	**0%**	

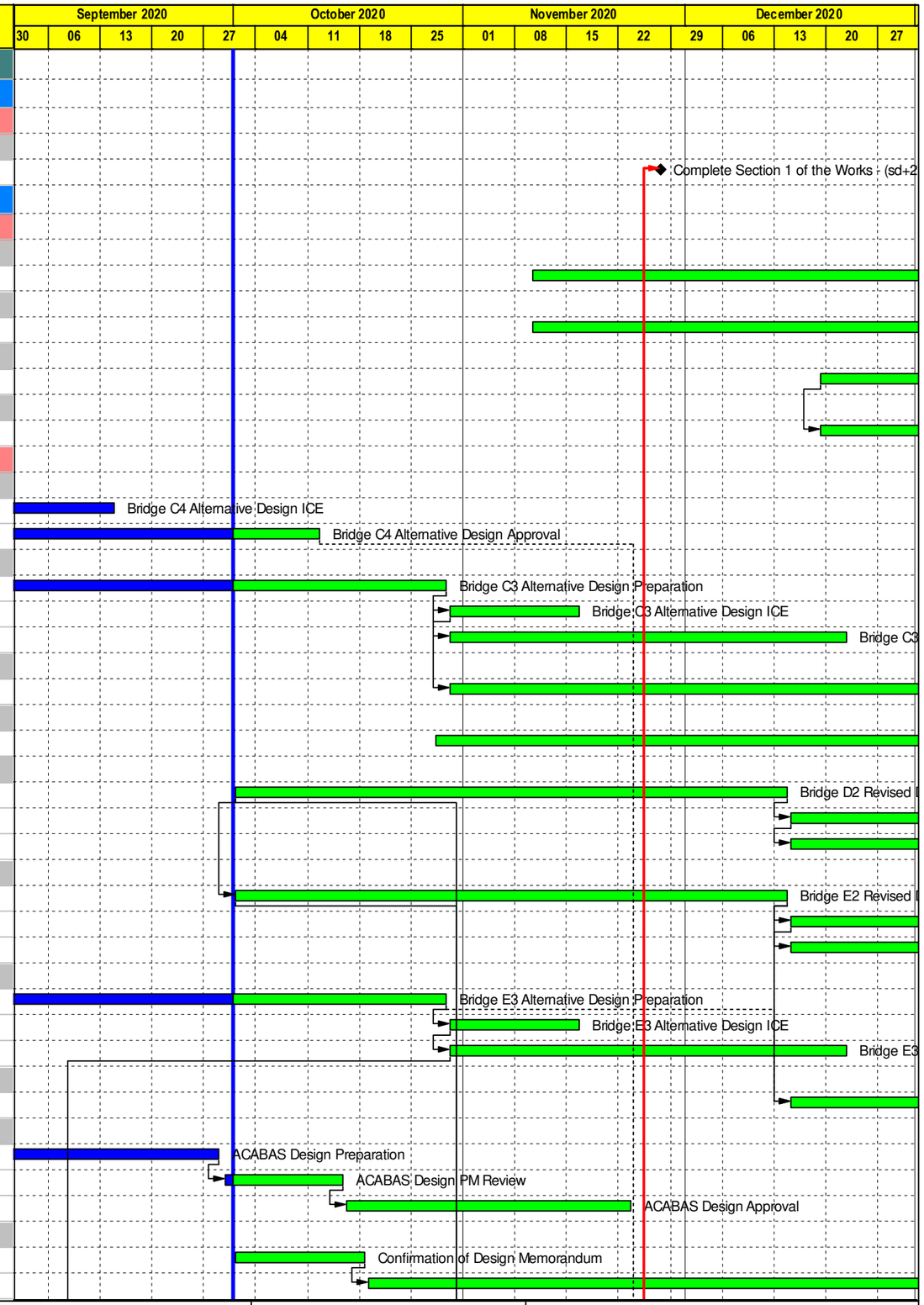


Revised Programme: September 2020

Data Date : 2020-9-3

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

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float
ND/2019/05 - Detail Programme Rev. 2b (CSD+BrRotSys)					
1.0 - Contract Data Part 1					
1.2 - Completion Date					
1.2.2 - Section of the Works					
S1	Complete Section 1 of the Works - (sd+270d)	0		27-Nov-20*	0
2.0 - Preliminary Works					
2.3 - Contractor's Design (PS 1,109)					
2.3.1 - (a) Noise Barrier					
CDa-100	Noise Barrier - Procurement	90	10-Nov-20	07-Feb-21	98
2.3.4 - (d) Lighting System					
CDd-100	Lighting System Design - Procurement	78	10-Nov-20	26-Jan-21	50
2.3.8 - (h) Traffic Control and Surveillance System (TCSS)					
CDh-100	TCSS - Procurement	90	19-Dec-20	18-Mar-21	120
2.3.9 - (i) Traffic Detector System					
CDi-100	Traffic Detector System - Procurement	90	19-Dec-20	18-Mar-21	247
2.4 - Alternative Design and CSD					
2.4.1 - Bridge C4					
AD-032	Bridge C4 Alternative Design ICE	0	02-Jul-20 A	15-Sep-20 A	
AD-033	Bridge C4 Alternative Design Approval	12	02-Jul-20 A	12-Oct-20	135
2.4.2 - Bridge C3					
AD-041	Bridge C3 Alternative Design Preparation	29	06-Jul-20 A	29-Oct-20	111
AD-042	Bridge C3 Alternative Design ICE	18	30-Oct-20	16-Nov-20	111
AD-043	Bridge C3 Alternative Design Approval	54	30-Oct-20	22-Dec-20	111
2.4.3 - Bridge C2					
AD-051	Bridge C2 Alternative Design Preparation	108	30-Oct-20	14-Feb-21	159
2.4.4 - Bridge C1					
AD-061	Bridge C1 Alternative Design Preparation	110	28-Oct-20	14-Feb-21	282
2.4.6 - Bridge D2					
AD-104	Bridge D2 Revised Design Preparation	75	01-Oct-20	14-Dec-20	81
AD-105	Bridge D2 Revised Design ICE	36	15-Dec-20	19-Jan-21	241
AD-106	Bridge D2 Revised Design Approval	54	15-Dec-20	06-Feb-21	241
2.4.8 - Bridge E2					
AD-074	Bridge E2 Revised Design Preparation	75	01-Oct-20	14-Dec-20	81
AD-075	Bridge E2 Revised Design ICE	36	15-Dec-20	19-Jan-21	109
AD-076	Bridge E2 Revised Design Approval	54	15-Dec-20	06-Feb-21	109
2.4.9 - Bridge E3					
AD-081	Bridge E3 Alternative Design Preparation	29	01-Aug-20 A	29-Oct-20	52
AD-082	Bridge E3 Alternative Design ICE	18	30-Oct-20	16-Nov-20	52
AD-083	Bridge E3 Alternative Design Approval	54	30-Oct-20	22-Dec-20	52
2.4.10 - Bridge E4					
AD-121	Bridge E4 Alternative Design Preparation	105	15-Dec-20	29-Mar-21	455
2.4.11 - ACABAS Submission					
AD-130	ACABAS Design Preparation	0	31-Mar-20 A	29-Sep-20 A	
AD-131	ACABAS Design PM Review	15	30-Sep-20 A	15-Oct-20	135
AD-132	ACABAS Design Approval	39	16-Oct-20	23-Nov-20	135
2.4.12 - Noise Barrier					
AD-300	Confirmation of Design Memorandum	18	01-Oct-20	18-Oct-20	23
AD-310	Noise Barrier Alternative Design Preparation	120	19-Oct-20	15-Feb-21	23



CRCC - Paul Y. Joint Venture

中国铁建

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

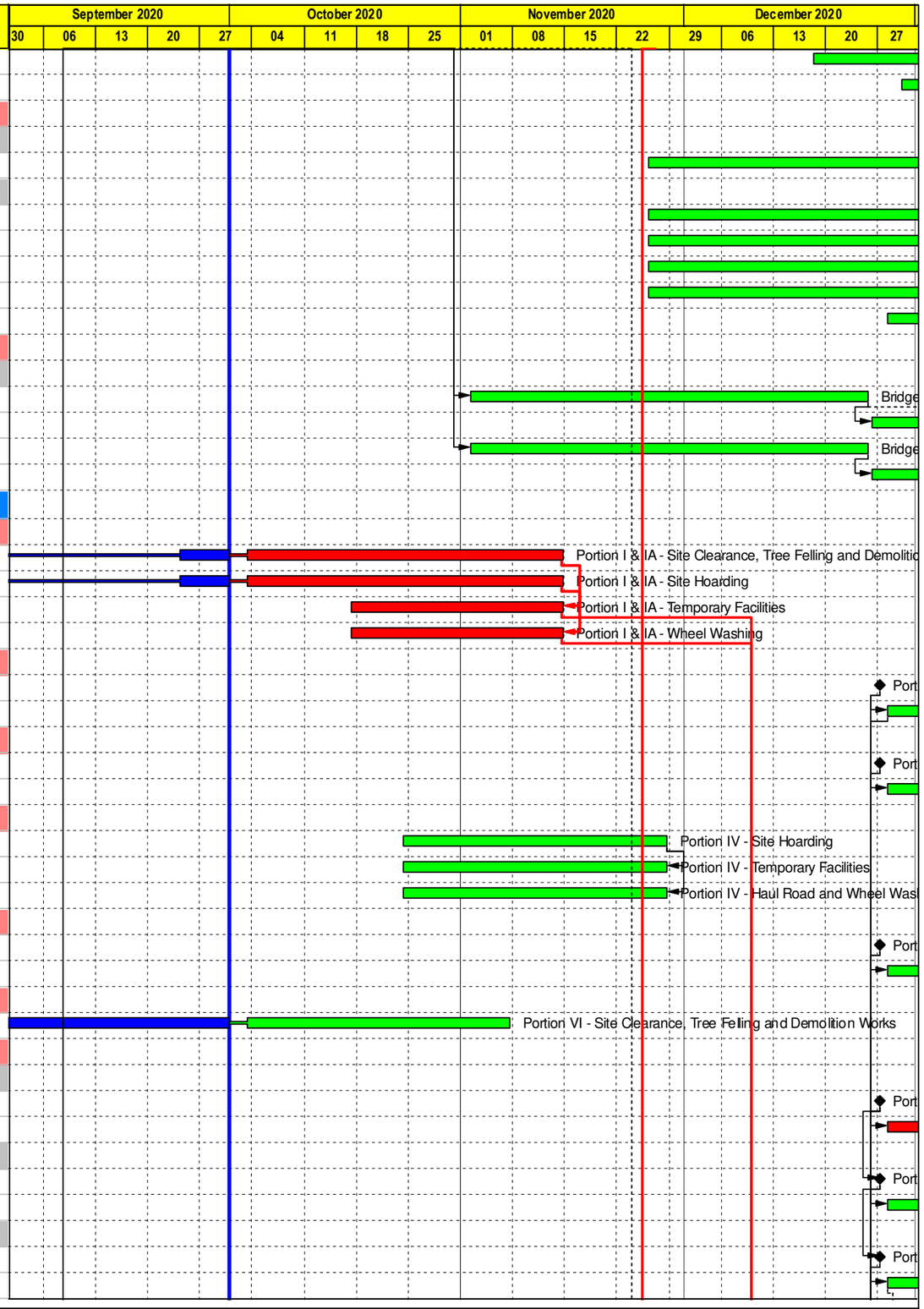
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme - October 2020

Proj ID : DPr2b
Layout : ND201905 3MRP
Date : Page 1 of 8

3MRP			
Date	Revision	Checked	Approved
05-Oct-20	October 2020		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float
AD-320	Noise Barrier Alternative Design ICE	60	18-Dec-20	15-Feb-21	23
AD-330	Noise Barrier Alternative Design Approval	60	30-Dec-20	27-Feb-21	23
2.5 - Segment Erection Design and Calculation					
2.5.1 - Geometry Control					
AD-141	Geometry Control Design Preparation	48	26-Nov-20	12-Jan-21	37
2.5.3 - Temporary Works					
AD-732	Temp Cast-in Items for Segment Lifting Design Preparation	72	26-Nov-20	05-Feb-21	37
AD-762	Temp Prestress Design Preparation	72	26-Nov-20	05-Feb-21	37
AD-792	Balance Cantilever Erection Stabilization Design Preparation	72	26-Nov-20	05-Feb-21	37
AD-822	Clamping Beam and Stitch Formwork Design Preparation	72	26-Nov-20	05-Feb-21	37
AD-852	False Balance Cantilever Temp Prestress Design Preparation	72	28-Dec-20	09-Mar-21	5
2.6 - Bridge Rotation System					
2.6.1 - Design					
BRS-100	Bridge E2-01 Bridge Rotation System Design (Prelim)	54	02-Nov-20	25-Dec-20	81
BRS-102	Bridge E2-01 Bridge Rotation System Design (Full Package)	36	26-Dec-20	30-Jan-21	81
BRS-140	Bridge D2-01 Bridge Rotation System Design (Prelim)	54	02-Nov-20	25-Dec-20	130
BRS-142	Bridge D2-01 Bridge Rotation System Design (Full Package)	36	26-Dec-20	30-Jan-21	130
3.0 - Site Establishment Works					
3.1 - Portion I & IA Site Set-up					
01-011	Portion I & IA - Site Clearance, Tree Felling and Demolition Works	36	06-Jul-20 A	14-Nov-20	-40
01-012	Portion I & IA - Site Hoarding	36	06-Jul-20 A	14-Nov-20	-40
01-013	Portion I & IA - Temporary Facilities	24	17-Oct-20	14-Nov-20	-40
01-014	Portion I & IA - Wheel Washing	24	17-Oct-20	14-Nov-20	-40
3.3 - Portion II Site Set-up					
02-100	Portion II - Access Date (sd+300d)	0	27-Dec-20		26
02-101	Portion II - Site Surveys and Records Including Tree Surveys	12	28-Dec-20	11-Jan-21	21
3.4 - Portion III Site Set-up					
03-100	Portion III - Access Date (sd+300d)	0	27-Dec-20		151
03-101	Portion III - Site Surveys and Records Including Tree Surveys	18	28-Dec-20	18-Jan-21	116
3.5 - Portion IV Site Set-up					
04-104	Portion IV - Site Hoarding	30	24-Oct-20	28-Nov-20	210
04-105	Portion IV - Temporary Facilities	30	24-Oct-20	28-Nov-20	210
04-106	Portion IV - Haul Road and Wheel Washing	30	24-Oct-20	28-Nov-20	210
3.6 - Portion V Site Set-up					
05-100	Portion V - Access Date (sd+300d)	0	27-Dec-20		30
05-101	Portion V - Site Surveys and Records Including Tree Surveys	18	28-Dec-20	18-Jan-21	24
3.7 - Portion VI Site Set-up					
06-102	Portion VI - Site Clearance, Tree Felling and Demolition Works	30	02-Jul-20 A	07-Nov-20	18
3.9 - Portion VIII					
3.9.1 - Bridge C4 Site Set-up					
08-100	Portion VIII Bridge C4 - Access Date (sd+300d)	0	27-Dec-20		1
08-101	Portion VIII Bridge C4 - Site Surveys and Records Including Tree Surveys	7	28-Dec-20	05-Jan-21	0
3.9.2 - Bridge D1/E1 Site Set-up					
08-200	Portion VIII Bridge D1/E1 - Access Date (sd+300d)	0	27-Dec-20		121
08-201	Portion VIII Bridge D1/E1 - Site Surveys and Records Including Tree Surveys	6	28-Dec-20	04-Jan-21	165
3.9.3 - Bridge D2/E2 Site Set-up					
08-300	Portion VIII Bridge D2/E2 - Access Date (sd+300d)	0	27-Dec-20		121
08-301	Portion VIII Bridge D2/E2 - Site Surveys and Records Including Tree Surveys	6	28-Dec-20	04-Jan-21	92



CRCC - Paul Y. Joint Venture

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

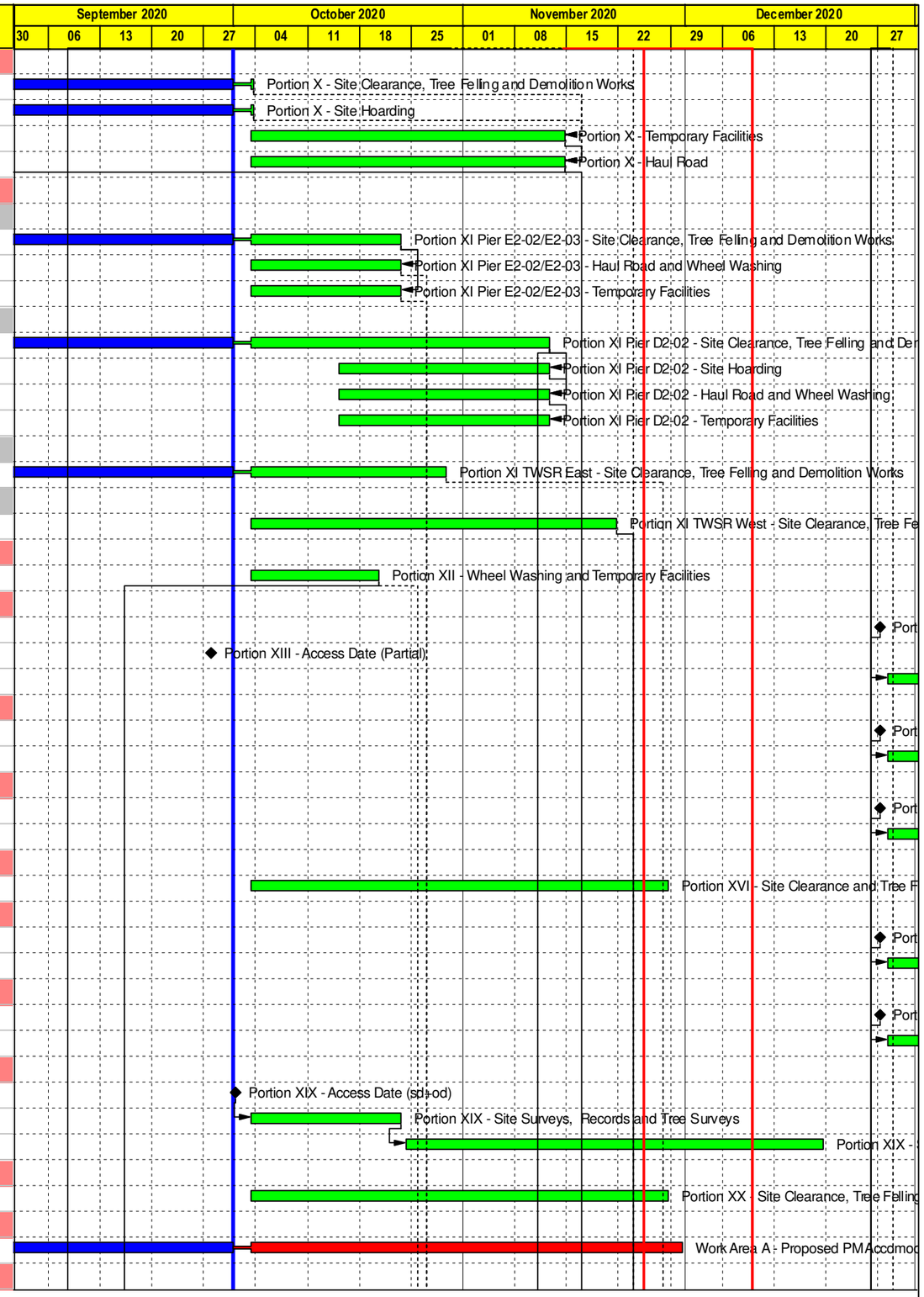
Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)

3-Month Rolling Programme - October 2020

Proj ID : DPr2b
Layout : ND201905 3MRP
Date : Page 2 of 8

3MRP			
Date	Revision	Checked	Approved
05-Oct-20	October 2020		

Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float
3.11 - Portion X Site Set-up					
10-102	Portion X - Site Clearance, Tree Felling and Demolition Works	1	15-Jun-20 A	03-Oct-20	98
10-104	Portion X - Site Hoarding	1	15-Jun-20 A	03-Oct-20	98
10-105	Portion X - Temporary Facilities	36	03-Oct-20	14-Nov-20	63
10-106	Portion X - Haul Road	36	03-Oct-20	14-Nov-20	63
3.12 - Portion XI Site Set-up					
3.12.1 - Pier E2-02/E2-03 Site Set-up					
11-104	Portion XI Pier E2-02/E2-03 - Site Clearance, Tree Felling and Demolition Works	18	08-Jul-20 A	23-Oct-20	3
11-108	Portion XI Pier E2-02/E2-03 - Haul Road and Wheel Washing	18	03-Oct-20	23-Oct-20	3
11-109	Portion XI Pier E2-02/E2-03 - Temporary Facilities	18	03-Oct-20	23-Oct-20	3
3.12.2 - Bridge D2 Site Set-up					
11-203	Portion XI Pier D2-02 - Site Clearance, Tree Felling and Demolition Works	34	01-Jun-20 A	12-Nov-20	46
11-207	Portion XI Pier D2-02 - Site Hoarding	24	15-Oct-20	12-Nov-20	50
11-208	Portion XI Pier D2-02 - Haul Road and Wheel Washing	24	15-Oct-20	12-Nov-20	50
11-209	Portion XI Pier D2-02 - Temporary Facilities	24	15-Oct-20	12-Nov-20	50
3.12.3 - Tai Wo Service Road East Site Set-up					
11-330	Portion XI TWSR East - Site Clearance, Tree Felling and Demolition Works	22	02-Jul-20 A	29-Oct-20	26
3.12.4 - Tai Wo Service Road West Site Set-up					
11-430	Portion XI TWSR West - Site Clearance, Tree Felling and Demolition Works	42	03-Oct-20	21-Nov-20	2
3.13 - Portion XII Site Set-up					
12-130	Portion XII - Wheel Washing and Temporary Facilities	15	03-Oct-20	20-Oct-20	242
3.14 - Portion XIII					
13-100	Portion XIII - Access Date (sd+300d)	0	27-Dec-20		34
13-101	Portion XIII - Access Date (Partial)	0	28-Sep-20 A		
13-110	Portion XIII - Site Surveys, Records and Tree Surveys	12	28-Dec-20	11-Jan-21	28
3.15 - Portion XIV					
14-100	Portion XIV - Access Date (sd+300d)	0	27-Dec-20		18
14-110	Portion XIV - Site Surveys, Records and Tree Surveys	12	28-Dec-20	11-Jan-21	14
3.16 - Portion XV					
15-100	Portion XV - Access Date (sd+300d)	0	27-Dec-20		18
15-110	Portion XV - Site Surveys, Records and Tree Surveys	12	28-Dec-20	11-Jan-21	14
3.17 - Portion XVI					
16-120	Portion XVI - Site Clearance and Tree Felling	48	03-Oct-20	28-Nov-20	872
3.18 - Portion XVII					
17-100	Portion XVII - Access Date (sd+300d)	0	27-Dec-20		18
17-110	Portion XVII - Site Surveys and Records Including Tree Surveys	12	28-Dec-20	11-Jan-21	14
3.19 - Portion XVIII					
18-100	Portion XVIII - Access Date (sd+300d)	0	27-Dec-20		18
18-110	Portion XVIII - Site Surveys and Records Including Tree Surveys	12	28-Dec-20	11-Jan-21	14
3.20 - Portion XIX					
19-100	Portion XIX - Access Date (sd+od)	0	01-Oct-20		46
19-110	Portion XIX - Site Surveys, Records and Tree Surveys	18	03-Oct-20	23-Oct-20	36
19-120	Portion XIX - Site Clearance, Tree Felling and Demolition Works	48	24-Oct-20	19-Dec-20	36
3.21 - Portion XX					
20-120	Portion XX - Site Clearance, Tree Felling and Demolition Works	48	03-Oct-20	28-Nov-20	54
3.22 - Work Area A					
21-120	Work Area A - Proposed PM Accomodation Construction	49	30-Jun-20 A	30-Nov-20*	0
3.23 - Segment Storage Facilities					



CRCC - Paul Y. Joint Venture

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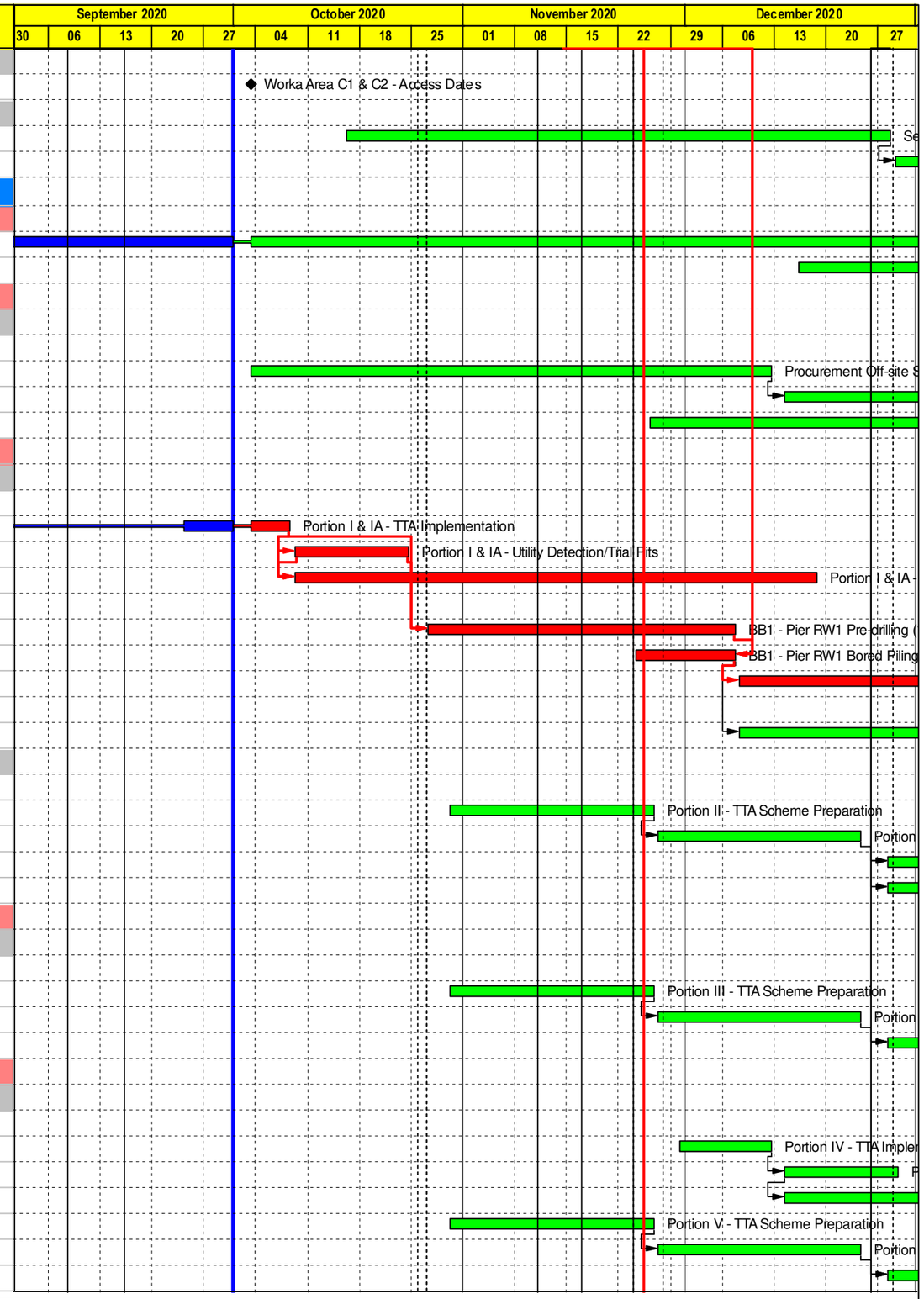
Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float
3.23.1 - Work Area C1 and C2					
WA-1000	Worka Area C1 & C2 - Access Dates	0	03-Oct-20		9
3.23.2 - On-site Segment Storage					
SS-1005	Segment On-site Storage - Procurement	60	16-Oct-20	28-Dec-20	9
SS-1008	Segment On-site Storage - Temp Works Design	60	29-Dec-20	16-Mar-21	9
4.0 - Bridge Construction					
4.1 - Launching Gantry					
LG-101	LG Procurement	86	14-Jul-20 A	15-Jan-21	2
LG-102	LG Design	48	16-Dec-20	19-Feb-21	2
4.3 - Segment Fabrication					
4.3.2 - Off-Site Fabrication					
4.3.2.1 - Preparation Works					
OSF-125	Procurement Off-site Segment Fabrication	60	03-Oct-20	12-Dec-20	2
OSF-130	Precast Segment Mould Design	36	14-Dec-20	27-Jan-21	2
OSF-135	Method Statement for Off-site Segment Fab/Del - Preparation	78	26-Nov-20	06-Mar-21	11
4.4 - Bridge B1					
4.4.1 - Substructure Portion I and 1A					
4.4.1.1 - Preparation Works					
B1-033	Portion I & IA - TTA Implementation	5	04-Jul-20 A	08-Oct-20	-59
B1-041	Portion I & IA - Utility Detection/Trial Pits	14	09-Oct-20	24-Oct-20	-59
B1-042	Portion I & IA - Utility Diversion/Protection	60	09-Oct-20	18-Dec-20	-27
4.4.1.2 - Piling					
B1-1110	BB1 - Pier RW1 Pre-drilling (18 nos)	36	27-Oct-20	07-Dec-20	-59
B1-1120	BB1 - Pier RW1 Bored Piling Set-up and Founding Level Approval	12	24-Nov-20	07-Dec-20	-59
B1-1131	BB1 - Pier RW1 Bored Piling (Piles 07/08/09/10)	48	08-Dec-20	04-Feb-21	-59
4.4.1.3 - Pier					
B1-1141	BB1 - Pier RW1/C1 Method Statement Preparation	60	08-Dec-20	25-Feb-21	126
4.4.3 - Substructure Portion II					
4.4.3.1 - Preparation Works					
B1-111	Portion II - TTA Scheme Preparation	24	30-Oct-20	26-Nov-20	65
B1-112	Portion II - TTA Approval / Endorsement	24	27-Nov-20	24-Dec-20	65
B1-113	Portion II - TTA Implementation	12	28-Dec-20	11-Jan-21	65
B1-121	Portion II - Utility Detection/Trial Pits	12	28-Dec-20	11-Jan-21	21
4.6 - Bridge C1					
4.6.1 - Foundation					
4.6.2 - Preparation Works					
C1-111	Portion III - TTA Scheme Preparation	24	30-Oct-20	26-Nov-20	218
C1-112	Portion III - TTA Approval / Endorsement	24	27-Nov-20	24-Dec-20	218
C1-113	Portion III - TTA Implementation	12	28-Dec-20	11-Jan-21	218
4.7 - Bridge C2					
4.7.1 - Foundation					
4.7.1.1 - Preparation Works					
C2-113	Portion IV - TTA Implementation	12	30-Nov-20	12-Dec-20	138
C2-121	Portion IV - Utility Detection/Trial Pits	12	14-Dec-20	29-Dec-20	138
C2-122	Portion IV - Utility Diversion/Protection	72	14-Dec-20	17-Mar-21	138
C2-211	Portion V - TTA Scheme Preparation	24	30-Oct-20	26-Nov-20	48
C2-212	Portion V - TTA Approval / Endorsement	24	27-Nov-20	24-Dec-20	48
C2-213	Portion V - TTA Implementation	12	28-Dec-20	11-Jan-21	48



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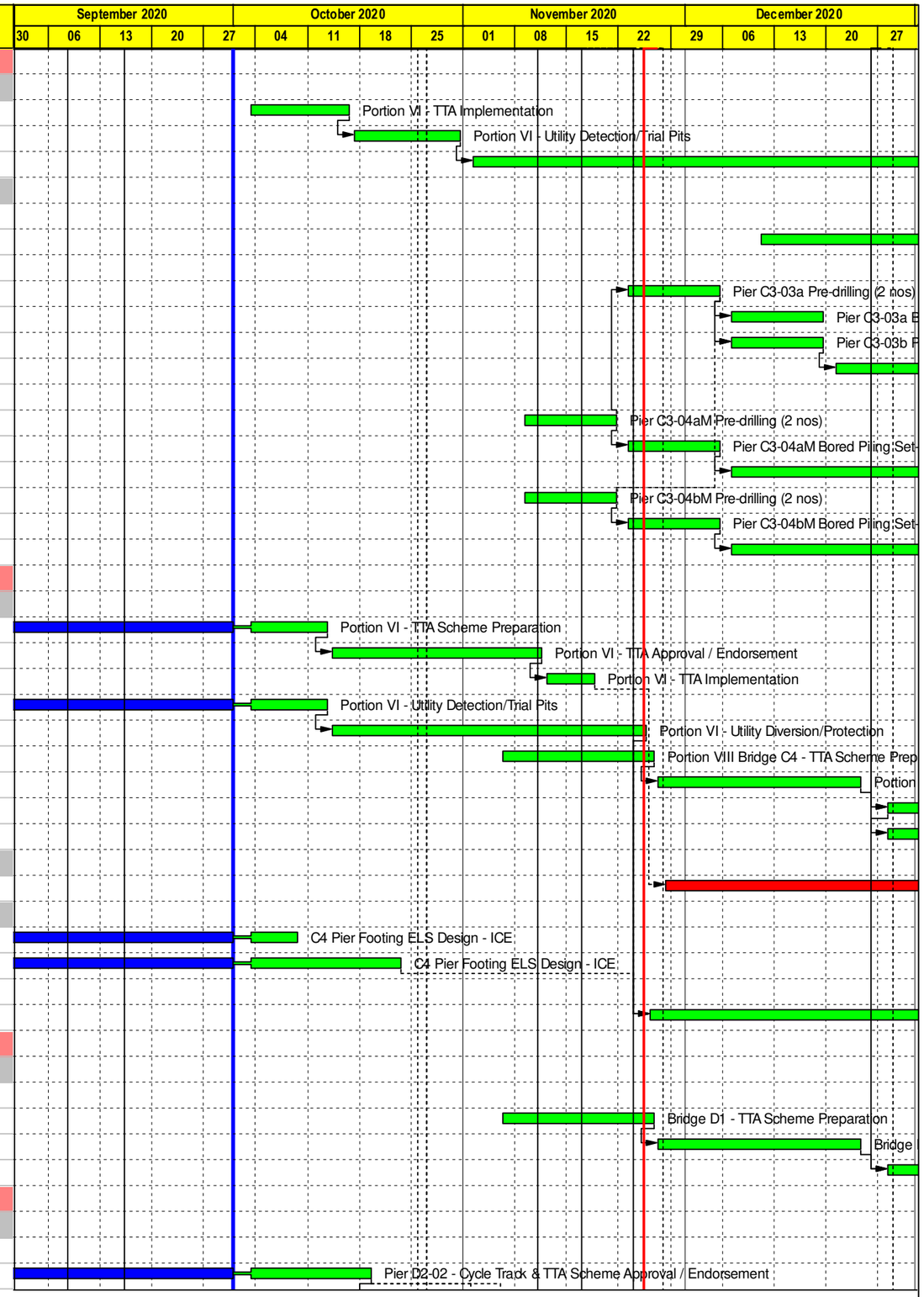
Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float
4.8 - Bridge C3					
4.8.1 - Preparation Works					
C3-1203	Portion VI - TTA Implementation	12	03-Oct-20	16-Oct-20	38
C3-1205	Portion VI - Utility Detection/Trial Pits	12	17-Oct-20	31-Oct-20	38
C3-1206	Portion VI - Utility Diversion/Protection	58	02-Nov-20	11-Jan-21	38
4.8.2 - Foundation					
4.8.2.2 - C3-02					
C3-1050	Pier C3-02 Pre-drilling C3-02 (6 nos)	24	11-Dec-20	11-Jan-21	38
4.8.2.3 - C3-03					
C3-1090	Pier C3-03a Pre-drilling (2 nos)	12	23-Nov-20	05-Dec-20	36
C3-1100	Pier C3-03a Bored Piling Set-up and Founding Level Approval	12	07-Dec-20	19-Dec-20	36
C3-1130	Pier C3-03b Pre-drilling (2 nos)	12	07-Dec-20	19-Dec-20	52
C3-1140	Pier C3-03b Bored Piling Set-up and Founding Level Approval	12	21-Dec-20	06-Jan-21	52
4.8.2.4 - C3-04M					
C3-7260	Pier C3-04aM Pre-drilling (2 nos)	12	09-Nov-20	21-Nov-20	18
C3-7270	Pier C3-04aM Bored Piling Set-up and Founding Level Approval	12	23-Nov-20	05-Dec-20	18
C3-7280	Pier C3-04aM Bored Piling (2 nos)	30	07-Dec-20	13-Jan-21	18
C3-7300	Pier C3-04bM Pre-drilling (2 nos)	12	09-Nov-20	21-Nov-20	46
C3-7310	Pier C3-04bM Bored Piling Set-up and Founding Level Approval	12	23-Nov-20	05-Dec-20	46
C3-7320	Pier C3-04bM Bored Piling (2 nos)	30	07-Dec-20	13-Jan-21	46
4.9 - Bridge C4					
4.9.1 - Preparation Works					
C4-111	Portion VI - TTA Scheme Preparation	9	02-Jul-20 A	13-Oct-20	8
C4-112	Portion VI - TTA Approval / Endorsement	24	14-Oct-20	11-Nov-20	8
C4-113	Portion VI - TTA Implementation	6	12-Nov-20	18-Nov-20	8
C4-121	Portion VI - Utility Detection/Trial Pits	9	02-Jul-20 A	13-Oct-20	78
C4-122	Portion VI - Utility Diversion/Protection	36	14-Oct-20	25-Nov-20	78
C4-211	Portion VIII Bridge C4 - TTA Scheme Preparation	18	06-Nov-20	26-Nov-20	1
C4-212	Portion VIII Bridge C4 - TTA Approval / Endorsement	24	27-Nov-20	24-Dec-20	1
C4-213	Portion VIII Bridge C4 - TTA Implementation	12	28-Dec-20	11-Jan-21	1
C4-221	Portion VIII Bridge C4 - Utility Detection/Trial Pits	12	28-Dec-20	11-Jan-21	1
4.9.2 - Foundation					
C4-1030	Pier C4-03 Predrilling (6 nos - 1 rig)	36	28-Nov-20	12-Jan-21	0
4.9.3 - Pier					
C4-1248	C4 Pier Footing ELS Design - ICE	6	26-Aug-20 A	09-Oct-20	105
C4-5620	C4 Pier Footing ELS Design - ICE	18	26-Aug-20 A	23-Oct-20	105
4.9.3.1 - C4-01					
C4-1250	Pier C4-01b ELS	42	26-Nov-20	16-Jan-21	78
4.10 - Bridge D1					
4.10.1 - Foundation					
4.10.1.1 - Preparation Works					
D1-211	Bridge D1 - TTA Scheme Preparation	18	06-Nov-20	26-Nov-20	189
D1-212	Bridge D1 - TTA Approval / Endorsement	24	27-Nov-20	24-Dec-20	189
D1-213	Bridge D1 - TTA Implementation	12	28-Dec-20	11-Jan-21	189
4.11 - Bridge D2					
4.11.1 - Foundation					
4.11.1.1 - Preparation Works					
D2-212	Pier D2-02 - Cycle Track & TTA Scheme Approval / Endorsement	14	07-Aug-20 A	19-Oct-20	1415



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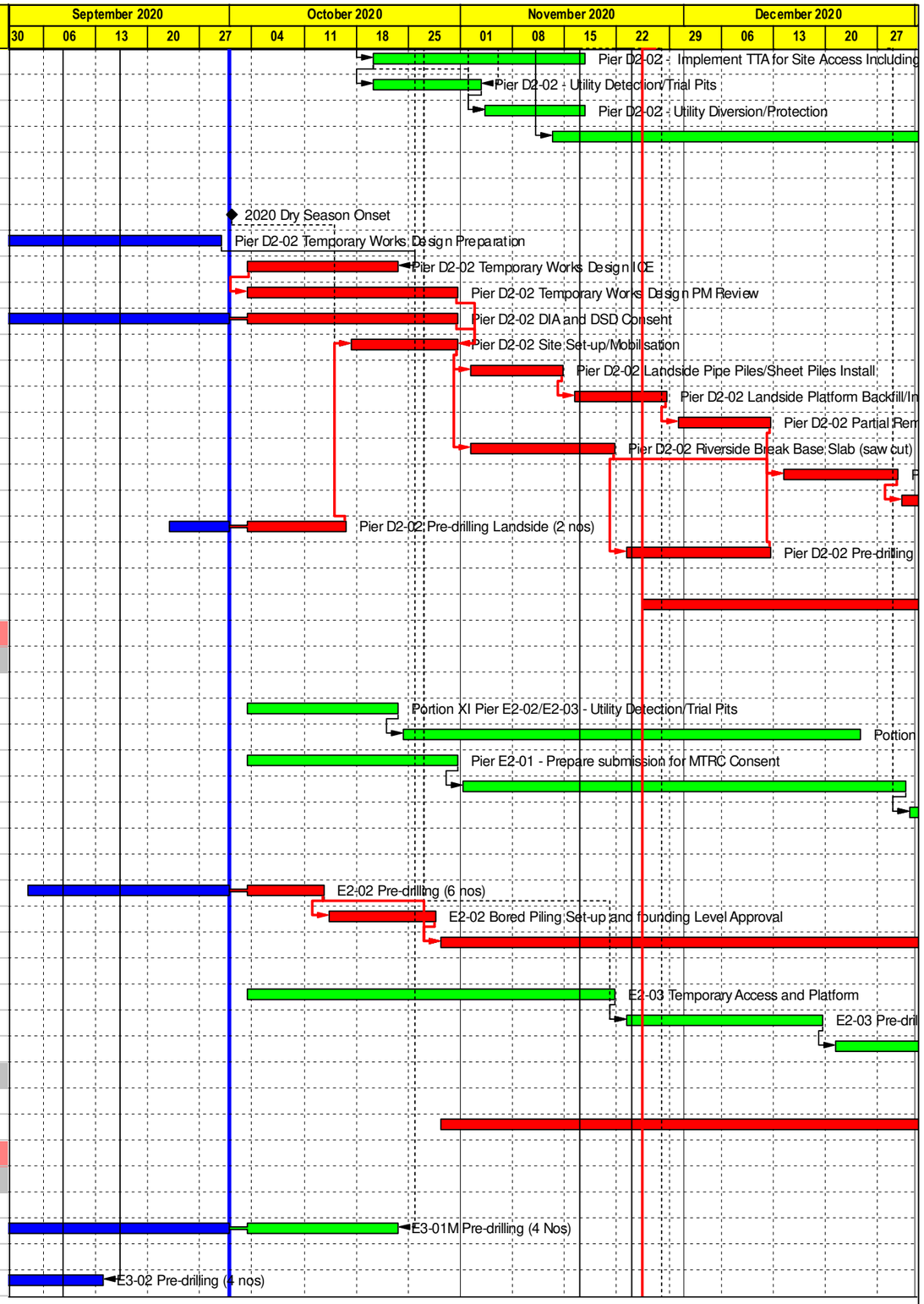
Activity ID	Activity Name	Rem Dur	Early Start	Early Finish	Total Float
D2-213	Pier D2-02 - Implement TTA for Site Access Including Haul Road	24	20-Oct-20	17-Nov-20	1415
D2-221	Pier D2-02 - Utility Detection/Trial Pits	12	20-Oct-20	03-Nov-20	1415
D2-222	Pier D2-02 - Utility Diversion/Protection	12	04-Nov-20	17-Nov-20	1415
D2-431	Abutment D2-04M - TTA Scheme Preparation for Foundation Work	48	13-Nov-20	11-Jan-21	394
4.11.1.3 - Portion XI					
4.11.1.3.1 - Pier D2-02					
D2-1150	2020 Dry Season Onset	0	01-Oct-20*		16
D2-1154	Pier D2-02 Temporary Works Design Preparation	0	15-Jul-20 A	30-Sep-20 A	
D2-1155	Pier D2-02 Temporary Works Design ICE	18	03-Oct-20	23-Oct-20	0
D2-1157	Pier D2-02 Temporary Works Design PM Review	24	03-Oct-20	31-Oct-20	0
D2-1158	Pier D2-02 DIA and DSD Consent	24	15-Jul-20 A	31-Oct-20	0
D2-1160	Pier D2-02 Site Set-up/Mobilisation	12	17-Oct-20	31-Oct-20	0
D2-1161	Pier D2-02 Landside Pipe Piles/Sheet Piles Install	12	02-Nov-20	14-Nov-20	0
D2-1162	Pier D2-02 Landside Platform Backfill/Install Support	12	16-Nov-20	28-Nov-20	0
D2-1163	Pier D2-02 Partial Removal of Ret Wall (saw cut)	12	30-Nov-20	12-Dec-20	0
D2-1164	Pier D2-02 Riverside Break Base Slab (saw cut)	18	02-Nov-20	21-Nov-20	0
D2-1165	Pier D2-02 Riverside Pipe Piles/Sheet Piles Install	12	14-Dec-20	29-Dec-20	0
D2-1166	Pier D2-02 Riverside Platform Backfill/Install Support	12	30-Dec-20	13-Jan-21	0
D2-1168	Pier D2-02 Pre-drilling Landside (2 nos)	12	23-Sep-20 A	16-Oct-20	0
D2-1170	Pier D2-02 Pre-drilling Riverside (2 nos)	18	23-Nov-20	12-Dec-20	0
4.11.1..3.2 - Pier D2-03					
D2-1228	Pier D2-03 WSD Liaison on WM clash with Pier D2-03	72	25-Nov-20	26-Feb-21	0
4.13 - Bridge E2					
4.13.1 - Foundation					
4.13.1.1 - Preparation Works					
E2-121	Portion XI Pier E2-02/E2-03 - Utility Detection/Trial Pits	18	03-Oct-20	23-Oct-20	129
E2-122	Portion XI Pier E2-02/E2-03 - Utility Diversion/Protection	52	24-Oct-20	24-Dec-20	129
E2-321	Pier E2-01 - Prepare submission for MTRC Consent	24	03-Oct-20	31-Oct-20	91
E2-322	Pier E2-01 - MTRC Consent to Commence Work	60	01-Nov-20	30-Dec-20	117
E2-324	Pier E2-01 - Utility Detection/Trial Pits	12	31-Dec-20	14-Jan-21	89
4.13.1.4 - Portion XI					
4.13.1.4.1 - Pier E2-02					
E2-1164	E2-02 Pre-drilling (6 nos)	9	04-Sep-20 A	13-Oct-20	0
E2-1165	E2-02 Bored Piling Set-up and founding Level Approval	12	14-Oct-20	28-Oct-20	0
E2-1171	E2-02 Bored Piling (6 nos)	72	29-Oct-20	23-Jan-21	0
4.13.1.4.2 - Pier E2-03					
E2-1201	E2-03 Temporary Access and Platform	42	03-Oct-20	21-Nov-20	121
E2-1211	E2-03 Pre-drilling (6 nos)	24	23-Nov-20	19-Dec-20	121
E2-1220	E2-03 Bored Piling Set-up and Founding Level Approval	12	21-Dec-20	06-Jan-21	121
4.13.3 - Bridge Deck					
4.13.3.4 - T-span E2-02					
E2-2270	Procurement of Travelling Formwork	60	29-Oct-20	09-Jan-21	0
4.14 - Bridge E3					
4.14.1 - Foundation					
4.14.1.1 - Pier E3-01M (Portion XI)					
E3-1010	E3-01M Pre-drilling (4 Nos)	18	24-Aug-20 A	23-Oct-20	239
4.14.1.2 - Pier E3-02 (Portion XII)					
E3-1250	E3-02 Pre-drilling (4 nos)	0	13-Aug-20 A	14-Sep-20 A	



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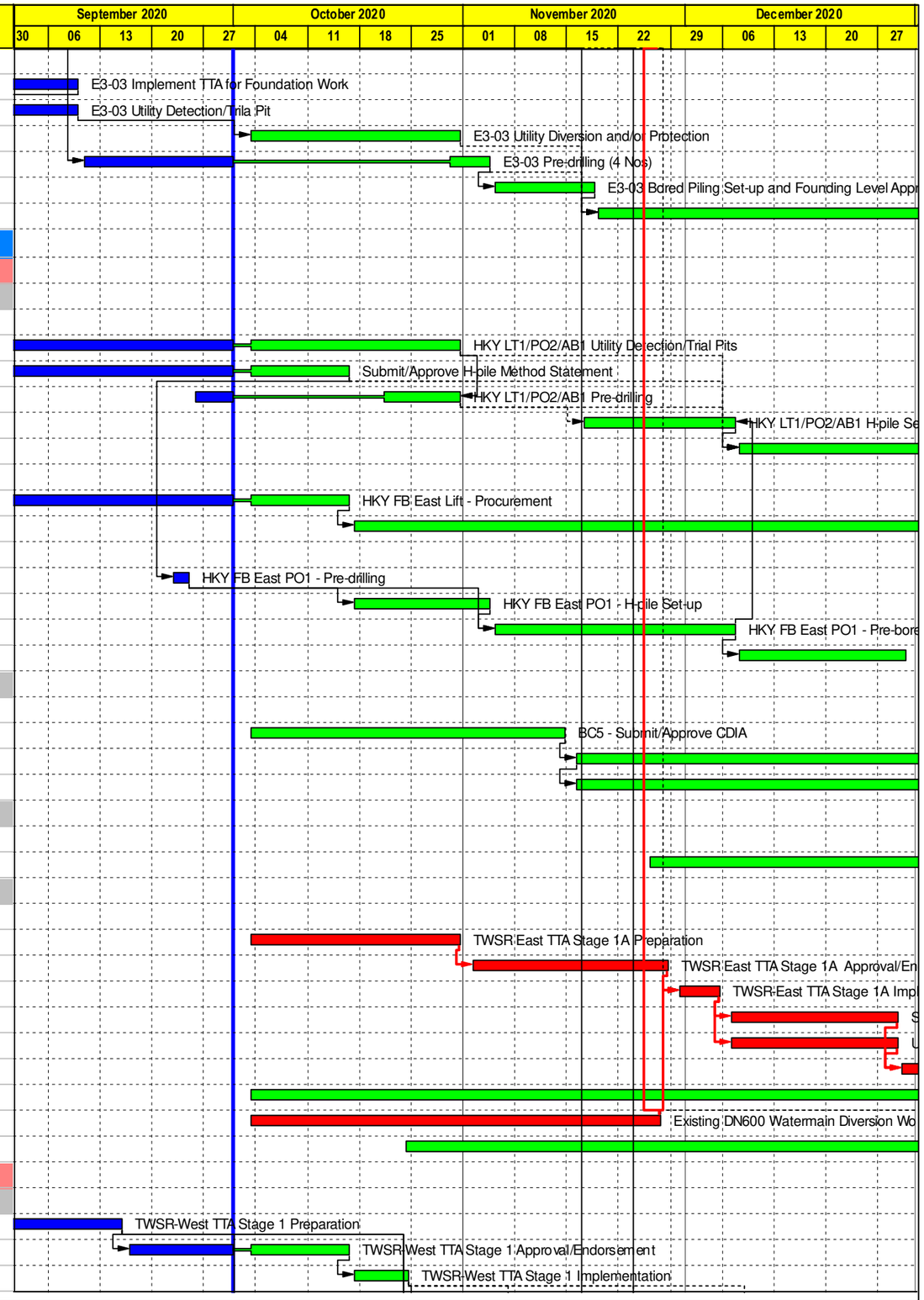
4.14.1.3 - Pier E3-03 (Portion XII)					
E3-1050	E3-03 Implement TTA for Foundation Work	0	01-Sep-20 A	10-Sep-20 A	
E3-1055	E3-03 Utility Detection/Trila Pit	0	01-Sep-20 A	10-Sep-20 A	
E3-1058	E3-03 Utility Diversion and/or Protection	24	03-Oct-20	31-Oct-20	59
E3-1060	E3-03 Pre-drilling (4 Nos)	5	11-Sep-20 A	04-Nov-20	44
E3-1070	E3-03 Bored Piling Set-up and Founding Level Approval	12	05-Nov-20	18-Nov-20	44
E3-1080	E3-03 Bored Piling (4 nos)	60	19-Nov-20	30-Jan-21	44
5.0 - Fanling Highway Associated Works					
5.3 - Tai Wo Service Road East (TWSR-East)					
5.3.1 - TWSR-East HKY FB Extension					
5.3.1.1 - Lift and Stairs Foundation					
FBE-1025	HKY LT1/PO2/AB1 Utility Detection/Trial Pits	24	17-Aug-20 A	31-Oct-20	17
FBE-1030	Submit/Approve H-pile Method Statement	12	03-Aug-20 A	16-Oct-20	4
FBE-1035	HKY LT1/PO2/AB1 Pre-drilling	9	26-Sep-20 A	31-Oct-20	17
FBE-1040	HKY LT1/PO2/AB1 H-pile Set-up	18	17-Nov-20	07-Dec-20	4
FBE-1050	HKY LT1/PO2/AB1 H-pile Installation (14 nos)	48	08-Dec-20	04-Feb-21	4
5.3.1.3 - Lift Installation					
FBE-1270	HKY FB East Lift - Procurement	12	28-Jul-20 A	16-Oct-20	4
FBE-1275	HKY FB East Lift - Manufacturing	236	17-Oct-20	09-Aug-21	4
5.3.1.4 - HKY FB Extension Deck					
FBE-1310	HKY FB East PO1 - Pre-drilling	0	23-Sep-20 A	25-Sep-20 A	
FBE-1315	HKY FB East PO1 - H-pile Set-up	15	17-Oct-20	04-Nov-20	4
FBE-1320	HKY FB East PO1 - Pre-bored H-pile (8 nos)	28	05-Nov-20	07-Dec-20	4
FBE-1325	HKY FB East PO1 - Pre-bored H-pile Testing	18	08-Dec-20	30-Dec-20	201
5.3.2 - TWSR East (1) Adjacent to Cycle Track					
5.3.2.2 - Box Culvert BC5					
TSE-2005	BC5 - Submit/Approve CDIA	36	03-Oct-20	14-Nov-20	43
TSE-2010	BC5 - Drainage Temporary Diversion	42	16-Nov-20	06-Jan-21	43
TSE-2015	BC5 - ELS	42	16-Nov-20	06-Jan-21	43
5.3.3 - TWSR-East Bus-Bus Interchange					
5.3.3.1 - Bus-Bus Interchange Shelter					
BBI-1202	BBI Covered Walkway - Procurement	78	26-Nov-20	06-Mar-21	91
5.3.5 - TWSR-East Noise Barrier					
5.3.5.1 - Noise Barrier NB71, NB72 and NB73					
TSE-1010	TWSR East TTA Stage 1A Preparation	24	03-Oct-20	31-Oct-20	0
TSE-1015	TWSR East TTA Stage 1A Approval/Endorsement	24	02-Nov-20	28-Nov-20	0
TSE-1020	TWSR-East TTA Stage 1A Implementation	6	30-Nov-20	05-Dec-20	0
TSE-1025	Site Clearance and Tree Felling	18	07-Dec-20	29-Dec-20	0
TSE-1030	Utility Diversion and/or Protection	18	07-Dec-20	29-Dec-20	0
TSE-1035	Dismantle and Store Noise Panels and Steel Structures	24	30-Dec-20	27-Jan-21	0
TSE-1045	Existing DN1200 Watermain Diversion Work	78	03-Oct-20	06-Jan-21	3
TSE-1055	Existing DN600 Watermain Diversion Work	47	03-Oct-20	27-Nov-20	0
TSE-1057	NB71+72+73 - Application for Lighting Removal	60	24-Oct-20	06-Jan-21	39
5.4 - Tai Wo Service Road West (TWSR-West)					
5.4.1 - Preparation Works for Pier D2-03					
TSW-1005	TWSR-West TTA Stage 1 Preparation	0	26-May-20 A	16-Sep-20 A	
TSW-1010	TWSR-West TTA Stage 1 Approval/Endorsement	12	17-Sep-20 A	16-Oct-20	13
TSW-1015	TWSR-West TTA Stage 1 Implementation	7	17-Oct-20	24-Oct-20	13



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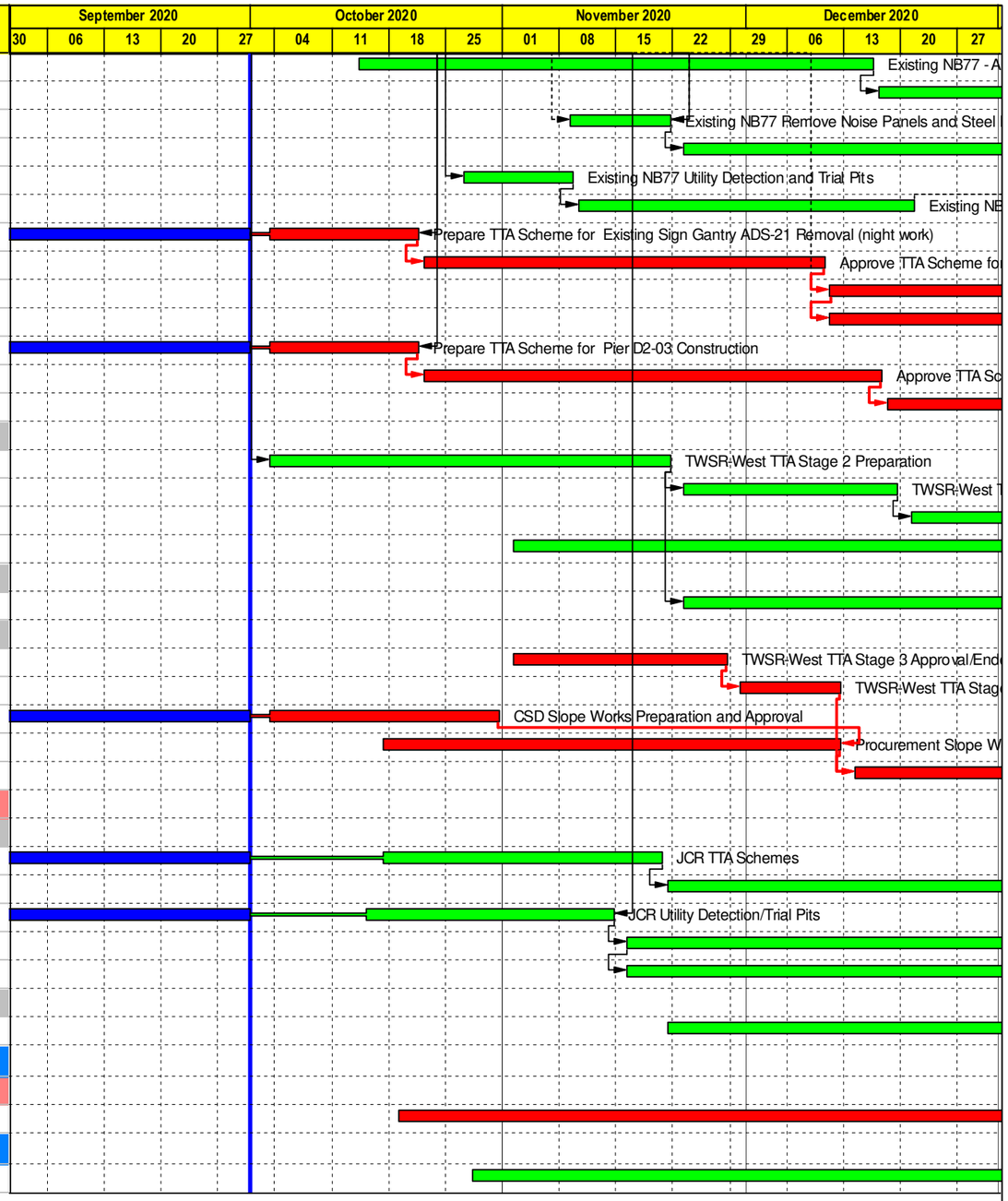
TSW-1016	Existing NB77 - Application for Lighting Removal	54	14-Oct-20	16-Dec-20	2
TSW-1018	Existing NB77 - Lighting Removal/Install Temp Lighting	15	17-Dec-20	06-Jan-21	2
TSW-1020	Existing NB77 Remove Noise Panels and Steel Frames	12	09-Nov-20	21-Nov-20	2
TSW-1025	Existing NB77 Demolish Footing	36	23-Nov-20	06-Jan-21	2
TSW-1030	Existing NB77 Utility Detection and Trial Pits	12	27-Oct-20	09-Nov-20	13
TSW-1035	Existing NB77 Utility Diversion and/or Protection	36	10-Nov-20	21-Dec-20	13
TSW-1040	Prepare TTA Scheme for Existing Sign Gantry ADS-21 Removal (night work)	16	30-Jun-20 A	21-Oct-20	0
TSW-1045	Approve TTA Scheme for Existing Sign Gantry ADS-21 Removal (night work)	42	22-Oct-20	10-Dec-20	0
TSW-1050	Implement TTA for Existing Sign Gantry ADS-21 Removal (night work)	18	11-Dec-20	04-Jan-21	0
TSW-1055	Demolish Existing Sign Gantry ADS-21	24	11-Dec-20	11-Jan-21	0
TSW-1065	Prepare TTA Scheme for Pier D2-03 Construction	16	30-Jun-20 A	21-Oct-20	0
TSW-1070	Approve TTA Scheme for Pier D2-03 Construction	48	22-Oct-20	17-Dec-20	0
TSW-1075	Temporary Road/Traffic Signs for the TTA for Pier D2-03 Construction	28	18-Dec-20	22-Jan-21	0
5.4.2 - TWSR-West Ch000 to Ch200					
TSW-4001	TWSR-West TTA Stage 2 Preparation	42	03-Oct-20	21-Nov-20	2
TSW-4002	TWSR-West TTA Stage 2 Approval/Endorsement	24	23-Nov-20	19-Dec-20	2
TSW-4003	TWSR-West TTA Stage 2A Implementation	12	21-Dec-20	06-Jan-21	2
TSW-4007	TWSR-West Ch0 to Ch200 - Application for Lighting Removal	54	02-Nov-20	06-Jan-21	20
5.4.3 - TWSR-West Ch200 to Ch450					
TSW-4405	TWSR-West TTA Stage 3 Approval/Endorsement	36	23-Nov-20	06-Jan-21	1375
5.4.5 - TWSR-West Ch600 to Ch800					
TSW-1105	TWSR-West TTA Stage 3 Approval/Endorsement	24	02-Nov-20	28-Nov-20	0
TSW-1110	TWSR-West TTA Stage 3A Implementation	12	30-Nov-20	12-Dec-20	0
TSW-1115	CSD Slope Works Preparation and Approval	24	01-Sep-20 A	31-Oct-20	0
TSW-1118	Procurement Slope Works	48	17-Oct-20	12-Dec-20	0
TSW-1120	FS04 Cut Slope - Site Establishment	18	14-Dec-20	06-Jan-21	0
5.5 - Jockey Club Road					
5.5.1 - Preparation Works					
10-120	JCR TTA Schemes	29	19-Jun-20 A	20-Nov-20	63
10-121	JCR TTA Stages Approval/endorsement	48	21-Nov-20	19-Jan-21	63
10-125	JCR Utility Detection/Trial Pits	26	19-Jun-20 A	14-Nov-20	528
10-126	JCR Utility Diversion	48	16-Nov-20	13-Jan-21	528
10-127	JCR Towngas Diversion	72	16-Nov-20	10-Feb-21	528
5.5.2 - Junction to Tong Hang Village (THV)					
JCR-2101	JCR Junction to THV S/B - Application for Lighting Removal	60	21-Nov-20	02-Feb-21	63
6.0 - TCSS Works					
6.1 - Key Date 1					
TCS-100	Tolo/Fanling Highway Section 3 - Submit /Approve Interface Management Plan	120	19-Oct-20	18-Mar-21	0
7.0 - Miscellaneous Works					
MIS-100	Preservation and Protection of Trees	360	28-Oct-20	17-Jan-22	642



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 - October 2020

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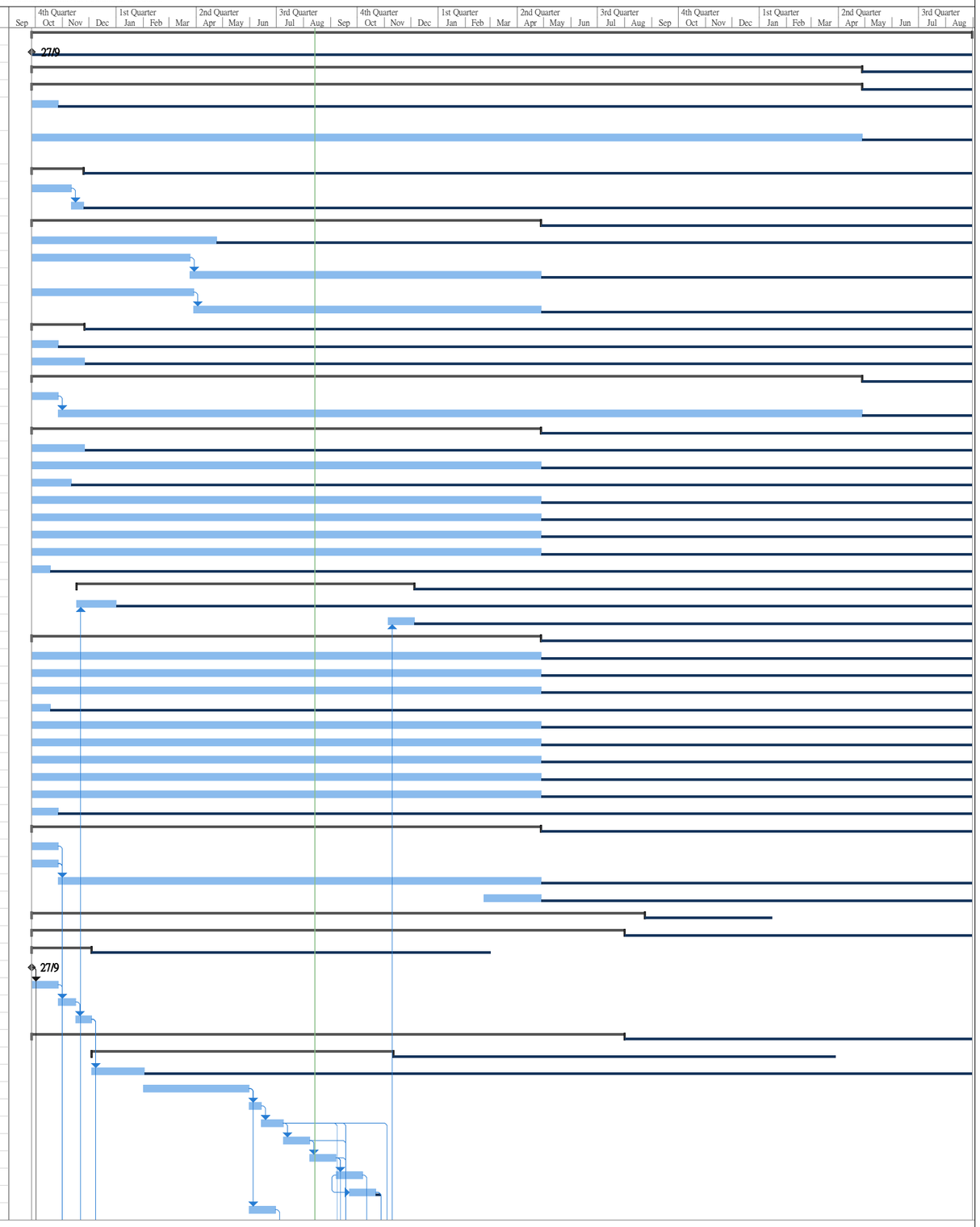
3MRP			
Date	Revision	Checked	Approved
05-Oct-20	October 2020		

Contract No. ND/2019/06
Development of Kwu Tung North and Fanling North New Development Areas, Phase 1:
Reprovisioning of North District Temporary Wholesale Market for Aricultural Products

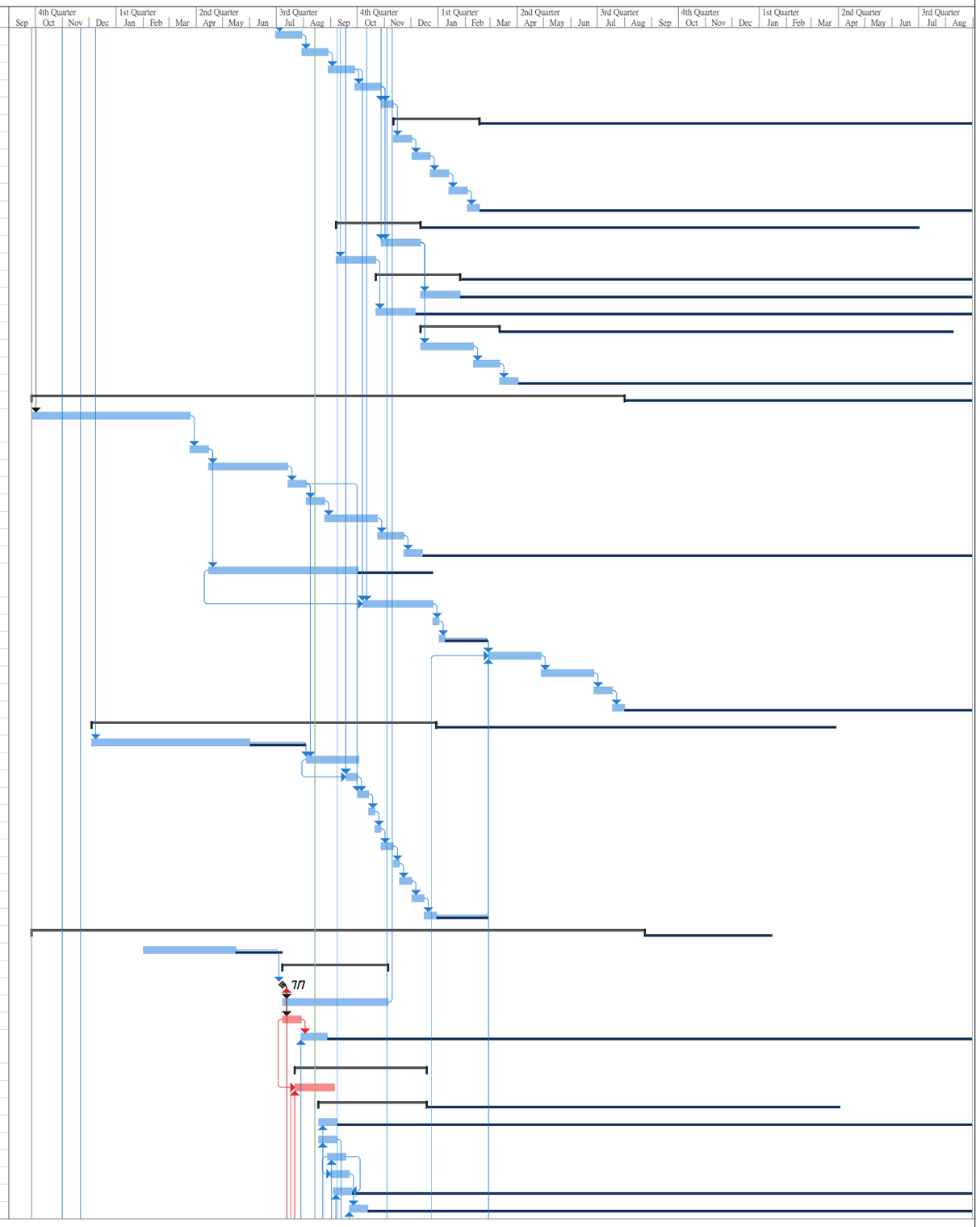
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
1		**ND/2019/06 Contract Period**	**1069 days**	**Fri 27/9/19**	**Tue 30/8/22**	**0 days**	
2		Starting Date	0 days	Fri 27/9/19	Fri 27/9/19	1069 days	
3		**Preliminaries**	**944 days**	**Fri 27/9/19**	**Wed 27/4/22**	**125 days**	
4		**Project Manager and Supervisor's site accommodation**	**944 days**	**Fri 27/9/19**	**Wed 27/4/22**	**125 days**	
5		Refurnishing the existing site office and provision of furniture and equipment	30 days	Fri 27/9/19	Sat 26/10/19	1039 days	
6		Provision of regular service to the accommodation (up to completion of DLP)	944 days	Fri 27/9/19	Wed 27/4/22	125 days	
7		**Contractor's site accommodation**	**59 days**	**Fri 27/9/19**	**Sun 24/11/19**	**1010 days**	
8		Searching and rental arrangement	45 days	Fri 27/9/19	Sun 10/11/19	0 days	
9		Set up of site office	14 days	Mon 11/11/19	Sun 24/11/19	1010 days	8
10		**Maintenance of land traffic flow**	**579 days**	**Fri 27/9/19**	**Tue 27/4/21**	**490 days**	
11		Arrangement of TMLG in different stages	210 days	Fri 27/9/19	Thu 23/4/20	859 days	
12		Application of TTA/ XP	180 days	Fri 27/9/19	Tue 24/3/20	0 days	
13		Implementation of TTA/ XP in different stages	399 days	Wed 25/3/20	Tue 27/4/21	490 days	12
14		Maintenance of traffic flow in interim construction stage	184 days	Fri 27/9/19	Sat 28/3/20	0 days	
15		Maintenance of traffic flow in final construction stage	395 days	Sun 29/3/20	Tue 27/4/21	490 days	14
16		**Provision of insurances**	**60 days**	**Fri 27/9/19**	**Mon 25/11/19**	**1009 days**	
17		Third party insurance	30 days	Fri 27/9/19	Sat 26/10/19	1039 days	
18		PII for the works	60 days	Fri 27/9/19	Mon 25/11/19	1009 days	
19		**Land transport for the use of the Project Manager and Superviso**	**944 days**	**Fri 27/9/19**	**Wed 27/4/22**	**125 days**	
20		Provision of vehicles	30 days	Fri 27/9/19	Sat 26/10/19	0 days	
21		Provision of transportation service with drivers (including DLP)	914 days	Sun 27/10/19	Wed 27/4/22	125 days	20
22		**Miscellaneous items**	**579 days**	**Fri 27/9/19**	**Tue 27/4/21**	**490 days**	
23		Contract computer facilities for the Project Manager and Superviso	60 days	Fri 27/9/19	Mon 25/11/19	1009 days	
24		Provision of progress photographs	579 days	Fri 27/9/19	Tue 27/4/21	490 days	
25		Installation of security system for the site	45 days	Fri 27/9/19	Sun 10/11/19	1024 days	
26		Interface management and public relation works	579 days	Fri 27/9/19	Tue 27/4/21	490 days	
27		BIM works	579 days	Fri 27/9/19	Tue 27/4/21	490 days	
28		Upkeep of the employer's store	579 days	Fri 27/9/19	Tue 27/4/21	490 days	
29		Emergency unit and weather protection scheme	579 days	Fri 27/9/19	Tue 27/4/21	490 days	
30		General site clearance	21 days	Fri 27/9/19	Thu 17/10/19	1048 days	
31		**Hoadings, temporary fences and signboards**	**384 days**	**Sun 17/11/19**	**Fri 4/12/20**	**634 days**	
32		Hoadings, temporary fences and signboards at Interim stage	45 days	Sun 17/11/19	Tue 31/12/19	973 days	386
33		Hoadings, temporary fences and signboards at Final stage	30 days	Thu 5/11/20	Fri 4/12/20	634 days	122
34		**Environmental management, mitigation and monitoring**	**579 days**	**Fri 27/9/19**	**Tue 27/4/21**	**490 days**	
35		Environmental management measures	579 days	Fri 27/9/19	Tue 27/4/21	490 days	
36		Environmental mitigation measures	579 days	Fri 27/9/19	Tue 27/4/21	490 days	
37		Environmental monitoring measures	579 days	Fri 27/9/19	Tue 27/4/21	490 days	
38		Site Management plan for trip ticket system	21 days	Fri 27/9/19	Thu 17/10/19	1048 days	
39		Air pollution abatement	579 days	Fri 27/9/19	Tue 27/4/21	490 days	
40		Noise pollution abatement	579 days	Fri 27/9/19	Tue 27/4/21	490 days	
41		Wastewater pollution abatement	579 days	Fri 27/9/19	Tue 27/4/21	490 days	
42		Waste Management	579 days	Fri 27/9/19	Tue 27/4/21	490 days	
43		Monitoring the use of ultra low sulphur diesel	579 days	Fri 27/9/19	Tue 27/4/21	490 days	
44		Temporarory drainage management plan	30 days	Fri 27/9/19	Sat 26/10/19	1039 days	
45		**Survey of the Site**	**579 days**	**Fri 27/9/19**	**Tue 27/4/21**	**490 days**	
46		Initial survey	30 days	Fri 27/9/19	Sat 26/10/19	0 days	
47		Conditional survey	30 days	Fri 27/9/19	Sat 26/10/19	0 days	
48		Monitoring survey	549 days	Sun 27/10/19	Tue 27/4/21	490 days	47
49		As-build survey	65 days	Mon 22/2/21	Tue 27/4/21	490 days	
50		**Section 1 of the Works**	**697 days**	**Fri 27/9/19**	**Mon 23/8/21**	**145 days**	
51		**Works for Portion 4**	**674 days**	**Fri 27/9/19**	**Sat 31/7/21**	**395 days**	
52		**General for Portion 4**	**68 days**	**Fri 27/9/19**	**Tue 3/12/19**	**454 days**	
53		Access date of Portion 4	0 days	**Fri 27/9/19**	**Fri 27/9/19**	0 days	
54		Site clearance and tree felling	30 days	Fri 27/9/19	Sat 26/10/19	0 days	53
55		Breaking up existing paving	20 days	Sun 27/10/19	Fri 15/11/19	0 days	54
56		Excavation for management office building	18 days	Sat 16/11/19	Tue 3/12/19	0 days	55
57		**Management Office Building**	**674 days**	**Fri 27/9/19**	**Sat 31/7/21**	**395 days**	
58		**Civil and strucutral works**	**343 days**	**Wed 4/12/19**	**Tue 10/11/20**	**503 days**	
59		Construction of foundation from G.L. E-H / 1-3	60 days	Wed 4/12/19	Sat 1/2/20	941 days	56
60		Idling due to COVID-9 infection	120 days	Sat 1/2/20	Sat 30/5/20	0 days	
61		Construction of foundation from G.L. A-E / 1-3	14 days	Sun 31/5/20	Sat 13/6/20	0 days	60
62		Construction for G/F slabs from G.L. A-E/1-3	25 days	Sun 14/6/20	Wed 8/7/20	0 days	61
63		Construction for G/F to R/F columns and wall from G.L. A-E/1-	30 days	Thu 9/7/20	Fri 7/8/20	0 days	62
64		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	63
65		Construction for R/F to UR/F columns and walls at G.L. B-C/1-3	30 days	Mon 7/9/20	Tue 6/10/20	0 days	64
66		Construction for UR/F slabs and beams at G.L. B-C/1-3	30 days	Tue 22/9/20	Wed 21/10/20	6 days	65SS+15 days
67		Construction of columns and walls from G/F to R/F for G.L. E-H	30 days	Sun 31/5/20	Mon 29/6/20	0 days	60



Project: ND/2019/06
Date: Fri 14/8/20
Revised Programme (Rev. 3)

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
68		Construction of slabs and beams for R/F for G.L. E-H/1-3	30 days	Tue 30/6/20	Wed 29/7/20	0 days	67
69		Construction of water tanks at R/F from G.L. E-H/1-3	30 days	Thu 30/7/20	Fri 28/8/20	0 days	68
70		Construction of R/F to UR/F columns and walls from G.L. C-H/	30 days	Sat 29/8/20	Sun 27/9/20	0 days	69
71		Construction of UR/F beams and slabs from G.L. C-H/1-3	30 days	Mon 28/9/20	Tue 27/10/20	0 days	70
72		Construction of Parapet walls	14 days	Wed 28/10/20	Tue 10/11/20	0 days	66,71
73		**Roofing works**	**98 days**	**Wed 11/11/20**	**Tue 16/2/21**	**560 days**	
74		Cememt sand screeding on roof slab	21 days	Wed 11/11/20	Tue 1/12/20	0 days	72
75		Waterproofing works for roof	21 days	Wed 2/12/20	Tue 22/12/20	0 days	74
76		Construction of 40mm insulation layer	21 days	Wed 23/12/20	Tue 12/1/21	0 days	75
77		Construction of 40mm cement sand rendering	21 days	Wed 13/1/21	Tue 2/2/21	0 days	76
78		300 x 300mm roofing concrete tiles	14 days	Wed 3/2/21	Tue 16/2/21	560 days	77
79		**External walls and internal walls**	**96 days**	**Mon 7/9/20**	**Fri 11/12/20**	**567 days**	
80		External wall block work and finishing	45 days	Wed 28/10/20	Fri 11/12/20	0 days	66,71
81		Internal wall block and finishing	45 days	Mon 7/9/20	Wed 21/10/20	0 days	64
82		**Installation of windows and doors**	**96 days**	**Thu 22/10/20**	**Mon 25/1/21**	**582 days**	
83		Installation of external windows and doors	45 days	Sat 12/12/20	Mon 25/1/21	582 days	80
84		Installation of internal doors	45 days	Thu 22/10/20	Sat 5/12/20	633 days	81
85		**Interior fitting-out, finishes and fixtures**	**90 days**	**Sat 12/12/20**	**Thu 11/3/21**	**516 days**	
86		Erection of interior fitting-out and finishes	60 days	Sat 12/12/20	Tue 9/2/21	0 days	80
87		Installation of fixtures	30 days	Wed 10/2/21	Thu 11/3/21	0 days	86
88		Handrail installation for MOB	21 days	Fri 12/3/21	Thu 1/4/21	516 days	87
89		**Building services works for Wholesale Market**	**674 days**	**Fri 27/9/19**	**Sat 31/7/21**	**395 days**	
90		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
91		Approval for BS equipment and materials	21 days	Wed 25/3/20	Tue 14/4/20	0 days	90
92		Submissions of CBWD and CSD drawings	90 days	Wed 15/4/20	Mon 13/7/20	0 days	91
93		Approval for CBWD and CSD drawings	21 days	Tue 14/7/20	Mon 3/8/20	0 days	92
94		Approval and confirmed all construction drawings	21 days	Tue 4/8/20	Mon 24/8/20	0 days	93
95		Production of BIM model	60 days	Tue 25/8/20	Fri 23/10/20	0 days	94
96		Submission of BIM model	30 days	Sat 24/10/20	Sun 22/11/20	0 days	95
97		Approval for BIM model	21 days	Mon 23/11/20	Sun 13/12/20	625 days	96
98		Production and delivery of BS equipment (including BS items of Wholesale Market)	170 days	Wed 15/4/20	Thu 1/10/20	85 days	91
99		Installation of BS equipment	80 days	Wed 7/10/20	Fri 25/12/20	0 days	98SS+90 days,70,65
100		Installation of switch panel	7 days	Sat 26/12/20	Fri 1/1/21	0 days	99
101		Installation of emergency generator	7 days	Sat 2/1/21	Fri 8/1/21	49 days	100
102		Testing and commissioning of BS equipment	60 days	Sat 27/2/21	Tue 27/4/21	0 days	117,101,293SS+60 days
103		Inspection of BS installations inclunding Fire Services by Authc	60 days	Wed 28/4/21	Sat 26/6/21	0 days	102
104		Remedial works after inspection	21 days	Sun 27/6/21	Sat 17/7/21	0 days	103
105		Re-insepction of BS installations by Authorities	14 days	Sun 18/7/21	Sat 31/7/21	395 days	104
106		**Transformer Room**	**392 days**	**Wed 4/12/19**	**Tue 29/12/20**	**454 days**	
107		Coordination with CLP for power supply and cable entry	180 days	Wed 4/12/19	Sun 31/5/20	64 days	56
108		Construction for power supply and cable entry	60 days	Tue 4/8/20	Fri 2/10/20	0 days	107,93
109		Interior finishing for transformer room	13 days	Fri 18/9/20	Wed 30/9/20	0 days	108SS+45 days,63,62,64
110		Fitting-out and E&M works	13 days	Thu 1/10/20	Tue 13/10/20	0 days	109,93
111		Installation of power panel	7 days	Wed 14/10/20	Tue 20/10/20	0 days	110
112		Installation check	7 days	Wed 21/10/20	Tue 27/10/20	0 days	111
113		Inform CLP for inspection	14 days	Wed 28/10/20	Tue 10/11/20	0 days	112
114		Inspection for transformer room	7 days	Wed 11/11/20	Tue 17/11/20	0 days	113
115		Cable testing CLP	14 days	Wed 18/11/20	Tue 1/12/20	0 days	114
116		Installation of power meter by CLP	14 days	Wed 2/12/20	Tue 15/12/20	0 days	115
117		Power feeding by CLP	14 days	Wed 16/12/20	Tue 29/12/20	59 days	116
118		**Works for Portion 3**	**697 days**	**Fri 27/9/19**	**Mon 23/8/21**	**145 days**	
119		Idling due to COVID-9 infection	105 days	Sat 1/2/20	Fri 15/5/20	53 days	
120		**General for Portion 3**	**120 days**	**Tue 7/7/20**	**Wed 4/11/20**	**0 days**	
121		Access date of Portion 3 (184 days after starting date)	0 days	Tue 7/7/20	Tue 7/7/20	0 days	440,119
122		Site clearance and tree felling	120 days	Wed 8/7/20	Wed 4/11/20	0 days	121
123		Construction for fencing to the final stage	21 days	Wed 8/7/20	Tue 28/7/20	0 days	121
124		Construction for ground investigation according to drawing no. 60335576/C6/C00/7501	30 days	Wed 29/7/20	Thu 27/8/20	733 days	344,123
125		**Site formation**	**150 days**	**Wed 22/7/20**	**Fri 18/12/20**	**0 days**	
126		Breaking up existing paving	45 days	Wed 22/7/20	Fri 4/9/20	0 days	440,123SS+14 days
127		**Excavation for underground drainage and pipeline construction**	**123 days**	**Tue 18/8/20**	**Fri 18/12/20**	**470 days**	
128		FMH-1.03 -> FMH-1.04 and FMH-1.02 - > FMH-1.01	21 days	Tue 18/8/20	Mon 7/9/20	722 days	178
129		C6_1.5 -> C6_2.2 -> C6_2.3 -> C6_2.4	21 days	Tue 18/8/20	Mon 7/9/20	0 days	178
130		FMH-2.06 -> FMH-2.05 -> FMH-2.04	21 days	Fri 28/8/20	Thu 17/9/20	0 days	179
131		C6_1.4 -> C6_1.3 -> C6_1.2	21 days	Tue 1/9/20	Mon 21/9/20	0 days	130SS+4 days
132		FMH-2.04 -> FMH-2.03 -> FMH-2.02 -> FMH-2.01	21 days	Fri 4/9/20	Thu 24/9/20	705 days	130FF+7 days,180
133		C6_1.2 -> C6_1.1B -> C6_1.1 -> C6_1.1A	21 days	Tue 22/9/20	Mon 12/10/20	687 days	131,181



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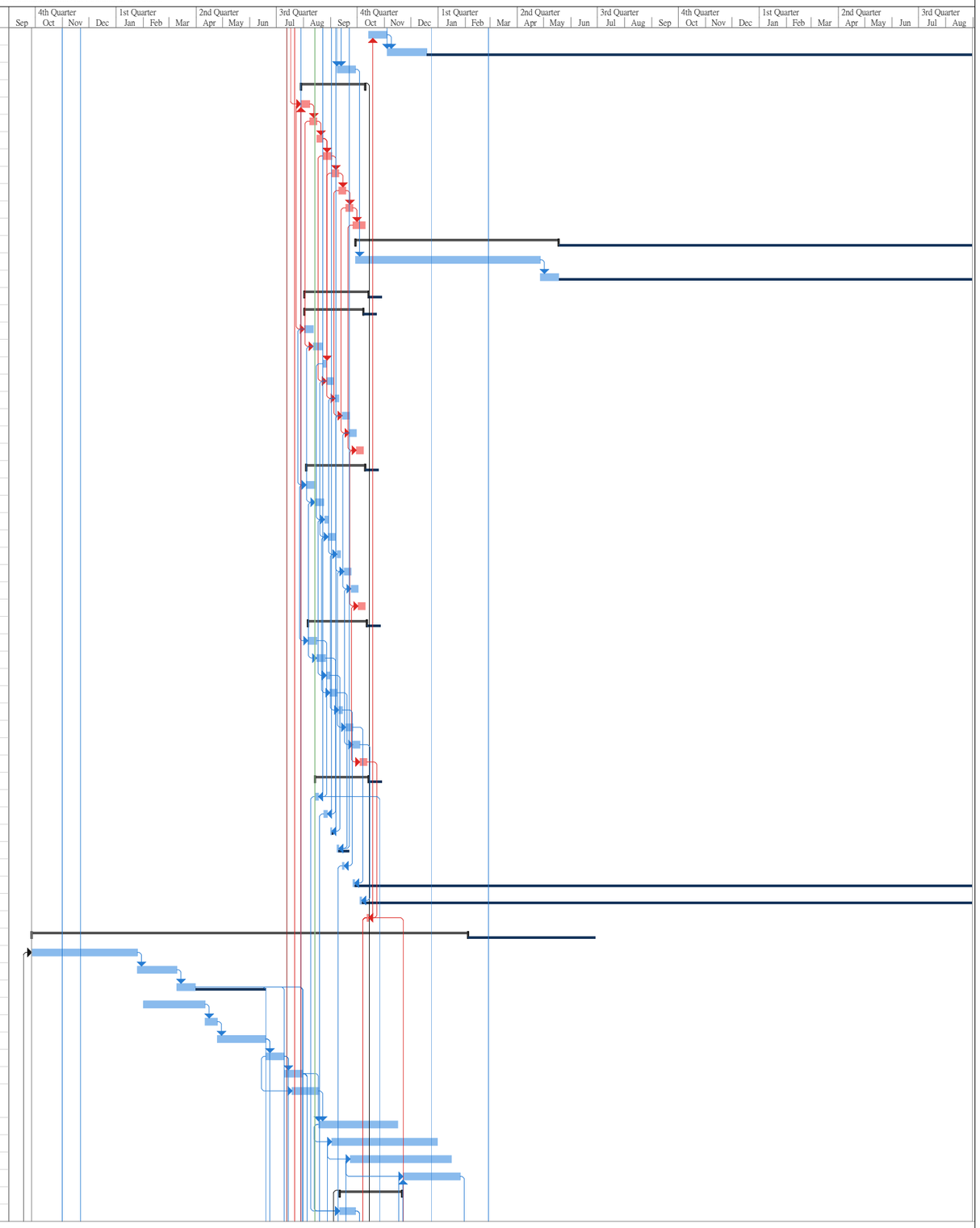
Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual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

ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
134		DP2.21 -> C6_2.1 -> C6_2.1A -> C6_1.1A	21 days	Wed 14/10/20	Tue 3/11/20	0 days	185
135		DP2.21 with U-channel construction near MOB	45 days	Wed 4/11/20	Fri 18/12/20	620 days	134,62
136		C6_2.4 -> C6_2.5	21 days	Tue 8/9/20	Mon 28/9/20	0 days	129,62
137		**Excavation for footing construction**	**73 days**	**Wed 29/7/20**	**Fri 9/10/20**	**0 days**	
138		F5 -> F4 -> F3 -> F2 -> F1	10 days	Wed 29/7/20	Fri 7/8/20	0 days	126SS+7 days,440
139		F11 and F10 -> F17 and F16	8 days	Sat 8/8/20	Sat 15/8/20	0 days	138
140		F28	7 days	Sun 16/8/20	Sat 22/8/20	0 days	139
141		F27 -> F26 - > F25 -> F24	10 days	Sun 23/8/20	Tue 1/9/20	0 days	140
142		F9 -> F8 -> F7	8 days	Wed 2/9/20	Wed 9/9/20	0 days	141
143		F16 -> F15 -> F14 -> F13	8 days	Thu 10/9/20	Thu 17/9/20	0 days	142
144		F22 -> F21 -> F20 -> F19	8 days	Fri 18/9/20	Fri 25/9/20	0 days	143
145		F6 -> F12 -> F18 -> F23	14 days	Sat 26/9/20	Fri 9/10/20	0 days	144
146		**Underground drainage construction**	**231 days**	**Tue 29/9/20**	**Mon 17/5/21**	**470 days**	
147		Remaining U-channel and drainage construction	210 days	Tue 29/9/20	Mon 26/4/21	0 days	136
148		Connection to the existing manhole	21 days	Tue 27/4/21	Mon 17/5/21	470 days	147
149		**Footing construction**	**73 days**	**Sun 2/8/20**	**Tue 13/10/20**	**15 days**	
150		**Vertical blinding and blind layers construction**	**67 days**	**Sun 2/8/20**	**Wed 7/10/20**	**15 days**	
151		F5 -> F4 -> F3 -> F2 -> F1	10 days	Sun 2/8/20	Tue 11/8/20	0 days	138SS+4 days
152		F11, F10 and F9 -> F17 and F16	10 days	Wed 12/8/20	Fri 21/8/20	0 days	139SS+4 days
153		F28	4 days	Sun 23/8/20	Wed 26/8/20	0 days	140
154		F27 -> F26 - > F25 -> F24	8 days	Thu 27/8/20	Thu 3/9/20	0 days	141SS+4 days
155		F8 -> F7	4 days	Sun 6/9/20	Wed 9/9/20	0 days	142SS+4 days
156		F16 -> F15 -> F14 -> F13	8 days	Mon 14/9/20	Mon 21/9/20	0 days	143SS+4 days
157		F22 -> F21 -> F20 -> F19	8 days	Tue 22/9/20	Tue 29/9/20	0 days	144SS+4 days
158		F6 -> F12 -> F18 -> F23	8 days	Wed 30/9/20	Wed 7/10/20	0 days	145SS+4 days
159		**Steel fixing for footings**	**67 days**	**Tue 4/8/20**	**Fri 9/10/20**	**15 days**	
160		F5 -> F4 -> F3 -> F2 -> F1	10 days	Tue 4/8/20	Thu 13/8/20	0 days	151SS+2 days
161		F11, F10 and F9 -> F17 and F16	10 days	Fri 14/8/20	Sun 23/8/20	0 days	152SS+2 days
162		F28	4 days	Tue 25/8/20	Fri 28/8/20	0 days	153SS+2 days
163		F27 -> F26 - > F25 -> F24	8 days	Sat 29/8/20	Sat 5/9/20	0 days	154SS+2 days
164		F8 -> F7	4 days	Tue 8/9/20	Fri 11/9/20	0 days	155SS+2 days
165		F16 -> F15 -> F14 -> F13	8 days	Wed 16/9/20	Wed 23/9/20	0 days	156SS+2 days
166		F22 -> F21 -> F20 -> F19	8 days	Thu 24/9/20	Thu 1/10/20	0 days	157SS+2 days
167		F6 -> F12 -> F18 -> F23	8 days	Fri 2/10/20	Fri 9/10/20	0 days	158SS+2 days
168		**Formwork erection for footings**	**67 days**	**Thu 6/8/20**	**Sun 11/10/20**	**15 days**	
169		F5 -> F4 -> F3 -> F2 -> F1	10 days	Thu 6/8/20	Sat 15/8/20	0 days	160SS+2 days
170		F11, F10 and F9 -> F17 and F16	10 days	Sun 16/8/20	Tue 25/8/20	0 days	161SS+2 days
171		F28	4 days	Thu 27/8/20	Sun 30/8/20	0 days	162SS+2 days
172		F27 -> F26 - > F25 -> F24	8 days	Mon 31/8/20	Mon 7/9/20	0 days	163SS+2 days
173		F8 -> F7	4 days	Thu 10/9/20	Sun 13/9/20	0 days	164SS+2 days
174		F16 -> F15 -> F14 -> F13	8 days	Fri 18/9/20	Fri 25/9/20	0 days	165SS+2 days
175		F22 -> F21 -> F20 -> F19	8 days	Sat 26/9/20	Sat 3/10/20	0 days	166SS+2 days
176		F6 -> F12 -> F18 -> F23	8 days	Sun 4/10/20	Sun 11/10/20	0 days	167SS+2 days
177		**Casting concrete for footings**	**61 days**	**Fri 14/8/20**	**Tue 13/10/20**	**15 days**	
178		F5 -> F4 -> F3 -> F2 -> F1	4 days	Fri 14/8/20	Mon 17/8/20	0 days	169FF+2 days
179		F11, F10 and F9 -> F17 and F16	4 days	Mon 24/8/20	Thu 27/8/20	0 days	170FF+2 days
180		F28	1 day	Tue 1/9/20	Tue 1/9/20	2 days	171FF+2 days
181		F27 -> F26 - > F25 -> F24	2 days	Tue 8/9/20	Wed 9/9/20	12 days	172FF+2 days
182		F8 -> F7	2 days	Mon 14/9/20	Tue 15/9/20	0 days	173FF+2 days
183		F16 -> F15 -> F14 -> F13	2 days	Sat 26/9/20	Sun 27/9/20	702 days	174FF+2 days
184		F22 -> F21 -> F20 -> F19	2 days	Sun 4/10/20	Mon 5/10/20	694 days	175FF+2 days
185		F6 -> F12 -> F18 -> F23	2 days	Mon 12/10/20	Tue 13/10/20	0 days	176FF+2 days
186		**Construction for Steel Canopy**	**496 days**	**Fri 27/9/19**	**Wed 3/2/21**	**145 days**	
187		Searching for steel fabricator	120 days	Fri 27/9/19	Fri 24/1/20	0 days	385SS
188		Preparation for shop drawing of steel canopy	45 days	Sat 25/1/20	Mon 9/3/20	0 days	187
189		Shop drawing submission for approval	21 days	Tue 10/3/20	Mon 30/3/20	80 days	188
190		Idling due to COVID-9 infection	70 days	Sat 1/2/20	Fri 10/4/20	0 days	
191		Change of steel fabricator	14 days	Sat 11/4/20	Fri 24/4/20	0 days	190
192		Re-preparation for shop drawing of steel canopy	55 days	Sat 25/4/20	Thu 18/6/20	0 days	191
193		Re-Shop drawing submission for approval	21 days	Fri 19/6/20	Thu 9/7/20	0 days	192
194		Approval of shop drawings	21 days	Fri 10/7/20	Thu 30/7/20	0 days	193
195		Material preparation for steel canopy (materials testing in Mainland China)	30 days	Sun 19/7/20	Mon 17/8/20	0 days	193SS+30 days
196		Fabrication and delivery for steel colum	90 days	Tue 18/8/20	Sun 15/11/20	0 days	194,195
197		Fabrication and delivery for lower roof steel frame and truss	120 days	Wed 2/9/20	Wed 30/12/20	0 days	196SS+15 days
198		Fabrication and delivery for upper roof steel frame	115 days	Wed 23/9/20	Fri 15/1/21	0 days	197SS+21 days
199		Fabrication for skylight steel frame structure	65 days	Sun 22/11/20	Mon 25/1/21	0 days	198SS+60 days,233
200		**Installation for steel column**	**71 days**	**Fri 11/9/20**	**Fri 20/11/20**	**0 days**	
201		Area 1 - F5, F4, F3, F11, F10, F9	18 days	Fri 11/9/20	Mon 28/9/20	0 days	178SS+28 days,196SS+21 days



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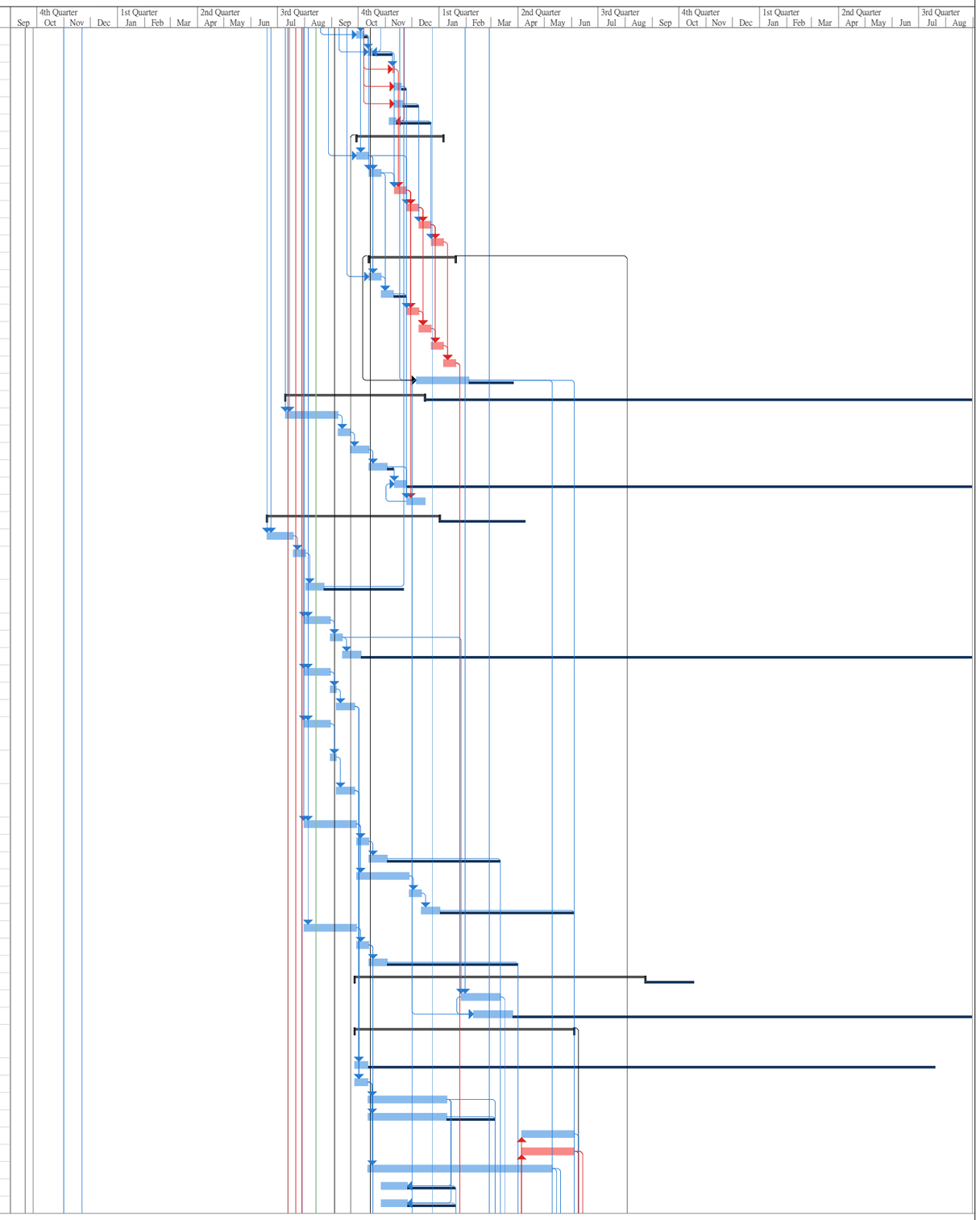
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
202		Area 2 - F17, F16, F28	8 days	Tue 29/9/20	Tue 6/10/20	5 days	179SS+30 days,201
203		Area 3 -F1, F2, F7, F8	5 days	Mon 12/10/20	Fri 16/10/20	23 days	178FF+28 days,202,182SS+28 days
204		Area 3 -F6	2 days	Mon 9/11/20	Tue 10/11/20	0 days	185SS+28 days,203
205		Area 4 -F12, F13, F14, F15	8 days	Wed 11/11/20	Wed 18/11/20	6 days	185SS+30 days
206		Area 5 - F18, F19, F20, F21, F22	10 days	Wed 11/11/20	Fri 20/11/20	18 days	185SS+30 days
207		Area 6 - F23, F24, F25, F26, F27	8 days	Thu 5/11/20	Thu 12/11/20	40 days	185FF+30 days
208		**Installation for lower roof steel frame and truss**	**99 days**	**Tue 29/9/20**	**Tue 5/1/21**	**0 days**	
209		Area 1 - F5, F4, F3, F11, F10, F9	14 days	Tue 29/9/20	Mon 12/10/20	0 days	201,197SS+14 days
210		Area 2 - F17, F16, F28	14 days	Tue 13/10/20	Mon 26/10/20	0 days	209,202
211		Area 3 -F1, F2, F6, F7, F8	14 days	Wed 11/11/20	Tue 24/11/20	0 days	210,203,204
212		Area 4 -F12, F13, F14, F15	14 days	Wed 25/11/20	Tue 8/12/20	0 days	211,205
213		Area 5 - F18, F19, F20, F21, F22	14 days	Wed 9/12/20	Tue 22/12/20	0 days	212,206
214		Area 6 - F23, F24, F25, F26, F27	14 days	Wed 23/12/20	Tue 5/1/21	0 days	213,207
215		**Installation for upper roof steel frame**	**99 days**	**Tue 13/10/20**	**Tue 19/1/21**	**0 days**	
216		Area 1 - F5, F4, F3, F11, F10, F9	14 days	Tue 13/10/20	Mon 26/10/20	0 days	209,198SS+14 days
217		Area 2 - F17, F16, F28	14 days	Tue 27/10/20	Mon 9/11/20	15 days	216,210
218		Area 3 -F1, F2, F6, F7, F8	14 days	Wed 25/11/20	Tue 8/12/20	0 days	217,211
219		Area 4 -F12, F13, F14, F15	14 days	Wed 9/12/20	Tue 22/12/20	0 days	218,212
220		Area 5 - F18, F19, F20, F21, F22	14 days	Wed 23/12/20	Tue 5/1/21	0 days	219,213
221		Area 6 - F23, F24, F25, F26, F27	14 days	Wed 6/1/21	Tue 19/1/21	0 days	220,214
222		Installation for skylight system steel frame structure	60 days	Sun 6/12/20	Wed 3/2/21	51 days	199SS+14 days,215SS+21 days
223		**Construction for steel staircase**	**159 days**	**Fri 10/7/20**	**Tue 15/12/20**	**623 days**	
224		Design for steel staircase	60 days	Fri 10/7/20	Mon 7/9/20	0 days	189,193
225		Submission for steel staircase	14 days	Tue 8/9/20	Mon 21/9/20	0 days	224
226		Approval for steel staircase	21 days	Tue 22/9/20	Mon 12/10/20	0 days	225
227		Fabrication for steel staircase	21 days	Tue 13/10/20	Mon 2/11/20	8 days	226
228		Delivery for steel staircase	14 days	Wed 11/11/20	Tue 24/11/20	644 days	229SS-14 days,227
229		Installation for steel staircase	21 days	Wed 25/11/20	Tue 15/12/20	0 days	227,209,211
230		**Design issues for roof of steel canopy**	**197 days**	**Fri 19/6/20**	**Fri 1/1/21**	**97 days**	
231		Skylight secondary steelwork members design and their fixing	30 days	Fri 19/6/20	Sat 18/7/20	0 days	189,192
232		Submission for skylight secondary steelwork members design and their fixing	14 days	Sun 19/7/20	Sat 1/8/20	0 days	231
233		Approval for the desing of skylight secondary steelwork members and their fixing	21 days	Sun 2/8/20	Sat 22/8/20	91 days	232
234		Design for glazing panel with Aluminum frame	30 days	Fri 31/7/20	Sat 29/8/20	0 days	189,194
235		Submission for glazing panel with Aluminum frame	14 days	Sun 30/8/20	Sat 12/9/20	0 days	234
236		Approval for design for glazing panel with Aluminum frame	21 days	Sun 13/9/20	Sat 3/10/20	696 days	235
237		Design for Purlin cleat and layout drawing	30 days	Fri 31/7/20	Sat 29/8/20	0 days	189,194
238		Submission for Purlin cleat and layout drawing	7 days	Sun 30/8/20	Sat 5/9/20	0 days	237
239		Approval for design for Purlin cleat and layout drawing	21 days	Sun 6/9/20	Sat 26/9/20	0 days	238
240		Design for metal roof cladding system and PMMA skylight system design calculation and shop drawing	30 days	Fri 31/7/20	Sat 29/8/20	0 days	189,194
241		Submission for metal roof cladding system and PMMA skylight system design calculation and shop drawing	7 days	Sun 30/8/20	Sat 5/9/20	0 days	240
242		Approval for metal roof cladding system and PMMA skylight system design calculation and shop drawing	21 days	Sun 6/9/20	Sat 26/9/20	0 days	241
243		Design for sliding roof hatch or hydraulic swing hatch door	60 days	Fri 31/7/20	Mon 28/9/20	0 days	189,194
244		Submission for sliding roof hatch or hydraulic swing hatch door	14 days	Tue 29/9/20	Mon 12/10/20	0 days	243
245		Approval for sliding roof hatch or hydraulic swing hatch door	21 days	Tue 13/10/20	Mon 2/11/20	129 days	244
246		Design for guardrail for roof	60 days	Tue 29/9/20	Fri 27/11/20	0 days	243
247		Submission for guardrail for roof	14 days	Sat 28/11/20	Fri 11/12/20	0 days	246
248		Approval for guardrail for roof	21 days	Sat 12/12/20	Fri 1/1/21	153 days	247
249		Design for solar pannel and the steel supporting frame	60 days	Fri 31/7/20	Mon 28/9/20	0 days	194
250		Submission for solar pannel and the steel supporting frame	14 days	Tue 29/9/20	Mon 12/10/20	0 days	249
251		Approval for solar pannel and the steel supporting frame	21 days	Tue 13/10/20	Mon 2/11/20	149 days	250
252		**Construction for roof of steel canopy**	**331 days**	**Sun 27/9/20**	**Mon 23/8/21**	**55 days**	
253		Fabrication and delivery for glazing panel with Aluminum frame	45 days	Tue 26/1/21	Thu 11/3/21	0 days	199,235
254		Installation for glazing panel with Aluminum frame	45 days	Tue 9/2/21	Thu 25/3/21	523 days	253SS+14 days,222SS+14 days
255		**Materials preparation and delivery for Purlin cleat, rockwood insulation, skylight PMMA Pannel**	**250 days**	**Sun 27/9/20**	**Thu 3/6/21**	**0 days**	
256		Purlin cleat steel raw	15 days	Sun 27/9/20	Sun 11/10/20	646 days	239,242
257		Prepare fabrication drawing	15 days	Sun 27/9/20	Sun 11/10/20	0 days	239,242
258		Under Liner	90 days	Mon 12/10/20	Sat 9/1/21	0 days	257
259		Alum Halter	90 days	Mon 12/10/20	Sat 9/1/21	55 days	257
260		Rockwool insulation	60 days	Mon 5/4/21	Thu 3/6/21	0 days	268FS+30 days
261		Top Liner (Coil)	60 days	Mon 5/4/21	Thu 3/6/21	0 days	268FS+30 days
262		Skylight PMMA Panel	210 days	Mon 12/10/20	Sun 9/5/21	0 days	257
263		Purlin	30 days	Tue 27/10/20	Wed 25/11/20	55 days	258FF-45 days
264		GMS. Gutter in mill finish	30 days	Tue 27/10/20	Wed 25/11/20	55 days	258FF-45 days



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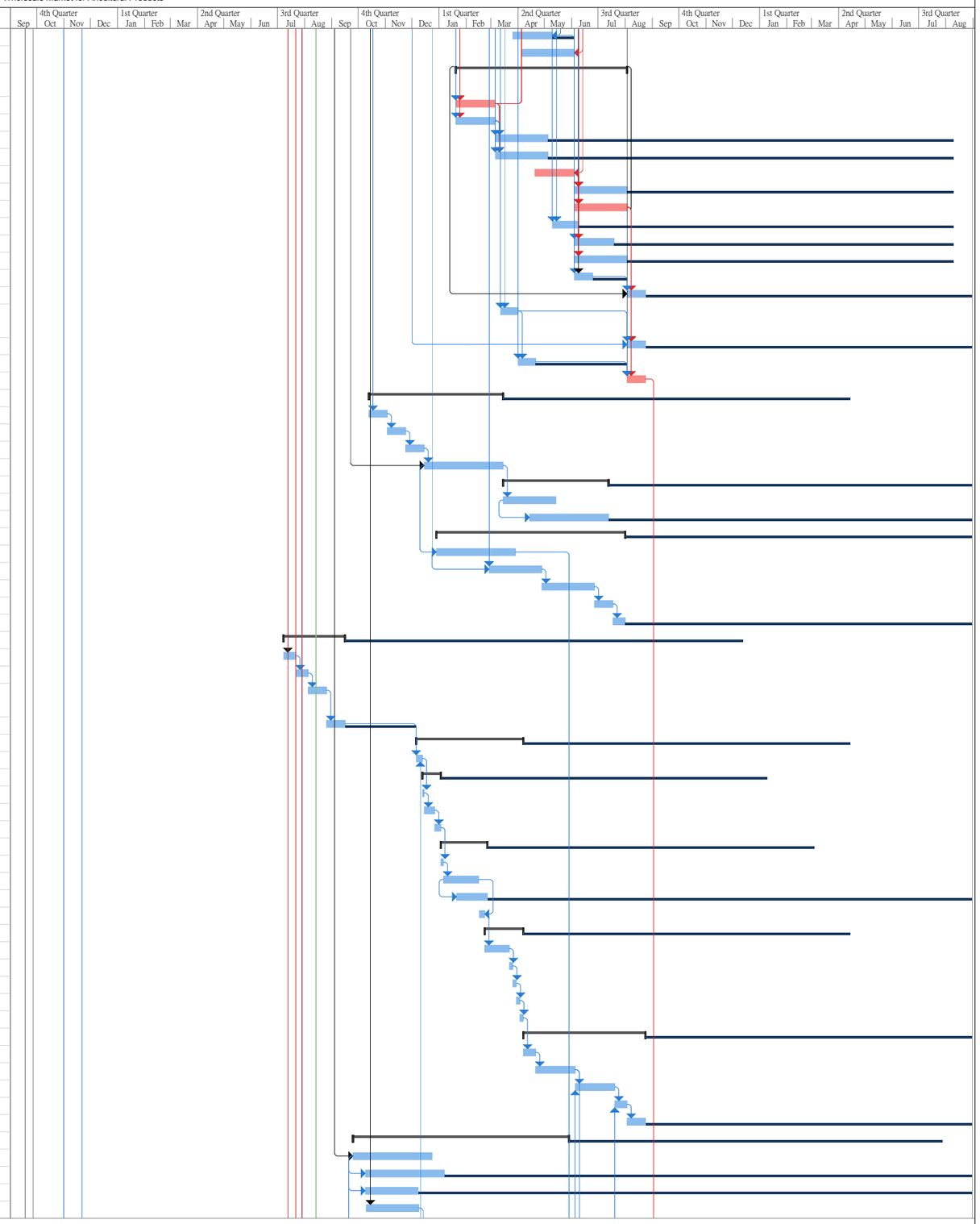
ID	Task Mode	Task Name	Duration	Start	Finish	Float	Predecessors
265		Skylight GMS edge capping w/. PE coating	45 days	Fri 26/3/21	Sun 9/5/21	25 days	262FF
266		Main Roof GMS. Edge capping w/. PE coating	60 days	Mon 5/4/21	Thu 3/6/21	0 days	261FF
267		**Installation for Purlin cleat, rockwood insulation, skylight PMMA Pannel**	**195 days**	**Wed 20/1/21**	**Mon 2/8/21**	**0 days**	
268		Install purlin	45 days	Wed 20/1/21	Fri 5/3/21	0 days	221,263
269		Install gutter	45 days	Wed 20/1/21	Fri 5/3/21	0 days	221,264
270		Install under liner	60 days	Sat 6/3/21	Tue 4/5/21	462 days	258,268,269
271		Install alum. halter	60 days	Sat 6/3/21	Tue 4/5/21	462 days	259,268,269
272		Louvre Install completer	45 days	Tue 20/4/21	Thu 3/6/21	0 days	261FF
273		Install rockwool	60 days	Fri 4/6/21	Mon 2/8/21	372 days	260,272
274		Install top liner	60 days	Fri 4/6/21	Mon 2/8/21	0 days	261,272
275		Install skylight PMMA panel	30 days	Mon 10/5/21	Tue 8/6/21	427 days	262,222
276		Install Skylight edge capping	45 days	Fri 4/6/21	Sun 18/7/21	387 days	265,272,222
277		Install Main roof edge capping	60 days	Fri 4/6/21	Mon 2/8/21	372 days	266,272
278		Fabrication and delivery for guardrail for roof	21 days	Fri 4/6/21	Thu 24/6/21	39 days	248,255
279		Installation of guardrail for roof	21 days	Tue 3/8/21	Mon 23/8/21	372 days	267SS+7 days,278,274
280		Fabrication and delivery for sliding roof hatch or hydraulic swing hatch door	20 days	Fri 12/3/21	Wed 31/3/21	0 days	245,253
281		Installation for sliding roof hatch or hydraulic swing hatch door	21 days	Tue 3/8/21	Mon 23/8/21	372 days	280,222SS+14 days,267,274
282		Fabrication for steel supporting frame for solar pannel	20 days	Thu 1/4/21	Tue 20/4/21	104 days	251,280
283		Installation for solar pannel and the steel supporting frame	21 days	Tue 3/8/21	Mon 23/8/21	0 days	282,215,274
284		**Hanging fan and lighting system for steel canopy**	**153 days**	**Tue 13/10/20**	**Sun 14/3/21**	**395 days**	
285		Design for hanging fan and lighting system	21 days	Tue 13/10/20	Mon 2/11/20	0 days	250
286		Submission for hanging fan and lighting system	21 days	Tue 3/11/20	Mon 23/11/20	0 days	285
287		Approval for hanging fan and lighting system	21 days	Tue 24/11/20	Mon 14/12/20	0 days	286
288		Installation for hanging fan and lighting system	90 days	Tue 15/12/20	Sun 14/3/21	0 days	287,208SS+21 days
289		**Interior fitting-out, finishes and fixtures**	**120 days**	**Mon 15/3/21**	**Mon 12/7/21**	**414 days**	
290		Erection of interior fitting-out and finishes	60 days	Mon 15/3/21	Thu 13/5/21	0 days	288
291		Installation of fixtures	90 days	Wed 14/4/21	Mon 12/7/21	414 days	290SS+30 days
292		**Building services works**	**215 days**	**Tue 29/12/20**	**Sat 31/7/21**	**395 days**	
293		Installation of BS equipment	90 days	Tue 29/12/20	Sun 28/3/21	0 days	288SS+14 days
294		Testing and commissioning of BS equipment	60 days	Sat 27/2/21	Tue 27/4/21	0 days	117,101,293SS+60 days
295		Inspection of BS installations inclunding Fire Services by Authorit	60 days	Wed 28/4/21	Sat 26/6/21	0 days	294
296		Remedial works after inspection	21 days	Sun 27/6/21	Sat 17/7/21	0 days	295
297		Re-insepction of BS installations by Authorities	14 days	Sun 18/7/21	Sat 31/7/21	395 days	296
298		**Demolision and re-provision works for toilet and RCB**	**70 days**	**Wed 8/7/20**	**Tue 15/9/20**	**453 days**	
299		Undergound Utilities detection	14 days	Wed 8/7/20	Tue 21/7/20	0 days	121
300		PR plan for relocation of toilet and RCB	14 days	Wed 22/7/20	Tue 4/8/20	0 days	299
301		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	300
302		Demolish the existing toilet and RCB	21 days	Wed 26/8/20	Tue 15/9/20	81 days	301
303		**Site formation and mini-pile works**	**122 days**	**Sun 6/12/20**	**Tue 6/4/21**	**372 days**	
304		Site formation for mini-pile works	7 days	Sun 6/12/20	Sat 12/12/20	0 days	349,302
305		**Pre-drill works**	**21 days**	**Sun 13/12/20**	**Sat 2/1/21**	**372 days**	
306		Mobilization of S.I. Drilling Rig	2 days	Sun 13/12/20	Mon 14/12/20	0 days	304
307		Pre-Drill works (4nos)	12 days	Tue 15/12/20	Sat 26/12/20	0 days	306
308		Completion Log Report	7 days	Sun 27/12/20	Sat 2/1/21	0 days	307
309		**Mini Pile Works**	**53 days**	**Sun 3/1/21**	**Wed 24/2/21**	**372 days**	
310		Mobilization of Percussive Drilling Rig	3 days	Sun 3/1/21	Tue 5/1/21	0 days	308
311		Drilling Works by 2 rigs (40nos.)	40 days	Wed 6/1/21	Sun 14/2/21	0 days	310
312		Grouting works (40nos.)	35 days	Thu 21/1/21	Wed 24/2/21	552 days	311SS+15 days
313		Post Drilling (2nos.)	6 days	Tue 16/2/21	Sun 21/2/21	0 days	311FF+7 days
314		**Loading test**	**44 days**	**Mon 22/2/21**	**Tue 6/4/21**	**372 days**	
315		Selection of loading test Pile by AECOM	28 days	Mon 22/2/21	Sun 21/3/21	0 days	313
316		Setup loading test platform by Kentledge Method	4 days	Mon 22/3/21	Thu 25/3/21	0 days	315
317		Loading Test Reading	4 days	Fri 26/3/21	Mon 29/3/21	0 days	316
318		Demobilization of loading test platform	4 days	Tue 30/3/21	Fri 2/4/21	0 days	317
319		Site Clearance	4 days	Sat 3/4/21	Tue 6/4/21	0 days	318
320		**Ramp structure and road works**	**139 days**	**Wed 7/4/21**	**Mon 23/8/21**	**372 days**	
321		Cutting mini-pile and welding capping plates (40 nos.)	14 days	Wed 7/4/21	Tue 20/4/21	0 days	319
322		Construction for ramp structure	45 days	Wed 21/4/21	Fri 4/6/21	0 days	321
323		Backfilling to the road paving level	45 days	Sat 5/6/21	Mon 19/7/21	0 days	322,358
324		Rigid pavement construction	14 days	Tue 20/7/21	Mon 2/8/21	0 days	331,354,323
325		Construction of steel vehicle parapet and thrie bear	21 days	Tue 3/8/21	Mon 23/8/21	372 days	324
326		**Road works and On-grade slab**	**246 days**	**Fri 25/9/20**	**Fri 28/5/21**	**425 days**	
327		Backfilling to the bottom of on-grade slab	90 days	Fri 25/9/20	Wed 23/12/20	0 days	200SS+14 days
328		Construction for Cable trough	90 days	Fri 9/10/20	Wed 6/1/21	601 days	327SS+14 days
329		Construction for Water Mains (by others)	60 days	Fri 9/10/20	Mon 7/12/20	631 days	327SS+14 days
330		Submission for paneling of on-grade slab and carriageway works	60 days	Sat 10/10/20	Tue 8/12/20	0 days	137



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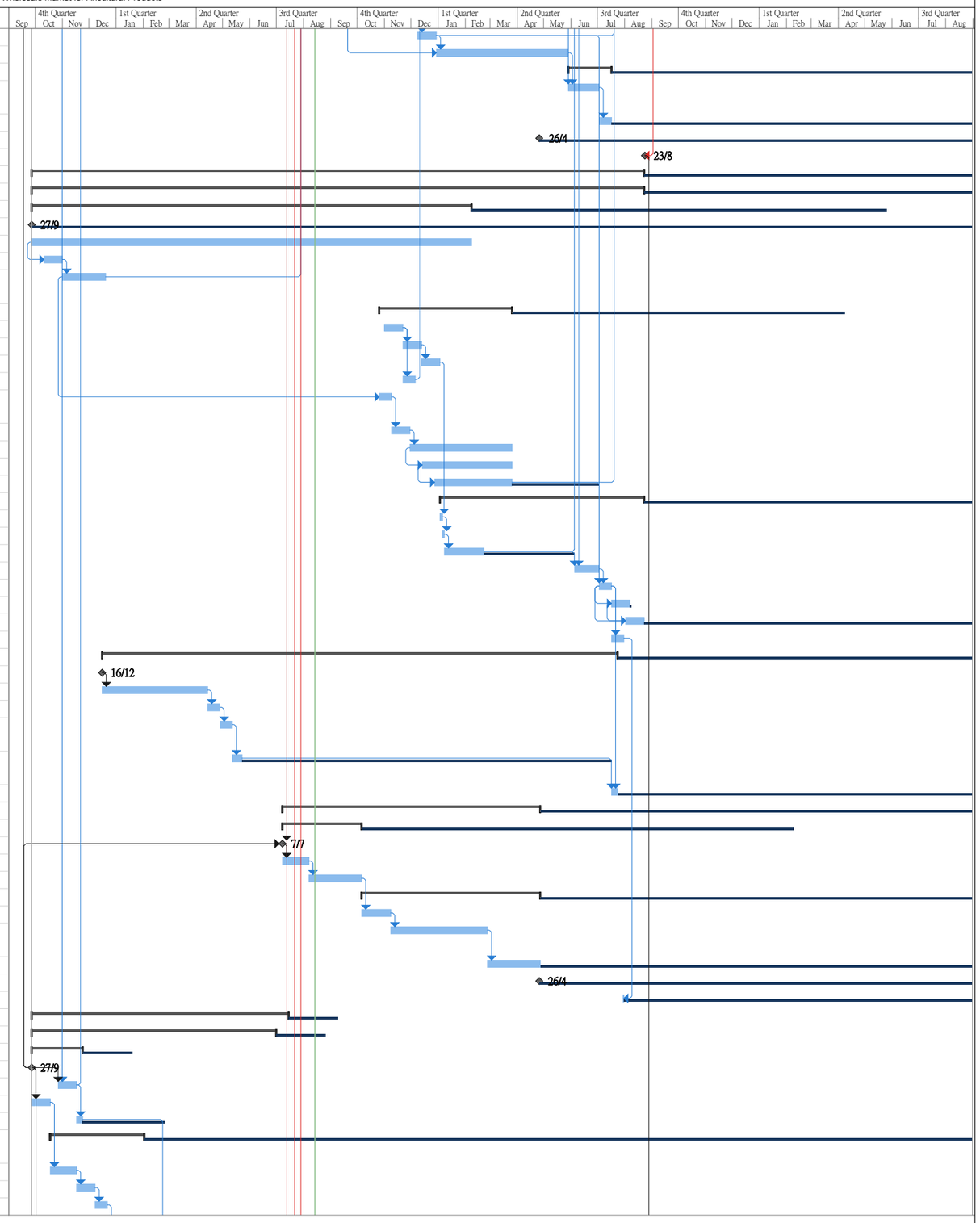
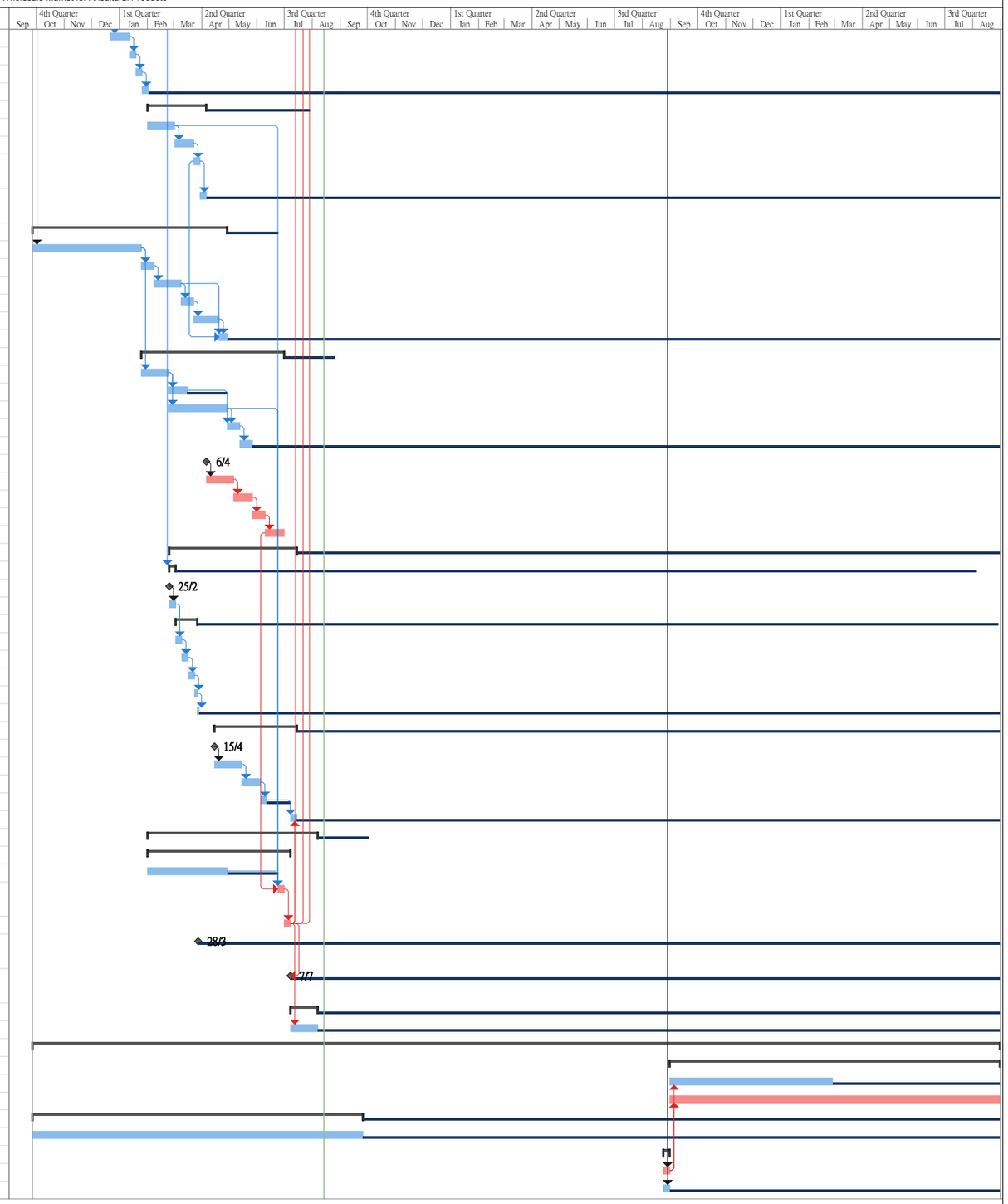
331		Approval for paneling of on-grade slab and carriageway works	21 days	Wed 9/12/20	Tue 29/12/20	0 days	330
332		Casting concrete for on-grade slab and carriagewway	150 days	Wed 30/12/20	Fri 28/5/21	0 days	327SS+30 days,331
333		**Street furniture and road marking**	**49 days**	**Sat 29/5/21**	**Fri 16/7/21**	**410 days**	
334		Construction for Street furniture as per drawing no. 60335576/C6/C00/1202	35 days	Sat 29/5/21	Fri 2/7/21	0 days	293,332
335		Road marking as per drawing no. 60335576/C6/C00/1602	14 days	Sat 3/7/21	Fri 16/7/21	410 days	334
336		Orignal Completion date of Section 1 of the Works	0 days	Mon 26/4/21	Mon 26/4/21	492 days	
337		Revised completion date of Section 1 of the Works	0 days	Mon 23/8/21	Mon 23/8/21	0 days	283FF
338		**Section 2 of the Works**	**696 days**	**Fri 27/9/19**	**Sun 22/8/21**	**373 days**	
339		**Works for Portion 6**	**696 days**	**Fri 27/9/19**	**Sun 22/8/21**	**373 days**	
340		**General for Portion 6**	**500 days**	**Fri 27/9/19**	**Sun 7/2/21**	**472 days**	
341		Access date of Portion 6	0 days	Fri 27/9/19	Fri 27/9/19	1069 days	
342		Site clearance and tree felling	500 days	Fri 27/9/19	Sun 7/2/21	0 days	
343		Construction for geotechnical instrumentation (D57 and D37)	21 days	Fri 11/10/19	Thu 31/10/19	0 days	342SS+14 days
344		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	343
345		**Slope and landscape works**	**151 days**	**Mon 26/10/20**	**Thu 25/3/21**	**378 days**	
346		Excavation from exsiting level to +5mPD by open cut method	21 days	Sun 1/11/20	Sat 21/11/20	0 days	
347		Replacement of existing soil to compacted fill under FW21	21 days	Sun 22/11/20	Sat 12/12/20	0 days	346
348		Rockfill to the bottom of FW21	21 days	Sun 13/12/20	Sat 2/1/21	0 days	347
349		Backfilling from bottom to Ramp structure bottom level	14 days	Sun 22/11/20	Sat 5/12/20	0 days	346
350		Trail pit construction as per drawing no. I/ND/2019/06/60335576/C6/C00/7501	14 days	Mon 26/10/20	Sun 8/11/20	0 days	344SS+360 days
351		Identification to the replacement for the loose fill	21 days	Mon 9/11/20	Sun 29/11/20	0 days	350
352		Excavation for the loose fill materails	116 days	Mon 30/11/20	Thu 25/3/21	0 days	351
353		Replace the loose fill to rockfill	102 days	Mon 14/12/20	Thu 25/3/21	0 days	352SS+14 days
354		Landscape works	88 days	Mon 28/12/20	Thu 25/3/21	99 days	353SS+14 days
355		**FW21 and road works**	**232 days**	**Sun 3/1/21**	**Sun 22/8/21**	**373 days**	
356		Minor modification to of the rockfill	3 days	Sun 3/1/21	Tue 5/1/21	0 days	348
357		Blinding concrete casting for FW21	2 days	Wed 6/1/21	Thu 7/1/21	0 days	356
358		Construction for new feature FW21	45 days	Fri 8/1/21	Sun 21/2/21	103 days	357
359		Backfilling to the road paving level	28 days	Sat 5/6/21	Fri 2/7/21	0 days	358,322
360		Rigid pavement construction	14 days	Sat 3/7/21	Fri 16/7/21	0 days	359,331,354
361		Construction of fence with footing	21 days	Sat 17/7/21	Fri 6/8/21	2 days	360SS+14 days
362		Construction of steel vehicle parapet and thrie bear	21 days	Mon 2/8/21	Sun 22/8/21	373 days	360SS+30 days,361SS+14 days
363		Road marking as per drawing no. 60335576/C6/C00/1602	14 days	Sat 17/7/21	Fri 30/7/21	0 days	360
364		**Road works construction at On Kui Street**	**586 days**	**Mon 16/12/19**	**Fri 23/7/21**	**403 days**	
365		TTA and XP granted	0 days	Mon 16/12/19	Mon 16/12/19	0 days	
366		TTA set up for revising shoulder to suit for interim stage	120 days	Mon 16/12/19	Mon 13/4/20	0 days	365
367		Demolish the existing shoulder	14 days	Tue 14/4/20	Mon 27/4/20	0 days	366
368		Re-construction the shoulder as per drawing no. 60335576/C6/C00/1001	14 days	Tue 28/4/20	Mon 11/5/20	0 days	367
369		Construction for street furniture as per drawing no. 60335576/C6/C00/1201	11 days	Tue 12/5/20	Fri 22/5/20	420 days	368
370		Road marking as per drawing no. 60335576/C6/C00/1601	7 days	Sat 17/7/21	Fri 23/7/21	403 days	369,360
371		**Works for Portion 5**	**293 days**	**Tue 7/7/20**	**Mon 26/4/21**	**491 days**	
372		**General for Portion 5**	**90 days**	**Tue 7/7/20**	**Mon 5/10/20**	**491 days**	
373		Access date of Portion 5 (184 days after starting date)	0 days	Tue 7/7/20	Tue 7/7/20	0 days	385SS+184 days,121
374		Site clearance and tree felling	30 days	Wed 8/7/20	Thu 6/8/20	0 days	373
375		Earthworks	60 days	Fri 7/8/20	Mon 5/10/20	0 days	374
376		**Street furniture and road marking**	**203 days**	**Tue 6/10/20**	**Mon 26/4/21**	**491 days**	
377		Removal of exisiting gate	33 days	Tue 6/10/20	Sat 7/11/20	0 days	375
378		Construction for Street furniture as per drawing no. 60335576/C6/C00/1202	110 days	Sun 8/11/20	Thu 25/2/21	0 days	377
379		Road marking as per drawing no. 60335576/C6/C00/1602	60 days	Fri 26/2/21	Mon 26/4/21	491 days	378
380		Orignal Completion date of Section 2 of the Works	0 days	Mon 26/4/21	Mon 26/4/21	492 days	
381		Revised completion date of Section 2 of the Works	1 day	Fri 30/7/21	Fri 30/7/21	396 days	363FF
382		**Section 3 of the Works**	**292 days**	**Fri 27/9/19**	**Tue 14/7/20**	**56 days**	
383		**Works at Portion 1**	**278 days**	**Fri 27/9/19**	**Tue 30/6/20**	**56 days**	
384		**General for Portion 1**	**58 days**	**Fri 27/9/19**	**Sat 23/11/19**	**56 days**	
385		Access date of Portion 1	0 days	Fri 27/9/19	Fri 27/9/19	0 days	
386		Site clearance and tree felling	21 days	Sun 27/10/19	Sat 16/11/19	0 days	46,47,385
387		Construction for fencing for interim stage	21 days	Fri 27/9/19	Thu 17/10/19	0 days	385
388		Construction for the insumentation (FLN-2-SF-DH005(P))	7 days	Sun 17/11/19	Sat 23/11/19	93 days	386
389		**Earthworks / site formation, drainage, fresh water and power suuply works**	**107 days**	**Fri 18/10/19**	**Sat 1/2/20**	**941 days**	
390		Excavation for drainage works	30 days	Fri 18/10/19	Sat 16/11/19	0 days	387
391		Drainage pipelaying	21 days	Sun 17/11/19	Sat 7/12/19	0 days	390
392		Manhole construction	14 days	Sun 8/12/19	Sat 21/12/19	0 days	391



Project: ND/2019/06
Date: Fri 14/8/20
Revised Programme (Rev. 3)

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
393		Backfilling to the drainage area	21 days	Sun 22/12/19	Sat 11/1/20	0 days	392
394		Connection to the existing manhole	7 days	Sun 12/1/20	Sat 18/1/20	0 days	393
395		Connection of fresh water supply	7 days	Sun 19/1/20	Sat 25/1/20	0 days	394
396		Connection of power supply	7 days	Sun 26/1/20	Sat 1/2/20	941 days	395
397		**Pavments and road marking to the ground for interim stage**	**65 days**	**Sat 1/2/20**	**Sun 5/4/20**	**114 days**	
398		Idling due to COVID-9 infection	30 days	Sat 1/2/20	Sun 1/3/20	0 days	
399		100m bituminous materials on compacted backfill	21 days	Mon 2/3/20	Sun 22/3/20	0 days	398
400		Installation of street furniture according to drawing no. 60335576/C6/C00/1201	7 days	Mon 23/3/20	Sun 29/3/20	0 days	399
401		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	877 days	400
402		**Temporary lighting installation for Portion 1 and Portion 2**	**215 days**	**Fri 27/9/19**	**Tue 28/4/20**	**56 days**	
403		Temporary lighting design	120 days	Fri 27/9/19	Fri 24/1/20	0 days	385
404		Temporary lighting design submission	14 days	Sat 25/1/20	Fri 7/2/20	0 days	403
405		Temporary lighting apprvoal	30 days	Sat 8/2/20	Sun 8/3/20	0 days	404
406		Materials preparation for temporary lighting	14 days	Mon 9/3/20	Sun 22/3/20	0 days	405
407		Idling due to COVID-9 infection	28 days	Mon 23/3/20	Sun 19/4/20	0 days	406
408		Temporary lighting installation	9 days	Mon 20/4/20	Tue 28/4/20	854 days	405,400SS+7 days,407
409		**Rain Shelter Construction**	**158 days**	**Sat 25/1/20**	**Tue 30/6/20**	**56 days**	
410		Desgin submission for foldable rain shelter	30 days	Sat 25/1/20	Sun 23/2/20	0 days	403
411		Approval for design submission for foldable rain shelter	21 days	Mon 24/2/20	Sun 15/3/20	44 days	410
412		Idling due to COVID-9 infection	65 days	Mon 24/2/20	Tue 28/4/20	0 days	410
413		Material preparation for foldable rain shelter	14 days	Wed 29/4/20	Tue 12/5/20	0 days	412,411
414		Construction for foldable rain shelter	14 days	Wed 13/5/20	Tue 26/5/20	826 days	413
415		PMI for changing part of foldable rain shelter to fixed rain shelte	0 days	Mon 6/4/20	Mon 6/4/20	0 days	
416		Design submission for fixed rain shelter	30 days	Mon 6/4/20	Tue 5/5/20	0 days	415
417		Approval for design submission for fixed rain shelter	21 days	Wed 6/5/20	Tue 26/5/20	0 days	416
418		Materials preparation for fixed rain shelter	14 days	Wed 27/5/20	Tue 9/6/20	0 days	417
419		Construction for fixed rain shelter	21 days	Wed 10/6/20	Tue 30/6/20	0 days	418
420		**Works at Portion 2**	**141 days**	**Tue 25/2/20**	**Tue 14/7/20**	**777 days**	
421		**General for Portion 2**	**7 days**	**Tue 25/2/20**	**Mon 2/3/20**	**885 days**	**388**
422		Access date for Portion 2 (152 days after starting date)	0 days	Tue 25/2/20	Tue 25/2/20	0 days	
423		Site clearance and tree felling	7 days	Tue 25/2/20	Mon 2/3/20	0 days	422
424		**Underground drainage works**	**24 days**	**Tue 3/3/20**	**Thu 26/3/20**	**885 days**	
425		Excavation for underground drainage	7 days	Tue 3/3/20	Mon 9/3/20	0 days	423
426		Underground drainage pipelaying	7 days	Tue 10/3/20	Mon 16/3/20	0 days	425
427		Construction of manhole	7 days	Tue 17/3/20	Mon 23/3/20	0 days	426
428		Connection to the existing manhole	3 days	Tue 24/3/20	Thu 26/3/20	0 days	427
429		Road marking as per drawing no. 60335576/C6/C00/1601	2 days	Fri 27/3/20	Sat 28/3/20	885 days	428
430		**Container office - Modification works**	**91 days**	**Wed 15/4/20**	**Tue 14/7/20**	**777 days**	
431		PMI for container office modification works	0 days	Wed 15/4/20	Wed 15/4/20	0 days	
432		Desgin submission for contanier office modification works	30 days	Wed 15/4/20	Thu 14/5/20	0 days	431
433		Design approval for container office modification works	21 days	Fri 15/5/20	Thu 4/6/20	0 days	432
434		Material preparation for contanier office modification works	7 days	Fri 5/6/20	Thu 11/6/20	26 days	433
435		Construction of container offices modification works	7 days	Wed 8/7/20	Tue 14/7/20	777 days	434,440
436		**Change of Market Stage**	**188 days**	**Sat 1/2/20**	**Thu 6/8/20**	**56 days**	
437		**From Existing Stage to Iterim Stage Arrangement**	**158 days**	**Sat 1/2/20**	**Tue 7/7/20**	**0 days**	
438		Idling due to COVID-9 infection	88 days	Sat 1/2/20	Tue 28/4/20	56 days	
439		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	438,419SS+14 days,412,398
440		Relocation of stall traders from existing NDTWM to Interim Market	7 days	Wed 1/7/20	Tue 7/7/20	0 days	439
441		Original Key Date completion of interim North District Temporary Wholesale Market for Agricultural Products	0 days	Sat 28/3/20	Sat 28/3/20	886 days	
442		Revised Key Date completion of interim North District Temporary Wholesale Market for Agricultural Products	0 days	Tue 7/7/20	Tue 7/7/20	784 days	440FF
443		**Completion of Reinstatement of interim NDTWM**	**30 days**	**Wed 8/7/20**	**Thu 6/8/20**	**754 days**	
444		Carrying out reinstatement works	30 days	Wed 8/7/20	Thu 6/8/20	754 days	440
445		**Maintenance Period (12 months of DLP)**	**1069 days**	**Fri 27/9/19**	**Tue 30/8/22**	**0 days**	
446		**Outstanding works and defects**	**365 days**	**Tue 31/8/21**	**Tue 30/8/22**	**0 days**	
447		Completion of outstanding works	180 days	Tue 31/8/21	Sat 26/2/22	185 days	452
448		Rectification of defects	365 days	Tue 31/8/21	Tue 30/8/22	0 days	452
449		**Landscape works**	**365 days**	**Fri 27/9/19**	**Fri 25/9/20**	**704 days**	
450		Establishment works	365 days	Fri 27/9/19	Fri 25/9/20	704 days	
451		**Final handover of the site**	**7 days**	**Tue 24/8/21**	**Mon 30/8/21**	**0 days**	
452		Pre-handover inspection	7 days	Tue 24/8/21	Mon 30/8/21	0 days	337
453		Handover of the Site	7 days	Tue 24/8/21	Mon 30/8/21	365 days	337



Project: ND/2019/06
Date: Fri 14/8/20
Revised Programme (Rev. 3)

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

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)
KTN-DMS4	297	500
FLN-DMS1	303	
FLN-DMS3	301	

Table B-2 Action and Limit Levels for 24-hour TSP

Monitoring station	Action Level (ug/m^3)	Limit Level (ug/m^3)
KTN-DMS4	192	260
FLN-DMS1	150	
FLN-DMS3	165	

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	95 percentile of baseline data	99 percentile of baseline data

averaged)*^	or 120% of upstream control station.	or 130% of upstream control station.

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

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

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

Monitoring Parameter					
Location / **Parameter**	KTN-IS1				
	Max	Min	Average	5 Percentile	1 Percentile
DO in mg/L	8.08	4.71	6.83	6.14	5.02
	Max	Min	Average	95 Percentile	99 Percentile
Turbidity in NTU	44.56	4.57	8.63	38.98	44.56
Suspended Solid in mg/L	35	2	6	31	35
Unionized ammonia in mg/L	0.0006	0.0001	0.0004	0.0005	0.0006

Nitrate nitrogen in mg/L	0.57	0.09	0.29	0.54	0.57
Orthophosphate in mg/L	0.14	0.03	0.09	0.13	0.14

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

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

Parameter	Action Level	Limit Level
Ambient Arsenic Concentration	**9.36ng/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-7.1 Action and Limit Levels and Responses to Evidence of Disturbance to Waterbirds using in Ng Tung, Sheung Yue and Shek Sheung Rivers

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

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

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

Table B-7.2 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.
Operational Phase			
Reduction in species such that Action Level response is triggered.	Investigate cause and if cause identified as related to Project review	Reduction in taxa diversity response is	Investigate cause and if cause identified as

	and adjust LVNP management measures to improve conditions for affected species.	triggered.	related to Project consider and implement additional mitigation measures.

* 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-7.3 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.
Operational Phase			
Reduction in species such that Action Level response is triggered.	Investigate cause and if cause identified as related to Project review and adjust LVNP management measures to improve conditions for affected species.	Reduction in taxa diversity response is triggered.	Investigate cause and if cause identified as related to Project consider and implement additional mitigation measures.

* 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 1701, Technology Park,
18 On Lai Street, Shatin,
N.T., Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

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

Test Report No.:	33783
Date of Issue:	2020-07-09
Date Received:	2020-07-07
Date Tested:	2020-07-07
Date Completed:	2020-07-09
Next Due Date:	2020-09-08

ATTN: **Mr. W. K. 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)	1.167

****

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

PATRICK TSE
General Manager

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

Test Report No.:	34033B
Date of Issue:	2020-09-07
Date Received:	2020-09-04
Date Tested:	2020-09-04
Date Completed:	2020-09-07
Next Due Date:	2020-11-06

ATTN: **Mr. W. K. 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)	1.130

****

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PATRICK TSE
General Manager

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N.T., Hong Kong.
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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.:	33964D
Date of Issue:	2020-08-24
Date Received:	2020-08-21
Date Tested:	2020-08-21
Date Completed:	2020-08-24
Next Due Date:	2020-10-23

Page: 1 of 1

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

Certificate of Calibration

Item for Calibration:

Description	: Dust Monitor
Manufacturer	: Met One Instruments
Model No.	: AEROCET-831
Serial No.	: X24478
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-10

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.139

****

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General Manager

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

File No. WMA20002/17/0001

Station: FLN-DMS3 - House near Tong Hang
Operator: WK
Date: 4-Aug-20
Next Due Date: 3-Oct-20
Equipment No.: WA-12-17
Serial No. 3218

Ambient Condition			
Temperature, Ta (K)	302.2	Pressure, Pa (mmHg)	754.4

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

Calibration of TSP Sampler					
Calibration Point	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	15.8	3.93	67.34	11.7	3.38
2	12.5	3.50	59.95	9.7	3.08
3	9.5	3.05	52.32	7.7	2.75
4	6.1	2.44	42.01	5.6	2.34
5	3.5	1.85	31.94	3.3	1.80

By Linear Regression of Y on X

Slope , mw = 0.0442 **Intercept, bw =** 0.4278

Correlation coefficient* = 0.9983

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 5.54

Remarks:

Conducted by: W.K. Tang Signature: Date: 4 Aug 2020

Checked by: Signature: Date: 4-8-2020

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

File No. WMA20002/20/0001

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

Operator: WK

Date: 4-Aug-20

Next Due Date: 3-Oct-20

Equipment No.: WA-12-20

Serial No. 3223

Ambient Condition			
Temperature, Ta (K)	302	Pressure, Pa (mmHg)	754.8

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

Calibration of TSP Sampler

Calibration Point	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	12.9	3.56	60.93	12.1	3.44
2	9.5	3.05	52.35	10.3	3.18
3	7.8	2.76	47.48	8.4	2.87
4	5.0	2.21	38.10	6.4	2.50
5	3.0	1.71	29.62	4.3	2.05

By Linear Regression of Y on X

Slope , mw = 0.0448 **Intercept, bw =** 0.7615

Correlation coefficient* = 0.9958

*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; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **7.38**

Remarks:

Conducted by: WK. Tang Signature: Kwai Date: 4 Aug 2020

Checked by: LEE MW Signature: Lee. Date: 4-8-2020

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

File No. WMA20002/03/0001

Station: KTN-DMS4A - Temporary Structure at Pak Shek Au
Operator: WK
Date: 18-Aug-20
Next Due Date: 17-Oct-20
Equipment No.: WA-11-03
Serial No. 3225

Ambient Condition			
Temperature, Ta (K)	298.9	Pressure, Pa (mmHg)	756.2

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

Calibration of RSP Sampler

Calibration Point	ORIFICE					HVS	
	ΔH(orifice), in. of water	Del Hc (1)	Qstd (2) (CFM)	Qa (3) (CFM) **X -axis**	Qa (3) (m^3/min) **X -axis**	ΔW (HVS), in. of water	$[\Delta W \times (Ta + 30) / Pa]^{1/2}$ **Y-axis**
1	8.7	8.63	50.42	50.83	1.44	9.9	2.08
2	6.8	6.75	44.63	44.99	1.27	8.8	1.96
3	5.6	5.56	40.54	40.87	1.16	7.5	1.81
4	3.4	3.37	31.69	31.95	0.90	6.3	1.66
5	2.0	1.98	24.41	24.61	0.70	5.1	1.49

By Linear Regression of Y on X

Slope , mw = 0.0222 **Intercept, bw = 0.9368**

Correlation coefficient* = 0.9952

(1) DEL Hc = ΔH x (Pa/760*298/Ta)

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

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

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

Set Point Flow Rate., SFR

SFR = 1.13 x (760/Pa) x (Ta/298) = 40.25

Sampler Well - Type Manometer Set Point, SSP

SSP = $[(mw \times SFR + bw)^2 \times Pa] / (Ta + 30)$ = 7.72

Remarks:

Conducted by: W.K. Tang Signature: Kwai Date: 18/8/2020

Checked by: LEE MAN HOI Signature: Date: 18-8-2020

TISCH Environmental

RECALIBRATION DUE DATE:
February 18, 2021

Certificate of Calibration

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

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4340	3.2	2.00
2	3	4	1	1.0230	6.4	4.00
3	5	6	1	0.9080	8.0	5.00
4	7	8	1	0.8680	8.8	5.50
5	9	10	1	0.7160	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
1.0001	0.6975	1.4173	0.9958	0.6944	0.8836
0.9959	0.9735	2.0044	0.9915	0.9692	1.2496
0.9937	1.0944	2.2410	0.9894	1.0896	1.3971
0.9927	1.1436	2.3504	0.9883	1.1386	1.4653
0.9873	1.3790	2.8347	0.9830	1.3729	1.7672
QSTD	**m=**	**2.07675**	**QA**	**m=**	**1.30043**
	b=	**-0.02681**		**b=**	**-0.01672**
	r=	**0.99993**		**r=**	**0.99993**

Calculations

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

For subsequent flow rate calculations:

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

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

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg

Key

- ΔH: calibrator manometer reading (in H2O)
- ΔP: rootsmeter manometer reading (mm Hg)
- Ta: actual absolute temperature (°K)
- Pa: actual barometric pressure (mm Hg)
- b: intercept
- m: slope

RECALIBRATION

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

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

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

WELLAB LIMITED
Rms 1214, 1502, 1516, 1701 & 1716,
Technology Park, 18 On Lai Street,
Shatin, N.T., Hong Kong.
Tel: 2898 7388 Fax: 2898 7076
Website: www.wellab.com.hk

TEST REPORT

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

Test Report No.:	32049A
Date of Issue:	2019-09-16
Date Received:	2019-09-13
Date Tested:	2019-09-13
Date Completed:	2019-09-16
Next Due Date:	2020-09-15
Page:	1 of 1

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

Certificate of Calibration

Item for calibration:

Description	: 'SVANTEK' Integrating Sound Level Meter
Manufacturer	: SVANTEK
Model No.	: SVAN 977
Serial No.	: 45482
Microphone No.	: 63626
Equipment No.	: N-08-14

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

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

Patrick Tse
PATRICK TSE
General Manager

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TEST REPORT

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

Test Report No.:	32667
Date of Issue:	2019-12-06
Date Received:	2019-12-04
Date Tested:	2019-12-04
Date Completed:	2019-12-06
Next Due Date:	2020-12-05

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

Certificate of Calibration

Item for calibration:

Description	: Sound & Vibration Analyser
Manufacturer	: BSWA
Model No.	: BSWA 801
Serial No.	: 35924
Equipment No.	: N-13-01

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

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

Patrick Tse
PATRICK TSE
General Manager

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TEST REPORT

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

Test Report No.:	32667B
Date of Issue:	2019-12-06
Date Received:	2019-12-04
Date Tested:	2019-12-04
Date Completed:	2019-12-06
Next Due Date:	2020-12-05

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

Certificate of Calibration

Item for calibration:

Description	: Sound & Vibration Analyser
Manufacturer	: BSWA
Model No.	: BSWA 801
Serial No.	: 35927
Equipment No.	: N-13-03

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

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

Patrick Tse

PATRICK TSE
General Manager

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TEST REPORT

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

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

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

Certificate of Calibration

Item for calibration:

Description	: Sound Level Meter
Manufacturer	: BSWA
Model No.	: BSWA 308
Serial No.	: 580005
Equipment No.	: WN-01-03

Test conditions:

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

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

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

Patrick Tse

PATRICK TSE
General Manager

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TEST REPORT

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

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

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 Temperatre	: 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:
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PATRICK TSE
General Manager

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TEST REPORT

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

Test Report No.:	32243
Date of Issue:	2019-09-30
Date Received:	2019-09-27
Date Tested:	2019-09-27
Date Completed:	2019-09-30
Next Due Date:	2020-09-29

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

Certificate of Calibration

Item for calibration:

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

Test conditions:

Room 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 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

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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.:	33963A
Date of Issue:	2020-08-21
Date Received:	2020-08-19
Date Tested:	2020-08-19
Date Completed:	2020-08-21
Next Due Date:	2021-08-20

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

Certificate of Calibration

Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 24791
Equipment No.	: N-09-04

Test conditions:

Room 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 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

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

PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab Limited**
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18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	33963
Date of Issue:	2020-08-21
Date Received:	2020-08-19
Date Tested:	2020-08-19
Date Completed:	2020-08-21
Next Due Date:	2021-08-20
Page:	1 of 1

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

Certificate of Calibration

Item for Calibration:

Description	: Acoustical Calibrator
Manufacturer	: 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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General Manager

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FIREMARK

Calibration Certificate

Number: CCP/80000

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

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

Next Calibration Date: 30th July 2021

Remarks: Instrument PASSED – fit for service.

Authorized Signature

Technical Department
Date: 31st July 2020

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

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 (September 2020)

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

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)
Remarks:
*Monitoring session would be conducted by portable TSP monitor.

Environmental Permit(s)	Contract No.	Air Quality Stations	Noise Stations
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	**<u>1hr TSP and 24hr TSP</u>** KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)	--
EP-468/2013/A	ND/2019/03		
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	**<u>24hr RSP (Arsenic)</u>** KTN-DMS4A - Temporary Structure at Pak Shek Au	--
EP-468/2013/A	ND/2019/03		
EP-467/2013/A EP-468/2013/A(1)	ND/2019/01	--	CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung
EP-468/2013/A(2)	ND/2019/01	--	CP-KTN-NMS3 -Fung Kong Garden
EP-470/2013	ND/2019/01	--	CP-KTN-NMS5 - N/A
EP-473/2013/A(3)	ND/2019/03	**<u>1hr TSP and 24hr TSP</u>** FLN-DMS1 - Scattered Village Houses North of Proposed Potential Ecopark	--
EP-473/2013/A(4)	ND/2019/05	**<u>1hr TSP and 24hr TSP</u>** FLN-DMS3 - House near Tong Hang	--
EP-473/2013/A(5)	ND/2019/05	--	CP-FLN-NMS2 - Scattered Village Houses in Tong Hang
EP-473/2013/A	ND/2019/05	--	CP-FLN-NMS1 - Belair Monte
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 FLN-DMS1 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05
4. Since the distance between monitoring station FLN-DMS3 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/03
5. Since the distance between monitoring station CP-FLN-NMS2 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03

Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Impact Ecological Monitoring Schedule (September 2020)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Sep	2-Sep	3-Sep	4-Sep	5-Sep
6-Sep	7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep
		T3(1), T5(1) High tide: Start time: 14:00 Low tide: Start time: 09:00				
13-Sep	14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep
		T3(1), T5(1) 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 **T1, T6**	
20-Sep	21-Sep	22-Sep	23-Sep	24-Sep	25-Sep	26-Sep
		T3(1), T5(1) High tide: Start time: 14:00 Low tide: Start time: 09:00	Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream **MS_01 - MS_10**		Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution **T4, T5**	
27-Sep	28-Sep	29-Sep	30-Sep			
		T3(1), T5(1) High tide: Start time: 10:00 Low tide: Start time: 14:00				

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

Item	Activity	Monitoring Stations/Transects
1	Monitoring of Measures to Minimise Disturbance to Water Birds on Sheung Yue River, and Long Valley	T3. Sheung Yue River T5. Long Valley
2	Monitoring of Measures to Minimise Impacts to Ma Tso Lung Stream	MS_01, MS_02, MS_03, MS_04, MS_05, MS_06, MS_07, MS_08, MS_09, MS_10
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
		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 September 2020

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

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

Contract No. NDO 04/2019
Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas
Tentative Impact Air Quality and Noise Monitoring Schedule (October 2020)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1-Oct	**2-Oct**	3-Oct
						24hr RSP (Arsenic) KTN-DMS4A
4-Oct	5-Oct	6-Oct	7-Oct	8-Oct	9-Oct	10-Oct
	1hr TSP* X3, 24hr TSP* KTN-DMS4 **24hr TSP** FLN-DMS1, FLN-DMS3 **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5	**1hr TSP* X3** FLN-DMS1, FLN-DMS3 **Noise** CP-FLN-NMS1, CP-FLN-NMS2		**24hr RSP (Arsenic)** KTN-DMS4A	**1hr TSP* X3, 24hr TSP*** KTN-DMS4 **24hr TSP** FLN-DMS1, FLN-DMS3	
11-Oct	12-Oct	13-Oct	14-Oct	15-Oct	16-Oct	17-Oct
	1hr TSP* X3 FLN-DMS1, FLN-DMS3 **Noise** CP-FLN-NMS1, CP-FLN-NMS2		**24hr RSP (Arsenic)** KTN-DMS4A	**1hr TSP* X3, 24hr TSP*** KTN-DMS4 **24hr TSP** FLN-DMS1, FLN-DMS3 **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5	**1hr TSP* X3** FLN-DMS1, FLN-DMS3	
18-Oct	19-Oct	20-Oct	21-Oct	22-Oct	23-Oct	24-Oct
		24hr RSP (Arsenic) KTN-DMS4A	**1hr TSP* X3, 24hr TSP*** KTN-DMS4 **24hr TSP** FLN-DMS1, FLN-DMS3 **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6	**1hr TSP* X3** FLN-DMS1, FLN-DMS3 **Noise** CP-FLN-NMS1, CP-FLN-NMS2		**24hr RSP (Arsenic)** KTN-DMS4A
25-Oct	**26-Oct**	27-Oct	28-Oct	29-Oct	30-Oct	31-Oct
		1hr TSP* X3, 24hr TSP* KTN-DMS4 **24hr TSP** FLN-DMS1, FLN-DMS3 **Noise** CP-KTN-NMS2, CP-KTN-NMS3, CP-KTN-NMS5, CP-KTN-NMS6	**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	--
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/2019/05	--	CP-FLN-NMS2 - Scattered Village Houses in Tong Hang
EP-473/2013/A	ND/2019/05	--	CP-FLN-NMS1 - Belair Monte
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 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/03
6. Since the distance between monitoring station CP-FLN-NMS2 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03

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 (October 2020)

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

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

Item	Activity	Monitoring Stations/Transects
1	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, Sheung Yue River, and Long Valley	T1. Ng Tung River T2. Ng Tung River T3. Sheung Yue River T5. Long Valley
2	Monitoring of Measures to Minimise Impacts 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 October 2020

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

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 (µg/m^3)
3-Sep-20	9:00	Cloudy	111.1
3-Sep-20	10:00	Cloudy	112.0
3-Sep-20	11:00	Cloudy	117.9
9-Sep-20	8:30	Cloudy	85.2
9-Sep-20	9:30	Cloudy	76.0
9-Sep-20	10:30	Cloudy	79.0
15-Sep-20	8:30	Cloudy	88.7
15-Sep-20	9:30	Cloudy	96.0
15-Sep-20	10:30	Cloudy	87.2
21-Sep-20	8:30	Cloudy	65.2
21-Sep-20	9:30	Cloudy	88.5
21-Sep-20	10:30	Cloudy	84.5
25-Sep-20	9:00	Cloudy	85.1
25-Sep-20	10:00	Cloudy	99.2
25-Sep-20	11:00	Cloudy	72.3
30-Sep-20	15:00	Cloudy	73.1
30-Sep-20	16:00	Cloudy	80.1
30-Sep-20	17:00	Cloudy	71.5
		Average	87.4
		Maximum	117.9
		Minimum	65.2

Location FLN-DMS3 - House near Tong Hang			
Date	Time	Weather	Particulate Concentration (µg/m^3)
3-Sep-20	14:00	Cloudy	130.5
3-Sep-20	15:00	Cloudy	117.1
3-Sep-20	16:00	Cloudy	118.6
9-Sep-20	13:00	Cloudy	74.8
9-Sep-20	14:00	Cloudy	62.0
9-Sep-20	15:00	Cloudy	59.6
15-Sep-20	13:15	Windy	118.2
15-Sep-20	14:15	Windy	130.8
15-Sep-20	15:15	Windy	135.9
21-Sep-20	13:00	Cloudy	50.3
21-Sep-20	14:00	Cloudy	73.0
21-Sep-20	15:00	Cloudy	43.1
25-Sep-20	13:00	Cloudy	98.9
25-Sep-20	14:00	Cloudy	70.7
25-Sep-20	15:00	Cloudy	64.4
30-Sep-20	10:00	Cloudy	89.2
30-Sep-20	11:00	Cloudy	51.3
30-Sep-20	13:45	Cloudy	55.0
		Average	85.7
		Maximum	135.9
		Minimum	43.1

Appendix E - 1-hour TSP Monitoring Results

Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration (µg/m^3)
1-Sep-20	9:00	Sunny	58.2
1-Sep-20	10:00	Sunny	61.0
1-Sep-20	11:00	Sunny	58.2
7-Sep-20	9:00	Cloudy	40.2
7-Sep-20	10:00	Cloudy	38.5
7-Sep-20	11:00	Cloudy	51.0
11-Sep-20	13:00	Sunny	26.5
11-Sep-20	14:00	Sunny	27.9
11-Sep-20	15:00	Sunny	30.6
17-Sep-20	9:00	Cloudy	67.3
17-Sep-20	10:00	Cloudy	63.0
17-Sep-20	11:00	Cloudy	40.1
23-Sep-20	9:00	Sunny	61.1
23-Sep-20	10:00	Sunny	52.3
23-Sep-20	11:00	Sunny	57.7
29-Sep-20	13:00	Cloudy	61.7
29-Sep-20	14:00	Cloudy	68.1
29-Sep-20	15:00	Cloudy	62.0
		Average	51.4
		Maximum	68.1
		Minimum	26.5

Appendix E - 24-hour TSP Monitoring Results

Location KTN-DMS4 - Temporary Structure near Fanling Highway			
Date	Time	Weather	Particulate Concentration (µg/m^3)
1-Sep-20	9:00	Sunny	108.2
7-Sep-20	9:00	Rainy	148.8
11-Sep-20	10:00	Sunny	106.2
17-Sep-20	9:00	Cloudy	68.5
23-Sep-20	9:00	Sunny	98.0
29-Sep-20	11:20	Cloudy	99.0
		Minimum	68.5
		Maximum	148.8
		Average	104.8

Appendix E - 24-hour TSP Monitoring Results

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

Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. ($\mu g/m^3$)
			Initial	Final		Initial	Final		Initial	Final			
2-Sep-20	Cloudy	300.6	3.4803	3.6235	0.1432	3491.9	3515.9	24.0	1.23	1.23	1.23	1765.4	81.1
8-Sep-20	Cloudy	300.6	3.2733	3.3160	0.0427	3515.9	3539.9	24.0	1.23	1.23	1.23	1771.7	24.1
14-Sep-20	Cloudy	300.8	3.4897	3.5426	0.0529	3539.9	3563.9	24.0	1.23	1.23	1.23	1771.5	29.9
18-Sep-20	Cloudy	299.0	3.5006	3.5435	0.0429	3563.9	3587.9	24.0	1.23	1.24	1.23	1777.4	24.1
24-Sep-20	Cloudy	300.8	3.4866	3.5556	0.0690	3587.8	3611.8	24.0	1.23	1.23	1.23	1771.7	38.9
30-Sep-20	Cloudy	299.0	3.5069	3.5618	0.0549	3611.9	3635.9	24.0	1.23	1.24	1.23	1775.7	30.9
												Min	24.1
												Max	81.1
												Average	38.2

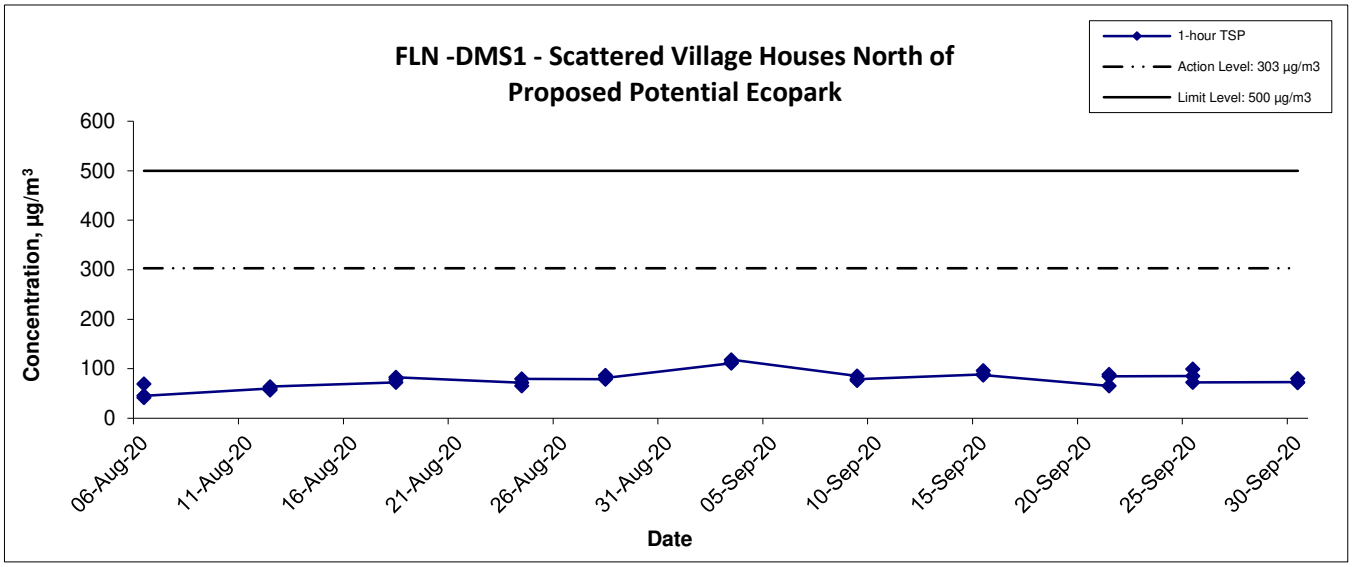
Location FLN-DMS3 - House near Tong Hang

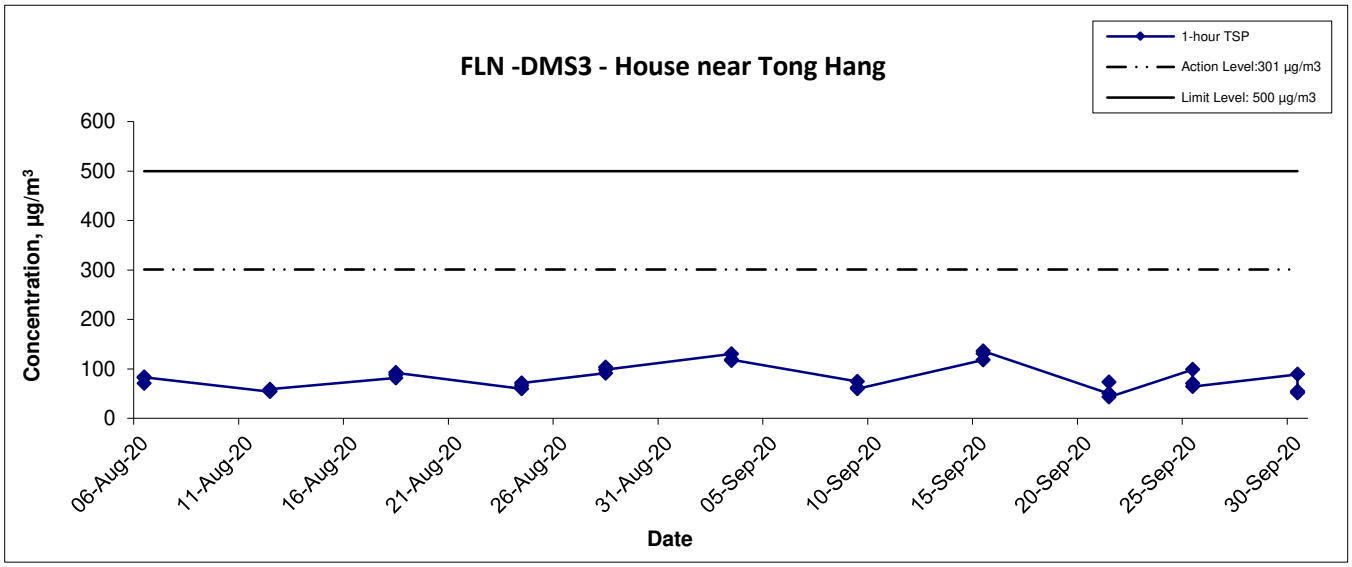
Start Date	Weather Condition	Air Temp. (K)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. ($\mu g/m^3$)
			Initial	Final		Initial	Final		Initial	Final			
2-Sep-20	Cloudy	300.6	3.4885	3.6405	0.1520	4533.0	4557.0	24.0	1.22	1.22	1.22	1754.7	86.6
8-Sep-20	Cloudy	300.5	3.3067	3.3523	0.0456	4557.0	4581.0	24.0	1.22	1.22	1.22	1758.5	25.9
14-Sep-20	Cloudy	300.8	3.5114	3.5740	0.0626	4581.0	4605.0	24.0	1.22	1.22	1.22	1758.7	35.6
18-Sep-20	Cloudy	299.0	3.4799	3.5180	0.0381	4625.0	4649.0	24.0	1.22	1.23	1.23	1764.0	21.6
24-Sep-20	Cloudy	300.9	3.4983	3.5810	0.0827	4629.0	4653.0	24.0	1.22	1.22	1.22	1757.9	47.0
30-Sep-20	Cloudy	299.1	3.4931	3.5484	0.0553	4653.0	4677.0	24.0	1.22	1.23	1.22	1762.0	31.4
												Min	21.6
												Max	86.6
												Average	41.4

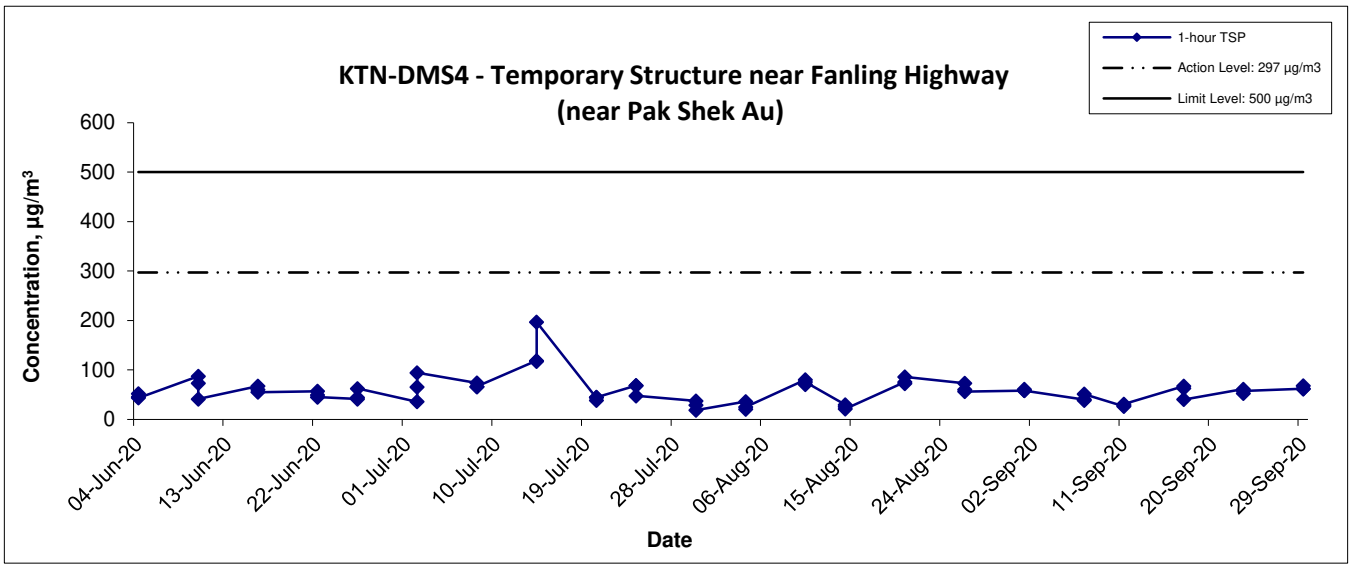
Appendix E - Ambient Arsenic Monitoring Results

Location KTN-DMS4(A) - Temporary Structure at Pak Shek Au			
Date	Arsenic (µg)	Standard Volume, Vstd (m^3)	Ambient Arsenic Concentration (ng/m^3)
4-Sep-20	6.2	1642.0	3.78
10-Sep-20	2.0	1636.6	1.22
16-Sep-20	1.1	1642.8	0.67
22-Sep-20	2.3	1635.2	1.41
28-Sep-20	3.3	1633.1	2.02

1-hr TSP Concentration Levels

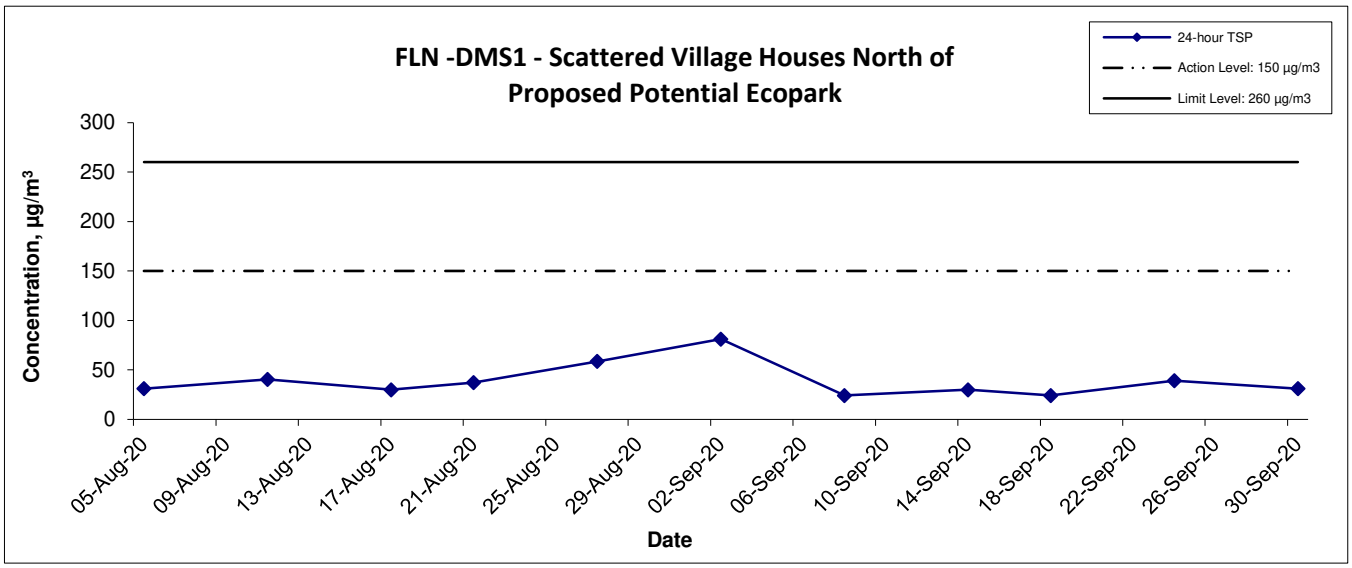


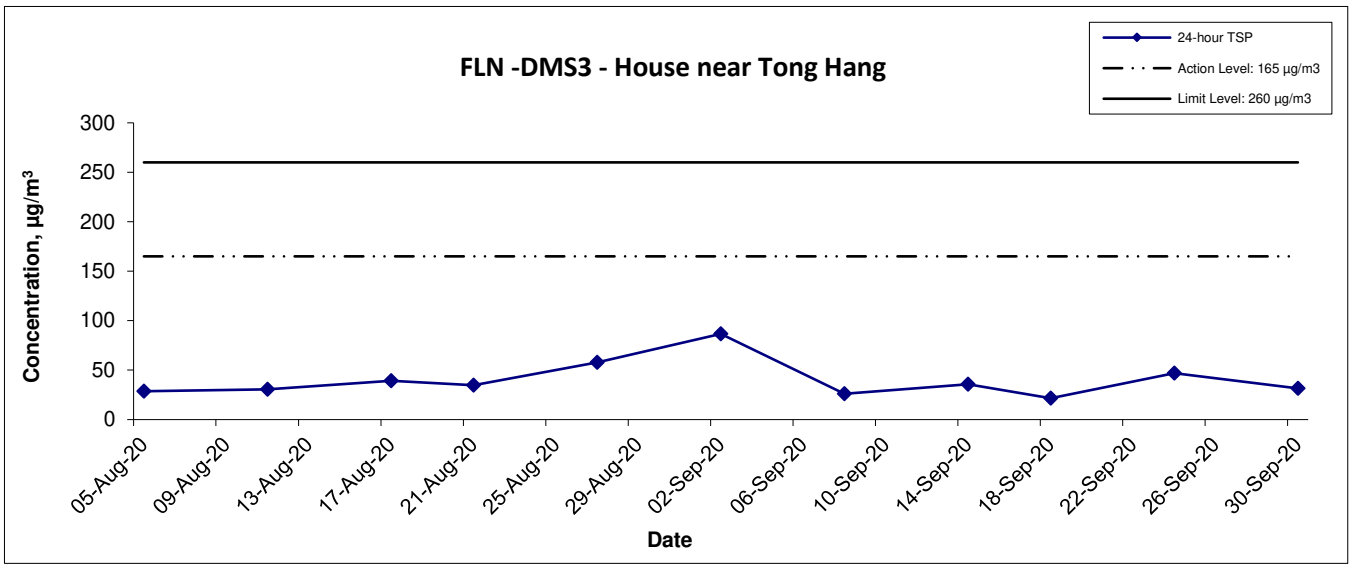


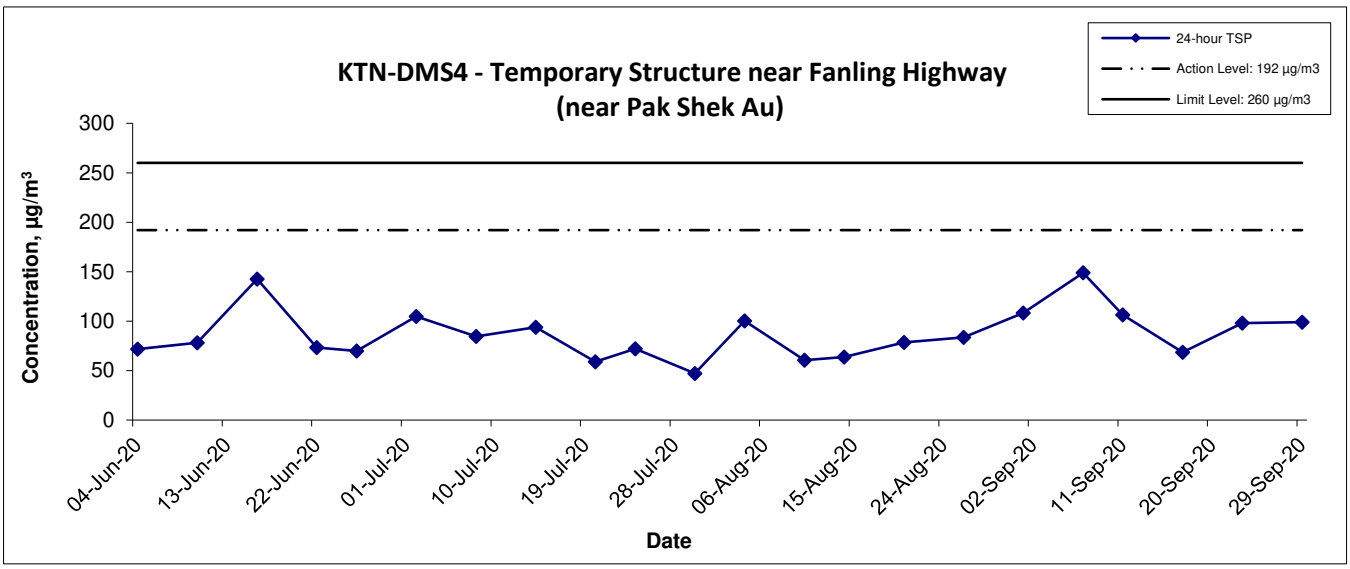


Title	Scale	Project No.	
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of 1-hour TSP Monitoring Results	N.T.S	WMA20002	WELLAB 匯力 consulting . testing . research
	Date Sep 20	Appendix E	

24-hr TSP Concentration Levels

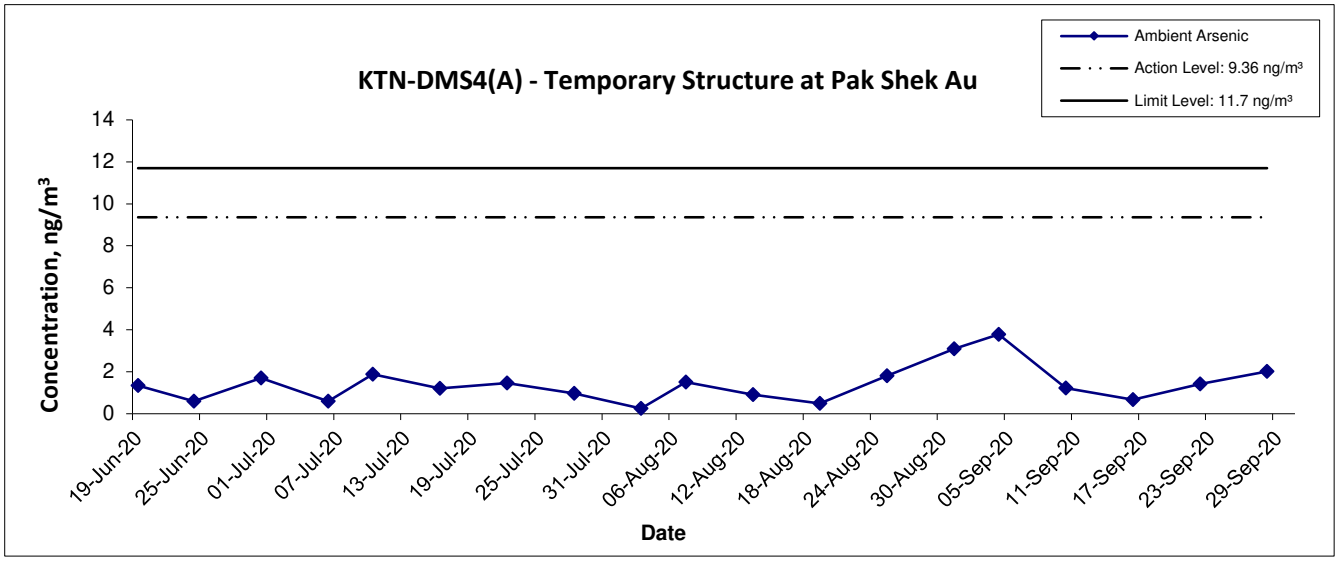






Title	Scale	Project No.	
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas	N.T.S	WMA20002	WELLAB 匯力 consulting . testing . research
Graphical Presentation of 24-hour TSP Monitoring Results	Date Sep 20	Appendix E	

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 Sep 20	Appendix E	

Table I - Ambient Arsenic Concentration on 4th September 2020

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 34032)	Standard Volume, Vstd = $Qstd_{avg}$ x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m^3	KTN-DMS4(A) - Temporary Structure at Pak Shek Au	6.2 µg	1642.0 m^3	3.78 ng/m^3	No

Table II – Action and Limit Levels for Ambient Arsenic Monitoring

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

	Name	Signature	Date
Prepared by:	Meiling Tang	Meiling	16 September 2020
Checked by:	Ivy Tam	Ivy	16 September 2020

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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.:	34032
Date of Issue:	2020-09-11
Date Received:	2020-09-07
Date Tested:	2020-09-11
Date Completed:	2020-09-11
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 34032
Project No. : WMA 20002
Project Title: Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 µg

Results:

Sample ID	200615/019
Sample No.	34032-1
Arsenic (µg)	6.2

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

Report No.:	QC34032
Date of Issue:	2020-09-11
Date Received:	2020-09-07
Date Tested:	2020-09-11
Date Completed:	2020-09-11

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)	0.07	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	107	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 (%)	101	70-130

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34032

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General Manager

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TEST REPORT

Report No.:	QC34032
Date of Issue:	2020-09-11
Date Received:	2020-09-07
Date Tested:	2020-09-11
Date Completed:	2020-09-11

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	84	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	7	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	106	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34032

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Contract No. NDO 04/2019
Advance and First Stage Works of
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24-hr RSP Air Quality Monitoring (Project No.: WMA20002)

Field Operation Data Log Sheet

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

Sampling Date & Time: From: 4 - 9 - 2020 (00 : 00) Collection Date: 7-9-2020

Operators: W.K. Weather Sunny (Cloudy) Windy Rainy

Wind: Strong Mild (Calm)

High Volume Sampler	Model no.	GMW-PM10
	Blower Motor Serial no.	3225

RSP - Respirable Suspended Particulates Sampler			
Equipment No.	NA-11-03	Set Point	7.72
Slope, m	0.0222	Intercept. b	0.93680
	Initial, I	Final, f	
Ambient Pressure (mmHg), Pa	759.6	759.2	
Ambient Temperature (K), Ta	300.0	301.5	
Delta (in. of Water), W	7.7	7.7	
$Y = [W \times (Ta+30)/Pa]^{1/2}$	1.829	1.834	
Standard flow, Qstd (m^3/min) = (Y - b)*0.0283/m	1.137	1.143	
Elapsed Timer Indicator (Hours), T	11561.04	11585.04	
Filter Identification no.	200615 1019		
Weight of Filter (g)	4.3012	4.3765	
Weight of Particulate (g)	0.0753		
Mean Standard Flow, $Qstd_{avg} = (Qstd_i + Qstd_f)/2$	1.140		
Total Time, Total Time = (Tf - Ti) x 60	1440.00		
Standard Volume, Vstd (m^3) = $Qstd_{avg}$ x Total Time	1642.0		
Particulate Concentration (μg/m^3)	45.9		
Observed Construction Activities: Main Construction Site	N.A		
Observed Construction Activities: Other Construction Site	N.A		

Remarks: Road traffic

Conducted by: Ho chi wai Signature: [signature] Date: 7-9-2020

Checked by: [signature] Signature: [signature] Date: 8/9/2020

Project No. WMA20002

Table I - Ambient Arsenic Concentration on 10th September 2020

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 34061)	Standard Volume, Vstd = $Qstd_{avg}$ x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m^3	KTN-DMS4(A) - Temporary Structure at Pak Shek Au	2.0 µg	1636.6 m^3	1.22 ng/m^3	No

Table II – Action and Limit Levels for Ambient Arsenic Monitoring

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

	Name	Signature	Date
Prepared by:	Meiling Tang	Mei	22 September 2020
Checked by:	Ivy Tam	Ivy	22 September 2020

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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.:	34061
Date of Issue:	2020-09-17
Date Received:	2020-09-11
Date Tested:	2020-09-17
Date Completed:	2020-09-17
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 34061
Project No. : WMA 20002
Project Title: Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 μg

Results:

Sample ID	200615/020
Sample No.	34061-1
Arsenic (μg)	2.0

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

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General Manager

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TEST REPORT

APPLICANT: **Wellab (EM&A)**
RM 1808, Technology Park,
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Report No.:	QC34061
Date of Issue:	2020-09-17
Date Received:	2020-09-11
Date Tested:	2020-09-17
Date Completed:	2020-09-17
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)	0.07	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	93	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	104	90-110

Interference check solution A

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

Interference check solution AB

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34061

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General Manager

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TEST REPORT

Report No.:	QC34061
Date of Issue:	2020-09-17
Date Received:	2020-09-11
Date Tested:	2020-09-17
Date Completed:	2020-09-17

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	93	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	1	RPD≤20%

Serial dilution check

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34061

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Contract No. NDO 04/2019
Advance and First Stage Works of
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24-hr RSP Air Quality Monitoring (Project No.: WMA20002)

Field Operation Data Log Sheet

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

Sampling Date & Time: From: 10 / 9 /2020 (00 : 00) Collection Date: 11 /9/2020

Operators: W.K. Tang Weather (Sunny) Cloudy Windy Rainy

Wind: Strong Mild (Calm)

High Volume Sampler	Model no.	TE-6070X
	Blower Motor Serial no.	322.5

RSP - Respirable Suspended Particulates Sampler			
Equipment No.	WA-11-03	Set Point	7.72
Slope, m	0.0222	Intercept. b	0.9368
	Initial, I	Final, f	
Ambient Pressure (mmHg), Pa	758.7	757.9	
Ambient Temperature (K), Ta	299.9	298.5	
Delta (in. of Water), W	7.7	7.7	
$Y = [W \times (Ta+30)/Pa]^{1/2}$	1.830	1.827	
Standard flow, Qstd (m^3/min) = (Y - b)*0.0283/m	1.138	1.135	
Elapsed Timer Indicator (Hours), T	11585.04	11609.04	
Filter Identification no.	200615/020		
Weight of Filter (g)	4.2592	4.3154	
Weight of Particulate (g)	0.0562		
Mean Standard Flow, $Qstd_{avg} = (Qstd_i + Qstd_f)/2$	1.136		
Total Time, Total Time = (Tf - Ti) x 60	1440.00		
Standard Volume, Vstd (m^3) = $Qstd_{avg}$ x Total Time	1636.6		
Particulate Concentration (μg/m^3)	34.3		
Observed Construction Activities	Main Construction Site	N/A	
	Other Construction Site	N/A	

Remarks: Road traffic

Conducted by: W.K. Tang Signature: Kwa Date: 11 /9 /2020

Checked by: Meily Tang Signature: Meily Date: 15/ 9/2020

Project No. WMA20002

Table I - Ambient Arsenic Concentration on 16th September 2020

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 34069)	Standard Volume, Vstd = $Qstd_{avg}$ x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m^3	KTN-DMS4(A) - Temporary Structure at Pak Shek Au	1.1 µg	1642.8 m^3	0.67 ng/m^3	No

Table II – Action and Limit Levels for Ambient Arsenic Monitoring

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

	Name	Signature	Date
Prepared by:	Meiling Tang	Meiling	30 September 2020
Checked by:	Ivy Tam	Ivy	30 September 2020

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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.:	34069
Date of Issue:	2020-09-23
Date Received:	2020-09-17
Date Tested:	2020-09-23
Date Completed:	2020-09-23
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 34069
Project No. : WMA 20002
Project Title: Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 µg

Results:

Sample ID	200615/026
Sample No.	34069-1
Arsenic (µg)	1.1

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

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General Manager

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TEST REPORT

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

Report No.:	QC34069
Date of Issue:	2020-09-23
Date Received:	2020-09-17
Date Tested:	2020-09-23
Date Completed:	2020-09-23
Page:	1 of 2

ATTN: **Ms Ivy Tam**

QC report:

Method Blank

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

Filter Lot Blank

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

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	109	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	105	90-110

Interference check solution A

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

Interference check solution AB

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34069

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General Manager

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TEST REPORT

Report No.:	QC34069
Date of Issue:	2020-09-23
Date Received:	2020-09-17
Date Tested:	2020-09-23
Date Completed:	2020-09-23

QC report:

Matrix Spike

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

Filter Duplicate

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

Serial dilution check

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34069

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

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

Field Operation Data Log Sheet

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

Sampling Date & Time: From: 16-9-2020 (0 : 00) Collection Date: 17-9-2020

Operators: Hei

Weather: Sunny Cloudy (Windy) Rainy

Wind: Strong Mild (Calm)

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

RSP - Respirable Suspended Particulates Sampler			
Equipment No.	WA-11-03	Set Point	7.72
Slope, m	0.0222	Intercept. b	0.9368
	Initial, I	Final, f	
Ambient Pressure (mmHg), Pa	758.9	758.5	
Ambient Temperature (K), Ta	299.4	301.8	
Delta (in. of Water), W	7.7	7.7	
$Y = [W \times (Ta+30)/Pa]^{1/2}$	1.828	1.835	
Standard flow, Qstd (m^3/min) = (Y - b)*0.0283/m	1.136	1.145	
Elapsed Timer Indicator (Hours), T	11609.04	11633.04	
Filter Identification no.	200618/026		
Weight of Filter (g)	4.5369	4.5763	
Weight of Particulate (g)	0.0394		
Mean Standard Flow, $Qstd_{avg} = (Qstd_i + Qstd_f)/2$	1.141		
Total Time, Total Time = (Tf - Ti) x 60	1440.00		
Standard Volume, Vstd (m^3) = $Qstd_{avg}$ x Total Time	1642.8		
Particulate Concentration ($\mu g/m^3$)	24.0		
Observed Construction Activities: Main Construction Site	N/A		
Observed Construction Activities: Other Construction Site	N/A		

Remarks: Road traffic

Conducted by: Ho Ka Chu Signature: [signature] Date: 17-9-20

Checked by: Meily Tang Signature: [signature] Date: 18/9/2020

Project No. WMA20002

Table I - Ambient Arsenic Concentration on 22nd September 2020

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 34093)	Standard Volume, Vstd = $Qstd_{avg}$ x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m^3	KTN-DMS4(A) - Temporary Structure at Pak Shek Au	2.3 µg	1635.2 m^3	1.41 ng/m^3	No

Table II – Action and Limit Levels for Ambient Arsenic Monitoring

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

	Name	Signature	Date
Prepared by:	Meiling Tang	Meiling	5 October 2020
Checked by:	Ivy Tam	Ivy	5 October 2020

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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.:	34093
Date of Issue:	2020-09-29
Date Received:	2020-09-23
Date Tested:	2020-09-29
Date Completed:	2020-09-29
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 34093
Project No. : WMA 20002
Project Title: Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 μg

Results:

Sample ID	200615/021
Sample No.	34093-1
Arsenic (μg)	2.3

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

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

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

PATRICK TSE
General Manager

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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.:	QC34093
Date of Issue:	2020-09-29
Date Received:	2020-09-23
Date Tested:	2020-09-29
Date Completed:	2020-09-29
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)	0.07	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	93	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	103	90-110

Interference check solution A

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

Interference check solution AB

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34093

****

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PATRICK TSE
General Manager

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TEST REPORT

Report No.:	QC34093
Date of Issue:	2020-09-29
Date Received:	2020-09-23
Date Tested:	2020-09-29
Date Completed:	2020-09-29

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	97	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	1	RPD≤20%

Serial dilution check

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34093

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

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

Field Operation Data Log Sheet

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

Sampling Date & Time: From: 22-9-2020 (0 : 00) Collection Date: 23-9-2020

Operators: Ka Chun

Weather: Sunny (Cloudy) Windy Rainy

Wind: Strong Mild (Calm)

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

RSP - Respirable Suspended Particulates Sampler			
Equipment No.	WA-11-03	Set Point	7.72
Slope, m	0.0222	Intercept. b	0.9368
	Initial, I	Final, f	
Ambient Pressure (mmHg), Pa	760.8	760.0	
Ambient Temperature (K), Ta	299.0	300.7	
Delta (in. of Water), W	7.7	7.7	
$Y = [W \times (Ta+30)/Pa]^{1/2}$	1.825	1.830	
Standard flow, Qstd (m^3/min) = (Y - b)*0.0283/m	1.132	1.139	
Elapsed Timer Indicator (Hours), T	11633.04	11657.04	
Filter Identification no.	200615 1021		
Weight of Filter (g)	4.2692	4.3355	
Weight of Particulate (g)	0.0663		
Mean Standard Flow, $Qstd_{avg} = (Qstd_i + Qstd_f)/2$	1.136		
Total Time, Total Time = (Tf - Ti) x 60	1440.00		
Standard Volume, Vstd (m^3) = $Qstd_{avg}$ x Total Time	1635.2		
Particulate Concentration (μg/m^3)	40.5		
Observed Construction Activities: Main Construction Site	N/A		
Observed Construction Activities: Other Construction Site	N/A		

Remarks: Road traffic

Conducted by: Ho Ka Chun Signature: Date: 23.9.2020

Checked by: Meling Tang Signature: Meling Date: 24/9/2020

Project No. WMA20002

Table I - Ambient Arsenic Concentration on 28th September 2020

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 34134)	Standard Volume, Vstd = $Qstd_{avg}$ x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m^3	KTN-DMS4(A) - Temporary Structure at Pak Shek Au	3.3 µg	1633.1 m^3	2.02 ng/m^3	No

Table II – Action and Limit Levels for Ambient Arsenic Monitoring

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

	Name	Signature	Date
Prepared by:	Meiling Tang	Meiling	6 October 2020
Checked by:	Ivy Tam	Ivy	6 October 2020

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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.:	34134
Date of Issue:	2020-10-06
Date Received:	2020-09-29
Date Tested:	2020-10-05
Date Completed:	2020-10-06
Page:	1 of 1

Sample Description : 1 sample as received from customer said to be quartz filter
Laboratory No. : 34134
Project No. : WMA 20002
Project Title: Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 µg

Results:

Sample ID	200615/022
Sample No.	34134-1
Arsenic (µg)	3.3

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

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

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PATRICK TSE
General Manager

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TEST REPORT

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

Report No.:	QC34134
Date of Issue:	2020-10-06
Date Received:	2020-09-29
Date Tested:	2020-10-05
Date Completed:	2020-10-06
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)	0.07	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	99	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	103	90-110

Interference check solution A

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

Interference check solution AB

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

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34134

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General Manager

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TEST REPORT

Report No.:	QC34134
Date of Issue:	2020-10-06
Date Received:	2020-09-29
Date Tested:	2020-10-05
Date Completed:	2020-10-06

QC report:

Matrix Spike

Parameter	Matrix Spike	Acceptance
Arsenic (%)	104	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	6	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	102	90-110

Remarks: 1) < = less than
2) N/A = Not applicable
3) This report is the summary of quality control data for report number 34134

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

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

Field Operation Data Log Sheet

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

Sampling Date & Time: From: 28/9/2020 (00 : 00) Collection Date: 29/9/2020

Operators: ~~[illegible]~~ Kwi Ka Chun Weather Sunny Cloudy Windy Rainy

Wind: Strong Mild Calm

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

RSP - Respirable Suspended Particulates Sampler			
Equipment No.	WA-11-03	Set Point	7.72
Slope, m	0.0222	Intercept. b	0.9268
	Initial, I	Final, f	
Ambient Pressure (mmHg), Pa	760.8	760.1	
Ambient Temperature (K), Ta	299.5	299.4	
Delta (in. of Water), W	7.7	7.7	
$Y = [W \times (Ta+30)/Pa]^{1/2}$	1.826	1.827	
Standard flow, Qstd (m^3/min) = (Y - b)*0.0283/m	1.134	1.134	
Elapsed Timer Indicator (Hours), T	11657.04	11681.04	
Filter Identification no.	200615/022		
Weight of Filter (g)	4.2446	4.3070	
Weight of Particulate (g)	0.0624		
Mean Standard Flow, $Qstd_{avg} = (Qstd_i + Qstd_f)/2$	1.134		
Total Time, Total Time = (Tf - Ti) x 60	1440.00		
Standard Volume, Vstd (m^3) = $Qstd_{avg}$ x Total Time	1633.1		
Particulate Concentration (μg/m^3)	38.2		
Observed Construction Activities: Main Construction Site	NA		
Observed Construction Activities: Other Construction Site	NA		

Remarks: NA

Conducted by: W.K. Tang Signature: Kwi Date: 29/9/2020

Checked by: Meiling Tang Signature: Meiling Date: 30/9/2020

Project No. WMA20002

APPENDIX F
NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATION

Appendix F - Noise Monitoring Results

Location CP-FLN-NMS1 - Belair Monte (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
3-Sep-20	Cloudy	13:00	66.0	68.8	59.9	67.4	69.9
		13:05	67.9	71.2	60.2		
		13:10	67.4	70.8	59.6		
		13:15	66.0	68.9	61.2		
		13:20	68.1	71.4	60.2		
		13:25	68.2	72.0	59.9		
9-Sep-20	Sunny	9:00	66.2	70.4	56.8	66.1	
		9:05	66.5	70.7	57.6		
		9:10	66.8	70.2	59.2		
		9:15	66.1	69.4	57.9		
		9:20	66.2	70.0	57.5		
		9:25	64.4	68.0	57.6		
15-Sep-20	Cloudy	9:00	66.4	69.7	57.1	68.6	
		9:05	68.3	71.6	60.0		
		9:10	69.4	72.7	60.8		
		9:15	68.4	72.5	59.2		
		9:20	68.5	71.5	60.1		
		9:25	69.9	72.4	60.4		
21-Sep-20	Cloudy	9:00	68.6	72.6	59.8	67.2	
		9:05	64.2	67.1	59.5		
		9:10	65.3	69.8	59.2		
		9:15	66.0	70.1	59.7		
		9:20	69.9	73.8	57.9		
		9:25	66.5	70.0	59.7		
30-Sep-20	Cloudy	13:00	67.6	70.4	63.5	68.2	
		13:05	67.7	70.9	61.4		
		13:10	68.1	71.2	61.5		
		13:15	69.3	72.2	61.3		
		13:20	68.3	71.9	61.6		
		13:25	68.0	71.1	60.6		

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}
3-Sep-20	Cloudy	14:00	57.0	57.8	56.1	56.5	59.6
		14:05	56.5	57.4	55.2		
		14:10	56.1	57.0	55.0		
		14:15	56.5	57.4	55.5		
		14:20	56.5	57.5	55.2		
		14:25	56.2	56.9	55.2		
9-Sep-20	Sunny	13:30	55.2	56.3	54.1	55.7	
		13:35	55.4	56.3	54.1		
		13:40	54.8	55.8	54.0		
		13:45	54.9	55.8	54.0		
		13:50	57.6	56.7	52.9		
		13:55	55.8	56.9	52.7		
15-Sep-20	Cloudy	13:00	62.6	64.2	61.1	62.3	
		13:05	64.2	65.3	62.7		
		13:10	61.7	62.6	60.9		
		13:15	61.6	62.4	60.1		
		13:20	61.1	62.1	60.1		
		13:25	62.1	63.9	60.1		
21-Sep-20	Cloudy	13:15	60.5	61.1	59.6	61.5	
		13:20	60.8	61.2	59.7		
		13:25	62.3	63.4	59.6		
		13:30	61.7	62.4	59.7		
		13:35	62.4	63.0	59.5		
		13:40	60.9	61.8	59.6		
30-Sep-20	Cloudy	10:00	60.5	61.0	59.8	61.1	
		10:05	60.8	61.7	60.0		
		10:10	61.4	60.8	59.9		
		10:15	60.7	61.5	60.0		
		10:20	60.4	60.8	60.0		
		10:25	62.6	63.8	60.0		

Appendix F - Noise Monitoring Results

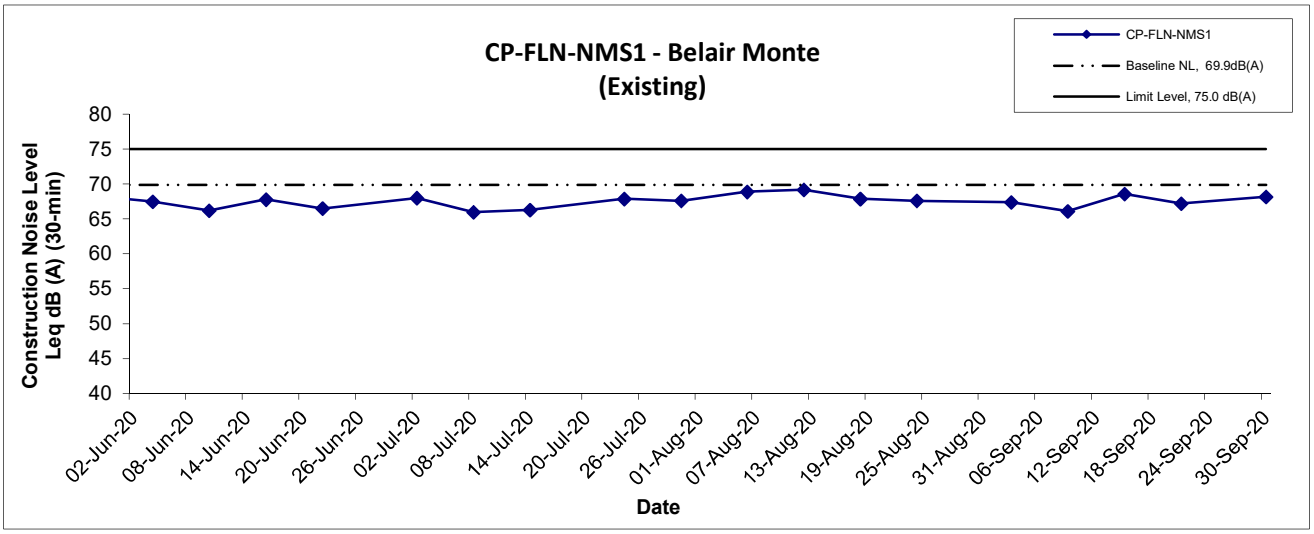
Location CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
1-Sep-20	Sunny	11:15	56.0	57.3	52.9	54.2	58.6
		11:20	53.9	54.7	52.2		
		11:25	54.5	56.0	53.2		
		11:30	53.6	54.5	52.1		
		11:35	52.7	53.8	48.2		
		11:40	53.6	54.4	52.3		
11-Sep-20	Cloudy	14:00	58.0	58.9	56.8	57.7	
		14:05	56.4	57.2	54.3		
		14:10	56.9	58.3	55.2		
		14:15	56.8	59.7	55.2		
		14:20	56.0	56.8	55.2		
		14:25	60.5	63.7	55.6		
17-Sep-20	Cloudy	13:00	59.7	60.6	53.0	55.2	
		13:05	53.5	54.6	52.4		
		13:10	52.4	55.7	53.2		
		13:15	51.6	53.8	50.6		
		13:20	54.4	56.2	51.9		
		13:25	53.5	56.7	52.6		
23-Sep-20	Sunny	9:00	56.8	57.2	55.8	56.8	
		9:05	56.9	56.8	55.8		
		9:10	56.8	57.9	56.0		
		9:15	57.5	57.1	54.8		
		9:20	55.9	56.4	55.4		
		9:25	57.0	57.8	55.3		
29-Sep-20	Cloudy	13:15	52.4	53.1	50.5	54.1	
		13:20	54.6	55.1	52.5		
		13:25	53.4	54.9	51.7		
		13:30	55.6	57.3	52.7		
		13:35	52.5	53.4	50.7		
		13:40	54.9	56.1	52.3		

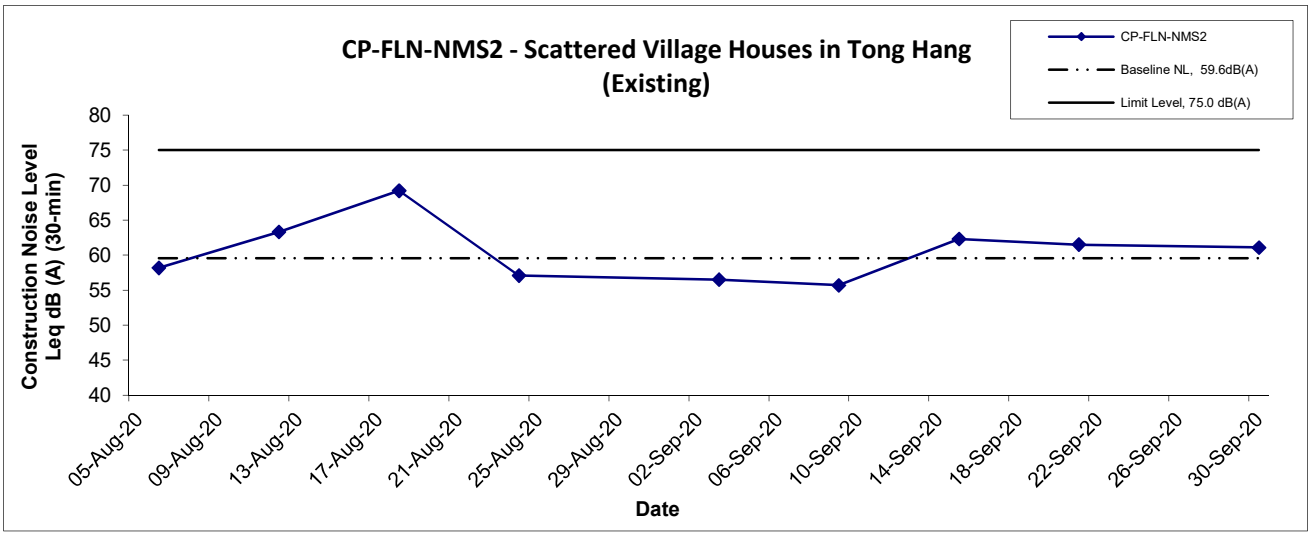
Location CP-KTN-NMS3 - Fung Kong Garden (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
1-Sep-20	Sunny	9:00	52.0	53.6	50.6	52.0	51.6
		9:05	51.2	53.7	50.2		
		9:10	51.6	53.5	50.9		
		9:15	50.8	53.0	49.9		
		9:20	52.0	53.5	50.6		
		9:25	53.7	55.6	51.8		
11-Sep-20	Cloudy	13:00	54.8	56.9	50.6	62.2	
		13:05	53.2	54.7	50.4		
		13:10	50.1	53.5	45.0		
		13:15	64.6	66.8	46.3		
		13:20	66.1	66.9	65.2		
		13:25	63.8	66.6	50.2		
17-Sep-20	Cloudy	14:00	55.6	58.4	50.4	53.0	
		14:05	53.8	56.9	52.6		
		14:10	52.5	54.9	50.8		
		14:15	51.6	54.0	50.8		
		14:20	50.8	53.3	49.4		
		14:25	51.9	54.2	50.6		
23-Sep-20	Sunny	9:50	57.5	59.3	45.7	53.5	
		9:55	54.1	56.5	46.0		
		10:00	47.1	49.6	43.7		
		10:05	52.2	52.0	45.6		
		10:10	54.2	57.3	43.6		
		10:15	45.2	48.1	41.6		
29-Sep-20	Cloudy	14:10	46.3	47.5	44.9	48.8	
		14:15	49.8	50.3	44.7		
		14:20	50.0	51.8	45.8		
		14:25	45.3	46.9	43.6		
		14:30	44.5	45.5	43.1		
		14:35	51.8	53.4	45.1		

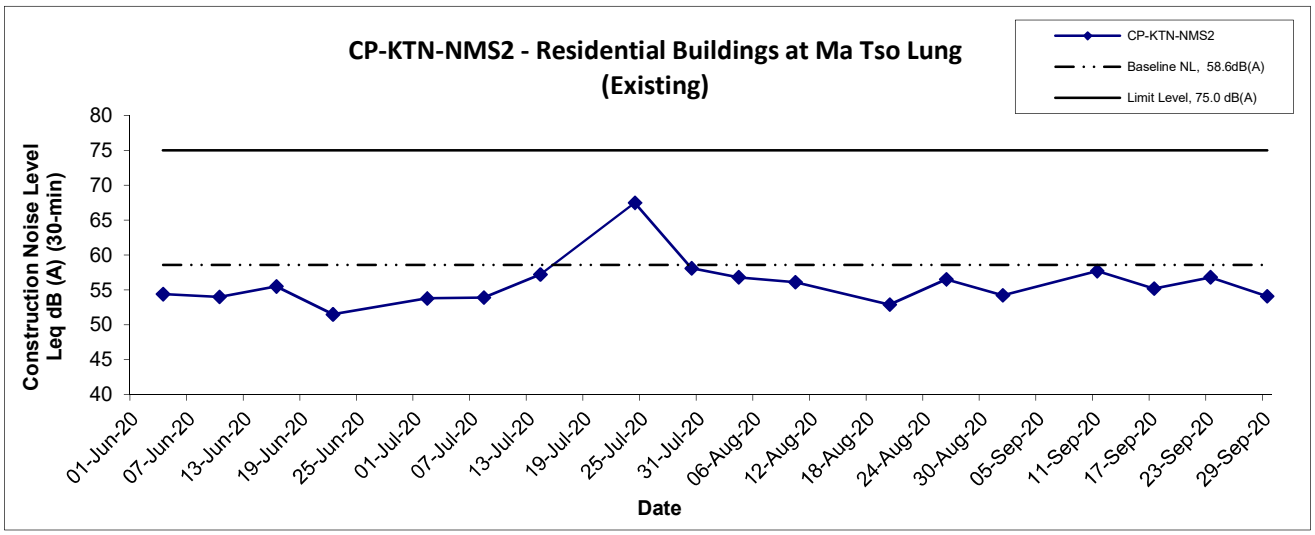
Appendix F - Noise Monitoring Results

Location CP-KTN-NMS5 - N/A							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
1-Sep-20	Sunny	10:30	54.3	55.2	48.7	54.3	57.2
		10:35	53.2	54.9	46.5		
		10:40	52.8	53.6	49.0		
		10:45	54.5	55.3	49.0		
		10:50	56.5	63.1	46.7		
		10:55	53.3	54.8	46.5		
11-Sep-20	Cloudy	15:00	51.5	52.1	50.1	58.8	
		15:05	53.7	54.3	53.1		
		15:10	58.0	58.1	53.1		
		15:15	61.1	63.4	53.2		
		15:20	54.6	55.9	53.2		
		15:25	62.9	65.8	54.0		
17-Sep-20	Sunny	11:00	57.9	64.4	56.7	56.5	
		11:05	56.4	62.8	56.6		
		11:10	54.4	55.2	49.7		
		11:15	53.3	54.9	46.2		
		11:20	52.8	53.7	49.0		
		11:25	59.7	63.4	56.8		
23-Sep-20	Sunny	11:20	52.8	54.5	48.8	55.8	
		11:25	55.0	57.9	49.4		
		11:30	55.3	59.3	49.5		
		11:35	53.2	53.6	49.2		
		11:40	55.5	59.7	49.0		
		11:45	59.4	63.5	49.7		
29-Sep-20	Cloudy	11:30	49.0	50.7	44.0	51.5	
		11:35	52.4	54.2	44.7		
		11:40	51.7	53.9	45.1		
		11:45	52.6	55.2	45.5		
		11:50	49.5	49.7	45.2		
		11:55	52.6	55.4	46.5		

Noise Levels

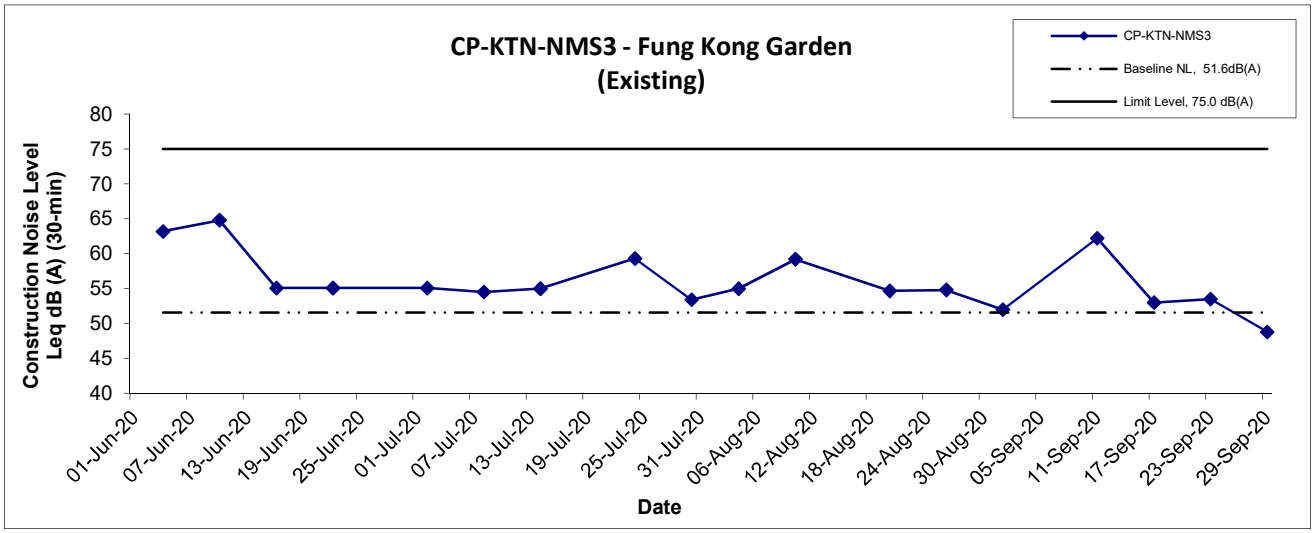


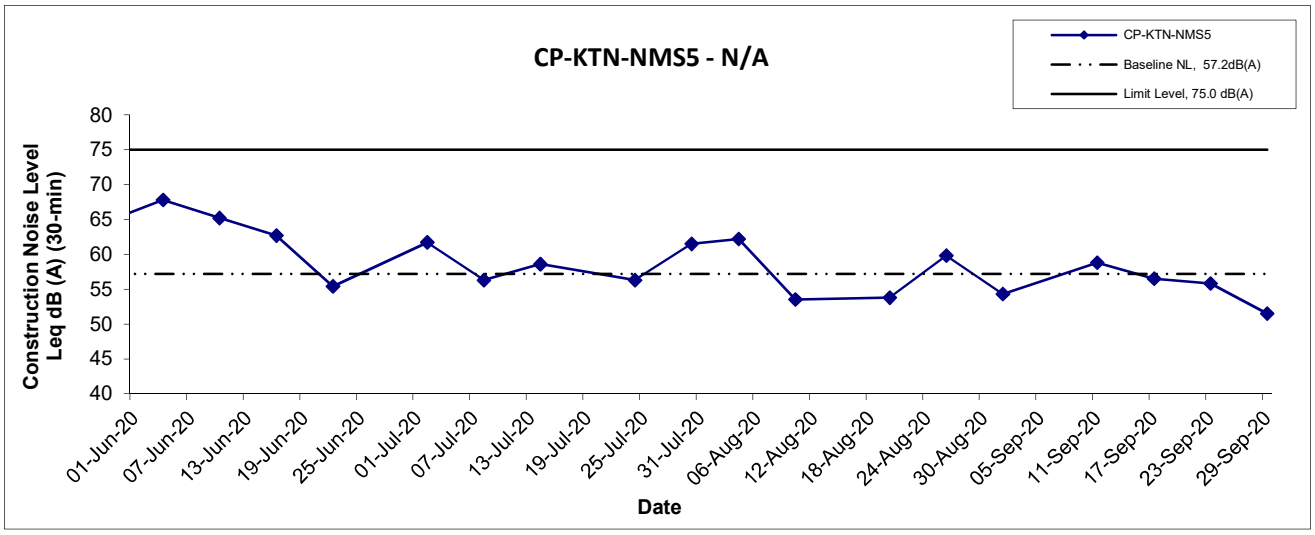




Title	Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. WMA20002	WELLAB 匯力 consulting . testing . research
		Date Sep 20	Appendix F	

Noise Levels





Title	Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. WMA20002	WELLAB 匯力 consulting . testing . research
		Date Sep 20	Appendix F	

APPENDIX G
LANDFILL GAS MONITORING RESULTS

Contract No. ND/2019/01

Development of Kwu Tung North & Fanling North New Development Area, Phase 1: Kwu Tung North New Development Area, Phase 1: Site formation & 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%
26-09-2020 8:30	CZ PT 1		20.9	0	0
26-09-2020 8:40	CZ container 1		20.9	0	0
26-09-2020 8:43	CZ container 2		20.9	0	0
26-09-2020 8:46	CZ container 3		20.9	0	0
26-09-2020 8:49	CZ container 4		20.9	0	0

Prepared by : Matthew Cheng (Safety Officer) Date : 30-09-2020

APPENDIX H
ECOLOGICAL MONITORING RESULT

Appendix H1a. Avifauna Species Recorded for Water Birds Monitoring, 8 September 2020, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	8/9/2020					
					Weather Condition	Cloudy					
					Tidal Condition	High					
					Tide Level (m)	1.9					
					Start Time	13:10					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv								14
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R				13			1	
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC		7		14			
Black Kite	*Milvus migrans*	黑鳶	R,WV	(RC), Cap.586							2
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R							3	
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)		4	5				1
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC		2					
Common Myna	*Acridothers tristis*	家八哥	UR				4				
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM		1						
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM			3	3				
Crested Myna	*Acridotheres cristatellus*	八哥	R		8		18				2
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)	8						
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R				36				
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R								5

Appendix H1a. Avifauna Species Recorded for Water Birds Monitoring, 8 September 2020, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	8/9/2020					
					Weather Condition	Cloudy					
					Tidal Condition	High					
					Tide Level (m)	1.9					
					Start Time	13:10					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	4	1	1	1			3
Magpie	*Pica pica*	喜鵲	R				1				
Magpie Robin	*Copsychus saularis*	鵲鴝	R				5				
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鶥	R				5				
Red-Rumped Swallow	*Hirundo daurica*	金腰燕	UPM								4
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		5		17				
Spotted Munia	*Lonchura punctulata*	斑文鳥	R				1				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		1	1	7				1
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R			2					
Whiter-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)			1				
Wood Sandpiper	*Tringa glareola*	林鷸	WV, PM	LC		4	26				
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R		1					1	1
Total No. of Species					7	8	15	2	0	3	9
Total No. of Conservation Interest Species					2	5	4	2	0	0	3

Appendix H1a. Avifauna Species Recorded for Water Birds Monitoring, 8 September 2020, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	8/9/2020					
					Weather Condition	Cloudy					
					Tidal Condition	High					
					Tide Level (m)	1.9					
					Start Time	13:10					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; UPM – Uncommon passage migrant; SPM – Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix H1b. Avifauna Species Recorded for Water Birds Monitoring, 8 September 2020, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	8/9/2020					
					Weather Condition	Rainy					
					Tidal Condition	Low					
					Tide Level (m)	1.03					
					Start Time	10:15					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv				1				1
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv								3
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R			2	10			9	
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC		4	6	13			
Chestnut Munia	*Lonchura atricapilla*	栗腹文鳥	R				2				
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R				1				1
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	2	3	5	1			1
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU	2		1				
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC	1	2					
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R		2						
Common Myna	*Acridotheres tristis*	家八哥	UR		1						
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM			2					
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵯	R				3				
Crested Myna	*Acridotheres cristatellus*	八哥	R				27			2	14
Domestic Pigeon	*Columba livia*	原鴿	R				3				

Appendix H1b. Avifauna Species Recorded for Water Birds Monitoring, 8 September 2020, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	8/9/2020					
					Weather Condition	Rainy					
					Tidal Condition	Low					
					Tide Level (m)	1.03					
					Start Time	10:15					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV			1	1				
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R				13				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	7	1					
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)							
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	1						1
Hair-crested Drongo	*Dicrurus hottentottus*	髮冠卷尾	PM, SV				1				
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R								2
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	11	3	3	6			3
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC		2					
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R								
Magpie	*Pica pica*	喜鵲	R				3				
Magpie Robin	*Copsychus saularis*	鵲鴝	R				2				
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鶥	R				2				
Plain Prinia	*Prinia inornata*	純色鷦鶯	R				1				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		6	1	12				1

Appendix H1b. Avifauna Species Recorded for Water Birds Monitoring, 8 September 2020, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	8/9/2020					
					Weather Condition	Rainy					
					Tidal Condition	Low					
					Tide Level (m)	1.03					
					Start Time	10:15					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Spotted Munia	*Lonchura punctulata*	斑文鳥	R				34				
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)		1	3				
White Wagtail	*Motacilla alba*	白鶺鴒	WV, PM			2	8				
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R				1				
Wood Sandpiper	*Tringa glareola*	林鷸	WV, PM	LC		23	2				
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R							3	
Total No. of Species					9	13	24	3	0	3	9
Total No. of Conservation Interest Species					6	8	6	3	0	0	3

Appendix H1b. Avifauna Species Recorded for Water Birds Monitoring, 8 September 2020, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	8/9/2020					
					Weather Condition	Rainy					
					Tidal Condition	Low					
					Tide Level (m)	1.03					
					Start Time	10:15					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; UPM – Uncommon passage migrant; SPM – Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
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(VU): Vulnerable in China Red Data Book Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix H1c. Avifauna Species Recorded for Water Birds Monitoring, 15 September 2020, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	15/9/2020					
					Weather Condition	Rainy					
					Tidal Condition	High					
					Tide Level (m)	2.31					
					Start Time	10:04					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv				1				6
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv			1	2				
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R			8				2	2
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				16			1
Chestnut Munia	*Lonchura atricapilla*	栗腹文鳥	R			2					
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R				2			2	2
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	5		11	2			2
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC	1						
Common Moorhen	*Gallinula chloropus*	黑水雞	R					6			
Common Myna	*Acridotheres tristis*	家八哥	UR				1				
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM			3	4				
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵯	R				6			4	
Crested Myna	*Acridotheres cristatellus*	八哥	R		1	1	42			3	16
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV			1					

Appendix H1c. Avifauna Species Recorded for Water Birds Monitoring, 15 September 2020, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	15/9/2020					
					Weather Condition	Rainy					
					Tidal Condition	High					
					Tide Level (m)	2.31					
					Start Time	10:04					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R				1				14
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	6			2			
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	2						
Kentish Plover	*Charadrius alexandrinus*	環頸鴴	WV	RC		2					
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	18	3	3				
Magpie	*Pica pica*	喜鵲	R			2	4				
Magpie Robin	*Copsychus saularis*	鵲鴝	R				1				
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鶥	R			8				2	
Sooty-headed Bulbul	*Pycnonotus aurigaster*	白喉紅臀鵯	UR				3				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		2		29		1		2
Spotted Munia	*Lonchura punctulata*	斑文鳥	R		1	2	54				44
White Headed Munia	*Lonchura maja*	白頭文鳥	R			12	3				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			4	9				7
Wood Sandpiper	*Tringa glareola*	林鷸	WV, PM	LC	2	8	7	3			

Appendix H1c. Avifauna Species Recorded for Water Birds Monitoring, 15 September 2020, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	15/9/2020					
					Weather Condition	Rainy					
					Tidal Condition	High					
					Tide Level (m)	2.31					
					Start Time	10:04					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R							1	
Total No. of Species					9	14	18	5	1	6	10
Total No. of Conservation Interest Species					6	3	3	4	0	0	2

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; UPM – Uncommon passage migrant; SPM – Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
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(VU): Vulnerable in China Red Data Book Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix H1d. Avifauna Species Recorded for Water Birds Monitoring, 15 September 2020, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	15/9/2020					
					Weather Condition	Rainy					
					Tidal Condition	Low					
					Tide Level (m)	0.5					
					Start Time	15:00					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv			4					11
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R			8	4		2	5	3
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC		3		20			1
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	4	5	2	3			1
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC	1			1			
Common Moorhen	*Gallinula chloropus*	黑水雞	R					2			
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM		1						
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM			2	2				
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵯	R			2				3	
Crested Myna	*Acridotheres cristatellus*	八哥	R		7	7	5			4	
Domestic Pigeon	*Columba livia*	原鴿	R				5				
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R				9				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	2						
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	1						1
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	5	2	3	2			2
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC		4		3			

Appendix H1d. Avifauna Species Recorded for Water Birds Monitoring, 15 September 2020, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	15/9/2020					
					Weather Condition	Rainy					
					Tidal Condition	Low					
					Tide Level (m)	0.5					
					Start Time	15:00					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Magpie	*Pica pica*	喜鵲	R			1					1
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鶥	R				4				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		6	2	12			6	3
Spotted Munia	*Lonchura punctulata*	斑文鳥	R				24				13
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			2	6				2
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)	1	1					
Wood Sandpiper	*Tringa glareola*	林鷸	WV, PM	LC		7	2	5			
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R							2	
Total No. of Species					9	14	12	7	1	5	10
Total No. of Conservation Interest Species					6	6	3	6	0	0	4

Appendix H1d. Avifauna Species Recorded for Water Birds Monitoring, 15 September 2020, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	15/9/2020					
					Weather Condition	Rainy					
					Tidal Condition	Low					
					Tide Level (m)	0.5					
					Start Time	15:00					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; UPM – Uncommon passage migrant; SPM – Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor
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VU: Vulnerable in IUCN Red List Status
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RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix H1e. Avifauna Species Recorded for Water Birds Monitoring, 22 September 2020, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	22/9/2020					
					Weather Condition	Sunny					
					Tidal Condition	High					
					Tide Level (m)	1.8					
					Start Time	14:00					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv			1	1				15
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R			1	8			3	1
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC	2		1	27			
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	1	2	4	4			
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU				1			
Common Koel	*Eudynamys scolopacea*	噪鵑	R				2				
Common Moorhen	*Gallinula chloropus*	黑水雞	R					3			
Common Myna	*Acridotheres tristis*	家八哥	UR				1				
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM		2						
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵯	R				2			4	
Crested Myna	*Acridotheres cristatellus*	八哥	R				4				
Domestic Pigeon	*Columba livia*	原鴿	R				8				
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)	1						
Eastern Yellow Wagtail	Motacilla tschutschensis	東黃鶺鴒	PM, WV			3					
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R								7

Appendix H1e. Avifauna Species Recorded for Water Birds Monitoring, 22 September 2020, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	22/9/2020					
					Weather Condition	Sunny					
					Tidal Condition	High					
					Tide Level (m)	1.8					
					Start Time	14:00					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	1			3			1
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)						1	
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV					4			
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	15		1	10			10
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC				7			
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鶥	R				3				
Plain Prinia	*Prinia inornata*	純色鷦鶯	R							1	
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		3		4			1	
Spotted Munia	*Lonchura punctulata*	斑文鳥	R		5		13				
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV				2			1	1
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R							2	
Wood Sandpiper	*Tringa glareola*	林鷸	WV, PM	LC	1		1	25			
Total No. of Species					9	4	15	9	0	7	6
Total No. of Conservation Interest Species					6	1	4	7	0	1	2

Appendix H1e. Avifauna Species Recorded for Water Birds Monitoring, 22 September 2020, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	22/9/2020					
					Weather Condition	Sunny					
					Tidal Condition	High					
					Tide Level (m)	1.8					
					Start Time	14:00					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; UPM – Uncommon passage migrant; SPM – Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix H1f. Avifauna Species Recorded for Water Birds Monitoring, 22 September 2020, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	22/9/2020					
					Weather Condition	Cloudy					
					Tidal Condition	Low					
					Tide Level (m)	0.7					
					Start Time	10:00					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv								26
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv								1
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R			1				3	
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC	1	1		23			3
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R				1				3
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	5		5	4			
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU	1						
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R		1						
Common Moorhen	*Gallinula chloropus*	黑水雞	R					2			
Common Myna	*Acridotheres tristis*	家八哥	UR		1						
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM			4	1				
Crested Myna	*Acridotheres cristatellus*	八哥	R			3	8				5
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)		1					
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV			3	5				
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R				9				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	3						

Appendix H1f. Avifauna Species Recorded for Water Birds Monitoring, 22 September 2020, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	22/9/2020					
					Weather Condition	Cloudy					
					Tidal Condition	Low					
					Tide Level (m)	0.7					
					Start Time	10:00					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV			1					
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	15		2	3			5
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC		5					
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R				1				
Magpie Robin	*Copsychus saularis*	鵲鴝	R		2		3				
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鶥	R				2			2	
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		5		9				2
Spotted Munia	*Lonchura punctulata*	斑文鳥	R			27					30
White Headed Munia	*Lonchura maja*	白頭文鳥	R			5					
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		3	1					1
Wood Sandpiper	*Tringa glareola*	林鷸	WV, PM	LC		1		17			
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R							2	
Yellow-browed Warbler	*Phylloscopus inornatus*	黃眉柳鶯	WV, SpM							1	
Total No. of Species					10	12	11	5	0	4	9
Total No. of Conservation Interest Species					5	4	2	4	0	0	2

Appendix H1f. Avifauna Species Recorded for Water Birds Monitoring, 22 September 2020, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	22/9/2020					
					Weather Condition	Cloudy					
					Tidal Condition	Low					
					Tide Level (m)	0.7					
					Start Time	10:00					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; UPM – Uncommon passage migrant; SPM – Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance
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VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
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WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix H1g. Avifauna Species Recorded for Water Birds Monitoring, 29 September 2020, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date		29/9/2020				
					Weather Condition		Cloudy with sunny intervals				
					Tidal Condition		High				
					Tide Level (m)		2.19				
					Start Time		10:15				
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv				2				2
Black Kite	*Milvus migrans*	黑鳶	R, WV	(RC), Cap.586							1
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R				7			6	2
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC		4		30			4
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R				2				
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	9	6	4	2			
Common Moorhen	*Gallinula chloropus*	黑水雞	R				8				
Common Myna	*Acridotheres tristis*	家八哥	UR				1				
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R		1						
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵯	R				4				
Domestic Pigeon	*Columba livia*	原鴿	R				2				
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)	1						
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R				7				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	13			1			1
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	2		1				
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	22	11	2	3			45

Appendix H1g. Avifauna Species Recorded for Water Birds Monitoring, 29 September 2020, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	29/9/2020					
					Weather Condition	Cloudy with sunny intervals					
					Tidal Condition	High					
					Tide Level (m)	2.19					
					Start Time	10:15					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC			10				
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R		1		2				
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鶥	R							2	
Pheasant-tailed Jacana	*Hydrophasianus chirurgus*	水雉	SPM	LC				1			
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		1		51				5
Spotted Munia	*Lonchura punctulata*	斑文鳥	R								4
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV		4	2	11				5
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R			1					
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R				1				
Wood Sandpiper	*Tringa glareola*	林鷸	WV, PM	LC				2			
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R							1	
Total No. of Species					9	5	16	6	0	3	9
Total No. of Conservation Interest Species					5	3	4	6	0	0	4

Appendix H1g. Avifauna Species Recorded for Water Birds Monitoring, 29 September 2020, High Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	29/9/2020					
					Weather Condition	Cloudy with sunny intervals					
					Tidal Condition	High					
					Tide Level (m)	2.19					
					Start Time	10:15					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; UPM – Uncommon passage migrant; SPM – Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
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WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix H1h. Avifauna Species Recorded for Water Birds Monitoring, 29 September 2020, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	29/9/2020					
					Weather Condition	Cloudy					
					Tidal Condition	Low					
					Tide Level (m)	0.69					
					Start Time	14:00					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv								1
Black Kite	*Milvus migrans*	黑鳶	R, WV	(RC), Cap.586							1
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R			7				4	
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC				32			16
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	9	5	4	8			
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC	1						
Common Moorhen	*Gallinula chloropus*	黑水雞	R					7			
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM		1						
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM				1	1			
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R				2				
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵯	R							1	
Crested Myna	*Acridotheres cristatellus*	八哥	R							2	2
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R				2				
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	9			1			
Kentish Plover	*Charadrius alexandrinus*	環頸鴴	WV	RC			1				

Appendix H1h. Avifauna Species Recorded for Water Birds Monitoring, 29 September 2020, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	29/9/2020					
					Weather Condition	Cloudy					
					Tidal Condition	Low					
					Tide Level (m)	0.69					
					Start Time	14:00					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	38		1	10			2
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC			4				
Magpie Robin	*Copsychus saularis*	鵲鴝	R				1				
Richard's Pipit	*Anthus richardi*	田鷚	WV, PM				4				
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R				21				2
Spotted Munia	*Lonchura punctulata*	斑文鳥	R				10				
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石䳭	WV				1				
White Headed Munia	*Lonchura maja*	白頭文鳥	R								20
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			1	4				3
White-shouldered Starling	*Sturnia sinensis*	灰背椋鳥	PM	LC			3				
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R			2		2			
Wood Sandpiper	*Tringa glareola*	林鷸	WV, PM	LC		19					
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R							2	
Total No. of Species					5	5	14	7	0	4	8
Total No. of Conservation Interest Species					4	2	5	4	0	0	3

Appendix H1h. Avifauna Species Recorded for Water Birds Monitoring, 29 September 2020, Low Tide

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	29/9/2020					
					Weather Condition	Cloudy					
					Tidal Condition	Low					
					Tide Level (m)	0.69					
					Start Time	14:00					
					Abundance						
					Transect Walk						
					T3	T5					
						WAL	DAL	SWH	P	Heard	Flight

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; UPM – Uncommon passage migrant; SPM – Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
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WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix H1i. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 22 September 2020, T5

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 22/9/2020					
					Start Time: 18:20					
					Abundance					
					WAL	DAL	SWH	P	Heard	Flight
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC			26			
Wood Sandpiper	*Tringa glareola*	林鷸	WV, PM	LC			7			
Total No. of Species					0	0	2	0	0	0
Total No. of Conservation Interest Species					0	0	2	0	0	0

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; UPM – Uncommon passage migrant; SPM – Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix H1j. Avifauna Species Recorded for Water Birds Monitoring, Night Survey, 29 September 2020, T5

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date: 29/9/2020					
					Start Time: 18:15					
					Abundance					
					WAL	DAL	SWH	P	Heard	Flight
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC	3		40			
Wood Sandpiper	*Tringa glareola*	林鷸	WV, PM	LC			19			
Total No. of Species					1	0	2	0	0	0
Total No. of Conservation Interest Species					1	0	2	0	0	0

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; UPM – Uncommon passage migrant; SPM – Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance
CR: Rare in China Red Data Book Status
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RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix H1k. Waterbirds Recorded in September 2020

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

Appendix H1k. Waterbirds Recorded in September 2020

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Green Sandpiper	*Tringa ochropus*	白腰草鷸		T5: Dry Agricultural Land, Shallow Water Habitat	Uncommon passage migrant and winter visitor. Found in Deep Bay area, Shuen Wan, Long Valley, Kam Tin, Shek Kong, Ho Chung.
Grey Heron	*Ardea cinerea*	蒼鷺	PRC	T3: River bank, River bed T5: Dry Agricultural Land, In flight	Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, Cape D'Aguilar.
Kentish Plover	*Charadrius alexandrinus*	環頸鴴	RC	T5: Wet Agricultural Land, Dry Agricultural Land	Abundant winter visitor. Found in Deep Bay area, Chek Lap Kok, Shuen Wan, Sai Kung, Lantau Island.
Little Egret	*Egretta garzetta*	小白鷺	PRC(RC)	T3: River bank, River bed, in flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common resident. Widely distributed in coastal area throughout Hong Kong.
Little Ringed Plover	*Charadrius dubius*	金眶鴴	LC	T3: River bed T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat	Common winter visitor and passage migrant. Widely distributed in freshwater areas throughout Hong Kong.
Pheasant-tailed Jacana	*Hydrophasianus chirurgus*	水雉	LC	T5: Shallow Water Habitat	Scarce passage migrant. Found in Deep Bay area, Kam Tin, Long Valley.
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥		T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, Heard	Common resident. Widely distributed in wetland throughout Hong Kong.
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	(LC)	T3: River bank T5: Wet Agricultural Land, Dry Agricultural Land	Common resident. Widely distributed in coastal areas throughout Hong Kong.
Wood Sandpiper	*Tringa glareola*	林鷸	LC	T3: River bed T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat	Common passage migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.

Appendix H1k. Waterbirds Recorded in September 2020

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; UPM – Uncommon passage migrant; SPM – Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond
*Source: Hong Kong Biodiversity Database, AFCD (https://www.afcd.gov.hk/English/conservation/hkbiodiversity/database/search.php)

Appendix H1l. Birds recorded in September 2020

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Barn Swallow	*Hirundo rustica*	家燕	PM, Sv	
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv	
Black Kite	*Milvus migrans*	黑鳶	R, WV	(RC), Cap.586
Black-necked Starling	*Sturnus nigricollis*	黑領椋鳥	R	
Black-winged Stilt	*Himantopus himantopus*	黑翅長腳鷸	PM	RC
Chestnut Munia	*Lonchura atricapilla*	栗腹文鳥	R	
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵯	R	
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU
Common Greenshank	*Tringa nebularia*	青腳鷸	PM, WV	RC
Common Koel	*Eudynamys scolopacea*	噪鵑	R	
Common Kingfisher	*Alcedo atthis*	普通翠鳥	R	
Common Moorhen	*Gallinula chloropus*	黑水雞	R	
Common Myna	*Acridotheres tristis*	家八哥	UR	
Common Sandpiper	*Actitis hypoleucos*	磯鷸	WV, PM	
Common Snipe	*Gallinago gallinago*	扇尾沙錐	WV, PM	
Common Tailorbird	*Orthotomus sutorius*	長尾縫葉鶯	R	
Crested Bulbul	*Pycnonotus jocosus*	紅耳鵯	R	
Crested Myna	*Acridotheres cristatellus*	八哥	R	
Domestic Pigeon	*Columba livia*	原鴿	R	

Appendix H1l. Birds recorded in July 2020

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Eastern Cattle Egret	*Bubulcus coromandus*	牛背鷺	R, PM	(LC)
Eastern Yellow Wagtail	*Motacilla tschutschensis*	東黃鶺鴒	PM, WV	
Eurasian Tree Sparrow	*Passer montanus*	樹麻雀	R	
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)
Green Sandpiper	*Tringa ochropus*	白腰草鷸	UPM, WV	
Grey Heron	*Ardea cinerea*	蒼鷺	WV	
Hair-crested Drongo	*Dicrurus hottentottus*	髮冠卷尾	PM, SV	
House Swift	*Apus nipalensis*	小白腰雨燕	SpM, R	
Kentish Plover	*Charadrius alexandrinus*	環頸鴴	WV	RC
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)
Little Ringed Plover	*Charadrius dubius*	金眶鴴	WV, PM	LC
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R	
Magpie	*Pica pica*	喜鵲	R	
Magpie Robin	*Copsychus saularis*	鵲鴝	R	
Masked Laughing Thrush	*Garrulax perspicillatus*	黑臉噪鶥	R	
Pallas's Leaf Warbler	*Phylloscopus proregulus*	黃腰柳鶯	WV	
Pheasant-tailed Jacana	*Hydrophasianus chirurgus*	水雉	SPM	LC
Plain Prinia	*Prinia inornata*	純色鷦鶯	R	
Red-Rumped Swallow	*Hirundo daurica*	金腰燕	UPM	

Appendix H1l. Birds recorded in July 2020

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Richard's Pipit	*Anthus richardi*	田鷚	WV, PM	
Sooty-headed Bulbul	*Pycnonotus aurigaster*	白喉紅臀鵯	UR	
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R	
Spotted Munia	*Lonchura punctulata*	斑文鳥	R	
Stejneger's Stonechat	*Saxicola stejnegeri*	黑喉石䳭	WV	
White Headed Munia	*Lonchura maja*	白頭文鳥	R	
White-shouldered Starling	*Sturnia sinensis*	灰背椋鳥	PM	
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV	
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R	
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R	(LC)
Wood Sandpiper	*Tringa glareola*	林鷸	WV, PM	LC
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R	
Yellow-browed Warbler	*Phylloscopus inornatus*	黃眉柳鶯	WV, SpM	

Note:
R – Resident; WV – Winter visitor; PM – Passage migrant; UPM – Uncommon passage migrant; SPM – Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor
Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)
Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance
Cap.586 : Endangered Species of Animals and Plants Ordinance
CR: Rare in China Red Data Book Status
VU: Vulnerable in IUCN Red List Status
(VU): Vulnerable in China Red Data Book Status
RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)
WAL: Wet Agricultural Land
DAL: Dry Agricultural Land
SWH: Shallow Water Habitat
P: Pond

Appendix H2. Freshwater Macroinvertebrate Species Recorded for Aquatic Fauna Monitoring

Common Name	Scientific Name	Conservation Status	Date: 23/9/2020									
			Weather: Sunny									
			Methods: Kick-netting, sweep netting and direct observation									
			Abundance									
			MS_01	MS_02	MS_03	MS_04	MS_05 *	MS_06	MS_07	MS_08	MS_09	MS_10
Apple Snail	*Pomacea canaliculata*	-									++	++
Atyid shrimp	*Caridina* sp.	-								+		
Bladder Snail	*Physella acuta*	-	+++			+						
Blood Worm	*Chironomidae*	-		+	+				+	+	+	+
Crane fly	*Tipulidae*	-			+							
Chinese River Snail	*Cipangopaludina chinensis*	-			+	+		+	+			
Damselfly	*Copera* sp.	-				+						
Freshwater Snail	*Radix plicatulus*	-	++									
	Tricula sp.	-		+	+					+	+	
Leech	Hirudinea	-							+	+		
Ram's Horn Snail	*Gyraulus convexiusculus*	-										
Red-rimmed Melania	*Melanoided tuberculata*	-		+	+				+	+	+	+
River Snail	*Sinotaia quadrata*	-				+		+	+		+	
Skimmer Dragonfly	*Orthetrum* sp.	-				+						
Threadtail Damselfly	*Prodasineura* sp.	-		+				+				

Appendix H2. Freshwater Macroinvertebrate Species Recorded for Aquatic Fauna Monitoring

Common Name	Scientific Name	Conservation Status	Date: 23/9/2020									
			Weather: Sunny									
			Methods: Kick-netting, sweep netting and direct observation									
			Abundance									
			MS_01	MS_02	MS_03	MS_04	MS_05 *	MS_06	MS_07	MS_08	MS_09	MS_10
Water Strider	*Metrocoris* sp.	-				+		+				+
	Microvelia sp.	-				++		+				
	Ptilomera tigrina	-						++	++			+
Total No. of species			2	4	5	7	0	6	6	5	5	5
Total No. of Conservation Interest Species			0	0	0	0	0	0	0	0	0	0

Note:
+: species recorded within the study area (no. of individuals from 1-10)
++: species commonly recorded within the study area (no. of individuals from 11-20)
+++: most abundant species recorded within the study area (no. of individuals from 21 and above)
*: Dry monitoring station

Appendix H3. Freshwater Fish Species Recorded for Aquatic Fauna Monitoring

Common Name	Scientific Name	Conservation Status	Date: 23/9/2020									
			Weather: Sunny									
			Methods: Kick-netting, sweep netting and direct observation									
			Abundance									
			MS_01	MS_02	MS_03	MS_04	MS_05*	MS_06	MS_07	MS_08	MS_09	MS_10
Mosquito Fish	*Gambusia affinis*	-						+	+	+		
Mozambique Tilapia	*Oreochromis mossambicus*	VU				+			+	+		
Nile Tilapia	*Oreochromis niloticus*	-				+		+	+			+
Redbelly Tilapia	*Tilapia zillii*	-				+			+			
Chinese Barb	*Barbodes semifasciolatus*	-		+								
Total No. of species			0	1	0	3	0	2	4	2	0	1
Total No. of Conservation Interest Species			0	0	0	1	0	0	1	1	0	0

Note:
VU: Vulnerable in International Union for Conservation of Nature red list
+: species recorded within the study area (no. of individuals from 1-10)
++: species commonly recorded within the study area (no. of individuals from 11-20)
+++: most abundant species recorded within the study area (no. of individuals from 21 and above)
*: Dry Monitoring Station

Appendix H4. Mammal Species Recorded for Ecologically Sensitive Habitat Monitoring, 18 and 25 September 2020

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 18/9/2020, 25/9/2020			
					Relative Abundance			
					Transect Walk			
					T1	T4	T5	T6
Domestic Cat	*Felis catus*	野貓	Uncommon	-	+			
Domestic Dog	*Canis lupus familiaris*	野狗	Common	-	+	+	+	+
Short-nosed Fruit Bat	*Cynopterus sphinx*	短吻果蝠	Very Common	Cap. 170	++	+	+	+
Total No. of species					3	2	2	2
Total No. of Conservation Interest Species					1	1	1	1

Note:
Cap. 170: Species under protection of Wild Animals Protection Ordinance (Cap. 170)
+: species recorded within transect routes
++: species commonly recorded within transect routes
+++: dominant species within transect routes

Appendix H5. Herpetofauna Species Recorded for Ecologically Sensitive Habitat Monitoring, 18 and 25 September 2020

Common Name	Species Name	Chinese Name	Conservation Status	Date: 18/9/2020, 25/9/2020			
				Relative Abundance			
				Transect Walk			
				T1	T4	T5	T6
Amphibian							
Asian Common Toad	*Bufo melanostictus*	黑眶蟾蜍	-	+	+	++	+
Asiatic Painted Frog	*Kaloula pulchra pulchra*	花狹口蛙	-	+	+		
Brown Tree Frog	*Polypedates megacephalus*	斑腿泛樹蛙	-	+			+
Greenhouse Frog	*Eleutherodactylus planirostris*	溫室蟾	-	+	+		+
Gunther's Frog	*Hylarana guentheri*	沼蛙	-	+			+
Paddy Frog	*Fejervarya limnocharis*	澤蛙	-			+	
Spotted Narrow-mouthed Frog	*Kalophrynus pleurostigma*	花細狹口蛙	-	+		+	
Reptile							
Bowring's Gecko	*Hemidactylus bowringii*	原尾蜥虎	-	+	+	+	
Changeable Lizard	*Calotes versicolor*	變色樹蜥	-	+			+
Chinese gecko	*Gekko chinensis*	中國壁虎	-	+	+	+	+
Four-Clawed Gecko	*Gehyra mutilata*	截趾虎	-	+			
Long-tailed Skink	*Mabuya longicaudata*	長尾南蜥	-	+			+
Reeve's Smooth Skink	*Scincella reevesii*	南滑蜥	-		+		
Total No. of species				11	6	5	7
Total No. of Conservation Interest Species				0	0	0	0

Appendix H5. Herpetofauna Species Recorded for Ecologically Sensitive Habitat Monitoring, 18 and 25 September 2020

Common Name	Species Name	Chinese Name	Conservation Status	Date: 18/9/2020, 25/9/2020			
				Relative Abundance			
				Transect Walk			
				T1	T4	T5	T6

Note:
+: species recorded within transect routes
++: species commonly recorded within transect routes
+++: dominant species within transect routes

Appendix H6. Butterfly Species Recorded Ecologically Sensitive Habitat Monitoring, 18 and 25 September 2020

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 18/9/2020, 25/9/2020			
					Relative Abundance			
					Transect Walk			
					T1	T4	T5	T6
Angled Castor	*Ariadne ariadne*	波蛺蝶	Common	-	+		+	
Blue Tiger	*Tirumala limniace*	青斑蝶	Common	-	+		+	
Blue-spotted Crow	*Euploea midamus*	藍點紫斑蝶	Very common	-	+	+		+
Ceylon Blue Glassy	*Ideopsis similis*	擬旖斑蝶	Very Common	-			+	
Chestnut Bob	*Iambrix salsala*	雅弄蝶	Uncommon	-	+			
Chinese Peacock	*Papilio bianor*	碧鳳蝶	Common	-	+		+	
Common Bluebottle	*Graphium sarpedon*	青鳳蝶	Common	-	+		+	
Common Evening Brown	*Melanitis leda*	暮眼蝶	Common	-			+	+
Common Five-ring	*Ypthima baldus*	矍眼蝶	Very Common	-	+			
Common Grass Yellow	*Eurema hecabe*	寬邊黃粉蝶	Very common	-	++	++	+	+
Common Indian Crow	*Euploea core*	幻紫斑蝶	Common	-	+	+	++	
Common Mormon	*Papilio polytes*	玉帶鳳蝶	Very common	-	++	++	++	+
Common Sailer	*Neptis hylas*	中環蛺蝶	Very common	-	+	+		+
Dark-brand Bush Brown	*Mycalesis mineus*	小眉眼蝶	Very common	-	+	+	+	+
Five-dot Sergeant	*Parathyma sulpitia*	殘鍔線蛺蝶	Common	-				+
Great Egg-fly	*Hypolimnas bolina*	幻紫斑蛺蝶	Common	-	+	+	++	+

Appendix H6. Butterfly Species Recorded Ecologically Sensitive Habitat Monitoring, 18 and 25 September 2020

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 18/9/2020, 25/9/2020			
					Relative Abundance			
					Transect Walk			
					T1	T4	T5	T6
Great Mormon	*Papilio memnon*	美鳳蝶	Very common	-	+		+	
Indian Cabbage White	*Pieris canidia*	東方菜粉蝶	Very common	-	+		+	+
Lemon Emigrant	*Catopsilia pomona*	遷粉蝶	Common	-	+			
Pale Grass Blue	*Pseudozizeeria maha*	酢漿灰碟	Very common	-	++	++	++	++
Paris Peacock	*Papilio paris*	巴黎翠鳳蝶	Very Common	-	+	+		
Plum Judy	*Abisara echerius*	蛇目褐蜆蝶	Very common	-		+		
Punchinello	*Zemeros flegyas*	波蜆蝶	Common	-	+		+	
Quaker	*Neopithecops zalmora*	一點灰蝶	Uncommon	-			+	
Red Helen	*Papilio Helenus*	玉斑鳳蝶	Very Common	-		+	+	
South China Bush Brown	*Mycalesis mineus*	平頂眉眼蝶	Very Common	-		+		
Spangle	*Papilio protenor*	藍鳳蝶	Very Common	-	+	+	+	+
Total No. of species					20	13	18	11
Total No. of Conservation Interest Species					0	0	0	0

Appendix H6. Butterfly Species Recorded Ecologically Sensitive Habitat Monitoring, 18 and 25 September 2020

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 18/9/2020, 25/9/2020			
					Relative Abundance			
					Transect Walk			
					T1	T4	T5	T6

Note:
LC: listed as Local Concern by Fellowes et al (2002)
#: Least concern in IUCN Red List Status
+: species recorded within transect routes
++: species commonly recorded within transect routes
+++: dominant species within transect routes

Appendix H7. Odonata Species Recorded for Ecologically Sensitive Habitat Monitoring 18 and 25 September 2020

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 18/9/2020, 25/9/2020			
					Relative Abundance			
					Transect Walk			
					T1	T4	T5	T6
Asian Amberwing	*Brachythemis contaminata*	黃翅蜻	Abundant	-	+		+	
Black Threadtail	*Prodasineura autumnalis*	烏齒原蟌	Abundant	-	+		+	+
Common Blue Skimmer	*Orthetrum glaucum*	黑尾灰蜻	Common	-				+
Common Red Skimmer	*Orthetrum pruinosum*	赤褐灰蜻	Abundant	-	+	+	+	+
Crimson Darter	*Crocothemis servilia*	紅蜻	Abundant	-	+	+	+	+
Crimson Dropwing	*Trithemis aurora*	曉褐蜻	Abundant	-	+		+	+
Green Skimmer	*Orthetrum sabina*	狹腹灰蜻	Abundant	-	+	+	+	+
Marsh Skimmer	*Orthetrum luzonicum*	呂宋灰蜻	Abundant	-	+			+
Orange-tailed Sprite	*Ceriagrion aurantiacum*	翠胸黃蟌	Abundant	-	+			
Red-faced Skimmer	*Orthetrum chrysis*	華麗灰蜻	Abundant	-	+	+		+
Russet Percher	*Neurothemis fulvia*	網脈蜻	Common	-			+	+
Scarlet Basker	*Urothemis signata*	赤斑曲鈎脈蜻	Common	LC	+			
Wandering Glider	*Pantala flavescens*	黃蜻	Abundant	-	++	+	++	++
Yellow Featherlegs	*Copera marginipes*	黃狹扇蟌	Abundant	-			+	+

Appendix H7. Odonata Species Recorded for Ecologically Sensitive Habitat Monitoring 18 and 25 September 2020

Common Name	Species Name	Chinese Name	Local Restrictedness	Conservation Status	Date: 18/9/2020, 25/9/2020			
					Relative Abundance			
					Transect Walk			
					T1	T4	T5	T6
Total No. of species					11	5	9	11
Total No. of Conservation Interest Species					1	0	0	0

Note:
LC: listed as Local Concern by Fellowes et al (2002)
+: species recorded within transect routes
++: species commonly recorded within transect routes
+++: dominant species within transect routes

APPENDIX I
WEATHER CONDITION

APPENDIX I –
GENERAL WEATHER CONDITIONS DURING THE MONITORING PERIOD

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1 Sep 2020	30.3	76	1.1
2 Sep 2020	30.0	77	0.4
3 Sep 2020	30.2	78	0.4
4 Sep 2020	29.8	82	0.1
5 Sep 2020	28.4	83	43.9
6 Sep 2020	29.1	80	-
7 Sep 2020	29.4	82	4.7
8 Sep 2020	27.1	91	68.9
9 Sep 2020	27.9	86	0.2
10 Sep 2020	28.5	83	8.2
11 Sep 2020	28.9	81	2.7
12 Sep 2020	28.2	85	27.9
13 Sep 2020	28.4	83	5.7
14 Sep 2020	28.1	85	38.2
15 Sep 2020	27.3	92	62.6
16 Sep 2020	29.5	76	4.4

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
17 Sep 2020	28.7	87	40.6
18 Sep 2020	28.3	88	15.9
19 Sep 2020	27.2	92	50.8
20 Sep 2020	28.6	83	0.7
21 Sep 2020	27.4	91	176.8
22 Sep 2020	28.6	82	0.5
23 Sep 2020	29.1	77	-
24 Sep 2020	28.5	80	0.6
25 Sep 2020	28.3	76	-
26 Sep 2020	28.0	76	Trace
27 Sep 2020	27.7	81	1.3
28 Sep 2020	26.6	87	26.2
29 Sep 2020	26.9	89	21.9
30 Sep 2020	27.4	88	104.1

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

APPENDIX J
EVENT ACTION PLANS

Appendix J:

Table J-1: Event / Action Plan for Air Quality

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

	to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC, ER and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; and 8. If exceedance stops, cease additional monitoring.	Implementation of remedial measures.		agreed proposals; and 4. Amend proposal if appropriate.
LIMIT LEVEL				
1.Exceedance for one sample	Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor, IEC and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET, ER and Contractor on possible remedial measures; 4. Advise the ER and ET on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; and 5. Amend proposal if appropriate.

		measures.		
2.Exceedance for two or more consecutive samples	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC, Contractorand 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 exceedancestops, 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 exceedancecontinues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedanceis 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 exceedanceis abated.

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

Table J-2: Event / Action Plan for Construction Noise

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level	1. Notify IEC, ER and Contractor;	1. Review the monitoring data submitted by the	1. Confirm receipt of notification of failure	1. Submit noise mitigation proposals

EVENT	ACTION			
	ET	IEC	ER	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.	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.	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	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; 7. Assess effectiveness of Contractor's remedial actions and keep IEC	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 Contractor to stop that portion of work until the exceedance is	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 determined by the ER until the exceedance is

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	informed of the results; 8. If exceedance stops, cease additional monitoring.		abated.	abated.

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative

Table J-3: Event / Action Plan for Water Quality

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action level being exceeded by one sampling day	1. Inform IEC, Contractor and ER; 2. Check monitoring data, all plant, equipment and Contractor's working methods; and 3. Discuss remedial measures with IEC and Contractor and ER.	1. Discuss with ET, ER and Contractor on the implemented mitigation measures; 2. Review proposals on remedial measures submitted by Contractor and advise the ER accordingly; and 3. Review and advise the ET and ER on the Effectiveness of the implemented mitigation measures.	1. Discuss with IEC, ET and Contractor on the Implemented mitigation measures; 2. Make agreement on the remedial measures to be implemented; 3. Supervise the implementation of agreed remedial measures.	1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the noncompliance in writing; 3. Rectify unacceptable practice; 4. Check all plant and equipment; 5. Consider changes of working methods; 6. Discuss with ER, ET and IEC and purpose remedial measures to IEC and ER; and 7. Implement the agreed mitigation measures.
Action level being exceeded	1. Repeat in-situ measurement on next day of exceedance to confirm	1. Discuss with ET, Contractor and ER on the implemented	1. Discuss with ET, IEC and Contractor on the proposed mitigation	1. Identify source(s) of impact; 2. Inform the ER and

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
by more than one consecutive sampling days	findings; 2. Inform IEC, Contractor and ER; 3. Check monitoring data, all plant, equipment and Contractor's working methods; 4. Discuss remedial measures with IEC, contractor and ER 5. Ensure remedial measures are implemented	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.	measures; 2. Make agreement on the remedial measures to be implemented; and 3. Discuss with ET,IEC and Contractor on the effectiveness of the implemented remedial measures.	confirm notification of the noncompliance in writing; 3. Rectify unacceptable practice; 4. Check all plant and equipment and consider changes of working methods; 5. Discuss with ET, IEC and ER and submit proposal of remedial measures to ER and IEC within 3 working days of notification; and 6. Implement the agreed mitigation measures.
Limit level being exceeded by one sampling day	1. Repeat measurement on next day of exceedance to confirm findings; 2. Inform IEC, Contractor and ER; 3. Rectify unacceptable practice; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Consider changes of working	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	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	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

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	methods; 6. Discuss mitigation measures with IEC, ER and Contractor; and 7. Ensure the agreed remedial measures are implemented	and ER on the effectiveness of the implemented mitigation measures.	4. Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures.	Working methods; 5. Discuss with ET, IEC and ER and submit proposal of additional mitigation measures to ER and IEC within 3 working days of notification; and 6. Implement the agreed remedial measures.
Limit level being exceeded by more than one consecutive sampling days	1. Inform IEC, contractor and ER; 2. Check monitoring data, all plant, equipment and Contractor's working methods; 3. Discuss mitigation measures with IEC, ER and Contractor; and 4. Ensure mitigation measures are implemented; and 5. Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days	1. Discuss with ET, Contractor and ER on the implemented mitigation measures; 2. Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and 3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.	1. Discuss with ET, IEC and Contractor on the implemented remedial measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the remedial measures to be implemented; 4. Discuss with ET and IEC on the effectiveness of the implemented mitigation measures; and 5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of 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

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
				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 J-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 J-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	1. Identify source, investigate	1. Check monitoring	1. Confirm receipt	1. Submit proposals for

for two or more consecutive samples	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 actions required; 7. If exceedance continues, arrange meeting with IEC and ER; and 8. If exceedance stops, cease additional 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.	of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	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.
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;	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	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

	5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	proposed remedial measures; 5. Supervise implementation of remedial measures.		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 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. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review 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 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 exceedanceis abated.	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; 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 J-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 J-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	Investigate cause and if	Reduction in taxa diversity	Investigate cause and if

diversity such that Action Level response is triggered.	cause identified as related to Project instigate remedial action to remove or reduce source of disturbance.	such that Limit Level response is trggered.	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 J-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 trggered.	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 K
SUMMARY OF EXCEEDANCE

Appendix K: 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 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

APPENDIX L
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	200901
Date	1 September 2020 (Tuesday)
Time	9:45-11:05

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	
200901-R01	• Mud or debris in channel should be cleared regularly.	D6
	E. Waste / Chemical Management	
200901-R02	• Oil leakage from equipment should be avoided.	E13
	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.:200827), no major environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	Kimmy Lui		1 September 2020
Checked by	Dr. Priscilla Choy		1 September 2020

Weekly Site Inspection Record Summary

Checklist Reference Number	200908
Date	8 September 2020 (Tuesday)
Time	9:30-11:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
200908-R01	• Chemical waste, waste oil should be stored properly in designated area.	E2
	F. Land Contamination	
200908-R02	• Holes are observed on the impermeable sheeting covering arsenic-containing soil, contractor was reminded to renew the impermeable sheeting.	F2
	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.:200901), items 200901-R01 and 200901-R02 were improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kimmy Lui		11 September 2020
Checked by	Dr. Priscilla Choy		11 September 2020

Weekly Site Inspection Record Summary

Checklist Reference Number	200914
Date	14 September 2020 (Monday)
Time	14:00-15:50

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	
200914-R01	• Chemical containers should be put in designated area properly.	E2
	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.:200908), all items were improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kimmy Lui		14 September 2020
Checked by	Dr. Priscilla Choy		14 September 2020

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	200922
Date	22 September 2020 (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	
200922-R02	• NRMM label should be replaced on regulated machine.	B24
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
200922-R01	• Chemical containers should be stored properly in designated area.	E2i
	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.:200914), all items were improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kimmy Lui		22 September 2020
Checked by	Dr. Priscilla Choy		22 September 2020

Weekly Site Inspection Record Summary

Checklist Reference Number	200929
Date	29 September 2020 (Tuesday)
Time	09:30-10:45

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• 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.:200922), all items were improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kimmy Lui		29 September 2020
Checked by	Dr. Priscilla Choy		29 September 2020

Weekly Site Inspection Record Summary

Checklist Reference Number	200904
Date	4 September 2020 (Friday)
Time	10:00-11:15

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
200904-R02	• Contractor was reminded to replace the impervious materials for covering dusty stockpile.	B2
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
200904-R01	• General refuse should be disposed of properly.	E1iii
	F. Landscape & Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.:200828), all environmental deficiency was rectified by the contractor.	

	Name	Signature	Date
Recorded by	Howard Chan	Howard	4 September 2020
Checked by	Dr. Priscilla Choy		4 September 2020

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	200911
Date	11 September 2020 (Friday)
Time	10:00-10:30

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. 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.:200904), all environmental deficiencies were rectified by the contractor.	

	Name	Signature	Date
Recorded by	Kimmy Lui		11 September 2020
Checked by	Dr. Priscilla Choy		11 September 2020

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	200917
Date	17 September 2020 (Thursday)
Time	14:00-15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape & 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.:200911), no major environmental deficiency was indentified during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan	Howard	18 September 2020
Checked by	Dr. Priscilla Choy		18 September 2020

Weekly Site Inspection Record Summary

Checklist Reference Number	200925
Date	25 September 2020 (Friday)
Time	10:00-10:45

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.:200917), no major environmental deficiency was indentified during site inspection.	

	Name	Signature	Date
Recorded by	Kimmy Lui		28 September 2020
Checked by	Dr. Priscilla Choy		28 September 2020

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	200929
Date	29 September 2020 (Tuesday)
Time	14:00-15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.:200925), no major environmental deficiency was indentified during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan		29 September 2020
Checked by	Dr. Priscilla Choy		29 September 2020

Weekly Site Inspection Record Summary

Checklist Reference Number	200909
Date	9 September 2020 (Wednesday)
Time	9:30-10:15

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
200909-R01	• Non-road Mobile Machinery (NRMM) label should be displayed on regulated machines.	B24
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
200909-R02	• Chemical waste, waste oil should be stored properly in designated areas.	E2
	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.: 200831), item 200831-R01 was improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kimmy Lui		11 September 2020
Checked by	Dr. Priscilla Choy		11 September 2020

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	200914
Date	14 September 2020 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	• No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 200909), all identified environmental deficiency was observed improved/rectified by Contractor.	

	Name	Signature	Date
Recorded by	Kenneth Leung	Leung	15 September 2020
Checked by	Dr. Priscilla Choy		15 September 2020

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	200921
Date	21 September 2020 (Monday)
Time	14:00 – 15:15

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	
200921-R01	• Chemical containers should be stored properly in designated areas.	E2i
	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.: 200914), no environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Kimmy Lui		21 September 2020
Checked by	Dr. Priscilla Choy		22 September 2020

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	200928
Date	28 September 2020 (Monday)
Time	14:00 – 15:15

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	
200928-R01	• Chemical containers should be stored in designated area properly.	E2i
	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.: 200921), all identified environmental deficiency was observed improved/rectified by Contractor.	

	Name	Signature	Date
Recorded by	Kimmy Lui		28 September 2020
Checked by	Dr. Priscilla Choy		28 September 2020

Weekly Site Inspection Record Summary

Checklist Reference Number	200903
Date	3 September 2020 (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 200827 Leung	
	• Follow-up on previous audit section (Ref. No.: ~~200903~~), all identified environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kenneth Leung	Leung	3 September 2020
Checked by	Dr. Priscilla Choy		3 September 2020

Weekly Site Inspection Record Summary

Checklist Reference Number	200911
Date	11 September 2020 (Friday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 200903), no major environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Kenneth Leung	Leung	15 September 2020
Checked by	Dr. Priscilla Choy		15 September 2020

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	200917
Date	17 September 2020 (Thursday)
Time	10:00 – 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	
200917-R01	• Contractor was reminded to clear the debris at the drainage near site boundary.	D 17
	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.: 200911), no major environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Kenneth Leung		17 September 2020
Checked by	Dr. Priscilla Choy		18 September 2020

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	200923
Date	23 September 2020 (Wednesday)
Time	10:00 – 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	
200923-R01	• Chemical containers should be stored properly in designated area.	E2i
200923-R02	• Oil leakage should be avoided and put the equipment on impervious sheeting.	E13
	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.: 200917), all environmental deficiency was improved/rectified by the Contractor	

	Name	Signature	Date
Recorded by	Kimmy Lui		23 September 2020
Checked by	Dr. Priscilla Choy		23 September 2020

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	200929
Date	29 September 2020 (Tuesday)
Time	13:45 – 14:15

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.: 200923), all environmental deficiency was improved/rectified by the Contractor	

	Name	Signature	Date
Recorded by	Kenneth Leung		30 September 2020
Checked by	Dr. Priscilla Choy		30 September 2020

APPENDIX M
ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures (What Measures)	Objectives of the recommended Measures & Main Concerns to address (What Requirements)	Who to implement the measures? (Who)	Location of the measures (Where)	When to Implement the measures? (When)	Implementation Status
Construction Dust Impact							
S3.8	D1	Mitigation measures in form of regular watering under a good site practice should be adopted. Watering once per hour on exposed worksites and haul road is proposed to achieve dust removal efficiency of 92.1%. While the above watering frequencies are to be followed, the extent of watering may vary depending on actual site conditions but should be sufficient to maintain an equivalent intensity of no less than 1.7 L/m2 to achieve the respective dust removal efficiencies	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	*
S3.8	D2	The Contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation.	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	*
S3.8	D3	Following dust suppression measures should also be incorporated by the Contractor to control the dust nuisance throughout the construction Phase • Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; • Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; • A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones; • The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle; • Where practicable, vehicle washing facilities with high	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	* * ^ *

		pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores;					^
		• When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period.					^
		• The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials;					^
		• Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously;					^
		• Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet;					^
		• Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding;					^
		• Any skip hoist for material transport should be totally enclosed by impervious sheeting;					N/A
		• 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;					N/A
		• Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed;					N/A
		• Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally					N/A

		enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and • Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.					N/A
S3.8	D4	Implement regular dust monitoring under EM&A programme during the construction stage.	Monitoring of dust impact	Contractor	Selected representative dust monitoring station	Construction phase	^
Noise Impact (Construction Phase)							
S4.9	N1	Implement the following good site management practices: • Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; • Machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; • Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works; • Mobile plant should be sited as far away from NSRs as possible and practicable; • Material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	Control construction airborne noise	Contractor	All construction sites	Construction phase	^ ^ ^ ^ ^
S4.9	N2	Install temporary site hoarding (approx 2.4m high) located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.	Reduce the construction noise levels at low-level zone of NSRs through partial	Contractor	All construction sites where practicable	Construction phase	^

			screening.				
S4.9	N3	Install movable noise barriers and full enclosure and acoustic mat, screen the noisy plants including air compressor and generator.	Screen the noisy plant items to be used at all construction sites	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N4	Use of "Quiet" Plant and Working Methods	Reduce the noise levels of plant items	Contractor	All construction sites where practicable	Construction phase	N/A
S4.9	N5	Sequencing operation of construction plants where practicable.	Operate sequentially within the same work site to reduce the construction airborne noise	Contractor	All construction sites where practicable	Construction phase	^
S4.9	N6	Implement a noise monitoring under EM&A programme.	Monitor the construction noise levels at the selected representative locations	Contractor	Selected representative noise monitoring stations	Construction phase	^
Water Quality Impact (Construction Phase)							
S5.7	W1	<u>Construction Runoff and Site Drainage</u> In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures should be provided and the Storm Water Pollution Control Plan is given below. where appropriate, should include the following: **Stormwater Pollution Control Plan** • At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal	Control construction runoff	Contractor	All construction sites	Construction phase	*

		facilities. The design of the temporary on-site drainage system will be undertaken by the Contractor prior to the commencement of construction.					
		• Diversion of natural stormwater should be provided as far as possible. The design of temporary on-site drainage should prevent runoff going through site surface, construction machinery and equipments in order to avoid or minimize polluted runoff. Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8m3 capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity shall be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped.					^
		• The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a silt/sediment trap. The silt/sediment traps should be incorporated in the permanent drainage channels to enhance deposition rates.					^
		• The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94. The detailed design of the sand/silt traps should be undertaken by the contractor prior to the commencement of construction.					^
		• Construction works should be programmed to minimize surface excavation works during the rainy seasons (April to September). All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other					N/A

		means. • All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas. • Measures should be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, it should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities. • All open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m3 should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. • Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. • Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events. • All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately				^ ^ * ^ ^ ^

		designed and sited wheel washing facilities should be provided at every construction site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. • Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources. The oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for the oil interceptors to prevent flushing during heavy rain. • Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts. • All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby. • Regular environmental audit on the construction site should be carried out in order to prevent any malpractices. Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the meander, wetlands and fish ponds.					N/A ^ ^ ^
S5.7	W2	*Stream Diversion* • In order to prevent sediment transport during riverbank works, deployment of silt curtain should be implemented,	Minimize water quality impact due to stream diversion	Contractor	All streams that required diversion	Construction phase	N/A

		especially when construction works encroach or occur in close distance to water body. It is recommended to carry out all the riverbank works and diversion works within a cofferdam or diaphragm wall and the work areas on riverbed should be kept in dry condition.					
S5.7	W3	*Groundwater from Contaminated Area* • For other inaccessible sites, site investigation is required when they are resumed and handed over to the Project Proponent to identify if contaminated groundwater is found. • If the investigation results indicated that the groundwater to be generated from construction works would be contaminated, the contaminated groundwater should be either discharged into recharged wells, or properly treated in compliance with the requirements of Technical Memorandum on Standards for Effluents Discharged into Drainage on Sewerage Systems, Inland and Coastal Waters. • If recharged well method were used, the groundwater quality in the recharged well should not be affected by recharging operation, i.e. the pollution levels of the recharged groundwater should not be higher than that in the recharging wells. • If treatment and discharge method were used, the design of wastewater treatment facilities, such as active carbon and petrol interceptor, should be submitted to the EPD and a discharge license should be obtained under the	Minimize water quality impact due to potential groundwater from contaminated area	Contractor	All identified groundwater-contaminated areas	Construction phase	N/A N/A N/A N/A

		WPCO through the Regional Offices of EPD.					
S5.7	W4	*Sewage from Workforce* Portable chemical toilets and sewage holding tanks should be provided for handling the construction sewage generated by the workforce. A licensed Contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance. Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. Regular environmental audit on the construction site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the Project would not cause water quality impact after undertaking all required measures.	Handling of site sewage	Contractor	All construction sites	Construction Phase	^
Waste Management (Construction Waste)							
S7.6	WM1	*Waste Reduction Measures* Waste reduction is best achieved at the planning and design phase, as well as by ensuring the implementation of good site practices. The following recommendations are proposed to achieve reduction: • segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal;	Reduce waste generation	Contractor	All construction sites where practicable	Prior to the commencement of construction	^

		• proper storage and site practices to minimize the potential for damage and contamination of construction materials; • plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste; • sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc); • provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.					^ ^ N/A ^
S7.6	WM2	Prepare Waste Management Plan and submit to the Engineer for approval	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	N/A
S7.6	WM3	*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	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	^ ^ ^

		collection for disposal; • Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; • Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;					^ ^
S7.6	WM4	*Storage of Waste* The following recommendation should be implemented to minimize the impacts: • Waste such as soil should be handled and stored well to ensure secure containment; • Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; • Different locations should be designated to stockpile each material to enhance reuse;	Minimize waste impacts from storage	Contractor	All construction sites	Construction phase	^ ^ ^
S7.6	WM5	*Collection and Transportation of Waste* The following recommendation should be implemented to minimize the impacts: • Remove waste in timely manner; • Employ the trucks with cover or enclosed containers for waste transportation;	Minimize waste impact from storage	Contractor	All construction sites	Construction phase	^ ^ ^

		• Obtain relevant waste disposal permits from the appropriate authorities; and • Disposal of waste should be done at licensed waste disposal facilities.					^
S7.6	WM6	*Excavated and C&D Material* Wherever practicable, C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at Public Fill Reception Facilities areas or reclamation sites. The following mitigation measures should be implemented in handling the excavated and C&D materials: • Maintain temporary stockpiles and reuse excavated fill material for backfilling; • Carry out on-site sorting; • Deliver surplus artificial hard materials to Tuen Mun Area 38 recycling plant or its successor for recycling into subsequent useful products; • Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; and • Implement a recording system for the amount of waste generated, recycled and disposed of for checking; Standard formwork should be used as far as practicable in order to minimize the arising of C&D waste. The use of more durable formwork (e.g. metal hoarding) or plastic facing should be encouraged in order to enhance the possibility of recycling. The purchasing of construction materials should be carefully planned in order to avoid over ordering and wastage.	Minimize waste impacts from excavated and C&D material	Contractor	All construction sites	Construction phase	^ ^ N/A N/A N/A ^ N/A

		Wheel wash facilities have to be provided at the site entrance before the trucks leaving the works area.					^
S7.6	WM7	*Contaminated Soil* As a precaution, it is recommended that standard good site practice should be implemented during the construction phase to minimize any potential exposure to contaminated soils or groundwater. The details of mitigation measures to minimize the potential environmental implications arising from the handling of contaminated materials refer to Land Contamination Section.	Remediate contaminated soil	Contractor	All construction sites where applicable	Construction phase	^
S7.6	WM8	*Chemical Waste* If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producers. Chemical wastes should be stored in appropriate containers and collected by a licensed chemical waste Contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Control the chemical waste and ensure proper storage, handling and disposal	Contractor	All construction sites	Construction phase	*
S7.6	WM9	*General Waste* • General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling. • Preferably enclosed and covered areas should be	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction phase	N/A ^

		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.					N/A
S7.6	WM10	*Sewage* • The WMP should document the locations and number of portable chemical toilets depending on the number of workers, land availability, site condition and activities. • Regularly collection by licensed collectors should be arranged to minimize potential environmental impacts.	Minimize production of sewage impacts	Contractor	All construction sites	Construction phase	N/A N/A
S7.6	WM11	Topsoil reuse – Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical. This is considered a general measure for good site practice.	Good site practice	Contractor/ Project Proponent	Onsite	Construction phase	N/A
Land Contamination							
S 8.4	LC2	Detailed site investigation (SI) for all inaccessible potentially contaminated sites in 2 NDAs	Verify the land contamination potential before the commencement of construction	Project Proponent Detailed Design Consultant Contractor	All inaccessible potentially contaminated sites in 2 NDAs as listed in the CAP	After the land is resumed and handed over to the Project Proponent	*

S 8.5	LC3	Preparation and submission of supplementary Contamination Assessment Report (CAR) and Remediation Action Plan (RAP) for all inaccessible potentially contaminated sites in 2 NDAs to EPD for agreement if land contamination is confirmed	Present the findings of SI and evaluate the potential environmental and human health impacts Recommend appropriate mitigation measures for the contaminated soil and groundwater identified in the assessment if remediation is required	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	*
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	After the land is resumed and handed over to the Project Proponent.	N/A

					identified as potentially contaminated or 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	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

		and bunded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or contaminated run-off during rainy season. Watering should be avoided on stockpiles of soil to minimize runoff; • Supply of suitable backfill material after excavation, if require; Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or run-off, and truck bodies and tailgates should be sealed to prevent any discharge during transport or during wet season; • Speed control for the trucks carrying excavated materials should be enforced; and Vehicle wheel washing facilities at the site's exit points should be established and used.					
S 8.7.2 and Appendix 8.4	LC8	Solidification/Stabilization • The loading, unloading, handling, transfer or storage of cement should be carried out in an enclosed system; • Mixing process and other associated material handling activities should be properly scheduled to minimize potential noise impact and dust emission; • The mixing facilities should be sited as far apart as practicable from the nearby noise sensitive receivers; • Mixing of soil and cement / water / other additive(s) should be undertaken at a solidification plant to minimize the potential for leaching; • Runoff from the solidification / stabilization area should be prevented by constructing a concrete bund along the perimeter of the solidification / stabilization area;	To minimize the potential environmental impacts arising from the handling of contaminated materials	Contractor	KTN NDA	The course of treatment	N/A

		• 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	Safety Measures • Set up a list of safety measures for site workers; • Provide written information and training on safety for site workers; • Keep a log-book and plan showing the zones requiring treatment and clean zones; • Maintain a hygienic working environment; • Avoid dust generation; • Provide face and respiratory protection gear to site workers if necessary; • Provide personal protective clothing (e.g. chemical resistant • jackboot, liquid tight gloves) to site workers if necessary; • Provide first aid training and materials to site worker; • Bulk earth moving equipment should be utilized as much as possible to minimize worker Eating, drinking and smoking should not be allowed in the excavation areas and treatment area to avoid inadvertent ingestion of arsenic containing soil.	To minimize the potential adverse effects on health and safety of construction workers	Contractor	KTN NDA	The course of treatment	N/A
Landfill Gas Hazard							
S10.6	LFG1	• Underground rooms or void should be avoided as far as	To minimize the risk of LFG	Government /	Buildings within	Detailed	N/A

		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 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	hazards to occupants within MTLL and its 250m Consultation Zone	Developer/ Detailed Design Consultant within MTLL and its 250m Consultation Zone	MTLL and its 250m Consultation Zone	design phase	

		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 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	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	N/A

		with leachate. • Any offices / quarters set up on site should take precautions against LFG ingress, such as being raised off the ground. Other storage premizes, e.g. shipping containers, where this is not possible should be well ventilated prior to entry. • Adequate precautions to prevent the accumulation of LFG under site buildings and within storage shed should be taken by raising buildings off the ground where appropriate and "airing" storage containers prior to entry by personnel and ensuring adequate ventilation at all times. • Smoking and naked flames should be prohibited within confined spaces. "No Smoking" and "No Naked Flame" notices in Chinese and English should be posted prominently around the construction site. Safety notices should be posted warning of the potential hazards. • Welding, flame-cutting or other hot works may only be carried out in confined spaces when controlled by a "permit to work" procedure, properly authorized by the Safety Officer. The permit to work procedure should set down clearly the requirements for continuous monitoring of methane, carbon dioxide and oxygen throughout the period during which the hot works are in progress. The procedure should also require the presence of an appropriately qualified person who shall be responsible for reviewing the gas measurements as they are made, and					

		who shall have executive responsibility for suspending the work in the event of unacceptable or hazardous conditions. Only those workers who are appropriately trained and fully aware of the potentially hazardous conditions which may arise should be permitted to carry out hot works in confined areas. • During the construction works, adequate fire extinguishers and breathing apparatus sets should be made available on site and appropriate training given in their use. • Ongoing gas monitoring should be considered for offices, stores etc set up on site.					
S10.6	LFG3	Utility Companies • The developers should make the utility companies aware of the location and features of the site within the Consultation Zone during the respective detailed design stage as part of the QLFGHA. • The utilities companies should have a responsibility to train and ensure their staff to take appropriate precautions at all times when entering enclosed spaces or plant rooms. • Should utility installation be required in site E1-1, the developers should make the utility companies aware of the potential constraints imposed by the landfill restoration facilities and aftercare works to ensure these facilities and works will remain unaffected. Appropriate precautionary measures against landfill gas should also be taken should utility installation be required within the MTLL.	To minimize the risk of LFG hazards to the occupants, maintenance personnel, visitors and other users within MTLL and its 250m Consultation Zone	Government / Developer within MTLL and its 250m Consultation Zone	Buildings within MTLL and its 250m Consultation Zone	Operation phase	N/A

		Building Management • The management committee of the building estate will hold a special responsibility to ensure that the occupants of the building, its staff and maintenance workers are protected from LFG and that visitors to the site are also made aware as to the dangers and the precautions required to be taken. • Of primary importance to satisfactorily upholding this responsibility will be to ensure that strict procedures for maintaining control over all temporary and /or permanent works proposed at the site are reviewed with regard to the LFG hazard. This needs to be accompanied by a comprehensive contingency plan in case of incidents, including liaison with EPD officers, Fire Services Department, Landfill Restoration Contractors and others, as necessary. • All construction and maintenance (including utilities) personnel working at the site should be made aware of the hazards of LFG and its possible presence on site. This should be achieved through a combination of posting warning signs in prominent places and also by access to detailed information on LFG hazards and the designs and procedural means by which these hazards are being minimized on site. In addition, entry to confined spaces such as refuse/store rooms, drainage manholes etc. should be preceded by a period of "airing" the space by opening the door widely allowing fresh air to enter. Where					

		appropriate, monitoring of gas should also precede entry. • Any proposed modifications or additions to the building structure should be subject to a further assessment of LFG hazard, particularly in areas where a gas membrane has been installed. Any penetrations of the membrane must be repaired as soon as possible after detection or works completion using similar products. • The building management company should also make arrangement with Landfill Restoration Contractor so that they are advised of all situations which may potentially threaten the safety of the building occupants resulting from any accidents or failures at the landfill site. The building management company should also have available suitable gas monitoring equipment for any ad hoc investigations necessary relating to LFG and be in a position to undertake any future routine monitoring of gas which may be considered necessary soloing completion of the defects correction period. • To ensure that all the above protection and precautionary measures and issues pertaining to LFG are properly and consistently addressed by future users and owners of the site, it is recommended that a comprehensive LFG hazard management system be developed by the owner of the building or its property management agency. The system should be developed by the developers of the sites as part of the QLFGHA before the occupation of the building and implemented during its operational phase.					

Cultural Heritage (Pre-construction Phase)							
S11.6.1	CH1	Undertaking Further Archaeological Survey to Cover the Outstanding Areas Further archaeological surveys to cover the outstanding areas of the not-yet-surveyed-area with medium archaeological potential located in the areas with proposed development as presented in Figure 11.9 should be implemented after land resumption to confirm and verify the findings of the EIA. The survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance. It should be noted that the scope of further archaeological survey is based on the current proposed alignment. Any additional works areas which have not been covered by the current archaeological impact assessment should be covered as soon as possible. Subject to the findings of the archaeological survey to be conducted after land resumption, additional mitigation measures would be designed and implemented before the commencement of construction works to mitigate the adverse impact.	To confirm and verify the findings of the EIA	Project Proponent/ Contractor/ Qualified Archaeologist	In the not-yet-surveyed-areas with medium archaeological potential located in the areas within Areas D1-11, A3-5, A3-6, B1-1, and B1-7,	After land resumption but before construction	N/A
S11.6.1	CH2	Undertaking Survey-cum-Rescue Excavation A Survey-cum-Rescue Excavation should be conducted after land resumption and before the commencement of construction works to define the precise archaeological deposits extent and to preserve the archaeological resources by record. The excavation should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should	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

		obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance.					
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	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

		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.					
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	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

		archaeological follow up actions.					
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	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	KT57, FL05, FL18, and FL2	Preconstruction stage before commenceme nt of construction works	N/A

		limit (a vibration limit at 7.5mm/s and 15mm/s could be adopted for graded historic buildings and historic buildings respectively) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report. The condition survey of 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,	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	N/A

		photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out by the Project Proponent.				construction works	
S11.6.2	CH11	Relocation of Built Heritages Relocation of built heritages to a reasonable location nearby may be required.	To preserve the directly impacted sites by relocation	Project Proponent/ Contractor	HKT01, HKT02, Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of construction works	N/A
S11.6.2	CH12	Drainage System and Access Route Design For the retained built heritage items in developable area, drainage system and access route would be designed to prevent the persevered flooding and maintain the accessibility to the built heritage.	To prevent the persevered flooding and maintain the accessibility to the built heritage	Contractor /Detailed Design consultant	The retained built heritage items	Pre-construction phase	N/A
Cultural Heritage (Construction Phase)							
S11.6.1	CH13	<u>Inform Upon Archaeological Discovery</u> Pursuant to the Antiquities and Monuments Ordinance, the construction Contractor should inform the AMO immediately in case of discovery of antiquities or supposed antiquities in the course of excavation works in construction phase.	Special attention should be given to areas evaluated to have archaeological potential or significance.	Contractor	All soil excavation works	Immediately upon discovery during excavation works	N/A
S11.6.2	CH14	<u>Watertable Monitoring</u> Since the construction works and development activities may induce change in the watertable. It is recommended the Contractor should ensure that the change of watertable induced by the construction works and development activities will not result in settlement of built heritage.	To minimize the potential impacts to the built heritage items by the change of watertable induced by the works during the Construction phase	Contractor	Within NDAs	Construction phase	N/A
S11.6.2	CH15	<u>Conducting Construction Vibration Monitoring and Structural</u>	To minimize the potential	Contractor	Identified potential	Construction	

		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.	impacts during Construction phase on any identified potential vibration impacted built heritage features		vibration impacted built heritage features	phase, with details specified in baseline condition survey and baseline vibration impact assessment	N/A
Landscape and Visual Impact (Detailed Design, Prior to Construction, Construction and Operation Phases)							
S.12.9	LV1	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed design consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as the areas become available, to achieve early establishment	N/A
S.12.9 MM1	LV2	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A

		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.12.9 MM2	LV3	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines. All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise	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

		enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated. Construction time frame should also be considered and designs seek to keep it to a practical minimum.					
S12.9 MM14.4	LV 4	Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed. For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream. 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
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	LV6	Tree Protection & Preservation – Exiting trees to be retained	Protect and Preserve Trees	Government /	Onsite	Prior to	N/A

MM4		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		Detailed Design Consultant/ Contractor		Construction and Construction Phase	
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	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

		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.12.9 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.	Compensate for trees and shrubs lost due to the Project.	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		Compensatory planting 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.					
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					N/A

		appropriate locations, including *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda*. In addition some understory vegetation may be planted including shrubs such as *Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii*. The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.					

S.12.9 MM9	LV11	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. building edges, piers).	Soften hard surfaces and facilities	Government / Developer/ Detailed Design Consultant/ Contractor	On appropriate structures	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM10	LV12	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Developer/ Detailed Design Consultant/ Contractor	On appropriate buildings	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM11	LV13	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

S.12.9 MM12	LV14	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	To soften the hard, straight edges and provide greening along roads.	Government / Developer/ Detailed Design Consultant/ Contractor	On viaducts or along roads	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM13 & EIA Annex 13	LV15	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on- wetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

S.12.9 MM14.1	LV16	Reprovision of Natural Stream – Where natural streams are unavoidably affected along some of their length, they can be diverted to avoid the proposed new developments and retain the integrity of the whole stream. Detailed design of any stream diversion should follow the Guidelines in ETWB Technical Circular (Works) No. 5/2005 (Protection of natural streams/rivers from adverse impacts arising from construction works) and appropriate construction methods should be used. Two short stretches of the Ma Tso Lung Stream will be affected by Project in the KTN NDA; by the LMC Eastern Connection Road on the western border of Site F1-3 and further upstream by Site E-2. At both these locations, the stream will be reprovisioned and maintain the flow between unaffected sections of the stream. The reprovisioned stream will be provided with a natural bed and banks, as well as having an area of marsh/pool next to it and trees and shrubs further from the banks. (See E2, E14 and E24 also)	Achieve a natural stream, similar to existing, including wetland planting provision for embankments	Government / Developer/ Detailed Design Consultant/ Contractor	Streams and channelized watercourses e.g. a Ma Tso Lung and Siu Han San Tsuen	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S12.9 MM14.2	LV17	Stream Buffer Planting –Providing a minimum 10 m buffer with planting (where there is a general presumption against any development taking place) along streams where they flow close to developments, confers a degree of protection to the stream course and its associated vegetation. For the stream at Ma Tso Lung in KTN NDA, the middle and	Protect natural streams	Government / Developer/ Detailed Design Consultant/ Contractor	Streams and channelized watercourses e.g. a Ma Tso Lung and Siu Han San Tsuen	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		upper sections will be designated as Green Belt zone where there is a general presumption against development as buffer to the stream. For the stream at Siu Hang San Tsuen in FLN NDA, within the NDA boundary much of the stream would be located underneath the viaduct for the proposed Fanling Bypass. To the south of the viaduct the stream flows through an Open Space area D1-3. In this Open Space zone a 10m buffer is proposed in which natural vegetation will be retained and enhanced and human activities will be limited in order to avoid direct impacts to the stream bed and to minimize potential indirect impacts to the stream and riparian corridor. (See E3 also)					
S12.9 MM14.3	LV18	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc.	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Developer/ Detailed Design Consultant/ Contractor	Channelized watercourse, particularly the Ma Wat River Channel Diversion	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.					
S12.9 MM15	LV19	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
S.12.9 MM16	LV20	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non- reflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	Throughout NDAs	Construction Phase	N/A
S.12.9 MM17	LV21	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize	To minimize glare impact to adjacent VSRs	Government / Developer/ Contractor	Throughout NDAs	Construction and Operation Phases	N/A

		glare impact to adjacent VSRs during the operation phase.					
Ecology (Prior to Construction Phase or throughout the project)							
S. 13.9	E1	Egretry Habitat Creation & Management Plan (EHCMP) and Woodland Planting and Management Plan (WPMP)	Compensate for loss of Man Kam To Road egretry. Compensate for loss of secondary woodland and hillside plantation of ecological significance.	Project Proponent/ Detailed Design Consultant (EHCMP and WPMP).	FLN area A1-7 (egretry compensation). KTN areas E1-8 and G1-3 (woodland compensation).	Detailed design phase	N/A
S. 13.9	E2	Detailed design of development along lower reaches of Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream in OU zones F1-2 and F1-3 and detailed design of LMC Loop Eastern Connection Road with restoration of diverted stream and riparian corridor, permanent barrier and underpass on the at-grade section Compensation for the loss of seasonally wet grassland at Ma Tso Lung by habitat restoration and enhancement along diverted section of Ma Tso Lung Stream	Minimize impacts on Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream and riparian corridor of importance to species of conservation significance.	Project Proponent/ Detailed Design Consultant. (design of Ma Tso Lung Stream diversion and buffer zone habitat restoration measures)	KTN areas F1-2 and F1-3 and LMC Loop Eastern Connection Road.	Detailed design and construction phases.	N/A

S13.9	E3	Detailed design, implementation and management of Siu Hang San Tsuen Stream to have 10m wide vegetated buffer in Open Space zone D1-3, Fanling Bypass to cross stream on viaduct.	Minimize impacts on Siu Hang San Tsuen Stream and stream fauna.	PlanD, Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	FLN area D1-3.	Detailed design, construction and operation phases.	N/A
S.13.9	E4	Long Valley Nature Park (LVNP) designation, design and implementation. Enhancement of non-wetland habitats in LVNP. Planning for the advanced provision of alternative foraging habitat along main river channels for large waterbirds.	Compensate for wetland loss arising from the project and protection of Long Valley from adverse ecological impacts including provision of additional/alternative habitat for large waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Project Proponent/ Detailed Design Consultant (Long Valley Nature Park Habitat Creation & Management Plan)	Long Valley KTN area C1-9 and any suitable areas to be identified during the planning stage	Detailed design phase	N/A
S13.9	E5	Stringent planning control requirements in Long Valley north and west of Sheung Yue River, including Ho Sheung Heung egretry.	Protect these wetland areas from indirect impacts to habitats and fauna especially breeding ardeids foraging in these areas and utilizing flight-lines from Ho Sheung Heung egretry. Avoid habitat loss and disturbance to fauna of	PlanD.	KTN areas C2-1 and C2-2 , Ho Sheung Heung egretry and areas north of Long Valley along the Ng Tung River to the Shenzhen River	Detailed design phase	N/A

			conservation significance, especially nesting ardeids Maintenance of ecological linkages with Deep Bay ecosystem and avoidance of severance of these linkages, especially for waterbirds				
S13.9	E6	Planning for creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; and detailed design of Open Space areas and development areas along river corridors.	Minimize disturbance to large waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels. Maintain ecological linkages within NDA Project Area and between Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Area along Ng Tung, Sheung Yue and Shek Sheung River	Detailed design, construction and operational phases.	N/A
S13.9	E7	Building setback and mounding in locations near Long Valley. KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries).	Minimization of disturbance impacts to fauna using Long Valley.	PlanD	KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern	Detailed design phase	N/A

					boundaries.		
S13.9	E8	Preparation and implementation of Guidelines for building design measures to minimize mortality and light and glare impacts to fauna. Guidelines to address the following measures: Use opaque, non-transparent, non-reflective noise barriers for all developments associated with the Project. Measures to include the following: • Fritting, or the placement of ceramic lines or dots on glass, which creates a visual barrier to birds and reduces air conditioning loads by lowering heat gain, while still allowing light transmission for interior spaces. It is most successful when the frits are applied on the outside surface. Frosted glass has similar effects; • Angled glass to be used only for smaller panes in buildings with a limited amount of glass; • The use of glass that reflects UV light (primarily visible to birds, but not to humans) to reduce collisions; • Film and art treatment allow glass surfaces to be used a medium of expression, often related to the nature and use of the building, as well indicating to birds their impenetrability; • Lightweight external screens can be added to windows or become a façade element of larger buildings, and are suitable where non-operable windows are prevalent, which is often the case in modern buildings in HK	Minimize mortality and disturbance impacts on fauna, especially mammals and birds.	PlanD/ Project Proponent/ Developer/ Detailed Design Consultant	Near Long Valley	Detailed design phase	N/A

	E9	Not used					N/A
S13.8	E10	Review development footprint and layout of proposed developments in KTN areas D1-11a and G1-5 to avoid/minimize direct and indirect impacts on secondary woodland at Ho Sheung Heung and shrubland at Crest Hill.	Minimize loss of secondary woodland and shrubland of ecological value.	Project Proponent/Detailed Design Consultant	KTN areas D1-11a and G1-5 to avoid/minimize direct and indirect impacts on secondary woodland at Ho Sheung Heung and Crest Hill	Detailed design phase	N/A
S13.9	E11	No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north or east of KTN D1-5 and east of D1-9 and C2-3, construction hours restricted to 09.00 to 17.30 during 1 March to 31 July on new pedestrian bridge over the Sheung Yue River, new pedestrian bridge over the tidal section of the Ng Tung River and existing bridge between KTN areas C2-2 and C1-8. Review Design and construction methods for all bridges especially those on the Sheung Yue and tidal Ng Tung Rivers and adopt methods which minimize impacts on Long Valley and the rivers, and disturbance and fragmentation impacts on fauna. No overlap in construction of bridges over main river channels. Measures to ensure no hydrological disruption to Long Valley Watercourse and water supply to Long Valley to be designed at	Minimize disturbance impacts (including cumulative impacts with cycle track project) to flight-lines of breeding ardeids.	Project Proponent/ Detailed Design Consultant Contractor	Along and within Sheung Yue and Ng Tung Rivers, Long Valley, Long Valley and watercourse upstream areas including KTN area B3-12	Detailed design/ construction phase.	N/A

		the detailed design stage for the rechannelisation of the Long Valley Watercourse and the development of areas through which it passes, including KTN area B3-12. Contingency plan to address any disruption to be included in LVNP HCMP. Avoid removal or interference with screen planting undertaken under the Construction of Cycle Tracks and Associated Supporting Facilities from Sha Po Tsuen to Shek Sheung project.					
Ecology (Construction Phase)							
S13.9	E12	Compensatory 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.	N/A
S13.9	E13	Review design and construction methods for bridges, especially those on the Sheung Yue and tidal Ng Tung Rivers, and adopt measures which minimize impacts on rivers and disturbance and fragmentation impacts on fauna. No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north and east of KTN area D1-5 and east of D1-9 and C2-3 and restriction of working hours on new pedestrian bridges over the Sheung Yue River and tidal Ng Tung River to 09.00 to 17.30 during the ardeid breeding season	Minimize impacts on rivers and disturbance and fragmentation impacts on fauna	Project Proponent/ Detailed Design Consultant/ Contractor	Along and within the Sheung Yue, Ng Tung and Shek Sheung Rivers	Detailed design and construction phases.	N/A

		(1 March to 31 July) Provision of alternative foraging habitat along main river channels for large waterbirds.					
S13.9	E14	Buffer zone of 15-30m as appropriate on both sides (not less than 45m total width) of Ma Tso Lung Stream north of the point where it is crossed by the LMC Loop Eastern Connection Road, and Ma Tso Lung Stream diversion during construction of the LMC Loop Eastern Connection Road; development along lower reaches of Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream in OU zones in KTN areas F1-2 and F1-3 to be set back beyond buffer. Construction and maintenance of permanent 1.2m high solid faunal barrier at all at-grade sections of LMC Loop eastern connection Road north of junction with road D4 within 15-30m as appropriate of Ma Tso Lung Stream buffer and construction of faunal underpass beneath road. Compensation for the loss of seasonally wet grassland at Ma Tso Lung by habitat restoration and enhancement along diverted section of Ma Tso Lung Stream.	Minimize impacts direct and indirect impacts of habitat loss, disturbance, pollution and fragmentation on Ma Tso Lung Stream and marsh and riparian corridor of importance to species of conservation significance.	PlanD/ Project Proponent/ Developer/ Detailed Design Consultant/ Contractor. (Design of Ma Tso Lung Stream diversion and buffer zone habitat restoration measures)	KTN areas H1-1, F12 and F1-3 and Lok Ma Chau Loop Eastern Connection Road.	Detailed design and construction phases.	N/A

S.13.9	E15	Creation and enhancement of proposed Long Valley Nature Park and creation and enhancement of wetland and buffer planting within LVNP.	Compensate for wetland loss arising from the project	Project Proponent/ Contractor (LVNP Detailed Habitat Creation & Management Plan)	Long Valley, (KTN area C1-9).	Construction phase.	N/A
S13.9	E16	Creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; provision of Open Space areas and development areas along river corridors; Design and erection of 2m high solid dull green site barrier fence between river channel and any active works area along or adjacent to Ng Tung, Sheung Yue and Shek Sheung Rivers. Ng Tung, Sheung Yue and Shek Sheung Rivers screen planting.	Minimize disturbance to waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.	Detailed Design Consultant/ Contractor	Ng Tung, Sheung Yue and Shek Sheung Rivers	Detailed design and Construction phases.	N/A
S13.9	E17	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance on edge of development areas, including along any roads adjacent to or penetrating into areas/habitats of ecological importance. Erection of a 2m high dull green site barrier fence at the edge of the works area or 30m from Ma Tso Lung Stream and	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna. Measures to minimize flight-line impacts to birds, especially breeding ardeids.	Contractor	Interface between areas/habitats/ fauna/ flora of ecological importance (e.g. KTN areas B1-3, C1-5, C1- 6, C1-	Construction phase.	N/A

		tributaries, whichever distance is the greater.			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.		
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.	N/A
S13.9	E20	Pre-site clearance check for presence of flora or fauna of conservation significance and bat roosts. If any are found, measures should be proposed and implemented to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement. Pre-site clearance check on all construction sites and pre – works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of protected plant species/specimens of conservation significance. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, Pre-site clearance of construction sites in Crest Hill area, KTN areas D1-7, D1-11 and G1-5 (where Eurasian Hobby was recorded) and on Cheung Po Tau, FLN area A3-1 (where Grey Nightjar was recorded) for presence of any breeding birds/breeding sites. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including	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

		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 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*	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

		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 strips, and open space sites.		Detailed Design Consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	N/A
S.12.A9 MM14.4	LV4-DP2	Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc.	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	All watercourses, particularly the stream at Siu	Prior to Construction and Construction	N/A

		Guidelines stated should be followed. For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream. Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.			Hang San Tsuen that will flow under the Fanling Bypass Eastern Section	Phase	
S.12.A9 MM4	LV5-DP2	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor"s works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.	Protect and Preserve Trees	Government/ Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A
S.12.A9 MM5	LV6-DP2	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be	Transplant Trees where suitable for transplantation	Government Detailed	*Onsite where possible,*	Prior to Construction,	N/A

		transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit" should be referred to.		Design Consultant/ Contractor	*otherwise consider offsite locations*	Construction Phase & Maintenance in Operation Phase	
S.12.A9 MM6	LV7-DP2	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM8	LV9-DP2	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The	Reprovide areas of woodland to compensate for	Project Proponent/ Detailed	*In areas identified in the EIA*	Prior to Construction, Construction	N/A

		location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda. In addition some understory vegetation may be planted including shrubs such as Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii.* The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is	those areas of quality woodland lost.	Design Consultant/ Contractor/ Maintenance Authority	*Landscape Mitigation Plans and as agreed with AFCD*	Phase & Maintenance in Operation Phase	

		inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.					
S.12.A9 MM9	LV10-DP2	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government Detailed Design Consultant/ Contractor	*On appropriate structures*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV11-DP2	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government Detailed Design Consultant/ Contractor	*Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM12	LV12-DP2	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate	To soften the hard, straight edges and provide greening along roads.	Government Detailed Design Consultant/ Contractor	*On viaducts or along roads.*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)					
S.12.A9 MM13 & EIA Annex 13	LV13-DP2	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance onwetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	*Onsite where possible. Otherwise consider offsite locations*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM14.3	LV14-DP2	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Detailed Design Consultant/ Contractor	*Channelized watercourse, particularly the Ma Wat River Channel Diversion*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.					
S.12.A9 MM15	LV15-DP2	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	*E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA*	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
Landscape and Visual (Construction)							
S.12.A9 MM16	LV16-DP2	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	*Throughout NDAs*	Construction Phase	N/A
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	N/A
Ecology (Detailed Design, Construction and Operational Phases)							
S13.9	E2-DP2	Use opaque, non-transparent, non-reflective noise barriers.	Minimize mortality impacts	Detailed	Within NDA.	Detailed	^

		Unnecessary lighting should be avoided.	on birds.	Design Consultant/ Contractor/ Maintenance Authority		design phase, Construction phase and Operation phase.	
Ecology (Construction Phase)							
S.13.9	E3-DP2	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.	Contractor.	Interface between areas/habitats of ecological importance (KTN area B1-3) and works areas.	Construction phase.	N/A
S13.9	E4-DP2	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN NDA areas E1-8 and G1-3.	Construction phase.	N/A
Cultural Heritage (Construction Phase)							
S11.6.2	CH5-DP2	Conducting Construction Vibration Monitoring and Structural Strengthening Measures Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact	N/A

						assessment,	
DP3- KTN NDA Road P1 and P2 (New Road) and associated new Kwu Tung Interchange (New Road) and Pak Shek Au Interchange Improvement (Major Improvement)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.A9	LV1-DP3	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	N/A

S.12.A9 MM4	LV5-DP3	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor"s works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.	Protect and Preserve Trees	Government Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction and Construction Phase	N/A
S.12.A9 MM5	LV6-DP3	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along	Transplant Trees where suitable for transplantation	Government Detailed Design Consultant/ Contractor	*Onsite where possible. Otherwise consider offsite locations.*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		highw ays, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree Transplanting Works under Highw ays 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 w orks are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted w here slope gradient and site conditions allow . In addition, landscape planting should be provided for the retaining structures associated w ith modified slopes w here conditions allow . All slope landscaping w orks should comply w ith GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM7	LV8-DP3	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately w ith 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 w ell as the open areas w ithin development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides,*	Compensate for trees and shrubs lost due to the Project.	Government Detailed Design Consultant/ Contractor	*Onsite where possible. Otherwise consider offsite locations*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica, and *Rhododendron simsii* are suggested..					
S.12.A9 MM8	LV9-DP3	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda. In addition some understory vegetation may be planted including shrubs such as Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii.* The area allocated for compensatory woodland planting allows in	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	*In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.					
S.12.A9 MM9	LV10-DP3	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Soften hard surfaces and facilities	Government Detailed Design Consultant/ Contractor	*On appropriate structures*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM11	LV11-DP3	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government Detailed Design Consultant/ Contractor	*Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM12	LV12-DP3	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the	To soften the hard, straight edges and provide	Government Detailed	*On viaducts or along roads.*	Prior to Construction,	N/A

		vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts. (Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)	greening along roads.	Design Consultant/ Contractor		Construction Phase & Maintenance in Operation Phase	
S.12.A9 MM13 EIA Annex 13	LV13-DP3	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance onwetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	*Onsite where possible. Otherwise consider offsite locations*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM14.3	LV14-DP3	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Detailed Design Consultant/ Contractor	*Channelized watercourse, particularly the Ma Wat River Channel Diversion*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.					
S.12.A9 MM15	LV15-DP3	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.		Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	*E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA*	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
Landscape and Visual (Construction)							
S.12.A9 MM16	LV16-DP3	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	*Throughout NDAs*	Construction Phase	N/A

S.12.A9 MM17	LV17-DP3	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	*Throughout NDAs*	Construction and Operation Phases	N/A
Ecology (Detailed Design, Construction and Operational Phases)							
S13.9	E3-DP3	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor Maintenance Authority.	Throughout.	Detailed design, Construction and Operation phases.	^
Ecology (Construction Phase)							
S.13.9	E4-DP3	Creation of proposed Long Valley Nature Park and creation and enhancement of wetland and woodland areas and buffer planting within LVNP.	Compensate for wetland loss arising from the project.	Project Proponent/ Contractor (LVNP Detailed Habitat Creation & Management Plan).	Long Valley	Construction phase.	N/A
S.13.9	E5-DP3	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance on edge of development areas, including along any roads adjacent to or penetrating into areas/habitats of ecological importance.	Minimize dust,disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.	Contractor.	Interface between areas/habitats of ecological importance (KTN	Construction phase.	N/A

			Measures to minimize flightline impacts to birds,		areas B1-3, H1-1) and works areas.		
S13.9	E6-DP3	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A
DP4- KTN NDA Road D1 to D5 (New Road)							
Noise Impacts (Operational Phase)							
S4.9	N1-DP4	Provide noise barrier before operation of the proposed project and locations of barriers are stated as following: • KTN-NB04: Approx. 35m long, 3m high NB; • KTN-NB05: Approx. 40m long, 3m high NB; • KTN-NB06: Approx. 65m long CNB; • KTN-NB07: Approx. 65m long CNB; • KTN-NB08: Approx. 105m long CNB; • KTN-NB09: Approx. 60m long, 3m high NB; • KTN-NB10: Approx. 90m long, 3m high NB; • KTN-NB19: Approx. 30m long, 3m high NB; • KTN-NB20: Approx. 70m long, 5m high NB; • KTN-NB23: Approx. 80m long, 5m high NB; • KTN-NB24: Approx. 95m long, 7m vertical barrier with 3m cantilevered arm; • KTN-NB25: Approx. 30m long CNB; • KTN-NB35: Approx. 40m long CNB; • KTN-NB37: Approx. 80m long CNB; • KTN-NB38: Approx. 100m long, 3m high NB; • KTN-NB69: Approx. 120m long, 5m high NB;	Control operational airborne noise due to road traffic	Project Proponent /Contractor	Refer to Appendix 5-1	Prior to operation of the Project	N/A

		• KTN-NB70: Approx. 30m long, 7m vertical barrier with 3m cantilevered arm; • KTN-NB73: Approx. 75m long CNB; • KTN-NB75: Approx. 45m long, 3m high NB; • KTN-NB76: Approx. 40m long, 3m high NB; • KTN-NB82: Approx. 45m long, 3m high NB; • KTN-SE03: Approx. 75m long SE with opening to northwestern direction; • KTN-SE05: Approx. 80m long SE with opening to south direction; • KTN-SE07: Approx. 95m long SE with opening to southeastern direction; KTN-FE02: Approx. 130m long FE					
Water Quality Impacts (Operational Phase)							
S5.7	W1-DP4	Road runoff In order to ensure the sand/silt traps removal efficiencies, the following measures should be implemented: • Vehicle dust, tyre scraps and oils might be washed away from the road surface / open areas to the nearby water courses by surface runoff or road surface cleaning. Subject to detailed design and requirement of relevant government departments, the capacities of road drainage system shall cater the runoff from 50 year-return-period rainstorm. Proper drainage systems with silt traps and oil interceptors should be installed	Control water quality impact	Project Proponent / Detailed Design Consultant,/ Maintenance Authority	All road works	Detailed design stage, Operation phase	*
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.A9	LV1-	General Good Practice Measures - For areas unavoidably		Detailed Design	Throughout NDAs,	Prior to	N/A

	DP4	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.		Consultant/ Contractor		Construction, Construction & for 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	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the	Detailed Design Consultant/	Throughout NDAs	Prior to Construction	N/A

		the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines. All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated. Construction time frame should also be considered and designs seek to keep it to a practical minimum.	surrounding landscape				
S.12.A9 MM4	LV4-DP4	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	*

		Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.					
S.12.A9 MM5	LV5-DP4	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 „Interim Guidelines for Tree	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

		Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.					
S.12.A9 MM6	LV6-DP4	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government Detailed Design Consultant/ Contractor	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM7	LV7-DP4	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus	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

		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, 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	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

		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 environment	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures , or around VSRs to contain their view out to the NDA structures.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM12	LV11-DP4	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters	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

		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)					
S.12.A9 MM13 & EIA Annex 13	LV12-DP4	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on-wetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ re-provisioned watercourses.	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.A9 MM15	LV13-DP4	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
Landscape and Visual (Construction)							
S.12.A9 MM16	LV14-DP4	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be	To screen undesirable views of the works site.	Contractor			N/A

		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).					
S.12.A9 MM17	LV15-DP4	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	Throughout NDAs	Construction and Operation Phases	N/A
Ecology (Prior to Detailed Design Prior to Construction Phase)							
S. 13.9	E1-DP4	Egretry Habitat Creation & Management Plan (EHCMP) and Woodland Planting and Management Plan (WPMP)	Compensate for loss of Man Kam To Road egretry. Compensate for loss of secondary woodland and hillside plantation of ecological significance.	Project Proponent/ Detailed Design Consultant (EHCMP and WPMP).	FLN area A1-7 (egretry compensation). KTN areas E1-8 and G1-3 (woodland compensation).	Detailed design phase.	N/A
Ecology (Detailed Design, Construction and Operational Phases)							
S13.9	E2-DP4	Use opaque, non-transparent, non-reflective noise barriers. Unnecessary lighting should be avoided.	Minimize mortality impacts on birds.	Detailed Design Consultant/ Contractor Maintenance Authority.	Throughout.	Throughout.	N/A
Ecology (Construction Phase)							
S.13.9	E3-	Design and erection of 2m high solid dull green site barrier fence	Minimize dust, disturbance,	Contractor.	Interface between	Construction	N/A

	DP4	between active works areas and all areas/habitats of ecological importance.	mortality and other adverse ecological impacts on habitats, flora and fauna.		areas/habitats of ecological importance (KTN areas B1-3, E1-8, G1-3 and H1-1) and works areas	phase.	
S13.9	E4-DP4	Compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Project Proponent / Contractor	KTN areas E1-8 and G1-3.	Construction phase.	N/A
S13.8	E5-DP4	Maintenance of compensatory native woodland planting.	Compensate for loss of plantation of ecological significance.	Maintenance Authority.	KTN areas E1-8 and G1-3.	Operation phase	N/A
Cultural Heritage (Pre-construction Phase)							
S11.6.1	CH1-DP4	<u>Undertaking Survey-cum-Rescue Excavation</u> A Survey-cum-Rescue Excavation should be conducted after land resumption and before the commencement of construction works to define the precise archaeological deposits extent and to preserve the archaeological resources by record. The 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	<u>Undertaking Further Archaeological Survey to Cover the Outstanding Areas</u> Further archaeological surveys to cover the outstanding areas of the not-yet-surveyed-area with medium archaeological potential located with areas with proposed development as presented in	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	After land resumption but before construction	N/A

		Figure 11.9 should be implemented after land resumption to confirm and verify the findings of the EIA. The survey should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance. It should be noted that the scope of further archaeological survey is based on the current proposed alignment. Any additional works areas which have not been covered by the current archaeological impact assessment should be covered as soon as possible. Subject to the findings of the archaeological survey to be conducted after land resumption, additional mitigation measures would be designed and implemented before the commencement of construction works to mitigate the adverse impact.			within the work extent of DP4		
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	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

		purpose. The first induction briefing will be video recorded and it will be used as induction briefing material for new site staff.					
S11.6.2	CH4-DP4	Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out by the Project Proponent.	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	Entrance Gate of HKT03, KT16, KT17 and KT18	Prior to Removal / Relocation of features before commencement of construction works	N/A
S11.6.2	CH5-DP4	Undertaking baseline condition survey and baseline vibration impact assessment In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration 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	N/A

						records and before commencement of construction works	
Cultural Heritage (Construction Phase)							
S11.6.2	CH7-DP4	Conducting Construction Vibration Monitoring and Structural Strengthening Measures Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment,	N/A
DP7-Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works (SWHSTW)							
Landscape and Visual (Construction Phase and Operational Phase)							
S.12.9 MM4	LV1-DP7	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction and Construction Phase	N/A

		detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.					
S.12.9 MM9	LV2-DP7	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. building edges, piers).	Soften hard surfaces and facilities	Government / Detailed Design Consultant/ Contractor	*On appropriate structures*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM10	LV3-DP7	Green Roof – Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide greening.	Government / Detailed Design Consultant/ Contractor	*On appropriate buildings*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
DP10- Fanling Bypass Eastern Section (New Road)							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.D9	LV1-DP10	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as		Detailed Design Consultant/ Contractor	*Throughout NDAs,*	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become	^

		roadside amenity strips, and open space sites.				available, to achieve early establishment	
S.12.D9 MM1	LV2-DP10	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	Reduce topographical changes and minimize land resumption	Government/ Detailed Design Consultant/ Contractor	*Throughout NDAs, particularly for reservoirs*	Prior to Construction	N/A
S.12.D9 MM4	LV3-DP10	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification 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	^

		A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.					
S.12.D9 MM5	LV4-DP10	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.	Transplant Trees where suitable for transplantation	Government/ Detailed Design Consultant/ Contractor	*Onsite where possible. Otherwise consider offsite locations*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM6	LV5-DP10	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of	Government/ Detailed Design Consultant/ Contractor	*Onsite*	Prior to Construction, Construction Phase &	N/A

		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.	landscape resources and character. To ensure man-made slopes are as visually amenable as possible.			Maintenance in Operation Phase	
S.12.D9 MM7	LV6-DP10	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii* are suggested.	Compensate for trees and shrubs lost due to the Project.	Government/ Detailed Design Consultant/ Contractor	*Onsite where possible. Otherwise consider offsite locations*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 MM8	LV7-DP10	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will	Reprovide areas of woodland to compensate for those areas of quality woodland lost.	Project Proponent/ Detailed Design Consultant/	*In areas identified in the EIA Landscape Mitigation Plans*	Prior to Construction, Construction Phase &	N/A

		principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including *Ailanthus fordii, Bischofia javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii, Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera heptaphylla and Ilex rotunda*. In addition some understory vegetation may be planted including shrubs such as *Atalantia buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma malabathricum, Melastoma dodecandrum, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii.* *The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support*		Contractor/ Maintenance Authority	*and as agreed with AFCD*	Maintenance in Operation Phase	

		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 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.D9 MM12	LV10-DP10	Road Greening –For viaducts, soft landscaping should be provided to soften the hard, straight edges (for climbers used to cover the vertical, hard surfaces of the piers – see MM9 Vertical Greening) and shade tolerant plants should be planted, where light is sufficient, to improve aesthetic value of areas under viaducts. Both at grade planting and use of elevated planters should be considered for the soft landscaping of viaducts, taking into account the preference to minimize the overall viaduct bulk and integrate architectural forms and textural finishes which improve aesthetics. For at grade roads, planting should be considered along central dividers and on road islands e.g. in the middle of roundabouts.	To soften the hard, straight edges and provide greening along roads.	Government/ Detailed Design Consultant/ Contractor	*On viaducts or along roads.*	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		(Roadside planting i.e. at the road edge and not in the central divider or road island, is considered part of Screen Planting)					
S.12.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 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
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	To screen undesirable views of the works site.	Contractor	*Throughout NDAs*	Construction Phase	^

		erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).					
S.12.D9 MM17	LV13-DP10	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	*Throughout NDAs*	Construction and Operation phases	^
Ecology (Detailed Design, Construction and Operational Phases)							
S13.8	E1-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*	Construction phase.	N/A

					Road).		
Cultural Heritage (Construction Phase)							
S11.6.2	CH4-DP10	Conducting Construction Vibration Monitoring and Structural Strengthening Measures Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard 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
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	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A

		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.					
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.	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

		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.D9 MM4	LV4-DP12	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A

		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 landscape resources and character. Woodland tree seedlings and/or shrubs should be planted where slope gradient and site conditions allow.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		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.	are as visually amenable as possible.				
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 *Rhododendron simsii* are suggested.	Compensate for trees and shrubs lost due to the Project.	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9 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	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures, or around VSRs to	Prior to Construction, Construction Phase &	N/A

			surrounding environment and create a pleasant pedestrian environment		contain their view out to the NDA structures.	Maintenance in Operation Phase	
Landscape and Visual (Construction)							
S.12.D9 MM16	LV9-DP12	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable view s of the w orks 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 N
WASTE GENERATION IN THE REPORTING MONTH

Name of Department: Civil Engineering and Development Department

Monthly Summary Waste Flow Table for 2020

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in Other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
January	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
February	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
March	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.065
April	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.351
May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.793
June	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.202
Sub-total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.411
July	0.000	0.000	5.907	0.000	0.000	0.000	0.000	0.000	17.800	0.000	0.455
August	0.000	0.000	0.024	0.000	0.003	0.000	0.000	0.086	0.000	0.000	0.327
September	0.000	0.000	0.145	0.000	0.000	0.000	0.003	0.059	0.000	0.000	0.503
October											
November											
December											
Total	0.000	0.000	6.076	0.000	0.003	0.000	0.003	0.145	17.800	0.000	2.696

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
Non-inert C&D material: 6.5m3/dump truck
(6) Numbers are rounded off to the nearest three decimal places
* Forecast

Sang Hing – Kuly Joint Venture
Contract No.: ND/2019/03
Kwu Tung North and Fanling North New Development Areas, Phase 1:
Development of Long Valley Nature Park

Name of Department: CEDD Contract No.: ND/2019/03

Monthly Summary Waste Flow Table for __2019_ (Year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill*	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
Jan	–	–	–	–	–	–	–	–	–	–	–
Feb	–	–	–	–	–	–	–	–	–	–	–
Mar	–	–	–	–	–	–	–	–	–	–	–
Apr	–	–	–	–	–	–	–	–	–	–	–
May	–	–	–	–	–	–	–	–	–	–	–
June	–	–	–	–	–	–	–	–	–	–	–
July	–	–	–	–	–	–	–	–	–	–	–
Aug	–	–	–	–	–	–	–	–	–	–	–
Sept	–	–	–	–	–	–	–	–	–	–	–
Oct	–	–	–	–	–	–	–	–	–	–	–
Nov	–	–	–	–	–	–	–	–	–	–	–
Dec	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0

*Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

Sang Hing – Kuly Joint Venture
Contract No.: ND/2019/03
Kwu Tung North and Fanling North New Development Areas, Phase 1:
Development of Long Valley Nature Park

Name of Department: CEDD Contract No.: ND/2019/03

Monthly Summary Waste Flow Table for __2020_ (Year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill*	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
Jan	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0.01
Mar	0	0	0	0	0	0	0	0	0	0	0.004
Apr	0	0	0	0	0	0	0	0	0	0	0.038
May	0	0	0	0	0	0	0	0	0	0	0.004
Jun	0	0	0	0	0	0	0	0	0	0	0.015
Sub-Total	0	0	0	0	0	0	0	0	0	0	0.071
Jul	0	0	0	0	0.1	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0.03
Sep	0	0	0	0	0	0	0	0	0	0	0
Oct	–	–	–	–	–	–	–	–	–	–	–
Nov	–	–	–	–	–	–	–	–	–	–	–
Dec	–	–	–	–	–	–	–	–	–	–	–
Total	0	0	0	0	0.1	0	0	0	0	0	0.101

*Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

Sang Hing – Kuly Joint Venture
Contract No.: ND/2019/03
Kwu Tung North and Fanling North New Development Areas, Phase 1:
Development of Long Valley Nature Park

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
2.5	1	2	0	0.5	5	1	0.2	0.2	1	3

*Remark: Figure to be revised if necessary

Notes:

(1) The performance targets are given in ETWB Technical Circular PS Clause 6(14).
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
(4) The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m3. (ETWB Technical Circular PS Clause 5(4)(b) refers). [Delete Note (4) and the table above on the forecast, where inapplicable].

Monthly Summary Waste Flow Table for 2020 (year)

Name of Person completing the record: Pan Fong (EO)

Project : Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang) Contract No.: ND/2019/05

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging/	Plastics (see Note 3)	Yard Waste	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 ton)
Jan												
Feb												
Mar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
Jun	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	0.000
Sub-total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	0.002
Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.009
Aug	1.327	0.000	0.035	0.000	1.327	0.000	0.000	0.020	0.001	21.250	0.000	0.272
Sep	0.313	0.000	0.000	0.000	0.313	0.000	0.001	0.039	0.003	34.290	0.000	0.048
Oct												
Nov												
Dec												
Total	1.640	0.000	0.035	0.000	1.640	0.000	0.001	0.109	0.004	55.540	0.000	0.331

Monthly Summary Waste Flow Table
(PS Clauses 1.101 & 1.102)

Name of Department: CEDD

Contract No.:ND/2019/06

Monthly Summary Waste Flow Table for 2019 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in the other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000kg	in '000kg	in '000kg	in '000kg	in '000m3
Jan											
Feb											
Mar											
Apr											
May											
June											
Sub-total											
July											
Aug											
Sept											
Oct											
Nov	0	0	0	0	0.927	0	0	0	0	0	0.008
Dec	0	0	0	0	0.428	0	0	0	0	0	0.071
Total	**0**	**0**	**0**	**0**	**1.355**	**0**	**0**	**0**	**0**	**0**	**0.079**

Monthly Summary Waste Flow Table for 2020 (year)

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in the other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000kg	in '000kg	in '000kg	in '000kg	in '000m3
Jan	0	0	0	0	1.558	0	0	0	0	0	0.038
Feb	0	0	0	0	0.548	0	0	0	0	0	0.011
Mar	0	0	0	0	0.145	0	0	0	0	0	0.022
Apr	0	0	0	0	1.741	0	0	0	0	0	0.043
May	0	0	0	0	0.063	0	0	0	0	0	0.035
June	0	0	0	0	0.008	0	0	0	0	0	0.014
Sub-total	0	0	0	0	4.062	0	0	0	0	0	0.162
July	0	0	0	0	1.562	0	0	0	0	0	0.025
Aug	0	0	0	0	1.448	0	0	0	0	0	0.010
Sept	0	0	0	0	1.171	0	0	0	0	0	0.010
Oct											
Nov											
Dec											
Total	**0.0**	**0.0**	**0.0**	**0.0**	**8.243**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.206**

Notes: (1) The performance targets are given in PS Clause 1.102(14).
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
*(4) The *Contractor* shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the *works* , together with a breakdown of the nature where the amount of C&D materials expected to be generated from the works is equal to or exceeding 50,000m3. [Delete Note (4) and the table above on the forecast, where inapplicable].

APPENDIX O
COMPLAINT LOG

Appendix O - Complaint Log

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
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APPENDIX P
SUMMARY OF SUCCESSFUL PROSECUTION

Appendix P - Summary of Successful Prosecution

Date of Successful Prosecution	Details of the Successful Prosecution	Status	Follow Up
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APPENDIX Q
SUMMARY TABLE FOR REQUIRED SUBMISSION UNDER ENVIRONMENTAL PERMIT

DP2	EP-466/2013	Castle Peak Road Diversion				
CEDD Contract No. ND/2019/01 - Site Formation and Infrastructural Works at KTN NDA						
Construction commencement date			**12-Aug-20**			
Operation commencement date			**tbc**			
EP Condition		**Requirements and Submissions**			**Submission Status**	**Remarks**
		Period	**Action**	**Timeframe**		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 2 March 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	Pending approval
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	Pending approval
2.6	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	**To Conduct -** A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	*	
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	**Deposit** - A copy of Photographic and cartographic records of directly impacted historical buildings at HKT08 and the entrance gate of HKT03	prior to the commencement of the respective removal or relocation works	*	
		Others	**For Approva**l - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	*	
2.8	Landscape Plan	Others	**Deposit**	at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures of the Project	*	
2.10	Traffic Noise Mitigation Measure (implement)	Before operation	**Implement--** all noise mitigation measures as shown in Figure 4 of this Permit	before commencement of operation	*	
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	
3.4	Monthly EM&A Report	During construction	**Submit**	within 2 weeks after the end of each reporting month throughout the entire construction period	Submit by ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

DP3	EP-467/2013/A	Kwu Tung North New Development Area Road P1 and P2 and Associated New Kwu Tung Interchange and Pak Shek Au Interchange Improvement				
CEDD Contract No. ND/2019/01 - Site Formation and Infrastructural Works at KTN NDA						
Construction commencement date			**12-Aug-20**			
Operation commencement date			**tbc**			
EP Condition		**Requirements and Sumbissions**			**Submission Status**	**Remarks**
		Period	**Action**	**Timeframe**		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 2 March 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	Pending approval
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	EPD Approved
2.6	Traffic Noise Mitigation Plan	Before construction	**For Approval**	no later than 1 month before the commencement of consturction	Submitted 31 July 2019	EPD Approved 9 August 2019
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records	Others	**Deposit** - A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical lanscape features at Locatoins KT38, KT44 and KT52	prior to the commencement of the respective removal or relocation works	*	
2.8	Landscape Plan	Others	**Deposit**	at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures of the Project	*	
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-Construction ET	
3.4	Monthly EM&A Report	During construction	**Submit**	within 2 weeks after the end of each reporting month throughout the entire construction period	Submit by ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
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DP4	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5				
CEDD Contract No. ND/2019/01 - Site Formation and Infrastructural Works at KTN NDA						
Construction commencement date			**1-Jun-20**			
Operation commencement date			**tbc**			
EP Condition		**Requirements and Submissions**			**Submission Status**	**Remarks**
		Period	**Action**	**Timeframe**		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 2 March 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	Pending approval
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	Pending approval
2.6	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	**To Conduct -** A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer Note: The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	*	
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	**Deposit** - A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at locations HKT03, KT16, KT17 and KT18	prior to the commencement of the respective removal or relocation works	*	
		Others	**For Approva**l - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	*	
2.8	Compensatory Tree Planting Plan	Before construction	**For Approval**	prior to the commencement of construction	*	
2.9	Habitat Creation and Management Plan	Others	**For Approval**	prior to the commencement of construction of relevant part of the Project	-	AECOM head office, circulated to EPD/AFCD, certificates from ET and IEC obtained
2.10	Traffic Noise Mitigation Plan	Before construction	**For Approval**	no later than 1 month before commencement of construction	Submitted 31 July 2020	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	Submit by ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

DP7	EP-470/2013	Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works				
CEDD Contract No. ND/2019/01 - Site Formation and Infrastructural Works at KTN NDA						
Construction commencement date			**23-Mar-20**			
Operation commencement date			**tbc**			
EP Condition		**Requirements and Submissions**			**Submission Status**	**Remarks**
		Period	**Action**	**Timeframe**		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notify 22 January 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-	
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	Pending approval
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	Pending approval
3.3	Baseline Monitoring Report	Before construction	**Submit**	at least 2 weeks before the commencement of construction	Submitted by Pre-construction ET	
3.4	Monthly EM&A Report	During construction	**Submit**	within 2 weeks after the end of each reporting month throughout the entire construction period	Submit by ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be

DP4	EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5				
CEDD Contract No. ND/2019/03 - Development of Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park						
Construction commencement date			**3-Jul-20**			
Operation commencement date			**tbc**			
EP Condition		**Requirements and Submissions**			**Submission Status**	**Remarks**
		Period	**Action**	**Timeframe**		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 28 April 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 18 June 2020	Pending Approval
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 18 June 2020	EPD Approval 29 June 2020
2.6	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	**To Conduct -** A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	N/A	
2.7	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	**Deposit** - A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at locations HKT03, KT16, KT17 and KT18	prior to the commencement of the respective removal or relocation works	N/A	
		Others	**For Approva**l - 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	-	AECOM head office, circulated to EPD/AFCD, certificates from ET and IEC obtained
2.10	Traffic Noise Mitigation Plan	Before construction	**For Approval**	no later than 1 month before commencement of construction	Submitted 31 July 2020	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	Submit by ET Monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

DP10	EP-473/2013/A	Fanling Bypass Eastern Section				
CEDD Contract No. ND/2019/05 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)						
Construction commencement date			**1-Aug-20**			
Operation commencement date			**tbc**			
EP Condition		**Requirements and Submissions**			**Submission Status**	**Remarks**
		Period	**Action**	**Timeframe**		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 15 June 2020	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	**Inform in writing**	no later than 2 weeks before the commencement of construction	Deposited 28 May 2020	Pending Approval
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 28 May 2020	EPD Approval 29 June 2020
2.6	Relocation Plan for Rose Bitterling	Before construction	**Approval**	before the commencement of construction	N/A	
2.7	Egretry Habitat Creation and Management Plan	Before construction	**Approval**	before the commencement of construction	N/A	
2.8	Detailed Design of Siu Hang San Tsuen Stream	Before construction	**Deposit**	before the commencement of construction	N/A	
2.9	Traffic Noise Mitigation Plan	Before construction	**Approval**	no later than 1 month before the commencement of construction	Submitted 1 September 2020	
2.10	Cultural Heritage Impact -- Baseline condition survey and baseline vibration impact assessment	Before construction	**To Conduct -** A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer <u>Note:</u> The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	Submitted 1 September 2020	Pending Approval
2.11	Cultural Heritage Impact -- Photographic and Cartographic Records/ Proposals on relocation of any building	Others	**Deposit** - A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at FL19	prior to the commencement of the respective removal or relocation works	-	
		Others	**For Approva**l - 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	Submit by ET monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
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DP12	EP-475/2013/A	Reprovision of temporary Wholesale Market in Fanling North New Development Area				
Contract No. ND/2019/06 - Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products						
Construction commencement date			**29-Oct-19**			
Operation commencement date			**tbc**			
EP Condition		**Requirements and Submissions**			**Submission Status**	**Remarks**
		Period	**Action**	**Timeframe**		
1.12	Commencement date of construction	Before construction	**Notify in writing**	no later than 8 weeks prior to the commencement of construction	Notified 15 October 2019	
2.1	Establish of ET	Before construction	**Establish** - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 5 March 2020	Pre-construction ET
					Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC				Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	**Deposit**	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction	
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	Pending approval
2.5	Layout Plan	Before construction	**Deposit**	no later than 2 weeks before the commencement of construction	Deposited 14 October 2019	Pending approval
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	Submit by ET monthly	
4.2	Dedicated website	During construction	**Set up and Notify in writing** -- the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
		During construction and operation	**Upload** -- All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbc:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available