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 May 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.

WELLAB LIMITED
Room 1701, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong
Tel: (852) 2898 7388 Fax: (852) 2898 7076
Website: www.wellab.com.hk

TABLE OF CONTENTS

Page

EXECUTIVE SUMMARY 1
Introduction 1
Environmental Monitoring and Audit Progress 1
Breaches of Action and Limit Levels 2
Construction Noise 2
Landfill Gas Monitoring 2
Complaint Log 2
Notification of Summons and Successful Prosecutions 2
Reporting Changes 2
Future Key Issues 3

1 INTRODUCTION 4
Purpose of the report 4
Structure of the report 4

2 PROJECT INFORMATION 5
Background 5
Project Organization 6
Summary of Construction Works Undertaken During Reporting Month 7
Construction Programme 8
Status of Environmental Licences, Notifications and Permits 9

3 NOISE MONITORING 10
Monitoring Requirements 10
Monitoring Location 10
Monitoring Equipment 10
Monitoring Parameters, Frequency and Duration 10
Monitoring Methodology and QA/QC Procedures 11
Maintenance and Calibration 11
Results and Observations 12
Event and Action Plan 12

4 LANDFILL GAS MONITORING 13
Monitoring Requirement 13
Monitoring Parameters and Frequency 13
Monitoring Locations 13
Monitoring Equipment 14
Results and Observations 14
Event and Action Plan 14

5 ENVIRONMENTAL SITE INSPECTION 15
Site Audits 15
Implementation Status of Environmental Mitigation Measures 17
Solid and Liquid Waste Management Status 18

6 ENVIRONMENTAL NON-CONFORMANCE 19
Summary of Exceedances 19
Summary of Environmental Non-Compliance 19
Summary of Environmental Complaint 19
Summary of Environmental Summon and Successful Prosecution 19

7 FUTURE KEY ISSUES 20
Key Issues in the Coming Two Months 20
Monitoring Schedule for the Next Month 21

Construction Programme for the Next Month.....21
8 CONCLUSIONS AND RECOMMENDATIONS 22
Conclusions 22
Recommendations 22

LIST OF TABLES

Table I Summary Table for Monitoring Activities in the Reporting Month
Table II Summary Table for Events Recorded in the Reporting Month
Table III Summary Table for Site Activities in the coming Two Months
Table 2.1 Work Contracts undertaken in the Reporting Month
Table 2.2 Key Contacts of the Project
Table 2.3 Summary Table for Major Site Activities in the Reporting Month
Table 2.4 Status of Environmental Licenses, Notifications and Permits
Table 3.1 Location for Noise Monitoring Stations
Table 3.2 Noise Monitoring Equipment
Table 3.3 Noise Monitoring Parameters, Duration and Frequency
Table 3.4 Summary Table of Noise Monitoring Results during the Reporting Month
Table 3.5 Observation at Noise Monitoring Stations
Table 4.1 Landfill Gas Monitoring Equipment
Table 5.1 Observations and Recommendations of Site Audit
Table 5.2 Photographic Records of Measures
Table 7.1 Summary Table for Site Activities in the coming Two Months

LIST OF DRAWINGS

Contract No. ND/2019/01

Drawing no. 60335576/C1/C00/1031A-1051D	Site Layout Plan (Contract No. ND/2019/01)

Contract No. ND/2019/06

Drawing no. 60335576/C6/C00/1041	Site Layout Plan (Contract No. ND/2019/06)

LIST OF FIGURES

Figure 1 Location of Noise Monitoring Station (Contract No. ND/2019/06)
Figure 2 Location of Noise Monitoring Station (Contract No. ND/2019/01)
Figure 3 Location of Landfill gas monitoring (Contract No. ND/2019/01)

LIST OF APPENDICES

Appendix A Construction Programme
Appendix B Action and Limit Levels
Appendix C Copies of Calibration Certificates
Appendix D Environmental Monitoring Schedules
Appendix E Noise Monitoring Results and Graphical Presentation

Appendix F Landfill gas monitoring result
Appendix G Weather Condition
Appendix H Event Action Plans
Appendix I Summary of Exceedance
Appendix J Site Audit Summary
Appendix K Environmental Mitigation Implementation Schedule (EMIS)
Appendix L Waste Generation in the Reporting Month
Appendix M Complaint Log
Appendix N Summary of Successful Prosecution

EXECUTIVE SUMMARY

Introduction

1. This is the 7th 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 May 2020.

2. During the reporting month, the following Works Contracts were undertaken for the Project:

   - Contract No. ND/2019/01 Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works
   - Contract No. ND/2019/06 Fanling North New Development Area, Phase 1: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products

Environmental Monitoring and Audit Progress

3. A summary of the monitoring activities in this reporting month is listed in **Table I** below:

Table I Summary Table for Monitoring Activities in the Reporting Month

Monitoring Activities	Date(s)
Noise Monitoring	ND/2019/01 4th , 11th , 18th , 26th May 2020 ND/2019/06 4th , 11th , 18th , 26th May 2020
Environmental Site Inspection	ND/2019/01 6th , 12th , 19th, 26th May 2020 ND/2019/06 7th , 13th , 21st , 28th May 2020

Breaches of Action and Limit Levels

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

Table II Summary Table for Events Recorded in the Reporting Month

Environmental Monitoring	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	
Noise	0	0	0	0	0	0
Landfill Gas	0	0	0	0	0	0

Construction Noise

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

Landfill Gas Monitoring

6. Monitoring of landfill gases commenced in May 2020 and was carried out by the Contractor at excavation location, Portion 6b. No Limit Level exceedance was recorded.

Complaint Log

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

Notification of Summons and Successful Prosecutions

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

Reporting Changes

9. 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

10. The major site activities for the coming two months are shown in **Table III.**

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

Contract No.	Contract Title	Site Activities (June and July 2020)
Contract No. ND/2019/01	Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works	(a) Site Clearance, Ground Investigation in Portion 1f; (b) Tree Survey, Ground Investigation in Portion 2 (c) Tree Survey, Site Clearance in Portion 3 (d) Soil Treatment works in Portion 4 (e) Site Clearance, Tree Survey, Ground Investigation in Portion 5 (f) Tree Survey, Site Clearance, Ground Investigation in Portion 6a; (g) Set up of Soil Treatment Facility, Operation of Soil Treatment Facility in Portion 6b; (h) Site Clearance, Set up of Soil Treatment Plant in Portion 7; (i) Tree Survey, Site Clearance, Expansion of Haul Road , Ground Investigation, Construction of Retaining Wall in Portion 8a; (j) Tree Survey, Site Clearance, Ground Investigation in Portion 8b; (k) Site Clearance, Excavation in Portion 10a; and (l) Tree Survey, Site Clearance, Ground Investigation in 10b
Contract No. ND/2019/06	Fanling North New Development Area, Phase 1: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products	(a) Installation of rain shelter for the interim stage; (b) Construction of footing and carcass of Management Office Building; (c) Construction of run-in/ out; (d) Construction of hoarding for the final stage; (e) Breaking up the concrete surface and disposal of C&D material off site at Portion 3; (f) Drainage works for interim stage including construction of U-channel and manhole for Portion 3 near Management Office Building; (g) Ground investigation works for mini-pile construction at Portion 3. (h) Tree felling at Portion 3 and 6.

11. The commencement of construction works under Environmental Permit EP-468/2013/A for the Contract No. ND/2019/01 is scheduled for 1 June 2020. Additional environmental monitoring information will be presented in the next monthly EM&A report.

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), 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 7th EM&A Report which summarises the impact monitoring results and audit findings for the EM&A programme in May 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: **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 4: **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 5: **Environmental Site Inspection -** summarises the audit findings of the weekly site inspections undertaken within the reporting month.

Section 6: **Environmental Non-conformance -** summarises any monitoring exceedance, environmental complaints, environmental summons and successful prosecutions within the reporting month.

Section 7: **Future Key Issues -** summarises the impact forecast and monitoring schedule for the next three months.

Section 8: **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 First Phase Development of the Project is governed by Environmental Permits (EPs) (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) under seven Contracts (Works Contracts No.: ND/2019/01, ND/2019/02, ND/2019/03, ND/2019/04, ND/2019/05, ND/2019/06 and ND/2019/07).

2.4 During the reporting month, the Works Contracts undertaken for First Phase Development of Kwu Tung North (KTN) and Fanling North (FLN) New Development Areas (NDAs) (the Project) are shown in **Table 2.1.**

Table 2.1 Work Contracts undertaken in the Reporting Month

Environmental Permit	Contract No. & Title	Commencement Date of Construction (EP Condition 1.12)
EP-470/2013	Contract No. ND/2019/01 Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works	23rd March 2020
EP-475/2013/A	Contract No. ND/2019/06 Fanling North New Development Area, Phase 1: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products	29th October 2019

2.5 The site layout plans for the Contract No. ND/2019/01 are shown in **Drawing no. 60335576/C1/C00/1031A-1051D.**

2.6 The site layout plan for the Contract No. ND/2019/06 is shown in **Drawing no. 60335576/C6/C00/1041.**

Project Organization

2.7 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)

2.8 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/2019/06 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

2.9 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.	Contract Title	Site Activities (May 2020)
Contract No. ND/2019/01	Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works	(a) Site Clearance, Construction of Interim CLC in Portion 1f (b) Tree Survey in Portion 2; (c) Site Clearance, Tree Survey and Ground Investigation in Portion 4; (d) Site Clearance, Tree Survey and Ground Investigation in Portion 5; (e) Site Clearance, Tree Survey and Ground Investigation in Portion 6a; (f) Set up Soil Treatment Facility in Portion 6b;

Contract No.	Contract Title	Site Activities (May 2020)
		(g) Site Clearance, Tree Survey and Ground Investigation in Portion 7; (h) Tree Survey, Expansion of Haul Road, Ground Investigation, Construction of Retaining Wall in Portion 8a; (i) Site Clearance, Tree Survey and Ground Investigation in Portion 10a
Contract No. ND/2019/06	Fanling North New Development Area, Phase 1: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products	(a) Road Marking for the interim stage; (b) Installation of rain shelter for the interim stage; (c) Modification works for the ramp between stall and road. (d) Construction of run-in/ out (e) Preparation of construction of footing of Management Office Building

Construction Programme

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

Status of Environmental Licences, Notifications and Permits

2.11 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-470/2013	21/11/2013	N/A	Valid
ND/2019/06	EP-475/2013/A	13/01/2017	N/A	Valid
Construction Noise Permit (CNP)				
ND/2019/06	GW-RN0113-20	25/02/2020	24/08/2020	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation				
ND/2019/01	451792	11/12/2019	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/2019/06	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/2019/06	5213-625-N2716-01	02/10/2019	N/A	Valid
Effluent Discharge License under Water Pollution Control Ordinance				
ND/2019/06	WT00035415-2019	20/03/2020	31/03/2025	Valid

3 NOISE MONITORING

Monitoring Requirements

3.1 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

3.2 Impact noise monitoring was conducted at the monitoring stations, as shown in **Figure 1 and 2** according to Table 1.1 of Updated EM&A Manual. **Table 3.1** describes the locations of the noise monitoring stations.

Table 3.1 Location of Noise Monitoring Stations

Contract No.	Monitoring Station	Location
ND/2019/01	CP-KTN-NMS5	N/A
ND/2019/06	CP-FLN-NMS1	Belair Monte

Monitoring Equipment

3.3 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 3.2** summarizes the noise monitoring equipment being used. Copies of calibration certificates are attached in **Appendix C**.

Table 3.2 Noise Monitoring Equipment

Equipment	Model	Quantity
Sound & Vibration Analyser	BSWA 801	1
Acoustical Calibrator	SV 30A	1

Monitoring Parameters, Frequency and Duration

3.4 **Table 3.3** summarises the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is shown in **Appendix D**.

Table 3.3 Noise Monitoring Parameters, Duration and Frequency

Contract No.	Monitoring Stations	Parameter	Duration	Frequency	Measurement
ND/2019/01	CP-KTN NMS5	$L_{10(30\ min.)}$ 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	Free-field[1]
ND/2019/06	CP-FLN-NMS1				Façade

Remarks:

[1]: Correction of +3dB (A) for Free-field Measurement.
[2]: A-weighted equivalent continuous sound pressure level (L_{eq}). It is the constant noise level which, under a given situation and time period, contains the same acoustic energy as the actual time-varying noise level.
L_{10} is the level exceeded for 10% of the time. For 10% of the time, the sound or noise has a sound pressure level above L_{10}.
L_{90} is the level exceeded for 90% of the time. For 90% of the time, the noise level is above this level.

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

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

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

3.7 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

3.8 The noise monitoring results are summarised in **Table 3.4**. Detailed monitoring results and graphical presentations of noise monitoring are shown in **Appendix E**. The weather information for the reporting month is summarized in **Appendix G.**

Table 3.4 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/2019/01	CP-KTN-NMS5	55.0-63.1	57.2	75
ND/2019/06	CP-FLN-NMS1	66.7-69.6	69.9	75

3.9 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 I**.

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

Table 3.5 Observation at Noise Monitoring Stations

Contract No.	Monitoring Station	Location	Major Noise Source
ND/2019/01	CP-KTN-NMS5	N/A	Other construction site not under ND/2019/01
ND/2019/06	CP-FLN-NMS1	Belair Monte	Road Traffic at Ma Sik Road

Event and Action Plan

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

4 LANDFILL GAS MONITORING

Monitoring Requirement

4.1 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.

4.2 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

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

4.4 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".

4.5 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

4.6 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 3** 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: Container in Portion 6b

Monitoring Equipment

4.7 **Table 4.1** summarizes the equipment employed by the Contractor for the landfill gas monitoring.

Table 4.1 Landfill Gas Monitoring Equipment

Equipment	Model and Make	Quantity
Portable gas detector	RKI Eagle (Serial No. E148037)	1

Results and Observations

4.8 In the reporting month, landfill gas monitoring was carried out by the Contractor at the aforesaid locations on 1 occasion with 2 monitoring stations. No Limit Level exceedance for landfill gas monitoring was recorded in the reporting month. The monitoring results are provided in **Appendix F**. Copies of calibration certificates are attached in **Appendix C**.

Event and Action Plan

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

5 ENVIRONMENTAL SITE INSPECTION

Site Audits

5.1 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 attached in **Appendix J**.

5.2 Site audits were conducted on 6th, 12th, 19th and 26th May 2020 for the Contract No. ND/2019/01 in the reporting month. For Contract No. ND/2019/06, Site audits were conducted on 7th, 13th, 21st, 28th May 2020 by ET in the reporting month. A joint site audit with the representative of the *Supervisor's* Representative, the Contractor, IEC and ET was carried out on 6th May 2020 for Contract No. ND/2019/01 while joint site audit of Contract No. ND/2019/06 was carried out on 13th May 2020. The details of observations during site audit are shown in **Table 5.1**.

5.3 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 5.1**.

Table 5.1 Observations and Recommendations of Site Audit

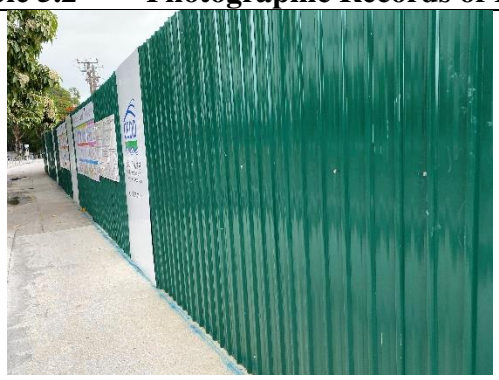
Parameters	Date	Observations and Recommendations	Follow-up
Contract No.: ND/2019/01			
Water Quality	19/05/2020	Clear water regularly.	Improvement/Rectification was observed during follow-up audit session on 26 May 2020.
	26/05/2020	Vehicles are not cleaned of earth, mud and debris before leaving the site.	Follow up action will be reported in next reporting month.
	26/05/2020	Water should be cleared regularly.	Follow up action will be reported in next reporting month.
Waste/ Chemical Management	29/04/2020	Chemical waste should be labelled, put in designated place properly.	Improvement/Rectification was observed during follow-up audit session on 6 May 2020.
	29/04/2020	Provide spill kit for all works area.	Item was remarked as 200506-R01. Follow-up action is needed to be reviewed.
	06/05/2020	Provide spill kit for all works area	Item was remarked as 200512-R01. Follow-up action is needed to be reviewed.
	12/05/2020	Provide spill kit for all works area.	Item was remarked as 200519-R01. Follow-up action is needed to be reviewed.
	19/05/2020	Provide spill kit for all works area.	Improvement/Rectification was observed during follow-up audit session on 26 May 2020.
	26/05/2020	Chemical waste/oil should be stored properly in designated area.	Follow up action will be reported in next reporting month.
Landscape and Visual	12/05/2020	Retained trees should be carefully protected. Constrcution materials should be cleared within tree protection zone.	Improvement/Rectification was observed during follow-up audit session on 19 May 2020.
	26/05/2020	Screen hoarding should be properly maintained and provided.	Follow up action will be reported in next reporting month.

Parameters	Date	Observations and Recommendations	Follow-up
Contract No.: ND/2019/06			
Air Quality	21/05/2020	The Contractor should renew the NRMM labels on the regulated machines.	Improvement/ Rectification was observed during follow-up audit session on 28 May 2020.
Water Quality	07/05/2020	Water should be cleared regularly.	Improvement/ Rectification was observed during follow-up audit session on 12 May 2020.
	13/05/2020	The Contractor should review the capacity of the sediment tank and location of discharge point.	Improvement/ Rectification was observed during follow-up audit session on 21 May 2020.
	28/05/2020	Sand and silt settled in drainage system should be removed regularly.	Follow up action will be reported in next reporting month.
	28/05/2020	Water in drip tray should be cleared regularly.	Follow up action will be reported in next reporting month.
Waste / Chemical Management	29/04/2020	Chemical waste should be stored properly in suitable container at designated area and labelled clearly.	Improvement/ Rectification was observed during follow-up audit session on 7 May 2020.
	07/05/2020	Oil leakage was found from equipment.	Improvement/ Rectification was observed during follow-up audit session on 13 May 2020.

Implementation Status of Environmental Mitigation Measures

5.4 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 K**. The photographic records of measures as stipulated in EP to mitigate environmental impacts in the reporting month are presented in **Table 5.2**.

Table 5.2 Photographic Records of Measures





Environmental Permit No. EP-475/2013/A Condition 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 have be erected around all active works areas

Solid and Liquid Waste Management Status

5.5 Waste generated from Contract No. ND/2019/06 include inert construction and demolition (C&D) materials and non-inert C&D wastes. For Contract No. ND/2019/01, only general refuse had been generated during reporting month.

5.6 The amount of wastes generated by the construction works of the Contract No. ND/2019/01 and Contract No. ND/2019/06 during the reporting month is shown in **Appendix L**.

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

6 ENVIRONMENTAL NON-CONFORMANCE

Summary of Exceedances

6.1 No exceedance of Action and Limit Levels of construction noise and landfill gas monitoring in the reporting month. The summary of exceedance record in reporting month is shown in **Appendix I**.

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

Summary of Environmental Non-Compliance

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

Summary of Environmental Complaint

6.4 No environmental complaints were received in the reporting month. The Cumulative Complaint Log since the commencement of the Project is presented in **Appendix M**.

Summary of Environmental Summon and Successful Prosecution

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

7 FUTURE KEY ISSUES

Key Issues in the Coming Two Months

7.1 The major site activities for the coming two months are shown in **Table 7.1.**

Table 7.1 Summary Table for Site Activities in the coming Two Months

Contract No.	Contract Title	Site Activities (June and July 2020)
Contract No. ND/2019/01	Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works	(a) Site Clearance, Ground Investigation in Portion 1f; (b) Tree Survey, Ground Investigation in Portion 2 (c) Tree Survey, Site Clearance in Portion 3 (d) Soil Treatment works in Portion 4 (e) Site Clearance, Tree Survey, Ground Investigation in Portion 5 (f) Tree Survey, Site Clearance, Ground Investigation in Portion 6a; (g) Set up of Soil Treatment Facility, Operation of Soil Treatment Facility in Portion 6b; (h) Site Clearance, Set up of Soil Treatment Plant in Portion 7; (i) Tree Survey, Site Clearance, Expansion of Haul Road , Ground Investigation, Construction of Retaining Wall in Portion 8a; (j) Tree Survey, Site Clearance, Ground Investigation in Portion 8b; (k) Site Clearance, Excavation in Portion 10a; and (l) Tree Survey, Site Clearance, Ground Investigation in 10b
Contract No. ND/2019/06	Fanling North New Development Area, Phase 1: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products	(a) Installation of rain shelter for the interim stage; (b) Construction of footing and carcass of Management Office Building; (c) Construction of run-in/ out; (d) Construction of hoarding for the final stage; (e) Breaking up the concrete surface and disposal of C&D material off site at Portion 3; (f) Drainage works for interim stage including construction of U-channel and manhole for Portion 3 near Management Office Building; (g) Ground investigation works for mini-pile construction at Portion 3.

		(h) Tree felling at Portion 3 and 6.

Monitoring Schedule for the Next Month

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

Construction Programme for the Next Month

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

8 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

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

8.2 No Action/Limit Level exceedance were recorded for construction noise and landfill gas monitoring.

Contract No. ND/2019/01

8.3 Environmental site inspection was conducted on 6th , 12th , 19th and 26th May 2020 by ET in the reporting month.

Contract No. ND/2019/06

8.4 Environmental site inspections were conducted on 7th , 13th , 21st and 28th May 2020 by ET in the reporting month.

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

8.6 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

8.7 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.

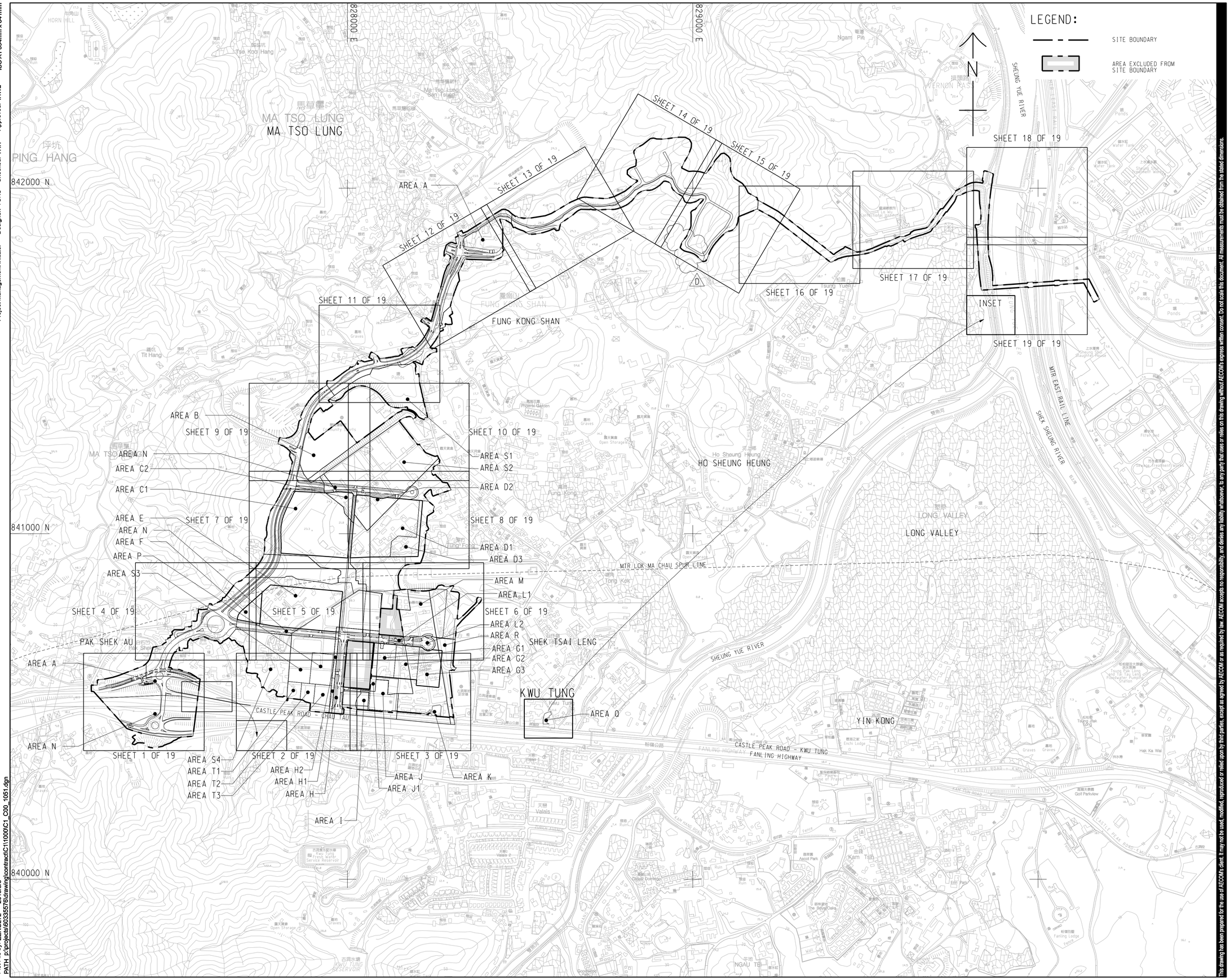
Landscape & Visual Impact

- 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.

DRAWING(S)

Contract No. ND/2019/01 Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works

Project Management Initials: Designer: TCKC Checked: YHH Approved: IHWL ISO A1 594mm x 841mm


LEGEND:
SITE BOUNDARY
AREA EXCLUDED FROM SITE BOUNDARY
N
822000 E
829000 E
842000 N
841000 N
840000 N
MA TSO LUNG
馬草壟
PING HANG
坪坑
HORN HILL
Tse Koo Hang
Ma Tso Lung San Tsuen
Ngam Pin
VERNON PARK
SHEUNG YUE RIVER
FUNG KONG SHAN
Tit Hang
Ho Sheung Heung
HO SHEUNG HEUNG
LONG VALLEY
Tung Kok
MTR LOK MA CHAU SPUR LINE
SHEK TSAI LENG
PAK SHEK AU
KWU TUNG
YIN KONG
Tsung Yuen
Ha Che
Saddle Hill
Hak Ka Wai
Kam Tsin
Fan Pass
Fanling Lodge
Ngau Tei
Tung Kong
Tung Kok
Kwu Tung
Pak Shek Au
Ho Sheung Heung
Fung Kong Shan
Ma Tso Lung
Tsung Yuen Ha



NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1050.
2. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM (mPD).
3. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.

LEGEND:

	SITE BOUNDARY		PORTION 8b
	PORTION 1a		PORTION 9a
	PORTION 1b		PORTION 9b
	PORTION 1c		PORTION 9c
	PORTION 1d		PORTION 9d
	PORTION 1e		PORTION 10a
	PORTION 1f		PORTION 10b
	PORTION 2		PORTION 11a
	PORTION 3		PORTION 11b
	PORTION 4		PORTION 12
	PORTION 5		PORTION 13
	PORTION 6a		PORTION 14
	PORTION 6b		PORTION 15
	PORTION 7		PORTION 16
	PORTION 8a		

Project Management Initials:
Designer: TCKC
Checked: YHH
Approved: IHWL
ISO A1 594mm x 841mm

Plot File by: lance.yu 02/08/2019
PATH p:\projects\60335576\drawing\contract\c1\1000\C1_C00_1031.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT 項目

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

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: 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.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

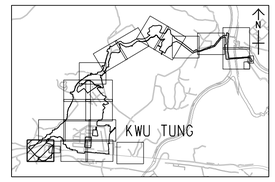
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
A	AUG-19	TENDER ADDENDUM NO. 3	YHH
-	JUN-19	TENDER DRAWING	YHH

STATUS 階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 1 OF 20

SHEET NUMBER 圖紙編號
60335576/C1/C00/1031A

Project Management Initials:
Designer: TCKC
Checked: YHH
Approved: IHWL
ISO A1 594mm x 841mm

CUT LINE 2-2
SEE DRAWING NO. 60335576/C1/C00/1035

827700 E
827800 E
827900 E
828000 E

PORTION 13
PORTION 7
PORTION 10a
PORTION 14

840600 N
840500 N
840400 N

CASTLE PEAK ROAD - CHAU TAU
FANLING HIGHWAY
KWU TUNG ROAD
污水處理廠
Sewage Treatment Plant Room
道路 Road
古洞路
CASTLE PEAK ROAD - SAN TIN

CUT LINE 3-3
SEE DRAWING NO. 60335576/C1/C00/1033

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C1/C00/1031.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1050.

Plot File by: ZENGLY2 2019/8/14
PATH: p:\projects\60335576\drawing\contract\c1\11000\C1_C00_1032.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT 項目

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

CONTRACT TITLE:

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

CLIENT 業主

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

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

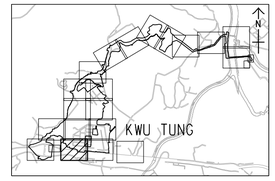
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
A	AUG-19	TENDER ADDENDUM NO. 5	YHH
-	JUN-19	TENDER DRAWING	YHH

STATUS 階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 2 OF 20

SHEET NUMBER 圖紙編號
60335576/C1/C00/1032A

Project Management Initials:
Designer: TCKC
Checked: YHH
Approved: IHWL
ISO A1 594mm x 841mm



This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

Plot File by: ZENGLY2 2019/7/19
PATH: P:\projects\60335576\drawing\CONTRACT\C1\1000\C1_C00_1033.dgn

AECOM

PROJECT 項目

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

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: 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.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

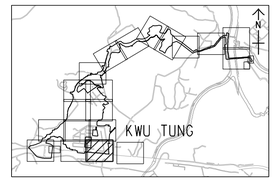
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
A	JUL-19	TENDER ADDENDUM NO. 1	YHH
-	JUN-19	TENDER DRAWING	YHH

STATUS 階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱

PORTION OF THE SITE

SHEET 3 OF 20

SHEET NUMBER 圖紙編號

60335576/C1/C00/1033A

Project Management Initials: Designer: TCKC Checked: YHH Approved: IHWL ISO A1 594mm x 841mm

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C1/C00/1031.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1049.

827400 E
827500 E
827600 E
840900 N
840800 N
840700 N

墓地 Graves
泥路 Track
道路 Road
LOK MA CHAU SPUR LINE
MATCH TO EXISTING GROUND LEVEL
PORTION 12
PORTION 1a
PORTION 13
白石凹 PAK SHEK AU
KWU TUNG NORTH NEW DEVELOPMENT AREA PHASE 1 (SEE DRAWING NO. 60335576/C1/C00/1035)
CUT LINE 1-1
SEE DRAWING NO. 60335576/C1/C00/1031
CUT LINE 1-1
SEE DRAWING NO. 60335576/C1/C00/1031

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

Plot File by: ZENGLY2 2019/6/18
PATH: p:\projects\60335576\drawing\contractfc\110000\C1_C00_1034.dgn

AECOM

PROJECT 項目

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

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: 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.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

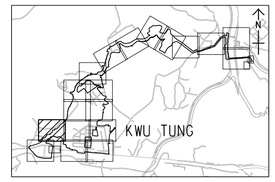
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
-	JUN-19	TENDER DRAWING	YHH

STATUS 階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 4 OF 19

SHEET NUMBER 圖紙編號
60335576/C1/C00/1034

ISO A1 594mm x 841mm

Approved: IHWL

Checked: YHH

Designer: TCKC

Project Management Initials:

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/60335576/C1/C00/1031.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1049.

CUT LINE 5-5
SEE DRAWING NO: 60335576/C1/C00/1037

CUT LINE 4-4
SEE DRAWING NO: 60335576/C1/C00/1034

CUT LINE 2-2
SEE DRAWING NO: 60335576/C1/C00/1032

CUT LINE 6-6
SEE DRAWING NO: 60335576/C1/C00/1036

840800 N
840700 N
840600 N
822000 E
822100 E

PORTION 1a
PORTION 1b
PORTION 3
PORTION 5
PORTION 7
PORTION 12
PORTION 13

LOK MA CHAU SPUR LINE

+20.0 +20.1 +20.5 +19.9 +19.5 +19.2 +18.9 +19.0 +18.6 +18.5 +17.3 +18.8

Plot File by: ZENGLY2 2019/6/18
PATH: P:\projects\60335576\drawing\contract\c1\1100\0\C1_C00_1035.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT 項目

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

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: 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.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

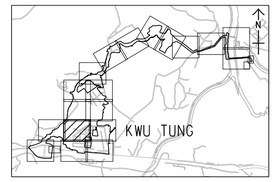
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
-	JUN-19	TENDER DRAWING	YHH

STATUS 階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 5 OF 19

SHEET NUMBER 圖紙編號
60335576/C1/C00/1035

ISO A1 594mm x 841mm

Approved: IHWL

Checked: YHH

Designer: TCKC

Project Management Initials:

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C1/C00/1031.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1050.

CUT LINE 5-5
SEE DRAWING NO. 60335576/C1/C00/1038

CUT LINE 6-6
SEE DRAWING NO. 60335576/C1/C00/1039

CUT LINE 2-2
SEE DRAWING NO. 60335576/C1/C00/1033

828100 E
828200 E
828300 E
840900 N
840800 N
840700 N

LOK MA CHAU SPUR LINE

PORTION 1b
PORTION 1d
PORTION 1e
PORTION 1f
PORTION 10b
PORTION 11a
PORTION 11b

露天貨倉
Open Storage

Road 道路
泥路 Track

Plot File by: ZENGLY2 2019/8/14
PATH: P:\PROJECTS\60335576\Drawing\CONTRACT\C1\1000\C1_C00_1036.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT 項目

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

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: 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.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

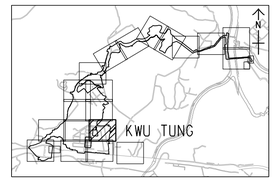
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核狀
B	AUG-19	TENDER ADDENDUM NO. 5	YHH
A	JUL-19	TENDER ADDENDUM NO. 1	YHH
-	JUN-19	TENDER DRAWING	YHH

STATUS 階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 6 OF 20

SHEET NUMBER 圖紙編號
60335576/C1/C00/1036B

Project Management Initials:
Designer: TCKC
Checked: YHH
Approved: IHWL
ISO A1 594mm x 841mm

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C1/C00/1031.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1049.

827800 E
827900 E
828000 E
841100 N
841000 N

CUT LINE 7-7
SEE DRAWING NO. 60335576/C1/C00/1039

PORTION 6b
PORTION 6a
PORTION 1c
PORTION 9a
PORTION 5
PORTION 1b
PORTION 3

CUT LINE 5-6
SEE DRAWING NO. 60335576/C1/C00/1038

CUT LINE 5-5
SEE DRAWING NO. 60335576/C1/C00/1035

泥路

Plot File by: ZENGLV2 2019/6/18
PATH: p:\projects\60335576\drawing\contract\c1\1000\C1_C00_1037.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
項目

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

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: 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.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

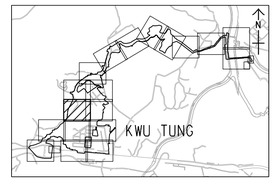
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	JUN-19	TENDER DRAWING	YHH

STATUS
階段

SCALE
比例
A1 1 : 500

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN A1 1 : 40000
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
PORTION OF THE SITE

SHEET 7 OF 19

SHEET NUMBER
圖紙編號
60335576/C1/C00/1037

Project Management Initials: Designer: TCKC Checked: YHH Approved: IHWL ISO A1 594mm x 841mm

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C1/C00/1831.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1049.

CUT LINE 7-7
SEE DRAWING NO. 60335576/C1/C00/1040

PORTION 1c

PORTION 1b

CUT LINE 6-6
SEE DRAWING NO. 60335576/C1/C00/1037

CUT LINE 5-5
SEE DRAWING NO. 60335576/C1/C00/1036

822800 E
823000 E
841100 N
841000 N

N

露天貨倉
Open Storage

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

Plot File by: ZENGLY2 2019/6/18
PATH: p:\projects\60335576\drawing\contract\c1\1000\C1_C00_1038.dgn

AECOM

PROJECT 項目

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

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: 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.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

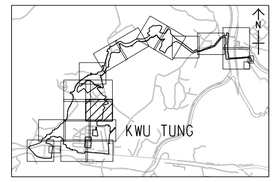
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
-	JUN-19	TENDER DRAWING	YHH

STATUS 階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 8 OF 19

SHEET NUMBER 圖紙編號
60335576/C1/C00/1038

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C1/C00/1031.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1049.



AECOM

PROJECT 項目

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

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: 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.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

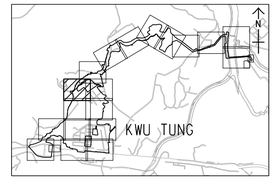
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核狀
-	JUN-19	TENDER DRAWING	YHH

STATUS 階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 9 OF 19

SHEET NUMBER 圖紙編號
60335576/C1/C00/1039

Project Management Initials: Designer: TCKC Checked: YHH Approved: IHWL ISO A1 594mm x 841mm

Plot File by: ZENGLY2 2019/6/18
PATH: p:\projects\60335576\drawing\contract\c1\1000\C1_C00_1039.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

Project Management Initials:
Designer: TCKC
Checked: YHH
Approved: IHWL
ISO A1 594mm x 841mm

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C1/C00/1031.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1049.

CUT LINE 8A-8A
SEE DRAWING NO. 60335576/C1/C00/1041

822800 E
822900 E
841400 N
841300 N
841200 N

PORTION 9c
PORTION 6b
PORTION 1c
PORTION 1b

CUT LINE 6-6
SEE DRAWING NO. 60335576/C1/C00/1039

CUT LINE 7-7
SEE DRAWING NO. 60335576/C1/C00/1038

G33-1
G33-2
G33-3
G33-6

馬鞍壆路 MA TSO LUNG ROAD
道路 Road
泥路 Track
籃球場 Basketball Court
足球場 Football Field
露天貨倉 Open Storage
PO
TS
FP
RCP
CUL
FH
ET
W1

N

Plot File by: ZENGLY2 2019/6/18
PATH: p:\projects\60335576\drawing\contract\c1\1\0\00\C1_C00_1040.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT 項目

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

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: 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.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

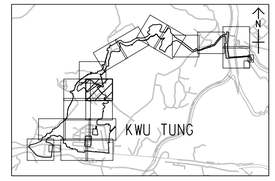
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
-	JUN-19	TENDER DRAWING	YHH

STATUS 階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 10 OF 19

SHEET NUMBER 圖紙編號
60335576/C1/C00/1040

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C1/C00/1031.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1049.

828000 E
828100 E
828200 E
841600 N
841500 N
841400 N

N

CUT LINE 9-9
SEE DRAWING NO. 60335576/C1/C00/1042

CUT LINE 8-8
SEE DRAWING NO. 60335576/C1/C00/1039

CUT LINE 8A-8A
SEE DRAWING NO. 60335576/C1/C00/1040

PORTION 9b
PORTION 9c
PORTION 6a

Track
Road
道路
泥路
墓地
Graves
籃球場
Basketball Court
TS
PO
WT
FP

Project Management Initials:
Designer: TCKC
Checked: YHH
Approved: IHWL
ISO A1 594mm x 841mm

Plot File by: ZENGLY2 2019/6/18
PATH: p:\projects\60335576\drawing\contract\c1\1000\C1_C00_1041.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT 項目

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

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: 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.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

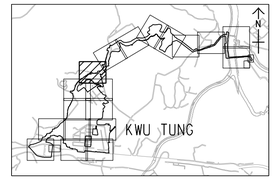
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核狀
-	JUN-19	TENDER DRAWING	YHH

STATUS 階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 11 OF 19

SHEET NUMBER 圖紙編號
60335576/C1/C00/1041

Project Management Initials:
Designer: TCKC
Checked: YHH
Approved: IHWL
ISO A1 594mm x 841mm

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C1/C00/1031.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1049.

828200 E
828300 E
841700 N
841600 N
PORTION 9b
PORTION 9d
CUT LINE 9-9
SEE DRAWING NO. 60335576/C1/C00/1041
CUT LINE 10-10
SEE DRAWING NO. 60335576/C1/C00/1043
MA TSO LUNG
Firing Range
Road
Septic Tank
FUNG KONG SHAN
鳳崗山

Plot File by: ZENGLY2 2019/6/18
PATH: p:\projects\60335576\drawing\contract\c1\1000\C1_C00_1042.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT 項目

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

CONTRACT TITLE:

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

CLIENT 業主

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

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

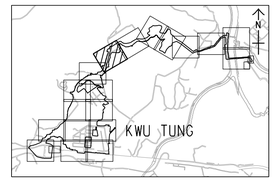
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
-	JUN-19	TENDER DRAWING	YHH

STATUS 階段

SCALE 比例
A1 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 40000



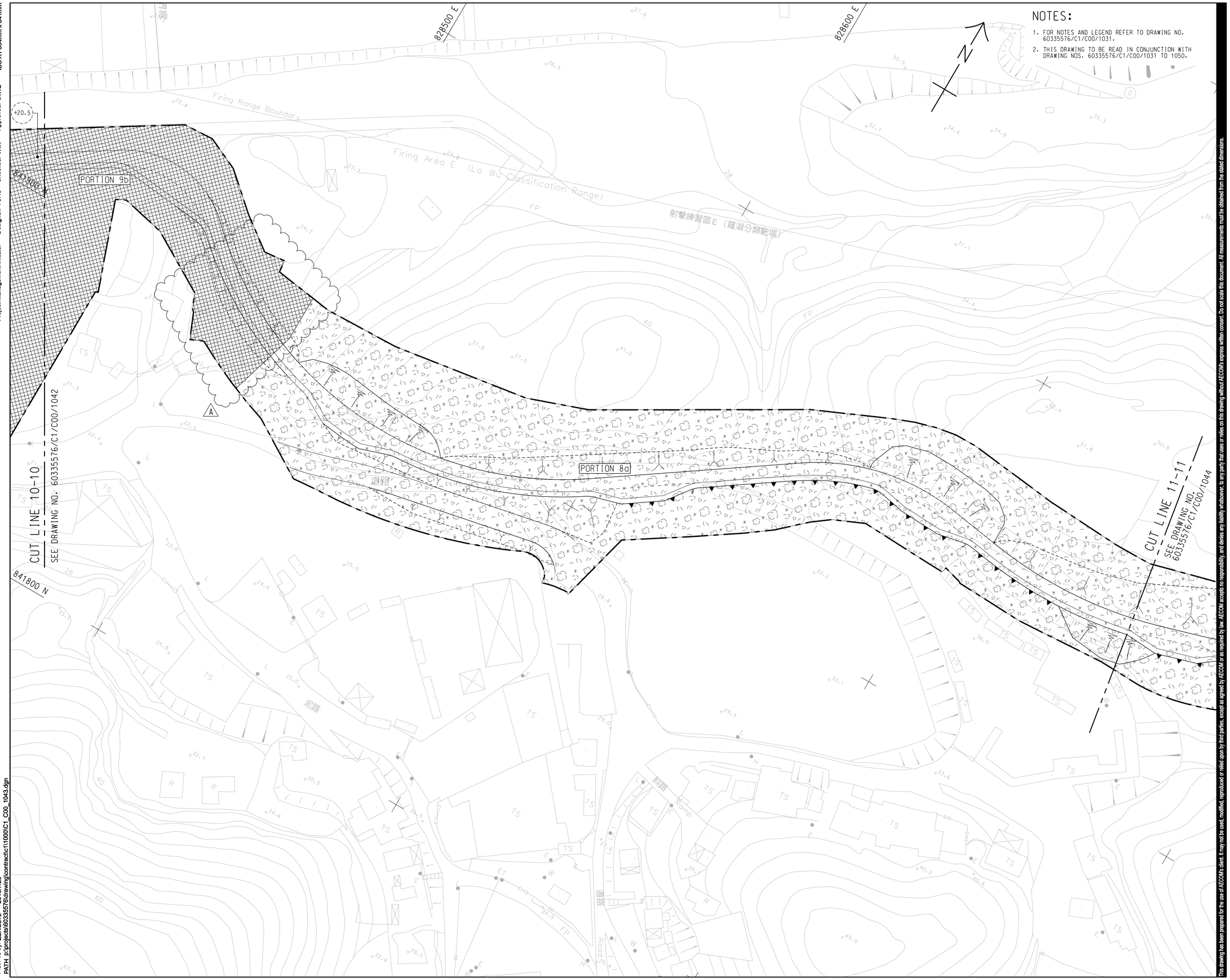
PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 12 OF 19

SHEET NUMBER 圖紙編號
60335576/C1/C00/1042



Project Management Initials: Designer: TCKC Checked: YHH Approved: IHWL ISO A1 594mm x 841mm

Plot File by: ZENGLY2 2019/7/25
PATH: p:\projects\60335576\drawing\contract\c1\1000\C1_C00_1043.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
項目

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

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: 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.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

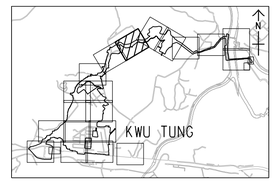
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核狀
A	JUL-19	TENDER ADDENDUM NO. 2	YHH
-	JUN-19	TENDER DRAWING	YHH

STATUS
階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 13 OF 20

SHEET NUMBER 圖紙編號
60335576/C1/C00/1043A

Project Management Initials: | Designer: TCKC | Checked: YHH | Approved: IHWL | ISO A1 594mm x 841mm



Plot File by: ZENGLY2 2019/6/18
PATH: p:\projects\60335576\drawing\contract\c1\1000\C1_C00_1044.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
項目

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

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: 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.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

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

STATUS
階段

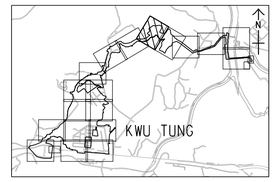
SCALE
比例

A1 1 : 500

DIMENSION UNIT
尺寸單位

METRES

KEY PLAN A1 1 : 40000
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

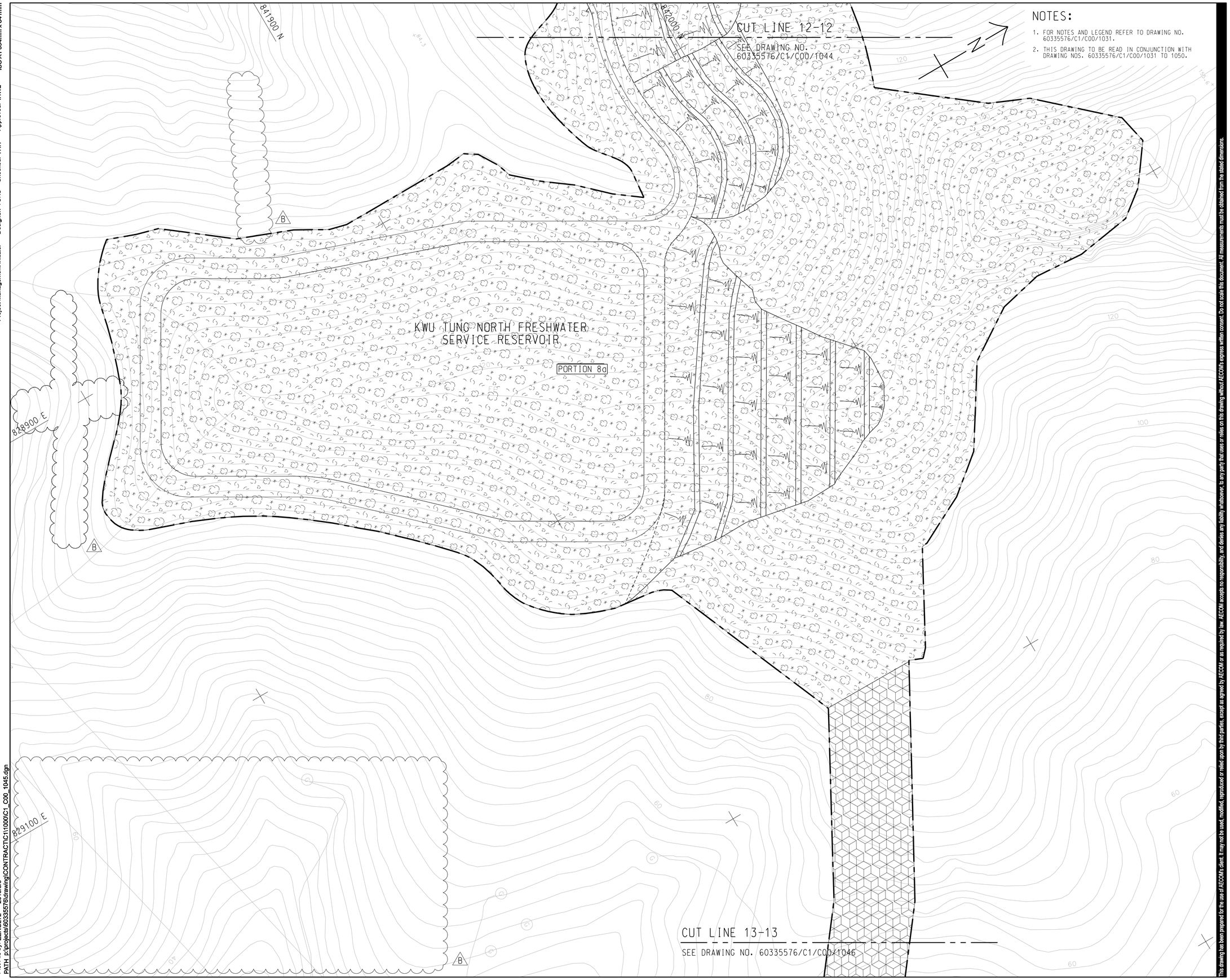
PORTION OF THE SITE

SHEET 14 OF 19

SHEET NUMBER
圖紙編號

60335576/C1/C00/1044

Project Management Initials: Designer: TCKC Checked: YHH Approved: IHWL ISO A1 594mm x 841mm



Plot File by: ZENGLY2 2019/8/9
PATH: p:\projects\60335576\drawing\CONTRACT\C1\1000\C1_C00_1045.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT 項目

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

CONTRACT TITLE:

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

CLIENT 業主

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

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

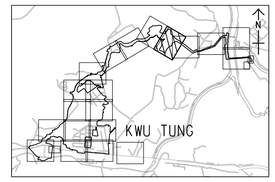
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
B	AUG-19	TENDER ADDENDUM NO. 4	YHH
A	JUL-19	TENDER ADDENDUM NO. 2	YHH
-	JUN-19	TENDER DRAWING	YHH

STATUS 階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 15 OF 20

SHEET NUMBER 圖紙編號
60335576/C1/C00/1045B



Project Management Initials: Designer: TCKC Checked: YHH Approved: IHWL ISO A1 594mm x 841mm

Plot File by: ZENGLY2 2019/8/14
PATH: p:\projects\60335576\drawing\contract\c1\1/C00\C1_C00_1046.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT
項目

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

CONTRACT TITLE:

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

CLIENT
業主

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

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

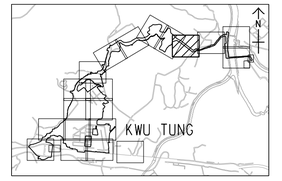
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
A	AUG-19	TENDER ADDENDUM NO. 5	YHH
-	JUN-19	TENDER DRAWING	YHH

STATUS
階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 16 OF 20

SHEET NUMBER 圖紙編號
60335576/C1/C00/1046A

Project Management Initials: | Designer: TCKC | Checked: YHH | Approved: IHWL | ISO A1 594mm x 841mm

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C1/C00/1031.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1050.

829500 E
829600 E
829700 E
842000 N
841900 N
841800 N

CUT LINE 15-15
SEE DRAWING NO. 60335576/C1/C00/1048

CUT LINE 14-14
SEE DRAWING NO. 60335576/C1/C00/1046

PORTION 8b

道路 Road
籃球場 Basketball Court
羅湖懲教所 Lo Wu Correctional Institution
CUL
PO
TS
EW

Plot File by: ZENGLY2 2019/8/14
PATH P:\PROJECTS\60335576\D\drawing\CONTRACT\C1\1\000\C1_C00_1047.dgn

This drawing has been prepared for the uses of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT 項目

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

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: 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.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

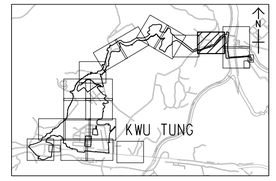
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
A	AUG-19	TENDER ADDENDUM NO. 5	YHH
-	JUN-19	TENDER DRAWING	YHH

STATUS 階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 17 OF 20

SHEET NUMBER 圖紙編號
60335576/C1/C00/1047A

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C1/C00/1031.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1049.

N

829800 E
830000 E
842100 N
842000 N
841900 N

CUT LINE 15-15
SEE DRAWING NO. 60335576/C1/C00/1047

CUT LINE 16-16
SEE DRAWING NO. 60335576/C1/C00/1049

PORTION 8b

道路 Road
排水口 Outfall
導管 Pipeline
Track
TS
FP
ET
FB
Air Tank
Water Tank
Railway
鐵路
中華電力
梧桐河變電站
水務署梧桐河原水抽水站
Water Supplies Department
River Indus Raw Water
Pumping Station

Project Management Initials:
Designer: TCKC
Checked: YHH
Approved: IHWL
ISO A1 594mm x 841mm

Plot File by: ZENGLY2 2019/6/18
PATH: p:\projects\60335576\drawing\contract\c11\1000\C1_C00_1048.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT 項目

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

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: 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.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

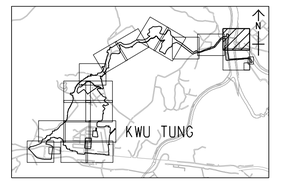
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 複核
-	JUN-19	TENDER DRAWING	YHH

STATUS 階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 18 OF 19

SHEET NUMBER 圖紙編號
60335576/C1/C00/1048

Project Management Initials:
Designer: TCKC
Checked: YHH
Approved: IHWL
ISO A1 594mm x 841mm

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C1/C00/1031.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1049.

CUT LINE 16-16

SEE DRAWING NO. 60335576/C1/C00/1048

829800 E

829900 E

830000 E

841800 N

841700 N

841600 N

PORTION 8b

CUT LINE 17-17

雙魚河 SHEUNG YUE RIVER (RIVER BEAS)

SHEUNG YUE RIVER (RIVER INDUS)

Air Tank

Air Tank Pipeline

導管 Pipelines

導管 Pipeline

排水口 Outfall

泥路 Track

港鐵(東鐵線) KCR East Rail Line

TS

FP

FB

N

KWU TUNG

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT 項目

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

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: 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.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

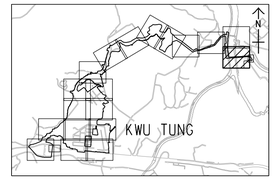
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核狀
-	JUN-19	TENDER DRAWING	YHH

STATUS 階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 19 OF 19

SHEET NUMBER 圖紙編號
60335576/C1/C00/1049

Plot File by: ZENGLY2 2019/6/18
PATH: p:\projects\60335576\drawing\contract\c1\1000\C1_C00_1049.dgn

Project Management Initials:
Designer: TCKC
Checked: YHH
Approved: IHWL
ISO A1 594mm x 841mm

NOTES:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60335576/C1/C00/1031.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1050.

N

828500 E

828600 E

840600 N

840500 N

840400 N

PORTION 16

A

前古洞公立愛華學校
Ku Wu Tung Public Oi Wah School

籃球場
Basketball Court

Playground

Tank

工廠
Factory

古洞蔬菜合作社

道路
Road

CASTLE PEAK ROAD - KWU TUNG

青山公路 — 古洞段

FANLING HIGHWAY

粉嶺公路

瑞奇大道 RIGI AVENUE

MONTREUX AVENUE

LAUSANNE AVENUE

洛森大道

KWU TUNG

Plot File by: ZENGLY2 2019/7/19
PATH: p:\projects\60335576\drawing\CONTRACT\C1\1000\C1_C00_1050.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

AECOM

PROJECT 項目

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

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: 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.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

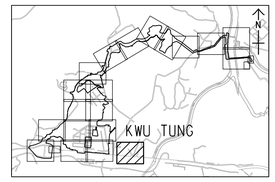
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核快
A	JUL-19	TENDER ADDENDUM NO. 1	YHH
-	JUN-19	TENDER DRAWING	YHH

STATUS 階段

SCALE 比例
A1 1 : 500

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/2019/01

SHEET TITLE 圖紙名稱
PORTION OF THE SITE

SHEET 20 OF 20

SHEET NUMBER 圖紙編號
60335576/C1/C00/1050A

Contract No. ND/2019/06 Fanling North New Development Area, Phase 1: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products

ISO A1 594mm x 841mm

Approved: IHWL

Checked: ALUI

Designer: DMCH

Project Management Initials:

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)
- Containers
- Water Flow
- Traffic Flow
- Pedestrian walkway

840200 N

840300 N

SHA TAU KOK ROAD - LUNG YEUK TAU

PEDESTRIAN ENTRANCE

Temp. Discharge Point

C&D Waste disposal

Materials Store

Security Guard House

Generator

General Waste

Containers Area for labor changing & rest room, equipment store

Management Office Building Area

Wetsep tank

Chemical waste

Temporary Access

Wheel Washing facility

3-colour recycling bins

PEDESTRIAN ENTRANCE

GATE

Proposed Project Sign Board location (agreed by PM)

Temporary Site Layout Plan

MA WAT RIVER

麻笏河 MA WAT RIVER

833200 E

833300 E

Cycling Track

道路 Road

Ramp

On Lok Mun Street Playground

North District Temp. Wholesale Market for Agricultural Products

Outfall

FP

RCP

Plot File by: Yauky 29/4/2019
PATH : P:\Projects\60335576\DRAWING\CONTRACT\C81000\C6_C00_1041.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

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

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

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

STATUS 階段

SCALE 比例
A1 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖

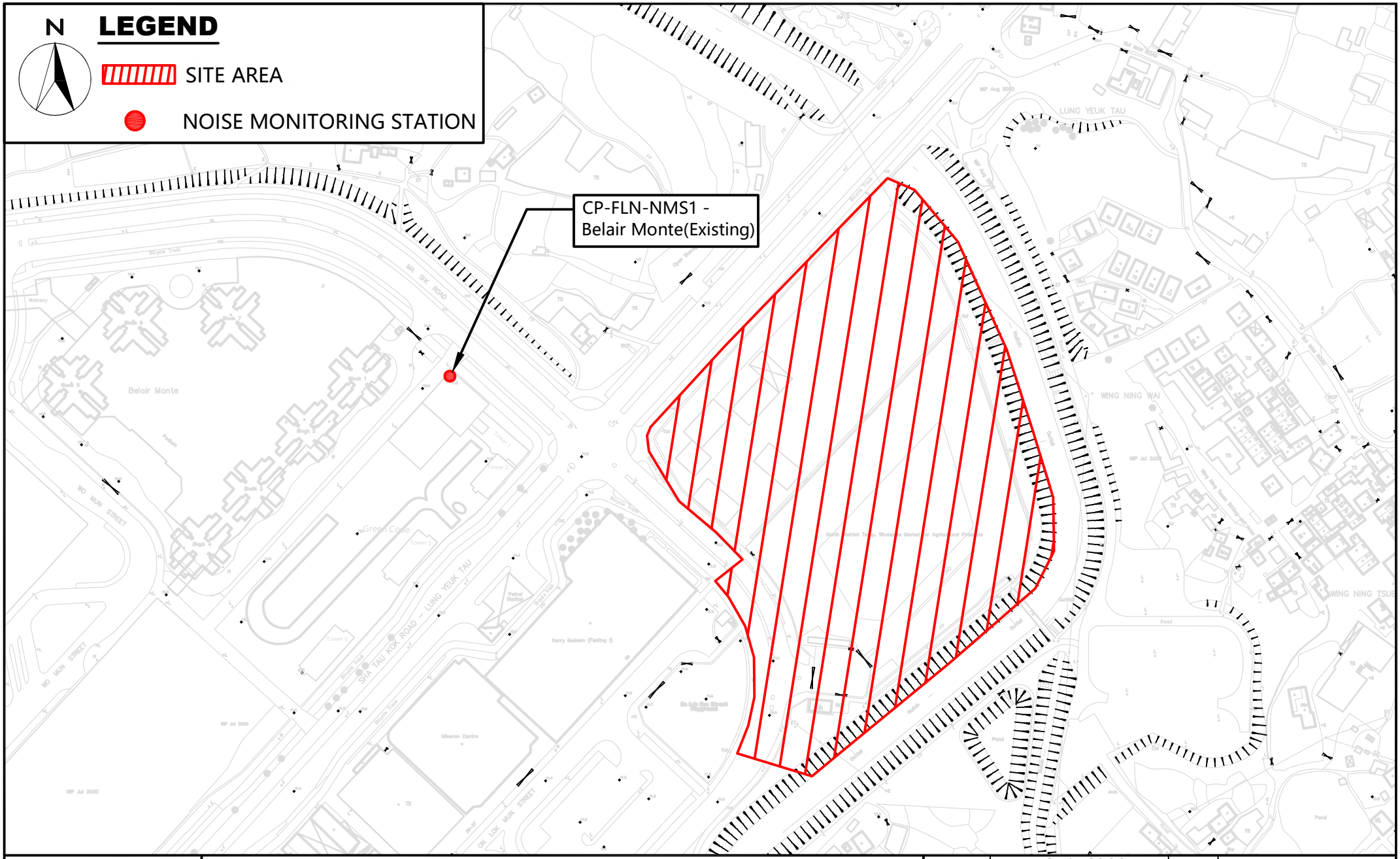
PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/06

SHEET TITLE 圖紙名稱
Site Layout Plan
(INTERIM STAGE)

SHEET NUMBER 圖紙編號
60335576/C6/C00/1041

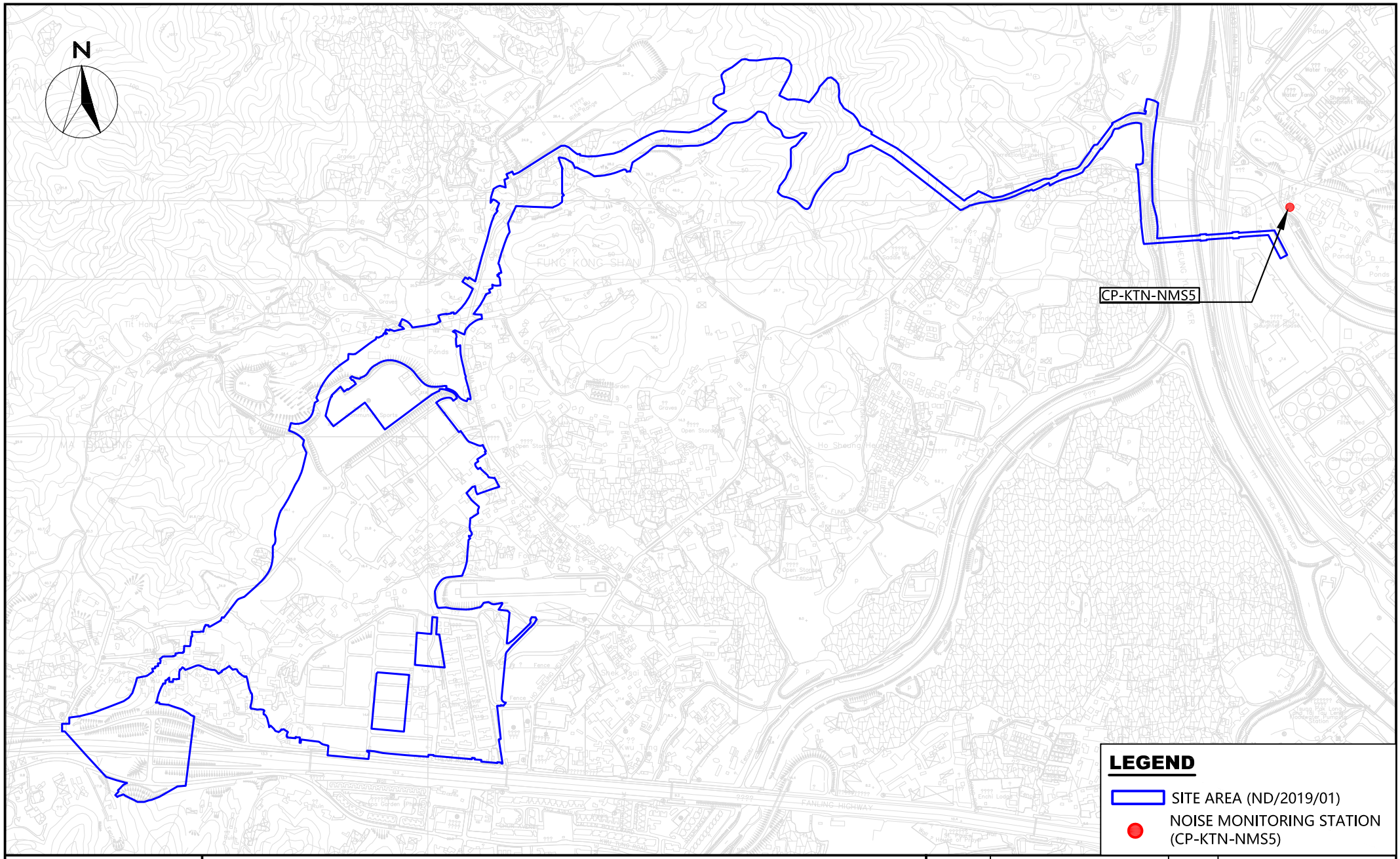
FIGURE(S)



WELLAB

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
Contract No. ND/2019/06 Fanling North New Development Area, Phase 1: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products
Location of Noise Monitoring Station

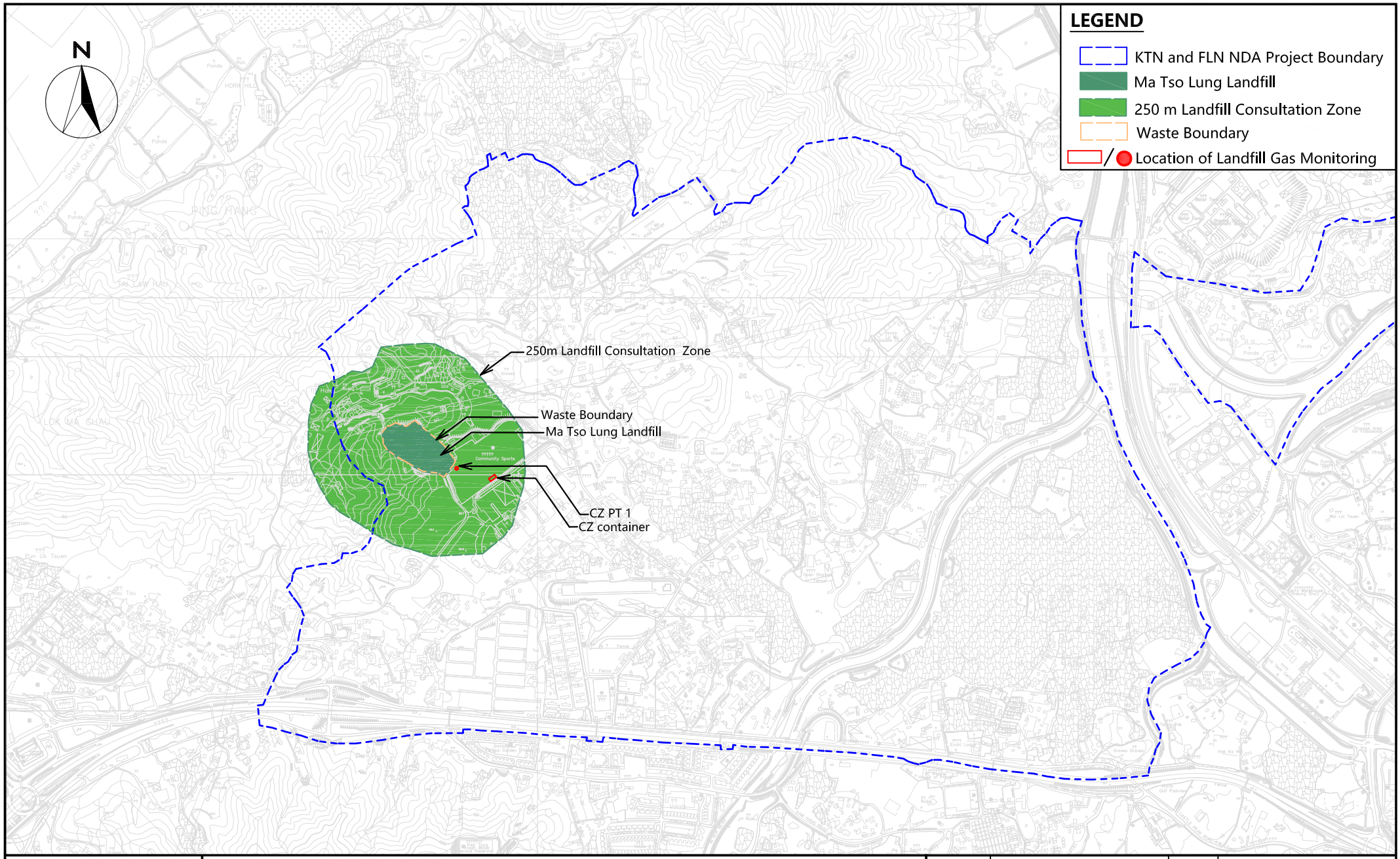
SCALE	A4 @ 1: 6000	DATE	FEB 2020
CHECK	KL	DRAWN	KIKI
PROJECT No.	WMA20002	FIGURE NO. 1	REV —



WELLAB

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
Contract No. ND/2019/01 Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works
Location of Noise Monitoring Station

SCALE	A4 @ 1:30000	DATE	APR 2020
CHECK	KL	DRAWN	KIKI
PROJECT No.	WMA20002	FIGURE NO.	2
		REV	—



WELLAB 匯力
consulting . testing . research

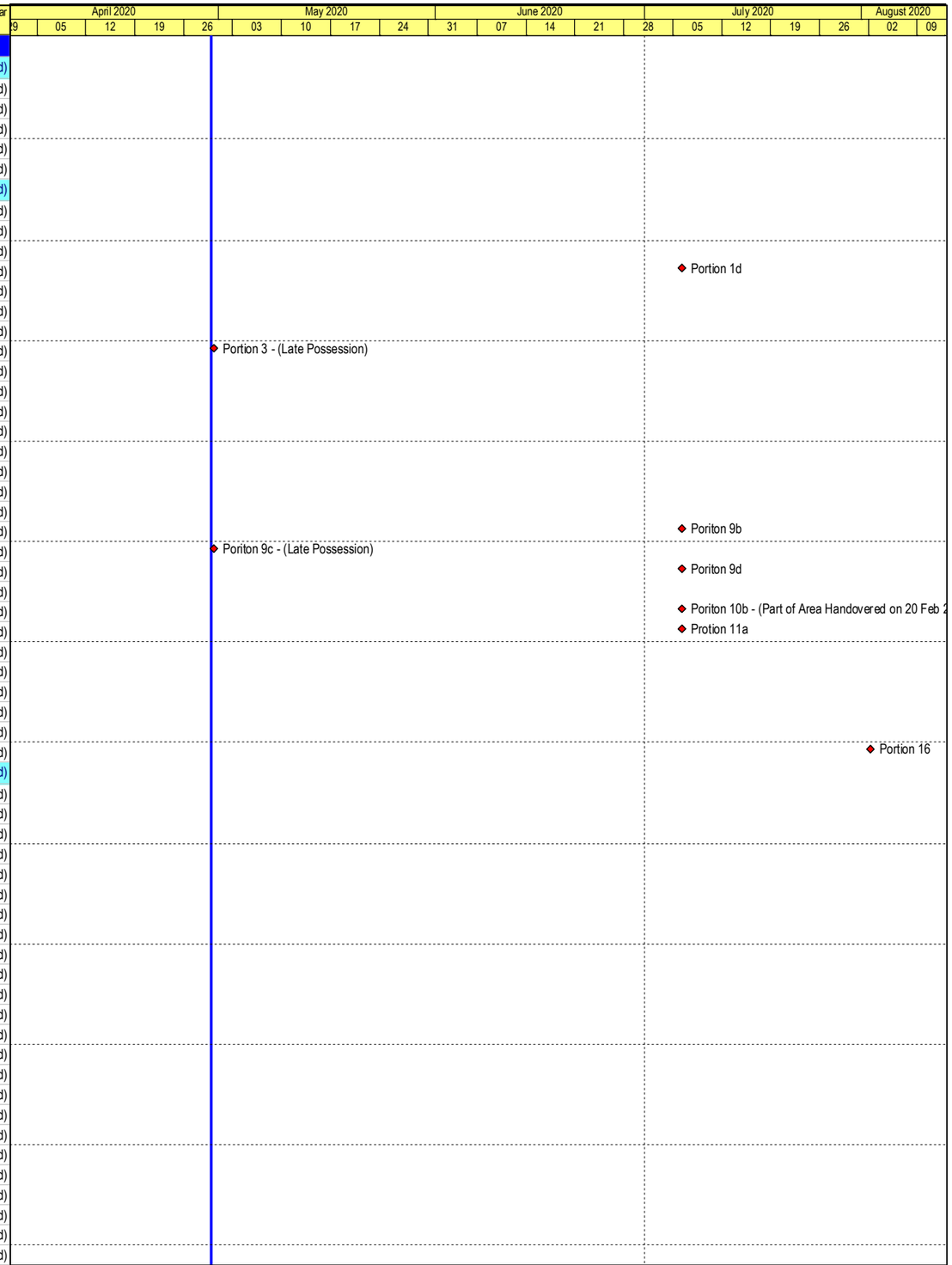
Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs
Contract No. ND/2019/01 Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works

Location of Landfill Gas Monitoring

SCALE	A4 @ 1:40000	DATE	JUNE 2020
CHECK	KL	DRAWN	KIKI
PROJECT No.	WMA20002	FIGURE NO.	3
		REV	—

APPENDIX A
CONSTRUCTION PROGRAMME

Activity ID	Activity Name	Predecessors	Successors	Remaining Duration	Start	Finish	Total Float	Calendar
3-Month Rolling Programme (2020-05 to 2020-07)				2443	28-Nov-19 A	06-Jan-27	0	
1.0 - Contract Date				393	28-Nov-19 A	06-Jan-27	0	CD (7d)
CD-1000	Contract Date		CD-1010, GS	0	28-Nov-19 A			CD (7d)
CD-1010	Starting date	CD-1000	SC-1000, SC	0	06-Dec-19 A			CD (7d)
CD-1020	Contract Completion Date	SC-1000, SC-	CD-1030	0		06-Jan-26*	0	CD (7d)
CD-1030	Contract Completion Date (with Establishment)	CD-1020		0		06-Jan-27*	0	CD (7d)
CD-1040	Planned Completion Date (Exclude Establishment)	S16-1010, S2	CD-1020	0		10-Dec-25	28	CD (7d)
2.0 - Site Access Date				1346	23-Dec-19 A	06-Jan-24	0	CD (7d)
AD-1000	Poriton 1a	CD-1010	S3P1a-1010,	0	06-Jul-21*		0	CD (7d)
AD-1010	Portion 1b	CD-1010	S4AP1b-101(	0	06-Jul-21*		0	CD (7d)
AD-1020	Portion 1c	CD-1010	S4BP1c-101(	0	06-Jan-22*		0	CD (7d)
AD-1030	Portion 1d	CD-1010	S21P1d-1010	0	06-Jul-20*		0	CD (7d)
AD-1040	Portion 1e - (Minor Area Handovered on 20 Feb 2020)	CD-1010	S6AP1e-101(	0	06-Apr-21*		0	CD (7d)
AD-1050	Poriton 1f	CD-1010	S14P1f-1010	0	23-Dec-19 A			CD (7d)
AD-1060	Portion 2	CD-1010	S8P2-1010, S	0	23-Dec-19 A			CD (7d)
AD-1070	Portion 3 - (Late Possession)	CD-1010	S8P3-1010, E	0	30-Apr-20*		-24	CD (7d)
AD-1080	Portion 4 - (Major Area Handovered on 20 Feb 2020)	CD-1010	S5P4-1010, S	0	20-Feb-20 A			CD (7d)
AD-1090	Portion 5 - (Major Area Handovered on 23 Dec 2019)	CD-1010	S2AP5-1010,	0	23-Dec-19 A			CD (7d)
AD-1100	Poriton 6a	CD-1010	S8P6a-1010,	0	23-Dec-19 A			CD (7d)
AD-1110	Poriton 6b	CD-1010	S11P6b-1010	0	20-Feb-20 A			CD (7d)
AD-1120	Portion 7 - (Part of Area Handovered on 20 Feb 2020)	CD-1010	S3P7-1010, S	0	20-Feb-20 A			CD (7d)
AD-1130	Portion 8a - (Major Area Handovered on 24 Dec 2019)	CD-1010	S8P8a-1010	0	24-Dec-19 A			CD (7d)
AD-1140	Portion 8b	CD-1010	S8P8b-1010	0	24-Dec-19 A			CD (7d)
AD-1150	Portion 9a	CD-1010	S2BP9a-101(	0	06-Jan-22*		0	CD (7d)
AD-1160	Poriton 9b	CD-1010	S8P9b-1010,	0	06-Jul-20*		0	CD (7d)
AD-1170	Poriton 9c - (Late Possession)	CD-1010	S14P9c-1010	0	30-Apr-20*		-24	CD (7d)
AD-1180	Poriton 9d	CD-1010	S8P9b-1010	0	06-Jul-20*		0	CD (7d)
AD-1190	Poriotn 10a - (Major Area Handovered on 20 Feb 2020)	CD-1010	S1P10a-1040	0	20-Feb-20 A			CD (7d)
AD-1200	Poriton 10b - (Part of Area Handovered on 20 Feb 2020)	CD-1010	S12P10b-101	0	06-Jul-20*		0	CD (7d)
AD-1210	Protion 11a	CD-1010	S21P11a-1010	0	06-Jul-20*		0	CD (7d)
AD-1220	Protion 11b	CD-1010	S6BP11b-101	0	06-Jan-24*		0	CD (7d)
AD-1230	Poriton 12	CD-1010	S9P12-1010,	0	06-Jul-21*		0	CD (7d)
AD-1240	Poriton 13	CD-1010	S14P13-1010	0	06-Jan-22*		0	CD (7d)
AD-1250	Portion 14	CD-1010	S5P14-1010,	0	07-Dec-20*		0	CD (7d)
AD-1260	Portion 15	CD-1010	S6AP15-101(	0	06-Jan-23*		0	CD (7d)
AD-1270	Portion 16	CD-1010	S14P16-1010	0	02-Aug-20*		0	CD (7d)
3.0 - Section Completion Date				2160	06-Feb-21	06-Jan-27	0	CD (7d)
SC-1000	Section 1 - all works Area H except landscape works and District Cooling System related works	CD-1010, S1-	CD-1020	0		06-Oct-22*	0	CD (7d)
SC-1010	Section 2A - all works in Area C1	CD-1010, S2A	CD-1020	0		06-Feb-22*	0	CD (7d)
SC-1020	Section 2B - all works in Area C2	CD-1010, S2E	CD-1020	0		06-May-23*	0	CD (7d)
SC-1030	Section 3 - all works in Area E	CD-1010, S3-	CD-1020	0		21-Feb-22*	0	CD (7d)
SC-1040	Section 4A - all works in Area D1	CD-1010, S4-	CD-1020	0		06-May-23*	0	CD (7d)
SC-1050	Section 4B - all works in Area D2	CD-1010, S14	CD-1020	0		21-Oct-23*	0	CD (7d)
SC-1060	Section 4C - all works in Area D3	CD-1010, S4(	CD-1020	0		06-Feb-23*	0	CD (7d)
SC-1070	Section 5 - all works in Area I	CD-1010, S5-	CD-1020	0		06-Feb-21*	0	CD (7d)
SC-1080	Section 6A - all works in Area G1	CD-1010, S6A	CD-1020	0		06-Jul-23*	0	CD (7d)
SC-1090	Section 6B - all works in Area G2	CD-1010, S6E	CD-1020	0		06-Jul-25*	0	CD (7d)
SC-1100	Section 6C - all works in Area G3	S6C-1000, CI	CD-1020	0		06-Jan-26*	0	CD (7d)
SC-1110	Section 7 - all works in Area K	CD-1010, S7-	CD-1020	0		06-Mar-23*	0	CD (7d)
SC-1120	Section 8 - all works in Area A except works under Section 18 and landscape works	CD-1010, S8-	CD-1020	0		21-Jun-24*	0	CD (7d)
SC-1130	Section 9 - all works in Area F	CD-1010, S9-	CD-1020	0		06-Sep-22*	0	CD (7d)
SC-1140	Section 10A - all works in Area J	CD-1010, S1(	CD-1020	0		06-Jul-22*	0	CD (7d)
SC-1150	Section 10B - all works in Area J1	CD-1010, S1(	CD-1020	0		06-Apr-23*	0	CD (7d)
SC-1160	Section 11 - all works in Area B	CD-1010, S11	CD-1020	0		06-Jan-26*	0	CD (7d)
SC-1170	Section 12A - all works in L1 except landscape works and District Cooling System related works	CD-1010, S12	CD-1020	0		06-Oct-24*	0	CD (7d)
SC-1180	Section 12B - all works in L2 except landscape works and District Cooling System related works	CD-1010, S12	CD-1020	0		06-Jan-26*	0	CD (7d)
SC-1190	Section 13 - all works in Area N except landscape works	CD-1010, S13	CD-1020	0		06-Jan-26*	0	CD (7d)
SC-1200	Section 14 - all remaining works not included in other section of works	CD-1010, S14	CD-1020	0		06-Jan-26*	0	CD (7d)
SC-1210	Section 15 - preservation and protection of trees	CD-1010, S15	CD-1020	0		06-Jan-26*	0	CD (7d)
SC-1220	Section 16 - landscape works	CD-1010, S16	CD-1020	0		06-Jan-26*	0	CD (7d)
SC-1230	Section 17 - establishment works	CD-1010, S17	CD-1020	0		06-Jan-27*	0	CD (7d)



Build King – Richwell Engineering Joint Venture

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

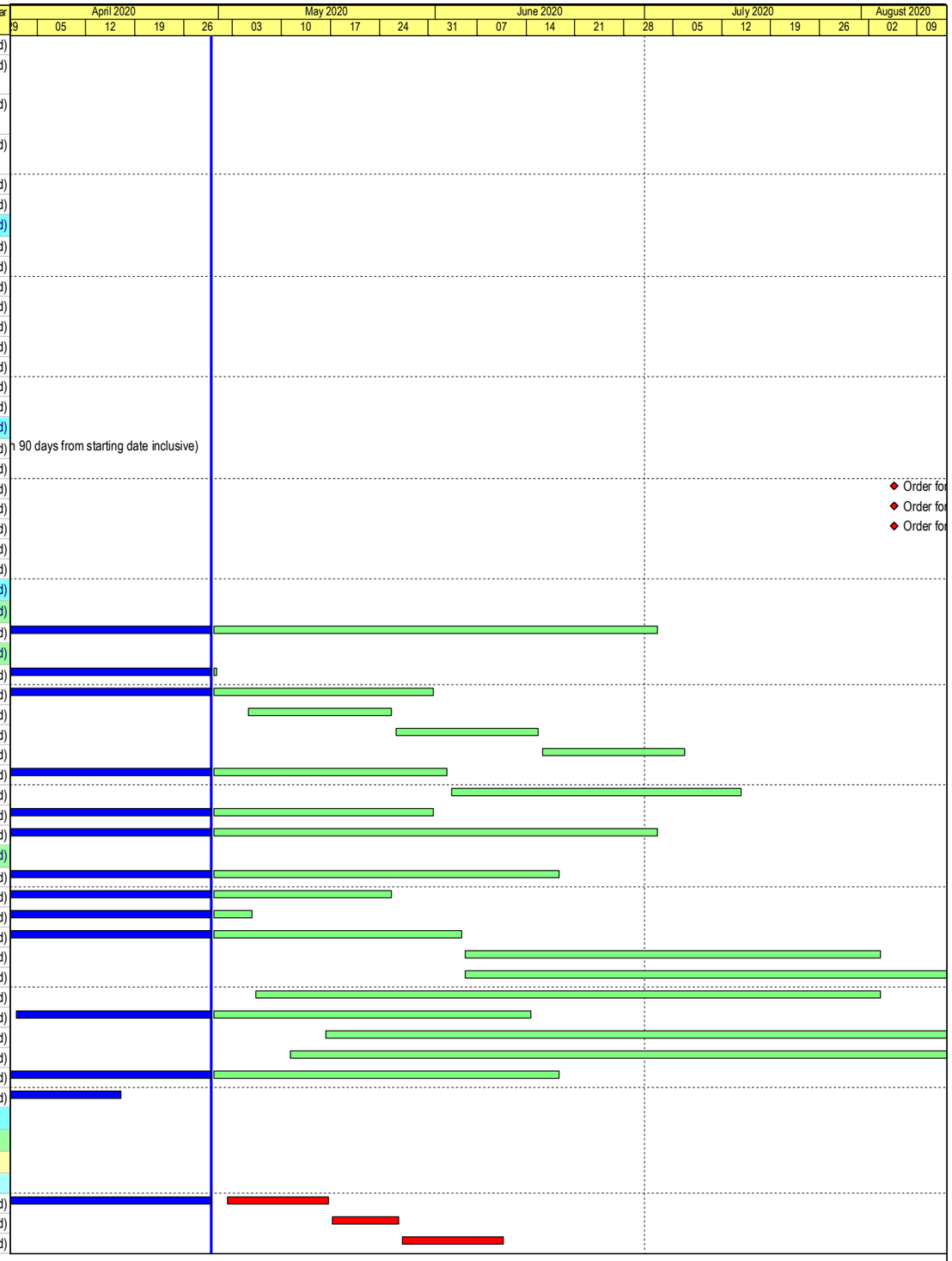
ND/2019/01 - Kwu Tung North New Development Area, Phase 1:
Site Formation and Infrastructure Works

Project ID: ND201901-FP-1
Layout: ND201901-3MRP

THE 3-MONTH ROLLING PROGRAMME (2020-05 to 2020-07)

Date	Revision	Checked	Approved
30-Apr-20	Rev. 0	JC	BY

Activity ID	Activity Name	Predecessors	Successors	Remaining Duration	Start	Finish	Total Float	Calendar
SC-1240	Section 18 - the 700mm diameter water mains laying works and associated ancillary structures	CD-1010, S18	CD-1020	0		21-Jun-24*	0	CD (7d)
SC-1250	Section 19A - 3x1200mm water pipes within Road L1 under Area H for District Cooling System and ancillary structures	CD-1010, S19A-1010	CD-1020	0		06-Jul-22*	0	CD (7d)
SC-1260	Section 19B - 3x1200mm water pipes within Road L1 under Area L1 for District Cooling System and ancillary structures	CD-1010, S19B-1020	CD-1020	0		06-Jul-24*	0	CD (7d)
SC-1270	Section 19C - 3x1200mm water pipes within Road L2 under Area L2 for District Cooling System and ancillary structures	CD-1010, S19C-1010	CD-1020	0		06-Oct-25*	0	CD (7d)
SC-1280	Section 20 - the consturciton of Pak Shek Au Pedestrian Subway Cum Cycle Track	CD-1010, S20	CD-1020	0		06-Jan-26*	0	CD (7d)
SC-1290	Section 21 - all works in Area M	CD-1010, S21	CD-1020	0		06-Jan-26*	0	CD (7d)
4.0 - Key Date				1293	06-Oct-20	21-Apr-24	0	CD (7d)
KD-1000	KD1 609 days after starting date	CD-1010, S1P		0		06-Aug-21*	0	CD (7d)
KD-1010	KD2 655 days after starting date	CD-1010, S7P		0		21-Sep-21*	0	CD (7d)
KD-1020	KD3 320 days after starting date	CD-1010, S14		0		21-Oct-20*	0	CD (7d)
KD-1030	KD4 366 days after starting date	CD-1010, S11		0		06-Dec-20*	0	CD (7d)
KD-1040	KD5 305 days after starting date	CD-1010, S14		0		06-Oct-20*	0	CD (7d)
KD-1050	KD6 351 days after starting date	CD-1010, S14		0		21-Nov-20*	0	CD (7d)
KD-1060	KD7 517 days after starting date	CD-1010, S14		0		06-May-21*	0	CD (7d)
KD-1070	KD8 1598 days after starting date	CD-1010, S8P		0		21-Apr-24*	0	CD (7d)
KD-1080	KD9 1230 days after starting date	CD-1010, S14		0		19-Apr-23*	0	CD (7d)
5.0 - Ordering Date				243	28-Feb-20 A	05-Apr-21	0	CD (7d)
OD-1000	Order for Section 7 (subject to excision, within 90 days from starting date inclusive)	CD-1010	S7P14-1010,	0		28-Feb-20 A		CD (7d)
OD-1010	Order for Section 18 (subject to excision, within 487 days from starting date inclusive)	CD-1010	S18-1000, S1	0		05-Apr-21*	0	CD (7d)
OD-1020	Order for Section 19A (subject to excision, within 244 days from starting date inclusive)	CD-1010	S19A-1000, S	0		05-Aug-20*	0	CD (7d)
OD-1030	Order for Section 19B (subject to excision, within 244 days from starting date inclusive)	CD-1010	S19B-1000, S	0		05-Aug-20*	0	CD (7d)
OD-1040	Order for Section 19C (subject to excision, within 244 days from starting date inclusive)	CD-1010	S19C-1000, S	0		05-Aug-20*	0	CD (7d)
OD-1050	Order for Section 20 (subject to excision, within 365 days from starting date inclusive)	CD-1010	S20S1-1010	0		04-Dec-20*	0	CD (7d)
OD-1060	Order for Section 21 (subject to excision, within 487 days from starting date inclusive)	CD-1010	S21P1b-1010	0		05-Apr-21*	0	CD (7d)
6.0 - Preliminaries and General Requirements				156	28-Nov-19 A	02-Oct-20	2287	CD (7d)
6.1 - Preliminaries				64	28-Nov-19 A	02-Jul-20	2379	CD (7d)
PRE-1020	Baseline Ecological Monitoring Works (by ET) (from 3/7/19 to 2/7/20)	CD-1000		64	28-Nov-19 A	02-Jul-20	2379	CD (7d)
6.2 - General Submission				76	06-Dec-19 A	14-Jul-20	385	CD (7d)
GS-1050	Submission of Construction Health and Safety Plan	CD-1000		1	07-Dec-19 A	30-Apr-20*	1	CD (7d)
GS-1080	Submission of Site Traffic Safety Management Plan	CD-1010		32	06-Dec-19 A	31-May-20*	15	CD (7d)
GS-1100	Submission of Interface Management Plan	CD-1010	GS-1120	21	05-May-20*	25-May-20	393	CD (7d)
GS-1120	Acceptance of Interface Management Plan	GS-1100	GS-1130	21	26-May-20	15-Jun-20	393	CD (7d)
GS-1130	Submission of Detailed Interface Document	GS-1120	GS-1140	21	16-Jun-20	06-Jul-20	393	CD (7d)
GS-1190	Submission of Details for Project Manager's Site Accommodation	CD-1000	GS-1200	34	06-Mar-20 A	02-Jun-20	22	CD (7d)
GS-1200	Acceptance of Details for Project Manager's Site Accommodation	GS-1190	S14P7T-1130	42	03-Jun-20	14-Jul-20	22	CD (7d)
GS-1230	Submission of Major Method Statements	CD-1010		32	06-Dec-19 A	31-May-20*	1	CD (7d)
GS-1240	Temporary Traffic Management Scheme and XP application	CD-1010, SP-	S13P2-3060,	64	04-Feb-20 A	02-Jul-20	7	CD (7d)
6.3 - Subletting Package				156	16-Jan-20 A	02-Oct-20	485	CD (7d)
SP-1010	Project Manager's Site Accommodation	GS-1220	S14P7T-1130	50	31-Mar-20 A	18-Jun-20	48	CD (7d)
SP-1020	Site Hoarding	GS-1220	S14P7S3-201	26	05-Mar-20 A	25-May-20	46	CD (7d)
SP-1030	Independent Checking Engineer Services	GS-1220	S7P14-2010	6	14-Feb-20 A	05-May-20	137	CD (7d)
SP-1080	Site Formation Works	GS-1220	S1K1-1010, S	36	16-Jan-20 A	04-Jun-20	6	CD (7d)
SP-1090	Piling Works	GS-1220	S8P5-2010, S	60	05-Jun-20	03-Aug-20	39	CD (7d)
SP-1110	Structural Works for Retaining Wall	GS-1220	S8P2-3030, S	120	05-Jun-20	02-Oct-20	55	CD (7d)
SP-1130	Drainage, Sewerage and Watermain Laying Works	GS-1220	S14K5-2010,	90	06-May-20	03-Aug-20	1	CD (7d)
SP-1160	E&M works for MBR Plant and Associated Works (including Sewage Transfer Station)	GS-1220	S7P14-2010	46	02-Apr-20 A	14-Jun-20	7	CD (7d)
SP-1190	Design, Supply and Construct Community Liaison Centre by MiC Method	GS-1220	S14P16-3010	90	16-May-20	13-Aug-20	6	CD (7d)
SP-1200	Slope Works - Soil Nailing	GS-1220	S13P2-3010,	120	11-May-20	07-Sep-20	510	CD (7d)
SP-1240	Traffic Consultant	GS-1220	GS-1240	50	14-Feb-20 A	18-Jun-20	21	CD (7d)
SP-1260	Condition Survey	GS-1220	S1K1-1010	0	22-Feb-20 A	17-Apr-20 A		CD (7d)
7.0 - CONSTRUCTION				1679	06-Dec-19 A	03-Dec-24	764	
Section 1				158	25-Mar-20 A	05-Oct-20	0	
Portion 10a in Area H, H1, H2 (Soil Treatment & Provision of Site Access & EVA to MWSC)				158	25-Mar-20 A	05-Oct-20	0	
Preparation work/Tree Survey/Site Clearance/GI				40	25-Mar-20 A	10-Jun-20	0	
S1P10a-1010	Tree survey and prepare tree felling and transplant report	CD-1010, SP-	S1P10a-1020	13	25-Mar-20 A	16-May-20	0	WD (6d)
S1P10a-1020	Submit and acceptance of tree felling application	S1P10a-1010	S1P10a-1030	10	17-May-20	26-May-20	0	CD (7d)
S1P10a-1030	Tree felling, transplant and protection	S1P10a-1020	S1K1-1010	13	27-May-20	10-Jun-20	0	WD (6d)



Build King – Richwell Engineering Joint Venture

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

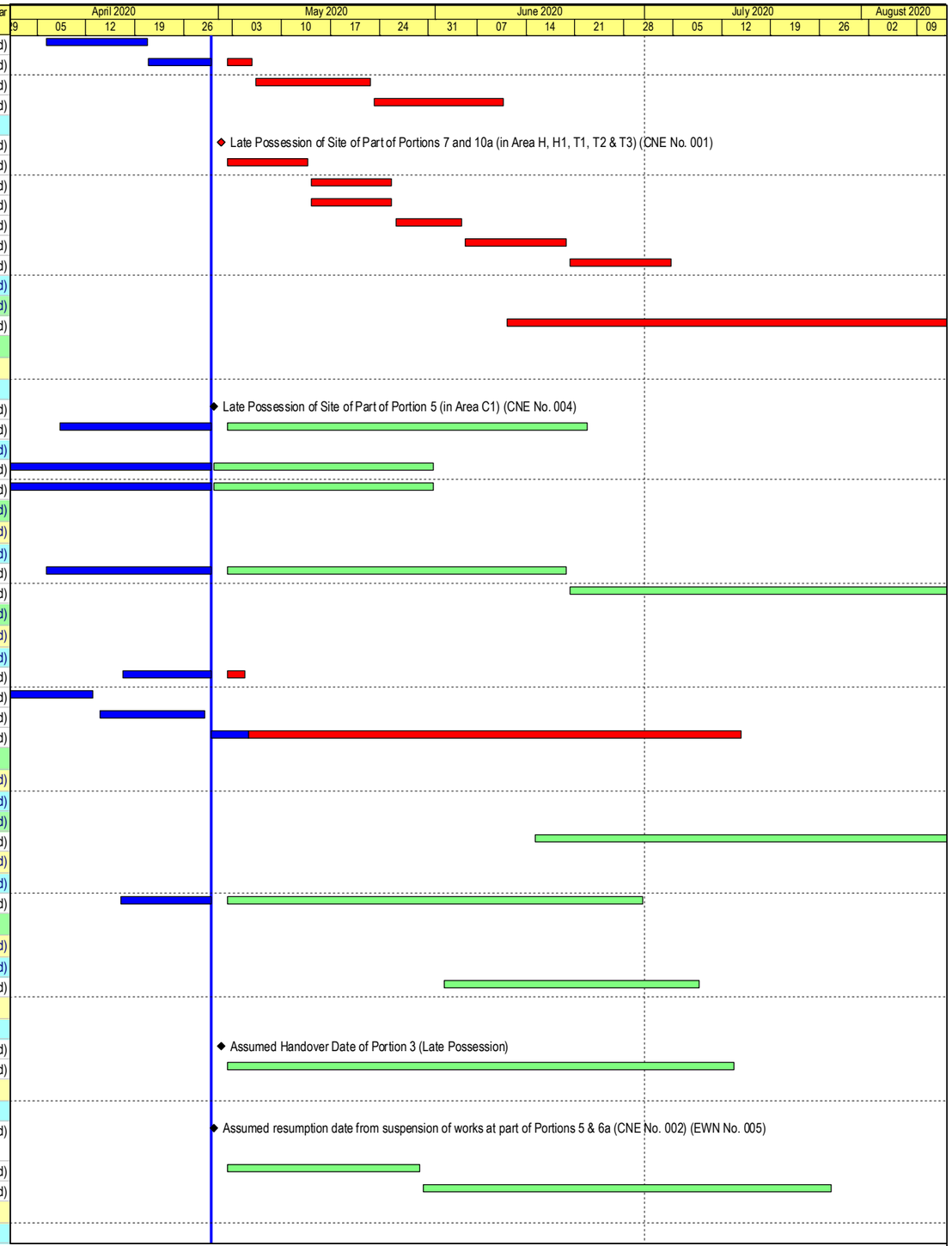
ND/2019/01 - Kwu Tung North New Development Area, Phase 1:
Site Formation and Infrastructure Works

Project ID: ND201901-FP-1
Lauyout: ND201901-3MRP

THE 3-MONTH ROLLING PROGRAMME (2020-05 to 2020-07)

Date	Revision	Checked	Approved
30-Apr-20	Rev. 0	JC	BY

Activity ID	Activity Name	Predecessors	Successors	Remaining Duration	Start	Finish	Total Float	Calendar
S1P10a-1040	Site clearance	AD-1190, PRE	S1P10a-1050	0	06-Apr-20 A	20-Apr-20 A		WD (6d)
S1P10a-1050	Ground investigation and laboratory test (6 no. GI)	S1P10a-1040	S1P10a-1060	3	21-Apr-20 A	05-May-20	0	WD (6d)
S1P10a-1060	Prepare Arsenic Assessment Report	S1P10a-1050	S1P10a-1070	15	06-May-20	22-May-20	0	WD (6d)
S1P10a-1070	Arsenic Treatment Plan	S1P10a-1050	S1K1-1010, S	16	23-May-20	10-Jun-20	0	WD (6d)
Preparation work/Tree Survey/Site Clearance/GI at Late Possession Area (Area H, H1)				65	01-May-20	04-Jul-20	-24	
S1P10a-1100	Late Possession of Site of Part of Portions 7 and 10a (in Area H, H1, T1, T2 & T3) (CNE No. 001)	EC-1001	S1P10a-1110	0	01-May-20*		-29	CD (7d)
S1P10a-1110	Tree survey and prepare tree felling and transplant report	S1P10a-1100	S1P10a-1120	10	02-May-20	13-May-20	-20	WD (6d)
S1P10a-1120	Tree felling, transplant and protection	S1P10a-1110	S1P10a-1140	10	14-May-20	25-May-20	-20	WD (6d)
S1P10a-1130	Site clearance	S1P10a-1100	S1P10a-1140	10	14-May-20	25-May-20	-20	WD (6d)
S1P10a-1140	Ground investigation and laboratory test (1 no. GI)	S1P10a-1130	S1P10a-1150	10	26-May-20	04-Jun-20	-24	CD (7d)
S1P10a-1150	Prepare Arsenic Assessment Report	S1P10a-1140	S1P10a-1160	15	05-Jun-20	19-Jun-20	-24	CD (7d)
S1P10a-1160	Arsenic Treatment Plan	S1P10a-1150	S1K1-1010, S	15	20-Jun-20	04-Jul-20	-24	CD (7d)
KD1 - Provision of Site Access and EVA to MWSC				96	11-Jun-20	05-Oct-20	0	WD (6d)
Soil Treatment				96	11-Jun-20	05-Oct-20	0	WD (6d)
S1K1-1010	Excavate the high-arsenic containing soil for treatment for Area H (29975m3)	S1P10a-1070	S1K1-1020, S	96	11-Jun-20*	05-Oct-20	0	WD (6d)
Section 2A				54	10-Feb-20 A	22-Jun-20	2389	
Portion 5 in Area C1 (Soil Treatment & Interface with HD's Contractors)				54	10-Feb-20 A	22-Jun-20	2389	
Preparation work/Tree Survey/Site Clearance/GI				54	08-Apr-20 A	22-Jun-20	365	
S2AP5-1000	Late Possession of Site of Part of Portion 5 (in Area C1) (CNE No. 004)	EC-1004	S2AP5-1010,	0	30-Apr-20		399	CD (7d)
S2AP5-1010	Tree survey and prepare tree felling and transplant report	AD-1090, SP-	S2AP5-1030	44	08-Apr-20 A	22-Jun-20	296	WD (6d)
Interface with HD's Contractor to carry out GI				32	10-Feb-20 A	31-May-20	2411	CD (7d)
S2AP5-3010	HD's Contractor to carry out GI in Area C1 (Stage 1)	AD-1090		32	10-Feb-20 A	31-May-20	2411	CD (7d)
S2AP5-3020	HD's Contractor to carry out GI in Area C1 (Stage 1A/2/2A)	AD-1090	S2AP5-3030,	32	10-Feb-20 A	31-May-20	526	CD (7d)
Section 3				102	06-Apr-20 A	31-Aug-20	219	WD (6d)
Portion 7 in Area E (Soil Treatment & Interface with HKHS's Contractors)				102	06-Apr-20 A	31-Aug-20	219	WD (6d)
Preparation work/Tree Survey/Site Clearance/GI				102	06-Apr-20 A	31-Aug-20	219	WD (6d)
S3P7-1010	Tree survey and prepare tree felling and transplant report	AD-1120, SP-	S3P7-1030, S	42	06-Apr-20 A	19-Jun-20	219	WD (6d)
S3P7-1020	Site Clearance	AD-1120, S3F	S3P7-1030	60	20-Jun-20	31-Aug-20	219	WD (6d)
Section 5				61	05-Mar-20 A	14-Jul-20	0	WD (6d)
Portion 4 in Area I (Soil Treatment & Complete Temp. Noise Barriers along Castle Peak Road)				61	05-Mar-20 A	14-Jul-20	0	WD (6d)
Preparation work/Tree Survey/Site Clearance/GI				61	05-Mar-20 A	14-Jul-20	0	WD (6d)
S5P4-1010	Tree survey and prepare tree felling and transplant report	AD-1080, SP-	S5P4-1030	2	17-Apr-20 A	04-May-20	0	WD (6d)
S5P4-1020	Site Clearance	AD-1080	S5P4-1030	0	05-Mar-20 A	13-Apr-20 A		WD (6d)
S5P4-1030	Ground investigation and laboratory test (2 GI)	S5P4-1020, S	S5P4-1040	0	14-Apr-20 A	29-Apr-20 A		WD (6d)
S5P4-1040	Prepare Arsenic Assessment Report	S5P4-1030	S5P4-1050	59	30-Apr-20 A	14-Jul-20	0	WD (6d)
Section 7 (Subject to excision)				134	17-Apr-20 A	12-Sep-20	12	
Portion 14 in Area K (Complete TSPS with Associated Sewerage)				90	15-Jun-20	12-Sep-20	7	CD (7d)
KD2 - Complete Temporary Sewage Pumping Station and associated rising mains and sewers, and connect				90	15-Jun-20	12-Sep-20	7	CD (7d)
Design and Civil Construction				90	15-Jun-20	12-Sep-20	7	CD (7d)
S7P14-2010	Design and approval of Temporary Sewage Pumping Station (TSPS)	OD-1000, AD	S7P14-2020,	90	15-Jun-20	12-Sep-20	7	CD (7d)
Portion 4 in Area K (Complete Temp. Noise Barriers along Castle Peak Road)				50	17-Apr-20 A	30-Jun-20	73	WD (6d)
Preparation work				50	17-Apr-20 A	30-Jun-20	73	WD (6d)
S7P4-1010	Site Clearance	AD-1080, OD	S7P4-2010	50	17-Apr-20 A	30-Jun-20	73	WD (6d)
Section 8				741	06-Jan-20 A	10-May-22	46	
Portion 2 in Area A (Soil Treatment & Construction of Pak Shek Au Junction)				30	02-Jun-20	08-Jul-20	13	WD (6d)
Preparation work/Tree Survey/Site Clearance/GI				30	02-Jun-20	08-Jul-20	13	WD (6d)
S8P2-0010	Tree Survey and prepare tree felling and transplant report	SP-1060	S8P2-1010	30	02-Jun-20*	08-Jul-20	13	WD (6d)
Portion 3 in Area A (Soil Treatment, Drainage & Roadwork)				74	01-May-20	13-Jul-20	669	
Preparation work/Tree Survey/Site Clearance/GI				74	01-May-20	13-Jul-20	669	
S8P3-1000	Assumed Handover Date of Portion 3 (Late Possession)	EC-1005	S8P3-1010	0	01-May-20*		666	CD (7d)
S8P3-1010	Site clearance	AD-1070, S8F	S8P3-1020	60	02-May-20	13-Jul-20	543	WD (6d)
Portion 5 in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)				89	30-Apr-20	27-Jul-20	1	
Preparation work/Tree Survey/Site Clearance/GI				89	30-Apr-20	27-Jul-20	1	
S8P5-1000	Assumed resumption date from suspension of works at part of Portions 5 & 6a (CNE No. 002) (EWN No. 005)	EC-1002	S8P5-1010, S8P5-2010,	0	30-Apr-20		21	CD (7d)
S8P5-1010	Site clearance	AD-1090, S8F	S8P5-2010, S	24	02-May-20	29-May-20	1	WD (6d)
S8P5-1020	Site investigation	AD-1090, S8F	S8P5-2010, S	48	30-May-20	27-Jul-20	1	WD (6d)
Portion 6a in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)				68	15-Feb-20 A	06-Jul-20	15	
Preparation work/Tree Survey/Site Clearance/GI				68	15-Feb-20 A	06-Jul-20	15	



Build King – Richwell Engineering Joint Venture

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

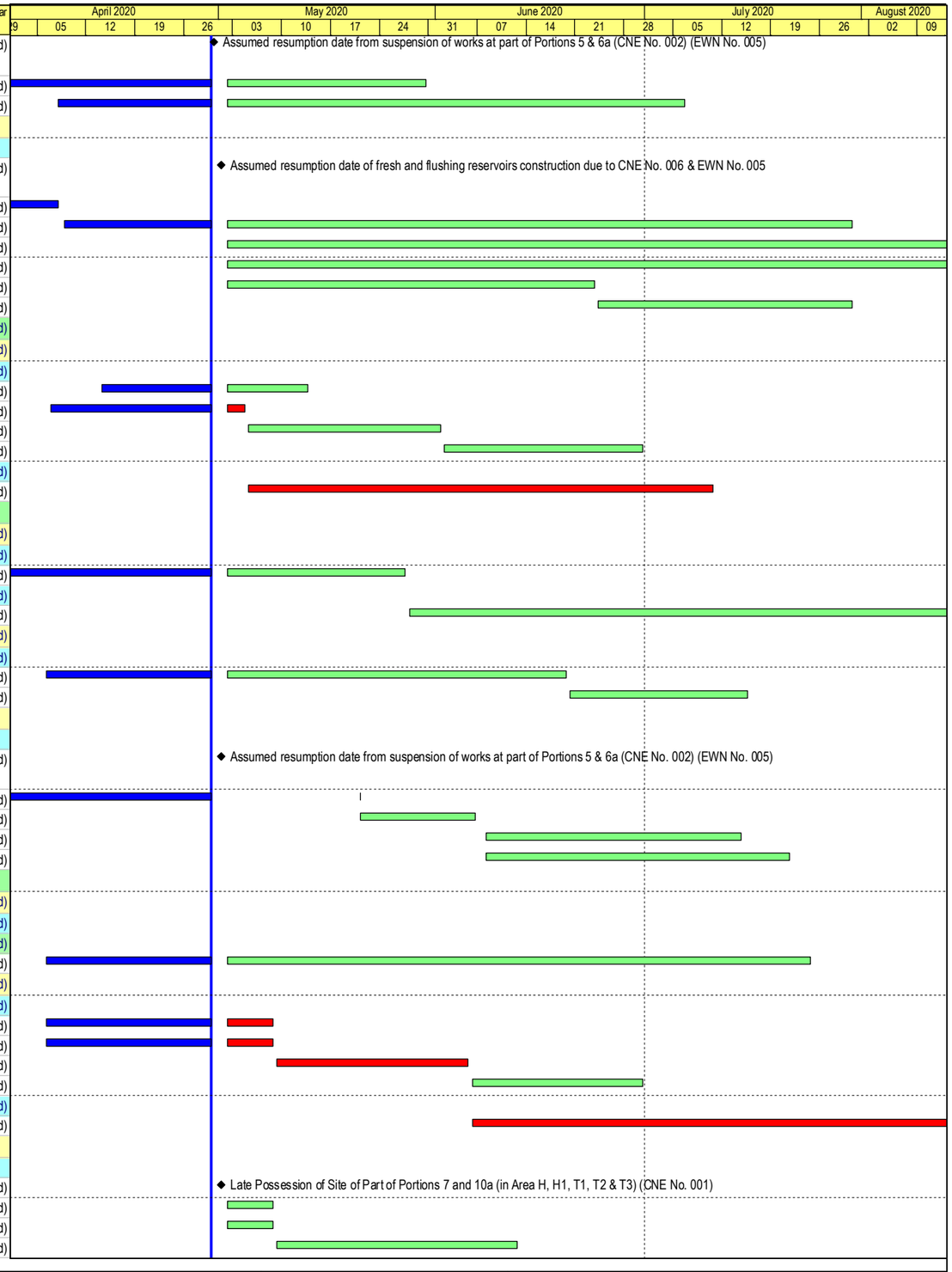
ND/2019/01 - Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works

Project ID: ND201901-FP-1
Lauyout: ND201901-3MRP

THE 3-MONTH ROLLING PROGRAMME (2020-05 to 2020-07)

Date	Revision	Checked	Approved
30-Apr-20	Rev. 0	JC	BY

Activity ID	Activity Name	Predecessors	Successors	Remaining Duration	Start	Finish	Total Float	Calendar
S8P6a-1000	Assumed resumption date from suspension of works at part of Portions 5 & 6a (CNE No. 002) (EWN No. 005)	EC-1002	S8P6a-1010, S8P6a-3010,	0	30-Apr-20		27	CD (7d)
S8P6a-1010	Site clearance	AD-1100, S8F	S8P6a-2010,	25	15-Feb-20 A	30-May-20	13	WD (6d)
S8P6a-1020	Site investigation	AD-1100, S8F	S8P6a-2010,	54	08-Apr-20 A	06-Jul-20	13	WD (6d)
Portion 8a in Area A (Soil Treatment, Reservoirs, Slope, Drainage & Roadwork)				740	06-Jan-20 A	10-May-22	46	
Preparation work/Tree Survey/Site Clearance/GI				740	06-Jan-20 A	10-May-22	46	
S8P8a-1000	Assumed resumption date of fresh and flushing reservoirs construction due to CNE No. 006 & EWN No. 005	EC-1006	S8P8a-1020, S8P8a-1030,	0	01-May-20*		12	CD (7d)
S8P8a-1010	Form site access to Flushing Water Service Reservoir	AD-1130	S8P8a-1020,	0	06-Jan-20 A	08-Apr-20 A		WD (6d)
S8P8a-1015	Site clearance	S8P8a-1010	S8K8-1010	75	09-Apr-20 A	30-Jul-20	54	WD (6d)
S8P8a-1020	General excavation (352230m3, 4 gang with 4 20T backhoes)	S8P8a-1010,	S8P8a-3010,	600	02-May-20	10-May-22	39	WD (6d)
S8P8a-1030	Form haul road to Flesh Water Service Reservoir	S8P8a-1010,	S8K8-3010, S	150	02-May-20	29-Oct-20	9	WD (6d)
S8P8a-1040	Ground investigation and laboratory test (6 GI)	S8P8a-1010,	S8P8a-1050	45	02-May-20	23-Jun-20	163	WD (6d)
S8P8a-1050	Prepare Arsenic Assessment Report	S8P8a-1040	S8P8a-1060	30	24-Jun-20	30-Jul-20	163	WD (6d)
Section 11				58	07-Apr-20 A	10-Jul-20	1386	WD (6d)
Portion 6b in Area B (Soil Treatment & Operation of HAC Soil Treatment Plant)				58	07-Apr-20 A	10-Jul-20	1386	WD (6d)
Preparation work/Tree Survey/Site Clearance/GI				50	07-Apr-20 A	30-Jun-20	1394	WD (6d)
S11P6b-1010	Tree survey and prepare tree felling and transplant report	AD-1110, SP-	S11P6b-4010	10	14-Apr-20 A	13-May-20	1434	WD (6d)
S11P6b-1030	Ground investigation and laboratory test (2 GI)	SP-1070	S11P6b-1040	2	07-Apr-20 A	04-May-20	0	WD (6d)
S11P6b-1040	Prepare Arsenic Assessment Report	S11P6b-1030	S11P6b-1050	24	05-May-20	01-Jun-20	1394	WD (6d)
S11P6b-1050	Arsenic Treatment Plan	S11P6b-1040	S11P6b-4010	24	02-Jun-20	30-Jun-20	1394	WD (6d)
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant				56	05-May-20	10-Jul-20	0	WD (6d)
S11P6b-2010	Set up, testing and commissioning high arsenic-containing soil treatment plant (KD4)	SP-1020, S11	S11P6b-1000	56	05-May-20	10-Jul-20	0	WD (6d)
Section 13				347	15-Feb-20 A	12-Apr-21	554	
Portion 2 in Area N (Soil Treatment, Slope, Drainage & Pak Shek Au Junction)				282	12-Mar-20 A	12-Apr-21	451	WD (6d)
Preparation work/Tree Survey/Site Clearance/GI				22	12-Mar-20 A	27-May-20	451	WD (6d)
S13P2-1010	Tree Survey & Site clearance for existing slope feature 2SE-B/CR148	AD-1060, SP-	S13P2-3005	22	12-Mar-20 A	27-May-20	451	WD (6d)
Civil Work				260	28-May-20	12-Apr-21	451	WD (6d)
S13P2-3005	Slopeworks for existing feature 2SE-B/CR148 (with about 450 nos. of soil nails)	AD-1060, S13	S13P2-3010	260	28-May-20	12-Apr-21	451	WD (6d)
Portion 7 in Area N (Soil Treatment, Drainage & Roadwork)				62	06-Apr-20 A	15-Jul-20	664	WD (6d)
Preparation work/Tree Survey/Site Clearance/GI				62	06-Apr-20 A	15-Jul-20	664	WD (6d)
S13P7-1010	Site clearance	AD-1120	S13P7-1020	42	06-Apr-20 A	19-Jun-20	664	WD (6d)
S13P7-1020	Ground investigation and laboratory test (2 GI)	S13P7-1010,	S13P7-1030	20	20-Jun-20	15-Jul-20	664	WD (6d)
Portion 6a & 5 in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)				82	15-Feb-20 A	21-Jul-20	770	
Preparation work/Tree Survey/Site Clearance/GI				82	15-Feb-20 A	21-Jul-20	770	
S13P6a-1000	Assumed resumption date from suspension of works at part of Portions 5 & 6a (CNE No. 002) (EWN No. 005)	EC-1002	S13P6a-1010	0	01-May-20*		728	CD (7d)
S13P6a-1010	Site clearance	AD-1100, S13	S13P6a-1020	0	15-Feb-20 A	21-May-20	591	WD (6d)
S13P6a-1020	Ground investigation and laboratory test (1 GI)	S13P6a-1010	S13P6a-1030	15	21-May-20	06-Jun-20	591	WD (6d)
S13P6a-1025	Site investigation for Noise Barriers	S13P6a-1020	S13P6a-2010	30	08-Jun-20	14-Jul-20	633	WD (6d)
S13P6a-1030	Prepare Arsenic Assessment Report	S13P6a-1020	S13P6a-1040	36	08-Jun-20	21-Jul-20	591	WD (6d)
Section 14				373	06-Jan-20 A	07-May-21	2070	
Portion 7 in Area P (Soil Treatment & KD3 - Tree Felling, General Site Clearance)				70	06-Apr-20 A	24-Jul-20	74	WD (6d)
KD3 - Tree felling, general site clearance (including the berm removal / levelling and general site				70	06-Apr-20 A	24-Jul-20	74	WD (6d)
Preparation work				70	06-Apr-20 A	24-Jul-20	74	WD (6d)
S14P7P-1010	General site clearance for Area P (KD3)	AD-1120	S14P7P-1000	70	06-Apr-20 A	24-Jul-20	74	WD (6d)
Portion 7 in Area S3 (Soil Treatment & Operation of HAC Soil Treatment Plant)				102	06-Apr-20 A	31-Aug-20	1204	WD (6d)
Preparation work/Tree Survey/Site Clearance/GI				50	06-Apr-20 A	30-Jun-20	1256	WD (6d)
S14P7S3-1010	Tree survey and prepare tree felling and transplant report	AD-1120, SP-	S14P7S3-1030	6	06-Apr-20 A	08-May-20	0	WD (6d)
S14P7S3-1020	Site Clearance	AD-1120	S14P7S3-1030	6	06-Apr-20 A	08-May-20	0	WD (6d)
S14P7S3-1030	Ground investigation and laboratory test (6 GI)	S14P7S3-102	S14P7S3-104	24	09-May-20	05-Jun-20	0	WD (6d)
S14P7S3-1040	Prepare Arsenic Assessment Report	S14P7S3-1030	S14P7S3-1050	20	06-Jun-20	30-Jun-20	1256	WD (6d)
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant				72	06-Jun-20	31-Aug-20	0	WD (6d)
S14P7S3-2010	Set up, testing and commissioning high arsenic-containing soil treatment plant (KD4)	SP-1020, S14	S14P7S3-100	72	06-Jun-20	31-Aug-20	0	WD (6d)
Portion 7 in Area T1, T2, T3 (Soil Treatment & Temp. Noise Barrier along Castle Peak Road)				96	01-May-20	04-Aug-20	1760	
Preparation work/Tree Survey/Site Clearance/GI				88	01-May-20	27-Jul-20	1768	
S14P7T-1001	Late Possession of Site of Part of Portions 7 and 10a (in Area H, H1, T1, T2 & T3) (CNE No. 001)	EC-1001	S14P7T-1010	0	01-May-20*		3	CD (7d)
S14P7T-1010	Tree survey and prepare tree felling and transplant report	AD-1120, SP-	S14P7T-1030	6	02-May-20	08-May-20	1	WD (6d)
S14P7T-1020	Site Clearance	AD-1120	S14P7T-1030	6	02-May-20	08-May-20	1	WD (6d)
S14P7T-1030	Ground investigation and laboratory test (4 GI)	SP-1070, S14	S14P7T-1040	30	09-May-20	12-Jun-20	1	WD (6d)



Build King – Richwell Engineering Joint Venture

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

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

Project ID: ND201901-FP-1
Layout: ND201901-3MRP

THE 3-MONTH ROLLING PROGRAMME (2020-05 to 2020-07)

Date	Revision	Checked	Approved
30-Apr-20	Rev. 0	JC	BY

Activity ID	Activity Name	Predecessors	Successors	Remaining Duration	Start	Finish	Total Float	Calendar
S14P7T-1040	Prepare Arsenic Assessment Report	S14P7T-1030	S14P7T-1050	36	13-Jun-20	27-Jul-20	1434	WD (6d)
Project Manager's Site Accommodation				64	20-May-20	04-Aug-20	1	WD (6d)
S14P7T-1110	Remove soil to stockpile area	S14P7T-1030	S14P7T-1120	24	20-May-20	16-Jun-20	1	WD (6d)
S14P7T-1120	Backfill of clean soil	S14P7T-1110	S14P7T-1130	40	17-Jun-20	04-Aug-20	1	WD (6d)
Portion 6a in Area S2 (Soil Treatment)				52	14-Apr-20 A	03-Jul-20	1310	WD (6d)
Preparation work/Tree Survey/Site Clearance/GI				52	14-Apr-20 A	03-Jul-20	1310	WD (6d)
S14P6a-1010	Tree survey and prepare tree felling and transplant report	AD-1100, SP-	S14P6a-1020	52	14-Apr-20 A	03-Jul-20	1310	WD (6d)
Portion 6b in Area S2 (Soil Treatment)				82	14-Apr-20 A	07-Aug-20	1328	WD (6d)
Preparation work/Tree Survey/Site Clearance/GI				82	14-Apr-20 A	07-Aug-20	1328	WD (6d)
S14P6b-1010	Tree survey and prepare tree felling and transplant report	AD-1110, SP-	S14P6b-1020	34	14-Apr-20 A	10-Jun-20	1328	WD (6d)
S14P6b-1020	Site Clearance	S14P6b-1010	S14P6b-1030	48	11-Jun-20	07-Aug-20	1328	WD (6d)
Portion 1f in Area R (Soil Treatment & Construction of Interim CLC & Road A1)				371	06-Jan-20 A	07-May-21	1243	
Preparation work/Tree Survey/Site Clearance/GI				63	06-Jan-20 A	16-Jul-20	1250	WD (6d)
S14P1f-1010	Tree survey and prepare tree felling and transplant report	AD-1050, SP-	S14P1f-1040	24	25-May-20*	20-Jun-20	1255	WD (6d)
S14P1f-1020	Site Clearance	AD-1050	S14P1f-1030	48	06-Jan-20 A	27-Jun-20	1250	WD (6d)
S14P1f-1030	Ground investigation and laboratory test (1 GI)	SP-1070, S14	S14P1f-1040	15	29-Jun-20	16-Jul-20	1250	WD (6d)
Interim Community Liaison Centre (CLC)				371	19-Mar-20 A	07-May-21	1243	
S14P1f-2015	Supply and delivery for proposed interim CLC	S14P1f-2010	S14P1f-2020	0	19-Mar-20 A	30-Apr-20 A		CD (7d)
S14P1f-2020	Construction of interim CLC	S14P1f-2010,	S14P1f-2040	16	14-Apr-20 A	20-May-20	1	WD (6d)
S14P1f-2030	Occupation of interim CLC	S14P1f-2020	S14P1f-2040	352	21-May-20	07-May-21	1243	CD (7d)
Portion 9c in Area S1 (Soil Treatment)				85	01-May-20	24-Jul-20	17	
Preparation work/Tree Survey/Site Clearance/GI				85	01-May-20	24-Jul-20	17	
S14P9c-1000	Late Possession of Site of Portions 9c (CNE No. 003)	EC-1003	S14P9c-1010	0	01-May-20*		18	CD (7d)
S14P9c-1010	Tree survey and prepare tree felling and transplant report	AD-1170, SP-	S14P9c-1020	60	02-May-20	13-Jul-20	14	WD (6d)
S14P9c-1020	Site Clearance	S14P9c-1010	S14P9c-1030	60	14-May-20	24-Jul-20	14	WD (6d)
Portion 13 in Area S4 (Soil Treatment)				4	30-Apr-20	03-May-20	2439	CD (7d)
Preparation work/Tree Survey/Site Clearance/GI				4	30-Apr-20	03-May-20	2439	CD (7d)
S14P13-1060	New Activity			4	30-Apr-20	03-May-20	2439	CD (7d)
Section 15				1679	06-Dec-19 A	03-Dec-24	399	CD (7d)
S15-1000	Presevation and protection of tree	CD-1010	S15-1010	1679	06-Dec-19 A	03-Dec-24	399	CD (7d)
Section 21 (Subject to excision)				14	21-May-20	05-Jun-20	1	WD (6d)
Portion 1d in Area M (Soil Treatment & Demolition of Existing CLC)				14	21-May-20	05-Jun-20	1	WD (6d)
Preparation work				14	21-May-20	05-Jun-20	1	WD (6d)
S21P1d-0010	Demolition of existing Community Liaison Centre (CLC)	S14P1f-2020		14	21-May-20	05-Jun-20*	1	WD (6d)
9.0 - EWN / CNE				0	09-Mar-20 A	30-Apr-20	667	CD (7d)
EC-1001	Late Possession of Site of Part of Portions 7 and 10a (in Area H, H1, T1, T2 & T3) (CNE No. 001)	AD-1120, AD-	S1P10a-1100	0	06-Apr-20 A	30-Apr-20	-28	CD (7d)
EC-1002	Suspension of Works at Part of Portions 5 & 6a (in Area A, N & C1) (CNE No. 002) (EWN No. 005)		S13P6a-1000	0	09-Mar-20 A	30-Apr-20	21	CD (7d)
EC-1003	Late Possession of Site of Portions 9c (CNE No. 003)	AD-1170	S14P9c-1000	0	06-Apr-20 A	30-Apr-20	19	CD (7d)
EC-1004	Late Possession of Site of Part of Portion 5 (in Area C1) (CNE No. 004)	AD-1090	S2AP5-1000	0	06-Apr-20 A	30-Apr-20	399	CD (7d)
EC-1005	Late Possession of Site of Portion 3 (CNE No. 005)	AD-1070	S8P3-1000	0	06-Apr-20 A	30-Apr-20	667	CD (7d)
EC-1006	Strong Objection on the Construction of Service Reservoirs at Portions 8a & 8b (CNE No. 006) (EWN No. 005)		S8P8a-1000, S8P8b-1010	0	18-Mar-20 A	30-Apr-20	13	CD (7d)



Build King – Richwell Engineering Joint Venture

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

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

Project ID: ND201901-FP-1
Lauyout: ND201901-3MRP

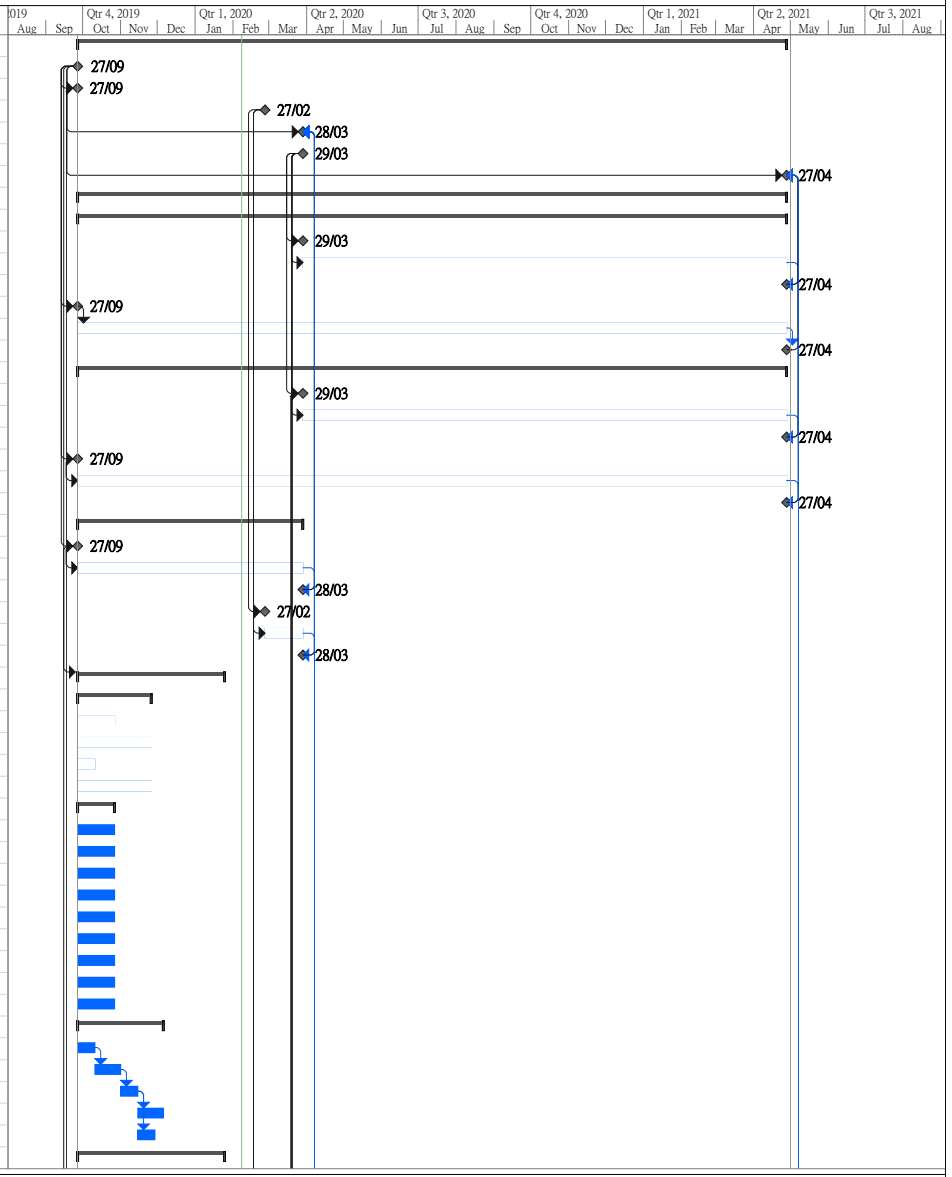
THE 3-MONTH ROLLING PROGRAMME (2020-05 to 2020-07)

Date	Revision	Checked	Approved
30-Apr-20	Rev. 0	JC	BY

Contract No. ND/2019/06 Fanling North New Development Area, Phase 1:
Reprovisioning of North District Temporary Wholesale Market for Agricultural Products
First Programme

Ref: FP-01 rev 4

ID	WBS	Activities	Duration	Start	Finish	Float
1	**1**	**ND/2019/06 Contract Key Dates**	**579 days**	**Fri 27 Sep '19**	**Tue 27 Apr '21**	**0 days**
2	1.1	Commencement of Contract	0 days	Fri 27 Sep '19	Fri 27 Sep '19	0 days
3	1.2	Commencement of Portion 1, 4 & 6	0 days	Fri 27 Sep '19	Fri 27 Sep '19	0 days
4	1.3	Commencement of Portion 2	0 days	Thu 27 Feb '20	Thu 27 Feb '20	0 days
5	1.4	Completion of Portion 1 & 2	0 days	Sat 28 Mar '20	Sat 28 Mar '20	0 days
6	1.5	Commencement of Portions 3 & 5	0 days	Sun 29 Mar '20	Sun 29 Mar '20	0 days
7	1.6	Project Completion	0 days	Tue 27 Apr '21	Tue 27 Apr '21	0 days
8	**2**	**Sections of the Works**	**579 days**	**Fri 27 Sep '19**	**Tue 27 Apr '21**	**0 days**
9	**2.1**	**Section 1**	**579 days**	**Fri 27 Sep '19**	**Tue 27 Apr '21**	**0 days**
10	2.1.1	Starting date for Portion 3	0 days	Sun 29 Mar '20	Sun 29 Mar '20	0 days
11	2.1.2	Work duration for Portion 3	395 days	Sun 29 Mar '20	Tue 27 Apr '21	0 days
12	2.1.3	Completion date for Portion 3	0 days	Tue 27 Apr '21	Tue 27 Apr '21	0 days
13	2.1.4	Starting date for Portion 4	0 days	Fri 27 Sep '19	Fri 27 Sep '19	0 days
14	2.1.5	Work duration for Portion 4	579 days	Fri 27 Sep '19	Tue 27 Apr '21	0 days
15	2.1.6	Completion date for Portion 4	0 days	Tue 27 Apr '21	Tue 27 Apr '21	0 days
16	**2.2**	**Section 2**	**579 days**	**Fri 27 Sep '19**	**Tue 27 Apr '21**	**0 days**
17	2.2.1	Starting date for Portion 5	0 days	Sun 29 Mar '20	Sun 29 Mar '20	0 days
18	2.2.2	Work duration for Portion 5	395 days	Sun 29 Mar '20	Tue 27 Apr '21	0 days
19	2.2.3	Completion date for Portion 5	0 days	Tue 27 Apr '21	Tue 27 Apr '21	0 days
20	2.2.4	Starting date for Portion 6	0 days	Fri 27 Sep '19	Fri 27 Sep '19	0 days
21	2.2.5	Work duration for Portion 6	579 days	Fri 27 Sep '19	Tue 27 Apr '21	0 days
22	2.2.6	Completion date for Portion 6	0 days	Tue 27 Apr '21	Tue 27 Apr '21	0 days
23	**2.3**	**Section 3**	**184 days**	**Fri 27 Sep '19**	**Sat 28 Mar '20**	**0 days**
24	2.3.1	Starting date for Portion 1	0 days	Fri 27 Sep '19	Fri 27 Sep '19	0 days
25	2.3.2	Work duration for Portion 1	184 days	Fri 27 Sep '19	Sat 28 Mar '20	0 days
26	2.3.3	Completion date for Portion 1	0 days	Sat 28 Mar '20	Sat 28 Mar '20	0 days
27	2.3.4	Starting date for Portion 2	0 days	Thu 27 Feb '20	Thu 27 Feb '20	0 days
28	2.3.5	Work duration for Portion 2	31 days	Thu 27 Feb '20	Sat 28 Mar '20	0 days
29	2.3.6	Completion date for Portion 2	0 days	Sat 28 Mar '20	Sat 28 Mar '20	0 days
30	**3**	**General Submission**	**120 days**	**Fri 27 Sep '19**	**Fri 24 Jan '20**	**0 days**
31	**3.1**	**Commercial and Organization**	**60 days**	**Fri 27 Sep '19**	**Mon 25 Nov '19**	**0 days**
32	3.1.1	Insurances - Third Party Liability	30 days	Fri 27 Sep '19	Sat 26 Oct '19	0 days
33	3.1.2	Insurances - PII for Works	60 days	Fri 27 Sep '19	Mon 25 Nov '19	0 days
34	3.1.3	Appointment of Key Personnel	14 days	Fri 27 Sep '19	Thu 10 Oct '19	0 days
35	3.1.4	Appointment of Project Core Team (ACC Section D)	60 days	Fri 27 Sep '19	Mon 25 Nov '19	0 days
36	**3.2**	**Plan**	**30 days**	**Fri 27 Sep '19**	**Sat 26 Oct '19**	**552 days**
37	3.2.1	Project Safety Plan	30 days	Fri 27 Sep '19	Sat 26 Oct '19	552 days
38	3.2.2	Environmental Management Plan	30 days	Fri 27 Sep '19	Sat 26 Oct '19	552 days
39	3.2.3	Project Quality Plan	30 days	Fri 27 Sep '19	Sat 26 Oct '19	552 days
40	3.2.4	Sub-contractors Management Plan	30 days	Fri 27 Sep '19	Sat 26 Oct '19	552 days
41	3.2.5	Public Relationship Plan	30 days	Fri 27 Sep '19	Sat 26 Oct '19	552 days
42	3.2.6	Project Webpage	30 days	Fri 27 Sep '19	Sat 26 Oct '19	552 days
43	3.2.7	Interfacing Management Plan	30 days	Fri 27 Sep '19	Sat 26 Oct '19	552 days
44	3.2.8	Site Monitoring Plan	30 days	Fri 27 Sep '19	Sat 26 Oct '19	552 days
45	3.2.9	Site Layout Plan including site access	30 days	Fri 27 Sep '19	Sat 26 Oct '19	552 days
46	**3.3**	**Programme**	**70 days**	**Fri 27 Sep '19**	**Thu 05 Dec '19**	**512 days**
47	3.3.1	First programme	14 days	Fri 27 Sep '19	Thu 10 Oct '19	0 days
48	3.3.2	Review of first programme	21 days	Fri 11 Oct '19	Thu 31 Oct '19	0 days
49	3.3.3	Resubmission of first programme	14 days	Fri 01 Nov '19	Thu 14 Nov '19	0 days
50	3.3.4	Approval of first programme	21 days	Fri 15 Nov '19	Thu 05 Dec '19	512 days
51	3.3.5	3-months rolling programme (first submission)	14 days	Fri 15 Nov '19	Thu 28 Nov '19	519 days
52	**3.4**	**Permit, Licence and Notification**	**120 days**	**Fri 27 Sep '19**	**Fri 24 Jan '20**	**462 days**



Critical Split Task Milestone Summary Critical

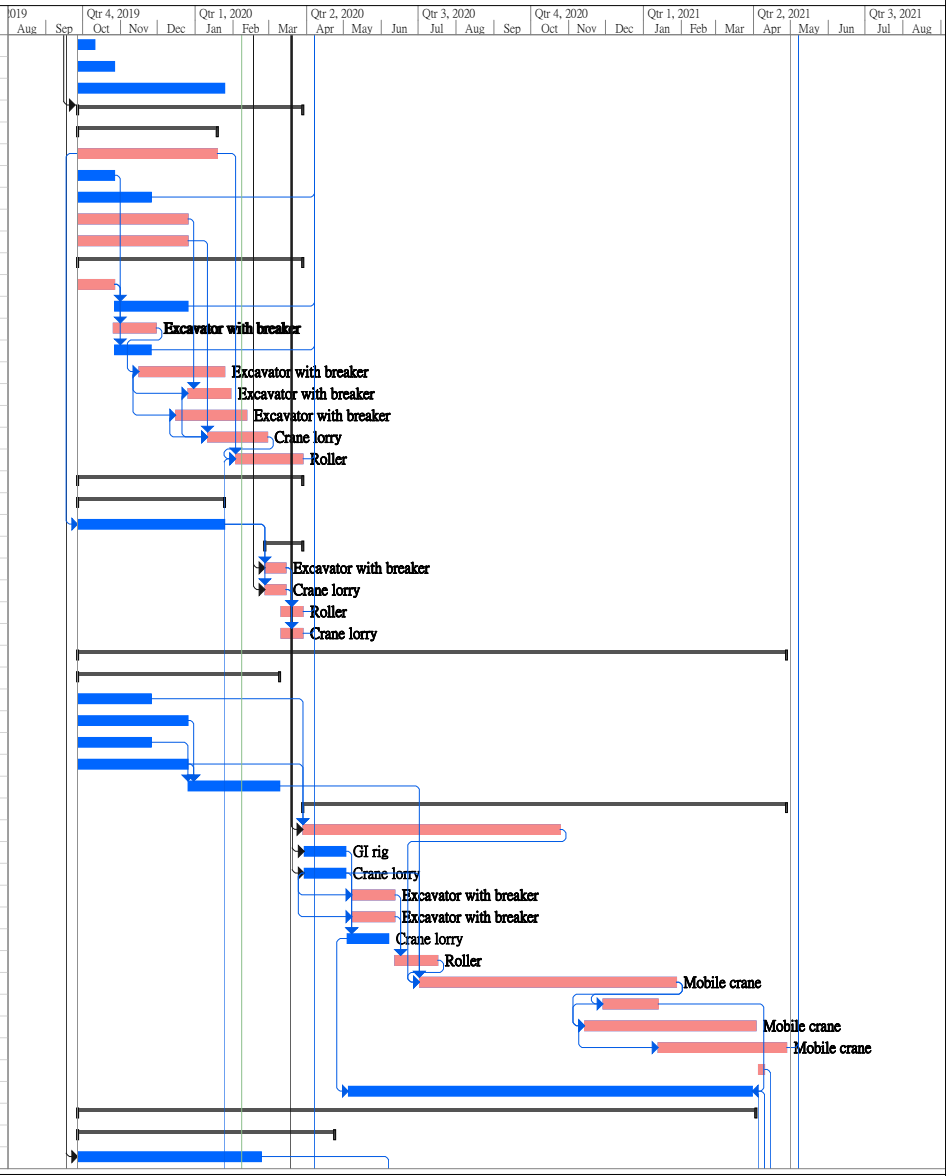
創業集團(控股)有限公司
New Concepts Holdings Limited

Remarks: Health and safety requirements has all been included in this programme

Date: 29 January 2020

Contract No. ND/2019/06 Fanling North New Development Area, Phase 1:
Reprovisioning of North District Temporary Wholesale Market for Agricultural Products
First Programme

ID	WBS	Activities	Duration	Start	Finish	Float
53	3.4.1	Notification to LD, EPD, PCFB, CIC & UU	14 days	Fri 27 Sep '19	Thu 10 Oct '19	568 days
54	3.4.2	Apply EPD for discharge license, construction waste disposal & CNP	30 days	Fri 27 Sep '19	Sat 26 Oct '19	552 days
55	3.4.3	XP & TTM	120 days	Fri 27 Sep '19	Fri 24 Jan '20	462 days
56	**4**	**Portion 1**	**184 days**	**Fri 27 Sep '19**	**Sat 28 Mar '20**	**0 days**
57	**4.1**	**Submission**	**114 days**	**Fri 27 Sep '19**	**Sat 18 Jan '20**	**0 days**
58	4.1.1	Generic material submission	114 days	Fri 27 Sep '19	Sat 18 Jan '20	0 days
59	4.1.2	Hoarding for Portion 1	30 days	Fri 27 Sep '19	Sat 26 Oct '19	0 days
60	4.1.3	Temporary drainage diversion	60 days	Fri 27 Sep '19	Mon 25 Nov '19	124 days
61	4.1.4	ELS in Portion 1	90 days	Fri 27 Sep '19	Wed 25 Dec '19	0 days
62	4.1.5	Temporary lighting submission	90 days	Fri 27 Sep '19	Wed 25 Dec '19	0 days
63	**4.2**	**Construction**	**184 days**	**Fri 27 Sep '19**	**Sat 28 Mar '20**	**0 days**
64	4.2.1	Mobilization and site setup	30 days	Fri 27 Sep '19	Sat 26 Oct '19	0 days
65	4.2.2	Hoarding for Portion 1	60 days	Sun 27 Oct '19	Wed 25 Dec '19	94 days
66	4.2.3	General site clearance	30 days	Sat 26 Oct '19	Fri 29 Nov '19	0 days
67	4.2.4	GI	30 days	Sun 27 Oct '19	Mon 25 Nov '19	124 days
68	4.2.5	Removal of hard paving	60 days	Sat 16 Nov '19	Fri 24 Jan '20	0 days
69	4.2.6	Underground pipelaying for drainage/sewerage	30 days	Thu 26 Dec '19	Wed 29 Jan '20	0 days
70	4.2.7	Underground cable duct laying	50 days	Mon 16 Dec '19	Tue 11 Feb '20	0 days
71	4.2.8	Temporary lighting installation	42 days	Sat 11 Jan '20	Fri 28 Feb '20	0 days
72	4.2.9	Hard paving works and road marking	48 days	Mon 03 Feb '20	Sat 28 Mar '20	0 days
73	**5**	**Portion 2**	**184 days**	**Fri 27 Sep '19**	**Sat 28 Mar '20**	**0 days**
74	**5.1**	**Submission**	**120 days**	**Fri 27 Sep '19**	**Fri 24 Jan '20**	**33 days**
75	5.1.1	Submission (completed in Portion 1)	120 days	Fri 27 Sep '19	Fri 24 Jan '20	33 days
76	**5.2**	**Construction**	**31 days**	**Thu 27 Feb '20**	**Sat 28 Mar '20**	**0 days**
77	5.2.1	Underground drainage laying	15 days	Thu 27 Feb '20	Sat 14 Mar '20	0 days
78	5.2.2	Temporary lighting installation	15 days	Thu 27 Feb '20	Sat 14 Mar '20	0 days
79	5.2.3	Hard paving works and road marking	16 days	Wed 11 Mar '20	Sat 28 Mar '20	0 days
80	5.2.4	Temporary office erection	16 days	Wed 11 Mar '20	Sat 28 Mar '20	0 days
81	**6**	**Portion 3**	**579 days**	**Fri 27 Sep '19**	**Tue 27 Apr '21**	**0 days**
82	**6.1**	**Submission**	**165 days**	**Fri 27 Sep '19**	**Mon 09 Mar '20**	**94 days**
83	6.1.1	Material submission & testing	60 days	Fri 27 Sep '19	Mon 25 Nov '19	124 days
84	6.1.2	BIM execution plan with team leader	90 days	Fri 27 Sep '19	Wed 25 Dec '19	0 days
85	6.1.3	CSD & CBWD submission	60 days	Fri 27 Sep '19	Mon 25 Nov '19	30 days
86	6.1.4	Shop drawing for steel structure	90 days	Fri 27 Sep '19	Wed 25 Dec '19	30 days
87	6.1.5	BIM model submission	75 days	Thu 26 Dec '19	Mon 09 Mar '20	139 days
88	**6.2**	**Construction**	**395 days**	**Sun 29 Mar '20**	**Tue 27 Apr '21**	**0 days**
89	6.2.1	Fabrication of steel structure	210 days	Sun 29 Mar '20	Sat 24 Oct '20	0 days
90	6.2.2	GI borehole (3 nos.)	30 days	Mon 30 Mar '20	Sat 02 May '20	1 day
91	6.2.3	Plate load test for canopy footings	30 days	Mon 30 Mar '20	Sat 02 May '20	1 day
92	6.2.4	Underground pipelaying for drainage/sewerage	30 days	Fri 08 May '20	Thu 11 Jun '20	0 days
93	6.2.5	Underground cable duct and flushing water pipe laying	30 days	Fri 08 May '20	Thu 11 Jun '20	0 days
94	6.2.6	Construction of canopy footing	30 days	Mon 04 May '20	Sat 06 Jun '20	0 days
95	6.2.7	Hard paving works	30 days	Fri 12 Jun '20	Thu 16 Jul '20	0 days
96	6.2.8	Erection of steel structure	180 days	Thu 02 Jul '20	Wed 27 Jan '21	0 days
97	6.2.9	Application of FRP paint	45 days	Sun 29 Nov '20	Tue 12 Jan '21	0 days
98	6.2.10	Erection of roof deck and skylight	120 days	Sat 14 Nov '20	Fri 02 Apr '21	0 days
99	6.2.11	Installation of solar panel	90 days	Wed 13 Jan '21	Tue 27 Apr '21	0 days
100	6.2.12	Road marking	5 days	Mon 05 Apr '21	Fri 09 Apr '21	0 days
101	6.2.13	MEP installation	330 days	Tue 05 May '20	Tue 30 Mar '21	3 days
102	**7**	**Portion 4**	**554 days**	**Fri 27 Sep '19**	**Fri 02 Apr '21**	**0 days**
103	**7.1**	**Submission**	**210 days**	**Fri 27 Sep '19**	**Thu 23 Apr '20**	**0 days**
104	7.1.1	Generic material submission	150 days	Fri 27 Sep '19	Sun 23 Feb '20	104 days



Critical Split · · · · · · · · · · · · · · · · Task ▬▬▬ Milestone ◆ Summary ▬▬▬ Critical ▬▬▬

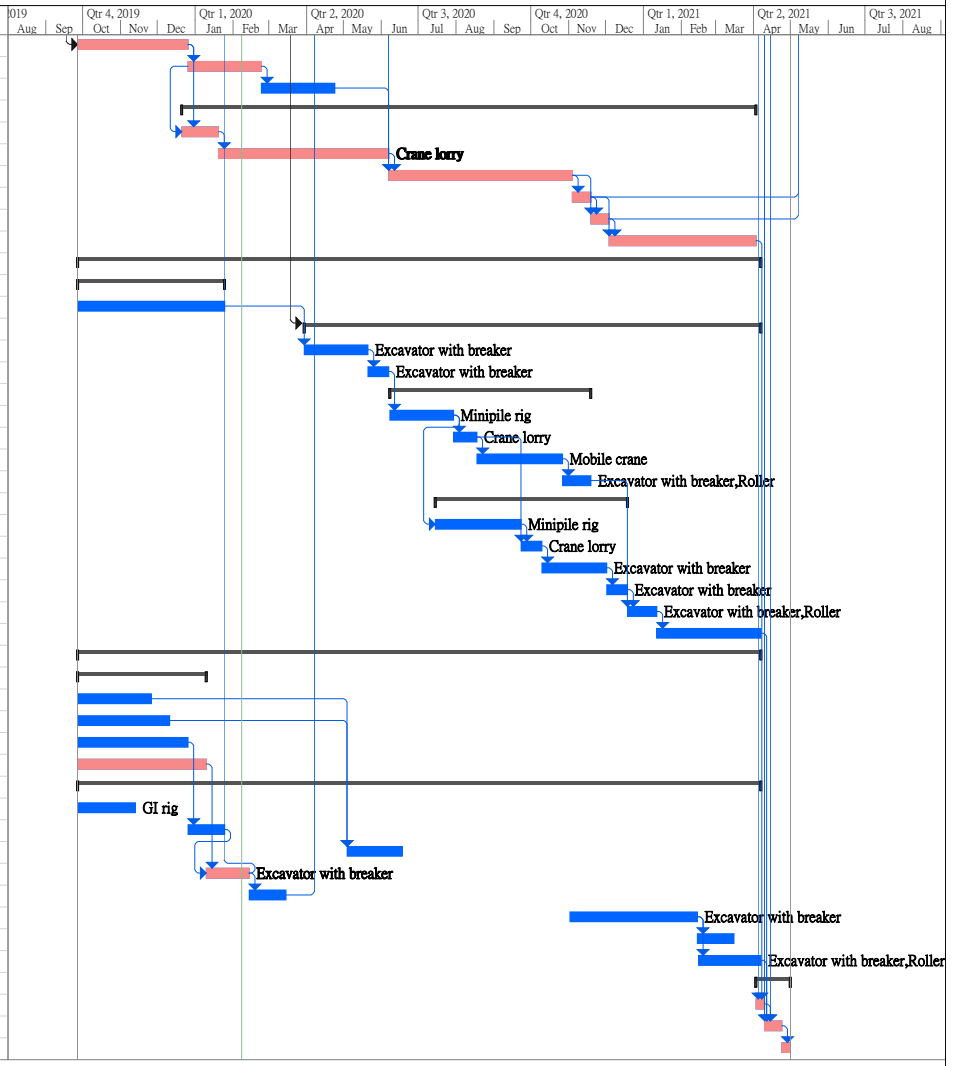
新業集團(控股)有限公司
New Concepts Holdings Limited

Remarks: Health and safety requirements has all been included in this programme

Date: 29 January 2020

Contract No. ND/2019/06 Fanling North New Development Area, Phase 1:
Reprovisioning of North District Temporary Wholesale Market for Agricultural Products
First Programme

ID	WBS	Activities	Duration	Start	Finish	Float
105	7.1.2	ELS for management office building	90 days	Fri 27 Sep '19	Wed 25 Dec '19	0 days
106	7.1.3	CSD & CBWD submission	60 days	Thu 26 Dec '19	Sun 23 Feb '20	0 days
107	7.1.4	BIM model submission	60 days	Mon 24 Feb '20	Thu 23 Apr '20	44 days
108	**7.2**	**Construction**	**469 days**	**Sat 21 Dec '19**	**Fri 02 Apr '21**	**0 days**
109	7.2.1	Site formation for management office building	30 days	Sat 21 Dec '19	Sun 19 Jan '20	0 days
110	7.2.2	Carcass of management office building	120 days	Mon 20 Jan '20	Sat 06 Jun '20	0 days
111	7.2.3	Fitout works of management office building	150 days	Sun 07 Jun '20	Tue 03 Nov '20	0 days
112	7.2.4	Transformer installation	15 days	Wed 04 Nov '20	Wed 18 Nov '20	0 days
113	7.2.5	Generator installation	15 days	Thu 19 Nov '20	Thu 03 Dec '20	0 days
114	7.2.6	MEP installation	120 days	Fri 04 Dec '20	Fri 02 Apr '21	0 days
115	**8**	**Portion 5**	**558 days**	**Fri 27 Sep '19**	**Tue 06 Apr '21**	**3 days**
116	**8.1**	**Submission**	**120 days**	**Fri 27 Sep '19**	**Fri 24 Jan '20**	**68 days**
117	8.1.1	Demolition Plan	120 days	Fri 27 Sep '19	Fri 24 Jan '20	65 days
118	**8.2**	**Construction**	**373 days**	**Mon 30 Mar '20**	**Tue 06 Apr '21**	**3 days**
119	8.2.1	Demolition of public toilet	45 days	Mon 30 Mar '20	Wed 20 May '20	0 days
120	8.2.2	Backfilling to ground level	15 days	Thu 21 May '20	Sat 06 Jun '20	1 day
121	**8.2.3**	**Retaining wall Bay 1**	**164 days**	**Mon 08 Jun '20**	**Wed 18 Nov '20**	**3 days**
122	8.2.3.1	Mini-pile (18 nos.)	45 days	Mon 08 Jun '20	Wed 29 Jul '20	0 days
123	8.2.3.2	Load testing for mini-pile	16 days	Thu 30 Jul '20	Mon 17 Aug '20	0 days
124	8.2.3.3	Structural works	60 days	Tue 18 Aug '20	Mon 26 Oct '20	0 days
125	8.2.3.4	Backfilling works	20 days	Tue 27 Oct '20	Wed 18 Nov '20	0 days
126	**8.2.4**	**Retaining wall Bay 2**	**157 days**	**Wed 15 Jul '20**	**Fri 18 Dec '20**	**3 days**
127	8.2.4.1	Mini-pile (22 nos.)	60 days	Wed 15 Jul '20	Tue 22 Sep '20	0 days
128	8.2.4.2	Load testing for mini-pile	15 days	Wed 23 Sep '20	Fri 09 Oct '20	0 days
129	8.2.4.3	Structural works	45 days	Sat 10 Oct '20	Tue 01 Dec '20	0 days
130	8.2.4.4	Backfilling works	15 days	Wed 02 Dec '20	Fri 18 Dec '20	0 days
131	8.2.5	Hard paving works and road marking	20 days	Sat 19 Dec '20	Mon 11 Jan '21	0 days
132	8.2.6	Landscape works	85 days	Tue 12 Jan '21	Tue 06 Apr '21	3 days
133	**9**	**Portion 6**	**558 days**	**Fri 27 Sep '19**	**Tue 06 Apr '21**	**0 days**
134	**9.1**	**Submission**	**105 days**	**Fri 27 Sep '19**	**Thu 09 Jan '20**	**0 days**
135	9.1.1	Tree surveying report	60 days	Fri 27 Sep '19	Mon 25 Nov '19	160 days
136	9.1.2	Method statement for tree felling	75 days	Fri 27 Sep '19	Tue 10 Dec '19	145 days
137	9.1.3	Method statement for trial pits at revetment	90 days	Fri 27 Sep '19	Wed 25 Dec '19	0 days
138	9.1.4	Method statement for soil replacement at revetment	105 days	Fri 27 Sep '19	Thu 09 Jan '20	0 days
139	**9.2**	**Construction**	**558 days**	**Fri 27 Sep '19**	**Tue 06 Apr '21**	**24 days**
140	9.2.1	GI (borehole 2 nos.)	40 days	Fri 27 Sep '19	Tue 12 Nov '19	535 days
141	9.2.2	GI (trial pits 7 nos.)	30 days	Thu 26 Dec '19	Fri 24 Jan '20	1 day
142	9.2.3	Tree felling	45 days	Mon 04 May '20	Wed 17 Jun '20	317 days
143	9.2.4	Soil replacement at river revetment next to Portions 1 & 4	30 days	Fri 10 Jan '20	Thu 13 Feb '20	0 days
144	9.2.5	Landscape works at river revetment next to Portions 1 & 4	30 days	Fri 14 Feb '20	Sat 14 Mar '20	14 days
145	9.2.6	Soil replacement at river revetment next to Portion 3	90 days	Mon 02 Nov '20	Sat 13 Feb '21	0 days
146	9.2.7	Landscape works at river revetment next to Portion 3	30 days	Sun 14 Feb '21	Mon 15 Mar '21	46 days
147	9.2.8	Reinstatement of hard pavement / footpath	44 days	Mon 15 Feb '21	Tue 06 Apr '21	3 days
148	**10**	**Statutory Submissions**	**28 days**	**Sat 03 Apr '21**	**Fri 30 Apr '21**	**0 days**
149	10.1	Form FS314A with FS251 - Fire Services Installation Plans	7 days	Sat 03 Apr '21	Fri 09 Apr '21	0 days
150	10.2	FSD inspection	14 days	Sat 10 Apr '21	Fri 23 Apr '21	0 days
151	10.3	FSD acknowledgement	7 days	Sat 24 Apr '21	Fri 30 Apr '21	0 days



創業集團(控股)有限公司
New Concepts Holdings Limited

Critical Split · · · · · · · · · · · · · · · · Task ▬▬▬ Milestone ◆ Summary ▬▬▬ Critical ▬▬▬

Remarks: Health and safety requirements has all been included in this programme

Date: 29 January 2020

APPENDIX B
ACTION AND LIMIT LEVELS

Appendix B - Action and Limit Levels

Table B-1 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-2 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%

APPENDIX C
COPIES OF CALIBRATION CERTIFCATES

WELLAB 匯力 Testing & Research

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.:	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
Page:	1 of 1

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

This report may not be reproduced, except in full, without prior written approval from WELLAB LIMITED and the results relate only to the items calibrated or tested.

WELLAB 匯力 Testing & Research

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.:	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
Page:	1 of 1

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

Certificate of Calibration

Item for calibration:

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

Test conditions:

Room 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
PATRICK TSE
General Manager

This report may not be reproduced, except in full, without prior written approval from WELLAB LIMITED and the results relate only to the items calibrated or tested.

FIREMARK

Calibration Certificate

Number: CCP/70431

Customer: Hong Kong Landfill Restoration Group Limited
Contact Person: Mr. Stanley Cheng
Detector Model: RKI Eagle
Serial Number: E148037

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 / 11706/1116**
CH4	**50% LEL**	**0% LEL**	**50% LEL**	**SPANTECH / 2286-6-1 to 4**
O2	**18% vol**	**20.9% vol**	**18% vol**	**SPANTECH / 2286-6-1 to 4**
CO2	**30% vol**	**0% vol**	**30% vol**	**SPANTECH / 1883-9-1**

Next Calibration Date: 24th July 2020

Remarks: Instrument PASSED – fit for service.

Authorized Signature

Date: 25th July 2019

FireMark Hong Kong Ltd. 瑞志香港有限公司

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 Noise Monitoring for May 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1-May	2-May
3-May	4-May	5-May	6-May	7-May	8-May	9-May
	Noise CP-FLN-NMS1 CP-KTN-NMS5					
10-May	11-May	12-May	13-May	14-May	15-May	16-May
	Noise CP-FLN-NMS1 CP-KTN-NMS5					
17-May	18-May	19-May	20-May	21-May	22-May	23-May
	Noise CP-FLN-NMS1 CP-KTN-NMS5					
24-May	25-May	26-May	27-May	28-May	29-May	30-May
		Noise CP-FLN-NMS1 CP-KTN-NMS5				
31-May						

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

EP-475/2013A: ND/2019/06 - Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products
Noise Monitoring Station
CP-FLN-NMS1 Belair Monte (Existing)

EP-470/2013: ND/2019/01 - Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works
Noise Monitoring Station
CP-KTN-NMS5 N/A (Existing)

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 (June 2020)

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

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)
Related information to additional monitoring stations will be presented in the next Monthly EM&A Report.
Remarks:
*denoting that monitoring session would be conducted by portable TSP monitor.

Environmental Permit(s)	Contract No.	Air Quality Stations	Noise Stations
EP-468/2013/A	ND/2019/01	KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)	1. CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung 2. CP-KTN-NMS3 -Fung Kong Garden
EP-470/2013		--	CP-KTN-NMS5 - N/A
EP-475/2013A	ND/2019/06	--	CP-FLN-NMS1 - Belair Monte

Related information to additional monitoring stations will be presented in the next Monthly EM&A Report.

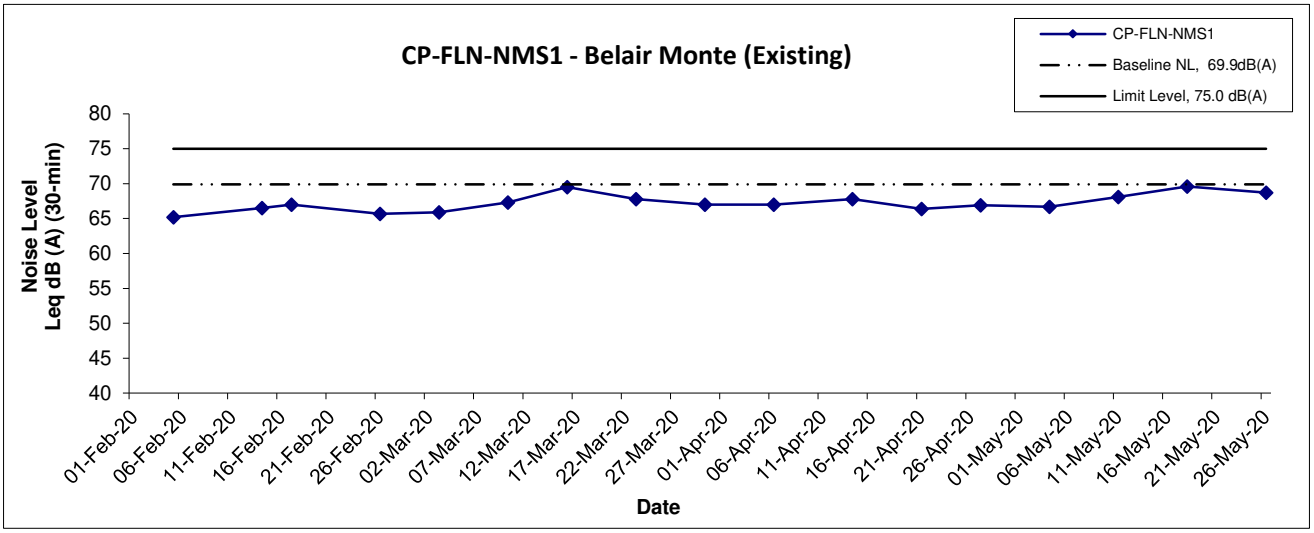
APPENDIX E
NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATION

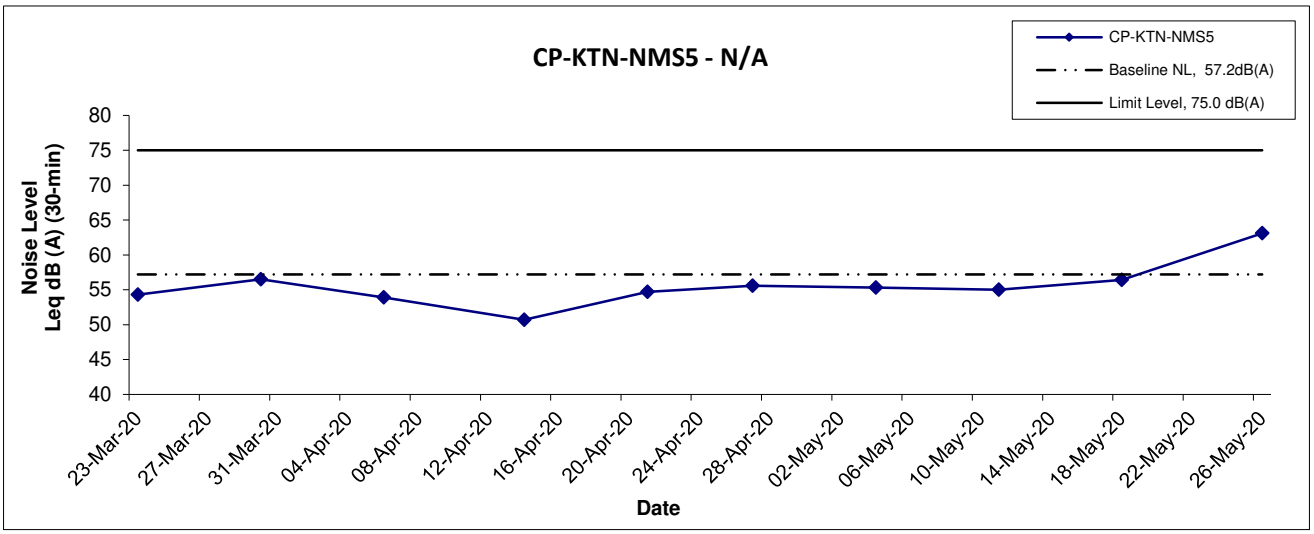
Appendix E - Noise Monitoring Results

Location CP-FLN-NMS1 - Belair Monte (Existing)							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
4-May-20	Sunny	15:15	67.5	71.3	57.0	66.7	69.9
		15:20	65.3	69.3	56.2		
		15:25	66.1	69.8	58.5		
		15:30	66.4	71.0	55.5		
		15:35	67.6	71.0	56.8		
		15:40	66.9	70.3	56.0		
11-May-20	Sunny	09:30	71.3	74.9	57.7	68.1	
		09:35	65.6	70.6	53.5		
		09:40	65.4	69.5	53.0		
		09:45	66.7	71.1	53.1		
		09:50	68.7	70.5	53.8		
		09:55	67.5	72.0	53.5		
18-May-20	Cloudy	10:30	70.5	74.2	59.5	69.6	
		10:35	71.4	74.9	61.3		
		10:40	67.0	70.2	61.7		
		10:45	69.0	73.1	59.7		
		10:50	68.5	73.1	56.6		
		10:55	69.6	74.0	58.3		
26-May-20	Cloudy	09:20	67.8	70.6	62.8	68.7	
		09:25	67.6	70.6	62.2		
		09:30	69.0	71.6	62.3		
		09:35	69.4	72.9	61.4		
		09:40	69.3	72.3	56.0		
		09:45	68.8	71.7	58.4		

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}
4-May-20	Sunny	14:25	53.0	54.5	51.0	55.3	57.2
		14:30	57.0	60.2	53.4		
		14:35	55.4	57.8	52.0		
		14:40	54.2	56.6	51.1		
		14:45	55.3	57.5	51.9		
		14:50	55.8	59.3	52.0		
11-May-20	Sunny	10:30	53.2	56.5	46.9	55.0	
		10:35	51.3	54.0	49.2		
		10:40	55.3	60.2	47.7		
		10:45	55.9	58.9	50.0		
		10:50	55.5	58.3	50.3		
		10:55	56.8	58.9	50.9		
18-May-20	Sunny	11:25	54.1	55.5	51.9	56.4	
		11:30	57.1	61.0	51.3		
		11:35	59.7	65.1	52.1		
		11:40	55.8	56.8	51.0		
		11:45	55.2	55.9	51.1		
		11:50	53.1	53.5	49.4		
26-May-20	Cloudy	10:00	66.4	72.9	54.9	63.1	
		10:05	59.9	61.7	54.2		
		10:10	57.5	60.2	53.1		
		10:15	63.6	70.4	53.2		
		10:20	65.1	71.7	53.3		
		10:25	59.1	62.4	52.4		

Noise Levels





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

APPENDIX F
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%
02-05-2020 8:30	CZ PT 1		20.9	0	0
02-05-2020 8:40	CZ container 1		20.9	0	0

Prepared by : Matthew Cheng (Safety Officer) Date : 03-06-2020

APPENDIX G
WEATHER CONDITION

APPENDIX G –
GENERAL WEATHER CONDITIONS DURING THE MONITORING PERIOD

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1 May 2020	25.7	81	-
2 May 2020	26.3	77	-
3 May 2020	27.3	78	-
4 May 2020	27.8	79	-
5 May 2020	27.9	80	-
6 May 2020	28.7	81	-
7 May 2020	29	81	-
8 May 2020	29.3	81	0.1
9 May 2020	29.2	79	0.1
10 May 2020	29	78	0.8
11 May 2020	28.9	76	14.8
12 May 2020	27	82	3.6
13 May 2020	26.6	84	0.3
14 May 2020	27.1	83	0.1
15 May 2020	28.5	81	-

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
16 May 2020	28.9	80	-
17 May 2020	28.9	77	Trace
18 May 2020	25.8	88	46.7
19 May 2020	28	82	-
20 May 2020	27.6	87	4.3
21 May 2020	27.6	92	84.6
22 May 2020	27.9	88	17
23 May 2020	25.7	88	1.5
24 May 2020	26.7	82	Trace
25 May 2020	26.6	91	32.4
26 May 2020	28.3	87	14.4
27 May 2020	28.2	83	0.1
28 May 2020	27.7	86	0.2
29 May 2020	28.2	85	0.2
30 May 2020	26	94	131.3
31 May 2020	29.2	83	Trace

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

APPENDIX H
EVENT ACTION PLANS

Appendix H:
Event / Action Plan for Construction Noise

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
Action Level	1. Notify IEC, ER and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss jointly with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the monitoring data submitted by the ET; 2. Review the construction methods and proposed remedial measures by the Contractor, and advise the ET and ER if the proposed remedial measures would be sufficient; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify the Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented	1. Submit noise mitigation proposals to ER and copy to the IEC and ET; 2. Implement noise mitigation proposals.
Limit Level	1. Identify source; 2. Inform IEC, ER and Contractor; 3. Repeat measurements to confirm findings; 4. Increase the monitoring frequency; 5. Carry out analysis of Contractor's working procedures with the ER and Contractor to determine possible mitigation to be implemented; 6. Inform IEC, ER and Contractor the causes and	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	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;

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	actions taken for the exceedances; 7. Assess effectiveness of Contractor's remedial actions and keep IEC informed of the results; 8. If exceedance stops, cease additional monitoring.		work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	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

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%

APPENDIX I
SUMMARY OF EXCEEDANCE

Appendix I: Exceedance Report

(A) 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

(B) Exceedance Report for Landfill Gas

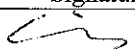
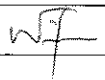
Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Landfill Gas	O_2 (% v/v) CH_4 (% LEL) CO_2 (%v/v)	0	0	0	0

APPENDIX J
SITE AUDIT SUMMARY

Weekly Site Inspection Record Summary

Checklist Reference Number	200506
Date	6 May 2020 (Wednesday)
Time	9:30-10:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
200506-R01	• Provide spill kit for all works area.	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.:200429), item 200429-R02 was remarked as 200506-R01. Follow-up action is needed to be reviewed.	

	Name	Signature	Date
Recorded by	Kimmy Lui		6 May 2020
Checked by	Dr. Priscilla Choy		11 May 2020

Weekly Site Inspection Record Summary

Checklist Reference Number	200512
Date	12 May 2020 (Tuesday)
Time	9:45-11:00

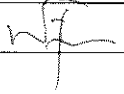
Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
200512-R01	• Provide spill kit for all works area.	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	
200512-R02	• Retained trees should be carefully protected. Constrcution materials should be cleared within tree protection zone.	I1
	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.:200506), item 200506-R01 was remarked as 200512-R01. Follow-up action is needed to be reviewed.	

	Name	Signature	Date
Recorded by	Kimmy Lui		12 May 2020
Checked by	Dr. Priscilla Choy		15 May 2020

Weekly Site Inspection Record Summary

Checklist Reference Number	200519
Date	19 May 2020 (Tuesday)
Time	9:40-11:00

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	
200519-R02	• Clear water regularly.	D12iv
	E. Waste / Chemical Management	
200519-R01	• Provide spill kit for all works area.	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.:200512), item 200512-R01 was remarked as 200519-R01. Follow-up action is needed to be reviewed.	

	Name	Signature	Date
Recorded by	Kimmy Lui		19 May 2020
Checked by	Dr. Priscilla Choy		22 May 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	200526
Date	26 May 2020 (Tuesday)
Time	9:45-10:45

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	
200526-O01	• Vehicles are not cleaned of earth, mud and debris before leaving the site.	D11
200526-R02	• Water should be regularly cleared.	D12iv
	E. Waste / Chemical Management	
200526-R03	• Chemical waste/oil 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	
200526-R04	• Screen hoarding should be properly maintained and provided.	I2
	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.:200519), all identified environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kimmy Lui		26 May 2020
Checked by	Dr. Priscilla Choy		1 June 2020

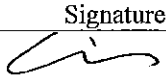
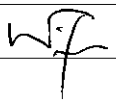
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	200507
Date	7 May 2020 (Thursday)
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. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
200507-R02	• Water should be cleared regularly.	D12iv
	E. Waste / Chemical Management	
200507-O01	• Oil leakage was found from equipment.	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.: 200429), all identified environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kimmy Lui		7 May 2020
Checked by	Dr. Priscilla Choy		7 May 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	200513
Date	13 May 2020 (Wednesday)
Time	14:00-14:50

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	
200513-R01	• The Contractor should review the capacity of the sediment tank and location of discharge point.	D5iii
	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.: 200507), all identified environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kimmy Lui		13 May 2020
Checked by	Dr. Priscilla Choy		15 May 2020

Weekly Site Inspection Record Summary

Checklist Reference Number	200521
Date	21 May 2020 (Thusday)
Time	14:00-14:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
200521-R01	• The Contractor should renew the NRMM labels on the 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	
	• 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.: 200513), all identified environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kimmy Lui		21 May 2020
Checked by	Dr. Priscilla Choy		22 May 2020

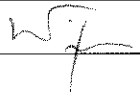
Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	200528
Date	28 May 2020 (Thusday)
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	
200528-R01	• Sand and silt settled in drainage system should be removed regularly.	D6
200528-R02	• Water in drip tray should be cleared regularly.	D12iv
	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.: 200521), all identified environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kimmy Lui		28 May 2020
Checked by	Dr. Priscilla Choy		1 June 2020

APPENDIX K
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
Construction Dust Impact							
S3.8	D1	Mitigation measures in form of regular watering under a good site practice should be adopted. Watering once per hour on exposed worksites and haul road is proposed to achieve dust removal efficiency of 92.1%. While the above watering frequencies are to be followed, the extent of watering may vary depending on actual site conditions but should be sufficient to maintain an equivalent intensity of no less than 1.7 L/m2 to achieve the respective dust removal efficiencies	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	*
S3.8	D2	The Contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation.	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	*
S3.8	D3	Following dust suppression measures should also be incorporated by the Contractor to control the dust nuisance throughout the construction Phase • Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; • Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; • A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones; • The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle; • Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	* * ^ * ^

		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;					N/A
		• 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;					N/A
		• 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 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	Contractor	All construction sites where practicable	Construction phase	^

			partial 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 WPCO	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

		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
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	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

		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.					
S11.6.1	CH2	Undertaking Survey-cum-Rescue Excavation A Survey-cum-Rescue Excavation should be conducted after land resumption and before the commencement of construction works to define the precise archaeological deposits extent and to preserve the archaeological resources by record. The excavation should be conducted by a professional archaeologist and prior to fieldwork commencement, the archaeologist should obtain a Licence to Excavate and Search for Antiquities from the Authority under the AM Ordinance.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	In KTN NDA, for Site 3 and In FLN NDA for Site 5.	After land resumption but before construction commencement of the zone	N/A
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.	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

		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.					
S11.6.1	CH4	Undertaking Induction Training Induction training should be provided to the construction Contractor before the commencement of the excavation works in Spots A, D, F to H. An induction will be conducted as part of the environmental health and safety induction programme to all site staff before they are deployed on site. The induction will include an introduction on the historical development of the Site, the possible archaeological remains that may be encountered during ground excavation works as well as the reporting procedures in case suspected archaeological remains are identified. A set of the presentation material (in the form of power point presentation) with content details will be prepared by an archaeologist and submitted to AMO for reference and record purpose. The first induction briefing will be video recorded and it will be used as induction briefing material for new site staff.	To preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	Spots A, D, F to H	Before the commencement of the excavation works and before site staff are deployed on site	N/A
S11.6.1	CH5	Undertaking Archaeological Impact Assessment before Construction at A1 It is recommended that an Archaeological Impact Assessment to	To define the precise archaeological deposits extent and to preserve the archaeological resources as	Project Proponent/ Contractor/ Qualified	Area B1-8 and B1-9 zoned as R4 and R3 in A1	After land resumption but before construction	N/A

		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.	far as possible	Archaeologist			
S11.6.1	CH6	Undertaking Archaeological Impact Assessment before Construction within A1 but except Area B1-8 and B1-9 Should there be any development work within the Sheung Shui Wa Shan Site of Archaeological Interest, it is recommended that an Archaeological Impact Assessment is required after land resumption and before construction when detail construction work information is available to determine the need for further archaeological follow up actions.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible.	Project Proponent/ Contractor/ Qualified Archaeologist	Area within A1 except Area B1-8 and B1-9 in R4 &R3 zoning	After land resumption but before construction	N/A
S11.6.2	CH7	Undertaking baseline condition survey and baseline vibration impact assessment In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 7.5mm/s could be adopted for graded historic buildings) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA	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

		report. The condition survey of graded historic building should be submitted to AMO for information.					
S11.6.2	CH8	Undertaking baseline condition survey and baseline vibration impact assessment In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 7.5mm/s and 15mm/s could be adopted for graded historic buildings and historic buildings respectively) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report. The condition survey of 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	KT57, FL05, FL18, and FL2	Preconstruction stage before commenceme nt of construction works	N/A
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	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,	Prior to Removal / Relocation of features before commenceme nt of construction works during Schedule 3 study	N/A

		Proponent.			KT36, KT39, KT40, KT41, KT43, KT45, KT47, KT50, KT54, KT62 to KT63, KT69, FL01, FL16, and FL35		
S11.6.2	CH10	Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out by the Project Proponent.	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	KT12 and KT61	Prior to Removal / Relocation of features before commencement of construction works	N/A
S11.6.2	CH11	Relocation of Built Heritages Relocation of built heritages to a reasonable location nearby may be required.	To preserve the directly impacted sites by relocation	Project Proponent/ Contractor	HKT01, HKT02, Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of construction works	N/A
S11.6.2	CH12	Drainage System and Access Route Design For the retained built heritage items in developable area, drainage system and access route would be designed to prevent the persevered flooding and maintain the accessibility to the built heritage.	To prevent the persevered flooding and maintain the accessibility to the built heritage	Contractor /Detailed Design consultant	The retained built heritage items	Pre-construction phase	N/A
Cultural Heritage (Construction Phase)							

S11.6.1	CH13	Inform Upon Archaeological Discovery Pursuant to the Antiquities and Monuments Ordinance, the construction Contractor should inform the AMO immediately in case of discovery of antiquities or supposed antiquities in the course of excavation works in construction phase.	Special attention should be given to areas evaluated to have archaeological potential or significance.	Contractor	All soil excavation works	Immediately upon discovery during excavation works	N/A
S11.6.2	CH14	Watertable Monitoring Since the construction works and development activities may induce change in the watertable. It is recommended the Contractor should ensure that the change of watertable induced by the construction works and development activities will not result in settlement of built heritage.	To minimize the potential impacts to the built heritage items by the change of watertable induced by the works during the Construction phase	Contractor	Within NDAs	Construction phase	N/A
S11.6.2	CH15	Conducting Construction Vibration Monitoring and Structural Strengthening Measures Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment	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		Detailed design consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as the areas become available,	N/A

		roadside amenity strips, and open space sites.				to achieve early establishment	
S.12.9 MM1	LV2	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A
S.12.9 MM2	LV3	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone	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

		colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines. All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated. Construction time frame should also be considered and designs seek to keep it to a practical minimum.					
S12.9 MM14.4	LV 4	Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed. For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream. Bridges and box culverts should also be used to minimize the	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

		necessity of watercourse modification and protect the watercourses where necessary.					
Landscape and Visual (Construction)							
S.12.9 MM3	LV5	Open Space Provision - the principles adopted in the RODP planning ensure that public open space systems are incorporated. All requirements for open space areas stipulated in the planning documents for the formulation of the Preliminary Layout Plan should be adhered to.	Reprovision of open space. Enhance visual amenity of the area and improve the overall landscape character	Government Developer/ Detailed Design Consultant/ Contractor/	Onsite as stipulated in the planning documents for the formulation of the Preliminary Layout Plan	Prior to Construction and Construction Phas	N/A
S.12.9 MM4	LV6	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A

S.12.9 MM5	LV7	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be 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.12.9 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.	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.12.9 MM7	LV9	Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii* are suggested.	Compensate for trees and shrubs lost due to the Project.	Government / Detailed Design Consultant/ Contractor	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

S.12.9 MM8	LV10	Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. 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*.					N/A

		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.	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

		The reprovisioned stream will be provided with a natural bed and banks, as well as having an area of marsh/ pool next to it and trees and shrubs further from the banks. (See E2, E14 and E24 also)					
S12.9 MM14.2	LV17	Stream Buffer Planting –Providing a minimum 10 m buffer with planting (where there is a general presumption against any development taking place) along streams where they flow close to developments, confers a degree of protection to the stream course and its associated vegetation. For the stream at Ma Tso Lung in KTN NDA, the middle and upper sections will be designated as Green Belt zone where there is a general presumption against development as buffer to the stream. For the stream at Siu Hang San Tsuen in FLN NDA, within the NDA boundary much of the stream would be located underneath the viaduct for the proposed Fanling Bypass. To the south of the viaduct the stream flows through an Open Space area D1-3. In this Open Space zone a 10m buffer is proposed in which natural	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

		vegetation will be retained and enhanced and human activities will be limited in order to avoid direct impacts to the stream bed and to minimize potential indirect impacts to the stream and riparian corridor. (See E3 also)					
S12.9 MM14.3	LV18	Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.	Minimize the necessity of watercourse modification, protect watercourses where possible and enhance channelized watercourses	Government / Developer/ Detailed Design Consultant/ Contractor	Channelized watercourse, particularly the Ma Wat River Channel Diversion	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

S12.9 MM15	LV19	Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
S.12.9 MM16	LV20	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non- reflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	Throughout NDAs	Construction Phase	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 glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Developer/ Contractor	Throughout NDAs	Construction and Operation Phases	N/A
Ecology (Prior to Construction Phase or throughout the project)							

S. 13.9	E1	Egretry Habitat Creation & Management Plan (EHCMP) and Woodland Planting and Management Plan (WPMP)	Compensate for loss of Man Kam To Road egretry. Compensate for loss of secondary woodland and hillside plantation of ecological significance.	Project Proponent/ Detailed Design Consultant (EHCMP and WPMP).	FLN area A1-7 (egretry compensation). KTN areas E1-8 and G1-3 (woodland compensation).	Detailed design phase	N/A
S. 13.9	E2	Detailed design of development along lower reaches of Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream in OU zones F1-2 and F1-3 and detailed design of LMC Loop Eastern Connection Road with restoration of diverted stream and riparian corridor, permanent barrier and underpass on the at-grade section Compensation for the loss of seasonally wet grassland at Ma Tso Lung by habitat restoration and enhancement along diverted section of Ma Tso Lung Stream	Minimize impacts on Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream and riparian corridor of importance to species of conservation significance.	Project Proponent/ Detailed Design Consultant. (design of Ma Tso Lung Stream diversion and buffer zone habitat restoration measures)	KTN areas F1-2 and F1-3 and LMC Loop Eastern Connection Road.	Detailed design and construction phases.	N/A
S13.9	E3	Detailed design, implementation and management of Siu Hang San Tsuen Stream to have 10m wide vegetated buffer in Open Space zone D1-3, Fanling Bypass to cross stream on viaduct.	Minimize impacts on Siu Hang San Tsuen Stream and stream fauna.	PlanD, Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance	FLN area D1-3.	Detailed design, construction and operation phases.	N/A

				Authority			
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 conservation significance, especially nesting ardeids Maintenance of ecological linkages with Deep Bay ecosystem and avoidance 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

			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 boundaries.	Detailed design phase	N/A
S13.9	E8	Preparation and implementation of Guidelines for building design measures to minimize mortality and light and glare impacts to fauna. Guidelines to address the following measures: Use opaque, non-transparent, non-reflective noise barriers for all developments associated with the Project.	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

		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					
	E9	Not used					N/A
S13.8	E10	Review development footprint and layout of proposed developments in KTN areas D1-11a and G1-5 to avoid/minimize direct and indirect impacts on secondary woodland at Ho Sheung Heung and shrubland at Crest Hill.	Minimize loss of secondary woodland and shrubland of ecological value.	Project Proponent/Detailed Design Consultant	KTN areas D1-11a and G1-5 to avoid/minimize direct and indirect impacts on	Detailed design phase	N/A

					secondary woodland at Ho Sheung Heung and Crest Hill		
S13.9	E11	No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north or east of KTN D1-5 and east of D1-9 and C2-3, construction hours restricted to 09.00 to 17.30 during 1 March to 31 July on new pedestrian bridge over the Sheung Yue River, new pedestrian bridge over the tidal section of the Ng Tung River and existing bridge between KTN areas C2-2 and C1-8. Review Design and construction methods for all bridges especially those on the Sheung Yue and tidal Ng Tung Rivers and adopt methods which minimize impacts on Long Valley and the rivers, and disturbance and fragmentation impacts on fauna. No overlap in construction of bridges over main river channels. Measures to ensure no hydrological disruption to Long Valley Watercourse and water supply to Long Valley to be designed at the detailed design stage for the rechannelisation of the Long Valley Watercourse and the development of areas through which it passes, including KTN area B3-12. Contingency plan to address any disruption to be included in LVNP HCMP. Avoid removal or interference with screen planting undertaken under the Construction of Cycle Tracks and Associated Supporting	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

		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 (1 March to 31 July) Provision of alternative foraging habitat along main river channels for large waterbirds.	Minimize impacts on rivers and disturbance and fragmentation impacts on fauna	Project Proponent/ Detailed Design Consultant/ Contractor	Along and within the Sheung Yue, Ng Tung and Shek Sheung Rivers	Detailed design and construction phases.	N/A

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 tributaries, whichever distance is the greater.	Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna. Measures to minimize flight-line impacts to birds, especially breeding ardeids.	Contractor	Interface between areas/habitats/ fauna/ flora of ecological importance (e.g. KTN areas B1-3, C1-5, C1- 6, C1-9, C2-2, C2-4, C2-5, D1-8, E1-8, G1- 3, H1-1, Ma Tso Lung Stream and tributaries; FLN areas A1-3, A1-7 and A1-9) and works areas; and around any	Construction phase.	N/A

					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	Minimize impacts to flora and fauna of conservation significance. Minimize impacts to protected fauna and flora species. Formulate and implement mitigation	Government/ Developer/ Contractor/ Ecologist	All construction sites.	Prior to clearance of vegetation and structures.	N/A

		respect of proposed measures, then implement. Pre-site clearance check on all construction sites and pre – works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of protected plant species/specimens of conservation significance. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, Pre-site clearance of construction sites in Crest Hill area, KTN areas D1-7, D1-11 and G1-5 (where Eurasian Hobby was recorded) and on Cheung Po Tau, FLN area A3-1 (where Grey Nightjar was recorded) for presence of any breeding birds/breeding sites. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and 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.	measures to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation.				
S13.9	E21	Pre-works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of flora or fauna of conservation significance and bat roosts. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation	Minimize impacts to flora and fauna of conservation significance. Minimize impacts to protected fauna and flora species. Consider and implement adjustments	Government/ Developer/ Contractor/ Ecologist	All construction sites.	Prior to clearance of vegetation and structures.	N/A

		and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement. Pre-site clearance check on all construction sites for presence of reptile species of conservation significance, capture and translocate to receptor site; review translocation options in respect to species in Ma Tso Lung area and determine whether release locally or elsewhere is appropriate. Seek agreement of relevant authorities including AFCD in respect of proposed measures then implement Pre-works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of Small Snakehead and *Sommaniathelphusa zanklon*. Capture any *Sommaniathelphusa zanklon* found and translocate to Ma Tso Lung Stream/ other suitable areas including LVNP	to avoid, minimize or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation				
S13.9	E22	Prevention of dust, run-off and pollutants impacting Deep Bay catchment area and areas of ecological importance.	Avoid increase to pollution entering ecologically sensitive Deep Bay ecosystem.	Contractor	All construction sites.	Construction	N/A
Specific Mitigation Measures for Designated Projects							
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	LV1-	Tree Protection & Preservation – Exiting trees to be retained	Protect and Preserve Trees	Government /	*Onsite*	Prior to	N/A

MM4	DP7	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 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	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide	Government / Detailed Design Consultant/ Contractor	*On appropriate buildings*	Prior to Construction, Construction Phase & Maintenance	N/A

		plants might be suitable.	greening.			in Operation Phase	
DP12-Reprovision of temporary wholesale market in FLN NDA							
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)							
S.12.D9	LV1-DP12	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.		Detailed design consultant/ Contractor	Throughout NDAs,	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	N/A
S.12.D9 MM1	LV2-DP12	Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside	Reduce topographical changes and minimize land resumption	Government / Detailed Design Consultant/ Contractor	Throughout NDAs, particularly for reservoirs	Prior to Construction	N/A

		setting.					
S.12.D9 MM2	LV3-DP12	Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines. All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a 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.					
S.12.D9 MM4	LV4-DP12	Tree Protection & Preservation – Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A
S.12.D9 MM5	LV5-DP12	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract	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	N/A

		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.				Operation Phase	
S.12.D9 MM6	LV6-DP12	Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9	LV7-	Compensatory Planting – Compensatory tree planting for felled	Compensate for trees and	Government /	Onsite where	Prior to	N/A

MM7	DP12	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.	shrubs lost due to the Project.	Detailed Design Consultant/ Contractor	possible. Otherwise consider offsite locations	Construction, Construction Phase & Maintenance in Operation Phase	
S.12.D9 MM11	LV8-DP12	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Government / Detailed Design Consultant/ Contractor	Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
Landscape and Visual (Construction)							

S.12.D9 MM16	LV9-DP12	Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	To screen undesirable views of the works site.	Contractor	Throughout NDAs	Construction Phase	N/A
S.12.D9 MM17	LV10-DP12	Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	To minimize glare impact to adjacent VSRs	Government / Contractor	Throughout NDAs	Construction and Operation Phases	N/A

Implementation status:

^ Mitigation measure was fully implemented

* Observation/reminder was made during site audit but improved/rectified by the contractor

\# Observation/reminder was made during site audit but not yet improved/rectified by the contractor

X Non-compliance of mitigation measure

• Non-compliance but rectified by the contractor

N/A Not Applicable at this stage as no such site activities were conducted in the reporting period

APPENDIX L
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											
Sub-total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.209
July											
August											
September											
October											
November											
December											
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.209

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

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											
Sub-total											
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total	**0.0**	**0.0**	**0.0**	**0.0**	**4.054**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.149**

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 M
COMPLAINT LOG

Appendix M - Complaint Log

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
--	--	--	--	--	--

APPENDIX N
SUMMARY OF SUCCESSFUL PROSECUTION

Appendix N - Summary of Successful Prosecution

Date of Successful Prosecution	Details of the Successful Prosecution	Status	Follow Up
--	--	--	--