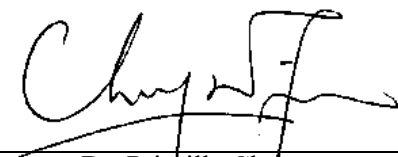


Civil Engineering and Development Department

**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 March 2020**

(Version 1.0)

Certified By	 _____ Dr. Priscilla Choy (Environmental Team Leader)
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REMARKS:

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

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

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Attention: Mr. Ryan Chau

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Agreement No. CE 33/2019 (EP)

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

Monthly Environmental Monitoring and Audit Report No. 5 (March 2020)

9 April 2020

BY EMAIL & POST

Dear Sir,

We refer to email of 8 April 2020 attaching the Monthly Environmental Monitoring and Audit Report No. 5 prepared by the Environmental Team (ET) of the captioned.

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

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

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



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Independent Environmental Checker
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Contract No. ND/2019/06

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EXECUTIVE SUMMARY**Introduction**

1. This is the 5th 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 March 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	<u>ND/2019/01</u> 23 rd , 30 th March 2020 <u>ND/2019/06</u> 3 rd , 10 th , 16 th , 23 rd , 30 th March 2020
Environmental Site Inspection	<u>ND/2019/01</u> 25 th March 2020 <u>ND/2019/06</u> 5 th , 11 th , 19 th , 26 th March 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	Parameter	No. of non-project related Exceedances		Total No. of non-project related Exceedances	No. of Exceedance related to the Construction Works of the Contract		Total No. of Exceedance related to the Construction Works of the Contract
		Action Level	Limit Level		Action Level	Limit Level	
Noise	$L_{eq(30min)}$	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.

Complaint Log

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

Notification of Summons and Successful Prosecutions

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

Reporting Changes

8. 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

9. 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 (April and May 2020)
Contract No. ND/2019/01	Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works	(a) Tree Survey, Site Clearance, Ground Investigation, Preparation Works and construction for Interim CLC in Portion 1f; (b) Tree Survey, Application of Excavation Permit (XP), Preparation of TTA Drawings for Approval, Ground Investigation in Portion 2; (c) Tree Survey, Site Clearance in Portion 3; (d) Tree Survey, Site Clearance in Portion 4; (e) Site Clearance, GI Works in Portion 5; (f) Tree Survey, Site Clearance, Demolish Abandoned Structures of Community Sports, Ground Investigation in Portion 6a; (g) Tree Survey, Site Clearance, Ground Investigation, Set up of Soil Treatment Plant in Portion 6b; (h) Tree Survey, Site Clearance, Ground Investigation in Portion 7; (i) Tree Survey, Site Clearance, Forming Access, GI Works and General Excavation in Portion 8a; (j) Tree Survey, Site Clearance in Portion 8b; and (k) Container Office in additional land next to Portion 1f.
Contract No. ND/2019/06	Fanling North New Development Area, Phase 1: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products	(a) Breaking up the remaining concrete surface and disposal of C&D material off site at Portion 1; (b) Installation of road kerbs for interim stage; (c) Drainage works for interim stage including construction of U-channel and manhole for interim stage; (d) Construction of road surface for interim stage; and (e) Construction of footing of lighting for interim stage; and (f) Construction of run-in/out.

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

Section 5: **Environmental Non-conformance** - summarises any monitoring exceedance, environmental complaints, environmental summons and successful prosecutions within the reporting month.

Section 6: **Future Key Issues** - summarises the impact forecast and monitoring schedule for the next three months.

Section 7: **Conclusions and Recommendations**

2 PROJECT INFORMATION

Background

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

- 2.3 The Project which covers KTN and FLN NDAs is a designated project (DP) under Schedule 3 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). In October 2013, the EIA Report (AEIAR-175/2013) for the Project was approved by the Director of Environmental Protection pursuant to the EIA Ordinance. The 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	23 rd 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	29 th 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. Stephen Leung	3152 3551	3547 1658
<i>Supervisor / Supervisor's Representative</i> (AECOM)	Chief Resident Engineer	Mr. Alan Lee	6398 5982	2645 3900
Environmental Team (Wellab Limited)	Environmental Team Leader	Dr. Priscilla Choy	2898 7388	2898 7076
Independent Environmental Checker (MottMac)	Independent Environmental Checker	Mr. Thomas Chan	2828 5967	2827 1823
<u>Contract No. ND/2019/01</u> Contractor (Build King – Richwell Engineering Joint Venture.)	Site Agent	Mr. Ivan Leung	9640 8340	--
	Environmental Officer	Mr. Daniel Sin	9777 2100	
<u>Contract No. ND/2019/06</u> Contractor (New Concepts Engineering Development Ltd.)	Site Agent	Mr. Anson Chan	9349 1320	2363 2162
	Environmental Officer	Mr. Alex Choy	9409 9608	
	Environmental Coordinator	Ms. Mildred Hung	9460 2745	

Summary of Construction Works Undertaken During Reporting Month

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 (March 2020)
Contract No. ND/2019/01	Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works	(a) Tree survey and prepare tree felling and transplant report in Portion 10a in Area H, H1, H2; (b) Tree survey and prepare tree felling and transplant report, Site Clearance, GI works in Portion 5 in Area C1; (c) Tree survey and prepare tree felling and transplant report, Site Clearance in Portion 4 in Area 1; (d) Site Clearance in Portion 4 in Area K; (e) Site Clearance in Portion 6a in Area A; (f) Liaison with HKPF and submit proposal of protective measures for works near Lo Wu Firing Range in Portion 9b & 9d in Area A;

Contract No.	Contract Title	Site Activities (March 2020)
		<p>(g) Form site access to Flushing Water Service Reservoir in Portion 8a in Area A;</p> <p>(h) Tree Survey and prepare tree felling and transplant report, Site Clearance, Ground Investigation and laboratory test in Portion 6b in Area B;</p> <p>(i) Tree Survey and Site Clearance for existing slope feature in Portion 2 in Area N;</p> <p>(j) Site Clearance in Portion 6a in Area N;</p> <p>(k) Tree Survey and prepare tree felling and transplant report in Portion 6a in Area S2;</p> <p>(l) Tree Survey and prepare tree felling and transplant report in Portion 6b in Area S2;</p> <p>(m) Tree Survey and prepare tree felling and transplant report, Site Clearance, Ground Investigation and laboratory test in Portion 1f in Area R; and</p> <p>(n) Preservation and protection of tree in Portion 9c in Area S1.</p>
Contract No. ND/2019/06	Fanling North New Development Area, Phase 1: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products	<p>(a) Breaking up the concrete surface and disposal of C&D material off site at Portion 1;</p> <p>(b) Installation of road kerbs for interim stage;</p> <p>(c) Drainage works for interim stage including construction of U-channel and manhole for interim stage;</p> <p>(d) Construction of footing of lighting for interim stage;</p> <p>(e) Ground investigation works at Trial Pit; and</p> <p>(f) Pavement construction for the interim stage (50% completed for 75mm thickness pavement, 60% completed for 175mm thickness pavement).</p>

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	Reference Number: WFG21717	--	--	Pending
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	Pending

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 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
Integrating Sound Level Meter	SVAN957	2
Sound & Vibration Analyser	BSWA 801	1
Acoustical Calibrator	SV 30A	2
Acoustical Calibrator	4231	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.L₁₀ is the level exceeded for 10% of the time. For 10% of the time, the sound or noise has a sound pressure level above L₁₀.L₉₀ 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}, L₉₀ and L₁₀ 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 F**.

Table 3.4 Summary Table of Noise Monitoring Results during the Reporting Month

Contract No.	Monitoring Station	Construction Noise Level Leq (30 min), dB(A)	Baseline Level, dB(A)	Limit Level, dB(A)
ND/2019/01	CP-KTN-NMS5	54.3-56.5	57.2	75
ND/2019/06	CP-FLN-NMS1	65.9-69.5	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 H**.
- 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 G** shall be carried out.

4 ENVIRONMENTAL SITE INSPECTION

Site Audits

- 4.1 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 I**.
- 4.2 Site audits were conducted on 5th, 11th, 19th, 26th March 2020 by ET for the Contract No. ND/2019/06 in the reporting month. For Contract No. ND/2019/01, site audit was conducted on 25th March 2020 by ET after the commencement of Contract on 23rd March 2020. A joint site audit with the representative of the *Supervisor's* Representative, the Contractor, IEC and ET was carried out on 19th March 2020 for Contract No. ND/2019/06 while joint site audit of Contract No. ND/2019/01 was carried out on 25th March 2020. The details of observations during site audit are shown in **Table 4.1**.
- 4.3 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 4.1**.

Table 4.1 Observations and Recommendations of Site Audit


Parameters	Date	Observations and Recommendations	Follow-up
Contract No.: ND/2019/01			
<i>Water Quality</i>	25/03/2020	To enhance the mitigation measures provided to direct the surface runoff to silt removal facilities.	Follow up action will be reported in next reporting month.
Contract No.: ND/2019/06			
<i>Water Quality</i>	05/03/2020	Drainage system should be cleared regularly and maintained.	Improvement/ Rectification was observed during follow-up audit session on 11 March 2020.
<i>Waste / Chemical Management</i>	11/03/2020	Chemical waste should be packed and held in containers of suitable design so as to prevent leakage, spillage or escape of the contents under normal conditions of handlings, storage and transport. Chemical waste should be stored in designated place.	Improvement/ Rectification was observed during follow-up audit session on 19 March 2020.
<i>Landscape & Visual Impact</i>	05/03/2020	Retained trees should be carefully protected and construction materials should be cleared within the protection zone.	Improvement/ Rectification was observed during follow-up audit session on 11 March 2020.
	11/03/2020	For trees which haven't been undertaken tree survey should be protected and surrounded with fencing. Construction materials should also be removed from tree protection area.	Improvement/ Rectification was not observed during follow-up audit session on 19 March 2020.
	19/03/2020	Retained trees should be carefully protected.	Improvement/ Rectification was observed during follow-up audit session on 25 March 2020.
	19/03/2020	Dull green fencing should be secured with no gaps or no holes.	Improvement/ Rectification was observed during follow-up audit session on 25 March 2020.

Implementation Status of Environmental Mitigation Measures

- 4.4 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 J**. The photographic records of measures as stipulated in EP to mitigate environmental impacts in the reporting month are presented in **Table 4.2**.

Table 4.2 Photographic Records of Measures


<p><u>Environmental Permit No. EP-475/2013/A Condition 2.7</u> 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</p>

Solid and Liquid Waste Management Status

- 4.5 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.
- 4.6 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 K**.
- 4.7 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 J**.

5 ENVIRONMENTAL NON-CONFORMANCE

Summary of Exceedances

- 5.1 No exceedance of Action and Limit Levels of construction noise in the reporting month. The summary of exceedance record in reporting month is shown in **Appendix H**.
- 5.2 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 G** be carried out.

Summary of Environmental Non-Compliance

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

Summary of Environmental Complaint

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

Summary of Environmental Summon and Successful Prosecution

- 5.5 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 M**.

6 FUTURE KEY ISSUES**Key Issues in the Coming Two Months**

6.1 The major site activities for the coming two months are shown in **Table 6.1**.

Table 6.1 Summary Table for Site Activities in the coming Two Months

Contract No.	Contract Title	Site Activities (April and May 2020)
Contract No. ND/2019/01	Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works	(a) Tree Survey, Site Clearance, Ground Investigation, Preparation Works and construction for Interim CLC in Portion 1f; (b) Tree Survey, Application of Excavation Permit (XP), Preparation of TTA Drawings for Approval, Ground Investigation in Portion 2; (c) Tree Survey, Site Clearance in Portion 3; (d) Tree Survey, Site Clearance in Portion 4; (e) Site Clearance, GI Works in Portion 5; (f) Tree Survey, Site Clearance, Demolish Abandoned Structures of Community Sports, Ground Investigation in Portion 6a; (g) Tree Survey, Site Clearance, Ground Investigation, Set up of Soil Treatment Plant in Portion 6b; (h) Tree Survey, Site Clearance, Ground Investigation in Portion 7; (i) Tree Survey, Site Clearance, Forming Access, GI Works and General Excavation in Portion 8a; (j) Tree Survey, Site Clearance in Portion 8b; and (k) Container Office in additional land next to Portion 1f.
Contract No. ND/2019/06	Fanling North New Development Area, Phase 1: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products	(a) Breaking up the remaining concrete surface and disposal of C&D material off site at Portion 1; (b) Installation of road kerbs for interim stage; (c) Drainage works for interim stage including construction of U-channel and manhole for interim stage; (d) Construction of road surface for interim stage; and (e) Construction of footing of lighting for interim stage; and (f) Construction of run-in/out.

Monitoring Schedule for the Next Month

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

Construction Programme for the Next Month

- 6.3 A tentative construction programme is provided in **Appendix A**.

7 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

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

7.2 No Action/Limit Level exceedance were recorded for construction noise.

Contract No. ND/2019/01

7.3 Environmental site inspection was conducted on 25th March 2020 by ET in the reporting month.

Contract No. ND/2019/06

7.4 Environmental site inspections were conducted on 5th, 11th, 19th, 26th March 2020 by ET in the reporting month.

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

7.6 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

7.7 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
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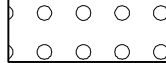
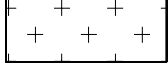





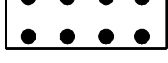
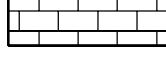
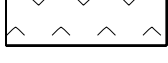




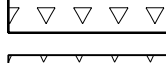


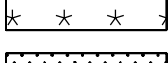



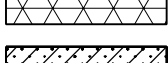

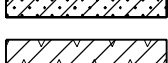
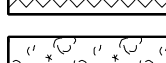
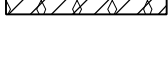



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	PORTION 1b		PORTION 9b
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	PORTION 1d		PORTION 9d
	PORTION 1e		PORTION 10a
	PORTION 1f		PORTION 10b
	PORTION 2		PORTION 11a
	PORTION 3		PORTION 11b
	PORTION 4		PORTION 12
	PORTION 5		PORTION 13
	PORTION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

PROJECT
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

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Civil Engineering and Development Department

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階段

SCALE
比例

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DIMENSION UNIT
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KEY PLAN
索引圖

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60335576

CONTRACT NO.
合約編號

ND/2019/01

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圖紙名稱

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SHEET NUMBER
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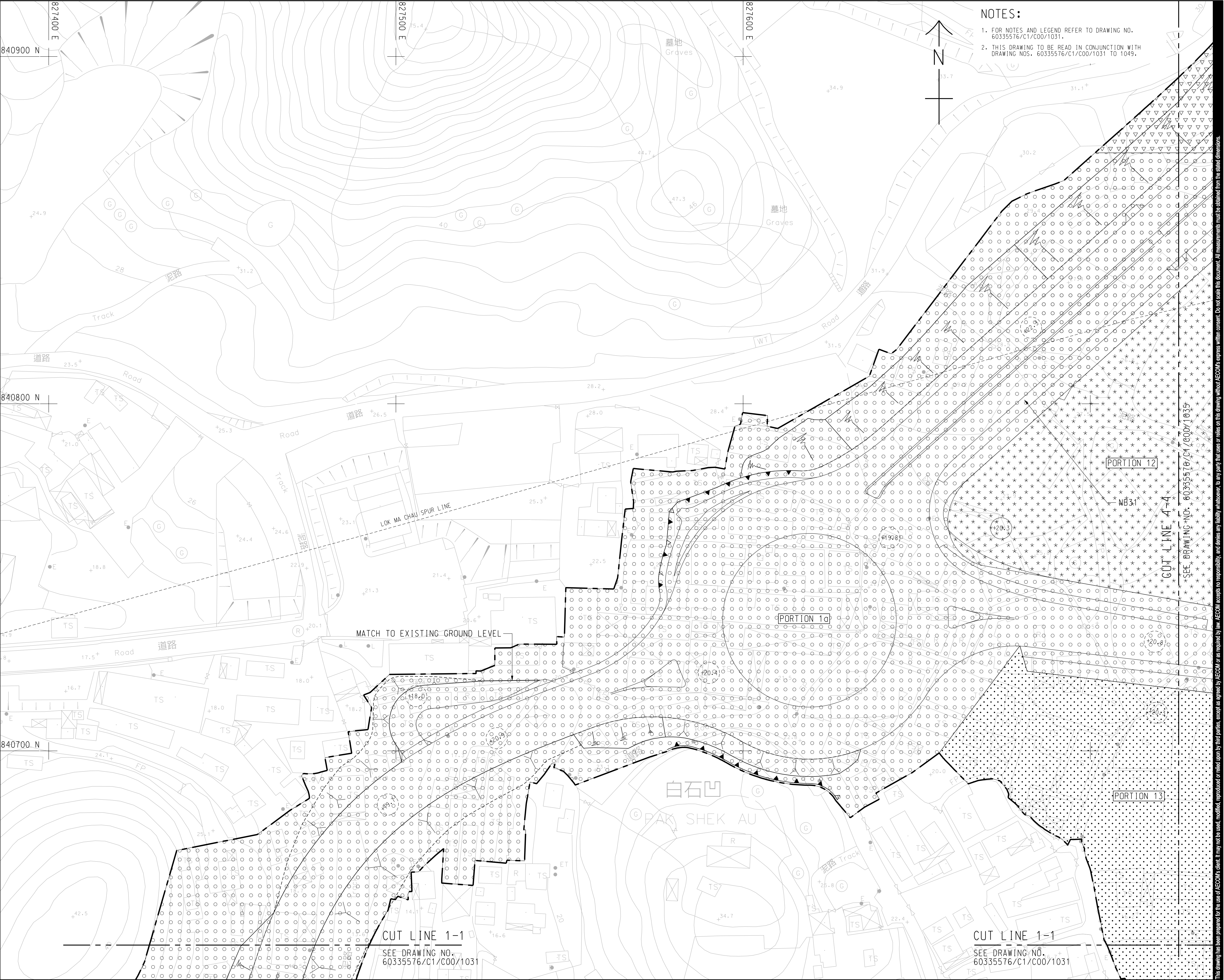
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DEVELOPMENT OF
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AREAS, PHASE 1

CONTRACT TITLE:

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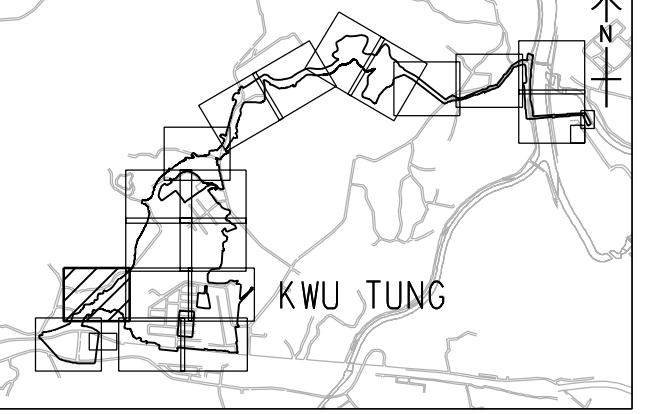
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KEY PLAN

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**DEVELOPMENT OF
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AREAS, PHASE 1**

CONTRACT TITLE:

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

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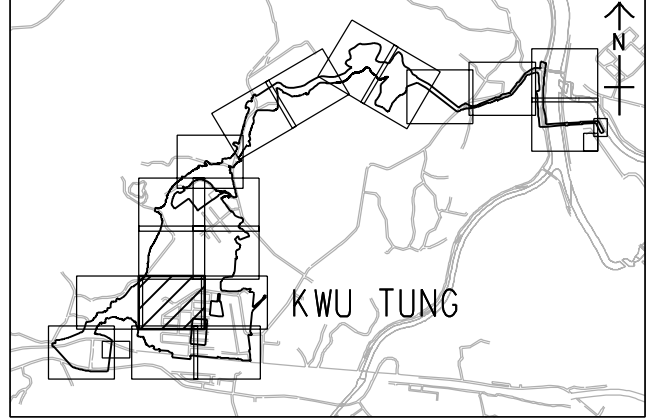
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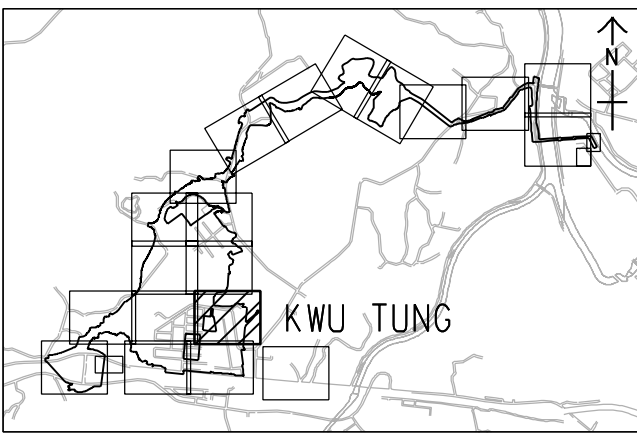
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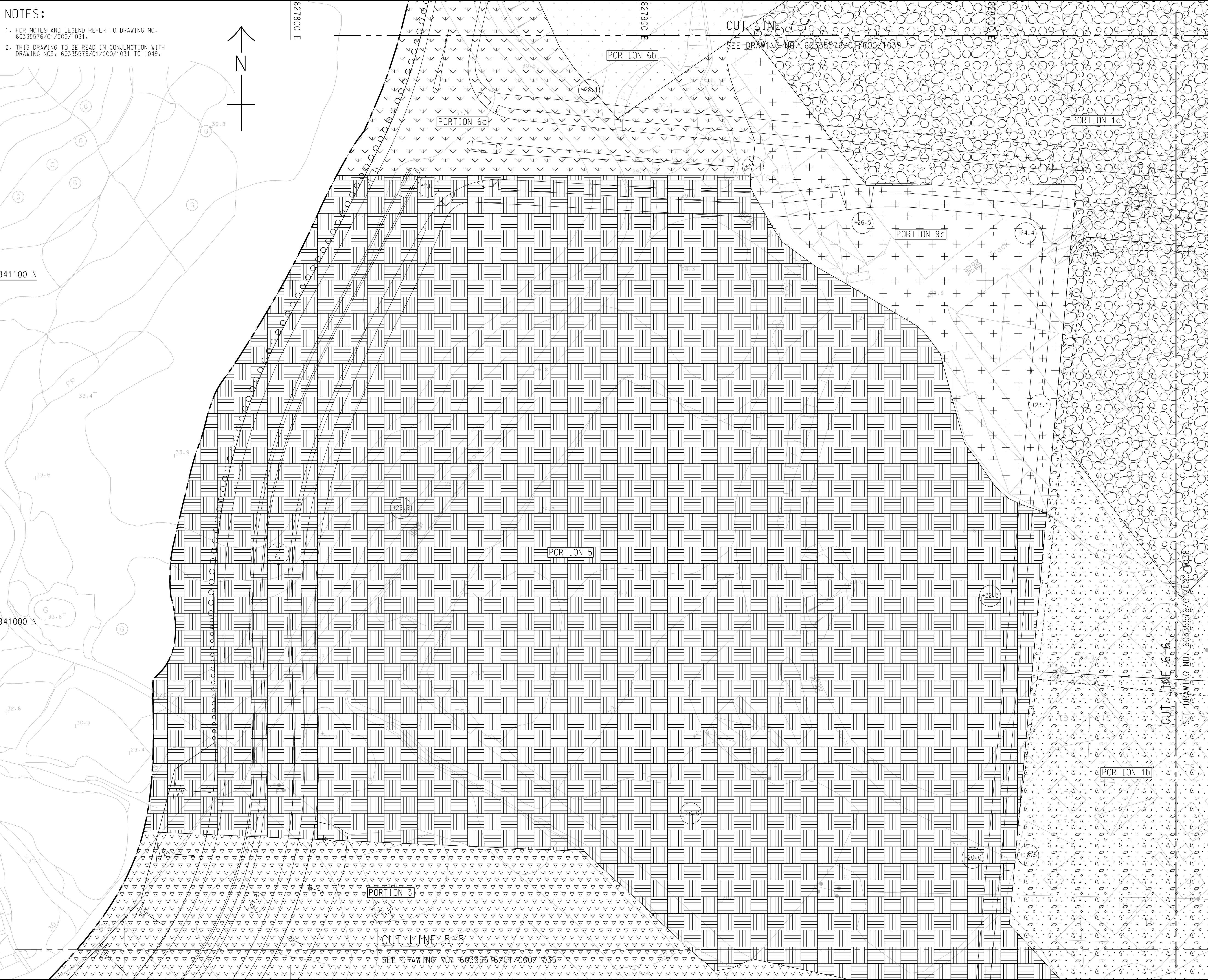
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CONTRACT TITLE:
KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: SITE FORMATION AND INFRASTRUCTURE WORKS

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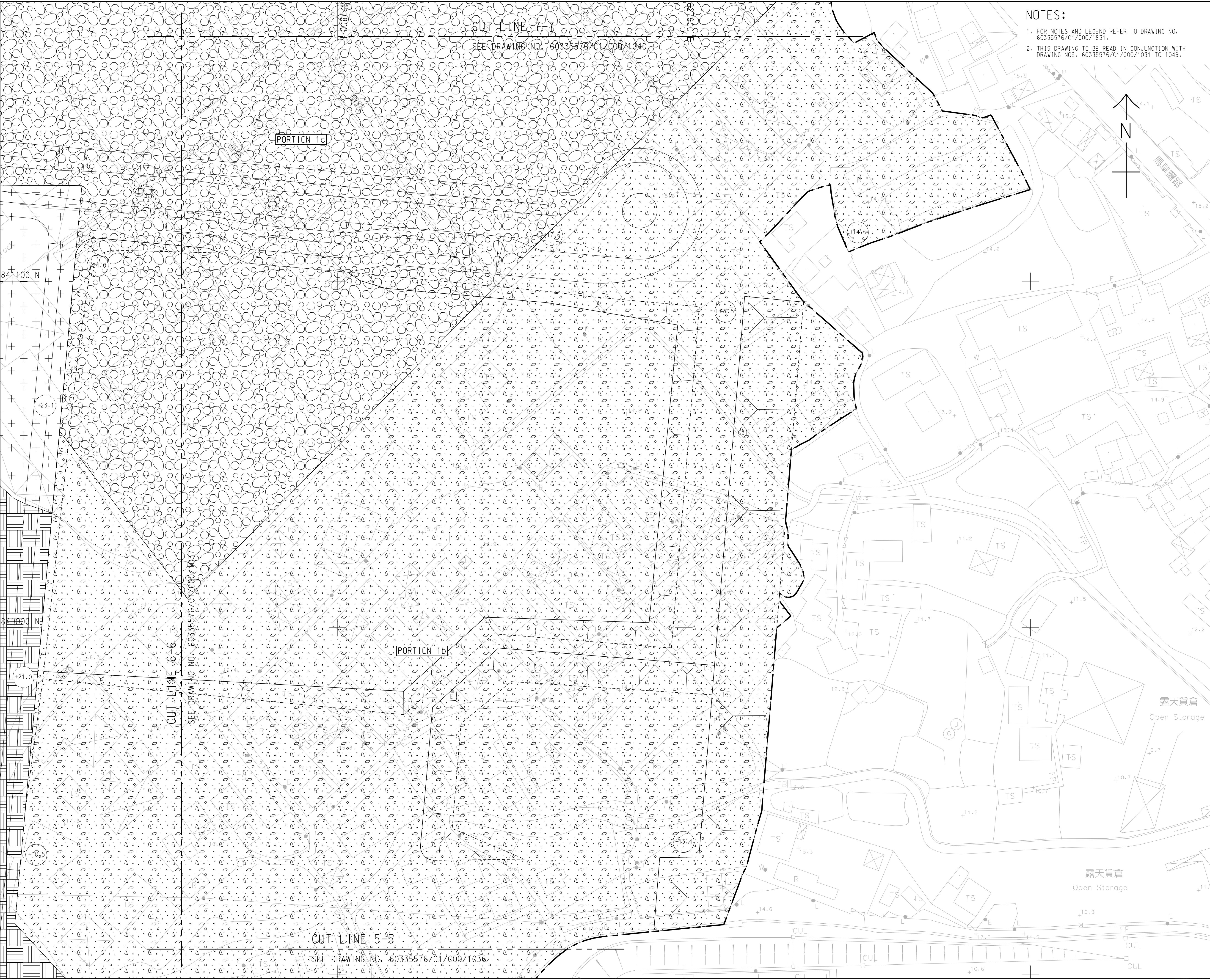
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CONTRACT TITLE:

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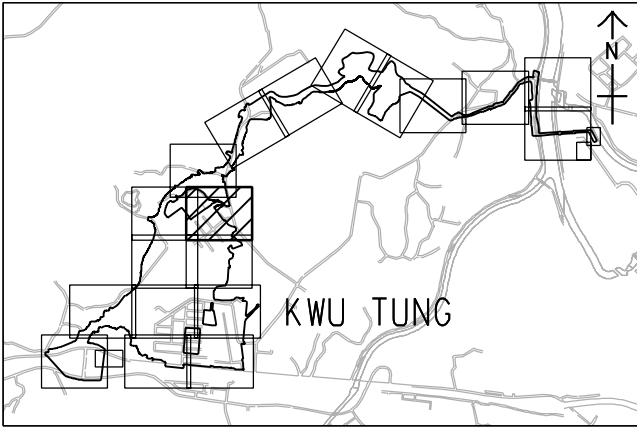
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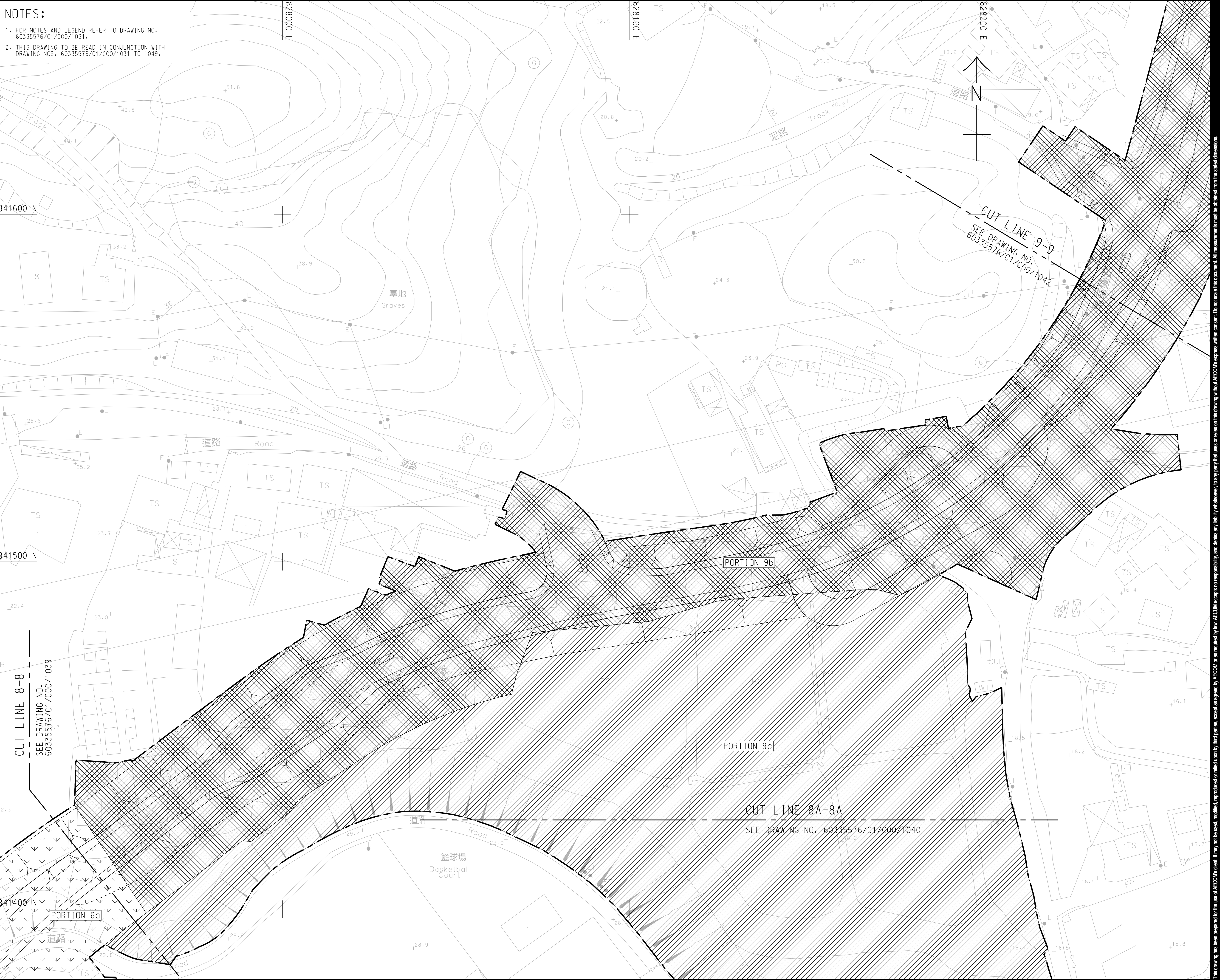
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CONTRACT TITLE:
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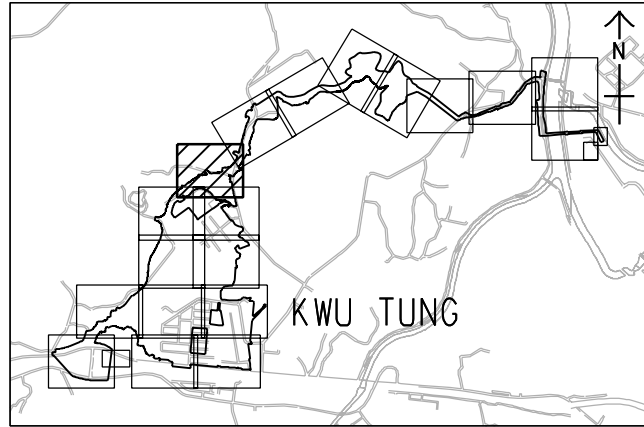
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-	JUN-19	TENDER DRAWING	YHH
I/R	DATE	DESCRIPTION	CHK.
修訂	日期	內容摘要	核核

STATUS
階段

SCALE
比例
A1 1 : 500
DIMENSION UNIT
尺寸單位
METRES
KEY PLAN
索引圖
A1 1 : 40000

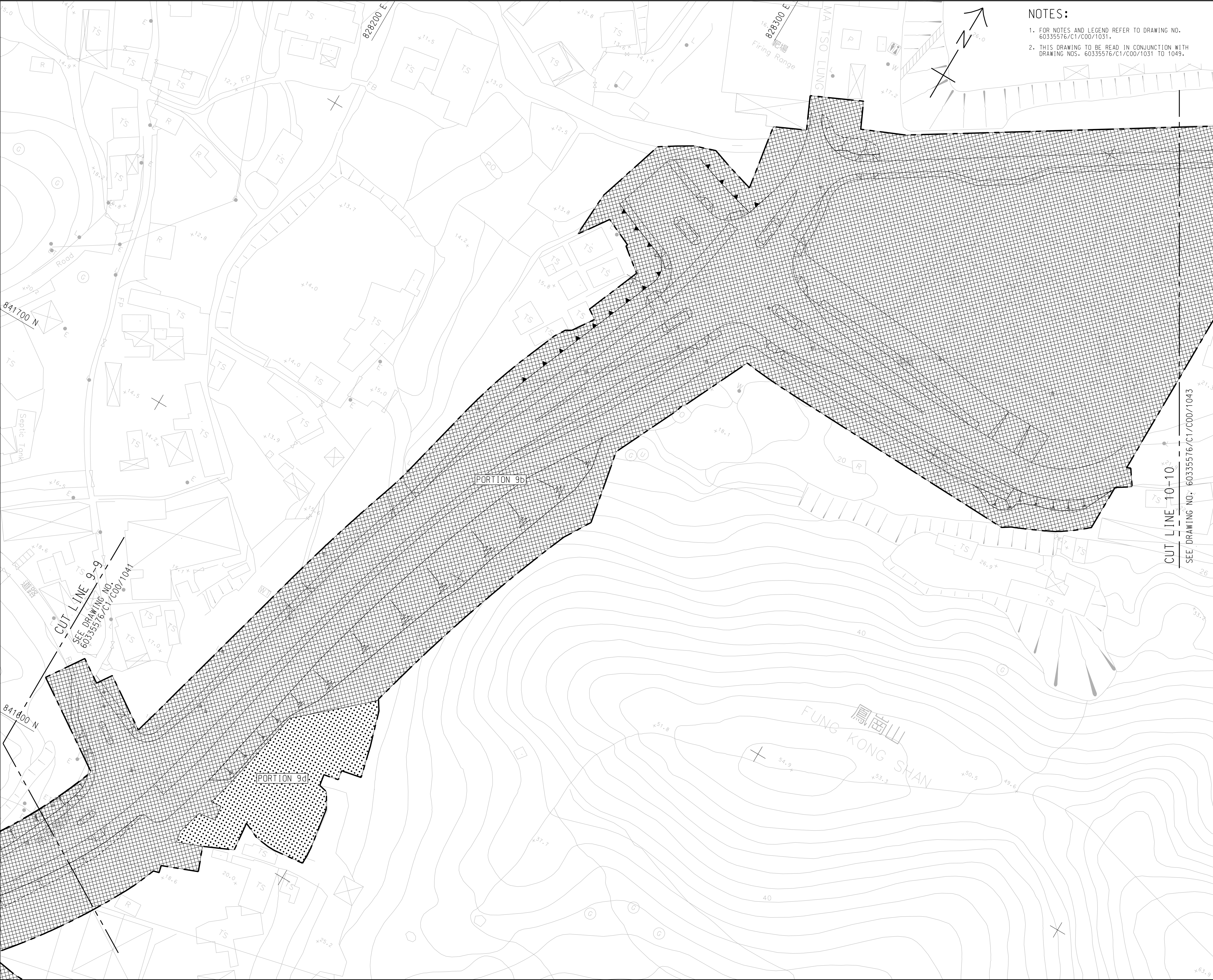


PROJECT NO.
項目編號
60335576
CONTRACT NO.
合約編號
ND/2019/01

SHEET TITLE
圖紙名稱
PORTION OF THE SITE

SHEET NUMBER
圖紙編號
60335576/C1/C00/1041
SHEET 11 OF 19

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NOTES:

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2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1049.

AECOM

PROJECT

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

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100/1			

STATUS

編號

SCALE

比例

A1 1: 500

DIMENSION UNIT

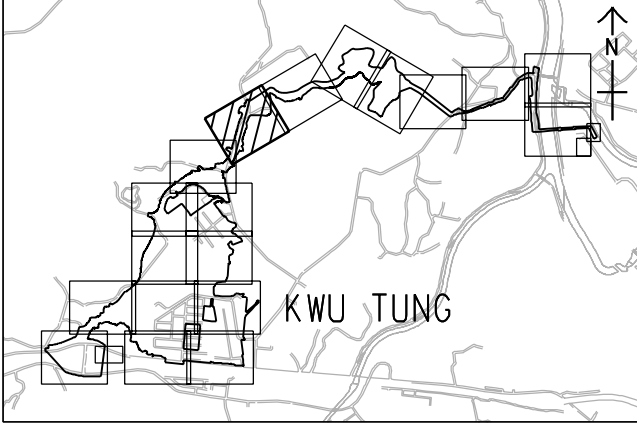
尺寸單位

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

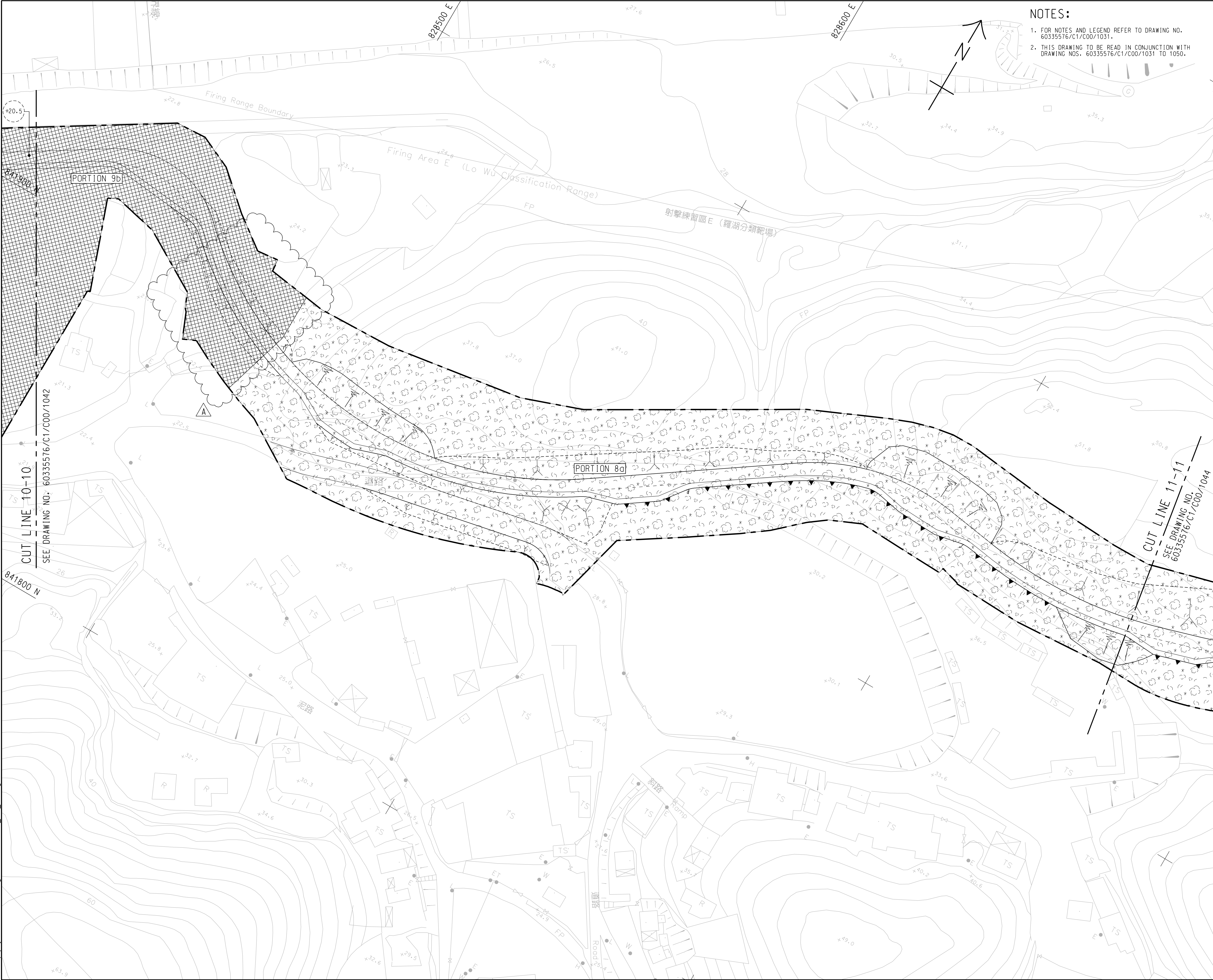
SHEET NUMBER

圖紙編號

60335576/C1/C00/1042

SHEET 12 OF 19

ISO A1 594mm x 841mm
Approved: YHH
Checked: YHH
Designer: TCK
Project Management Initials:
2019/7/25
ZENG L Y2
60335576/C1/C00/1043A



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 2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1050.

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

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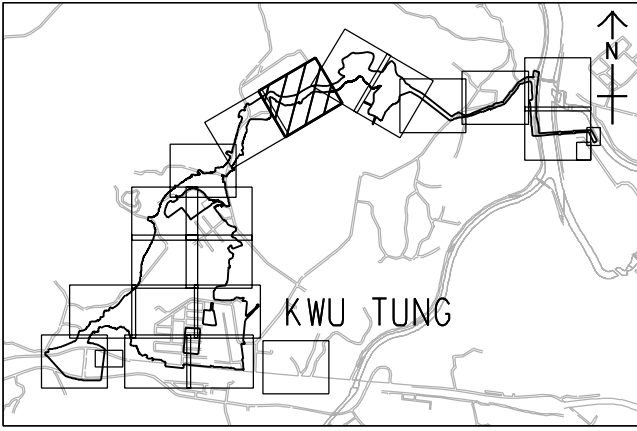
STATUS
階段

SCALE
比例

DIMENSION UNIT
尺寸單位

A1 1: 500 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 NUMBER
圖紙編號

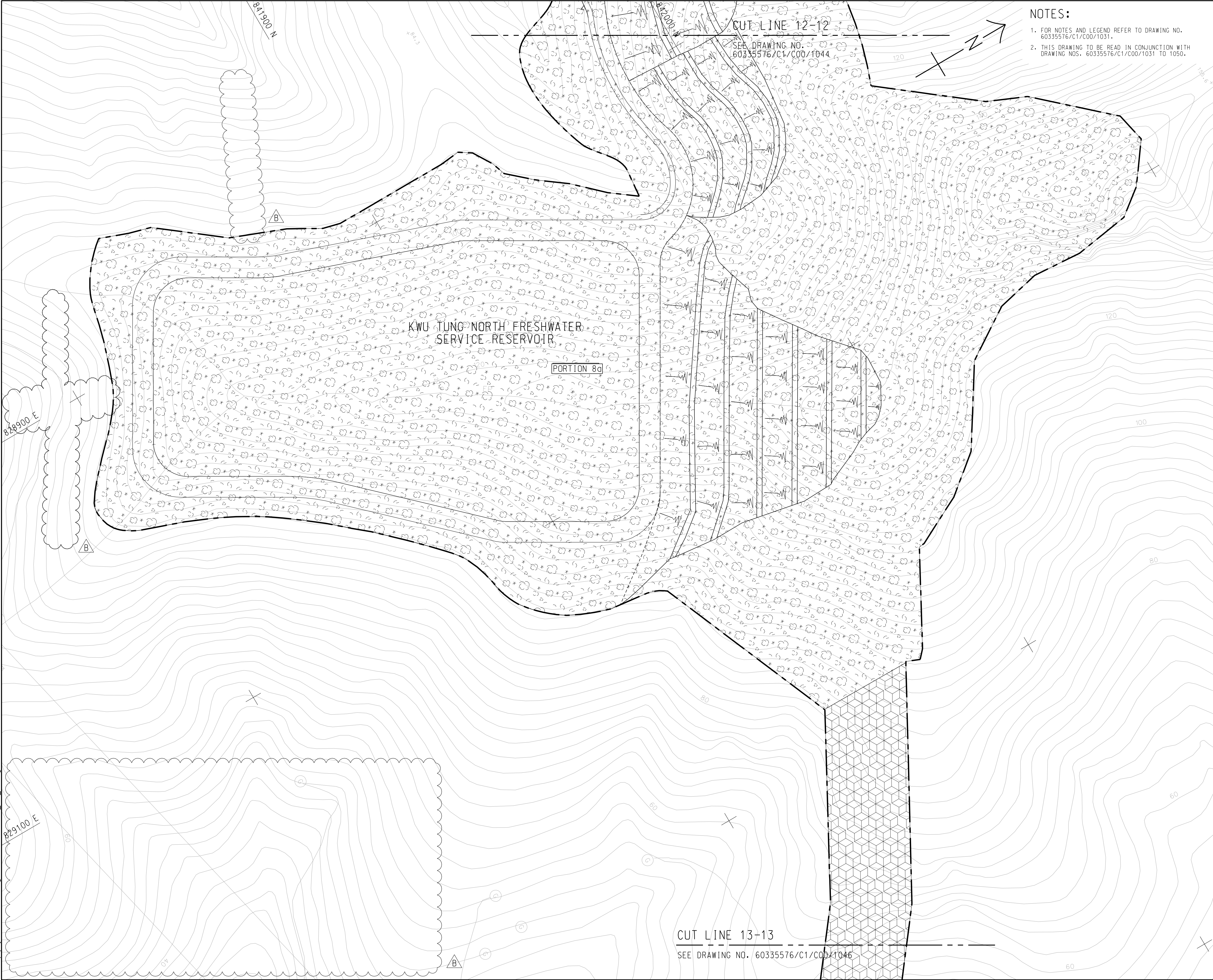
60335576/C1/C00/1043A

SHEET 13 OF 20

SEE DRAWING NO.
60335576/C1/600/1045

SHEET 14 OF 19

Pld File by: ZENGJY2 2019/09/09
PATH: P:\Projects\60335576\Drawing\CONTRACT\CT1\1000\CT1_C00_1045.dgn
Project Management Initials: Designer: TCKC Checked: YHH Approved: HHL
ISO A1 594mm x 841mm



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 2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1050.

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

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

STATUS
階段

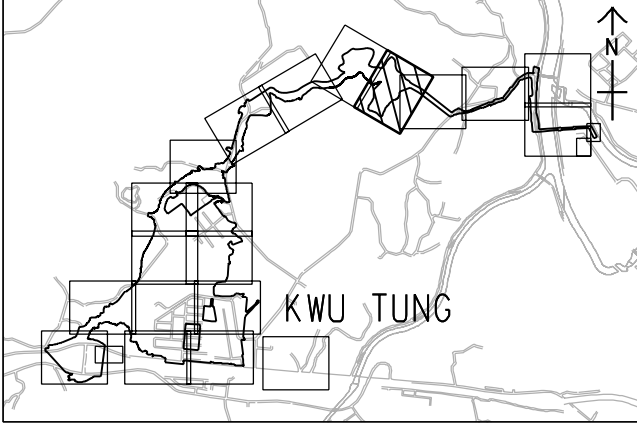
SCALE
比例

DIMENSION UNIT
尺寸單位

A1 1 : 500 METRES

KEY PLAN
索引圖

A1 1 : 40000



PROJECT NO.
項目編號

CONTRACT NO.
合約編號

60335576 ND/2019/01

SHEET TITLE
圖紙名稱

PORTION OF THE SITE

SHEET NUMBER
圖紙編號

60335576/C1/C00/1045B

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2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60335576/C1/C00/1031 TO 1050.

AECOM

PROJECT

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

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I/R	DATE	DESCRIPTION	CHK.
修改	日期	内容摘要	校核

STATUS

阶段

SCALE

比例

A1 1: 500

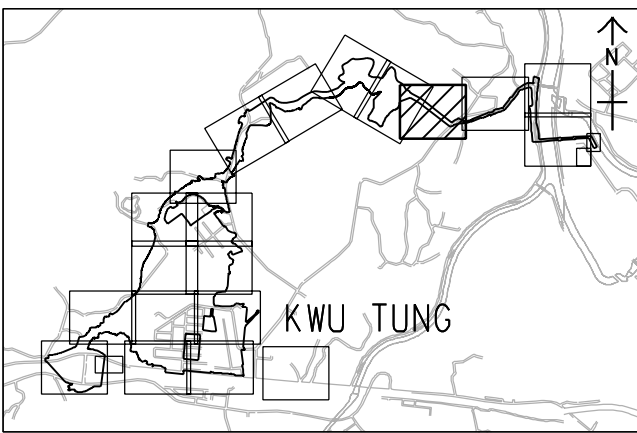
DIMENSION UNIT

尺寸单位

METRES

KEY PLAN

索引图



PROJECT NO.

项目编号

60335576

CONTRACT NO.

合约编号

ND/2019/01

SHEET TITLE

图底名称

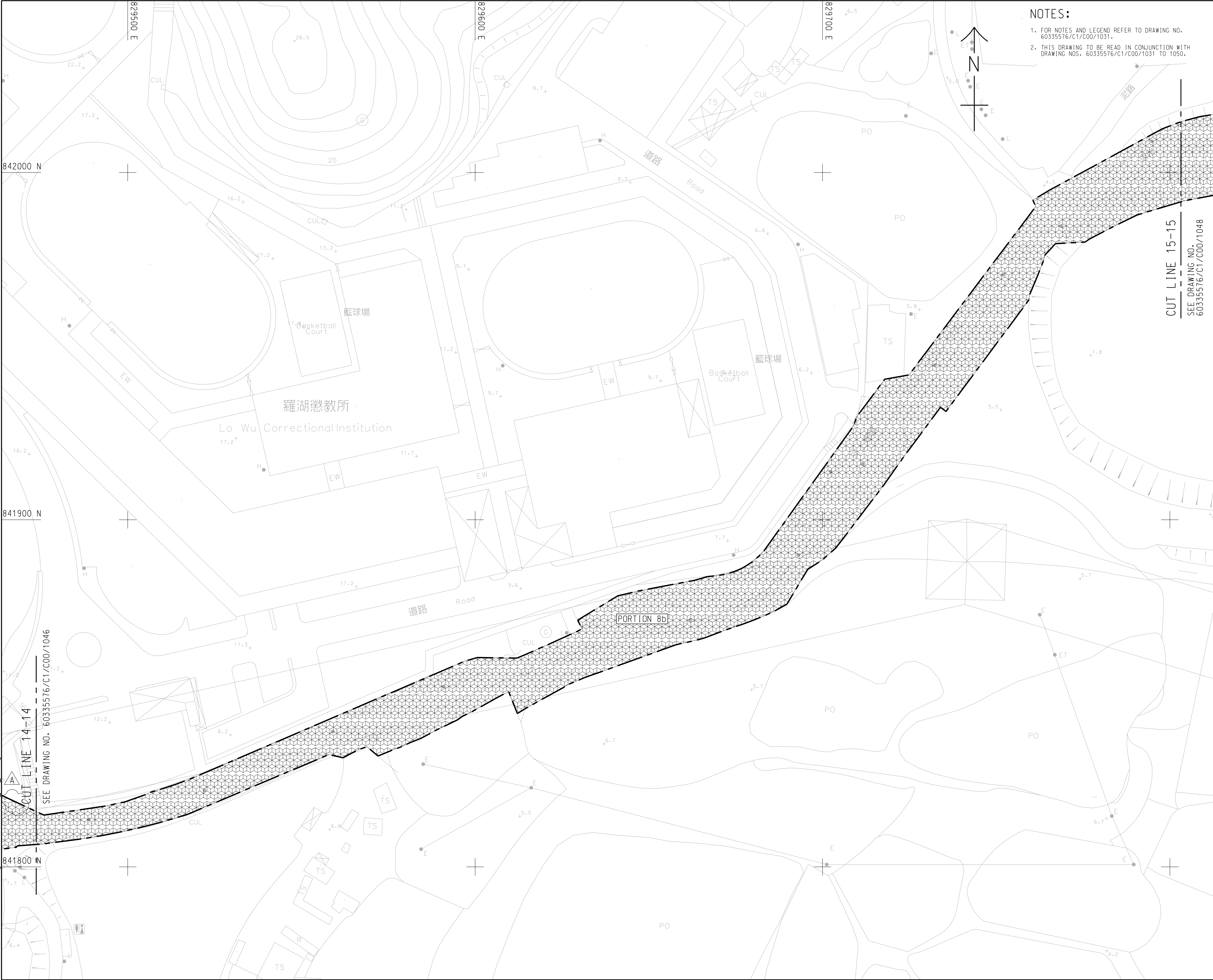
PORTION OF THE SITE

SHEET NUMBER

图底编号

60335576/C1/C00/1046A

SHEET 16 OF 20



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

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PROJECT

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

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A	AUG-19	TENDER ADDENDUM NO. 5	YHH
-	JUN-19	TENDER DRAWING	YHH
I/R	修訂	修訂	修訂

STATUS

備註

SCALE

比例

A1 1: 500

DIMENSION UNIT

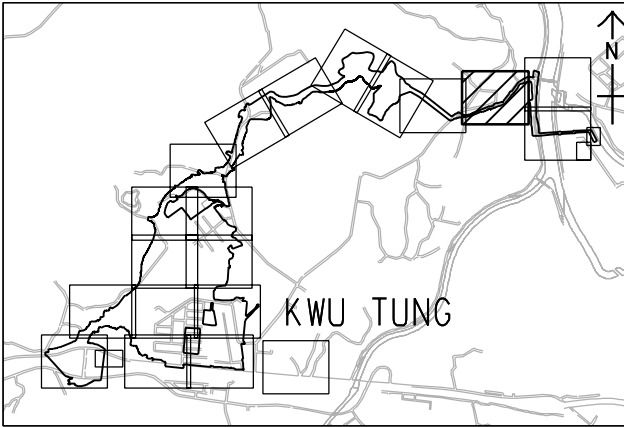
尺寸單位

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 NUMBER

圖紙編號

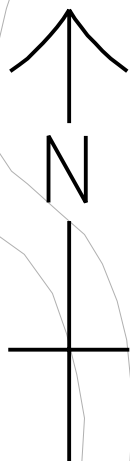
60335576/C1/C00/1047A

SHEET 17 OF 20



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

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

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I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 覆核

STATUS

SCALE
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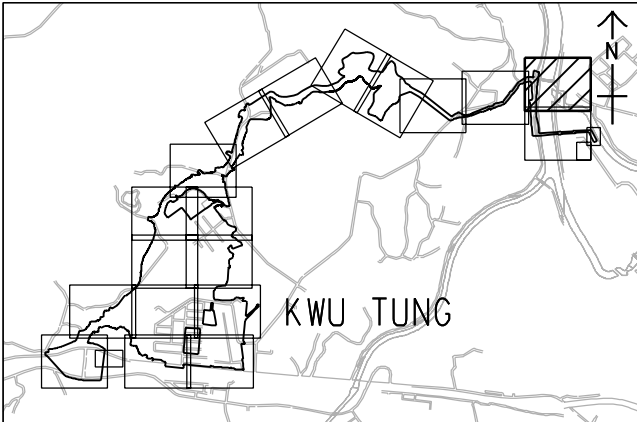
A1 1 : 500

DIMENSION UNIT
尺寸單位

METRES

KEY PLANS

A1 1 : 40000

**PROJECT NO.**

60335576

CONTRACT NO.

ND/2019/01

SHEET TITLE

PORTION OF THE SITE

SHEET 18 OF 19

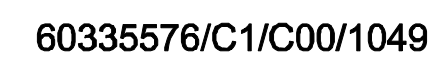
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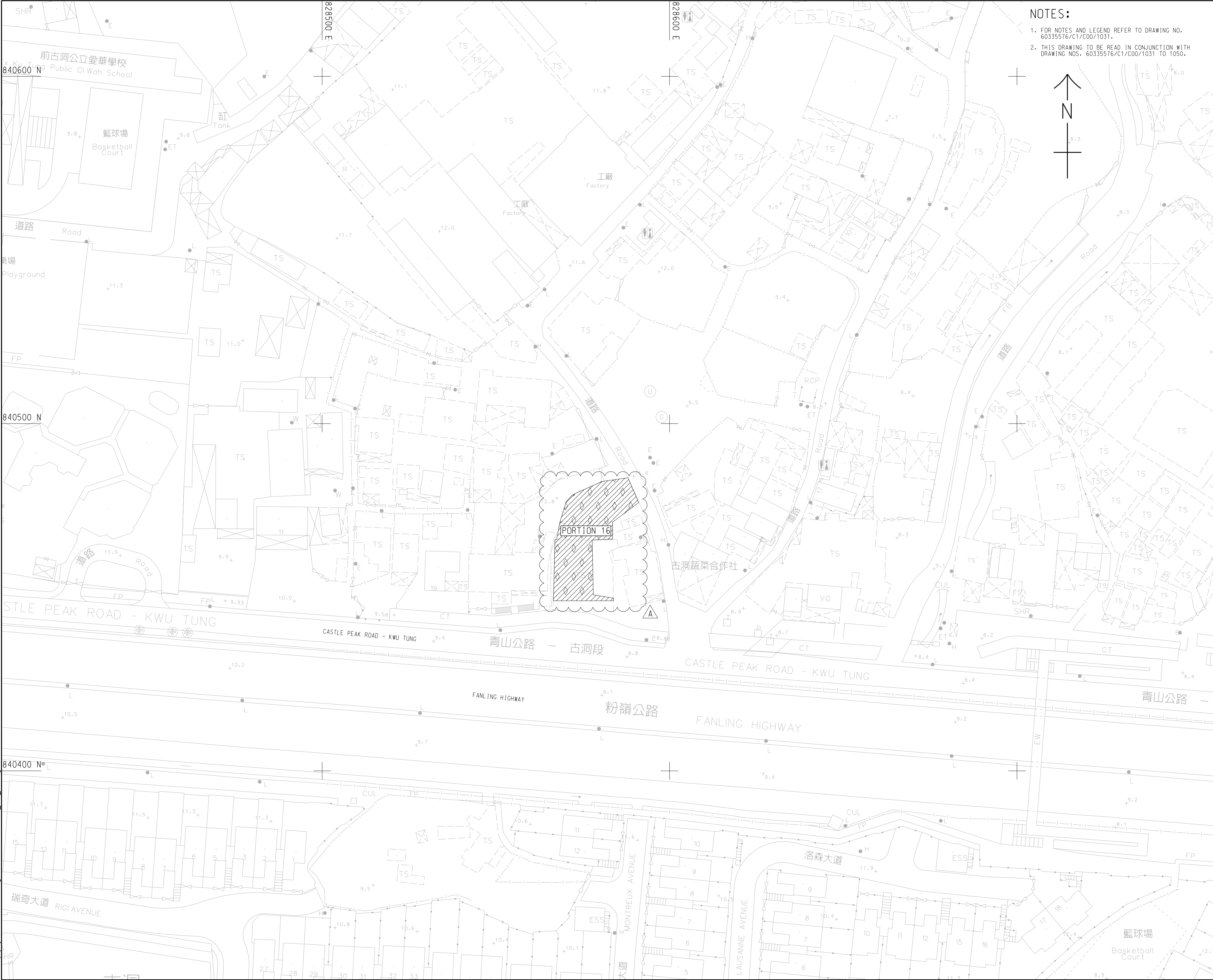


CUT LINE 17-17

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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.



AECOM

PROJECT

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

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-	JUN-19	TENDER DRAWING	YHH
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修改	日期	內容摘要	校核

STATUS

備核

SCALE

比例

A1 1: 500

DIMENSION UNIT

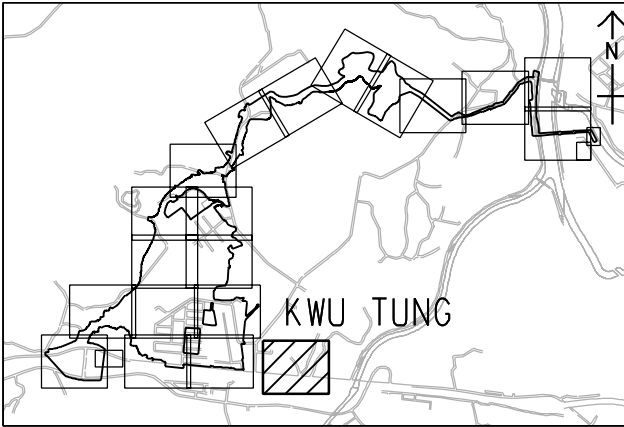
尺寸單位

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 NUMBER

圖紙編號

60335576/C1/C00/1050A

SHEET 20 OF 20

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

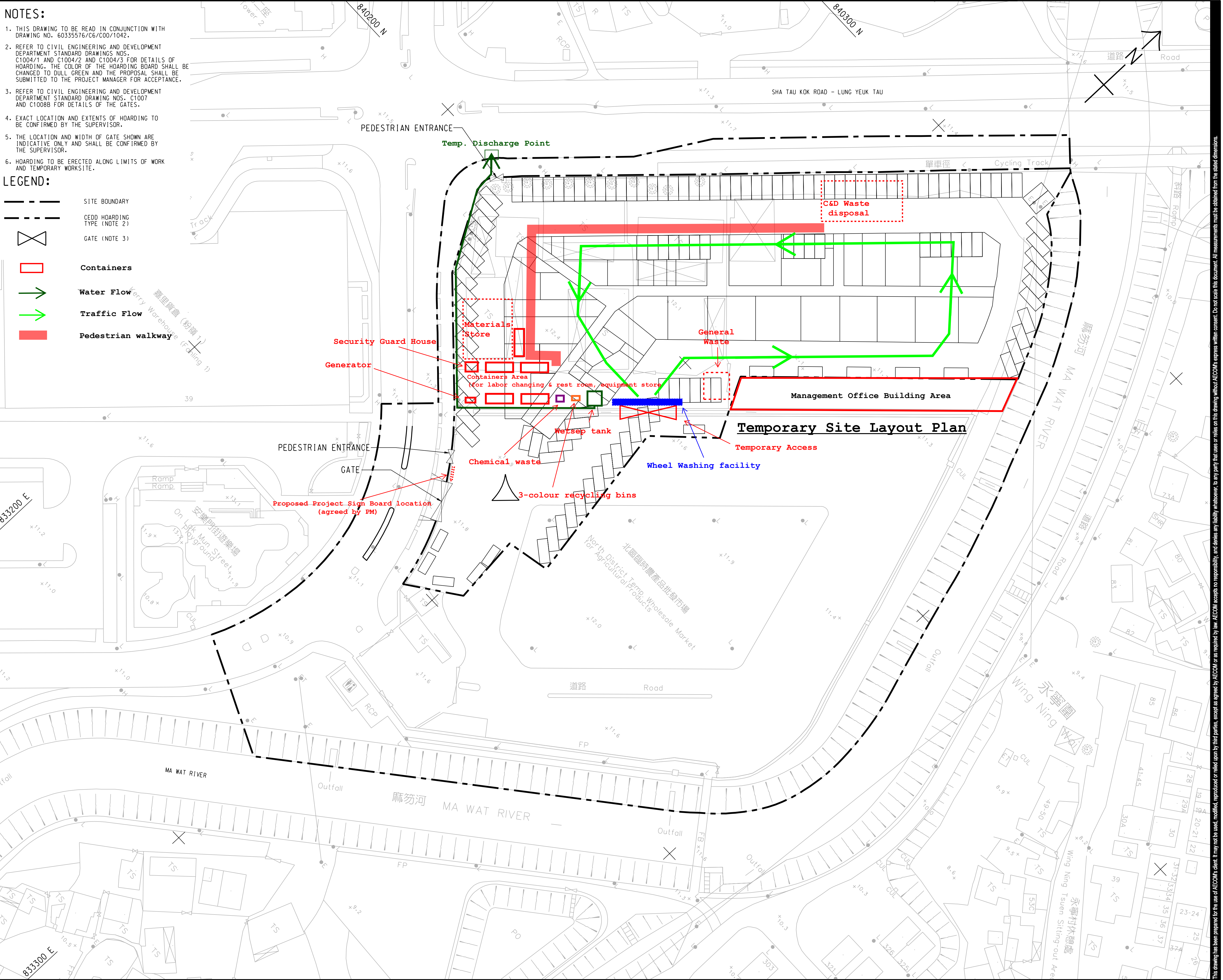
Pot File by: Yauky 28/4/2019
PATH P:\Projects\60335576\DRAWING\CONTRACT\CS1000\CS_C00_1041.dgn
Project Management Initials: Designer: DMCH Checked: ALUI Approved: IHWL
ISO A1 594mm x 841mm

NOTES:

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

LEGEND:

- SITE BOUNDARY
- CEDD HOARDING TYPE (NOTE 2)
- ⊗ GATE (NOTE 3)
- Containers
- Water Flow
- Traffic Flow
- Pedestrian walkway



PROJECT

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

CONTRACT TITLE:

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

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STATUS

備註

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)

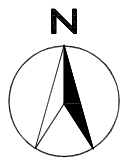
SHEET NUMBER

圖紙編號

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FIGURE(S)



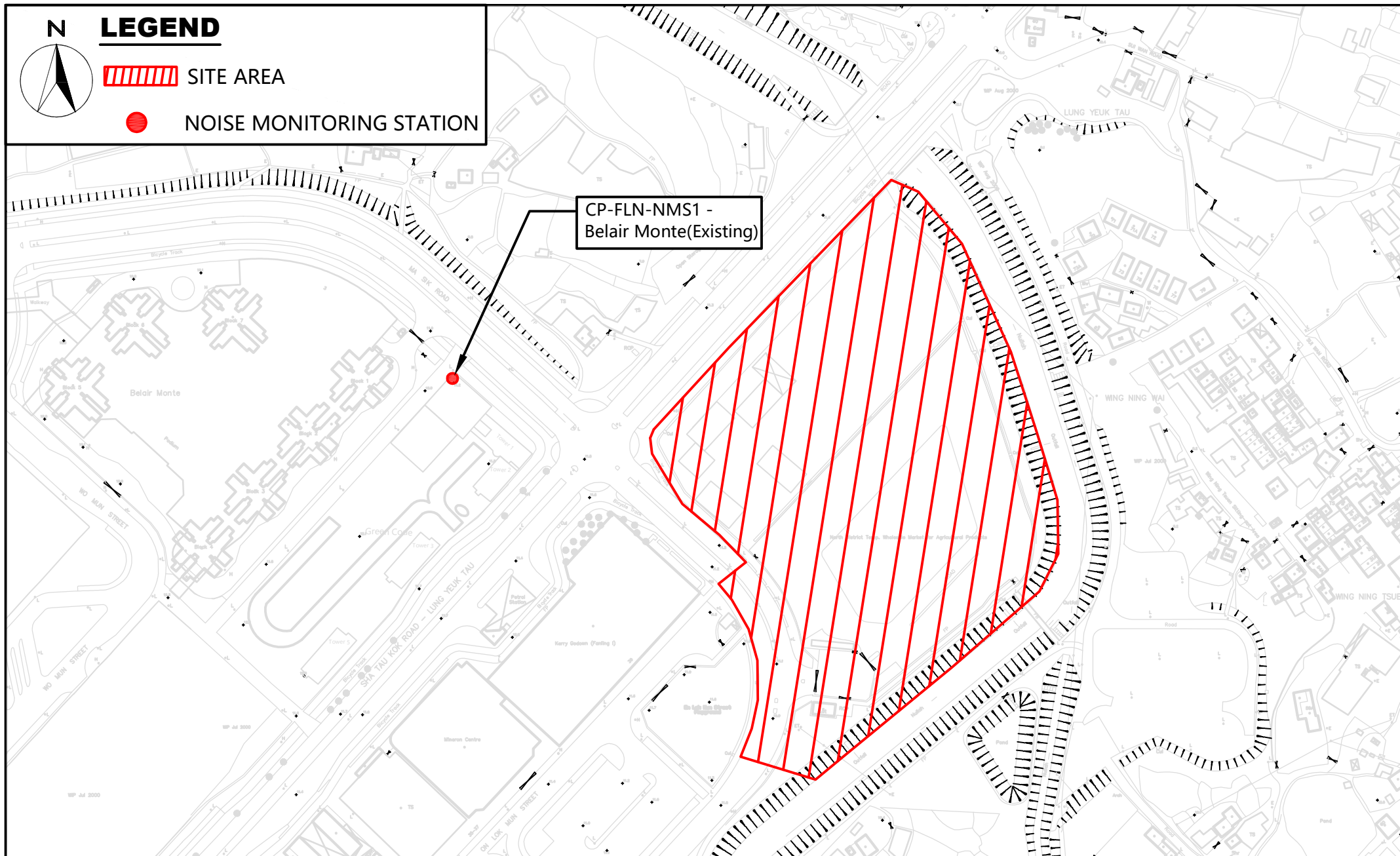
LEGEND



SITE AREA



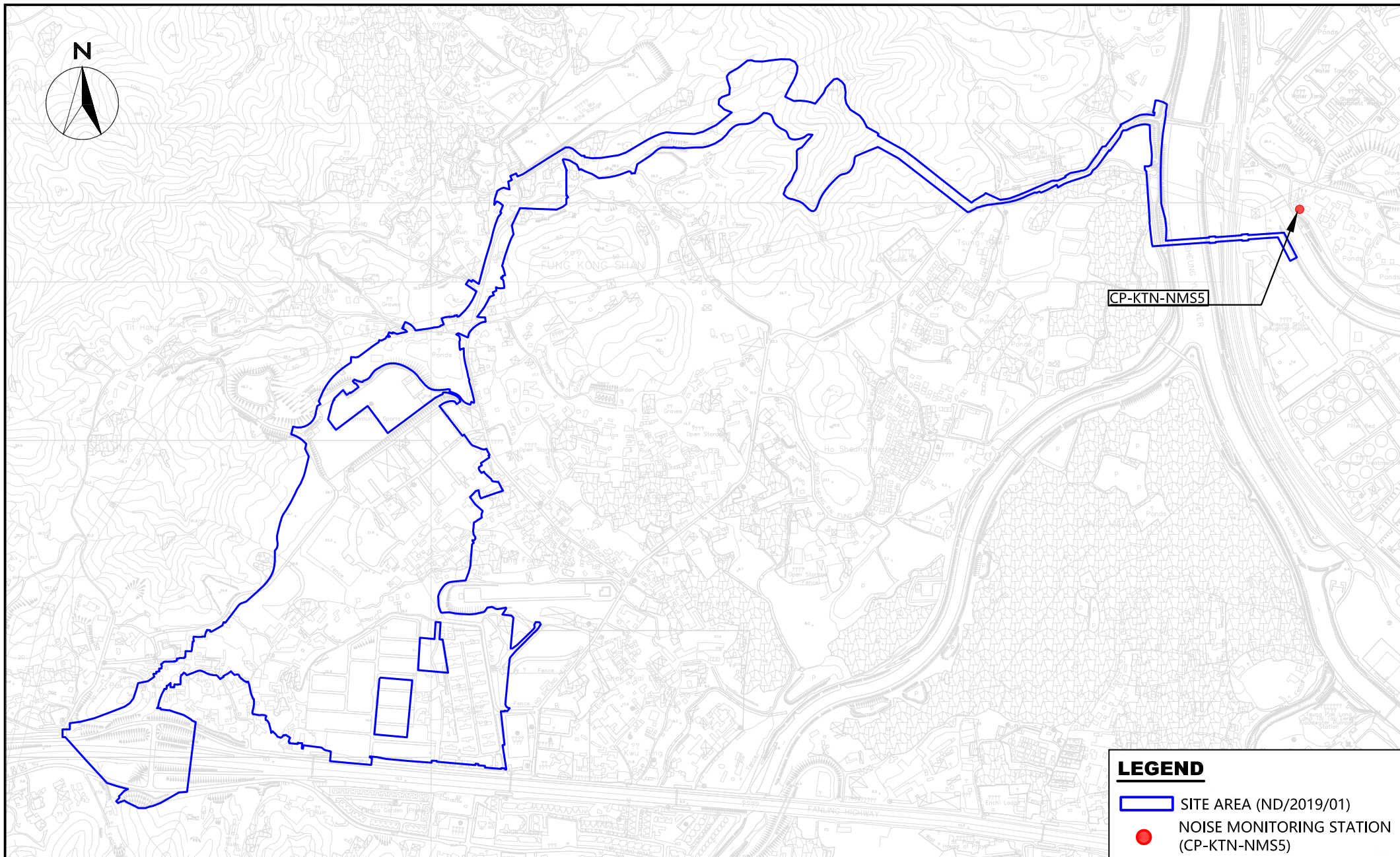
NOISE MONITORING STATION



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	—



LEGEND

SITE AREA (ND/2019/01)

● NOISE MONITORING STATION (CP-KTN-NM55)


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	—

APPENDIX A
CONSTRUCTION PROGRAMME

Activity ID	Activity Name	Predecessors	Successors	Remaining Duration	Start	Finish	Total Float	Calendar	February 2020				March 2020				April 2020				May 2020				2020	
									02	09	16	23	01	08	15	22	29	05	12	19	26	03	10	17	24	31
Three Month Rolling Programme				2504	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				1370	23-Dec-19 A	06-Jan-24	0	CD (7d)																		
AD-1000	Portion 1a	CD-1010	S3P1a-1010,	0	06-Jul-21*		0	CD (7d)																		
AD-1010	Portion 1b	CD-1010	S4AP1b-1010(	0	06-Jul-21*		0	CD (7d)																		
AD-1020	Portion 1c	CD-1010	S4BP1c-1010(	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-1010(	0	06-Apr-21*		0	CD (7d)																		
AD-1050	Portion 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	CD-1010	S8P3-1010	0	06-Apr-20*		0	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)	◆ Portion 4 - (Major Area Handovered on 20 Feb 2020)																	
AD-1090	Portion 5 - (Major Area Handovered on 23 Dec 2019)	CD-1010	S2AP5-1010,	0	23-Dec-19 A			CD (7d)																		
AD-1100	Portion 6a	CD-1010	S8P6a-1010,	0	23-Dec-19 A			CD (7d)																		
AD-1110	Portion 6b	CD-1010	S11P6b-1010(	0	20-Feb-20 A			CD (7d)	◆ Portion 6b																	
AD-1120	Portion 7 - (Part of Area Handovered on 20 Feb 2020)	CD-1010	S3P7-1010, S	0	06-Apr-20*		0	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-1010(	0	06-Jan-22*		0	CD (7d)																		
AD-1160	Portion 9b	CD-1010	S8P9b-1010,	0	06-Jul-20*		0	CD (7d)																		
AD-1170	Portion 9c	CD-1010	S14P9c-1010	0	06-Apr-20*		0	CD (7d)																		
AD-1180	Portion 9d	CD-1010	S8P9b-1010	0	06-Jul-20*		0	CD (7d)																		
AD-1190	Portion 10a - (Major Area Handovered on 20 Feb 2020)	CD-1010	S1P10a-1040	0	06-Apr-20*		0	CD (7d)																		
AD-1200	Portion 10b - (Part of Area Handovered on 20 Feb 2020)	CD-1010	S12P10b-101	0	06-Jul-20*		0	CD (7d)																		
AD-1210	Portion 11a	CD-1010	S21P11a-1010	0	06-Jul-20*		0	CD (7d)																		
AD-1220	Portion 11b	CD-1010	S6BP11b-101	0	06-Jan-24*		0	CD (7d)																		
AD-1230	Portion 12	CD-1010	S9P12-1010,	0	06-Jul-21*		0	CD (7d)																		
AD-1240	Portion 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	S6AP15-1010(	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, S2f	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, S4C	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, S6f	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, C1	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, S10	CD-1020	0		06-Jul-22*	0	CD (7d)																		
SC-1150	Section 10B - all works in Area J1	CD-1010, S10	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)																		



Build King – Richwell Engineering
Joint Venture

Planned Work

Critical Work

Actual Work

◆

Milestone

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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-F3MRP
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3-MONTH ROLLING PROGRAMME (2020-03 to 202...

Date	Revision	Checked	Approved
29-Feb-20	Rev. 0	JC	BY

Activity ID	Activity Name	Predecessors	Successors	Remaining Duration	Start	Finish	Total Float	Calendar	February 2020				March 2020				April 2020				May 2020				2020
									02	09	16	23	01	08	15	22	29	05	12	19	26	03	10	17		24	31
SC-1230	Section 17 - establishment works	CD-1010, S17	CD-1020	0		06-Jan-27*	0	CD (7d)																	
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 anc	CD-1010, S19	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 an	CD-1010, S19	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 an	CD-1010, S19	CD-1020	0		06-Oct-25*	0	CD (7d)																	
SC-1280	Section 20 - the consturction 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, S1*		0		06-Aug-21*	0	CD (7d)																	
KD-1010	KD2 655 days after starting date	CD-1010, S7*		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, S8*		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					397	04-Mar-20	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		04-Mar-20*	0	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					192	28-Nov-19 A	07-Sep-20	2312																	
6.1 - Preliminaries					125	28-Nov-19 A	02-Jul-20	2379																	
PRE-1020	Baseline Ecological Monitoring Works (by ET) (from 3/7/19 to 2/7/20)	CD-1000		125	28-Nov-19 A	02-Jul-20	2379	CD (7d)																	
PRE-1030	Provision of Waste Water Treatment Facilities	CD-1010	S1P10a-1040	0	01-Feb-20 A	10-Feb-20 A		CD (7d)																	
PRE-1040	Erection of Interim Contractor's Site Accommodation in Additional Land near Portion 1f			0	08-Jan-20 A	21-Jan-20 A		WD (6d)																	
6.2 - General Submission					125	28-Nov-19 A	02-Jul-20	2379	CD (7d)																
GS-1000	Submission of Organization Chart	CD-1010		0	06-Dec-19 A	19-Dec-19 A		CD (7d)																	
GS-1010	Submission of the First Programme	CD-1000	GS-1020	0	28-Nov-19 A	11-Dec-19 A		CD (7d)																	
GS-1020	Acceptance of the First Programme / Revision of First Programme	GS-1010		11	12-Dec-19 A	10-Mar-20*	5	CD (7d)																	
GS-1030	Submission / Acceptance of the First Three Month Rolling Programme			11	14-Feb-20 A	10-Mar-20*	21	CD (7d)																	
GS-1040	Submission of Draft Construction Health and Safety Plan	CD-1000		0	28-Nov-19 A	06-Dec-19 A		CD (7d)																	
GS-1050	Submission of Construction Health and Safety Plan	CD-1000		31	07-Dec-19 A	30-Mar-20*	1	CD (7d)																	
GS-1060	Submission of Draft Environmental Management Plan	CD-1000		0	28-Nov-19 A	06-Dec-19 A		CD (7d)																	
GS-1070	Submission of Environmental Management Plan	CD-1000		0	28-Nov-19 A	31-Dec-19 A		CD (7d)																	
GS-1080	Submission of Site Traffic Safety Management Plan	CD-1010		31	06-Dec-19 A	30-Mar-20*	1	CD (7d)																	
GS-1100	Submission of Interface Management Plan	CD-1010	GS-1120	21	05-Mar-20*	25-Mar-20	454	CD (7d)																	
GS-1120	Acceptance of Interface Management Plan	GS-1100	GS-1130	21	26-Mar-20	15-Apr-20	454	CD (7d)																	
GS-1130	Submission of Detailed Interface Document	GS-1120	GS-1140	21	16-Apr-20	06-May-20	454	CD (7d)																	
GS-1140	Acceptance of Detailed Interface Document	GS-1130	S2AP5-3030,	21	07-May-20	27-May-20	454	CD (7d)																	
GS-1150	Submission of Proposal for Security System for the site	CD-1000, SP-	PRE-1010, S	14	26-May-20	08-Jun-20	112	CD (7d)																	
GS-1160	Submission of Subcontractor Management Plan	CD-1000		0	28-Nov-19 A	06-Dec-19 A		CD (7d)																	
GS-1170	Submission of Site Hoarding Plan	CD-1010		0	06-Dec-19 A	27-Dec-19 A		CD (7d)																	
GS-1180	Submission of Emergency Unit	CD-1010		0	06-Dec-19 A	17-Dec-19 A		CD (7d)																	
GS-1190	Submission of Details for Project Manager's Site Accommodation	CD-1000, SP-	GS-1200	28	06-May-20	02-Jun-20	22	CD (7d)																	
GS-1210	Submission of Subcontracting Procedure	CD-1000	GS-1220	0	28-Nov-19 A	06-Dec-19 A		CD (7d)																	
GS-1220	Acceptance of Subcontracting Procedure	GS-1210	SP-1010, SP-	0	07-Dec-19 A	27-Dec-19 A		CD (7d)																	
GS-1230	Submission of Major Method Statements	CD-1010		32	06-Dec-19 A	31-Mar-20*	44	CD (7d)																	
GS-1240	Temporary Traffic Management Scheme and XP application	CD-1010, SP-	S13P2-3060,	125	04-Feb-20 A	02-Jul-20	7	CD (7d)																	
6.3 - Subletting Package					192	16-Jan-20 A	07-Sep-20	510	CD (7d)																
SP-1010	Project Manager's Site Accommodation	GS-1220	PRE-1010, G	50	17-Mar-20	05-May-20	22	CD (7d)																	
SP-1020	Site Hoarding	GS-1220	S14P7S3-20*	67	05-Mar-20	10-May-20	141	CD (7d)																	
SP-1030	Independent Checking Engineer Services	GS-1220	S7P14-2010,	67	14-Feb-20 A	05-May-20	22	CD (7d)																	
SP-1040	Security System for the site	GS-1220	GS-1150	70	17-Mar-20	25-May-20	112	CD (7d)																	
SP-1060	Tree Survey	GS-1220	S1P10a-1010	12	20-Jan-20 A	11-Mar-20	0	CD (7d)																	
SP-1070	Ground Investigation and Laboratory Testing	GS-1220	S14P6a-1030	17	20-Jan-20 A	16-Mar-20	9	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-F3MRP

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3-MONTH ROLLING PROGRAMME (2020-03 to 202...			
Date	Revision	Checked	Approved
29-Feb-20	Rev. 0	JC	BY

Activity ID	Activity Name	Predecessors	Successors	Remaining Duration	Start	Finish	Total Float	Calendar	February 2020				March 2020				April 2020				May 2020				2020
									02	09	16	23	01	08	15	22	29	05	12	19	26	03	10	17		24	31
SP-1080	Site Formation Works	GS-1220	S1K1-1010, S	57	16-Jan-20 A	25-Apr-20	46	CD (7d)																	
SP-1090	Piling Works	GS-1220	S8P5-2010, S	60	06-Apr-20	04-Jun-20	99	CD (7d)																	
SP-1110	Structural Works for Retaining Wall	GS-1220	S8P2-3030, S	120	06-May-20	02-Sep-20	85	CD (7d)																	
SP-1130	Drainage, Sewerage and Watermain Laying Works	GS-1220	S14K5-2010,	90	26-Apr-20	24-Jul-20	11	CD (7d)																	
SP-1160	E&M works for Temporary Sewage Pumping Station	GS-1220	S7P14-2010	70	07-Mar-20	15-May-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-Apr-20	12	CD (7d)																	
SP-1250	Interim Community Liaison Centre	GS-1220	S14P1f-2010	32	22-Feb-20 A	31-Mar-20	1	CD (7d)																	
SP-1260	Condition Survey	GS-1220	S1K1-1010	60	22-Feb-20 A	28-Apr-20	43	CD (7d)																	
7.0 - CONSTRUCTION				1740	06-Dec-19 A	03-Dec-24	764																		
Section 1				91	12-Mar-20	10-Jun-20	0																		
Portion 10a in Area H, H1, H2 (Soil Treatment & Provision of Site Access & EVA to MWSC)				91	12-Mar-20	10-Jun-20	0																		
Preparation work/Tree Survey/Site Clearance/GI				91	12-Mar-20	10-Jun-20	0																		
S1P10a-1010	Tree survey and prepare tree felling and transplant report	CD-1010, SP-	S1P10a-1020	30	12-Mar-20	20-Apr-20	0	WD (6d)																	
S1P10a-1020	Submit and acceptance of tree felling application	S1P10a-1010	S1P10a-1030	30	21-Apr-20	20-May-20	0	CD (7d)																	
S1P10a-1030	Tree felling, transplant and protection	S1P10a-1020	S1K1-1010	18	21-May-20	10-Jun-20	0	WD (6d)																	
S1P10a-1040	Site clearance	AD-1190, PRE	S1P10a-1050	10	06-Apr-20	20-Apr-20	0	WD (6d)																	
S1P10a-1050	Ground investigation and laboratory test (7 no. Gis / 7 teams)	S1P10a-1040	S1P10a-1060	11	21-Apr-20	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-1060	S1K1-1010, S	16	23-May-20	10-Jun-20	0	WD (6d)																	
S1P10a-1080	Install monitoring points within the MWSC Site prior to the excavation works	S1P10a-1040	S1K1-1010	3	21-Apr-20	23-Apr-20	39	WD (6d)																	
Section 2A				161	10-Feb-20 A	07-Aug-20	2343																		
Portion 5 in Area C1 (Soil Treatment & Interface with HD's Contractors)				161	10-Feb-20 A	07-Aug-20	2343																		
Preparation work/Tree Survey/Site Clearance/GI				130	26-Feb-20 A	07-Aug-20	258	WD (6d)																	
S2AP5-1010	Tree survey and prepare tree felling and transplant report	AD-1090, SP-	S2AP5-1030	60	12-Mar-20	27-May-20	318	WD (6d)																	
S2AP5-1020	Site Clearance	AD-1090	S2AP5-1030	130	26-Feb-20 A	07-Aug-20	258	WD (6d)																	
Interface with HD's Contractor to carry out GI				93	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		93	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,	93	10-Feb-20 A	31-May-20	526	CD (7d)																	
Section 3				60	06-Apr-20	19-Jun-20	219	WD (6d)																	
Portion 7 in Area E (Soil Treatment & Interface with HKHS's Contractors)				60	06-Apr-20	19-Jun-20	219	WD (6d)																	
Preparation work/Tree Survey/Site Clearance/GI				60	06-Apr-20	19-Jun-20	219	WD (6d)																	
S3P7-1010	Tree survey and prepare tree felling and transplant report	AD-1120, SP-	S3P7-1030, S	60	06-Apr-20	19-Jun-20	219	WD (6d)																	
Section 5				84	05-Mar-20	17-Jun-20	0	WD (6d)																	
Portion 4 in Area I (Soil Treatment & Complete Temp. Noise Barriers along Castle Peak Road)				84	05-Mar-20	17-Jun-20	0	WD (6d)																	
Preparation work/Tree Survey/Site Clearance/GI				84	05-Mar-20	17-Jun-20	0	WD (6d)																	
S5P4-1010	Tree survey and prepare tree felling and transplant report	AD-1080, SP-	S5P4-1030	60	12-Mar-20	27-May-20	0	WD (6d)																	
S5P4-1020	Site Clearance	AD-1080	S5P4-1030	60	05-Mar-20	20-May-20	6	WD (6d)																	
S5P4-1030	Ground investigation and laboratory test (2 GI)	S5P4-1020, S	S5P4-1040	18	28-May-20	17-Jun-20	0	WD (6d)																	
Section 7 (Subject to excision)				162	05-Mar-20	13-Aug-20	42																		
Portion 14 in Area K (Complete TSPS with Associated Sewerage)				90	16-May-20	13-Aug-20	7	CD (7d)																	
KD2 - Complete Temporary Sewage Pumping Station and associated rising mains and sewers, and connect				90	16-May-20	13-Aug-20	7	CD (7d)																	
Design and Civil Construction				90	16-May-20	13-Aug-20	7	CD (7d)																	
S7P14-2010	Design and approval of Temporary Sewage Pumping Station (TSPS)	OD-1000, AD-	S7P14-2020,	90	16-May-20	13-Aug-20	7	CD (7d)																	
Portion 4 in Area K (Complete Temp. Noise Barriers along Castle Peak Road)				48	05-Mar-20	06-May-20	119	WD (6d)																	
Preparation work				48	05-Mar-20	06-May-20	119	WD (6d)																	
S7P4-1010	Site Clearance	AD-1080, OD-	S7P4-2010	48	05-Mar-20	06-May-20	119	WD (6d)																	
Section 8				798	06-Jan-20 A	06-May-22	126																		
Portion 2 in Area A (Soil Treatment & Construction of Pak Shek Au Junction)				30	21-May-20	24-Jun-20	23	WD (6d)																	
Preparation work/Tree Survey/Site Clearance/GI				30	21-May-20	24-Jun-20	23	WD (6d)																	
S8P2-0010	Tree Survey and prepare tree felling and transplant report	SP-1060	S8P2-1010	30	21-May-20	24-Jun-20	23	WD (6d)																	
Portion 3 in Area A (Soil Treatment, Drainage & Roadwork)				60	06-Apr-20	19-Jun-20	661	WD (6d)																	
Preparation work/Tree Survey/Site Clearance/GI				60	06-Apr-20	19-Jun-20	661	WD (6d)																	
S8P3-1010	Site clearance	AD-1070	S8P3-1020	60	06-Apr-20	19-Jun-20	661	WD (6d)																	
Portion 5 in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)				72	06-Apr-20	06-Jul-20	67	WD (6d)																	
Preparation work/Tree Survey/Site Clearance/GI				72	06-Apr-20	06-Jul-20	67	WD (6d)																	
S8P5-1010	Site clearance	AD-1090	S8P5-2010, S	24	06-Apr-20*	08-May-20	67	WD (6d)																	
S8P5-1020	Site investigation	AD-1090, S8F	S8P5-2010, S	48	09-May-20*	06-Jul-20	67	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

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3-MONTH ROLLING PROGRAMME (2020-03 to 202...			
Date	Revision	Checked	Approved
29-Feb-20	Rev. 0	JC	BY

ID	Activity Name		Predecessors	Successors	Remaining Duration	Start	Finish	Total Float	Calendar	February 2020				March 2020				April 2020				May 2020				2020	
										02	09	16	23	01	08	15	22	29	05	12	19	26	03	10	17	24	31
Portion 6a in Area A (Soil Treatment, Bored Pile Wall, Drainage & Roadwork)																											
Preparation work/Tree Survey/Site Clearance/GI																											
S8P6a-1010	Site clearance	AD-1100	S8P6a-2010,	45	15-Feb-20 A	25-Apr-20	28	WD (6d)																			
S8P6a-1020	Site investigation	AD-1100, S8F	S8P6a-2010,	57	27-Apr-20*	06-Jul-20	28	WD (6d)																			
Portion 9b & 9d in Area A (Soil Treatment, Slope, Retaining Wall, Drainage & Roadwork)																											
Preparation work/Tree Survey/Site Clearance/GI																											
S8P9b-0010	Liasion with HKPF and submit proposal of protective measures for works near Lo Wu Firing Range	CD-1000	S8P9b-0020	87	10-Feb-20 A	25-May-20	707	CD (7d)																			
S8P9b-0020	Acceptance of protective measures for works near Lo Wu Firing Range	S8P9b-0010	S8P9b-0030	30	26-May-20	24-Jun-20	707	CD (7d)																			
Portion 8a in Area A (Soil Treatment, Reservoirs, Slope, Drainage & Roadwork)																											
Preparation work/Tree Survey/Site Clearance/GI																											
S8P8a-1010	Form site access to Flushing Water Service Reservoir	AD-1130	S8P8a-1020,	46	06-Jan-20 A	27-Apr-20	11	WD (6d)																			
S8P8a-1015	Site clearance	S8P8a-1010	S8K8-1010	90	28-Apr-20	14-Aug-20	41	WD (6d)																			
S8P8a-1020	General excavation (352230m3, 4 gang with 4 20T backhoes)	S8P8a-1010,	S8P8a-3010,	600	28-Apr-20	06-May-22	41	WD (6d)																			
S8P8a-1030	Form haul road to Flesh Water Service Reservoir	S8P8a-1010	S8K8-3010, S	150	28-Apr-20	27-Oct-20	11	WD (6d)																			
S8P8a-1040	Ground investigation and laboratory test (6 GI)	S8P8a-1010,	S8P8a-1050	45	28-Apr-20	20-Jun-20	165	WD (6d)																			
Portion 8b in Area A (Soil Treatment & Install Watermains by Trenchless / Open Trench Method)																											
Preparation work/Tree Survey/Site Clearance/GI																											
S8P8b-1010	Site Clearance	AD-1140	S8P8b-4010,	37	22-Apr-20*	05-Jun-20	36	WD (6d)																			
Section 11																											
Portion 6b in Area B (Soil Treatment & Operation of HAC Soil Treatment Plant)																											
Preparation work/Tree Survey/Site Clearance/GI																											
S11P6b-1010	Tree survey and prepare tree felling and transplant report	AD-1110, SP-	S11P6b-2010	24	12-Mar-20	09-Apr-20	124	WD (6d)																			
S11P6b-1020	Site Clearance	AD-1110	S11P6b-1030	26	10-Mar-20*	09-Apr-20	124	WD (6d)																			
S11P6b-1030	Ground investigation and laboratory test (2 GI)	S11P6b-1020	S11P6b-1040	20	17-Mar-20	09-Apr-20	124	WD (6d)																			
S11P6b-1040	Prepare Arsenic Assessment Report	S11P6b-1030	S11P6b-1050	24	14-Apr-20	13-May-20	1410	WD (6d)																			
S11P6b-1050	Arsenic Treatment Plan	S11P6b-1040	S11P6b-4010	24	14-May-20	10-Jun-20	1410	WD (6d)																			
KD4 - Setting up and T&C of the High Arsenic-containing Soil Treatment Plant																											
S11P6b-2010	Set up, testing and commissioning high arsenic-containing soil treatment plant (KD4)	SP-1020, S11	S11P6b-1000	72	14-Apr-20	10-Jul-20	124	WD (6d)																			
Section 13																											
Portion 2 in Area N (Soil Treatment, Slope, Drainage & Pak Shek Au Junction)																											
Preparation work/Tree Survey/Site Clearance/GI																											
S13P2-1010	Tree Survey & Site clearance for existing slope feature 2SE-B/CR148	AD-1060, SP-	S13P2-3005	60	12-Mar-20	27-May-20	451	WD (6d)																			
Civil Work																											
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)																											
Preparation work/Tree Survey/Site Clearance/GI																											
S13P7-1010	Site clearance	AD-1120	S13P7-1020	60	06-Apr-20	19-Jun-20	664	WD (6d)																			
Portion 6a in Area N (Soil Treatment, Noise Barrier, Drainage & Roadwork)																											
Preparation work/Tree Survey/Site Clearance/GI																											
S13P6a-1010	Site clearance	AD-1100	S13P6a-1020	48	15-Feb-20 A	29-Apr-20	607	WD (6d)																			
S13P6a-1020	Ground investigation and laboratory test (1 GI)	S13P6a-1010	S13P6a-1030	15	02-May-20	19-May-20	607	WD (6d)																			
S13P6a-1030	Prepare Arsenic Assessment Report	S13P6a-1020	S13P6a-1040	36	20-May-20	02-Jul-20	607	WD (6d)																			
Section 14																											
Portion 7 in Area P (Soil Treatment & KD3 - Tree Felling, General Site Clearance)																											
KD3 - Tree felling, general site clearance (including the berm removal / levelling and general site																											
Preparation work																											
S14P7P-1010	General site clearance for Area P (KD3)	AD-1120	S14P7P-1000	88	06-Apr-20	24-Jul-20	74	WD (6d)																			
Portion 7 in Area S3 (Soil Treatment & Operation of HAC Soil Treatment Plant)																											
Preparation work/Tree Survey/Site Clearance/GI																											
S14P7S3-1010	Tree survey and prepare tree felling and transplant report	AD-1120, SP-	S14P7S3-1030	24	06-Apr-20	08-May-20	24	WD (6d)																			
S14P7S3-1020	Site Clearance	AD-1120	S14P7S3-1030	24	06-Apr-20	08-May-20	24	WD (6d)																			
S14P7S3-1030	Ground investigation and laboratory test (6 GI)	S14P7S3-102	S14P7S3-104	24	09-May-20	05-Jun-20	24	WD (6d)																			
Portion 7 in Area T1, T2, T3 (Soil Treatment & Temp. Noise Barrier along Castle Peak Road)																											
Preparation work/Tree Survey/Site Clearance/GI																											
S14P7T-1010	Tree survey and prepare tree felling and transplant report	AD-1120, SP-	S14P7T-1020	60	06-Apr-20	19-Jun-20	361	WD (6d)																			
Portion 6a in Area S2 (Soil Treatment)																											
Preparation work/Tree Survey/Site Clearance/GI																											
S14P6a-1010	Tree survey and prepare tree felling and transplant report	AD-1100, SP-	S14P6a-1020	48	12-Mar-20	13-May-20	1352	WD (6d)																			
S14P6a-1020	Site Clearance	S14P6a-1010	S14P6a-1030	48	14-May-20	10-Jul-20	1352	WD (6d)																			



Build King – Richwell Engineering
Joint Venture

Planned Work

Critical Work

Actual Work

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Milestone

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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
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3-MONTH ROLLING PROGRAMME (2020-03 to 202...

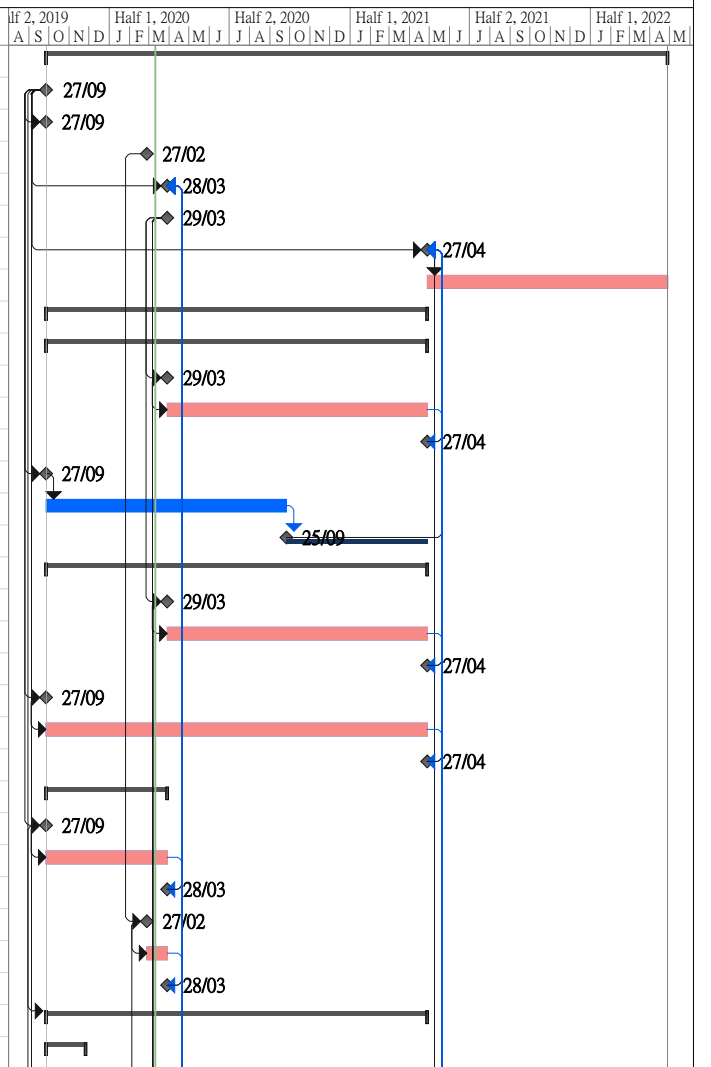
Date	Revision	Checked	Approved
29-Feb-20	Rev. 0	JC	BY

Activity ID	Activity Name	Predecessors	Successors	Remaining Duration	Start	Finish	Total Float	Calendar	February 2020				March 2020				April 2020				May 2020				2020	
									02	09	16	23	01	08	15	22	29	05	12	19	26	03	10	17	24	31
Portion 6b in Area S2 (Soil Treatment)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S14P6b-1010	Tree survey and prepare tree felling and transplant report	AD-1110, SP-	S14P6b-1020	48	12-Mar-20	13-May-20	1352	WD (6d)																		
S14P6b-1020	Site Clearance	S14P6b-1010	S14P6b-1030	48	14-May-20	10-Jul-20	1352	WD (6d)																		
Portion 1f in Area R (Soil Treatment & Construction of Interim CLC)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S14P1f-1010	Tree survey and prepare tree felling and transplant report	AD-1050, SP-	S14P1f-2020	24	12-Mar-20	09-Apr-20	3	WD (6d)																		
S14P1f-1020	Site Clearance	AD-1050	S14P1f-1030	16	06-Jan-20 A	18-Mar-20	6	WD (6d)																		
S14P1f-1030	Ground investigation and laboratory test (1 GI)	SP-1070, S14	S14P1f-1040	15	19-Mar-20	06-Apr-20	6	WD (6d)																		
S14P1f-1040	Prepare Arsenic Assessment Report	S14P1f-1030	S14P1f-1050	36	07-Apr-20	23-May-20	1523	WD (6d)																		
S14P1f-1050	Arsenic Treatment Plan	S14P1f-1040	S14P1f-3010	36	25-May-20	07-Jul-20	1523	WD (6d)																		
Interim Community Liaison Centre (CLC)																										
S14P1f-2010	Submissions and approval for proposed interim CLC	CD-1010, SP-	S14P1f-2020	10	01-Apr-20	10-Apr-20	1	CD (7d)																		
S14P1f-2015	Supply and delivery for proposed interim CLC	S14P1f-2010	S14P1f-2020	20	11-Apr-20	30-Apr-20	1	CD (7d)																		
S14P1f-2020	Construction of interim CLC	S14P1f-2010,	S14P1f-2040	30	16-Apr-20	22-May-20	1	WD (6d)																		
S14P1f-2030	Occupation of interim CLC	S14P1f-2020	S14P1f-2040	352	23-May-20	09-May-21	1484	CD (7d)																		
Portion 9c in Area S1 (Soil Treatment)																										
Preparation work/Tree Survey/Site Clearance/GI																										
S14P9c-1010	Tree survey and prepare tree felling and transplant report	AD-1170, SP-	S14P9c-1020	60	06-Apr-20	19-Jun-20	1304	WD (6d)																		
Section 15																										
S15-1000	Presevation and protection of tree	CD-1010	S15-1010	1740	06-Dec-19 A	03-Dec-24	399	CD (7d)																		
Section 21 (Subject to excision)																										
Portion 1d in Area M (Soil Treatment & Demolition of Existing CLC)																										
Preparation work																										
S21P1d-0010	Demolition of existing Community Liaison Centre (CLC)	S14P1f-2020		12	23-May-20	05-Jun-20*	1	WD (6d)																		
8.0 - Works due to PMI / CE																										
PC-1010	Remove the existing un-wanted vegetation in Area 1.2 within Portion 7 (PMI No. 001, CE No. 001)			0	20-Jan-20 A	12-Feb-20 A		WD (6d)																		
PC-1020	Remove the existing un-wanted vegetation in Area 1.3 within Portion 7 (PMI No. 001, CE No. 001)			0	15-Feb-20 A	18-Feb-20 A		WD (6d)																		
PC-1030	Remove the existing un-wanted vegetation in Area 2 within Portion 10a (PMI No. 001, CE No. 001)			0	03-Feb-20 A	12-Feb-20 A		WD (6d)																		
PC-1040	Remove the existing un-wanted vegetation in Area 3 within Portion 4 (PMI No. 001, CE No. 001)			0	05-Feb-20 A	12-Feb-20 A		WD (6d)																		


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

Ref: DP-01 rev 1

ID	WBS	Activities	Duration	Start	Finish	Float	lf 2, 2019 A S O N D	Half 1, 2020 J F M A M J	Half 2, 2020 J A S O N D	Half 1, 2021 J F M A M J	Half 2, 2021 J A S O N D	Half 1, 2022 J F M A M
1	1	ND/2019/06 Contract Key Dates	944 days	Fri 27 Sep '19	Wed 27 Apr '22	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 Portions 1, 4 & 6	0 days	Fri 27 Sep '19	Fri 27 Sep '19	0 days						
4	1.3	Commencement of Portions 2	0 days	Thu 27 Feb '20	Thu 27 Feb '20	0 days						
5	1.4	Completion of Portions 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	1.7	Project defects liability period	365 days	Wed 28 Apr '21	Wed 27 Apr '22	0 days						
9	2	Sections of the Works	579 days	Fri 27 Sep '19	Tue 27 Apr '21	0 days						
10	2.1	Section 1	579 days	Fri 27 Sep '19	Tue 27 Apr '21	0 days						
11	2.1.1	Starting date for Portion 3	0 days	Sun 29 Mar '20	Sun 29 Mar '20	0 days						
12	2.1.2	Work duration for Portion 3	395 days	Sun 29 Mar '20	Tue 27 Apr '21	0 days						
13	2.1.3	Completion date for Portion 3	0 days	Tue 27 Apr '21	Tue 27 Apr '21	0 days						
14	2.1.4	Starting date for Portion 4	0 days	Fri 27 Sep '19	Fri 27 Sep '19	0 days						
15	2.1.5	Work duration for Portion 4	365 days	Fri 27 Sep '19	Fri 25 Sep '20	0 days						
16	2.1.6	Completion date for Portion 4	0 days	Fri 25 Sep '20	Fri 25 Sep '20	214 days						
17	2.2	Section 2	579 days	Fri 27 Sep '19	Tue 27 Apr '21	0 days						
18	2.2.1	Starting date for Portion 5	0 days	Sun 29 Mar '20	Sun 29 Mar '20	0 days						
19	2.2.2	Work duration for Portion 5	395 days	Sun 29 Mar '20	Tue 27 Apr '21	0 days						
20	2.2.3	Completion date for Portion 5	0 days	Tue 27 Apr '21	Tue 27 Apr '21	0 days						
21	2.2.4	Starting date for Portion 6	0 days	Fri 27 Sep '19	Fri 27 Sep '19	0 days						
22	2.2.5	Work duration for Portion 6	579 days	Fri 27 Sep '19	Tue 27 Apr '21	0 days						
23	2.2.6	Completion date for Portion 6	0 days	Tue 27 Apr '21	Tue 27 Apr '21	0 days						
24	2.3	Section 3	184 days	Fri 27 Sep '19	Sat 28 Mar '20	0 days						
25	2.3.1	Starting date for Portion 1	0 days	Fri 27 Sep '19	Fri 27 Sep '19	0 days						
26	2.3.2	Work duration for Portion 1	184 days	Fri 27 Sep '19	Sat 28 Mar '20	0 days						
27	2.3.3	Completion date for Portion 1	0 days	Sat 28 Mar '20	Sat 28 Mar '20	0 days						
28	2.3.4	Starting date for Portion 2	0 days	Thu 27 Feb '20	Thu 27 Feb '20	0 days						
29	2.3.5	Work duration for Portion 2	31 days	Thu 27 Feb '20	Sat 28 Mar '20	0 days						
30	2.3.6	Completion date for Portion 2	0 days	Sat 28 Mar '20	Sat 28 Mar '20	0 days						
31	3	General Submission	579 days	Fri 27 Sep '19	Tue 27 Apr '21	0 days						
32	3.1	Commercial and Organization	60 days	Fri 27 Sep '19	Mon 25 Nov '19	0 days						



Ref: DP-01 rev 1

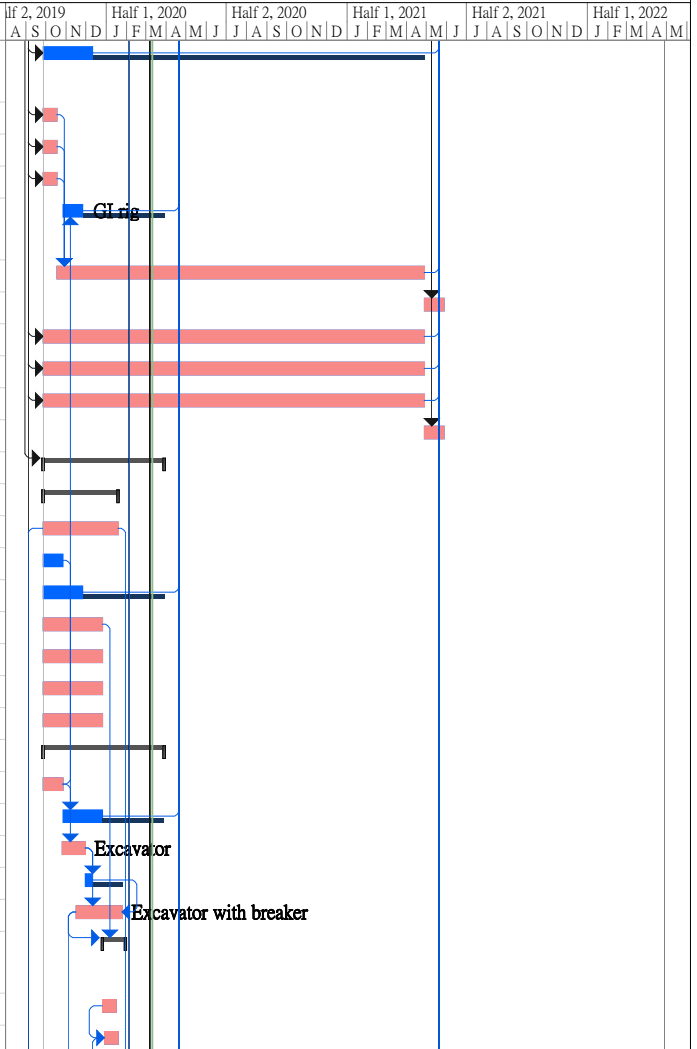

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 New Concepts Holdings Limited

Date: 10 March 2020
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Reprovisioning of North District Temporary Wholesale Market for Agricultural Products
Detailed Programme**

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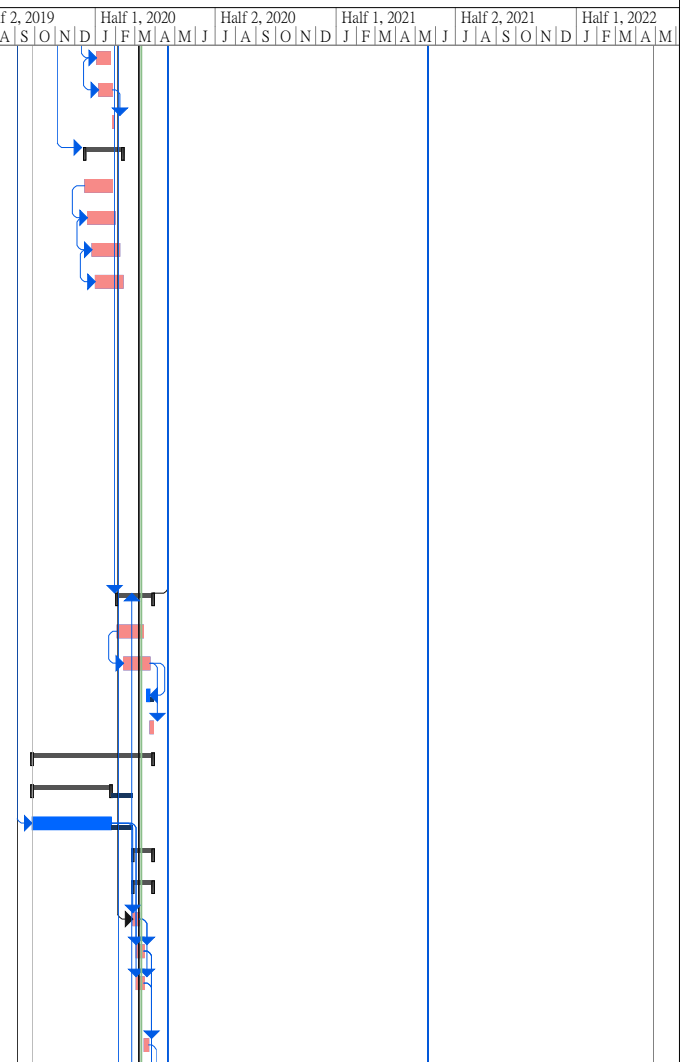
ID	WBS	Activities	Duration	Start	Finish	Float	lf 2, 2019	Half 1, 2020	Half 2, 2020	Half 1, 2021	Half 2, 2021	Half 1, 2022
							A S O N D	J F M A M J	J A S O N D	J F M A M J	J A S O N D	J F M A M
62	4.1	Set up PM and Contractor site accomodation including security and trip ticket system	75 days	Fri 27 Sep '19	Tue 10 Dec '19	504 days						
63	4.2	Initial survey	21 days	Fri 27 Sep '19	Thu 17 Oct '19	0 days						
64	4.3	Tree survey	21 days	Fri 27 Sep '19	Thu 17 Oct '19	0 days						
65	4.4	Condition survey	21 days	Fri 27 Sep '19	Thu 17 Oct '19	0 days						
66	4.5	Ground investigation borehole & installation of geotechnical instrumentation	30 days	Sun 27 Oct '19	Mon 25 Nov '19	124 days						
67	4.6	Site monitoring	558 days	Fri 18 Oct '19	Tue 27 Apr '21	0 days						
68	4.7	As-built record	30 days	Wed 28 Apr '21	Thu 27 May '21	0 days						
69	4.8	Coordination with CLP	579 days	Fri 27 Sep '19	Tue 27 Apr '21	0 days						
70	4.9	Coordination with TBE company	579 days	Fri 27 Sep '19	Tue 27 Apr '21	0 days						
71	4.10	Coordination with interface contractor	579 days	Fri 27 Sep '19	Tue 27 Apr '21	0 days						
72	4.11	Final hoarding removal	30 days	Wed 28 Apr '21	Thu 27 May '21	0 days						
73	5	Portion 1	184 days	Fri 27 Sep '19	Sat 28 Mar '20	0 days						
74	5.1	Submission	114 days	Fri 27 Sep '19	Sat 18 Jan '20	0 days						
75	5.1.1	Generic material submission	114 days	Fri 27 Sep '19	Sat 18 Jan '20	0 days						
76	5.1.2	Hoarding for Portion 1	30 days	Fri 27 Sep '19	Sat 26 Oct '19	0 days						
77	5.1.3	Temporary drainage diversion	60 days	Fri 27 Sep '19	Mon 25 Nov '19	124 days						
78	5.1.4	ELS in Portion 1	90 days	Fri 27 Sep '19	Wed 25 Dec '19	0 days						
79	5.1.5	Temporary lighting submission	90 days	Fri 27 Sep '19	Wed 25 Dec '19	0 days						
80	5.1.6	Drain laying submission	90 days	Fri 27 Sep '19	Wed 25 Dec '19	0 days						
81	5.1.7	Road paving submission	90 days	Fri 27 Sep '19	Wed 25 Dec '19	0 days						
82	5.2	Construction	184 days	Fri 27 Sep '19	Sat 28 Mar '20	0 days						
83	5.2.1	Mobilization and site setup	30 days	Fri 27 Sep '19	Sat 26 Oct '19	0 days						
84	5.2.2	Hoarding for Portion 1	60 days	Sun 27 Oct '19	Wed 25 Dec '19	94 days						
85	5.2.3	General site clearance	35 days	Sat 26 Oct '19	Fri 29 Nov '19	0 days						
86	5.2.4	Tree felling	10 days	Sat 30 Nov '19	Mon 09 Dec '19	46 days						
87	5.2.5	Removal of hard paving	70 days	Sat 16 Nov '19	Fri 24 Jan '20	0 days						
88	5.2.6	Underground pipelaying for drainage/sewerage & watermain	35 days	Thu 26 Dec '19	Wed 29 Jan '20	0 days						
89	5.2.6.1	Excavation	21 days	Thu 26 Dec '19	Wed 15 Jan '20	0 days						
90	5.2.6.2	Manhole construction	21 days	Sun 29 Dec '19	Sat 18 Jan '20	0 days						



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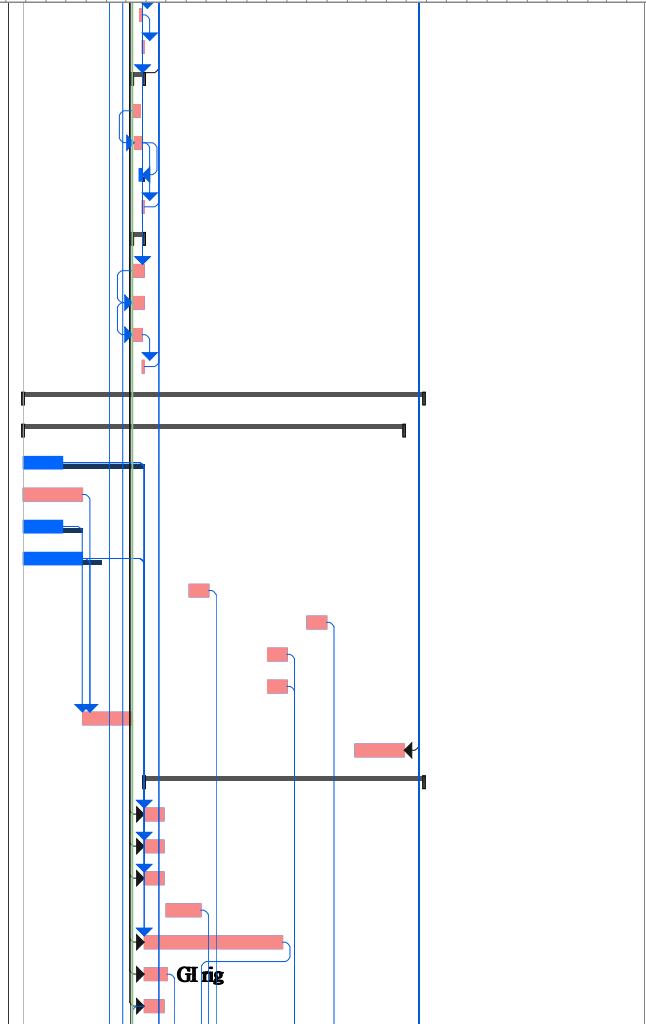
ID	WBS	Activities	Duration	Start	Finish	Float	1st 2, 2019	Half 1, 2020	Half 2, 2020	Half 1, 2021	Half 2, 2021	Half 1, 2022
							A S O N D	J F M A M J	J A S O N D	J F M A M J	J A S O N D	J F M A M J
91	5.2.6.3	Pipe laying	21 days	Fri 03 Jan '20	Thu 23 Jan '20	0 days						
92	5.2.6.4	Backfilling	21 days	Mon 06 Jan '20	Sun 26 Jan '20	0 days						
93	5.2.6.5	Testing including CCTV inspection	3 days	Mon 27 Jan '20	Wed 29 Jan '20	0 days						
94	5.2.7	Underground cable duct laying	58 days	Mon 16 Dec '19	Tue 11 Feb '20	0 days						
95	5.2.7.1	Excavation	42 days	Mon 16 Dec '19	Sun 26 Jan '20	0 days						
96	5.2.7.2	Draw pit construction	42 days	Fri 20 Dec '19	Thu 30 Jan '20	0 days						
97	5.2.7.3	Duct laying	42 days	Fri 27 Dec '19	Thu 06 Feb '20	0 days						
98	5.2.7.4	Backfilling	42 days	Wed 01 Jan '20	Tue 11 Feb '20	0 days						
99	5.2.8	Temporary lighting and water pipe installation	104 days	Mon 16 Dec '19	Sat 28 Mar '20	0 days						
100	5.2.8.1	Excavation	42 days	Mon 16 Dec '19	Sun 26 Jan '20	0 days						
101	5.2.8.2	Footing construction	49 days	Sat 11 Jan '20	Fri 28 Feb '20	0 days						
102	5.2.8.3	Drawpit construction and cable duct / water pipe laying	49 days	Sat 11 Jan '20	Fri 28 Feb '20	0 days						
103	5.2.8.4	Water pipe laying	49 days	Sat 11 Jan '20	Fri 28 Feb '20	0 days						
104	5.2.8.5	Temporary Lamp post erection	21 days	Sat 29 Feb '20	Fri 20 Mar '20	0 days						
105	5.2.8.6	Temporary lighting and other cable laying	7 days	Thu 19 Mar '20	Wed 25 Mar '20	0 days						
106	5.2.8.7	Testing & commissioning on temporary lighting	3 days	Thu 26 Mar '20	Sat 28 Mar '20	0 days						
107	5.2.9	Hard paving works and road marking	55 days	Mon 03 Feb '20	Sat 28 Mar '20	0 days						
108	5.2.9.1	Site formation works to hard paving and U-channel	40 days	Mon 03 Feb '20	Fri 13 Mar '20	0 days						
109	5.2.9.2	Hard paving works and road kerb	40 days	Thu 13 Feb '20	Mon 23 Mar '20	0 days						
110	5.2.9.3	Water point installation	5 days	Thu 19 Mar '20	Mon 23 Mar '20	5 days						
111	5.2.9.4	Road marking	5 days	Tue 24 Mar '20	Sat 28 Mar '20	0 days						
112	6	Portion 2	184 days	Fri 27 Sep '19	Sat 28 Mar '20	0 days						
113	6.1	Submission	120 days	Fri 27 Sep '19	Fri 24 Jan '20	33 days						
114	6.1.1	Submission (completed in Portion 1)	120 days	Fri 27 Sep '19	Fri 24 Jan '20	33 days						
115	6.2	Construction	31 days	Thu 27 Feb '20	Sat 28 Mar '20	0 days						
116	6.2.1	Temporary lighting and water pipe installation	31 days	Thu 27 Feb '20	Sat 28 Mar '20	0 days						
117	6.2.1.1	Excavation	10 days	Thu 27 Feb '20	Sat 07 Mar '20	0 days						
118	6.2.1.2	Footing construction	12 days	Tue 03 Mar '20	Sat 14 Mar '20	0 days						
119	6.2.1.3	Drawpit construction and cable duct / water pipe laying	12 days	Tue 03 Mar '20	Sat 14 Mar '20	0 days						
120	6.2.1.4	Temporary Lamp post erection	7 days	Sun 15 Mar '20	Sat 21 Mar '20	0 days						



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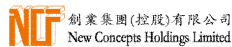
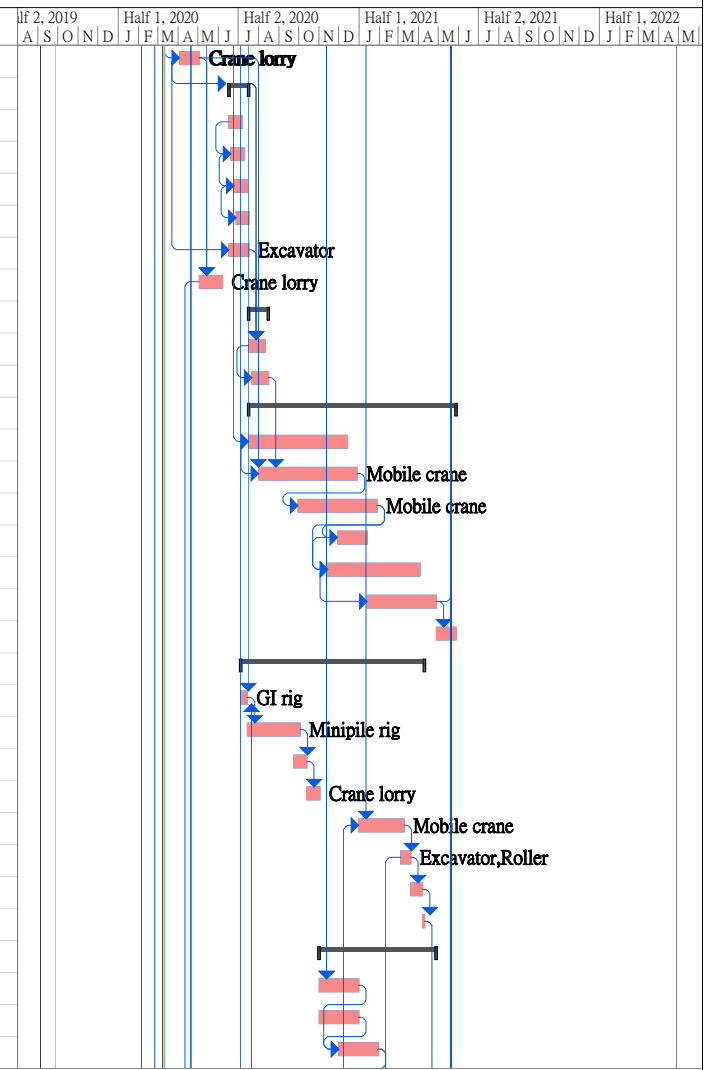
ID	WBS	Activities	Duration	Start	Finish	Float	lf 2, 2019	Half 1, 2020	Half 2, 2020	Half 1, 2021	Half 2, 2021	Half 1, 2022
							A | S | O | N | D	J | F | M | A | M | J	J | A | S | O | N | D	J | F | M | A | M | J	J | A | S | O | N | D	J | F | M | A | M
121	6.2.1.5	Temporary lighting and other cable laying	4 days	Sun 22 Mar '20	Wed 25 Mar '20	0 days						
122	6.2.1.6	Testing & commissioning on temporary lighting	3 days	Thu 26 Mar '20	Sat 28 Mar '20	0 days						
123	6.2.2	Hard paving works and road marking	18 days	Wed 11 Mar '20	Sat 28 Mar '20	0 days						
124	6.2.2.1	Site formation works to hard paving and U-channel	12 days	Wed 11 Mar '20	Sun 22 Mar '20	0 days						
125	6.2.2.2	Hard paving works and road kerb	12 days	Sat 14 Mar '20	Wed 25 Mar '20	0 days						
126	6.2.2.3	Water point installation	5 days	Sat 21 Mar '20	Wed 25 Mar '20	3 days						
127	6.2.2.4	Road marking	3 days	Thu 26 Mar '20	Sat 28 Mar '20	0 days						
128	6.2.3	Other works	18 days	Wed 11 Mar '20	Sat 28 Mar '20	0 days						
129	6.2.3.1	Temporary office and notice board erection	18 days	Wed 11 Mar '20	Sat 28 Mar '20	0 days						
130	6.2.3.2	Guard booth erection	18 days	Wed 11 Mar '20	Sat 28 Mar '20	0 days						
131	6.2.3.3	Drop bar system installation	15 days	Wed 11 Mar '20	Wed 25 Mar '20	0 days						
132	6.2.3.4	Drop bar system testing & commissioning	3 days	Thu 26 Mar '20	Sat 28 Mar '20	0 days						
133	7	Portion 3	609 days	Fri 27 Sep '19	Thu 27 May '21	0 days						
134	7.1	Submission	579 days	Fri 27 Sep '19	Tue 27 Apr '21	0 days						
135	7.1.1	Material submission & testing	60 days	Fri 27 Sep '19	Mon 25 Nov '19	124 days						
136	7.1.2	BIM execution plan with team leader	90 days	Fri 27 Sep '19	Wed 25 Dec '19	0 days						
137	7.1.3	CSD & CBWD submission	60 days	Fri 27 Sep '19	Mon 25 Nov '19	30 days						
138	7.1.4	Shop drawing for steel structure	90 days	Fri 27 Sep '19	Wed 25 Dec '19	30 days						
139	7.1.5	Method statement for mini-pile	30 days	Fri 05 Jun '20	Sat 04 Jul '20	0 days						
140	7.1.6	Method statement for piled retaining wall	30 days	Tue 01 Dec '20	Wed 30 Dec '20	0 days						
141	7.1.7	Method statement for soil retaining wall	30 days	Fri 02 Oct '20	Sat 31 Oct '20	0 days						
142	7.1.8	ELS design for soil retaining wall	30 days	Fri 02 Oct '20	Sat 31 Oct '20	0 days						
143	7.1.9	BIM model submission	75 days	Thu 26 Dec '19	Mon 09 Mar '20	0 days						
144	7.1.10	Final BIM model submission	75 days	Fri 12 Feb '21	Tue 27 Apr '21	0 days						
145	7.2	Construction	425 days	Sun 29 Mar '20	Thu 27 May '21	0 days						
146	7.2.1	Site clearance	30 days	Sun 29 Mar '20	Mon 27 Apr '20	0 days						
147	7.2.2	Hoarding for Portion 3	30 days	Sun 29 Mar '20	Mon 27 Apr '20	0 days						
148	7.2.3	Project signboard	30 days	Sun 29 Mar '20	Mon 27 Apr '20	0 days						
149	7.2.4	Removal of refuse collection point	53 days	Fri 01 May '20	Mon 22 Jun '20	0 days						
150	7.2.5	Fabrication of steel structure	210 days	Sun 29 Mar '20	Sat 24 Oct '20	0 days						
151	7.2.6	Ground investigation borehole (3 nos.)	35 days	Sun 29 Mar '20	Sat 02 May '20	0 days						
152	7.2.7	Excavation for plate load test	1 day	Sun 29 Mar '20	Mon 27 Apr '20	0 days						



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153	7.2.8	Plate load test for canopy footings	30 days	Fri 03 Apr '20	Sat 02 May '20	0 days						
154	7.2.9	Underground pipelaying for drainage/sewerage	30 days	Wed 17 Jun '20	Thu 16 Jul '20	0 days						
155	7.2.9.1	Excavation	20 days	Wed 17 Jun '20	Mon 06 Jul '20	0 days						
156	7.2.9.2	Manhole construction	20 days	Sat 20 Jun '20	Thu 09 Jul '20	0 days						
157	7.2.9.3	Pipe laying	20 days	Thu 25 Jun '20	Tue 14 Jul '20	0 days						
158	7.2.9.4	Backfilling	19 days	Sun 28 Jun '20	Thu 16 Jul '20	0 days						
159	7.2.10	Underground cable duct and water pipe laying	30 days	Wed 17 Jun '20	Thu 16 Jul '20	0 days						
160	7.2.11	Construction of canopy footing	35 days	Sun 03 May '20	Sat 06 Jun '20	0 days						
161	7.2.12	Hard paving works	30 days	Fri 17 Jul '20	Sat 15 Aug '20	0 days						
162	7.2.12.1	Site formation works for hard paving	25 days	Fri 17 Jul '20	Mon 10 Aug '20	0 days						
163	7.2.12.2	Paving works for steel canopy	25 days	Wed 22 Jul '20	Sat 15 Aug '20	0 days						
164	7.2.13	Steel canopy	315 days	Fri 17 Jul '20	Thu 27 May '21	0 days						
165	7.2.13.1	Delivery of steel structure	150 days	Fri 17 Jul '20	Sun 13 Dec '20	0 days						
166	7.2.13.2	Erection of steel structure (column)	150 days	Sat 01 Aug '20	Mon 28 Dec '20	0 days						
167	7.2.13.3	Erection of steel structure (roof)	120 days	Wed 30 Sep '20	Wed 27 Jan '21	0 days						
168	7.2.13.4	Application of FRP paint	45 days	Sun 29 Nov '20	Tue 12 Jan '21	0 days						
169	7.2.13.5	Erection of roof deck and skylight	140 days	Sat 14 Nov '20	Fri 02 Apr '21	0 days						
170	7.2.13.6	Installation of solar panel	105 days	Wed 13 Jan '21	Tue 27 Apr '21	0 days						
171	7.2.13.7	Testing and commissioning on solar panel	30 days	Wed 28 Apr '21	Thu 27 May '21	0 days						
172	7.2.14	Piled retaining wall	279 days	Sun 05 Jul '20	Fri 09 Apr '21	0 days						
173	7.2.14.1	Predrilling	10 days	Sun 05 Jul '20	Tue 14 Jul '20	0 days						
174	7.2.14.2	Mini-pile (40 nos.)	80 days	Wed 15 Jul '20	Fri 02 Oct '20	0 days						
175	7.2.14.3	Proof drilling	20 days	Wed 23 Sep '20	Mon 12 Oct '20	0 days						
176	7.2.14.4	Load testing for mini-pile	20 days	Tue 13 Oct '20	Sun 01 Nov '20	0 days						
177	7.2.14.5	Retaining wall structure	69 days	Thu 31 Dec '20	Tue 09 Mar '21	0 days						
178	7.2.14.6	Road formation works	15 days	Fri 05 Mar '21	Fri 19 Mar '21	0 days						
179	7.2.14.7	Hard paving works	18 days	Sat 20 Mar '21	Tue 06 Apr '21	0 days						
180	7.2.14.8	Road marking	3 days	Wed 07 Apr '21	Fri 09 Apr '21	0 days						
181	7.2.15	Soil Retaining wall	178 days	Sun 01 Nov '20	Tue 27 Apr '21	0 days						
182	7.2.15.1	Excavation to formation level	60 days	Sun 01 Nov '20	Wed 30 Dec '20	0 days						
183	7.2.15.2	Drainage temporary diversion	60 days	Sun 01 Nov '20	Wed 30 Dec '20	0 days						
184	7.2.15.3	Backfilling to foundation level	60 days	Tue 01 Dec '20	Fri 29 Jan '21	0 days						



Critical Split Task Milestone Summary Critical Slack

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

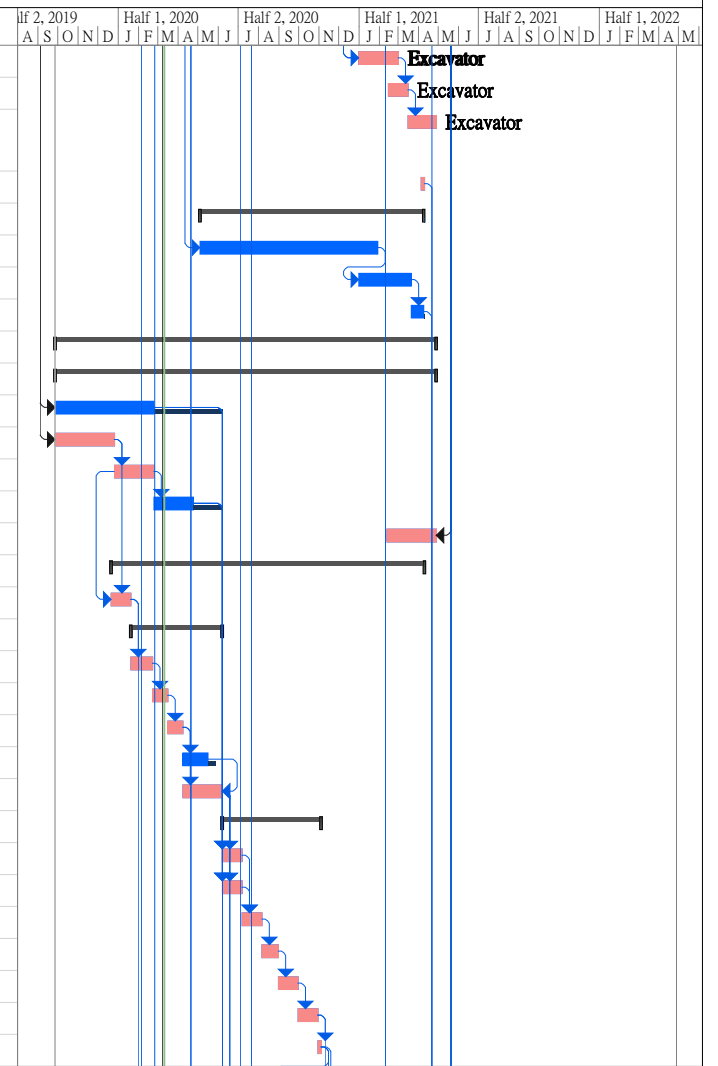
Date: 10 March 2020

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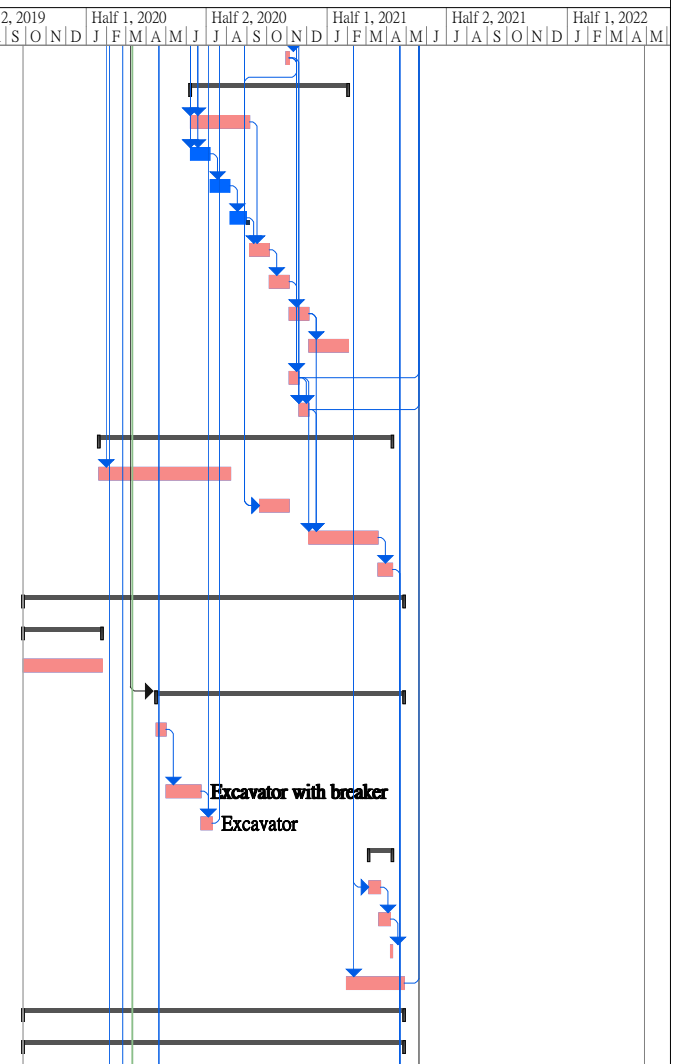
ID	WBS	Activities	Duration	Start	Finish	Float	lf 2, 2019 A S O N D	Half 1, 2020 J F M A M J	Half 2, 2020 J A S O N D	Half 1, 2021 J F M A M J	Half 2, 2021 J A S O N D	Half 1, 2022 J F M A M
185	7.2.15.4	Retaining wall structure	60 days	Thu 31 Dec '20	Sun 28 Feb '21	0 days						
186	7.2.15.5	Backfilling to road formation level	30 days	Sun 14 Feb '21	Mon 15 Mar '21	0 days						
187	7.2.15.6	Paving works for roadwork and footpath with chainlink fence	43 days	Tue 16 Mar '21	Tue 27 Apr '21	0 days						
188	7.2.16	Road marking	5 days	Mon 05 Apr '21	Fri 09 Apr '21	0 days						
189	7.2.17	MEP installation	340 days	Mon 04 May '20	Thu 08 Apr '21	1 day						
190	7.2.17.1	first fixing	270 days	Mon 04 May '20	Thu 28 Jan '21	0 days						
191	7.2.17.2	final fixing	80 days	Thu 31 Dec '20	Sat 20 Mar '21	0 days						
192	7.2.17.3	Testing & commissioning	30 days	Sun 21 Mar '21	Thu 08 Apr '21	1 day						
193	8	Portion 4	579 days	Fri 27 Sep '19	Tue 27 Apr '21	0 days						
194	8.1	Submission	579 days	Fri 27 Sep '19	Tue 27 Apr '21	0 days						
195	8.1.1	Generic material submission	150 days	Fri 27 Sep '19	Sun 23 Feb '20	104 days						
196	8.1.2	ELS for management office building	90 days	Fri 27 Sep '19	Wed 25 Dec '19	0 days						
197	8.1.3	CSD, CBWD and staircase submission	60 days	Thu 26 Dec '19	Sun 23 Feb '20	0 days						
198	8.1.4	BIM model submission	60 days	Mon 24 Feb '20	Thu 23 Apr '20	44 days						
199	8.1.5	Final BIM model submission	75 days	Fri 12 Feb '21	Tue 27 Apr '21	0 days						
200	8.2	Construction	476 days	Sat 21 Dec '19	Fri 09 Apr '21	0 days						
201	8.2.1	Site formation for management office building	30 days	Sat 21 Dec '19	Sun 19 Jan '20	0 days						
202	8.2.2	Carcass of management office building	139 days	Mon 20 Jan '20	Sat 06 Jun '20	0 days						
203	8.2.2.1	Raft foundation	33 days	Mon 20 Jan '20	Fri 21 Feb '20	0 days						
204	8.2.2.2	Foundation to ground level	23 days	Sat 22 Feb '20	Sun 15 Mar '20	0 days						
205	8.2.2.3	Ground level to roof level	23 days	Mon 16 Mar '20	Tue 07 Apr '20	0 days						
206	8.2.2.4	Water tanks	38 days	Wed 08 Apr '20	Fri 15 May '20	12 days						
207	8.2.2.5	Roof level to upper roof level	60 days	Wed 08 Apr '20	Sat 06 Jun '20	0 days						
208	8.2.3	Fitout works for tranformer and generator room	150 days	Sun 07 Jun '20	Tue 03 Nov '20	0 days						
209	8.2.3.1	Door frame	30 days	Sun 07 Jun '20	Mon 06 Jul '20	0 days						
210	8.2.3.2	Minor steelwork for chequer plate	30 days	Sun 07 Jun '20	Mon 06 Jul '20	0 days						
211	8.2.3.3	Screeding	30 days	Tue 07 Jul '20	Wed 05 Aug '20	0 days						
212	8.2.3.4	Wall rendering	25 days	Thu 06 Aug '20	Sun 30 Aug '20	0 days						
213	8.2.3.5	Painting	30 days	Mon 31 Aug '20	Tue 29 Sep '20	0 days						
214	8.2.3.6	Door & ironmongery	30 days	Wed 30 Sep '20	Thu 29 Oct '20	0 days						
215	8.2.3.7	Signage	5 days	Fri 30 Oct '20	Tue 03 Nov '20	0 days						



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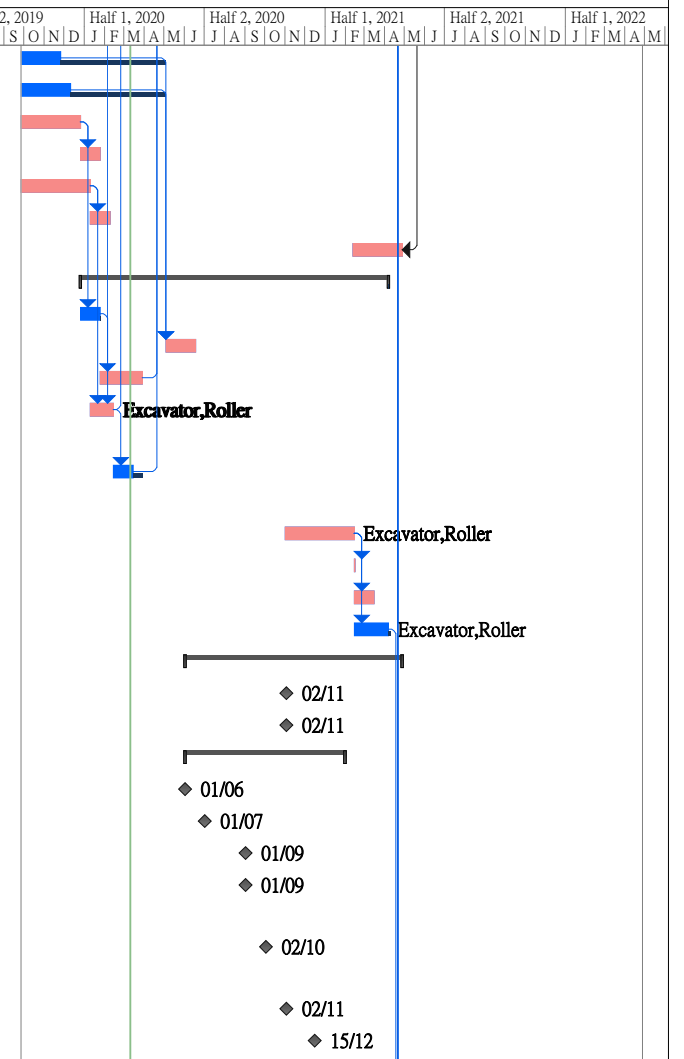
ID	WBS	Activities	Duration	Start	Finish	Float	lf 2, 2019 A S O N D	Half 1, 2020 J F M A M J	Half 2, 2020 J J A S O N D	Half 1, 2021 J F M A M J	Half 2, 2021 J J A S O N D	Half 1, 2022 J F M A M
216	8.2.3.8	Chequer plate installation	5 days	Fri 30 Oct '20	Tue 03 Nov '20	0 days						
217	8.2.4	Fitout works of management office building	240 days	Sun 07 Jun '20	Mon 01 Feb '21	0 days						
218	8.2.4.1	Steelwork staircase	90 days	Sun 07 Jun '20	Fri 04 Sep '20	0 days						
219	8.2.4.2	Door frame	30 days	Sun 07 Jun '20	Mon 06 Jul '20	0 days						
220	8.2.4.3	Screeding	30 days	Tue 07 Jul '20	Wed 05 Aug '20	0 days						
221	8.2.4.4	Wall rendering	25 days	Thu 06 Aug '20	Sun 30 Aug '20	5 days						
222	8.2.4.5	Painting	30 days	Sat 05 Sep '20	Sun 04 Oct '20	0 days						
223	8.2.4.6	Floor tiling	30 days	Mon 05 Oct '20	Tue 03 Nov '20	0 days						
224	8.2.4.7	Door & ironmongery	30 days	Wed 04 Nov '20	Thu 03 Dec '20	0 days						
225	8.2.4.8	Minor steelwork installation	60 days	Fri 04 Dec '20	Mon 01 Feb '21	0 days						
226	8.2.5	Transformer installation	15 days	Wed 04 Nov '20	Wed 18 Nov '20	0 days						
227	8.2.6	Generator installation	15 days	Thu 19 Nov '20	Thu 03 Dec '20	0 days						
228	8.2.7	MEP installation	446 days	Mon 20 Jan '20	Fri 09 Apr '21	0 days						
229	8.2.7.1	first fixing	200 days	Mon 20 Jan '20	Thu 06 Aug '20	0 days						
230	8.2.7.2	final fixing for CLP transformer installation	45 days	Sun 20 Sep '20	Tue 03 Nov '20	0 days						
231	8.2.7.3	final fixing	105 days	Fri 04 Dec '20	Thu 18 Mar '21	0 days						
232	8.2.7.4	Testing & commissioning	22 days	Fri 19 Mar '21	Fri 09 Apr '21	0 days						
233	9	Portion 5	579 days	Fri 27 Sep '19	Tue 27 Apr '21	0 days						
234	9.1	Submission	120 days	Fri 27 Sep '19	Fri 24 Jan '20	0 days						
235	9.1.1	Demolition Plan	120 days	Fri 27 Sep '19	Fri 24 Jan '20	0 days						
236	9.2	Construction	377 days	Thu 16 Apr '20	Tue 27 Apr '21	0 days						
237	9.2.1	Provision of temporary toilet and refuse collection point	15 days	Thu 16 Apr '20	Thu 30 Apr '20	0 days						
238	9.2.2	Demolition of public toilet	53 days	Fri 01 May '20	Mon 22 Jun '20	0 days						
239	9.2.3	Backfilling to ground level	17 days	Tue 23 Jun '20	Thu 09 Jul '20	0 days						
240	9.2.4	Hard paving works and road marking	36 days	Fri 05 Mar '21	Fri 09 Apr '21	0 days						
241	9.2.4.1	Road formation works	18 days	Fri 05 Mar '21	Mon 22 Mar '21	0 days						
242	9.2.4.2	Hard paving works	18 days	Sat 20 Mar '21	Tue 06 Apr '21	0 days						
243	9.2.4.3	Road marking	3 days	Wed 07 Apr '21	Fri 09 Apr '21	0 days						
244	9.2.5	Landscape works	88 days	Sat 30 Jan '21	Tue 27 Apr '21	0 days						
245	10	Portion 6	579 days?	Fri 27 Sep '19	Tue 27 Apr '21	0 days?						
246	10.1	Submission	579 days	Fri 27 Sep '19	Tue 27 Apr '21	0 days						



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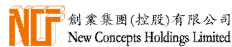
ID	WBS	Activities	Duration	Start	Finish	Float	lf 2, 2019 A S O N D	Half 1, 2020 J F M A M J	Half 2, 2020 J A S O N D	Half 1, 2021 J F M A M J	Half 2, 2021 J A S O N D	Half 1, 2022 J F M A M
247	10.1.1	Tree surveying report	60 days	Fri 27 Sep '19	Mon 25 Nov '19	160 days						
248	10.1.2	Method statement for tree felling	75 days	Fri 27 Sep '19	Tue 10 Dec '19	145 days						
249	10.1.3	Method statement for trial pits at revetment	90 days	Fri 27 Sep '19	Wed 25 Dec '19	0 days						
250	10.1.4	Consent from DSD on trial pits	30 days	Thu 26 Dec '19	Fri 24 Jan '20	0 days						
251	10.1.5	Method statement for soil replacement at revetment	105 days	Fri 27 Sep '19	Thu 09 Jan '20	0 days						
252	10.1.6	Consent from DSD on soil replacement	30 days	Fri 10 Jan '20	Sat 08 Feb '20	0 days						
253	10.1.7	Final BIM model submission	75 days	Fri 12 Feb '21	Tue 27 Apr '21	0 days						
254	10.2	Construction	468 days?	Thu 26 Dec '19	Tue 06 Apr '21	1 day?						
255	10.2.1	Ground investigation (trial pits 7 nos.)	30 days	Thu 26 Dec '19	Fri 24 Jan '20	1 day						
256	10.2.2	Tree felling	45 days	Mon 04 May '20	Wed 17 Jun '20	0 days						
257	10.2.3	Temporary entrance for interim stage	64 days	Sat 25 Jan '20	Sat 28 Mar '20	0 days						
258	10.2.4	Soil replacement at river revetment next to Portions 1 & 4	35 days	Fri 10 Jan '20	Thu 13 Feb '20	0 days						
259	10.2.5	Landscape works at river revetment next to Portions 1 & 4	30 days	Fri 14 Feb '20	Sat 14 Mar '20	14 days						
260	10.2.6	Soil replacement at river revetment next to Portion 3	105 days	Sun 01 Nov '20	Sat 13 Feb '21	0 days						
261	10.2.7	Reinstatement of U-channel	1 day?	Sun 14 Feb '21	Sun 14 Feb '21	0 days?						
262	10.2.8	Landscape works at river revetment next to Portion 3	30 days	Sun 14 Feb '21	Mon 15 Mar '21	0 days						
263	10.2.9	Reinstatement of hard pavement / footpath	52 days	Sun 14 Feb '21	Tue 06 Apr '21	3 days						
264	11	Statutory Submissions / Requirements	330 days	Mon 01 Jun '20	Tue 27 Apr '21	0 days						
265	11.1	Water supplies connection	0 days	Mon 02 Nov '20	Mon 02 Nov '20	0 days						
266	11.2	Power energization	0 days	Mon 02 Nov '20	Mon 02 Nov '20	0 days						
267	11.3	Fire Services Installation	243 days	Mon 01 Jun '20	Sat 30 Jan '21	0 days						
268	11.3.1	Form WWO46 - Part I & II Submission	0 days	Mon 01 Jun '20	Mon 01 Jun '20	0 days						
269	11.3.2	Form WWO46 - Part III Endorsement by WSD	0 days	Wed 01 Jul '20	Wed 01 Jul '20	0 days						
270	11.3.3	Direct Link Application	0 days	Tue 01 Sep '20	Tue 01 Sep '20	0 days						
271	11.3.4	FS Plumbing Drawings Final Amendment Submission to WSD	0 days	Tue 01 Sep '20	Tue 01 Sep '20	0 days						
272	11.3.5	WSD's endorsement on FS Plumbing Drawings Final Amendment	0 days	Fri 02 Oct '20	Fri 02 Oct '20	0 days						
273	11.3.6	Form WWO46 - Part IV Submission	0 days	Mon 02 Nov '20	Mon 02 Nov '20	0 days						
274	11.3.7	WSD Inspection	0 days	Tue 15 Dec '20	Tue 15 Dec '20	0 days						



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275	11.3.8	Water sampling	0 days	Tue 22 Dec '20	Tue 22 Dec '20	0 days				◆ 22/12		
276	11.3.9	Submission of lab test report to WSD	0 days	Sat 02 Jan '21	Sat 02 Jan '21	0 days				◆ 02/01		
277	11.3.10	WWO46 - Part V Endorsed by WSD	0 days	Sat 30 Jan '21	Sat 30 Jan '21	0 days				◆ 30/01		
278	11.4	MVAC Installation	198 days	Sat 01 Aug '20	Mon 15 Feb '21	0 days						
279	11.4.1	FSI314 VAC drawing Submission to FSD	0 days	Sat 01 Aug '20	Sat 01 Aug '20	0 days				◆ 01/08		
280	11.4.2	FSI314 VAC drawing Submission approved by FSD	0 days	Fri 02 Oct '20	Fri 02 Oct '20	0 days				◆ 02/10		
281	11.4.3	FSI/314 & 501 Submission (VAC System)	0 days	Mon 15 Feb '21	Mon 15 Feb '21	0 days					◆ 15/02	
282	11.5	Plumbing Installation	259 days	Mon 01 Jun '20	Mon 15 Feb '21	0 days						
283	11.5.1	Form WWO46 - Part I & II Submission	0 days	Mon 01 Jun '20	Mon 01 Jun '20	0 days				◆ 01/06		
284	11.5.2	Form WWO46 - Part III Endorsement by WSD	0 days	Thu 02 Jul '20	Thu 02 Jul '20	0 days				◆ 02/07		
285	11.5.3	Plumbing Drawings Final Amendment Submission to WSD	0 days	Tue 01 Sep '20	Tue 01 Sep '20	0 days				◆ 01/09		
286	11.5.4	WSD's endorsement on Plumbing Drawings Final Amendment	0 days	Fri 02 Oct '20	Fri 02 Oct '20	0 days				◆ 02/10		
287	11.5.5	Form WWO46 - Part IV Submission	0 days	Fri 02 Oct '20	Fri 02 Oct '20	0 days				◆ 02/10		
288	11.5.6	WSD Inspection	0 days	Tue 01 Dec '20	Tue 01 Dec '20	0 days				◆ 01/12		
289	11.5.7	WWO46 - Part V(a) Endorsed by WSD	0 days	Tue 15 Dec '20	Tue 15 Dec '20	0 days				◆ 15/12		
290	11.5.8	Water sampling	0 days	Tue 15 Dec '20	Tue 15 Dec '20	0 days				◆ 15/12		
291	11.5.9	Submission of lab test report to WSD	0 days	Sat 02 Jan '21	Sat 02 Jan '21	0 days				◆ 02/01		
292	11.5.10	WWO46 - Part V(b) Endorsed by WSD	0 days	Sat 30 Jan '21	Sat 30 Jan '21	0 days				◆ 30/01		
293	11.5.11	WWO1005 issuance	0 days	Mon 15 Feb '21	Mon 15 Feb '21	0 days				◆ 15/02		
294	11.6	Drainage	89 days	Tue 01 Dec '20	Sun 28 Feb '21	0 days						
295	11.6.1	Drainage plan final amendment	0 days	Tue 01 Dec '20	Tue 01 Dec '20	0 days				◆ 01/12		
296	11.6.2	Approval	0 days	Sun 28 Feb '21	Sun 28 Feb '21	0 days					◆ 28/02	
297	11.7	Form FS314A with FS251 - Fire Services Installation Plans	7 days	Sat 03 Apr '21	Fri 09 Apr '21	0 days						
298	11.8	FSD inspection	14 days	Sat 10 Apr '21	Fri 23 Apr '21	0 days						
299	11.9	FSD acknowledgement	4 days	Sat 24 Apr '21	Tue 27 Apr '21	0 days						



Critical Split Task Milestone ◆ Summary Critical Slack

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

Date: 10 March 2020

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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.

**APPENDIX C
COPIES OF CALIBRATION
CERTIFCATES**

TEST REPORT

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

Test Report No.: 31950
Date of Issue: 2019-08-14
Date Received: 2019-08-12
Date Tested: 2019-08-12
Date Completed: 2019-08-14
Next Due Date: 2020-08-13

Page: 1 of 1

ATTN: Mr. W. K. Tang

Certificate of Calibration

Item for Calibration:

Description : 'SVANTEK' Integrating Sound Level
Meter
Manufacturer : SVANTEK
Model No. : SVAN 957
Serial No. : 21459
Microphone No. : 43676
Equipment No. : N-08-08

Test Conditions:

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

Test Specifications

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
Laboratory Manager

TEST REPORT

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

Test Report No.:	31950A
Date of Issue:	2019-08-14
Date Received:	2019-08-12
Date Tested:	2019-08-12
Date Completed:	2019-08-14
Next Due Date:	2020-08-13

Page: 1 of 1

ATTN: Mr. W. K. Tang

Certificate of Calibration

Item for Calibration:

Description	: 'SVANTEK' Integrating Sound Level Meter
Manufacturer	: SVANTEK
Model No.	: SVAN 957
Serial No.	: 21460
Microphone No.	: 43679
Equipment No.	: N-08-09

Test Conditions:

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

Test Specifications

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
Laboratory Manager

TEST REPORT

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

Test Report No.: 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 Temperature : 17-22 degree Celsius
Relative Humidity : 40-70%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.: 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 Temperature : 17-22 degree Celsius
Relative Humidity : 40-70%

Methodology:

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

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.: 32243A
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. : 24780
Equipment No. : N-09-05

Test conditions:

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

Methodology:

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

Results:

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

PREPARED AND CHECKED BY:

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


PATRICK TSE
General Manager

TEST REPORT

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

Test Report No.: 31951-V1
Date of Issue: 2020-04-07
Date Received: 2019-08-16
Date Tested: 2019-08-16
Date Completed: 2019-08-20
Next Due Date: 2020-08-19

Page: 1 of 1

ATTN: Mr. W. K. Tang

Certificate of Calibration

Item for Calibration:

Description : Acoustical Calibrator
Manufacturer : Brüel & Kjær
Model No. : 4231
Serial No. : 2412367
Equipment No. : N-02-03

Test Conditions:

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

Methodology:

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

Results:

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

Remark: This report supersedes the one dated 2019-08-20 with certificate number 31951.

PREPARED AND CHECKED BY:

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


PATRICK TSE
Laboratory Manager

**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 March 2020

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

EP-475/2013/A: 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 Noise Monitoring for April 2020

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

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

EP-475/2013/A: 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)

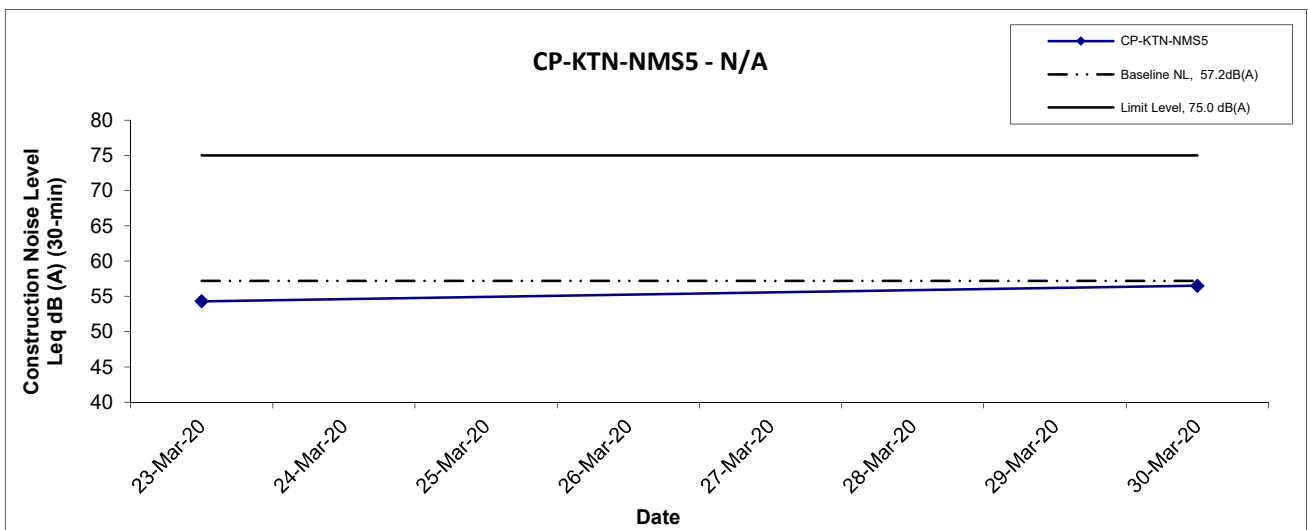
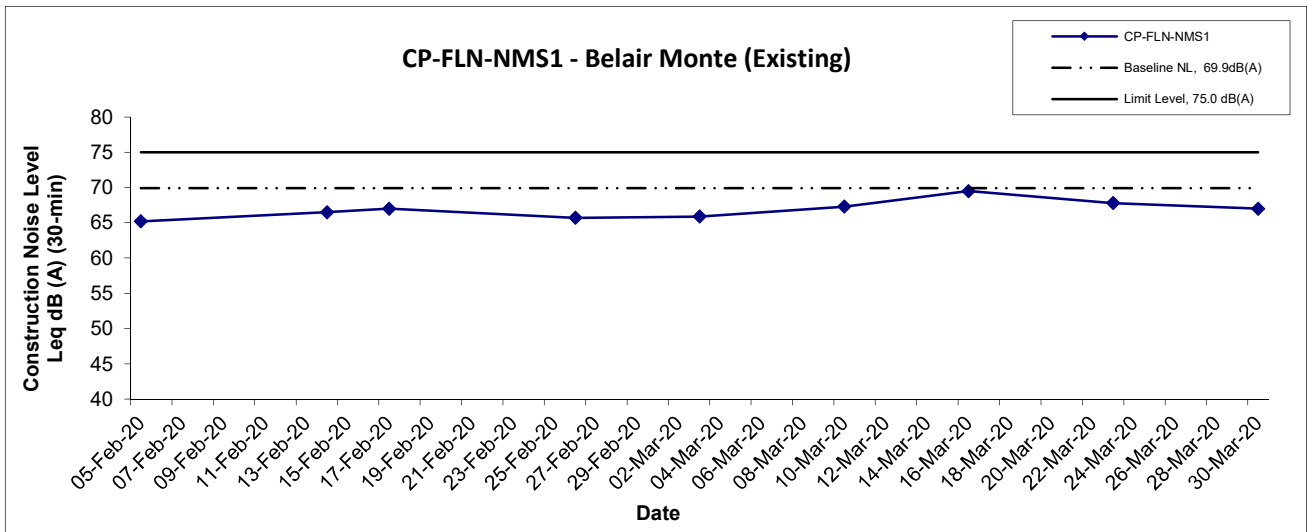
APPENDIX E
NOISE MONITORING RESULTS AND
GRAPHICAL PRESENTATION


Appendix E - Noise Monitoring Results

Location CP-FLN-NMS1 - Belair Monte (Existing)								
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}	L _{eq}
3-Mar-20	Cloudy	8:45	66.7	70.4	56.7	65.9	69.9	65.9 Measured ≤ Baseline
		8:50	66.9	70.1	56.4			
		8:55	66.4	69.8	56.2			
		9:00	64.9	68.8	56.9			
		9:05	64.9	68.8	56.9			
		9:10	64.9	68.7	56.8			
10-Mar-20	Sunny	15:50	66.3	70.0	56.4	67.3		67.3 Measured ≤ Baseline
		15:55	68.1	70.3	56.7			
		16:00	65.4	68.6	57.3			
		16:05	66.9	70.6	57.6			
		16:10	68.3	71.1	59.8			
		16:15	68.1	71.6	58.2			
16-Mar-20	Cloudy	9:55	68.7	72.9	65.2	69.5		69.5 Measured ≤ Baseline
		10:00	68.5	71.7	66.0			
		10:05	70.2	73.8	64.4			
		10:10	69.6	73.5	65.9			
		10:15	71.2	75.0	66.9			
		10:20	68.3	71.4	66.1			
23-Mar-20	Sunny	9:30	68.6	72.2	55.1	67.8		67.8 Measured ≤ Baseline
		9:35	68.0	71.8	56.9			
		9:40	67.8	71.7	55.0			
		9:45	65.5	70.6	54.2			
		9:50	68.1	71.5	55.0			
		9:55	67.9	71.9	56.7			
30-Mar-20	Cloudy	9:15	67.7	71.1	57.0	67.0		67.0 Measured ≤ Baseline
		9:20	66.7	70.6	58.5			
		9:25	66.0	70.3	56.6			
		9:30	67.4	71.2	57.5			
		9:35	68.0	71.1	58.7			
		9:40	65.7	69.2	58.4			

Location CP-KTN-NMS5 - N/A								
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level	Construction Noise Level
			L _{eq}	L ₁₀	L ₉₀	L _{eq}	L _{eq}	L _{eq}
23-Mar-20	Cloudy	10:30	56.3	56.4	47.4	54.3	57.2	54.3 Measured ≤ Baseline
		10:35	50.4	52.5	46.1			
		10:40	51.5	54.8	48.4			
		10:45	53.9	53.9	49.6			
		10:50	51.9	53.3	48.4			
		10:55	57.2	56.6	45.5			
30-Mar-20	Cloudy	10:00	56.1	57.9	53.5	56.5		56.5 Measured ≤ Baseline
		10:05	57.4	58.5	53.3			
		10:10	54.4	55.4	53.2			
		10:15	56.5	58.3	53.1			
		10:20	56.8	58.9	54.2			
		10:25	57.1	55.4	50.0			

Noise Levels



Title	CEDD NDO 042019 ET Construction 1 Ph Dev Kwu Tung Fanling North Graphical Presentation of Construction Noise Monitoring Results	Scale	Project	
		N.T.S	No. WMA20002	
		Date	Appendix	
		Mar 20	E	

APPENDIX F
WEATHER CONDITION

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

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1 March 2020	22.8	82	-
2 March 2020	20.1	84	trace
3 March 2020	19.4	81	trace
4 March 2020	19.9	84	3.1
5 March 2020	18.2	85	0.4
6 March 2020	18.3	80	trace
7 March 2020	20.6	88	trace
8 March 2020	22.1	92	trace
9 March 2020	23.4	89	trace
10 March 2020	23.4	67	trace
11 March 2020	19.2	72	trace
12 March 2020	19.2	89	trace
13 March 2020	21.4	91	-
14 March 2020	21.6	78	0.4
15 March 2020	20.2	70	-

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
16 March 2020	20.3	75	-
17 March 2020	20.3	79	-
18 March 2020	20.5	86	10.7
19 March 2020	21.1	88	0.8
20 March 2020	21.2	87	0.4
21 March 2020	21.2	94	0.2
22 March 2020	24.2	84	-
23 March 2020	24.6	81	-
24 March 2020	22.8	82	trace
25 March 2020	22.8	83	trace
26 March 2020	23.3	90	1.0
27 March 2020	24.4	86	trace
28 March 2020	22.8	91	9.8
29 March 2020	20.2	91	2.2
30 March 2020	20.4	95	6.5
31 March 2020	20.3	95	5.8

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

APPENDIX G
EVENT ACTION PLANS

Appendix G: Event / Action Plan for Construction Noise

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action Level	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to ER and copy to the IEC and ET; 2. Implement noise mitigation proposals.
Limit Level	<ol style="list-style-type: none"> 1. Identify source; 2. Inform IEC, ER and Contractor; 3. Repeat measurements to confirm findings; 4. Increase the monitoring frequency; 5. Carry out analysis of Contractor's working procedures with the ER and Contractor to determine possible mitigation to be implemented; 6. Inform IEC, ER and Contractor the causes and actions taken for 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing; 2. Notify the Contractor; 3. Require the Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented; 5. If exceedance continues, consider what portion of the work is responsible 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to the ER and copy to the ET and IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problems still not under control; 5. Stop the relevant

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

APPENDIX H
SUMMARY OF EXCEEDANCE

Appendix H: 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	$L_{eq}(30 \text{ min.}) \text{ dB(A)}$	0	0	0	0

APPENDIX I
SITE AUDIT SUMMARY

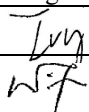

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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

Weekly Site Inspection Record Summary

Checklist Reference Number	200325
Date	25 March 2020 (Wednesday)
Time	9:30-10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>C. Noise</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
200325-R01	• To enhance the mitigation measures provided to direct the surface runoff to silt removal facilities.	D3
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Land Contamination</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Landfill Gas Hazard</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Cultural Heritage</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Landscape and Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>J. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>K. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>L. Others</i>	
	• No environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Ivy Tam		25 March 2020
Checked by	Dr. Priscilla Choy		25 March 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	200305
Date	5 March 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	
200305-R02	• Drainage system should be cleared regularly and maintained.	D6
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
200305-R01	• Retained trees should be carefully protected and construction materials should be cleared within the protection zone.	F1
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.:200227), all identified environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kimmy Lui		5 March 2020
Checked by	Dr. Priscilla Choy		5 March 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	200311
Date	11 March 2020 (Wednesday)
Time	14:00-14:45

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
200311-R02	• Chemical waste should be packed and held in containers of suitable design so as to prevent leakage, spillage or escape of the contents under normal conditions of handling, storage and transport. Chemical waste should be stored in designated place.	E2
	F. Landscape and Visual	
200311-R01	• For trees which haven't been undertaken tree survey should be protected and surrounded with fencing. Construction materials should also be removed from tree protection area.	F1
	G. Ecology	
	• No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.:200305), all identified environmental deficiency was observed improved/rectified by the Contractor.	

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

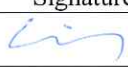

Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

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	200319
Date	19 March 2020 (Thursday)
Time	10:00-11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
200319-R01	• Retained trees should be carefully protected.	F1
200319-R02	• Dull green fencing should be secured with no gap or no holes.	F2
	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.:200311), item 200311-R01 was remarked as 200319-R01. Follow-up action is needed to be reviewed..	

	Name	Signature	Date
Recorded by	Kimmy Lui		20 March 2020
Checked by	Dr. Priscilla Choy		20 March 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	200326
Date	26 March 2020 (Thursday)
Time	10:00-10:40

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	<i>B. Air Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>C. Noise</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>D. Water Quality</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>E. Waste / Chemical Management</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>F. Landscape and Visual</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>G. Ecology</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>H. Permits/Licences</i>	
	• No environmental deficiency was identified during site inspection.	
	<i>I. Others</i>	
	• Follow-up on previous audit section (Ref. No.:200319), all identified environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kimmy Lui		26 March 2020
Checked by	Dr. Priscilla Choy		26 March 2020

**APPENDIX J
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/m ² to achieve the respective dust removal efficiencies	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	*
S3.8	D2	The Contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation.	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	*
S3.8	D3	<p>Following dust suppression measures should also be incorporated by the Contractor to control the dust nuisance throughout the construction Phase</p> <ul style="list-style-type: none"> Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones; The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle; Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible 	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	<p>*</p> <p>*</p> <p>^</p> <p>*</p> <p>^</p>

		<p>or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores;</p> <ul style="list-style-type: none"> • When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period. • The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials; • Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously; • Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; • Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; • Any skip hoist for material transport should be totally enclosed by impervious sheeting; • Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides; • Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed; • Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust 						<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>
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		<p>should be fitted with an effective fabric filter or equivalent air pollution control system; and</p> <ul style="list-style-type: none"> Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies. 					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	<p>Implement the following good site management practices:</p> <ul style="list-style-type: none"> Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; Machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works; Mobile plant should be sited as far away from NSRs as possible and practicable; Material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. 	Control construction airborne noise	Contractor	All construction sites	Construction phase	^ ^ ^ ^ ^
S4.9	N2	Install temporary site hoarding (approx 2.4m high) located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.	Reduce the construction noise levels at low-level zone of NSRs through	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	<p><u>Construction Runoff and Site Drainage</u></p> <p>In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures should be provided and the Storm Water Pollution Control Plan is given below.</p> <p>where appropriate, should include the following:</p> <p>Stormwater Pollution Control Plan</p> <ul style="list-style-type: none"> At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal 	Control construction runoff	Contractor	All construction sites	Construction phase	*
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		<p>facilities. The design of the temporary on-site drainage system will be undertaken by the Contractor prior to the commencement of construction.</p> <ul style="list-style-type: none"> • Diversion of natural stormwater should be provided as far as possible. The design of temporary on-site drainage should prevent runoff going through site surface, construction machinery and equipments in order to avoid or minimize polluted runoff. Sedimentation tanks with sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8m³ capacities, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity shall be flexible and able to handle multiple inputs from a variety of sources and suited to applications where the influent is pumped. • The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a silt/sediment trap. The silt/sediment traps should be incorporated in the permanent drainage channels to enhance deposition rates. • The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94. The detailed design of the sand/silt traps should be undertaken by the contractor prior to the commencement of construction. • Construction works should be programmed to minimize surface excavation works during the rainy seasons (April to September). All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other 					<p>^</p> <p>^</p> <p>^</p> <p>N/A</p>
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		<p>means.</p> <ul style="list-style-type: none"> • All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas. • Measures should be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, it should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities. • All open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m³ should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. • Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. • Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events. • All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities should be 					<p>^</p> <p>^</p> <p>*</p> <p>^</p> <p>^</p> <p>^</p>
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		<p>provided at every construction site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.</p> <ul style="list-style-type: none"> Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources. The oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for the oil interceptors to prevent flushing during heavy rain. Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts. All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby. Regular environmental audit on the construction site should be carried out in order to prevent any malpractices. Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the meander, wetlands and fish ponds. 					<p>N/A</p> <p>^</p> <p>^</p> <p>^</p>
S5.7	W2	<p><u>Stream Diversion</u></p> <ul style="list-style-type: none"> In order to prevent sediment transport during riverbank works, deployment of silt curtain should be implemented, 	Minimize water quality impact due to stream diversion	Contractor	All streams that required diversion	Construction phase	N/A

		especially when construction works encroach or occur in close distance to water body. It is recommended to carry out all the riverbank works and diversion works within a cofferdam or diaphragm wall and the work areas on riverbed should be kept in dry condition.					
S5.7	W3	<p><u>Groundwater from Contaminated Area</u></p> <ul style="list-style-type: none"> For other inaccessible sites, site investigation is required when they are resumed and handed over to the Project Proponent to identify if contaminated groundwater is found. If the investigation results indicated that the groundwater to be generated from construction works would be contaminated, the contaminated groundwater should be either discharged into recharged wells, or properly treated in compliance with the requirements of Technical Memorandum on Standards for Effluents Discharged into Drainage on Sewerage Systems, Inland and Coastal Waters. If recharged well method were used, the groundwater quality in the recharged well should not be affected by recharging operation, i.e. the pollution levels of the recharged groundwater should not be higher than that in the recharging wells. If treatment and discharge method were used, the design of wastewater treatment facilities, such as active carbon and petrol interceptor, should be submitted to the EPD and a discharge license should be obtained under the WPCO 	Minimize water quality impact due to potential groundwater from contaminated area	Contractor	All identified groundwater-contaminated areas	Construction phase	<p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>

		through the Regional Offices of EPD.					
S5.7	W4	<p><u>Sewage from Workforce</u></p> <p>Portable chemical toilets and sewage holding tanks should be provided for handling the construction sewage generated by the workforce. A licensed Contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.</p> <p>Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. Regular environmental audit on the construction site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the Project would not cause water quality impact after undertaking all required measures.</p>	Handling of site sewage	Contractor	All construction sites	Construction Phase	^
Waste Management (Construction Waste)							
S7.6	WM1	<p><u>Waste Reduction Measures</u></p> <p>Waste reduction is best achieved at the planning and design phase, as well as by ensuring the implementation of good site practices. The following recommendations are proposed to achieve reduction:</p> <ul style="list-style-type: none"> segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal; 	Reduce waste generation	Contractor	All construction sites where practicable	Prior to the commencement of construction	^

		<ul style="list-style-type: none"> proper storage and site practices to minimize the potential for damage and contamination of construction materials; plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste; sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc); provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling. 					<p>^</p> <p>^</p> <p>N/A</p> <p>^</p>
S7.6	WM2	Prepare Waste Management Plan and submit to the Engineer for approval	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	N/A
S7.6	WM3	<p><u>Good Site Practice</u></p> <p>The following good site practices are recommended throughout the construction activities:</p> <ul style="list-style-type: none"> Nomination of an approved personnel, such as a site manager, to be responsible for the implementation of good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; Training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling; Provision of sufficient waste disposal points and regular 	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	<p>^</p> <p>^</p> <p>^</p>

		<p>collection for disposal;</p> <ul style="list-style-type: none"> • 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; 					<p>^</p> <p>^</p>
S7.6	WM4	<p><u>Storage of Waste</u></p> <p>The following recommendation should be implemented to minimize the impacts:</p> <ul style="list-style-type: none"> • Waste such as soil should be handled and stored well to ensure secure containment; • Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; • Different locations should be designated to stockpile each material to enhance reuse; 	Minimize waste impacts from storage	Contractor	All construction sites	Construction phase	<p>^</p> <p>^</p> <p>^</p>
S7.6	WM5	<p><u>Collection and Transportation of Waste</u></p> <p>The following recommendation should be implemented to minimize the impacts:</p> <ul style="list-style-type: none"> • 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	<p>^</p> <p>^</p> <p>^</p>

		<ul style="list-style-type: none"> Obtain relevant waste disposal permits from the appropriate authorities; and Disposal of waste should be done at licensed waste disposal facilities. 					^
S7.6	WM6	<p><u>Excavated and C&D Material</u></p> <p>Wherever practicable, C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at Public Fill Reception Facilities areas or reclamation sites. The following mitigation measures should be implemented in handling the excavated and C&D materials:</p> <ul style="list-style-type: none"> Maintain temporary stockpiles and reuse excavated fill material for backfilling; Carry out on-site sorting; Deliver surplus artificial hard materials to Tuen Mun Area 38 recycling plant or its successor for recycling into subsequent useful products; Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; and Implement a recording system for the amount of waste generated, recycled and disposed of for checking; <p>Standard formwork should be used as far as practicable in order to minimize the arising of C&D waste. The use of more durable formwork (e.g. metal hoarding) or plastic facing should be encouraged in order to enhance the possibility of recycling. The purchasing of construction materials should be carefully planned in order to avoid over ordering and wastage.</p>	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	<u>Contaminated Soil</u> As a precaution, it is recommended that standard good site practice should be implemented during the construction phase to minimize any potential exposure to contaminated soils or groundwater. The 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	<u>Chemical Waste</u> 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	<u>General Waste</u> <ul style="list-style-type: none"> General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling. Preferably enclosed and covered areas should be 	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction phase	N/A ^

		<p>provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean.</p> <ul style="list-style-type: none"> A reputable waste collector should be employed to remove general refuse on a daily basis. 					N/A
S7.6	WM10	<p><u>Sewage</u></p> <ul style="list-style-type: none"> The WMP should document the locations and number of portable chemical toilets depending on the number of workers, land availability, site condition and activities. Regularly collection by licensed collectors should be arranged to minimize potential environmental impacts. 	Minimize production of sewage impacts	Contractor	All construction sites	Construction phase	N/A
S7.6	WM11	<p>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.</p>	Good site practice	Contractor/ Project Proponent	Onsite	Construction phase	N/A
Cultural Heritage (Pre-construction Phase)							
S11.6.1	CH1	<p><u>Undertaking Further Archaeological Survey to Cover the Outstanding Areas</u></p> <p>Further archaeological surveys to cover the outstanding areas of the not-yet-surveyed-area with medium archaeological potential 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</p>	To confirm and verify the findings of the EIA	Project Proponent/ Contractor/ Qualified Archaeologist	In the not-yet-surveyed-areas with medium archaeological potential located 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	<p><u>Undertaking Survey-cum-Rescue Excavation</u></p> <p>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.</p>	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible	Project Proponent/ Contractor/ Qualified Archaeologist	In KTN NDA, for Site 3 and In FLN NDA for Site 5.	After land resumption but before construction commencement of the zone	N/A
S11.6.1	CH3	<p><u>Undertaking Preservation in-situ for Site 7</u></p> <p>Preservation in-situ of the cultivation deposits in Site 7 is proposed. If disturbance to the site by the design of the Central Park is unavoidable, further archaeological survey should be conducted after land resumption prior to the pre-construction stage to assess the feasibility to incorporate Site 7 into the design of the development plan of the proposed zone. Appropriate followup actions, including preservation of the significant archaeological deposits in-situ in the Central Park, would then be considered with the consent of AMO.</p>	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	<u>Undertaking Induction Training</u> 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	<u>Undertaking Archaeological Impact Assessment before Construction at A1</u> 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	<u>Undertaking Archaeological Impact Assessment before Construction within A1 but except Area B1-8 and B1-9</u> Should there be any development work within the Sheung Shui Wa Shan Site of Archaeological Interest, it is recommended that an Archaeological Impact Assessment is required after land resumption and before construction when detail construction work information is available to determine the need for further archaeological follow up actions.	To define the precise archaeological deposits extent and to preserve the archaeological resources as far as possible.	Project Proponent/ Contractor/ Qualified Archaeologist	Area within A1 except Area B1-8 and B1-9 in R4 &R3 zoning	After land resumption but before construction	N/A
S11.6.2	CH7	<u>Undertaking baseline condition survey and baseline vibration impact assessment</u> In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration 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	<p><u>Undertaking baseline condition survey and baseline vibration impact assessment</u></p> <p>In case any potential vibration impact on any nearby built heritage features are identified during the pre-construction stage of the Project, prior to commencement of construction works, a baseline condition survey and baseline vibration impact assessment should be conducted by a qualified building surveyor or a qualified structural engineer to define the vibration limit (a vibration limit at 7.5mm/s and 15mm/s could be adopted for graded historic buildings and historic buildings respectively) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase so as to ensure the construction performance meets with the vibration standard stated in the EIA report. The condition survey of graded historic building should be submitted to AMO for information.</p>	To minimize the vibration impacts during preconstruction stage on any identified potential vibration impacted built heritage features	Project Proponent/ Contractor	KT57, FL05, FL18, and FL2	Preconstruction stage before commencement of construction works	N/A
S11.6.2	CH9	<p><u>Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages</u></p> <p>Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out the Project</p>	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	Ancillary structures of G303, HKT01, HKT02, Entrance Gate of HKT03, HKT04, KT01 to KT10, KT13,	Prior to Removal / Relocation of features before commencement 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	<u>Conducting Photographic and Cartographic Records Prior to Removal/Relocation of Impacted Built Heritages</u> Prior to removal/relocation of the directly impacted historical buildings and cultural/historical landscape features, photographic and cartographic records should be conducted to preserve them by record. Liaison with and obtaining agreement from the descendants of these features will be carried out by the Project Proponent.	To preserve the directly impacted sites by record prior to their removal / relocation	Project Proponent/ Contractor	KT12 and KT61	Prior to Removal / Relocation of features before commencement of construction works	N/A
S11.6.2	CH11	Relocation of Built Heritages Relocation of built heritages to a reasonable location nearby may be required.	To preserve the directly impacted sites by relocation	Project Proponent/ Contractor	HKT01, HKT02, Entrance Gate of HKT03	After the photographic and cartographic records and before commencement of construction works	N/A
S11.6.2	CH12	Drainage System and Access Route Design For the retained built heritage items in developable area, drainage system and access route would be designed to prevent the persevered flooding and maintain the accessibility to the built heritage.	To prevent the persevered flooding and maintain the accessibility to the built heritage	Contractor /Detailed Design consultant	The retained built heritage items	Pre-construction phase	N/A
Cultural Heritage (Construction Phase)							

S11.6.1	CH13	<u>Inform Upon Archaeological Discovery</u> Pursuant to the Antiquities and Monuments Ordinance, the construction Contractor should inform the AMO immediately in case of discovery of antiquities or supposed antiquities in the course of excavation works in construction phase.	Special attention should be given to areas evaluated to have archaeological potential or significance.	Contractor	All soil excavation works	Immediately upon discovery during excavation works	N/A
S11.6.2	CH14	<u>Watertable Monitoring</u> Since the construction works and development activities may induce change in the watertable. It is recommended the Contractor should ensure that the change of watertable induced by the construction works and development activities will not result in settlement of built heritage.	To minimize the potential impacts to the built heritage items by the change of watertable induced by the works during the Construction phase	Contractor	Within NDAs	Construction phase	N/A
S11.6.2	CH15	<u>Conducting Construction Vibration Monitoring and Structural Strengthening Measures</u> Construction vibration monitoring and structural strengthening measures should be conducted during Construction phase based on the assessment result of baseline condition survey and baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.	To minimize the potential impacts during Construction phase on any identified potential vibration impacted built heritage features	Contractor	Identified potential vibration impacted built heritage features	Construction phase, with details specified in baseline condition survey and baseline vibration impact assessment	N/A
<i>Landscape and Visual Impact (Detailed Design, Prior to Construction, Construction and Operation Phases)</i>							
S.12.9	LV1	General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as		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	<p>Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed.</p> <p>For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream.</p> <p>Bridges and box culverts should also be used to minimize the</p>	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	All watercourses, particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern Section	Prior to Construction and Construction Phase	N/A

		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 – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. 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	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible.</p> <p>A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.</p>	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	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes</p>	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	<p>Compensatory Planting – Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p> <p>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested.</p>	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	<p>Woodland Compensatory Planting –Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Raphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p>					N/A
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		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	<p>Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on- wetland areas within the LVNP. (See E4,E15 and E25 also)</p> <p>Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/ reprovisioned watercourses.</p>	Compensate for Marsh/ Wetland lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Onsite where possible. Otherwise consider offsite locations	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM14.1	LV16	<p>Reprovision of Natural Stream – Where natural streams are unavoidably affected along some of their length, they can be diverted to avoid the proposed new developments and retain the integrity of the whole stream. Detailed design of any stream diversion should follow the Guidelines in ETWB Technical Circular (Works) No. 5/2005 (Protection of natural streams/rivers from adverse impacts arising from construction works) and appropriate construction methods should be used.</p> <p>Two short stretches of the Ma Tso Lung Stream will be affected by Project in the KTN NDA; by the LMC Eastern Connection Road on the western border of Site F1-3 and further upstream by Site E-2.</p> <p>At both these locations, the stream will be reprovisioned and maintain the flow between unaffected sections of the stream.</p>	Achieve a natural stream, similar to existing, including wetland planting provision for embankments	Government / Developer/ Detailed Design Consultant/ Contractor	Streams and channelized watercourses e.g. a Ma Tso Lung and Siu Han San Tsuen	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		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	<p>Stream Buffer Planting –Providing a minimum 10 m buffer with planting (where there is a general presumption against any development taking place) along streams where they flow close to developments, confers a degree of protection to the stream course and its associated vegetation.</p> <p>For the stream at Ma Tso Lung in KTN NDA, the middle and upper sections will be designated as Green Belt zone where there is a general presumption against development as buffer to the stream.</p> <p>For the stream at Siu Hang San Tsuen in FLN NDA, within the NDA boundary much of the stream would be located underneath the viaduct for the proposed Fanling Bypass. To the south of the viaduct the stream flows through an Open Space area D1-3. In this Open Space zone a 10m buffer is proposed in which natural</p>	Protect natural streams	Government / Developer/ Detailed Design Consultant/ Contractor	Streams and channelized watercourses e.g. a Ma Tso Lung and Siu Han San Tsuen	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A

		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	<p>Enhancement Planting along Embankment - For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc.</p> <p>For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.</p>	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	<p>Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs.</p> <p>All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.</p>	Reprovision for ponds lost due to the Project.	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA	Prior to Construction, Construction Phase Maintenance in Operation Phase	N/A
S.12.9 MM16	LV20	<p>Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non- reflective, recessive colours be used.</p> <p>Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).</p>	To screen undesirable views of the works site.	Contractor	Throughout NDAs	Construction Phase	N/A
S.12.9 MM17	LV21	<p>Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.</p> <p>Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.</p>	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	<p>Long Valley Nature Park (LVNP) designation, design and implementation.</p> <p>Enhancement of non-wetland habitats in LVNP. Planning for the advanced provision of alternative foraging habitat along main river channels for large waterbirds.</p>	<p>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.</p>	<p>Project Proponent/ Detailed Design Consultant (Long Valley Nature Park Habitat Creation & Management Plan)</p>	<p>Long Valley KTN area C1-9 and any suitable areas to be identified during the planning stage</p>	<p>Detailed design phase</p>	N/A
S13.9	E5	<p>Stringent planning control requirements in Long Valley north and west of Sheung Yue River, including Ho Sheung Heung egretty.</p>	<p>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 egretty.</p> <p>Avoid habitat loss and disturbance to fauna of conservation significance, especially nesting ardeids</p> <p>Maintenance of ecological linkages with Deep Bay ecosystem and avoidance of</p>	<p>PlanD.</p>	<p>KTN areas C2-1 and C2-2 , Ho Sheung Heung egretty and areas north of Long Valley along the Ng Tung River to the Shenzhen River</p>	<p>Detailed design phase</p>	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

		<p>Measures to include the following:</p> <ul style="list-style-type: none"> • Fritting, or the placement of ceramic lines or dots on glass, which creates a visual barrier to birds and reduces air conditioning loads by lowering heat gain, while still allowing light transmission for interior spaces. It is most successful when the frits are applied on the outside surface. Frosted glass has similar effects; • Angled glass to be used only for smaller panes in buildings with a limited amount of glass; • The use of glass that reflects UV light (primarily visible to birds, but not to humans) to reduce collisions; • Film and art treatment allow glass surfaces to be used a medium of expression, often related to the nature and use of the building, as well indicating to birds their impenetrability; • Lightweight external screens can be added to windows or become a façade element of larger buildings, and are suitable where non-operable windows are prevalent, which is often the case in modern buildings in HK 					
	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/Detail ed 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	<p>No construction during ardeid breeding season (1 March to 31 July) along Sheung Yue River north or east of KTN D1-5 and east of D1-9 and C2-3, construction hours restricted to 09.00 to 17.30 during 1 March to 31 July on new pedestrian bridge over the Sheung Yue River, new pedestrian bridge over the tidal section of the Ng Tung River and existing bridge between KTN areas C2-2 and C1-8.</p> <p>Review Design and construction methods for all bridges especially those on the Sheung Yue and tidal Ng Tung Rivers and adopt methods which minimize impacts on Long Valley and the rivers, and disturbance and fragmentation impacts on fauna.</p> <p>No overlap in construction of bridges over main river channels. Measures to ensure no hydrological disruption to Long Valley Watercourse and water supply to Long Valley to be designed at 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</p>	Minimize disturbance impacts (including cumulative impacts with cycle track project) to flightlines of breeding ardeids	Project Proponent/Detail ed Design Consultant.Contr actor	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	<p>Compensatory egret habitat provision and establishment.</p> <p>Review condition and location of egrets before commencement of works. Formulate and implement additional mitigation measures as appropriate.</p> <p>Phasing of works near and within Man Kam To Road Egret outside breeding season</p>	<p>Compensate for loss of Man Kam To Road egret habitat.</p> <p>Avoid mortality of breeding egrets</p>	<p>Project Proponent/ Detailed Design Consultant/ Contractor</p>	<p>FLN area A1-7 500m from Man Kam To Road Egret.</p>	<p>Construction phase.</p>	N/A
S13.9	E13	<p>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.</p> <p>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)</p> <p>Provision of alternative foraging habitat along main river channels for large waterbirds.</p>	<p>Minimize impacts on rivers and disturbance and fragmentation impacts on fauna</p>	<p>Project Proponent/ Detailed Design Consultant/ Contractor</p>	<p>Along and within the Sheung Yue, Ng Tung and Shek Sheung Rivers</p>	<p>Detailed design and construction phases..</p>	N/A

S13.9	E14	<p>Buffer zone of 15-30m as appropriate on both sides (not less than 45m total width) of Ma Tso Lung Stream north of the point where it is crossed by the LMC Loop Eastern Connection Road, and Ma Tso Lung Stream diversion during construction of the LMC Loop Eastern Connection Road; development along lower reaches of Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream in OU zones in KTN areas F1-2 and F1-3 to be set back beyond buffer.</p> <p>Construction and maintenance of permanent 1.2m high solid faunal barrier at all at-grade sections of LMC Loop eastern connection Road north of junction with road D4 within 15-30m as appropriate of Ma Tso Lung Stream buffer and construction of faunal underpass beneath road.</p> <p>Compensation for the loss of seasonally wet grassland at Ma Tso Lung by habitat restoration and enhancement along diverted section of Ma Tso Lung Stream.</p>	Minimize impacts direct and indirect impacts of habitat loss, disturbance, pollution and fragmentation on Ma Tso Lung Stream and marsh and riparian corridor of importance to species of conservation significance.	PlanD/ Project Proponent/ Developer/ Detailed Design Consultant/ Contractor. (Design of Ma Tso Lung Stream diversion and buffer zone habitat restoration measures)	KTN areas H1-1, F12 and F1-3 and Lok Ma Chau Loop Eastern Connection Road.	Detailed design and construction phases.	N/A
S.13.9	E15	Creation and enhancement of proposed Long Valley Nature Park and creation and enhancement of wetland and buffer planting within LVNP.	Compensate for wetland loss arising from the project	Project Proponent/ Contractor (LVNP Detailed Habitat Creation & Management Plan)	Long Valley, (KTN area C1-9).	Construction phase.	N/A

S13.9	E16	<p>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;</p> <p>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.</p> <p>Ng Tung, Sheung Yue and Shek Sheung Rivers screen planting.</p>	<p>Minimize disturbance to waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.</p>	<p>Detailed Design Consultant/ Contractor</p>	<p>Ng Tung, Sheung Yue and Shek Sheung Rivers</p>	<p>Detailed design and Construction phases.</p>	<p>N/A</p>
S13.9	E17	<p>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.</p> <p>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.</p>	<p>Minimize dust, disturbance, mortality and other adverse ecological impacts on habitats, flora and fauna.</p> <p>Measures to minimize flight-line impacts to birds, especially breeding ardeids.</p>	<p>Contractor</p>	<p>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</p>	<p>Construction phase.</p>	<p>N/A</p>

					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

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

		<p>and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement.</p> <p>Pre-site clearance check on all construction sites for presence of reptile species of conservation significance, capture and translocate to receptor site; review translocation options in respect to species in Ma Tso Lung area and determine whether release locally or elsewhere is appropriate. Seek agreement of relevant authorities including AFCD in respect of proposed measures then implement</p> <p>Pre-works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of Small Snakehead and <i>Sommaniathephusa zanklon</i>. Capture any <i>Sommaniathephusa zanklon</i> found and translocate to Ma Tso Lung Stream/ other suitable areas including LVNP</p>	<p>to avoid, minimize or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation</p>				
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 – Existing trees to be retained	Protect and Preserve Trees	Government /	<u>Onsite</u>	Prior to	N/A

MM4	DP7	<p>within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</p>		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	<u>On appropriate structures</u>	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.9 MM10	LV3- DP7	<p>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</p>	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. Provide	Government / Detailed Design Consultant/ Contractor	<u>On appropriate buildings</u>	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	<p>Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines.</p> <p>All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise</p>	Improve visual amenity of the new buildings, NDAs in general and integrate as best possible into the surrounding landscape	Detailed Design Consultant	Throughout NDAs	Prior to Construction	N/A

		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	<p>Tree Protection & Preservation – Existing trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas.</p> <p>A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</p>	Protect and Preserve Trees	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction and Construction Phase	N/A
S.12.D9 MM5	LV5- DP12	Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract	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

		<p>Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.</p>				Operation Phase	
S.12.D9 MM6	LV6- DP12	<p>Slope Landscaping – Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow.</p> <p>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.</p>	<p>To avoid substantial slope cutting and fill slopes.</p> <p>To prevent erosion and subsequent loss of landscape resources and character.</p> <p>To ensure man-made slopes are as visually amenable as possible.</p>	Government / Detailed Design Consultant/ Contractor	Onsite	Prior to Construction, Construction Phase & Maintenance in Operation Phase	N/A
S.12.D9	LV7-	Compensatory Planting – Compensatory tree planting for felled	Compensate for trees and	Government /	Onsite where	Prior to	N/A

MM7	DP12	<p>trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006.</p> <p>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</p> <p>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Raphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested.</p>	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	<p>Screen Hoarding –Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, nonreflective, recessive colours be used.</p> <p>Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).</p>	To screen undesirable views of the works site.	Contractor	Throughout NDAs	Construction Phase	N/A
S.12.D9 MM17	LV10- DP12	<p>Light Control – Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.</p> <p>Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.</p>	To minimize glare impact to adjacent VSRs	Government / Contractor	Throughout NDAs	Construction and Operation Phases	N/A

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

**APPENDIX K
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											
May											
June											
Sub-total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.065
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	0.065

Forecast of Total Quantities of C&D Materials to be Generated from the Contract*										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in Other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
1,310.619	300.000	1,010.619	0.000	0.000	0.000	20.000	10.000	20.000	0.500	10.000

- Notes: (1) The performance target are given in PS Clause 1.115(14)
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
(4) The Contractor shall also submit the latest forecast of the amount of C&D materials expected to be generated from the Works, together with a break down of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m³.
(5) Conversion factors for reporting purpose:
in-situ: rock = 2.5 tonnes/m³; soil = 2.0 tonnes/m³
excavated: rock = 2.0 tonnes/m³; soil = 1.8 tonnes/m³
broken concrete and bitumen = 2.4 tonnes/m³
C&D Waste = 0.9 tonnes/m³
(6) Numbers are rounded off to the nearest three decimal places
* Forecast figure for the entire contract period

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 '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
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 '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
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											
May											
June											
Sub-total											
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total	0.0	0.0	0.0	0.0	2.250	0.0	0.0	0.0	0.0	0.0	0.071

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].

Note: $volume(m^3) = \frac{weight(kg)}{density(kg/m^3)}$
density of inert materials: $2000kg/m^3$
density of general refuse: $1000kg/m^3$

APPENDIX L
COMPLAINT LOG

Appendix L - Complaint Log

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
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APPENDIX M
SUMMARY OF SUCCESSFUL
PROSECUTION

Appendix M - Summary of Successful Prosecution

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