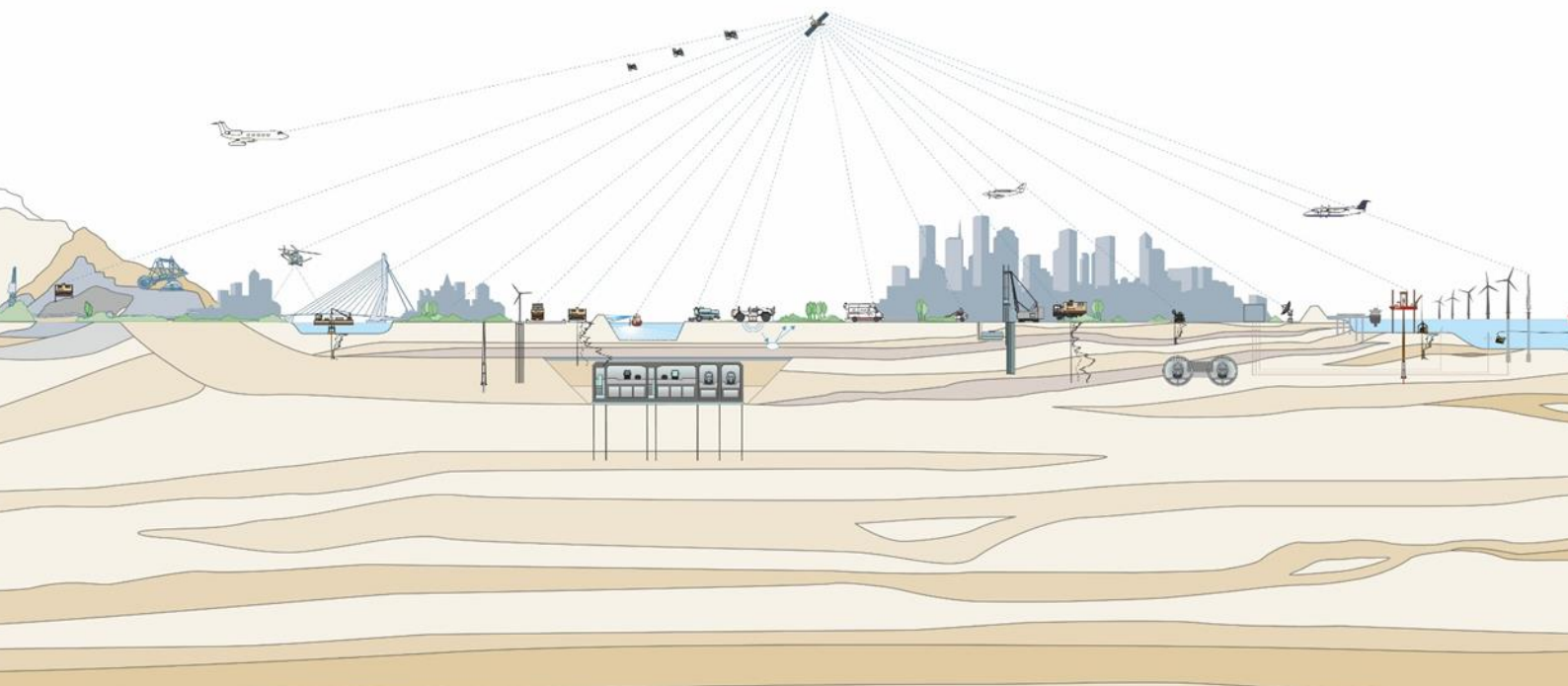


Environmental Monitoring & Audit Monthly Report (December 2019)

Project Proponent : Civil Engineering and Development
Department

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

Fugro Document No. : 0032/19/ED/0291C



**Environmental Monitoring & Audit
Monthly Report
(December 2019)**

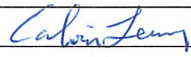
Project Proponent : Civil Engineering and Development
Department

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

Fugro Document No. : 0032/19/ED/0291C

Prepared for:



03	Final	Jimmy Lui, Wingo So	Calvin Leung		20/4/2020
Issue No.	Status	Prepared and Checked by:	Certified by:	Signature:	Date



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

Your reference:

Our reference: HKCEDD14/50/106525

Date: 12 May 2020

Attention: Mr Ryan Chau

BY EMAIL & POST
(email: hlchau@cedd.gov.hk)

Dear Sirs

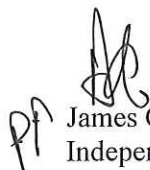
Agreement No.: NDO 16/2018
Independent Environmental Checker for
Pre-construction Environmental Monitoring and Audit Works for the Advance and
First Stage Works of Kwu Tung North and Fanling North New Development Areas
Monthly Environmental Monitoring and Audit Report No.2 (December 2019) (Revised)

We refer to emails of 30 March and 5 May 2020 attaching the Monthly Environmental Monitoring and Audit Report No. 2 (Revised) prepared by the Environmental Team (ET) of the captioned.

We have no further comment and hereby verify the Monthly Environmental Monitoring and Audit Report No.2 (December 2019) (Revised) in accordance with Clause 3.3 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 and EP-475/2013/A.

Should you have any queries, please do not hesitate to contact the undersigned or our Ms Katherine Chu on 2618 2831.

Yours faithfully
ANewR CONSULTING LIMITED

 James Choi
Independent Environmental Checker

CPSJ/LYMA/CWKK/csym

cc AECOM – Mr Chris Ho (email: chris.ho@aecom.com)
Fugro – Mr Calvin Leung (email: c.leung@fugro.com)

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DOCUMENT ISSUE LOG

Issue No.	Status	Reason for Issue/Reissue	Comments on Content	Date
01	Draft	IEC 1 st comments	IEC with no comment and submitted on 17/1/2020.	17/2/2020
02	Draft	EPD 1 st comments	Addressed EPD Comments and resubmitted on 26/3/2020.	26/3/2020
03	Final	IEC 2 st comments	Addressed EPD Comments and resubmitted on 20/4/2020.	20/4/2020

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EXECUTIVE SUMMARY

- i. This is the 2nd monthly EM&A Report which summaries the impact monitoring results and audit findings for the contract (Contract No.ND/2019/06) within the period from 1 December to 31 December 2019.
- ii. **Breaches of Action and Limit Levels**
No Action or Limit Level Exceedance of Noise monitoring was recorded in the reporting period.
- iii. **Complaint, Notifications of Summons and Successful Prosecutions**
No complaints, notification of summons and prosecutions were received in the reporting period.
- iv. **Reporting Change**
There was no reporting change required in the reporting period.
- v. **Future Key Issues**
Construction Activities for the Coming Reporting Period
During the coming reporting period, the principal work activities within the site included:
 - Hoarding works
 - Sewerage works, water works
 - Site clearance and tree felling
 - Excavation work
 - Breaking work existing paving
- vi. Potential environmental impacts due to the construction activities will be monitored or reviewed. The ET will continue to implement the environmental monitoring & audit programme in accordance with the EM&A Manual and Environmental Permit requirements. The recommended environmental mitigation measures shall be implemented on site and regular inspections as required will be carried out to ensure that the environmental conditions are acceptable.

1. INTRODUCTION

1.1 Background

- 1.1.1 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.
- 1.1.2 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.
- 1.1.3 The Environmental Impact Assessment (EIA) report for the North East New Territories (NENT) NDAs Study, which covered the Advance Works and First Stage Works of KTN and FLN NDAs, has been submitted to Environmental Protection Department (EPD) in mid-2013. The report was subsequently approved with conditions by EPD on 19 October 2013 under Register No. AEIAR-175/2013.

-
- 1.1.4 The concurrent construction works under this contract (Contract No. ND/2019/06 Fanling North New Development Area, Phase 1: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products) that may be carried out include, but not limited to, the following:
- a. Fanling Bypass Eastern Section; and
 - b. Site Formation and Infrastructural Works at Fanling North New Development Area, Resite Area for Holf in Sha Tin and Site Formation Works for Village Resite Area in Fanling North New Development Area.
- 1.1.5 The Director of Environmental Protection (the Director) granted the Environmental Permit (EP-475/2013) to the Civil Engineering and Development Department on 21 November 2013. A Variation of an Environmental Permit (Application No. VEP-516/2016) EP-475/2013/A was issued on 13 January 2017 and it is the current permit for this Contract.
- 1.1.6 The construction phase and EM&A programme of the contract (Contract No.ND/2019/06) commenced on 29 October 2019.
- 1.1.7 This is the 2nd monthly EM&A Report which summaries the impact monitoring results and audit findings for the contract (Contract No.ND/2019/06) within the period from 1 December to 31 December 2019.

1.2 Project Organization

1.2.1 The Project Organization structure is shown in Appendix C. The key personnel contact information are summarized in Table 1.1.

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone	Fax
Civil Engineering and Development Department, HKSAR (CEDD)	Project Management	Mr. Lai Cheuk Ho	3547 1608	3547 1658
Engineer/Engineer's Representative (AECOM)	Resident Engineer	Mr. Leo Mak	6398 0379	3922 9797
Independent Environmental Checker (ANEWR)	Independent Environmental Checker	Mr. James Choi	2618 2836	3007 8648
Environmental Team (FTS)	Environmental Team Leader	Mr. Calvin Leung	3565 4441	3565 4160
Contractor (NCED)	Site Agent	Mr. Anson Chan	9349 1320	23632162
	Environmental Officer	Mr. Alex Choy	9409 9608	
	Environmental Coordinator	Ms, Hei Ling Chan	9571 8654	

1.3 Construction Programme and Activities

1.3.1 The construction phase of the contract under the EP (EP-475/2013/A) commenced on 29 October 2019.

1.3.2 The construction programme of the contract is shown in **Appendix B**.

1.4 Works undertaken during the month

1.4.1 During this reporting period, the principal work activities within the site included:

- Excavation
- Breaking work
- Hoarding work
- Site clearance and tree felling

1.5 Status of Environmental Licences, Notification and Permits

1.5.1 A summary of the relevant permits, licences and/or notifications on environmental protection for this Contract is presented in Table 1.2.

Table 1.2 Status of Environmental Licences, Notification and Permits

Permit / Direction / License	Ref No	Valid From	Valid Till
Environmental Permit	EP-475/2013/A	13/01/2017	N/A
Notification of Works Under APCO	449369	24/09/2019	N/A
Wastewater Discharge Licence	450687	--	--
Registration as a Chemical Waste Producer	5213-625-N2716-01	02/10/2019	N/A
Billing Account for Disposal of Construction Waste	7035473	17/10/2019	N/A
Construction Noise Permit	GW-RN0921-19	25/12/2019	24/2/2020

2. NOISE QUALITY MONITORING

2.1 Monitoring Requirement

2.1.1 With reference to Section 3.7 of the Updated EM&A Manual, during normal construction working hour (0700-1900 Monday to Saturday), monitoring of Leq, 30min noise levels (as six consecutive Leq, 5min readings) shall be carried out at the agreed monitoring locations once every week in accordance with the methodology in the TM.

2.2 Monitoring Equipment and Methodology and QA/QC Procedure

2.2.1 The sound level meter used in noise monitoring was complied with the International Electrotechnical Commission Publication (IEC) 651:1979 (Type 1) and 804:1985 (Type 1) specifications as referred to in the Technical Memorandum issued under the Noise Control Ordinance (NCO).

2.2.2 Sound level calibrator was used for the on-site calibration of the meter. This calibrator was complied with the IEC Publication 942 (1988) Class 1 and ANSI S1.40 – 1984. Noise measurements were only accepted to be valid if the calibration levels from before and after the measurement agree to within 1.0dB. Measurements shall be recorded to the nearest 0.1dB.

2.2.3 Table 2.1 summarizes the noise monitoring equipment model used for this project.

Table 2.1 Noise Monitoring Equipment

Manufacturer/ Brand	Model	Equipment	Serial Number
Casella	CEL-63X Series	Sound Level Meter	1488295
	CEL-120/1	Sound Calibrator	4358298

2.2.4 The monitoring procedures are as follows:

- For façade measurement, the monitoring station was set at a point 1m from the exterior of the sensitive receivers building façade and set at a position 1.2m above the ground. For free-field measurement, the monitoring station was set at a position 1.2m above the ground.
- The battery condition was checked to ensure good functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time will set as follows:
 - frequency weighting : A
 - time weighting : Fast
 - measurement time : 30 minutes
- Prior to and after noise measurement, the meter shall be calibrated using the calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement is more than 1.0 dB, the measurement will considered invalid and repeat of noise measurement is required after re-calibration or repair of the equipment.
- The wind speed at the monitoring station shall be checked with the portable wind meter. Noise monitoring should be 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.
- Noise measurement should be paused during periods of high intrusive noise if possible and observation shall be recorded when intrusive noise is not avoided.
- At the end of the monitoring period, the Leq, L10 and L90 shall be recorded. In addition, site conditions and noise sources should be recorded on a standard record sheet.

2.2.5 Maintenance / Calibration

- The microphone head of the sound level meter and calibrator should be cleaned with a soft cloth at quarterly intervals.
- The sound level meter and calibrator should be calibrated annually by a HOKLAS laboratory or the manufacturer.
- Relevant calibration certificates are provided in Appendix D.

2.3 Monitoring Parameters and Frequency

2.3.1 Table 2.2 presents the noise monitoring parameters and frequencies.

Table 2.2 Monitoring Parameters and Frequencies of Noise Monitoring

Parameter	Frequency and Period
L _{Aeq} (30min) (L ₁₀ and L ₉₀ will be recorded for reference)	At each station at 0700-1900 hours on normal weekdays at a frequency of once a week

2.4 Monitoring Locations

2.4.1 Noise monitoring was conducted at two designated monitoring stations as described in Table 2.3 and the monitoring locations are shown in **Figure A2**.

Table 2.3 Location of noise monitoring stations

Monitoring Location	Description	Type of Measurement*
Contract 6		
CP-FLN-NMS1	Belair Monte (Existing)	Façade

Note: *For Free-field measurement, +3dB(A) should be added to the measured results

2.5 Results and Observations

2.5.1 The schedule of noise monitoring in reporting period is provided in **Appendix F**.

2.5.2 The adopted Action and Limit Levels for noise impact monitoring are provided in **Appendix E**.

2.5.3 The noise monitoring data are summarized in Table 2.4. Detailed monitoring data are presented in **Appendix G**.

Table 2.4 Summary of Noise Impact Monitoring Results

Monitoring Location	Construction Noise Level Leq (30min), dB(A)	Baseline Level, dB(A)	Limit Level, dB(A)
Contract 6			
CP-FLN-NMS1	67.1-69.6	69.9	75

2.5.4 The Event and Action Plan for noise is given in **Appendix J**.

2.5.5 No Action or Limit Level Exceedance was recorded in the reporting period.

Other factor influencing the monitoring results

2.5.6 There were no other noticeable external factors generally affecting the monitoring results in this reporting period.

3. WASTE MANAGEMENT

- 3.1.1 Auditing of waste management practices during regular site inspections will confirm that the waste generated during construction are properly, stored, handled and disposed of. The construction Contractor(s) will be responsible for the implementation of any mitigation measures to reduce waste or redress issues arising from the waste materials.
- 3.1.2 The summary of site audited and the implemented environmental mitigation measures in the reporting period are summarized in **Appendix I and Appendix L**.
- 3.1.3 Monthly summary of waste flow table is detailed in **Appendix M**.

4. ENVIRONMENTAL SITE INSPECTION AND AUDIT

4.1 Site Inspection

- 4.1.1 Regular site inspections will be carried out by the ET once per week during construction phase.
- 4.1.2 In the reporting period, site inspections were carried out on 4, 13, 19 and 24 December 2019.
- 4.1.3 The summary of the site audits are given in **Appendix I**.
- 4.1.4 According to EP-475/2013/A section 2.7, 2m high solid dull green site barrier fences had been erected around all active works areas as a mitigation measure to minimise adverse impacts on habitats of ecological importance in the vicinity of the Project. Related photo shown in **Appendix N**.

5. ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

5.1 Complaint, Notifications of Summons and Successful Prosecutions

- 5.1.1 No complaints, notification of summons and prosecutions were received in the reporting period.
- 5.1.2 Cumulative complaint log, summaries of complaints, notification of summons and successful prosecutions and public engagement activities are presented in **Appendix H**.

6. IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

6.1 Implementation Status

- 6.1.1 The Contractor has implemented environmental mitigation measures and requirements as stated in the EIA Reports, the EP and the EM&A Manuals. The implementation status of the mitigation measures during the reporting period is summarized in **Appendix K**.
- 6.1.2 As confirmed by contractor, 2m high solid dull green site barrier fences had been erected around all active works areas to minimise adverse impacts on habitats of ecological importance in the vicinity of the Project. The related photo shown in **Appendix N**.

7. FUTURE KEY ISSUES

7.1 Construction Works for the Coming Month

7.1.1 During the coming reporting period, the principal work activities within the site included:

- Hoarding works
- Sewerage works, water works
- Site clearance and tree felling
- Excavation work
- Breaking work existing paving

7.2 Key Issues for the Coming Month

7.2.1 Potential environmental impacts due to the construction activities, including air quality, noise, water quality, waste, landscape and visual, will be monitored or reviewed. The ET will continue to implement the environmental monitoring & audit programme in accordance with the EM&A Manual and Environmental Permit requirement. The recommended environmental mitigation measures shall be implemented on site and regular inspections as required will be carried out to ensure that the environmental conditions are acceptable.

7.2.2 The anticipated impact of principal work activities within the site and the recommended mitigation measures are shown in **Appendix L**.

7.3 Monitoring Schedules for the Coming Months

7.3.1 The schedules for environmental monitoring in the coming months are provided in **Appendix F**.

8. Conclusions

- 8.1.1 No Action or Limit Level Exceedance was recorded in the reporting period.
- 8.1.2 No complaints, notification of summons or successful prosecutions were received in the reporting period.
- 8.1.3 There was no reporting change required in the reporting period.
- 8.1.4 Potential environmental impacts due to the construction activities, including air quality, noise, water quality, waste, landscape and visual, will be monitored or reviewed. The ET will continue to implement the environmental monitoring & audit programme in accordance with the EM&A Manual and Environmental Permit requirements. The recommended environmental mitigation measures shall be implemented on site and regular inspections as required will be carried out to ensure that the environmental conditions are acceptable.

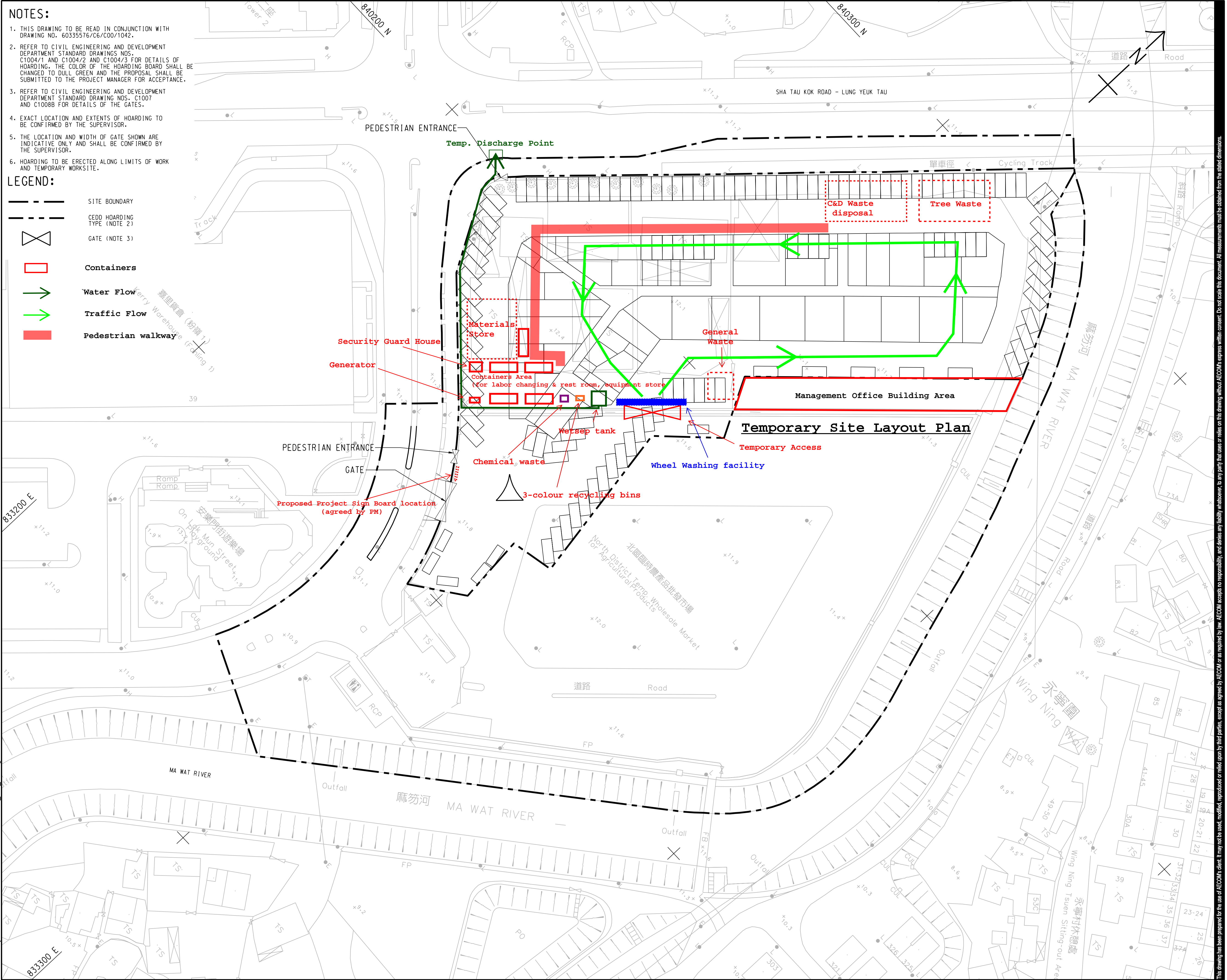
A. FIGURES

A.1 SITE LAYOUT PLAN

PLOT 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
 - CDDD HOARDING TYPE (NOTE 2)
 - ⊗ GATE (NOTE 3)
 - Containers
 - Water Flow
 - Traffic Flow
 - Pedestrian walkway

PROJECT
項目

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

CONTRACT TITLE:

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

CLIENT
業主

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

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

STATUS
階段

SCALE
比例

A1 1: 500

DIMENSION UNIT
尺寸單位

METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號

60335576

CONTRACT NO.
合約編號

ND/2019/06

SHEET TITLE
圖紙名稱

HOARDING PLAN Site Layout Plan (INTERIM STAGE)

SHEET NUMBER
圖紙編號

60335576/C6/C00/1041

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A.2 PROJECT BOUNDARY AND NOISE MONITORING STATION



Legend:



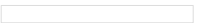






















Contract No. ND/2019/06 Fanling North New Development Area, Phase 1: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products site boundary



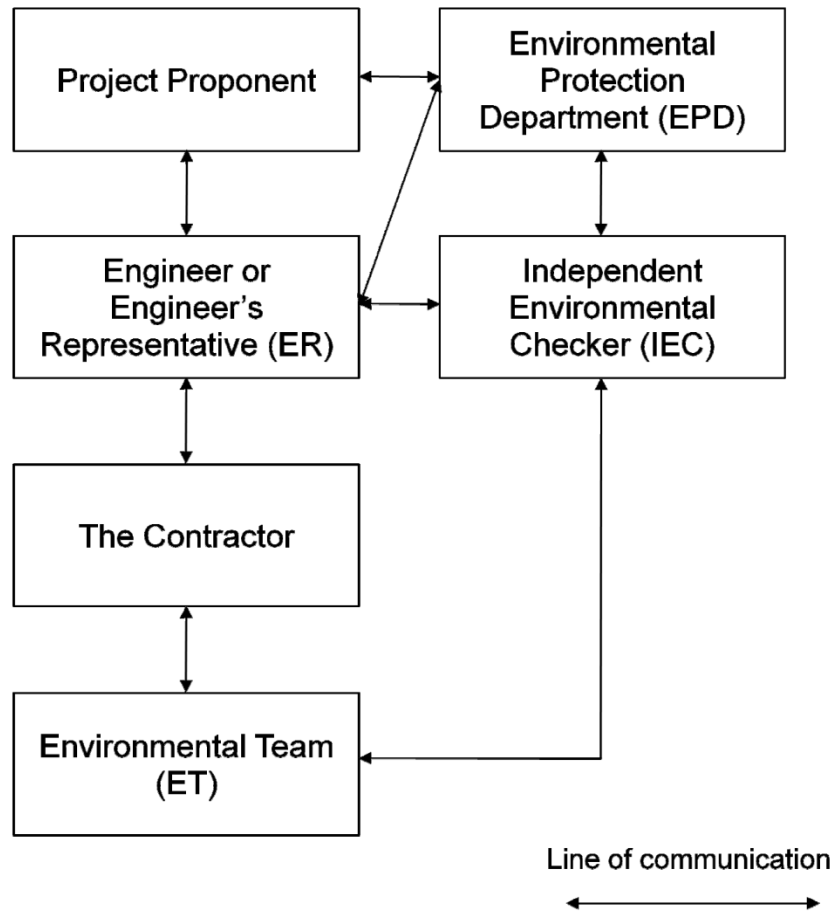
Construction Airborne Noise Monitoring Station

B. CONSTRUCTION PROGRAMME

Contract No. ND/2019/06 Development of Kwu Tung North and Fanling North New Development Areas, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Aricultural Products. Updated Three Months Rolling Programme (Nov 2019 - Jan/Feb 2020)										Dated:Thu 5/12/19 Data Date: 30 November 2019			
ID	WBS	Task Name	Baseline Start	Baseline Finish	Start	Finish	Finish Variance	% Compl	2020				
									Nov	Dec	Jan	Feb	
95	ND201906-3MRP-2.11	Excavation work - 100%	Mon 30/12/19	Sat 4/1/20	Sat 4/1/20	Sat 11/1/20	6 days	0%					
96	ND201906-3MRP-2.12	Plate load test to verify formation bearing capacity	Fri 20/12/19	Fri 27/12/19	Fri 27/12/19	Fri 3/1/20	5 days	0%					
97	ND201906-3MRP-2.13	Blinding layer for foundation - Transformer/switch rooms	Mon 6/1/20	Tue 7/1/20	Sat 4/1/20	Sat 4/1/20	-2 days	0%					
98	ND201906-3MRP-2.14	Blinding layer for foundation - remaining area	Wed 8/1/20	Thu 9/1/20	Mon 6/1/20	Mon 6/1/20	-3 days	0%					
99	ND201906-3MRP-2.15	Formwork of G/F beams and slabs - Transformer /switch/generator rooms	Thu 9/1/20	Mon 13/1/20	Mon 6/1/20	Thu 16/1/20	3 days	0%					
100	ND201906-3MRP-2.16	Rebar fixing of G/F beams and slabs - Transformer /switch/generator rooms	Tue 14/1/20	Sat 18/1/20	Fri 10/1/20	Sat 18/1/20	0 days	0%					
101	ND201906-3MRP-2.17	Concreting fixing of G/F beams and slabs - Transformer /switch/generator rooms	Sun 19/1/20	Sun 19/1/20	Mon 20/1/20	Mon 20/1/20	1 day	0%					
102	ND201906-3MRP-2.18	Site clearance of G/F beams and slabs - Transformer /switch/generator rooms	Mon 20/1/20	Tue 21/1/20	Tue 21/1/20	Thu 23/1/20	2 days	0%					
103	ND201906-3MRP-2.19	Formwork of G/F beams and slabs - Remaining area of building	Wed 22/1/20	Mon 27/1/20	Fri 17/1/20	Wed 29/1/20	1 day	0%					
104	ND201906-3MRP-2.20	Rebar fixing of G/F beams and slabs - Remaining area of building	Mon 27/1/20	Thu 30/1/20	Mon 20/1/20	Fri 31/1/20	1 day	0%					
105	ND201906-3MRP-2.21	Concreting fixing of G/F beams and slabs - Remaining area of building	Thu 30/1/20	Fri 31/1/20	Sat 1/2/20	Sat 1/2/20	1 day	0%					
106	ND201906-3MRP-2.22	Site clearance of G/F beams and slabs - Remaining area of building	Wed 29/1/20	Fri 31/1/20	Mon 3/2/20	Wed 5/2/20	4 days	0%					
107	ND201906-3MRP-2.23	Construction of walls and columns - 50%	Sat 1/2/20	Sun 9/2/20	Thu 6/2/20	Fri 14/2/20	5 days	0%					
108	ND201906-3MRP-2.24	Construction of walls and columns - 100%	Mon 10/2/20	Tue 18/2/20	Sat 15/2/20	Mon 24/2/20	5 days	0%					
113	ND201906-3MRP-3	Section 2	Fri 27/9/19	Mon 20/1/20	Fri 27/9/19	Mon 2/3/20	33 days	46%					
116	ND201906-3MRP-3.03	Site clearance and tree felling within Portion 6 - Complete 50%	Wed 9/10/19	Thu 17/10/19	Fri 6/12/19	Sat 21/12/19	56 days	0%					
117	ND201906-3MRP-3.04	Site clearance and tree felling within Portion 6 - Complete75%	Fri 18/10/19	Sat 26/10/19	Mon 23/12/19	Thu 9/1/20	62 days	0%					
118	ND201906-3MRP-3.05	Site clearance and tree felling within Portion 6 - Complete 100%	Mon 28/10/19	Sat 2/11/19	Fri 10/1/20	Wed 29/1/20	70 days	0%					
122	ND201906-3MRP-3.09	Topographic Survey - Submission of initial survey report	Wed 6/11/19	Thu 14/11/19	Wed 6/11/19	Thu 14/11/19	0 days	100%					
123	ND201906-3MRP-3.10	Confirmation of prebore location D37 & D57	Fri 1/11/19	Sat 16/11/19	Fri 1/11/19	Sat 9/11/19	-6 days	100%					
124	ND201906-3MRP-3.11	Setup pre-drilling for D37 & D57	Mon 18/11/19	Sat 23/11/19	Sat 9/11/19	Fri 15/11/19	-7 days	100%					
125	ND201906-3MRP-3.12	Commencement of pre-drilling at D37 & D57	Mon 25/11/19	Tue 10/12/19	Sat 16/11/19	Fri 29/11/19	-9 days	100%					
126	ND201906-3MRP-3.13	Complete of pre-drilling at D37 & D57 and submission of record	Wed 11/12/19	Fri 27/12/19	Sat 30/11/19	Mon 16/12/19	-9 days	0%					
127	ND201906-3MRP-3.14	Trial pits for slope fill investigation - 50%	Tue 17/12/19	Thu 2/1/20	Tue 17/12/19	Fri 3/1/20	1 day	0%					
128	ND201906-3MRP-3.22	Trial pits for slope fill investigation - 100%	Fri 3/1/20	Tue 14/1/20	Sat 4/1/20	Sat 18/1/20	4 days	0%					
129	ND201906-3MRP-3.15	Preparation of reprots for replacmenet of losse fill	Thu 23/1/20	Thu 6/2/20	Sat 4/1/20	Mon 20/1/20	-12 days	0%					
130	ND201906-3MRP-3.16	Submit report to PM, DSD and relevant govt, departments	Fri 7/2/20	Fri 21/2/20	Thu 30/1/20	Fri 14/2/20	-6 days	0%					
132	ND201906-3MRP-4	Section 3	Fri 27/9/19	Fri 7/2/20	Fri 27/9/19	Wed 11/3/20	28 days	52%					
 New Concepts Engineering Development Limited		Task		Inactive Task		Manual Summary Rollup		External Milestone		Manual Progress			
		Split		Inactive Milestone		Manual Summary		Deadline		BASELINE			
		Milestone		Inactive Summary		Start-only		Critical					
		Summary		Manual Task		Finish-only		Critical Split					
		Project Summary		Duration-only		External Tasks		Progress					
Page 2													

C. PROJECT ORGANIZATION CHART

Project organization chart (environmental)



D. CALIBRATION CERTIFICATES OF MONITORING EQUIPMENT

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
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MaterialLab

Report no.: 183057CA196305

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CALIBRATION CERTIFICATE OF SOUND LEVEL METER**Client Supplied Information**

Client : Fugro Technical Services Ltd.

Address : Room 723 & 725, 7/F., Block B Profit Industrial Building, 1-15 Kwai Fung Crescent, Kwai Chung, N.T.

Project : Calibration Services

Details of Unit Under Test, UUT

Description : Sound Level Meter
Manufacturer : Casella

	Meter	Microphone	Preamplifier
Model No.	CEL-63X	CE-251	CEL-495
Serial No.	1488295	02809	003921

Next Calibration Date : 16-Oct-2020

Specification Limit : EN 61672: 2003 Type 1

Laboratory Information

Details of Reference Equipment -

Description : B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)
Equipment ID. : R-108-1

Date of Calibration : 17-Oct-2019 Ambient Temperature : 22 °C

Calibration Location : Calibration Laboratory of FTS

Method Used : By direct comparison

Calibration Results :

Parameters		Mean Value (dB)	Specification Limit(dB)
A-weighting frequency response	4000Hz	1.4	2.6 to -0.6
	2000Hz	1.3	2.8 to -0.4
	1000Hz	0.0	1.1 to -1.1
	500Hz	-3.4	-1.8 to -4.6
	250Hz	-8.7	-7.2 to -10.0
	125Hz	-16.2	-14.6 to -17.6
	63Hz	-26.2	-24.7 to -27.7
	31.5Hz	-39.1	-37.4 to -41.4
Differential level linearity	94dB-104dB	0.0	± 0.6
	104dB-114dB	0.0	± 0.6

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast
4. The equipment does comply with EN 61672: 2003 Type 1 sound level meter for the above measurement.
5. The values given in this Calibration Certificate only relate to the values at the time of the test and any uncertainties will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

Checked by : William Date : 23-10-2019 Certified by : P. L. Tong Date : 24-10-2019
CA-R-297 (22/07/2009) Leung Kwok Tai (Assistant Manager)

** End of Report **

FUGRO TECHNICAL SERVICES LIMITED

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Report no.: 183057CA195873

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CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

Client Supplied Information

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Details of Unit Under Test, UUT

Description : Sound Calibrator
Manufacturer : Casella (Model CEL-120/1)
Serial No. : 4358289
Equipment ID : N-35
Next Calibration Date : 25-Jul-2020
Specification Limit : EN 60942: 2003 Type 1

Laboratory Information

Description : Reference Sound level meter
Equipment ID. : R-119-1
Date of Calibration : 26-Jul-2019 Ambient Temperature : 22 °C
Calibration Location : Calibration Laboratory of FTS
Method Used : By direct comparison

Calibration Results :

Parameters (Setting of UUT)	Mean Value (error of measurement)	Specification Limit(dB)
94dB	0.1 dB	±0.4dB
114dB	0.0 dB	

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. The equipment does comply with the specification limit.
4. The values given in this Calibration Certificate only relate to the values at the time of the test and any uncertainties will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

Checked by : William Date : 26-7-2019 Certified by : RT Leung Date : 26-7-2019
CA-R-297 (22/07/2009) Leung Kwok Tai (Assistant Manager)

** End of Report **

E. ACTION AND LIMIT LEVELS

Action and Limit Levels for Construction Noise

Monitoring Location	Description	Time Period	Action Level	Limit Level
Contract 6				
CP-FLN-NMS1	Belair Monte (Existing)	0700 – 1900 hours on normal weekdays	When one documented complaint is received	75 dB(A)

F. ENVIRONMENTAL MONITORING SCHEDULES

Impact Monitoring Schedule (December 2019)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2 CP-FLN-NMS1	3	4	5	6	7
8	9	10	11	12	13 CP-FLN-NMS1	14
15	16	17	18	19 CP-FLN-NMS1	20	21
22	23 CP-FLN-NMS1	24	25	26	27	28
29	30	31 CP-FLN-NMS1				

Notes:

1. Monitoring Locations: CP-FLN-NMS1 — Belair Monte (Existing)

Impact Monitoring Schedule (January 2020)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6 CP-FLN-NMS1	7	8	9	10	11
12	13 CP-FLN-NMS1	14	15	16	17	18
19	20	21 CP-FLN-NMS1	22	23	24	25
26	27	28	29	30	31 CP-FLN-NMS1	

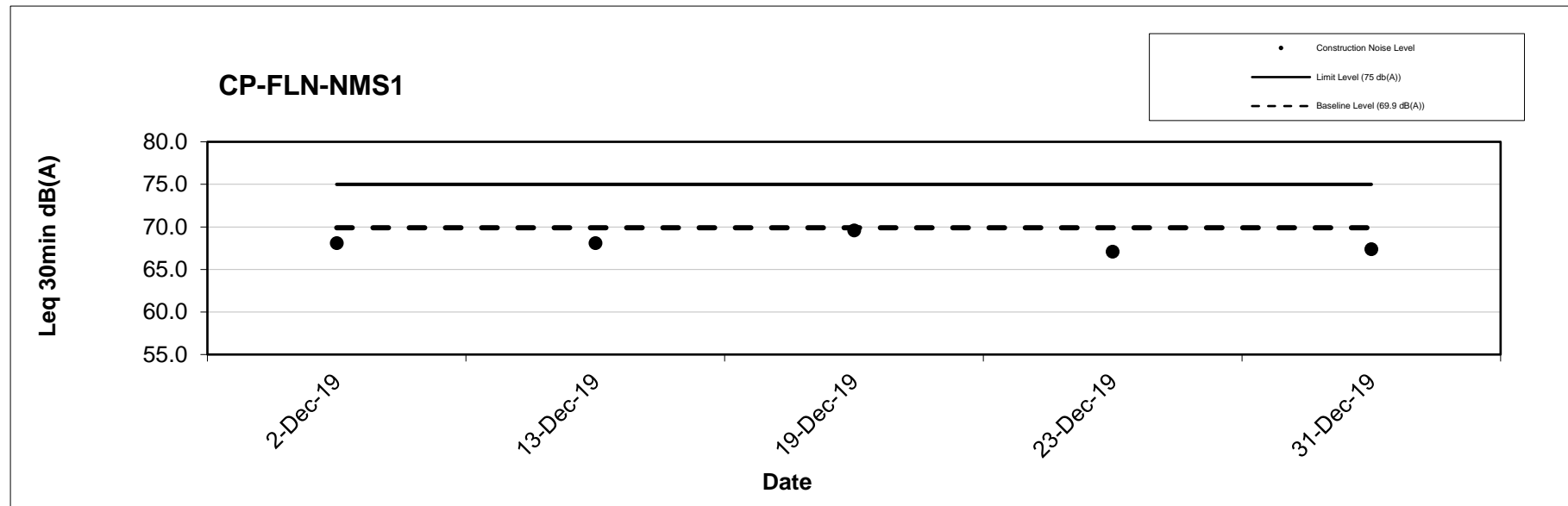
Notes:

1. Monitoring Locations: CP-FLN-NMS1 — Belair Monte (Existing)
2. Actual monitoring date will be subjected to change due to any safety concern or adverse weather condition.

G. NOISE MONITORING DATA AND GRAPHICAL PRESENTATIONS

CP-FLN-NMS1 Belair Monte

Date	Start Time	Measured Noise Level (MNL)			Baseline (BNL)	Limit Level	Corrected Noise Level (CNL)#		Weather	Wind Speed m/s
		L _{eq} *	L ₉₀	L ₁₀						
		Unit: dB(A) 30 mins								
2-Dec-2019	10:15	68.1	58.5	71.5	69.9	75	68.1	Measured≤Baseline	Fine	0.9
13-Dec-2019	09:38	68.1	60.8	71.8	69.9	75	68.1	Measured≤Baseline	Fine	1.9
19-Dec-2019	09:48	69.6	57.5	74.0	69.9	75	69.6	Measured≤Baseline	Fine	2.1
23-Dec-2019	09:42	67.1	55.9	71.2	69.9	75	67.1	Measured≤Baseline	Fine	2.4
31-Dec-2019	09:45	67.4	55.2	71.9	69.9	75	67.4	Measured≤Baseline	Fine	0.6



H. CUMULATIVE STATISTICS ON EXCEEDANCES, COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

Environmental Complaints Log

Complaint Log No.	Date of Complaint	Received From	Received By	Nature of Complaint	Investigation/Mitigation Action	Status
Nil	-	-	-	-	-	-

Remark:

* No Complaints, Notifications of Summons or Successful Prosecutions was received in the reporting period.

Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions and Public Engagement Activities

Reporting Period	Complaints	Notifications of Summons and Prosecutions	Public Engagement Activities
This Month	0	0	0
Cumulative Project-to-Date	0	0	0

Cumulative Statistics on Monitoring Exceedance

Monitoring Parameter	Month/Year	No. of Exceedance	
		Action	Limit
Noise (LAeq (30min))	No. of Exceedance This Month	0	0
	Cumulative Project-to-Date	0	0

I. SITE AUDIT SUMMARY

Site Audit Summary

Inspection Date	Observation/ Comment	Follow Up Action	Completion Date
Follow Up action(s) of last reporting month	Cover material of tree waste should be fully covered the waste properly.	Tree waste has been covered properly	30/11/2019
	The gravel in the canal should be cleared.	The gravel in the canal has been cleared	30/11/2019
4/12/2019	Tarpaulin sheet or water spray should be provided on temporary soil stockpile for dust control.	Tarpaulin sheet has been provided on temporary soil stockpile for dust control.	6/12/2019
	Stagnant water on the ground should be cleared.	Stagnant water on the ground has been cleared.	6/12/2019
13/12/2019	Water spray for dust control for stockpile at portion 1.	Water spray for dust control has been applied at portion 1.	18/12/2019
	De-silting of U-channel in a regular basis.	U-channel has been cleaned regularly.	18/12/2019
19/12/2019	Tarpaulin sheet or water spray should be provided on temporary soil stockpile for dust control.	Tarpaulin sheet has be provided on temporary soil stockpile for dust control.	20/12/2019
	De-silting of U-channel in a regular basis.	U-channel has been cleared regularly.	20/12/2019
24/12/2019	Stock pile should be fully enclosed by tarpaulin sheet	Follow up action will be reported in the next reporting month.	

J. EVENTS AND ACTION PLAN

Event and Action Plan for Construction Noise

Event	Action			
	ET	IEC	ER	Contractor
Action Level Exceedance	<ol style="list-style-type: none"> 1. Notify the 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 the monitoring frequency to check the mitigation effectiveness. 	<ol style="list-style-type: none"> 1. Review the monitoring data submitted by the ET; 2. Review the construction methods and proposed redial 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 the Contractor to propose remedial measures for the analyzed noise problem; 4. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to the ER and copy to the IEC and ET; 2. Implement noise mitigation proposals.
Limit Level Exceedance	<ol style="list-style-type: none"> 1. Identify sources. 2. Inform IEC, ER and Contractor; 3. Repeat measurements to confirm findings; 4. Increase the monitoring frequency; 5. Carry out analysis of the Contractor's working procedures with the ER and Contractor to determine possible mitigations to be implemented; 6. Inform IEC, ER and Contractor the causes and actions taken for the exceedances; 7. Assess the effectiveness of the Contractor's remedial action with the ER and keep the IEC informed of the results; 8. If exceedance stops, cease additional monitoring. 	<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 action 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 analyzed noise problems; 4. Ensure remedial measures are properly implemented; 5. If exceedance continues, consider what portion of work is responsible and instruct the Contractor to stop that portion of works until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial action to the ER and copy to the ET and IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problems still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Notes:

ET – Environmental Team

IEC – Independent Environmental Checker

ER – Engineer's Representative

K. IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES (CONSTRUCTION PHASE)

EIA Ref.	Objective & Address	Stage (D/C/O)	Recommended Mitigation Measures	Implementation Status (Construction Phase)
Common Mitigation Measures (Applicable to ALL Project Components, including DPs and Non-DPs)				
Construction Dust Impact				
S3.8	All construction sites	C	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.	^
S3.8	All construction sites	C	The Contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation.	^
S3.8	All construction sites	C	Following dust suppression measures should also be incorporated by the Contractor to control the dust nuisance throughout the construction phase:	/
			<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; 	^
			<ul style="list-style-type: none"> Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; 	^
			<ul style="list-style-type: none"> A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones; 	N.O
			<ul style="list-style-type: none"> 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; 	^
			<ul style="list-style-type: none"> Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores; 	^
			<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. 	^
			<ul style="list-style-type: none"> 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; 	^
			<ul style="list-style-type: none"> 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; 	^
S3.8	All construction sites	C	<ul style="list-style-type: none"> 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; 	^
			<ul style="list-style-type: none"> 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; 	^
			<ul style="list-style-type: none"> Any skip hoist for material transport should be totally enclosed by impervious sheeting; 	N.O
S3.8	All construction sites	C	<ul style="list-style-type: none"> Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides; 	N.O
			<ul style="list-style-type: none"> Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is 	N.O

EIA Ref.	Objective & Address	Stage (D/C/O)	Recommended Mitigation Measures	Implementation Status (Construction Phase)
			interlocked with the material filling line and no overfilling is allowed;	
			<ul style="list-style-type: none"> Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and 	N.O
			<ul style="list-style-type: none"> Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies. 	^
S3.8	Selected representative dust monitoring station	C	<ul style="list-style-type: none"> Implement regular dust monitoring under EM&A programme during the Construction phase. 	^
Noise Impact (Construction Phase)				
S4.9	All construction sites where practicable	C	Implement the following good site management practices:	^
			<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; 	
			<ul style="list-style-type: none"> 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; 	^
			<ul style="list-style-type: none"> plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; 	^
			<ul style="list-style-type: none"> 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; and 	^
			<ul style="list-style-type: none"> material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. 	^
			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.	^
			Install movable noise barriers, full enclosure and acoustic mat, screen the noisy plants including air compressor and generator.	^
			Use of "Quiet" Plant and Working Methods	N.O
S4.9	All construction sites where practicable	C	Sequencing operation of construction plants where practicable.	^
S4.9	Selected representative noise monitoring stations	C	Implement a noise monitoring under EM&A programme.	^
Water Quality Impact (Construction Phase)				

EIA Ref.	Objective & Address	Stage (D/C/O)	Recommended Mitigation Measures	Implementation Status (Construction Phase)
S5.7	All construction sites	C	<p><u>Construction Runoff</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>Storm Water 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 facilities. The design of the temporary on-site drainage system will be undertaken by the Contractor prior to the commencement of construction. 	^
			<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. 	N.O
			<ul style="list-style-type: none"> 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. 	^
			<ul style="list-style-type: none"> 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. 	^
			<ul style="list-style-type: none"> 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 means. 	^
S5.7	All construction sites	C	<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. 	^
			<ul style="list-style-type: none"> Measures should be taken to minimize 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. 	N.O
			<ul style="list-style-type: none"> 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. 	^

EIA Ref.	Objective & Address	Stage (D/C/O)	Recommended Mitigation Measures	Implementation Status (Construction Phase)
			<ul style="list-style-type: none"> 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. 	^
			<ul style="list-style-type: none"> Precautions 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 summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events. 	^
			<ul style="list-style-type: none"> All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities should be provided at every construction site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. 	^
			<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. 	N.O
			<ul style="list-style-type: none"> Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts. 	^
			<ul style="list-style-type: none"> 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. 	^
	All streams that required diversion that required diversion	C	<u>Stream Diversion</u> In order to prevent sediment transport during riverbank works, deployment of silt curtain should be implemented, especially when construction works encroach or occur in close distance to water body. It is recommended to carry out all the riverbank works and diversion works within a cofferdam or diaphragm wall and the work areas on riverbed should be kept in dry condition.	N.O
S5.7	All identified groundwater-contaminated areas	C	<u>Groundwater from Contaminated Area</u>	N.O
			<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. 	N.O

EIA Ref.	Objective & Address	Stage (D/C/O)	Recommended Mitigation Measures	Implementation Status (Construction Phase)
			<ul style="list-style-type: none">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.	N.O
			<ul style="list-style-type: none">If treatment and discharge method were used, the design of wastewater treatment facilities, such as active carbon and petrol interceptor, should be submitted to the EPD and a discharge license should be obtained under the WPCO through the Regional Offices of EPD.	N.O
S5.7	All construction sites	C	<u>Sewage from Workforce</u> 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.	N.O
			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.	^
Waste Management (Construction Waste)				
S7.6	All construction sites where practicable	Prior to the commencement construction of construction	<u>Waste Reduction Measures</u> 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: <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;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;	N.O
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				^
S7.6	All construction sites where practicable	Prior to the commencement construction	<ul style="list-style-type: none">sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc.);provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.	N.O
				^
S7.6	All construction sites	C	Prepare Waste Management Plan and submit to the Engineer for approval	N.O
S7.6	All construction sites	C	<u>Good Site Practice</u> The following good site practices are recommended throughout the construction activities: <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;	^

EIA Ref.	Objective & Address	Stage (D/C/O)	Recommended Mitigation Measures	Implementation Status (Construction Phase)
			<ul style="list-style-type: none"> training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling; 	^
			<ul style="list-style-type: none"> provision of sufficient waste disposal points and regular collection for disposal; 	^
			<ul style="list-style-type: none"> appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by 	^
			<ul style="list-style-type: none"> transporting wastes in enclosed containers; 	^
			<ul style="list-style-type: none"> regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; 	^
S7.6	All construction sites	C	<u>Storage of Waste</u> The following recommendation should be implemented to minimize the impacts: <ul style="list-style-type: none"> waste such as soil should be handled and stored well to ensure secure containment; 	^
			<ul style="list-style-type: none"> stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; 	^
			<ul style="list-style-type: none"> different locations should be designated to stockpile each material to enhance reuse; 	^
S7.6	All construction sites	C	<u>Collection and Transportation of Waste</u> The following recommendation should minimize the impacts: <ul style="list-style-type: none"> remove waste in timely manner; 	^
			<ul style="list-style-type: none"> employ the trucks with cover or enclosed containers for waste transportation; 	^
			<ul style="list-style-type: none"> obtain relevant waste disposal permits from the appropriate authorities; and 	^
S7.6	All construction sites	C	<ul style="list-style-type: none"> disposal of waste should be done at licensed waste disposal facilities. 	^
S7.6	All construction sites	C	<u>Excavated and C&D Material</u> Wherever practicable, C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at public filling areas or reclamation sites. The following mitigation measures should be implemented in handling the excavated and C&D materials: <ul style="list-style-type: none"> maintain temporary stockpiles and reuse excavated fill material for backfilling; 	^
			<ul style="list-style-type: none"> carry out on-site sorting; 	N.O
			<ul style="list-style-type: none"> deliver surplus artificial hard materials to Tuen Mun Area 38 recycling plant or its successor for recycling into subsequent useful products; 	N.O
			<ul style="list-style-type: none"> make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; 	N.O
			<ul style="list-style-type: none"> implement a recording system for the amount of waste generated, recycled and disposed of for checking; 	^
			<ul style="list-style-type: none"> 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. 	N.O
			<ul style="list-style-type: none"> Wheel wash facilities have to be provided at the site entrance before the trucks leaving the works area. 	^

EIA Ref.	Objective & Address	Stage (D/C/O)	Recommended Mitigation Measures	Implementation Status (Construction Phase)
S7.6	All construction sites where applicable	C	<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.	^
S7.6	All construction sites	C	<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.	^
S7.6	All construction sites	C	<u>General Waste</u> • General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling.	N.O
			• Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean.	^
			• A reputable waste collector should be employed to remove general refuse on a daily basis.	N.O
S7.6	All construction sites	C	<u>Sewage</u> • The WMP should document the locations and number of portable chemical toilets depending on the number of workers, land availability, site condition and activities.	N.O
			• Regularly collection by licensed collectors should be arranged to minimize potential environmental impacts.	N.O
S7.6	Onsite	C	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.	N.O
Cultural Heritage (Construction Phase)				
S11.6.1	All soil excavation works	Immediately upon discovery during excavation works	<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.	N.O
S11.6.2	Within NDAs	C	<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.	N.O

EIA Ref.	Objective & Address	Stage (D/C/O)	Recommended Mitigation Measures	Implementation Status (Construction Phase)
S11.6.2	Identified potential vibration impacted built heritage features	C with details specified in baseline condition survey and baseline vibration impact assessment,	<p><u>Conducting Construction Vibration Monitoring and Structural Strengthening Measures</u></p> <p>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.</p>	N.O
<i>Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)</i>				
S.12.9	Throughout NDAs,	C as soon as the areas become available, to achieve early establishment.	<p>General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to.</p> <p>With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.</p>	N.O
S.12.9 MM1	Throughout NDAs, particularly for reservoirs	C	<p>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.</p>	N.O
S.12.9 MM2	Throughout NDAs	C	<p>Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines.</p> <p>All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ orelevated, should follow the guidelines stated.</p> <p>Construction time frame should also be considered and designs seek to keep it to a practical minimum.</p>	N.O

EIA Ref.	Objective & Address	Stage (D/C/O)	Recommended Mitigation Measures	Implementation Status (Construction Phase)
S12.9 MM14.4	All watercourses, particularly the stream at Siu Hang San Tsuen that will flow under the Fanling Bypass Eastern Section	C	<p>Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimize any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed.</p> <p>For example, for the stream at Siu Hang San Tsuen in FLN NDA, much of the stream is located underneath the viaduct for the proposed Fanling Bypass. In order to avoid impacts to the stream, the detailed final design of the viaduct should follow guidelines and ensure that no viaduct footings or other structures are placed in the stream.</p> <p>Bridges and box culverts should also be used to minimize the necessity of watercourse modification and protect the watercourses where necessary.</p>	N.O
S.12.9 MM3	Onsite as stipulated in the planning documents for the formulation of the Preliminary Layout Plan	C	<p>Open Space Provision - the principles adopted in the RODP planning ensure that public open space systems are incorporated. All requirements for open space areas stipulated in the planning documents for the formulation of the Preliminary Layout Plan should be adhered to.</p>	N.O
S.12.9 MM4	Onsite	C	<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>	N.O
S.12.9 MM5	Onsite possible. consider locations	C & O	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along 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>	N.O

EIA Ref.	Objective & Address	Stage (D/C/O)	Recommended Mitigation Measures	Implementation Status (Construction Phase)
S.12.9 MM6	Onsite	C & O	<p>Slope Landscaping – Site formation should be reduced as far as possible. Hydroseeding 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>	N.O
S.12.9 MM7	Onsite where possible. Otherwise consider offsite locations	C & O	<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>	N.O
S.12.9 MM7	Onsite where possible. Otherwise consider offsite locations	C & O	<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>	N.O
S.12.9 MM8	In areas identified in the EIA Landscape Mitigation Plans and as agreed with AFCD	C & O	<p>Woodland Compensatory Planting – Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA.</p> <p>The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also).</p> <p>Native tree species are suggested for planting in the appropriate locations, including <i>Ailanthus fordii</i>, <i>Bischofia javanica</i>, <i>Castanopsis fissa</i>, <i>Celtis sinensis</i>, <i>Cinnamomum burmannii</i>, <i>Cinnamomum camphora</i>, <i>Xanthoxylum avicennae</i>, <i>Hibiscus tiliaceus</i>, <i>Liquidambar formosana</i>, <i>Sapium discolor</i>, <i>Schefflera heptaphylla</i> and <i>Ilex rotunda</i>. In addition some understory vegetation may be planted including shrubs such as <i>Atalantia buxifolia</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma malabathricum</i>, <i>Melastoma dodecandrum</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i>.</p> <p>The area allocated for compensatory woodland planting allows in 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</p>	N.O

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			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	On appropriate structures	C & O	Vertical Greening – Planting of climbers to grow up vertical surfaces were appropriate (e.g. building edges, piers).	N.O
S.12.9 MM10	On appropriate buildings	C & O	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.	N.O
S.12.9 MM11	Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures.	C & O	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	N.O
S.12.9 MM12	On viaducts or along roads.	C & O	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)	N.O
S.12.9 MM13 & EIA Annex 13	Onsite where possible. Otherwise consider offsite locations	C & O	Marsh/Wetland Compensation –The proposed Long Valley Nature Park (LVNP) will be designed and implemented to enhance on- wetland areas within the LVNP. (See E4,E15 and E25 also) Also see LV16, LV17, and LV18 as wetland planting should be provided along the embankments and beds of modified/reprovisioned watercourses.	N.O
S.12.9 MM14.1	Streams and channelized watercourses e.g. a Ma Tso Lung and Siu Han San Tsuen	C & O	Reprovision of Natural Stream – Where natural streams are unavoidably affected along some of their length, they can be diverted to avoid the proposed new developments and retain the integrity of the whole stream. Detailed design of any stream diversion should follow the Guidelines in ETWB Technical Circular (Works) No. 5/2005 (Protection of natural streams/rivers from adverse impacts arising from construction works) and appropriate construction methods should be used. Two short stretches of the Ma Tso Lung Stream will be affected by Project in the KTN NDA; by the LMC Eastern Connection Road on the western border of Site F1-3 and further upstream by Site E-2. At both these locations, the stream will be reprovisioned and maintain the flow between unaffected sections of the stream. The reprovisioned stream will be provided with a natural bed and banks, as well as having an area of marsh/ pool next to it and trees and shrubs further from the banks. (See E2, E14 and E24 also)	N.O

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S12.9 MM14.2	Streams and channelized watercourses e.g. a Ma Tso Lung and Siu Han San Tsuen	C & O	<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 vegetation will be retained and enhanced and human activities will be limited in order to avoid direct impacts to the stream bed and to minimize potential indirect impacts to the stream and riparian corridor. (See E3 also)</p>	N.O
S12.9 MM14.3	Channelized watercourse, particularly the Ma Wat River Channel Diversion	C & O	<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>	N.O
S12.9 MM15	E1-7 and C1-9 (LVNP) in KNT NDA and generally throughout NDA	C & O	<p>Pond Replacement –Principles adopted in the design of the NDAs ensure that they incorporate ponds within the RODPs. All requirements for ponds stipulated in the planning documents for the formulation of the Preliminary Layout Plan (e.g. at Fung Kong Shan Park in E1-7 of KNT ND) should be adhered to.</p>	N.O
S.12.9 MM16	Throughout NDAs	C	<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>	N.O
S.12.9 MM17	Throughout NDAs	C & O	<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>	N.O

EIA Ref.	Objective & Address	Stage (D/C/O)	Recommended Mitigation Measures	Implementation Status (Construction Phase)
S.13.9	KTN areas F1-2 and F1-3 and LMC Loop Eastern Connection Road.	D & C	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	N.O
S13.9	FLN area D1-3.	D & C & O.	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.	N.O
Ecology (Construction Phase)				
S. 13.9	FLN area A1-7 500m from Man Kam To Road Egretty.	C	Compensatory egretty habitat provision and establishment. Review condition and location of egrettries before commencement of works. Formulate and implement additional mitigation measures as appropriate. Phasing of works near and within Man Kam To Road Egretty outside breeding season	N.O
S.13.9	Interface between areas/habitats/fauna/ flora of ecological importance (e.g. FLN areas A1-3, A1-7 and A1-9) and works areas; and around any works areas north of the Fanling Bypass and north of the Ng Tung River west of the western terminus of the Fanling Bypass. Riparian corridor of Ma Tso Lung Stream and tributaries.	C	Design and erection of 2m high solid dull green site barrier fence between active works areas and all areas/habitats of ecological importance on edge of development areas, including along any roads adjacent to or penetrating into areas/habitats of ecological importance. Erection of a 2m high dull green site barrier fence at the edge of the works area or 30m from Ma Tso Lung Stream and tributaries, whichever distance is the greater.	N.O
S13.9	All construction sites	C	Use opaque, non-transparent, non-reflective noise barriers for all construction sites. Unnecessary lighting should be avoided.	N.O
S13.9	All construction sites.	Prior clearance of vegetation and structures	Pre-site clearance check for presence of flora or fauna of conservation significance and bat roosts. If any are found, measures should be proposed and implemented to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement. Pre-site clearance check on all construction sites and pre –works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of protected plant species/specimens of conservation significance. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works,	A

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S13.9	All construction sites.	Prior clearance of vegetation and structures	transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement. Pre-site clearance of construction sites in Crest Hill area, KTN areas D1-7, D1-11 and G1-5 (where Eurasian Hobby was recorded) and on Cheung Po Tau, FLN area A3-1 (where Grey Nightjar was recorded) for presence of any breeding birds/breeding sites. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement. Pre-site clearance check on all construction sites for presence of Chinese Bullfrog, translocation to suitable areas including LVNP.	N.O
S13.9	All construction sites.	Prior clearance of vegetation and structures of vegetation and structures.	Pre-works commencement check on watercourses to be physically and/or hydrologically impacted by construction activities for presence of flora or fauna of conservation significance and bat roosts. If any are found consider adjustments to avoid, minimize and/or compensate for impacts; including adjustments to design, timing of works, transplantation and translocation. Seek agreement of relevant authorities including AFCD in respect of proposed measures, then implement. Pre-site clearance check on all construction sites for presence of reptile species of conservation significance, capture and translocate to receptor site; review translocation options in respect to species in Ma Tso Lung area and determine whether release locally or elsewhere is appropriate. Seek agreement of relevant authorities including AFCD in respect of proposed measures then implement.	N.O
S13.9	All construction sites	C	Prevention of dust, run-off and pollutants impacting Deep Bay catchment area and areas of ecological importance.	N.O
Specific Mitigation Measures for Designated Projects				
DP12-Reprovision of temporary wholesale market in FLN NDA				
Landscape and Visual (Detailed Design, Prior to Construction, Construction and Operational Phases)				
S.12.D9	Throughout NDAs,	C as	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.	N.O
S.12.D9 MM1	Throughout NDAs, particularly for reservoirs	C	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	N.O

EIA Ref.	Objective & Address	Stage (D/C/O)	Recommended Mitigation Measures	Implementation Status (Construction Phase)
			appropriate, to support assimilation with the hillside setting.	
S.12.D9 MM2	Throughout NDAs	C	<p>Detailed Design (Visual) –The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines.</p> <p>All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated.</p> <p>Construction time frame should also be considered and designs seek to keep it to a practical minimum.</p>	N.O
S.12.D9 MM4	Onsite	C	<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>	N.O
S.12.D9 MM5	Onsite where possible. Otherwise consider offsite location	C & O	<p>Tree Transplantation – Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme.</p> <p>A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work.</p> <p>For trees associated with highways e.g. roadside planting along 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>	N.O

EIA Ref.	Objective & Address	Stage (D/C/O)	Recommended Mitigation Measures	Implementation Status (Construction Phase)
S.12.D9 MM6	Onsite	C & O	<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>	N.O
S.12.D9 MM7	Onsite where possible. Otherwise consider offsite location offsite locations	C & O	<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>	N.O
S.12.D9 MM11	Along roads, around suitable built structures, or around VSRs to contain their view out to the NDA structures. built structures, or around VSRs to contain their view out to the NDA structures.	C & O	Screen Planting – Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	N.O
S.12.D9 MM16	Throughout NDAs	C	<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>	N.O
S.12.D9 MM17	Throughout NDAs	C & O	<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>	N.O

Remarks: ^ Compliance of mitigation measure
/ Recommendation was made during site audit but not improved/ rectified by the Contractor in reporting period.
x Non-compliance of mitigation measure
N.A Not Applicable at this stage as no such site activities were conducted in the reporting period
N.O Not Observed during site inspection in the reporting period.

L. PROACTIVE ENVIRONMENTAL PROTECTION PROFORMA

Reporting Period: 01/12/2019-31/12/2019		
Construction Works	Anticipated Impacts	Corresponding Mitigation Measures
Underground drainage works	1. Waste water	<ul style="list-style-type: none"> • Reuse on Site after sedimentation
sewerage works, water works	1. Waste water 2. Water pollution	<ul style="list-style-type: none"> • Reuse on Site after sedimentation
Ground investigation	1. Waste water 2. Air pollution	<ul style="list-style-type: none"> • Reuse on Site after sedimentation • "Approved" NRMM
Site clearance and tree felling	1. Refuse generation 2. Air pollution 3. Waste water	<ul style="list-style-type: none"> • Waste disposal to Pubilc Landfill • Restrit the speed of all vehicles moving within the Site to below 10 km/hr to minimize fugitive dust emission • Every vehicle shall be washed to remove dusty materials from its body and wheels • Cover any stockpile by impervious sheeting • Reuse on Site after sedimentation
ELS for management build structure	1. C&D waste 2. Air pollution 3. Noise pollution	<ul style="list-style-type: none"> • Cover C&D waste by impervious sheeting • Disposal to FB • Spray with water to work area before, during and after the work • Adopt QPME for excavator • Adopt noise barrier in screening noise
Slope stabilization work	1. Noise pollution 2. Water bodycontamination	<ul style="list-style-type: none"> • Adopt QPME for plants • Adopt noise barrier if practicable • Use sand bags to block the work area
Slope stabilization work	1. Noise pollution 2. Water bodycontamination	<ul style="list-style-type: none"> • Adopt QPME for plants • Adopt noise barrier if practicable • Use sand bags to block the work area

Remarks:

The Contractor should implemented environmental mitigation measures and requirements as stated in the EIA Reports, the EP and the EM&A Manuals.

Coming Month: 01/01/2020-31/01/2020		
Construction Works	Anticipated Impacts	Corresponding Mitigation Measures
Hoarding work;	1. Noise Pollution	<ul style="list-style-type: none"> • Adopt QPME label
Sewerage works,water works	1. Waste water 2. Water pollution	<ul style="list-style-type: none"> • Reuse on Site after sedimentation
Site clearance and tree felling	1. Refuse generation 2. Air pollution 3. Waste water	<ul style="list-style-type: none"> • Waste disposal to Pubilc Landfill • Restrict the speed of all vehicles moving within the Site to below 10 km/hr to minimize fugitive dust emission • Every vehicle shall be washed to remove dusty materials from its body and wheels • Cover any stockpile by impervious sheeting • Reuse on Site after sedimentation
Excavation work	1. C&D waste 2. Air pollution 3. Noise pollution	<ul style="list-style-type: none"> • Cover C&D waste by impervious sheeting • Disposal to FB • Spray with water to work area before, during and after the work • Adopt QPME for excavator • Adopt noise barrier in screening noise
Breaking work existing paving	1. C&D waste 2. Air pollution 3. Noise pollution	<ul style="list-style-type: none"> • Cover C&D waste by impervious sheeting • Sorting before disposal to FB • Spray with water to work area before, during and after the work • Adopt QPME for excavator • Adopt noise barrier in screening noise

Remarks:

The Contractor should implemented environmental mitigation measures and requirements as stated in the EIA Reports, the EP and the EM&A Manuals.

M.WASTE FLOW TABLE

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	0.00397
Dec	0	0	0	0	0.428	0	0	0	0	0	0.0354
Total	0	0	0	0	1.355	0	0	0	0	0	0.0393

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].

N. PHOTO OF GREEN SITE BARRIER FENCES

Photo of green site barrier fences



High 2m solid dull green site barrier fences had been erected around all active works areas.