Civil Engineering and Development Department

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

Monthly Environmental Monitoring and Audit Report for July 2021

(Version 1.0)

Certified By

Dr. Priscilla Choy

(Environmental Team Leader)

REMARKS:

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

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

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

Monthly Environmental Monitoring and Audit Report No. 21 (July 2021)

24 August 2021 **BY EMAIL**

Dear Sir.

We refer to email of 23 August 2021 attaching the Monthly Environmental Monitoring and Audit Report No. 21 prepared by the Environmental Team (ET) of the captioned.

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

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

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

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EXECUTIVE SUMMARY

Introduction

- 1. This is the 21st monthly Environmental Monitoring and Audit (EM&A) Report under First Phase Development of Kwu Tung North (KTN) and Fanling North (FLN) New Development Areas (NDAs), comprising the Advance Works and First Stage Works (the Project). This report was prepared by Wellab Limited under "Service Contract No. NDO 04/2019 Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of KTN and FLN NDAs" (hereinafter called the "Service Contract"). This report documents the findings of Environmental Monitoring and Audit (EM&A) work conducted in July 2021.
- 2. During the reporting month, the following Works Contracts under relevant Environmental Permit(s) were undertaken for the Project:

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

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

Works Contracts	Environmental Permit No.	Designated Project (DP)	Commencement date of construction
Development Area, Phase 1: Development of Long Valley Nature Park	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	6 th October 2020
Contract No. ND/2019/04 – Fanling North New	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	23 rd February 2021
Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)	EP-546/2017	Fanling North Temporary Sewage Pumping Station	16 th February 2021
Contract No. ND/2019/05 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)	EP-473/2013/A	Fanling Bypass Eastern Section (New Road)	1 st August 2020
Contract No. ND/2019/06 - Fanling North New Development Area, Phase 1: Re-provisioning of North District Temporary Wholesale Market for Agricultural Products	EP-475/2013/A Reprovision of temporary Wholesale Market in Fanling North New Development Area		29 th October 2019
Contract No. ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works	Works area Environmental Po Project.	1 st March 2021	

Environmental Monitoring and Audit Progress

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

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

EM&A Activities	Works Contracts										
	ND/2019/	ND/2019/	ND/2019/	ND/2019/	ND/2019/	ND/2019/	ND/2019/				
	01	02	03	04	05	06	07				
1-hr Total Suspended	5, 9, 15,	N/A	2, 5, 7, 9,	2, 5, 7, 9,	2, 7, 13,	N/A	N/A				
Particulates (TSP)	21, 27		13, 15,	13, 15,	19, 23, 29						
Monitoring	July 2021		19, 21,	19, 21,	July 2021						
			23, 27, 29	23, 27, 29							
			July 2021	July 2021							
24-hr TSP Monitoring	5, 9, 15,	N/A	5, 6, 9,	5, 6, 9,	6, 12, 16,	N/A	N/A				
	21, 27		12, 15,	12, 15,	22, 28						
	July 2021		16, 21,	16, 21,	July 2021						
			22, 27, 28	22, 27, 28							
			July 2021	July 2021							

EM&A	Activities	Works Contracts										
		ND/2019/	ND/2019/	ND/2019/	ND/2019/	ND/2019/	ND/2019/	ND/2019/				
		01	02	03	04	05	06	07				
	P (Ambient	2, 8, 14,	N/A	2, 8, 14,	N/A	N/A	N/A	N/A				
Arsenic)	Monitoring	20, 26, 30		20, 26, 30								
for	Land	July 2021		July 2021								
Contamina		5 15 21 2	7 I1 2021	NT/A	2.7.1	2 10 20 1-1-	- 2021	NT/A				
Noise Mon	itoring	5, 15, 21, 27 July 2021		N/A	2, /, 1	3, 19, 29 July	7 2021	N/A				
Water	Quality	N/A	2, 5, 7, 9,	N/A	2, 5, 7, 9,	N/A	N/A	N/A				
Monitoring	5		12, 14,		12, 14,							
			17, 19,		17, 19,							
			21, 23,		21, 23,							
			26, 28, 30		26, 28, 30							
Landfill Ga	NG.	22 July	July 2021 N/A	N/A	July 2021 N/A	N/A	N/A	N/A				
Monitoring		22 July 2021	1 N /A	1N/ A	1N/ A	1 N / <i>F</i> A	1 N / A 1	1 N / FA				
Built	Heritage	N/A	N/A	N/A	N/A	Daily	N/A	N/A				
Monitoring		1 1/1 1	1 1/11	1 1/11	1 1/11	assessment	1,71	1 1/1 1				
	,					subject to						
						construction						
						works						
						conducted						
						within						
						assessment						
	Monitoring	N/A*	N/A*	8, 9, 15,	8, 15, 21,	area N/A*	N/A*	N/A*				
	of Measures	14/11	1 4/ 2 1	16, 21,	28 July	1 1/1 1	14/11	14/21				
	to Minimise			23, 27, 28	2021							
	Disturbance to Water			July 2021								
	Birds on Ng											
	Tung River,											
	Sheung Yue River, and											
	Long Valley											
	Monitoring	20, 26	N/A*	20, 26	20, 26	N/A*	N/A*	N/A*				
	of Measures to Minimise	July 2021		July 2021	July 2021							
	Impacts to											
Ecologic-	Ma Tso											
al Survey	Lung Stream and											
	Siu Hang											
	San Tsuen Stream											
	Monitoring	14, 26	14, 26	26 July	26 July	26 July	N/A*	N/A*				
	of Measures	July 2021	July 2021	2021	2021	2021	1 1/ / 1	1 1/1 1				
	to Minimise]	,									
	Impacts on Ecological											
	Sensitive											
	Habitats from											
	Disturbance											
	and											
	Pollution											

EM&A Activities	Works Contracts									
	ND/2019/	ND/2019/	ND/2019/	ND/2019/	ND/2019/	ND/2019/	ND/2019/			
	01	06	07							
Environmental Site	6, 13, 20,	7, 14, 23,	2, 9, 16,	2, 8, 15,	7, 12, 19,	8, 15, 22,	2, 8, 16,			
Inspection	27 July	28 July	20, 30	22, 29	26 July	29 July	23, 30			
	2021	2021	July 2021	July 2021	2021	2021	July 2021			

Remark:

- N/A No relevant monitoring is required according to updated EM&A Manual
- N/A* No relevant monitoring is required according to Baseline Ecological Monitoring Plan (Table 3.1)
- [1] Since the distance between monitoring station CP-KTN-NMS2 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03
- [2] Since the distance between monitoring station CP-KTN-NMS3 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03
- [3] Since the distance between monitoring station CP-KTN-NMS1 and site boundary of ND/2019/02 under EP-469/2013 exceeds 300m. The monitoring station is not applicable to ND/2019/02
- [4] Since the distance between monitoring station FLN-DMS1 and site boundary of ND/2019/05 under EP-473/2013/A exceeds500m. The monitoring station is not applicable to ND/2019/05
- [5] Since the distance between monitoring station FLN-DMS3 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04
- [6] Since the distance between monitoring station FLN-DMS5 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05
- [7] Since the distance between monitoring station CP-FLN-NMS2 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04.
- [8] Since the distance between monitoring station CP-FLN-NMS1 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.

Breaches of Action and Limit Levels

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

Table III Summary Table for Events Recorded in the Reporting Month

Environmental Monitoring	Parameter	No. of non- project related Exceedances		Total No. of non-project related Exceedances	No. of Exceedance related to the Construction Works of the Contract		Total No. of Exceedance related to the Construction Works of the	
		Action Level	Limit Level	Excecuances	Action Level	Limit Level	Contract	
	1-hr TSP	0	0	0	0	0	0	
	24-hr TSP	0	0	0	0	0	0	
Air Quality	24-hr RSP (Ambient Arsenic)	0	0	0	0	0	0	
Noise	L _{eq(30min)}	0	0	0	0	0	0	
[1]	DO	1	8	9	0	0	0	
Water Quality ^[1]	Turbidity	0	16	16	0	1	1	

	SS	1	11	12	0	1	1
	Arsenic	2	0	2	0	0	0
	O_2	0	0	0	0	0	0
Landfill Gas	CH ₄						
	CO ₂						
Cultural heritage	Built Heritage Monitoring	0	0	0	0	0	0

Air Quality

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

Construction Noise

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

Water Quality

7. All additional water quality monitoring was conducted as scheduled in the reporting month. One (1) Action Level exceedance and eight (8) Limit Level exceedances for dissolved oxygen, seventeen (17) Limit level exceedances for turbidity, one (1) Action Level exceedance and twelve (12) Limit Level exceedances for suspended solids and two (2) Action Level exceedance for arsenic of impact water quality monitoring were recorded. After investigation, one (1) Limit Level exceedances for turbidity and one (1) Limit Level exceedances for suspended solids at monitoring station, SHST-IS2, were found due to Contract No. ND/2019/04. Other exceedances were considered non-projected related. No construction of channel for alternation of natural streams was carried out in the reporting month. Therefore, no water quality monitoring according to pre-construction ET's Updated EM&A Manual and Baseline Water Quality Monitoring Report (KTN & FLN NDA) was conducted. For the details, please refer to Section 5.

Land Contamination

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

Landfill Gas Monitoring

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

Built Heritage Monitoring

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

Ecological Monitoring

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

Complaint Log

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

Notification of Summons and Successful Prosecutions

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

Reporting Changes

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

Future Key Issues

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

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

1 able 1 v	Summary Table for Site Activities in the coming Two Months
Contract No.	Site Activities (August 2021 and September 2021)
ND/2019/01	(a) Site clearance, site formation and additional road opening in Portion 1f
	(b) Site clearance, ground investigation, tree felling and temporary road construction in Portion 2
	(c) Site clearance, excavation, sheetpiling and excavation, and pipes laying in Portion 3
	(d) Site clearance, stockpile of soil, construction of KW01 retaining wall, sheetpiling and excavation, pipes laying, and tree felling in Portion 5
	(e) Site Clearance, sheetpiling and excavation, pipes laying, backfilling, construction of KW01 retaining wall, construction of KB01 retaining wall, and haul road construction in Portion 6a
	(f) Arsenic soil treatment works in Portion 6b
	(g) Site clearance, sheetpiling and excavation, pipes laying in Portion 7
	(h) Construction of retaining wall, slope cutting, soil nailing, slope drainage and maintenance access construction, excavation for Fresh Water Service
	Reservoir, RC construction of Flushing Water Service Reservoir in Portion 8a
	(i) Sheetpiling for jacking pit, trenchless works and excavation in Portion 8b
	(j) Sheetpiling and excavation, pipes laying of existing structures in Portion 9b
	(k) Stockpile of soil and excavation in Portion 9c

	(l) Excavation, sheetpiling for ELS, pipes laying, noise barrier footing in
	Portion 10a
	(m) Sheetpiling and excavation, pipes laying in Portion 10b
	(n) Construction of MBR at 11b
	(o) Construction of temporary sewage pumping station in Portion 14
ND/2019/02	(a) Pre-bored Socketed H-pile
	(b) Tree felling
	(c) ELS
	(d) Hoarding erection
	(e) Construction of Pile Cap
ND/2019/03	
ND/2019/03	
	(b) Portion 2 to Portion 20
	- Erection of Permanent Boundary Structure
	- Construction of Irrigation Channel
	- Geotechnical Works in Long Valley (Trail Pits)
	- Construction of Temporary Road in Long Valley
	- Asbestos Removal in Long Valley
	- Demolition of Existing Construction in Handed over Area
	- Construction of Type 2 Storage House
	- Construction of Outdoor Composting Facility
	- Construction of Bird Hide
	- Construction of Outdoor Classroom
	- Construction of Storage Sheds
	- Wetland Creation & Restoration works
ND/2019/04	(a) Site clearance
	(b) Tree felling
	(c) Predrill
	(d) Socket H-piling
	(e) Bored piling
	(f) Excavation
	(g) ELS
ND/2019/05	(a) Bridge Foundation Works
	\
	- Ground investigation works at FLN3-DH016, ABH02, ABH04, ABH10,
	- Ground investigation works at FLN3-DH016, ABH02, ABH04, ABH10, D39(P).
	D39(P).
	D39(P) Pre-drilling for bored piles at B1(Portion I), C2-02, E2-01, E3-01,
	D39(P). - Pre-drilling for bored piles at B1(Portion I), C2-02, E2-01, E3-01, B1(Portion II), B2(Potion II), C1-01 & C1-02(Portion II), C3-02.
	D39(P). - Pre-drilling for bored piles at B1(Portion I), C2-02, E2-01, E3-01, B1(Portion II), B2(Potion II), C1-01 & C1-02(Portion II), C3-02. - Bored piling at C3-03b, C3-04b, C2-04a, C2-04b, D1-03, E1-03, D1-04,
	D39(P). - Pre-drilling for bored piles at B1(Portion I), C2-02, E2-01, E3-01, B1(Portion II), B2(Potion II), C1-01 & C1-02(Portion II), C3-02. - Bored piling at C3-03b, C3-04b, C2-04a, C2-04b, D1-03, E1-03, D1-04, E1-04, E2-03, C3-01a, C3-01b, C2-01, B1(Portion 1), C3-04b, C2-03b,
	D39(P). - Pre-drilling for bored piles at B1(Portion I), C2-02, E2-01, E3-01, B1(Portion II), B2(Potion II), C1-01 & C1-02(Portion II), C3-02. - Bored piling at C3-03b, C3-04b, C2-04a, C2-04b, D1-03, E1-03, D1-04, E1-04, E2-03, C3-01a, C3-01b, C2-01, B1(Portion 1), C3-04b, C2-03b, C3-03a, C3-04a, D1-02, E1-02, E3-01, E2-01, D2-01.
	D39(P). - Pre-drilling for bored piles at B1(Portion I), C2-02, E2-01, E3-01, B1(Portion II), B2(Potion II), C1-01 & C1-02(Portion II), C3-02. - Bored piling at C3-03b, C3-04b, C2-04a, C2-04b, D1-03, E1-03, D1-04, E1-04, E2-03, C3-01a, C3-01b, C2-01, B1(Portion 1), C3-04b, C2-03b, C3-03a, C3-04a, D1-02, E1-02, E3-01, E2-01, D2-01. - Pile cap construction at E2-01, C4-03, C4-04, E2-03, E3-03, D1-01, E1-
	D39(P). - Pre-drilling for bored piles at B1(Portion I), C2-02, E2-01, E3-01, B1(Portion II), B2(Potion II), C1-01 & C1-02(Portion II), C3-02. - Bored piling at C3-03b, C3-04b, C2-04a, C2-04b, D1-03, E1-03, D1-04, E1-04, E2-03, C3-01a, C3-01b, C2-01, B1(Portion 1), C3-04b, C2-03b, C3-03a, C3-04a, D1-02, E1-02, E3-01, E2-01, D2-01. - Pile cap construction at E2-01, C4-03, C4-04, E2-03, E3-03, D1-01, E1-01, HKY-P02 pile cap & HKY-AB pile cap.
	D39(P). Pre-drilling for bored piles at B1(Portion I), C2-02, E2-01, E3-01, B1(Portion II), B2(Potion II), C1-01 & C1-02(Portion II), C3-02. Bored piling at C3-03b, C3-04b, C2-04a, C2-04b, D1-03, E1-03, D1-04, E1-04, E2-03, C3-01a, C3-01b, C2-01, B1(Portion 1), C3-04b, C2-03b, C3-03a, C3-04a, D1-02, E1-02, E3-01, E2-01, D2-01. Pile cap construction at E2-01, C4-03, C4-04, E2-03, E3-03, D1-01, E1-01, HKY-P02 pile cap & HKY-AB pile cap. Footing construction at C4-01a and C4-01b.
	D39(P). Pre-drilling for bored piles at B1(Portion I), C2-02, E2-01, E3-01, B1(Portion II), B2(Potion II), C1-01 & C1-02(Portion II), C3-02. Bored piling at C3-03b, C3-04b, C2-04a, C2-04b, D1-03, E1-03, D1-04, E1-04, E2-03, C3-01a, C3-01b, C2-01, B1(Portion 1), C3-04b, C2-03b, C3-03a, C3-04a, D1-02, E1-02, E3-01, E2-01, D2-01. Pile cap construction at E2-01, C4-03, C4-04, E2-03, E3-03, D1-01, E1-01, HKY-P02 pile cap & HKY-AB pile cap. Footing construction at C4-01a and C4-01b.
	D39(P). Pre-drilling for bored piles at B1(Portion I), C2-02, E2-01, E3-01, B1(Portion II), B2(Potion II), C1-01 & C1-02(Portion II), C3-02. Bored piling at C3-03b, C3-04b, C2-04a, C2-04b, D1-03, E1-03, D1-04, E1-04, E2-03, C3-01a, C3-01b, C2-01, B1(Portion 1), C3-04b, C2-03b, C3-03a, C3-04a, D1-02, E1-02, E3-01, E2-01, D2-01. Pile cap construction at E2-01, C4-03, C4-04, E2-03, E3-03, D1-01, E1-01, HKY-P02 pile cap & HKY-AB pile cap. Footing construction at C4-01a and C4-01b. (b) Viaduct Works 1st Segment Mould installation and 2st Segment Mould fabrication.
	D39(P). Pre-drilling for bored piles at B1(Portion I), C2-02, E2-01, E3-01, B1(Portion II), B2(Potion II), C1-01 & C1-02(Portion II), C3-02. Bored piling at C3-03b, C3-04b, C2-04a, C2-04b, D1-03, E1-03, D1-04, E1-04, E2-03, C3-01a, C3-01b, C2-01, B1(Portion 1), C3-04b, C2-03b, C3-03a, C3-04a, D1-02, E1-02, E3-01, E2-01, D2-01. Pile cap construction at E2-01, C4-03, C4-04, E2-03, E3-03, D1-01, E1-01, HKY-P02 pile cap & HKY-AB pile cap. Footing construction at C4-01a and C4-01b. Viaduct Works 1st Segment Mould installation and 2st Segment Mould fabrication. Segment production line and segment storage yard establishment
	D39(P). Pre-drilling for bored piles at B1(Portion I), C2-02, E2-01, E3-01, B1(Portion II), B2(Potion II), C1-01 & C1-02(Portion II), C3-02. Bored piling at C3-03b, C3-04b, C2-04a, C2-04b, D1-03, E1-03, D1-04, E1-04, E2-03, C3-01a, C3-01b, C2-01, B1(Portion 1), C3-04b, C2-03b, C3-03a, C3-04a, D1-02, E1-02, E3-01, E2-01, D2-01. Pile cap construction at E2-01, C4-03, C4-04, E2-03, E3-03, D1-01, E1-01, HKY-P02 pile cap & HKY-AB pile cap. Footing construction at C4-01a and C4-01b. (b) Viaduct Works 1st Segment Mould installation and 2st Segment Mould fabrication. Segment production line and segment storage yard establishment First batch of precast segment production
	D39(P). Pre-drilling for bored piles at B1(Portion I), C2-02, E2-01, E3-01, B1(Portion II), B2(Potion II), C1-01 & C1-02(Portion II), C3-02. Bored piling at C3-03b, C3-04b, C2-04a, C2-04b, D1-03, E1-03, D1-04, E1-04, E2-03, C3-01a, C3-01b, C2-01, B1(Portion 1), C3-04b, C2-03b, C3-03a, C3-04a, D1-02, E1-02, E3-01, E2-01, D2-01. Pile cap construction at E2-01, C4-03, C4-04, E2-03, E3-03, D1-01, E1-01, HKY-P02 pile cap & HKY-AB pile cap. Footing construction at C4-01a and C4-01b. (b) Viaduct Works 1st Segment Mould installation and 2st Segment Mould fabrication. Segment production line and segment storage yard establishment First batch of precast segment production Segment shop drawing preparation for bridge C4
	D39(P). Pre-drilling for bored piles at B1(Portion I), C2-02, E2-01, E3-01, B1(Portion II), B2(Potion II), C1-01 & C1-02(Portion II), C3-02. Bored piling at C3-03b, C3-04b, C2-04a, C2-04b, D1-03, E1-03, D1-04, E1-04, E2-03, C3-01a, C3-01b, C2-01, B1(Portion 1), C3-04b, C2-03b, C3-03a, C3-04a, D1-02, E1-02, E3-01, E2-01, D2-01. Pile cap construction at E2-01, C4-03, C4-04, E2-03, E3-03, D1-01, E1-01, HKY-P02 pile cap & HKY-AB pile cap. Footing construction at C4-01a and C4-01b. (b) Viaduct Works 1st Segment Mould installation and 2st Segment Mould fabrication. Segment production line and segment storage yard establishment First batch of precast segment production Segment shop drawing preparation for bridge C4 Typical pier column mould fabrication
	D39(P). Pre-drilling for bored piles at B1(Portion I), C2-02, E2-01, E3-01, B1(Portion II), B2(Potion II), C1-01 & C1-02(Portion II), C3-02. Bored piling at C3-03b, C3-04b, C2-04a, C2-04b, D1-03, E1-03, D1-04, E1-04, E2-03, C3-01a, C3-01b, C2-01, B1(Portion 1), C3-04b, C2-03b, C3-03a, C3-04a, D1-02, E1-02, E3-01, E2-01, D2-01. Pile cap construction at E2-01, C4-03, C4-04, E2-03, E3-03, D1-01, E1-01, HKY-P02 pile cap & HKY-AB pile cap. Footing construction at C4-01a and C4-01b. (b) Viaduct Works 1st Segment Mould installation and 2st Segment Mould fabrication. Segment production line and segment storage yard establishment First batch of precast segment production Segment shop drawing preparation for bridge C4

	- First pair of segment erection method statement
	- PT material delivery (first batch) to HZ precast yard preparation
	- Bearing fabrication for bridge C2, C3 and C4
	- Nailing design for SOP erection
	- CTC storage yard establishment
	- Containers site office setup
	(c) Jockey Club Road
	- AT tree felling in July 2021 for Retaining Wall FW51 and 3SW-C/F63
	- Inspection pit digging and UU diversion
	- Completion of gas main diversion
	- Commencement of rock fill slope work for 3SW-C/F63
	- Commencement of cut slope work and soil nail
	(d) Tai Wo Service Road West
	- Road widening for D2-03
	- Site clearance
	- 1650dia stormdrain in Portion XIII
	- HKT draw pit construction in Portion XIII
	- CLP cross road duct joint bay in Portion XII
	- 1650dia drain and manhole in Portion XII
	- Erection of temporary barrier & scaffolding for pedestrian diversion
	- TTA implementation & demolish of HKY staircase
	- CLP ducting laying (joint bay) starts at CH750
	(e) Tai Wo Service Road East
	- Drainage, watermain and road works in Ch100-200
	- Site clearance and formation start in Ch200-450
	- Drainage works at Portion XII
	- HKY FB Abutment commencement AB1
	- HKY FB Lift shaft and column commencement LT1 and P02
	(f) Fanling Highway
	- Road works for Diversion of Fanling Highway for Pier D2-03
	Construction
ND/2019/06	(a) Finishing works and E&M installations for the Management Office Building
110/201//00	(MOB) at Portion 4.
	(b) Erection of the steel members of steel canopy at Portion 3.
	(c) Construction of retaining wall FW21 at Portion 6.
	(d) Construction of ground slab of the market stall area at Portion 3.
	(e) Construction of underground utilities in the final stage market at Portion 3.
	(f) Installation of sheet piles for ELS for footings of additional carriageway steel
	cover at Portion 3.
NID /0040/05	(g) Construction of footings of additional carriageway steel cover at Portion 3.
ND/2019/07	(a) Site clearance at Portion 1 and 2.
	(b) Erection of site hoarding at Portion 1.
	(c) C&D waste disposal at Portion 1 and 2.
	(d) G.I. works at Portion 1. (e) Construction of box culvert at Portion 2.
	(f) Filling works at Portion 2. (g) Tree falling/ Disposal of yard waste at Portion 1 and 2.
	(g) Tree felling/ Disposal of yard waste at Portion 1 and 2.(h) Construction of site haul road at Portion 1.
	(k) Removal of asbestoses containing material at Portion 1 and 2.

1 INTRODUCTION

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

Purpose of the report

1.2 This is the 21st EM&A Report which summarises the key findings of the EM&A programme in July 2021.

Structure of the report

- 1.3 The structure of the report is as follows:
 - Section 1: **Introduction -** purpose and structure of the report.
 - Section 2: **Project Information -** summarises background and scope of the Project, site description, project organisation and contact details, construction programme, the construction works undertaken and the status of Environmental Permits/Licences during the reporting month.
 - Section 3: **Air Quality Monitoring -** summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.
 - Section 4: **Noise Monitoring** summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.
 - Section 5: Water Quality Monitoring summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels and Event / Action Plans.
 - Section 6: Land Contamination (Ambient Arsenic Monitoring) summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.
 - Section 7: **Landfill Gas Monitoring** summarises the monitoring requirement, monitoring parameters and frequency, monitoring locations, Action and Limit Levels, monitoring results and observation, and Event / Action Plans.
 - Section 8: **Built Heritage Monitoring** summarises the monitoring requirement, monitoring parameters and frequency, monitoring locations, Action and Limit Levels, monitoring results and observation.

- Section 9: **Ecological Monitoring** summarises the details of monitoring of measures to minimise disturbance to waterbirds in Ng Tung River, Sheung Yue River, Shek Sheung River and Long Valley, monitoring of measures to minimise impacts on ecological sensitive habitats from disturbance and pollution during the reporting month.
- Section 10: **Environmental Site Inspection -** summarises the audit findings of the weekly site inspections undertaken within the reporting month.
- Section 11: **Environmental Non-conformance** summarises any monitoring exceedance, environmental complaints, environmental summons and successful prosecutions within the reporting month.
- Section 12: **Future Key Issues** summarises the impact forecast, proposed mitigation measures and monitoring schedule for the upcoming months.
- Section 13: Conclusions and Recommendations

2 PROJECT INFORMATION

Background

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

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

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

EP No.	Designated Project		C2	С3	C5 A	C5 B	C6	C 7
EP-466/2013	Castle Peak Road Diversion	✓						
EP-467/2013/A	Kwu Tung North New Development Area Road P1 and P2 and Associated New Kwu Tung Interchange and Pak Shek Au Interchange Improvement							
EP-468/2013/A	Kwu Tung North New Development Area Road D1 to D5			✓				
EP-469/2013	Sewage Pumping Stations in Kwu Tung North New Development Area		✓					
EP-470/2013	Utilization of Treated Sewage Effluent (TSE) from Shek Wu Hui Sewage Treatment Works	✓						
EP-473/2013/A	Fanling Bypass Eastern Section			✓	✓	✓		
EP-475/2013/A	Reprovision of temporary Wholesale Market in Fanling North New Development Area						√	
EP-546/2017	Fanling North Temporary Sewage Pumping Station				✓			

Note: C1: ND/2019/01 C2: ND/2019/02 C3: ND/2019/03 C5A: ND/2019/04

C5B: ND/2019/05 C6: ND/2019/06 C7: ND/2019/07

- 2.4 The site boundary of the Project and all Works Contracts are shown in **Drawing No. 1**.
- 2.5 The required submissions and submission status under Environmental Permits are shown in **Appendix U**.

Project Organization

- 2.6 Different parties with different levels of involvement in the Project organization include:
 - Project Proponent Civil Engineering and Development Department (CEDD)
 - Supervisor / Supervisor's Representative AECOM
 - Environmental Team (ET) Wellab Limited
 - Independent Environmental Checker (IEC) Mott MacDonald Hong Kong Ltd (MottMac)
- 2.7 The key personnel contact names and numbers are summarised in **Table 2.2**.

Table 2.2 Key Contacts of the Project

Table 2.2 Key Contacts of the Project					
Party	Role	Contact Person	Phone No.	Fax No.	
Civil Engineering and Development Department, HKSAR (CEDD)	Project Proponent	Mr. Felix Fan	3152 3551	3547 1658	
Supervisor / Supervisor's Representative (AECOM)	Chief Resident Engineer	Mr. Alan Lee	6398 5982	2645 3900	
Environmental Team (Wellab Limited)	Environmental Team Leader	Dr. Priscilla Choy	2898 7388	2898 7076	
Independent Environmental Checker (MottMac)	Independent Environmental Checker	Mr. Thomas Chan	2828 5967	2827 1823	
Contract No. ND/2019/01 Contractor (Build King –	Site Agent	Mr. Ivan Leung	9640 8340		
Richwell Engineering Joint Venture)	Environmental Officer	Mr. Edward Tam	9287 8270		
Contract No. ND/2019/02	Site Agent	Mr. Andy Chan	3485 9780		
Contractor (Chun Wo – Kwan Lee Joint Venture.)	Environmental Officer	Mr. Ng Tao, Richard	9802 9577		
	Site Agent	Mr. Tang Wing Kai	9300 7037		
Contract No. ND/2019/03 Contractor (Sang Hing Kuly Joint Venture)	Environmental Officer	Mr. Chow Ka Wing	9184 6351		
	Environmental Supervisor	Mr. Ken Kwok	9732 4360		
<u>Contract No. ND/2019/04</u>	Site Agent	Mr. Bear Ding	6483 6198		
Contractor (Daewoo – Chun Wo – Kwan Lee Joint	Environmental Officer	Ms. Donna Tso	9283 7167		
Venture)	Environmental Supervisor	Ms. Peggie Hon	9714 3308		
	Site Agent	Mr. Darvin Lo	9467 5891		
Contract No. ND/2019/05 Contractor (CRCC – Paul Y. Joint Venture)	Environmental Manager	Mr. Pan Fong	9436 9435		
·	Environmental Officer	Ms. Louise Poon	5272 5709		

	Site Agent	Mr. Anson Chan	9349 1320		
Contract No. ND/2019/06 Contractor (New Concepts Engineering Development	Environmental Officer	Mr. Alex Choy	9409 9608	2363 2162	
Ltd.)	Environmental Coordinator	Ms. Mildred Hung	9460 2745		
	Site Agent	Mr. Daniel Wong	5335 9572		
Contract No. ND/2019/07 Contractor (China Road and Bridge Corporation)	Environmental Officer	Mr. K. M. Lui	5113 8223		
	Environmental Supervisor	Mr. Attlee Chau	6386 9018		

Summary of Construction Works Undertaken During Reporting Month

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

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

Contract No.	Site Activities (July 2021)				
	(a)	Site clearance, site formation and additional road opening in Portion 1f			
	(b)				
	(c)	Site clearance and excavation in Portion 3			
	(d)	Site Clearance, stockpile of soil, construction of KW01 retaining wall,			
		sheetpiling and excavation, pipes laying and backfilling in Portion 5			
	(e)	Site Clearance, sheetpiling and excavation, pipes laying, construction of			
		KW01 retaining wall in Portion 6a			
	(f)	Arsenic soil treatment works in Portion 6b			
	(g)	Site Clearance, Construction of temporary road for alternative Po Lau Road,			
		Construction of site accommodation in Area T2 and T3, sheetpiling and excavation, pipes laying, footing of Noise Barriers in Portion 7			
	(h)	Construction of Retaining Wall, slope cutting, soil nailing, slope drainage			
	(11)	and maintenance access construction, excavation for Fresh Water Service			
ND/2019/01		Reservoir, RC construction of Flushing Water Service Reservoir in Portion			
		8a			
	(i)	Sheetpiling for jacking pit in Portion 8b			
	(j)	Sheetpiling and excavation, pipes laying and demolition of existing			
		structures in Portion 9b			
	(k)	Stockpile of soil and excavation in Portion 9c			
	(1)	Sheetpiling for ELS, excavation, pipes laying and noise barriers footing in			
	(***)	Portion 10a			
	(m)	Sheetpiling and excavation in Portion 10b			
	(n)	Laying of rising mains, construction of MBR in Portion 11b			
	(o)	Sheetpiling and excavation, Construction of temporary sewage pumping station in Portion 14			
	(p)	Construction of CLC in Portion 16			
ND/2019/02	(a)	Pre-bored Socketed H-pile			
1111/2019/02	(b)	Tree felling			

Contract No.	Site Activities (July 2021)				
	(c) ELS				
	(d) Hoarding erection				
ND/2019/03	(a) Underground Utilities Laying in Portion 1; (b) Portion 2 to Portion 20 - Erection of Permanent Boundary Structure - Construction of Irrigation Channel - Geotechnical Works in Long Valley (Trail Pits) - Construction of Temporary Road in Long Valley - Asbestos Removal in Long Valley - Demolition of Existing Construction in Handed over Area - Construction of Storage Shed and Type 2 Storage House - Construction of Bird Hide - Construction of Outdoor Classroom - Wetland Creation & Restoration works				
ND/2019/04	 (a) Site clearance (b) Tree felling (c) Predrill (d) Socket H-piling (e) Bored piling (f) Excavation (g) Sheet piling 				
ND/2019/05	(a) Bridge Foundation Works - Ground investigation works at FLN3-DH016, ABH02, ABH04, ABH10, D39(P). - Pre-drilling for bored piles at B1(Portion I), C2-02, E2-01, E3-01, B1(Portion II), B2(Potion II), C1-01 & C1-02(Portion II), C3-02. - Bored piling at C3-03b, C3-04b, C2-04a, C2-04b, D1-03, E1-03, D1-04, E1-04, E2-03, C3-01a, C3-01b, C2-01, B1(Portion 1), C3-04b, C2-03b, C3-03a, C3-04a, D1-02, E1-02, E3-01, E2-01, D2-01. - Pile cap construction at E2-01, C4-03, C4-04, E2-03, E3-03, D1-01, E1-01, HKY-P02 pile cap & HKY-AB pile cap. - Footing construction at C4-01a and C4-01b. (b) Viaduct Works - 1st Segment Mould installation and 2st Segment Mould fabrication. - Segment production line and segment storage yard establishment - First batch of precast segment production - Segment shop drawing preparation for bridge C4 - Typical pier column mould fabrication - Falsework & formwork design for typical pier head - Pier column trial panel at CTC yard - First pair of segment erection method statement - PT material delivery (first batch) to HZ precast yard preparation - Bearing fabrication for bridge C2, C3 and C4 - Nailing design for SOP erection - CTC storage yard establishment - Containers site office setup (c) Jockey Club Road - AT tree felling in July 2021 for Retaining Wall FW51 and 3SW-C/F63 - Inspection pit digging and UU diversion - Completion of gas main diversion				

Contract No.	Site Activities (July 2021)
	- Commencement of cut slope work and soil nail
	(d) Tai Wo Service Road West
	- Road widening for D2-03
	- Site clearance
	- 1650dia stormdrain in Portion XIII
	- HKT draw pit construction in Portion XIII
	- CLP cross road duct joint bay in Portion XII
	- 1650dia drain and manhole in Portion XII
	- Erection of temporary barrier & scaffolding for pedestrian diversion
	- TTA implementation & demolish of HKY staircase
	- CLP ducting laying (joint bay) starts at CH750
	(e) Tai Wo Service Road East
	- Drainage, watermain and road works in Ch100-200
	- Site clearance and formation start in Ch200-450
	- Drainage works at Portion XII
	- HKY FB Abutment commencement AB1
	- HKY FB Lift shaft and column commencement LT1 and P02
	(f) Fanling Highway
	- Road works for Diversion of Fanling Highway for Pier D2-03
	Construction
	(a) Finishing works and E&M installations for the Management Office Building
	(MOB) at Portion 4
	(b) Erection of the steel members of steel canopy at Portion 3
	(c) Construction of retaining wall FW21 at Portion 6
ND/2019/06	(d) Construction of ground slab of the market stall area and concrete carriageway
	at Portion 3
	(e) Construction of underground utilities in the final stage market at Portion 3
	(f) Installation of sheet piles for ELS for footings of additional carriageway steel
	cover at Portion 3
	(a) Site clearance at Portion 1 and 2.
	(b) Erection of site hoarding at Portion 1.
	(c) C&D waste disposal in Portion 1 and 2.
	(d) G.I. works at Portion 1.
	(e) Construction of box culvert in Portion 2.
ND/2019/07	(f) Filling works in Portion 2.
	(g) Tree felling / Disposal of yard waste in Portion 1 and 2
	(h) Construction of site haul road in Portion 1.
	(i) Trial pit at Ma Sik Road.
	(j) Demolition of villager's houses in Portion 1 and 2.
	(k) Removal of asbestos containing materials in Portion 1 and 2.

Construction Programme

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

Status of Environmental Licences, Notifications and Permits

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

Table 2.4 Status of Environmental Licenses, Notifications and Permits

Table 2.4	Status of Environm	ental Licenses, I	Nouncations and 1	ermits			
		Valid	Period				
Contract No.	Permit / License No.	From	То	Status			
Environmental Permit (EP)							
	EP-466/2013	21/11/2013	N/A	Valid			
ND/2019/01	EP-467/2013/A	27/01/2017	N/A	Valid			
1112/2019/01	EP-468/2013/A	27/01/2017	N/A	Valid			
3 777 (5 0 4 0 (0 5	EP-470/2013	21/11/2013	N/A	Valid			
ND/2019/02	EP-469/2013	21/11/2013	N/A	Valid			
ND/2019/03	EP-468/2013/A	27/01/2017	N/A	Valid			
	EP-473/2013/A	27/01/2017	N/A	Valid			
ND/2019/04	EP/473/2013/A	27/01/2017	N/A	Valid Valid			
ND/2019/05	EP/546/2017 EP-473/2013/A	16/11/2017 27/01/2017	N/A N/A	Valid Valid			
ND/2019/05 ND/2019/06	EP-475/2013/A EP-475/2013/A	13/01/2017	N/A N/A	Valid Valid			
		13/01/2017	IV/A	vanu			
Construction Noise	GW-RN0011-21	17/01/2021	16/07/2021	Expired in the reporting period			
	GW-RN0143-21	16/03/2021	15/09/2021	Valid			
ND/2019/01	GW-RN0224-21	07/04/2021	06/10/2021	Valid			
	GW-RN0381-21	08/06/2021	07/09/2021	Valid			
	GW-RN0411-21	25/06/2021	24/09/2021	Valid			
	GW-RN0413-21	23/06/2021	17/12/2021	Valid			
	GW-RN0436-21	30/06/2021	29/09/2021	Valid			
	GW-RN0478-21	17/07/2021	16/01/2022	Valid			
ND/2019/03	GW-RN0131-21	01/03/2021	31/08/2021	Valid			
ND/2019/04	GW-RN0393-21	16/06/2021	15/07/2021	Expired in the reporting period			
	GW-RN0247-21	14/04/2021	13/07/2021	Expired in the reporting period			
ND/2019/05	GW-RN0332-21	01/06/2021	30/07/2021	Expired in the reporting period			
	GW-RN0275-21	05/05/2021	02/11/2021	Valid			
	GW-RN0476-21	05/07/2021	04/10/2021	Valid			
	GW-RN0497-21	30/07/2021	29/10/2021	Valid			
ND/2019/06	GW-RN0903-20	25/01/2021	24/07/2021	Expired in the reporting period			
	ant to Air Pollution Cor		n Dust) Regulation				
ND/2019/01	451792	11/12/2019	N/A	Valid			
ND/2019/02	454012	05/03/2020	N/A	Valid			
	452216	24/12/2019	N/A	Valid			
ND/2019/03	452332	31/12/2019	N/A	Valid			
	452333	31/12/2019	N/A	Valid			
ND/2019/04	461184	23/10/2020	N/A	Valid			
ND/2019/05	454323	13/03/2020	N/A	Valid			

ND/2019/06	449369	24/09/2019	N/A	Valid		
ND/2019/07	459393	28/08/2020	N/A	Valid		
Billing Account for Disposal of Construction Waste						
ND/2019/01	7036265	17/01/2020	N/A	Valid		
ND/2019/02	7036898	01/04/2020	N/A	Valid		
ND/2019/03	7036378	22/01/2020	N/A	Valid		
ND/2019/04	7038391	22/09/2020	N/A	Valid		
ND/2019/05	7036901	01/04/2020	N/A	Valid		
ND/2019/06	7035473	17/10/2019	N/A	Valid		
ND/2019/07	7038309	14/09/2020	N/A	Valid		
Registration of Ch	emical Waste Producer					
ND/2019/01	5213-545-B2578-01	10/01/2020	N/A	Valid		
ND/2019/02	5213-548-C4439-01	06/05/2020	N/A	Valid		
ND/2019/03	5213-623-S4231-01	14/04/2020	N/A	Valid		
ND/2019/04	5211-624-D2709-01	26/11/2020	N/A	Valid		
ND/2019/05	5213-625-C4464-01	20/05/2020	N/A	Valid		
ND/2019/06	5213-625-N2716-01	02/10/2019	N/A	Valid		
ND/2019/07	5213-625-C4498-01	21/09/2020	N/A	Valid		
Effluent Discharge	License under Water F	Pollution Control (
	WT00036071-2020	22/06/2020	30/06/2025	Valid		
	WT00036073-2020	22/06/2020	30/06/2025	Valid		
	WT00036067-2020	22/06/2020	30/06/2025	Valid		
	WT00036075-2020	22/06/2020	30/06/2025	Valid		
NTD /2010/01	WT00036076-2020	22/06/2020	30/06/2025	Valid		
ND/2019/01	WT00037191-2020	02/02/2021	28/02/2025	Valid		
	WT00037204-2020	02/02/2021	28/02/2025	Valid		
	WT00037412-2021	15/04/2021	30/04/2026	Valid		
	WT00037564-2021	19/04/2021	30/04/2026	Valid		
	WT00037886-2021	28/06/2021	30/06/2026	Valid		
ND/2010/02	WT00036584-2020	21/10/2020	31/10/2025	Valid		
ND/2019/02	WT00036952-2020	17/12/2020	31/12/2025	Valid		
ND/2019/03	WT00035847-2020	12/08/2020	31/08/2025	Valid		
ND/2019/04	WT00037539-2021	16/04/2021	30/04/2026	Valid		
ND/2019/05	WT00036996-2020	22/12/2020	31/12/2025	Valid		
ND/2019/06	WT00035415-2019	20/03/2020	31/03/2025	Valid		
ND/2019/07	WT00037526-2021	04/05/2021	31/05/2026	Valid		

3 AIR QUALITY MONITORING

Monitoring Requirements

- 3.1 In accordance with the Updated EM&A Manual, impact 1-hour TSP and 24-hr TSP monitoring were conducted to monitor the air quality for the Works Contracts. **Appendix B** shows the established Action/Limit Levels for the air quality monitoring works.
- 3.2 Impact 1-hour TSP monitoring was conducted for at least three times every 6 days, while the impact 24-hour TSP monitoring was conducted for at least once every 6 days at one air quality monitoring station.

Monitoring Location

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

Table 3.1 Location for Air Quality Monitoring Locations

EP No.	Contract No.	Monitoring Station	Location	
	ND/2019/03	FLN-DMS1 ^[2]	Scattered Village Houses	
	ND/2019/04	FLN-DMS1	North of Proposed Potential Ecopark	
EP-473/2013/A	ND/2019/05	FLN-DMS3 ^[3]	House near Tong Hang	
	ND/2019/03	FLN-DMS5 ^[4]	Noble Hill	
	ND/2019/04			
EP-466/2013				
EP-467/2013/A	ND/2019/01	IZTNI DMC4	Temporary Structure near	
EP-468/2013/A		KTN-DMS4	Fanling Highway (near Pak Shek Au)	
EP-468/2013/A	ND/2019/03		Shor Hu)	

Remark:

Monitoring Equipment

- 3.4 As the power supply for High Volume Sample (HVS) for TSP monitoring at FLN-DMS 5 and KTN-DMS 4 were rejected, direct reading dust meter was used to measure both 1-hour and 24-hour average TSP levels:-
 - The proposal for alternative monitoring equipment (i.e. direct reading dust meter) for TSP monitoring was approved by EPD according to approved Baseline Air Quality Monitoring Report (KTN & FLN NDA); and

^{[1]:} Noting that construction phase air quality monitoring at the other proposed monitoring stations (e.g. planned), where access is permitted, will be conducted during the relevant works contract(s).

^{[2]:} Since the distance between monitoring station and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05.

^{[3]:} Since the distance between monitoring station and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04.

^{[4]:} Since the distance between monitoring station and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05

- Adopt same measurement methodology (i.e. direct reading dust meter) as baseline monitoring for reliable comparison.
- 3.5 The proposed use of portable direct reading dust meters was submitted to IEC and obtained agreement from the IEC as stated in Section 2.4.5 of the Updated EM&A Manual.
- 3.6 HVS for 24-hr TSP monitoring will be adopted once secured supply of electricity become available at FLN-DMS 5 and KTN-DMS 4.
- 3.7 **Table 3.2** summarizes the equipment used in the impact air monitoring programme. Copies of calibration certificates are attached in **Appendix C**.

Table 3.2 Air Quality Monitoring Equipment

Monitoring Station	Equipment	Manufacturer	Model and Make	Quantity
FLN-DMS5 KTN-DMS4	Dust Monitor (1-hour and 24- hour TSP)	Met One Instruments	AEROCET-831	7
FLN-DMS1	Dust Monitor (1-hour TSP)			
FLN-DMS3	HVS Sampler (TSP) (24-hour TSP)	Tisch	TISCH Model: TE-5170	2

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

Monitoring Parameters, Frequency and Duration

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

Table 3.3 Impact Dust Monitoring Parameters, Frequency and Duration

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

Monitoring Methodology and QA/QC Procedure

1-hour and 24-hour TSP Air Quality Monitoring

Instrumentation

- 3.11 Direct reading dust meter was deployed for the air quality monitoring as shown in **Table 3.2**.
- 3.12 The measuring procedures of the dust meter are in accordance with the Manufacturer's Instruction Manual as follows:

(AEROCET-831)

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

Maintenance/Calibration

- 3.13 The following maintenance/calibration was required for the direct dust meters:
 - Check and calibrate the meter by HVS to check the validity and accuracy of the results measured by direct reading method at 2-month intervals throughout all stages of the air quality monitoring.

24-hour TSP Air Quality Monitoring

Instrumentation

(TISCH Model: TE-5170)

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

HVS Installation

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

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

Filters Preparation

- 3.16 Wellab Limited (HOKLAS Registration No.083) is the HOKLAS accredited laboratory and responsible for the preparation of 24-hr conditioned and pre-weighed filter papers for monitoring team.
- 3.17 All filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than ±3 °C; the relative humidity (RH) was < 50% and not variable by more than ±5%. A convenient working RH was 40%.

Operating/Analytical Procedures

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

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

Maintenance/Calibration

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

Results and Observations

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

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

Monitoring Station	Concentration (µg/m³)		Action Level, μg/m³	Limit Level,	
	Average	Range	μg/m²	$\mu g/m^3$	
FLN -DMS1	61.0	44.5 – 85.4	303	500	
FLN -DMS3	66.7	46.6 - 95.3	301	500	
FLN-DMS5	20.5	9.2 - 37.2	279	500	
KTN-DMS4	67.5	19.6 – 174.5	297	500	

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

Monitoring Station	Concentration (µg/m³)		Action Level,	Limit Level,
Station	Average	Range	μg/m²	μg/m³
FLN -DMS1	70.5	46.7 – 91.0	150	260
FLN -DMS3	39.7	27.2 - 60.1	165	260

FLN-DMS5	29.8	9.5 - 48.4	153	260
KTN-DMS4	59.5	30.5 - 118.7	192	260

- 3.21 All 1-hour and 24-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedances were recorded.
- 3.22 According to our field observations, the major dust source identified at the designated air quality monitoring stations in the reporting month are shown in **Table 3.6**:

Table 3.6 Observation at Dust Monitoring Stations

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

Event and Action Plan

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

4 NOISE MONITORING

Monitoring Requirements

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

Monitoring Location

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

Table 4.1 Location of Noise Monitoring Stations

Contract No.	Monitoring Station(s)	Location(s)	
ND/2019/06			
ND/2019/04	CP-FLN-NMS1 ^[2]	Belair Monte	
ND/2019/05	CP-FLN-NMS2 ^[3]	Scattered Village Houses in Tong	
		Hang	
	CP-KTN-NMS2 ^[4]	Residential Buildings at Ma Tso	
ND/2019/01		Lung	
1112/11/101	CP-KTN-NMS3 ^[5]	Fung Kong Garden	
	01 1111 1 11120	1 and 11 and 2 and 11	
ND/2019/01	CP-KTN-NMS5	N/A	
		Ho Sheung Heung, Hau Ku Shek	
ND/2019/02	CP-KTN-NMS6	Ancestral Hall, Hung Shing Temple	
1110/2019/02	CI -KIN-NWS0	& Pai Fung Temple and Sin Wai	
		Nunnery	

Remarks:

Monitoring Equipment

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

^{[1]:} Noting that construction phase noise monitoring at the other proposed monitoring stations (e.g. planned), where access is permitted, will be conducted during the relevant works contract(s).

^{[2]:} Since the distance between monitoring station and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.

^{[3]:} Since the distance between monitoring station and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04.

^{[4],[5]:} Since the distance between monitoring station and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.

equipment being used. Copies of calibration certificates are attached in Appendix C.

Table 4.2 Noise Monitoring Equipment

Equipment	Manufacturer	Model	Quantity
Sound Level Meter	BSWA	BSWA 308	4
Acoustical Calibrator	SVANTEK	SV30A	1

Monitoring Parameters, Frequency and Duration

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

Table 4.3 Noise Monitoring Parameters, Duration and Frequency

Contract No.	Monitoring Stations	Parameter	Duration	Frequency	Measurement
ND/2019/06					
ND/2019/04	CP-FLN-NMS1 ^[3]				Façade
ND/2019/05	CD FLATAN (COM)				
	CP-FLN-NMS2 ^[4]				
ND/2010/01	CP-KTN NMS2 ^[5]	$ \begin{array}{c} L_{10(30 \text{ min.})} dB(A) \\ L_{90(30 \text{ min.})} dB(A) \\ L_{eq(30 \text{ min.})} dB(A) \end{array} $	0700-1900 hrs on	Once per	
ND/2019/01	CP-KTN NMS3 ^[6]	(as six consecutive $L_{eq, 5min}$ readings)	normal weekdays	week	Free-field ^[1]
ND/2019/01	CP-KTN NMS5				
ND/2019/02	CP-KTN-NMS6				Façade

Remarks:

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

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

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

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

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

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

Monitoring Methodology and QA/QC Procedures

- The microphone head of the sound level meter was positioned at 1m from the exterior of the noise sensitive I and lowered sufficiently so that the building's external wall acted as a reflecting surface;
- The battery condition was checked to ensure the correct functioning of the meter;
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:

frequency weighting : Atime weighting : Fast

time measurement : $L_{eq}(30 \text{ min.}) dB(A)$

(as six consecutive L_{eq}, 5_{min} readings) during non-restricted hours (i.e. 0700-1900 hrs on normal weekdays)

- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after re- calibration or repair of the equipment;
- During the monitoring period, the L_{eq}, L₉₀ and L₁₀ were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet;
- Noise measurement was paused temporarily during periods of high intrusive noise (e.g. dog barking, helicopter noise) if possible and observation record during measurement period should be provided; and
- Noise monitoring was cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s. The wind speed should be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

Maintenance and Calibration

- 4.5 The microphone head of the sound level meter and calibrator were cleaned with a soft cloth at quarterly intervals.
- 4.6 The sound level meter and calibrator were checked and calibrated at yearly intervals.
- 4.7 Immediately prior to and following each noise measurement, the accuracy of the sound level meter should be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements would be accepted as valid only if the calibration levels before and after the noise measurement agreed to within 1.0 dB.

Results and Observations

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

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

Contract No.	Monitoring Station	Noise Level Leq (30 min), dB(A)	Baseline Level, dB(A)	Limit Level, dB(A)
ND/2019/06				
ND/2019/04	CP-FLN-NMS1 ^[1]	54.6 – 69.8	69.9	
ND/2019/05	CP-FLN-NMS2 ^[2]	52.1 - 60.6	59.6	
ND /2010/01	CP-KTN NMS2 ^[3]	55.3 – 63.0	58.6	75
ND/2019/01	CP-KTN NMS3 ^[4]	50.7 – 57.8	51.6	
ND/2019/01	CP-KTN NMS5	53.2 – 59.9	57.2	
ND/2019/02	CP-KTN-NMS6	56.6 – 61.2	55.1	

Remarks:

- 4.9 All noise monitoring was conducted as scheduled in the reporting month. No complaint on construction noise was received during the reporting month. No Action/Level exceedance was recorded. The summary of exceedance record in reporting month is shown in **Appendix O**.
- 4.10 According to our field observations, the major noise source identified at the designated noise monitoring stations in the reporting month are as follows:

Table 4.5 Observation at Noise Monitoring Stations

Contract No.	Monitoring Station	Location	Major Noise Source
ND/2019/06			Dump truck, excavator,
ND/2019/04	CP-FLN-NMS1 ^[1]		mobile crane, piling, road
ND/2019/05	CP-FLN-NMS2 ^[2]	Scattered Village House in Tong Hang (Existing)	Excavator, road traffic
ND/2019/01	CP-KTN-NMS2 ^[3]	Residential Buildings at Ma Tso Lung (Existing)	Dump truck, excavator, road traffic

^{[1]:} Since the distance between monitoring station and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.

^{[2]:} Since the distance between monitoring station and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.

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

ND/2019/01	CP-KTN-NMS3 ^[4]	Fung Kong Garden (Existing)	Road traffic
ND/2019/01	CP-KTN-NMS5	N/A	Road traffic, other sites, train traffic
ND/2019/02	CP-KTN-NMS6	Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunnery (Existing)	Road traffic, other sites

Remarks:

Event and Action Plan

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

^{[1]:} Since the distance between monitoring station and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.

^{[2]:} Since the distance between monitoring station and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03.

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

5 WATER QUALTY MONITORING

Monitoring Requirements

- 5.1 In accordance with the Updated EM&A Manual, impact water quality monitoring shall be carried out three days per week at all the designated monitoring stations during the construction period. The measurement periods are during the construction of channel specified in Table 4.1 of Updated EM&A Manual. The interval between two sets of monitoring shall not be less than 36 hours.
- 5.2 Replicate in-situ measurements of Dissolved Oxygen (DO), temperature, turbidity, pH, Suspended Solids (SS) and samples for Suspended Solids (SS), ammonia nitrogen, unionized ammonia, nitrate nitrogen and orthophosphate from each independent sampling event shall be collected to ensure a robust statistically interpretable database.
- 5.3 **Appendix B** shows the established Action and Limit Levels for the water quality monitoring work according to pre-construction ET's Updated EM&A Manual and Baseline Water Quality Monitoring Report (KTN & FLN NDA).

Monitoring Parameters, Frequency

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

Table 5.1 Water Quality Monitoring Parameters and Frequency

Table 3.1 Water Quanty Womtoring Farameters and Frequency							
Parameters, unit	Depth	Frequency					
 Temperature(°C) pH(pH unit) turbidity (NTU) water depth (m) salinity (ppt) DO (mg/L and % of saturation) SS (mg/L) Ammonia Nitrogen (NH₃-N) (mg NH₃-N/L) Unionized Ammonia (UIA) (mg/L) Nitrate-nitrogen (NO₃-N) (mg NO₃-N/L) Ortho-phosphate (PO₄) (mg PO₄³-P/L) 	 3 water depths: 1m below water surface, mid-depth and 1m above river bed. If the water depth was less than 3m, mid-depth sampling only. If water depth was less than 6m, mid-depth may be omitted. 	3 days per week during construction of channel					

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Results and Observations

- 5.5 According to the Section 5.6.1.2 of approved EIA Report, the potential water quality impact during construction is due to the alternation of natural streams (i.e. channelization of Ma Tso Lung Stream and Siu Hang San Tsuen Stream) as these two streams are the ecological importance streams.
- 5.6 No construction of channel was carried out at Ma Tso Lung Stream and Siu Hang San Tsuen Stream during the reporting month. Therefore, no water quality monitoring was conducted.

Additional Water Quality Monitoring

Monitoring Requirements

- 5.7 Additional Water Quality Monitoring shall be carried out at River Beas, River Indus and near Siu Hang San Tsuen Stream three days per week at all designated monitoring stations during the construction period. The measurement period are during the construction site drainage along River Beas, construction of footbridge across River Beas and during construction of bridge across River Indus.
- 5.8 Replicate in-situ measurement and samples from each independent sampling event were collected to ensure a robust statistically interpretable database. DO, temperature, turbidity and pH were measured in-situ whereas SS and arsenic were determined by an accredited laboratory. Other relevant data were recorded, including monitoring location / position, time, water depth, weather conditions and any special phenomena or work underway at the construction site.
- 5.9 For all the monitoring stations, sampling were taken at 3 water depths, namely 1m below the water surface, mid depth and 1m above the river bed. For stations that are less than 3m in depth, only the mid depth sample was taken. Should the water depth is less than 6m, in which case the mid-depth station may be omitted. The interval between two sampling surveys was not less than 36 hours.
- 5.10 **Appendix B** shows the established Action and Limit Levels for the environmental monitoring works

Monitoring Locations

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

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Table 5.2 Additional Water Quality Monitoring Stations

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

Monitoring Equipment

Instrumentation

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

Dissolved Oxygen (DO) and Temperature Measuring Equipment

- 5.13 The instrument for measuring dissolved oxygen and temperature should be portable and weatherproof complete with cable, sensor, and use DC power source. The equipment was capable of measuring:
 - A dissolved oxygen level in the range of 0-20mg/L and 0-200% saturation; and
 - The temperature within 0-45 degree Celsius.
- 5.14 The equipment had a membrane electrode with automatic temperature compensation complete with a cable.
- 5.15 Sufficient stocks of spare electrodes and cables were available for replacement where necessary.
- 5.16 Salinity compensation was built-in in the DO equipment. *In-situ* salinity was measured to calibrate the DO equipment prior to each DO measurement.

Turbidity

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

suspended Solids. Salinity

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

Water Depth Detector

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

<u>pH</u>

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

Water Sampling for Laboratory Analysis

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

Sample Container and Storage

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

Calibration of In Situ Instruments

- 5.23 The pH meter, DO meter and turbidimeter were checked and calibrated before use. DO meter and turbidimeter were certified by WELLAB Limited before use and subsequently recalibrated at quarterly basis throughout all stage of water quality monitoring programme. Response of sensors and electrodes were checked with certified standard solutions before each use. Wet bulb calibration for a DO meter was carried out before measurement at each monitoring station.
- 5.24 For the on-site calibration of field equipment (Multi-parameter Water Quality System), the BS 1427:2009, "Guide to on-site test methods for analysis of waters" was observed.

Back-up Equipment

- 5.25 Sufficient stocks of spare parts were maintained for replacements when necessary. Backup monitoring equipment was also be made available so that monitoring can proceed uninterrupted even when some equipment is under maintenance, calibration, etc.
- 5.26 **Table 5.3** summarizes the equipment used in the water quality monitoring program. The copies of the calibration certificates of multi-parameter water quality system are shown in the **Appendix C**.

Table 5.3 Water Quality Monitoring Equipment

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

Monitoring Parameters and Frequency

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

Table 5.4 Additional Water Quality Monitoring Parameters and Frequency

Monitoring Station(s)		Parameters, unit	Depth	Frequency
River Beas	SYR-CS1 SYR-IS1	 Temperature (°C) pH (pH unit) Turbidity (NTU) Water depth (m) Salinity (ppt) Dissolved Oxygen (DO) (mg/L and % of saturation) Suspended Solids (SS) (mg/L) Arsenic (As) (μg/L) 	 3 water depths: 1m below water surface, middepth and 1m above river bed. If the water depth was less 	3 days per week, for 2 weeks prior to the
River Indus and near Siu Hang San Tsuen Stream	NTR-CS1 NTR-IS1 SHST-IS2 MWR-IS3	 Temperature (°C) pH (pH unit) Turbidity (NTU) Water depth (m) Salinity (ppt) Dissolved Oxygen (DO) (mg/L and % of saturation) Suspended Solids (SS) (mg/L) 	than 3m, middepth sampling only. If water depth was less than 6m, middepth might be omitted.	commencement of construction works

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

Monitoring Methodology

Instrumentation

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

Operating/Analytical Procedures

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

Laboratory Analytical Methods

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

Table 5.5 Method for Laboratory Analysis for Water Samples

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

QA/QC Requirements

Decontamination Procedures

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

Sampling Management and Supervision

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

Quality Control Measures for Sample Testing

- 5.34 The samples testing and following QC programme were performed by WELLAB Ltd. for every batch of 20 samples:
 - One method blank; and
 - One set of QC sample.

Results and Observations

- 5.35 All additional water quality monitoring was conducted as scheduled in the reporting month. The water quality monitoring schedule for this reporting month is shown in **Appendix D**.
- 5.36 The monitoring results and graphical presentation of additional water quality monitoring at the monitoring stations are shown in **Appendix G**.
- 5.37 During the reporting month, one (1) Action Level exceedance and eight (8) Limit Level exceedances for dissolved oxygen, seventeen (17) Limit level exceedances for turbidity, one (1) Action Level exceedance and twelve (12) Limit Level exceedances for suspended solids and two (2) Action Level exceedance for arsenic of impact water quality monitoring were recorded. The summary of exceedance records is shown in **Table 5.6** and **Table 5.7**.

Table 5.6 Summary of Exceedance Records of Water Quality Monitoring in the Reporting Month

D-4-	Monitoring	D((Depth-averaged	Excee	dances	Exceedances	
Date	Stations	Parameter (unit) Measured Value		AL	LL	due to the Contract	
		DO (mg/L)	5.3		✓		
	SYR-IS1	Turb. (NTU)	62.1		✓	No	
		As (μg/L)	16.0	✓			
		DO (mg/L)	4.8		✓		
	NTR-IS1	Turb. (NTU)	26.7		✓	No	
19 July		SS (mg/L)	21.5		✓		
2021	SHST-IS2	DO (mg/L)	5.9		✓		
		Turb. (NTU)	32.3		✓	No	
		SS (mg/L)	24.5		✓		
	MWR-IS3	DO (mg/L)	7.4		✓		
		Turb. (NTU)	20.1		✓	No	
		SS (mg/L)	19.0		✓		
		DO (mg/L)	6.7		✓		
21 July	SHST-IS2	Turb. (NTU)	208.4		✓	No	
		SS (mg/L)	220.0		✓		
2021		DO (mg/L) 7.7			✓		
	MWR-IS3	Turb. (NTU)	98.6		✓	No	
		SS (mg/L)	145.0		✓		

	NTR-IS1	Turb. (NTU)	8.0		✓	No
23 July 2021	GLIGT IGA	Turb. (NTU)	18.6		✓	N.
2021	SHST-IS2	SS (mg/L)	7.5		✓	No
	SYR-IS1	DO (mg/L)	3.7		✓	No
	NTR-IS1	DO (mg/L)	5.7	✓		No
26 July	N1K-151	Turb. (NTU)	10.7		✓	No
2021	SHST-IS2	Turb. (NTU)	31.2		✓	No
	5П51-152	SS (mg/L)	18.0		✓	No
	MWR-IS3	Turb. (NTU)	20.0		✓	No
	NTR-IS1	Turb. (NTU)	16.4		✓	No
28 July	N1K-151	SS (mg/L)	9.0	✓		No
2021	SHST-IS2	Turb. (NTU)	17.1		✓	No
		SS (mg/L)	8.0		✓	NO
		Turb. (NTU)	114.0		✓	
	SYR-IS1	SS (mg/L)	103.5		✓	No
		As (µg/L)	26.0	✓		
	NTR-IS1	Turb. (NTU)	22.5		✓	No
30 July 2021	N1K-151	SS (mg/L)	12.0		✓	NO
	SHST-IS2	Turb. (NTU)	40.1		✓	Yes
	5П51-152	SS (mg/L)	32.0		✓	(ND/2019/04)
		DO (mg/L)	7.5		✓	
	MWR-IS3	Turb. (NTU)	32.1		✓	No
		SS (mg/L)	43.5		✓	

Abbreviation: AL – Action Level, LL – Limit Level, DO – Dissolved Oxygen, Turb. – Turbidity, SS – Suspended Solids

Table 5.7 Summary of Exceedance Records of Water Quality Monitoring in the Reporting Month

No. of no rel Parameter Excee		ted	Total No. of non- project related Exceedances	related Constr Works	dance I to the	Total No. of Exceedance related to the Construction Works of the
	Action Level	Limit Level		Action Level	Limit Level	Contract
Dissolved Oxygen	1	8	9	0	0	0
Turbidity	0	16	16	0	1	1
Suspended Solids	1	11	12	0	1	1
Arsenic	2	0	2	0	0	0

5.38 Notifications of exceedance were issued to relevant parties upon confirmation of the monitoring results. Investigation for the exceedances recorded were conducted by ET accordingly. After investigation, one (1) Limit Level exceedances for turbidity and one (1) Limit Level exceedances for suspended solids at monitoring station, SHST-IS2, were found due to Contract No. ND/2019/04. Other exceedances were considered non-projected related. The investigation results and summary of exceedances are summarised in **Table 5.8**. The summary of exceedance recorded in the reporting month is shown in **Appendix O**.

Table 5.8 Summary of Investigation on Water Quality Monitoring Exceedance Records in the Reporting Month

Date	Monitoring Stations	Parameters	Investigation Summary
19, 26 and 30 July 2021	SYR-IS1	DO, Turbidity, SS, As	An influx of muddy water from nullah (from village area) to upper stream of River Beas was observed which affect the water quality of River Indus during the monitoring day. No pollution discharge from construction activity was observed and water mitigation measures (under Contract No. ND/2019/02) were observed maintained properly. Rainfall was recorded during and before monitoring which led to increased surface runoff and hence adverse water quality. For exceedances recorded on DO (19 and 26 July 2021), water temperature recorded were relatively higher that that during baseline monitoring and led to low oxygen solubility in water. The exceedances are considered due to the external factors rather than the contract works and non-project related.
19, 23, 26, 28, 30 July 2021	NTR-IS1	DO, Turbidity, SS	An influx of muddy water from a tributary (out of Project boundary) to Ma Wat River and then to River Indus was observed which affect the water quality of River Indus during the monitoring day. Water mitigation measures near monitoring station (under Contract No. ND/2019/04) were observed maintained properly. No pollution discharge from construction activity under the Project was observed. Rainfall was recorded during and before monitoring which led to increased surface runoff and hence adverse water quality (19, 26, 28 and 30 July 2021). For exceedances recorded on DO (19 and 26 July 2021), DO value at control station were measured lower than the water quality criteria at NTR-IS1 (19 July 2021). Also, water temperature recorded were relatively higher that that during baseline monitoring and led to low oxygen solubility in water. The exceedances are considered due to the external factors rather than the contract works and non-project related.
19, 21, 23 July 2021	SHST-IS2	Do, Turbidity, SS	No pollution discharge from construction activity was observed and water mitigation measures (under Contract No. ND/2019/04) were observed maintained properly for directing site runoff into site drainage system. Rainfall was recorded before monitoring which led to increased surface runoff and erosion from natural habitat along the Siu Hang San Tsuen Stream, and also may cause the dispersion of riverbed sediment to the monitoring station (19 and 21 July 2021). For exceedances recorded on DO (19 and 21 July 2021), DO value at control station were measured lower than the water quality criteria at SHST-IS2. Also, water temperature recorded were relatively higher that that during baseline monitoring and led to low oxygen solubility in water. The exceedances are considered due to the external factors rather than the contract works and non-project related.

 , 28 2021	SHST-IS2	Turbidity, SS	Rainfall was recorded during and before monitoring which led to increased surface runoff and erosion from natural habitat along the Siu Hang San Tsuen Stream, and also may cause the dispersion of riverbed sediment to the monitoring station. No pollution discharge from construction activity was observed. Water control measures were checked and part of the green barriers for protecting Siu Hang San Tsuen Stream were observed felled. The exceedances are considered due to the external factors rather than the contract works and non-project related. However, water control measures were recommended to avoid exceedances as below: 1) To regularly clear the slurry and sediment trapped in site channel; 2) To properly erect and maintain the green water barriers with desilting materials deployed along Siu Hang San Tsuen Stream. The effectiveness of remedial measures implemented by the Contractor would be continuously checked and reviewed during water quality monitoring and weekly site inspection.
July 121	SHST-IS2	Turbidity, SS	Water from upstream of Siu Hang San Tsuen was observed muddy. Rainfall was recorded during and before monitoring which led to increased surface runoff and erosion from natural habitat along the Siu Hang San Tsuen Stream, and also may cause the dispersion of riverbed sediment to the monitoring station. Water mitigation measures (under Contract No. ND/2019/04) were checked. Desilting materials were observed felled at part of the green barriers fence for protecting Siu Hang San Tsuen Stream. Muddy surface runoff was observed between water barriers from sediment trapped at the channels within site area which is considered as a source of water pollution. The following recommendations on remedial measures under rainstorm events and during rainy season were given as below and shall be maintained to avoid further exceedances: 1) To regularly clear the slurry and sediment trapped in site channels; 2) To properly erect and maintain the green water barriers with desilting materials deployed along Siu Hang San Tsuen Stream; 3) To provide spare pumps for emergency use to pump muddy surface runoff to wastewater treatment facilities during and after rainstorm; 4) To frequently check and ensure desilting materials for protection of Siu Hang San Tsuen Stream are intact and in good condition. The effectiveness of remedial measures implemented by the Contractor would be continuously checked and reviewed during water quality monitoring and weekly site inspection.
1, 26, July 121	MWR-IS3	DO, Turbidity and SS	Influx of muddy water from a tributary (out of Project boundary) to Ma Wat River and then to the monitoring stations was observed which affect the water quality of Ma Wat River during the monitoring days. No pollution discharge from construction activity under the Project was observed. Rainfall was recorded during and before monitoring which led to increased surface runoff and hence adverse water quality. For exceedances recorded on DO (19, 21 and 30 July 2021), DO value at control station were measured lower than the water quality criteria at MWR-IS3. Water temperature recorded were relatively higher that that during baseline monitoring and led to low oxygen solubility in water. The exceedances are considered due to the external factors rather than the contract works and non-project related.

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Event and Action Plan

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

6 LAND CONTAMINATION (AMBIENT ARSENIC MONITORING)

Monitoring Requirements

- 6.1 According to Section 7.5 of updated EM&A Manual, an ambient arsenic monitoring is required to be conducted in KTN during the clean-up processes of arsenic containing soil and the construction phase.
- 6.2 The Respirable Suspended Particulate (RSP, or PM10) should be measured by High Volume Sampler (HVS) equipped with PM10 selector following the "Reference Method for the Determination of Particulate Matter as PM10 in the Atmosphere" Part 50 Chapter 1 Appendix J, Title 40 of the Code of Federal Regulations of the USEPA.
- 6.3 The Dust-laden air should be drawn through PM10 HVS fitted with a conditioned preweighting filter paper, at a controlled rate. After sampling for 24-hour (refer Section 9.5.5 for details on measurement period), the filter paper with retained PM10 particulates shall be collected and returned to the laboratory for drying in a desiccators followed by accurate weighting. 24-hour average RSP levels shall be calculated from the ratio of the mass of PM10 particulates retained on the filter paper to the total volume of air sampled.
- 6.4 The weighted filter paper shall be prepared for arsenic testing through a "Hot Acid Extraction Procedure". The extracted material shall be tested for arsenic by using Inductively Coupled Plasma/Mass Spectrometry (ICP/MS). The extraction and testing will be referenced to the following methods:
 - Compendium Method 1O-3.1 Selection, Preparation and Extraction of Filter Material, Center for Environmental Research Information, Office of Research and Development, USEPA, June 1999; and
 - Compendium Method 1O-3.5 determination of Metals in Ambient Particulate Matter using Inductively Coupled Plasma/Mass Spectrometry (ICP/MS., Center for Environmental Research Information, Office of Research and Development, USEPA, June 1999.

Monitoring Location

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

Table 6.1 Location of Ambient Arsenic Monitoring station

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

Remarks:

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

Monitoring Equipment

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

Table 6.2 Ambient Arsenic Monitoring Equipment

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

Monitoring Parameters, Frequency and Duration

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

Table 6.3 Impact Ambient Arsenic Monitoring Parameters, Frequency and Duration

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

Monitoring Methodology and QA/QC Procedure 24-hour RSP Monitoring

Instrumentation

- 6.8 High volume samplers (HVS) (GMW PM10 (TE6070X)) complete with appropriate sampling inlets was employed for 24-hour RSP monitoring. The sampler is composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complied with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50).
- 6.9 The following guidelines were adopted during the installation of HVS:
 - a horizontal platform with appropriate support to secure the samplers against gusty wind was provided;
 - no two samplers was placed less than 2 meters apart;
 - the distance between the sampler and an obstacle, such as buildings, was at least twice the height that the obstacle protrudes above the sampler;
 - a minimum of 2 meters of separation from walls, parapets and penthouses was required for rooftop samplers;
 - a minimum of 2 meters separation from any supporting structure, measured horizontally was required;
 - no furnace or incinerator flue was nearby;
 - airflow around the sampler was unrestricted;
 - the sampler was more than 20 meters from the dripline;
 - any wire fence and gate, to protect the sampler, were not cause any obstruction during monitoring;
 - permission was obtained to set up the samplers and to obtain access to the
 - monitoring stations; and
 - a secured supply of electricity was needed to operate the samplers.

Operating/analytical procedures for the operation of HVS

- Prior to the commencement of the dust sampling, the flow rate of the high volume sampler will be properly set (between 1.1 m³/min. and 1.4 m³/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.
- The power supply was checked to ensure the sampler worked properly. On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.
- The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter will be carefully centered with the stamped number upwards, on a supporting screen.
- The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure were sufficient to avoid air leakage at the edges.
- The shelter lid was closed and secured with the aluminum strip.
- The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).
- After sampling, the filter was removed and sent to the Wellab Ltd. for weighing. The elapsed time was also recorded.
- Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature was between 25°C and 30°C and not vary by more than ±3°C; the relative humidity (RH) was < 50% and not vary by more than ±5%. A convenient working RH was 40%. Weighing results were further analysis of RSP concentrations collected by each filter.

Maintenance/Calibration

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

Laboratory Measurement / Analysis

- 6.11 Quartz filters of size 8" x 10" were labelled before sampling. A HOKLAS accredited laboratory, Wellab Ltd., is responsible for the preparation of 24-hr conditioned and preweighed filter papers for the monitoring team. The balance for weighting filter paper was regularly calibrated against a traceable standard.
- 6.12 All filters, which were prepared by Wellab Ltd., were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than ± 3 °C; the relative humidity (RH) was < 50% and not variable by more than $\pm 5\%$. A convenient working RH was 40%.
- 6.13 Wellab Ltd. (HOKLAS Registration No. 083), is responsible for the extraction and testing procedure for Arsenic and comprehensive quality assurance and quality control programmes

were conducted.

Results and Observations

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

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

Monitoring Date	Monitoring Station	Concentration (ng/m³)	Action Level (ng/m³)	Limit Level, (ng/m³)
02/07/2021		0.67		
08/07/2021		1.34		
14/07/2021	VTN DMC4(A)	0.97	0.26	11.7
20/07/2021	KTN-DMS4(A)	0.39	9.36	11.7
26/07/2021		5.36		
30/07/2021		1.33		

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

Event and Action Plan

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

7 LANDFILL GAS MONITORING

Monitoring Requirement

- 7.1 In accordance with the updated EM&A Manual, monitoring of landfill gas (LFG) is required for construction works within the Ma Tso Lung Landfill (MTLL, close to KTN NDA) during the construction phase. This section presents the results of landfill gas measurements performed by the Contractor. **Appendix B** shows the Limit Levels for the monitoring works.
- 7.2 The MTLL is situated in the vicinity of the KTN NDA. A portion of the development falls within the MTLL and its 250m Consultation Zone.

Monitoring Parameters and Frequency

- 7.3 Monitoring parameters for Landfill gas monitoring include Methane, Carbon dioxide and Oxygen.
- 7.4 According to the mitigation measures of the updated EM&A Manual, measurements of the following frequencies should be carried out according to the monitoring requirements and procedures specified in Paragraphs 8.23 to 8.28 of EPD's Guidance Note, "LANDFILL GAS HAZARD ASSESSMENT GUIDANCE NOTE".
- 7.5 The frequency of monitoring of LFG are conducted referring to the updated EM&A Manual Monitoring of any LFG which may be migrated to the site should be undertaken during the construction of infrastructure and the development within the Consultation Zone and within MTLL when the works involve confined spaces. Routine gas monitoring should be undertaken during groundwork construction and in all excavations. Monthly gas monitoring should also be conducted for offices, stores etc. set up on site.

Monitoring Locations

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

Excavation Locations: Portion 6b
 Manholes and Chambers: N/A
 Relocation of monitoring wells: N/A

Any other Confined Spaces: Containers in Portion 6b

Monitoring Equipment

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

Table 7.1 Landfill Gas Monitoring Equipment

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

Results and Observations

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

Event and Action Plan

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

8 BUILT HERITAGE MONITORING

Monitoring Requirement

- 8.1 In accordance with the updated EM&A Manual, baseline condition survey and baseline vibration impact assessment shall be conducted for identified built heritage prior to the commencement of construction works. Baseline condition survey and baseline vibration impact assessment shall be conducted by a qualified building surveyor or qualified structural engineer to define the vibration limit (a vibration limit at 7.5mm/s and 15mm/s could be adopted for graded historical buildings and historical buildings, respectively) and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction phase to ensure the construction performance meets with the vibration standard stated in the EIA report.
- 8.2 According to the condition survey report from cultural heritage condition survey for Fanling Bypass Eastern Section under EP-473/2013/A, vibration monitoring plan was proposed for the surveyed cultural heritage based on the Buildings Department's Practice Note (PNAP APP-137). This section presents the results of built heritage monitoring performed by the Contractor according to the proposed monitoring plan in baseline condition survey report. **Appendix B** shows the Limit Levels for the monitoring works.

Monitoring Location

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

Table 8.1 Location of Construction Vibration Monitoring

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

Monitoring Parameters and Frequency

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

Table 8.2 Vibration Monitoring Plan

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

Remarks:

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

built heritage in the reporting month.

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

Monitoring Equipment

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

Results and Observations

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

Event and Action Plan

8.8 **Table 8.3** summarises the vibration limit for construction vibration monitoring for surveyed cultural heritage.

Table 8.3 Vibration Limit for Construction Vibration Monitoring

Type of Building	Guide Values of Maximum ppv* (mm/Sec)				
	Transient Vibration	Continuous Vibration			
Vibration-sensitive / dilapidated buildings#	7.5	3.0			
Declared monuments/ Historical structures	3.0				

Remarks:

8.9 If any exceedance of limit have been found or damage to either structural or non-structural elements of the historic buildings have been identified, the construction works should stop immediately and seek structural engineer's advices for any remedial work.

^{*} peak particle velocity

[#] as cultural heritages are sensitive receivers, vibration monitoring should be classified as vibration-sensitive.

9 ECOLOGICAL MONITORING

Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, Sheung Yue River, Shek Sheung River and Long Valley

Monitoring Requirements and Protocol

- 9.1 As required under Section 12.3.2.5 of Updated EM&A Manual, where development under the NDAs project is undertaken within 200m (the maximum distance at which it is predicted there may be some disturbance, and hence a reduction in numbers, of large waterbirds) of Sheung Yue River and Long Valley, weekly transect at both high and low tides should be followed (It is considered high tide when the tidal levels are above 1.5m and low tide when the tidal levels are below 1.5m at Tsim Bei Tsui Station).
- 9.2 The purpose of the survey was to identify and enumerate all bird species utilizing the river channels and Long Valley Nature Park (LVNP) and identify any sources of actual or potential disturbance to birds due to construction activities throughout the construction period according to Methodology specified in Table 12.1 in Updated EM&A Manual.
- 9.3 Monitoring in Long Valley should follow the methodology adopted by the regular HKBWS bird monitoring programme in order to obtain comparable results and complete coverage of the area in the shortest time possible.

Monitoring Frequency

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

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

Date of avifauna monitoring: 8th, 9th, 15th, 16th, 21st, 23rd, 27th, 28th July 2021

Monitoring Location

- 9.5 The avifauna monitoring was carried out at Ng Tung River, Sheung Yue River and Long Valley in reporting month according to construction works. The transect routes in the Reporting Month were as follows:
 - T1. Ng Tung River
 - T2. Ng Tung River
 - T3. Sheung Yue River
 - T5. Long Valley

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

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

Monitoring Parameters

- 9.7 The monitoring parameters and survey methodology for each transect are described below:
 - Abundance of birds
 - Types of habitat of which birds in use
 - Notable bird behaviours such as roosting, feeding, nesting and presence of juveniles
 - Birds heard though birdcalls that could not be located would be marked as "heard", while birds flying over the survey area would be marked as "flight". Species of conservation significance would be specified.
- 9.8 Other information at the time of survey such as weather condition, tidal condition, tide level and noticeable natural or anthropogenic activities would be documented.
- 9.9 For Avifauna survey, Ornithological nomenclature would make reference to The Avifauna of Hong Kong (Carey *et al.* 2001), The Birds of Hong Kong and South China (Viney *et al.* 2005), and the most recent updated list from other sources (e.g. Hong Kong Bird Watching Society).

Monitoring Result

- 9.10 In total, 48 species of birds were recorded during the bird surveys within assessment area. Among the recorded birds, there were 18 species of waterbirds. The detailed list of waterbirds and all recorded birds are shown in **Appendix L1i and L1j** respectively.
- 9.11 Among the four transects, the transect T5 had a higher species diversity and abundance due to its diverse habitat types within Long Valley. Species such as *Ardeola bacchus* and *Egretta garzetta* were commonly found roosting and foraging at wetland habitats such as agricultural lands and shallow water habitats.
- 9.12 Along the transect T5 in Long Valley, species with conservation interest such as *Himantopus himantopus*, which is a passage migrant, and *Tringa glareola*, which is a passage migrant and winter visitor, were commonly observed in swallow water habitat. Juvenile of *Himantopus humantopus* were recorded, while *Himantopus Himantopus was* observed sitting in nest.
- 9.13 Construction works were observed in T5 in the reporting month.
- 9.14 Transect T3 was conducted along the Sheung Yue River. Bird species such as *Ardeola bacchus* and *Egretta garzetta* were commonly observed feeding and roosting on the river bank and river bed. Construction works were observed beside Sheung Yue River.
- 9.15 Transect T1 and T2 are located at Ng Tung River. *Ardeola bacchus* and *Egretta garzetta* were commonly found feeding and roosting along the Ng Tung River. Fishing activities were observed at both T1 and T2, while construction activities were observed beside T2 during the avifauna monitoring.

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

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

Monitoring Requirements and Protocol

- 9.17 As required under Section 12.3.2.14 of Updated EM&A Manual, aquatic faunal monitoring should be carried out during the construction phase.
- 9.18 Larger organisms such as fish should be monitored by direct counting, while kick-netting and sweep-netting should be used for invertebrate sampling. There should be three replicates for invertebrate sampling at each sampling point. For kick-netting, the net should be placed with the opening facing the water current, and the substrate should be disturbed by kicking to dislodge organisms from the stream bed. Sweep-netting should be conducted when kick-netting is not feasible, such as in area with no water current. Small organisms that could not be identified with naked eye should be brought to the laboratory for identification under the dissecting microscope.

Monitoring Frequency

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

Date of aquatic fauna monitoring: 20th and 26th July 2021

Monitoring Location

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

•	MS_01	•	MS_02	•	MS_03	•	MS_04	•	MS_05
•	MS_06	•	MS_07	•	MS_08	•	MS_09	•	MS_10
•	MS 11	•	MS 12	•	MS 13	•	MS 14	•	MS 15

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

Monitoring Parameters

- 9.22 The monitoring parameters and survey methodology for each monitoring station are described below:
 - Species composition
 - Abundance
 - · Distribution for invertebrates and fish fauna
 - Species of conservation significance would be specified
- 9.23 Other information at the time of survey such as weather condition and noticeable natural or anthropogenic activities would be recorded.

Monitoring Status

- 9.24 In the survey of aquatic fauna, a total of 14 aquatic invertebrate species were recorded in Ma Tso Lung Stream and Siu Hang San Tsuen Stream. There were 4 fish species recorded in the reporting month. No aquatic macroinvertebrate species of conservation importance was recorded. *Rhodeus ocellatus*, which is fish species of conservation importance, was recorded in Siu Hang San Tsuen Stream.
- 9.25 Aquatic faunal monitoring in construction phase was conducted during the reporting month and the results are attached in **Appendix L2 to L3**

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

Monitoring Requirements and Protocol

- 9.26 As required under Section 12.3.2.17 of Updated EM&A Manual, monitoring of measures to minimize impacts should be carried out during the construction phase.
- 9.27 The purpose of survey is to monitor the effectiveness of measures to minimize impacts on ecologically sensitive habitats from disturbance and pollution by standard faunal transect surveys.

Mammal survey

- 9.28 Mammal survey should be performed during both day and night times, in areas along the transect routes which may potentially be utilized by terrestrial mammals. Field signs such as droppings, footprints, diggings and burrows left by larger terrestrial mammals should be observed. Mammals directly observed should be recorded, and identification should be made as accurate as possible form the field signs observed.
- 9.29 Bat survey should be conducted along the transect routes shortly after sunset, with the use of a bat detector to record the echolocation calls. The relative abundance of the species encountered should be estimated with reference to the baseline monitoring results, i.e. using a scale from one (species recorded within transect routes) to three (dominant species within transect routes), for comparison between baseline results and the current monitoring results. Nomenclature of mammal should be based on Shek (2006).

Herpetofauna survey (Amphibians and Reptiles)

- 9.30 Amphibian surveys should be conducted whenever possible on evenings following or during periods of rainfall, focusing on areas suitable for amphibians (e.g. forest, shrublands, grasslands, streams, ponds, marshes, etc.). Calling amphibians should be recorded, supplemented by visual observation of eggs, tadpoles, adult frogs, and toads.
- 9.31 Active searching of appropriate microhabitats such as stones, pond bunds, crevices and leaf debris should be performed mainly. Observation of exposed, basking and foraging reptiles should also be conducted. Nomenclature of amphibian and reptile should be based on Chan et al. (2005) and Karsen et al. (1998), respectively.

Insect survey (Butterfly and Dragonfly)

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

Monitoring Frequency

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

Date of Monitoring surveys of ecological sensitive receivers: 14th, 2

14th, 26th July 2021

Monitoring Location

- 9.34 The transect routes in the Reporting Month according to construction works are as follows:
 - T1. Ma Tso Lung riparian zone and associated wetland habitats;
 - T1. Green belt areas E1-8, D1-8 and G1-3 in KTN NDA;
 - T1. AGR one C2-4 and C2-2 in KTN NDA;
 - T1. Area north of Ng Tung River;
 - T3. Area west of Siu Hang San Tsuen Stream
 - T4. South side of Fanling Highway and Castle Peak Road in the vicinity of Pak Shek Au;
 - T5. Area west and east of the southern limit of the FLN NDA work area; and
 - T6. Areas in the western part of KTN
- 9.35 The location of Transects is shown in **Figure 11** for reference.

Monitoring Parameters

- 9.36 The monitoring parameters and survey methodology for each transect are described below:-
 - Species composition
 - Abundance
 - Distribution for fauna observed
 - Species of conservation significance would be specified

Monitoring Result

Mammal

- 9.37 During the survey, a total of 4 mammal species were recorded from transects T1, T3, T4, T5 and T6. A total of 2 species of conservation importance were recorded, namely bats *Pipistrellus abramus* and *Cynopterus sphinx*.
- 9.38 Domestic cat, *Felis catus* was found at T3 and T5. Domestic dog, *Canis lupus familiaris*, was found at T1, T4, T5 and T6, where associated with human settlements.
- 9.39 Echolocation calls of bats were recorded with a bat detector. The bat detector would list out possible bat species having similar echolocation calls in pattern and frequency. The structure of the echolocation calls from the recordings was later analysed to identify species as far as possible (the lack of literature on echolocation call structure makes the field identification of

- some bat species in Hong Kong difficult, and some species could only be identified to genus level, or remain unidentified from the recordings).
- 9.40 Identification of bat species encountered in the surveys was made with consideration to the possible bat species suggested by the bat detector, the distribution of the suggested bat species in Hong Kong, previous records of bat species in the EIA Report and Baseline Monitoring Report, and the structure of echolocation calls of the recordings (including call structure, frequency, duration, inter pulse interval etc., with reference to relevant literatures).
- 9.41 *Pipistrellus abramus* was recorded with FM/QCF call structure and frequency around 45 kHz to 68 kHz (Ma et al., 2010, p.319). The above characteristics were further compared with data from relevant literatures to confirm the identities. References were also made to Tong (2016).
- 9.42 Bat species, *Cynopterus sphinx* was found in flight near area with Chinese Fan-palm at nighttime at T1 and T3. *Pipistrellus abramus* was recorded in flight at nighttime at T1, T3, T4, T5 and T6.
 - Herpetofauna (Amphibians and Reptiles)
- 9.43 Along the transects, a total of 9 herpetofauna species were observed. One species of conservation importance, *Kalophrynus interlineatus*, was recorded at T1. Species including frogs, toad, lizards and gecko were recorded near wetland habitats and watercourse. Transect T1 had higher species diversity and abundance than other transects.
 - *Insects (Butterfly and Dragonfly)*
- 9.44 During the insect survey, a total of 27 butterfly species and 17 odonata species were recorded from the transects. Transect T1 had higher butterfly species diversity than other transects.
- 9.45 Transect T1 had higher dragonfly species recorded in the reporting month. All of the dragonfly species recorded, were common and abundant in Hong Kong.
- 9.46 Ecological sensitive receivers such as mammals, insects (butterflies and dragonflies), and herpetofauna monitoring in construction phase was conducted during the reporting month and the results are attached in **Appendix L4 to L7**.
- 9.47 For the monitoring conducted on 26th July 2021 on Transect T5, a section of the transect route was found located within private property, and was not accessible. Another section on transect T5, which was found blocked by fallen trees before, was now accessible for monitoring. The inaccessible parts and section with fallen trees cleared are shown in **Photo 1** and **Photo 2** below. The adjusted accessible transect route is shown in **Figure 11**.



Photo 1. Inaccessible part of transect T5 located within private property



Photo 2. Section of transect T5 with fallen trees cleared and accessible for monitoring

Results and Observation

Details of the Influencing Factors

Major Activities

- 9.48 During the survey of Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley, anthropogenic activities including soil turning with excavator and other construction activities were observed in Long Valley. Construction works were observed beside Sheung Yue River.
- 9.49 The anthropogenic activities affected only a small area of habitat in Long Valley during the monitoring and would only pose minor disturbances to the birds. Several *Acridotheres cristatellus* and *Acridotheres tristis* were observed foraging near the excavators.
- 9.50 During the survey of Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, anthropogenic activities including construction works beside T2, and recreational fishing by fishing rod at both T1 and T2 were observed.

Weather Conditions

- 9.51 According to the observation during survey, temperature and the rain flow record in the Reporting Month (Reference: http://www.weather.gov.hk/wxinfo/pastwx/metob202107.htm), weather condition might pose influence towards the monitoring result.
- 9.52 Since the Final Baseline Ecological Monitoring Report has not been issued yet during the Reporting Month, the Action and Limit Level of ecological monitoring will be compared with the monitoring results in the Reporting Month and track back exceedance reporting (if any) after the Final Baseline Ecological Monitoring Report has been issued.
- 9.53 The detailed Ecological monitoring results are attached in **Appendix L**.

Reference

Chou, C. H., & Cheng, H. C. (2012). Echolocation Calls of the Eleven Insectivorous Bats of Taiwan. Taiwan Journal of Biodiversity, 14(3-4), 33-62.

Chao, N. M. (2001). Identification of Pipistrellus abramus, Miniopterus schreibersii, Hipposideros terasensis, and Rhinolophus monoceros using echolocation call characters (Doctoral dissertation, MS thesis, National Sun Yat-Sen University).

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

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

10 ENVIRONMENTAL SITE INSPECTION

Site Audits

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

Table 10.1 Summary of Site Audit

Environmental	Works Contracts							
Site Inspection	ND/2019/	ND/2019/	ND/2019/	ND/2019/	ND/2019/	ND/2019/	ND/2019/	
	01	02	03	04	05	06	07	
Weekly site audit with representative of the <i>Supervisor's</i> Representative and the Contractor	6, 13, 20, 27 July 2021	7, 14, 23, 28 July 2021	2, 9, 16, 20, 30 July 2021	2, 8, 15, 22, 29 July 2021	7, 12, 19, 26 July 2021	8, 15, 22, 29 July 2021	2, 8, 16, 23, 30 July 2021	
Joint Site Audit with representative of the <i>Supervisor's</i> Representative, the Contractor and IEC	13 July 2021	23 July 2021	20 July 2021	15 July 2021	7 July 2021	15 July 2021	8 July 2021	

10.2 During site inspections in the reporting month, no non-conformance was identified. The observations and recommendations made during the audit sessions are summarised in **Table 10.2**.

Table 10.2 Observations and Recommendations during Site Audits

133322 2332	Date	Observations and Recommendations	Follow-up		
Contract No.: NI	D/2019/01	1	<u> </u>		
Water Quality	27/7/2021	Wastewater treatment facility was observed not operating and no water discharge was observed. Contractor was reminded to ensure proper operation and functioning of the waste water treatment facility at Portion 9B.	Follow-up action is needed to be reported in the following month.		
Waste/ Chemical Management	29/6/2021	Provide drip tray for the chemical containers at Portion 6a.	Improvement/Rectification was observed during follow- up audit session on 6 July 2021.		
Contract No.: N	ID/2019/02				
	30/6/2021	NRMM Label was observed faded, Contractor was reminded to replace the NRMM Label.	Improvement/Rectification was observed during follow- up audit session on 7 July 2021.		
	14/7/2021	To keep public road near site entrance clean and free of dust.	Improvement/Rectification was observed during follow-up audit session on 23 July 2021.		
Air Quality	14/7/2021	Contractor was reminded to water the exposed worksites regularly to avoid dust generation.	Improvement/Rectification was observed during follow-up audit session on 23 July 2021.		
	14/7/2021	Every stock of more than 20 bags of cement should be covered or sheltered on top and 3 sides.	Improvement/Rectification was observed during follow-up audit session on 23 July 2021.		
	23/7/2021	NRMM Label should be displayed on the regulated machines.	Improvement/Rectification was observed during follow-up audit session on 28 July 2021.		
	28/7/2021	NRMM Label should be displayed on the regulated machines.	Follow-up action is needed to be reported in the following month.		
Construction	30/6/2021	Compressor should be operated with doors closed.	Item was remarked as 210707-R01. Follow-up action is needed to be reviewed.		
Noise Impact	7/7/2021	Compressor should be operated with doors closed.	Improvement/Rectification was observed during follow-up audit session on 14 July 2021.		
Water Quality	30/6/2021	To prevent muddy water discharge into storm drain.	Improvement/Rectification was observed during follow- up audit session on 7 July 2021.		

	23/7/2021	Provide berm to prevent any muddy water flow offsite.	Item was remarked as 210728-R02. Follow-up action is needed to be reviewed.
	28/7/2021	Provide berm to prevent any muddy water flow offsite.	Follow-up action is needed to be reported in the following month.
	23/7/2021	Chemical waste should be stored properly.	Item was remarked as 210728-R03. Follow-up action is needed to be reviewed.
Waste/ Chemical Management	28/7/2021	Chemical waste should be stored properly.	Follow-up action is needed to be reported in the following month.
	28/7/2021	Clear the stagnant water and maintain drip tray well.	Follow-up action is needed to be reported in the following month.
Contract No.: NI	0/2019/03		
Water Quality	2/7/2021	Clear the stagnant water in site area and properly treat the wastewater in wastewater treatment facility (Portion 1)	Improvement/Rectification was observed during follow-up audit session on 9 July 2021.
rrater Quanty	30/7/2021	Regularly clear the water in wheel washing facilities.	Follow-up action is needed to be reported in the following month.
Landscape & Visual	30/7/2021	Avoid stockpiling of construction materials near retained trees at SS05.	Follow-up action is needed to be reported in the following month.
Contract No.: NI	D/2019/04		
	24/6/2021	Wastewater from haul road cleaning should be directed to wastewater treatment facilities and properly treated (Bridge A2).	Improvement/Rectification was observed during follow-up audit session on 2 July 2021.
	24/6/2021	Cover exposed site area during rainstorm (Bridge A2).	Improvement/Rectification was observed during follow-up audit session on 2 July 2021.
Water Quality	24/6/2021	To ensure silt curtain at Portion C is properly deployed and avoid any leakage of muddy water from site area.	Item was remarked as 210702-O01. Follow-up action is needed to be reviewed.
	24/6/2021	Replace the sand bags to minimize source of muddy runoff (Bridge A2).	Improvement/Rectification was observed during follow-up audit session on 2 July 2021.
	2/7/2021	Regularly clear the sedimentation tank to avoid overflowing at Portion C.	Improvement/Rectification was observed during follow-up audit session on 8 July 2021.

		T =	,
	2/7/2021	Enhance water mitigation measures for site drainage at Bridge A2.	Improvement/Rectification was observed during follow- up audit session on 8 July 2021.
	2/7/2021	To ensure silt curtain at Portion C is properly deployed and avoid any leakage of muddy water from site area.	Improvement/Rectification was observed during follow- up audit session on 8 July 2021.
	2/7/2021	Erect and maintain desilting materials along green barriers at Bridge A2.	Improvement/Rectification was observed during follow- up audit session on 8 July 2021.
	8/7/2021	Regularly clear the sediment in U-channel at Portion C.	Improvement/Rectification was observed during follow- up audit session on 15 July 2021.
	8/7/2021	Provide desilting material for the box culvert to prevent any sediment from flowing into nearby watercource (Portion C).	Improvement/Rectification was observed during follow- up audit session on 15 July 2021.
	8/7/2021	Provide spare pump to direct muddy water to sump pit and wastewater treatment facility (Portion C).	Improvement/Rectification was observed during follow- up audit session on 15 July 2021.
	15/7/2021	Provide sand bags as water control measure for surface runoff within site area (Portion W).	Improvement/Rectification was observed during follow-up audit session on 22 July 2021.
	22/7/2021	Regularly clear the sediment trapped by sand bags and maintain the water control measure well.	Improvement/Rectification was observed during follow-up audit session on 29 July 2021.
	29/7/2021	Enhance sediment control measures for site runoff after rainstorm event at Portion H.	Follow-up action is needed to be reported in the following month.
	29/7/2021	Clear the sediments at channels along water barriers near Siu Hang San Tsuen Stream to ensure proper function. (Bridge A2)	Follow-up action is needed to be reported in the following month.
	29/7/2021	Properly erect and maintain the desilting materials along green barriers at Bridge A2.	Follow-up action is needed to be reported in the following month.
Waste/Chemical	24/6/2021	Clear the stagnant water in drip tray and treat as chemical waste. Maintain the drip tray well at Portion C.	Item was remarked as 210702-R01. Follow-up action is needed to be reviewed.
Management	24/6/2021	Drip tray should be provided for chemical storage (Portion C).	Improvement/Rectification was observed during follow-up audit session on 2 July 2021.

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	2/7/2021	Clear the stagnant water in drip tray and maintain the drip tray properly (Portion C).	Improvement/Rectification was observed during follow- up audit session on 8 July 2021.
	29/7/2021	Oil stain was observed at site area and should be properly cleared at Portion W.	Follow-up action is needed to be reported in the following month.
Landscape and Visual	24/6/2021	Remove the construction materials within the tree protection zone (Portion C).	Improvement/Rectification was observed during follow-up audit session on 2 July 2021.
v isuai	29/7/2021	Stockpile of construction materials should be avoided at retained tree. Tree protection zone should be erected at Portion W.	Follow-up action is needed to be reported in the following month.
Ecology	29/7/2021	Properly erect and maintain 2m high solid barriers for lower reaches of Siu Hang San Tsuen Stream.	Follow-up action is needed to be reported in the following month.
Contract No.: NI	D/2019/05		
Air Quality	19/7/2021	NRMM Label should be displayed on regulated machines.	Improvement/Rectification was observed during follow-up audit session on 26 July 2021.
	28/6/2021	Clear slurry on site haul road and ensure adequate capacity of sediment tank to minimize any muddy runoff through site surface.	Item was remarked as 210707-O01. Follow-up action is needed to be reviewed.
	7/7/2021	Muddy water should be directed to the wastewater treatment facilities and avoid any untreated wastewater discharge into nearby storm drain.	Improvement/Rectification was observed during follow- up audit session on 12 July 2021.
W. C. Pr	19/7/2021	Muddy water should be directed to the wastewater treatment facilities and avoid any untreated wastewater discharge to public road.	Item was remarked as 210726-O01. Follow-up action is needed to be reviewed.
Water Quality	19/7/2021	To review the capacity of the sump pit and avoid overflow to public road.	Improvement/Rectification was observed during follow-up audit session on 26 July 2021.
	19/7/2021	Proper maintain the Wetsep to prevent overflow.	Improvement/Rectification was observed during follow-up audit session on 26 July 2021.
	26/7/2021	Muddy water should be directed to the wastewater treatment facilities and avoid any untreated wastewater discharge to public road.	Follow-up action is needed to be reported in the following month.

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	26/7/2021	Site runoff should be directed to waste water treatment facilities.	Follow-up action is needed to be reported in the following month.
	26/7/2021	Provide mitigation measures to prevent debris and dusty materials drop into nearby storm drain.	Follow-up action is needed to be reported in the following month.
Landscape and Visual	26/7/2021	Stockpile of dusty materials should be avoided at trees protection zone.	Follow-up action is needed to be reported in the following month.
Contract No.: N	ND/2019/06		
Air Quality	8/7/2021	NRMM label was observed faded. Contractor was reminded to replace the NRMM label.	Improvement/Rectification was observed during follow-up audit session on 15 July 2021.
Water Quality	15/7/2021	Provide sand bags as water control measure for surface runoff within site area.	Improvement/Rectification was observed during follow-up audit session on 22 July 2021.
Waste / Chemical Management	8/7/2021	General refuse should be disposed of properly.	Improvement/Rectification was observed during follow- up audit session on 15 July 2021.
	15/7/2021	Provide drip tray with adequate capacity for oil containers.	Improvement/Rectification was observed during follow- up audit session on 22 July 2021.
Contract No.: N	ND/2019/07		
Waste / Chemical Management	25/6/2021	To clear the general refuse at site entrance.	Improvement/Rectification was observed during follow-up audit session on 2 July 2021.

Implementation Status of Environmental Mitigation Measures

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

Table 10.3 Photographic Records and Implementation Status of Measures

	Table 10.3	Photographic Records and Implementation Status of Measur	res
EP No.	Condition	Photographic Record	Implementation Status
EP- 466/2013	2.9	To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(Figure 12)	^[1]
EP- 468/2013/ <u>A</u>	2.11	To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(Figure 14)	^ _[1]
EP- 469/2013	2.7	To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(Figure 15)	^[1]
EP- 473/2013/ A	2.13	To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas.(Figure 16)	^[i]

EP- 475/2013/ A 2.7	To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas. (Figure 17)
Implementation status:	Mitigation measure was fully implemented * Observation/reminder was made during site audit but improved/rectified by the contractor # Observation/reminder was made during site audit but not yet improved/ rectified by the contractor X Non-compliance of mitigation measure • Non-compliance but rectified by the contractor N/A Not Applicable at this stage as no such site activities were conducted in the reporting period

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

Implementation Status of Water Quality Mitigation Measures

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

Table 10.4 Specific Water Quality Mitigation Measures for Major Construction Works in the Reporting Month

Works Contracts	Photographic Records		
ND/2019/01	Onsite drainage system to direct surface runoff to water treatment plant	Hydroseeding for slope area	
ND/2019/02	Provision of sand bags around works area	Concrete block barrier to prevent runoff to river	
ND/2019/03	Wastewater from wheel washing was directed to wastewater treatment facility	Regular clearance of water for wheel washing facility	
ND/2019/04	Surface channels and earth bunds to direct storm water to wastewater treatment facilities for works area near Siu Hang San Tsuen Stream	Deployment of silt curtain around works area in Ng Tung River	



Solid and Liquid Waste Management Status

- 10.6 Waste generated from Contract No. ND/2019/01, ND/2019/02, ND/2019/03, ND/2019/04, ND/2019/05, ND/2019/06 and ND/2019/07 include inert construction and demolition (C&D) materials and non-inert C&D wastes in the Reporting Month.
- 10.7 The amount of wastes generated by the construction works of the Contract No. ND/2019/01, ND/2019/02, ND/2019/03, ND/2019/04, ND/2019/05, ND/2019/06 and ND/2019/07 during the reporting month are shown in **Appendix R**.
- 10.8 The Contractors are advised to minimize the wastes generated through the recycling or reusing. All mitigation measures stipulated in the Updated EM&A Manual and waste management plans shall be fully implemented. The status of implementation of waste management and reduction measures are summitted in **Appendix Q**.

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

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

conserving and enhancing the ecologically important environment as well as for compensation of the wetland loss due to the NDA development.

- 10.10 LVNP is developed according to approved Habitat Creation and Management Plan (HCMP) submitted under EP-468/2013/A. The HCMP provides a framework and specifications for development and management of the LVNP and guides the development to maintain and enhance the 37ha of low-lying wetland habitats.
- 10.11 Regarding to the design, the zoning of land use in the LVNP is intended to maintain the existing mosaic pattern of wet and dry agriculture, while controlling the activities that could potentially disturb target habitats and species. The LVNP will divide into three broad zones of land use as below:
 - Biodiversity Zone of about 21 hectares largely designated for biodiversity conservation through cultivation of specified crops and habitat management.
 - Agricultural Zone of about 11 hectares designated for commercially focuses crop production and eco-friendly agricultural practice for farming.
 - Visitor Zone of about 5 hectares designed to accommodate visitors as well as storage and other facilities and for educational purposes.
- 10.12 The construction of the LVNP started in late 2019 and is expected to be completed in 2023. During construction period, the progress of construction and wetland enhancement works are under observation by different stakeholders including AFCD and green groups. Close communication between AFCD and CEDD are conducted to exchange views on conservation, restoration and management of habitats as well as on the planning and design of the park. Also, advices from green groups, Hong Kong Bird Watching Society (HKBWS) and The Conservancy Association (CA), are taken on habitat management of Long Valley and potential effects on habitat and wildlife of each individual work conducted in Long Valley. Regular meeting are held monthly on 23rd July 2021 in the reporting month to share the progress of LVNP with different stakeholders, including CEDD, AFCD, CA, HKBWS, Contractor, ET, IEC and farmers.
- 10.13 Proposals on wetland creation and restoration, dry agricultural land creation, pond creation, water treatment wetland and design of irrigation channel are submitted by the Contractor to achieve the objectives stated in HCMP and accepted by the Engineer with consent from AFCD before implementation. The Contractor will consult with the stakeholders for recommendations and suggestions on mitigation measures to minimise the environmental impacts arising from construction works. The progress of works will be arranged to minimise impacts to avifauna and maintain the habitat for avifauna. The photographic records of site activities in LVNP are presented in **Table 10.5**.

Table 10.5 Photographic Records of Site Activities in LVNP





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







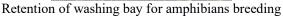
Lotus pond Open water Habitat Chinese arrowhead pond
Creation of wetland with designated habitat for biodiversity conservation





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







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



Provision of bird island (hidden area)



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



Construction of storage sheds for farmers



Pair of Greater Painted-Snipe were recorded



Regular watering on haul road for dust control



Provision of noise barrier for noisy works in Long Valley



Laying geotextile under rock layer to allow effective reinstatement of temporary access road



Provision of wastewater treatment facilities

11 ENVIRONMENTAL NON-CONFORMANCE

Summary of Exceedances

- 11.1 One (1) Action Level exceedance and eight (8) Limit Level exceedances for dissolved oxygen, seventeen (17) Limit level exceedances for turbidity, one (1) Action Level exceedance and twelve (12) Limit Level exceedances for suspended solids and two (2) Action Level exceedance for arsenic of impact water quality monitoring were recorded. After investigation, one (1) Limit Level exceedances for turbidity and one (1) Limit Level exceedances for suspended solids at monitoring station, SHST-IS2, were found due to Contract No. ND/2019/04. Other exceedances were considered non-projected related.
- 11.2 No exceedance of Action and Limit Levels of air quality, construction noise, ambient arsenic and landfill gas monitoring in the reporting month. The summary of exceedance record in reporting month is shown in **Appendix O**.
- 11.3 Ecological monitoring was carried out in the reporting month. The Action and Limit Level will be compared after the issue of Final Baseline Ecological Report.
- 11.4 Should the monitoring results of the environmental monitoring parameters at any designated monitoring stations indicate that the Action / Limit Levels are exceeded, the actions in accordance with the Event and Action Plans in **Appendix N** would be carried out.

Summary of Environmental Non-Compliance

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

Summary of Environmental Complaint

11.6 No environmental complaint was received in the reporting month. The Cumulative Complaint Log since the commencement of the Project is presented in **Appendix S**.

Summary of Environmental Summon and Successful Prosecution

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

12 FUTURE KEY ISSUES

Key Issues in the Coming Two Months

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

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

Contract No.	Major Site Activities (August and September 2021)	Location/ Working Period	Potential Environmental Impact	Recommended Mitigation Measures
ND/2019/01	(a) Site clearance (b) GI works (c) Excavation (d) Construction of retaining wall (e) Soil nailing (f) Demolition of existing structure (g) Construction of temporary site haul road (h) Arsenic soil treatment works (i) Tree felling	Period Portion 1f, 2, 3, 5, 6a, 7 Portion 2, 9b Portion 3, 5, 6a, 7, 8a, 9b, 9c, 10a, 10b Portion 5, 6a, 8a Portion 8a Portion 9b Portion 6b Portion 2, 5	- Construction Dust impact - Noise Impact (Construction Phase) - Water Quality Impact (Construction Phase) - Waste Management (Construction Waste)	Air Watering on exposed earth and haul road. Cover the stockpiles or dusty materials. Deploy water browsers to water the haul road. Deploy mist-cannon on site Install sprinkler system for dust suppression. Provide shelter with top and 3-sides for cement production activities. Entirely cover the Arsenic-containing soil. Store the bulk cement in enclosed silo tank for Solidification / Stabilization treatment. Close the mechanical cover of the vehicles used for transporting dusty materials. Establish vehicle wheel washing facilities at vehicle exit points. Speed control of site vehicles.
	(j) Sheetpiling	Portion3, 7, 8b, 9b, 10a		- Erect solid site hoarding.

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Noise Regular inspect of construction plants in good condition Provide temporary noise screens if necessary. Use of Quiet plants (QPME) and working methods if possible. Sequencing operation of construction plants where practicable. Shut down the machines and plant if not in use. Only well-maintained plant to be operated on-site. Mobile plant to be sited as far away from NSRs as possible and practicable. Conduct noise monitoring regularly. Erect silent-up noise barrier at Portion 6b. Water Set up wastewater treatment system (AquaSed) on site. Erect soil bund / temporary drain to divert /collect surface runoff. Maintain the drainage and wastewater treatment facilities.
Waste / Chemical Management - Sort out demolition debris and excavated materials from demolition works to recover reusable / recyclable portions. - Provide recycling bin on site, encourage reuse and recycle as much as possible. - Provide drip tray for chemical containers. - Chemical spill kit available on site. - Chemical waste cabinet available on site.

				- Chemical wastes to be stored in appropriate containers and collected by a licensed chemical waste collector Delivery of yard waste to Y-Park for reuse/upcycling or agreed alternative site.
ND/2019/02	 (a) Hoarding erection (b) Tree Felling (c) Pre-bored Socketed H-pile (d) ELS (e) Construction of Pile Cap 	Portion 10 Portion 7 Portion 7, 9, 10 Portion 1, 9 Portion 9	Air, Noise, Waste Air, Noise, Water, Waste, Ecology	 Dusty works should be spray water or idle stockpile or slop should be covered by Tarpaulin sheet properly. Wheel washing should be carried out at every exit. Plants should be well maintained to prevent dark smoke and oil leakage. Idle plant should be turned off. Drip tray should be provided for all chemical and stationary plants. No construction works shall be carried out in restricted hours (7:00 pm to 7:00 am) unless CNP is obtained. Waste should be sorted and dispose according to the Waste Management Plan No direct discharge of wastewater into storm drains is allowed. Wastewater must be de-silted before discharged in accordance with the water discharge license. Dull green barrier and ecological measures should be implemented according to the Ecological protection plan.
ND/2019/03	(a) Excavation of irrigation channel	Long Valley	- C&D waste - Air pollution - Noise pollution	 Watering exposed earth regularly Cover C&D material by tarpaulin Adopt QPME for excavation
	(b) Excavation of trench in Yin Kong Road	Portion 1 and Portion 1A	- C&D waste - Air pollution - Noise pollution	 Watering exposed earth regularly Cover C&D material by tarpaulin Noise barrier for screening from source of noise

		, , , , , , , , , , , , , , , , , , ,	- Water pollution	- Wastewater will be treated before discharging to channel
	(c) Demolition of existing structure	Long Valley	- C&D material - Air Pollution	Cover C&D material by tarpaulinWatering while demolish the structure
	(d) Construction works of storage shed and Type 2 Storage House	Long Valley	- C&D material - Air Pollution	Watering exposed earth regularlyCover C&D material by tarpaulin
	(e) Asbestos Removal in Long Valley	Long Valley	- Air Pollution	- Removing the asbestos containing material according to requirement of COP
ND/2019/04	(a) Socket H-piling	Portion N	- Air, Noise, Water, Waste	- Dusty works should be sprayed with water or stockpile should be covered by tarpaulin properly.
	(b) Sheet piling (c) Bored piling	Portion H Bridge A2, F	- Air, Noise, Waste - Air, Noise, Water, Waste	- Plants should have maintenance to prevent dark smoke and oil leakage. Idle plant should be turned off.
	(d) Excavation	Bridge F	- Air, Noise, Waste	- Drip tray should be provided for all chemical and
	(e) Site clearance (f) Tree felling	Portion A, B Portion A	- Air, Noise, Waste - Air, Noise, Waste	 stationary plants. No construction works shall be carried out in restricted hours (7:00 pm to 7:00 am) unless CNP is granted. Waste should be sorted and disposed according to Waste Management Plan. No direct discharge of wastewater into storm water drains is allowed. Wastewater must be desilted before discharging according to water discharge license.
ND/2019/05	(a) Ground investigation works	FLN3-DH016, ABH02, ABH04, D39(P), ABH10	Construction Dust ImpactNoise Impact	Regular watering on exposed worksites and haul roadStockpiling area should be provided with covers
	(b) Pre drilling for bored piles	B1(Portion I), C2-01, C2-02, E2-01,	- Water Quality Impact (Construction Phase)	and water spraying systemOnly well-maintained plant to be operated on-site

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	B1(Portion II),	- Waste Management	-	Plant known to emit noise strongly in one
	B2(Potion II),	(Construction Waste)		direction, where possible, be orientated so that the
	C1-01 &	- Landscape and		noise is directed away from nearby NSRs;
	C1-02(Portion	Visual	-	Mobile plant to be sited as far away from NSRs as
	II), C3-02	- Cultural Heritage		possible practicable
(c) Bored piling	C3-03b, C3-04b,		-	All open stockpiles of construction materials of
	C2-04b, D1-03,			more than 50m ³ to be covered with tarpaulin
	E1-03, D1-04, E1-		-	Manholes to be adequately covered and
	04, E2-03, C3-			temporarily sealed so as to prevent silt,
	01b, C2-01,			construction materials or debris being washed into
	B1(Portion 1),			the drainage system
	C3-04b, E3-01,		-	All vehicles and plant to be cleaned before leaving
	C3-01a, C2-03b,			a construction site to ensure no earth, mud, debris
	C3-03a, C3-04a,			and the like is deposited by them on roads.
	D1-02, E1-02, E2-		-	Segregate and store different types of waste in
	01, D2-01.			different containers, skip or stockpiles to enhance
(d) Soil Nail	Jockey Club			reuse or recycling of materials and their proper
	Road			disposal
(e) Pile Cap Construction	E2-01, C4-03,		-	Sort out demolition debris and excavated materials
	C4-04, E3-03,			from demolition works to recover
	D1-01, E1-01,			reusable/recyclable portions
	HKY-P02 pile		-	Provide training to workers on appropriate waste
	cap & HKY-AB			management procedures, including waste
	ELS.			reduction, reuse and recycling
(f) Footing Construction	C4-01a and C4-		-	To adopt other good site practice, such as
	01b			arrangements for collection and effective disposal
(g) Site Formation/	Portion XI, XII,			to an appropriate facility, of all wastes generated at
Clearance	TWSRW			the site and regular cleaning and maintenance
(h) Utitilies Diversion Works	TWSRW			programme for drainage
and Permanent Road	1 44 217 44		-	Chemical wastes to be stored in appropriate
Works				containers and collected by a licensed chemical
(i) Tree work	TWSRW, Jockey			waste Contractor. Chemical wastes (e.g. spent
	Club Road			lubricant oil) should be recycled at an appropriate

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	(j) TTA	Jockey Club Road			facility as far as possible, while the chemical waste
	(k) Drainage & Water Mains construction	Box culvert BC5, TWSRE			that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or
	(l) UU diversion	Tai Wo Service Road West			another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation
	(m) Gas main diversion	Jockey Club Road		-	Conducting Construction Vibration Monitoring Tree Protection & Preservation – Exiting trees to
	(n) Road works for temporary road diversion	D2-03, Portion XI			be retained within the Project site should be carefully protected during construction. In
	(o) Retaining wall construction	FW04, FW05, FW06, FW52		_	particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Tree Transplantation – Tree unavoidably affected
	(p) Slope construction	C363, FS04, Jockey Club Road			by the Project works should be transplanted where practical. Tree should be transplanted straight to their final receptor site and not held in a temporary
	(q) Footbridge staircase demolition	Ho Ka Yuen Footbridge		-	nursey as far as possible. Erect 2m high dull green site boundary fence. Light Control – Construction day and night time should be controlled to minimize glare impact to adjacent VSRs during the Construction phase.
ND/2019/06	(a) Construction of finishing works and E&M works for the Management Office Building (MOB)	Portion 4	- Noise pollution - Water pollution	-	Adopt noise barrier in screening noise Wastewater generated after wheel washing of vehicles should be treated properly before discharge
	(b) Construction of ramp structure	Portion 3	- Water pollution	-	Wastewater generated after wheel washing of vehicles should be treated properly before discharge Provide sand bags for prevent polluted water discharge off site without wastewater treatment
	(c) Erection of the steel members of steel canopy; Construction of ground	Portion 3	- C&D waste - Air pollution - Noise pollution	-	Cover C&D waste by impervious sheeting Spray with water to work area before, during and after the work

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		slab of the market stall area and concrete carriageway; Construction of installation and constriction of sheetpiles for ELS for footings of additional carriageway steel cover.		- Water pollution	-	Adopt QPME for excavator Wastewater generated after wheel washing of vehicles should be treated properly before discharge
	(d)	Relocation of containers for construction of underground utilities	Portion3	- C&D waste	-	Cover C&D waste by impervious sheeting
	(e)	E&M installations for the steel canopy	Portion 3	C&D wasteAir pollutionNoise pollutionWater pollution		Cover C&D waste by impervious sheeting Spray with water to work area before, during and after the work Adopt QPME for excavator Wastewater generated after wheel washing of vehicles should be treated properly before disposa
ND/2019/07	(a)	Site clearance	Portion 1, 2	- Construction Dust Impact	-	Regular watering on exposed worksites and haul road.
	(b)	Erection of site hoarding	Portion 1	- Noise Impact	-	Stockpiling area should be provided with covers and water s praying system.
	(c)	C&D waste disposal	Portion 1, 2	- Water Quality Impact		
	(d) Ground investigation works Portion 1 (Construction Phase) Waste Management (Construction Wester)	` '	-	Only well maintained plant to be operated on site. Plant known to emit noise strongly in one direction, where possible, be orientated so that the		
	(e)	Construction of box culvert	Portion 2	- Landscape and Visual	_	noise is directed away from nearby NSRs. Mobile plant to be sited as far away from NSRs a
	(f)	Filing works	Portion 2		-	possible practicable. All open stockpiles of construction materials of more than 50m ³ to be covered with tarpaulin.
	(g)	Tree felling/ disposal of yard waste	Portion 1, 2, 3			
	(h)	Construction of site haul road	Portion 1		-	Manholes to be adequately covered and temporarily sealed so as to prevent silt,

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(i) Trial pit	Ma Sik Road	construction materials or debris being washed into
(j) Demolition of villager's	Portion 1, 2, 4	the drainage system.All vehicles and plant to be cleaned before leaving
houses		a construction site to ensure no earth, mud, debris
(k) Drainage Works	Portion 1, 3	and the like is deposited by them on roads.
		- Segregate and store different types of waste in
		different containers, skip or stockpiles to enhance
		reuse or recycling of materials and their proper
		disposal.
		- Sort out demolition debris and excavated materials
		from demolition works to recover
		reusable/recyclable portions.
		- Provide training to workers on appropriate waste management procedures, including waste
		reduction, reuse and recycling.
		- To adopt other good site practice, such as
		arrangements for collection and effective disposal
		to an appropriate facility, of all wastes generated at
		the site and regular cleaning and maintenance
		programme for drainage.
		- Chemical wastes to be stored in appropriate
		containers and collected by a licensed chemical
		waste Contractor. Chemical wastes (e.g. spent
		lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste
		that cannot be recycled should be disposed of at
		either the Chemical Waste Treatment Centre, or
		another licensed facility, in accordance with the
		Waste Disposal (Chemical Waste) (General)
		Regulation.
		- Tree Protection & Preservation – Existing trees to
		be retained within the Project Site should be
		carefully protected during construction. In

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

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

Monitoring Schedule for the Next Month

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

Construction Programme for the Next Month

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

13 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- 13.1 This Monthly EM&A Report presents the EM&A work undertaken in July 2021 in accordance with Updated EM&A Manual.
- 13.2 One (1) Action Level exceedance and eight (8) Limit Level exceedances for dissolved oxygen, seventeen (17) Limit level exceedances for turbidity, one (1) Action Level exceedance and twelve (12) Limit Level exceedances for suspended solids and two (2) Action Level exceedance for arsenic of impact water quality monitoring were recorded. After investigation, one (1) Limit Level exceedances for turbidity and one (1) Limit Level exceedances for suspended solids at monitoring station, SHST-IS2, were found due to Contract No. ND/2019/04. Other exceedances recorded were considered non-projected related.
- 13.3 No Action/Limit Level exceedance were recorded for air quality, construction noise, ambient arsenic and landfill gas monitoring in the reporting month

Contract No. ND/2019/01

13.4 Environmental site inspection were conducted on 6th, 13th, 20th and 27th July 2021 by ET in the reporting month.

Contract No. ND/2019/02

13.5 Environmental site inspection were conducted on 7th, 14th, 23rd and 28th July 2021 by ET in the reporting month.

Contract No. ND/2019/03

13.6 Environmental site inspection were conducted on 2nd, 9th, 16th, 20th and 30th July 2021 by ET in the reporting month.

Contract No. ND/2019/04

13.7 Environmental site inspection were conducted on 2nd, 8th, 15th, 22nd and 29th July 2021 by ET in the reporting month.

Contract No. ND/2019/05

13.8 Environmental site inspections were conducted on7th, 12th, 19th and 26th July 2021 by ET in the reporting month.

Contract No. ND/2019/06

13.9 Environmental site inspections were conducted on 8th, 15th, 22nd and 29th July 2021 by ET in the reporting month.

Contract No. ND/2019/07

- 13.10 Environmental site inspections were conducted on 2nd, 8th, 16th, 23rd and 30th July 2021 by ET in the reporting month.
- 13.11 There were no environmental complaints, no notification of summons or successful prosecutions received in the reporting month.

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

Recommendations

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

Air Quality Impact

- To maintain the impervious material to entirely cover the stockpile of dusty materials;
- To cover dusty stockpile with impervious materials;
- To cover or shelter every stock of more than 20 bags of cement on top and 3 sides;
- To water the exposed worksites regularly;
- To ensure all regulated machines displayed with valid Non-road Mobile Machinery (NRMM) labels; and
- To keep public road near work site area clean and free of dust.

Construction Noise Impact

• To operate compressor with doors closed.

Water Impact

- To regularly maintain and ensure water treatment facilities proper operation and functioning;
- To prevent any surface runoff discharge into nearby drainage or stream;
- To provide sandbags or construct berm to prevent any outflow of muddy water from site area:
- To regularly review the capacity of sump pit for sediment control;
- To ensure all vehicle clear of earth and mud before leaving site;
- To regularly clear the water in wheel washing facilities;
- To divert all the water generated from construction site to de-silting facilities with sufficient handling capacity before discharge;
- To ensure silt curtain properly deployed around work area in water or near water;
- To ensure the drainage facilities would not be clogged with waste to avoid overflow;
- To regularly check the condition of desilting materials for ensuring proper function.
- To cover the exposed site area with tarpaulin to minimise muddy runoff during rainy season

Waste/Chemical Management

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

Landscape & Visual Impact

• Retained trees should be carefully protected.

Landfill Gas Hazard

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

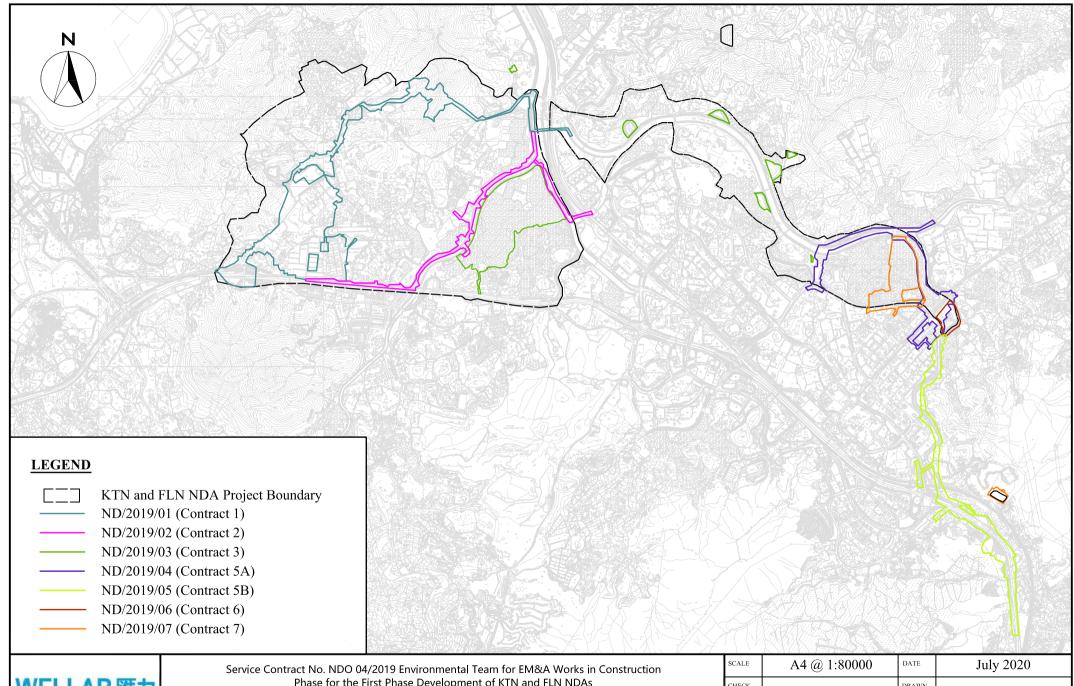
Land Contamination

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

Ecology

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

DRAWING(S)



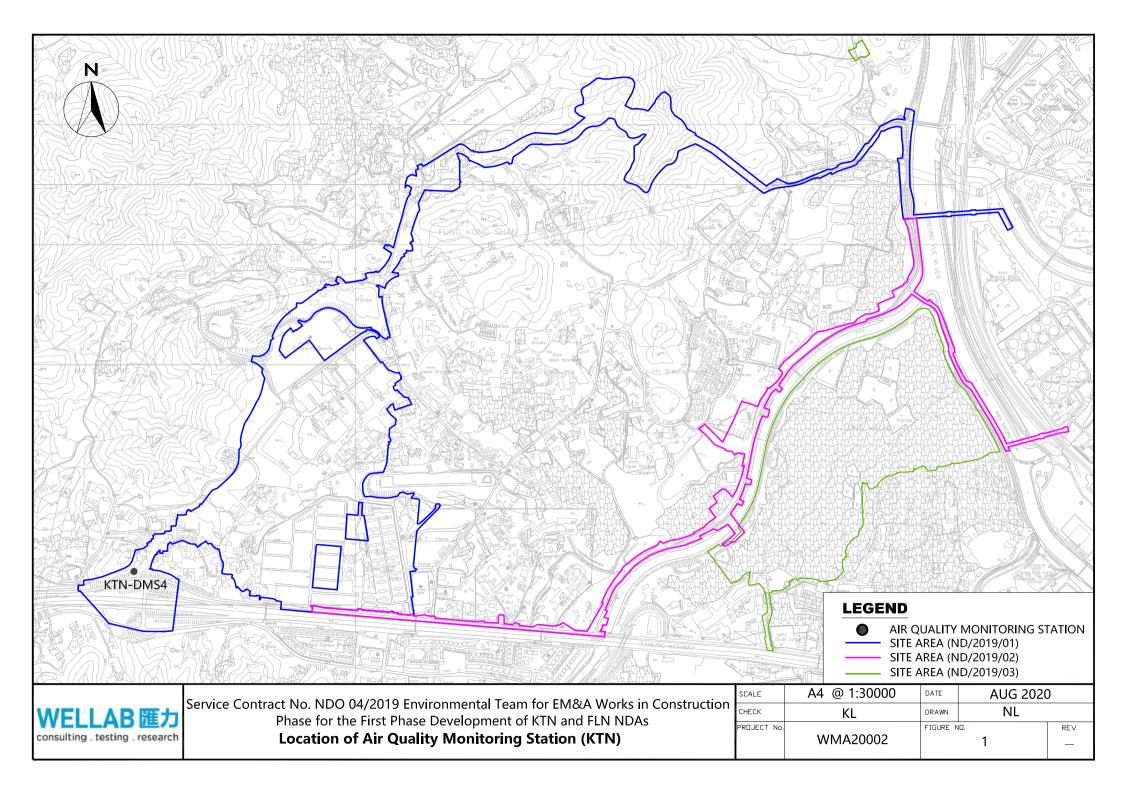
consulting . testing . research

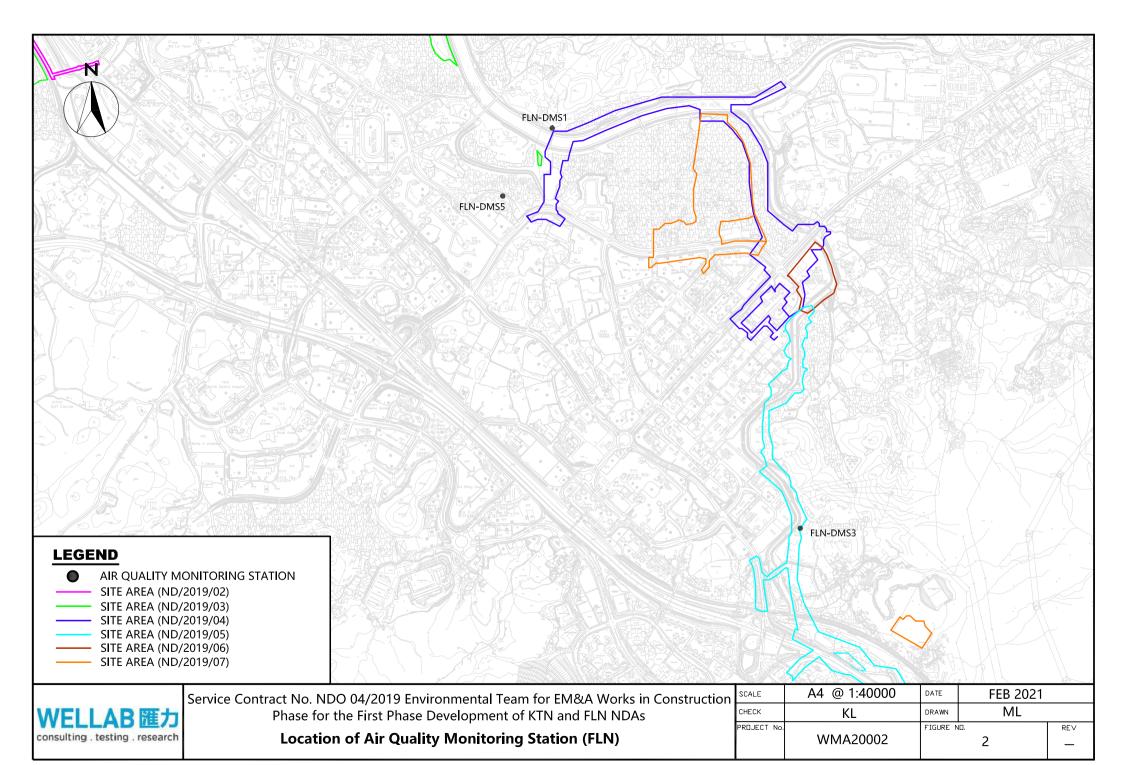
Phase for the First Phase Development of KTN and FLN NDAs

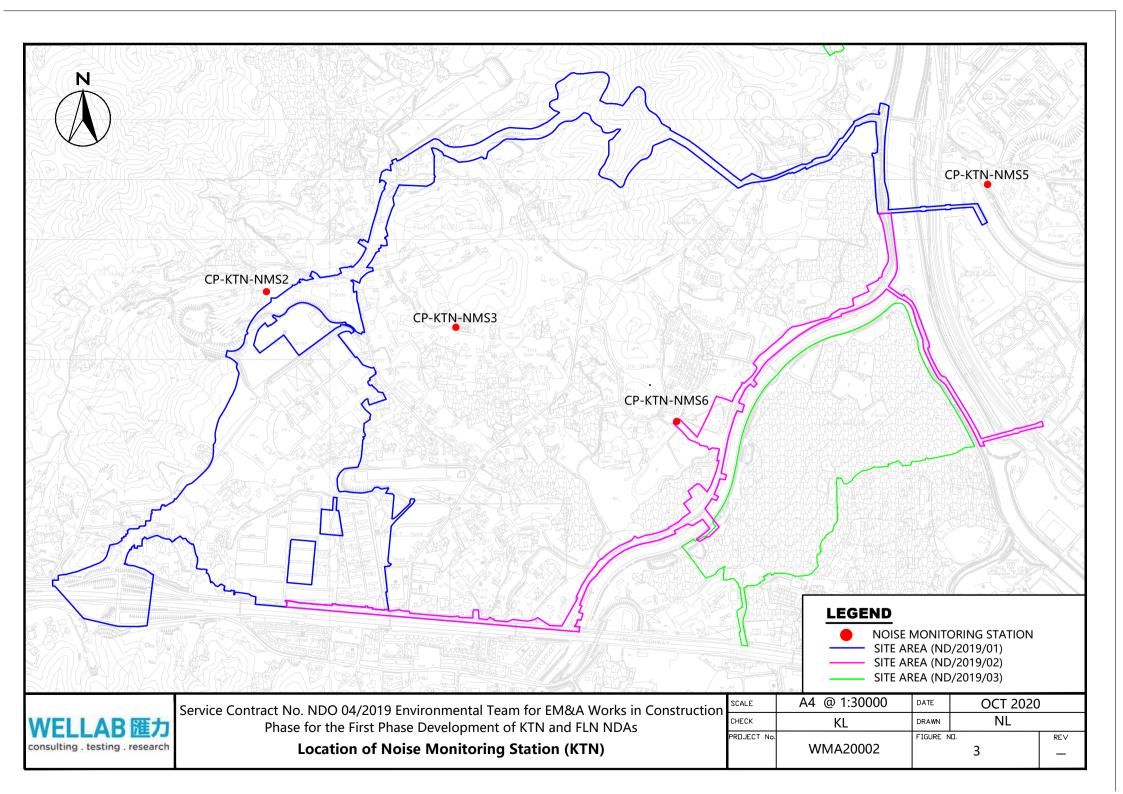
Project Boundary for the Advance and First Stage Works of Kwu Tung North and **Fanling North New Development Areas**

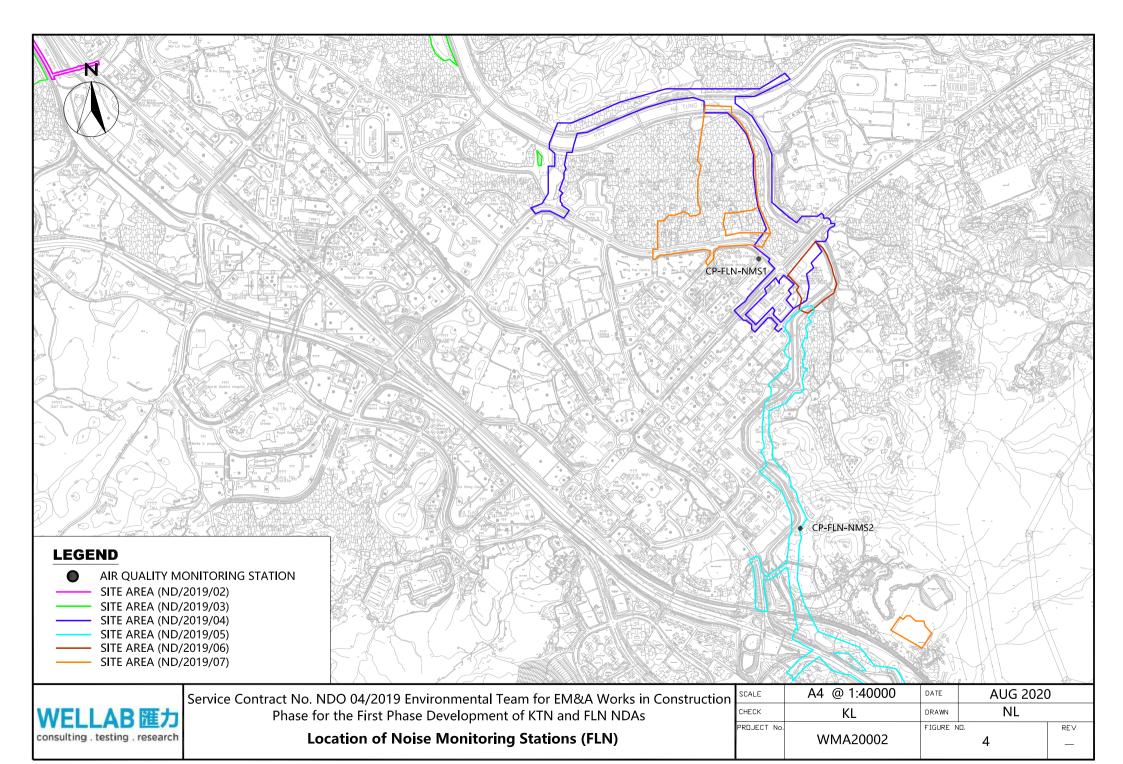
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Project No.	WMA20002	Drawing No	1 REV -

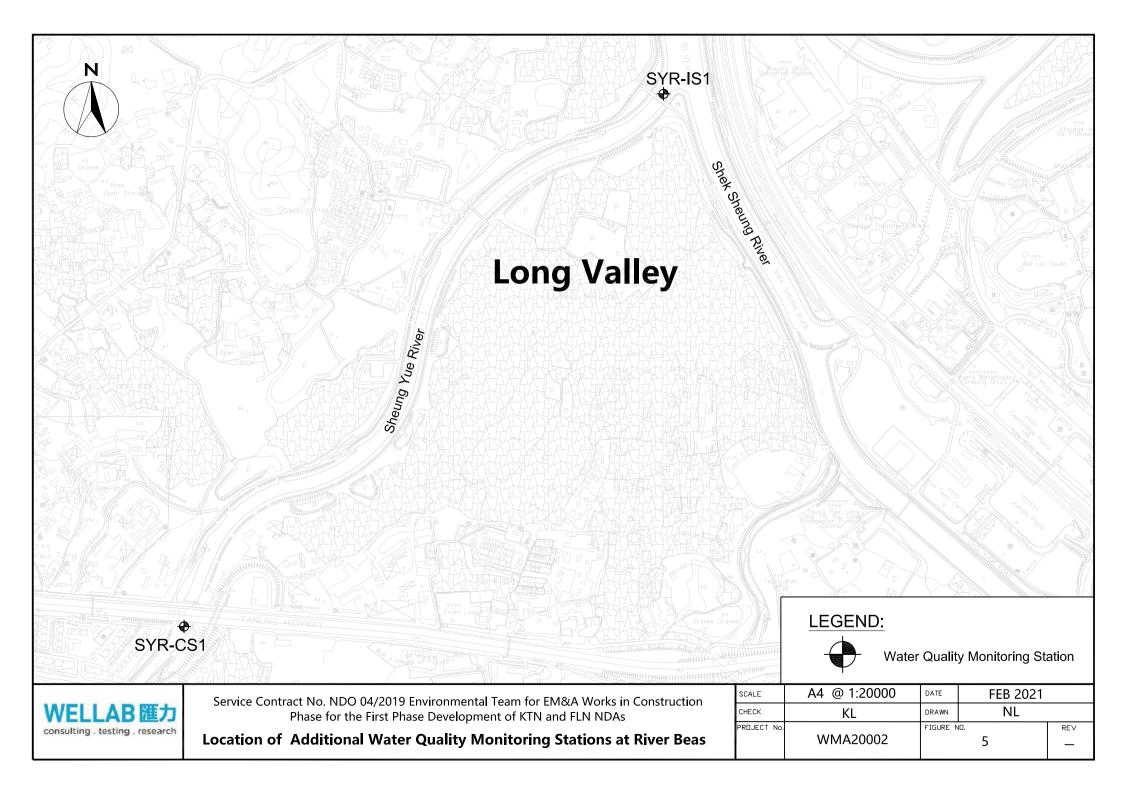
FIGURE(S)

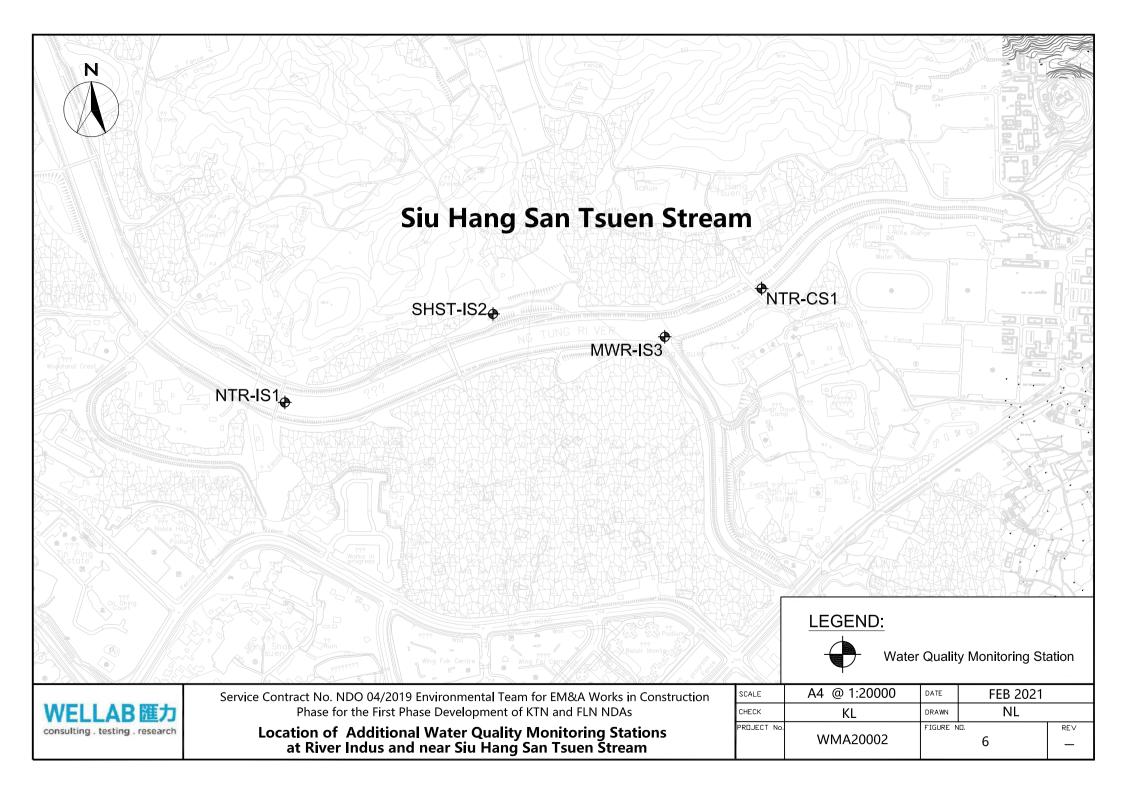


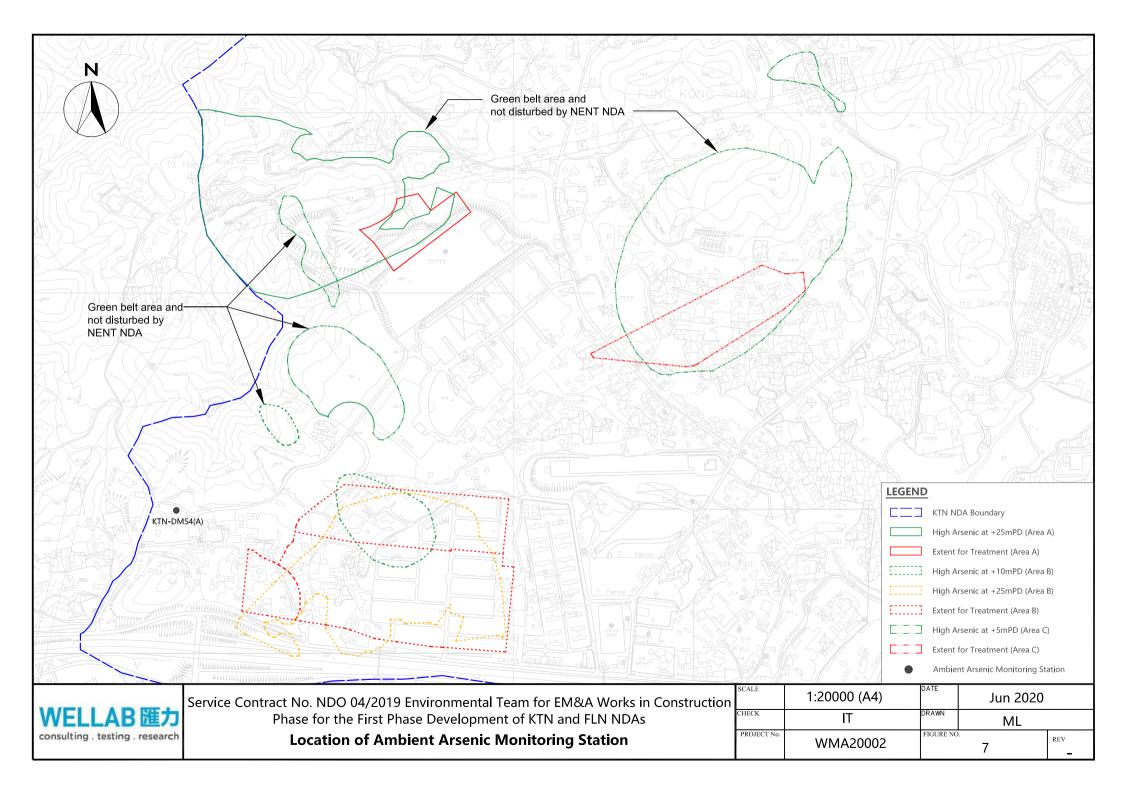


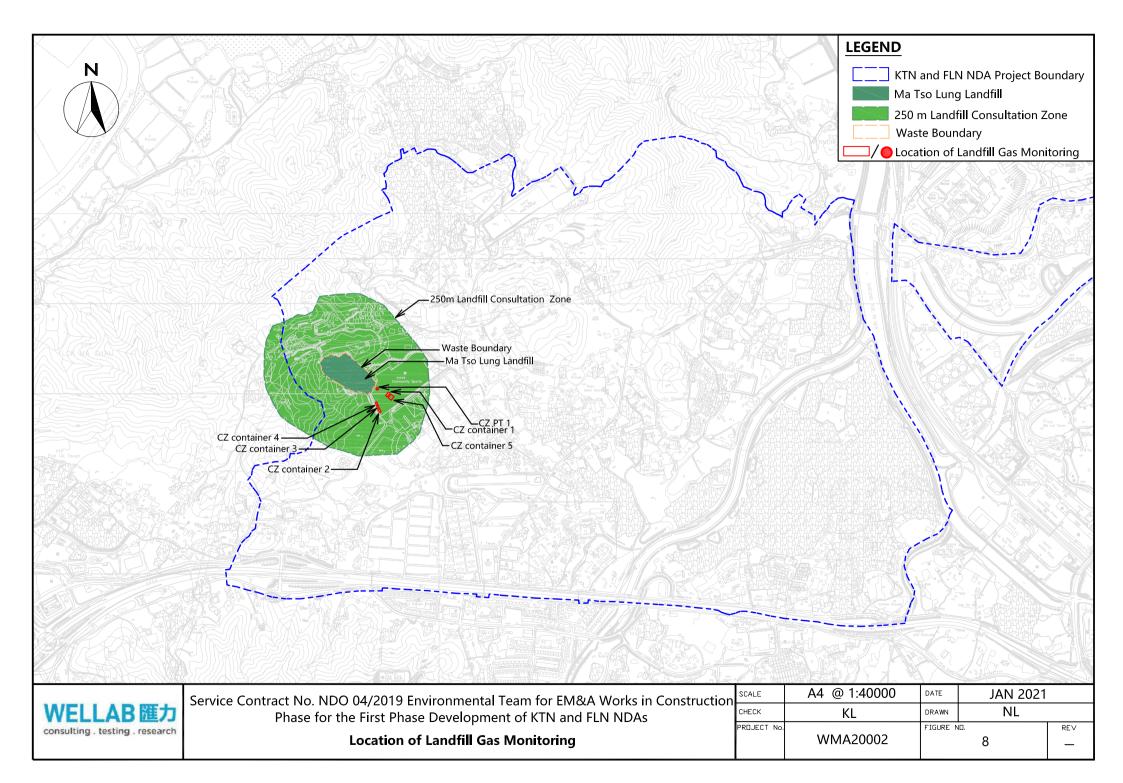


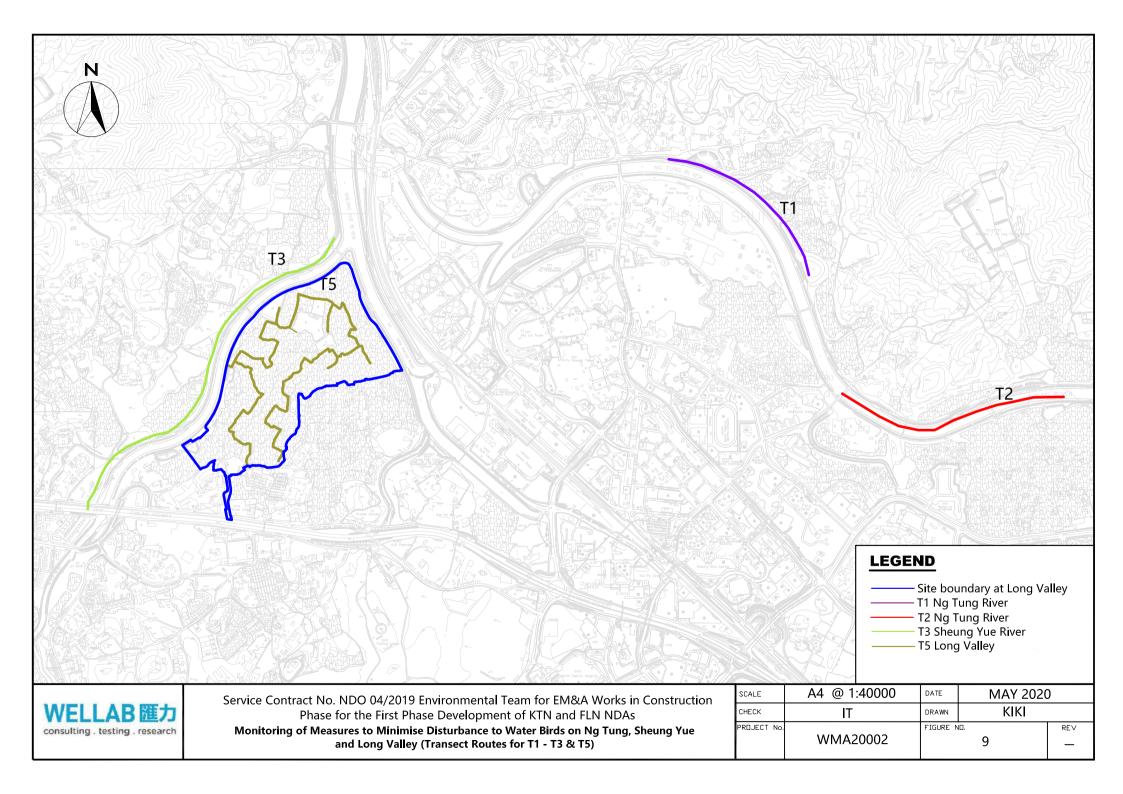


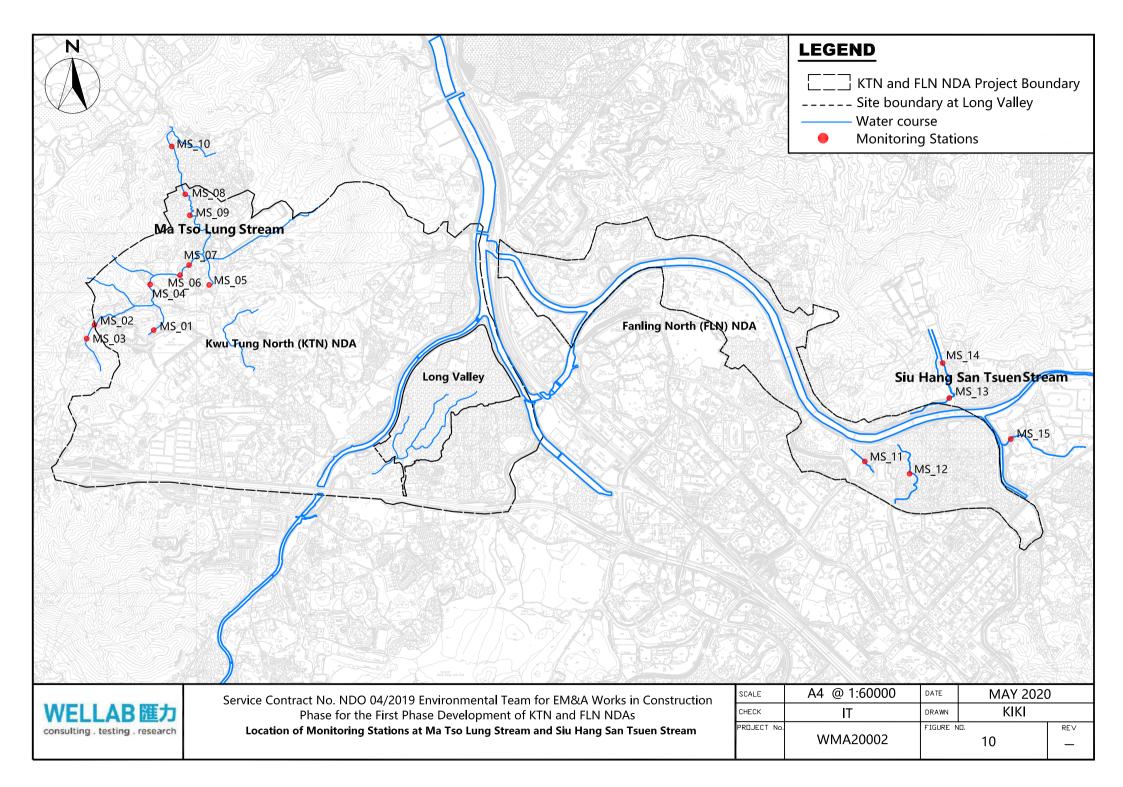












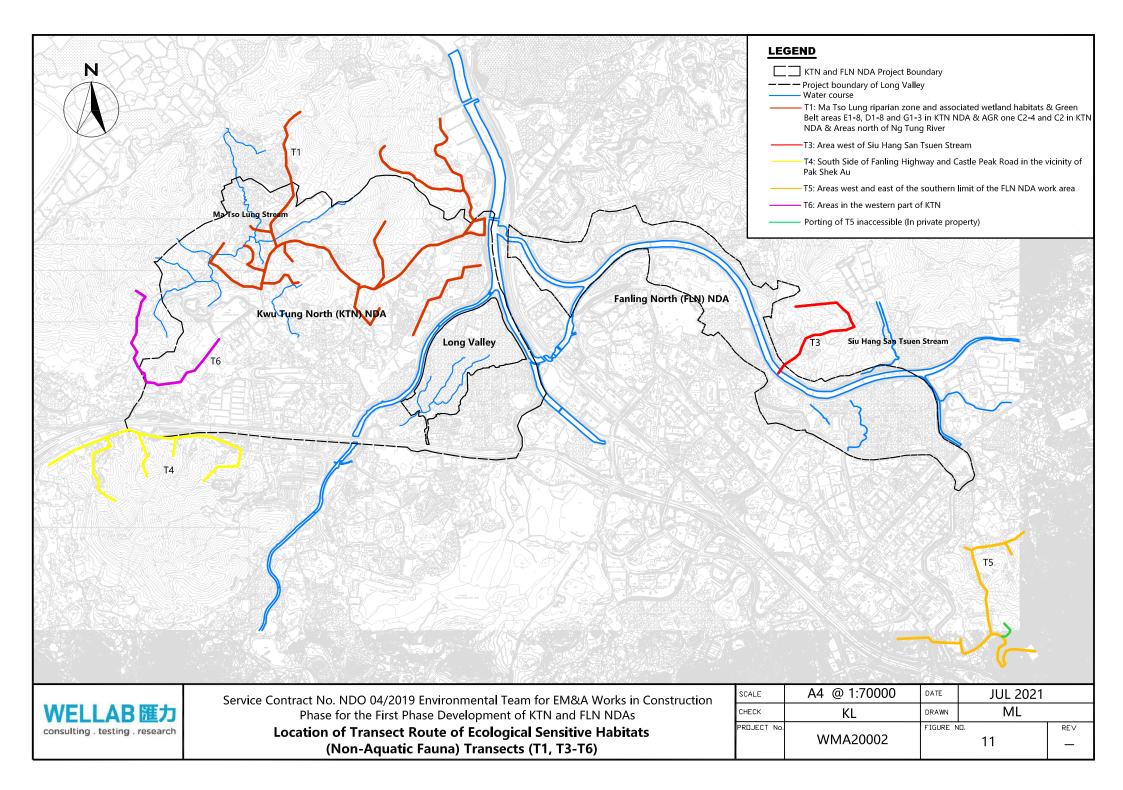
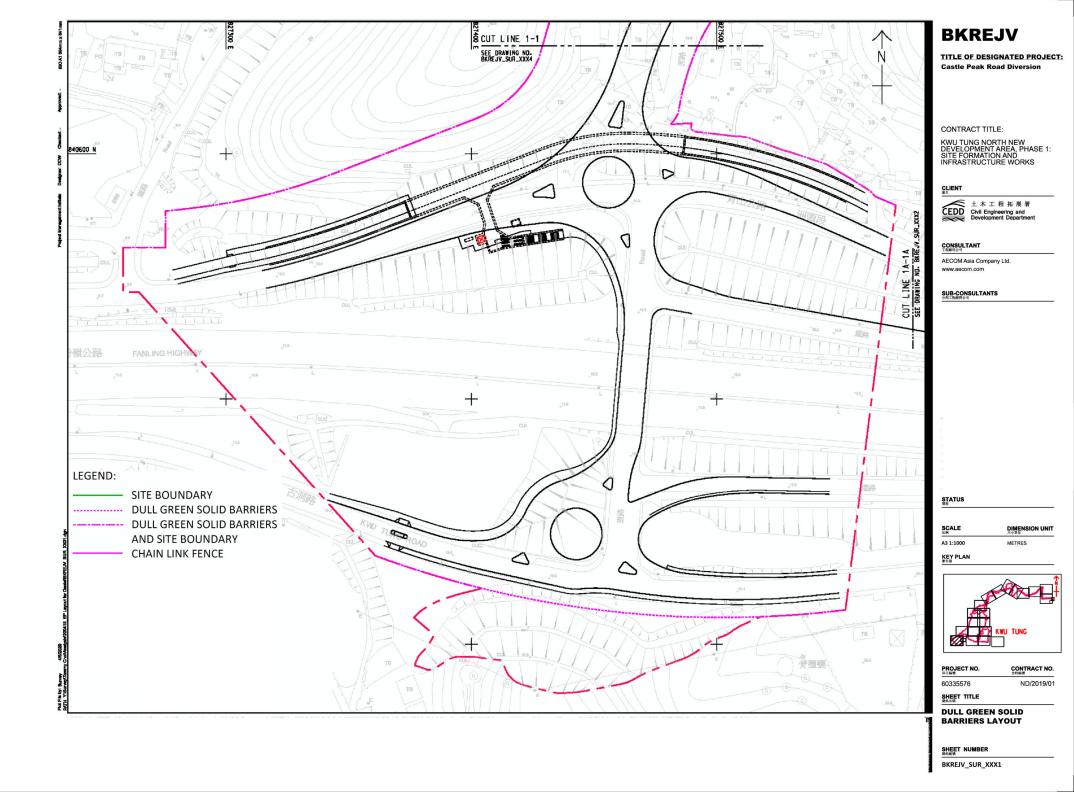
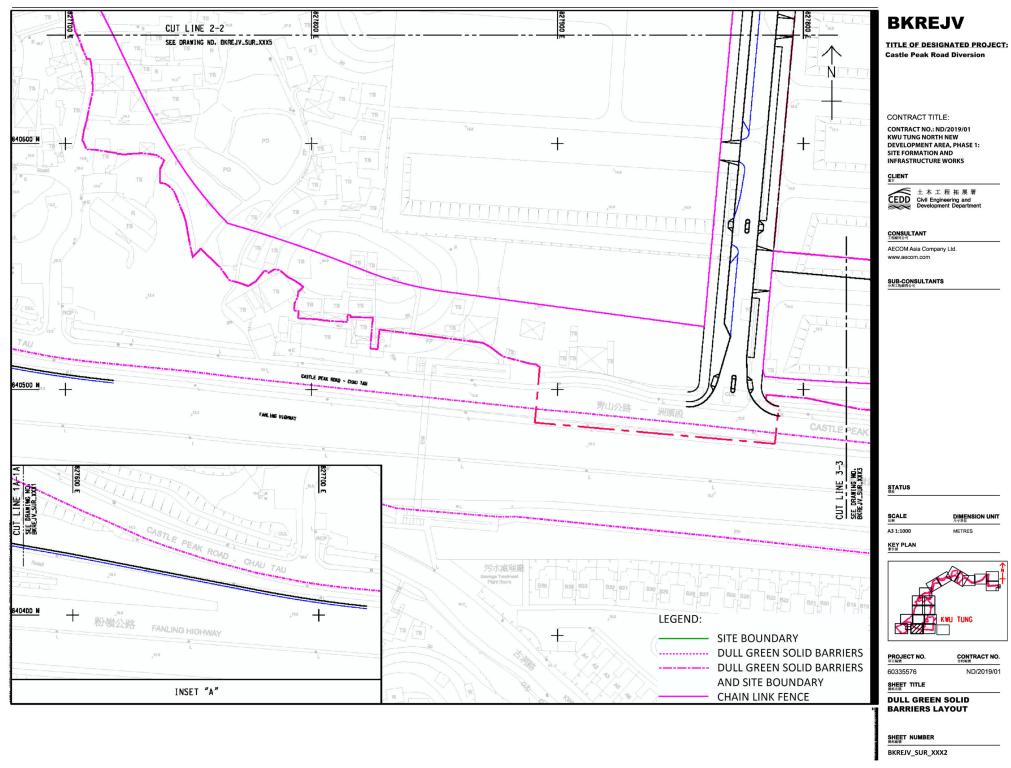


Figure 12

Hoarding Plan

EP-466/2013





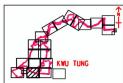
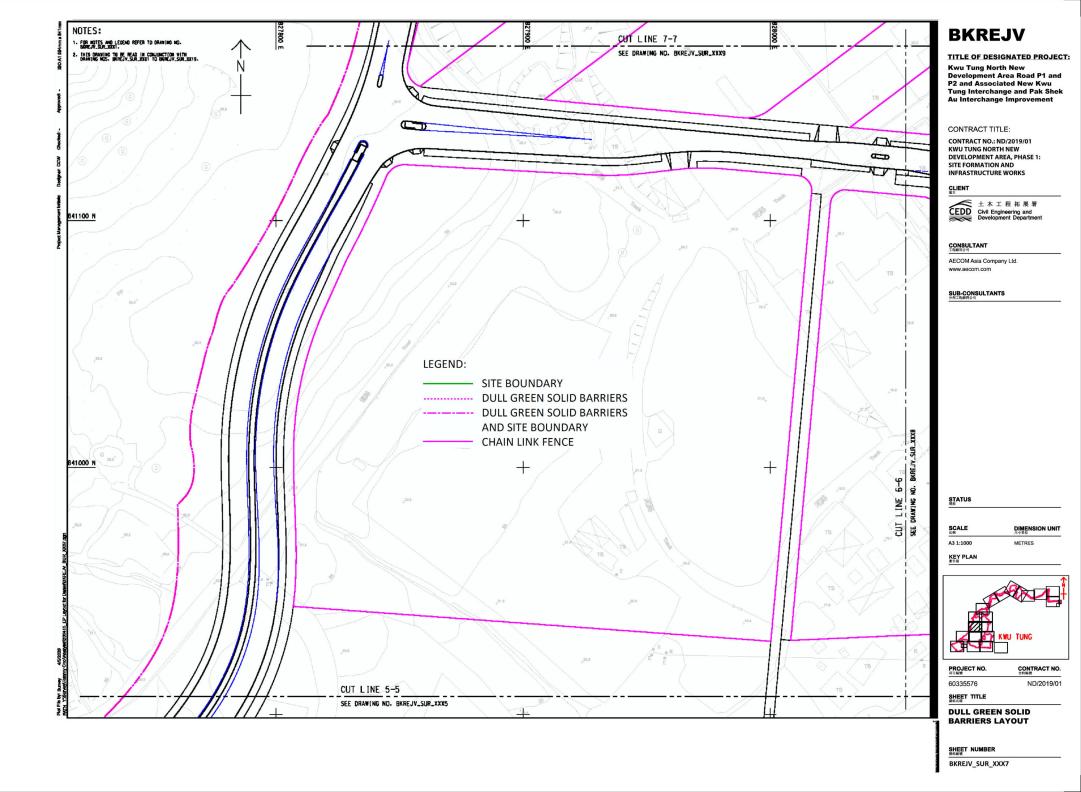
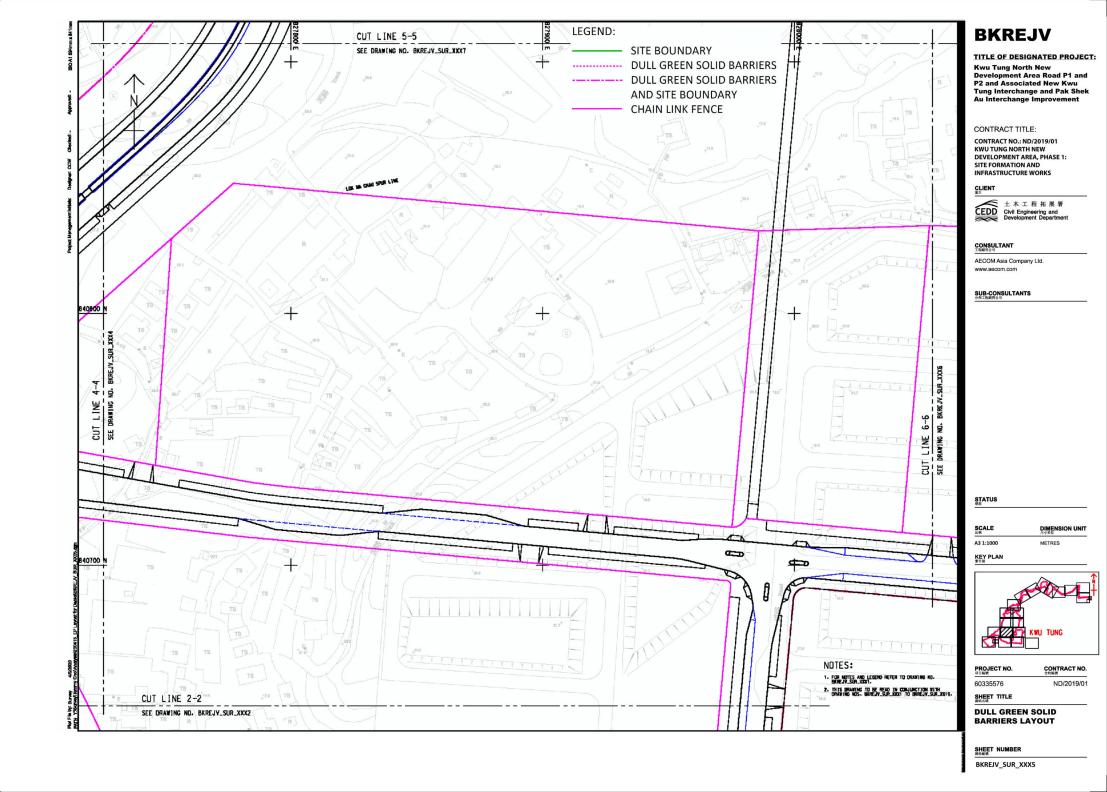


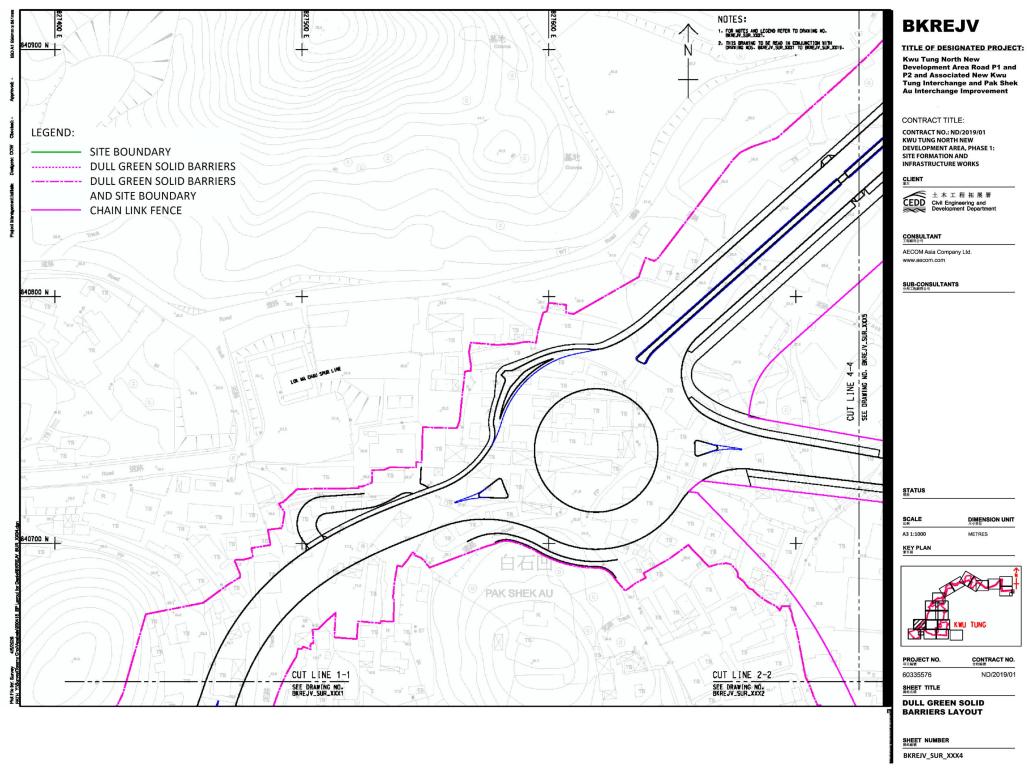
Figure 13

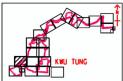
Hoarding Plan

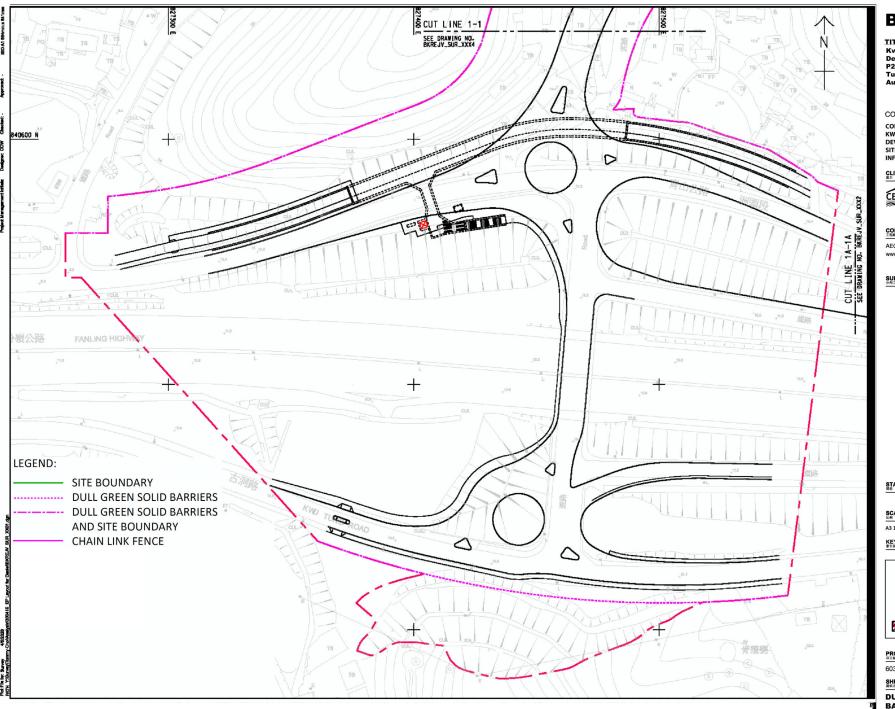
EP-467/2013/A











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

CONTRACT TITLE:

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

CLIENT



CONSULTANT

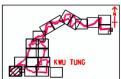
AECOM Asia Company Ltd.

SUB-CONSULTANTS

STATUS

SCALE 比例	DIMENSION UNI		
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KEY PLAN 素引展



PROJECT NO. 項目編號	CONTRACT I	
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SHEET TITLE

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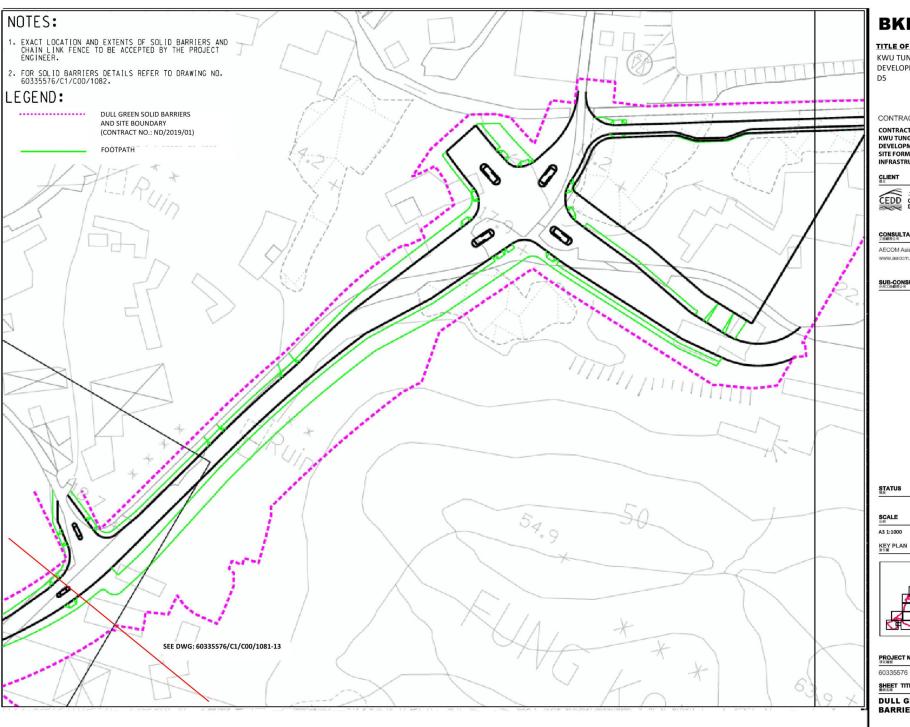
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Figure 14

Hoarding Plan

EP-468/2013/A



TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO

CONTRACT TITLE:

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



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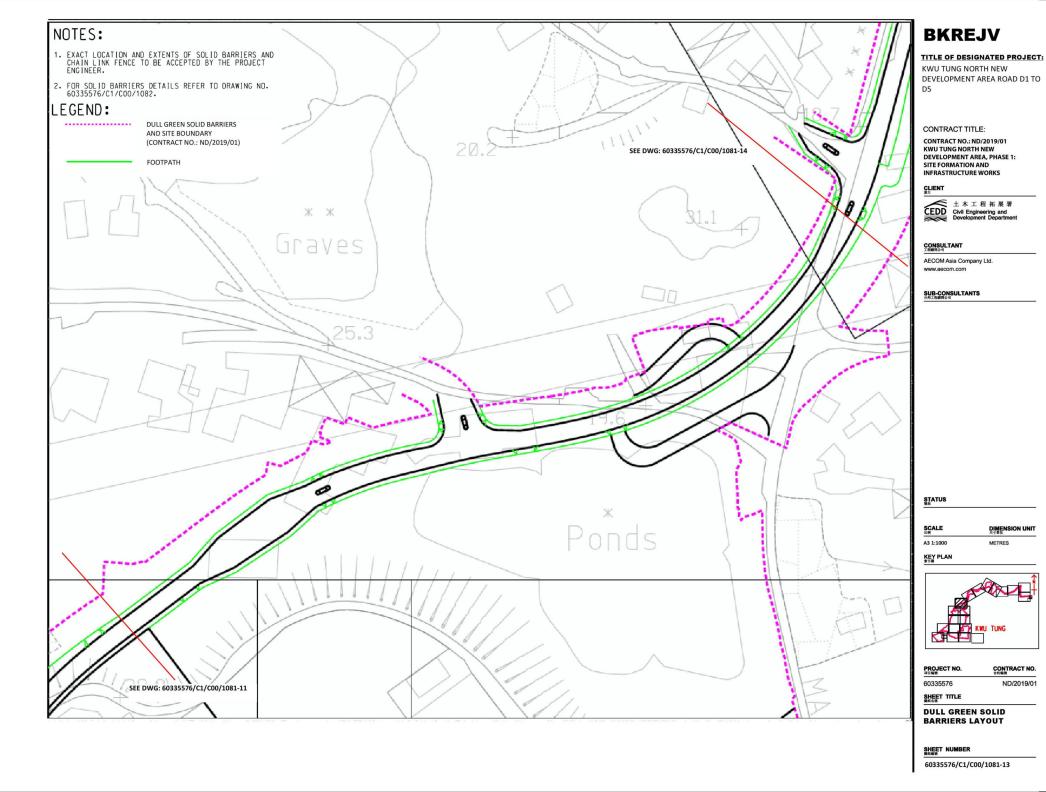
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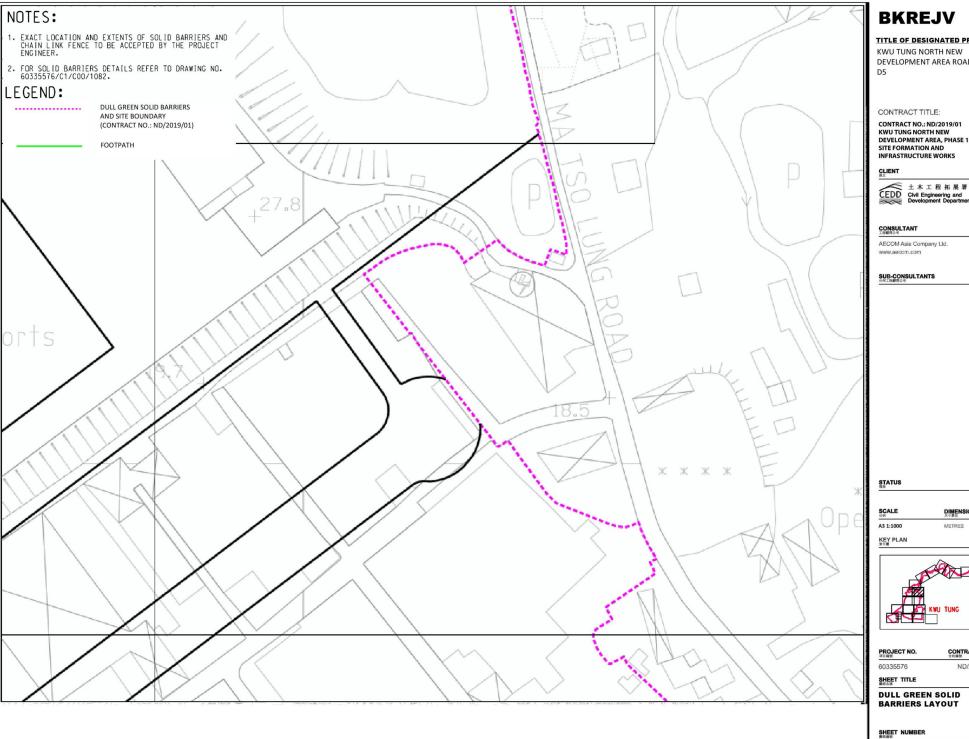
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SHEET TITLE

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER

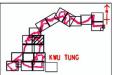




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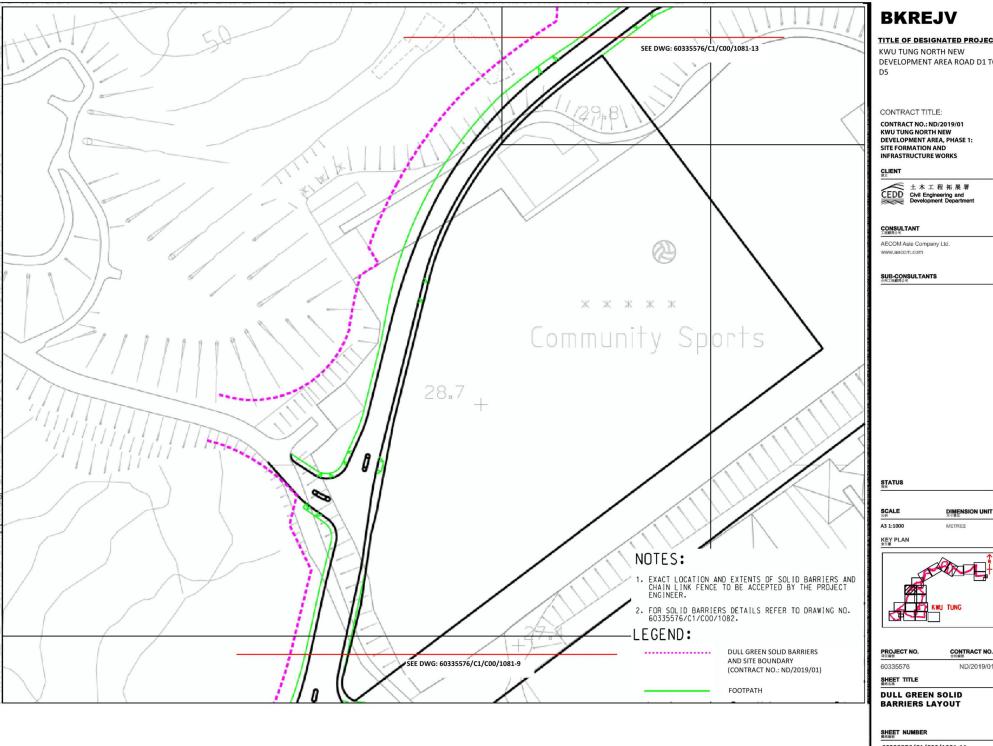
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CONTRACT NO.: ND/2019/01 KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: SITE FORMATION AND



CONTRACT NO. ND/2019/01

BARRIERS LAYOUT



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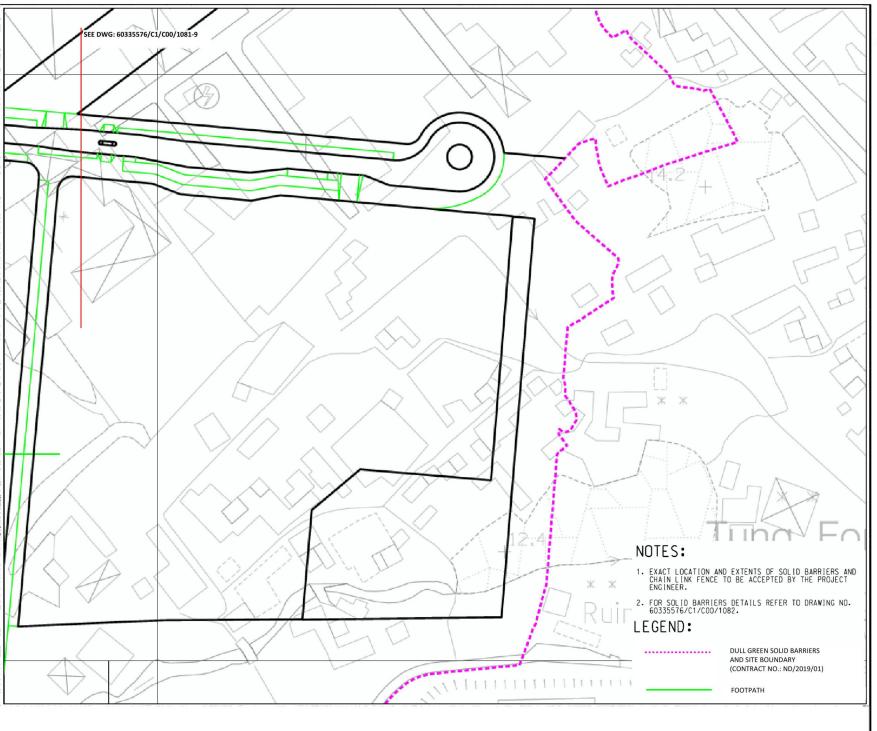
DEVELOPMENT AREA ROAD D1 TO

CONTRACT NO.: ND/2019/01 KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1:



CONTRACT NO. ND/2019/01

DULL GREEN SOLID BARRIERS LAYOUT



TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO

CONTRACT TITLE:

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



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

CONSULTANT

AECOM Asia Company Ltd. www.aecom.com

SUB-CONSULTANTS

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KEY PLAN 余引度



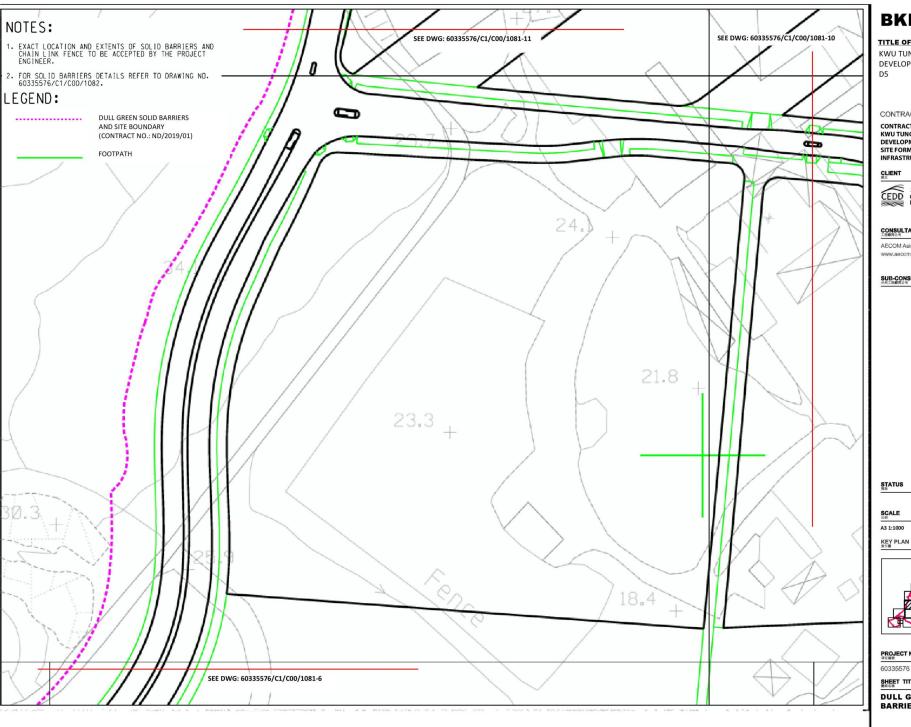
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60335576 SHEET TITLE ND/2019/01

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DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER



TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO

CONTRACT TITLE:

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



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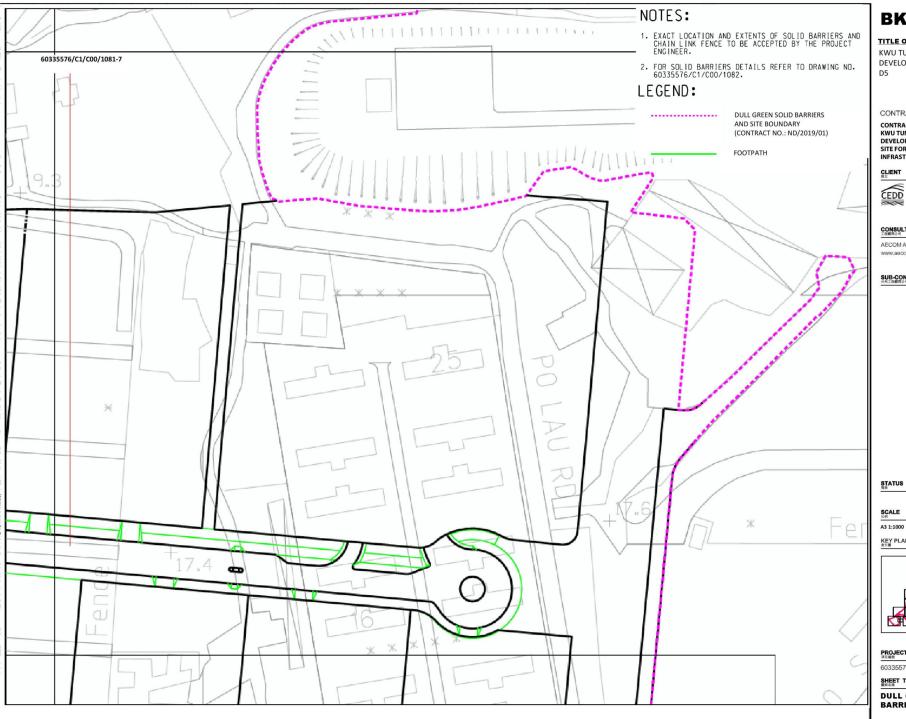
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CONTRACT NO. ND/2019/01

SHEET TITLE

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER



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KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO

CONTRACT TITLE:

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



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CEDD Civil Engineering and Development Department

CONSULTANT 工程網開公司

AECOM Asia Company Ltd.

SUB-CONSULTANTS

DIMENSION UNIT

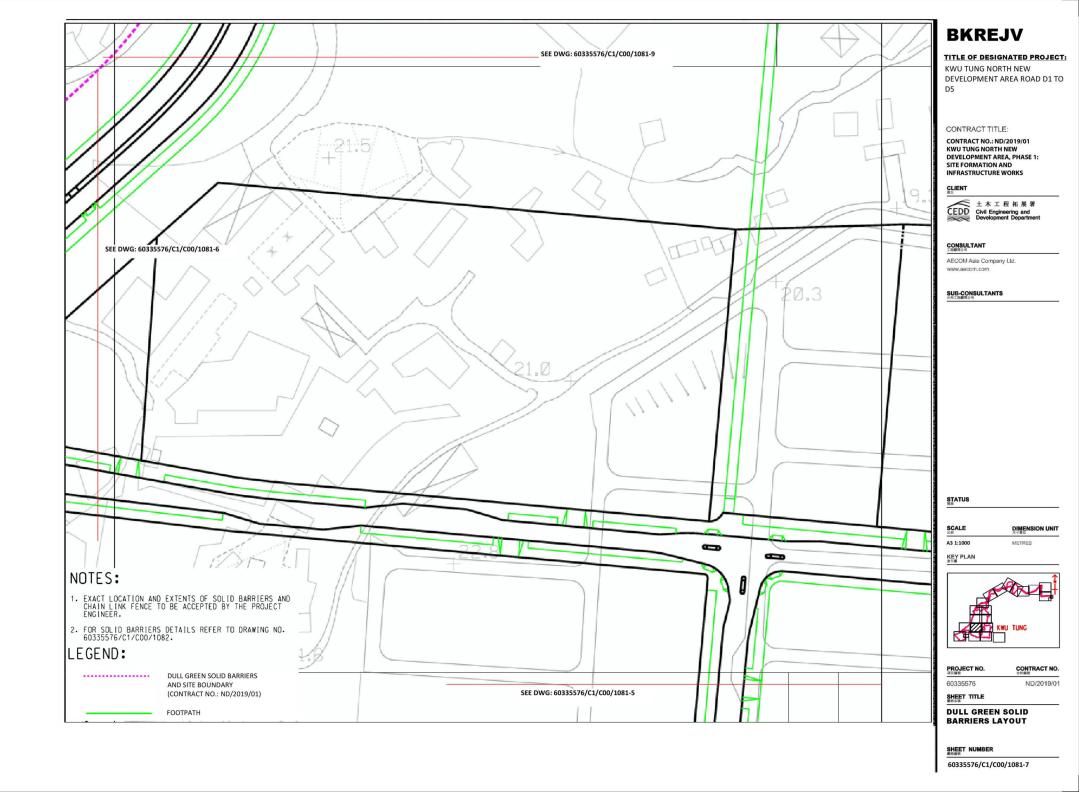


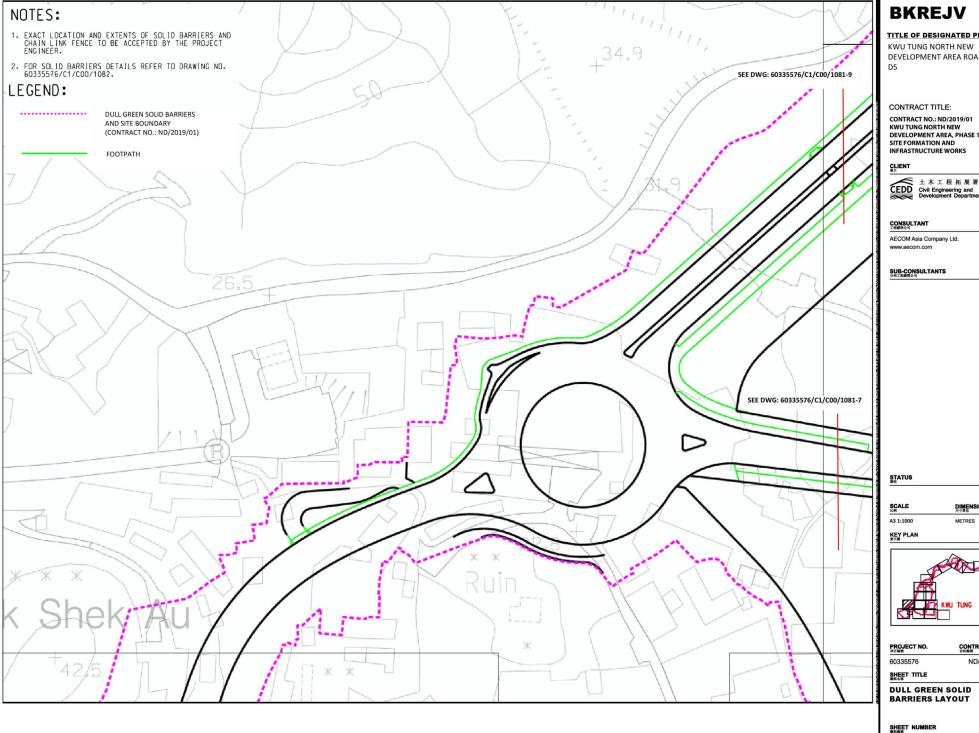
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60335576	ND/2019/		

SHEET TITLE

DULL GREEN SOLID BARRIERS LAYOUT

SHEET NUMBER

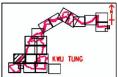




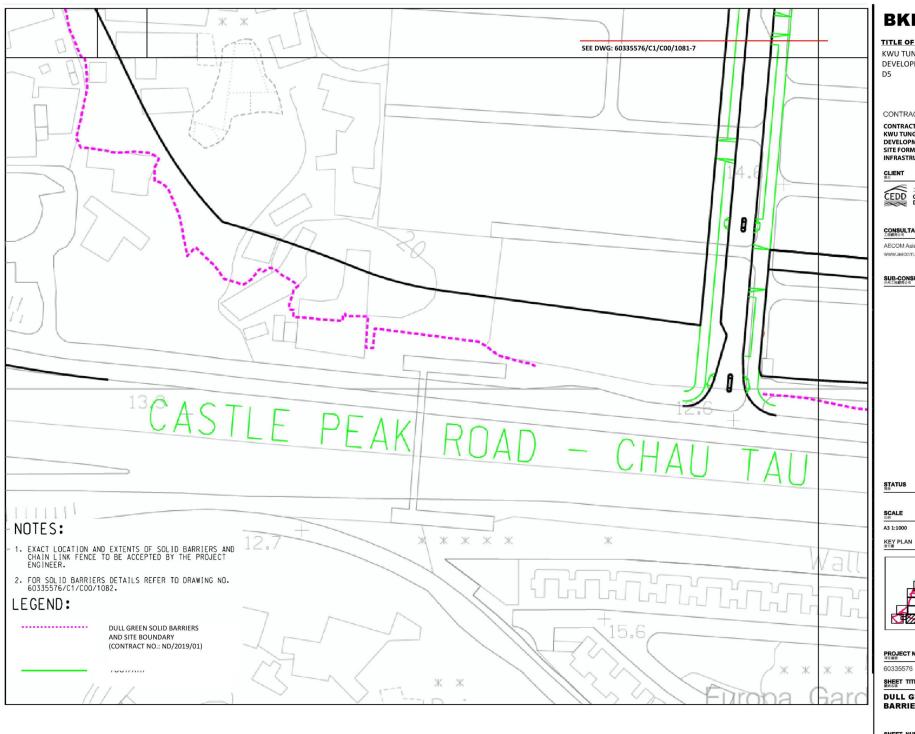
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DEVELOPMENT AREA ROAD D1 TO

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



CONTRACT NO. ND/2019/01



TITLE OF DESIGNATED PROJECT:

KWU TUNG NORTH NEW DEVELOPMENT AREA ROAD D1 TO

CONTRACT TITLE:

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



CONSULTANT

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STATUS

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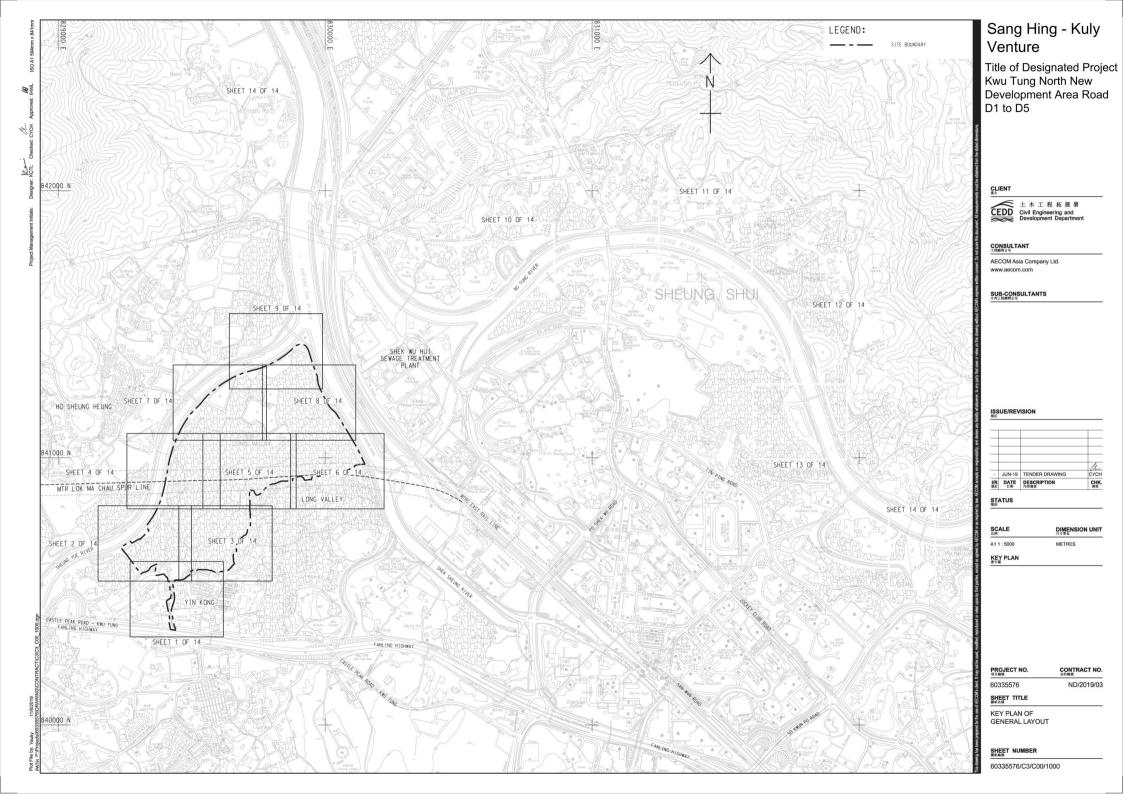


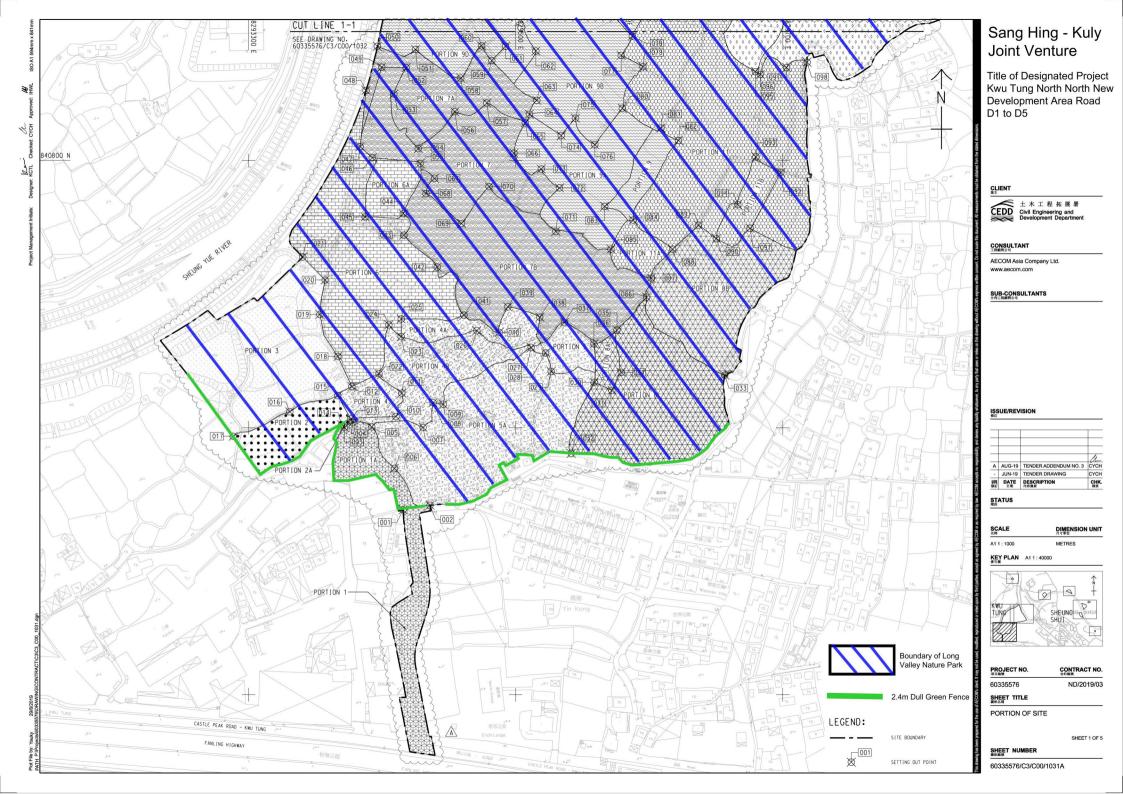
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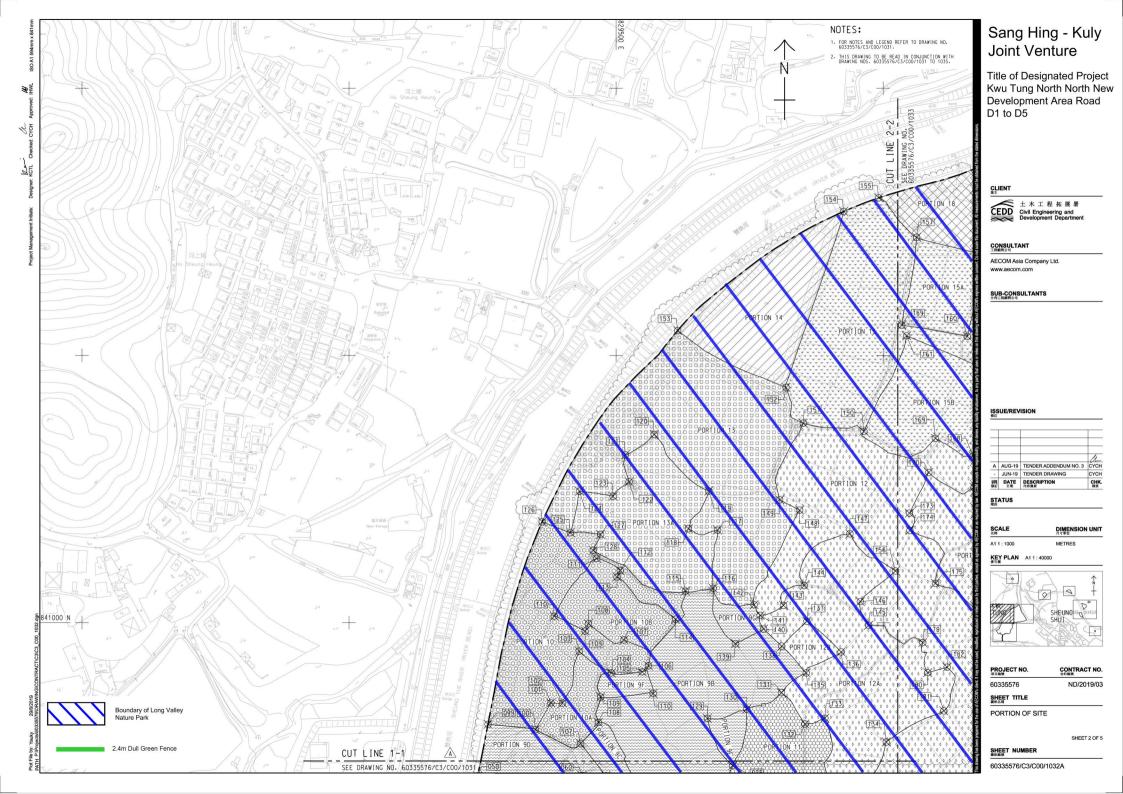
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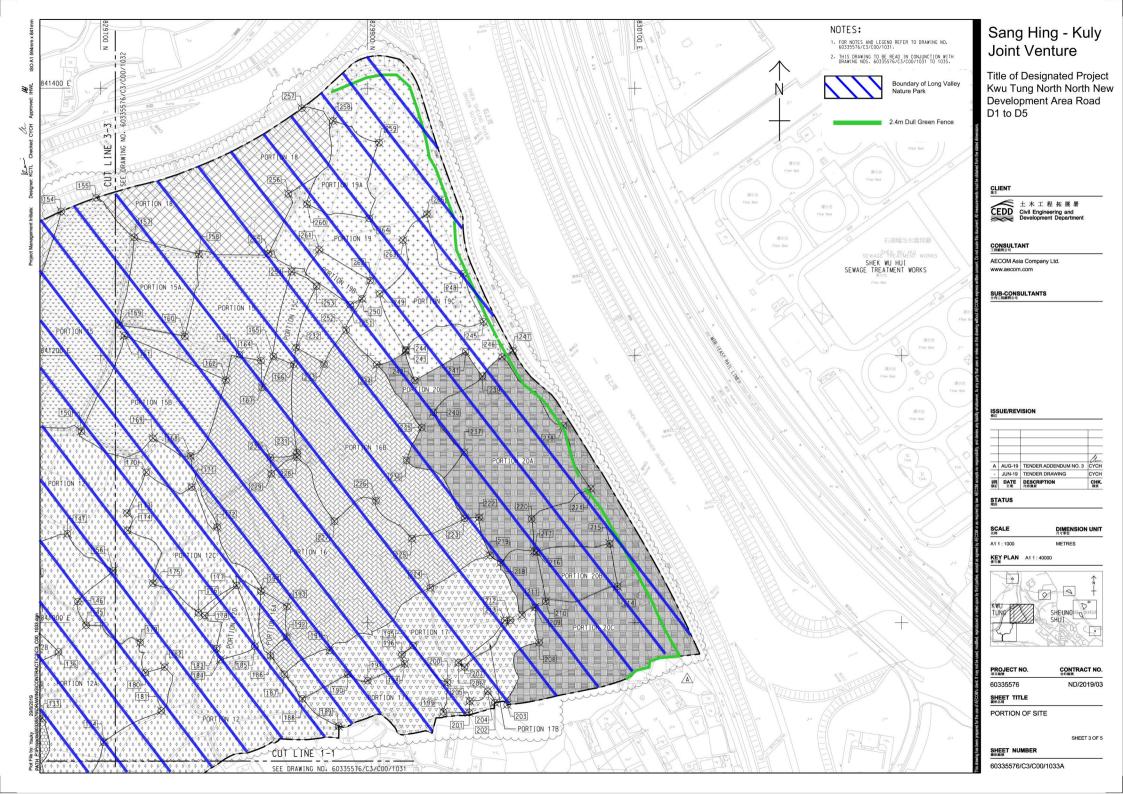
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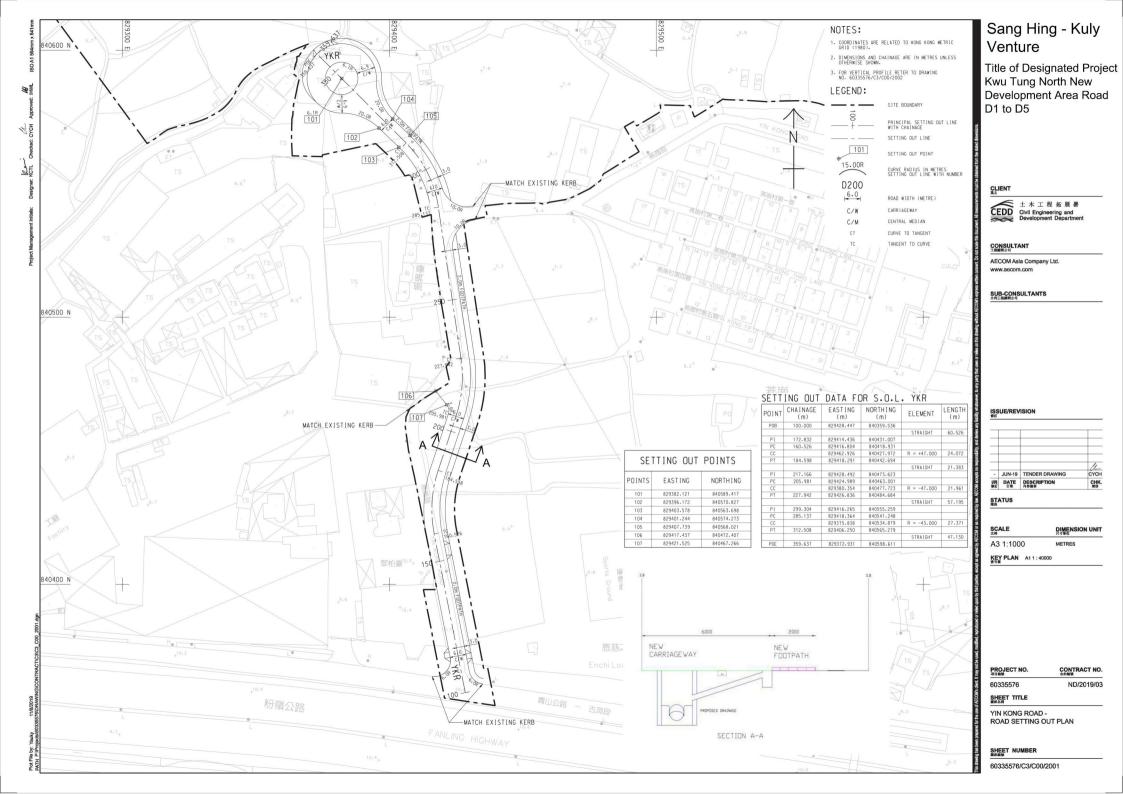
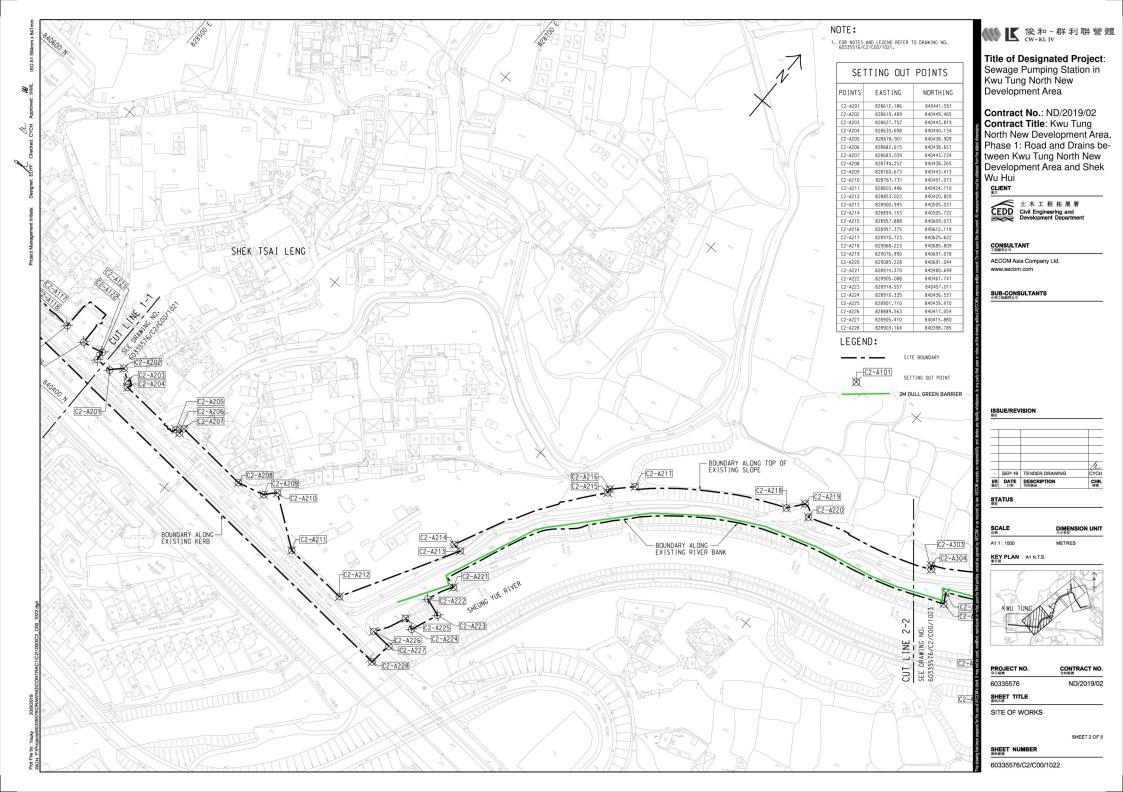
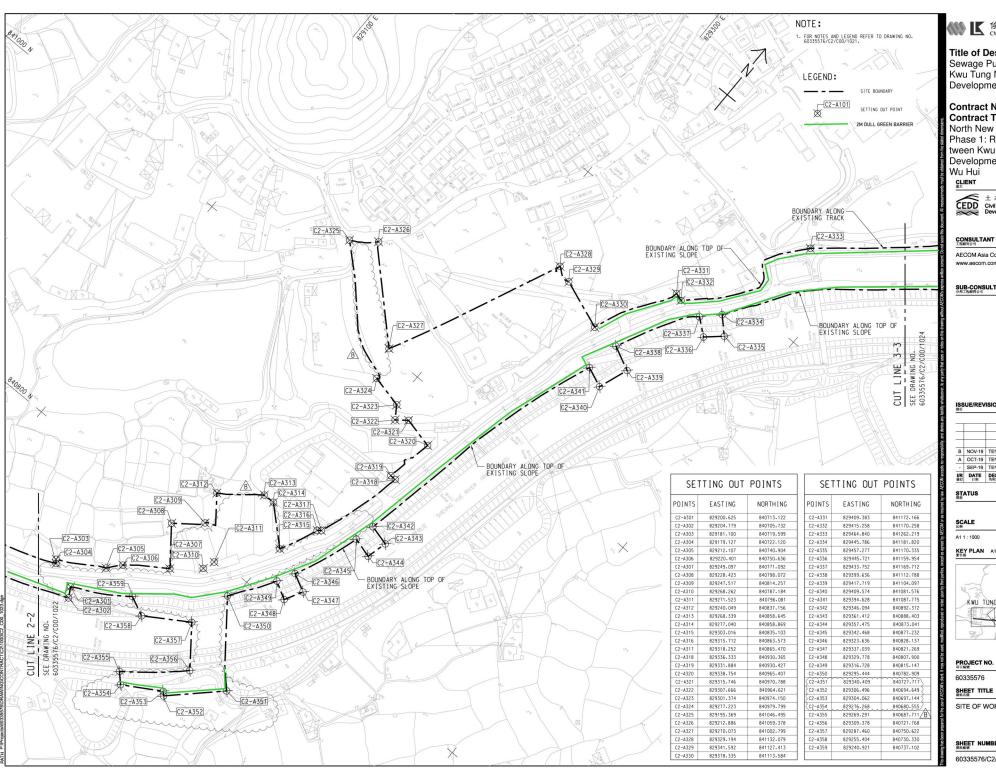


Figure 15

Hoarding Plan

EP-469/2013





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Title of Designated Project:

Sewage Pumping Station in Kwu Tung North New Development Area

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



AECOM Asia Company Ltd.

SUB-CONSULTANTS

ISSUE/REVISION

I/D	DATE	DESCRIPTION	CH
-	SEP-19	TENDER DRAWING	CYC
Α	OCT-19	TENDER ADDENDUM NO. 2	CYC
В	NOV-19	TENDER ADDENDUM NO. 3	CYC
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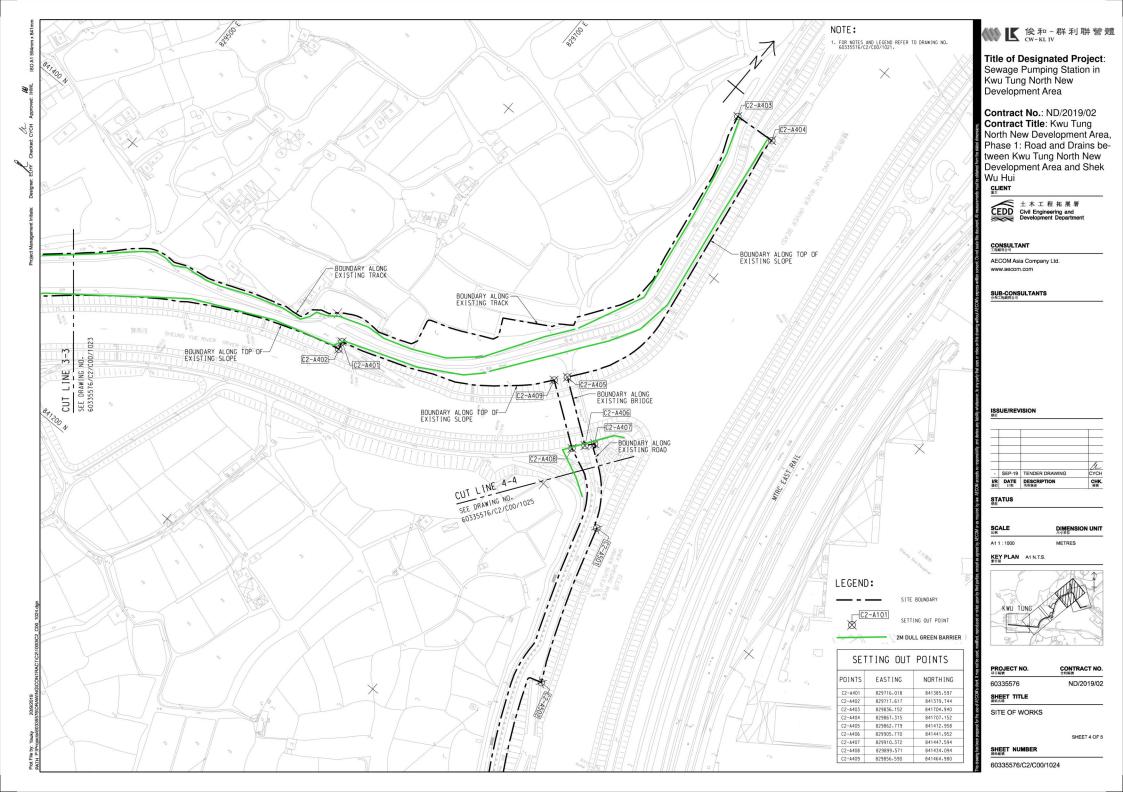


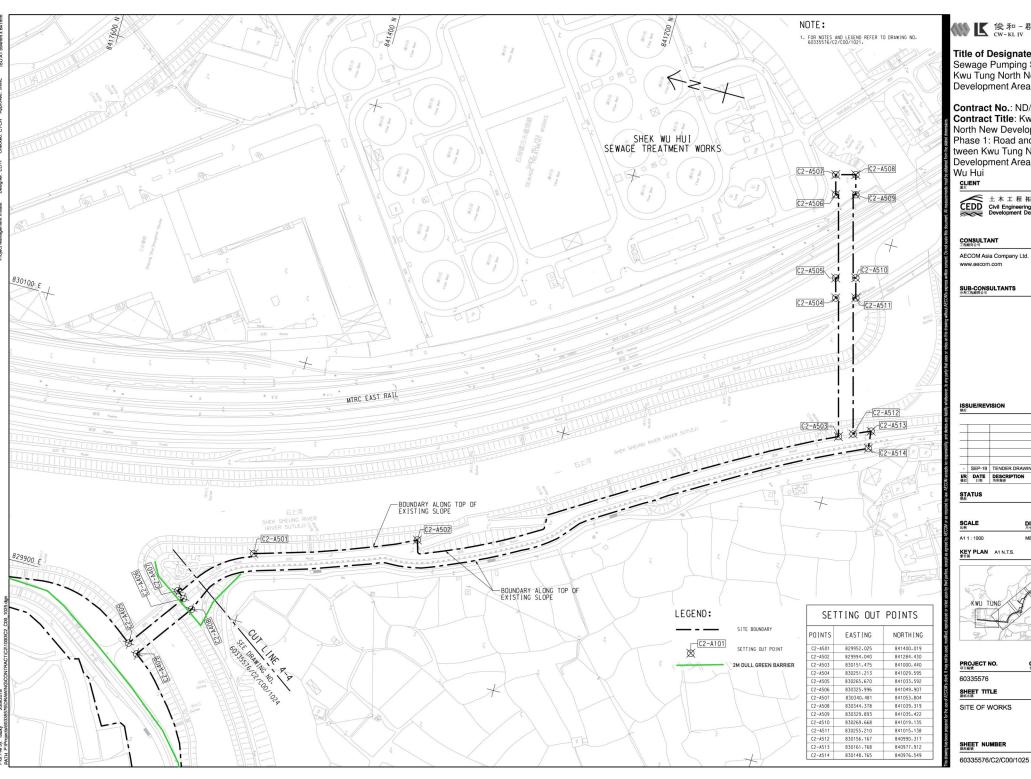
PROJECT NO.	CONTRACT NO.
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BHEET TITLE I版名稱	
SITE OF WORKS	

SHEET 3 OF 5

SHEET NUMBER

60335576/C2/C00/1023B





《 後和 - 群利聯營體 cw-ki jv

Title of Designated Project:

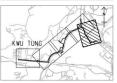
Sewage Pumping Station in Kwu Tung North New Development Area

Contract No.: ND/2019/02 Contract Title: Kwu Tung North New Development Area, Phase 1: Road and Drains be-tween Kwu Tung North New Development Area and Shek



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A1 1 : 1000	METRES	



CONTRACT NO 合約編號 ND/2019/03	

SHEET 5 OF 5

Figure 16

Hoarding Plan

EP-473/2013/A

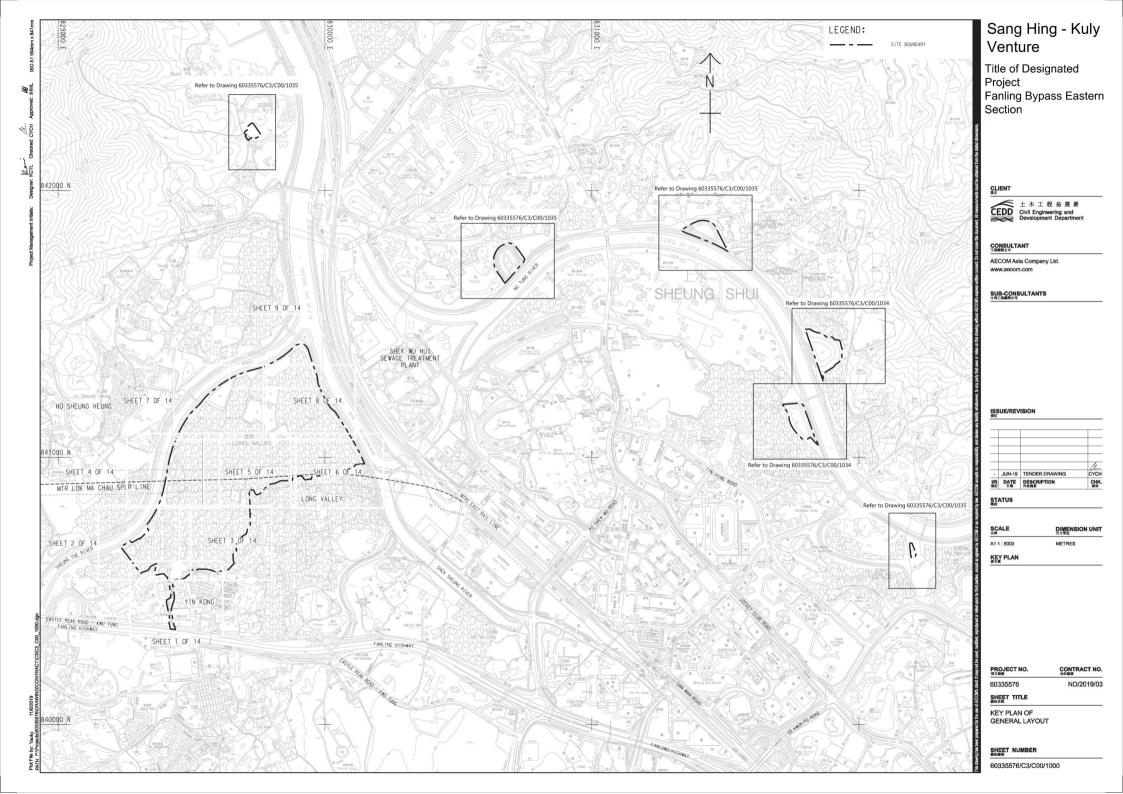
Summary of submission (EP-473/2013/A)

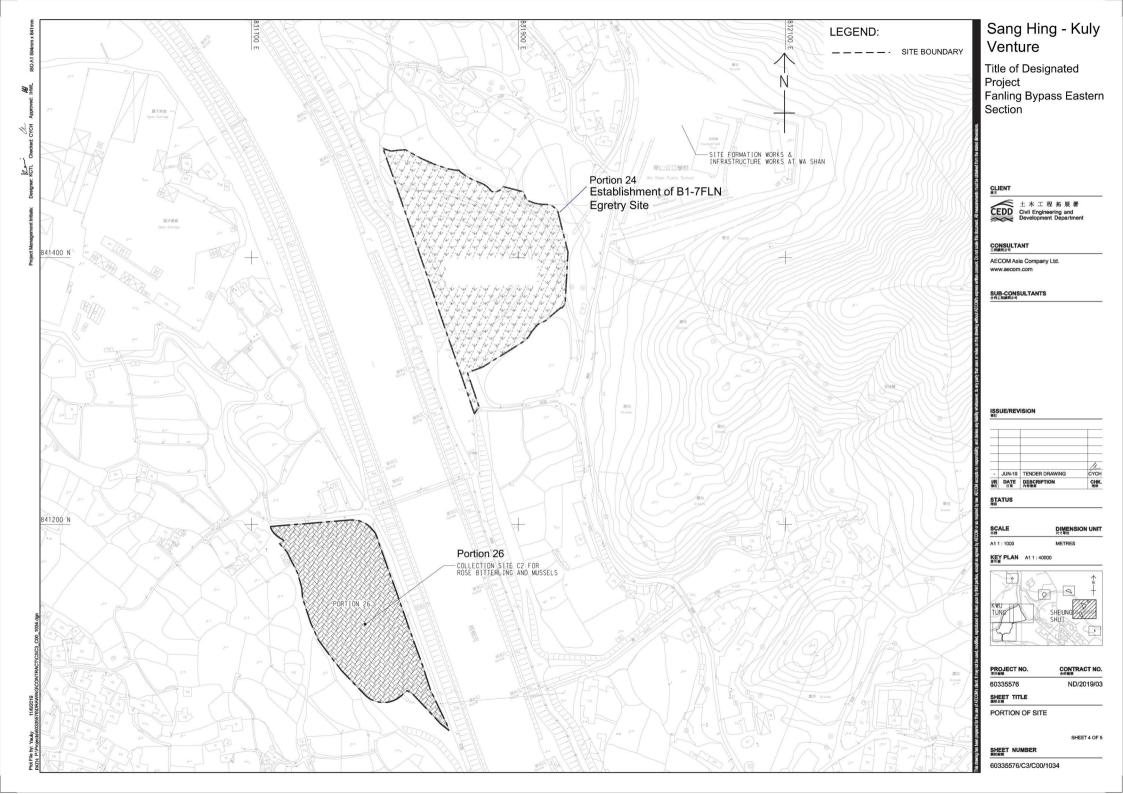
Submission of Layout Plan

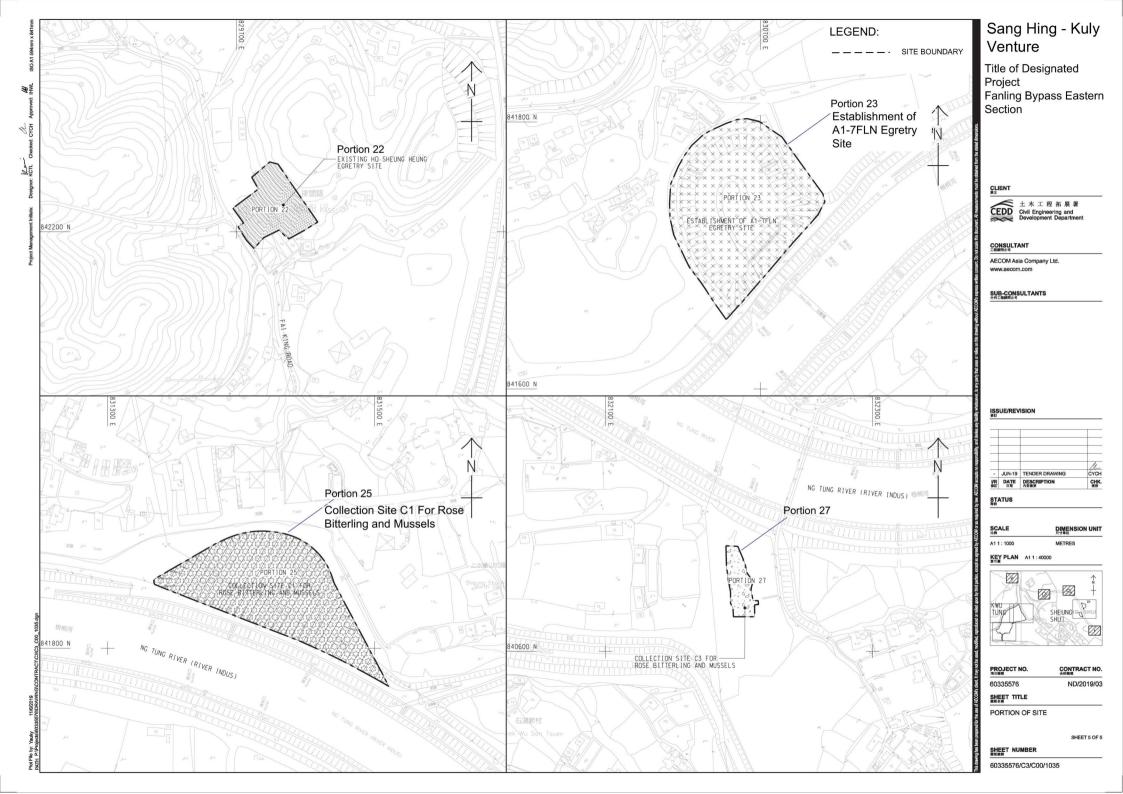
EP's Condition 2.5: The Permit shall, no later than 2 weeks before the commencement of construction of the Project, deposit four hard copies and one electronic copy of location plan(s) of the Project with a scale of 1:1000 or other appropriate scale as agreed with the Director. The plans shall include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

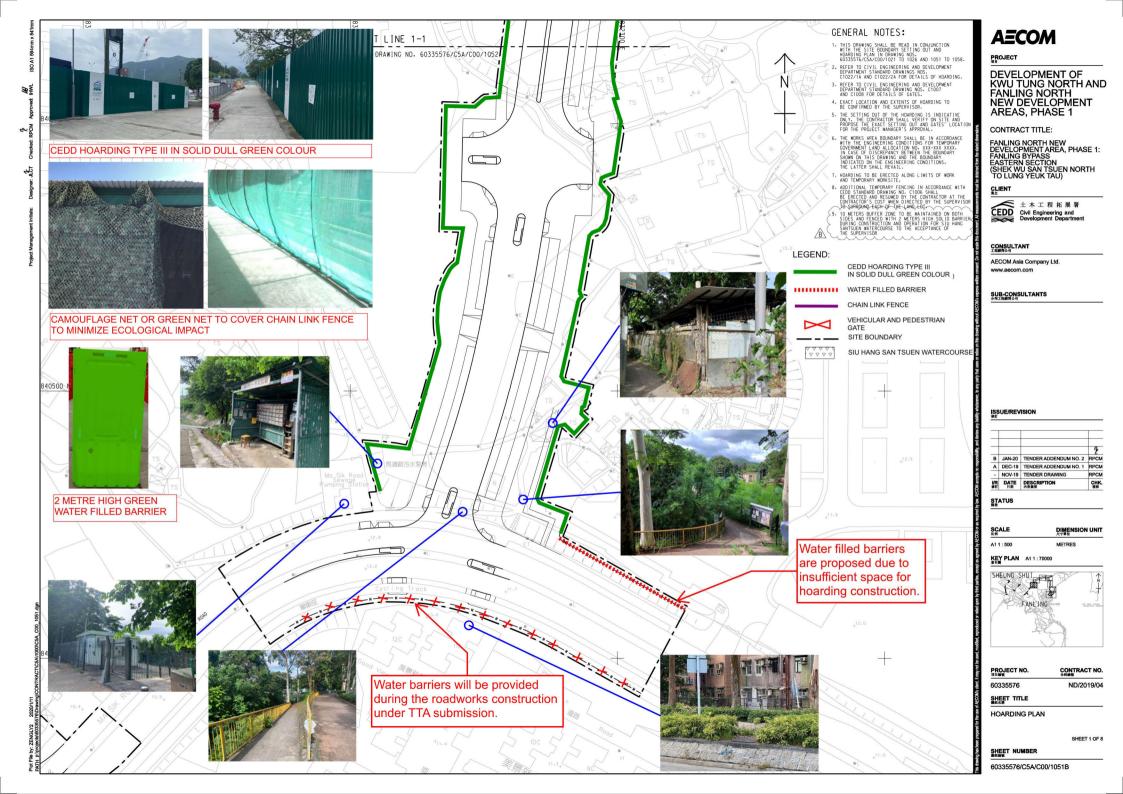
Table of Summary of Submission

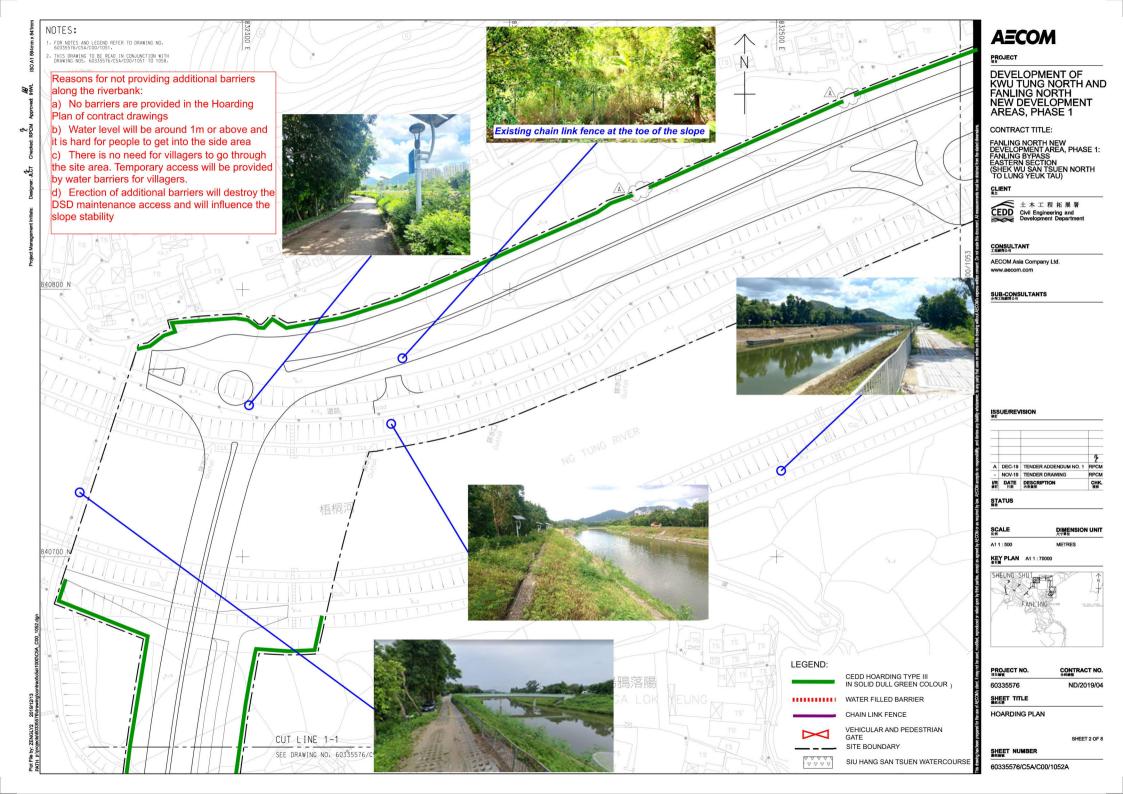
ED was wined detail	Layout Details			
EP required detail	Detail	Reference No.	Scale	Remarks
Works Boundaries and Works Areas	Key Plan	60335576/C3/C00/1000	A1 1:5000	Scale Not in 1:1000 For indication of following layout plans only
	Portion 24, 26	60335576/C3/C00/1034	A1 1:1000	
	Portion 22, 23, 25, 27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

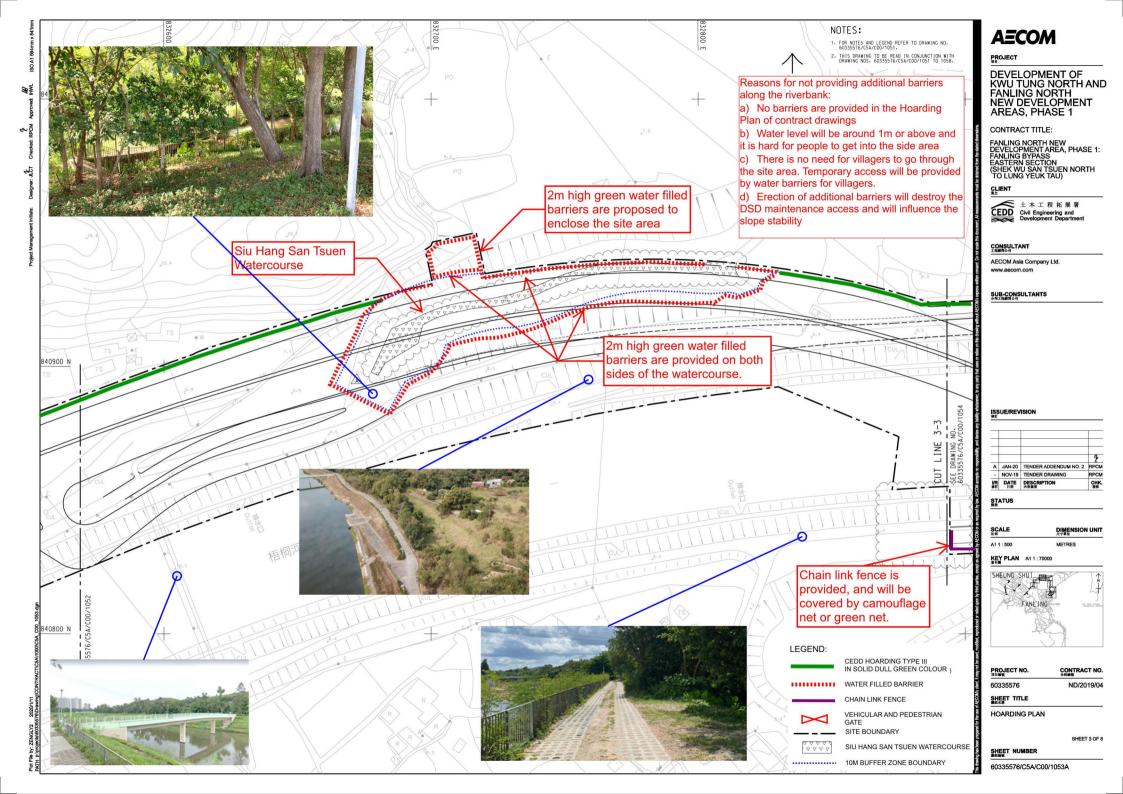


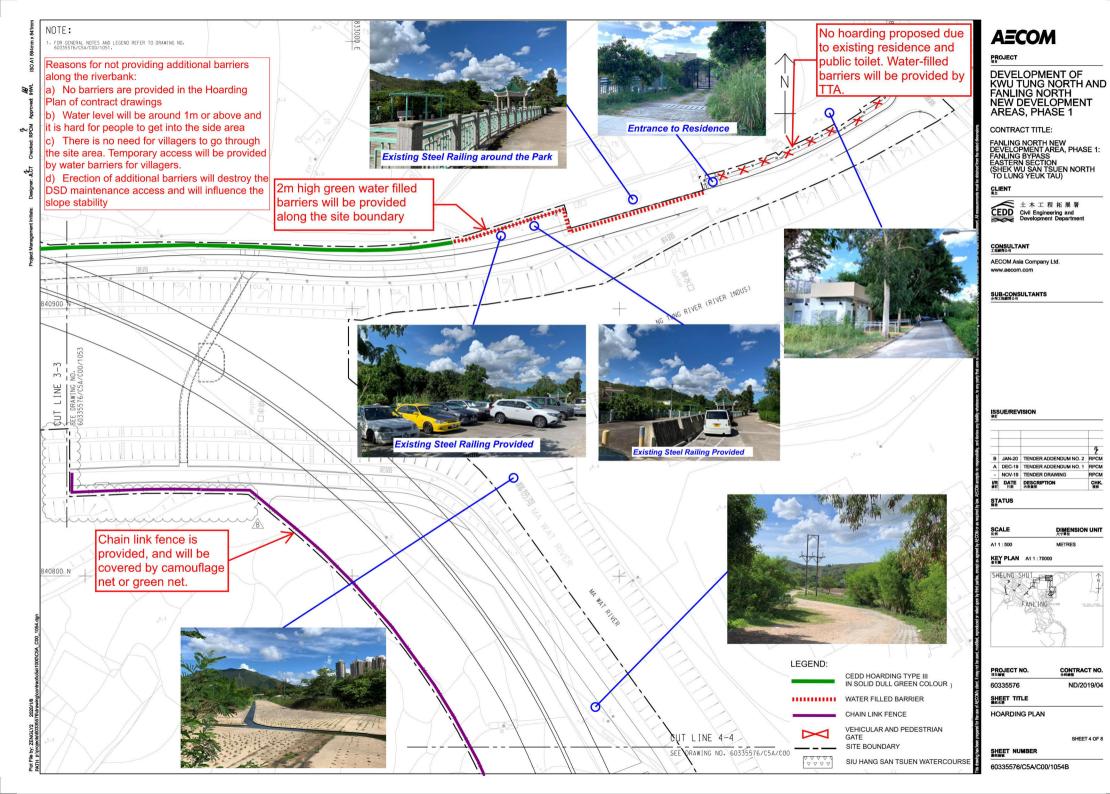


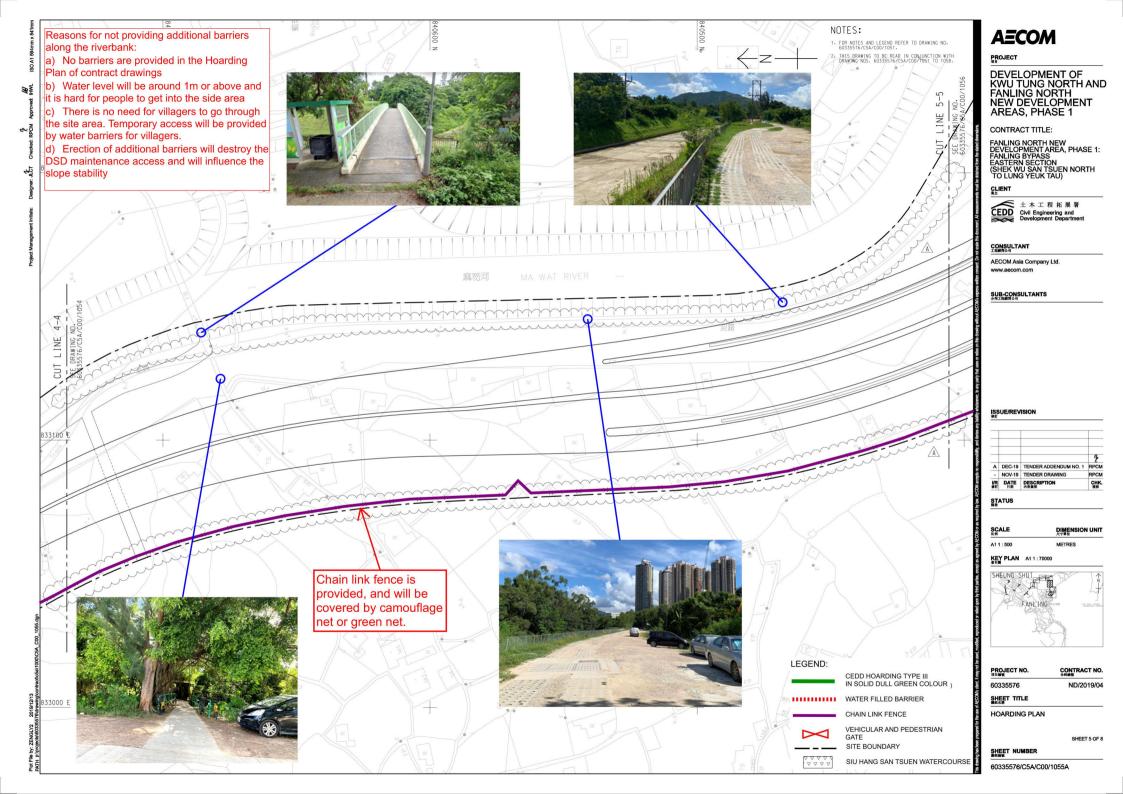


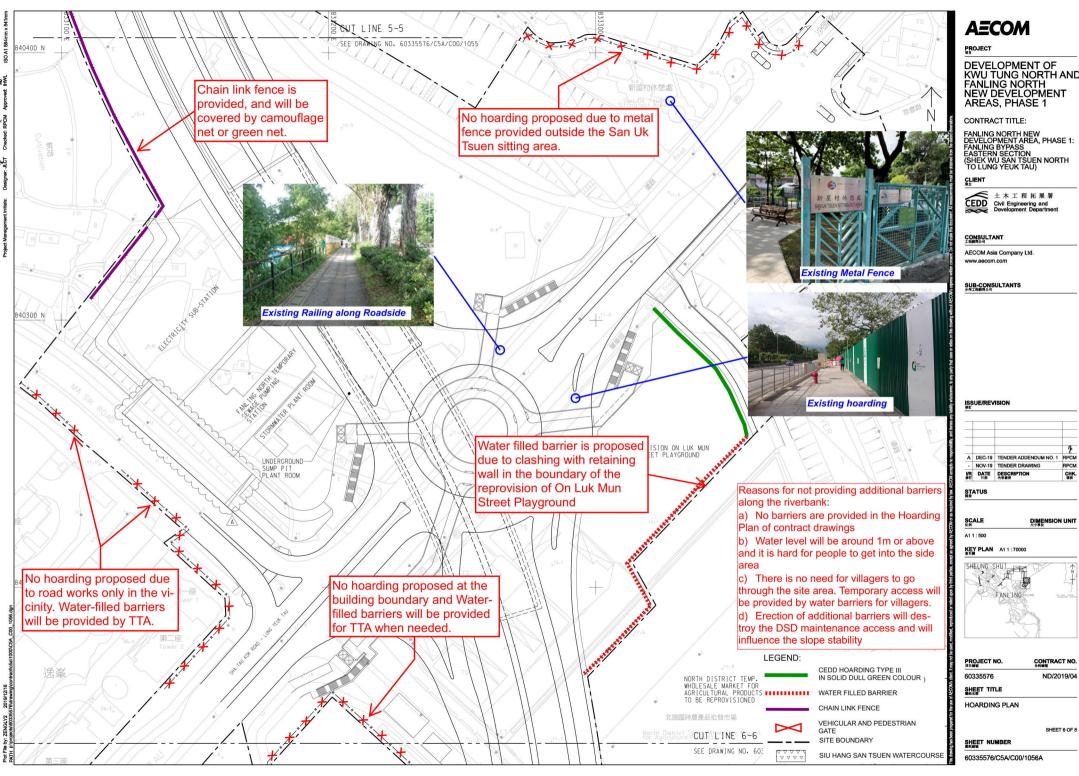










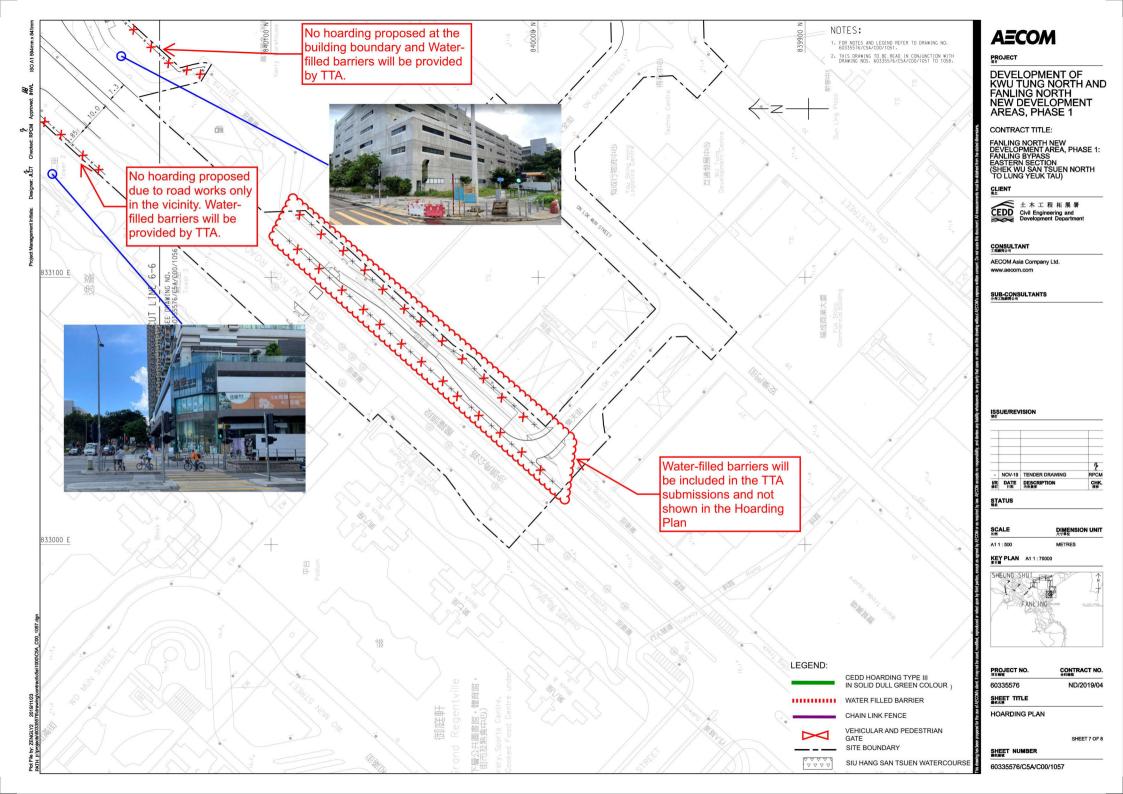


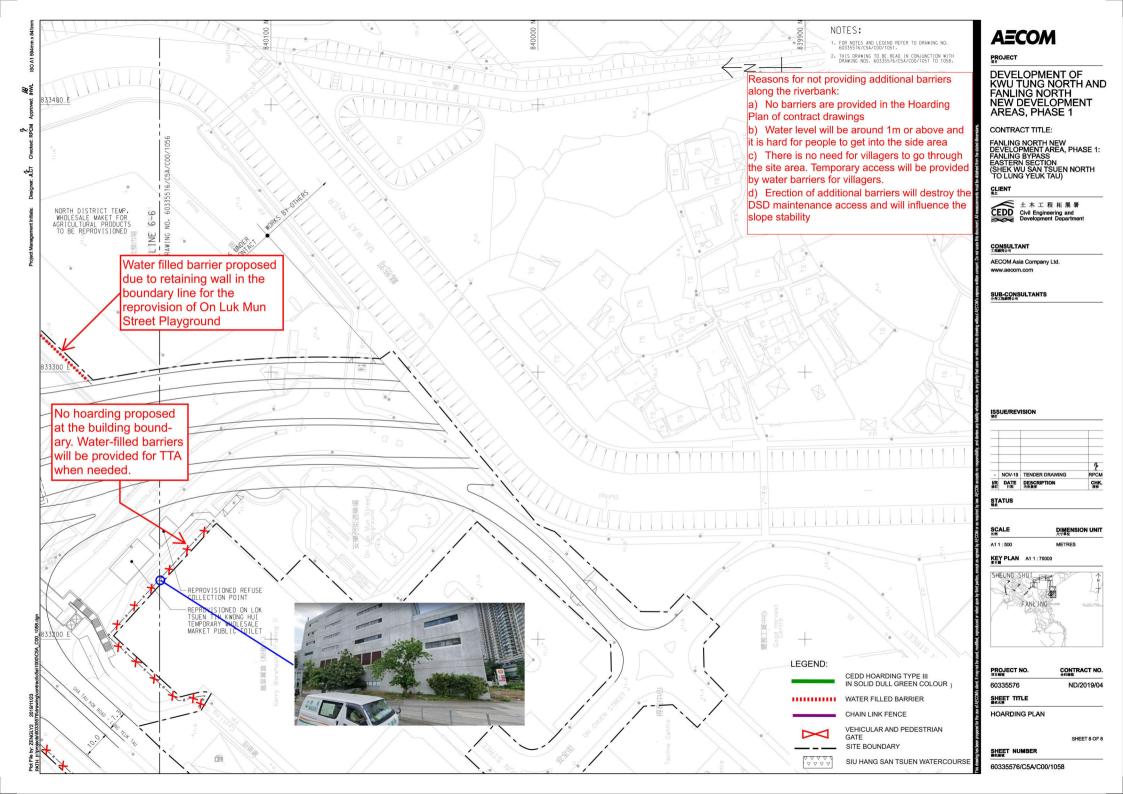
DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

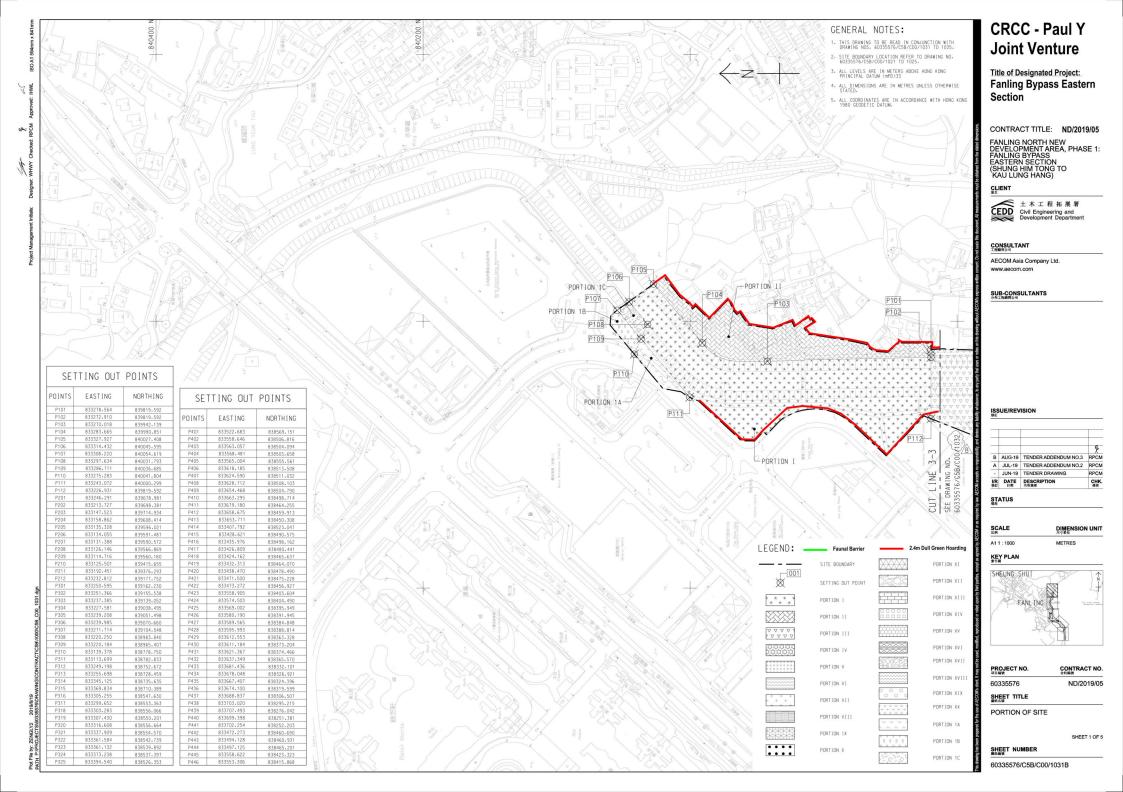
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4			
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Α	DEC-19	TENDER ADDENDUM NO. 1	RPCM
-	NOV-19	TENDER DRAWING	RPCM
I/R 修訂	DATE 日期	DESCRIPTION 内容衰萎	CHK. 複核

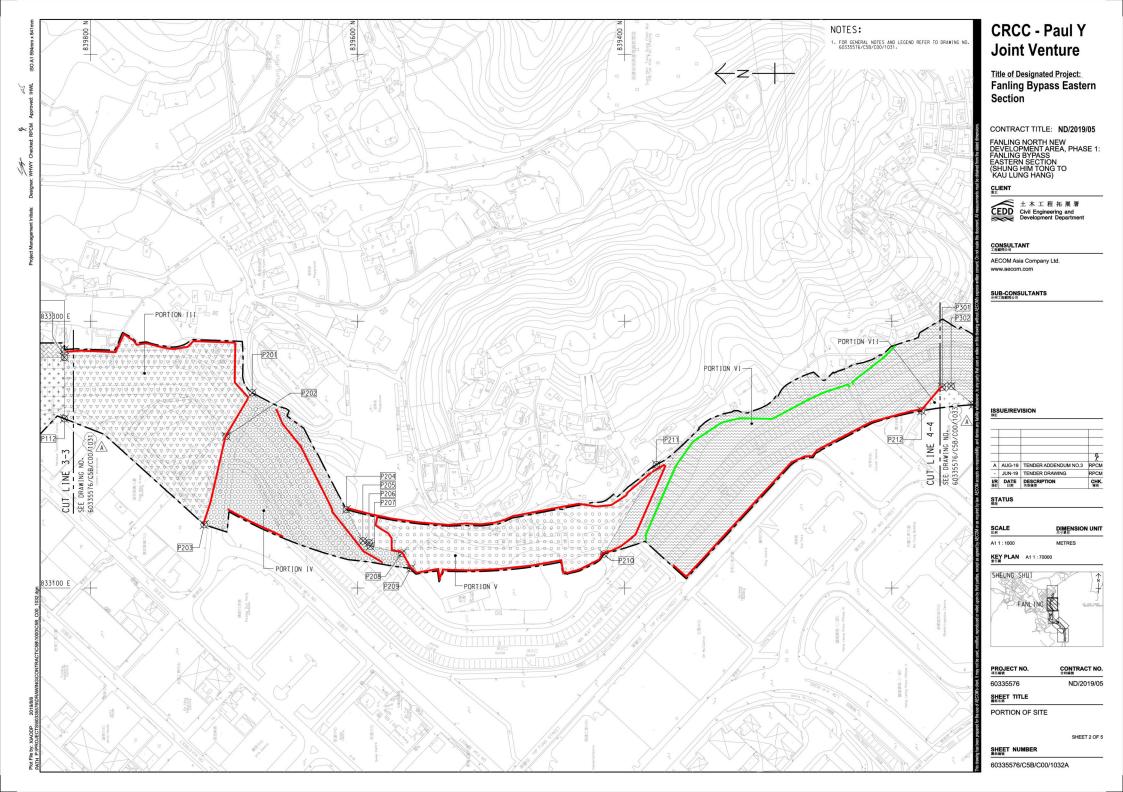


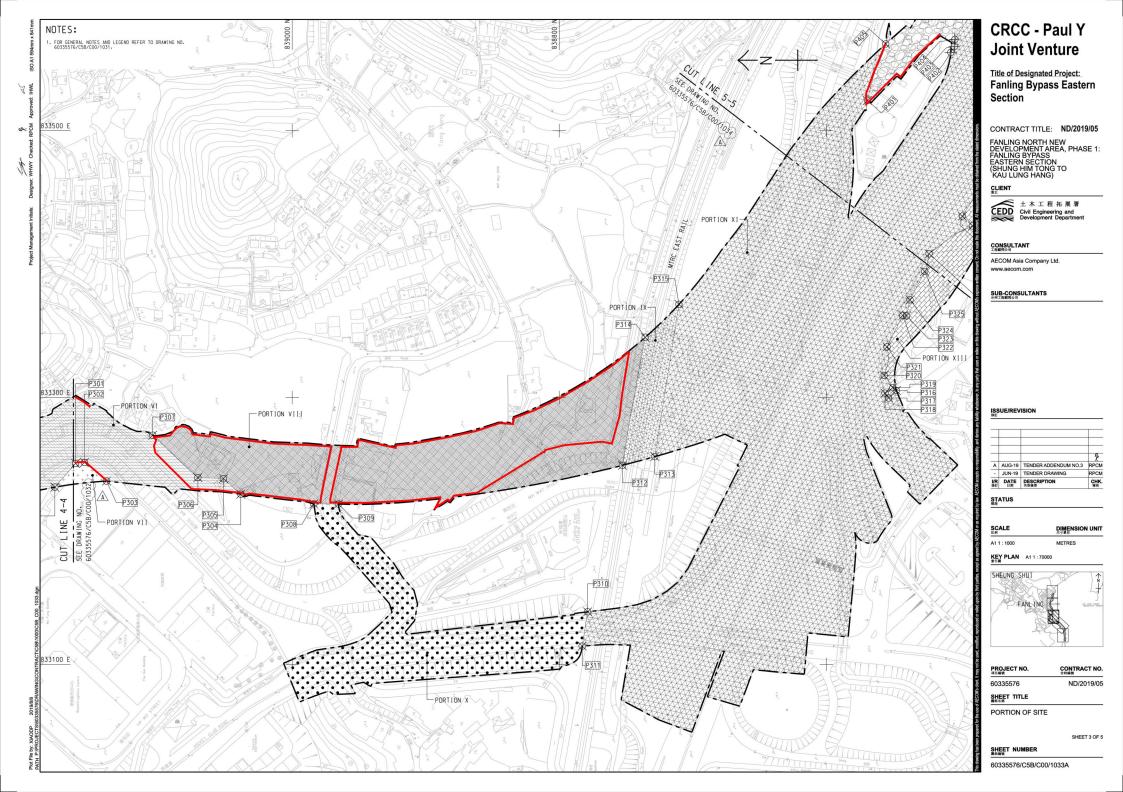
CONTRACT NO.

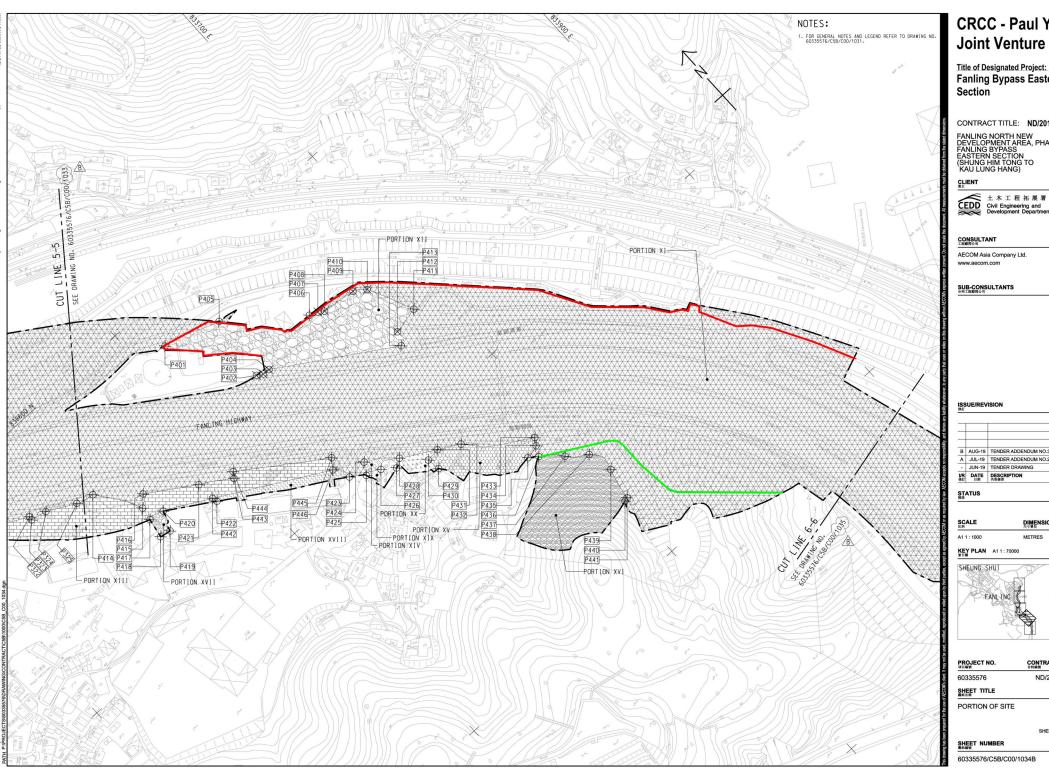












CRCC - Paul Y Joint Venture

Title of Designated Project: Fanling Bypass Eastern

CONTRACT TITLE: ND/2019/05

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



A JUL-19 TENDER ADDENDUM NO.2 RPCM			DESCRIPTION	
- 100 10 101001110011100	-	JUN-19	TENDER DRAWING	RPCN
B AUG-19 TENDER ADDENDUM NO.3 RPCM	Α	JUL-19	TENDER ADDENDUM NO.2	RPC
T _P	В	AUG-19	TENDER ADDENDUM NO.3	RPC
				P



CONTRACT NO. ND/2019/05

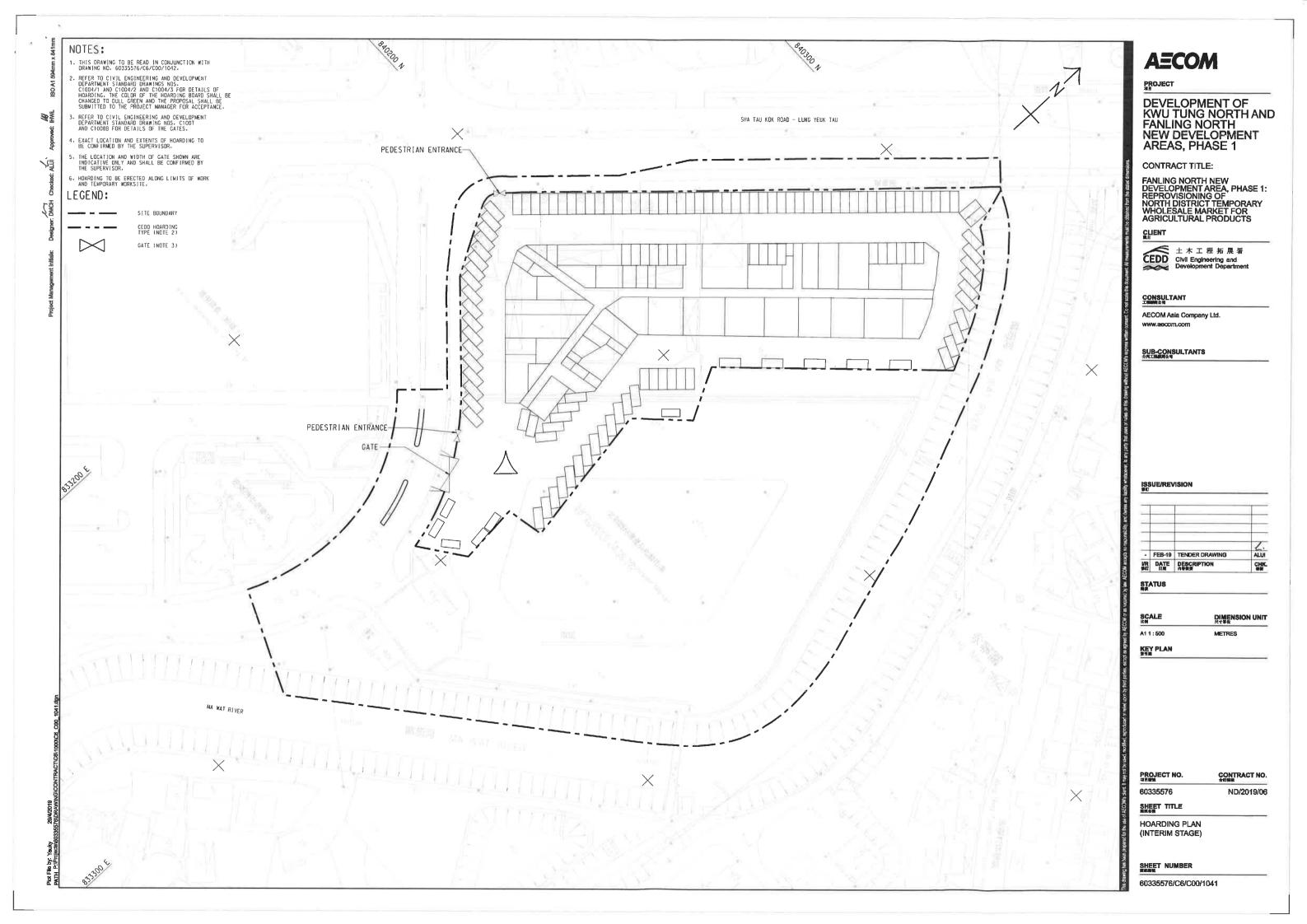
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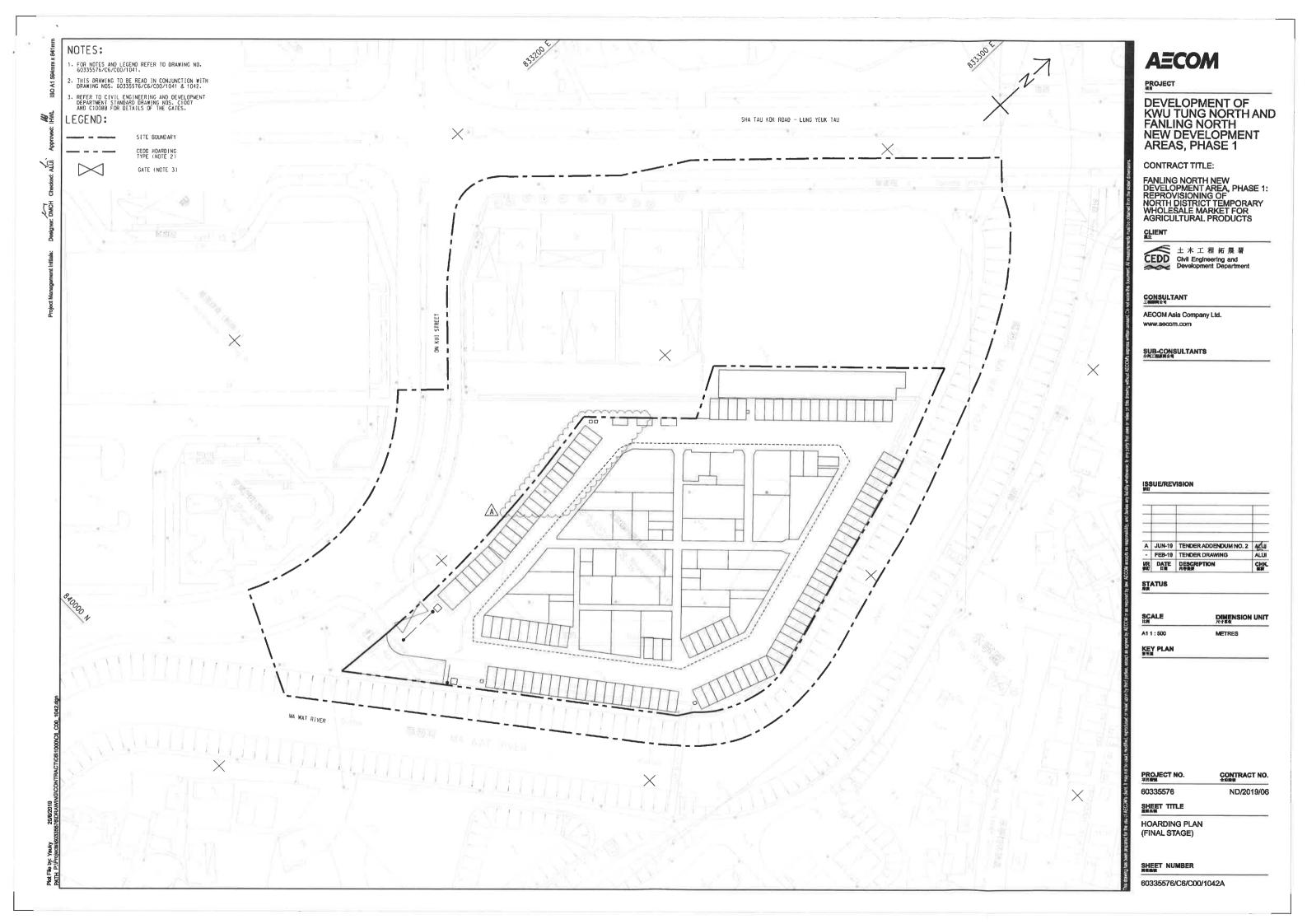


Figure 17

Hoarding Plan

EP-475/2013/A





APPENDIX A CONSTRUCTION PROGRAMME



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

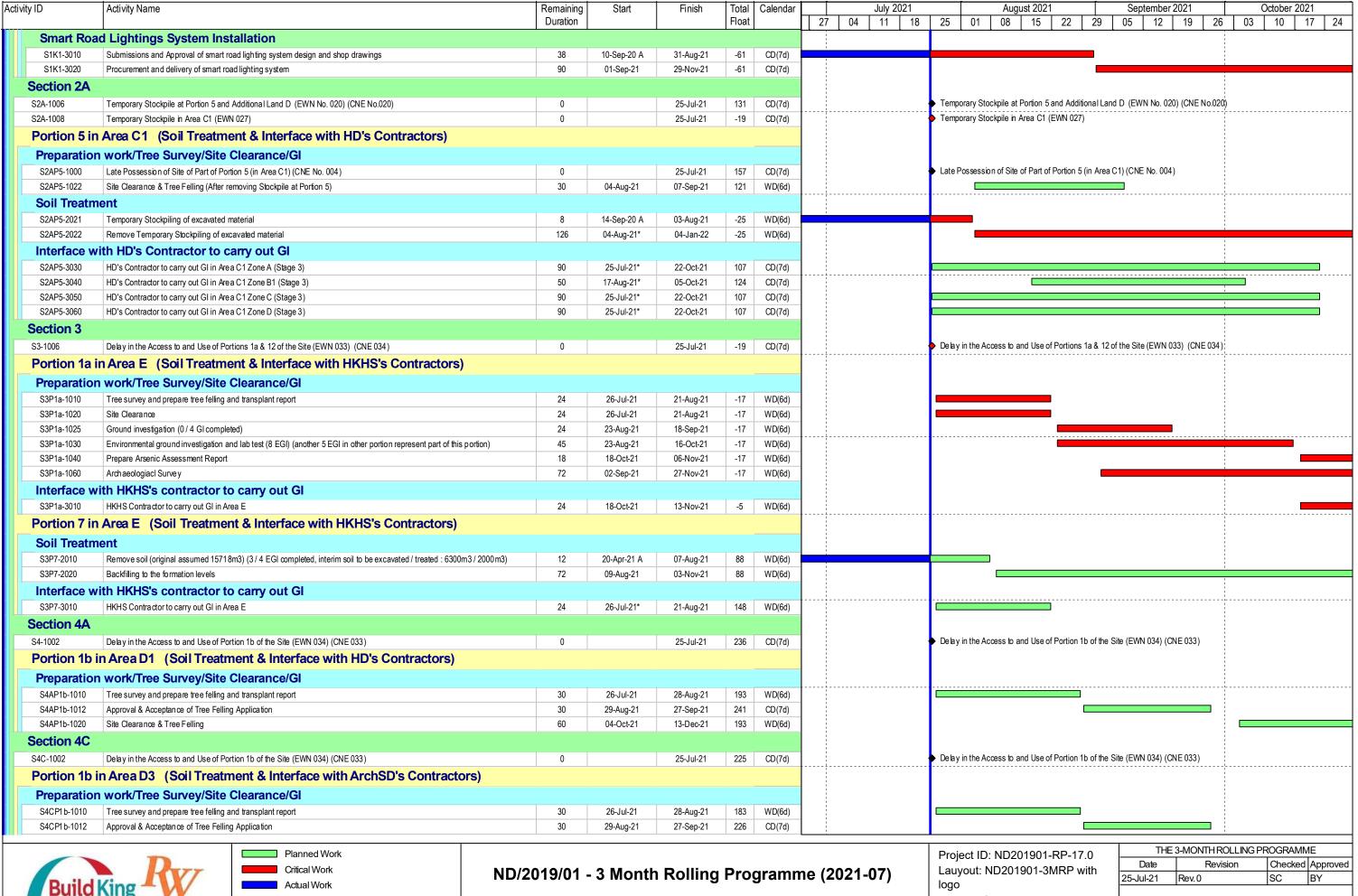


tivity ID	Activity Name	Remaining Duration	Start	Finish	Total Float	Calendar	July 2021 27 04 11 18	25 01	August 2021 08 15	22 29	September 20	021 19 26		ber 2021 0 17
Revised Prog	gramme (2021-07-25) Rev.0		<u> </u>							1 1	<u> </u>			<u> </u>
2.0 - Site Ac	cess Dates													
AD-1000	Poriton 1a	0	25-Jul-21*		-19	CD(7d)		Poriton 1a						
AD-1010	Portion 1b - (Minor Area Handovered on 7 May 2020)	0	25-Jul-21*		-19	CD(7d)	•	Portion 1b - (Min	or Area Hando vered	d on 7 May 2020)				
AD-1040	Portion 1e - (Minor Area Handovered on 20 Feb 2020)	0	25-Jul-21*		-110	CD(7d)	•	Portion 1e - (Min	or Area Hando vered	d on 20 Feb 2020))			
AD-1070	Portion 3 - (Late Possession from 6 Apr 2020)	0	22-Jul-21 A			CD(7d)	♦ Po	ortion 3 - (Late Pos	session from 6 Apr	2020)				
AD-1230	Poriton 12	0	25-Jul-21*		-19	CD(7d)	•	Poriton 12						
3.0 - Site Co	mpletion Dates													
4.0 - Key Da	ates													
_	te Completion (Orignial Contract Completion Date)													
KD0-1000	KD1 609 days after starting date			06-Aug-21*	0	CD(7d)			KD1 609 days afters	starting date				
KD0-1000 KD0-1010	KD2 655 days after starting date	0		21-Sep-21*	0	CD(7d)		V 1	(D) 003 days aller	starting date		♦ KD2 655 da	avs after startin	n date
	d Key Date Completion	U U	<u> </u>	21-06p-21	0	OD(ru)						1132 000 40	yo anor otaran	ig dato
				24 1-1 04*	000	OD (7-I)		▲ VD7 517	daya after starting	data				
KD-1060	KD7 517 days after starting date	U		31-Jul-21*	-86	CD(7d)		ווני ועא 🍑	days after starting	uale				
	aries and General Requirements													
6.2 - Genera	al Submissions													
GS-1230	Submission of Major Metho d Statements	42	06-Dec-19 A	04-Sep-21	1102	CD(7d)	1							
GS-1260	Acceptance of Archaeological Action Plan and Issuance of Licence to Excavate and Search for Antiquities	22	08-Sep-20 A	15-Aug-21	-96	CD(7d)								
GS-1290	Preparation and Submission of Fully Corodinated BIM	1649	21-Aug-20 A	28-Jan-26*	8	CD(7d)						<u> </u>		
6.3 - Sublett	ting Packages													
SP-1320	Tree Survey for STPRP for Portion 2-Slope	30	02-Aug-21*	31-Aug-21	-60	CD(7d)								
7.0 Construc	ction													
Section 1														
S1-1012	Opening of Cycle Track at Portion 10a (EWN No. 017)	0		25-Jul-21	-396	CD(7d)		Onening of Cycle	Track at Portion 10)a (FWN No. 017)	١			
S1-1012	Excavation Permit (XP) for New Cycle Path (EWN No. 021)	0		25-Jul-21	-396	CD(7d)	1		it (XP) for New Cycl					
	a in Area H, H1, H2 (Soil Treatment & Provision of Site Access &	EVA to MWSC)		20 001 21	000	OD (i u)								
		LVA (O WIVVOO)												
	vision of Site Access and EVA to MWSC													
Civil Worl	ks													
Road D1	(Stage 1)													
S1K1-2007	Underground Drainage Manhole M1.70 - M1.71	18	26-Jul-21	14-Aug-21	-169	WD(6d)								
S1K1-2009	Underground Fresh & Flushing watermains (around 190m)	72	26-Jul-21	20-Oct-21	-223	WD(6d)								
S1K1-2010	Pressure test for Fresh & Flushing watermains (around 190 m)	12	21-Oct-21	03-Nov-21	-164	WD(6d)								
S1K1-2014	Underground utilities (around 190m)	88	03-May-21 A	08-Nov-21	-168	WD(6d)								
S1K1-2016	Road works - Formation & Sub base	36	20-Oct-21	30-Nov-21	-168	WD(6d)								
S1K1-2060	Noise barrier NB35 footing Stage 2 (2 / 6 bays)	18	25-Jun-21 A	14-Aug-21	-169	WD(6d)	· 							
	(Stage 2) Castle Peak road junction													
S1K1-2026	Underground Drainage ELS & Excavation (around 40m)	24	26-Jul-21	21-Aug-21	-321	WD(6d)								
S1K1-2028	Underground Drainage (around 40m)	40	23-Aug-21	09-Oct-21	-321	WD(6d)			•			-	— _	
S1K1-2030	Underground Sewerage (around 40m)	42	11-Oct-21	29-Nov-21	-321	WD(6d)							_	
Road L1														
S1K1-2104	Underground Sewerage Manhole Construction and Pile laying (around 120m)	0	11-Jan-21 A	19-Jul-21 A		WD(6d)								
S1K1-2106	Underground Drainage (around 120m)	23	15-Mar-21 A	20-Aug-21	-194	WD(6d)								
S1K1-2108	Underground Fresh & Flushing watermains (around 120m)	66	26-Jul-21	12-Oct-21	-194	WD(6d)						-		
S1K1-2109	Pressure test for Fresh & Flushing watermains (around 120 m)	12	13-Oct-21	27-Oct-21	-175	WD(6d)								
S1K1-2110	Underground utilities (around 120m)	78	17-Aug-21	18-Nov-21	-194	WD(6d)								
	Planned Work							Project ID: 1	ND201901-R	P-17 0	THE 3	-MONTH ROL	LING PROC	GRAMME
	Critical Work	ND 1004 0104	9 Ma41	- D-II!	D			-	D201901-IN D201901-3MF	RP with	Date	Revisio		necked App
Duild	Actual Work	ND/2019/01	- 3 Wonth	n Kolling	Pro	gramn	1e (2021-07)	logo	201301 - 01411	VI AAIMI	25-Jul-21	Rev.0	SC	C BY
Build	→ Milestone							Page 1 of 1	0					
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Joint Venture

Milestone Critical







Data Date: 25-Jul-21 Run Date: 28-Jul-21

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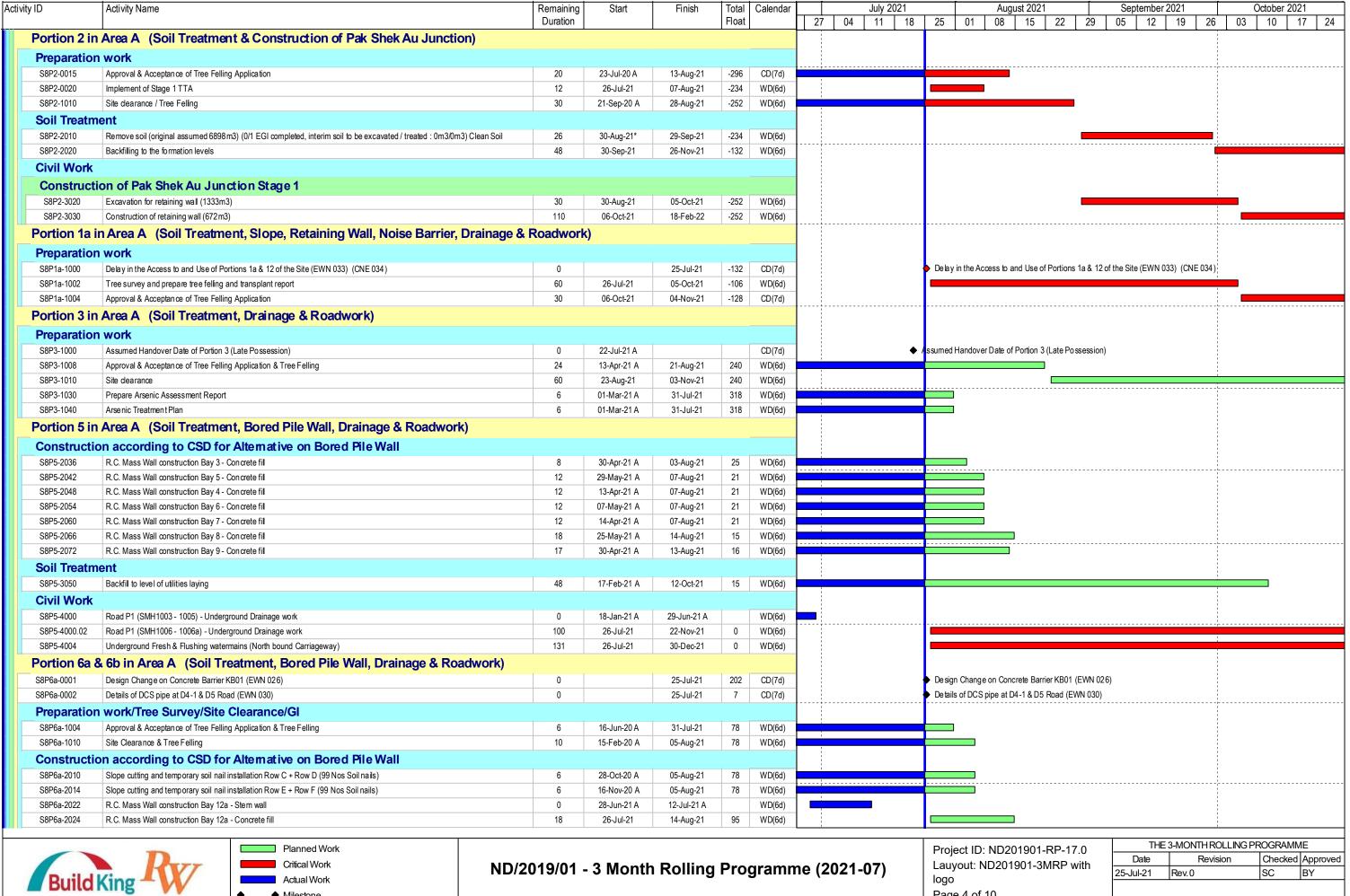


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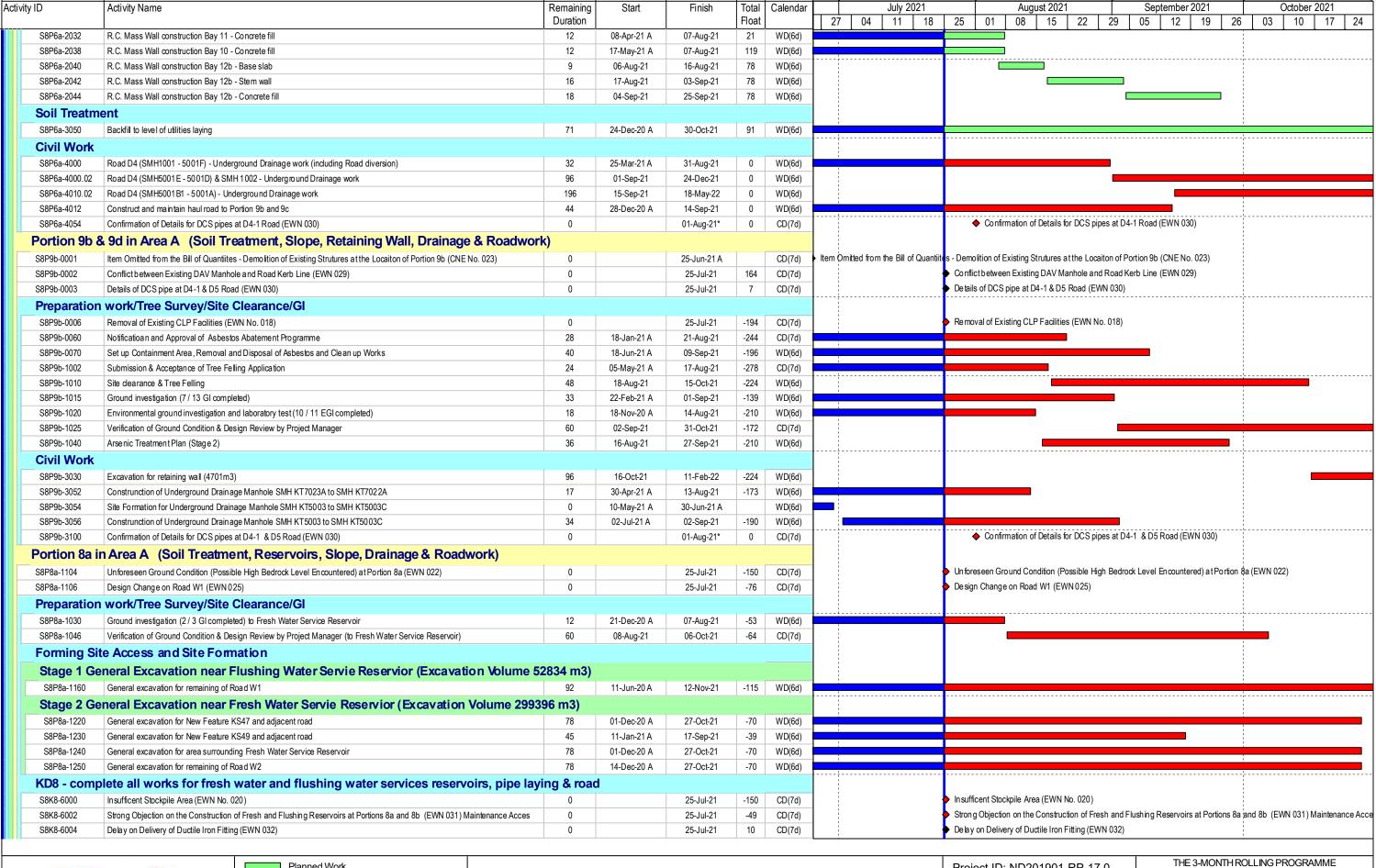




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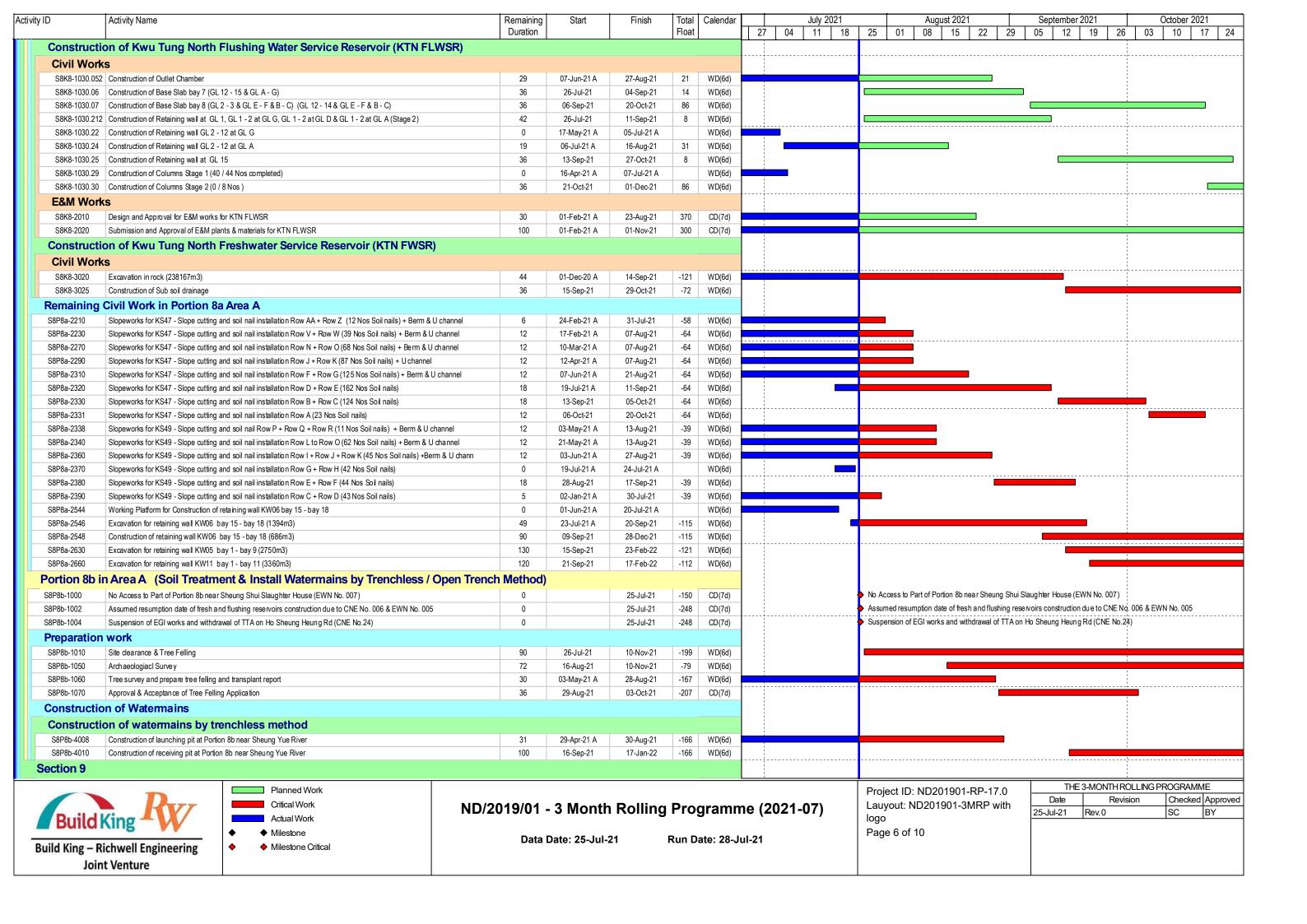


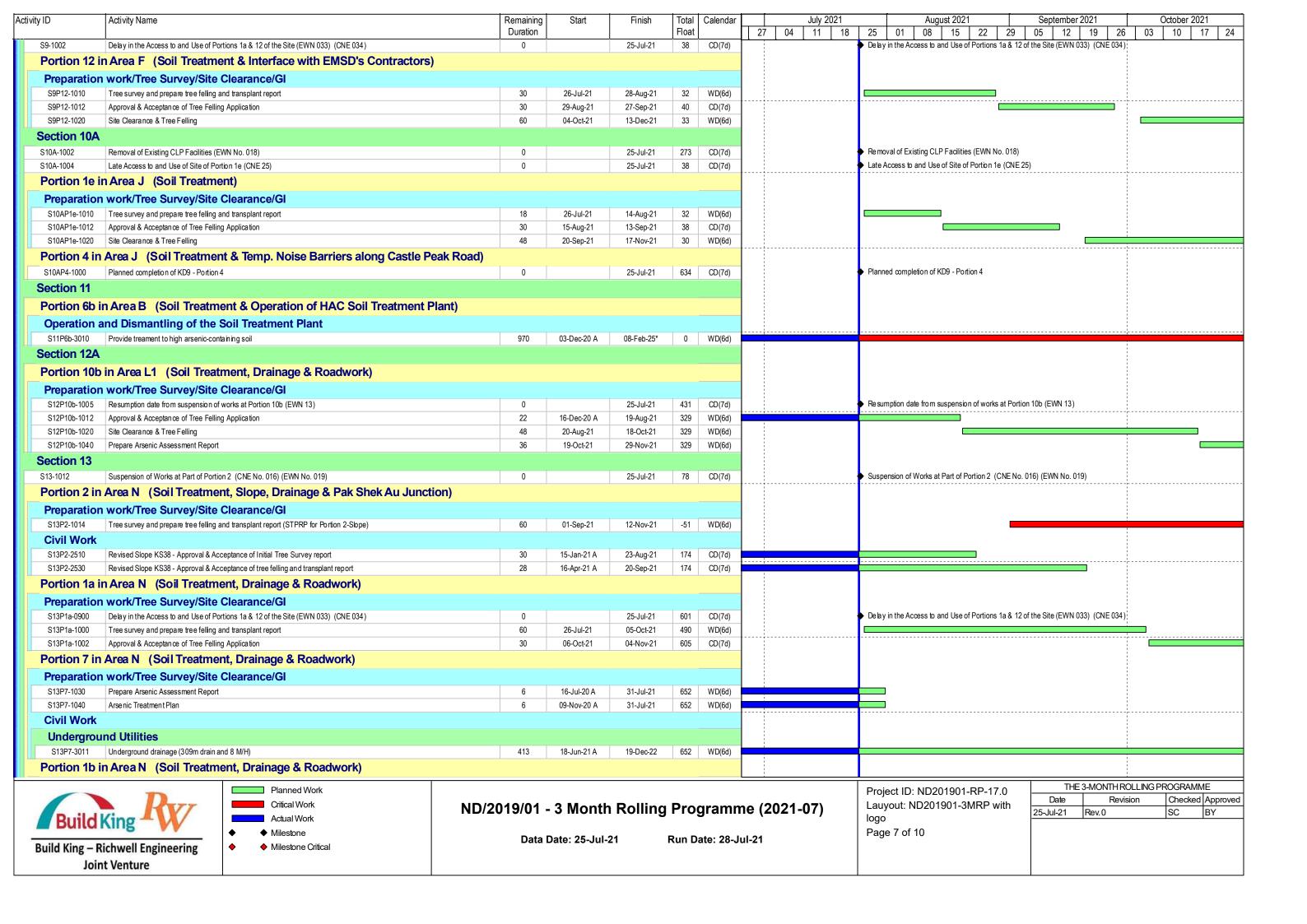


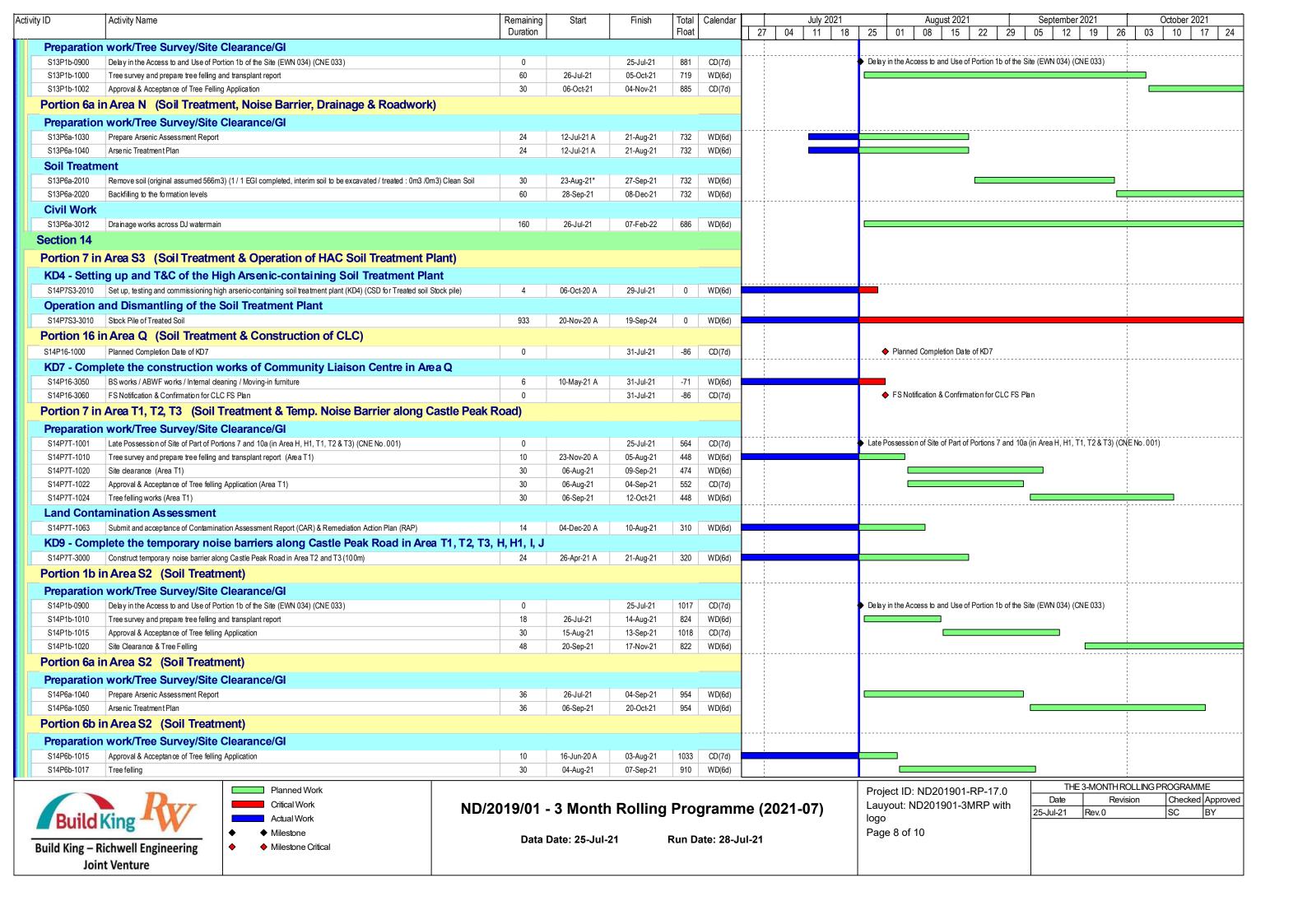
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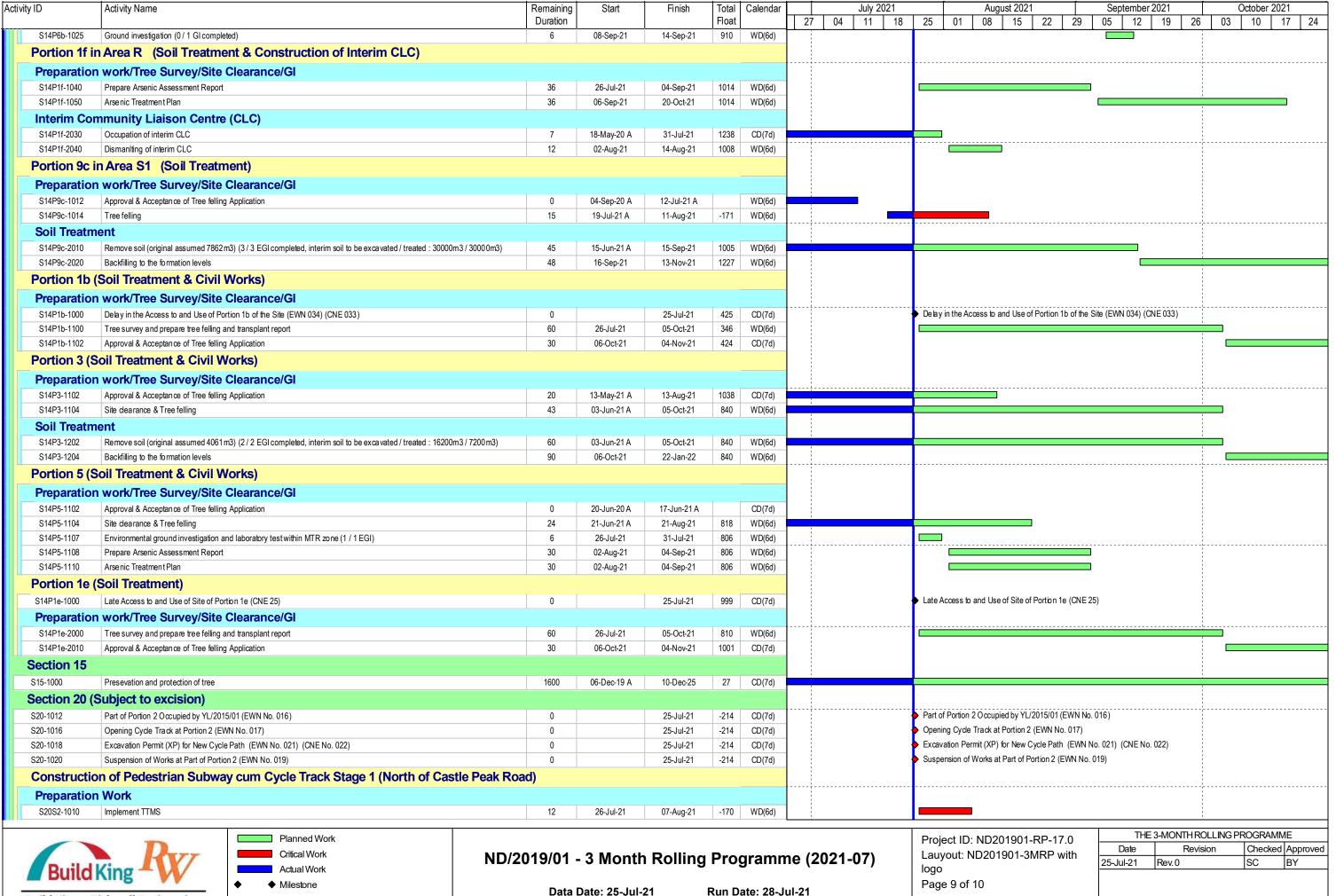
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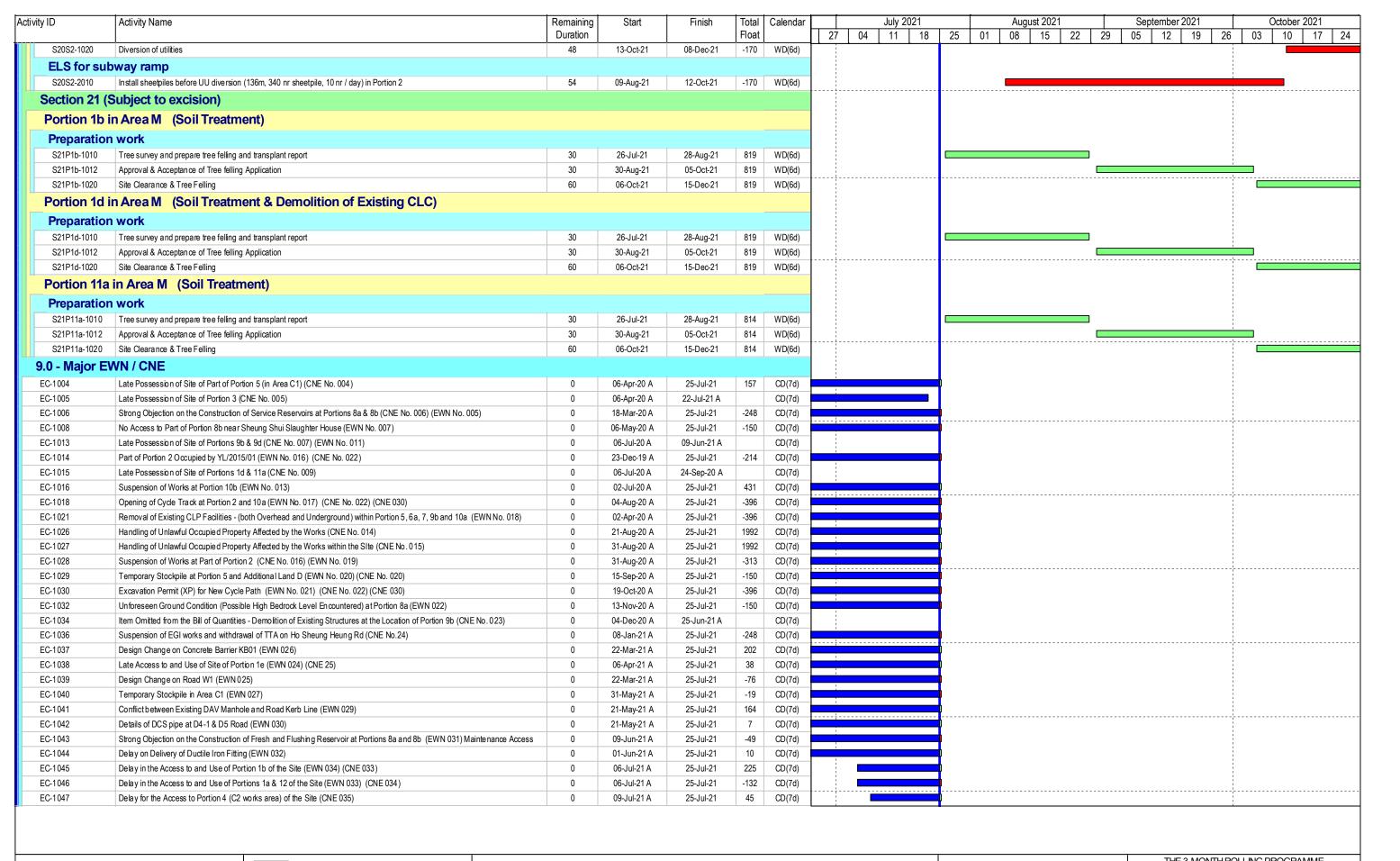
















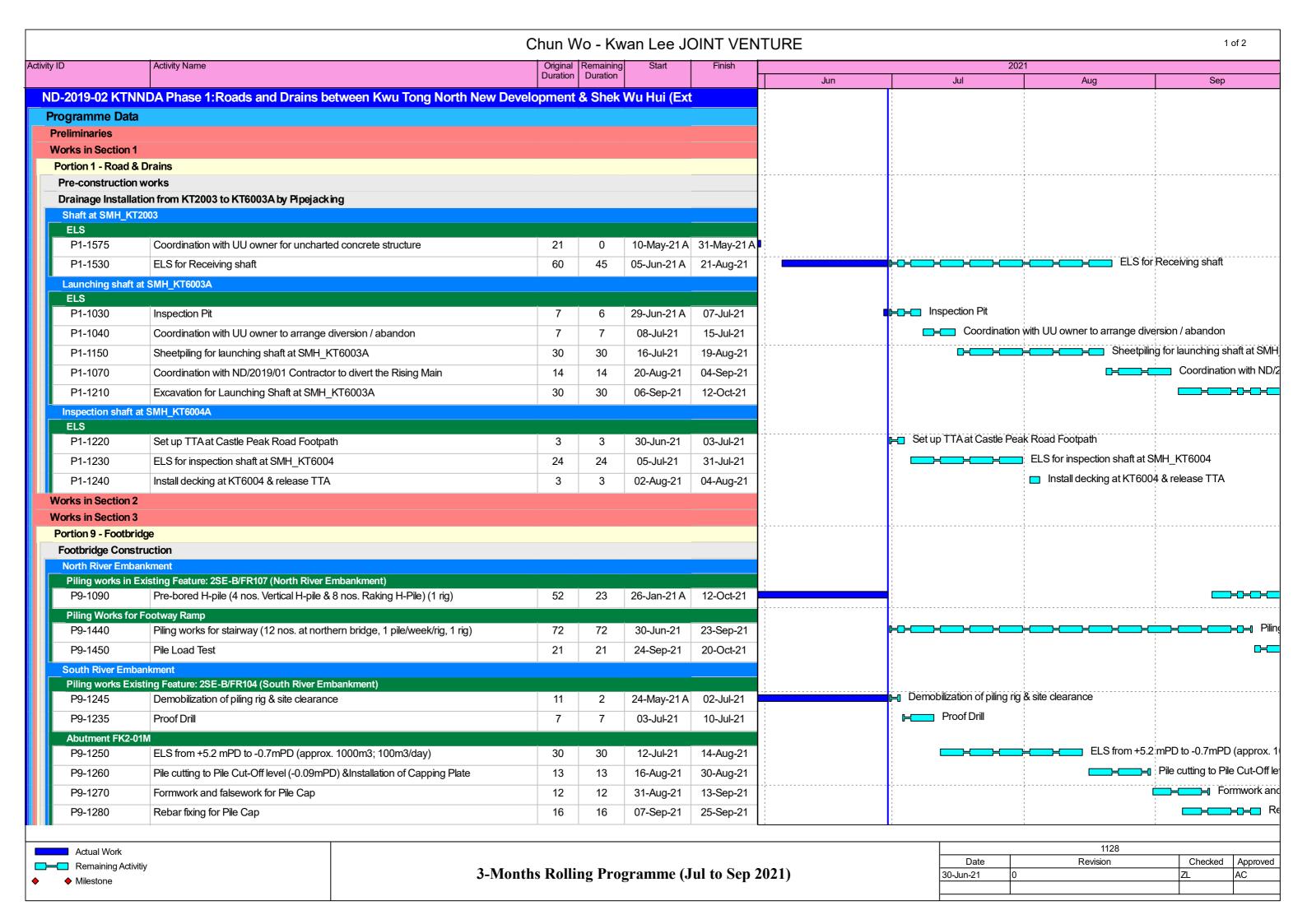
ND/2019/01 - 3 Month Rolling Programme (2021-07)

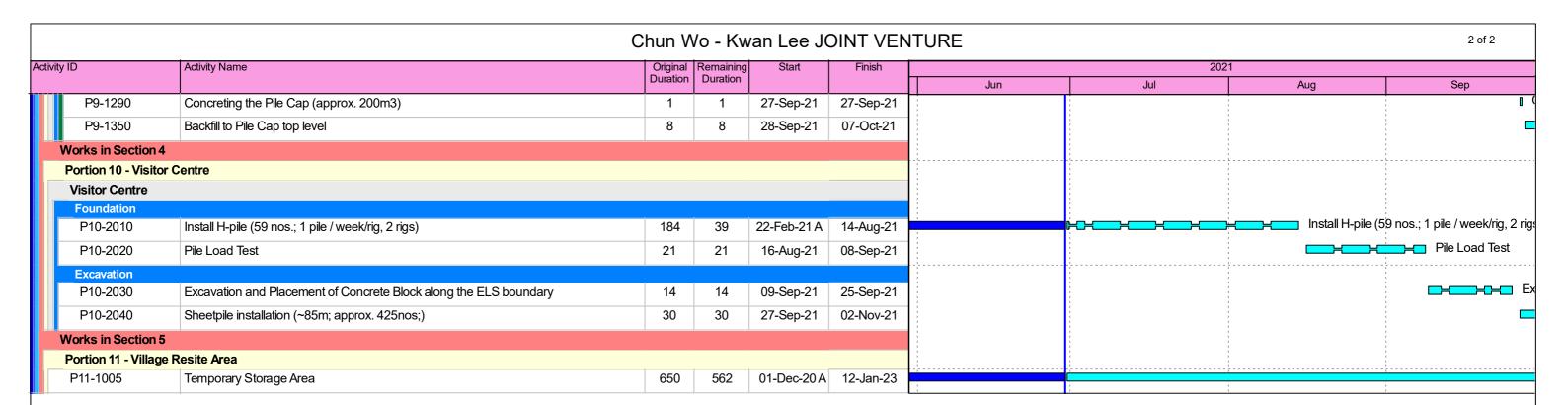
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Contract No. ND/2019/03

Sang Hing - Kuly Joint Venture

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

oject Prog	ramme of the Works															
D	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete Risk	Allowance H2	2020 H1	H2	2021 H1	H2	2022 H1	2023 H2 H1	
1	Contract Key Dates	0 days	Tue 19/12/10	Tue 19/12/10	1		1516 days	0%		•					111	1
1	1.1 Contract Date 1.2 Starting Date	0 days 1 day	Tue 19/12/10 Thu 19/12/19	Tue 19/12/10 Thu 19/12/19		.59,61,62,63,42,5,57,45,47,44,43,3. days,6FS+30 days,7FS+60 days,8FS+121 days,11FS+212 days,14FS+304 days,19,17FS+396 days,55,56,22FS+851	1516 days -167 days	0% 0%								
						days,23FS+1034 days,24FS+1003 days,26FS+273 days,27FS+394 days,28FS+528 days,29FS+592 days,30FS+572										
=	1.3 Site Access Dates	0 days	Thu 19/12/19	Thu 19/12/19			1507 days	0%		•						
===	Portions 25, 26, 27 Portions 1, 5, 6A, 7, 8A, 9A, 9C, 9E, 9F, 9G, 10A, 10B, 11A, 11B, 12A, 12D, 13A, 15B, 15C, 16, 17, 19A, 19B, 19C, 20A, 20B	0 days 2C, 0 days	Thu 19/12/19 Sat 20/1/18	Thu 19/12/19 Sat 20/1/18	3 3FS+30 days	3,70,71,73,82,137,220,237,255,281,8 days,77FS+30 days,78,79	1506 days 332 days	0% 0%								
	Portions 23, 24	0 days	Mon 20/2/17	Mon 20/2/17	3FS+60 days	315	1446 days	0%		+						
	Portions 15A, 18, 19, 20, 20C, 22	0 days	Sat 20/4/18	Sat 20/4/18	3FS+121 days	9,10	1360 days	0%								
	Delay of Site Access Dates: Portion 15A, 18, 19, 20 (Structure has no		Sun 20/4/19	Thu 20/5/7	8	201,256,282	1366 days	0%								
	been handed over) Delay of Site Access Dates: Portion 22 (Structure has not been	25 days	Sun 20/4/19	Wed 20/5/13	8	316	1360 days	0%								
	handed over) Portions 1A, 2, 2A, 3, 4, 4A, 4B, 5A, 6, 8, 7A, 7B	0 days	Sat 20/7/18	Sat 20/7/18	3FS+212 days	83,122,138,221,257,39,12,13	-138 days	0%								
	Delay of Site Access for Area with Structure & Tudigong in Portion 1		Sun 20/7/19	Sat 21/2/6	11	113	36 days	0%								
-	Delay of Site Access Dates: 4B,5A	296 days	Sun 20/7/19	Mon 21/5/10	11	141	-138 days	0%								
	Portions 8B, 9, 9B, 9D, 10, 11, 12, 12B, 13, 14	0 days	Sun 20/10/18	Sun 20/10/18	3FS+304 days	213,238,283,15,16	-167 days	0%			•					
	Delay of Site Access Date: Portion 9D	151 days	Mon 20/10/19	Thu 21/3/18	14	222,225	-151 days	0%								
	Delay of Site Access for Area with Structure in Portion 8B, 9B	167 days	Mon 20/10/19	Sat 21/4/3	14	222,229	-167 days	0%								
_	Portions 15, 16A, 16B, 17A, 17B, 21	0 days	Mon 21/1/18	Mon 21/1/18	3FS+396 days	300,239,258,284,18	-156 days	0%				Q			1	
	Delay of Site Access for Area with Structure in Portion 16B	79 days	Tue 21/1/19	Wed 21/4/7	17	246	100 days	0%								
	Works Area WA1	0 days	Thu 19/12/19	Thu 19/12/19	3		1506 days	0%								
122	1.4 Completion of the works	0 days	Thu 19/12/19	Thu 19/12/19	3		1506 days	0%		ă l						
	Section 1	0 days	Mon 22/4/18	Mon 22/4/18	3FS+851 days		655 days	0%		5				•		
	Section 2	0 days	Tue 22/10/18	Tue 22/10/18	3FS+1034 days		472 days	0%							•	
	Section 3	0 days	Sat 22/9/17	Sat 22/9/17	3FS+1003 days		503 days	0%								
	Section 3A	0 days	Sun 23/9/17	Sun 23/9/17	3FS+1368 days		138 days	0%			 					
	Section 4	0 days	Wed 20/10/21	Wed 20/10/21	3FS+273 days		0 days	100%			•	↓				
4	Section 5	0 days	Sat 21/1/16	Sat 21/1/16	3FS+394 days		0 days	100%				•				
-1	Section 6	0 days	Sun 21/5/30	Sun 21/5/30	3FS+528 days		978 days	0%					9	1		
	Section 7	0 days	Mon 21/8/2	Mon 21/8/2	3FS+592 days		914 days	0%					•			
	Section 8	0 days	Tue 21/7/13	Tue 21/7/13 Sat 21/11/6	3FS+572 days 3FS+688 days		934 days 818 days	0% 0%				15	Y		1	
	Section 9 Section 10	0 days 0 days	Sat 21/11/6 Thu 22/6/30	Sat 21/11/6 Thu 22/6/30	3FS+924 days		582 days	0%						•		
_	Section 10	0 days 0 days	Sun 22/12/18	Sun 22/12/18	3FS+1095 days		411 days	0%							*	
	Section 11A	0 days	Mon 23/12/18	Mon 23/12/18	3FS+1460 days		46 days	0%							*	
	Section 12	0 days	Fri 20/12/18	Fri 20/12/18	3FS+365 days		1141 days	0%				•				
				m			707 1									
	2. Preliminary works	805 days	Fri 19/12/20	Thu 22/3/3			701 days	66%			-			_		
~	Set up Project Manager's Accommodation in WA1 (1st part) Set up Project Manager's Accommodation in Portion 3 (2nd part)	14 days t) 14 days	Wed 20/6/17 Mon 21/3/8	Tue 20/6/30 Sun 21/3/21	11		0 days 1048 days	100% 50%			#	Y				
	N 02 5		Mon 20/2/3	Tue 20/3/3	3	171	0 days	100%		-						
Ž	Prepare, submit & Approve ICE Prepare, submit & Approve Traffic Consultant	30 days 30 days	Wed 20/1/1	Tue 20/3/3 Thu 20/1/30	3	85	0 days	100%								
~	Prepare, submit & Approve Traffic Consultant Prepare, submit & Approve Landscape Team Leader	100 days	Mon 20/2/3	Tue 20/5/12	3	75	0 days	100%								
*	Prepare, submit & Approve Earliscape Fearing Leader	30 days	Fri 19/12/20	Sat 20/1/18	3	. •	0 days	100%								
*	Prepare, submit & Approve Constructed / Treatment Wetland	30 days	Fri 20/2/28	Sat 20/3/28	3	64	0 days	100%							1	
Y			Fri 19/12/20	Sat 20/1/18	3	47	0 days	100%								
	Specialist Prepare, submit & Approve Ecological Team Leader	30 davs			~	•••	-			THE L						
	Prepare, submit & Approve Ecological Team Leader	30 days 112 days		Sat 20/5/9			0 days	100%								
· · ·	Prepare, submit & Approve Ecological Team Leader Habitat Survey Submission/approval of Habitat Surveys Method Statemen	112 days	Sun 20/1/19 Sun 20/1/19	Sat 20/5/9 Thu 20/2/27	3,45	48	0 days 0 days	100%		4						
**	Prepare, submit & Approve Ecological Team Leader Habitat Survey	112 days t 40 days	Sun 20/1/19 Sun 20/1/19	Thu 20/2/27	3,45 47	48 49				4. 2. 2.		:				
\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	Prepare, submit & Approve Ecological Team Leader Habitat Survey Submission/approval of Habitat Surveys Method Statemen and Programme Habitat Surveys Task	112 days	Sun 20/1/19 Sun 20/1/19 Fri 20/2/28	Thu 20/2/27 Sat 20/3/28	47	49	0 days 0 days	100%	Progress					1		
**	Prepare, submit & Approve Ecological Team Leader Habitat Survey Submission/approval of Habitat Surveys Method Statemen and Programme Habitat Surveys Task	112 days t 40 days	Sun 20/1/19 Sun 20/1/19 Fri 20/2/28	Thu 20/2/27 Sat 20/3/28	47 Rolled Up M	ilestone 🔷 Extern	0 days 0 days nal Tasks	100%	Progress Deadline			:		2		
***	Prepare, submit & Approve Ecological Team Leader Habitat Survey Submission/approval of Habitat Surveys Method Statemen and Programme Habitat Surveys Task Critical Task	112 days t 40 days	Sun 20/1/19 Sun 20/1/19 Fri 20/2/28 Summa	Thu 20/2/27 Sat 20/3/28	47	ilestone \diamondsuit Externogress Projection	0 days 0 days	100%	Progress Deadline	•		: - -		2		

0	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete Risk Allowance	2020 2021 2022 2023 H2 H1 H2 H1 H2 H1 H2 H1
~	Submission of Habitat Record	14 days	Sun 20/3/29	Sat 20/4/11	48	50	0 days	100%	
1	Approval of Habitat Survey Record	28 days	Sun 20/4/12	Sat 20/5/9	49	53,51	0 days	100%	
	Prepare and Submit Wetland Restoration Proposal	50 days	Sun 20/5/10	Sun 20/6/28	50	52	0 days	100%	
√	Approval of Wetland Restoration Proposal	180 days	Mon 20/6/29	Fri 20/12/25	51	225,242,261,287	162 days	90%	
-	Prepare and Submit Wetland Creation Proposal	50 days	Sun 20/5/10	Sun 20/6/28	50	54	0 days	100%	Clinate Character (Clinate Character)
¥	· · · · · · · · · · · · · · · · · · ·	-	Mon 20/6/29	Fri 20/12/25	53	225,242,261,287	162 days	90%	
	Approval of Wetland Cretation Proposal	180 days				223,242,201,201	•	100%	**************************************
	Prepare and Submit Ecological Protection Plan	14 days	Fri 19/12/20	Thu 20/1/2	3		0 days		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
✓	Prepare, Submit and Approval of Maintenance Proposal for Stage	204 days	Fri 19/12/20	Fri 20/7/10	3		0 days	100%	
	1 Maintenance Works	00 days	M-4 20 77 /15	Mon 20/10/12	2		0 days	100%	
1	Prepare, submit & Approve G.I. Contractor	90 days	Wed 20/7/15		3	75	-	100%	
₹ 🗸	Prepare and submit Smart Card Sysytem	30 days	Fri 19/12/20	Sat 20/1/18	3	75	0 days		
✓	Prepare, submit Draft Safety Plan	14 days	Fri 19/12/20	Thu 20/1/2	3	60	0 days	100%	
o 🗸	Review & Approve Safety Plan	35 days	Fri 20/1/3	Thu 20/2/6	59	75	0 days	100%	
1 🗸	Prepare, Submit Draft Environmental Management Plan	21 days	Fri 19/12/20	Thu 20/1/9	3	62	0 days	100%	
2	Review & Approve Environmental Management Plan	45 days	Fri 20/1/10	Sun 20/2/23	3,61	75	0 days	100%	
3 🗸	Prepare, submit & Approve Site Management Plan for Trip Ticket	45 days	Fri 19/12/20	Sun 20/2/2	3		0 days	100%	
•	System		-, -,				_		
	Submission and Approval of Construction Method for water treatment wetland	90 days	Tue 20/9/15	Sun 20/12/13	44	141	10 days	50%	
~	Submission of Proposal for Source of Water for Water Treatment Wetland	120 days	Fri 19/12/20	Fri 20/4/17	3	66	0 days	100%	
5 🗸	Approval of Source of Water for Water Treatment Wetland	90 days	Sat 20/4/18	Thu 20/7/16	65	141	0 days	100%	
7	Design/submission/approval of Lodging Facilities	300 days	Tue 20/6/30	Sun 21/4/25	6	127,68SS,126	19 days	50%	
	Design / Submission / approval of Sewerage System of Lodging	150 days	Wed 20/9/16	Fri 21/2/12	67SS	130	461 days	50%	
	Facilities				6	155	640 days	0%	(000 3/53)
	Design/submission/approval of alluminium roofing system, timber for wall/floor/soffit for Birdhide	180 days	Tue 21/3/30	Sat 21/9/25	Ö	133	040 days	070	
) I		100 de	Wed 20/9/30	Sun 21/3/28	6	130,176,167,132,158,157	328 days	30%	
	Design/submission/approval of E&M works for Facilities	180 days			0				SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS
L	Design/submission/approval of Plumbing works for Facilities	240 days	Wed 21/7/7	Thu 22/3/3	6	158,167	108 days	0%	
2 🛅	Design/submission/approval and supply of Lighting	180 days	Tue 20/6/30	Sat 20/12/26	6		1133 days	0%	
3	Design/submission/approval and supply of park facilities	180 days	Sun 20/8/30	Thu 21/2/25	6	161	318 days	30%	
4 🛅	Submission and Approval for Fire Extinguisher	50 days	Wed 21/4/14	Wed 21/6/2	3	157,167,183,190,270,176	1 day	0%	
	Tree survey and submission	450 days	Wed 20/5/13	Thu 21/8/5	42,60,62,58	76SS+30 days	0 days	100%	
	Tree felling / Site clearance	450 days	Fri 20/6/12	Sat 21/9/4	75SS+30 days	·	881 days	90%	
7	Design/submission/approval of Entrance gantry signages	180 days	Wed 21/9/1	Sun 22/2/27	6FS+30 days	169	142 days	0%	
7 E	Design/submission/approval of Irrigation system for landscape	180 days	Thu 21/4/1	Mon 21/9/27	6		858 days	50%	
	softworks Design/submission/approval of Irrigation System for landscape softworks	130 days	Tue 20/9/1	Fri 21/1/8	6	232,249,275,294	178 days	97%	
	Design/submission/approval of Irrigation Channel and other associated facilities	130 days	106 20/3/1	11121/1/0	· ·	£3£,€73,£13,€34	1.0 0093	J. 70	
0	2 Continual of the works (Partisms 1 and 14)	000 4	Eri 10/13/20	Wod 22/6/1F			-59 dave	38%	
	3. Section 1 of the works (Portions 1 and 1A)	909 days	Fri 19/12/20	Wed 22/6/15	•	9E 104 00EC - 30 days 103 103 23	-58 days	100%	
2	Site Access in Portion 1	0 days	Sat 20/1/18	Sat 20/1/18	6	85,104,90FS+30 days,103,102,88	0 days		
-	Site Access in Portion 1A	0 days	Sat 20/7/18	Sat 20/7/18	11	115,113,97	0 days	100%	
a	Design/submission/approval and supply of Road Lighting System along Yin Kong Road	180 days	Tue 20/6/30	Sat 20/12/26	6FS+30 days	107,116	302 days	20%	
5	Application for XP for construction of Yin Kong Road	400 days	Fri 20/1/31	Fri 21/3/5	41,82	86SS+45 days,87	158 days	49%	
5	Prepare TTA for TMLG and approval from TD and RMO	90 days	Mon 20/3/16	Sat 20/6/13	85SS+45 days	87	423 days	70%	
	Application of Traffic Advice and Road Work Advice	30 days	Sat 21/3/6	Sun 21/4/4	85,86	106	158 days	0%	
	• •		Wed 20/7/29	Thu 20/8/27	82	104	0 days	100%	
$\leq \leq$	Submission of Utilities Detection Report	30 days			02		-	0%	
) <u>s</u>	Additional Widening works for Yin Kong Road (to be approved by	30 days	Thu 21/7/1	Fri 21/7/30		105,115,114	-58 days	U76	
	Relevant Department)	225 م	Sun 20/3/1	Fri 21/1/29	82FS+30 days		184 days	50%	
	Relocation of Utilities (by Others)	335 days			62F3T3V Udys		-	100%	
- ✓	Relocation of CLP Pole at Yin Kong Road in (Portion 1)	195 days	Sun 20/3/1	Fri 20/9/11		22	0 days		
✓	Planning for Relocation	60 days	Sun 20/3/1	Wed 20/4/29		93	0 days	100%	
√	Construction of New Pole	60 days	Thu 20/4/30	Sun 20/6/28	92	94	0 days	100%	
V	Outage and Diversion of Underground Cable	75 days	Mon 20/6/29	Fri 20/9/11	93	104	0 days	100%	
T T									
	Relocation of CLP Pole at Yin Kong Road (Portion 1A)	195 days	Sun 20/7/19	Fri 21/1/29			184 days	0%	
-	Planning for Relocation	60 days	Sun 20/7/19	Wed 20/9/16	83	98	184 days	0%	
3	Construction of New Pole	60 days	Thu 20/9/17	Sun 20/11/15	97	99	184 days	0%	
				Fri 21/1/29	98	115	184 days	0%	
	Outage and Diversion of Underground Cable	75 days	Mon 20/11/16	LII 51/1/53	30	113	104 days	070	E-E-E-E-E-E-E-E-E-E-E-E-E-E-E-E-E-E-E-
		262 .					06 1	AEO/	
1	Site Works (under Portion 1)	765 days	Fri 19/12/20	Sat 22/1/22			86 days	45%	
2 🗸	Compensation Event No. 002 - Construction of Chain Link	21 days	Thu 20/4/16	Wed 20/5/6	82	104	0 days	100%	
	Fence and Gate adjacent to Yin Kong Road							1000	
3	Compensation Event No. 003 - Reprovision of Hoarding and gate at Enchi Lodge	30 days	Wed 20/4/22	Thu 20/5/21	82	104	0 days	100%	
	Task	150000000	Summ	arv	Rolled Un M	ilestone 🔷 Exter	nal Tasks	Progre	ess
ised Programm	e: July 2021	132521252525				•		-	
a Date : 2021-7-	Critical Task		Rolled	Up Task	Rolled Up Pr	ogress Proje	ct Summary	Deadli	ine 💌
	Milestone	•	Rolled	Up Critical Task	Split	.,,,,,,,,,,,,,,,,, Grou	p By Summary	_	
	Milestone								

Sang Hing - Kuly Joint Venture

ID O	Task Name	Duration	Start	Finish	Predecessors	Successors		% Complete Risl		2020 2021 2022 2023 H2 H1 H2 H1 H2 H1 H2 H1 H2 H1 H
104 🗸	Remove existing fencing and site clearance	30 days	Fri 20/8/28	Sat 20/9/26	82,88,94,102,103		0 days	100%		
05	Road widening	120 days	Sat 21/7/31	Sat 21/11/27	89	106FS-80 days	1 day	0%		
06 🖼	Drainage works	150 days	Wed 21/5/5	Mon 21/11/22	105FS-80 days,87	107FS-30 days	1 day	50%	7 days	
07	Lighting and installation of street fruniture	76 days	Sun 21/10/24	Fri 22/1/7	106FS-30 days,84	117,310	1 day	0%	4 days	
08	Construction of Pai Lau	765 days	Fri 19/12/20	Sat 22/1/22			86 days	50%		
09 🗸	Instruction from PM	365 days	Fri 19/12/20	Fri 20/12/18	3	110	0 days	100%		
10	Design/Submission/approval	150 days	Sat 20/12/19	Mon 21/5/17	109	111	86 days	10%		
.11	Construction of Pai Lau	250 days	Tue 21/5/18	Sat 22/1/22	110	119	86 days		7 days	
		-	Sun 21/2/7	Mon 22/3/7	110	115	-58 days	9%	/ days	
112	Site Works (under Portion 1A)	394 days			83.13	114	•	30%		2
113	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	120 days	Sun 21/2/7	Sun 21/6/6	83,12	114	-4 days			
14	Road Widening	120 days	Sat 21/7/31	Sat 21/11/27	113,89	115FS-60 days	-58 days	0%		
15	Drainage works	120 days	Wed 21/9/29	Wed 22/1/26	83,99,89,114FS-60 days	116	-58 days		7 days	
16	Lighting and installation of street fruniture	40 days	Thu 22/1/27	Mon 22/3/7	115,84	117,310	-58 days	0%	4 days	
17	Paving block on footway	60 days	Tue 22/3/8	Fri 22/5/6	107,116	118	-58 days	0%		
18	bituminous pavement on carriageway	40 days	Sat 22/5/7	Wed 22/6/15	117	119	-58 days	0%		
19 = 20	Completion of Section 1 of the works	0 days	Mon 22/4/18	Mon 22/4/18	118,111		-58 days	0%		
21	4. Section 2 of the works (Portions 2 and 2A)	803 days	Sat 20/7/18	Thu 22/9/29			491 days	5%		
.22	Site Access in Portions 2 and 2A	0 days	Sat 20/7/18	Sat 20/7/18	11	123	1294 days	0%		The state of the s
23	General site clearance / demolition work / Removal of Asbesto	60 days	Sun 20/7/19	Wed 20/9/16	122	125	0 days	100%		
24	Containing Material Construction of lodging facility & associated facilities	7/12	Thu 20/9/17	Thu 22/9/29			19 days	0%		
	·	743 days			100	100	•	0%		3333 23
25	Excavation and formation preparation	120 days	Thu 20/9/17	Thu 21/1/14	123	126	120 days			
26	Construction of foundation / pavement	120 days	Mon 21/4/26	Mon 21/8/23	125,67	127	19 days	0%		
27	Supply of logging units	200 days	Tue 21/8/24	Fri 22/3/11	126,67	128FS-50 days	19 days	0%		
28	Installation of lodging units	100 days	Fri 22/1/21	Sat 22/4/30	127FS-50 days	129,130,131,132	19 days	0%	3 days	
29	Installation of furniture / facility	120 days	Sun 22/5/1	Sun 22/8/28	128	133	24 days	0%		
30	Installation of E&M works	125 days	Sun 22/5/1	Fri 22/9/2	70,68,128	133	19 days	0%	5 days	
31	Installation of Fire Services	125 days	Sun 22/5/1	Fri 22/9/2	128	133	19 days	0%		
32	Installation of plumbing works	125 days	Sun 22/5/1	Fri 22/9/2	70,128	133	19 days	0%	5 days	
33	Testing and commissioning	27 days	Sat 22/9/3	Thu 22/9/29	132,130,131,129	134	19 days	0%		
34	Completion of Section 2 of the works	0 days	Thu 22/9/29	Thu 22/9/29	133		19 days	0%		
.35										
.36	5. Section 3 of the works (Portions 3, 4, 4A, 4B, 5, 5A, 6 & 6A)	1111 days	Sat 20/1/18	Thu 23/2/2		14112000	365 days	12%		
.37	Site Access in Portions 5 and 6A	0 days	Sat 20/1/18	Sat 20/1/18	6	141,139SS	340 days	0%		
L38	Site Access in Portions 3, 4, 4A, 4B, 5A and 6	0 days	Sat 20/7/18	Sat 20/7/18	11	152,141,139FF+20 days	158 days	0%		
139	General site clearance / demolition work / Removal of Asbesto Containing Material	300 days	Sun 20/1/19	Fri 20/11/13	137SS,138FF+20 days	161,152	422 days	80%		
L40	Construction of water treatment wetland	588 days	Tue 21/5/11	Mon 22/12/19			-138 days	0%		
L41	Excavation for sedimentation pond	120 days	Tue 21/5/11	Tue 21/9/7	64,137,138,66,13	142	-138 days	0%		
.42	Excavation for macophyte zones - down stream	71 days	Wed 21/9/8	Wed 21/11/17	141	143,149	-138 days	0%		
.43	Bedding preparation	45 days	Thu 21/11/18	Sat 22/1/1	142	144,146	-138 days	0%		
.44	Excavation for macophyte zones - mid stream	72 days	Sun 22/1/2	Mon 22/3/14	143	145	645 days	0%		
.45	Bedding preparation	45 days	Tue 22/3/15	Thu 22/4/28	144		645 days	0%		
46	Excavation for macophyte zones - upstream	72 days	Sun 22/1/2	Mon 22/3/14	143	147	-138 days	0%		
47	Bedding preparation	45 days	Tue 22/3/15	Thu 22/4/28	146	148,193	-138 days	0%		
48	Excavation for open water zone	115 days	Fri 22/4/29	Sun 22/8/21	147	150	-93 days	0%		
	• • • • • • •			Fri 22/6/10	147	194	99 days	0%		
49	Construction of wetland broadwalk	205 days	Thu 21/11/18							
.50	Construction of Inlet and outlet structures	120 days	Mon 22/8/22	Mon 22/12/19	148	194	-93 days	0%		
.51	Construction of birdhide	528 days	Mon 20/12/21	Wed 22/6/1			611 days	13%		
L52 🗸	Excavation and formation preparation	21 days	Mon 20/12/21	Sun 21/1/10	138,139	153	0 days	100%		
.53	Construction of base slab	120 days	Mon 21/4/12	Mon 21/8/9	152	154	134 days	50%		
L54	Installation of steel structural frame	60 days	Tue 21/8/10	Fri 21/10/8	153	155,178,157,185	134 days	0%		
.55	Installation of timber wall / roof	120 days	Sat 21/10/9	Sat 22/2/5	154,69	156	627 days	0%	4 days	
.56	Installation of timber rised flooring	100 days	Sun 22/2/6	Mon 22/5/16	155		627 days	0%		
157	Installation of E&M, Fire Services System	120 days	Sat 21/10/9	Sat 22/2/5	154,70,74	158	134 days	0%		
.58	Testing & commissioning	90 days	Fri 22/3/4	Wed 22/6/1	70,71,157	194	108 days	0%		
59	Construction of farmer's forum / open area	251 days	Sun 21/10/31	Fri 22/7/8			71 days	0%		
60	Construction of tea house pavilion	251 days	Sun 21/10/31	Fri 22/7/8			71 days	0%		
161	Construction of base slab	21 days	Sun 21/10/31	Sat 21/11/20	139,173,73	162	71 days	0%		
162	Construction of walls with columns	35 days	Sun 21/11/21	Sat 21/12/25	161	163	71 days	0%		
163	Installation of roof steel structure	45 days	Sun 21/12/26	Tue 22/2/8	162	164,168	71 days	0%		
164	Installation of roof steel structure Installation of recycled timber strip for roof	30 days	Wed 22/2/9	Thu 22/3/10	163	165	71 days	0%		
	Task		Summ	ary	Rolled Up Mile	stone 🔷 E	xternal Tasks		Progress	
want Dragger	e: July 2021	*********	to the total or to the total		A STATE OF THE PARTY OF THE PAR	•				•
evised Frogramm	Critical Tank	E+0+0+0+0+0+			RUING IN DEAL	ress	roject Silmmani	100	I Jeaniine	very
ata Date : 2021-7	-3 Critical Task Milestone			Up Task Up Critical Task 📳	Rolled Up Prog Split		roject Summary Group By Summary		Deadline	•

Sang Hing - Kuly Joint Venture

0	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete Risk Allowance	2020 H2 H1	H2 2021	2022 H1 H2 H1	2023 H2 H1
5	Installation of recycled timber strip for walls	30 days	Fri 22/3/11	Sat 22/4/9	164	166SS	71 days	0%	112	11/2		112 111
6	Supply and installation of bench	30 days	Fri 22/3/11	Sat 22/4/9	165SS	167	71 days	0%				
7	Installation of plumbing works / E&M works with testing	90 days	Sun 22/4/10	Fri 22/7/8	166,70,71,74	194	71 days	0%	116			∄ ₩
-	& commissioning	00 1	M- 1 22 /2 /0	M 22/F/0	163	160	71 days	0% 4 days			900000	
3	Construction of paving slab for open area	90 days	Wed 22/2/9	Mon 22/5/9	163	169	71 days					50
9	Construction of entrance gantry signages	60 days	Tue 22/5/10	Fri 22/7/8	168,77	194	71 days		115			<u> </u>
)	Construction of Type 1 storage house	280 days	Tue 21/8/3	Mon 22/5/9	40.100	172	71 days	0%				/ [1]
l	Excavation and formation preparation	21 days	Tue 21/8/3	Mon 21/8/23	40,188	172	71 days	0%				/ [1]
2	Construction of base slab	28 days	Tue 21/8/24	Mon 21/9/20	171	173	71 days	0%				
3	Construction of walls and roof	40 days	Tue 21/9/21	Sat 21/10/30	172	174,161,192	71 days	0% 0%				
	Installation of aluminium louvre / GMS door	28 days	Sun 21/10/31	Sat 21/11/27	173	175	71 days				I I I I I I I I I I I I I I I I I I I	
	Installation of recycled timber strip / external finishing	73 days	Sun 21/11/28	Tue 22/2/8	174	176,182	71 days	0% 3 days			B33397	
	Installation of E&M works & Fire Services with testing & commissioning	90 days	Wed 22/2/9	Man 22/5/9	175,70,74	194	131 days	0%				
	Construction of outdoor classroom shelter	455.2 days	Mon 21/4/26	Mon 22/7/25			54.8 days	7%				
1	Excavation and formation preparation	21 days	Mon 21/4/26	Wed 21/10/13	154	179	0 days	100%				T I
~	Construction of base slab	42 days	Wed 21/10/13	Wed 21/11/24	178	180	54.8 days	0%				
-	Construction of concrete columns	63 days	Wed 21/11/24	Wed 22/1/26	179	181	54.8 days	0% 3 days				
	Installation of steel roof frame with corrugated sheet	30 days	Wed 21/11/24 Wed 22/1/26	Fri 22/2/25	180	182	54.8 days	0% 3 days				
			Fri 22/2/25	Tue 22/4/26	181,175	183	54.8 days	0%			120-3	
_	Installation of recycled timber strip roofing	60 days			182,74	194	-	0%			1990-99 H	1757 ·
	Installation of E&M works and Fire Services with testing & comissioning	90 days	Tue 22/4/26	Mon 22/7/25	102,74	174	54.8 days	U/U				223
-	Construction of storage compositing facility	319 days	Mon 21/2/15	Thu 21/12/30			261 days	34%				
1	Excavation and formation preparation	22 days	Mon 21/2/15	Mon 21/3/8	154	186	0 days	100%		i i		
1	Construction of base slab	54 days	Tue 21/3/9	Sat 21/5/1	185	187	0 days	100%				
	Construction of concrete columns	63 days	Sun 21/5/2	Sat 21/7/3	186	188	71 days	50% 3 days				
	Installation of steel roof frame with corrugated sheet	30 days	Sun 21/7/4	Mon 21/8/2	187	189,171	71 days	0%	113 11			
	Installation of recycled timber strip roofing	60 days	Tue 21/8/3	Fri 21/10/1	188	190,191	261 days	0%			[25:5] [25:55:4]	
			Sat 21/10/2	Thu 21/12/30	189,74	194	261 days	0%			18:041	
	Installation of E&M works & Fire Services with testing & commissioning	90 days	3at 21/10/2	1110 21/12/30	105,74	194	201 days	078			<u>1.30350303</u>	
	Construction of entry landing with drop bar	90 days	Sat 21/10/2	Thu 21/12/30	189	194	261 days	0%				
	Construction of walkway	210 days	Sun 21/10/31	Sat 22/5/28	173	194	112 days	0%			94888888888888888888888888888888888888	
-	Landscaping softworks	280 days	Fri 22/4/29	Thu 23/2/2	147	194,197	-138 days	0%				
	Completion of Section 3 of the works	0 days	Sat 22/9/17	Sat 22/9/17	,158,167,169,176,183,190,191,		-138 days	0%			l l l l l l l l l l l l l l l l l l l	
	Completion of Section 5 of the Horizon	,-	200 22, 5, 2.	000000,0,0	,,,,							
	6. Section 3A of the works (Establishment works for Section 2 and 3)	365 days	Fri 23/2/3	Fri 24/2/2			-138 days	0%				-
	Establishment works for landscape softworks	365 days	Fri 23/2/3	Fri 24/2/2	193	198FF	-138 days	0%				
<u> </u>	Completion of Section 3A of the Works	0 days	Sun 23/9/17	Sun 23/9/17	197FF		-138 days	0%		22		
												1
/	7. Section 4 of the works (Portion 18)	167 days	Thu 20/5/7	Wed 20/10/21			0 days	100%				
	Site Access in Portion 18	0 days	Thu 20/5/7	Thu 20/5/7	9	202,203,208,209,204	0 days	100%			;	
1	General site clearance / demolition work / Removal of Asbesto	20 days	Fri 20/5/8	Wed 20/5/27	201	203	0 days	100%			 	I I
*	Containing Material & Dioxin Contaminated											
V	General maintenance to exisitng wetland	80 days	Thu 20/5/28	Sat 20/8/15	201,202	210	0 days	100% 7 days		2222		
1	Compensation Event No. 020 - Inclement Weather Conditions in	8.5 days	Fri 20/9/18	Sat 20/9/26	201	205	0 days	100%	11 = 1			
	August 2020								11.5			
V	Compensation Event No. 021 - Inclement Weather Conditions in September 2020	14.5 days	Sat 20/9/26	Sat 20/10/10	204	206	0 days	100%				
V	Compensation Event No. 028 - Inclement Weather Conditions in	3 days	Sun 20/10/11	Tue 20/10/13	205	210	0 days	100%		II II F		2
·	October 2020 Compensation Event No. 026 - Provision of Root Barriers behind	8 days	Wed 20/10/14	Wed 20/10/21	208	210	0 days	100%	1 2	9		
1 .	Gabion Walls of Irrigation Channel	F 4 1		T . AA # 5 # 5	201	207	A 4	1000/	Ε.		1.	
4	Construction of Irrigation Channel	56 days	Wed 20/8/19	Tue 20/10/13	201	207	0 days	100%				
V	Construction of Metal Wire Railing	65 days	Mon 20/8/10	Tue 20/10/13	201	210	0 days	100%				
V	Completion of Section 4 of the works	0 days	Wed 20/10/21	Wed 20/10/21	203,209,206,207		0 days	100%		•		
V	8. Section 5 of the works (Portion 14)	90 days	Sun 20/10/18	Sat 21/1/16			0 days	100%	11 23			
V	Site Access in Portion 14	0 days	Sun 20/10/18	Sun 20/10/18	14	216,214,215	0 days	100%		→		
1	General site clearance / demolition work / Removal of Asbesto	60 days	Mon 20/10/19	Thu 20/12/17	213	217	0 days	100%		233.0		
	Containing Material	4= 1	14	W. 100 70 70	24.2	24755	. الم	1000/				
	General maintenance to exisiting wetland	45 days	Mon 20/10/19	Wed 20/12/2	213	217FF	0 days	100%				
\leq	Boundary Structure - Metal Wire Railing	90 days	Mon 20/10/19	Sat 21/1/16	213	217FF	0 days	100%	1 -			
	Completion of Section 5 of the works	0 days	Sat 21/1/16	Sat 21/1/16	216FF,215FF,214		0 days	0%		91		
	9. Section 6 of the works (Portions 8,8A,8B and 9,9A~9G)	705 days	Sat 20/1/18	Thu 21/12/23			771 days	55%				
					- 212				11 🗸 1		thi _e	
d Programme	e: July 2021		Summ	-	Rolled Up Miles	*	kternal Tasks	Progres				
-	Critical Task			Up Task	Rolled Up Prog	ress P	roject Summary	Deadlin	e 🌗			
Date: 2021-7-			Polled	Up Critical Task 📱	accessorements Chlif	G	D C					
	Milestone		Rolled	Op Chilical Task	Split	1111111111111111	roup By Summar	y				

Contract No. ND/2019/03

Sang Hing - Kuly Joint Venture

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

D	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete R	isk Allowance	2020 2021 2022 2023	
0 🗸	Site Access in Portions 8A, 9A, 9C, 9E, 9F, 9G	0 days	Sat 20/1/18	Sat 20/1/18	6	225,223SS	0 days	100%		H2 H1 H2 H1 H2 H1 H2 H	1
	Site Access in Portion 8	0 days	Sat 20/7/18	Sat 20/7/18	11	223FF+10 days,225	0 days	100%			
	Site Access in Portions 8B, 9, 9B, 9D	0 days	Sun 20/10/18	Sun 20/10/18	15,16	223FF+10 days,225,229	331 days	50%			
~	General site clearance / demolition work / Removal of Asbesto Containing Material & Dioxin Contaminated	-	Fri 20/7/3	Sun 20/11/29	220SS,221FF+10 days,222FF+10 days	234	0 days	100%			
-	Wetland Restoration / Wetland Creation	200 days	Fri 21/3/19	Mon 21/10/4			851 days	63%			
	Excavation	90 days	Fri 21/3/19	Wed 21/6/16	220,54,52,221,222,15	226SS+30 days	961 days	80%			
	Backfilling	60 days	Sun 21/4/18	Wed 21/6/16	225SS+30 days	227SS+90 days,229,232,233	-117 days	80%			
	Agricultural Planting	80 days	Sat 21/7/17	Mon 21/10/4	226SS+90 days	234	-127 days	30%			
8	Construction of Storage Sheds	190 days	Thu 21/6/17	Thu 21/12/23			-40 days	36%			
9	Construction of concrete structure	150 days	Thu 21/6/17	Sat 21/11/13	226,222,16	230FS-30 days,231	-207 days	60%	4 days	A CONTRACTOR OF THE PARTY OF TH	
0	Installation of Alluminium Window/Lourvre and GMS Doc		Fri 21/10/15	Mon 21/12/13	229FS-30 days	234 234	-197 days	0%	4 days	N88 2	
81	with recycle timber decoration Installation of GMS roofing structure with recycle timber	or 60 days 40 days	Sun 21/11/14	Thu 21/12/23	229F3-30 days	234	-207 days	0%		7 (888) 881	
	Construction of Channel	70 days	Thu 21/6/17	Wed 21/8/25	226,79	234	-87 days	80%	7 days		
32 33	Construction of Channel Construction of walkway	100 days	Thu 21/6/17	Fri 21/9/24	226	234	-117 days	0%	7 days		
34	Completion of Section 6 of the works	0 days	Sun 21/5/30	Sun 21/5/30	227,231,232,233,223,230	234	-207 days	0%	, duys		
5											
86	10. Section 7 of the works (Portions 10,10A,10B, 13,13A and 16,16A,16B)	620 days	Sat 20/1/18	Wed 21/9/29			856 days	62%			
37 🗸	Site Access in Portions 10A, 10B, 13A, 16	0 days	Sat 20/1/18	Sat 20/1/18	6	242,240SS	0 days	100%		 	
38	Site Access in Portions 10, 13	0 days	Sun 20/10/18	Sun 20/10/18	14	240FF+20 days	0 days	100%		→	
39	Site Access in Portions 16A, 16B	0 days	Mon 21/1/18	Mon 21/1/18	17	240FF+20 days	0 days	100%			
40	General site clearance / demolition work / Removal of Asbeste Containing Material & Dioxin Contaminated	-	Tue 20/4/14	Sun 21/2/7	237SS,238FF+20 days,239FF+20 days	252	0 days	100%		A CONTRACTOR OF THE CONTRACTOR	
41	Wetland Restoration / Wetland Creation	167 days	Sat 20/12/26	Thu 21/6/10	· ·		967 days	50%			
42	Excavation	100 days	Sat 20/12/26	Sun 21/4/4	237,54,52	243SS+47 days,249	112 days	50%			
43	Backfilling	60 days	Thu 21/2/11	Sun 21/4/11	242SS+47 days	244SS+60 days	1027 days	50%			
244	Agricultural Planting	60 days	Mon 21/4/12	Thu 21/6/10	243SS+60 days	252	53 days	50%			
45	Construction of storage sheds	180 days	Sat 21/4/3	Wed 21/9/29			-30 days	50%			
46	Construction of concrete structure	150 days	Sat 21/4/3	Mon 21/8/30	18	247SS+90 days,248	-58 days	70%			
47	Installation of Alluminium Window/Lourvre and GMS Doc with recycle timber decoration	-	Fri 21/7/2	Sat 21/7/31	246SS+90 days	248SS+30 days	-28 days	0%			
48	Installation of GMS roofing structure with recycle timber	30 days	Tue 21/8/31	Wed 21/9/29	247SS+30 days,246	252	-58 days	0%			
49	Construction of Channel	80 days	Mon 21/4/5	Wed 21/6/23	79,242	250SS,252	40 days	90%	7 days		
50	Construction of walkway	90 days	Mon 21/4/5	Sat 21/7/3	249SS	251FF-15 days,252	30 days	0%	6 days		
251	Construction of entry landing with drop bar	45 days	Wed 21/5/5	Fri 21/6/18	250FF-15 days	252	45 days	0%			
52	Completion of Section 7 of the works	0 days	Mon 21/8/2	Mon 21/8/2	244,248,249,250,251,240		-58 days	0%			
		•									
53 54	11. Section 8 of the works (Portions 7,7A,7B, 17,17A,17B,	541 days	Sat 20/1/18	Mon 21/7/12			935 days	59%			
-	19,19A,19B,19C, 20,20A,20B&20C)	0.1	C-/ 20 # # 2	C-4 20 # # 0		261 25055	الم	1,000/			
55	Site Access in Portions 7, 17, 19A, 19B, 19C, 20A, 20B	0 days	Sat 20/1/18	Sat 20/1/18	6	261,259SS	0 days	100%			
56	Site Access in Portions 19, 20, 20C	0 days	Thu 20/5/7	Thu 20/5/7	9	259FF+20 days	0 days	100%			
57 🗸	Site Access in Portions 7A, 7B	0 days	Sat 20/7/18	Sat 20/7/18	11	259FF+20 days	0 days	100%	1		
58 🗸	Site Access in Portions 17A, 17B	0 days	Mon 21/1/18	Mon 21/1/18	17	259FF+20 days	0 days	100%			
259	General site clearance / demolition work / Removal of Asbest Containing Material & Dioxin Contaminated	o 350 days	Mon 20/2/24	Sun 21/2/7	255SS,256FF+20 days,257FF+20 days,258FF+20		0 days	100%		aniana ninananananana	
60	Wetland Restoration / Wetland Creation	135 days	Sat 20/12/26	Sun 21/5/9	days		999 days	55%			
61	Excavation	80 days	Sat 20/12/26 Sat 20/12/26	Mon 21/3/15	255,54,52	262SS+25 days,272SS+60	1054 days	60%			
	Backfilling	80 days	Wed 21/1/20	Fri 21/4/9	261SS+25 days	days,265SS,275SS 263SS+60 days	1029 days	60%			
62	· · · · · · · · · · · · · · · · · · ·				-	26355+60 days 278	65 days	40%			
63	Agricultural Planting	50 days	Sun 21/3/21	Sun 21/5/9	262SS+60 days	2/0	-	45%		Taki	
64	Construction of Type 2 storage house	199 days	Sat 20/12/26	Mon 21/7/12	261.00	200	935 days	100%		M M	
65	Excavation and formation preparation	21 days	Sat 20/12/26	Fri 21/1/15	261SS	266	0 days	100%			
66	Construction of base slab	28 days	Sat 21/1/16	Fri 21/2/12	265	267	0 days		1		
67	Construction of walls and roof	70 days	Sat 21/2/13	Fri 21/4/23	266	268,269	11 days	90%		London II	
68	Installation of aluminium louvre / GMS door	30 days	Sat 21/4/24	Sun 21/5/23	267	270	11 days	0%			
69	Installation of recycled timber strip / external finishing	60 days	Sat 21/4/24	Tue 21/6/22	267		955 days	0%			
70	Installation of E&M works with testing & commissioning	40 days	Thu 21/6/3	Mon 21/7/12	268,74	278	1 day	0%			
71	Construction of storage sheds	120 days	Wed 21/2/24	Wed 21/6/23			20 days	30%			
72	Construction of concrete structure	90 days	Wed 21/2/24	Mon 21/5/24	261SS+60 days	273SS+60 days,274	20 days	50%			
73	Installation of Alluminium Window/Lourvre and GMS Doo with recycle timber decoration	or 30 days	Sun 21/4/25	Mon 21/5/24	272SS+60 days	274SS+21 days	29 days	0%			
wined Dra	Task		Summ	ary	Rolled Up Mile	stone 🔷 Exte	ernal Tasks		Progress	?SS	
evised Programm	Critical Task		Rolled	Up Task	Rolled Up Prog	ress Proi	ject Summary	W.	Deadline	ine 👃	
ata Date : 2021-7	7-3 Milestone	N-CHARLES				Gro	up By Summary			107/11	
			Kolled	Up Critical Task	Split	iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	up by buillingly	_	•		

Sang Hing - Kuly Joint Venture

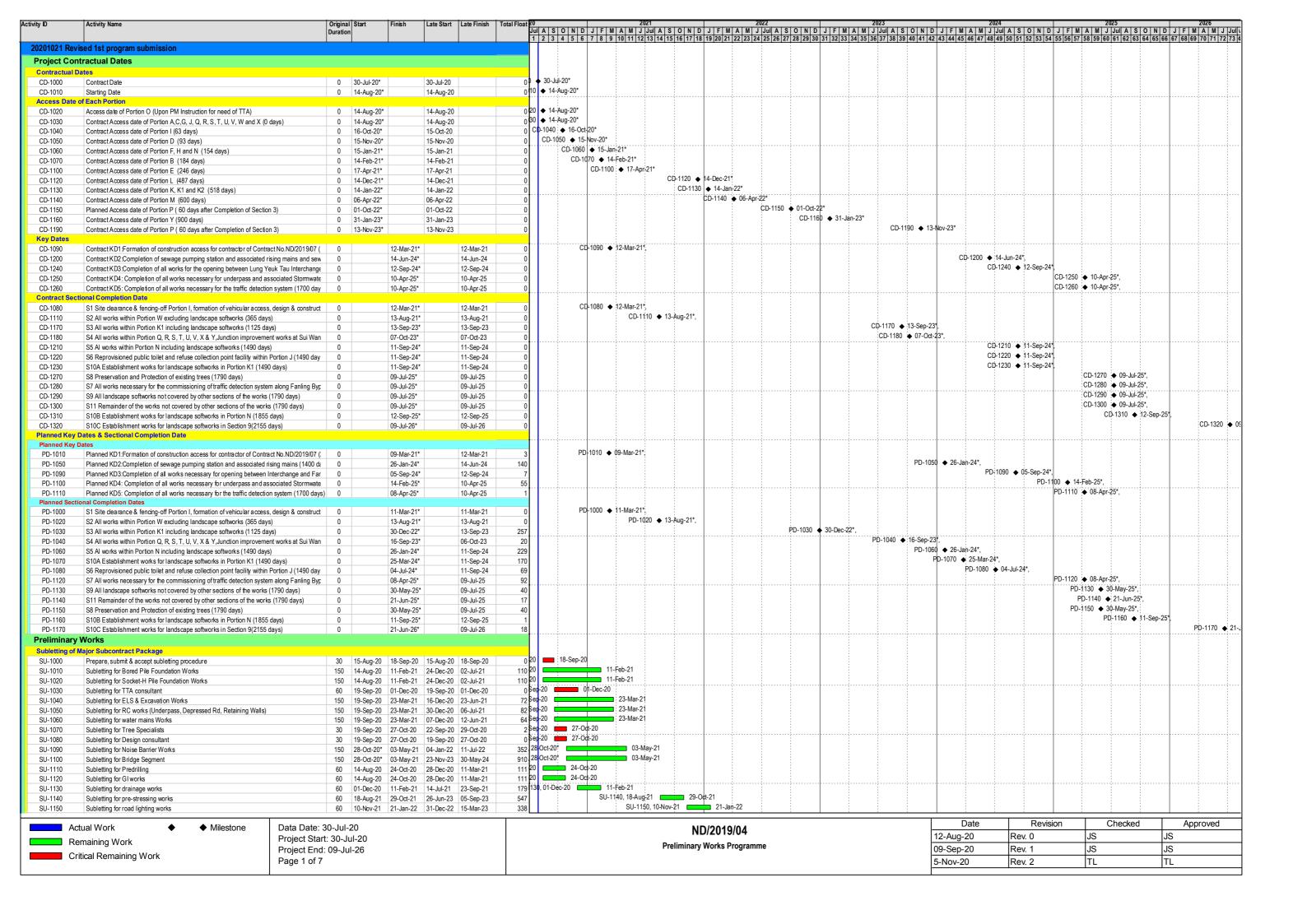
ID 6	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack 9	% Complete Risk	k Allowance 2020 2021 2022 2023 H2 H1 H2 H1 H2 H1 H2 H1 H2 H1
74	Installation of GMS roofing structure with recycle timber	30 days	Tue 21/5/25	Wed 21/6/23	273SS+21 days,272	278	20 days	0%	116 112 112 112 112 11
275	Construction of Channel	80 days	Sat 21/1/9	Mon 21/3/29	79,261SS	276SS,278	106 days		7 days
276	Construction of enames Construction of walkway	90 days	Sat 21/1/9	Thu 21/4/8	275SS	277FF,278	96 days		7 days
				Thu 21/4/8	276FF	278	96 days	0%	72533
277	Construction of entry landing with drop bar	45 days	Tue 21/2/23			2/0	-		
78	Completion of Section 8 of the works	0 days	Mon 21/7/12	Mon 21/7/12	263,270,274,275,276,277		1 day	0%	
279									
280	12. Section 9 of the works (Portions 11,11A,11B, 12,12A~12D, and	637 days	Sat 20/1/18	Sat 21/10/16			839 days	44%	
	15,15A~15C)								
281 🗸	Site Access in Portions 11A, 11B, 12A, 12C, 12D, 15B, 15C	0 days	Sat 20/1/18	Sat 20/1/18	6	287,285SS	0 days	100%	
282 🗸	Site Access in Portion 15A	0 days	Thu 20/5/7	Thu 20/5/7	9	285FF+20 days	0 days	100%	
283	Site Access in Portions 11, 12, 12B	0 days	Sun 20/10/18	Sun 20/10/18	14	285FF+20 days	0 days	100%	
204	Site Access in Portion 15	0 days	Mon 21/1/18	Mon 21/1/18	17	285FF+20 days	0 days	100%	
284	General site clearance / demolition work / Removal of Asbesto	320 days	Wed 20/3/25	Sun 21/2/7	281SS,282FF+20	297	272 days	90%	11,
203	Containing Material & Dioxin Contaminated	320 days	Wed 20/3/23	3011 21/2/1	days,283FF+20 days,284FF+2		272 days	3070	(contractor of 2)
	Containing Material & Bloxin Containinated				days	•			
86	Wetland Restoration / Wetland Creation	265 days	Sat 20/12/26	Thu 21/9/16	/-		869 days	60%	
		150 days	Sat 20/12/26	Mon 21/5/24	281,54,52	288SS+45 days,291SS+80 days	984 days	70%	The state of the s
	Excavation							70%	Parameter (10)
88	Backfilling	150 days	Tue 21/2/9	Thu 21/7/8	287SS+45 days	289SS+120 days,294SS+100 days			
89	Agricultural Planting	100 days	Wed 21/6/9	Thu 21/9/16	288SS+120 days	297	51 days	30%	
90	Construction of storage sheds	210 days	Tue 21/3/16	Mon 21/10/11			75 days	12%	
91	Construction of concrete structure	180 days	Tue 21/3/16	Sat 21/9/11	287SS+80 days	292SS+45 days,293	26 days	20%	
92	Installation of Alluminium Window/Lourvre and GMS Door	100 days	Fri 21/4/30	Sat 21/8/7	291SS+45 days	293SS+21 days	140 days	0%	
	with recycle timber decoration	-,-			•				
293	Installation of GMS roofing structure with recycle timber	30 days	Sun 21/9/12	Mon 21/10/11	292SS+21 days,291	297	26 days	0%	3 days
294	Construction of Channel	150 days	Thu 21/5/20	Sat 21/10/16	288SS+100 days,79	295SS,297	21 days	30%	4 days
295	Construction of walkway	150 days	Thu 21/5/20	Sat 21/10/16	294SS	296FF,297	21 days	0%	4 days
.95 !96	Construction of warkway Construction of entry landing with drop bar	=	Thu 21/9/2	Sat 21/10/16	295FF	297	21 days	0%	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		45 days				231			
297	Completion of Section 9 of the works	0 days	Sat 21/10/16	Sat 21/10/16	289,293,294,295,296,285		21 days	0%	
98									
99	13. Section 10 of the works (Portion 21)	684 days	Mon 21/1/18	Sat 22/12/3			-156 days	0%	
800	Site Access in Portion 21	0 days	Mon 21/1/18	Mon 21/1/18	17	301	-156 days	0%	→
01	Local Objection for commencement of Works	166 days	Tue 21/1/19	Sat 21/7/3	300	302	-156 days	0%	
302	General site clearance / demolition work / Removal of Asbesto	14 days	Sun 21/7/4	Sat 21/7/17	301	303	-156 days	0%	
-	Containing Material	1- days	July 22/1/7	556 21/1/11	501	555		2,0	
303	Erect site hoarding	14 days	Sun 21/7/18	Sat 21/7/31	302	305	-156 days	0%	
304	Archaeological Impacts Mitigation Measures	180 days	Sun 21/8/1	Thu 22/1/27	302	505	-156 days	0%	
		-			202	205			
305	Archaeological survey	120 days	Sun 21/8/1	Sun 21/11/28	303	306	-156 days	0%	
306	Archaeological impact assessment	60 days	Mon 21/11/29	Thu 22/1/27	305	308	-156 days	0%	light in the second sec
307	Site formation work and infrastructure works at Wa Shan	310 days	Fri 22/1/28	Sat 22/12/3			-156 days	0%	
808	Site formation / slope works	150 days	Fri 22/1/28	Sun 22/6/26	306	309	-156 days	0%	4 days
309	Drainage works	100 days	Mon 22/6/27	Tue 22/10/4	308	310	-156 days	0%	4 days
310	Paving block on footway	30 days	Wed 22/10/5	Thu 22/11/3	107,116,309	311	-156 days	0%	
311	bituminous pavement on carriageway	30 days	Fri 22/11/4	Sat 22/12/3	310	312FF	-156 days	0%	
	· · · · · · · · · · · · · · · · · · ·	•			311FF	31211	-156 days	0%	A
312	Completion of Section 10 of the works	0 days	Thu 22/6/30	Thu 22/6/30	2116		-130 days	U 70	•
313									
314	14. Section 11 of the works (Portions 22, 23, 24 and remainder	706 days	Tue 19/12/31	Sun 21/12/5			488 days	69%	
	works)		T -0.000.00	T	_	210	0.45	1000	
15 🗸	Site Access in Portions 23, 24	0 days	Tue 19/12/31	Tue 19/12/31	7	318	0 days	100%	→
316	Site Access in Portion 22	0 days	Wed 20/5/13	Wed 20/5/13	10	329,331	0 days	100%	<u> </u>
317	Egretray Site Protion 23 & 24	657 days	Tue 20/2/18	Sun 21/12/5			488 days	62%	
18 🗸	General site clearance	30 days	Tue 20/2/18	Wed 20/3/18	315	319	0 days	100%	
19	Erect site hoarding (Deleted)	30 days	Thu 20/3/19	Fri 20/4/17	318	320	0 days	100%	
20	Preliminary Survey	40 days	Sat 20/4/18	Wed 20/5/27	319	321	0 days	100%	
	• •						•	100%	
21	Submission of mehtodology for translocation	60 days	Thu 20/5/28	Sun 20/7/26	320	322	0 days		and the second s
22	Approval of Methodology for Translocation	130 days	Mon 20/7/27	Thu 20/12/3	321	323,342	0 days	100%	Annual Cont.
23	Translocation works	30 days	Fri 20/12/4	Sat 21/1/2	322,343	324	0 days	100%	
324	Planting in Portion 23 & 24	30 days	Mon 21/5/10	Tue 21/6/8	323	325	0 days	100%	
325	Provision of Railing and Gate at Portion 23 (Under PMI 026 /	90 days	Wed 21/6/9	Mon 21/9/6	324	326	488 days	40%	
	CE 019)								
26	Establishmnet of A1-7FLN Egretray Site (Portion 23)	90 days	Tue 21/9/7	Sun 21/12/5	325	327FS-200 days	488 days	0%	10 days
27	Establishment of B1-7FLN Egretray Site (Portion 24)	90 days	Thu 21/5/20	Tue 21/8/17	326FS-200 days	332	488 days	0%	10 days
328	,,,,	/-	, -,	- , -,					
	Preparation Works for Landscaping work at existing Ho Sheung	60 days	Wed 20/11/25	Sat 21/1/23	316,331	332,330	0 days	100%	10 days
329	Heung Egretry Site (Portion 22)	ou days	AAEG 50/11/52	201 K1/1/43	710,221	332,330	o uays	10070	20 00,0
330 🗸	Planting for Ho Sheung Heung Egretry Site	14 days	Sun 21/1/24	Sat 21/2/6	329		0 days	100%	
30 🗸	Fighting for the Shedrig Hedrig Egretty Site	14 uays	Juil 21/1/24	Jal 21/2/0	323		o days	10070	
		11					17.	r .	D
vised Programm	e: July 2021		Summ	ary	Rolled Up M	ilestone 🔷 Exter	rnal Tasks		Progress
	Critical Task		Rolled	Up Task	Rolled Up Pr	ogress Proje	ect Summary	-	Peadline
_				1					
Date: 2021-7	-3 Milestone	A	Dallad	Up Critical Task	Split	Grou	up By Summary		

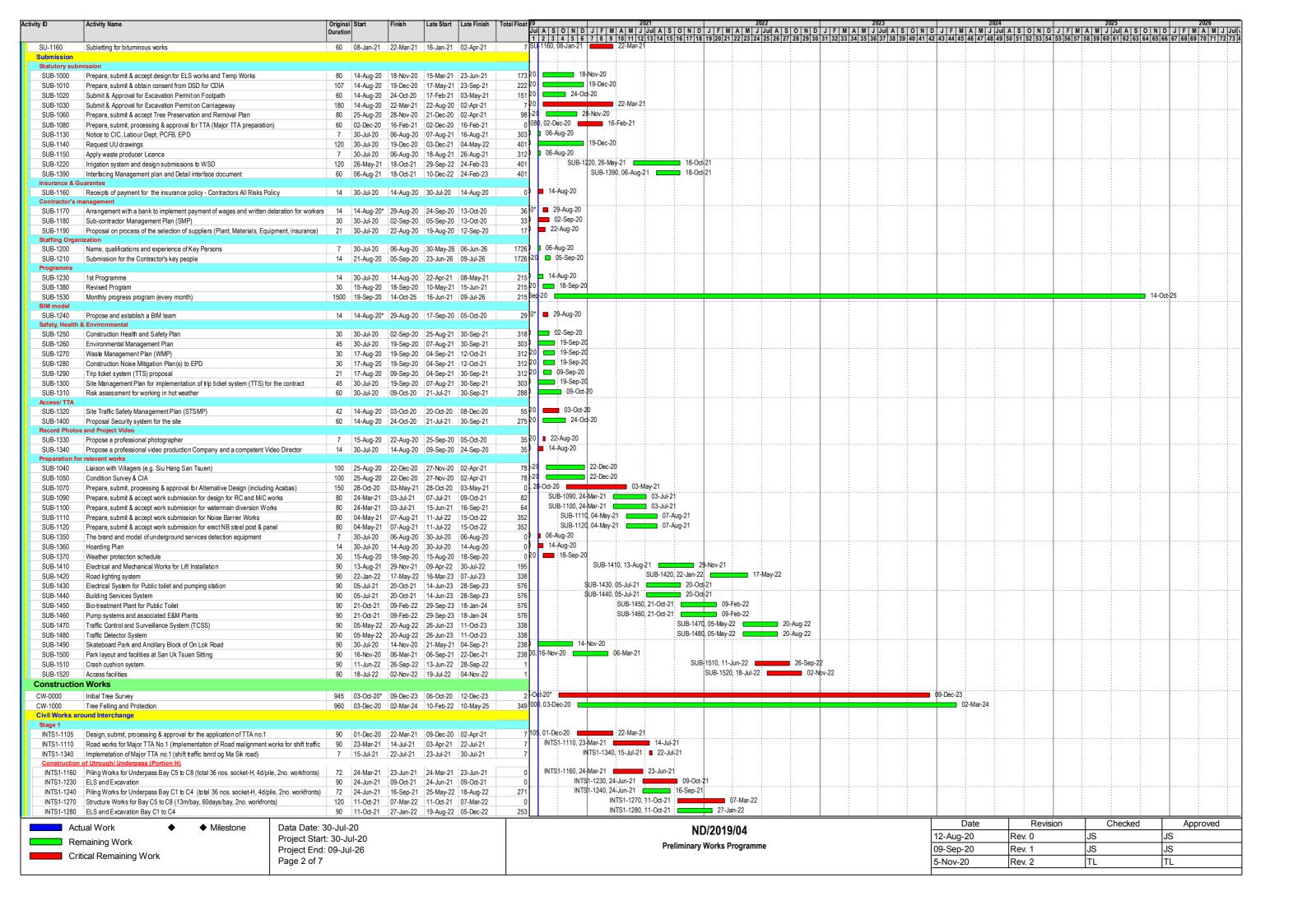
Contract No. ND/2019/03

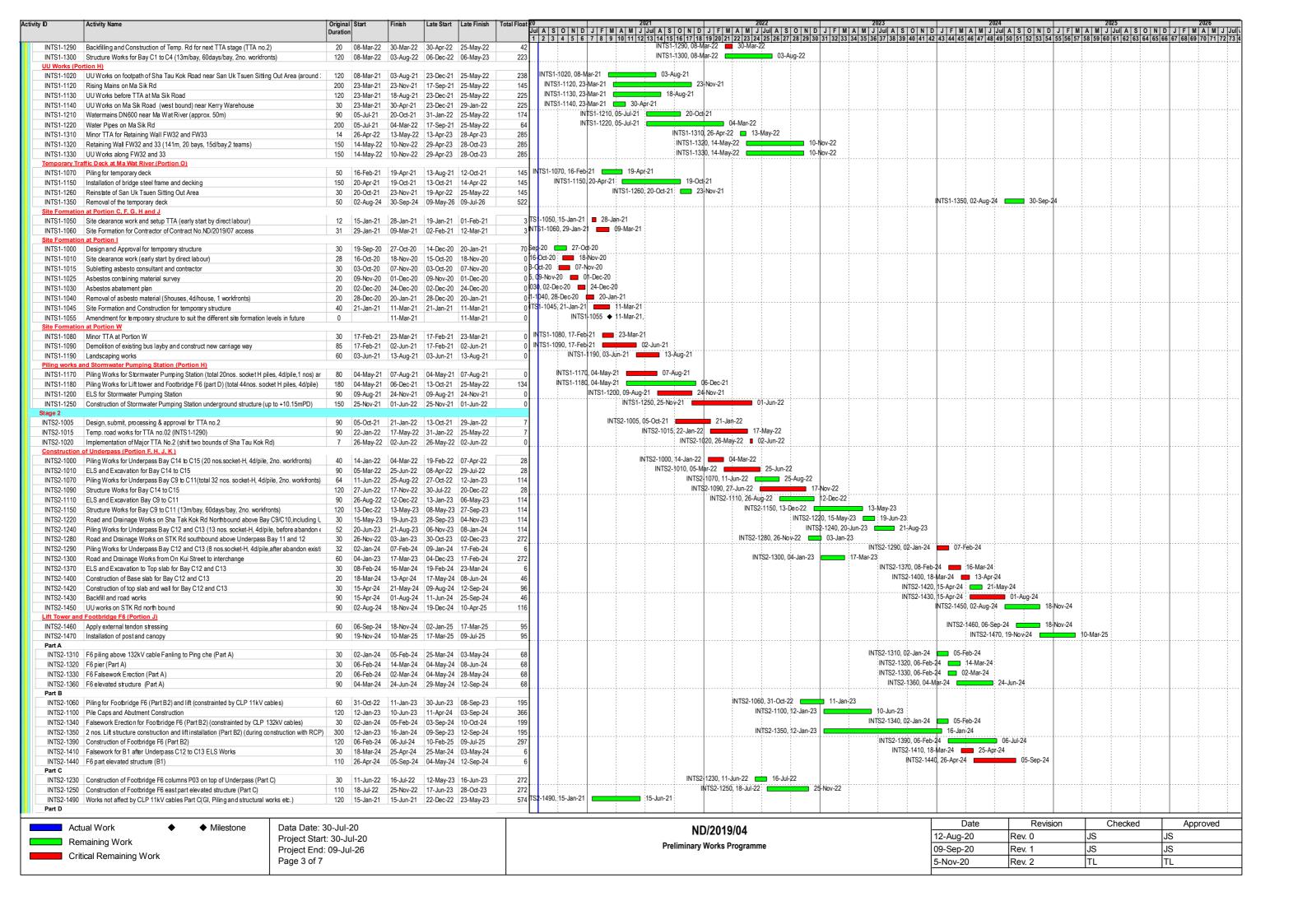
Sang Hing - Kuly Joint Venture

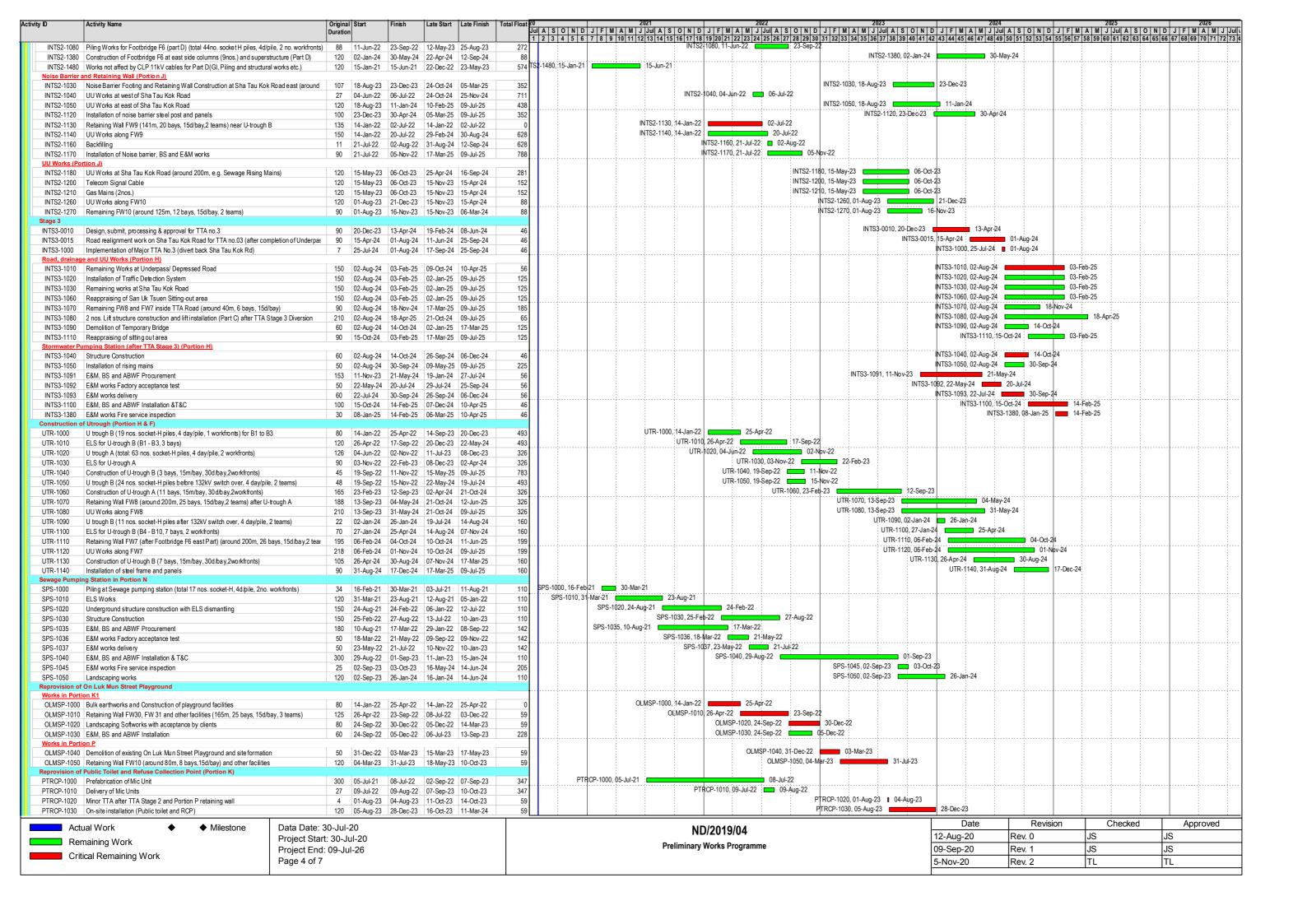
Kwu Tung North and Fanling North New Development Areas, Phase 1 : Development of Long Valley Nature Park Project Programme of the Works

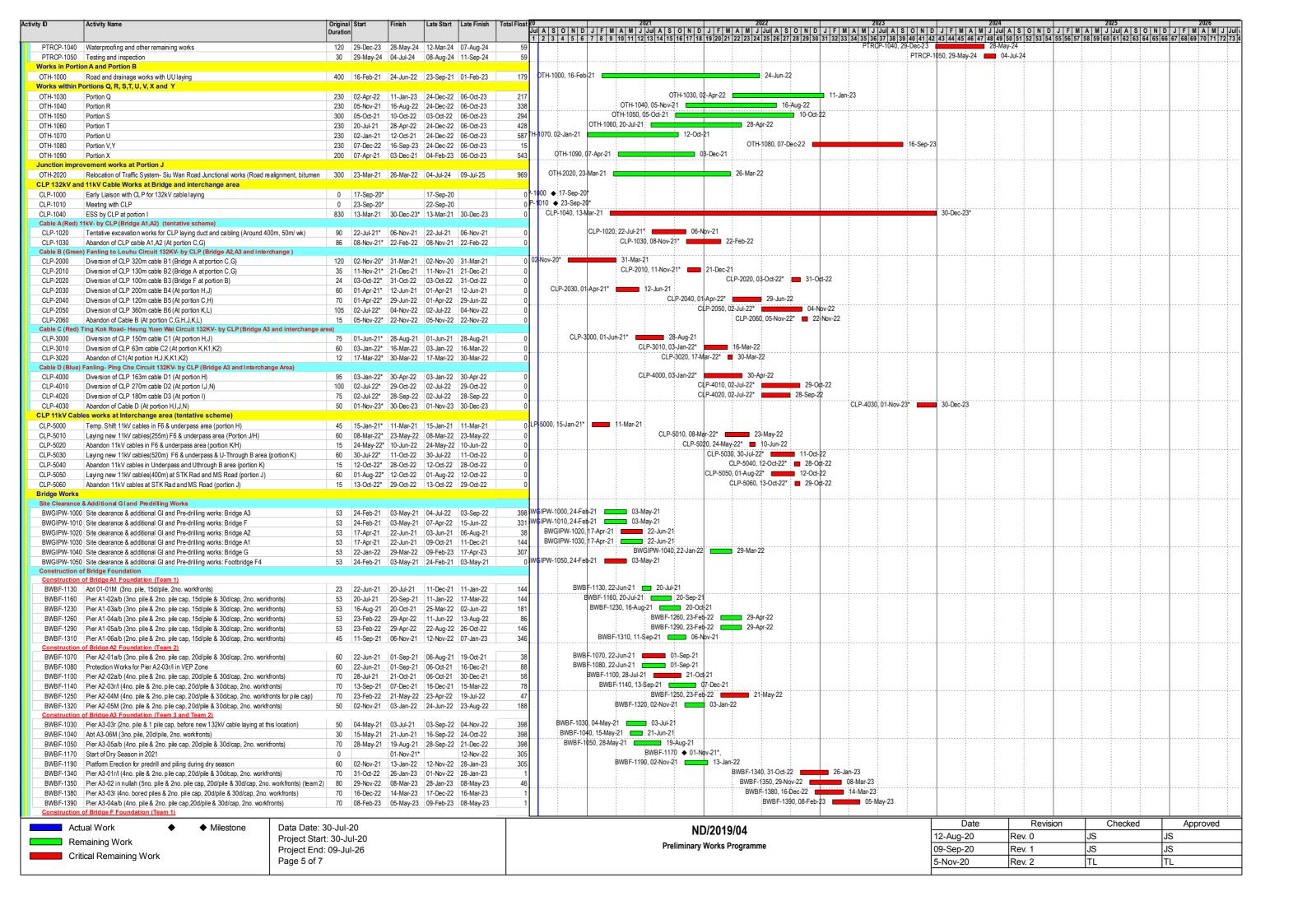
ID	Task Name	Duration	Start	Finish	Predecessors	Successors	Total Slack	% Complete	Risk Allowance		2020		2021	10 - 0	2022		2023	
0										H2	H1	H2	H1	H2	H1	H2	H1	H2
331 🗸	Compensation Event No. 017 - Removal of Existing Unsafe Sheds	50 days	Tue 20/10/6	Tue 20/11/24	316	329	0 days	100%										
332	Completion of Section 11 of the works	0 days	Tue 21/8/17	Tue 21/8/17	329,327	335	488 days	0%						•				
33 34	15. Section 11A of the works (Establishment works for Section 11) $$	1050 days	Fri 21/1/1	Thu 23/11/16			78 days	74%					•	-			_	
35	Establishment works	365 days	Wed 21/8/18	Wed 22/8/17	332		534 days	0%										
336	Compensation Event No. 15 Provisionof Decoys and Broadcast of Bird Sound in Portions 23 & 24	1050 days	Fri 21/1/1	Thu 23/11/16		337	0 days	100%										
337 33	Completion of Section 11A of the works	0 days	Thu 23/11/16	Thu 23/11/16	336		32 days	0%			.					,		8
339	16. Section 12 of the works (Portions 25, 26 and 27)	284 days	Wed 20/3/18	Sun 20/12/27			0 days	100%					-					
40 🗸	Site Access in Portions 25, 26, 27	0 days	Wed 20/3/18	Wed 20/3/18	3FS+90 days	341FS+60 days	0 days	100%			•							
41	Boundary Site Area	60 days	Mon 20/5/18	Thu 20/7/16	340FS+60 days		0 days	100%					_13					
42	Preparation for translocation works	4 days	Fri 20/12/4	Mon 20/12/7	322	346,343	0 days	100%				MANUAL CONTRACTOR	i i i					
43	Compensation Event No. 11 - Translocation of Rose Bitterling	20 days	Tue 20/12/8	Sun 20/12/27	342	323	0 days	100%										
44	Collection site C1 (Portion 25)	5 days	Mon 20/12/14	Fri 20/12/18	345	347FF	0 days	100%										
45	Collection site C2 (Portion 26)	3 days	Fri 20/12/11	Sun 20/12/13	346	347FF,344	0 days	100%										
46	Collcetion site C3 (Portion 27)	3 days	Tue 20/12/8	Thu 20/12/10	342	347FF,345	0 days	100%										
47	Completion of Section 12 of the works	0 days	Fri 20/12/18	Fri 20/12/18	344FF,345FF,346FF		0 days	100%					•4					

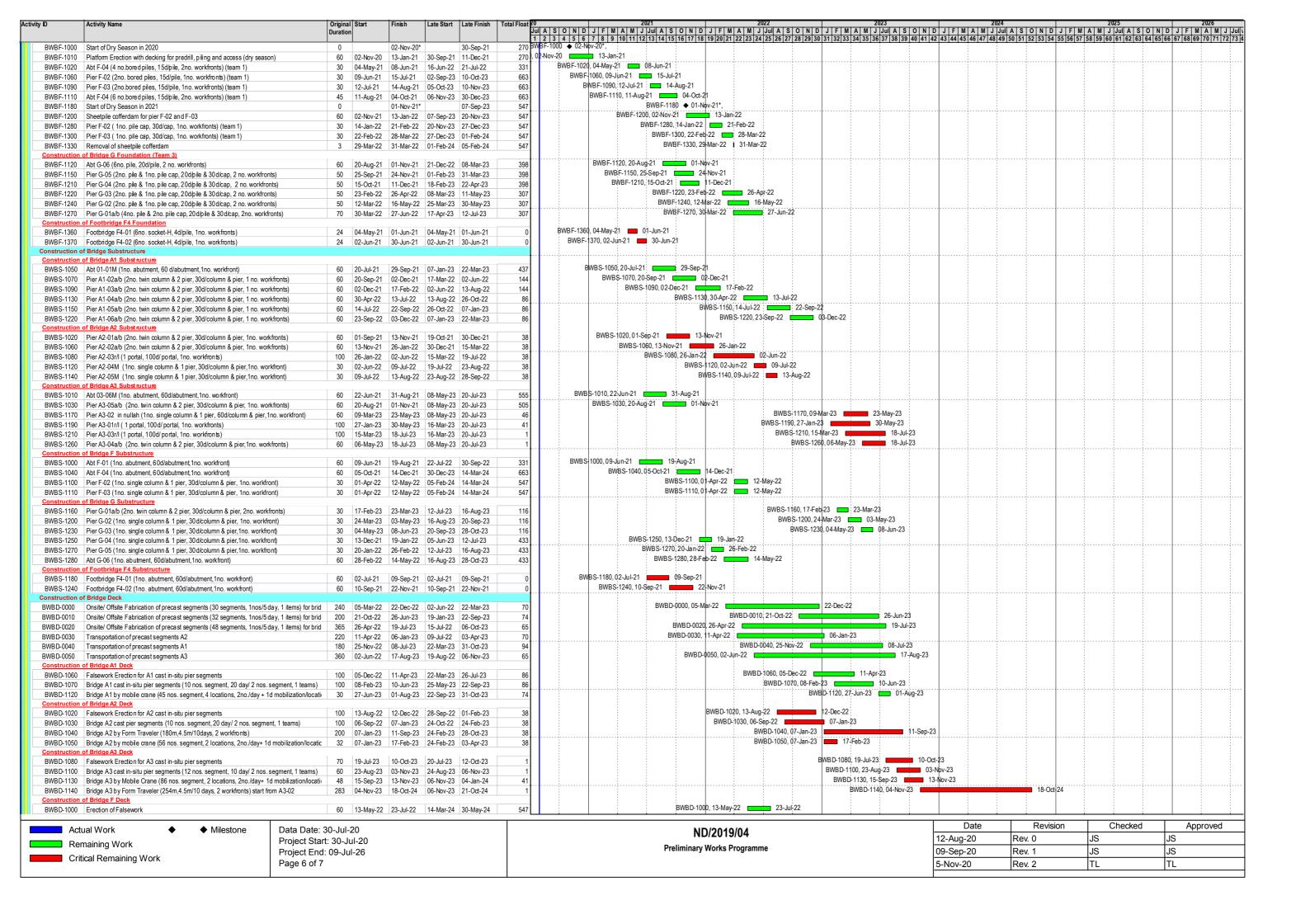


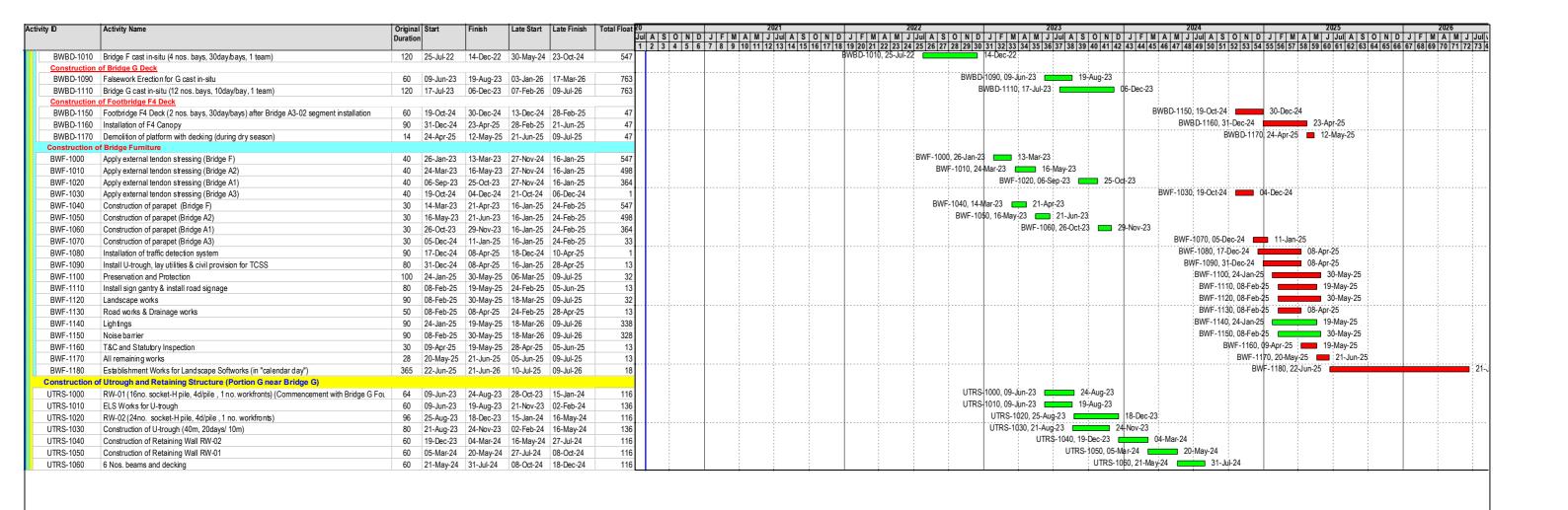












Actual Work

Remaining Work

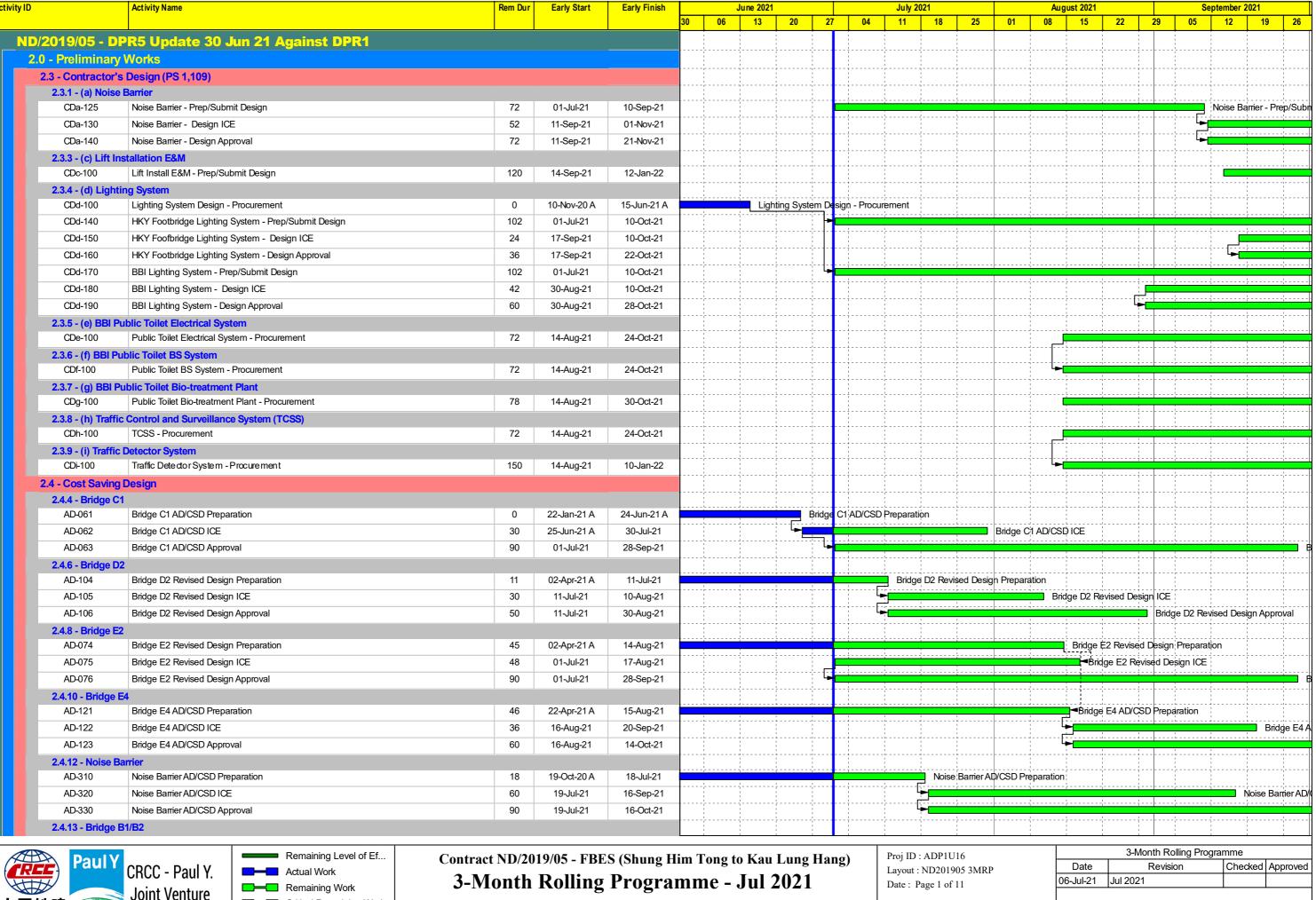
Critical Remaining Work

Data Date: 30-Jul-20 Project Start: 30-Jul-20 Project End: 09-Jul-26 Page 7 of 7

Milestone

ND/2019/04
Preliminary Works Programme

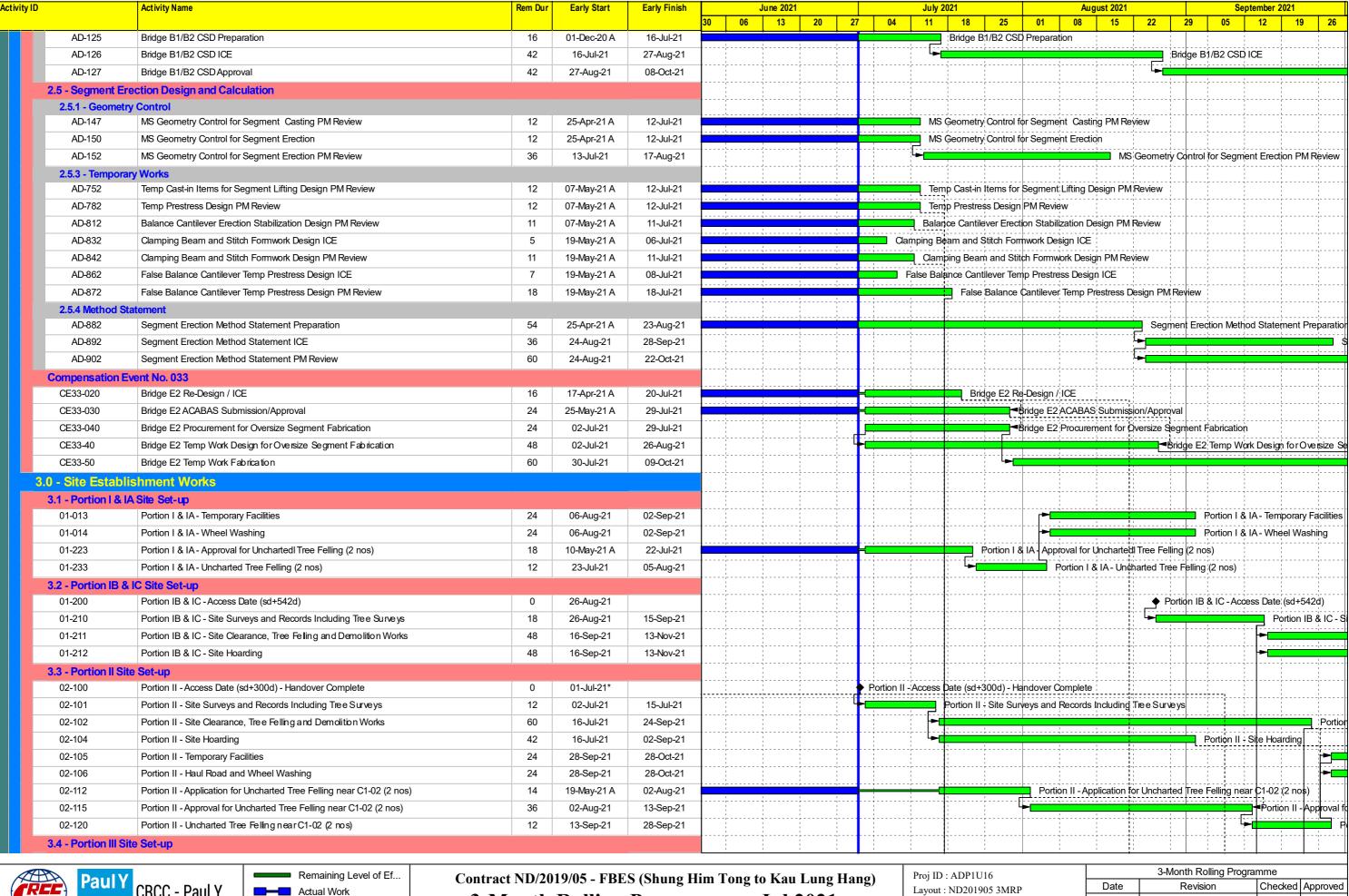
Date	Revision	Checked	Approved
12-Aug-20	Rev. 0	JS	JS
09-Sep-20	Rev. 1	JS	JS
5-Nov-20	Rev. 2	TL	TL
	-		I .





Critical Remaining Work Milestone

3-Month Rolling Frogramme			
Date Revision		Checked	Approved
06-Jul-21	Jul 2021		



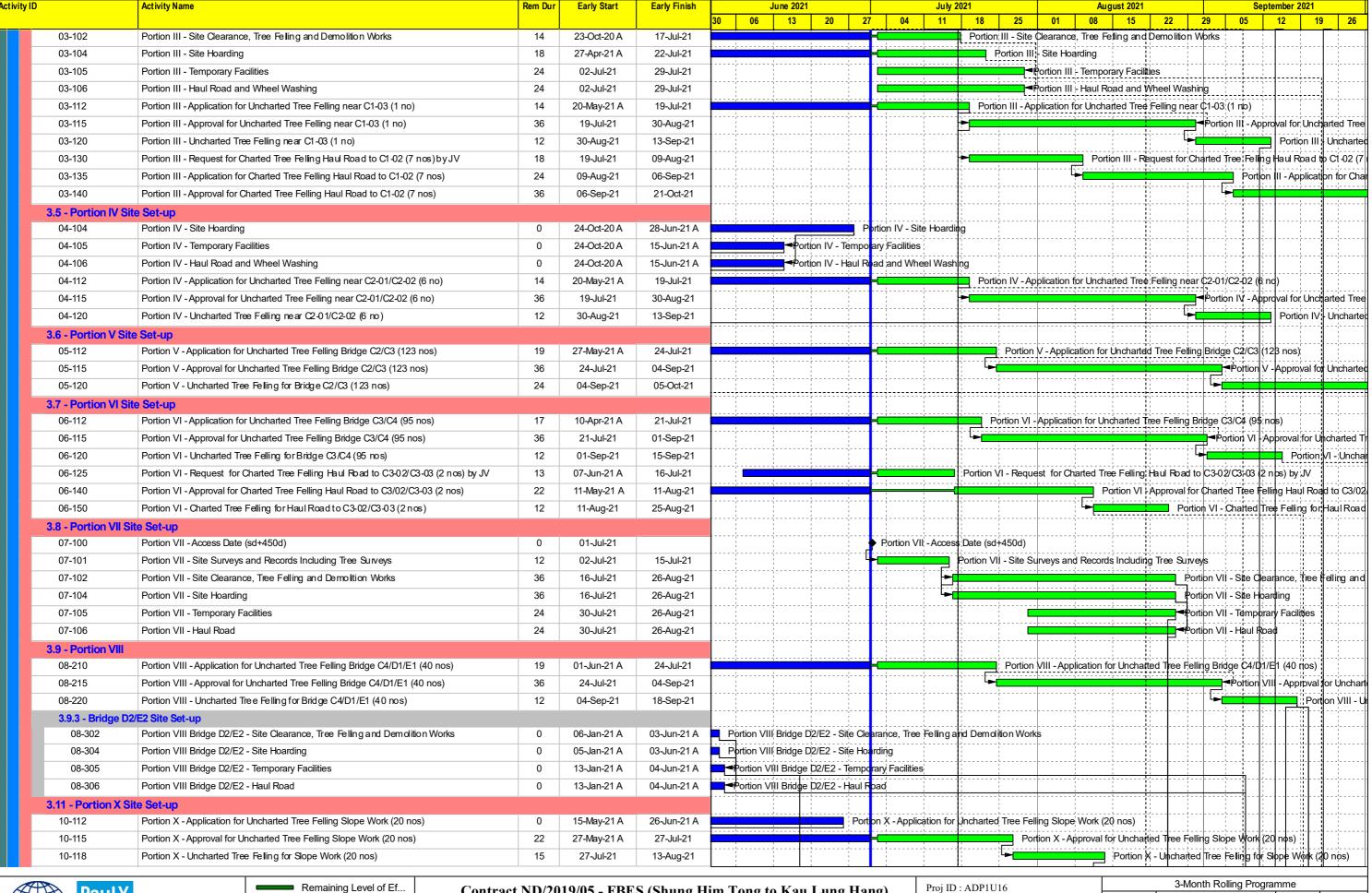


Remaining Work Critical Remaining Work Milestone

3-Month Rolling Programme - Jul 2021

Date: Page 2 of 11

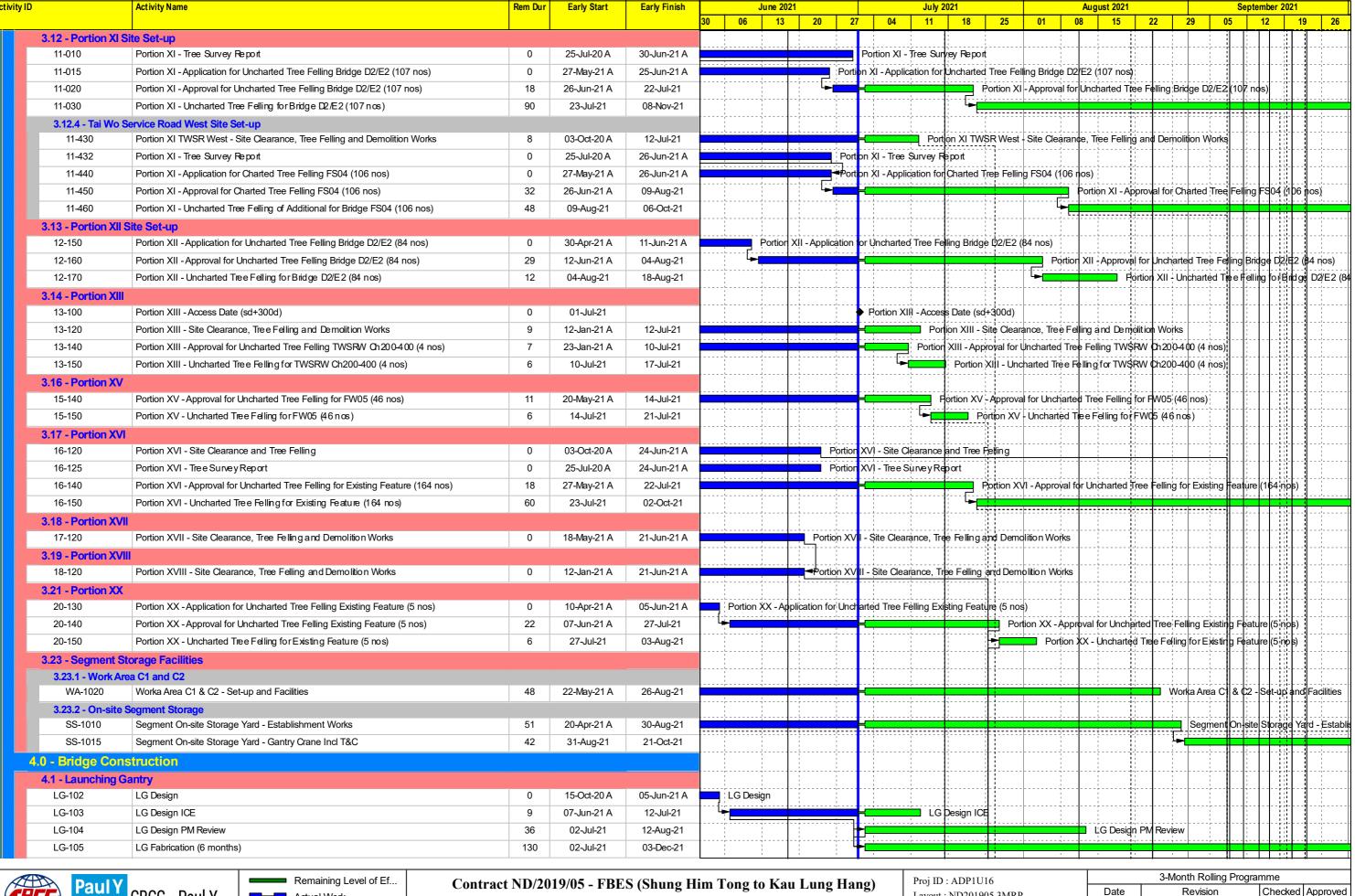
06-Jul-21 Jul 2021





Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)
3-Month Rolling Programme - Jul 2021

Layout: ND201905 3MRP Date: Page 3 of 11 Date Revision Checked Approved 06-Jul-21 Jul 2021

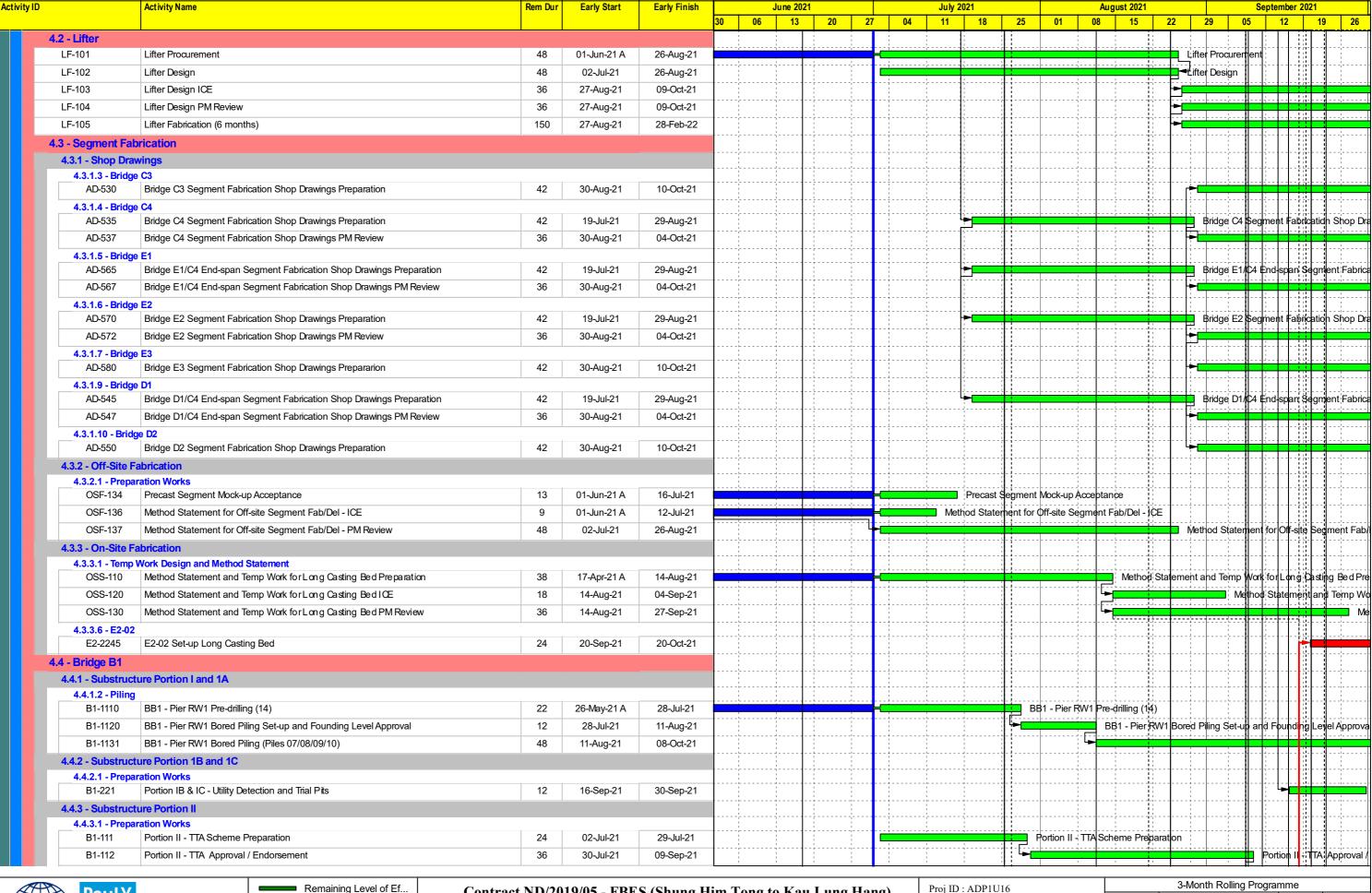




Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)
3-Month Rolling Programme - Jul 2021

Layout: ND201905 3MRP Date: Page 4 of 11

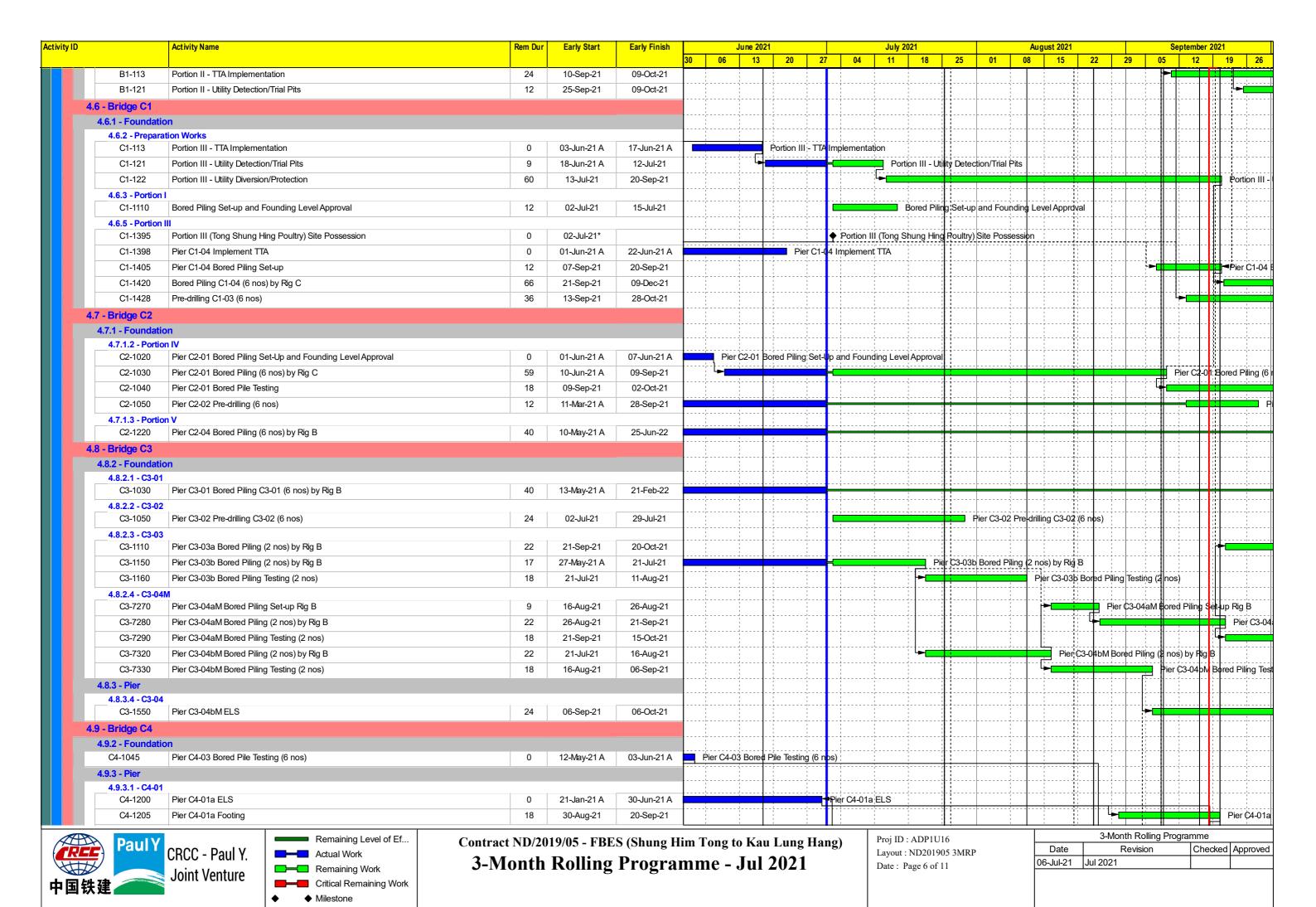
Date	Revision	Checked	Approved
06-Jul-21	Jul 2021		

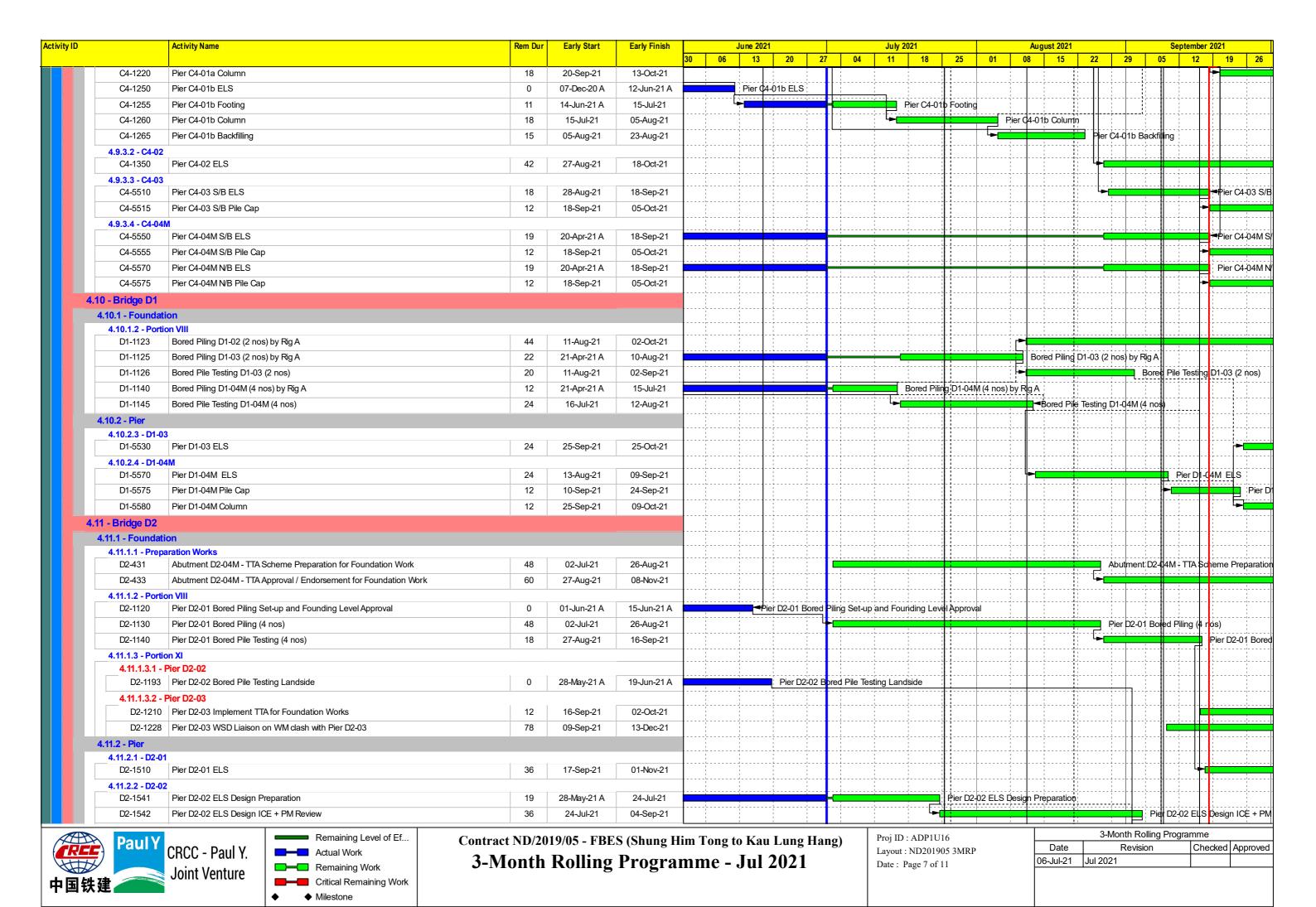


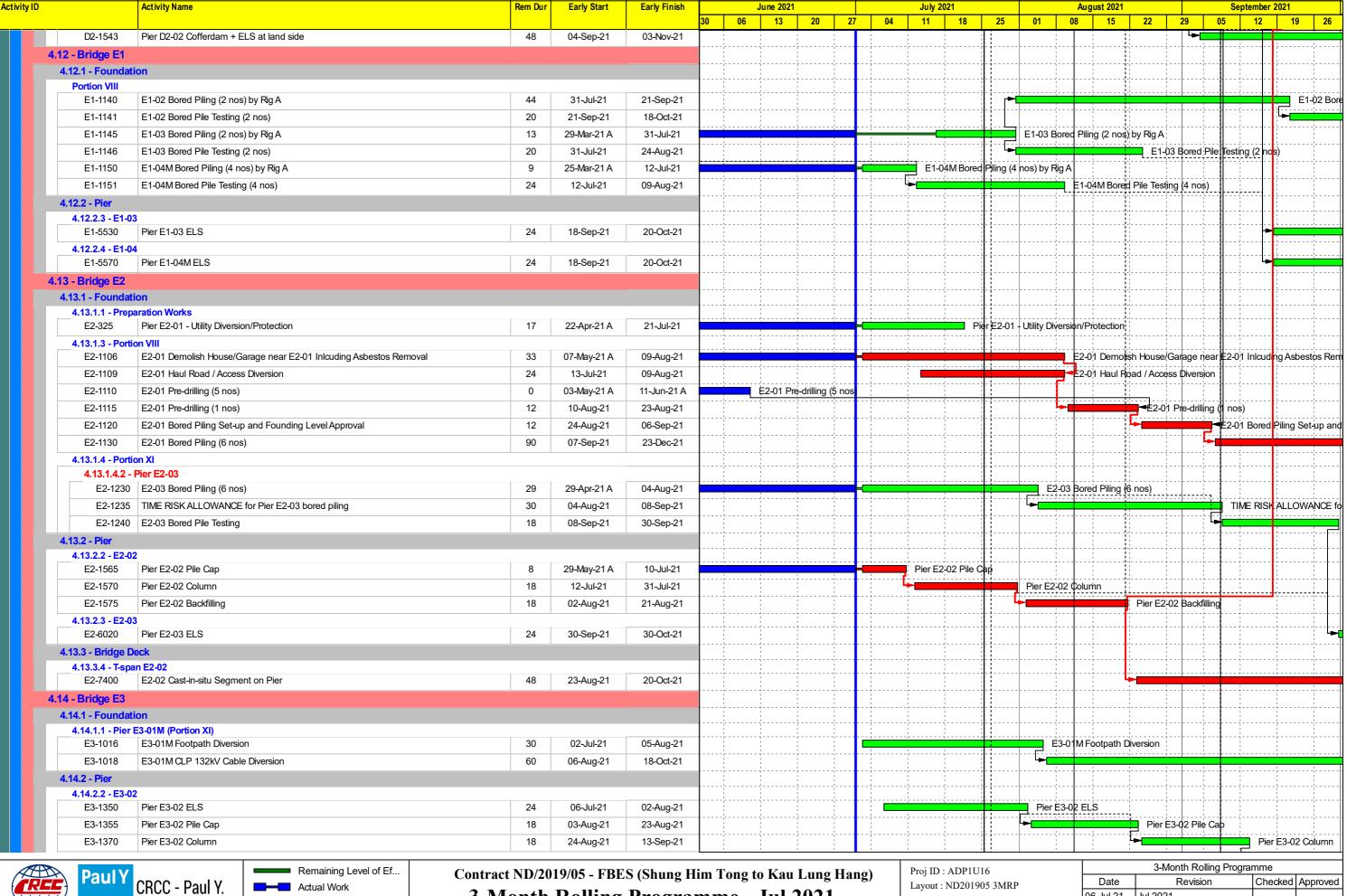


Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)
3-Month Rolling Programme - Jul 2021

Proj ID: ADP1U16 Layout: ND201905 3MRP Date: Page 5 of 11 Date Revision Checked Approved
06-Jul-21 Jul 2021







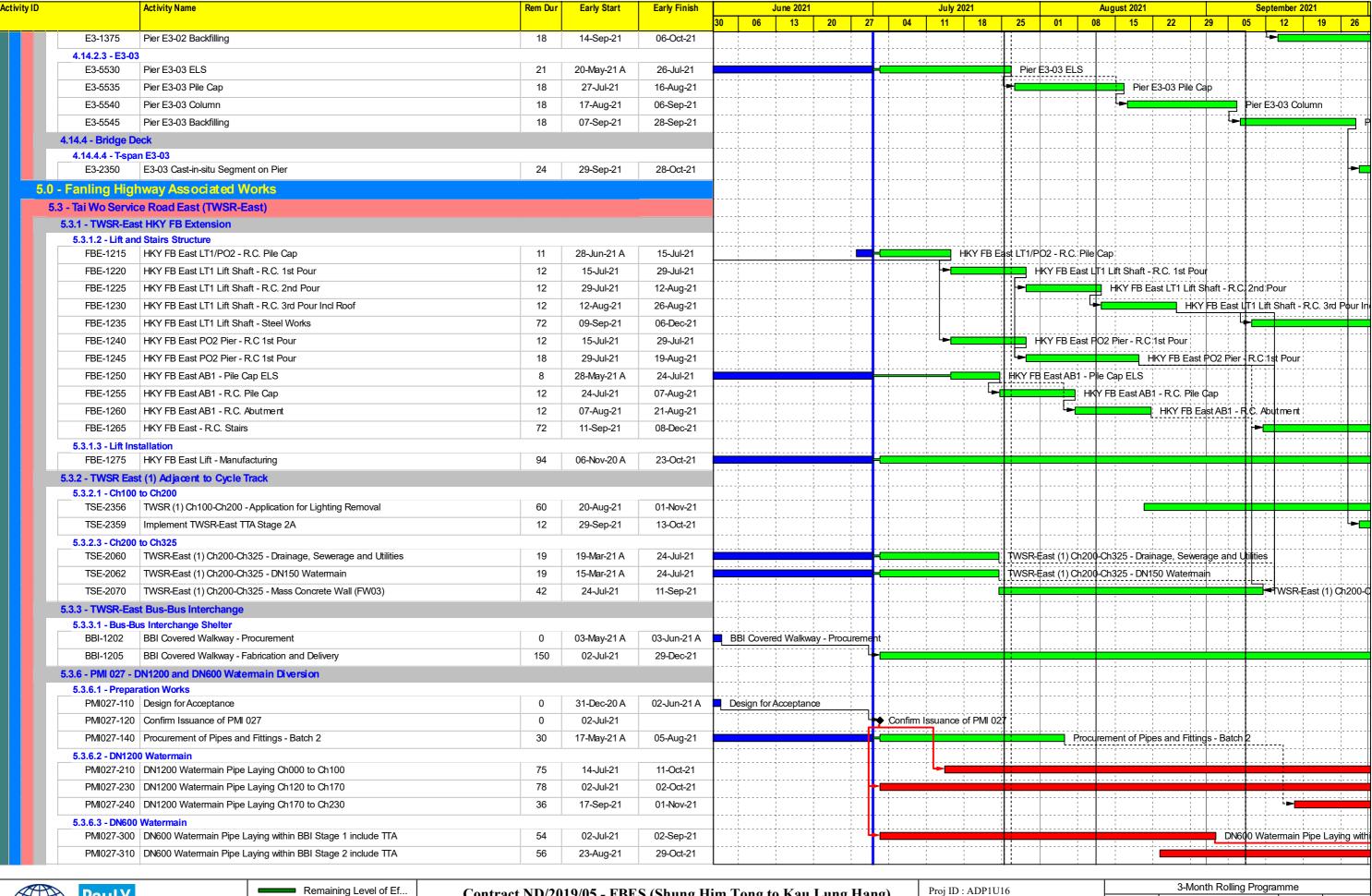


Remaining Work Critical Remaining Work Milestone

3-Month Rolling Programme - Jul 2021

Date: Page 8 of 11

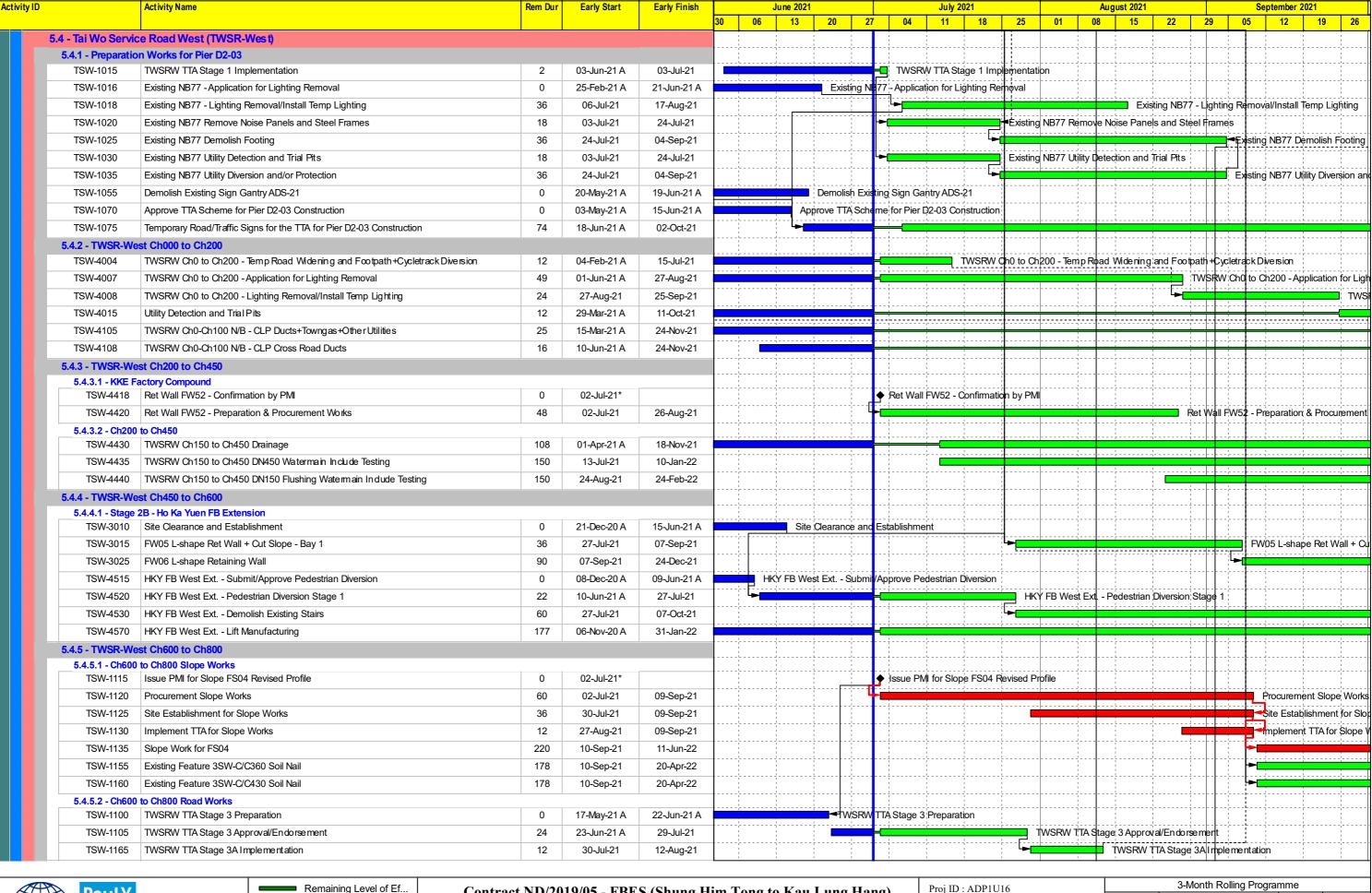
06-Jul-21 | Jul 2021





Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)
3-Month Rolling Programme - Jul 2021

Proj ID : ADP1U16 Layout : ND201905 3MRP Date : Page 9 of 11 Date Revision Checked Approved
06-Jul-21 Jul 2021





Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)
3-Month Rolling Programme - Jul 2021

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Date	Revision	Checked	Approved
06-Jul-21	Jul 2021		







Contract ND/2019/05 - FBES (Shung Him Tong to Kau Lung Hang)
3-Month Rolling Programme - Jul 2021

Proj ID : ADP1U16 Layout : ND201905 3MRP Date : Page 11 of 11

3-Month Rolling Programme			
Date	Revision	Checked	Approved
06-Jul-21	Jul 2021		

Contract No. ND/2019/07 Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works 7 08-Jul-21 15-Jul-21 0 Actual Access Date Possesion of Portion I (CE008) (Possession date TBC) 08-Jul-21 Possesion of Portion I (CE008) (Possession date TBC) ACD1010 Possesion of Portion II (South Part) (CE016) (Possession date TBC) 0 08-Jul-21* -121 Possesion of Portion II (South Part) (CE016) (Possession date TBC) ACD1020 Possesion of Portion III (Possession date TBC) 0 08-Jul-21* Possesion of Portion III (Possession date TBC) ACD1030 Possesion of Portion IV 0 15-Jul-21* Presession of Portion IV ACD1040 Possesion of Portion V Possesion of Portion V Preliminaries, Contractor's Design, Method Statement Submission and Approval 435 16-Sep-20 A 24-Nov-21 36 General Submission PGS1200 Preparation and approval of TTA scheme and traffic impact assessment(PS1.16) 290 30-Dec-20 A 15-Oct-21 0 Preparation and approval of TTA scheme and traffic impact ■ Prepare & submit the Temporary Drainage Management Plan(PS 1.24) PGS1210 Prepare & submit the Temporary Drainage Management Plan(PS 1,24) 180 09-Feb-21 A 07-Aug-21 -2 PGS1230 Submission of construction impact assessment (CIA) (PS 1 108) 45 08-Jul-21 21-Aug-21 83 Submission of construction impact assessment (CIA) (PS 1.108) Design for road lighting system 04-Oct-21 11-Oct-21 288 Time risk allowance for Design for road lighting system PWD1025 PWD1030 30-Aug-21 24-Nov-21 315 Design for irrigation system 83 08-Jul-21 12-Oct-21 178 Major Temporary Works Design TWD1030 ELS design for pipe laying works on Ma Sik Road 08-Jul-21 15-Sep-21 39 ■ Time risk allowance for ELS design for pipe laying works on Ma Sik Road TWD1035 Time risk allowance for ELS design for pipe laving works on Ma Sik Road 7 16-Sep-21 23-Sep-21 39 TWD1050 ELS design for construction of foundation of noise barrier 60 04-Aug-21 12-Oct-21 178 TWD1060 Formwork design for construction of noise barrier 45 20-Aug-21 11-Oct-21 179 Formwork design for construction of noise barrier Major Construction Works Method Statement Method Statement for tree transplanting works MS1560 Method statement submission and approval for construction of drainage and sewerage works 60 08-Jul-21 15-Sep-21 109 Method statement submission and approval for construction of drainage and sewerage works Method statement submission and approval for piling works MS1570 Method statement submission and approval for piling works 35 05-Aug-21 14-Sep-21 149 Method statement submission and approval for construction of noise barrier 60 15-Sep-21 23-Nov-21 149 Tendering and Procurement for Major Subcontractor TDS1067 140 16-Mar-21 A 25-Aug-21 310 Subletting for piling works TDS1070 Subletting for road works 120 26-Mar-21 A 12-Aug-21 28 100 05-May-21 A 28-Aug-21 315 TDS1110 Subletting for irrigation system works Subletting for irrigation system works Subletting for supply and installation of noise barrier post and panels TDS1140 50 09-Sep-21 05-Nov-21 107 Tree Works and Submission of the tree survey report and tree preservation and removal propi 347 29-Jan-21 A 10-Jan-22 224 Prepare & submit the tree survey report and tree preservation and removal proposal (TPRP) (FL-G14.7) (Partial) 63i 132 26-Apr-21 A 02-Oct-21 Prepare & submit the tree survey report and tree preservation and removal proposal (TPRP) (F TWS0920 30 04-Oct-21 08-Nov-21 44 Tree felling works (FL-G14.7) (Partial) 63nos Tree survey and tree risk assessment (FL-G14.7) (Remaining) TWS0930 Tree survey and tree risk assessment (FL-G14.7) (Remaining) 15-Jul-21 23-Jul-21 2 TWS0940 Prepare & submit the tree survey report and tree preservation and removal proposal (TPRP) (FL-G14.7) (Remaining 108 24-Jul-21 30-Nov-21 24 Tree Works in Area FL-G14.9 TWS1070 Prepare & submit the tree preservation and removal proposal (TPRP) (FL-G14.9) 140 29-Jan-21 A 23-Jul-21 -58 Tree felling works (FL-G14.9 TWS1080 Tree felling works (FL-G14.9) 30 24-Jul-21 27-Aug-21 -58 Tree Works in Area FL-G14.10 TWS1100 Prepare & submit the tree survey report and tree preservation and removal proposal (TPRP) (FL-G14.10) 150 01-Feb-21 A 06-Aug-21 -15 Prepare & submit the tree survey report and tree preservation and removal proposal (TPRP) (FL-G14.10) TWS1110 Tree felling works (FL-G14 10) 30 07-Aug-21 10-Sep-21 -152 Prepare & submit the tree survey report and tree preservation and removal proposal (TPRP) (FL-G14.) TWS1140 Tree Works in Area FL-G14.1 TWS1170 Tree felling works (FL-G14.1) 36 30-Sep-21 12-Nov-21 -22 Tree Works on Ma Sik Road Tree felling works (Ma Sik Road) (before Noise Barrier Construction) 80 05-Oct-21 10-Jan-22 18 TWS1210 Tree transplanting works at the side of road (9nos) (before noise barrier construction) 80 25-Sep-21 13-Dec-21 235 180 11-May-21 A 13-Dec-21 230 Section 1- Site Formation and Infrastructure Works in Area A Site Formation (Portion II- Area A 21900m2) Diversion of existing utilities and services (84m LV Cables to be abandon 75 11-May-21 A 09-Aug-21 -47 Diversion of existing utilities and services (250m PCCW Ducts to be abandor S1-SF1304 Diversion of existing utilities and services (250m PCCW Ducts to be abandon) S1-SF1392 Erection of hoarding along the site boundary (339m) (After tree felled) 50 11-Sep-21 11-Nov-21 S1-SF1394 Site clearance (Southern part) 11-Sep-21 07-Dec-21 -152 S1-SF1396 Construction of haul road (Southern part 72 17-Sep-21 13-Dec-21 -152 Site Formation (Portion III- Area A 4900m2) S1-SF1440 Cordon off work areas along the site boundary 08-Jul-21 19-Jul-21 224 Cordon off work areas along the site boundary S1-SF1450 Erection of hoarding along the site boundary (173m) 20-Jul-21 23-Aun-21 254 Erection of hoarding along the site boundary (173m) S1-SF1530 Existing utilities and services detection 20-Jul-21 30-Jul-21 224 Existing utilities and services detection S1-SF1535 Diversion of existing utilities and services if necessary 60 31-Jul-21 11-Oct-21 224 Diversion of existing utilities and services if necessar Cordon off work areas along the site boundar S1-SF1750 15-Jul-21 26-Jul-21 130 Existing utilities and services detection S1-SF1760 Existing utilities and services detection 15-Jul-21 26-Jul-21 287 S1-SF1765 27-Jul-21 10-Sep-21 30 Erection of hoarding along the site boundary (515m Erection of hoarding along the site boundary (515m) Prepare & submit the tress preservation and removal proposal (TPRP) S1-SF1768 75 27-Jul-21 25-Oct-21 130 S1-SF1770 Diversion of existing utilities and services (59m LV Cables to be abandon) 60 27-Jul-21 06-Oct-21 28 Date Revision Checked Approved Actual Work Three Month Rolling Programme (Data Date: 08-Jul-21) 中國路橋工程有阻責任公司 15-Jul-21 LDS CLX Remaining Work Page: 1 of 2 Critical Remaining Work CHINA ROAD AND BRIDGE CORPORATION Milestone

Contract No. ND/2019/07 Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works 95 08-Jul-21 29-Oct-21 -15 Box Culvert BC3 and Outfall 10 95 08-Jul-21 29-Oct-21 -158 Box Culvert BC3 (CH168 to CH216) Construction of the box culvert side wall and top slab Bay 17 (CH192 to CH204) 08-Jul-21 S1-BC0850 Construction of the box culvert side wall and top slab Bay 15 (CH168 to CH180) 20 31-Jul-21 23-Aug-21 -158 Construction of the box culvert side wall and top slab Bay 15 (CH168 to CH180) Construction of the box culvert side wall and top slab Bay 16 (CH180 to CH192) 20 24-Aug-21 15-Sep-21 -158 Construction of the box culvert side wall and top slab Bay 16 (CH180 to CH192) S1-BC0860 Construction of the box culvert base slab Bay 18 (CH214 to CH216) S1-BC0870 Construction of the box culvert base slab Bay 18 (CH214 to CH216) 15 16-Sep-21 05-Oct-21 -158 \$1-BC0880 Construction of the box culvert side wall and too slab Bay 18 (CH214 to CH216) 20 06-Oct-21 29-Oct-21 -158 Section 2- Site Formation and Infrastructure Works in Area B 234 01-Mar-21 A 10-Dec-21 -48 Site Formation and Infrastructure Works in Area B1 & B2 Site formation works Area B part 1 (16623m3) 127 01-Mar-21 A 04-Aug-21 80 06-Sep-21 10-Dec-21 -58 Site Formation Works after trees felled in FL-G14.9 33 28-Aug-21 07-Oct-21 6 S2-SF2282 Site clearance (after trees felled in FL-G14.9) 28-Aug-21 04-Sep-21 -58 Construction of haul road (after trees felled in FL-G14.9) S2-SF2302 Construction of haul road (after trees felled in FL-G14.9) 11 31-Aug-21 11-Sep-21 6 S2-SF2360 Demolition of existing structure(8nos 244m2) 20 13-Sep-21 07-Oct-21 6 Demolition of existing structure(8nos 244m2) Section 3- Site Formation and Infrastructure Works in Area C 135 15-Jul-21 22-Dec-21 10: 23-Aug-21 03-Sep-21 Diversion of existing utilities and services (27m LV Cables to be abandon Diversion of existing utilities and services (142m PCCW Ducts to be abandon) S3-SF1195 Site clearance 15-Jul-21 12-Aug-21 110 S3-SF1200 Construction of haul road 13-Aug-21 06-Sep-21 110 S3-SF1210 45 07-Sep-21 01-Nov-21 125 Trial pit and temporary diversion of utilities S3-SF1220 Asbestos survey 15-Jul-21 18-Aug-21 10 S3-SF1230 Prepare and submit asbestos report and asbestos abatement plan 25 19-Aug-21 16-Sep-21 10 Prepare and submit asbestos report and asbestos abatement plan S3-SF1240 Demolition of existing structure(21nos 1465m2) 80 17-Sep-21 22-Dec-21 10 Section 4- Site Formation and Infrastructure Works in Area D 15-Jul-21 17-Nov-21 208 S4-SF1000 27-Jul-21 10-Sep-21 45 Erection of hoarding (515m) S4-SF1010 Tree survey and tree risk assessment 27-Jul-21 18-Aug-21 -1 Prepare & submit the tree preservation and removal proposal (TPRP) 19-Aug-21 17-Nov-21 -10 S4-SF1015 S4-SF1020 Utilities detection and trial pit 21 27-Jul-21 19-Aug-21 67 S4-SF1025 Diversion of existing utilities and services (410m LV Cables to be abandon) 60 20-Aug-21 01-Nov-21 222 Diversion of S4-SF1030 Diversion of existing utilities and services (165m PCCW Ducts to be abandon) 60 20-Aug-21 01-Nov-21 222 Diversion of 135 08-Jul-21 19-Nov-21 225 Section 5- Site Formation and Infrastructure Works in Area E and Remainder of the Works Road L1 94 08-Jul-21 28-Oct-21 127 Road L1 in Portion I (P700 CH 175 to CH245) S5-RD1036 Trial pit (1nos) (PMI005) after Demolition of existing structure 08-Jul-21 50 28-Aug-21 28-Oct-21 117 S5-RD1037 Site clearance (after trees felled in FL-G14.9) Road L1 in Portion IV (P600 CH 194 to CH393, P700 CH100 to CH175) 107 15-Jul-21 19-Nov-21 15 S5-RD1140 UU detection and trial pit 23-Aug-21 07-Sep-21 123 S5-RD1141 Tree survey and tree risk assessment 15-Jul-21 30-Jul-21 90 Tree survey and tree risk assessment S5-RD1142 Prepare & submit the tree preservation and removal proposal (TPRP) 15-Jul-21 19-Oct-21 90 S5-RD1143 Asbestos survey for the existing structures 15-Jul-21 30-Jul-21 128 Asbestos survey for the existing structures S5-RD1144 Prepare and submit asbestos report and asbestos abatement plan for the existing structures 28 31-Jul-21 01-Sep-21 128 Prepare and submit asbestos report and asbestos abatement plan for the existing structures S5-RD1148 Diversion of existing utilities and services (112m LV Cables to be abandon) 60 08-Sep-21 19-Nov-21 157 S5-RD1149 Diversion of existing utilities and services (17m PCCW Ducts to be abandon) Road L1 in Portion V (P600 CH 100 to CH194) 108 15-Jul-21 30-Oct-21 -84 Possession of Portion V S5-RD1266 Tree survey and tree risk assessment 15-Jul-21 Prepare & submit the tree preservation and removal proposal (TPRP) 30-Oct-21 -123 S5-RD1267 02-Aug-21 15-Jul-21 30-Jul-21 -89 S5-RD1270 UU detection and trial pit 50 Diversion of existing utilities and services (139m PCCW Ducts to be abandon S5-RD1278 Diversion of existing utilities and services (139m PCCW Ducts to be abandon) 31-Jul-21 28-Sep-21 -43 S5-RD1280 Asbestos survey 28 31-Jul-21 01-Sep-21 -8 Asbestos survey S5-RD1290 Prepare and submit asbestos report and asbestos abatement plan 28 02-Sep-21 06-Oct-21 -89 Prepare and submit asbestos report and asbestos abatement plan Road L2 Tree survey and tree risk assessment 15-Jul-21 18-Aug-21 71 Tree survey and tree risk assessment S5-RD1460 UU detection and trial pit 14 27-Jul-21 11-Aug-21 67 UU detection and trial pit S5-RD1480 Site clearance and tree felling works Diversion of existing utilities and services (83m PCCW Ducts to be abandon) S5-RD1485 12-Aug-21 15 12-Aug-21 28-Aug-21 247 1146 31-Aug-20 A 16-Jul-24 -158 Section 6-Completion of Preservation And Protection Of Existing Trees S6-CS1000 1146 31-Aug-20 A 16-Jul-24 -158





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15-Jul-21	1	LDS	CLX

APPENDIX B ACTION AND LIMIT LEVELS

Appendix B - Action and Limit Levels

Table B-1 Action and Limit Levels for 1-hour TSP

Monitoring station	Action Level (ug/m³)	Limit Level (ug/m³)
FLN-DMS1	303	
FLN-DMS3	301	500
FLN-DMS5	279	500
KTN-DMS4	297	

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

Monitoring station	Action Level (ug/m³)	Limit Level (ug/m³)
FLN-DMS1	150	
FLN-DMS3	165	260
FLN-DMS5	153	260
KTN-DMS4	192	

Table B-3 Action and Limit Levels for Construction Noise

Time Period	Action Level	Limit Level
0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A) *

Noted:

If works are to be carried during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.

(*) reduce to 70 dB(A) for schools and 65 dB(A) during school examination periods.

Table B-4.1 Action and Limit Levels for Water Quality Monitoring⁽¹⁾

Parameters	Action Level	Limit Level
DO in mg/L (depth average)#+	5 percentile of baseline data.	4 mg/L or 1 percentile of
		baseline data.
SS in mg/L (depth averaged)*&	95 percentile of baseline data	20 mg/L or 99 percentile of
	or 120% of upstream control	baseline data or 130% of
	station.	upstream control station.
Turbidity in NTU (depth averaged)*^	95 percentile of baseline data	99 percentile of baseline data
	or 120% of upstream control	or 130% of upstream control
	station.	station.
Unionized ammonia in mg/L	95 percentile of baseline data	0.021mg/L or 99 percentile of
(depth averaged)*~	or 120% of upstream control	baseline data or 130% of
	station.	upstream control station.

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

Nitrate nitrogen in mg/L	95 percentile of baseline data	99 percentile of baseline data
(depth averaged)*^	or 120% of upstream control	or 130% of upstream control
	station.	station.
Orthophosphate in mg/L (depth	95 percentile of baseline data	99 percentile of baseline data
averaged)*^	or 120% of upstream control	or 130% of upstream control
	station.	station.

Remarks:

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

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

Table B-4.2 Summary of Baseline Water Quanty Monitoring Results (RTW MDM)					
	Monitoring Parameter				
Location	KTN-CS1				
Parameter	Max	Min	Average	5 Percentile	1 Percentile
DO in mg/L	7.79	6.28	6.82	6.32	6.28
	Max	Min	Average	95 Percentile	99 Percentile
Turbidity in NTU	72.4	4.59	10.88	62.2	72.2
Suspended Solid in mg/L	74	2	9	60	73
Unionized ammonia in mg/L	0.0005	0.0001	0.0003	0.0004	0.0005
Nitrate nitrogen in mg/L	0.52	0.09	0.27	0.50	0.52
Orthophosphate in mg/L	0.19	0.01	0.10	0.17	0.19

Monitoring Parameter					
Location	KTN-IS1				
Parameter	Max Min Average 5 Percentile 1 Percentile				
DO in mg/L	8.08	4.71	6.83	6.14	5.02
	Max	Min	Average	95 Percentile	99 Percentile
Turbidity in NTU	44.56	4.57	8.63	38.98	44.56

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

Monthly EM&A Report

Suspended Solid in mg/L	35	2	6	31	35
Unionized ammonia in mg/L	0.0006	0.0001	0.0004	0.0005	0.0006
Nitrate nitrogen in mg/L	0.57	0.09	0.29	0.54	0.57
Orthophosphate in mg/L	0.14	0.03	0.09	0.13	0.14

Note:

Table B-4.3 Action and Limit Levels for Additional Water Quality Monitoring

Turbidity in NTU (depth average) [1] or 120% of upstream control station, whichever is higher [3] or 120% of upstream control station, whichever is higher [3] or 130% of upstream control station, whichever is higher [3] or 120% of upstream control station, whichever is higher [3] or 120% of upstream control station, whichever is higher [3]	Parameters	Action Level	Limit Level		
SYR-IS1: 6.1 SYR-IS1: 6.1 SYR-IS1: 6.2 SYR-IS1: 6.0 SYR-IS1: 6.5 SYR-IS1: 8.5 SYR-IS1: 5.5 SYR	River Beas (SYR-IS1)				
average) [1] or 120% of upstream control station, whichever is higher [3] whichever is higher [3] whichever is higher [3] SYR-IS1: $\underline{50.9}$ or 120% of upstream control station, whichever is higher [3] or 120% of upstream control station, whichever is higher [3] whichever is higher [3] or 120% of upstream control station, whichever is higher [3] or 120% of upstream control station, whichever is higher [3] or 120% of upstream control station, whichever is higher [3] or 120% of upstream control station, whichever is higher [3] or 120% of upstream control station, whichever is higher [3] or 120% of upstream control station, whichever is higher [3] or 120% of upstream control station, whichever is higher [3] or 120% of upstream control station, average) [1] SHST-IS2: $\underline{7.0}$ [2] SHST-IS2: $\underline{4.0}$ MWR-IS3: $\underline{8.5}$ [2] SHST-IS2: $\underline{4.0}$ MWR-IS3: $\underline{14.4}$ or 120% of upstream control station, whichever is higher [3] whichever is higher [3]	8	SYR-IS1: <u>6.1</u> ^[2]	SYR-IS1: <u>6.0</u> ^[2]		
Turbidity in NTU (depth average) [1] or 120% of upstream control station, whichever is higher [3] or 120% of upstream control station, whichever is higher [3] or 130% of upstream control station, whichever is higher [3] or 120% of upstream control station, whichever is higher [3] or 120% of upstream control station, whichever is higher [3]		SYR-IS1: <u>75.6</u>	SYR-IS1: 83.1		
Turbidity in NTU (depth average) [1] or 120% of upstream control station, whichever is higher [3] or 120% of upstream control station, whichever is higher [3] or 120% of upstream control station, whichever is higher [3]	average) [1]		or 130% of upstream control station,		
(depth average) or 120% of upstream control station, whichever is higher syr-IS1: $\underline{5.4}$ (depth average) or 120% of upstream control station, whichever is higher shigher shighe		whichever is higher ^[3]	whichever is higher ^[3]		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		SYR-IS1: <u>48.2</u>	SYR-IS1: <u>50.9</u>		
Arsenic in $\mu g/L$ (depth average) [2] or 120% of upstream control station, whichever is higher [3] $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	(depth average) [1]	or 120% of upstream control station,	or 130% of upstream control station,		
(depth average) [2]or 120% of upstream control station, whichever is higher [3]SYR-IS1: $50 \mu g/L$ [4]River Indus and near Siu Hang San Tsuen Stream (NTR-IS1, SHST-IS2, MWR-IS3)DO in mg/L (depth average) [1]NTR-IS1: $\underline{5.8}$ [2]NTR-IS1: $\underline{5.7}$ [2](depth average) [1]SHST-IS2: $\underline{7.0}$ [2]SHST-IS2: $\underline{6.8}$ [2]SS in mg/L (depth average) [1]NTR-IS1: $\underline{8.9}$ [2]NTR-IS1: $\underline{9.0}$ [2]SS in mg/L (depth average) [1]SHST-IS2: $\underline{4.0}$ [3]NTR-IS1: $\underline{9.0}$ [4]MWR-IS3: $\underline{14.0}$ [1]MWR-IS3: $\underline{14.4}$ [1]or 120% of upstream control station, whichever is higher [3]or 130% of upstream control station, whichever is higher [3]		whichever is higher ^[3]	whichever is higher ^[3]		
whichever is higher [3]River Indus and near Siu Hang San Tsuen Stream (NTR-IS1, SHST-IS2, MWR-IS3)DO in mg/L (depth average) [1]NTR-IS1: $\underline{5.8}$ [2]NTR-IS1: $\underline{5.7}$ [2](depth average) [1]SHST-IS2: $\underline{7.0}$ [2]SHST-IS2: $\underline{6.8}$ [2]SS in mg/L (depth average) [1]NTR-IS1: $\underline{8.9}$ NTR-IS1: $\underline{9.0}$ SHST-IS2: $\underline{4.0}$ NWR-IS3: $\underline{14.0}$ or 120% of upstream control station, whichever is higher [3]MWR-IS3: $\underline{14.4}$ or 130% of upstream control station, whichever is higher [3]	Arsenic in µg/L	SYR-IS1: <u>5.4</u>			
River Indus and near Siu Hang San Tsuen Stream (NTR-IS1, SHST-IS2, MWR-IS3)DO in mg/L (depth average) [1]NTR-IS1: $\underline{5.8}$ [2]NTR-IS1: $\underline{5.7}$ [2](depth average) [1]SHST-IS2: $\underline{7.0}$ [2]SHST-IS2: $\underline{6.8}$ [2]SS in mg/L (depth average) [1]NTR-IS1: $\underline{8.9}$ NTR-IS1: $\underline{9.0}$ SHST-IS2: $\underline{4.0}$ NWR-IS3: $\underline{14.0}$ or 120% of upstream control station, whichever is higher [3]MWR-IS3: $\underline{14.4}$ or 130% of upstream control station, whichever is higher [3]	(depth average) [2]	or 120% of upstream control station,	SYR-IS1: 50 μg/L ^[4]		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		whichever is higher [3]			
(depth average) $^{[1]}$ SHST-IS2: $\overline{\textbf{7.0}}$ $^{[2]}$ SHST-IS2: $\underline{\textbf{6.8}}$ $^{[2]}$ SS in mg/L (depth average) $^{[1]}$ NTR-IS1: $\underline{\textbf{8.9}}$ NTR-IS1: $\underline{\textbf{9.0}}$ SHST-IS2: $\underline{\textbf{4.0}}$ SHST-IS2: $\underline{\textbf{4.0}}$ SHST-IS2: $\underline{\textbf{4.0}}$ MWR-IS3: $\underline{\textbf{14.0}}$ MWR-IS3: $\underline{\textbf{14.4}}$ or 120% of upstream control station, whichever is higher $^{[3]}$ or 130% of upstream control station, whichever is higher $^{[3]}$	River Indus and near Siu Hang San Tsuen Stream (NTR-IS1, SHST-IS2, MWR-IS3)				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	DO in mg/L	NTR-IS1: <u>5.8</u> ^[2]	NTR-IS1: <u>5.7</u> ^[2]		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	(depth average) [1]		SHST-IS2: <u>6.8</u> ^[2]		
average) [1] SHST-IS2: $\overline{4.0}$ SHST-IS2: $\overline{4.0}$ MWR-IS3: $\overline{14.4}$ or 120% of upstream control station, whichever is higher [3] whichever is higher whichever is higher [3]		MWR-IS3: <u>8.6</u> ^[2]	MWR-IS3: <u>8.5</u> ^[2]		
MWR-IS3: <u>14.0</u> or 120% of upstream control station, whichever is higher ^[3] MWR-IS3: <u>14.4</u> or 130% of upstream control station, whichever is higher ^[3] whichever is higher ^[3]	SS in mg/L (depth	NTR-IS1: <u>8.9</u>	NTR-IS1: <u>9.0</u>		
or 120% of upstream control station, whichever is higher ^[3] or 130% of upstream control station, whichever is higher ^[3]	average) [1]	SHST-IS2: <u>4.0</u>	SHST-IS2: <u>4.0</u>		
whichever is higher ^[3] whichever is higher ^[3]		MWR-IS3: <u>14.0</u>	MWR-IS3: <u>14.4</u>		
		or 120% of upstream control station,	or 130% of upstream control station,		
Turbidity in NTU NTR-IS1: 6.0 NTR-IS1: 6.1		whichever is higher ^[3]	whichever is higher ^[3]		
	Turbidity in NTU	NTR-IS1: <u>6.0</u>	NTR-IS1: <u>6.1</u>		
(depth average) [1] SHST-IS2: <u>4.4</u> SHST-IS2: <u>4.7</u>	(depth average) [1]	SHST-IS2: <u>4.4</u>	SHST-IS2: <u>4.7</u>		
MWR-IS3: <u>10.1</u> MWR-IS3: <u>11.1</u>		MWR-IS3: <u>10.1</u>	MWR-IS3: <u>11.1</u>		
			or 130% of upstream control station,		
whichever is higher ^[3] whichever is higher ^[3]		whichever is higher ^[3]	whichever is higher ^[3]		

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

^{[1] &}quot;Depth-averaged" is calculated by taking the arithmetic mean of reading of all three depths.

^[2] For DO, non-compliance occurs when monitoring results is lower than the limits.

^[3] For turbidity, SS and arsenic, non-compliance occurs when monitoring results is larger than the limits.

^[4] There is no local criterion for heavy metal. Limit Level of heavy metal is adopted from Category III Surface Water Quality Standards (GB3838-2002) (地表水環境質量標準), which applicable for Shenzhen River on mainland side.

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

Parameter	Action Level	Limit Level
Ambient Arsenic Concentration	9.36ng/m ³	11.7ng/m ³
	- 80% of 11.7ng/m3 – the	- the highest ambient arsenic
	highest ambient arsenic	concentration predicted
	concentration predicted	during the construction
	during the construction	phase with mitigation
	phase with mitigation	measures implemented
	measures implemented)	

Table B-6 Action level in the event of LFG being detected

Table D 0	Action level in the event of 11 5 being detected		
Parameter	Monitoring Results	Actions	
O_2	<19% v/v	Increase underground ventilation to restore O ₂ to >19% v/v	
	<18% v/v	Stop works, evacuate all personnel, prohibit entry, and increase ventilation to restore O ₂ level to >19%	
CH ₄	>10% LEL	Prohibit hot works, increase ventilation to restore CH4 to <10% LEL	
	>20% LEL	Stop works, evacuate all personnel, increase ventilation further to restore CH ₄ to <10% LEL	
CO ₂	>0.5% v/v	Increase ventilation to restore C O ₂ to <0.5% v/v	
	>1.5% v/v	Stop works, evacuate all personnel, increase ventilation further to restore CO_2 to $<0.5\%$	

Table B-7 Vibration Limit for Construction Vibration Monitoring

Type of Building	Guide Values of Maximum PPV* (mm/Sec)		
	Transient Vibration	Continuous Vibration	
Vibration-sensitive / dilapidated buildings#	7.5	3.0	
Declared monuments/ Historical structures	3.0		

Table B-8.1 Action and Limit Levels and Responses to Evidence of Disturbance to Waterbirds using in Ng Tung, Sheung Yue and Shek Sheung Rivers

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

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

	1: 4 1		· ·
	disturbance.		measures to improve
			conditions for
			affected species.
Decline in numbers	Investigate cause and	Decline in numbers	Investigate cause
of any one waterbird	if	of any one waterbird	and if caused
species occurring in	cause identified as	species occurring in	identified as related
significant numbers*	related to NDAs	significant numbers*	to NDAs project
during Baseline	project	during Baseline	instigate remedial
Monitoring such that	instigate remedial	Monitoring such that	action. Review and
the Action Level	action to remove or	the Limit Level	adjust LVNP
response is	reduce source of	response is	management
triggered.	disturbance.	triggered.	measures to improve
			conditions for
			affected species.
Operational Phase			-
Decline in numbers	Investigate cause and	Decline in numbers	Investigate cause and
of all waterbird	if cause identified as	of all waterbird	if cause identified as
species relative to	related to NDAs	species relative to	related to NDAs
numbers during	review and adjust	numbers during	consider and
Baseline Monitoring	LVNP management	Baseline Monitoring	implement additional
such that the Action	measures to improve	such that the Limit	mitigation measures
Level response is	conditions for	Level response is	(e.g. additional
triggered.	affected species in	triggered.	screening and screen
	LVNP.		planting, adjustments
			to infrastructure
			design).
Decline in numbers	Investigate cause and	Decline in numbers	Investigate cause and
of any one waterbird	if cause identified as	of any one waterbird	if cause identified as
species occurring in	related to NDAs	species occurring in	related to NDAs
	review and adjust		consider and
T 11.88 -11.31			
significant numbers* during Baseline Monitoring such that the Action Level response is triggered.	review and adjust LVNP management measures to improve conditions for affected species.	significant numbers* during Baseline Monitoring such that the Limit Level response is triggered.	

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

Table B-8.2 Action and Limit Levels and Responses to Evidence of Declines in Aquatic Fauna

Action Level	Response	Limit Level	Response
Construction Phase			
Reduction in species diversity such that Action Level response is triggered.	Investigate cause and if cause identified as related to Project instigate remedial action to remove or reduce source of disturbance.	Reduction in taxa diversity such that Limit Level response is triggered.	Investigate cause and if caused identified as related to Project instigate remedial action.

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

Table B-8.3 Action and Limit Levels and Responses to Evidence of Declines in non-aquatic Fauna

Action Level	Response	Limit Level	Response
Construction Phase			
Reduction in species diversity such that Action	Investigate cause and if cause identified as	Reduction in taxa diversity such that Limit	Investigate cause and if caused identified as
Level response is triggered.	related to Project instigate remedial action to remove or reduce source of disturbance.	Level response is triggered.	related to Project instigate remedial action.

^{*} Whether numbers are significant will depend on species and season. Significance threshold for each species should be reviewed following collection of Baseline survey data.

^{*} Whether numbers are significant will depend on species and season. Significance threshold for each species should be reviewed following collection of Baseline survey data.

APPENDIX C COPIES OF CALIBRATION CERTIFCATES



TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.: 35376
Date of Issue: 2021-07-05
Date Received: 2021-07-02
Date Tested: 2021-07-02

1 of 1

Date Completed: 2021-07-05 Next Due Date: 2021-09-04

Page:

ATTN: Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

Description : Dust Monitor

Manufacturer : Met One Instruments
Model No. : AEROCET-831

Serial No. : X23807 Flow rate : 0.1 cfm

Zero Count Test : 0 count per 1 minute

Equipment No. : WA-01-01

Test Conditions:

Room Temperature : 17-22 degree Celsius

Relative Humidity : 40-70%

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.102
1	

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager



TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.: 35376A
Date of Issue: 2021-07-05

Date of Issue:
Date Received:

2021-07-02

Date Tested:

2021-07-02

Date Completed: Next Due Date:

2021-07-05 2021-09-04

Page:

1 of 1

ATTN:

Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

Description

: Dust Monitor

Manufacturer

: Met One Instruments

Model No.

: AEROCET-831

Serial No.

: X23808 : 0.1 cfm

Flow rate

, U.I CIIII

Zero Count Test Equipment No. : 0 count per 1 minute : WA-01-02

Test Conditions:

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

Test Specifications & Methodology:

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

Results:

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

General Manager



TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

 Test Report No.:
 35376B

 Date of Issue:
 2021-07-05

 Date Received:
 2021-07-02

 Date Tested:
 2021-07-02

 Date Completed:
 2021-07-05

Page:

Next Due Date:

1 of 1

2021-09-04

ATTN:

Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

Description

: Dust Monitor

Manufacturer

: Met One Instruments

Model No.

: AEROCET-831 : X23809

Serial No. Flow rate

: 0.1 cfm

7 0 . 7

: 0 count per 1 minute

Zero Count Test Equipment No.

: WA-01-03

Test Conditions:

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

Test Specifications & Methodology:

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

Results:

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

General Manager



Room 1714, Technology Park 18 On Lai Street, Shatin New Territories, Hong Kong Tel: 2898 7388 Fax: 2898 7076

Website: www.wellab.com.hk

WELL'AB LIMITED

TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.: 35376C Date of Issue: 2021-07-05

Date Received:

2021-07-02

Date Tested: Date Completed: 2021-07-02 2021-07-05

Next Due Date:

2021-09-04

Page:

1 of 1

ATTN:

Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

Description

: Dust Monitor

Manufacturer

: Met One Instruments

Model No.

: AEROCET-831

Serial No.

: X23810

Flow rate

: 0.1 cfm

Zero Count Test

: 0 count per 1 minute

Equipment No.

: WA-01-04

Test Conditions:

Room Temperature

: 17-22 degree Celsius

: 40-70% Relative Humidity

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF) 1.116 *******************************

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager



consulting . testing . research

WELLAB LIMITED Room 1714, Technology Park 18 On Lai Street, Shatin New Territories, Hong Kong Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

 Test Report No.:
 35375A

 Date of Issue:
 2021-06-28

 Date Received:
 2021-06-25

 Date Tested:
 2021-06-25

 Date Completed:
 2021-06-28

Page:

Next Due Date:

1 of 1

2021-08-27

ATTN:

Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

Description

: Dust Monitor

Manufacturer

: Met One Instruments

Model No.

: AEROCET-831

Serial No. Flow rate

: X24477

110W Tate

: 0.1 cfm

Zero Count Test

: 0 count per 1 minute

Equipment No.

: WA-01-06

Test Conditions:

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF) 1.097

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

General Manager



TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

 Test Report No.:
 35376D

 Date of Issue:
 2021-07-05

 Date Received:
 2021-07-02

 Date Tested:
 2021-07-02

 Date Completed:
 2021-07-05

Next Due Date: Page:

1 of 1

2021-09-04

ATTN:

Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

Description : Dust Monitor

Manufacturer : Met One Instruments Model No. : AEROCET-831

Serial No. : X24475 Flow rate : 0.1 cfm

Zero Count Test : 0 count per 1 minute

Equipment No. : WA-01-07

Test Conditions:

Room Temperature : 17-22 degree Celsius

Relative Humidity : 40-70%

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF) 1.082

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager



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WELLAB LIMITED Room 1714, Technology Park 18 On Lai Street, Shatin New Territories, Hong Kong Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1808, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.: 35375B Date of Issue: 2021-06-28 Date Received: 2021-06-25 Date Tested: 2021-06-25 2021-06-28 Date Completed:

Next Due Date: Page:

2021-08-27 1 of 1

ATTN:

Ms. Meiling Tang

Certificate of Calibration

Item for Calibration:

Description

: Dust Monitor

Manufacturer

: Met One Instruments

Model No.

: AEROCET-831

Serial No. Flow rate

: X24479 : 0.1 cfm

: 0 count per 1 minute

Zero Count Test Equipment No.

: WA-01-08

Test Conditions:

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF) 1.116

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

General Manager

High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

Date:	N-DMS1 - Scattere	ed Village Houses Nort				File No.	
			h of Proposed Potential	Ecopark		Operator:	
	21-May-21				Next	Due Date:	20-Jul-21
Equipment No.:	WA-12-20					Serial No	3223
							wWatti W
			Ambient C	Condition			
Temperature	e, Ta (K)	304.5	Pressure, Pa	(mmHg)		759.	1
			Prifice Transfer Sta	ndard Informat	ion		
Serial No. 0993		Slope, mc	0.0569	Intercept,		-0.01398	
Last Calibrati	ion Date:	28-Jan-21		me x Qstd + l	$be = [\Delta H \times (Pa/76)]$	60) x (298/Ta)]"2
Next Calibrat	ion Date:	28-Jan-22		Qstd = {[ΔII	x (Pa/760) x (298	/Ta)]"" -bc}	/ mc
							· · · · · · · · · · · · · · · · · · ·
			Calibration of	TSP Sampler			
Calibration	177 / 100 >	Orfi I	ce	0.11(077) 0	THE CALLED .	HV	
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	0) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of water	[ΔW x (Pa/7	760) x (298/Ta)] ^{1/2} Y-a
1	13.5		3.63	64,11	10.2		3.16
2	10.8		3.25	57.37	8.1		2.81
3	7.7]	2.74	48.48	5.6		2.34
4	5.1	:	2.23	39.50	4.0		1.98
5	3.6		1.88	33.23	3,1		1.74
By Linear Regress Slope, mw = Correlation coeff Correlation Coeff	0.0461 efficient* =	- 0.9 check and recalibrate	9974 c.	Intercept, bw	0.1667		
.	-ALH-A		Set Point C	alculation			
rom the TSP Field	1 Calibration Curv	ve, take Qstd = 43 C					
		-					
From the Regressio	n Dquanon, me	. , , , , , , , , , , , , , , , , , , ,					
From the Regression							
From the Regressio		mw x	$Qstd + bw = [\Delta W]$	x (Pa/760) x (298	/Ta)] ^{1/2}		
	Set Point: W = ($Qstd + bw = [\Delta W]$ $x (760 / Pa) x (Ta)$		/(Ta)] ^{1/2} 4.73		



File No. WMA20002/20/0007

High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

Station	FLN-DMS1 - Scatter	ed Village Houses Nor	th of Proposed Potenti	al Ecopark		Operator:	HL
Date:	19-Jul-21				Next	Due Date:	18-Sep-21
Equipment No.	: WA-12-20					Serial No	3223
			Ambient	Condition			
Tempera	iture, Ta (K)	300	Pressure, P		u	754.4	
100	transfer (grant	(Drifice Transfer St	andard Informat	ion		
Ser	rial No.	0993	Slope, mc	0.0569	Intercept,		-0.01398
Last Cali	bration Date:	28-Jan-21			$bc = [\Delta H \times (Pa/7)]$		
Next Cali	ibration Date:	28-Jan-22		Qstd = {[ΔH	x (Pa/760) x (298	3/Ta)] ^{1/2} -be} /	me
		•				***	
			Calibration of	TSP Sampler			
Calibration		Orf	ice			HVS	
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	60) x (298/Ta)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of water	[ΔW x (Pa/76	60) x (298/Ta)] ^{1/2} Y-ax
1	13.4		3.63	64,15	10.1		3.16
2	10.2		3.17	56.00	7.9		2.79
3	7.6	:	2.74	48.37	5.7		2.37
4	5.3		2.29	40.44	4.2		2.04
5	3,4		1.83	32.44	2.8		1.66
By Linear Reg Slope , mw =	ression of Y on X			Intercept, bw:	0.1150		
-	a coefficient* =	- n (9993	Intercept, ba			
	Coefficient < 0.990,						
ii coroniion	coemolom - 0.550,	one of the recent of the	••				
			Set Point C	Calculation			and the second
From the TSP F	Field Calibration Cur	ve, take Qstd = 43 C	FM				
From the Regre	ssion Equation, the "	Y" value according	to				
		mw x	$Qstd + bw = [\Delta W]$	x (Pa/760) x (298	/Ta)]***		
Theref	fore, Set Point; W = ($mw \times Ostd + hw)^2$	x (760 / Pa) x (Ta	/298)=	4.70		
1110101	ioro, berromi, ii	min n qua · on j	n(/00/14/n(14	, 230)	-1.70		
Remarks:							
			,		W = 0.000		
Conducted by:	Blo MAN 1962	Signature:	<u> </u>	·)		Date:/	9-7-2021
Checked by	: No Backen	Signature;	1	l_		Date: (Y-7-20M

High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

						File No.	WMA20002/17/	0006
Station	FLN-DMS3 - Hou	ise near Tong Hang				Operator:	HL	
Date:	31-May-21				Next	Due Date:		
Equipment No.:	WA-12-17					Serial No.		
	~~~~		Ambient (	Condition				
Temperati	ure, Ta (K)	304.2	Pressure, Pa			755	. 6	
romporan	10, 14 (11)	30 1.2	11033010, 14	(пинту)		133		
	***************************************	(	rifice Transfer Sta	ndard Informat	ion		17-1111-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	
Seria	Serial No. 0993		Slope, mc	0.0569	Intercept,		-0.01398	
Last Calib	ration Date:	28-Jan-21			$bc = [\Delta H \times (Pa/7)]$			
Next Calib	ration Date:	28-Jan-22		$\mathbf{Qstd} = \{ [\Delta \mathbf{H}$	x (Pa/760) x (298	3/Ta)] ^{1/2} -bc}	/ me	
			Calibration of	TSP Sampler			7947	
Calibration		Orfi	ce			HV	'S	
Point	ΔH (orifice), in. of water	[ΔH x (Pa/76	0) x (298/Γa)] ^{1/2}	Qstd (CFM) X - axis	ΔW (HVS), in. of water	[ΔW x (Pa/	760) x (298/Ta)] ^{1/2}	Y-axis
1	14.8	3	3.80	66.99	9.8		3.09	
2	11.7	3	3.38	59,59	7.7		2.74	
3	9.4	3	3.03	53,44	6.4		2.50	
4	6.5		2.52	44.48	4.5		2.09	
5	3.4	. 1	.82	32.24	2.3		1.50	
	0.0454 coefficient* =	0.9 check and recalibrate	995	Intercept, bw	0.0497			
	******		Set Point C	alculation				
From the TSP Fie	eld Calibration Curv	ve, take Qstd = 43 Cl						
		Y" value according t						
			$Qstd + bw = [\Delta W]$		/Ta)] ^{1/2} 4.12			
Remarks:		*****						
Conducted by: Д Checked by: 」	EE MM HEZ Ho Ka chu	Signature:	he.'	) L		Date:	31-5-20= 31/5/24	<u>-                                    </u>



File No. <u>WMA20002/03/0006</u>
Operator: <u>KC</u>

Next Due Date: 3-Aug-21

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

KTN-DMS4A - Temporary Structure at Pak Shek Au

Station

Date:

4-Jun-21

				Ambient Conditi	on			
Temperatur	e, Ta (K)	30	3.5	Pressure, Pa (mmHg)		756.5		
01	NI.	00	EDBS(SECRETARISM CONTRACTOR MANAGEM IN	ansfer Standard	0.0569	Intoro	ept, bc	-0.01398
	ial No.: 0993 Slope, mc 0.0569 bration Date: 28-Jan-21 Next Calibration Date:					Incre	<del>срі, ос</del> 28-Jan-22	
Last Canora	ition Date.	20,30		TVOAT CHIIOX	ution Buto.		20 3411 22	
			Cali	bration of RSP S	ampler			
Calibration			ORIF	ICE			HVS	
Point	ΔH(orifice), in. of water	Del Hc ⁽¹⁾	Qstd ⁽²⁾ (CFM)	Qa ⁽³⁾ (CFM) <b>X -axis</b>	Qa ⁽³⁾ (m ³ /min) X -axis	ΔW (HVS), in. of water		a + 30) / Pa] ^{1/2} '-axis
1	8.5	8.31	50.92	52.10	1.47	9.8		2.08
2	7.3	7.13	47.21	48.30	1.37	8.6		1.95
3	5.1	4.98	39.50	40.41	1.14	7.1		1.77
4	3.4	3.32	32.29	33.04	0.94	5.4		1.54
5	2.6	2.54	28.27	28.93	0.82	4.6		1.42
Slope, mw = Correlation co		77	0.998	Intercep 5	ot, bw = -	0.6	289	
(1) DEL He = {[(2) Qstd = {[(3) Qa = Qst]	oefficient* = = ΔΗ x (Pa/76 ΔΗ x (Pa/760 d x (Ta / Pa)	50*298/Та) ) x (298/Та) x (760 / 298	] ^{1/2} - be}/me ) (m3/min)	5 (m3/min)	ot, bw =	0.6	289	_
(1) DEL He = {[(2) Qstd = {[(3) Qa = Qst]	oefficient* = = ΔΗ x (Pa/76 ΔΗ x (Pa/760 d x (Ta / Pa)	50*298/Та) ) x (298/Та) x (760 / 298	] ^{1/2} - bc}/mc ) (m3/min) and recalibr	5 (m3/min)		0.6	289	
Correlation control (1) DEL He (2) Qstd = {[(3) Qa = Qst]*If Correlation (4)	efficient* =  = ΔH x (Pa/76 ΔH x (Pa/760) d x (Ta / Pa):  Coefficient < 0	50*298/Та) ) x (298/Та) x (760 / 298	] ^{1/2} - bc}/mc ) (m3/min) and recalibr	5 (m3/min)		0.6	289	
Correlation control (1) DEL Hc = {[(2) Qstd = {[(3) Qa = Qst]}*If Correlation of the corr	efficient* =  = ΔH x (Pa/76 ΔH x (Pa/760) d x (Ta / Pa):  Coefficient < 0	60*298/Ta) ) x (298/Ta) x (760 / 298 ).990, check	] ^{1/2} - bc}/mc ) (m3/min) and recalibr	5 (m3/min)		0.6	289	
(1) DEL He (2) Qstd = {[(3) Qa = Qst]*If Correlation (2) SFR = 1.13 x	Defficient* =  AH x (Pa/76) AH x (Ta / Pa) Coefficient < 0  Rate., SFR x (760/Pa) x (T	60*298/Ta) ) x (298/Ta) x (760 / 298 0.990, check Ta/298) =	] ^{1/2} - bc}/mc ) (m3/min) and recalibr	(m3/min) rate. Set Point Calcular		0.6		
(1) DEL He (2) Qstd = {[ (3) Qa = Qst *If Correlation (3)  Set Point Flow (3)  SFR = 1.13 x  Sampler Well -	Defficient* =  AH x (Pa/76) AH x (Ta / Pa) Coefficient < 0  Rate., SFR x (760/Pa) x (T	60*298/Ta) ) x (298/Ta) x (760 / 298 0.990, check Ta/298) =	] ^{1/2} - bc}/mc ) (m3/min) and recalibr	(m3/min) rate. Set Point Calcular	tion	0.6		



# RECALIBRATION DUE DATE:

January 28, 2022

# Certificate of Calibration

**Calibration Certification Information** 

Cal. Date: January 28, 2021

Rootsmeter S/N: 438320

Ta: 294

°K

Operator: Jim Tisch

Pa: 763.5

mm Hg

....

Calibration Model #: TE-5025A

Calibrator S/N: 0993

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4160	3.3	2.00
2	3	4	1	0.9980	6.4	4.00
3	5	6	1	0.8890	8.0	5.00
4	7	8	1	0.8500	8.8	5.50
5	9	10	1	0.7020	12.9	8.00

	Data Tabulation				
Vstd	Qstd	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$		Qa	$\sqrt{\Delta H (Ta/Pa)}$
(m3)	(x-axis)	(y-axis)	Va	(x-axis)	(y-axis)
1.0139	0.7160	1.4271	0.9957	0.7032	0.8776
1.0098	1.0118	2.0182	0.9916	0.9936	1.2411
1.0076	1.1334	2.2564	0.9895	1.1131	1.3875
1.0066	1.1842	2.3666	0.9885	1.1629	1.4553
1.0011	1.4261	2.8542	0.9831	1.4004	1.7551
Ĭ	m=	2.00902		m=	1.25802
<b>QSTD</b>	b=	-0.01398	QA [	b=	-0.00860
	r=	0.99997		r=	0.99997

	Calculation	s	
Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	Va=	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	Qa=	Va/ΔTime
	For subsequent flow rat	e calculatio	ns:
Qstd=	$1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$	Qa=	$1/m\left(\left(\sqrt{\Delta H(Ta/Pa)}\right)-b\right)$

100 100 A 100 C	Standard Conditions
Tstd:	298.15 °K
Pstd:	760 mm Hg
	Кеу
ΔH: calibrator	manometer reading (in H2O)
ΔP: rootsmete	er manometer reading (mm Hg)
Ta: actual abs	olute temperature (°K)
Pa: actual bar	ometric pressure (mm Hg)
b: intercept	
m: slope	

# RECALIBRATION

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

Tisch Environmental, Inc. 145 South Miami Avenue Village of Cleves, OH 45002 www.tisch-env.com

TOLL FREE: (877)263-7610 FAX: (513)467-9009



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WELLAB LIMITED Room 1701, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong. Tel: 2898 7388 Fax: 2898 7076

Website: www.wellab.com.hk

# TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1701, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.:	34872D
Date of Issue:	2021-03-08
Date Received:	2021-03-05
Date Tested:	2021-03-05
Date Completed:	2021-03-08
Next Due Date:	2022-03-07

Page:

1 of 1

ATTN:

Mr. W. K. Tang

# **Certificate of Calibration**

# Item for calibration:

Description

: Sound Level Meter

Manufacturer

: BSWA

Model No. Serial No.

: BSWA 308 : 580007

Equipment No.

: WN-01-05

# Test conditions:

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

# **Test Specifications:**

Performance checking at 94 and 114 dB

# Methodology:

In-house method, according to manufacturer instruction manual

# Results:

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

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

General Manager



WELLAB LIMITED Room 1701, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong. Tel: 2898 7388 Fax: 2898 7076

Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

# TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1701, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.:	34873
Date of Issue:	2021-03-15
Date Received:	2021-03-12
Date Tested:	2021-03-12
Date Completed:	2021-03-15
Next Due Date:	2022-03-14

Page:

1 of 1

ATTN:

Mr. W. K. Tang

# Certificate of Calibration

# Item for calibration:

Description

: Sound Level Meter

Manufacturer Model No.

: BSWA : BSWA 308 : 580011

Serial No. Equipment No.

: WN-01-08

# Test conditions:

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

# **Test Specifications:**

Performance checking at 94 and 114 dB

# Methodology:

In-house method, according to manufacturer instruction manual

### Results:

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

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager



#### TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1701, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.: 34873A Date of Issue: 2021-03-15 Date Received: 2021-03-12 Date Tested: 2021-03-12 Date Completed: 2021-03-15 Next Due Date: 2022-03-14

Page:

1 of 1

ATTN:

Mr. W. K. Tang

#### **Certificate of Calibration**

#### Item for calibration:

Description

: Sound Level Meter

Manufacturer Model No. Serial No.

: BSWA : BSWA 308 : 580013

Equipment No.

: WN-01-09

#### **Test conditions:**

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### **Test Specifications:**

Performance checking at 94 and 114 dB

#### Methodology:

In-house method, according to manufacturer instruction manual

#### Results:

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

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager



WELLAB LIMITED

Room 1701, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong.

Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

#### TEST REPORT

APPLICANT: Wellab Limited

(EM&A Department)

Room 1701, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

 Test Report No.:
 34873B

 Date of Issue:
 2021-03-15

 Date Received:
 2021-03-12

 Date Tested:
 2021-03-12

 Date Completed:
 2021-03-15

 Next Due Date:
 2022-03-14

Page:

1 of 1

ATTN:

Mr. W. K. Tang

# **Certificate of Calibration**

#### Item for calibration:

Description

: Sound Level Meter

Manufacturer Model No.

: BSWA 308 : 580017

Serial No. Equipment No.

: WN-01-10

#### Test conditions:

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### **Test Specifications:**

Performance checking at 94 and 114 dB

### Methodology:

In-house method, according to manufacturer instruction manual

#### Results:

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

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager



WELLAB LIMITED

Room 1701, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong.

Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

# TEST REPORT

APPLICANT:

Wellab Limited

(EM&A Department)

Room 1701, Technology Park,

18 On Lai Street,

Shatin, NT, Hong Kong

Test Report No.: 34136A Date of Issue: 2020-10-03

Date Received: 2020-09-29

Date Tested: 2020-09-29
Date Completed: 2020-10-03
Next Due Date: 2021-10-02

Page:

1 of 1

ATTN:

Mr. W. K. Tang

#### **Certificate of Calibration**

#### Item for calibration:

Description

: Acoustical Calibrator

Manufacturer

: SVANTEK : SV30A

Model No. Serial No.

: 24780

Equipment No.

: N-09-05

#### Test conditions:

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

# Methodology:

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

#### Results:

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	$94.0 \pm 0.1 \text{ dB}$
At 114 dB SPL	114.0	114.0 ± 0.1 dB

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager

This report may not be reproduced, except in full, without prior written approval from WELLAB LIMITED and the results relate only to the items calibrated or tested. ONLY the laboratory's certified true copy is valid.



#### **TEST REPORT**

APPLICANT:

Wellab Limited (EM&A)

RM 1808, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Test Report No.: 35322 Date of Issue: 2021-06-22

Date Received: 2021-06-21

Date Tested: 2021-06-21 to

2021-06-22 Date Completed: 2021-06-22

ATTN:

Miss Mei Ling Tang

Page:

1 of 2

#### **Certificate of Calibration**

#### Item for calibration:

YSI EXO1 Multiparameter Sondes	Equipment No.: SW-08-42
Manufacturer:	YSI Incorporated, a Xylem brand
Description:	Model No. Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599502-24 16J102314
- EXO Optical DO Sensor, Ti	599100-01 16J100949
- EXO conductivity/Temperature Sensor, Ti	599870 17A105111
- EXO Turbidity Sensor, Ti	599101-01 16J101144
- EXO pH Sensor Assembly, Guarded, Ti	599701 16J101306

#### **Test conditions:**

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### **Test Specifications:**

Performance checking for Conductivity, Temperature, pH, Dissolved oxygen (D.O.)

and Turbidity

#### Methodology:

According to manufacturer instruction manual, APHA 20e 4500-O C

***********************************

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

General Manager



# **TEST REPORT**

 Test Report No.:
 35322

 Date of Issue:
 2021-06-22

 Date Received:
 2021-06-21

 Date Tested:
 2021-06-21 to

 2021-06-22
 2021-06-22

 Date Completed:
 2021-06-22

Page:

2 of 2

#### **Certificate of Calibration**

# Results:

#### Conductivity performance checking

	Instrument Readings (µS/cm)	Accetance Criteria	Comment
KCl stock solution (12890 μS/cm)	12800	12246-13534	Pass
Temperature performanc	e checking		
Reference thermometer-	Instrument Readings (°C)	Correction (°C)	Comment

Reference thermometer- E431 Readings (°C)	Instrument Readings (°C)	Correction (°C)	Comment
20.0	19.996	+0.004	N/A
20.0		+0.004	N/2

#### pH performance checking

	Instrument Readings (pH unit)	Accetance Criteria	Comment
pH QC buffer 4.00	4.00	4.00 ± 0.10	Pass
pH QC buffer 6.86	6.88	6.86 ± 0.10	Pass
pH QC buffer 9.18	9.17	9.18 <u>+</u> 0.10	Pass

### D.O. performance checking

	Instrument Readings (mg/L)	Accetance Criteria	Comment
Zero DO soultion	0.09	<0.1mg/L	Pass

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Accetance Criteria	Comment
8.00	8.18	Difference between Titration value and instrument reading <0.2mg/L	Pass

# Turbidity performance checking

Turbidity stock solution	Instrument Readings (NTU)	Accetance Criteria	Comment
10 NTU	9.28	9.0-11.0	Pass
50 NTU	51.70	45.0-55.0	Pass
100 NTU	101.6	90.0-110.0	Pass

#### Depth performance checking

Water Depth	Instrument Readings (m)	Accetance Criteria	Comment
0.5 meter	0.50	0.45-0.55	Pass



#### TEST REPORT

APPLICANT:

Wellab Limited (EM&A)

RM 1808, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Test Report No.:	35529
Date of Issue:	2021-06-30
Date Received:	2021-06-28
Date Tested:	2021-06-28 to

2021-06-30

Date Completed:

2021-06-30

ATTN:

Miss Mei Ling Tang

1 of 2

#### **Certificate of Calibration**

#### Item for calibration:

YSI EXO1 Multiparameter Sondes	Equipment No.:	SW-08-65
Manufacturer:	YSI Incorporated, a Xylem brand	
Description:	Model No.	Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599502-24	16J102337
- EXO Optical DO Sensor, Ti	599100-01	17B102224
- EXO conductivity/Temperature Sensor, Ti	599870	16H100179
- EXO Turbidity Sensor, Ti	599101-01	20J103605
- EXO pH Sensor Assembly, Guarded, Ti	599701	17B103653

#### Test conditions:

Room Temperature

: 17-22 degree Celsius

Relative Humidity

: 40-70%

#### **Test Specifications:**

Performance checking for Conductivity, Temperature, pH, Dissolved oxygen (D.O.) and Turbidity

#### Methodology:

According to manufacturer instruction manual, APHA 20e 4500-O C

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

General Manager



WELLAB LIMITED Room 1701, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong. Tel: 2898 7388 Fax: 2898 7076

Website: www.wellab.com.hk

# TEST REPORT

Test Report No.: 35529 Date of Issue: 2021-06-30 Date Received: 2021-06-28 Date Tested: 2021-06-28 to 2021-06-30 Date Completed: 2021-06-30

Page:

2 of 2

#### Certificate of Calibration

#### Results:

# Conductivity performance checking

	Instrument Readings (μS/cm)	Accetance Criteria	Comment
KCl stock solution	12600	12246-13534	Pass
(12890 μS/cm)			
TI 6			·

#### Temperature performance checking

Reference thermometer- E431 Readings (°C)	Instrument Readings (°C)	Correction (°C)	Comment
20.0	19.997	+0.003	N/A

#### pH performance checking

	Instrument Readings (pH unit)	Accetance Criteria	Comment
pH QC buffer 4.00	4.02	$4.00 \pm 0.10$	Pass
pH QC buffer 6.86	6.84	6.86 ± 0.10	Pass
pH QC buffer 9.18	9.22	$9.18 \pm 0.10$	Pass

#### D.O. performance checking

	Instrument Readings (mg/L)	Accetance Criteria	Comment
Zero DO soultion	0.09	<0.1mg/L	Pass

Winkler Titration value	Instrument Readings (mg/L)	Accetance Criteria	Comment
(mg/L)			<u> </u>
8.06	8.21	Difference between	Pass
		Titration value and	
		instrument reading	
		<0.2mg/L	

#### Turbidity performance checking

Turbidity stock solution	Instrument Readings (NTU)	Accetance Criteria	Comment
10 NTU	10.31	9.0-11.0	Pass
50 NTU	52.42	45.0-55.0	Pass
100 NTU	103.2	90.0-110.0	Pass

#### Depth performance checking

Water Depth	Instrument Readings (m)	Accetance Criteria	Comment
0.5 meter	0.50	0.45-0.55	Pass



**Eurotron Instruments (UK) Ltd** 

Unit 18 Austin Way Royal Oak Industrial Estate Daventry, NN 11 8QY

T: +44 (0)1327 871044, F: +44 (0)1327 301255 E: sales@Eurotronuk.com www.eurotronuk.com

# CALIBRATION CERTIFICATE

For Gas Analyser:

Rasi 700 BIO

With Serial Number:

330055

The adjustment and calibration of the flue gas analyser is due to a measurement with certified test gases. Other measuring procedures correspond with the technical regulations and norms valid at the time of the measurement. Traceability is guaranteed by nation normative!

# Measuring Installations:

Measurement with certified test gases:

CO/02

Cylinder-nr. 88772

NO

Cylinder-nr. 72126

CO/H2/O2 Cylinder-nr. D5CPTH5

NO2

Cylinder-nr. 88778

CO2/CH4/H2S Cylinder nr. 1421177

MRU-Pressure calibrator DK1500 S/N 285943 MRU-Temp calibrator TT2, I-Nr.:T024

Gas mixing unit #v010

Measuring Results:

TOUGHT THE TRUE OF			
El. Chemical	Nominal Value	Tolerance	Actual Value
		Value	
O2 in Vol. %	0,00	+/- 0,2	0.02
O2 in Vol. %	2.01	+/- 0,2	2.02
02 in Vol. %	10.00	+/-0,3	10.03
NDIR:			
CH4 in Vol%	60.0	+/-1.8	60.0
CO2 in Vol%	40.0	+/-1.2	40.0
T Air in °C	125.0	+/- 1,0	124.7
T Gas in °C	250.0	+/- 2,0	249.6
Draft in hPa	Measuring range	+/- 0,03	Values are within
	are according to		specified
	specifications		tolerances
Pressure in Hpa	Measuring range	+/-0.03	Not installed
	are according to		
	specifications		

Special Remarks

Date of Calibration: 16/03/21 carried out by:

Calibration Due:

16/03/22

Europron Instruments (UK) Ltd NN11 00 Tel: 01327 871044 Company No. 5501255

Calibration Item: Micromate System ISEE (Calibration with

Geophone UM17121)

Model No.: 721A2501 Serial No.: UM17121

Calibration Date: 8 January 2021 Next Calibration Date: 8 January 2022

Method Used: In-house Method B3-001

In-house Testing Procedure No.: B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Wong, Keefe Solomon)

Calibration Item: TRIAXIAL GEOPHONE (Calibration with

main unit UM17121)

Part Number: 721A2901 Serial No.: UM17121

Calibration Date: 8 January 2021 Next Calibration Date: 8 January 2022

Method Used: In-house Method B3-001

In-house Testing Procedure No.: B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Wong, Keefe Solomon)

Calibration Item: Micromate System ISEE (Calibration with

Geophone UM17124)

Model No .:

721A2501

Serial No .:

UM17124

Calibration Date:

8 January 2021

Next Calibration Date:

8 January 2022

Method Used:

In-house Method B3-001

In-house Testing Procedure No.:

B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Wong, Keefe Solomon)

Calibration Item:

TRIAXIAL GEOPHONE (Calibration with

main unit UM17124)

Part Number:

721A290.1

Serial No.:

UM17124

Calibration Date:

8 January 2021

Next Calibration Date:

8 January 2022

Method Used:

In-house Method B3-001

In-house Testing Procedure No.:

B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Wong, Keefe Solomon)

Calibration Item: Micromate System ISEE (Calibration with

Geophone UM17126)

Model No.:

721A2501

Serial No.:

UM17126

Calibration Date:

8 January 2021

Next Calibration Date:

8 January 2022

Method Used:

In-house Method B3-001

In-house Testing Procedure No.: B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Wong, Keefe Solomon)

Calibration Item: TRIAXIAL GEOPHONE (Calibration with

main unit UM17126)

Part Number:

721A2901

Serial No.:

UM17126

Calibration Date:

8 January 2021

Next Calibration Date:

8 January 2022

Method Used:

In-house Method B3-001

In-house Testing Procedure No.: B3-001

Test References	Model	Serial No.
Blastmate III	714A0801	BA15521
ISEE Triaxial Geophone	714A9701	BG14463
GLOBAL SPECIALISTS 3MHz*	2030	256812
Stanford Spectrum Analyzer	SR760	41550
Aglient Multimeter*	34410A	MY47011119
HP Distortion Meter*	339A	810699
Bruel & Kjaer Accelerometer*	4370	30323
Bruel & Kjaer Charge Amplifier*	2647	2518810
Bruel & Kjaer Conditional Amplifier*	269	2152173
LDS Air Cooled Vibrator	V556	92794/1
LDS Field Power Supply	FPS10L	ARA 04/05
LDS Power Amplifier	PA1000L	ARA 07/06

^{*}References are traceable to NIST or equivalent.

INSTANTEL INC. hereby certifies that this unit has been calibrated and that the results are consistent with the specifications published regarding this instrument. The SENSORCHECK feature of the unit is sufficiently reliable to indicate proper operation, although it is recommended that this unit be sent to INSTANTEL or an authorized service center for regular calibration.

Authorized by:

(Wong, Keefe Solomon)

# APPENDIX D ENVIRONMENTAL MONITORING SCHEDULES

# Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Impact Air Quality and Noise Monitoring Schedule (July 2021)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1-Jul	2-Jul	3-Jul
					Ihr TSP* X3 FLN-DMS1, FLN-DMS3 24hr RSP (Arsenic) KTN-DMS4A Noise CP-FLN-NMS1, CP-FLN-NMS2	
4-Jul	5-Jul	6-Jul	7-Jul	8-Jul	9-Jul	10-Jul
	<u>Ihr TSP* X3, 24hr TSP*</u> KTN-DMS4, FLN-DMS5 <u>Noise</u> CP-KTN-NMS2, CP-KTN-NMS3, CP- KTN-NMS5, CP-KTN-NMS6	<u>24hr TSP</u> FLN-DMS1, FLN-DMS3	<u>Ihr TSP* X3</u> FLN-DMS1, FLN-DMS3  Noise CP-FLN-NMS1, CP-FLN-NMS2	24hr RSP (Arsenic) KTN-DMS4A	1hr TSP* X3, 24hr TSP* KTN-DMS4, FLN-DMS5	
11-Jul	12-Jul	13-Jul	14-Jul	15-Jul	16-Jul	17-Jul
	<u>24hr TSP</u> FLN-DMS1, FLN-DMS3	1hr TSP* X3 FLN-DMS1, FLN-DMS3  Noise CP-FLN-NMS1, CP-FLN-NMS2	<u>24hr RSP (Arsenic)</u> KTN-DMS4A	Ihr TSP* X3, 24hr TSP* KTN-DMS4, FLN-DMS5 Noise CP-KTN-NMS2, CP-KTN-NMS3, CP- KTN-NMS5, CP-KTN-NMS6	24hr TSP FLN-DMS1, FLN-DMS3	
18-Jul	19-Jul	20-Jul	21-Jul	22-Jul	23-Jul	24-Jul
	1hr TSP* X3 FLN-DMS1, FLN-DMS3  Noise CP-FLN-NMS1, CP-FLN-NMS2	<u>24hr RSP (Arsenic)</u> KTN-DMS4A	<u>Ihr TSP* X3, 24hr TSP*</u> KTN-DMS4, FLN-DMS5 <u>Noise</u> CP-KTN-NMS2, CP-KTN-NMS3, CP- KTN-NMS5, CP-KTN-NMS6	24hr TSP FLN-DMS1, FLN-DMS3	1hr TSP* X3 FLN-DMS1, FLN-DMS3	
25-Jul	26-Jul	27-Jul	28-Jul	29-Jul	30-Jul	31-Jul
	<u>24hr RSP (Arsenic)</u> KTN-DMS4A	Ihr TSP* X3, 24hr TSP*  KTN-DMS4, FLN-DMS5  Noise  CP-KTN-NMS2, CP-KTN-NMS3, CP-  KTN-NMS5, CP-KTN-NMS6	24hr TSP FLN-DMS1, FLN-DMS3	Ihr TSP* X3 FLN-DMS1, FLN-DMS3  Noise CP-FLN-NMS1, CP-FLN-NMS2	24hr RSP (Arsenic) KTN-DMS4A	

Remarks

^{*}Monitoring session would be conducted by portable TSP monitor.

Environmental Permit(s)	Contract No.	Air Quality Stations	Noise Stations	
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	1hr TSP and 24hr TSP KTN-DMS4 - Temporary Structure	-	
EP-468/2013/A	ND/2019/03	near Fanling Highway (near Pak Shek Au)		
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	24hr RSP (Arsenic) KTN-DMS4A - Temporary Structure at	-	
EP-468/2013/A	ND/2019/03	Pak Shek Au		
EP-467/2013/A EP-468/2013/A ⁽¹⁾	ND/2019/01		CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung	
EP-468/2013/A ⁽²⁾	ND/2019/01		CP-KTN-NMS3 -Fung Kong Garden	
EP-469/2013 ⁽³⁾	ND/2019/02		CP-KTN-NMS6 - Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunne	
EP-470/2013	ND/2019/01		CP-KTN-NMS5 - N/A	
EP-473/2013/A ⁽⁴⁾	ND/2019/03	1hr TSP and 24hr TSP FLN-DMS1 - Scattered Village Houses North		
Er-4/3/2013/A	ND/2019/04	of Proposed Potential  Ecopark		
EP-473/2013/A ⁽⁵⁾	ND/2019/05	1hr TSP and 24hr TSP FLN-DMS3 - House near Tong Hang	1	
ED 473/2013/4 ⁽⁶⁾	ND/2019/03	1hr TSP and 24hr TSP		
EP-473/2013/A ⁽⁶⁾	ND/2019/04	FLN-DMS5 - Noble Hill		
EP-473/2013/A ⁽⁷⁾	ND/2019/05		CP-FLN-NMS2 - Scattered Village Houses in Tong Hang	
(2)	ND/2019/04			
EP-473/2013/A ⁽⁸⁾	ND/2019/05		CP-FLN-NMS1 - Belair Monte	
EP-475/2013/A	ND/2019/06			

#### Remarks:

- Since the distance between monitoring station CP-KTN-NMS2 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03
- 2. Since the distance between monitoring station CP-KTN-NMS3 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03
- Since the distance between monitoring station CP-KTN-NMS1 and site boundary of ND/2019/02 under EP-469/2013 exceeds 300m.
   The monitoring station is not applicable to ND/2019/02
- Since the distance between monitoring station FLN-DMS1 and site boundary of ND/2019/05 under EP-473/2013/A exceeds500m. The
  monitoring station is not applicable to ND/2019/05
- 5. Since the distance between monitoring station FLN-DMS3 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04
- 6. Since the distance between monitoring station FLN-DMS5 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05
- 7. Since the distance between monitoring station CP-FLN-NMS2 and site boundary of ND/2019/03 and ND/2019/04 under EP-
- 473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04.
- Since the distance between monitoring station CP-FLN-NMS1 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m.
   The monitoring station is not applicable to ND/2019/03.

# Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas **Impact Water Quality Monitoring Schedule (July 2021)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1-Jul	2-Jul	3-Jul
					Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream	
4-Jul	5-Jul	6-Jul	7-Jul	8-Jul	9-Jul	10-Jul
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream	
11-Jul	12-Jul	13-Jul	14-Jul	15-Jul	16-Jul	17-Jul
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream			Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream
18-Jul	19-Jul	20-Jul	21-Jul	22-Jul	23-Jul	24-Jul
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream	
25-Jul	26-Jul	27-Jul	28-Jul	29-Jul	30-Jul	31-Jul
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream	

#### **Water Quality Monitoring Stations**

River Beas: SYR-CS1 - Upstream of river, SYR-IS1 - Downstream of river
River Indus and near Siu Hang San Tsuen Stream: NTR-CS1 - Upstream of river, NTR-IS1 - Downstream of river, SHST-IS2 - Water sensitive receiver at near Siu Hang San Tsuen Stream,

MWR-IS3 - Water sensitive receiver at near Ma Wat River

Environmental Permit(s)	Contract No.	Water Quality Stations
EP-469/2013	ND/2019/02	River Beas SYR-CS1 - Upstream of river SYR-IS1 - Downstream of river
EP-473/2013/A	ND/2019/04	River Indus and near Siu Hang San Tsuen Stream NTR-CS1 - Upstream of river NTR-IS1 - Downstream of river SHST-IS2 - Water sensitive receiver at near Siu Hang San Tsuen Stream MWR-IS3 - Water sensitive receiver at near Ma Wat River

# Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Impact Ecological Monitoring Schedule (July 2021)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Sunday	ivioliday	Tuesday	wednesday	1-Jul	2-Jul	3-Jul
				1-Jui	2-Jul	5-341
4-Jul	5-Jul	6-Jul	7-Jul	8-Jul	9-Jul	10-Jul
. 3	3 3	3 3.1.	7 3	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River T1 T2  High tide: Start time: 09:00  Low tide: Start time: 13:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley T3 T5  High tide: Start time: 09:00  Low tide: Start time: 14:00	10 34
11-Jul	12-Jul	13-Jul	14-Jul	15-Jul	16-Jul	17-Jul
			Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution  T1, T6	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River T1 T2 High tide: Start time: 11:00 Low tide: Start time: 08:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley T3 T5  High tide: Start time: 12:00  Low tide: Start time: 08:00	
18-Jul	19-Jul	20-Jul	21-Jul	22-Jul	23-Jul	24-Jul
		Monitoring of Measures to Minimise Impacts to Ma Tso Lung and Siu Hang San Tsuen Stream  MS 01 - MS 03, MS 05, MS 08, MS 09, MS 11 - MS 14	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River T1 T2 High tide: Start time: 09:00 Low tide: Start time: 13:00		Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley T3 T5  High tide: Start time: 09:00  Low tide: Start time: 14:00	
25-Jul	26-Jul	27-Jul		29-Jul	30-Jul	31-Jul
	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution  T3, T4, T5  Monitoring of Measures to Minimise Impacts to Ma Tso Lung and Siu Hang San Tsuen Stream  MS 04, MS 06, MS 07, MS 10, MS 15	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <u>T3 T5</u> High tide: Start time: 11:00  Low tide: Start time: 16:30	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River T1 T2  High tide: Start time: 12:00  Low tide: Start time: 17:00			

Item	Activity	Monitoring Stations/Transects
1	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, Sheung Yue River, and Long Valley	T1. Ng Tung River T2. Ng Tung River T3. Sheung Yue River T5. Long Valley
2	Monitoring of Measures to Minimise Impacts to Aquatic Fauna in Ma Tso Lung Stream and Siu Hang San Tsuen Stream	MS_01, MS_02, MS_03, MS_04, MS_05, MS_06, MS_07, MS_08, MS_09, MS_10, MS_11, MS_12, MS_13, MS_14, MS_15
3	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	T1. Ma Tso Lung riparian zone and associated wetland habitats T1. Green belt areas E1-8,D1-8 and G1-3 in KTN NDA T1. AGR one C2-4 and C2-2 in KTN NDA T1. Areas north of Ng Tung River T3. Area west of Siu Hang San Tsuen Stream T4. South side of Fanling Highway and Castle Peak Road in the vicinity of Pak Shek Au T5. Area west and east of the southern limit of the FLN NDA work area T6. Areas in the western part of KTN

# Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Weekly Site Inspection Schedule for July 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1-Jul	2-Jul	3-Jul
					Site Inspection (ND/2019/03) Site Inspection (ND/2019/04) Site Inspection (ND/2019/07)	
4-Jul	5-Jul	6-Jul	7-Jul	8-Jul	9-Jul	10-Jul
		Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02) Site Inspection (ND/2019/05)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/06) Site Inspection (ND/2019/07)	Site Inspection (ND/2019/03)	
11-Jul	12-Jul	13-Jul	14-Jul	15-Jul	16-Jul	17-Jul
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	
18-Jul	19-Jul	20-Jul	21-Jul	22-Jul	23-Jul	24-Jul
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01) Site Inspection (ND/2019/03)		Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)	Site Inspection (ND/2019/02) Site Inspection (ND/2019/07)	
25-Jul	26-Jul	27-Jul	28-Jul	29-Jul	30-Jul	31-Jul
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	

### Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Tentative Impact Air Quality and Noise Monitoring Schedule (August 2021)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-Aug		3-Aug	4-Aug		6-Aug	7-Aug
	1hr TSP* X3, 24hr TSP* KTN-DMS4, FLN-DMS5	24hr TSP FLN-DMS1, FLN-DMS3	Ihr TSP* X3 FLN-DMS1, FLN-DMS3  Noise CP-FLN-NMS1, CP-FLN-NMS2	24hr RSP (Arsenic) KTN-DMS4A	Ihr TSP* X3, 24hr TSP* KTN-DMS4, FLN-DMS5 Noise CP-KTN-NMS2, CP-KTN-NMS3, CP- KTN-NMS5, CP-KTN-NMS6	
8-Aug	9-Aug	10-Aug	11-Aug	12-Aug	13-Aug	14-Aug
	<u>24hr TSP</u> FLN-DMS1, FLN-DMS3	1hr TSP* X3 FLN-DMS1, FLN-DMS3  Noise CP-FLN-NMS1, CP-FLN-NMS2	<u>24hr RSP (Arsenic)</u> KTN-DMS4A	1hr TSP* X3, 24hr TSP*  KTN-DMS4, FLN-DMS5  Noise  CP-KTN-NMS2, CP-KTN-NMS3, CP-  KTN-NMS5, CP-KTN-NMS6	<u>24hr TSP</u> FLN-DMS1, FLN-DMS3	
15-Aug	16-Aug	17-Aug	18-Aug	19-Aug	20-Aug	21-Aug
	<u>1hr TSP* X3</u> FLN-DMS1, FLN-DMS3	<u>24hr RSP (Arsenic)</u> KTN-DMS4A	<u>Ihr TSP* X3, 24hr TSP*</u> KTN-DMS4, FLN-DMS5 <u>Noise</u> CP-KTN-NMS2, CP-KTN-NMS3, CP- KTN-NMS5, CP-KTN-NMS6	24hr TSP FLN-DMS1, FLN-DMS3	<u>Ihr TSP* X3</u> FLN-DMS1, FLN-DMS3 <u>Noise</u> CP-FLN-NMS1, CP-FLN-NMS2	
22-Aug	23-Aug	24-Aug	25-Aug	26-Aug	27-Aug	28-Aug
	<u>24hr RSP (Arsenic)</u> KTN-DMS4A	<u>Ihr TSP* X3, 24hr TSP*</u> KTN-DMS4, FLN-DMS5 <u>Noise</u> CP-KTN-NMS2, CP-KTN-NMS3, CP- KTN-NMS5, CP-KTN-NMS6	<u>24hr TSP</u> FLN-DMS1, FLN-DMS3	1hr TSP* X3 FLN-DMS1, FLN-DMS3  Noise CP-FLN-NMS1, CP-FLN-NMS2	24hr RSP (Arsenic) KTN-DMS4A	
29-Aug	30-Aug	31-Aug				
	<u>Ihr TSP* X3, 24hr TSP*</u> KTN-DMS4, FLN-DMS5 <u>Noise</u> CP-KTN-NMS2, CP-KTN-NMS3, CP- KTN-NMS5, CP-KTN-NMS6	24hr TSP FLN-DMS1, FLN-DMS3				

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

^{*}Monitoring session would be conducted by portable TSP monitor.

Environmental Permit(s)	Contract No.	Air Quality Stations	Noise Stations	
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	1hr TSP and 24hr TSP KTN-DMS4 - Temporary Structure	-	
EP-468/2013/A	ND/2019/03	near Fanling Highway (near Pak Shek Au)		
EP-466/2013 EP-467/2013/A EP-468/2013/A	ND/2019/01	24hr RSP (Arsenic) KTN-DMS4A - Temporary Structure at	-	
EP-468/2013/A	ND/2019/03	Pak Shek Au		
EP-467/2013/A EP-468/2013/A ⁽¹⁾	ND/2019/01		CP-KTN-NMS2 - Residential Buildings at Ma Tso Lung	
EP-468/2013/A ⁽²⁾	ND/2019/01		CP-KTN-NMS3 -Fung Kong Garden	
EP-469/2013 ⁽³⁾	ND/2019/02		CP-KTN-NMS6 - Ho Sheung Heung, Hau Ku Shek Ancestral Hall, Hung Shing Temple & Pai Fung Temple and Sin Wai Nunne	
EP-470/2013	ND/2019/01		CP-KTN-NMS5 - N/A	
EP-473/2013/A ⁽⁴⁾	ND/2019/03	1hr TSP and 24hr TSP FLN-DMS1 - Scattered Village Houses North		
Er-4/3/2013/A	ND/2019/04	of Proposed Potential  Ecopark		
EP-473/2013/A ⁽⁵⁾	ND/2019/05	1hr TSP and 24hr TSP FLN-DMS3 - House near Tong Hang	1	
ED 473/2013/4 ⁽⁶⁾	ND/2019/03	1hr TSP and 24hr TSP		
EP-473/2013/A ⁽⁶⁾	ND/2019/04	FLN-DMS5 - Noble Hill		
EP-473/2013/A ⁽⁷⁾	ND/2019/05		CP-FLN-NMS2 - Scattered Village Houses in Tong Hang	
(2)	ND/2019/04			
EP-473/2013/A ⁽⁸⁾	ND/2019/05		CP-FLN-NMS1 - Belair Monte	
EP-475/2013/A	ND/2019/06			

#### Remarks:

- Since the distance between monitoring station CP-KTN-NMS2 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03
- 2. Since the distance between monitoring station CP-KTN-NMS3 and site boundary of ND/2019/03 under EP-468/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03
- Since the distance between monitoring station CP-KTN-NMS1 and site boundary of ND/2019/02 under EP-469/2013 exceeds 300m.
   The monitoring station is not applicable to ND/2019/02
- Since the distance between monitoring station FLN-DMS1 and site boundary of ND/2019/05 under EP-473/2013/A exceeds500m. The
  monitoring station is not applicable to ND/2019/05
- 5. Since the distance between monitoring station FLN-DMS3 and site boundary of ND/2019/03 and ND/2019/04 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04
- 6. Since the distance between monitoring station FLN-DMS5 and site boundary of ND/2019/05 under EP-473/2013/A exceeds 500m. The monitoring station is not applicable to ND/2019/05
- 7. Since the distance between monitoring station CP-FLN-NMS2 and site boundary of ND/2019/03 and ND/2019/04 under EP-
- 473/2013/A exceeds 300m. The monitoring station is not applicable to ND/2019/03 and ND/2019/04.
- Since the distance between monitoring station CP-FLN-NMS1 and site boundary of ND/2019/03 under EP-473/2013/A exceeds 300m.
   The monitoring station is not applicable to ND/2019/03.

# Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas **Tentative Impact Water Quality Monitoring Schedule (August 2021)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-Aug	2-Aug	3-Aug	4-Aug	5-Aug	6-Aug	7-Aug
		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream
8-Aug	9-Aug	10-Aug	11-Aug	12-Aug	13-Aug	14-Aug
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream	
15-Aug	16-Aug	17-Aug	18-Aug	19-Aug	20-Aug	21-Aug
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream	
22-Aug	23-Aug	24-Aug	25-Aug	26-Aug	27-Aug	28-Aug
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream		Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream	
29-Aug	30-Aug	31-Aug		-	-	
	Water Quality Monitoring River Beas, River Indus and near Siu Hang San Tsuen Stream					

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

#### **Water Quality Monitoring Stations**

River Beas: SYR-CS1 - Upstream of river, SYR-IS1 - Downstream of river
River Indus and near Siu Hang San Tsuen Stream: NTR-CS1 - Upstream of river, NTR-IS1 - Downstream of river, SHST-IS2 - Water sensitive receiver at near Siu Hang San Tsuen Stream,

MWR-IS3 - Water sensitive receiver at near Ma Wat River

Environmental Permit(s)	Contract No.	Water Quality Stations
EP-469/2013	ND/2019/02	River Beas SYR-CS1 - Upstream of river SYR-IS1 - Downstream of river
EP-473/2013/A	ND/2019/04	River Indus and near Siu Hang San Tsuen Stream NTR-CS1 - Upstream of river NTR-IS1 - Downstream of river SHST-IS2 - Water sensitive receiver at near Siu Hang San Tsuen Stream MWR-IS3 - Water sensitive receiver at near Ma Wat River

# Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Tentative Impact Ecological Monitoring Schedule (August 2021)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-Aug	2-Aug	3-Aug	4-Aug	i	6-Aug	7-Aug
				Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River T1 T2 High tide: Start time: 9:00 Low tide: Start time: 12:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley <u>T3 T5</u> High tide: Start time: 9:00  Low tide: Start time: 13:00	
8-Aug	9-Aug	10-Aug	11-Aug			14-Aug
		Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley T3 T5  High tide: Start time: 13:00  Low tide: Start time: 17:00	Monitoring of Measures to Minimise Impacts to Ma Tso Lung and Siu Hang San Tsuen Stream	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River T1 T2 High tide: Start time: 12:00 Low tide: Start time: 8:00	
15-Aug	16-Aug	17-Aug		19-Aug		21-Aug
		Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution  T1, T6		Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River T1 T2 High tide: Start time: 9:00 Low tide: Start time: 12:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley T3 T5  High tide: Start time: 9:00  Low tide: Start time: 14:00	
22-Aug	23-Aug	24-Aug	25-Aug	26-Aug	$\mathcal{E}$	28-Aug
20. A	20.4			Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River T1 T2  High tide: Start time: 14:00  Low tide: Start time: 17:00	Monitoring of Measures to Minimise Disturbance to Water Birds in Sheung Yue River and Long Valley T3 T5  High tide: Start time: 13:00  Low tide: Start time: 17:00	
29-Aug	30-Aug	31-Aug				

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

Item	Activity	Monitoring Stations/Transects				
1	Monitoring of Measures to Minimise Disturbance to Water Birds in Ng Tung River, Sheung Yue River, and Long Valley	T1. Ng Tung River T2. Ng Tung River T3. Sheung Yue River T5. Long Valley				
2	Monitoring of Measures to Minimise Impacts to Aquatic Fauna in Ma Tso Lung Stream and Siu Hang San Tsuen Stream	MS_01, MS_02, MS_03, MS_04, MS_05, MS_06, MS_07, MS_08, MS_09, MS_10, MS_11, MS_12, MS_13, MS_14, MS_15				
3	Monitoring of Measures to Minimise Impacts on Ecological Sensitive Habitats from Disturbance and Pollution	T1. Ma Tso Lung riparian zone and associated wetland habitats T1. Green belt areas E1-8,D1-8 and G1-3 in KTN NDA T1. AGR one C2-4 and C2-2 in KTN NDA T1. Areas north of Ng Tung River T3. Area west of Siu Hang San Tsuen Stream T4. South side of Fanling Highway and Castle Peak Road in the vicinity of Pak Shek Au T5. Area west and east of the southern limit of the FLN NDA work area T6. Areas in the western part of KTN				

# Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas Tentative Weekly Site Inspection Schedule for August 2021

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-Aug	2-Aug	3-Aug	4-Aug	5-Aug	6-Aug	7-Aug
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	
8-Aug	9-Aug	10-Aug	11-Aug	12-Aug	13-Aug	14-Aug
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	
15-Aug	16-Aug	17-Aug	18-Aug	19-Aug	20-Aug	21-Aug
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	
22-Aug	23-Aug	24-Aug	25-Aug	26-Aug	27-Aug	28-Aug
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)	Site Inspection (ND/2019/02)	Site Inspection (ND/2019/04) Site Inspection (ND/2019/06)	Site Inspection (ND/2019/03) Site Inspection (ND/2019/07)	
29-Aug	30-Aug	31-Aug				
	Site Inspection (ND/2019/05)	Site Inspection (ND/2019/01)				

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

APPENDIX E
AIR QUALITY AND AMBIENT ARSENIC
MONITORING RESULTS AND
GRAPHICAL PRESENTATION

# **Appendix E - 1-hour TSP Monitoring Results**

Date	Time	Weather	Particulate Concentration ( µg/m³)
2-Jul-21	9:00	Sunny	62.5
2-Jul-21	10:00	Sunny	66.0
2-Jul-21	11:00	Sunny	67.9
7-Jul-21	13:00	Cloudy	52.2
7-Jul-21	14:00	Cloudy	58.5
7-Jul-21	15:00	Cloudy	54.9
13-Jul-21	13:00	Sunny	44.5
13-Jul-21	14:00	Sunny	48.5
13-Jul-21	15:00	Sunny	45.3
19-Jul-21	9:00	Cloudy	53.3
19-Jul-21	10:00	Cloudy	47.2
19-Jul-21	11:00	Cloudy	50.4
23-Jul-21	9:00	Sunny	65.8
23-Jul-21	10:00	Sunny	68.4
23-Jul-21	11:00	Sunny	74.9
29-Jul-21	13:15	Cloudy	75.9
29-Jul-21	14:15	Cloudy	85.4
29-Jul-21	15:15	Cloudy	77.1
		Average	61.0
	ſ	Maximum	85.4
		Minimum	44.5

Date	Time	Weather	Particulate Concentration ( μg/m³)
2-Jul-21	13:00	Sunny	69.6
2-Jul-21	14:00	Sunny	77.2
2-Jul-21	15:00	Sunny	93.2
7-Jul-21	9:00	Cloudy	52.7
7-Jul-21	10:00	Cloudy	62.8
7-Jul-21	11:00	Cloudy	66.2
13-Jul-21	9:00	Sunny	47.4
13-Jul-21	10:00	Sunny	55.5
13-Jul-21	11:00	Sunny	46.6
19-Jul-21	13:00	Cloudy	54.6
19-Jul-21	14:00	Cloudy	67.4
19-Jul-21	15:00	Cloudy	64.2
23-Jul-21	9:00	Sunny	59.5
23-Jul-21	10:00	Sunny	60.3
23-Jul-21	11:00	Sunny	68.0
29-Jul-21	8:35	Cloudy	73.7
29-Jul-21	9:35	Cloudy	95.3
29-Jul-21	10:35	Cloudy	86.0
		Average	66.7
		Maximum	95.3
		Minimum	46.6

WMA20002\1-hr TSP Results Wellab

**Appendix E - 1-hour TSP Monitoring Results** 

Location FLN-D	Location FLN-DMS5 - Noble Hill									
Date	Time	Weather	Particulate Concentration ( µg/m³)							
5-Jul-21	13:00	Cloudy	17.7							
5-Jul-21	14:00	Cloudy	11.7							
5-Jul-21	15:00	Cloudy	17.6							
9-Jul-21	13:00	Sunny	14.2							
9-Jul-21	14:00	Sunny	14.4							
9-Jul-21	15:00	Sunny	16.0							
15-Jul-21	13:00	Sunny	14.8							
15-Jul-21	14:00	Sunny	9.2							
15-Jul-21	15:00	Sunny	11.2							
21-Jul-21	8:30	Windy	22.8							
21-Jul-21	9:30	Windy	30.8							
21-Jul-21	10:30	Windy	26.4							
27-Jul-21	8:15	Sunny	30.6							
27-Jul-21	9:15	Sunny	32.9							
27-Jul-21	10:15	Sunny	37.2							
		Average	20.5							
		Maximum	37.2							
		Minimum	9.2							

	( Au)		1
Date	Time	Weather	Particulate Concentration ( μg/m³)
5-Jul-21	13:00	Cloudy	19.6
5-Jul-21	14:00	Cloudy	27.3
5-Jul-21	15:00	Cloudy	28.4
9-Jul-21	13:00	Sunny	41.5
9-Jul-21	14:00	Sunny	36.4
9-Jul-21	15:00	Sunny	33.4
15-Jul-21	13:00	Sunny	27.7
15-Jul-21	14:00	Sunny	42.3
15-Jul-21	15:00	Sunny	31.2
21-Jul-21	9:00	Windy	174.5
21-Jul-21	10:00	Windy	98.7
21-Jul-21	11:00	Windy	53.0
27-Jul-21	8:00	Sunny	150.4
27-Jul-21	9:00	Sunny	146.6
27-Jul-21	10:00	Sunny	101.3
		Average	67.5
		Maximum	174.5
		Minimum	19.6

WMA20002\1-hr TSP Results Wellab

# **Appendix E - 24-hour TSP Monitoring Results**

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

Start Date	Weather	Air	Filter W	eight (g)	Particulate	Elapse	Time	Sampling	Flow Rate	(m³/min.)	Av. flow	Total vol.	Conc.
Start Date	Condition	Temp. (K)	Initial	Final	weight (g)	Initial	Final	Time(hrs.)	Initial	Final	(m ³ /min)	$(m^3)$	(µg/m³)
6-Jul-21	Cloudy	301.8	3.5582	3.6882	0.1300	4879.2	4903.2	24.0	1.22	1.22	1.22	1754.4	74.1
12-Jul-21	Sunny	302.0	3.3187	3.4667	0.1480	4903.2	4927.2	24.0	1.22	1.22	1.22	1756.5	84.3
16-Jul-21	Cloudy	300.5	3.3910	3.4900	0.0990	4927.2	4951.2	24.0	1.22	1.22	1.22	1759.7	56.3
22-Jul-21	Sunny	300.0	3.4424	3.5242	0.0818	4951.2	4975.2	24.0	1.22	1.21	1.22	1751.2	46.7
28-Jul-21	Sunny	299.8	3.5128	3.6720	0.1592	4975.2	4999.2	24.0	1.21	1.21	1.21	1748.6	91.0
-					-							Min	46.7
												Max	91.0
												Average	70.5

# **Location FLN-DMS3 - House near Tong Hang**

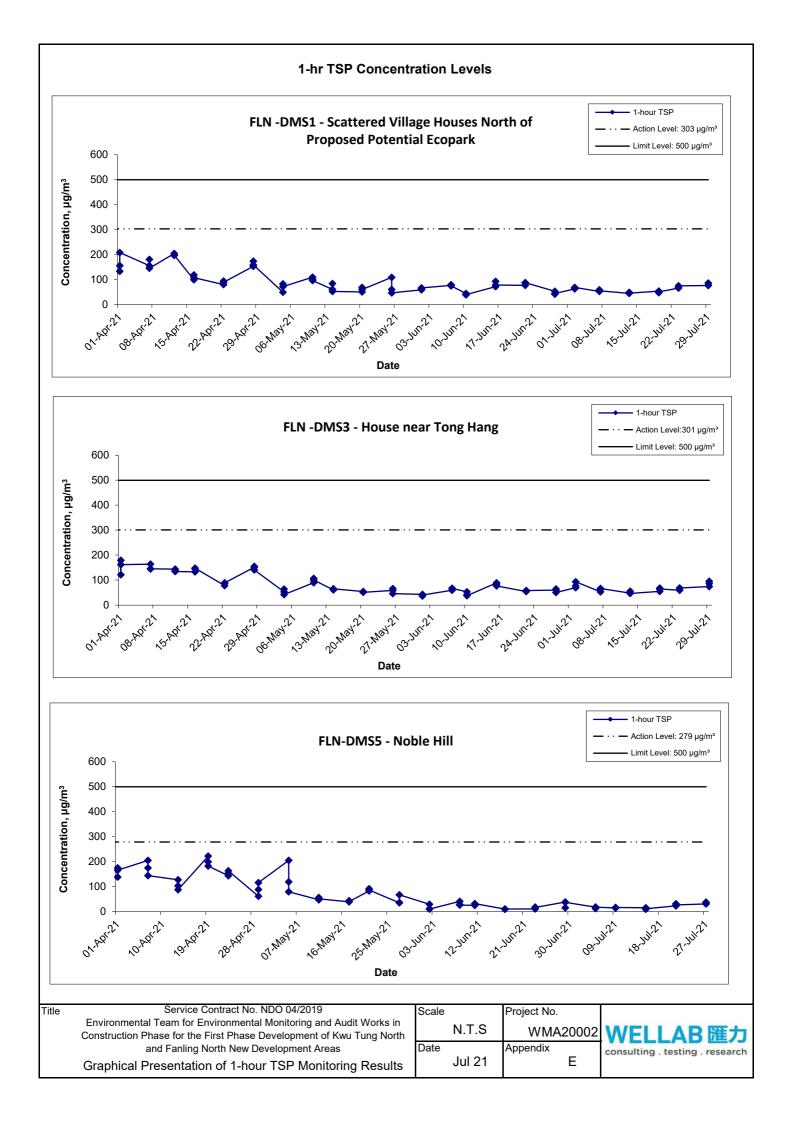
Start Date	Weather	Air	Filter W	eight (g)	Particulate	Elapse	Time	Sampling	Flow Rate	(m³/min.)	Av. flow	Total vol.	Conc.
Start Date	Condition	Temp. (K)	Initial	Final	weight (g)	Initial	Final	Time(hrs.)	Initial	Final	(m ³ /min)	(m ³ )	$(\mu g/m^3)$
6-Jul-21	Cloudy	301.8	3.4506	3.5563	0.1057	5912.3	5936.3	24.0	1.22	1.22	1.22	1759.0	60.1
12-Jul-21	Sunny	302.0	3.5109	3.5715	0.0606	5936.3	5960.3	24.0	1.22	1.22	1.22	1761.0	34.4
16-Jul-21	Cloudy	300.5	3.4607	3.5136	0.0529	5960.3	5984.3	24.0	1.22	1.23	1.23	1764.0	30.0
22-Jul-21	Sunny	300.0	3.2927	3.3405	0.0478	5984.3	6008.3	24.0	1.22	1.22	1.22	1759.4	27.2
28-Jul-21	Sunny	299.8	3.5030	3.5856	0.0826	6008.3	6032.3	24.0	1.22	1.22	1.22	1756.9	47.0
												Min	27.2
												Max	60.1
												Average	39.7

WMA20002\24-hr TSP Results Wellab

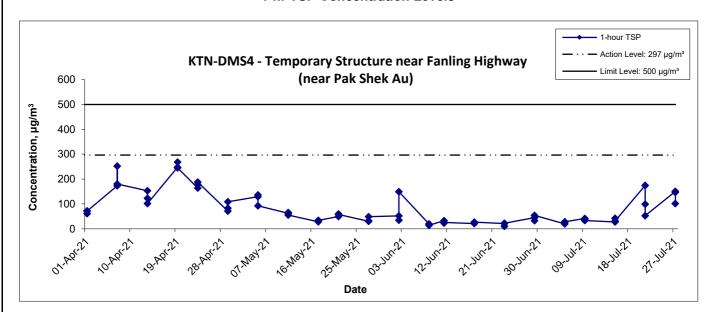
# Appendix E - 24-hour TSP Monitoring Results

Location FLN-D	ocation FLN-DMS5 - Noble Hill										
Date	Time	Weather	Particulate Concentration ( μg/m³)								
5-Jul-21	10:30	Cloudy	42.0								
9-Jul-21	10:30	Sunny	13.8								
15-Jul-21	10:00	Sunny	9.5								
21-Jul-21	8:10	Windy	48.4								
27-Jul-21	8:15	Sunny	35.1								
		Minimum	9.5								
		Maximum	48.4								
		Average	29.8								

Location KTN-DMS4 - Temporary Structure near Fanling Highway (near Pak Shek Au)			
Date	Time	Weather	Particulate Concentration ( µg/m³)
5-Jul-21	10:00	Cloudy	38.1
9-Jul-21	9:30	Sunny	30.5
15-Jul-21	9:30	Sunny	64.8
21-Jul-21	8:45	Windy	118.7
27-Jul-21	8:00	Sunny	45.3
		Minimum	30.5
		Maximum	118.7
		Average	59.5



#### 1-hr TSP Concentration Levels



Title

Service Contract No. NDO 04/2019

Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

Graphical Presentation of 1-hour TSP Monitoring Results

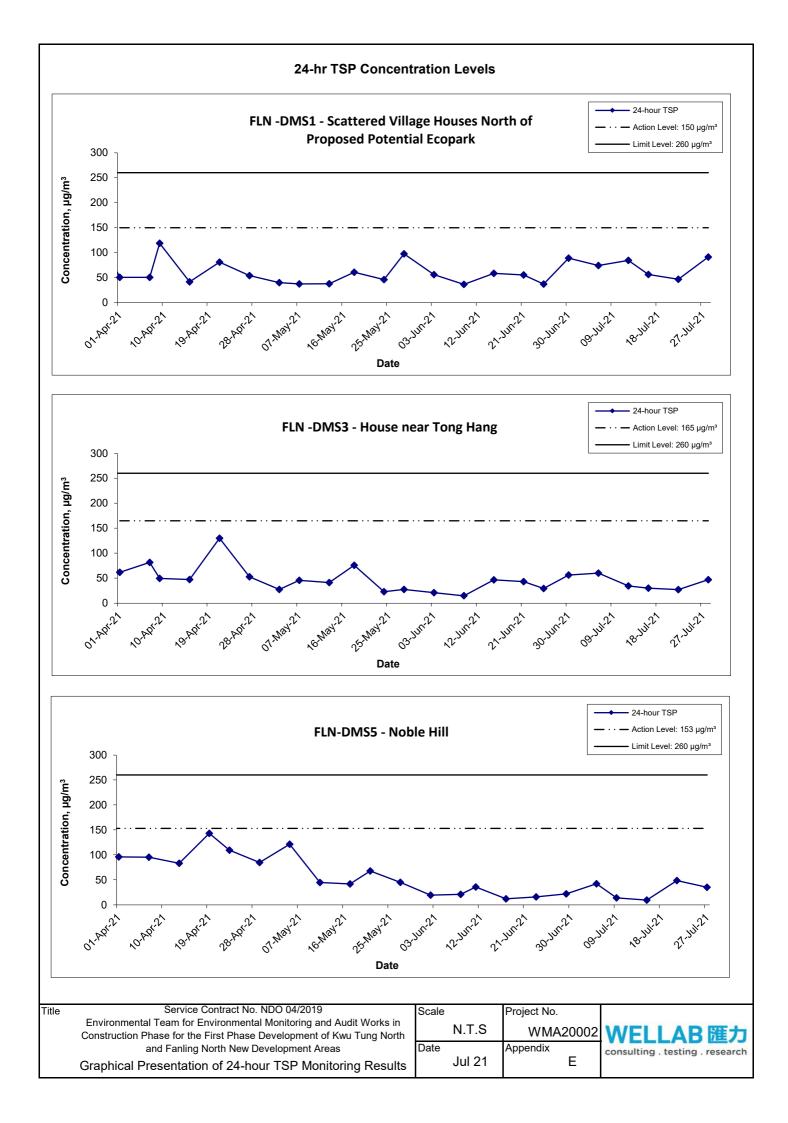
 Scale
 Project No.

 N.T.S
 WMA20002

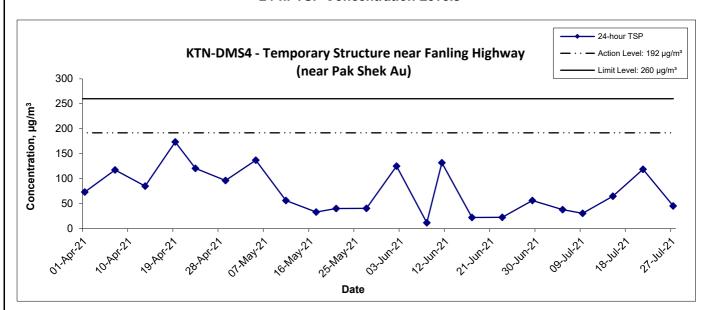
 Date
 Appendix

 Jul 21
 E





#### 24-hr TSP Concentration Levels



Title Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in
Construction Phase for the First Phase Development of Kwu Tung North
and Fanling North New Development Areas
Graphical Presentation of 24-hour TSP Monitoring Results

 Scale
 Project No.

 N.T.S
 WMA20002

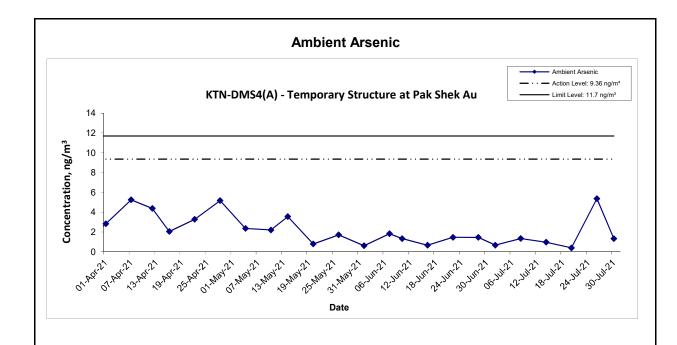
 Date
 Appendix

 Jul 21
 E



# **Appendix E - Ambient Arsenic Monitoring Results**

Location KTN-DMS4(A) - Temporary Structure at Pak Shek Au				
Date	Arsenic (µg)	Standard Volume, Vstd (m³)	Ambient Arsenic Concentration ( ng/m³)	
2-Jul-21	1.1	1649.0	0.67	
8-Jul-21	2.2	1642.2	1.34	
14-Jul-21	1.6	1647.2	0.97	
20-Jul-21	0.6	1647.3	0.39	
26-Jul-21	8.9	1661.5	5.36	
30-Jul-21	2.2	1652.1	1.33	



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

Date

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Graphical Presentation of Ambient Arsenic Monitoring Results

## Service Contract No. NDO 04/2019

# Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas



## Table I - Ambient Arsenic Concentration on 2nd July 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 35394)	Standard Volume, Vstd = Qstd _{avg} x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient	KTN-DMS4(A)				
Arsenic	- Temporary	1.1 μg	$1649.0 \text{ m}^3$	$0.67  \mathrm{ng/m^3}$	No
Concentration,	Structure at Pak				
ng/m³	Shek Au				

## Table II – Action and Limit Levels for Ambient Arsenic Monitoring

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

	Name	Signature	Date
Prepared by:	Meiling Tang	Mely	12 August 2021
Checked by:	Ivy Tam	Turk	12 August 2021



#### TEST REPORT

**APPLICANT:** 

Wellab (EM&A)

RM 1808, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Report No.: 35394

Date of Issue: 2021-07-09

Date Received: 2021-07-05 Date Tested: 2021-07-05

Date Completed: 2021-07-09

1 of 1

ATTN:

Ms Ivy Tam

Page:

Sample Description : 1 sample as received from customer said to be quartz filter

Laboratory No. : 35394

Project No. : WMA 20002 Project Title: Service Contract No. NDO 04/2019

Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North

and Fanling North New Development Areas

**Tests Requested & Methodology:** 

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

#### Results:

Testite.		
Sample ID	210105/029	
Sample No.	35394-1	
Arsenic (µg)	1.1	

Remarks: 1) <= less than

2) Results for the test material reported as received

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## **TEST REPORT**

APPLICANT:

Wellab (EM&A)

RM 1808, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Report No.: QC 35394 Date of Issue: 2021-07-09

 Date Received:
 2021-07-05

 Date Tested:
 2021-07-05

 Date Completed:
 2021-07-09

vy Tam

Page:

1 of 2

ATTN:

Ms Ivy Tam

QC report:

**Method Blank** 

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

Filter Lot Blank

inter not blank		
Parameter	Filter Lot Blank	Acceptance
Arsenic (µg)	0.05	N/A

Laboratory control spike/ Method OC

Laboratory control spike/ Method QC			
Parameter	MQC	Acceptance	
Arsenic (%)	107	80-120	

#### Calibration check

CCV	Acceptance
104	90-110
	CCV

#### Interference check solution A

Interference check solution A		
Parameter	ICS A	Acceptance
Arsenic (ug)	< 0.036	< 0.036

#### Interference check solution AB

meet tel enee eneem bolanes.		
Parameter	ICS AB	Acceptance
Arsenic (%)	102	70-130

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35394

************************************

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## TEST REPORT

 Report No.:
 QC 35394

 Date of Issue:
 2021-07-09

 Date Received:
 2021-07-05

 Date Tested:
 2021-07-05

 Date Completed:
 2021-07-09

Page:

2 of 2

QC report:

Matrix Spike		
Parameter	Matrix Spike	Acceptance
Arsenic (%)	119	75-125

**Filter Duplicate** 

Tillel Duplicate		
Parameter	Filter Duplicate	Acceptance
Arsenic (%)	4	RPD<20%

Serial dilution check

oci iai unution check		
Parameter	Serial dilution check	Acceptance
Arsenic (%)	108	90-110

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35394

# Contract No. NDO 04/2019 Advance and First Stage Works of

# WELLAB匯力

consulting . testing . research

# Kwu Tung North and Fanling North New Development Areas

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

Field Operation Data Log Sheet

Station:	KTN-DM	184A - Temporary Struc	cture at Pak Sh	iek Au			
Sampling Date &	: Time:	From: 2/7/2				Collec	etion Date: 5 /7 /202
Operators:		ka chun	Weather_ Wind:	Sunny Strong	Cloudy Mild	Windy Calm	Rainy
	High Volum	ne Sampler	Model no	•			TE-6070X
,	.tigii voiui.	ne samplei	Blower M	lotor Seria	l no.		3175
		RSP - Respirabl	e Suspended	Particulat	es Sampler	1	
Equipmen	t No.	wh	. (1-03		Set P	oint	1.03
Slope,	m		2)7		Interc	ept. b	0-628(
				Initial, I			Final, f
Ambient Pressure	e (mmHg),	Pa		7(1.	.E		757.1
Ambient Temper				7(1. 30)	1.4		3028
Delta (in. of Wa	ter), W			<u>ጉ</u>	.0		7.0
$Y = [W \times (Ta+3)]$	0)/Pa] ^{1/2}			1, 2	<del>}</del> 53		1.753
		n) = (Y - b)*0.0283/m		1.1	es		1.146
Elapsed Timer In	ndicator (H	ours), T		13009.8	78	/	3037.88
Filter Identificati	on no.				2101	105/02	. 9
Weight of Filter (g)			1.148 1.146 13007.88 13033.88 210105/029 4.2470 4.3173 0-0653				
Weight of Partice	ılate (g)			•	0.06	73	
Mean Standard F					, ,		
$Qstd_{avg} = (Qstd_i)$	+ Qstd _f )/2				1-1	45	
Total Time,	ድ ፕነኮ ፈርስ				ſs a	Y5 60.20	`
Total Time = (Tf Standard Volume	e,						
$Vstd(m^3) = Qstd$	l _{avg} x Total	Time			160	49.0	
Particulate Con	centration	$(\mu g/m^3)$			3	P-6	
Observed Construction	M	ain Construction Site		Dung	truk		
Activities	Ot	her Construction Site		ŕ	truk Exercator	~	
Remarks:	Road	fraktie					
Conducted by Checked by		Man Mer Chely Pan		1.	lej u.l.	Date:	/ , [

# Service Contract No. NDO 04/2019

# Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas



## Table I - Ambient Arsenic Concentration on 8th July 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 35421)	Standard Volume, Vstd = Qstd _{avg} x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m³	KTN-DMS4(A) - Temporary Structure at Pak Shek Au	2.2 µg	1642.2 m ³	1.34 ng/m³	No

## <u>Table II – Action and Limit Levels for Ambient Arsenic Monitoring</u>

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

	Name	Signature	Date
Prepared by:	Meiling Tang	thely	12 August 2021
Checked by:	Ivy Tam	Tred	12 August 2021



### **TEST REPORT**

APPLICANT:

Wellab (EM&A)

RM 1808, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Report No.: 35421

Date of Issue: 2021-07-14

Date Received: 2021-07-09 Date Tested: 2021-07-09

Date Completed:

2021-07-14

ATTN:

Ms Ivy Tam

Page:

1 of 1

**Sample Description** 

1 sample as received from customer said to be quartz filter

Laboratory No.

35421

Project No.

WMA 20002

Project Title:

Service Contract No. NDO 04/2019

Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North

and Fanling North New Development Areas

**Tests Requested & Methodology:** 

TCDCDI	requested to met	100000000	
Item	Parameters	Ref. Method	Limit of reporting
1	Arsenic	In-house method SOP036 (ICP-MS)	0.18 μg

#### Results:

Acsults.		
Sample ID	210105/030	
Sample No.	35421-1	
Arsenic (μg)	2.2	

Remarks: 1)  $\leq$  = less than

2) Results for the test material reported as received

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

General Manager



## TEST REPORT

sAPPLICANT: Wellab (EM&A)

RM 1808, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Report No.: QC 35421 Date of Issue: 2021-07-14

Date of Issue: 2021-07-14
Date Received: 2021-07-09

Date Tested: 2021-07-09 Date Completed: 2021-07-14

Page:

1 of 2

ATTN:

Ms Ivy Tam

QC report:

Method Blank

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

Filter Lot Blank

ritter Lot Diams		
Parameter	Filter Lot Blank	Acceptance
Arsenic (ug)	0.05	N/A

Laboratory control spike/ Method QC

Parameter	MQC	Acceptance
Arsenic (%)	106	80-120

#### Calibration check

CCV	Acceptance
102	90-110
	CCV

#### Interference check solution A

A
Acceptance
< 0.036
-

#### Interference check solution AB

Three lef chec check solution 71B		
Parameter	ICS AB	Acceptance
Arsenic (%)	102	70-130

Remarks: 1)  $\leq$  = less than

2) N/A = Not applicable

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



#### TEST REPORT

 Report No.:
 QC 35421

 Date of Issue:
 2021-07-14

 Date Received:
 2021-07-09

 Date Tested:
 2021-07-09

 Date Completed:
 2021-07-14

Page:

2 of 2

**QC** report:

Matrix SpikeAcceptanceParameterMatrix SpikeAcceptanceArsenic (%)10975-125

Filter Duplicate

Tittel Dupiteate	-	
Parameter	Filter Duplicate	Acceptance
Arsenic (%)	4	RPD≤20%

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	104	90-110

Remarks: 1)  $\leq$  = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35421

# Contract No. NDO 04/2019 Advance and First Stage Works of

# WELLAB匯力

consulting . testing . research

## Kwu Tung North and Fanling North New Development Areas

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

Field Operation Data Log Sheet

_	TN-DMS4A - Temporary S	/ /pr/ (06:00	. )	Calla	ention Data: 0 / /
Sampling Date & T	ime: From: 0/7/2	752/ (06:00	, ,	Cone	ection Date: 9/>/20
Operators: _	He _r ·	Weather Sunny Wind: Strong		Windy Calm	Rainy 
11.		Model no.			TE-6070X
Hig 	th Volume Sampler	Blower Motor Se	rial no.		32VS
	DCD Dosnir	able Suspended Particu	latas Sampla	1*	
F., *(X)		<del></del>			20.0
Equipment N	0.	MA-11-03		Point	7-03
Slope, m		0.9277	•	cept. b	
		Initia			Final, f
Ambient Pressure (1		<u> </u>			761-0
Ambient Temperatu	re (K), Ta	301	_පී		3002
Delta (in. of Water)			- 0		7.0
$Y = [W \times (Ta+30)/$		1, -	<del>147</del>		1.743
Standard flow, Qstd	$(m^3/min) = (Y - b)*0.0283/$	/m /. (	<u>43                                    </u>		1, 138
Elapsed Timer Indic	cator (Hours), T	/3-33	,8-9	/	3037.89
Filter Identification	no.		210	0/05/0	30
Weight of Filter (g)		42	13033.89 13037.89 210105/030 42448 4.305		4.3015
Weight of Particulate (g)			0-6	607	
Mean Standard Flow	v,		<b>\$</b>		
$Qstd_{avg} = (Qstd_i + Qstd_i)$	Qstd _f )/2		1.	140	
Total Time, Total Time = (Tf - 7	Гі) х 60		/ 4	l40.0	0
Standard Volume, Vstd (m²) = Qstd _{avg}	x Total Time		1642.2		
Particulate Concer				7.0	
Observed Construction	Main Construction Site	e Du	mstruck	se her	
Activities	Other Construction Sit	e Æ	her services	M	
Remarks:	Rand Fraktiz				
-					
Conducted by:	LEE MAN MET	Signature:	per _	Date	: 9-7-2021
Checked by:	Motor Ta	Signature:  Signature:	Ouch	Date	· 14/7/24

## Service Contract No. NDO 04/2019

# Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas



## <u>Table I - Ambient Arsenic Concentration on 14th July 2021</u>

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 35459)	Standard Volume, Vstd = Qstd _{avg} x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration,	KTN-DMS4(A) - Temporary Structure at Pak	1.6 µg	1647.2 m ³	0.97 ng/m ³	No
ng/m ³	Shek Au				

## Table II – Action and Limit Levels for Ambient Arsenic Monitoring

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

	Name	Signature	Date
Prepared by:	Meiling Tang	inely	12 August 2021
Checked by:	Ivy Tam	TW	12 August 2021



#### TEST REPORT

**APPLICANT:** 

Wellab (EM&A)

RM 1808, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Report No.:	35459	
Date of Issue:	2021-07-21	
Date Received:	2021-07-15	
Date Tested:	2021-07-15	
Date Completed:	2021-07-21	

ATTN:

Ms Ivy Tam

Page:

1 of 1

**Sample Description** 

1 sample as received from customer said to be quartz filter

Laboratory No.

35459

Project No.

WMA 20002

Project Title:

Service Contract No. NDO 04/2019

Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North

and Fanling North New Development Areas

**Tests Requested & Methodology:** 

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

#### Results.

results.		
Sample ID	210105/031	
Sample No.	35459-1	
Arsenic (µg)	1.6	

Remarks: 1)  $\leq$  = less than

2) Results for the test material reported as received

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## TEST REPORT

sAPPLICANT: Wellab (EM&A)

RM 1808, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Report No.: QC 35459 Date of Issue: 2021-07-21

Date Received: 2021-07-15 Date Tested: 2021-07-15 Date Completed: 2021-07-21

ATTN:

Ms Ivy Tam

Page:

1 of 2

QC report:

Method Blank

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

#### Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (µg)	0.05	N/A

Laboratory control spike/ Method OC

Parameter	MQC	Acceptance
Arsenic (%)	89	80-120

#### Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	104	90-110

#### Interference check solution A

interior check solution is		
Parameter	ICS A	Acceptance
Arsenic (µg)	< 0.036	< 0.036

#### Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	108	70-130

Remarks: 1)  $\leq$  = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35459

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



#### TEST REPORT

 Report No.:
 QC 35459

 Date of Issue:
 2021-07-21

 Date Received:
 2021-07-15

 Date Tested:
 2021-07-15

 Date Completed:
 2021-07-21

Page:

2 of 2

QC report:

Matrix SpikeParameterMatrix SpikeAcceptanceArsenic (%)9975-125

Filter Duplicate

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

Serial dilution check

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

Remarks: 1)  $\leq$  = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35459

# Contract No. NDO 04/2019 Advance and First Stage Works of

# WELLAB匯力

consulting , testing , research

# Kwu Tung North and Fanling North New Development Areas

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

Field Operation Data Log Sheet

Station:	KTN-DN	IS4A - Temporary Structur	e at Pak Sh	iek Au			
Sampling Date &	Time:	From: Kt /7/2021 Ka Oly	( 0	: or )		Collec	etion Date: 18/7/2021
Operators:		Ka Ch	_Weather_ Wind: _	Sunny	Cloudy Mild	Windy Calm	Rainy
E	ligh Volut	ne Sampler	Model no	•			TE-6070X
			Blower M	lotor Seria	l no.	······································	3716
		RSP - Respirable S	uspended l	Particulat	es Sampler		
Equipment	No.	WA-(1	. 03		Set P	oint	7-93
Slope, n		0.0			Interc		0.6281
			Τ,,	Initial, I			Final, f
Ambient Pressure	(mmHg),	Pa		743.5	5		BOCK
Ambient Tempera				30a			302.
Delta (in. of Wate		M <del>.Fa</del>		7.0			7.0
$Y = [W \times (Ta + 30)]$		****		17	47		1.750
Standard flow, Qs	std (m³/mi	(y - b)*0.0283/m		1-142	/		1.146
Elapsed Timer Inc	dicator (H	ours), T	1305	7.89		1308	71.89
Filter Identification	n no.	-			210108/0		,
Weight of Filter (	g)			4.26	210105/0		4.3168
Weight of Particu	late (g)				004	J.)	
Mean Standard Fl			:		) (	. (c	
$\frac{\text{Qstd}_{\text{avg}} = (\text{Qstd}_{\text{i}} + \text{Qstd}_{\text{i}})}{\text{Total Time,}}$	- Qsia _f )/2				1, (%	٠ ٦	
Total Time = (Tf	- Ti) x 60				144	0.00	
Standard Volume, Vstd (m³) = Qstd _a	,	Time			169	t4 0.00 17.V	
Particulate Conc		-				1.6	
Observed						1.0	
Construction	M	ain Construction Site	N/A				
Activities	Ot	her Construction Site	N/A				
Remarks:	NHA	Road traffic	- Luisses - Luisses			- 5.01(+P-0.4	
				0/1			
Conducted by:	Ho ko	lun	_Signatur <u>e</u>	: ///	<u>~</u>	Date:	15/7/204
Checked by:		Metry Zany	_Signatur <u>e</u>	: L4	uty	Date:	1617/201
Project No. W	MA2000	12			1		

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



Table I - Ambient Arsenic Concentration on 20th July 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 35471)	Standard Volume, Vstd = Qstd _{avg} x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m³	KTN-DMS4(A) - Temporary Structure at Pak Shek Au	0.64 μg	1647.3 m³	0.39 ng/m ³	No

## Table II - Action and Limit Levels for Ambient Arsenic Monitoring

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

	Name	Signature	Date
Prepared by:	Meiling Tang	Me.try	12 August 2021
Checked by:	Ivy Tam	126	12 August 2021



## TEST REPORT

APPLICANT:

Wellab (EM&A)

RM 1808, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Report No.:	35471
Date of Issue:	2021-07-27
Date Received:	2021-07-21
Date Tested:	2021-07-21
Date Completed:	2021-07-27

ATTN:

Ms Ivy Tam

Page:

1 of 1

Sample Description

1 sample as received from customer said to be quartz filter

Laboratory No.

35471

Project No. :

WMA 20002

Project Title:

Service Contract No. NDO 04/2019

Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North

and Fanling North New Development Areas

**Tests Requested & Methodology:** 

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

#### Results:

results.		
Sample ID	210105/032	
Sample No.	35471-1	
Arsenic (µg)	0.64	

Remarks: 1)  $\leq$  = less than

2) Results for the test material reported as received

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## TEST REPORT

**sAPPLICANT:** 

Wellab (EM&A)

RM 1808, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Report No.: Date of Issue: QC 35471

Date Received:

2021-07-27 2021-07-21

Date Tested: Date Completed: 2021-07-21 2021-07-27

Page:

1 of 2

ATTN:

Ms Ivy Tam

QC report:

Method Blank

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

Filter Lot Blank

Parameter	Filter Lot Blank	Acceptance
Arsenic (µg)	0.05	N/A

Laboratory control spike/ Method OC

Parameter Parameter	MQC	Acceptance
Arsenic (%)	106	80-120

Calibration check

Parameter	CCV	Acceptance
Arsenic (%)	104	90-110

Interference check solution A

interference eneck solution 11		
Parameter	ICS A	Acceptance
Arsenic (µg)	< 0.036	< 0.036

Interference check solution AB

Parameter	ICS AB	Acceptance
Arsenic (%)	101	70-130

Remarks: 1)  $\leq$  = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35471

*******************************

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## TEST REPORT

 Report No.:
 QC 35471

 Date of Issue:
 2021-07-27

 Date Received:
 2021-07-21

 Date Tested:
 2021-07-21

 Date Completed:
 2021-07-27

Page:

2 of 2

QC report:

Matrix Spike

THE STATE OF THE S		
Parameter	Matrix Spike	Acceptance
Arsenic (%)	107	75-125

Filter Duplicate

Parameter	Filter Duplicate	Acceptance
Arsenic (%)	2	RPD<20%

Serial dilution check

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

Remarks: 1)  $\leq$  = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35471

# Contract No. NDO 04/2019 Advance and First Stage Works of

# WELLAB匯力

consulting , testing , research

## Kwu Tung North and Fanling North New Development Areas

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

Field Operation Data Log Sheet

Sampling Date &	Time: From: 20	17/2021 (00	:00)	( //	ction Date: 21/7/202
Operators:	Ka Chu			oudy Windy) fild Calm	<u>(</u> Rainy)
High Volume Sampler		Model no.			TE-6070X
		Blower Moto	or Serial no.		3715
	RSP - Re	spirable Suspended Par	ticulates Sa	ımpler	and the state of t
Equipment	No.	WA-11.03		Set Point	7-03
Slope, n		6-0277		Intercept. b	0.628(
-	•	I	nitial, I		Final, f
Ambient Pressure	(mmHg), Pa		754-4		775.0
Ambient Tempera	ture (K), Ta		2868		281.5
Delta (in. of Wate	er), W		7.0		7.0
Y = [Wx(Ta+30)]	)/Pa] ^{1/2}		1.749		L)48
Standard flow, Qs	$td (m^3/min) = (Y - b)*0.02$		1.145		1-143
Elapsed Timer Inc	licator (Hours), T		3081.8P		13105.89
Filter Identificatio	n no.		210105/032		
Weight of Filter (	g)		4.2361 4.2584		
Weight of Particul	late (g)		0	. 6223	·
Mean Standard Fl	ow,	1 ,			
$Qstd_{avg} = (Qstd_i +$	- Qstd _f )/2	1.19	44		
Total Time, Total Time = (Tf ·	Ti) v 60		1	(44000	
Standard Volume,				647.3	1-17-
$Vstd (m^3) = Qstd_a$	_{vg} x Total Time		1647.5		
Particulate Conc	entration (µg/m³)			13.5	
Observed Construction	Main Construction	Site N/A			
Activities	Other Construction	Site N/A			
Remarks:	Road Tra	ffic			
Conducted by:	Chenk Cap Me:ty	You Signature:	Von	Date:	21/7/2024 74/11
Checked by:	Me: try	Signature: [	Mely	Date:	ru Hhn
Project No. W/	1		ţ		

## Service Contract No. NDO 04/2019

# Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas



Table I - Ambient Arsenic Concentration on 26th July 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 35516)	Standard Volume, Vstd = Qstd _{avg} x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic Concentration, ng/m ³	KTN-DMS4(A) - Temporary Structure at Pak Shek Au	8.9 µg	1661.5 m ³	5.36 ng/m ³	No

## Table II – Action and Limit Levels for Ambient Arsenic Monitoring

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

	Name	Signature	Date
Prepared by:	Meiling Tang	the:(m	12 August 2021
Checked by:	Ivy Tam	Tuy	12 August 2021



## **TEST REPORT**

APPLICANT:

Wellab (EM&A)

RM 1808, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

 Report No.:
 35516

 Date of Issue:
 2021-08-03

 Date Received:
 2021-07-28

 Date Tested:
 2021-07-28

 Date Completed:
 2021-08-03

ATTN:

Ms Ivy Tam

Page:

1 of 1

Sample Description :

1 sample as received from customer said to be quartz filter

Laboratory No.

35516

Project No.

WMA 20002

Project Title:

Service Contract No. NDO 04/2019

Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North

and Fanling North New Development Areas

**Tests Requested & Methodology:** 

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

#### Results:

Acsults.		
Sample ID	210105/033	
Sample No.	35516-1	
Arsenic (µg)	8.9	

Remarks: 1)  $\leq$  = less than

2) Results for the test material reported as received

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## TEST REPORT

**sAPPLICANT:** 

Wellab (EM&A)

RM 1808, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Report No.: QC 35516 2021-08-03 Date of Issue:

Date Received: 2021-07-28 Date Tested: 2021-07-28

Date Completed:

2021-08-03

ATTN:

Ms Ivy Tam

Page:

1 of 2

QC report: **Method Blank** 

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

Filter Lot Blank

THE LOUDIANK		
Parameter	Filter Lot Blank	Acceptance
Arsenic (µg)	0.05	N/A

Laboratory control spike/ Mothed OC

Laboratory Control spike/ Mic	thou QC	
Parameter	MQC	Acceptance
Arsenic (%)	91	80-120

Calibration check

campiation eneck		
Parameter	CCV	Acceptance
Arsenic (%)	103	90-110

Interference check solution A

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

Interference check solution AR

filler ler ence check solution a	LD	
Parameter	ICS AB	Acceptance
Arsenic (%)	100	70-130

Remarks: 1)  $\leq$  = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35516

*************************************

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



#### TEST REPORT

 Report No.:
 QC 35516

 Date of Issue:
 2021-08-03

 Date Received:
 2021-07-28

 Date Tested:
 2021-07-28

 Date Completed:
 2021-08-03

Page:

2 of 2

QC report:

Matrix SpikeParameterMatrix SpikeAcceptanceArsenic (%)11775-125

Filter Duplicate

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

Serial dilution check

Parameter	Serial dilution check	Acceptance
Arsenic (%)	104	90-110

Remarks: 1)  $\leq$  = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35516

# Contract No. NDO 04/2019 Advance and First Stage Works of

# WELLAB匯力

consulting , testing , research

# Kwu Tung North and Fanling North New Development Areas

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

Field Operation Data Log Sheet

Project No. WMA20002

Station:	KTN-DM	S4A - Temporary Structu	re at Pak Sl	nek Au			
Sampling Date &	Time:	From: 26/7/2021	( 0	: W)		Collec	ction Date: <u>27/6/2021</u>
Operators:		Ka Chun	Weather_ Wind:	Sunay	Cloudy Mild	Windy Catin	Rainy
FI	ligh Volun	ne Sampler	Model no				TE-6070X
		<u> </u>	Blower N	lotor Seria	ıl no.		3724
	··	RSP - Respirable S	Suspended :	 Particulat	es Sampler	,	A 44C4 5**
Equipment	No.	w 17-1	<del></del>		Set P		7~3
Slope, n		D- 0			Interc		0.6499
			T'	Initial, I			
Ambient Pressure	(mmHg).	 Pa		7.7.	1.0		Final, f
Ambient Tempera		-11.11.11.11.11		301-P			302-0
Delta (in. of Wate				7.9			7.9
$Y = [W \times (Ta+30)]$				1.753	٢		1. 754
		a) = (Y - b)*0.0283/m		1.13	3	1. 155	
Elapsed Timer Inc			1318	13105.89 13129.89		1129.89	
Filter Identification no.			·	2/0/8	5/03	3	
Weight of Filter (g)		~	- 804.	<b>but</b> 1		4.2895	
Weight of Particulate (g)				Ozoli	ey		
Mean Standard Fl	ow,	.,, .			1 ,	-10	
$Qstd_{avg} = (Qstd_i +$	Qstd _f )/2				1,15	Y 2	
Total Time,	T:) -, 60			1,154			
Total Time = (Tf- Standard Volume,	- 11) X 00				1 [ ]	1 5	
$Vstd(m^2) = Qstd_a$	_{vg} x Total	<u> Fime</u>			161	6(27	
Particulate Conc	entration	(μg/m ³ )			87	0-8	
Observed Construction	Ma	in Construction Site	N/A				
Activities	Otl	ner Construction Site	NIA				
Remarks:	Road	traffic					
				Λ.			
Conducted by:	tlo K	a China	Signature		^	Date:	27/7/2021
Checked by:		Mely 7ay	Signature	: <i>W</i>	re:ly	Date:	2917/2M

# Service Contract No. NDO 04/2019 Environmental Team for Environmental

## Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas



## Table I - Ambient Arsenic Concentration on 30th July 2021

Parameter	Monitoring Station	Arsenic (Refer to Report No.: 35530)	Standard Volume, Vstd = Qstd _{avg} x Total Time (Refer to the 24-hr RSP Field Operation Data Log Sheet)	Ambient Arsenic Concentration	Exceedance (Refer to Table II for Action and Limit Level)
Ambient Arsenic	KTN-DMS4(A) - Temporary	2.2 μg	1652.1 m ³	1.33 ng/m ³	No
Concentration, ng/m ³	Structure at Pak Shek Au				

## Table II - Action and Limit Levels for Ambient Arsenic Monitoring

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

	Name	Signature	Date
Prepared by:	Meiling Tang	netry	12 August 2021
Checked by:	Ivy Tam	Tuy	12 August 2021



## TEST REPORT

APPLICANT:

Wellab (EM&A)

RM 1808, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Report No.:	35530
Date of Issue:	2021-08-06
Date Received:	2021-08-02
Date Tested:	2021-08-02
Date Completed:	2021-08-06

ATTN:

Ms Ivy Tam

Page:

1 of 1

Sample Description

: 1 sample as received from customer said to be quartz filter

Laboratory No.

35530

Project No.

WMA 20002

Project Title:

Service Contract No. NDO 04/2019

Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North

and Fanling North New Development Areas

**Tests Requested & Methodology:** 

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

#### Results.

Results.		
Sample ID	210105/034	
Sample No.	35530-1	
Arsenic (µg)	2.2	

Remarks: 1) <= less than

2) Results for the test material reported as received

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## **TEST REPORT**

APPLICANT:

Wellab (EM&A)

RM 1808, Technology Park,

18 On Lai Street,

Shatin, N.T., Hong Kong

Report No.: Date of Issue: QC 35530 2021-08-06

Date Received: Date Tested:

2021-08-02

Date Completed:

2021-08-02 2021-08-06

Page:

1 of 2

ATTN:

Ms Ivy Tam

QC report:

**Method Blank** 

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

Filter Lot Blank

THECH LOT DIGHT		
Parameter	Filter Lot Blank	Acceptance
Arsenic (μg)	0.05	N/A

I about town control miles/ Mothed OC

Laboratory control spike/ Mic	thou QC	
Parameter	MQC	Acceptance
Arsenic (%)	103	80-120

Calibration check

Cambiation check		
Parameter	CCV	Acceptance
Arsenic (%)	100	90-110

Interference check solution A

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

Interference check solution AR

Darameter	ICS AB	Acceptance
Parameter		A CONTRACTOR OF THE PARTY OF TH
Arsenic (%)	102	70-130

Remarks: 1) < =less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35530

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

PATRICK TSE General Manager

************************************



# TEST REPORT

QC 35530 Report No.: 2021-08-06 Date of Issue: 2021-08-02 Date Received: 2021-08-02 Date Tested: 2021-08-06 Date Completed:

Page:

2 of 2

QC report:

**Matrix Spike** Acceptance Matrix Spike Parameter 75-125 118 Arsenic (%)

Filter Dunlicate

Filler Duplicate		No. 100
Parameter	Filter Duplicate	Acceptance
	10	RPD<20%
Arsenic (%)	10	KI D_2070

Serial dilution check

Serial dilution check	9 9500 U 10 10 U	
Parameter	Serial dilution check	Acceptance
Arsenic (%)	94	90-110
Arsenic (70)	,	

Remarks: 1)  $\leq$  = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35530 

This report may not be reproduced, except in full, without prior written approval from WELLAB LIMITED and the results relate only to the items calibrated or tested. ONLY the laboratory's certified true copy is valid.

# Contract No. NDO 04/2019 Advance and First Stage Works of

# WELLAB匯力

consulting . testing . research

# Kwu Tung North and Fanling North New Development Areas

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

Field Operation Data Log Sheet

Station:	KTN-DM	1S4A - T	Γemporary St	ructure	e at Pak Sh	ek Au			
Sampling Date &	Time:	From:	30/7/204		( 0	: ७७)	)	Collec	tion Date: 2/f/2021
Operators:	—	a W			Weather_ Wind: _	Sunny Strong	Cloudy Mild	Windy Calin	Rainy
Н	ligh Volun	ne Samr	oler		Model no.				TE-6070X
					Blower M	otor Seria	al no.		3)W
**************************************		R	SP - Respira	ble Su	spended I	Particulat	tes Sample	r	
Equipment	No.			MA	11.123	i	Set 1	Point	7-03
Slope, n				0 - 0	. 11.03 277		1	cept, b	0-6281
* 1					<del> </del>	Initial, I	-	T .	Final, f
Ambient Pressure	(mmHg),	Pa		****		753			7535
Ambient Tempera	ture (K),	Га				300	-3		300.5
Delta (in. of Wate	er), W				~	7.	a		tio
$Y = [W \times (Ta+30)]$	)/Pa ] ^{1/2}					1.7	31		1.212
Standard flow, Qs	td (m³/mir	$\mathbf{n}) = (\mathbf{Y} - \mathbf{n}) = \mathbf{n} \cdot \mathbf{n}$	· b)*0.0283/n	1	1.147			1148	
Elapsed Timer Inc	licator (Ho	ours), T			1312f. Sp			(3	.183.8P
Filter Identificatio	n no.					•	210/05/	634	
Weight of Filter (g	g)				4	-2344	-	4	c. 3065
Weight of Particul	147				0.0721				
Mean Standard Flo	-						, 11	<u>د</u> ک.	
$\frac{\text{Qstd}_{\text{avg}} = (\text{Qstd}_{\text{i}} + \frac{1}{2})}{\text{Qstd}_{\text{i}} + \frac{1}{2}}$	Qstd _f )/2						1.1	t7 t0.00	
Total Time, Total Time = (Tf -	Ti) x 60						14	40 00	
Standard Volume,							11	52.	
$Vstd (m^3) = Qstd_{av}$	_{/g} x Total ′	Time					1 8	77-1	
Particulate Conc	entration	(μg/m ³ )					$\varphi$	3.6	
Observed Construction	Ma	in Cons	truction Site		NA				
Activities	Oth	ner Cons	truction Site		N/A				
Remarks:	Road	traf	l lic					- Harris	
-		q				^			
Conducted by:		(e (	<u>l</u>		Signatur <u>e:</u>	<u>U</u>	<u> </u>	Date:	2/8/2021
Checked by:	(ı	re.b	Jay		Signatur <u>e:</u>	m	e:h	Date:	3/8/24

APPENDIX F NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATION

#### Appendix F - Noise Monitoring Results

Location CP-FLN-NMS1 - Belair Monte (Existing)										
Date Weather	her Time	Un	it: dB (A) (5-n	nin)	Average	Baseline Level				
			L _{eq}	L ₁₀	L 90	L _{eq}	L _{eq}			
		11:30	62.2	62.6	61.6	-				
		11:35	62.6	63.3	61.7					
2-Jul-21	Sunny	11:40	61.4	62.4	59.5	61.3				
Z-Jul-2 I	Sullily	11:45	60.0	60.8	59.3	01.3				
		11:50	60.3	60.8	59.4					
		11:55	60.5	61.4	59.4					
		15:00	54.6	56.2	52.0					
		15:05	52.7	54.4	50.6					
7-Jul-21	Cloudy	15:10	55.2	56.7	51.6	54.6				
7-Jui-2 i	Cloudy	15:15	56.0	57.3	53.2	54.6				
		15:20	54.1	56.2	53.5					
		15:25	54.0	56.3	53.1					
		09:30	57.6	59.7	48.5	54.6				
		09:35	54.6	57.0	51.0		69.9			
13-Jul-21	Sunny	09:40	53.9	57.3	49.9					
13-Jul-21	Suring	09:45	54.7	57.4	48.8					
		09:50	51.8	54.6	50.1					
		09:55	52.0	54.7	50.0					
		10:30	69.4	71.6	66.8		1			
		10:35	70.8	73.1	66.2					
19-Jul-21	Cloudy	10:40	69.7	71.8	66.1	00.0				
19-Jui-21	Cloudy	10:45	70.7	73.8	66.4	69.8				
		10:50	69.3	72.0	65.5					
		10:55	68.4	71.0	64.5					
		13:55	69.9	71.8	67.8					
		14:00	69.0	70.9	66.8	69.4				
29-Jul-21	Claudy	14:05	70.4	73.1	67.2					
∠9-Jui-∠1	Cloudy	14:10	69.6	71.2	66.5					
		14:15	69.1	71.8	64.6					
		14:20	67.7	71.0	62.1					

Location CP-FLN-NMS2 - Scattered Village House in Tong Hang (Existing)									
Date Weather	Time	Un	it: dB (A) (5-n	nin)	Average	Baseline Level			
			L _{eq}	L ₁₀	L 90	L _{eq}	L _{eq}		
		13:30	52.3	52.6	47.6				
		13:35	54.8	60.7	48.8	52.1			
2-Jul-21	Sunny	13:40	52.0	56.9	45.5				
Z-3ui-Z i	Suring	13:45	49.7	53.4	45.4	32.1			
		13:50	49.5	51.3	43.1				
		13:55	52.3	54.3	50.1				
		13:30	54.6	56.2	49.9		1		
		13:35	56.7	58.1	50.2				
7-Jul-21	Claudy	13:40	53.4	55.1	50.5	E 4 7			
7-Jui-2 i	Cloudy	13:45	54.4	56.2	50.2	- 54.7 -			
		13:50	54.3	56.4	50.0				
		13:55	54.0	56.0	49.7				
		11:00	51.8	55.0	50.2	53.9	1		
		11:05	53.9	57.4	51.4		59.6		
40 1 104	0	11:10	54.5	58.0	51.5				
13-Jul-21	Sunny	11:15	54.7	58.1	51.0				
		11:20	54.5	58.5	45.6				
		11:25	53.6	55.7	46.0				
		13:10	61.7	65.1	59.4		1		
		13:15	61.8	66.6	54.8				
		13:20	59.9	65.0	53.2	60.6			
19-Jul-21	Cloudy	13:25	59.6	61.7	52.4				
		13:30	59.8	62.6	53.3				
		13:35	60.3	63.1	54.6				
		09:40	58.2	59.3	57.1		1		
		09:45	60.5	61.4	57.4	60.4			
		09:50	63.0	66.6	58.1				
29-Jul-21	Cloudy	09:55	60.6	61.9	57.6				
		10:00	59.7	60.6	58.4				
		10:05	58.7	59.1	58.0				

WMA20002 - Noise Results
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### Appendix F - Noise Monitoring Results

Location CP-K	TN-NMS2 - R	esidential Βι	ıildings at M	a Tso Lung (	(Existing)		
Date	Weather	Time	Un	it: dB (A) (5-n	nin)	Average	Baseline Level
			L _{eq}	L ₁₀	L 90	L _{eq}	L _{eq}
		10:45	55.3	56.3	54.4		
		10:50	55.6	57.8	54.3		
5-Jul-21	Cloudy	10:55	54.9	56.3	53.9	55.3	
J-Jui-2 i	Cloudy	11:00	55.4	57.8	54.0	33.3	
		11:05	55.4	55.3	53.6		
		11:10	55.2	56.3	53.9		
		09:00	58.7	59.6	57.2		
		09:05	58.1	59.0	56.5		
15-Jul-21	Cummi	09:10	57.1	57.8	56.3	60.4	
15-Jul-21	Sunny	09:15	57.3	57.8	56.7	00.4	
		09:20	57.4	58.3	56.6		
		09:25	65.5	68.0	56.8		50.0
		10:40	63.0	63.4	58.4		58.6
		10:45	65.5	66.3	58.6		
21-Jul-21	Cloudy	10:50	67.4	62.3	49.6	63.0	
21-Jui-21	Cloudy	10:55	53.9	58.2	48.8	03.0	
		11:00	52.1	53.7	48.7		
		11:05	58.1	58.8	49.0		
		09:00	58.9	59.5	58.2		
		09:05	59.3	61.2	57.9		
27-Jul-21	Cummit	09:10	58.0	58.4	57.6	58.4	
∠1-Jui-∠1	Sunny	09:15	57.9	58.4	57.5	30.4	
		09:20	57.9	58.4	57.5		
		09:25	58.4	59.5	57.5		

Location CP-K	TN-NMS3 - Fu	ıng Kong Ga	ırden (Existi	ng)			
Date	Weather	Time	Un	it: dB (A) (5-n	nin)	Average	Baseline Level
			L _{eq}	L ₁₀	L 90	L _{eq}	L _{eq}
		10:00	60.2	63.3	54.5		
		10:05	55.3	56.8	54.3		
5-Jul-21	Cloudy	10:10	54.8	55.1	54.4	57.0	
5-Jui-2 i	Cloudy	10:15	54.8	55.2	54.3	57.0	
		10:20	58.7	62.6	52.8		
		10:25	54.3	55.9	54.1		
		09:50	49.1	51.3	46.4		
		09:55	49.6	51.3	46.5		
15-Jul-21	C	10:00	48.9	50.7	46.4	54.8	
15-Jul-21	Sunny	10:05	61.5	68.1	47.0	54.6	
		10:10	49.6	52.5	47.0		
		10:15	47.8	49.9	44.9		
		11:20	58.8	61.4	48.7		51.6
		11:25	63.8	67.7	48.7		
04 1:104	01	11:30	50.0	51.7	47.9	57.0	
21-Jul-21	Cloudy	11:35	50.5	52.3	47.1	57.8	
		11:40	49.6	51.8	46.8		
		11:45	51.8	51.9	46.5		
		09:50	48.4	50.6	47.0		1
		09:55	56.2	55.9	43.8		
07 101 04		10:00	46.5	47.6	45.3	50.7	
27-Jul-21	Sunny	10:05	47.1	48.9	45.3	50.7	
		10:10	47.8	49.6	45.8		
		10:15	47.5	48.7	46.3		

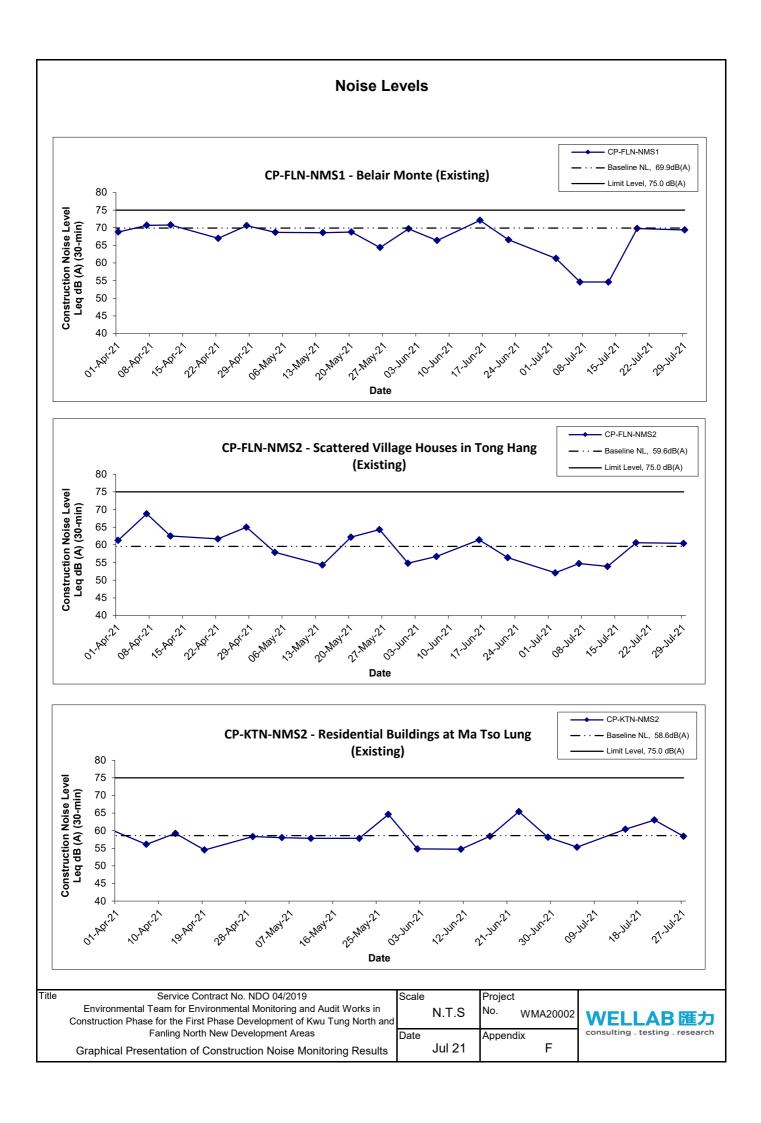
WMA20002 - Noise Results
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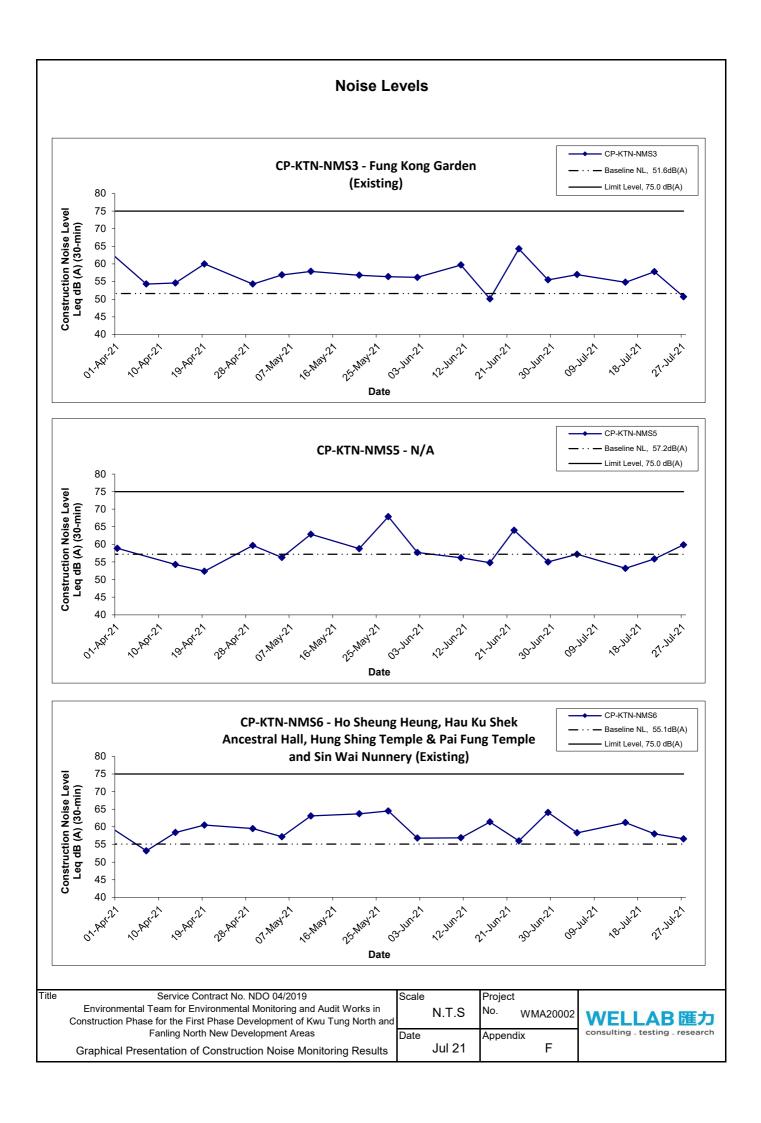
### Appendix F - Noise Monitoring Results

Location CP-K	TN-NMS5 - N	Ά					
Date	Weather	Time	Un	it: dB (A) (5-n	nin)	Average	Baseline Level
			L _{eq}	L ₁₀	L 90	L _{eq}	L _{eq}
		13:00	57.6	59.8	56.3		
		13:05	57.1	57.8	56.4		
5-Jul-21	Cloudy	13:10	56.8	57.5	56.0	57.2	
J-Jul-2 1	Cloudy	13:15	58.4	63.1	56.0	37.2	
		13:20	56.8	57.6	56.0		
		13:25	56.4	57.0	56.0		
		13:15	50.7	53.3	49.2		1
		13:20	55.5	59.3	48.3		
15-Jul-21	Sunny	13:25	50.9	51.5	50.0	53.2	
13-Jui-21	Suring	13:30	52.4	55.2	49.8	55.2	
		13:35	51.5	53.1	49.4		
		13:40	55.3	55.9	49.8		57.0
		16:50	57.3	58.7	53.0		57.2
		16:55	55.0	56.8	52.7		
21-Jul-21	Cloudy	17:00	55.5	57.2	53.3	55.9	
21-Jui-21	Cloudy	17:05	55.3	58.4	52.6	55.9	
		17:10	55.7	58.8	52.3		
		17:15	56.2	54.6	51.0		
		13:20	61.5	63.4	58.9		
		13:25	58.7	61.1	53.9		
27-Jul-21	Cuppy	13:30	54.9	57.7	51.6	50.0	
21-Jui-21	Sunny	13:35	61.5	63.1	53.5	59.9	
		13:40	60.5	62.6	57.2		
		13:45	59.2	63.2	53.3		

Date	Weather	Time	Un	it: dB (A) (5-n	nin)	Average	Baseline Level
			L _{eq}	L ₁₀	L 90	L _{eq}	L _{eq}
		11:30	59.6	62.2	54.8		
		11:35	56.3	57.8	55.0		
5-Jul-21	Claudy	11:40	59.7	60.8	55.8	58.3	
5-Jui-2 i	Cloudy	11:45	55.7	56.7	54.0	30.3	
		11:50	57.7	59.2	52.5		
		11:55	59.4	62.8	52.5		
		10:40	61.1	64.3	56.7		
		10:45	60.8	61.8	55.8		
15-Jul-21	Cummi	10:50	64.4	62.6	55.8	61.2	
15-Jul-21	Sunny	10:55	60.6	61.2	55.9	01.2	
		11:00	59.6	62.8	54.7		
		11:05	57.7	60.6	54.3		
		13:35	58.7	60.5	51.5		55.1
		13:40	61.0	63.8	53.8		
04 11 04	Classals	13:45	57.7	59.2	53.2	50.0	
21-Jul-21	Cloudy	13:50	58.4	60.4	50.1	58.0	
		13:55	54.3	56.3	52.0		
		14:00	54.3	56.4	51.0		
		10:45	55.1	55.2	53.0		
		10:50	55.1	56.4	52.8		
07 1-1 04	0	10:55	54.9	54.9	52.5	50.0	
27-Jul-21	-Jul-21 Sunny	11:00	54.5	55.7	53.0	56.6	
		11:05	53.4	53.9	52.8		
		11:10	61.1	63.2	53.2		

WMA20002 - Noise Results
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APPENDIX G WATER QUALITY MONITORING RESULTS AND GRAPHICAL PRESENTATIONS

Location: SYR-CS1

Date	Weather	Start	Sampling	Depth (m)	Tempera	ature (°C)	р	Н	Salin	ity ppt	DO Satu	ration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L)	Arseni	c (μg/L)
Date	Condition	Time	Gampling	Deptil (III)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Jul-21	Cloudy	09:18	Middle	0.2	30.2 30.1	30.2	7.2 7.2	7.2	0.1 0.1	0.1	85.6 85.0	85.3	6.5 6.4	6.5	4.1 4.0	4.1	11 11	11.0	24 20	22.0
5-Jul-21	Sunny	12:41	Middle	0.2	31.0 31.0	31.0	7.4 7.3	7.4	0.1 0.1	0.1	86.0 85.9	86.0	6.4 6.4	6.4	6.8 6.8	6.8	8 9	8.5	15 15	15.0
7-Jul-21	Rainy	11:05	Middle	0.2	29.3 29.3	29.3	7.1 7.1	7.1	0.1 0.1	0.1	77.5 77.1	77.3	5.9 5.9	5.9	11.0 11.1	11.1	17 14	15.5	13 13	13.0
9-Jul-21	Sunny	09:14	Middle	0.2	29.3 29.3	29.3	7.4 7.4	7.4	0.2 0.2	0.2	67.2 66.9	67.1	5.1 5.1	5.1	6.7 6.8	6.8	9 8	8.5	12 14	13.0
12-Jul-21	Sunny	09:00	Middle	0.3	30.6 30.6	30.6	7.6 7.6	7.6	0.1 0.1	0.1	79.3 78.9	79.1	5.9 5.9	5.9	3.9 3.9	3.9	17 19	18.0	13 13	13.0
14-Jul-21	Sunny	09:21	Middle	0.1	30.4 30.4	30.4	7.3 7.3	7.3	0.1 0.1	0.1	74.4 74.2	74.3	5.6 5.6	5.6	6.7 6.5	6.6	21 19	20.0	12 12	12.0
17-Jul-21	Cloudy	12:03	Middle	0.3	30.5 30.6	30.6	7.7 7.7	7.7	0.2 0.2	0.2	101.7 101.5	101.6	7.6 7.6	7.6	9.5 9.6	9.6	14 13	13.5	11 10	10.5
19-Jul-21	Rainy	09:40	Middle	0.2	26.9 26.9	26.9	7.6 7.6	7.6	0.1 0.1	0.1	79.6 79.5	79.6	6.4 6.3	6.4	23.0 23.1	23.1	18 19	18.5	o	8.5
21-Jul-21	Rainy	11:17	Middle	0.3	26.2 26.2	26.2	7.2 7.2	7.2	0.1 0.1	0.1	78.0 77.4	77.7	6.3 6.3	6.3	12.0 12.1	12.1	15 12	13.5	9 8	8.5
23-Jul-21	Sunny	13:14	Middle	0.3	30.5 30.5	30.5	7.5 7.5	7.5	0.1 0.1	0.1	99.0 98.9	99.0	7.4 7.4	7.4	6.5 6.3	6.4	12 10	11.0	12 11	11.5
26-Jul-21	Sunny	09:42	Middle	0.2	29.2 29.2	29.2	7.9 7.8	7.9	0.1 0.1	0.1	128.4 128.5	128.5	9.8 9.8	9.8	5.0 5.0	5.0	4 4	4.0	14 12	13.0
28-Jul-21	Fine	10:36	Middle	0.3	30.6 30.6	30.6	7.7 7.7	7.7	0.2 0.2	0.2	85.0 85.1	85.1	6.4 6.4	6.4	12.2 12.3	12.3	11 11	11.0	13 13	13.0
30-Jul-21	Rainy	09:17	Middle	0.2	27.3 27.3	27.3	7.4 7.4	7.4	0.1 0.1	0.1	72.6 72.1	72.4	5.8 5.7	5.8	20.8 20.9	20.9	12 12	12.0	10 10	10.0

Location: SYR-IS1

Date	Weather	Start	Sampling	Depth (m)	Tempera	ature (°C)	р	Н	Salin	ity ppt	DO Satu	ration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L)	Arsenie	c (μg/L)
Date	Condition	Time	Gampling	Deput (III)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Jul-21	Cloudy	09:36	Middle	0.5	30.1 30.1	30.1	7.1 7.1	7.1	0.2 0.2	0.2	88.0 88.0	88.0	6.6 6.6	6.6	23.2 22.9	23.1	26 26	26.0	15 17	16.0
5-Jul-21	Sunny	13:01	Middle	0.5	31.5 31.5	31.5	7.2 7.2	7.2	0.2 0.2	0.2	88.4 88.4	88.4	6.5 6.5	6.5	18.9 18.5	18.7	29 30	29.5	17 17	17.0
7-Jul-21	Rainy	11:24	Middle	0.5	29.3 29.3	29.3	7.2 7.2	7.2	0.2 0.2	0.2	90.0 89.3	89.7	6.9 6.8	6.9	14.3 14.2	14.3	13 15	14.0	15 15	15.0
9-Jul-21	Sunny	09:28	Middle	0.6	31.4 31.4	31.4	7.3 7.3	7.3	0.3 0.3	0.3	83.6 83.5	83.6	6.2 6.2	6.2	14.5 14.6	14.6	19 19	19.0	4 4	4.0
12-Jul-21	Sunny	09:21	Middle	0.5	30.8 30.8	30.8	7.3 7.3	7.3	0.3 0.3	0.3	86.1 85.8	86.0	6.4 6.4	6.4	17.6 17.3	17.5	24 27	25.5	6 7	6.5
14-Jul-21	Sunny	09:02	Middle	0.2	29.3 29.3	29.3	7.3 7.3	7.3	0.2 0.2	0.2	82.3 82.2	82.3	6.3 6.3	6.3	9.6 9.5	9.6	18 20	19.0	10 10	10.0
17-Jul-21	Cloudy	12:34	Middle	0.6	31.5 31.5	31.5	7.7 7.7	7.7	0.2 0.2	0.2	88.9 88.7	88.8	6.6 6.5	6.6	46.4 46.5	46.5	43 44	43.5	8 8	8.0
19-Jul-21	Rainy	10:00	Middle	0.5	26.9 26.9	26.9	7.4 7.4	7.4	0.1 0.1	0.1	66.6 66.4	66.5	5.3 5.3	5.3	61.5 62.6	62.1	32 32	32.0	16 16	16.0
21-Jul-21	Rainy	12:54	Middle	0.8	26.8 26.8	26.8	7.4 7.4	7.4	0.1 0.1	0.1	93.2 93.0	93.1	7.5 7.4	7.5	17.3 17.3	17.3	17 14	15.5	10 10	10.0
23-Jul-21	Sunny	12:48	Middle	0.6	32.3 32.3	32.3	7.4 7.4	7.4	0.1 0.1	0.1	93.5 93.3	93.4	6.8 6.8	6.8	11.2 11.2	11.2	8	8.0	12 11	11.5
26-Jul-21	Sunny	10:05	Middle	0.6	29.3 29.3	29.3	7.3 7.3	7.3	0.1 0.1	0.1	47.8 47.6	47.7	3.7 3.6	3.7	21.7 21.8	21.8	18 22	20.0	8	8.0
28-Jul-21	Fine	11:07	Middle	0.4	32.1 32.1	32.1	7.6 7.6	7.6	0.2 0.2	0.2	85.4 85.5	85.5	6.2 6.2	6.2	23.4 23.5	23.5	22 21	21.5	9	9.0
30-Jul-21	Rainy	09:40	Middle	0.6	27.4 27.4	27.4	7.3 7.3	7.3	0.1 0.1	0.1	85.1 85.0	85.1	6.7 6.7	6.7	113.9 114.0	114.0	97 110	103.5	26 26	26.0

Location: NTR-CS1

Date	Weather	Start	Sampling	Depth (m)	Tempera	ature (°C)		pΗ	Salin	ity ppt	DO Satu	ration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L)
Date	Condition	Time	Sampling	Deptii (III)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Jul-21	Cloudy	11:30	Middle	0.1	30.2 30.2	30.2	7.2 7.2	7.2	0.1 0.1	0.1	113.8 114.7	114.3	8.6 8.6	8.6	7.0 6.8	6.9	8 8	8.0
5-Jul-21	Sunny	14:36	Middle	0.1	31.6 31.6	31.6	7.2 7.2	7.2	0.1 0.1	0.1	117.4 117.7	117.6	8.6 8.7	8.7	11.0 11.1	11.1	8 8	8.0
7-Jul-21	Rainy	13:13	Middle	0.1	30.5 30.5	30.5	7.0 7.0	7.0	0.1 0.1	0.1	90.1 90.1	90.1	6.8 6.8	6.8	11.3 11.6	11.5	9	9.0
9-Jul-21	Sunny	11:34	Middle	0.2	32.0 32.0	32.0	7.3 7.3	7.3	0.1 0.1	0.1	105.6 105.6	105.6	7.7 7.7	7.7	5.8 5.7	5.8	5 5	5.0
12-Jul-21	Sunny	10:35	Middle	0.2	30.6 30.7	30.7	7.2 7.2	7.2	0.1 0.1	0.1	95.8 95.6	95.7	7.2 7.1	7.2	6.7 6.7	6.7	7 7	7.0
14-Jul-21	Sunny	10:34	Middle	0.1	30.9 30.9	30.9	7.0 7.0	7.0	0.1 0.1	0.1	97.0 97.0	97.0	7.2 7.2	7.2	6.5 6.2	6.4	7 7	7.0
17-Jul-21	Cloudy	13:47	Middle	0.2	29.9 29.9	29.9	7.2 7.2	7.2	0.1 0.1	0.1	97.0 96.8	96.9	7.3 7.3	7.3	11.1 11.3	11.2	9	9.0
19-Jul-21	Rainy	11:42	Middle	0.1	27.4 27.4	27.4	7.2 7.2	7.2	0.1 0.1	0.1	67.3 67.1	67.2	5.3 5.3	5.3	11.2 11.0	11.1	9 10	9.5
21-Jul-21	Rainy	15:47	Middle	0.2	26.5 26.5	26.5	7.2 7.2	7.2	0.1 0.1	0.1	82.4 82.1	82.3	6.6 6.6	6.6	31.0 31.3	31.2	25 30	27.5
23-Jul-21	Sunny	10:20	Middle	0.2	29.4 29.5	29.5	7.4 7.4	7.4	0.1 0.1	0.1	111.1 111.0	111.1	8.5 8.5	8.5	4.6 4.6	4.6	4 5	4.5
26-Jul-21	Sunny	11:43	Middle	0.1	28.7 28.7	28.7	7.5 7.4	7.5	0.1 0.1	0.1	112.8 112.9	112.9	8.7 8.7	8.7	4.6 4.5	4.6	4	4.0
28-Jul-21	Fine	12:17	Middle	0.2	32.6 32.6	32.6	7.7 7.7	7.7	0.1 0.1	0.1	138.8 138.7	138.8	10.0 10.0	10.0	4.1 4.1	4.1	6 6	6.0
30-Jul-21	Rainy	11:44	Middle	0.1	27.2 27.2	27.2	7.3 7.2	7.3	0.1 0.1	0.1	86.3 86.1	86.2	6.9 6.8	6.9	9.3 9.8	9.6	8 8	8.0

Location: NTR-IS1

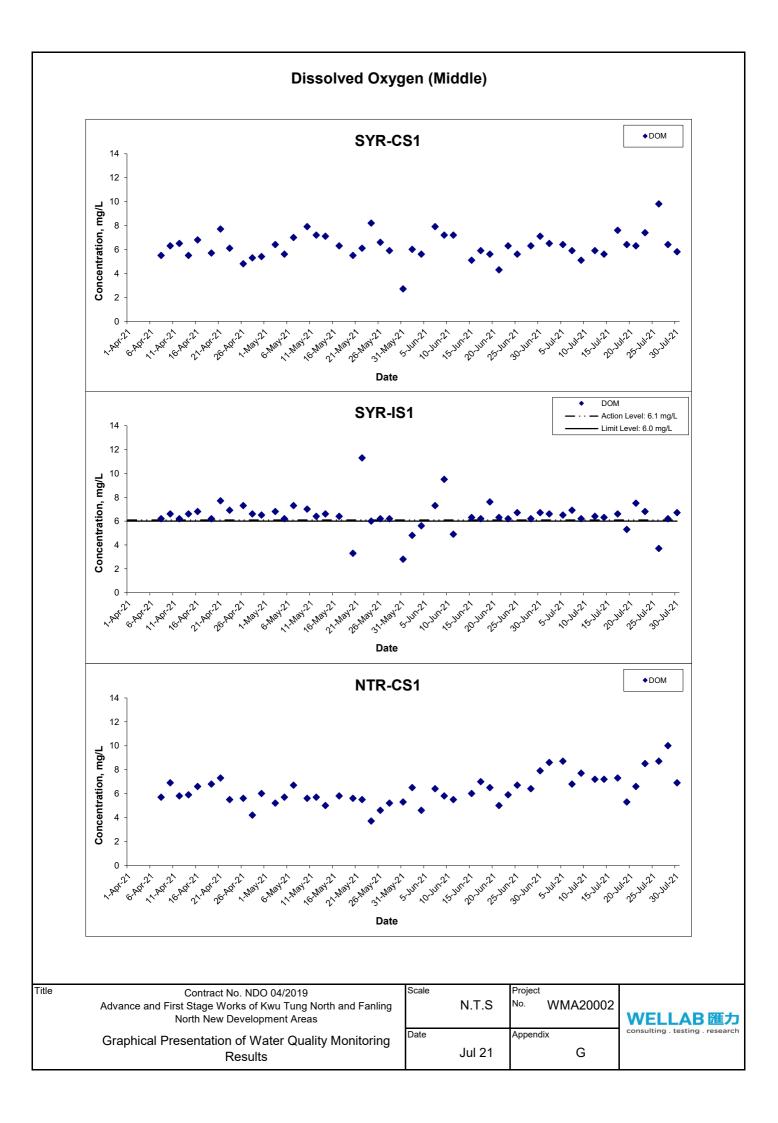
Date	Weather	Start	Sampling	Depth (m)	Tempera	ature (°C)		ρΗ	Salin	ity ppt	DO Satu	ration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L)
Date	Condition	Time	Sampling	Depui (III)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Jul-21	Cloudy	10:17	Middle	0.5	30.4 30.4	30.4	7.2 7.2	7.2	0.1 0.1	0.1	92.0 91.7	91.9	6.9 6.9	6.9	5.3 5.2	5.3	5 5	5.0
5-Jul-21	Sunny	13:34	Middle	0.4	30.2 30.2	30.2	7.1 7.1	7.1	0.1 0.1	0.1	80.5 80.2	80.4	6.1 6.0	6.1	8.2 8.2	8.2	4 4	4.0
7-Jul-21	Rainy	11:54	Middle	0.5	28.6 28.6	28.6	7.4 7.3	7.4	0.1 0.1	0.1	78.3 78.2	78.3	6.1 6.1	6.1	12.1 12.3	12.2	8 8	8.0
9-Jul-21	Sunny	10:12	Middle	0.3	31.3 31.3	31.3	7.2 7.2	7.2	0.2 0.2	0.2	82.6 82.4	82.5	6.1 6.1	6.1	3.8 3.8	3.8	4 4	4.0
12-Jul-21	Sunny	09:55	Middle	0.2	31.4 31.4	31.4	7.5 7.5	7.5	0.1 0.1	0.1	95.6 95.6	95.6	7.1 7.1	7.1	5.6 5.6	5.6	5 6	5.5
14-Jul-21	Sunny	11:01	Middle	0.5	32.5 32.5	32.5	7.3 7.2	7.3	0.1 0.1	0.1	81.3 81.0	81.2	5.9 5.9	5.9	6.9 6.9	6.9	6 6	6.0
17-Jul-21	Cloudy	13:02	Middle	0.3	29.8 29.8	29.8	7.5 7.5	7.5	0.1 0.1	0.1	79.8 79.4	79.6	6.1 6.0	6.1	8.7 8.7	8.7	4 3	3.5
19-Jul-21	Rainy	10:28	Middle	0.5	27.0 27.0	27.0	7.2 7.2	7.2	0.1 0.1	0.1	59.9 59.7	59.8	4.8 4.8	4.8	26.5 26.9	26.7	22 21	21.5
21-Jul-21	Rainy	14:39	Middle	0.6	26.7 26.7	26.7	7.6 7.6	7.6	0.1 0.1	0.1	89.2 88.9	89.1	7.1 7.1	7.1	22.1 21.7	21.9	23 20	21.5
23-Jul-21	Sunny	12:09	Middle	0.5	32.1 32.2	32.2	7.4 7.4	7.4	0.1 0.1	0.1	86.4 86.3	86.4	6.3 6.3	6.3	8.0 7.9	8.0	3 3	3.0
26-Jul-21	Sunny	10:34	Middle	0.5	28.4 28.4	28.4	7.4 7.4	7.4	0.1 0.1	0.1	74.3 72.6	73.5	5.8 5.6	5.7	10.7 10.6	10.7	7 6	6.5
28-Jul-21	Fine	11:47	Middle	0.3	31.9 31.9	31.9	7.4 7.4	7.4	0.2 0.2	0.2	80.8 80.7	80.8	5.9 5.9	5.9	16.4 16.4	16.4	9 9	9.0
30-Jul-21	Rainy	10:24	Middle	0.6	27.0 27.0	27.0	7.5 7.5	7.5	0.1 0.1	0.1	83.2 82.8	83.0	6.6 6.6	6.6	22.6 22.3	22.5	13 11	12.0

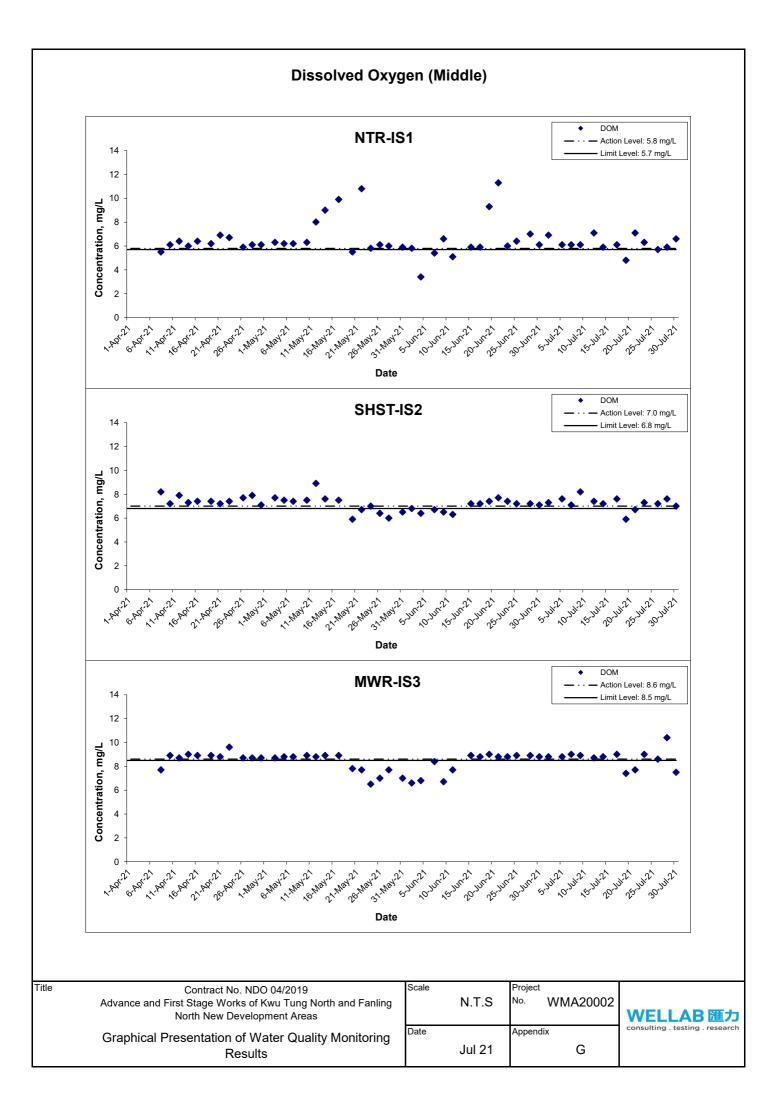
Location: SHST-IS2

Date	Weather	Start	Sampling	Depth (m)	Temper	ature (°C)	i	Н	Salin	ity ppt	DO Satu	ration (%)	Dissolved O	xygen (mg/L)	Turbidit	ty(NTU)	Suspended	Solids (mg/L)
Date	Condition	Time	Sampling	Deptil (III)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Jul-21	Cloudy	10:40	Middle	0.2	28.8 28.8	28.8	7.4 7.4	7.4	0.1 0.1	0.1	95.1 94.4	94.8	7.3 7.3	7.3	7.3 7.4	7.4	8 9	8.5
5-Jul-21	Sunny	13:46	Middle	0.2	30.1 30.1	30.1	7.2 7.2	7.2	0.1 0.1	0.1	100.4 100.4	100.4	7.6 7.6	7.6	12.6 12.5	12.6	10 8	9.0
7-Jul-21	Rainy	12:04	Middle	0.2	28.1 28.0	28.1	7.3 7.3	7.3	0.1 0.1	0.1	90.3 90.1	90.2	7.1 7.1	7.1	9.5 9.3	9.4	10 10	10.0
9-Jul-21	Sunny	11:43	Middle	0.2	31.2 31.2	31.2	7.7 7.7	7.7	0.2 0.2	0.2	110.6 110.8	110.7	8.2 8.2	8.2	5.4 5.5	5.5	4 3	3.5
12-Jul-21	Sunny	11:29	Middle	0.3	31.8 31.8	31.8	7.4 7.4	7.4	0.1 0.1	0.1	100.8 100.7	100.8	7.4 7.4	7.4	7.6 7.5	7.6	8 7	7.5
14-Jul-21	Sunny	10:21	Middle	0.1	31.4 31.4	31.4	7.3 7.3	7.3	0.1 0.1	0.1	98.0 98.0	98.0	7.2 7.2	7.2	7.0 7.0	7.0	7 8	7.5
17-Jul-21	Cloudy	13:21	Middle	0.2	29.3 29.3	29.3	7.6 7.6	7.6	0.1 0.1	0.1	99.5 99.6	99.6	7.6 7.6	7.6	12.5 12.5	12.5	8 9	8.5
19-Jul-21	Rainy	10:45	Middle	0.2	26.6 26.6	26.6	7.3 7.3	7.3	0.1 0.1	0.1	73.6 73.5	73.6	5.9 5.9	5.9	32.2 32.3	32.3	26 23	24.5
21-Jul-21	Rainy	14:58	Middle	0.3	26.4 26.4	26.4	7.2 7.2	7.2	0.1 0.1	0.1	83.1 83.0	83.1	6.7 6.7	6.7	208.6 208.1	208.4	200 240	220.0
23-Jul-21	Sunny	11:07	Middle	0.2	29.3 29.4	29.4	7.6 7.6	7.6	0.1 0.1	0.1	95.4 95.3	95.4	7.3 7.3	7.3	18.5 18.6	18.6	7 8	7.5
26-Jul-21	Sunny	10:53	Middle	0.2	27.7 27.7	27.7	7.8 7.7	7.8	0.1 0.1	0.1	91.1 91.0	91.1	7.2 7.2	7.2	31.1 31.3	31.2	19 17	18.0
28-Jul-21	Fine	13:07	Middle	0.3	33.0 33.0	33.0	7.4 7.4	7.4	0.1 0.1	0.1	105.4 105.2	105.3	7.6 7.6	7.6	17.2 16.9	17.1	8 8	8.0
30-Jul-21	Rainy	10:52	Middle	0.2	26.6 26.6	26.6	7.5 7.5	7.5	0.1 0.1	0.1	87.3 87.3	87.3	7.0 7.0	7.0	40.0 40.1	40.1	33 31	32.0

Location: MWR-IS3

Date	Weather	Start	Sampling	Depth (m)	Tempera	ature (°C)	1	Н	Salin	ity ppt	DO Satu	ration (%)	Dissolved O	xygen (mg/L)	Turbidi	ty(NTU)	Suspended	Solids (mg/L)
Date	Condition	Time	Sampling	Deptil (III)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Jul-21	Cloudy	11:15	Middle	0.2	30.8 30.8	30.8	7.7 7.7	7.7	0.1 0.1	0.1	117.6 117.7	117.7	8.8 8.8	8.8	5.8 5.5	5.7	9 7	8.0
5-Jul-21	Sunny	14:23	Middle	0.2	33.0 33.0	33.0	8.2 8.2	8.2	0.2 0.2	0.2	121.9 121.9	121.9	8.8 8.8	8.8	12.1 12.2	12.2	14 12	13.0
7-Jul-21	Rainy	12:52	Middle	0.2	31.2 31.2	31.2	7.2 7.2	7.2	0.1 0.1	0.1	121.3 121.3	121.3	9.0 9.0	9.0	10.1 10.1	10.1	13 13	13.0
9-Jul-21	Sunny	12:04	Middle	0.2	32.6 32.6	32.6	7.4 7.4	7.4	0.1 0.1	0.1	122.5 122.2	122.4	8.9 8.8	8.9	8.5 8.8	8.7	8 10	9.0
12-Jul-21	Sunny	10:57	Middle	0.2	30.1 30.1	30.1	7.6 7.6	7.6	0.2 0.2	0.2	115.5 115.5	115.5	8.7 8.7	8.7	4.1 4.0	4.1	8 8	8.0
14-Jul-21	Sunny	09:48	Middle	0.1	30.5 30.6	30.6	7.5 7.5	7.5	0.1 0.1	0.1	117.4 117.5	117.5	8.8 8.8	8.8	4.7 4.7	4.7	7 7	7.0
17-Jul-21	Cloudy	13:58	Middle	0.2	30.3 30.3	30.3	8.3 8.3	8.3	0.2 0.2	0.2	120.2 120.2	120.2	9.0 9.0	9.0	9.3 9.2	9.3	9	9.0
19-Jul-21	Rainy	11:21	Middle	0.1	27.1 27.1	27.1	7.6 7.6	7.6	0.1 0.1	0.1	93.4 93.4	93.4	7.4 7.4	7.4	20.1 20.0	20.1	18 20	19.0
21-Jul-21	Rainy	15:32	Middle	0.4	26.5 26.5	26.5	7.9 7.9	7.9	0.04 0.04	0.04	95.2 95.2	95.2	7.7 7.7	7.7	99.0 98.2	98.6	160 130	145.0
23-Jul-21	Sunny	10:43	Middle	0.3	30.3 30.3	30.3	7.4 7.4	7.4	0.1 0.1	0.1	120.1 120.4	120.3	9.0 9.0	9.0	5.9 6.0	6.0	3 3	3.0
26-Jul-21	Sunny	11:24	Middle	0.1	29.7 29.7	29.7	7.8 7.8	7.8	0.1 0.1	0.1	113.0 113.1	113.1	8.6 8.6	8.6	19.9 20.1	20.0	11 11	11.0
28-Jul-21	Fine	12:33	Middle	0.2	31.8 31.8	31.8	7.6 7.6	7.6	0.1 0.1	0.1	141.2 141.4	141.3	10.4 10.4	10.4	7.5 7.6	7.6	7 8	7.5
30-Jul-21	Rainy	11:24	Middle	0.1	27.9 27.9	27.9	7.6 7.6	7.6	0.1 0.1	0.1	95.5 95.5	95.5	7.5 7.5	7.5	32.2 31.9	32.1	40 47	43.5





#### **Turbidity (Depth-averaged)** ◆TUR SYR-CS1 160 140 120 100 Concentration, 80 60 40 20 0 22.201.22 20May 21 25.401.2 11.May.21 21,1181,21 25-1111-27 Date TUR • Action Level : 48.2 NTU • Limit Level: 50.9 NTU SYR-IS1 160 120% of SYR-CS1 (Control Station) 130% of SYR-CS1 (Control Station) 140 120 N 100 Concentration, 60 40 20 0 Schristy 12-7111-57 21.20.21 , emay 22 1.Way.27 , 6. Way 22 21.1184.27 28,1184.27 31.11.04.27 30.141.27 10-JU1-21 20.311.27 25.401.27 " May 21 15-Jun 27 25-1111-27 20.Jun. 2 Date ◆TUR NTR-CS1 160 140 120 **1**00 Concentration, 80 60 40 20 31,118422 2 musy 15-Jun 21 11.1184721 10.Way 21 21.11.84.27 28/18/21 20.Jun.21 Date Title Contract No. NDO 04/2019 Scale Project No. N.T.S WMA20002 Advance and First Stage Works of Kwu Tung North and Fanling WELLAB 匯力 consulting . testing . research North New Development Areas Date Appendix **Graphical Presentation of Water Quality Monitoring** Jul 21 G Results

#### **Turbidity (Depth-averaged)** TUR NTR-IS1 Action Level : 6.0 NTU Limit Level: 6.1 NTU ...... 120% of NTR-CS1 (Control Station) 160 - - - 130% of NTR-CS1 (Control Station) 140 120 100 Concentration, 80 60 40 20 0 27,118427 6. Agr. 22 ~ 27.207.27 . 28 vary, "Way21 , e way 57, 11.118422 10.W81.27 20,11,27 31,1187,27 P.JILY 40-Jun 22 12-muss 20-141-27 25-1411-27 10-711-27 15-111-21 Date TUR SHST-IS2 Action Level : 4.4 NTU Limit Level: 4.7 NTU ...... 120% of NTR-CS1 (Control Station) 1400 - - 130% of NTR-CS1 (Control Station) 1200 1000 Concentration, NTU 800 600 400 200 31.1° AQ1.21 27.May22 10-July 21 No Way 27 25-Jun-21 15-1111-21 0 1, Wah 5 7 , Chang 1,1,104.21 15-Jun 21 20.Jun.21 5-Juli-21 , AQ1.27 and hand hand bund out to 21. AQ1.20. AQ1.21. A Date TUR **MWR-IS3** Action Level: 10.1 NTU Limit Level: 11.1 NTU 160 120% of NTR-CS1 (Control Station) - - - 130% of NTR-CS1 (Control Station) 140 120 **1**00 Concentration, 80 60 40 20 11.1184727 16.Way 22 21.1184.27 21.201.22 , May 21 · ONBASS 31.1124.21 5-Jun 21 10-Jun 21 15-Jun-21 20.347.27 10-Jul 27 15-111/21 28 118427 25-Jun-21 20-11/2 25-111-27 Date Title Contract No. NDO 04/2019 Scale Project No. N.T.S WMA20002 Advance and First Stage Works of Kwu Tung North and Fanling WELLAB 匯力 consulting . testing . research North New Development Areas Date Appendix **Graphical Presentation of Water Quality Monitoring**

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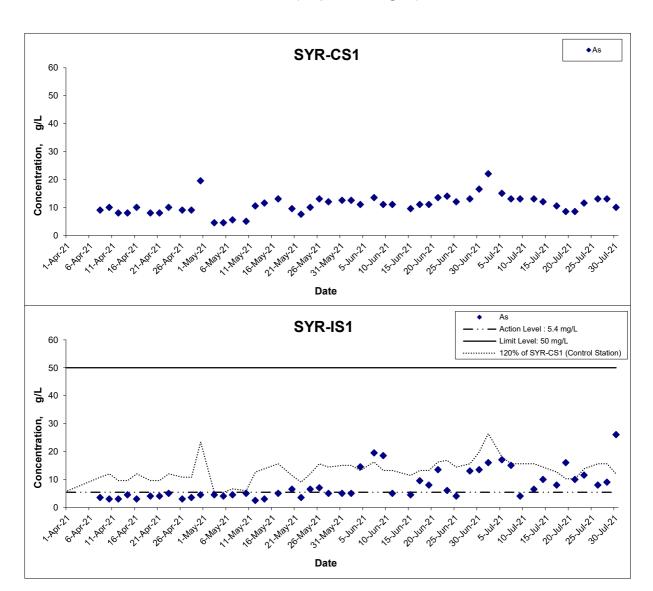
Jul 21

Results

#### Suspended Solids (Depth-averaged) ♦SS SYR-CS1 180 160 140 20 11.Way 21 10.Way.27 21.1184.27 26,484.27 37,118422 25.201.27 'SMR2Y21 , May 21 Date SS - Action Level : 75.6 mg/L - Limit Level: 83.1 mg/L · 120% of SYR-CS1 (Control Station) SYR-IS1 180 130% of SYR-CS1 (Control Station 160 140 20 0 16.401.2¹ · 21.A01.21 20.A01.21 "May 22 21.118422 , 6 May 21 11.May 21 10.W81.77 28,1184.27 31.1184.27 5-111-27 15-JU1-21 20-Jun 27 25-1111-27 10-JU1-27 Date ♦SS NTR-CS1 180 160 140 **J**₁₂₀ 100 Concentration, 80 60 40 20 5-Jun 21 15-Jun-21 20.Jun.21 11.11.21.21 VO'WON'S 21,1104,27 28 118427 25-Jun-21 Date Title Contract No. NDO 04/2019 Scale Project No. N.T.S WMA20002 Advance and First Stage Works of Kwu Tung North and Fanling WELLAB 匯力 consulting . testing . research North New Development Areas Date Appendix **Graphical Presentation of Water Quality Monitoring** Jul 21 G Results

#### Suspended Solids (Depth-averaged) SS NTR-IS1 Action Level : 8.9 mg/L Limit Level: 9.0 mg/L ...... 120% of NTR-CS1 (Control Station) 180 - - - 130% of NTR-CS1 (Control Station) 160 140 **J**120 100 Concentration, 80 60 40 20 0 · 27.201.27 25.201.27 "Way21 , onay? , 1, May 21 10.Way 21 21.11.22.27 20 May 22 8-Jun. 27 10-Jun 21 12-Jun 21 20-141-27 25 Jun 22 6.Agr.27 10-711-27 15-JU1-27 20.311.27 25-311-27 Date SS SHST-IS2 Limit Level: 4.0 mg/L 120% of NTR-CS1 (Control Station) 1600 130% of NTR-CS1 (Control Station) 1400 1200 Concentration, mg/ 1000 800 600 400 200 10.AQ1.21 20 Jun 21 25.Jun.21 OMay 21 "O'Way 27 21,118427 0 11,118421 15-Jun-21 15,111,21 20.311.21 at 2 hat 2 hat 2 hur 2 hur 2 30 mus 2 mus 1 mus 1 21. 2012 20 AD12 1 1842 1 Date · Action Level : 14.0 mg/L MWR-IS3 Limit Level: 14.4 mg/L 180 120% of NTR-CS1 (Control Station) - - - 130% of NTR-CS1 (Control Station) 160 140 120 100 Concentration, 80 60 40 20 31,118422 8-Jun 27 6-A91-21 21.401.27 , May 21 6May 21 10 May 22 21.1184.27 26,1184.27 10-Jun-21 15-Jun-21 20.347.27 25,411,27 10-JU1-27 15-JU1-21 20-311-27 Ve Volta 1.1184.21 Date Title Contract No. NDO 04/2019 Scale Project No. N.T.S WMA20002 Advance and First Stage Works of Kwu Tung North and Fanling WELLAB 匯力 consulting . testing . research North New Development Areas Date Appendix **Graphical Presentation of Water Quality Monitoring** G Jul 21 Results

## Arsenic (Depth-averaged)



Title	Contract No. NDO 04/2019 Advance and First Stage Works of Kwu Tung North and Fanling North New Development Areas	Scale		Project No. WMA20002	WELLAB匯力
	Graphical Presentation of Water Quality Monitoring Results	Date	Jul 21	Appendix G	consulting . testing . research

APPENDIX H LABORATORY TESTING REPORTS FOR LABORATORY ANALYSIS



### TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street,

Report No.: 35368

Date of Issue: 2021-07-08 Date Received: 2021-07-02

Date Tested: 2021-07-02 2021-07-08 Date Completed:

Shatin, N.T.

Page:

1 of 1

ATTN:

Ms. Ivy Tam

4 liquid samples as received from client said to be water Sample Description :

Laboratory No. 35368

> WMA20002 Project No.

Contract No. NDO 04/2019 Project Name

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

WMA20002/210702 Custody No. :

2021-07-02 Sampling Date

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

#### Dogulte

Results.				
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	35368-2	35368-3	35368-5	35368-6
Total Suspended Solids (mg/L)	11	11	26	26
Arsenic (μg/L)	24	20	15	17

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager



## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T.

Report No.:

35368A

Date of Issue:

2021-07-08

Date Received: Date Tested:

2021-07-02 2021-07-02

Date Completed:

2021-07-08

ATTN:

Ms. Ivy Tam

Page:

1 of 1

**Sample Description** 

8 liquid samples as received from client said to be water

Laboratory No.

35368A

Project No.

WMA20002

Project Name

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

Custody No. :

WMA20002/210702

Sampling Date

2021-07-02

Tosts Paguested & Methodology

Tests L	tequested & Methodology.		- · · · · · · · · · · · · · · · · · · ·
Item	Parameters	Ref. Method	Limit of reporting
1.	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L

#### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	35368-8	35368-9	35368-11	35368-12
Total Suspended Solids (mg/L)	8	8	5	5

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35368-14	35368-15	35368-17	35368-18
Total Suspended Solids (mg/L)	8	9	9	7

Remarks: 1) <= less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

ATRICK TSE



## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street,

Shatin, N.T.

35372 Report No.:

2021-07-09 Date of Issue: Date Received: 2021-07-05

2021-07-05 Date Tested: 2021-07-09 Date Completed:

Page:

1 of 1

ATTN:

Ms. Ivy Tam

**Sample Description** 

4 liquid samples as received from client said to be water

Laboratory No.

35372

Project No.

WMA20002

Project Name

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

Custody No.

WMA20002/210705

Sampling Date

2021-07-05

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L
1		In-house method SOP022 (ICP-AES)	1 μg/L
2	Arsenic	and SOP076 (ICP-MS)	Iμg/L

#### Results.

Mesuris.				
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	35372-2	35372-3	35372-5	35372-6
Total Suspended Solids (mg/L)	8	9	29	30
Arsenic (µg/L)	15	15	17	17

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE



35372A

1 of 1

## TEST REPORT

APPLICANT: Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T.

2021-07-09 Date of Issue: Date Received: 2021-07-05 2021-07-05 Date Tested: 2021-07-09 Date Completed:

Report No.:

Page:

ATTN:

Ms. Ivy Tam

**Sample Description** 

8 liquid samples as received from client said to be water

Laboratory No.

35372A

Project No.

WMA20002

Project Name :

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

**Development Areas** 

Custody No. :

WMA20002/210705

Sampling Date

2021-07-05

**Tests Requested & Methodology:** 

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L

#### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	35372-8	35372-9	35372-11	35372-12
Total Suspended Solids (mg/L)	8	8	4	4

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35372-14	35372-15	35372-17	35372-18
Total Suspended Solids (mg/L)	10	8	14	12

Remarks: 1)  $\leq$  = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

ATRICK TSE General Manager



## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T.

Date Completed: Page:

Report No.:

Date of Issue:

Date Tested:

Date Received:

2021-07-07 2021-07-13

1 of 1

2021-07-13

2021-07-07

35388

ATTN:

Ms. Ivy Tam

4 liquid samples as received from client said to be water

Sample Description : Laboratory No. :

35388

Project No.

WMA20002

Project Name

: Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

Custody No. :

WMA20002/210707

Sampling Date

2021-07-07

**Tests Requested & Methodology:** 

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

#### Results:

Results.				
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	35388-2	35388-3	35388-5	35388-6
Total Suspended Solids (mg/L)	17	14	13	15
Arsenic (µg/L)	13	13	15	15

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager



## TEST REPORT

**APPLICANT:** 

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T.

Report No.:

35388A

Date of Issue:

2021-07-13

Date Received:

2021-07-07 2021-07-07

Date Tested: Date Completed:

2021-07-13

ATTN:

Ms. Ivy Tam

Page:

1 of 1

Sample Description :

8 liquid samples as received from client said to be water

Laboratory No.

35388A

Project No.

WMA20002

Project Name

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

Custody No. :

WMA20002/210707

Sampling Date :

2021-07-07

Tests Degreeted & Mothodology

rests n	tequested & Methodology.		
Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L

#### Posults.

Results.			Co. 16	
Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	35388-8	35388-9	35388-11	35388-12
Total Suspended Solids (mg/L)	9	9	8	8

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35388-14	35388-15	35388-17	35388-18
Total Suspended Solids (mg/L)	10	10	13	13

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE



## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T.

Report No.: 35401

Page:

Date of Issue: 2021-07-14

Date Received: 2021-07-09
Date Tested: 2021-07-09

Date Completed: 2021-07-14

1 of 1

ATTN:

Ms. Ivy Tam

Sample Description: 4 liquid samples as received from client said to be water

Laboratory No. : 35401

Project No. : WMA20002
Project Name : Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

Custody No. : WMA20002/210709

Sampling Date: 2021-07-09

**Tests Requested & Methodology:** 

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

#### Results:

Results.				
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	35401-2	35401-3	35401-5	35401-6
Total Suspended Solids (mg/L)	9	8	19	19
Arsenic (µg/L)	12	14	4	4

Remarks: 1) <= less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager



## **TEST REPORT**

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T. Report No.:
Date of Issue:

35401A 2021-07-14

Date Received:

2021-07-09

Date Tested:
Date Completed:

2021-07-09 2021-07-14

ATTN:

Ms. Ivy Tam

Page:

1 of 1

Sample Description

8 liquid samples as received from client said to be water

Laboratory No.

35401A

Project No.

WMA20002

Project Name

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

**Development Areas** 

Custody No.

WMA20002/210709

Sampling Date

2021-07-09

**Tests Requested & Methodology:** 

1 6313 1	tequested & memodology.		- 1
Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L

#### Results:

Mesuris.				
Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	35401-8	35401-9	35401-11	35401-12
Total Suspended Solids (mg/L)	. 5	5	4	4

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35401-14	35401-15	35401-17	35401-18
Total Suspended Solids (mg/L)	4	3	8	10

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE



## **TEST REPORT**

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street,

Shatin, N.T.

Report No.: 35413 2021-07-14 Date of Issue: Date Received: 2021-07-12 2021-07-12 Date Tested: 2021-07-14 Date Completed:

Page:

1 of 1

ATTN:

Ms. Ivy Tam

Sample Description :

4 liquid samples as received from client said to be water

Laboratory No.

35413

Project No.

WMA20002

Project Name :

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

Custody No.

WMA20002/210712

Sampling Date

2021-07-12

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

#### Dagultar

Results:				
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	35413-2	35413-3	35413-5	35413-6
Total Suspended Solids (mg/L)	17	19	24	27
Arsenic (µg/L)	13	13	6	7

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE



## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street,

Shatin, N.T.

Report No.: 35413A 2021-07-14 Date of Issue: 2021-07-12 Date Received:

Date Tested: Date Completed: 2021-07-12 2021-07-14

1 of 1

ATTN:

Ms. Ivy Tam

Sample Description

8 liquid samples as received from client said to be water

Laboratory No.

35413A

Project No. Project Name :

WMA20002 Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

Custody No.

WMA20002/210712

Sampling Date

2021-07-12

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L

#### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	35413-8	35413-9	35413-11	35413-12
Total Suspended Solids (mg/L)	7	7	5	6

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35413-14	35413-15	35413-17	35413-18
Total Suspended Solids (mg/L)	8	7	8	8

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE



## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T. Report No.: 35424

Date of Issue: 2021-07-20

Date Received: 2021-07-14 Date Tested: 2021-07-14

Date Completed: 2021-07-20

1 of 1

ATTN:

Ms. Ivy Tam

4 liquid samples as received from client said to be water

Sample Description : 41 Laboratory No. : 35

35424

Project No.

WMA20002

Project Name: Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Page:

**Development Areas** 

Custody No. :

WMA20002/210714

Sampling Date

2021-07-14

**Tests Requested & Methodology:** 

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

### Results:

Results:				
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	35424-2	35424-3	35424-5	35424-6
Total Suspended Solids (mg/L)	21	19	18	20
Arsenic (µg/L)	12	12	10	10

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE



## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T.

Report No.: 35424A Date of Issue: 2021-07-20 2021-07-14 Date Received: 2021-07-14 Date Tested:

Page:

Date Completed:

2021-07-20 1 of 1

ATTN:

Ms. Ivy Tam

**Sample Description**:

8 liquid samples as received from client said to be water

Laboratory No.

35424A

Project No.

WMA20002

Project Name :

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

Custody No.

WMA20002/210714

Sampling Date

2021-07-14

Tests Requested & Methodology:

1 6212 1	requested & Methodology.		
Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L

#### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	35424-8	35424-9	35424-11	35424-12
Total Suspended Solids (mg/L)	7	7	6	6

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35424-14	35424-15	35424-17	35424-18
Total Suspended Solids (mg/L)	7	8	7	7

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE



## **TEST REPORT**

**APPLICANT:** 

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T.

Report No.: 35436 Date of Issue: 2021-07-21

Date Received: 2021-07-17 2021-07-17 Date Tested: 2021-07-21 Date Completed:

ATTN:

Ms. Ivy Tam

Page:

1 of 1

Sample Description :

4 liquid samples as received from client said to be water

Laboratory No.

35436

Project No.

WMA20002

Project Name: Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

Custody No. :

WMA20002/210717

Sampling Date

2021-07-17

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

#### Dogulte:

Results.				
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	35436-2	35436-3	35436-5	35436-6
Total Suspended Solids (mg/L)	14	13	43	44
Arsenic (μg/L)	~ 11	10	8	8

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE



### TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T. 

 Report No.:
 35436A

 Date of Issue:
 2021-07-21

 Date Received:
 2021-07-17

 Date Tested:
 2021-07-17

 Date Completed:
 2021-07-21

ATTN:

Ms. Ivy Tam

Page:

1 of 1

Sample Description :

8 liquid samples as received from client said to be water

Laboratory No. :

35436A

Project No.

WMA20002

Project Name :

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

Custody No. :

WMA20002/210717

Sampling Date

2021-07-17

**Tests Requested & Methodology:** 

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L

#### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	35436-8	35436-9	35436-11	35436-12
Total Suspended Solids (mg/L)	9	9	4	3

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35436-14	35436-15	35436-17	35436-18
Total Suspended Solids (mg/L)	8	9	9	9

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE



## TEST REPORT

**APPLICANT:** 

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T. Report No.: 35441 Date of Issue: 2021-07-22

Page:

Date Received: 2021-07-19
Date Tested: 2021-07-19

Date Tested: 2021-07-19

Date Completed: 2021-07-22

1 of 1

ATTN:

Ms. Ivy Tam

Sample Description : 4 liquid samples as received from client said to be water

Laboratory No. : 35441

Project No. : WMA20002

Project Name : Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

Custody No. : WMA20002/210719

Sampling Date : 2021-07-19

**Tests Requested & Methodology:** 

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

#### Results:

Results.				~~~~ ~~ .
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	35441-2	35441-3	35441-5	35441-6
Total Suspended Solids (mg/L)	18	19	32	32
Arsenic (µg/L)	9	8	16	16

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager



## TEST REPORT

**APPLICANT:** 

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T.

Report No.: Date of Issue: 35441A

2021-07-22

Date Received: Date Tested:

2021-07-19 2021-07-19

Date Completed:

2021-07-22

ATTN:

Ms. Ivy Tam

Page:

1 of 1

Sample Description :

8 liquid samples as received from client said to be water

Laboratory No.

35441A

Project No. :

WMA20002

Project Name : Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

Custody No. :

WMA20002/210719

Sampling Date: 2021-07-19

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L

#### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	35441-8	35441-9	35441-11	35441-12
Total Suspended Solids (mg/L)	9	10	22	21

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35441-14	35441-15	35441-17	35441-18
Total Suspended Solids (mg/L)	26	23	18	20

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE



### TEST REPORT

**APPLICANT:** 

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T.

Report No.: 35454 2021-07-27 Date of Issue: Date Received: 2021-07-21 Date Tested: 2021-07-21 2021-07-27 Date Completed:

1 of 1

ATTN:

Ms. Ivy Tam

4 liquid samples as received from client said to be water

Sample Description: Laboratory No.

35454

Project No.

WMA20002

Project Name:

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Page:

Development Areas

Custody No. :

WMA20002/210721

Sampling Date

2021-07-21

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

#### Doculte.

Results.				
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	35454-2	35454-3	35454-5	35454-6
Total Suspended Solids (mg/L)	15	12	17	14
Arsenic (µg/L)	9	8	10	10

Remarks: 1)  $\leq$  = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager



## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T.

Report No.:

35454A

Date of Issue:

2021-07-27

Date Received: Date Tested:

2021-07-21 2021-07-21

Date Completed:

2021-07-27

ATTN:

Ms. Ivy Tam

Page:

1 of 1

Sample Description :

8 liquid samples as received from client said to be water

Laboratory No.

35454A

Project No.

WMA20002

Project Name:

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

**Development Areas** 

Custody No. :

WMA20002/210721

Sampling Date :

2021-07-21

Tests Requested & Methodology

I COLO I	requested of Methodology.		
Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L

#### Dogulte.

Acsurts.				
Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	35454-8	35454-9	35454-11	35454-12
Total Suspended Solids (mg/L)	25	30	23	20

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35454-14	35454-15	35454-17	35454-18
Total Suspended Solids (mg/L)	200	240	160	130

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE



WELLAB LIMITED Room 1714, Technology Park 18 On Lai Street, Shatin New Territories, Hong Kong Tel: 2898 7388 Fax: 2898 7076

Website: www.wellab.com.hk

## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T.

Report No.: Date of Issue: 35466

2021-07-29

Date Received: Date Tested:

2021-07-23 2021-07-23

Date Completed:

2021-07-29

ATTN:

Ms. Ivy Tam

Page:

1 of 1

Sample Description:

4 liquid samples as received from client said to be water

Laboratory No.

35466

Project No.

WMA20002

Project Name:

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

**Development Areas** 

Custody No. :

WMA20002/210723

Sampling Date

2021-07-23

**Tests Requested & Methodology:** 

Item	em Parameters Ref. Method		Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

#### Dogulta

Results.				
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	35466-2	35466-3	35466-5	35466-6
Total Suspended Solids (mg/L)	12	10	8	8
Arsenic (μg/L)	12	11	12	11

Remarks: 1)  $\leq$  = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## TEST REPORT

**APPLICANT:** 

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T. Report No.: 35466A

Date of Issue: 2021-07-29

Date Received: 2021-07-23

Date Tested: 2021-07-23
Date Completed: 2021-07-29

ATTN:

Ms. Ivy Tam

Page:

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Sample Description:

8 liquid samples as received from client said to be water

Laboratory No.

35466A

Project No.

WMA20002

Project Name :

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

Custody No. :

WMA20002/210723

Sampling Date

2021-07-23

**Tests Requested & Methodology:** 

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L

#### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	35466-8	35466-9	35466-11	35466-12
Total Suspended Solids (mg/L)	4	5	3	3

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35466-14	35466-15	35466-17	35466-18
Total Suspended Solids (mg/L)	7	8	3	3

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE General Manager

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## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street,

Report No.: 35476 Date of Issue: 2021-07-30

Date Received: 2021-07-26 Date Tested: 2021-07-26

Shatin, N.T.

Date Completed:

Page:

2021-07-30

1 of 1

ATTN:

Ms. Ivy Tam

4 liquid samples as received from client said to be water Sample Description :

Laboratory No.

35476

Project No.

WMA20002

Project Name: Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

Custody No. :

WMA20002/210726

Sampling Date

2021-07-26

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

#### Posulte.

results.				
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	35476-2	35476-3	35476-5	35476-6
Total Suspended Solids (mg/L)	4	4	18	22
Arsenic (µg/L)	14	12	8	8

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T. Report No.:

35476A

Date of Issue:

2021-07-30

Date Received:
Date Tested:

2021-07-26 2021-07-26

Date Completed:

2021-07-30

ATTN:

Ms. Ivy Tam

Page:

1 of 1

**Sample Description** 

8 liquid samples as received from client said to be water

Laboratory No.

35476A

Project No.

WMA20002

Project Name

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

Custody No. :

WMA20002/210726

Sampling Date

2021-07-26

**Tests Requested & Methodology:** 

-	r coro in	equested & methodology.		
Item Param		Parameters	Ref. Method	Limit of reporting
1	1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L

#### Results:

Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	35476-8	35476-9	35476-11	35476-12
Total Suspended Solids (mg/L)	4	4	7	6

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35476-14	35476-15	35476-17	35476-18
Total Suspended Solids (mg/L)	19	17	11	11

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE



## TEST REPORT

APPLICANT: Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T. 

 Report No.:
 35499

 Date of Issue:
 2021-08-03

 Date Received:
 2021-07-28

 Date Tested:
 2021-07-28

 Date Completed:
 2021-08-03

1 of 1

Ms. Ivy Tam Page:

Sample Description: 4 liquid samples as received from client said to be water

Laboratory No. : 35499
Project No. : WMA20002

Project Name: Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

**Development Areas** 

Custody No. : WMA20002/210728

Sampling Date : 2021-07-28

**Tests Requested & Methodology:** 

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

#### Results:

ATTN:

Mesuris.				
Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	35499-2	35499-3	35499-5	35499-6
Total Suspended Solids (mg/L)	11	11	22	21
Arsenic (µg/L)	13	13	9	9

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



#### TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street,

Shatin, N.T.

35499A Report No.: Date of Issue:

2021-08-03

Date Received: Date Tested:

2021-07-28 2021-07-28 2021-08-03

Date Completed: Page:

1 of 1

ATTN:

Ms. Ivy Tam

Sample Description

8 liquid samples as received from client said to be water

Laboratory No.

35499A

Project No.

WMA20002

Project Name

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

**Development Areas** 

Custody No.

WMA20002/210728

Sampling Date

2021-07-28

Tests Requested & Methodology:

I coto I	equested & memodology.		
Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L

#### Results.

Mesuris.				Control of the Contro
Sample ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample No.	35499-8	35499-9	35499-11	35499-12
Total Suspended Solids (mg/L)	6	6	9	9

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35499-14	35499-15	35499-17	35499-18
Total Suspended Solids (mg/L)	8	8	7	8

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



#### TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T.

Page:

Report No.:

Date of Issue:

Date Tested:

Date Received:

Date Completed:

1 of 1

35505

2021-08-03

2021-07-30

2021-07-30

2021-08-03

ATTN:

Ms. Ivy Tam

**Sample Description** 

4 liquid samples as received from client said to be water

Laboratory No.

35505

Project No.

WMA20002

Project Name

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New

Development Areas

Custody No.

WMA20002/210730

Sampling Date

2021-07-30

Tests Requested & Methodology:

Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L
2	Arsenic	In-house method SOP022 (ICP-AES) and SOP076 (ICP-MS)	1 μg/L

#### Results:

Sample ID	SYR-CS1-a	SYR-CS1-b	SYR-IS1-a	SYR-IS1-b
Sample No.	35505-2	35505-3	35505-5	35505-6
Total Suspended Solids (mg/L)	12	12	97	110
Arsenic (µg/L)	10	10	26	26

Remarks: 1) < = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T.

Report No.:

35505A

Date of Issue:

2021-08-03 2021-07-30

Date Received: Date Tested:

Date Completed:

2021-07-30 2021-08-03

ATTN:

Ms. Ivy Tam

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**Sample Description** 

8 liquid samples as received from client said to be water

Laboratory No.

35505A

Project No.

WMA20002

Project Name

Contract No. NDO 04/2019

Advance and First Stage Works of Kwu Tung North and Fanling North New **Development Areas** 

Custody No. :

WMA20002/210730

Sampling Date

2021-07-30

Tests Requested & Methodology:

1 6363 1	tequested & Methodology.		
Item	Parameters	Ref. Method	Limit of reporting
1	Total Suspended Solids	APHA 17ed 2540 D	2.5 mg/L

#### Results.

C 1 ID	NTR-CS1-a	NTR-CS1-b	NTR-IS1-a	NTR-IS1-b
Sample ID	NTK-CS1-a			
Sample No.	35505-8	35505-9	35505-11	35505-12
Total Suspended Solids (mg/L)	8	8	13	11

Sample ID	SHST-IS2-a	SHST-IS2-b	MWR-IS3-a	MWR-IS3-b
Sample No.	35505-14	35505-15	35505-17	35505-18
Total Suspended Solids (mg/L)	33	31	40	47

Remarks: 1)  $\leq$  = less than

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE

APPENDIX I QUALITY CONTROL REPORTS FOR SS AND ARSENIC LABORATORY ANALYSIS



#### TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street,

Shatin, N.T.

Report No.: QC35368

Date of Issue: 2021-07-08

Date Received: 2021-07-02

Date Tested: 2021
Date Completed: 2021

2021-07-02 2021-07-08

Ms. Ivy Tam

Page:

1 of 1

ATTN: QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	< 0.5	< 0.5	< 0.5
Arsenic (µg/L)	<0.2	N/A	< 0.2
Arsenic (µg/L)	0.12		7,500 (80.00)

Method OC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	101	102	80-120
Arsenic (%)	106	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	100	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	2	RPD≤5%
Arsenic (%)	5	N/A	RPD≤20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35368.

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



#### TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T.

Date Completed:
Page:

Report No.:

Date of Issue:

Date Tested:

Date Received:

2021-07-09 2021-07-05 2021-07-05

2021-07-09

QC35372

1 of 1

ATTN:

Ms. Ivy Tam

QC report

Method Blank			
Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	< 0.5	<0.5	< 0.5
Arsenic (µg/L)	<0.2	N/A	< 0.2

 Method QC
 MQC1
 MQC2
 Acceptance

 Parameter
 MQC1
 MQC2
 Acceptance

 Total Suspended Solids (%)
 99
 95
 80-120

 Arsenic (%)
 117
 N/A
 80-120

Sample Spike

Sample Spike		~ 1 0 11 0	A
Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	114	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	3	RPD≤5%
Arsenic (%)	6	N/A	RPD≤20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35372.

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



WELLAB LIMITED Room 1714, Technology Park 18 On Lai Street, Shatin New Territories, Hong Kong Tel: 2898 7388 Fax: 2898 7076

Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street,

Shatin, N.T.

Report No.: QC35388

Date of Issue: 2021-07-13 Date Received: 2021-07-07

Date Tested: 2021-07-07 Date Completed: 2021-07-13

Page:

1 of 1

ATTN:

Ms. Ivy Tam

QC report

Method Blank 1	Method Blank 2	Acceptance
< 0.5	<0.5	< 0.5
<0.2	N/A	< 0.2
	<0.5	<0.5

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	97	99	80-120
Arsenic (%)	102	N/A	80-120

Sample Spike

Sample Spike			
Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	116	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	2	4	RPD≤5%
Arsenic (%)	10	N/A	RPD≤20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35388.

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street,

Shatin, N.T.

QC35401 Report No.:

2021-07-14 Date of Issue: Date Received: 2021-07-09

Date Tested: 2021-07-09 2021-07-14

Date Completed:

Page:

1 of 1

ATTN:

Ms. Ivy Tam

QC report

Aethod Blank Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	< 0.5
Arsenic (µg/L)	<0.2	N/A	< 0.2

Method OC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	1041	98	80-120
Arsenic (%)	107	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	92	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	2	1	RPD≤5%
Arsenic (%)	18	N/A	RPD≤20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35401.

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T. 

 Report No.:
 QC35413

 Date of Issue:
 2021-07-14

 Date Received:
 2021-07-12

Date Tested: 20
Date Completed: 20

2021-07-12 2021-07-14

Page:

1 of 1

ATTN:

Ms. Ivy Tam

QC report

Method Blank		<u> </u>	
Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	< 0.5	<0.5	< 0.5
Arsenic (µg/L)	<0.2	N/A	< 0.2

Method QC

P	MQC1	MQC2	Acceptance
Parameter			
Total Suspended Solids (%)	101	100	80-120
Arsenic (%)	104	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	112	N/A	80-120

Sample Duplicate

Sample Duplicate			
Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	2	0	RPD≤5%
Arsenic (%)	3	N/A	RPD≤20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35413.

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## **TEST REPORT**

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T. 

 Report No.:
 QC35424

 Date of Issue:
 2021-07-20

 Date Received:
 2021-07-14

 Date Tested:
 2021-07-14

Page:

Date Completed:

1 of 1

2021-07-20

ATTN:

Ms. Ivy Tam

QC report

Method Blank			
Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	< 0.5	<0.5	< 0.5
Arsenic (ug/L)	<0.2	N/A	< 0.2

 Method QC
 MQC1
 MQC2
 Acceptance

 Parameter
 MQC1
 MQC2
 Acceptance

 Total Suspended Solids (%)
 98
 102
 80-120

 Arsenic (%)
 93
 N/A
 80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	81	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	4	2	RPD≤5%
Arsenic (%)	1	N/A	RPD≤20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35424.

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



#### TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T. 

 Report No.:
 QC35436

 Date of Issue:
 2021-07-21

 Date Received:
 2021-07-17

 Date Tested:
 2021-07-17

 Date Completed:
 2021-07-21

ATTN:

Ms. Ivy Tam

Page:

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QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	< 0.5	<0.5	< 0.5
Arsenic (μg/L)	<0.2	N/A	< 0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	99	101	80-120
Arsenic (%)	89	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	117	N/A	80-120

Sample Duplicate

Sample Duplicate			
Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	2	RPD≤5%
Arsenic (%)	14	N/A	RPD≤20%

Remarks: 1)  $\leq$  = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35436.

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



#### TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T.

Report No.: QC35441 2021-07-22 Date of Issue: 2021-07-19 Date Received:

2021-07-19 Date Tested: 2021-07-22

Date Completed:

Page:

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ATTN:

Ms. Ivy Tam

QC report

Method Blank Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	<0.5	<0.5	< 0.5
Arsenic (µg/L)	<0.2	N/A	< 0.2

Method QC Acceptance MQC2 MQC1 Parameter 80-120 99 101 Total Suspended Solids (%) 80-120 N/A 103 Arsenic (%)

Sample Spike

bampic spike			
Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	104	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	3	RPD≤5%
Arsenic (%)	6	N/A	RPD≤20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35441.

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T. 

 Report No.:
 QC35454

 Date of Issue:
 2021-07-27

 Date Received:
 2021-07-21

Date Tested: 20
Date Completed: 20

2021-07-21 2021-07-21 2021-07-27

Page:

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ATTN:

Ms. Ivy Tam

QC report Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	< 0.5	<0.5	< 0.5
Arsenic (μg/L)	<0.2	N/A	<0.2

**Method QC** 

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	101	99	80-120
Arsenic (%)	106	N/A	80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	101	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	3	RPD≤5%
Arsenic (%)	8	N/A	RPD≤20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35454.

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



#### TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T. 

 Report No.:
 QC35466

 Date of Issue:
 2021-07-29

 Date Received:
 2021-07-23

 Date Tested:
 2021-07-23

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Date Completed:

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2021-07-29

ATTN:

Ms. Ivy Tam

QC report
Method Blank

Michiga Diank			
Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	< 0.5	<0.5	< 0.5
Arsenic (µg/L)	<0.2	N/A	< 0.2

 Method QC
 MQC1
 MQC2
 Acceptance

 Parameter
 MQC1
 MQC2
 Acceptance

 Total Suspended Solids (%)
 99
 102
 80-120

 Arsenic (%)
 113
 N/A
 80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	107	N/A	80-120

Sample Duplicate

Sample Duplicate			
Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	3	RPD≤5%
Arsenic (%)	4	N/A	RPD<20%
Alschie (70)			

Remarks: 1) <= less than

2) N/A = Not applicable

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T. 

 Report No.:
 QC35476

 Date of Issue:
 2021-07-30

 Date Received:
 2021-07-26

 Date Tested:
 2021-07-26

Date Completed:

2021-07-26 2021-07-30

Page:

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ATTN:

Ms. Ivy Tam

QC report

Method Blank

Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	< 0.5	<0.5	< 0.5
Arsenic (µg/L)	<0.2	N/A	< 0.2

Method QC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	102	101	80-120
Arsenic (%)	98	N/A	80-120

Sample Spike

Sample Spike			
Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	93	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	1	RPD≤5%
Arsenic (%)	4	N/A	RPD≤20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35476.

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T.

QC35499 Report No.: 2021-08-03 Date of Issue: Date Received: 2021-07-28 Date Tested:

Date Completed:

2021-07-28 2021-08-03

Page:

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ATTN:

Ms. Ivy Tam

QC report

Method Blank			
Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	< 0.5	<0.5	< 0.5
Argania (ug/L)	<0.2	N/A	< 0.2

< 0.2

Arsenic (µg/L) Method OC

Parameter	MQC1	MQC2	Acceptance
Total Suspended Solids (%)	103	105	80-120
Arsenic (%)	96	N/A	80-120

Sample Spike

bampic opine			
Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	116	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	1	4	RPD≤5%
Arsenic (%)	4	N/A	RPD≤20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35499.

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.



## TEST REPORT

APPLICANT:

Wellab Limited (EM&A Department)

Rm 1714, Technology Park,

18 On Lai Street, Shatin, N.T. 

 Report No.:
 QC35505

 Date of Issue:
 2021-08-03

 Date Received:
 2021-07-30

Date Tested: 2021-07-30
Date Completed: 2021-08-03

Date Completed: Page:

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ATTN:

Ms. Ivy Tam

QC report

Method Diank			
Parameter	Method Blank 1	Method Blank 2	Acceptance
Total Suspended Solids (mg/L)	< 0.5	<0.5	< 0.5
Arsenic (ug/L)	<0.2	N/A	< 0.2

 Method QC
 MQC1
 MQC2
 Acceptance

 Parameter
 MQC1
 MQC2
 Acceptance

 Total Suspended Solids (%)
 105
 102
 80-120

 Arsenic (%)
 91
 N/A
 80-120

Sample Spike

Parameter	Sample Spike 1	Sample Spike 2	Acceptance
Total Suspended Solids (%)	N/A	N/A	N/A
Arsenic (%)	97	N/A	80-120

Sample Duplicate

Parameter	Sample Duplicate 1	Sample Duplicate 2	Acceptance
Total Suspended Solids (%)	3	1 -	RPD≤5%
Arsenic (%)	4	N/A	RPD≤20%

Remarks: 1) < =less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 35505.

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

## APPENDIX J LANDFILL GAS MONITORING RESULTS



## Contract No. ND/2019/01

Development of Kwu Tung North & Fanling North New Development Area, Phase 1: Kwu Tung North New Development Area, Phase 1: Site formation & Infrastucture works

堆填區附近區域(Consultation Zone)每月氣體監察記錄

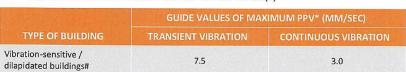
			氧氣 O2	甲烷 CH4	二氧化碳 CO2
日期及時間	位置	氣體及安全標 準	>19%	<10% LEL	<0.5%
22-07-2021 10:51	CZ PT 1		20.05	0.02	0.01
22-07-2021 10:58	CZ container 1		20.44	0.03	0.00
22-07-2021 10:42	CZ container 2		20.65	0.02	0.00
22-07-2021 10:44	CZ container 3		20.42	0.06	0.00
22-07-2021 10:46	CZ container 4		20.18	0.02	0.00
22-07-2021 11:02	CZ container 5	·	21.01	0.02	0.02

Prepared by: Y L Chan (Safety Officer) Date: 22-07-2021

APPENDIX K BUILT HERITAGE MONITORING RESULTS

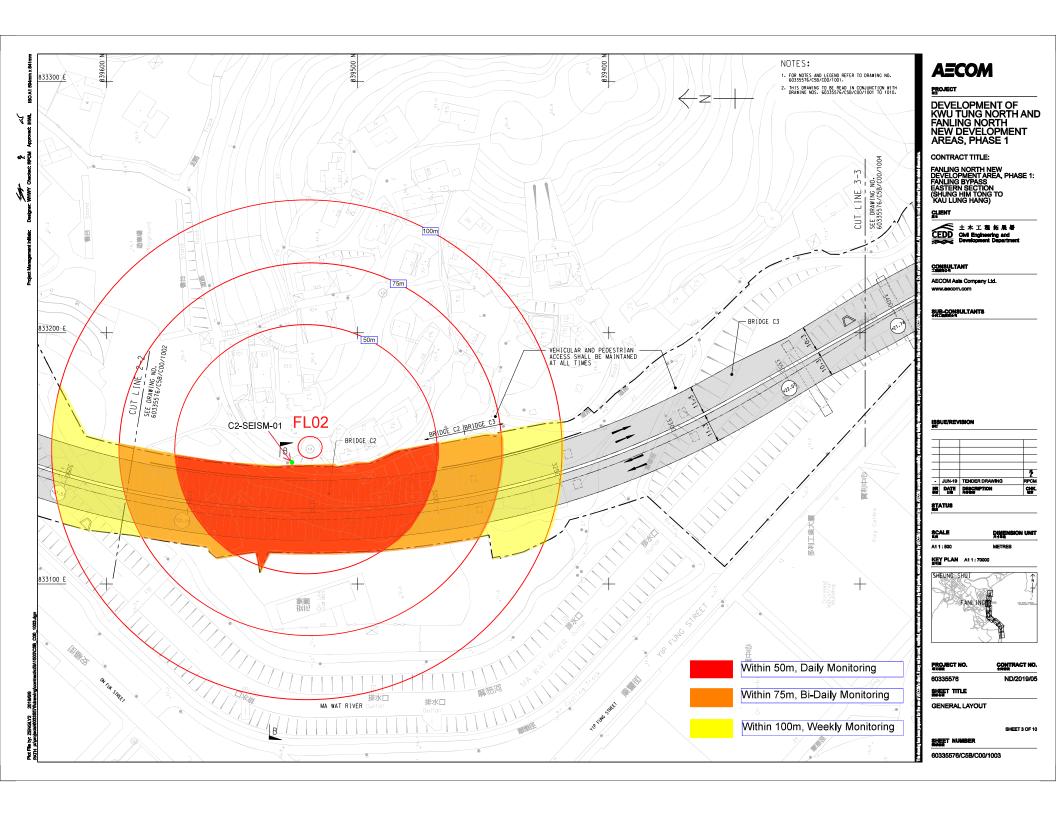
# Summary of vibration readings at FL02 (C2-SEISM-01)







Date	Max. PPV recorded (mm/s)	Serial no. of device (Micromate/ Supergraph)
02 Jul 2021	0.124	UM17121
03 Jul 2021	0.084	UM17121
05 Jul 2021	0.112	UM17124
06 Jul 2021	0.078	UM17124
07 Jul 2021	0.291	UM17126
08 Jul 2021	0.333	UM17126
09 Jul 2021	0.584	UM17126
10 Jul 2021	0.077	UM17124
12 Jul 2021	0.464	UM17126
13 Jul 2021	0.484	UM17126
14 Jul 2021	0.403	UM17126
15 Jul 2021	0.561	UM17126
16 Jul 2021	0.311	UM17126
17 Jul 2021	0.345	UM17126
19 Jul 2021	0.597	UM17126
20 Jul 2021	0.442	UM17124
21 Jul 2021	0.868	UM17126
22 Jul 2021	0.651	UM17124
23 Jul 2021	1.640	UM17124
24 Jul 2021	0.974	UM17126
26 Jul 2021	0.361	UM17126
27 Jul 2021	0.365	UM17126
28 Jul 2021	0.517	UM17126
29 Jul 2021	0.298	UM17126
30 Jul 2021	0.224	UM17126
31 Jul 2021	0.076	UM17124



## APPENDIX L ECOLOGICAL MONITORING RESULTS

Appendix L1a. Avifauna Species Recorded for Water Birds Monitoring, 8 & 9 July 2021, High Tide

	ina Species Recorded for	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, o	•• > <b>6</b> •• 3	Date			8/7/20	21, 9/7/2	021					
					Weath	er Condi	ition	Sunny, Sunny							
					Tidal Condition			High							
			11 17		Tide Level (m)			2.51, 2.67							
Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start T			09:00,	09:00						
					Abundance										
						ct Walk									
					T1	T2	Т3	T5	DAY	CATATA	T.,	** 1	TH. 1		
Barn Swallow	Hirundo rustica	家燕	PM, Sv		2	2	1	WAL	DAL	SWH	P	Heard	Flight 12		
			,	(RC),		<i>L</i>	1						1.2		
Black Kite	Milvus migrans	黑鳶	R, WV	(RC), Cap.586									1		
Black-necked Starling	Sturnus nigricollis	黑領椋鳥	R		2				5	2			2		
Black-winged Stilt	Himantopus himantopus	黑翅長腳鷸	PM	RC						24					
Chestnut Munia	Lonchura atricapilla	栗腹文鳥	R						8						
Chinese Bulbul	Pycnonotus sinensis	白頭鵯	R						2				1		
Chinese Pond Heron	Ardeola bacchus	池鷺	R	PRC(RC)	2	2	4	3	4	8			3		
Collared Crow	Corvus torquatus	白頸鴉	UR	LC, VU			5								
Common Moorhen	Gallinula chloropus	黑水雞	R							1					
Crested Bulbul	Pycnonotus jocosus	紅耳鵯	R		1										
Crested Myna	Acridotheres cristatellus	八哥	R		3	3	6	6	29				7		
Domestic Pigeon	Columba livia	原鴿	R						1				1		
Eastern Cattle Egret	Bubulcus coromandus	牛背鷺	R, PM	(LC)				1	1						
Eurasian Tree Sparrow	Passer montanus	樹麻雀	R		2	2	1		11						
Great Egret	Ardea alba	大白鷺	R, WV	PRC(RC)				1		1					
Greater Coucal	Centropus sinensis	褐翅鴉鵑	R	(VU)					1						

Appendix L1a. Avifauna Species Recorded for Water Birds Monitoring, 8 & 9 July 2021, High Tide

Appendix L1a. Avifa	una Species Recorded for	Water Birds N	lonitoring, 8	& 9 July 2021,	, High T	ide									
					Date			8/7/2021, 9/7/2021							
					Weather Condition Tidal Condition			Sunny, Sunny							
				_				High							
		·			Tide Level (m)			2.51, 2.67							
Common Name Sp	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start T	ime		09:00,	09:00						
		Tame	Status	Status	Abundance										
					Transect Walk										
					T1	T2	T3	T5							
								WAL	DAL	SWH	P	Heard	Flight		
Grey Heron	Ardea cinerea	蒼鷺	WV	PRC			1		1						
Little Egret	Egretta garzetta	小白鷺	R	PRC(RC)	2	3	6		1	22			6		
Long-tailed Shrike	Lanius schach	棕背伯勞	R						1						
Magpie Robin	Copsychus saularis	鵲鴝	R						4						
Masked Laughing Thrush	Garrulax perspicillatus	黑臉噪鶥	R				1		2						
Plain Prinia	Prinia inornata	純色鷦鶯	R						5						
Spotted Dove	Streptopelia chinensis	珠頸斑鳩	R		3		3	2	16						
Spotted Munia	Lonchura punctulata	斑文鳥	R				2		2				2		
White-breasted Waterhen	Amaurornis phoenicurus	白胸苦惡鳥	R					1		1		1			
White-throated Kingfisher	Halcyon smyrnensis	白胸翡翠	R	(LC)			3		1						
White Wagtail	Motacilla alba	白鶺鴒	PM, WV				1		3	1			2		
Yellow-bellied Prinia	Prinia flaviventris	黃腹鷦鶯	R									5			
Total No. of Species	tal No. of Species						12	6	19	8	0	1	10		
Total No. of Conservation	otal No. of Conservation Interest Species						4	3	5	4	0	0	3		

Appendix L1a. Avifauna Species Recorded for Water Birds Monitoring, 8 & 9 July 2021, High Tide

Appenuix Lia. Aviia	auna Species Recorded for	water birds iv	Tomicoring, o	& 9 July 2021,	mgii ii	ue									
					Date			8/7/2021, 9/7/2021							
					Weather	r Condi	tion	Sunny, Sunny							
					Tidal Condition Tide Level (m)			High							
	Species Name	Chinese Name						2.51, 2.67							
Common Name			Hong Kong Status	Conservation Status	Start Ti	me		09:00,	09:00						
			Status	Status	Abundance										
					Transec	Transect Walk									
					T1	T2	T3	T5							
								WAL	DAL	SWH	P	Heard	Flight		

#### Note:

R – Resident; RR - Rare resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant

Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)

Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance

Cap.586: Endangered Species of Animals and Plants Ordinance (Cap.586)

(CR): Rare in China Red Data Book Status

VU: Vulnerable in IUCN Red List Status

(VU): Vulnerable in China Red Data Book Status

NT: Near Threatened in IUCN Red List Status

CR: Critically Endangered in IUCN Red List Status

RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)

WAL: Wet Agricultural Land

DAL: Dry Agricultural Land

SWH: Shallow Water Habitat

P: Pond

Appendix L1b. Avifauna Species Recorded for Water Birds Monitoring, 8 & 9 July 2021, Low Tide

rippendix 1210: 11 na	una species Recorded for	VILLET BILLES IV		a > July 2021,		Ide		0/7/00	21 0/7/2	021					
					Date			8/7/2021, 9/7/2021							
					Weather Condition			Sunny, Sunny							
					Tidal Condition			Low							
			**		Tide Level (m)			1.43, 1.3							
Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start T	ime		13:00,	14:00						
		rame	Status	Status	Abundance										
					Transect Walk										
					T1	T2	Т3	T5							
								WAL	DAL	SWH	P	Heard	Flight		
Asian Koel	Eudynamys scolopaceus	噪鵙	R		1										
Barn Swallow	Hirundo rustica	家燕	PM, Sv		2	9							9		
Black-necked Starling	Sturnus nigricollis	黑領椋鳥	R		3		1		15				2		
Black-winged Stilt	Himantopus himantopus	黑翅長腳鷸	PM	RC						23			2		
Chinese Bulbul	Pycnonotus sinensis	白頭鵯	R						9						
Chinese Pond Heron	Ardeola bacchus	池鷺	R	PRC(RC)	5	6	5	6	4	2			2		
Collared Crow	Corvus torquatus	白頸鴉	UR	LC, VU			2								
Common Tailorbird	Orthotomus sutorius	長尾縫葉鶯	R		2										
Crested Bulbul	Pycnonotus jocosus	紅耳鵯	R		1				3						
Crested Myna	Acridotheres cristatellus	八哥	R		3	2	15		33				4		
Domestic Pigeon	Columba livia	原鴿	R						3				3		
Eurasian Tree Sparrow	Passer montanus	樹麻雀	R		5	7	4		7				2		
Great Egret	Ardea alba	大白鷺	R, WV	PRC(RC)		1	2		1	1					
Greater Coucal	Centropus sinensis	褐翅鴉鵑	R	(VU)	1				1						
Japanese White-eye	Zosterops japonicus	暗綠繡眼鳥	R			2									
Little Egret	Egretta garzetta	小白鷺	R	PRC(RC)		3	13	4	3	20			2		

Appendix L1b. Avifauna Species Recorded for Water Birds Monitoring, 8 & 9 July 2021, Low Tide

Appendix L1b. Aviia	una Species Recorded for	water Birds N	Tontoring, 8	& 9 July 2021,	LOW I	ıae										
					Date			8/7/2021, 9/7/2021								
					***************************************			Sunny, Sunny								
								Low								
		~ ·						1.43, 1.3								
Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start T	ime		13:00, 14:00								
		rame	Status	Status	Abundance											
					Transe	ct Walk										
					T1 T2		T3	T5	1	1						
								WAL	DAL	SWH	P	Heard	Flight			
Long-tailed Shrike	Lanius schach	棕背伯勞	R						1							
Magpie Robin	Copsychus saularis	鵲鴝	R			1		2	1							
Masked Laughing Thrush	Garrulax perspicillatus	黑臉噪鶥	R		4		1		2			2				
Pied Kingfisher	Ceryle rudis	斑魚狗	UR	(LC)			1									
Plain Prinia	Prinia inornata	純色鷦鶯	R				2		3							
Red-billed Blue Magpie	Urocissa erythrorhyncha	紅咀藍鵲	R				2									
Spotted Dove	Streptopelia chinensis	珠頸斑鳩	R		3	1	6	1	12				1			
Spotted Munia	Lonchura punctulata	斑文鳥	R		10	8			6				16			
White Wagtail	Motacilla alba	白鶺鴒	PM, WV						11	2						
White-breasted Waterhen	Amaurornis phoenicurus	白胸苦惡鳥	R					4	5	2						
White-throated Kingfisher	Halcyon smyrnensis	白胸翡翠	R	(LC)		1										
Yellow-bellied Prinia	Prinia flaviventris	黃腹鷦鶯	R		1	1						2				
Total No. of Species	otal No. of Species						12	5	18	6	0	2	10			
Total No. of Conservation	otal No. of Conservation Interest Species						5	2	4	4	0	0	3			

Appendix L1b. Avifauna Species Recorded for Water Birds Monitoring, 8 & 9 July 2021, Low Tide

Appendix Lib. Aviia	una Species Recorded for	water birds iv	tomitoring, o	& 9 July 2021,	LUW II	ue									
				Conservation	Date			8/7/2021, 9/7/2021							
					Weather Condition Tidal Condition Tide Level (m)			Sunny, Sunny							
		Chinese Name						Low							
	Species Name							1.43, 1.3							
Common Name					Start Time		13:00,	14:00							
				Status	Abundance		Abundance								
					Transec	Transect Walk									
					T1	T2	T3	T5							
								WAL	DAL	SWH	P	Heard	Flight		

#### Note:

R – Resident; RR - Rare resident, WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant

Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)

Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance

Cap.586: Endangered Species of Animals and Plants Ordinance (Cap.586)

(CR): Rare in China Red Data Book Status

VU: Vulnerable in IUCN Red List Status

(VU): Vulnerable in China Red Data Book Status

NT: Near Threatened in IUCN Red List Status

CR: Critically Endangered in IUCN Red List Status

RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)

WAL: Wet Agricultural Land

DAL: Dry Agricultural Land

SWH: Shallow Water Habitat

#### P: Pond

Appendix L1c. Avifauna Species Recorded for Water Birds Monitoring, 15 & 16 July 2021, High Tide

Appendix LTC. Aviia	una Species Recorded for	water birds w	lonnornig, 1.	x 10 July 202	Date	1 Hue		15/7/2021, 16/7/2021								
						er Condi	ition	Sunny, Cloudy with drizzle								
					Tidal Condition			High								
					Tide Level (m)			2.01, 1	1.93							
Common Name Spe	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start T	ime		11:00,	12:00							
		Tame	Status	Status	Abundance											
					Transect Walk											
					T1	T2	T3	T5				1				
		₩ II II II	•					WAL	DAL	SWH	P	Heard	Flight			
Asian Koel	Eudynamys scolopacea	噪鵑	R			1										
Barn Swallow	Hirundo rustica	家燕	PM, Sv		3	6	4						21			
Black Kite	Milvus migrans	黑鳶	R, WV	(RC), Cap.586	1											
Black-necked Starling	Sturnus nigricollis	黑領椋鳥	R				1		6							
Black-winged Stilt	Himantopus himantopus	黑翅長腳鷸	PM	RC						12			1			
Chinese Bulbul	Pycnonotus sinensis	白頭鵯	R				1		8							
Chinese Pond Heron	Ardeola bacchus	池鷺	R	PRC(RC)	5	6	7		4	6						
Common Snipe	Gallinago gallinago	扇尾沙錐	WV, PM							2						
Common Tailorbird	Orthotomus sutorius	長尾縫葉鶯	R			1										
Crested Bulbul	Pycnonotus jocosus	紅耳鵯	R		1	2	1		3							
Crested Myna	Acridotheres cristatellus	八哥	R		1		5		11	5			8			
Eurasian Tree Sparrow	Passer montanus	樹麻雀	R			11			5							
Great Egret	Ardea alba	大白鷺	R, WV	PRC(RC)		1	1			2			4			
Greater Painted-snipe	Rostratula benghalensis	彩鷸	R, PM, WV	LC						2						
Green Sandpiper	Tringa ochropus	白腰草鷸	UPM, WV							2						

Appendix L1c. Avifauna Species Recorded for Water Birds Monitoring, 15 & 16 July 2021, High Tide

Appendix Lie. Aviia	una Species Recorded for	water birus w	tomitoring, 13	& 10 July 202	ar, migi	1 Hue							
					Date			15/7/2	021, 16/7	7/2021			
					Weath	er Cond	ition	Sunny	, Cloudy	with driz	zzle		
					Tidal (	Conditio	n	High					
		CI :	**	<b>a</b> .:	Tide L	evel (m)		2.01, 1	.93				
Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start T	`ime		11:00,	12:00				
		ranic	Status	Status	Abund	lance							
					Transe	ct Walk							
					T1	T2	T3	T5			1	•	
								WAL	DAL	SWH	P	Heard	Flight
Japanese White-eye	Zosterops japonicus	暗綠繡眼鳥	R						1				
Little Egret	Egretta garzetta	小白鷺	R	PRC(RC)		3	10			13			17
Magpie Robin	Copsychus saularis	鵲鴝	R			3	1		2				
Masked Laughing Thrush	Garrulax perspicillatus	黑臉噪鶥	R						4				
Plain Prinia	Prinia inornata	純色鷦鶯	R		1				3				
Spotted Dove	Streptopelia chinensis	珠頸斑鳩	R		7	9	3		10				
Spotted Munia	Lonchura punctulata	斑文鳥	R		1		5		30				
White-breasted Waterhen	Amaurornis phoenicurus	白胸苦惡鳥	R							4			
White Wagtail	Motacilla alba	白鶺鴒	PM, WV		2	1	1		2				
White-rumped Munia	Lonchura striata	白腰文鳥	R						10				
White-throated Kingfisher	Halcyon smyrnensis	白胸翡翠	R	(LC)	1								
Yellow-bellied Prinia	Tellow-bellied Prinia Prinia flaviventris 黃腹鷦鶯 R											4	
Total No. of Species	No. of Species						12	0	14	9	0	1	5
Total No. of Conservation	on Interest Species				3	3	3	0	1	5	0	0	3

Appendix L1c. Avifauna Species Recorded for Water Birds Monitoring, 15 & 16 July 2021, High Tide

Appendix L1c. Aviia	una Species Recorded for	water Birds N	ionitoring, 13	& 16 July 202	21, Hign	Tiae							
					Date			15/7/20	021, 16/7	/2021			
					Weathe	er Condi	tion	Sunny,	, Cloudy	with driz	zle		
					Tidal C	Condition	n	High					
Common Name Species Name					evel (m)		2.01, 1	.93					
	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start T	ime		11:00,	12:00				
		Name	Status	Status	Abund	ance							
					Transe	ct Walk							
					TD 1	TO	TD2	T5					
					T1	T2	T3	WAL	DAL	SWH	P	Heard	Flight

### Note:

R – Resident; RR - Rare resident, WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant

Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)

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VU: Vulnerable in IUCN Red List Status

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CR: Critically Endangered in IUCN Red List Status

RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)

WAL: Wet Agricultural Land

DAL: Dry Agricultural Land

SWH: Shallow Water Habitat

P: Pond

Appendix L1d. Avifauna Species Recorded for Water Birds Monitoring, 15 & 16 July 2021, Low Tide

Tipperium Blutti in	una Species Recorded for	, , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , ,	10 gaig 20	Date	1100		15/7/2	021, 16/7	7/2021			
					Weath	er Condi	ition	Sunny	, Cloudy	with driz	zzle		
					Tidal (	Conditio	n	Low					
		China	II IZ	C	Tide L	evel (m)		1.09, 1					
Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start T			08:00,	08:00				
					Abunc								
					Transe	ect Walk							
					T1	T2	Т3	T5	I		I_	T	
Asian IZaal	E 1	n县 EÉ	D					WAL	DAL	SWH	P	Heard	Flight
Asian Koel	Eudynamys scolopacea	噪鵑	R		_	_						1	
Barn Swallow	Hirundo rustica	家燕	PM, Sv		3	5	4						10
Black-necked Starling	Sturnus nigricollis	黑領椋鳥	R			2			3				
Black-winged Stilt	Himantopus himantopus	黑翅長腳鷸	PM	RC						13			
Chestnut Munia	Lonchura atricapilla	栗腹文鳥	R						10				
Chinese Bulbul	Pycnonotus sinensis	白頭鵯	R				3		2				2
Chinese Pond Heron	Ardeola bacchus	池鷺	R	PRC(RC)	2	3	4	2	3	5			
Common Myna	Acridotheres tristis	家八哥	UR						2				
Crested Bulbul	Pycnonotus jocosus	紅耳鵯	R		1	1	2		2				
Crested Myna	Acridotheres cristatellus	八哥	R		3	3	4		9				12
Eurasian Tree Sparrow	Passer montanus	樹麻雀	R		2	2	2		9				
Great Egret	Ardea alba	大白鷺	R, WV	PRC(RC)			1	1		1			
Little Egret	Egretta garzetta	小白鷺	R	PRC(RC)	1	2	8	2		8			6
Magpie Robin	Copsychus saularis	鵲鴝	R			2							
Masked Laughing Thrush	Garrulax perspicillatus	黑臉噪鶥	R						4				
Plain Prinia	Prinia inornata	純色鷦鶯	R				2		4			2	

Appendix L1d. Avifauna Species Recorded for Water Birds Monitoring, 15 & 16 July 2021, Low Tide

Appendix LTu. Aviia	una Species Recorded for	vvater birus iv	Tonnornig, 1.	X 10 July 20.	21, LUW	Tiuc		1					
					Date			15/7/2	021, 16/7	7/2021			
					Weath	er Cond	ition	Sunny	, Cloudy	with driz	zle		
					Tidal (	Conditio	n	Low					
			**		Tide L	evel (m)	)	1.09, 1	.1				
Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start T	ime		08:00,	08:00				
		Tallic	Status	Status	Abund	lance							
					Transe	ect Walk							
		T1	T2	T3	T5								
					11	12	13	WAL	DAL	SWH	P	Heard	Flight
Sooty-headed Bulbul	Pycnonotus aurigaster	白喉紅臀鵯	UR						2				
Spotted Dove	Streptopelia chinensis	珠頸斑鳩	R		4	6	3		6				
Spotted Munia	Lonchura punctulata	斑文鳥	R		2				30				
White-breasted Waterhen	Amaurornis phoenicurus	白胸苦惡鳥	R							4			
White-headed Munia	Lonchura maja	白頭文鳥	R						5				
White Wagtail	Motacilla alba	白鶺鴒	PM, WV		1		1	2		2			
Yellow-bellied Prinia	Prinia flaviventris	黃腹鷦鶯	R									2	
Total No. of Species	l No. of Species						11	4	14	6	0	3	4
Total No. of Conservation	o. of Conservation Interest Species							3	1	4	0	0	1

Appendix L1d. Avifauna Species Recorded for Water Birds Monitoring, 15 & 16 July 2021, Low Tide

Appendix L1u. Avii	auna Species Recorded for	water birds iv	nonnormg, 1	5 & 10 July 202	21, LOW 110	ue		
					Date			15/7/2021, 16/7/2021
					Weather C	Condit	ion	Sunny, Cloudy with drizzle
					Tidal Con	ndition		Low
Common Name Speci					Tide Leve	el (m)		1.09, 1.1
	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start Time	e		08:00, 08:00
		Name	Status	Status	Abundanc	ce		
					Transect V	Walk		
					TD1 TD	30	TT2	T5
					T1 T	. 2	T3	WAL DAL SWH P Heard Flight

### Note:

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P: Pond

Appendix L1e. Avifauna Species Recorded for Water Birds Monitoring, 21 & 23 July 2021, High Tide

rippellula Electivitati	una Species Recorded for	Vacci Biras IV		- CC 20 July 202	Date	Tiuc		21/7/2	021, 23/7	7/2021			
					Weath	er Condi	ition	Cloud	y with dr	izzle, Su	nny		
					Tidal (	Conditio	n	High					
		CI.	11 17		Tide L	evel (m)		2.28, 2	2.91				
Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start T	ime		09:00,	09:00				
			2		Abund	ance							
					Transe	ct Walk		1					
					T1	T2	T3	T5	1	T	l _	Τ	
D C 11	TT: 1	<b>少</b> 世	DM C			0	2	WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	Hirundo rustica	家燕	PM, Sv			8	2		3				6
Black-necked Starling	Sturnus nigricollis	黑領椋鳥	R						10				
Black-winged Stilt	Himantopus himantopus	黑翅長腳鷸	PM	RC						18			
Chinese Bulbul	Pycnonotus sinensis	白頭鵯	R			2			4				2
Chinese Pond Heron	Ardeola bacchus	池鷺	R	PRC(RC)	1	7	3		3	10			2
Crested Bulbul	Pycnonotus jocosus	紅耳鵯	R		2				2				
Crested Myna	Acridotheres cristatellus	八哥	R			1	2		18				12
Domestic Pigeon	Columba livia	原鴿	R			3			3				
Eurasian Tree Sparrow	Passer montanus	樹麻雀	R			10	2		7				
Great Egret	Ardea alba	大白鷺	R, WV	PRC(RC)		1	1	1					
Grey Heron	Ardea cinerea	蒼鷺	WV	PRC			1						
Green Sandpiper	Tringa ochropus	白腰草鷸	UPM, WV							1			
Japanese White-eye	Zosterops japonicus	暗綠繡眼鳥	R						1				
Little Egret	Egretta garzetta	小白鷺	R	PRC(RC)	3	3	8			16			4
Magpie Robin	Copsychus saularis	鵲鴝	R		1	1	2		4				
Masked Laughing Thrush	Garrulax perspicillatus	黑臉噪鶥	R						4				

Appendix L1e. Avifauna Species Recorded for Water Birds Monitoring, 21 & 23 July 2021, High Tide

Appendix Ere. Aviid	una species Recorded for	Water Dirus IV	tomitoring, 21	& 25 July 202	11, 111g1	Tiuc							
					Date			21/7/20	021, 23/7	//2021			
					Weath	er Condi	ition	Cloud	y with dr	izzle, Sur	nny		
					Tidal C	Conditio	n	High					
					Tide L	evel (m)	)	2.28, 2	.91				
Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start T	`ime		09:00,	09:00				
		Name	Status	Status	Abund	lance							
					Transe	ect Walk							
					TD:1	T-0	T 2	T5					
					T1	T2	Т3	WAL	DAL	SWH	P	Heard	Flight
Plain Prinia	Prinia inornata	純色鷦鶯	R		3	2	2		5				
Spotted Dove	Streptopelia chinensis	珠頸斑鳩	R		6	7	2		7				
Spotted Munia	Lonchura punctulata	斑文鳥	R			2			60				
White-breasted Waterhen	Amaurornis phoenicurus	白胸苦惡鳥	R							3			
White-headed Munia	Lonchura maja	白頭文鳥	R						10				
White Wagtail	Motacilla alba	白鶺鴒	PM, WV				1	2		2			
White-rumped Munia	Lonchura striata	白腰文鳥	R						20				
Wood Sandpiper	Tringa glareola	林鷸	WV, PM	LC						6			
Yellow-bellied Prinia Prinia flaviventris 黄腹鷦鶯 R					2							3	
Total No. of Species	al No. of Species						11	2	16	7	0	1	5
Total No. of Conservation	o. of Conservation Interest Species							1	1	4	0	0	2

Appendix L1e. Avifauna Species Recorded for Water Birds Monitoring, 21 & 23 July 2021, High Tide

Appendix Lie. Avii	auna Species Recorded for	water birds iv	Tomicoring, 2	1 & 23 July 202	21, mgn 11	lue		<del>,</del>
					Date			21/7/2021, 23/7/2021
					Weather C	Conditi	ion	Cloudy with drizzle, Sunny
					Tidal Con	dition		High
Common Name Specie					Tide Leve	el (m)		2.28, 2.91
	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start Time	e		09:00, 09:00
		Name	Status	Status	Abundanc	ce		
					Transect V	Walk		
					T-1 T-	70	тэ	T5
					T1 T	2	T3	WAL DAL SWH P Heard Flight

### Note:

R – Resident; RR - Rare resident, WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant

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P: Pond

Appendix L1f. Avifauna Species Recorded for Water Birds Monitoring, 21 & 23 July 2021, Low Tide

перетили при при при при при при при при при пр	ina Species Recorded for		, , , , , , , , , , , , , , , , , , ,	oc ze guzj z vz	Date			21/7/2	2021, 23/7	7/2021			
					Weath	er Condi	ition	Cloud	y with ra	in, Sunny	I		
					Tidal (	Conditio	n	Low					
		CI.	11 17		Tide L	evel (m)		0.84, (	0.8				
Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start T	ime		13:00,	14:00				
					Abund								
					Transe	ect Walk		T					
					T1	T2	T3	T5	T =		1_	T	
D 0 11	TT: 1	<b>少</b> 世	DM C		2	4		WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	Hirundo rustica	家燕	PM, Sv		3	4			5			<u> </u>	5
Black-crowned Night Heron	Nycticorax nycticorax	夜鷺	R, WV	LC			3						
Black-necked Starling	Sturnus nigricollis	黑領椋鳥	R			3			15				
Black-winged Stilt	Himantopus himantopus	黑翅長腳鷸	PM	RC						20			
Chestnut Munia	Lonchura atricapilla	栗腹文鳥	R					5					
Chinese Bulbul	Pycnonotus sinensis	白頭鵯	R		2	2			8				7
Chinese Pond Heron	Ardeola bacchus	池鷺	R	PRC(RC)	3	2	7		3	10			1
Common Kingfisher	Alcedo atthis	普通翠鳥	R				1						
Common Myna	Acridotheres tristis	家八哥	UR						6				
Crested Bulbul	Pycnonotus jocosus	紅耳鵯	R			2			6				
Crested Myna	Acridotheres cristatellus	八哥	R		3	3	1		69				32
Eurasian Tree Sparrow	Passer montanus	樹麻雀	R		4	3			16				
Great Egret	Ardea alba	大白鷺	R, WV	PRC(RC)		1	2						
Greater Painted-snipe	Rostratula benghalensis	彩鷸	R, PM, WV	LC						2			
Green Sandpiper	Tringa ochropus	白腰草鷸	UPM, WV				1			1			
Japanese White-eye	Zosterops japonicus	暗綠繡眼鳥	R						1				

Appendix L1f. Avifauna Species Recorded for Water Birds Monitoring, 21 & 23 July 2021, Low Tide

			<u> </u>		Date			21/7/2	021, 23/7	7/2021			
					Weath	er Condi	ition	Cloud	y with ra	in, Sunny	y		
					Tidal (	Conditio	n	Low					
		GI :	** **		Tide L	evel (m)	l	0.84, (	).8				
Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start T	ime		13:00,	14:00				
		T (dillo	Status	Status	Abund	lance							
					Transe	ect Walk							
					T1	T2	T3	T5					
								WAL	DAL	SWH	P	Heard	Flight
Little Egret	Egretta garzetta	小白鷺	R	PRC(RC)	2	2	18	1	1	14			4
Long-tailed Shrike	Lanius schach	棕背伯勞	R						1				
Magpie	Pica pica	喜鵲	R						1				
Magpie Robin	Copsychus saularis	鵲鴝	R					3	2				
Masked Laughing Thrush	Garrulax perspicillatus	黑臉噪鶥	R				3		6			2	
Plain Prinia	Prinia inornata	純色鷦鶯	R						6				3
Plaintive Cuckoo	Cacomantis merulinus	八聲杜鵑	USV									1	
Sooty-headed Bulbul	Pycnonotus aurigaster	白喉紅臀鵯	UR						2				
Spotted Dove	Streptopelia chinensis	珠頸斑鳩	R		1	2			9				1
Spotted Munia	Lonchura punctulata	斑文鳥	R					5	90				6
White-breasted Waterhen	Amaurornis phoenicurus	白胸苦惡鳥	R					2	3	4			
White-throated Kingfisher	Halcyon smyrnensis	白胸翡翠	R	(LC)					1				
White Wagtail	Motacilla alba	白鶺鴒	PM, WV				1	1		1			
Wood Sandpiper	Tringa glareola	林鷸	WV, PM	LC						10			
Yellow-bellied Prinia	Prinia flaviventris	黄腹鷦鶯	R									4	

Appendix L1f. Avifauna Species Recorded for Water Birds Monitoring, 21 & 23 July 2021, Low Tide

nu species meetine ion	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		cc _c g azy _ c _	2, 2011								
				Date			21/7/20	021, 23/7	//2021			
				Weath	er Condi	tion	Cloudy	y with rai	in, Sunny	7		
				Tidal C	Conditio	1	Low					
					evel (m)		0.84, 0	.8				
Species Name				Start T	ime		13:00,	14:00				
	Name	Status	Status	Abund	ance							
				Transe	ct Walk							
				TD:1	TT0	TT2	T5					
				11	12	13	WAL	DAL	SWH	P	Heard	Flight
tal No. of Species					10	9	6	20	8	0	3	8
No. of Conservation Interest Species						4	1	3	5	0	0	2
	Species Name	Species Name  Chinese Name	Species Name  Chinese Hong Kong Status	Species Name  Chinese Hong Kong Conservation Status  Status	Species Name  Chinese Name  Hong Kong Status  Conservation Status  Conservation Status  Tidal Conservation Status  Transe T1  7	Species Name  Chinese Name  Hong Kong Status  Hong Kong Status  Conservation Status  Conservation Status  Conservation Start Time  Abundance  Transect Walk  T1 T2  7 10	Species Name  Chinese Name  Hong Kong Status  Hong Kong Status  Conservation Status  Conservation Start Time Abundance Transect Walk  T1 T2 T3  7 10 9	Chinese Name	Species Name	Species Name	Species Name	Species Name

### Note:

R – Resident; RR - Rare resident, WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant

Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)

Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance

Cap.586: Endangered Species of Animals and Plants Ordinance (Cap.586)

(CR): Rare in China Red Data Book Status

VU: Vulnerable in IUCN Red List Status

(VU): Vulnerable in China Red Data Book Status

NT: Near Threatened in IUCN Red List Status

CR: Critically Endangered in IUCN Red List Status

RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)

WAL: Wet Agricultural Land

DAL: Dry Agricultural Land

SWH: Shallow Water Habitat

P: Pond

Appendix L1g. Avifauna Species Recorded for Water Birds Monitoring, 27 & 28 July 2021, High Tide

Appendix Elg. Aviide	una Species Recorded for	viauci Dii us iv		& 20 July 202	Date	1 Huc		27/7/2	021, 28/7	7/2021			
						er Condi	tion		, Sunny				
						Condition		High					
					Tide L	evel (m)		2.64, 2	53				
Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start T	ime		11:00,	12:00				
		Ivanic	Status	Status	Abund	lance							
					Transe	ect Walk		1					
					T1	T2	T3	T5				T	
							10	WAL	DAL	SWH	P	Heard	Flight
Barn Swallow	Hirundo rustica	家燕	PM, Sv		1	3							1
Black-necked Starling	Sturnus nigricollis	黑領椋鳥	R		2			1	3				
Black-winged Stilt	Himantopus himantopus	黑翅長腳鷸	PM	RC						6			
Chinese Bulbul	Pycnonotus sinensis	白頭鵯	R			2							
Chinese Pond Heron	Ardeola bacchus	池鷺	R	PRC(RC)	3	5	6	3	1				3
Common Kingfisher	Alcedo atthis	普通翠鳥	R		1				1				
Common Sandpiper	Actitis hypoleucos	磯鷸	WV, PM							1			
Crested Bulbul	Pycnonotus jocosus	紅耳鵯	R			2							
Crested Myna	Acridotheres cristatellus	八哥	R		4	3			35				
Domestic Pigeon	Columba livia	原鴿	R						5				
Eurasian Tree Sparrow	Passer montanus	樹麻雀	R		6	4	2		1				
Great Egret	Ardea alba	大白鷺	R, WV	PRC(RC)			3						
Greater Coucal	Centropus sinensis	褐翅鴉鵑	R	(VU)	1				1				
Green Sandpiper	Tringa ochropus	白腰草鷸	UPM, WV					1					
Grey Heron	Ardea cinerea	蒼鷺	WV	PRC			2						
Little Egret	Egretta garzetta	小白鷺	R	PRC(RC)	2	4	11	1		12			4

Appendix L1g. Avifauna Species Recorded for Water Birds Monitoring, 27 & 28 July 2021, High Tide

Appendix Erg. Aviid	ana species Recorded for	THE DIES IV.		& 20 July 202	<u>,                                    </u>	1 Huc		07/7/2	001 00 /5	1/2021				
					Date			211112	021, 28/7	72021				
					Weath	er Condi	ition	Sunny	, Sunny					
					Tidal C	Conditio	n	High						
					Tide L	evel (m)	)	2.64, 2	64, 2.53					
Common Name	Species Name	Chinese	Hong Kong	Conservation	Start T	ime		11:00,	12:00					
		Name	Status Status		Abundance									
					Transect Walk									
					m1		TD2	T5						
					T1	T2	T3	WAL	DAL	SWH	P	Heard	Flight	
Long-tailed Shrike	Lanius schach	棕背伯勞	R						2					
Magpie Robin	Copsychus saularis	鵲鴝	R			1	1		3					
Masked Laughing Thrush	Garrulax perspicillatus	黑臉噪鶥	R						2					
Plain Prinia	Prinia inornata	純色鷦鶯	R			1	3							
Spotted Dove	Streptopelia chinensis	珠頸斑鳩	R		1	1	1							
Spotted Munia	Lonchura punctulata	斑文鳥	R		10		20						74	
White-breasted Waterhen	Amaurornis phoenicurus	白胸苦惡鳥	R						1	1	1	1		
White Wagtail	Motacilla alba	白鶺鴒	PM, WV					1	2					
Yellow-bellied Prinia Prinia flaviventris 黄腹鷦鶯 R							1					1		
Total No. of Species					10	10	10	5	12	4	1	2	4	
Total No. of Conservation	otal No. of Conservation Interest Species					2	4	2	2	2	0	0	2	

Appendix L1g. Avifauna Species Recorded for Water Birds Monitoring, 27 & 28 July 2021, High Tide

Appendix Lig. Aviia	una species Recorded for	water birds w	Tollitoring, 2	& 20 July 202	21, 111gii .	Tiuc							
					Date	Date 27/7/2021, 28/7/2021							
				Weather Condition Sunny, Sunny									
					Tidal Condition		High						
					Tide Level (m)			2.64, 2	2.64, 2.53				
Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation	Conservation Start Time 11:00, 12:00								
			Status	Status	Abunda	Abundance							
					Transect	t Walk							
					TC1	то	TO	T5					
					T1 T2	T2	Т3	WAL	DAL	SWH	P	Heard	Flight

### Note:

R – Resident; RR - Rare resident, WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant

Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)

Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance

Cap.586: Endangered Species of Animals and Plants Ordinance (Cap.586)

(CR): Rare in China Red Data Book Status

VU: Vulnerable in IUCN Red List Status

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CR: Critically Endangered in IUCN Red List Status

RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)

WAL: Wet Agricultural Land

DAL: Dry Agricultural Land

SWH: Shallow Water Habitat

P: Pond

Appendix L1h. Avifauna Species Recorded for Water Birds Monitoring, 27 & 28 July 2021, Low Tide

Appenuix Em. Avita	una Species Recorded for	vater birds iv	Tomtornig, 27	& 20 July 202	Date 27/7/2021, 28/7/202									
						er Condi	tion	Sunny	, Sunny					
					Tidal C	Condition	n	Low						
		·		~ .	Tide L	evel (m)		1.46, 1.46 16:30, 17:00						
Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start T	ime								
		ranic	Status	Status	Abundance									
					Transe	ct Walk	1	1						
					T1	T2	T3	T5	1	1	I			
			世 DM C					WAL	DAL	SWH	P	Heard	Flight	
Barn Swallow	Hirundo rustica	家燕	PM, Sv		4	3	8						4	
Black-crowned Night Heron	Nycticorax nycticorax	夜鷺	R, WV	LC		1	1							
Black Drongo	Dicrurus macrocercus	黑卷尾	Sv						3					
Black-necked Starling	Sturnus nigricollis	黑領椋鳥	R						12					
Black-winged Stilt	Himantopus himantopus	黑翅長腳鷸	PM	RC						14				
Chestnut Munia	Lonchura atricapilla	栗腹文鳥	R						20					
Chinese Bulbul	Pycnonotus sinensis	白頭鵯	R			2			5					
Chinese Pond Heron	Ardeola bacchus	池鷺	R	PRC(RC)	5	10	9		2	11				
Common Myna	Acridotheres tristis	家八哥	UR						2					
Common Tailorbird	Orthotomus sutorius	長尾縫葉鶯	R						1					
Crested Bulbul	Pycnonotus jocosus	紅耳鵯	R			3			2					
Crested Myna	Acridotheres cristatellus	八哥	R		3	2	6		14				12	
Domestic Pigeon	Columba livia	原鴿	R						4					
Eurasian Tree Sparrow	Passer montanus	樹麻雀	R		3	2	4		11					
Great Egret	Ardea alba	大白鷺	R, WV	PRC(RC)		2	2	1	1					
Greater Coucal	Centropus sinensis	褐翅鴉鵑	R	(VU)					2					

Appendix L1h, Avifauna Species Recorded for Water Birds Monitoring, 27 & 28 July 2021, Low Tide

Appenuix Din. Avna	una Species Recorded for	vater birds iv	lomtoring, 2	20 July 20	Date	Tiuc		27/7/2	021, 28/7	7/2021					
					Weath	er Cond	ition	Sunny	Sunny, Sunny						
					Tidal Condition			Low							
					Tide L	evel (m)	)	1.46, 1	1.46						
Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Start T	Start Time 16:30, 17:00									
		ranic	Status	Status	Abundance										
					Transe	ct Walk									
					T1	T2	T3	T5							
						12	10	WAL	DAL	SWH	P	Heard	Flight		
Green Sandpiper	Tringa ochropus	白腰草鷸	UPM, WV				1			2					
Grey Heron	Ardea cinerea	蒼鷺	WV	PRC			1								
Large Hawk Cuckoo	Hierococcyx sparverioides	大鷹鵑	CPM, Sv									1			
Little Egret	Egretta garzetta	小白鷺	R	PRC(RC)	4	4	12	2		13			5		
Magpie Robin	Copsychus saularis	鵲鴝	R		3	2			4						
Masked Laughing Thrush	Garrulax perspicillatus	黑臉噪鶥	R		2				3						
Plain Prinia	Prinia inornata	純色鷦鶯	R			3			3						
Spotted Dove	Streptopelia chinensis	珠頸斑鳩	R			1	3		8						
Spotted Munia	Lonchura punctulata	斑文鳥	R				5		53						
White-breasted Waterhen	Amaurornis phoenicurus	白胸苦惡鳥	R							5					
White-headed Munia	Lonchura maja	白頭文鳥	R						10						
White Wagtail	Motacilla alba	白鶺鴒	PM, WV		2	1	1		2						
Wood Sandpiper	Tringa glareola	林鷸	WV, PM	LC			1								
Yellow-bellied Prinia	Prinia flaviventris	黃腹鷦鶯	R									2			
Total No. of Species					8	13	13	2	20	5	0	2	3		
Total No. of Conserva	tal No. of Conservation Interest Species					4	6	2	3	3	0	0	1		

Appendix L1h. Avifauna Species Recorded for Water Birds Monitoring, 27 & 28 July 2021, Low Tide

Appendix Lin. Avii	auna species Recorded for	water birds w	Tomicoring, 2	/ & 20 July 202	21, LOW 11	lue					
					Date			27/7/2021, 28/7/2021			
					Weather Condition			Sunny, Sunny			
					Tidal Condition			Low			
				Tide Level (m)			1.46, 1.46				
Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Start Time 16:30, 17:00				16:30, 17:00			
		Ivallie	Status	Status	Abundan	ce					
					Transect Walk						
					TD1 T			T5			
					T1 T	T2	T3	WAL DAL SWH P Heard Flight			

### Note:

R – Resident; RR - Rare resident, WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM - Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant

Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)

Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance

Cap. 586: Endangered Species of Animals and Plants Ordinance (Cap. 586)

(CR): Rare in China Red Data Book Status

VU: Vulnerable in IUCN Red List Status

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CR: Critically Endangered in IUCN Red List Status

RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)

WAL: Wet Agricultural Land

DAL: Dry Agricultural Land

SWH: Shallow Water Habitat

P: Pond

Appendix L1i. Waterbirds Recorded in July 2021

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Black-crowned Night Heron	Nycticorax nycticorax	夜鷺	LC	T2: River bank T3: River bank, river bed	Common resident and winter visitor. Widely distributed in Hong Kong.
Black-winged Stilt	Himantopus himantopus	黑翅長腳鷸	RC	T5: Shallow Water Habitat, In flight	Common passage migrant. Found in Deep Bay area, Long Valley, Kam Tin.
Chinese Pond Heron	Ardeola bacchus	池鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, in flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common resident. Widely distributed in Hong Kong.
Collared Crow	Corvus torquatus	白頸鴉	LC, VU	T3: River bank, in flight	Uncommon resident. Found in Inner Deep Bay area, Nam Chung, Kei Ling Ha, Tai Mei Tuk, Pok Fu Lam, Chek lap Kok, Shuen Wan, Lam Tsuen.
Common Kingfisher	Alcedo atthis	普通翠鳥		T1: In flight T3: In flight	Common passage migrant and winter visitor. Widely distributed in wetland habitat throughout Hong Kong.
Common Moorhen	Gallinula chloropus	黑水雞		T5: Shallow Water Habitat	Common resident. Found in Deep Bay area, Shuen Wan, Starling Inlet.
Common Sandpiper	Actitis hypoleucos	機鷸		T5: Swallow Water Habitat	Common passage migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.
Common Snipe	Gallinago gallinago	扇尾沙錐		T5: Swallow Water Habitat	Common passage migrant and winter visitor. Found in Long Valley, Chau Tau, Sai Kung.
Eastern Cattle Egret	Bubulcus coromandus	牛背鷺	(LC)	T5: Wet Agricultural Land, Dry Agricultural Land	Resident and common passage migrant. Widely distributed in Hong Kong.
Great Egret	Ardea alba	大白鷺	PRC(RC)	T2: River bank, In flight T3: River bank, River bed, In flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common resident and winter visitor. Widely distributed in Hong Kong.

Appendix L1i. Waterbirds Recorded in July 2021

Common Name	Species Name	Chinese Name	Conservation Status	Recorded habitat from the survey	Distribution in Hong Kong*
Greater Painted-snipe	Rostratula benghalensis	彩鷸	LC	T5: Shallow Water Habitat	Resident, Passage migrant and winter visitor. Found in Ha Tsuen, Lok Ma Chau, Kam Tin, Long Valley, Hong Kong Wetland Park.
Green Sandpiper	Tringa ochropus	白腰草鷸		T3: River bank T5: Wet Agricultural Land, Shallow Water Habitat	Uncommon passage migrant and winter visitor. Found in Deep Bay area, Shuen Wan, Long Valley, Kam Tin, Shek Kong, Ho Chung.
Grey Heron	Ardea cinerea	蒼鷺	PRC	T3: River bed, In flight T5: Dry Agricultural Land	Common winter visitor. Found in Deep Bay area, Starling Inlet, Kowloon Park, Cape D'Aguilar.
Little Egret	Egretta garzetta	小白鷺	PRC(RC)	T1: River bank, In flight T2: River bank, In flight T3: River bank, River bed, In flight T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, In flight	Common resident. Widely distributed in coastal area throughout Hong Kong.
Pied Kingfisher	Ceryle rudis	斑魚狗	(LC)	T3: In flight	Uncommon resident. Widely distributed in lakes and ponds throughout Hong Kong.
White-breasted Waterhen	Amauromis phoenicurus	白胸苦惡鳥		T5: Wet Agricultural Land, Dry Agricultural Land, Shallow Water Habitat, Pond, Heard	Common resident. Widely distributed in wetland throughout Hong Kong.
White-throated Kingfisher	Halcyon smyrnensis	白胸翡翠	(LC)	T1: River bank T2: River bank T3: River bank T5: Dry Agricultural Land	Common resident. Widely distributed in coastal areas throughout Hong Kong.
Wood Sandpiper	Tringa glareola	林鷸	LC	T3: River bed T5: Shallow Water Habitat	Common passage migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.

Appendix L1i. Waterbirds Recorded in July 2021

Common Name   Species Name   Common Name   C	Chinese Conservation Name Status	Recorded habitat from the survey	Distribution in Hong Kong*
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### Note:

R – Resident; RR - Rare resident, WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon passage migrant; SPM – Scarce passage migrant; CaM - Common autumn migrant; USV - Uncommon Summer visitor; SpM – Spring migrant; Sv – Summer Visitor; UR – Uncommon resident; SWV – Scarce winter visitor; CWV - Common Winter Visitor; M - Spring and Autumn Migrant

Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)

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WAL: Wet Agricultural Land

DAL: Dry Agricultural Land

SWH: Shallow Water Habitat

P: Pond

*Source: Hong Kong Biodiversity Database, AFCD (https://www.afcd.gov.hk/English/conservation/hkbiodiversity/database/search.php)

Appendix L1j. Birds Recorded in July 2021

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

Appendix L1j. Birds Recorded in July 2021

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
Eurasian Tree Sparrow	Passer montanus	樹麻雀	R	
Great Egret	Ardea alba	大白鷺	R, WV	PRC(RC)
Greater Coucal	Centropus sinensis	褐翅鴉鵑	R	(VU)
Greater Painted-snipe	Rostratula benghalensis	彩鷸	R, PM, WV	LC
Green Sandpiper	Tringa ochropus	白腰草鷸	UPM, WV	
Grey Heron	Ardea cinerea	蒼鷺	WV	PRC
Japanese White-eye	Zosterops japonicus	暗綠繡眼鳥	R	
Large Hawk Cuckoo	Hierococcyx sparverioides	大鷹鵑	CPM, Sv	
Little Egret	Egretta garzetta	小白鷺	R	PRC(RC)
Long-tailed Shrike	Lanius schach	棕背伯勞	R	
Magpie	Pica pica	喜鵲	R	
Magpie Robin	Copsychus saularis	鵲鴝	R	
Masked Laughing Thrush	Garrulax perspicillatus	黑臉噪鶥	R	
Pied Kingfisher	Ceryle rudis	斑魚狗	UR	(LC)
Plain Prinia	Prinia inornata	純色鷦鶯	R	
Plaintive Cuckoo	Cacomantis merulinus	八聲杜鵑	USV	
Red-billed Blue Magpie	Urocissa erythrorhyncha	紅咀藍鵲	R	
Sooty-headed Bulbul	Pycnonotus aurigaster	白喉紅臀鵯	UR	
Spotted Dove	Streptopelia chinensis	珠頸斑鳩	R	
Spotted Munia	Lonchura punctulata	斑文鳥	R	
White-breasted Waterhen	Amaurornis phoenicurus	白胸苦惡鳥	R	

Appendix L1j. Birds Recorded in July 2021

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status
White-headed Munia	Lonchura maja	白頭文鳥	R	
White-rumped Munia	Lonchura striata	白腰文鳥	R	
White-throated Kingfisher	Halcyon smyrnensis	白胸翡翠	R	(LC)
White Wagtail	Motacilla alba	白鶺鴒	PM, WV	
Wood Sandpiper	Tringa glareola	林鷸	WV, PM	LC
Yellow-bellied Prinia	Prinia flaviventris	黃腹鷦鶯	R	

#### Note:

 $R-Resident; RR-Rare\ resident,\ WV-Winter\ visitor;\ PM-Passage\ migrant;\ CPM-Common\ Passage\ Migrant;\ UPM-Uncommon\ passage\ migrant;\ SPM-Scarce\ passage\ migrant;\ CaM-Common\ autumn\ migrant;\ USV-Uncommon\ Summer\ visitor;\ SpM-Spring\ migrant;\ Sv-Summer\ Visitor;\ UR-Uncommon\ resident;\ SWV-Scarce\ winter\ visitor;\ CWV-Common\ Winter\ Visitor;\ M-Spring\ and\ Autumn\ Migrant$ 

Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)

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(CR): Rare in China Red Data Book Status

VU: Vulnerable in IUCN Red List Status

(VU): Vulnerable in China Red Data Book Status

NT: Near Threatened in IUCN Red List Status

CR: Critically Endangered in IUCN Red List Status

RC=Regional Concern; LC=Local Concern; PRC=Potential Regional Concern; GC=Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence (Fellowes et al. (2002)

WAL: Wet Agricultural Land

DAL: Dry Agricultural Land

SWH: Shallow Water Habitat

P: Pond

	water Macromvertebra			& 26 July 2								
		Componentian	Weather:	Rainy on 2	0 July 2021	and Sunny	y on 26 July	2021				
Common Name	Scientific Name	Conservation Status	Methods:	Kick-nettii	ng, sweep n	etting and	direct obser	vation				
		Status	Abundan									
			MS_01	MS_02	MS_03	MS_04	MS_05	MS_06	MS_07	MS_08	MS_09	MS_10
Apple Snail	Pomacea canaliculata	-		+						++	++	+++
Atyid Shrimp	Caridina sp.	-								+	+	
Black Threadtail	Prodasineura autumnalis	-		+								
Bladder Snail	Physella acuta	-								++		
Blood Worm	Chironomidae	-										
Chinese River Snail	Sinotaia guangdungensis	-			++	++				+	+	
Common Red Skimmer	Orthetrum pruinosum	-								+		
Freshwater Snail	Bellamya sp.	-				+						
Fleshwater Shan	Radix plicatulus	-		+				+	+	+	+	+
Golden Freshwater Clam	Corbicula fluminea	-										
Ram's Horn Snail	Gyraulus convexiusculus	-		+	+							
Red-rimmed Melania	Melanoides tuberculata	-			+++					+	+	
River Snail	Sinotaia quadrata	-			+			+		+	+	+
Skimmer Dragonfly	Orthetrum sp	-								+		
Total No. of specie	s		0	4	4	2	0	2	1	9	6	3
Total No. of Conse	rvation Interest Specie	es	0	0	0	0	0	0	0	0	0	0

Common Name Scientific Name			Date: 20 &	Date: 20 & 26 July 2021										
	C .:	Weather:	Weather: Rainy on 20 July 2021 and Sunny on 26 July 2021											
	Scientific Name	Conservation Status	Methods: Kick-netting, sweep netting and direct observation											
		Status	Abundand	ce										
			MS_01	MS_02	MS_03	MS_04	MS_05	MS_06	MS_07	MS_08	MS_09	MS_10		

## Note:

^{+:} species recorded within the study area (no. of individuals from 1-10)
++: species commonly recorded within the study area (no. of individuals from 11-20)
+++: most abundant species recorded within the study area (no. of individuals from 21 and above)

^{*:} Dry monitoring station

Appendix L2. Freshy		_		& 26 July 2						
		Conservation	Weather:	Rainy on 2	0 July 2021	and Sunny	on 26 July	2021		
Common Name	Scientific Name	Status	Methods:	Kick-nettii	ng, sweep n	etting and	direct obser	vation		
		Status	Abundan						 	
			MS_11	MS_12	MS_13	MS_14	MS_15			
Apple Snail	Pomacea canaliculata	-		++	+++	+				
Atyid Shrimp	Caridina sp.	-				+				
Black Threadtail	Prodasineura autumnalis	-								
Bladder Snail	Physella acuta	-		+						
Blood Worm	Chironomidae	-					+++			
Chinese River Snail	Sinotaia guangdungensis	-		+	+++					
Common Red Skimmer	Orthetrum pruinosum	-								
Freshwater Snail	Bellamya sp.	-								
Treshwater Shah	Radix plicatulus	-	+		+++	++				
Golden Freshwater Clam	Corbicula fluminea	-			++	+				
Ram's Horn Snail	Gyraulus convexiusculus	-		++						
Red-rimmed Melania	Melanoides tuberculata	-			+++	+				
River Snail	Sinotaia quadrata	-	++		+					
Skimmer Orthetrum sp -					+					
Total No. of species	S		2	3	6	6	1			
Total No. of Conse	Total No. of Conservation Interest Species		0	0	0	0	0			

1.1		1	T							
Common Name   Scientific Name		Date: 20 & 26 July 2021								
	Canaamustian	Weather: Rainy on 20 July 2021 and Sunny on 26 July 2021								
	Conservation Status	Methods: Kick-netting, sweep netting and direct observation								
	Status	Status	Abundance							
			MS_11 MS_12 MS_13 MS_14 MS_15							

## Note:

^{+:} species recorded within the study area (no. of individuals from 1-10)
++: species commonly recorded within the study area (no. of individuals from 11-20)
+++: most abundant species recorded within the study area (no. of individuals from 21 and above)

^{*:} Dry monitoring station

Appendix L3. Freshwater Fish Species Recorded for Aquatic Fauna Monitoring

Appendix 123. I restitute I is is Species Recorded for Aquatic I data Monitoring														
			Date: 20 & 26 July 2021											
			Weather: Rainy on 20 July 2021 and Sunny on 26 July 2021											
Common Name	Scientific Name	Conservation Status	Methods: Kick-netting, sweep netting and direct observation											
			Abundance											
			MS_01	MS_02	MS_03	MS_04	MS_05	MS_06	MS_07	MS_08	MS_09	MS_10		
Chinese Barb	Barbodes semifasciolatus	-				+			+					
Mosquito Fish	Gambusia affinis	-				++				+	+			
Nile Tilapia	Oreochromis niloticus	-						+	+					
Rose Bitterling	Rhodeus ocellatus	LC												
Total No. of species		0	0	0	2	0	1	2	1	1	0			
Total No. of Conservation Interest Species		0	0	0	0	0	0	0	1	1	0			

## Note:

LC: Local Concern (Fellowes et al., 2002)

^{+:} species recorded within the study area (no. of individuals from 1-10)

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

Appendix L3. Freshwater Fish Species Recorded for Aquatic Fauna Monitoring

	•	•	Date: 20 &	& 26 July 2	021								
		Componentian	Weather:	Rainy on 2	0 July 2021	and Sunny	on 26 July	2021					
Common Name	Scientific Name	Conservation Status	Methods:	Methods: Kick-netting, sweep netting and direct observation									
			Abundan	Abundance									
			MS_11	MS_12	MS_13	MS_14	MS_15						
Chinese Barb	Barbodes semifasciolatus	-											
Mosquito Fish	Gambusia affinis	-			+++								
Nile Tilapia	Oreochromis niloticus	-											
Rose Bitterling	Rhodeus ocellatus	LC			+								
Total No. of specie	Total No. of species		0	0	2	0	0						
Total No. of Conservation Interest Species		0	0	1	0	0							

## Note:

LC: Local Concern (Fellowes et al., 2002)

^{+:} species recorded within the study area (no. of individuals from 1-10)

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

Appendix L4. Mammal Species Recorded for Ecologically Sensitive Habitat Monitoring, 14 & 26 July 2021

				C.	Date: 14/7/20	21, 26/7/2021					
Common	Species	Chinese	Local	Conservation	Relative Abui	ndance					
Name	Name	Name	Restrictedness	Status	Transect Walk						
					T1	T3	T4	T5	Т6		
Domestic Cat	Felis catus	野貓	Uncommon	-		+		+			
Domestic Dog	Canis lupus familiaris	野狗	Common	-	+		+	+	+		
Japanese Pipistrelle	Pipistrellus abramus	東亞家蝠	Very Common	Cap. 170	++	+	+	+	+		
Short-nosed Fruit Bat	Cynopterus sphinx	短吻果蝠	Very Common	Cap. 170, I, NT	+		+				
Total No. of spec	Total No. of species						3	3	2		
Total No. of Con	Total No. of Conservation Interest Species						2	1	1		

Note:

Cap. 170: Species under protection of Wild Animals Protection Ordinance (Cap. 170)

NT: Near Threatened in the Red List of China's Vertebrates

I: Indeterminate in China Red Data Book Status

+: species recorded within transect routes

++: species commonly recorded within transect routes

+++: dominant species within transect routes

Appendix L5. Herpetofauna Species Recorded for Ecologically Sensitive Habitat Monitoring, 14 & 26 July 2021

				Date: 14/7/202	1, 26/7/2021			
Common Name	Species Name	Chinese	Conservation	Relative Abun	dance			
Common Name	species Name	Name	Status	Transect Walk				
				T1	Т3	T4	T5	T6
Amphibian								
Asian Common Toad	Bufo melanostictus	黑眶蟾蜍	-	++	+	+	++	+
Asian Painted Frog	Kaloula pulchra	花狹口蛙	-	+	+		+	
Brown Tree Frog	Polypedates megacephalus	斑腿泛樹蛙	-	+			++	
Gunther's Frog	Hylarana guentheri	沼蛙	-	+		+	+	+
Spotted Narrow-mouthed Frog	Kalophrynus interlineatus	花細狹口蛙	NT	+				
Reptile								
Bowring's Gecko	Hemidactylus bowringii	原尾蜥虎	-	+	+		+	
Chinese gecko	Gekko chinensis	中國壁虎	-	+	+	+	+	
Long-tailed Skink	Eutropis longicaudata	長尾南蜥	-	+	+			
Reeve's Smooth Skink	Scincella reevesii	南滑蜥	-				+	
Total No. of species	Total No. of species					3	7	2
Total No. of Conservation	Total No. of Conservation Interest Species					0	0	0

## Note:

NT: Near Threatened in the Red List of China's Vertebrates

+: species recorded within transect routes

++: species commonly recorded within transect routes

+++: dominant species within transect routes

Appendix L6. Butterfly Species Recorded Ecologically Sensitive Habitat Monitoring, 14 & 26 July 2021

					Date: 14/7/202	21, 26/7/2021			
		Chinese	Local	Conservation	Relative Abun	dance			
Common Name	Species Name	Name	Restrictedness	Status	Transect Walk				
					T1	Т3	T4	T5	T6
Angled Castor	Ariadne ariadne	波蛺蝶	Common	-	+	+			
Blue Admiral	Kaniska canace	琉璃蛺蝶	Common	-				+	
Blue Tiger	Tirumala limniace	青斑蝶	Common	-	+			+	
Blue-spotted Crow	Euploea midamus	藍點紫斑蝶	Very common	-	++	+		+	+
Chocolate Pansy	Junonia iphita	鉤翅眼蛺蝶	Common	-	+	+	+		
Common Bluebottle	Graphium sarpedon	青鳳蝶	Common	-	+			+	
Common Five-ring	Ypthima baldus	矍眼蝶	Very common	-		+			
Common Grass Yellow	Eurema hecabe	寬邊黃粉蝶	Very common	-	++	+	+	++	+
Common Jay	Graphium doson axion	木蘭青鳳蝶	Common	-	+				
Common Mime	Chilasa clytia	斑鳳蝶	Common	-	+				
Common Mormon	Papilio polytes	玉帶鳳蝶	Very common	-	+	+	+	+	+
Common Sailer	Neptis hylas	中環蛺蝶	Very common	-	+		+	+	
Common Tiger	Danaus genutia	虎斑蝶	Common	-				+	
Dark Brand Bush Brown	Mycalesis mineus	小眉眼蝶	Very common	-			+	++	
Great Egg-fly	Hypolimnas bolina	幻紫斑蛺蝶	Common	-	++			+	++
Great Mormon	Papilio memnon	美鳳蝶	Very common	-	+		+		+
Indian Cabbage White	Pieris canidia	東方菜粉蝶	Very common	-	+	+	+	+	+
Large Faun	Faunis eumeus	串珠環蝶	Common	-				+	

Appendix L6. Butterfly Species Recorded Ecologically Sensitive Habitat Monitoring, 14 & 26 July 2021

					Date: 14/7/202	21, 26/7/2021			
C N	C · N	Chinese	Local	Conservation	Relative Abur	ndance			
Common Name	Species Name	Name	Restrictedness	Status	Transect Walk	ζ			
					T1	T3	T4	T5	Т6
Lemon Emigrant	Catopsilia pomona	遷粉蝶	Common	-	+				
Long-tailed Blue	Lampides boeticus	亮灰蝶	Common	-	+				
Pale Grass Blue	Pseudozizeeria maha	酢漿灰碟	Very common	-	++	+	+	++	+
Paris Peacock	Papilio paris	巴黎翠鳳蝶	Very common	-	+		+	+	+
Plum Judy	Abisara echerius	蛇目褐蜆蝶	Very Common	-	+		+		+
Red Helen	Papilio Helenus	玉斑鳳蝶	Very Common	-	+				
Spangle	Papilio protenor	藍鳳蝶	Very Common	-	+		+	+	
Tailed Jay	Graphium agamemnon	統帥青鳳蝶	Common	-				+	
Transparent 6-line Blue	Nacaduba kurava	古樓娜灰蝶	Common	-	+			+	
Total No. of species	Total No. of species						11	17	9
Total No. of Conserv	Γotal No. of Conservation Interest Species						0	0	0

## Note:

+: species recorded within transect routes

++: species commonly recorded within transect routes

+++: dominant species within transect routes

Appendix L7. Odonata Species Recorded for Ecologically Sensitive Habitat Monitoring 14 & 26 July 2021

				_	Date: 14/7/20	021, 26/7/202	1		
Common Name	Species Nome	Chinese	Local	Conservation	Relative Abu	ındance			
Common Name	Species Name	Name	Restrictedness	Status	Transect Wa	lk			
					T1	T3	T4	T5	T6
Asian Amberwing	Brachythemis contaminata	黄翅蜻	Abundant	-	+		+	+	
Black-banded Gossamerwing	Euphaea decorata	方帶幽蟌	Abundant	-	+				
Blue Dasher	Brachydiplax flavovittata	藍額疏脈蜻	Common	-	+				+
Common Bluetail	Ischnura senegalensis	褐斑異痣蟌	Abundant	-	+			+	
Common Flangetail	Ictinogomphus pertinax	霸王葉春蜓	Common	-	++			+	
Common Red Skimmer	Orthetrum pruinosum	赤褐灰蜻	Abundant	-	+		+	+	
Crimson Darter	Crocothemis servilia	紅蜻	Abundant	-	+	+	+		
Crimson Dropwing	Trithemis aurora	曉褐蜻	Abundant	-	+		+		+
Green Skimmer	Orthetrum sabina	狹腹灰蜻	Abundant	-	+		+		
Indigo Dropwing	Trithemis festiva	慶褐蜻	Abundant	-	+				
Pied Skimmer	Pseudothemis zonata	王帶蜻	Common	-	+				
Red-faced Skimmer	Orthetrum chrysis	華麗灰蜻	Abundant	-	+		+		
Russet Percher	Neurothemis fulvia	網脈蜻	Common	-				+	
Saddlebag Glider	Tramea virginia	華斜痣蜻	Abundant	-	+				+
Variegated Flutterer	Rhyothemis variegata	斑麗翅蜻	Common	-			+	+	+
Wandering Glider	Pantala flavescens	黄蜻	Abundant	-	++	+	++	++	+
Yellow Featherlegs	Copera marginipes	黄狹扇蟌	Abundant	-	+			+	

Appendix L7. Odonata Species Recorded for Ecologically Sensitive Habitat Monitoring 14 & 26 July 2021

		Chinese Name	Local	Conservation	Date: 14/7/2021, 26/7/2021							
Common Nome	on Name   Species Name   Cl				Relative Abundance							
Common Name	Species Name	Cililese Name	Restrictedness	Status	Transect Wa	ransect Walk						
					T1	T3	T4	T5	T6			
Total No. of species		15	2	8	8	5						
Total No. of Conservation Interest Species						0	0	0	0			

## Note:

+: species recorded within transect routes

++: species commonly recorded within transect routes

+++: dominant species within transect routes

# APPENDIX M WEATHER CONDITION

# APPENDIX M – GENERAL WEATHER CONDITIONS DURING THE MONITORING PERIOD

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1 July 2021	30.3	78	Trace
2 July 2021	30.6	77	-
3 July 2021	30.4	79	Trace
4 July 2021	30.4	79	-
5 July 2021	30.2	79	2.3
6 July 2021	29.4	80	18.4
7 July 2021	29.4	81	11.7
8 July 2021	29.8	79	1.5
9 July 2021	30.5	76	-
10 July 2021	30.5	76	-
11 July 2021	30.6	77	Trace
12 July 2021	30.9	75	0.1
13 July 2021	31.1	72	-
14 July 2021	30.7	75	1.5
15 July 2021	31.3	71	-
16 July 2021	29.6	78	Trace

Service Contract No. NDO 04/2019 Environmental Team for EM&A Works in Construction Phase for the First Phase Development of KTN and FLN NDAs Monthly EM&A Report – July 2021

Date	Mean Air Temperature (°C)	Mean Relative	Precipitation
		Humidity (%)	(mm)
17 July 2021	28.8	80	0.2
18 July 2021	26.9	90	42.4
19 July 2021	26.5	93	117.2
20 July 2021	26.2	94	87.8
21 July 2021	26.8	94	28.4
22 July 2021	29.3	80	-
23 July 2021	30.3	77	-
24 July 2021	29.8	82	26.5
25 July 2021	29.6	81	8.9
26 July 2021	30.7	78	-
27 July 2021	31.3	75	Trace
28 July 2021	30.8	79	Trace
29 July 2021	29.5	82	7.8
30 July 2021	28.8	83	7.9
31 July 2021	29.7	84	16.9

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

### APPENDIX N EVENT ACTION PLANS

### **Appendix N:**

## Table N-1: Event / Action Plan for Air Quality

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

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

		measures.		
2.Exceedance	1. Notify IEC, ER,	1. Check monitoring	1. Confirm receipt of	1. Identify source,
for two or	Contractor and EPD;	data submitted by	notification of failure	investigate the causes
more	2. Identify source;	ET;	in writing;	of exceedance and
consecutive	3. Repeat measurement to	2. Check	2. Notify Contractor;	propose remedial
samples	confirm findings;	Contractor's	3. In consultation with	measures;
	4. Increase monitoring	working method;	the ET and IEC,	2. Take immediate action
	frequency to daily;	3. Discuss amongst	agree with the	to avoid
	5. Carry out analysis of	ER, ET, and	Contractor on the	further exceedance;
	Contractor's working	Contractor on the	remedial measures to	3. Submit proposals for
	procedures to	potential remedial	be implemented;	remedial actions to ER
	determine possible	actions;	4. Supervise and ensure	with a copy to ET
	mitigation to be	4. Review	remedial measures	and IEC within 3
	implemented;	Contractor's	properly	working days of
	6. Arrange meeting with	remedial actions	implemented; and	notification;
	IEC, Contractor and	whenever	5. If exceedance	4. Implement the agreed
	ER to discuss the	necessary to	continues, consider	proposals;
	remedial actions to be	assure their	what portion of the	5. Resubmit proposals if
	taken;	effectiveness and	work is responsible	problem still not under
	7. Assess effectiveness of	advise the ER	and instruct the	control;
	Contractor's remedial	accordingly; and	Contractor to stop	6. Stop the relevant
	actions and keep IEC,	5. Supervise the	that portion of work	portion of works as
	EPD and ER informed	implementation of	until the exceedance	determined by the ER
	of the results;	remedial	is abated.	until the exceedance is
	8. If exceedance stops,	measures.		abated.
	cease additional			
	monitoring.			

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

EVENT		ACTIO	N	
	ET	IEC	ER	CONTRACTOR
Action Level	<ol> <li>Notify IEC, ER and         Contractor;</li> <li>Carry out investigation;</li> <li>Report the results of         investigation to the IEC,         ER and Contractor;</li> <li>Discuss jointly with the         Contractor and formulate         remedial measures;</li> <li>Increase monitoring         frequency to check         mitigation effectiveness.</li> </ol>	1. Review the monitoring data submitted by the ET;  2. Review the construction methods and proposed remedial measures by the Contractor, and advise the ET and ER if the proposed remedial measures would be sufficient;  3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing;  2. Notify the Contractor;  3. Require Contractor to propose remedial measures for the analysed noise problem;  4. Ensure remedial measures are properly implemented	1. Submit noise mitigation proposals to ER and copy to the IEC and ET;  2. Implement noise mitigation proposals.
Limit Level	<ol> <li>Identify source;</li> <li>Inform IEC, ER and         Contractor;</li> <li>Repeat measurements to         confirm findings;</li> <li>Increase the monitoring         frequency;</li> <li>Carry out analysis of         Contractor's working         procedures with the ER and         Contractor to determine         possible mitigation to be         implemented;</li> <li>Inform IEC, ER and         Contractor the causes and         actions taken for         the exceedances;</li> </ol>	1. Discuss amongst the ER, ET, and Contractor on the potential remedial actions;  2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;  3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing;  2. Notify the Contractor;  3. Require the Contractor to propose remedial measures for the analysed noise problem;  4. Ensure remedial measures are properly implemented;  5. If exceedance continues, consider what portion of the work is responsible and instruct the	1. Take immediate action to avoid further exceedance;  2. Submit proposals for remedial actions to the ER and copy to the ET and IEC within 3 working days of notification;  3. Implement the agreed proposals;  4. Resubmit proposals if problems still not under control;  5. Stop the relevant portion of works as

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

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

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

EVENT		ACTIO	N	
	ET	IEC	ER	CONTRACTOR
Action level being exceeded by more than one consecutive sampling days	1. Repeat in-situ measurement on next day of exceedance to confirm findings; 2. Inform IEC, Contractor and ER; 3. Check monitoring data, all plant, equipment and Contractor's working methods; 4. Discuss remedial measures with IEC, contractor and ER 5. Ensure remedial measures are implemented	1. Discuss with ET, Contractor and ER on the implemented mitigation measures;  2. Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and  3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.	1. Discuss with ET, IEC and Contractor on the proposed mitigation measures;  2. Make agreement on the remedial measures to be implemented; and  3. Discuss with ET,IEC and Contractor on the effectiveness of the implemented remedial measures.	1. Identify source(s) of impact;  2. Inform the ER and confirm notification of the noncompliance in writing;  3. Rectify unacceptable practice;  4. Check all plant and equipment and consider changes of working methods;  5. Discuss with ET, IEC and ER and submit proposal of remedial measures to ER and IEC within 3 working days of notification; and  6. Implement the agreed mitigation measures.
Limit level being exceeded by one sampling day	1. Repeat measurement on next day of exceedance to confirm findings; 2. Inform IEC, Contractor and ER; 3. Rectify unacceptable practice; 4. Check monitoring data, all	Discuss with ET,     Contractor and ER on the implemented mitigation measures;     Review the proposed remedial measures submitted by Contractor and advise the ER	Discuss with ET, IEC and Contractor on the implemented remedial measures;      Request Contractor to critically review the working methods;      Make agreement on the	<ol> <li>Identify source(s) of impact;</li> <li>Inform the ER and confirm notification of the noncompliance in writing;</li> <li>Rectify unacceptable practice;</li> </ol>

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

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
			the dredging activities until no exceedance of Limit level.	and 6. Implement the agreed remedial measures. 7. As directed by the ER, to slow down or stop all or part of the dredging activities until no exceedance of
				Limit level.

Table N-4: Actions in the event of LFG being detected

Parameter	Monitoring Results	Actions
$O_2$	<19% v/v	Increase underground ventilation to restore O ₂ to >19% v/v
	<18% v/v	Stop works, evacuate all personnel, prohibit entry, and increase ventilation to restore O ₂ level to >19%
CH ₄	>10% LEL	Prohibit hot works, increase ventilation to restore CH4 to <10% LEL
	>20% LEL	Stop works, evacuate all personnel, increase ventilation further to restore CH ₄ to <10% LEL
$CO_2$	>0.5% v/v	Increase ventilation to restore C O ₂ to <0.5% v/v
	>1.5% v/v	Stop works, evacuate all personnel, increase ventilation further to restore $CO_2$ to $<0.5\%$

Note: Depending on the results of the measurements, actions required will vary and should be set down by the Safety Officer or another appropriately qualified person. As a minimum these should encompass those actions specified in the above table.

Table N-5: Event / Action Plan for Ambient Arsenic Monitoring

	ACTION						
EVENT	ET	IEC	ER	CONTRACTOR			
ACTION LEVE	L						
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures;  2. Inform IEC,ER and Contractor;  3. Repeat measurement to confirm finding; and  4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET;  2. Check Contractor's working method; and  3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Notify Contractor.	1. Rectify any unacceptable practice;  2. Amend working methods if appropriate			
2. Exceedance for two or more consecutive samples	1. Identify source, investigate the causes of exceedance and propose remedial measures;  2. Inform IEC,ER and Contractor;  3. Advise the ER and Contractor on the effectiveness of the proposed remedial measures;  4. Repeat measurements to confirm findings;  5. Increase monitoring frequency to daily;  6. Discuss with IEC, ER and Contractor on remedial	<ol> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method;</li> <li>Discuss with ET and Contractor on possible remedial measures;</li> <li>Advise the ET and ER on the effectiveness of the proposed remedial measures; and</li> <li>Supervise Implementation of remedial measures.</li> </ol>	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; and 3. Supervise and ensure remedial measures properly implemented.	1. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 2. Implement the agreed proposals; and 3. Amend proposal if appropriate.			

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

procedures to determine	their effectiveness	remedial	3. Implement the agreed
possible mitigation to be	and advise the ER	measures to be	proposals;
implemented;	accordingly;	implemented;	4. Resubmit proposals if
6. Arrange meeting with	3. Supervise the	4. Supervise and	problem still not under
IEC, Contractor and ER	implementation of	ensure remedial	control;
to discuss the remedial	remedial measures	measures properly	5. Stop the relevant
actions to be taken;		implemented; and	portion of works as
7. Assess effectiveness of		5. If exceedance	determined by the ER
Contractor's remedial		continues,	until the exceedance is
actions and keep IEC,		consider what	abated.
EPD and ER informed		portion of the	
of the results;		work is	
8. If exceedance stops,		responsible and	
cease additional		instruct the	
monitoring.		Contractor to stop	
		that portion of	
		work until	
		the exceedanceis	
		abated.	

Table N-6.1 Action and Limit Levels and Responses to Evidence of Disturbance to Waterbirds using in Ng Tung, Sheung Yue and Shek Sheung Rivers

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

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

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

Table N-6.2 Action and Limit Levels and Responses to Evidence of Declines in Aquatic Fauna

<b>Action Level</b>	Response	Limit Level	Response
Construction Phase			
Reduction in species	Investigate cause and if	Reduction in taxa diversity	Investigate cause and if
diversity such that Action	cause identified as related	such that Limit Level	caused identified as related
Level response is triggered.	to Project instigate remedial	response is triggered.	to Project instigate remedial
	action to remove or reduce		action.
	source of disturbance.		

^{*} Whether numbers are significant will depend on species and season. Significance threshold for each species should be reviewed following collection of Baseline survey data.

Table N-6.3 Action and Limit Levels and Responses to Evidence of Declines in non-aquatic Fauna

Action Level	Response	Limit Level	Response
Construction Phase			
Reduction in species	Investigate cause and if	Reduction in taxa diversity	Investigate cause and if
diversity such that Action	cause identified as related	such that Limit Level	caused identified as related
Level response is triggered.	to Project instigate remedial	response is triggered.	to Project instigate remedial
	action to remove or reduce		action.
	source of disturbance.		

^{*} Whether numbers are significant will depend on species and season. Significance threshold for each species should be reviewed following collection of Baseline survey data.

#### APPENDIX O SUMMARY OF EXCEEDANCE

#### **Appendix O: Exceedance Report**

#### (A) Exceedance Report for Air Quality

Environmental Monitoring	Parameter	No. of no related Ex	n-project sceedance	No. of Exceedance related to the Construction Activities of this Contract	
		Action Level	Limit Level	Action Level	Limit Level
Air Quality	1-hr TSP	0	0	0	0
	24-hr TSP	0	0	0	0
	24-hr RSP (Ambient Arsenic)	0	0	0	0

### (B) Exceedance Report for Construction Noise

Environmental	No of non-project		¥ •		ance related to ion Activities of ontract
Monitoring		Action Level	Limit Level	Action Level	Limit Level
Noise	$L_{eq(30min.)}dB(A)$	0	0	0	0

(C) Exceedance Report for Water Quality

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
8		Action Level	Limit Level	Action Level	Limit Level
Water Quality	DO	1	8	0	0
	Turbidity	0	16	1	0
	SS	1	11	1	0
	Arsenic	2	0	0	0

(D) Exceedance Report for Landfill Gas

Environmental	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
Monitoring		Action Level	Limit Level	Action Level	Limit Level
Landfill Gas	O ₂ (% v/v) CH ₄ (% LEL) CO ₂ (%v/v)	0	0	0	0

(E) Exceedance Report for Built Heritage Monitoring

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of this Contract	
Monitoring		Action Limit Level Level		Action Level	Limit Level
Cultural Heritage	Built Heritage Monitoring	0	0	0	0

#### APPENDIX P SITE AUDIT SUMMARY

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

Checklist Reference Number	210706
Date	6 July 2021 (Tuesday)
Time	09:30 – 11:00

Ref. No.	Non-Compliance	Relate Item N
-	None identified	-
		Relate
Ref. No.	Remarks/Observations	Item N
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	No environmental deficiency was identified during site inspection.	
	G. Landfill Gas Hazard	
	No environmental deficiency was identified during site inspection.	
	H. Cultural Heritage	
	No environmental deficiency was identified during site inspection.	
	I. Landscape and Visual	
	No environmental deficiency was identified during site inspection.	
	J. Ecology	
	No environmental deficiency was identified during site inspection.	
	K. Permits/Licences	
<del>.</del>	No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:210629), all identified environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kenneth Leung	Jeins	8 July 2021
Checked by	Dr. Priscilla Choy	W	8 July 2021

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

Checklist Reference Number	210713
Date	13 July 2021 (Tuesday)
Time	14:00-16:00

Ref. No.	Non-Compliance	Related Item No
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No
	B. Air Quality	27741110
	No environmental deficiency was identified during site inspection.	
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	No environmental deficiency was identified during site inspection.	
	G. Landfill Gas Hazard	
	No environmental deficiency was identified during site inspection.	
	H. Cultural Heritage	
	No environmental deficiency was identified during site inspection.	
	I. Landscape and Visual	
	No environmental deficiency was identified during site inspection.	
	J. Ecology	
	No environmental deficiency was identified during site inspection.	
	K. Permits/Licences	
•	No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:210706), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Anson Tong	3/6	16 July 2021
Checked by	Dr. Priscilla Choy	W70	16 July 2021

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

Checklist Reference Number	210720
Date	20 July 2021 (Tuesday)
Time	09:30-10:30

Y 0 3 1	N. G. II	Related Item No.
Ref. No.	Non-Compliance None identified	Tem No.
_	None identified	Related
Ref. No.	Remarks/Observations	Item No.
110111101	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	New York	<u> </u>
	D. Water Quality	
	No environmental deficiency was identified during site inspection.	
	E. W. d. / Change at Management	
	E. Waste / Chemical Management     No environmental deficiency was identified during site inspection.	
	• 140 ellyholimental denoiency was identified during site inspection.	
	F. Land Contamination	
	No environmental deficiency was identified during site inspection.	
	1 To entransmental desires, where the same and the same a	
	G. Landfill Gas Hazard	
	No environmental deficiency was identified during site inspection.	
	H. Cultural Heritage	
	No environmental deficiency was identified during site inspection.	
	I. Landscape and Visual	
	No environmental deficiency was identified during site inspection.	
	X 707	
	J. Ecology     No environmental deficiency was identified during site inspection.	
	• 140 environmental deficiency was identified during site inspection.	
	K. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	L. Others	ļ
	• Follow-up on previous audit section (Ref. No.:210713), no environmental deficiency was	
	identified during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan	Varion	21 July 2021
Checked by	Dr. Priscilla Choy	TANK,	21 July 2021

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

Checklist Reference Number	210727
Date	27 July 2021 (Tuesday)
Time	09:30-11:30

Ref. No.	Non-Compliance	Related Item No
-	None identified	nem N
D 0 N		Relate
Ref. No.	Remarks/Observations	Item N
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
210727-001	<ul> <li>Wastewater treatment facility was observed not operating and no water discharge was observed. Contractor was reminded to ensure proper operation and functioning of the wastewater treatment facility at Portion 9B.</li> </ul>	D 5i
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	No environmental deficiency was identified during site inspection.	
	G. Landfill Gas Hazard	
	No environmental deficiency was identified during site inspection.	
	H. Cultural Heritage	
	No environmental deficiency was identified during site inspection.	
	I. Landscape and Visual	<del>_</del>
	No environmental deficiency was identified during site inspection.	
	J. Ecology	
	No environmental deficiency was identified during site inspection.	
	K. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	L. Others	<u></u> :
	<ul> <li>Follow-up on previous audit section (Ref. No.:210720), no environmental deficiency was identified during site inspection.</li> </ul>	<u></u>

Name	Signature	Date
Kenneth Leung	Low	28 July 2021
Dr. Priscilla Choy	NI	28 July 2021
	Kenneth Leung	Kenneth Leung  Levy

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

Checklist Reference Number	210707
Date	7 July 2021 (Wednesday)
Time	14:00-15:00

Ref. No.	Non-Compliance	Related
ACI. IVO.	None identified	Item No.
	1 volto Idollottod	Related
Ref. No.	Remarks/Observations	Item No.
	B. Air Quality	
	. No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
210707-R01	Compressor should be operated with doors closed.	C 9
	D. Water Quality	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	No environmental deficiency was identified during site inspection.	
***************************************	G. Landscape and Visual	
	No environmental deficiency was identified during site inspection.	
	H. Ecology	
	No environmental deficiency was identified during site inspection.	-
	I. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:210630), item 210630-R02 was remarked as 210707-R01, follow-up action is needed to be reviewed. Other items were observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Anson Tong	3%	9 July 2021
Checked by	Dr. Priscilla Choy	WI	9 July 2021

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

Checklist Reference Number	210714
Date	14 July 2021 (Wednesday)
Time	09:30-11:00

		Related
Ref. No.	Non-Compliance	Item No.
-	None identified	_
		Related
Ref. No.	Remarks/Observations	Item No.
	B. Air Quality	
210714-R01	To keep public road near site entrance clean and free of dust.	B 1&2
210714-R02	Contractor was reminded to water the exposed worksites regularly to avoid dust generation.	B 1
210714-R03	Every stock of more than 20 bags of cement should be covered or sheltered on top and 3 sides.	B 13
	C. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
,	No environmental deficiency was identified during site inspection.	
	H. Ecology	
	No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	L. Others	
	Follow-up on previous audit section (Ref. No.:21707), all identified environmental deficiency was observed improved/ rectified by the Contractor.	

	Name	/ Signature	Date
Recorded by	Howard Chan	Xaward	14 July 2021
Checked by	Dr. Priscilla Choy	LWI	14 July 2021

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

Checklist Reference Number	210723
Date	23 July 2021 (Wednesday)
Time	15:00-16:30

Ref. No.	Non Compliance	Related Item No.
Kei, No.	Non-Compliance None identified	- ICH 110.
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
210723-R01	NRMM Label should be displayed on the regulated machines.	B 24
	C. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
-	D. Water Quality	
210723-R02	Provide berm to prevent any muddy water flow offsite.	D1
<del>,,,,,</del>	E. Waste / Chemical Management	
210723-R03	Chemical waste should be stored properly.	E 3i
	F. Cultural Heritage	
	No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	No environmental deficiency was identified during site inspection.	
	H. Ecology	_, .
	No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	L. Others	
	Follow-up on previous audit section (Ref. No.:210714), all identified environmental deficiencies were observed improved/ rectified by the Contractor.	

	Name	, Signature	Date
Recorded by	Howard Chan	X award,	28 July 2021
Checked by	Dr. Priscilla Choy	NIZ	28 July 2021

# ND/2019/02 – Kwu Tung North New Development Area, Phase 1: Roads and Drains between Kwu Tung North New Development and Shek Wu Hui

Checklist Reference Number	210728
Date	28 July 2021 (Wednesday)
	09:30-11:00

		Related
Ref. No.	Non-Compliance	Item No.
•	None identified	-
		Related
Ref. No.	Remarks/Observations	Item No.
	B. Air Quality	
210728-R01	NRMM Label should be displayed on the regulated machines.	B 24
	C. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
210728-R02	Provide berm to prevent any muddy water flow offsite.	D 1
	E. Waste / Chemical Management	
210728-R03	Chemical waste should be stored properly.	E 3i
210728-R03	Clear the stagnant water and maintain drip tray well.	E 14
210/20-104	• Clear the stagnant water and maintain trip tray wen.	D 14
	F. Cultural Heritage	
	No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	No environmental deficiency was identified during site inspection.	
	H. Ecology	
	No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	L. Others	
	• Follow-up on previous audit section (Ref. No.:210723), items 210723-R02 and 210723-R03 were remarked as 210728-R02 and 210728-R03. Follow-up action is needed to be reviewed. Other item was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Howard Chan	Davan	29 July 2021
Checked by	Dr. Priscilla Choy	WI	29 July 2021

# ND/2019/03 – Kwu Tung North New Development Area, Phase 1: Development of Long Valley Nature Park

Checklist Reference Number	210702
Date	2 July 2021 (Friday)
Time	15:00 – 16:00

Ref. No.	Non-Compliance	Related Item No.
<del>-</del>	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
210702-R01	• Clear the stagnant water in site area and properly treat the wastewater in wastewater treatment facility. (Portion 1)	D 5
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
	No environmental deficiency was identified during site inspection.	
	G. Ecology	
	No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.:210622), no environmental deficiency was identified during the site inspection.	

	Name	Signature	Date
Recorded by	Kenneth Leung		5 July 2021
Checked by	Dr. Priscilla Choy	W.L.	5 July 2021

# ND/2019/03 – Kwu Tung North New Development Area, Phase 1: Development of Long Valley Nature Park

Checklist Reference Number	210709
Date	9 July 2021 (Friday)
Time	10:00-10:30

		Related
Ref. No.	Non-Compliance	Item No.
-	None identified	-
***************************************		Related
Ref. No.	Remarks/Observations	Item No.
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
	No environmental deficiency was identified during site inspection.	
	G. Ecology	
	No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	Follow-up on previous audit section (Ref. No.:210702), all identified environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Kenneth Leung	Lenf/	9 July 2021
Checked by	Dr. Priscilla Choy	H	9 July 2021

# ND/2019/03 – Kwu Tung North New Development Area, Phase 1: Development of Long Valley Nature Park

Checklist Reference Number	210716
Date	16 July 2021 (Friday)
Time	10:00-11:00

Ref. No.	Non-Compliance	Relate
Nei. 140.	None identified	Item N
	Tyone adenumed	
Ref. No.	Remarks/Observations	Relate
жи. 110.	B. Air Quality	Item N
	No environmental deficiency was identified during site inspection.	ļ
	Two chanding deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
	No environmental deficiency was identified during site inspection.	
	G. Ecology	
	No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.:210709), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan	J ANGIRO	16 July 2021
Checked by	Dr. Priscilla Choy	WIL	16 July 2021

ND/2019/03 – Kwu Tung North New Development Area, Phase 1: Development of Long Valley Nature Park

Checklist Reference Number	210720
	20 July 2021 (Tuesday)
Time	14:00-15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	<u> </u>
	No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	7/4
	F. Landscape & Visual	19
	No environmental deficiency was identified during site inspection.	
	G. Ecology	
	No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.:210716), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan	Nower.	21 July 2021
Checked by	Dr. Priscilla Choy	WI	21 July 2021

ND/2019/03 – Kwu Tung North New Development Area, Phase 1: Development of Long Valley Nature Park

Checklist Reference Number	210730
Date	30 July 2021 (Friday)
Time	10:00 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
210730-R02	Regularly clear the water in wheel washing facilities.	D 12iv
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Landscape & Visual	
210730-R01	Avoid stockpiling of construction materials near retained trees at SS05.	F1
	G. Ecology	
	No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.:210720), no major environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Kenneth Leung	Sem	30 July 2021
Checked by	Dr. Priscilla Choy	WL	30 July 2021

ND/2019/04 — Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)

Checklist Reference Number	210702
Date	2 July 2021 (Friday)
Time	10:00 – 12:00

<b>D</b> 0.37					Related
Ref. No.	Non-Complian	ee			Item No.
-	None identified				**
Ref. No.	Remarks/Obse	rvations			Related Item No.
220111101	B. Air Quality				
		ntal deficiency was identified	during site inspection		
	C. Noise				
	No environme	ntal deficiency was identified	during site inspection.		
	D. Water Qualit	v			
210702-R02	Regularly clea	r the sedimentation tank to av	roid overflowing at Portion C.		D 5iii
210702-R03		r mitigation measures for site			D 6
210702-O01	To ensure silt water from sit		rly deployed and avoid any le	eakage of muddy	D 18
210702-O02	Erect and main	ntain desilting materials along	green barriers at Bridge A2.		D 13ii
		nical Management			
210702-R01	• Clear the stagnant water and sediment in drip tray and maintain the drip tray properly (Portion C).				E 14
	F. Cultural Heritage				
	No environmental deficiency was identified during site inspection.				
	G. Landscape and Visual				
	No environmental deficiency was identified during site inspection.				
	H. Ecology		***************************************		
	No environmental deficiency was identified during site inspection.				
	I. Permits/Licen	ces			
	No environmental deficiency was identified during site inspection.				
	J. Others				
	• Follow-up on previous audit section (Ref. No.: 210624), items 210624-O01 and 210624-O02 were remarked as 210702-R01 and 210702-O01. Follow-up action is needed				
			and 210/02-001. Follow-up improved/rectified by the Con		
	10 be teviewed	Name	Signature	Date	3
D			8 July 2		
	rded by	<del></del>		<u></u>	
Chec	ked by	Dr. Priscilla Choy	L WAT	8 July 2	2021

ND/2019/04 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)

Checklist Reference Number	210708
Date	8 July 2021 (Thursday)
Time	14:00-16:00

Ref. No.	Non Compliana	0			Related Item No.	
Kei. No.	Non-Compliance None identified	<u> </u>			-	
	Tyone identified				Related	
Ref. No.	   Remarks/Obser	vations			Item No.	
23727 3 1,55	B. Air Quality					
		ntal deficiency was identified of	luring site inspection.			
	C. Noise					
	No environme	ntal deficiency was identified o	luring site inspection.			
	D. Water Qualit					
210708-R01	<ul> <li>Regularly clea</li> </ul>	r the sediment in U-channel at	Portion C.		D 6	
210708-R02	nearby waterco	ng material for the box culver ource (Portion C).			D 6	
210708-R03	• Provide spare pump to direct muddy water to sump pit and wastewater treatment facility (Portion C).			D 13ii		
	E. Waste / Chen	nical Management			•	
	No environmental deficiency was identified during site inspection.					
	F. Cultural Heritage					
	No environmental deficiency was identified during site inspection.					
	G. Landscape and Visual					
	No environmental deficiency was identified during site inspection.					
	H. Ecology					
	No environme	ntal deficiency was identified of	during site inspection.			
	I. Permits/Licen					
	No environmental deficiency was identified during site inspection.					
	J. Others  • Follow-up on previous audit section (Ref. No.: 210702), all identified environmental					
	Follow-up on deficiencies w	previous audit section (Ref. ere observed improved/ rectific	ed by the Contractor.			
		Name	Signature	Date		
Reco	rded by	Kenneth Leung	ferry	16 July 2	2021	
Checked by		Dr. Priscilla Choy		16 July 2021		

ND/2019/04 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)

Checklist Reference Number	210715
Date	15 July 2021 (Thursday)
Time	09:30 – 11:30

D-C NI-	N				Related Item No.	
Ref. No.	Non-Compliant None identified	ce			Hem Ivo.	
_	None identified				Related	
Ref. No.	Remarks/Obser	vetions			Item No.	
1801. 110.	B. Air Quality	Yations			reem 100	
		ntal deficiency was identified	during site inspection.			
	1,0 0,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
<del></del>	C. Noise					
	No environme	ntal deficiency was identified	during site inspection.			
	D. Water Qualit					
210715-R01	Provide sand b	pags as water control measure	for surface runoff within site	area (Portion W).	D 3	
			<del></del>			
		nical Management	I T			
	No environme	ntal deficiency was identified	during site inspection.			
	F. Cultural Heritage					
	No environmental deficiency was identified during site inspection.					
	G. Landscape and Visual					
	No environmental deficiency was identified during site inspection.					
	H. Ecology					
	No environmental deficiency was identified during site inspection.					
	I. Permits/Licences					
	No environmental deficiency was identified during site inspection.					
	The on Administrative and the second					
	J. Others					
	• Follow-up on previous audit section (Ref. No.: 210708), all identified environmental					
	deficiencies w	ere observed improved/ rectif	Y			
		Name	Signature	Dat		
Reco	rded by	Kenneth Leung	Jan	21 July		
Chec	cked by	Dr. Priscilla Choy	- WIL	21 July	2021	

ND/2019/04 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)

Checklist Reference Number	210722
Date	22 July 2021 (Thursday)
Time	14:00 – 15:30

n a 27					Related
Ref. No.	Non-Compliant None identified	ce			Item No.
_	None identified				Related
Ref. No.	Remarks/Obser	rvations			Item No.
	B. Air Quality				
	No environme	ntal deficiency was identified of	during site inspection.		
	C. Noise				
	No environme	ntal deficiency was identified of	during site inspection.		,
	D. Water Qualit	'y			
210722-R01	Regularly clea well.	er the sediment trapped by sand	bags and maintain the water	control measure	D 13ii
	E. Waste / Chen	nical Management			
	No environmental deficiency was identified during site inspection.				
	F. Cultural Heritage				
	No environmental deficiency was identified during site inspection.				
	G. Landscape and Visual				
	No environmental deficiency was identified during site inspection.				
	H. Ecology				
	No environme	ntal deficiency was identified of	during site inspection.		
	I. Permits/Licences				
	No environme	ntal deficiency was identified of	during site inspection.		
	J. Others				
		previous audit section (Ref. s observed improved/ rectified		d environmental	
1 1 2 2 2 2 2		Name	Signature	Date	)
Reco	rded by	Kenneth Leung	fem?	22 July 2	2021
	ked by	Dr. Priscilla Choy	- WI	22 July 2021	

ND/2019/04 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)

Checklist Reference Number	210729	
Date	29 July 2021 (Thursday)	
Time	14:00 – 16:00	

Ref. No.	Non-Complian	ice			Related Item No.
_	None identified	-			_
Ref. No.	Remarks/Obse	ervations			Related Item No.
	B. Air Quality				
	No environm	ental deficiency was identifie	d during site inspection.		
	C. Noise	. 1 1 6			
	No environm	ental deficiency was identifie	d during site inspection.		
	D. Water Quali				
210729-O03	Enhance sedi	ment control measures for site	e runoff after rainstorm event a	t Portion H.	D 13i
210729-005	ensure proper	function. (Bridge A2)	er barriers near Siu Hang San		D 13ii
210729-O06	Properly erec	t and maintain the desilting m	aterials along green barriers at	Bridge A2.	D 13ii
010700 001	E. Waste / Cher	nical Management			
210729-O01	Oil stain was observed at site area and should be properly cleared at Portion W.			E 11	
	F. Cultural He	ritage			
		ental deficiency was identified	d during site inspection		
			and the poetron.		
	G. Landscape a	nd Visual			
210729-002	Stockpile of construction materials should be avoided at retained tree. Tree protection zone.			G 1	
				.,,	
	H. Ecology				
210729-004			Н3		
	I. Permits/Licer				
	No environme	ntal deficiency was identified	during site inspection.		
	J. Others				
		previous audit section (Re	f. No.: 210722), all identifie	d environmental	
	deficiency wa	s observed improved/rectified	d by the Contractor.		
		Name	Signature	Date	<b>;</b>
Recor	ded by	Kenneth Leung	Levy/	30 July 2	2021
Check	necked by Dr. Priscilla Choy 30 July 2021		2021		

ND/2019/05 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section between Shung Him Tong to Kau Lung Hang

Checklist Reference Number	210707
Date	7 July 2021 (Wednesday)
Time	09:00-11:00

		Related
Ref. No.	Non-Compliance	Item No.
-	None identified	-
		Related
Ref. No.	Remarks/Observations	Item No.
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
210707-O01	Muddy water should be directed to the wastewater treatment facilities and avoid any untreated wastewater discharge into nearby storm drain	D 1
······································	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	• 140 environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	No environmental deficiency was identified during site inspection.	
	H. Ecology	
	No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 210628), item 210628-R01 was remarked as 210707-O01, follow-up action is needed to be reviewed.	

	Name	Signature	Date
Recorded by	Howard Chan	Vavort 1	9 July 2021
Checked by	Dr. Priscilla Choy	WI	9 July 2021

ND/2019/05 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section between Shung Him Tong to Kau Lung Hang

Checklist Reference Number	210712
Date	12 July 2021 (Monday)
Time	14:00-16:00

		Related
Ref. No.	Non-Compliance	Item No.
_	None identified	-
		Related
Ref. No.	Remarks/Observations	Item No.
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	·	
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	No environmental deficiency was identified during site inspection.	
	H. Ecology	
	No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 210707), all identified environmental	
	deficiency was observed improved/ rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Anson Tong .	3/3	28 July 2021
Checked by	Dr. Priscilla Choy	WI	28 July 2021

ND/2019/05 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section between Shung Him Tong to Kau Lung Hang

Checklist Reference Number	210719	
Date	19 July 2021 (Monday)	
Time	14:00-16:00	

Ref. No.	Non-Compliance	Related
	None identified	Item No.
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
210719-R01	NRMM Label should be displayed on regulated machines.	B 24
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
210719-O01	Muddy water should be directed to the wastewater treatment facilities and avoid any untreated wastewater discharge to public road.	D 1
210719-O02	To review the capacity of the sump pit and avoid overflow to public road,	D 1
210719-003	Proper maintain the Wetsep to prevent overflow.	D 1
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
	No environmental deficiency was identified during site inspection.	
	H. Ecology	
	No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	J. Others	
	<ul> <li>Follow-up on previous audit section (Ref. No.: 210712), no environmental deficiency was identified during site inspection.</li> </ul>	

	Name	Signature	Date
Recorded by	Howard Chan	Marson M	28 July 2021
Checked by	Dr. Priscilla Choy	NTA	28 July 2021

ND/2019/05 – Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section between Shung Him Tong to Kau Lung Hang

Checklist Reference Number	210726
Date	26 July 2021 (Monday)
Time	14:00-16:00

		Related
Ref. No.	Non-Compliance	Item No.
-	None identified	_
		Related
Ref. No.	Remarks/Observations	Item No.
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
210726-O01	Muddy water should be directed to the wastewater treatment facilities and avoid any untreated wastewater discharge to public road.	D 1
210726-O02	Site runoff should be directed to wastewater treatment facilities.	D 4
210726-R03	Provide mitigation measures to prevent debris and dusty materials drop into nearby storm drain.	D 17
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Cultural Heritage	
	No environmental deficiency was identified during site inspection.	
	G. Landscape and Visual	
210726-R04	Stockpile of dusty materials should be avoided at trees protection zone.	G 1
210720 1007	- Stookpite of dusty indicates should be divided at those protection zone.	<u> </u>
	H. Ecology	
	No environmental deficiency was identified during site inspection.	
	I. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	J. Others	
	• Follow-up on previous audit section (Ref. No.: 210719), Item 210719-O01 was remarked as 210726-O01. Follow-up action is needed to be reviewed. Other items were observed improved/rectified by the Contractor.	

	Name	Signature /	Date
Recorded by	Howard Chan	Variant	28 July 2021
Checked by	Dr. Priscilla Choy	W17	28 July 2021

ND/2019/06 – Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products

Checklist Reference Number	210708
Date	8 July 2021 (Thursday)
Time	10:00-11:00

Ref. No.	Non-Compliance	Related Item No.
<b>=</b>	None identified	_
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality	
210708-R01	NRMM label was observed faded. Contractor was reminded to replace the NRMM label.	B 24
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
210708-R02	General refuse should be disposed of properly.	E 1iii
	F. Landscape and Visual	- <del></del>
	No environmental deficiency was identified during site inspection.	
	G. Ecology	
	No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
<u> </u>	I, Others	
	Follow-up on previous audit section (Ref. No.: 210630), no major environmental deficiency was observed during site inspection.	

	Name	Signature	Date
Recorded by	Anson Tong	3/3	9 July 2021
Checked by	Dr. Priscilla Choy	NJ.	9 July 2021

ND/2019/06 – Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products

Checklist Reference Number	210715
Date	15 July 2021 (Thursday)
Time	14:00-15:00

		Related
Ref. No.	Non-Compliance	Item No.
-	None identified	•
		Related
Ref. No.	Remarks/Observations	Item No.
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
210715-R02	Provide sand bags as water control measure for surface runoff within site area.	D 3
	E. Waste / Chemical Management	
210715-R01	Provide drip tray with adequate capacity for oil cantainers.	E 14
	E Y I and I War al	
	F. Landscape and Visual	
	No environmental deficiency was identified during site inspection.	
	G. Ecology	
	No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 210708), all identified environmental	
	deficiency was observed improved/ rectified by the Contractor.	

77	Name	Signature	Date
Recorded by	Anson Tong	1/6	26 July 2021
Checked by	Dr. Priscilla Choy	NT	26 July 2021

ND/2019/06 – Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products

Checklist Reference Number	210722
Date	22 July 2021 (Thursday)
Time	10:00-11:00

10 C NI	N. G. V	Related
Ref. No.	Non-Compliance	Item No
-	None identified	-
		Related
Ref. No.	Remarks/Observations	Item No
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	No environmental deficiency was identified during site inspection.	
, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	No environmental deficiency was identified during site inspection.	
	G. Ecology	
	No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 210715), all identified environmental deficiency was observed improved/rectified by the Contractor.	

	Name	Signature	Date
Recorded by	Anson Tong	3/5	26 July 2021
Checked by	Dr. Priscilla Choy	W.Z.	26 July 2021

ND/2019/06 — Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products

Checklist Reference Number	210729
Date	29 July 2021 (Thursday)
Time	10:00-10:30

		Related
Ref. No.	Non-Compliance	Item No.
-	None identified	
		Related
Ref. No.	Remarks/Observations	Item No.
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Noise	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	No environmental deficiency was identified during site inspection.	
	G. Ecology	
	No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 210722), no environmental deficiency was	
	identified during site inspection.	

	Name	Signature	Date
Recorded by	Anson Tong	3/3	29 July 2021
Checked by	Dr. Priscilla Choy	WI	29 July 2021

# ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Checklist Reference Number	210702
Date	2 July 2021 (Friday)
Time	14:00 – 14:30

Ref. No.	Non-Compliance	Related Item No.
_	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	B. Air Quality     No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact     No environmental deficiency was identified during site inspection.	
	D. Water Quality     No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management  No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	No environmental deficiency was identified during site inspection.	
	G. Ecology	
	No environmental deficiency was identified during site inspection.	
	<ul> <li>H. Permits/Licences</li> <li>No environmental deficiency was identified during site inspection.</li> </ul>	
	I. Others	
	<ul> <li>Follow-up on previous audit section (Ref. No.: 210625), all identified environmental deificiency was observed improved/rectified by the Contractor.</li> </ul>	

	Name	Signature	Date
Recorded by	Kenneth Leung	£er3/	5 July 2021
Checked by	Dr. Priscilla Choy	WI	5 July 2021

# ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Checklist Reference Number	210708
Date	8 July 2021 (Thursday)
Time	14:00 – 14:30

		Related
Ref. No.	Non-Compliance	Item No.
-	None identified	-
		Related
Ref. No.	Remarks/Observations	Item No.
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	<u> </u>
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	·
	No environmental deficiency was identified during site inspection.	
	G. Ecology	
	·	
	No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I Others	
	Follow-up on previous audit section (Ref. No.: 210702), no environmental deficiency was	
	• Follow-up on previous audit section (Ref. No.: 210702), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Anson Tong	3/%	12 July 2021
Checked by	Dr. Priscilla Choy	NF.	12 July 2021

# ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Checklist Reference Number	210716
Date	16 July 2021 (Friday)
Time	14:00 – 14:30

		Related
Ref. No.	Non-Compliance	Item No.
-	None identified	-
		Related
Ref. No.	Remarks/Observations	Item No.
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
11.4."	No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	No environmental deficiency was identified during site inspection.	
	G. Ecology	
	No environmental deficiency was identified during site inspection.	
	H, Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 210708), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan	1 X revord	16 July 2021
Checked by	Dr. Priscilla Choy		16 July 2021

## ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

Checklist Reference Number	210723
Date	23 July 2021 (Friday)
Time	14:00 – 14:30

Ref. No.	Non-Compliance	Related Item No
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	4
	F. Landscape and Visual	% %
	No environmental deficiency was identified during site inspection.	
	G. Ecology	
	No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 210716), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Kenneth Leung	four!	27 July 2021
Checked by	Dr. Priscilla Choy	NIL	27 July 2021

# ND/2019/07 – Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

	210730
Date	30 July 2021 (Friday)
Time	14:00 – 15:00

		Related
Ref. No.	Non-Compliance	Item No
-	None identified	-
		Related
Ref. No.	Remarks/Observations	Item No
	B. Air Quality	
	No environmental deficiency was identified during site inspection.	
	C. Construction Noise Impact	
	No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	No environmental deficiency was identified during site inspection.	
	F. Landscape and Visual	
	No environmental deficiency was identified during site inspection.	
•	G. Ecology	
	No environmental deficiency was identified during site inspection.	
	H. Permits/Licences	
	No environmental deficiency was identified during site inspection.	
	I. Others	
	• Follow-up on previous audit section (Ref. No.: 210723), no environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Howard Chan	Xaway	30 July 2021
Checked by	Dr. Priscilla Choy	WA	30 July 2021

APPENDIX Q ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

EIA Ref.	EM&A	Recommended Mitigation Measures	Objectives of the	Who to	Location of the	When to	Implementation
	Log	(What Measures)	recommended	implement	measures	Implement the	Status
	Ref		Measures & Main	the	(Where)	measures?	
			Concerns to address	measures?		(When)	
			(What Requirements)	(Who)			
Construc	ction Dus	t Impact					
S3.8	D1	Mitigation measures in form of regular watering under a good site practice should be adopted. Watering once per hour on exposed worksites and haul road is proposed to achieve dust removal efficiency of 92.1%. While the above watering frequencies are to be followed, the extent of watering may vary depending on actual site conditions but should be sufficient to maintain an equivalent intensity of no less than 1.7 L/m2 to achieve the respective dust removal efficiencies	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	^
S3.8	D2	The Contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation.	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	۸
S3.8	D3	<ul> <li>Following dust suppression measures should also be incorporated by the Contractor to control the dust nuisance throughout the construction Phase</li> <li>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;</li> <li>Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;</li> <li>A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones;</li> <li>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;</li> <li>Where practicable, vehicle washing facilities with high</li> </ul>	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction phase	* ^ ^

			,	1	,	
		pressure water jet should be provided at every discernible				
		or designated vehicle exit point. The area where vehicle				
		washing takes place and the road section between the				
		washing facilities and the exit point should be paved with				
		concrete, bituminous materials or hardcores;				
	•	When there are open excavation and reinstatement works,				^
		hoarding of not less than 2.4m high should be provided as				
		far as practicable along the site boundary with provision				
		for public crossing. Good site practice shall also be				
		adopted by the Contractor to ensure the conditions of the				
		hoardings are properly maintained throughout the				
		construction period.				
		The portion of any road leading only to construction site				*
		that is within 30m of a vehicle entrance or exit should be				
		kept clear of dusty materials;				
		Surfaces where any pneumatic or power-driven drilling,				٨
		cutting, polishing or other mechanical breaking operation				
		takes place should be sprayed with water or a dust				
		suppression chemical continuously;				
	•	Any area that involves demolition activities should be				
		sprayed with water or a dust suppression chemical				۸
		immediately prior to, during and immediately after the				
		activities so as to maintain the entire surface wet;				
	•	Where a scaffolding is erected around the perimeter of a				
		building under construction, effective dust screens,				٨
		sheeting or netting should be provided to enclose the				
		scaffolding from the ground floor level of the building, or a				
		canopy should be provided from the first floor level up to				
		the highest level of the scaffolding;				
		Any skip hoist for material transport should be totally				۸
		enclosed by impervious sheeting;				
		Every stock of more than 20 bags of cement or dry				
		pulverised fuel ash (PFA) should be covered entirely by				*
		impervious sheeting or placed in an area sheltered on the				
		top and the 3 sides;				
		Cement or dry PFA delivered in bulk should be stored in a				N/A
		closed silo fitted with an audible high level alarm which is				
		interlocked with the material filling line and no overfilling is				
		allowed;				
	•	Loading, unloading, transfer, handling or storage of bulk				N/A
		cement or dry PFA should be carried out in a totally				1.47.

		<ul> <li>enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and</li> <li>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.</li> </ul>					٨
S3.8	D4	Implement regular dust monitoring under EM&A programme	Monitoring of dust impact	Contractor	Selected	Construction	^
		during the construction stage.			representative	phase	
					dust		
					monitoring station		
Noise Im	pact (Cons	truction Phase)					
S4.9	N1	<ul> <li>Implement the following good site management practices:</li> <li>Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction</li> </ul>	Control construction airborne noise	Contractor	All construction sites	Construction phase	٨
		<ul> <li>programme;</li> <li>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;</li> <li>Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works;</li> <li>Mobile plant should be sited as far away from NSRs as possible and practicable;</li> <li>Material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.</li> </ul>					^ ^
S4.9	N2	Install temporary site hoarding (approx 2.4m high) located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.	Reduce the construction noise levels at low-level zone of NSRs through partial	Contractor	All construction sites where practicable	Construction phase	۸

			screening.				
S4.9	N3	Install movable noise barriers and full enclosure and acoustic mat, screen the noisy plants including air compressor and	Screen the noisy plant items	Contractor	All construction	Construction	۸
		generator.	to be used at all construction		sites where	phase	
			sites		practicable		
S4.9	N4	Use of "Quiet" Plant and Working Methods	Reduce the noise levels of	Contractor	All construction	Construction	N/A
			plant items		sites where	phase	
					practicable		
S4.9	N5	Sequencing operation of construction plants where practicable.	Operate sequentially within	Contractor	All construction	Construction	۸
			the same work site to reduce		sites where	phase	
			the construction airborne		practicable		
			noise				
S4.9	N6	Implement a noise monitoring under EM&A programme.	Monitor the construction	Contractor	Selected	Construction	٨
			noise levels at the selected		representative	phase	
			representative locations		noise monitoring		
					stations		
Water Q	uality Impa	nct (Construction Phase)			1	1	I
S5.7	W1	Construction Runoff and Site Drainage	Control construction runoff	Contractor	All construction	Construction	
		In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection			sites	phase	
		Department, 1994 (ProPECC PN 1/94), construction phase					
		mitigation measures should be provided and the Storm Water					
		Pollution Control Plan is given below.					
		where appropriate, should include the following:					
		Stormwater Pollution Control Plan					*
		At the start of site establishment, perimeter cut-off drains					
		to direct off-site water around the site should be					
		constructed with internal drainage works and erosion and					
		sedimentation control facilities implemented. Channels					
		(both temporary and permanent drainage pipes and					
		culverts), earth bunds or sand bag barriers should be					
		provided on site to direct stormwater to silt removal					

facilities. The design of the temporary on-site drainage
system will be undertaken by the Contractor prior to the
commencement of construction.
Diversion of natural stormwater should be provided as far
as possible. The design of temporary on-site drainage
should prevent runoff going through site surface,
construction machinery and equipments in order to avoid
or minimize polluted runoff. Sedimentation tanks with
sufficient capacity, constructed from pre-formed
individual cells of approximately 6 to 8m³ capacities,
are recommended as a general mitigation measure
which can be used for settling surface runoff prior to
disposal. The system capacity shall be flexible and able
to handle multiple inputs from a variety of sources and
suited to applications where the influent is pumped.
The dikes or embankments for flood protection should be     *
implemented around the boundaries of earthwork areas.
Temporary ditches should be provided to facilitate the
runoff discharge into an appropriate watercourse,
through a silt/sediment trap. The silt/sediment traps
should be incorporated in the permanent drainage
channels to enhance deposition rates.
The design of efficient silt removal facilities should be
based on the guidelines in Appendix A1 of ProPECC PN
1/94. The detailed design of the sand/silt traps should be
undertaken by the contractor prior to the commencement
of construction.
Construction works should be programmed to minimize     *
surface excavation works during the rainy seasons (April
to September). All exposed earth areas should be
completed and vegetated as soon as possible after
earthworks have been completed. If excavation of soil
cannot be avoided during the rainy season, or at
any time of year when rainstorms are likely, exposed
slope surfaces should be covered by tarpaulin or other

means.	
All drainage facilities and erosion and sediment control  #	
structures should be regularly inspected and maintained	
to ensure proper and efficient operation at all times and	
particularly following rainstorms. Deposited silt and grit	
should be removed regularly and disposed of by	
spreading evenly over stable, vegetated areas.	
Measures should be taken to minimise the ingress of site	
drainage into excavations. If the excavation of trenches	
in wet periods is necessary, it should be dug and	
backfilled in short sections wherever practicable. Water	
pumped out from trenches or foundation excavations	
should be discharged into storm drains via silt removal	
facilities.	
All open stockpiles of construction materials (for	
example, aggregates, sand and fill material) of more than	
50m3 should be covered with tarpaulin or similar fabric	
during rainstorms. Measures should be taken to prevent	
the washing away of construction materials, soil, silt or	
debris into any drainage system.	
Manholes (including newly constructed ones) should	
always be adequately covered and temporarily sealed so	
as to prevent silt, construction materials or debris being	
washed into the drainage system and storm runoff being	
directed into foul sewers.	
Precautions to be taken at any time of year when  #	
rainstorms are likely, actions to be taken when a	
rainstorm is imminent or forecasted, and actions to be	
taken during or after rainstorms are summarized in	
Appendix A2 of ProPECC PN 1/94. Particular attention	
should be paid to the control of silty surface runoff during	
storm events.	
All vehicles and plant should be cleaned before leaving a	
construction site to ensure no earth, mud, debris and the	
like is deposited by them on roads. An adequately	

		works, deployment of silt curtain should be implemented,	diversion				
		In order to prevent sediment transport during riverbank	impact due to stream		required diversion	phase	N/A
							N1/A
S5.7	W2	Stream Diversion	Minimize water quality	Contractor	All streams that	Construction	
		Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.  Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources. The oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for the oil interceptors to prevent flushing during heavy rain.  Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts.  All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby.  Regular environmental audit on the construction site should be carried out in order to prevent any malpractices. Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the meander, wetlands and fish ponds.					N/A ^
		designed and sited wheel washing facilities should be provided at every construction site exit where practicable.					

N/A
N/A
N/A
N/A

		WPCO through the Regional Offices of EPD.					
S5.7	W4	Sewage from Workforce	Handling of site sewage	Contractor	All construction	Construction	
		Portable chemical toilets and sewage holding tanks should be			sites	Phase	
		provided for handling the construction sewage generated by the					^
		workforce. A licensed Contractor should be employed to provide					
		appropriate and adequate portable toilets and be responsible for					
		appropriate disposal and maintenance.					
		Notices should be posted at conspicuous locations to remind the					
		workers not to discharge any sewage or wastewater into the					
		nearby environment during the construction phase of the Project.					
		Regular environmental audit on the construction site should be					
		conducted in order to provide an effective control of any					
		malpractices and achieve continual improvement of					
		environmental performance on site. It is anticipated that sewage					
		generation during the construction phase of the Project would not					
		cause water quality impact after undertaking all required					
		measures.					
Waste Ma	nagemen	t (Construction Waste)					
S7.6	WM1	Waste Reduction Measures	Reduce waste generation	Contractor	All construction	Prior to the	
		Waste reduction is best achieved at the planning and design			sites where	commencement of	
		phase, as well as by ensuring the implementation of good site practices. The following recommendations are proposed to			practicable	construction	
		achieve reduction:					
		segregate and store different types of waste in different					^
		containers, skip or stockpiles to enhance reuse or recycling					
		of materials and their proper disposal;					

		proper storage and site practices to minimize the potential					#
		for damage and contamination of construction materials;					
		plan and stock construction materials carefully to minimize					۸
		amount of waste generated and avoid unnecessary					
		generation of waste;					
		sort out demolition debris and excavated materials from					N/A
		demolition works to recover reusable/recyclable portions					
		(i.e. soil, broken concrete, metal etc);					
		provide training to workers on the importance of appropriate					٨
		waste management procedures, including waste reduction,					
		reuse and recycling.					
S7.6	WM2	Prepare Waste Management Plan and submit to the Engineer	Minimize waste generation	Contractor	All construction	Construction	۸
		for approval	during construction		sites	phase	
S7.6	WM3	Good Site Practice	Minimize waste generation	Contractor	All construction	Construction	
		The following good site practices are recommended throughout the construction activities:	during construction		sites	phase	
		Nomination of an approved personnel, such as a site					۸
		manager, to be responsible for the implementation of good					Λ
		site practices, arrangements for collection and effective					
		disposal to an appropriate facility, of all wastes generated					
		at the site;					
		Training of site personnel in site cleanliness, appropriate					
		waste management procedures and concepts of waste					۸
		reduction, reuse and recycling;					
		Provision of sufficient waste disposal points and regular					
		collection for disposal;					۸
		Appropriate measures to minimise windblown litter and					
							^

		dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;  Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;					۸
S7.6	WM4	Storage of Waste  The following recommendation should be implemented to minimize the impacts:  Waste such as soil should be handled and stored well to ensure secure containment;  Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away;  Different locations should be designated to stockpile each	Minimize waste impacts from storage	Contractor	All construction sites	Construction phase	^ ^
S7.6	WM5	material to enhance reuse;  Collection and Transportation of Waste  The following recommendation should be implemented to minimize the impacts:  Remove waste in timely manner;  Employ the trucks with cover or enclosed containers for waste transportation;  Obtain relevant waste disposal permits from the appropriate authorities; and  Disposal of waste should be done at licensed waste disposal facilities.	Minimize waste impact from storage	Contractor	All construction sites	Construction phase	^ ^

S7.6	WM6	Excavated and C&D Material	Minimize waste impacts from	Contractor	All construction	Construction	
		Wherever practicable, C&D materials should be segregated	excavated and C&D material		sites	phase	٨
		from other wastes to avoid contamination and ensure					
		acceptability at Public Fill Reception Facilities areas or					
		reclamation sites. The following mitigation measures should be implemented in handling the excavated and C&D materials:					
		mipromonios in nanamig ino oroanatos and cost materials.					
		Maintain temporary stockpiles and reuse excavated fill					۸
		material for backfilling;					
		Carry out on-site sorting;					N/A
		Deliver surplus artificial hard materials to Tuen Mun Area					N/A
		38 recycling plant or its successor for recycling into					
		subsequent useful products;					
		Make provisions in the Contract documents to allow and					N/A
		promote the use of recycled aggregates where					
		appropriate; and					
		Implement a recording system for the amount of waste					۸
		generated, recycled and disposed of for checking;					
		Standard formwork should be used as far as practicable in order					N/A
		to minimize the arising of C&D waste. The use of more durable					
		formwork (e.g. metal hoarding) or plastic facing should be					
		encouraged in order to enhance the possibility of recycling. The					
		purchasing of construction materials should be carefully planned					
		in order to avoid over ordering and wastage.					
		Wheel wash facilities have to be provided at the site entrance					
		before the trucks leaving the works area.					۸
S7.6	WM7	Contaminated Soil	Remediate contaminated soil	Contractor	All construction	Construction	
		As a precaution, it is recommended that standard good site			sites where	phase	۸

		<u> </u>					,
		practice should be implemented during the construction phase			applicable		
		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	WM8	Chemical Waste	Control the chemical waste	Contractor	All construction	Construction	
		If chemical wastes are produced at the construction site, the	and ensure proper storage,		sites	phase	#
		Contractors should register with EPD as chemical waste	handling and disposal				
		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	WM9	General Waste	Minimize production of the	Contractor	All construction	Construction	
		General refuse should be stored in enclosed bins	general refuse and avoid		sites	phase	*
		separately from construction and chemical wastes.	odour, pest and litter impacts				
		Recycling bins should also be placed to encourage					
		recycling.					
		Preferably enclosed and covered areas should be					۸
		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					۸

		general refuse on a daily basis.					
S7.6	WM10	Sewage	Minimize production of	Contractor	All construction	Construction	
		The WMP should document the locations and number of	sewage impacts		sites	phase	N/A
		portable chemical toilets depending on the number of					
		workers, land availability, site condition and activities.					
		Regularly collection by licensed collectors should be					N/A
		arranged to minimize potential environmental impacts.					
S7.6	WM11	Topsoil reuse – Topsoil, where identified, should be stripped and	Good site practice	Contractor/	Onsite	Construction	N/A
		stored for re-use in the construction of the soft landscape works,		Project		phase	
		where practical. This is considered a general measure for good		Proponent			
		site practice.					
Land Co	ntaminatio	n					
S 8.4	LC2	Detailed site investigation (SI) for all inaccessible potentially	Verify the land	Project	All inaccessible	After the land	N/A
		contaminated sites in 2 NDAs	contamination potential	Proponent	potentially	is resumed	
			before the commencement	Detailed	contaminated	and handed	
			of construction	Design	sites in	over to the	
				Consultant	2 NDAs as listed	Project	
				Contractor	in	Proponent	
					the CAP		
S 8.5	LC3	Preparation and submission of supplementary Contamination	Present the findings of SI	Project	All inaccessible	Prior to the	N/A
		Assessment Report (CAR) and Remediation Action Plan (RAP) for	and evaluate the potential	Proponent/	potentially	commencement	
		all inaccessible potentially contaminated sites in 2 NDAs to EPD	environmental and human	Detailed	contaminated	of any	
		for agreement if land contamination is confirmed	health impacts	Design	sites in 2 NDAs	proposed	
			Recommend appropriate	Consultant	as listed in the	construction	
			mitigation measures for the		CAP	works if land	
			contaminated soil and			contamination	

		<del>-</del>		1			
			groundwater identified in			is confirmed	
			the assessment if			and remediation	
			remediation is required			is required	
S 8.5	LC4	Preparation and submission of Remediation Report to EPD for	Demonstrate that the	Project	All inaccessible	Prior to the	N/A
		agreement	decontamination work is	Proponent/	potentially	commencement	
			adequate and is carried out	Detailed	contaminated	of any	
			in accordance with the	Design	sites in	proposed	
			endorsed supplementary	Consultant	2 NDAs as listed	construction	
			CAR and RAP		in the CAP	works if land	
						contamination	
						is confirmed	
						and remediation	
						is required	
S 8.6	LC5	Re-appraisal of surveyed sites (if they become part of the land	Verify the land	Project	All surveyed sites	After the land is	N/A
		requirement for NDA development) that were not identified as	contamination potential	Proponent/	(if they become	resumed and	
		potentially contaminated or could not be accessed for visual	due to potential change of	Detailed	part of the land	handed over to	
		inspection during the site survey	land uses before the	Design	requirement for	the Project	
			commencement of	Consultant	NDA	Proponent.	
			construction		development		
					(that were not		
					identified as		
					potentially		
					contaminated or		
					could not be		
					accessed for		
					visual inspection		

					during the site		
					survey as listed		
					in the CAP		
S 8.7.2	LC6	Treatment of arsenic-containing soil	To treat the arsenic	Government	KTN NDA	Prior to	N/A
and		"Solidification/Stabilization" (S/S) treatment method was proposed	containing	Developer/		commencement	
Appendix		for the treatment of arsenic-containing soil. Toxicity Characteristic	soil	Contractor		of construction	
8.4		Leaching Procedure (TCLP) test should be undertaken after S/S in				works within	
		order to ensure that the contaminant will not leach to the				KTN NDA	
		environment. Unconfined Compressive Strength (UCS) test should					
		be conducted, and not less than 1MPa should be met prior to the					
		backfilling or stockpiled for future reuse within the study area.					
S 8.7.2	LC7	Excavation and Transportation	To minimize the potential	Contractor	KTN NDA	Prior to	N/A
and		Excavation profiles must be properly designed and executed	environmental impacts			commencement	
Appendix		with attention to the relevant requirements for environment,	arising from the handling of			of construction	
8.4		health and safety;	contaminated materials			works within	
		In case the soil to be excavated is situated beneath the				KTN NDA	
		groundwater table, it may be necessary to lower the					
		groundwater table;					
		Excavation should be carried out during dry season as far as					
		possible to minimize runoff from excavated soils;					
		Stockpiling site(s) should be lined with impermeable sheeting					^
		and bunded. Stockpiles should be properly covered by					
		impermeable sheeting to reduce dust emission during dry					
		season or contaminated run-off during rainy season.					
		Watering should be avoided on stockpiles of soil to minimize					
		runoff;					

S 8.7.2 LC8 Solidication/Sublitzation  The loading, unloading, handling, transfer or storage of contaminate and other process and other associated materials and the process and other associated materials and the sites is exit points should be established and used.  S 8.7.2 LC8 Solidication/Sublitzation  To minimize the potential of contractor or treatment N/A  Appendix A Mixing process and other associated materials activities and used of the sites and other associated materials and used.  S Mixing process and other associated material handling activities should be properly scheduled to minimize potential noise impact and dust emission;  The mixing facilities should be sited as far apart as practicable from the nearby noise sensitive receivers;  Mixing of soil and cament / water / other additive(s) should be properly scheduled to minimize the potential for leaching;  Runoff from the solidification / stabilization areas should be prevented by constructing a concrete bund along the perimeter of the solidification / stabilization areas:  If isockpile of treated soil is required, the stockpling site(s) should be lined with impermeable sheeting to reduce dust emission during dry season or site nundful during rainy season; and		,							
suitably covered to limit potential dust emissions or run-off, and truck bodies and taligates should be sealed to prevent any discharge during transport or during wet season;  Secondary of the trucks carrying excavated materials should be enforact; and Vehicle wheel washing facilities at the site's out points should be enforact; and Vehicle wheel washing facilities at the site's out points should be established and used.  Set 2 LC8 Solidification/Stabilization  The loading, unloading, handling, transfer or storage of commental impacts and comment should be carried out in an enclosed system:  Appendix  8.4 Mixing process and other associated material handling activities should be properly scheduled to minimize potential noise impact and dust emission;  The mixing facilities should be sited as far apart as practicable from the nearby noise sensitive receivers;  Mixing of soil and cement / water / other additive(s) should be undertaken at a solidification plant to minimize the potential for leaching;  Runoff from the solidification / stabilization area;  If stockpile of treated soil is required, the stockpiling site(s) should be lined with impermeable sheeting and bunded.  Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or site			•	Supply of suitable backfill material after excavation, if require;					
and truck bodies and taligates should be sealed to prevent any discharge during transport or during wet season;  Seed control for the trucks carrying excavated materials should be enforced; and Vehicle wheel washing facilities at the site's exit points should be established and used.  S. 8.7.2 LC8 Solidification'Stabilization  To minimize the potential onvironmental impacts arising from the loading, unloading, handling, transfer or storage of contaminated materials and the carried out in an enclosed system; and the property scheduled to minimize potential noise impact and dust emission;  The mixing facilities should be sited as far apart as practicable from the nearby noise sensitive receivers;  Mixing of soil and cement / water / other additive(s) should be undertaken at a solidification / stabilization area;  Runoff from the solidification / stabilization area;  If stockpile of treated soil is required, the stockpiling site(s) should be lined with impermeable sheeting to reduce dust emission during dry season or site				Vehicles containing any excavated materials should be					
any discharge during transport or during wet season: Speed control for the trucks carrying excavated materials should be enforced; and Vehicle wheel washing facilities at the site's exit points should be established and used.  S. 8.7.2 LCS Solidification/Stabilization  The loading, unloading, handling, transfer or storage of comment should be carried out in an enclosed system; and solid properly scheduled to minimize potential noise impact and dust emission; The mixing facilities should be properly scheduled to minimize potential noise impact and dust emission; The mixing facilities should be sited as far apart as practicable from the nearby noise sensitive receivers; Mixing of soil and cement / water / other additive(s) should be undertaken at a solidification plant to minimize the potential for loaching; Runoff from the solidification area; If it sockpile of treated soil is required, the stockpiling site(s) should be lined with impermeable sheeting to reduce dust emission during dry season or site				suitably covered to limit potential dust emissions or run-off,					
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S 8.7.2 LC8 Solidification/Stabilization  - The loading, unloading, handling, transfer or storage of cement should be carried out in an enclosed system;  8.4 - Mixing process and other associated material handling activities should be properly scheduled to minimize potential noise impact and dust emission;  - The mixing facilities should be intended in a solidification / stabilization area should be prevented by constructing a concrete bund along the perimeter of the solidification / stabilization area;  - If stockpile of treated soil is required, the stockpiling site(s) should be intended in the minimal process of treatment in pacts arising from the handling of contaminated materials  - The mixing facilities should be properly scheduled to minimize potential noise impact and dust emission;  - The mixing facilities should be sited as far apart as practicable from the nearby noise sensitive receivers;  - Mixing of soil and cement / water / other additive(s) should be understaken at a solidification / stabilization area should be prevented by constructing a concrete bund along the perimeter of the solidification / stabilization area;  - If stockpile of treated soil is required, the stockpiling site(s) should be lined with impermeable sheeting and bunded.  - Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or site				any discharge during transport or during wet season;					
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S 8.7.2 LC8 Solidification/Stabilization  The loading, unloading, handling, transfer or storage of cement should be carried out in an enclosed system;  8.4 Mixing process and other associated material handling activities should be properly scheduled to minimize potential noise impact and dust emission;  The mixing facilities should be sited as far apart as practicable from the nearby noise sensitive receivers;  Mixing of soil and cement / water / other additive(s) should be undertaken at a solidification plant to minimize the potential of the solidification / stabilization area;  Runoff from the solidification / stabilization area;  If stockpile of treated soil is required, the stockpiling site(s) should be lined with impermeable sheeting and bunded.  Stockpiles should be property covered by impermeable sheeting to reduce dust emission during dry season or site				should be enforced; and Vehicle wheel washing facilities at					
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Appendix  cement should be carried out in an enclosed system;  Mixing process and other associated material handling activities should be properly scheduled to minimize potential noise impact and dust emission;  The mixing facilities should be sited as far apart as practicable from the nearby noise sensitive receivers;  Mixing of soil and cement / water / other additive(s) should be undertaken at a solidification plant to minimize the potential for leaching;  Runoff from the solidification / stabilization area should be prevented by constructing a concrete bund along the perimeter of the solidification / stabilization area;  If stockpile of treated soil is required, the stockpiling site(s) should be properly covered by impermeable sheeting to reduce dust emission during dry season or site	S 8.7.2	LC8	Solid	dification/Stabilization	To minimize the potential	Contractor	KTN NDA	The course of	
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<ul> <li>Runoff from the solidification / stabilization area should be prevented by constructing a concrete bund along the perimeter of the solidification / stabilization area;</li> <li>If stockpile of treated soil is required, the stockpiling site(s) should be lined with impermeable sheeting and bunded.</li> <li>Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or site</li> </ul>				be undertaken at a solidification plant to minimize the					
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should be lined with impermeable sheeting and bunded.  Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or site				perimeter of the solidification / stabilization area;					
Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or site			•	If stockpile of treated soil is required, the stockpiling site(s)					
sheeting to reduce dust emission during dry season or site				should be lined with impermeable sheeting and bunded.					^
				Stockpiles should be properly covered by impermeable					
run-off during rainy season; and				sheeting to reduce dust emission during dry season or site					
				run-off during rainy season; and					

		If necessary, there should be clear and separated areas for					
		stockpiling of untreated and treated materials.					
S 8.7.2	LC9	Safety Measures	To minimize the potential	Contractor	KTN NDA	The course of	N/A
and		Set up a list of safety measures for site workers;	adverse effects on health			treatment	
Appendix		Provide written information and training on safety for site	and safety of construction				
8.4		workers;	workers				
		Keep a log-book and plan showing the zones requiring					
		treatment and clean zones;					
		Maintain a hygienic working environment;					
		Avoid dust generation;					
		Provide face and respiratory protection gear to site workers if					
		necessary;					
		Provide personal protective clothing (e.g. chemical resistant					
		jackboot, liquid tight gloves) to site workers if necessary;					
		Provide first aid training and materials to site worker;					
		Bulk earth moving equipment should be utilized as much as					
		possible to minimize worker					
		Eating, drinking and smoking should not be allowed in the					
		excavation areas and treatment area to avoid inadvertent ingestion					
		of arsenic containing soil.					
Landfill G	as Hazard						
S10.6	LFG1	Underground rooms or void should be avoided as far as	To minimize the risk of LFG	Government /	Buildings within	Detailed	N/A
		practicable in the proposed developments within the	hazards to occupants within	Developer/	MTLL	design phase	
		Consultation Zone and should be avoided totally in the	MTLL and its 250m	Detailed	and its 250m		
		proposed developments within the MTLL.	Consultation Zone	Design	Consultation Zone		
		Buildings or structures within the MTLL should be at		Consultant			
		ground level with raised floor slabs which are less prone to		within MTLL			

		T			
	gas ingress.		and its 250m		
•	For the high risk category, the use of active control of gas,		Consultation		
	including barriers and detection systems are		Zone		
	recommended. These measures include the control of gas				
	by mechanical means e.g. ventilation of spaces with air to				
	dilute gas, or extraction of gas using fans or blowers.				
	For the low risk category, the provision of barriers to the				
	movement of gas is recommended. Measures				
	recommended include the use of membranes in floors or				
	walls, or in trenches, coupled with high permeability vents				
	such as nofines gravel in trenches or voids/permeable				
	layers below structures.				
	The need and practicality of incorporating such measures				
	should be reviewed in the detailed Qualitative LFG				
	Hazards Assessment (QLFGHA) during the detailed				
	design stage for developments within the 250m				
	Consultation Zone and within MTLL. Recommendations				
	on the detailed precautionary and protection measures to				
	be adopted should be given in the QLFGHA.				
	The design and construction method of the proposed				
	development within MTLL (i.e. the proposed recreational				
	area in site E1-1) should be provided to EPD for				
	agreement in the design stage to ensure compatibility with				
	the landfill restoration facilities and aftercare works within				
	MTLL, such that these facilities and works will not be				
	affected by the construction or operation of the proposed				
	development.				

S10.6	LFG2	During all works, safety procedures should be	To minimize the risk of LFG	Contractor	Construction sites	Construction	٨
		implemented to minimize the risks of fires and explosions,	hazards to the staff and		within MTLL and	phase	
		asphyxiation of workers (especially in confined space) and	visitors within MTLL and its		its		
		toxicity effects resulting from contact with contaminated	250m Consultation Zone		250m Consultation		
		soils and groundwater.			Zone		
		Safety officers, specifically trained with regard to LFG and					۸
		leachate related hazards and the appropriate actions to					
		take in adverse circumstances, should be present on all					
		worksites throughout the works.					
		All personnel who work on site and all visitors to the site					۸
		should be made aware of the possibility of ignition of gas					
		in the vicinity of the works, the possible presence of					
		contaminated water and the need to avoid physical					
		contact with it.					
		Those staff who work in, or have responsibility for "at risk"					۸
		areas, including bore pilling and excavation works, should					
		receive appropriate training on working in areas					
		susceptible to LFG.					
		Enhanced personal hygiene practices including washing					
		thoroughly after working and eating only in "clean" areas					۸
		should be adopted where contact may have been made					
		with any groundwater which is thought to be contaminated					
		with leachate.					
		Any offices / quarters set up on site should take					
		precautions against LFG ingress, such as being raised off					۸
		the ground. Other storage premizes, e.g. shipping					
		containers, where this is not possible should be well					

ventilated prior to entry.	
Adequate precautions to prevent the accumulation of LFG	٨
under site buildings and within storage shed should be	
taken by raising buildings off the ground where	
appropriate and "airing" storage containers prior to entry	
by personnel and ensuring adequate ventilation at all	
times.	
Smoking and naked flames should be prohibited within	۸
confined spaces. "No Smoking" and "No Naked Flame"	
notices in Chinese and English should be posted	
prominently around the construction site. Safety notices	
should be posted warning of the potential hazards.	
Welding, flame-cutting or other hot works may only be	N/A
carried out in confined spaces when controlled by a	
"permit to work" procedure, properly authorized by the	
Safety Officer. The permit to work procedure should set	
down clearly the requirements for continuous monitoring	
of methane, carbon dioxide and oxygen throughout the	
period during which the hot works are in progress. The	
procedure should also require the presence of an	
appropriately qualified person who shall be responsible for	
reviewing the gas measurements as they are made, and	
who shall have executive responsibility for suspending the	
work in the event of unacceptable or hazardous	
conditions. Only those workers who are appropriately	
trained and fully aware of the potentially hazardous	
conditions which may arise should be permitted to carry	

				T	1			1
			out hot works in confined areas.					
		•	During the construction works, adequate fire extinguishers					^
			and breathing apparatus sets should be made available					
			on site and appropriate training given in their use.					
			Ongoing gas monitoring should be considered for offices,					۸
			stores etc set up on site.					
S10.6	LFG3		Utility Companies	To minimize the risk of LFG	Government /	Buildings within	Operation	N/A
			The developers should make the utility companies aware	hazards to the occupants,	Developer	MTLL	phase	
			of the location and features of the site within the	maintenance personnel,	within MTLL	and its 250m		
			Consultation Zone during the respective detailed design	visitors and other users	and its 250m	Consultation Zone		
			stage as part of the QLFGHA.	within MTLL and its 250m	Consultation			
		•	The utilities companies should have a responsibility to	Consultation Zone	Zone			
			train and ensure their staff to take appropriate precautions					
			at all times when entering enclosed spaces or plant					
			rooms.					
			Should utility installation be required in site E1-1, the					
			developers should make the utility companies aware of					
			the potential constraints imposed by the landfill restoration					
			facilities and aftercare works to ensure these facilities and					
			works will remain unaffected. Appropriate precautionary					
			measures against landfill gas should also be taken should					
			utility installation be required within the MTLL.					
			Building Management					
			The management committee of the building estate will					
			hold a special responsibility to ensure that the occupants					
			of the building, its staff and maintenance workers are					
			protected from LFG and that visitors to the site are also					

made aware as to the dangers and the precautions
required to be taken.
Of primary importance to satisfactorily upholding this
responsibility will be to ensure that strict procedures for
maintaining control over all temporary and /or permanent
works proposed at the site are reviewed with regard to the
LFG hazard. This needs to be accompanied by a
comprehensive contingency plan in case of incidents,
including liaison with EPD officers, Fire Services
Department, Landfill Restoration Contractors and others,
as necessary.
All construction and maintenance (including utilities)
personnel working at the site should be made aware of the
hazards of LFG and its possible presence on site. This
should be achieved through a combination of posting
warning signs in prominent places and also by access to
detailed information on LFG hazards and the designs and
procedural means by which these hazards are being
minimized on site. In addition, entry to confined spaces
such as refuse/store rooms, drainage manholes etc.
should be preceded by a period of "airing" the space by
opening the door widely allowing fresh air to enter. Where
appropriate, monitoring of gas should also precede entry.
Any proposed modifications or additions to the building
structure should be subject to a further assessment of
LFG hazard, particularly in areas where a gas membrane
has been installed. Any penetrations of the membrane

		must be repaired as soon as possible after detection or					
		works completion using similar products.					
		The building management company should also make					
		arrangement with Landfill Restoration Contractor so that					
		they are advised of all situations which may potentially					
		threaten the safety of the building occupants resulting					
		from any accidents or failures at the landfill site. The					
		building management company should also have available					
		suitable gas monitoring equipment for any ad hoc					
		investigations necessary relating to LFG and be in a					
		position to undertake any future routine monitoring of gas					
		which may be considered necessary soloing completion of					
		the defects correction period.					
		To ensure that all the above protection and precautionary					
		measures and issues pertaining to LFG are properly and					
		consistently addressed by future users and owners of the					
		site, it is recommended that a comprehensive LFG hazard					
		management system be developed by the owner of the					
		building or its property management agency. The system					
		should be developed by the developers of the sites as part					
		of the QLFGHA before the occupation of the building and					
		implemented during its operational phase.					
Cultural I	Heritage (F	Pre-construction Phase)					
S11.6.1	CH1	Undertaking Further Archaeological Survey to Cover the	To confirm and verify the	Project	In the not-yet-	After land	N/A
		Outstanding Areas	findings of the EIA	Proponent/	surveyed-areas	resumption but	
		Further archaeological surveys to cover the outstanding areas of		Contractor/	with medium	before construction	
		the not-yet-surveyed-area with medium archaeological potential		Qualified	archaeological		

		located in the areas with proposed development as presented in		Archaeologist	potential located		
		Figure 11.9 should be implemented after land resumption to			in the areas within		
		confirm and verify the findings of the EIA. The survey should			Areas D1-11, A3-		
		be conducted by a professional archaeologist and prior to			5, A3-6, B1-1, and		
		fieldwork commencement, the archaeologist should obtain a			B1-7,		
		Licence to Excavate and Search for Antiquities from the					
		Authority under the AM Ordinance. It should be noted that the					
		scope of further archaeological survey is based on the current					
		proposed alignment. Any additional works areas which have					
		not been covered by the current archaeological impact					
		assessment should be covered as soon as possible. Subject					
		to the findings of the archaeological survey to be conducted					
		after land resumption, additional mitigation measures would be					
		designed and implemented before the commencement of					
		construction works to mitigate the adverse impact.					
S11.6.1	CH2	Undertaking Survey-cum-Rescue Excavation	To define the precise	Project	In KTN NDA, for	After land	N/A
		A Survey-cum-Rescue Excavation should be conducted after	archaeological deposits	Proponent/	Site 3 and In FLN	resumption but	
		land resumption and before the commencement of construction	extent and to preserve the	Contractor/	NDA for Site 5.	before construction	
		works to define the precise archaeological deposits extent and	archaeological resources as	Qualified		commencement	
		to preserve the archaeological resources by record. The	far as possible	Archaeologist		of the zone	
		excavation should be conducted by a professional archaeologist					
		and prior to fieldwork commencement, the archaeologist should					
		obtain a Licence to Excavate and Search for Antiquities from the					
		Authority under the AM Ordinance.					

S11.6.1	СНЗ	Undertaking Preservation in-situ for Site 7	To preserve the	Project	Site 7 in FLN NDA	After land	N/A
		Preservation in-situ of the cultivation deposits in Site 7 is	archaeological resources as	Proponent/		resumption prior to	
		proposed. If disturbance to the site by the design of the Central	far as possible.	Contractor/		preconstruction	
		Park is unavoidable, further archaeological survey should be		Qualified		stage of the	
		conducted after land resumption prior to the pre-construction		Archaeologist		proposed Central	
		stage to assess the feasibility to incorporate Site 7 into the				Park (Area C2-8,	
		design of the development plan of the proposed zone.				Zoning O)	
		Appropriate followup actions, including preservation of the					
		significant archaeological deposits in-situ in the Central Park,					
		would then be considered with the consent of AMO.					
		The recommended mitigation measure of preservation in-situ					
		with further archaeological survey should be conducted by a					
		professional archaeologist and prior to fieldwork					
		commencement, the archaeologist should obtain a Licence to					
		Excavate and Search for Antiquities from the Authority under the					
		AM Ordinance.					
S11.6.1	CH4	Undertaking Induction Training	To preserve the	Project	Spots A, D, F to	Before the	N/A
		Induction training should be provided to the construction	archaeological resources as	Proponent/	Н	commencement of	
		Contractor before the commencement of the excavation works	far as possible	Contractor/		the excavation	
		in Spots A, D, F to H. An induction will be conducted as part of		Qualified		works and before	
		the environmental health and safety induction programme to all		Archaeologist		site staff are	
		site staff before they are deployed on site. The induction will				deployed on site	
		include an introduction on the historical development of the Site,					
		the possible archaeological remains that may be encountered					
		during ground excavation works as well as the reporting					
		procedures in case suspected archaeological remains are					

		identified. A set of the presentation material (in the form of					
		power point presentation) with content details will be prepared					
		by an archaeologist and submitted to AMO for reference and					
		record purpose. The first induction briefing will be video					
		recorded and it will be used as induction briefing material for					
		new site staff.					
S11.6.1	CH5	Undertaking Archaeological Impact Assessment before	To define the precise	Project	Area B1-8 and	After land	N/A
		Construction at A1	archaeological deposits	Proponent/	B1-9 zoned as R4	resumption but	
			extent and to preserve the	Contractor/	and R3 in A1	before construction	
		It is recommended that an Archaeological Impact Assessment to	archaeological resources as	Qualified			
		be conducted in the impacted area in Area B1-8 and B1-9 at A1	far as possible	Archaeologist			
		(Sheung Shui Wa Shan Site of Archaeological Interest) after					
		land resumption and before construction when detail					
		construction work information is available to determine the need					
		for further archaeological follow up actions.					
S11.6.1	CH6	Undertaking Archaeological Impact Assessment before	To define the precise	Project	Area within A1	After land	N/A
		Construction within A1 but except Area B1-8 and B1-9	archaeological deposits	Proponent/	except Area B1-8	resumption but	
		Should there be any development work within the Sheung Shui	extent and to preserve the	Contractor/	and B1-9 in R4	before construction	
		Wa Shan Site of Archaeological Interest, it is recommended that	archaeological resources as	Qualified	&R3 zoning		
		an Archaeological Impact Assessment is required after land	far as possible.	Archaeologist			
		resumption and before construction when detail construction					
		work information is available to determine the need for further					
		archaeological follow up actions.					

S11.6.2	CH7	Undertaking baseline condition survey and baseline vibration	To minimize the vibration	Project	G303 and G308	Preconstruction	N/A
		impact assessment	impacts during	Proponent/		stage before	
		In case any potential vibration impact on any nearby built	preconstruction stage on any	Contractor		commencement of	
		heritage features are identified during the pre-construction stage	identified potential vibration			construction works	
		of the Project, prior to commencement of construction works, a	impacted built heritage			during Schedule 3	
		baseline condition survey and baseline vibration impact	features			study	
		assessment should be conducted by a qualified building					
		surveyor or a qualified structural engineer to define the vibration					
		limit (a vibration limit at 7.5mm/s could be adopted for graded					
		historic buildings) and to evaluate if construction vibration					
		monitoring and structural strengthening measures are required					
		during construction phase so as to ensure the construction					
		performance meets with the vibration standard stated in the EIA					
		report. The condition survey of graded historic building should					
		be submitted to AMO for information.					
S11.6.2	CH8	Undertaking baseline condition survey and baseline vibration	To minimize the vibration	Project	KT57, FL05,	Preconstruction	N/A
		impact assessment	impacts during	Proponent/	FL18, and FL2	stage before	
		In case any potential vibration impact on any nearby built	preconstruction stage on any	Contractor		commenceme nt of	
		heritage features are identified during the pre-construction stage	identified potential vibration			construction works	
		of the Project, prior to commencement of construction works, a	impacted built heritage				
		baseline condition survey and baseline vibration impact	features				
		assessment should be conducted by a qualified building					
		surveyor or a qualified structural engineer to define the vibration					
		limit (a vibration limit at 7.5mm/s and 15mm/s could be adopted					
		for graded historic buildings and historic buildings respectively)					
		and to evaluate if construction vibration monitoring and					
		structural strengthening measures are required during					

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		construction phase so as to ensure the construction					
		performance meets with the vibration standard stated in the					
		EIA report. The condition survey of graded historic building					
		should be submitted to AMO for information.					
S11.6.2	CH9	Conducting Photographic and Cartographic Records Prior to	To preserve the directly	Project	Ancillary	Prior to Removal /	N/A
		Removal/Relocation of Impacted Built Heritages	impacted sites by record	Proponent/	structures of	Relocation of	
		Prior to removal/relocation of the directly impacted historical	prior to their removal /	Contractor	G303, HKT01,	features before	
		buildings and cultural/historical landscape features,	relocation		HKT02, Entrance	commenceme nt of	
		photographic and cartographic records should be conducted to			Gate of HKT03,	construction works	
		preserve them by record. Liaison with and obtaining			HKT04, KT01 to	during Schedule 3	
		agreement from the descendants of these features will be			KT10, KT13,	study	
		carried out the Project Proponent.			KT36, KT39,		
					KT40, KT41,		
					KT43, KT45,		
					KT47, KT50,		
					KT54, KT62 to		
					KT63, KT69,		
					FL01, FL16, and		
					FL35		
S11.6.2	CH10	Conducting Photographic and Cartographic Records Prior to	To preserve the directly	Project	KT12 and KT61	Prior to Removal /	N/A
		Removal/Relocation of Impacted Built Heritages	impacted sites by record	Proponent/		Relocation of	
		Prior to removal/relocation of the directly impacted historical	prior to their removal /	Contractor		features before	
		buildings and cultural/historical landscape features,	relocation			commencement of	
		photographic and cartographic records should be conducted to				construction works	
		preserve them by record. Liaison with and obtaining agreement					
		from the descendants of these features will be carried out by the					
		Project Proponent.					
				1	1	1	1

S11.6.2	CH11	Relocation of Built Heritages Relocation of built heritages to a	To preserve the directly	Project	HKT01, HKT02,	After the	N/A
		reasonable location nearby may be required.	impacted sites by relocation	Proponent/	Entrance Gate of	photographic and	
				Contractor	HKT03	cartographic	
						records and before	
						commencement of	
						construction works	
S11.6.2	CH12	Drainage System and Access Route Design For the retained	To prevent the persevered	Contractor	The retained built	Pre-construction	N/A
		built heritage items in developable area, drainage system and	flooding and maintain the	/Detailed Design	heritage items	phase	
		access route would be designed to prevent the persevered	accessibility to the built	consultant			
		flooding and maintain the accessibility to the built heritage.	heritage				
Cultural I	Heritage (0	Construction Phase)					
S11.6.1	CH13	Inform Upon Archaeological Discovery	Special attention should be	Contractor	All soil excavation	Immediately upon	
		Pursuant to the Antiquities and Monuments Ordinance, the	given to areas evaluated to		works	discovery during	N/A
		construction Contractor should inform the AMO immediately in	have archaeological			excavation works	
		case of discovery of antiquities or supposed antiquities in the	potential or significance.				
		course of excavation works in construction phase.					
S11.6.2	CH14	Watertable Monitoring	To minimize the potential	Contractor	Within NDAs	Construction	
		Since the construction works and development activities may	impacts to the built heritage			phase	N/A
		induce change in the watertable. It is recommended the	items by the change of				
		Contractor should ensure that the change of watertable induced	watertable induced by the				
		by the construction works and development activities will not	works during the				
		result in settlement of built heritage.	Construction phase				
S11.6.2	CH15	Conducting Construction Vibration Monitoring and Structural	To minimize the potential	Contractor	Identified potential	Construction	
		Strengthening Measures	impacts during Construction		vibration impacted	phase, with details	٨
		Construction vibration monitoring and structural strengthening	phase on any identified		built heritage	specified in	
		measures should be conducted during Construction phase based	potential vibration impacted		features	baseline condition	
		on the assessment result of baseline condition survey and	built heritage features			survey and	

baseline vibration impact assessment, so as to ensure the construction performance meets with the vibration standard stated in the EIA report.  Landscape and Visual impact (Detailed Design, Prior to Construction, Construction and Operation Phases)  S.12.9  LV1 General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.  S.12.9  LV2 Minimum Topographical Change —To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical fundform 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 fand 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.								
Stated in the EIA report.			baseline vibration impact assessment, so as to ensure the				baseline vibration	
Landscape and Visual Impact (Detailed Design, Prior to Construction, Construction and Operation Phases)  S.12.9 LV1 General Good Practice Measures - For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.  S.12.9 LV2 Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and of natural features such as spurs and ridges where appropriate,			construction performance meets with the vibration standard				impact assessment	
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re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.    S.12.9   LV2   Minimum Topographical Change —To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain.    Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate,			With regard to topsoil, where identified, it should be stripped,				should be installed	
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S.12.9 LV2 Minimum Topographical Change –To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate,			roadside amenity strips, and open space sites.				to achieve early	
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,							establishment	
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,	S.12.9	LV2	Minimum Topographical Change -To minimize landscape and	Reduce topographical	Government /	Throughout	Prior to	N/A
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,	MM1		visual impacts, the footprint and elevation of such elements	changes and minimize land	Detailed Design	NDAs, particularly	Construction	
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,			should be optimized to reduce topographical/ landform changes,	resumption	Consultant/	for reservoirs		
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,			as well as reduce land take and interference with natural terrain.		Contractor			
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,			Where there is a need to significantly cut into the existing					
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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,			also considering visual amenity. Earthworks and engineered					
natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate,			slopes should be designed to be a visually interesting landform,					
of natural features such as spurs and ridges where appropriate,			compatible with the surrounding landscape and to mimic the					
			natural contouring and terrain e.g. introduction and continuation					
to support assimilation with the hillside setting.			of natural features such as spurs and ridges where appropriate,					
			to support assimilation with the hillside setting.					

S.12.9	LV3	Detailed Design (Visual) -The footprint and massing of	Improve visual amenity of	Detailed Design	Throughout NDAs	Prior to	N/A
MM2		development components and the works area should also be	the new buildings, NDAs in	Consultant		Construction	
		kept to a practical minimum and the detailed design of	general and integrate as				
		development components for Construction phase should	best possible into the				
		follow the Sustainable Building Design Guidelines. The	surrounding landscape				
		form, textures, finishes and colours of the proposed					
		development components should aim to be compatible with					
		the existing surroundings. To improve visual amenity					
		designs should be aesthetically pleasing and treatment of					
		structures also improve visual amenity. For example,					
		natural building materials such as stone and timber, should					
		be considered for architectural features, and light earthy tone					
		colours such as shades of green, shades of grey, shades of					
		brown and off-white should also be considered to reduce the					
		visibility of the development components, including all					
		roadwork, buildings and noise barriers. In addition, the					
		design of structures should consider green roofs were					
		feasible, following stated guidelines. All Noise barriers,					
		particularly noise barriers but also any barriers proposed for					
		ecological impact mitigation, should be kept to a practical					
		minimum, and be of such a designed as to integrate as well					
		as possible into the surrounding visual context and be as low					
		as practical to minimize blocking views. Noise barrier					
		design, including vertical, cantilever or curved, and noise					
		enclosures including semi-enclosure and full enclosure, at					
		grade and/ or elevated, should follow the guidelines stated.					
		Construction time frame should also be considered and					

		designs seek to keep it to a practical minimum.					
S12.9	LV 4	Avoid affecting Watercourses – In the detailed design,	Avoid direct impacts to	Detailed Design	All watercourses,	Prior to	٨
MM14.4		consideration should be made of watercourses, to minimize	watercourses	Consultant/	particularly the	Construction and	
		any impacts e.g. at new bridge crossings, viaducts, road		Contractor	stream at Siu	Construction	
		alignment etc. Guidelines stated should be followed.			Hang San Tsuen	Phase	
		For example, for the stream at Siu Hang San Tsuen in FLN			that will flow under		
		NDA, much of the stream is located underneath the viaduct			the Fanling		
		for the proposed Fanling Bypass. In order to avoid impacts			Bypass Eastern		
		to the stream, the detailed final design of the viaduct should			Section		
		follow guidelines and ensure that no viaduct footings or other			Geoderi		
		structures are placed in the stream.					
		Bridges and box culverts should also be used to minimize the					
		necessity of watercourse modification and protect the					
		watercourses where necessary.					
		ual (Construction)	T	T	Г	<u> </u>	
S.12.9	LV5	Open Space Provision - the principles adopted in the RODP	Reprovision of open space.	Government	Onsite as	Prior to	N/A
MM3		planning ensure that public open space systems are	Enhance visual amenity of	Developer/	stipulated in the	Construction and	
		incorporated. All requirements for open space areas	the area and improve the	Detailed Design	planning	Construction Phas	
		stipulated in the planning documents for the formulation of	overall landscape character	Consultant/	documents for the		
		the Preliminary Layout Plan should be adhered to.		Contractor/	formulation of the		
					Preliminary		
					Layout Plan		
S.12.9	LV6	Tree Protection & Preservation – Exiting trees to be retained	Protect and Preserve Trees	Government /	Onsite	Prior to	#
MM4		within the Project Site should be carefully protected during		Detailed Design		Construction and	
		construction. In particular OVTs will be preserved		Consultant/		Construction	
		according to ETWB Technical Circular (Works) No. 29/2004.		Contractor		Phase	

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		Detailed Tree Protection Specification shall be provided in					
		the Contract Specification. Under this specification, the					
		Contractor shall be required to submit, for approval, a					
		detailed working method statement for the protection of trees					
		prior to undertaking any works adjacent to all retained trees,					
		including trees in Contractor's works areas.					
		A detailed tree survey will be carried out for the Tree Removal					
		Application (TRA) process which will be carried out at the					
		later detailed design stage of the Project. The detailed tree					
		survey will propose which trees should be retained,					
		transplanted or felled and will include details of tree					
		protection measures for those trees to be retained					
S.12.9	LV7	Tree Transplantation - Trees unavoidably affected by the	Transplant Trees where	Government /	Onsite where	Prior to	N/A
MM5		Project works should be transplanted where practical. Trees	suitable for transplantation	Detailed Design	possible.	Construction,	
		should be transplanted straight to their final receptor site and		Consultant/	Otherwise	Construction	
		not held in a temporary nursery as far as possible.		Contractor	consider offsite	Phase &	
					locations	Maintenance in	
		A detailed Tree Transplanting Specification shall be provided				Operation Phase	
		in the Contract Specification, where applicable. Sufficient					
		time for necessary tree root and crown preparation periods					
		shall be allowed in the project programme.					
		A detailed transplanting proposal will be submitted to relevant					
		government departments for approval in accordance with					
		ETWBTC 2/2004 and 3/2006 and final locations of					
		transplanted trees should be agreed prior to commencement					
		of the work.					

		For trace appointed with highways a greedeide planting					
		For trees associated with highways e.g. roadside planting					
		along highways, that are unavoidably affected and should be					
		transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree					
		Transplanting Works under Highways Department's					
		Vegetation Maintenance Ambit' should be referred to.					
S.12.9	LV8	Slope Landscaping – Site formation should be reduced as far	To avoid substantial slope	Government /	Onsite	Prior to	N/A
MM6		as possible. Seeding of modified slopes should be done as	cutting and fill slopes.	Detailed Design		Construction,	
		soon as grading works are completed to prevent erosion and	To prevent erosion and	Consultant/		Construction	
		subsequent loss of landscape resources and character.	subsequent loss of	Contractor		Phase &	
		Woodland tree seedlings and/ or shrubs should be planted	landscape resources and			Maintenance in	
		where slope gradient and site conditions allow.	character.			Operation Phase	
			To ensure man-made slopes				
		In addition, landscape planting should be provided for the	are as visually amenable as				
		retaining structures associated with modified slopes where	possible.				
		conditions allow. All slope landscaping works should					
		comply with GEO Publication No. 1/2011-Technical					
		Guidelines on Landscape Treatment for Slopes.					
S.12.9	LV9	Compensatory Planting - Compensatory tree planting for	Compensate for trees and	Government /	Onsite where	Prior to	N/A
MM7		felled trees shall be provided to the satisfaction of relevant	shrubs lost due to the	Detailed Design	possible.	Construction,	
I		Government departments. Required numbers and locations	Project.	Consultant/	Otherwise	Construction	
		of compensatory trees shall be determined and agreed		Contractor	consider offsite	Phase &	
		separately with Government during the Tree Removal			locations	Maintenance in	
		Application process under ETWBTC 3/2006.				Operation Phase	
		Compensatory planting is proposed at the potential open					
		areas such as open spaces, amenity areas, open areas of the					
]							
İ		streetscapes, as well as the open areas within development		1			

		lots.			
		Compensatory planting for shrubs should be considered in			
		suitable locations. Native species such as Melastoma			
		malabathricum, Diospyros vaccinioides, Gardenia			
		jasminoides, Ixora chinensis, Ligustrum sinense, Litsea			
		rotundifolia, Melastoma dodecandrum, Atalantia buxifolia,			
		Rhodomyrtus tomentosa, Rhaphiolepis indica, and			
		Rhododendron simsii are suggested.			
S.12.9	LV10	Woodland Compensatory Planting -Specific Woodland			N/A
MM8		compensatory planting is proposed for any areas of quality			
		woodland that are unavoidably affected by the Project. The			
		location and design of the woodland compensatory planting			
		will principally be within habitats of lower value such as			
		upland grassland. The proposed locations are identified, for			
		example, on the foothills of Tai Shek Mo, and on the higher			
		ground of Fung Kong Shan in KTN NDA; along Fanling			
		Bypass; and a small area in the northern FLN NDA.			
		The intention of the compensatory woodland will be to			
		recreate areas of quality woodland, not necessarily to			
		compensate for loss of trees on a like for like basis (See E18			
		& E27 also).			
		Native tree species are suggested for planting in the			
		appropriate locations, including Ailanthus fordii, Bischofia			
		javanica, Castanopsis fissa, Celtis sinensis, Cinnamomum			
		burmannii, Cinnamomum camphora, Xanthoxlyum			

	+						
		avicennaeHibiscus tiliaceus, Liquidambar formosana,					
		Sapium discolor, Schefflera heptaphylla and llex rotunda. In					
		addition some understory vegetation may be planted					
		including shrubs such as Atalantia buxifolia, Diospyros					
		vaccinioides, Gardenia jasminoides, Ixora chinensis,					
		Ligustrum sinense, Litsea rotundifolia, Melastoma					
		malabathricum, Melastoma dodecandrum, Rhodomyrtus					
		tomentosa, Rhaphiolepis indica, and Rhododendron simsii.					
		The area allocated for compensatory woodland planting					
		allows in part for the fact that it will take some time for the					
		compensatory planting to achieve the landscape and					
		ecological function and value of the area to be lost. In					
		addition, it allows for the fact that not all of the areas identified					
		for planting will prove to be plantable, by virtue of topography					
		and ground conditions and, especially, because though the					
		areas identified are largely grassland it is inevitable that these					
		areas will already support some patches of trees and shrubs					
		which would be inappropriate for further planting.					
S.12.9	LV11	Vertical Greening – Planting of climbers to grow up vertical	Soften hard surfaces and	Government /	On appropriate	Prior to	N/A
MM9		surfaces were appropriate (e.g. building edges, piers).	facilities	Developer/	structures	Construction,	
				Detailed Design		Construction	
				Consultant/		Phase &	
				Contractor		Maintenance in	
						Operation Phase	

## App Q - IMPLEMENTATION SCHEDULE AND RECOMMENDED MITIGATION MEASURES

## July 2021

S.12.9	LV12	Green Roof - Roof greening where appropriate should be	Reduce exposure to	Government /	On appropriate	Prior to	N/A
MM10		established on proposed buildings as per the guidelines	untreated concrete surfaces	Developer/	buildings	Construction,	
		stated. These guidelines provide further details including	and particularly mitigate	Detailed Design		Construction	
		information regarding structural loading, design,	visual impact to VSRs at	Consultant/		Phase &	
		maintenance, etc. considerations as well as providing	high levels. Provide	Contractor		Maintenance in	
		information on what types of plants might be suitable.	greening.			Operation Phase	
	1						
S.12.9	LV13	Screen Planting – Tall screen/buffer trees and shrubs should be	To screen proposed	Government /	Along roads,	Prior to	N/A
MM11		planted. This measure may additionally form part of the	structures such as roads and	Detailed Design	around suitable	Construction,	
		compensatory planting.	buildings. Improve	Consultant/	built structures, or	Construction	
			compatibility with the	Contractor	around VSRs to	Phase &	
			surrounding environment		contain their view	Maintenance in	
			and create a pleasant		out to the NDA	Operation Phase	
			pedestrian environment		structures.		

S.12.9	LV14	Road Greening –For viaducts, soft landscaping should be	To soften the hard, straight	Government /	On viaducts or	Prior to	N/A
MM12		provided to soften the hard, straight edges (for climbers used to	edges and provide greening	Developer/	along roads	Construction,	
		cover the vertical, hard surfaces of the piers – see MM9 Vertical	along roads.	Detailed Design		Construction	
		Greening) and shade tolerant plants should be planted, where		Consultant/		Phase &	
		light is sufficient, to improve aesthetic value of areas under		Contractor		Maintenance in	
		viaducts. Both at grade planting and use of elevated planters				Operation Phase	
		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.					
1		For at grade roads, planting should be considered along central					
I		dividers and on road islands e.g. in the middle of roundabouts.					
		(Roadside planting i.e. at the road edge and not in the central					
		divider or road island, is considered part of Screen Planting)					
S.12.9	LV15	Marsh/Wetland Compensation –The proposed Long Valley	Compensate for Marsh/	Project	Onsite where	Prior to	N/A
MM13 &		Nature Park (LVNP) will be designed and implemented to	Wetland lost due to the	Proponent/	possible.	Construction,	
EIA Annex		enhance on- wetland areas within the LVNP. (See E4,E15 and	Project.	Detailed Design	Otherwise	Construction	
13		E25 also)		Consultant/	consider offsite	Phase &	
		Also see LV16, LV17, and LV18 as wetland planting should be		Contractor/	locations	Maintenance in	
		provided along the embankments and beds of modified/		Maintenance		Operation Phase	
		reprovisioned watercourses.		Authority			

S.12.9	LV16	Reprovision of Natural Stream – Where natural streams are	Achieve a natural stream,	Government /	Streams and	Prior to	N/A
MM14.1		unavoidably affected along some of their length, they can be	similar to existing, including	Developer/	channelized	Construction,	
		diverted to avoid the proposed new developments and retain the	wetland planting provision	Detailed Design	watercourses	Construction	
		integrity of the whole stream. Detailed design of any stream	for embankments	Consultant/	e.g. a Ma Tso	Phase &	
		diversion should follow the Guidelines in ETWB Technical		Contractor	Lung and Siu Han	Maintenance in	
		Circular (Works) No. 5/2005 (Protection of natural streams/rivers			San Tsuen	Operation Phase	
		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)					
S12.9	LV17	Stream Buffer Planting –Providing a minimum 10 m buffer with	Protect natural streams	Government /	Streams and	Prior to	N/A
MM14.2		planting (where there is a general presumption against any		Developer/	channelized	Construction,	
		development taking place) along streams where they flow close		Detailed Design	watercourses	Construction	
		to developments, confers a degree of protection to the stream		Consultant/	e.g. a Ma Tso	Phase &	
		course and its associated vegetation.		Contractor	Lung and Siu Han	Maintenance in	
					San Tsuen	Operation Phase	
		For the stream at Ma Tso Lung in KTN NDA, the middle and					

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		upper sections will be designated as Green Belt zone where					
		there is a general presumption against development as buffer to					
		the stream.					
		For the stream at Siu Hang San Tsuen in FLN NDA, within the					
		NDA boundary much of the stream would be located underneath					
		the viaduct for the proposed Fanling Bypass. To the south of the					
		viaduct the stream flows through an Open Space area D1-3. In					
		this Open Space zone a 10m buffer is proposed in which natural					
		vegetation will be retained and enhanced and human activities					
		will be limited in order to avoid direct impacts to the stream bed					
		and to minimize potential indirect impacts to the stream and					
		riparian corridor. (See E3 also)					
S12.9	LV18	Enhancement Planting along Embankment - For channelized	Minimize the necessity of	Government /	Channelized	Prior to	N/A
MM14.3		watercourses, if these are modified, the Drainage Services	watercourse modification,	Developer/	watercourse,	Construction,	
		Department Practice Note No.1/2005 – Guidelines on	protect watercourses where	Detailed Design	particularly the Ma	Construction	
		Environmental Considerations for River Channel Design, should	possible and enhance	Consultant/	Wat River	Phase &	
		be considered and appropriate mitigation measures included	channelized watercourses	Contractor	Channel Diversion	Maintenance in	
		ensuring the new watercourses match the existing as far as				Operation Phase	
		possible. Measures can include enhancement planting to					
		upgrade the channels as appropriate, including consideration of					
		wetland planting along embankments where appropriate; as well					
		as consideration of the best materials for the channel lining (e.g.					
		gabion). All measures must also ensure any necessary					
		maintenance work can be carried out and that the channel					
		meets all its requirements for water flow, etc.					

		For example, a stretch of the Ma Wat River Channel in the south					
		of FLN NDA will have to be diverted for the construction of the					
		Fanling Bypass Eastern Section. This measure will be					
		particularly relevant in this area.					
S12.9	LV19	Pond Replacement –Principles adopted in the design of the	Reprovision for ponds lost	Project	E1-7 and C1-9	Prior to	N/A
MM15		NDAs ensure that they incorporate ponds within the RODPs.	due to the Project.	Proponent/	(LVNP) in KNT	Construction,	
				Detailed Design	NDA and	Construction	
		All requirements for ponds stipulated in the planning documents		Consultant/	generally	Phase	
		for the formulation of the Preliminary Layout Plan (e.g. at Fung		Contractor/	throughout NDA	Maintenance in	
		Kong Shan Park in E1-7 of KNT ND) should be adhered to.		Maintenance		Operation Phase	
				Authority			
S.12.9	LV20	Screen Hoarding –Screen hoarding shall be erected along areas	To screen undesirable views	Contractor	Throughout NDAs	Construction	۸
MM16		of the construction works site boundary where the works site	of the works site.			Phase	
		borders publically accessible routes and/or is close to visually					
		sensitive receivers (VSRs). It is proposed that the screening be					
		compatible with the surrounding environment and where					
		possible, non- reflective, recessive colours be used.					
		Any works areas near the ecological sensitive areas should					
		erect 2m high dull green site boundary fence. Details can refer					
		to the ecological impact assessment (Chapter 13 of the EIA					
		report).					
S.12.9	LV21	Light Control – Construction day and night time lighting should	To minimize glare impact to	Government /	Throughout NDAs	Construction and	N/A
MM17		be controlled to minimize glare impact to adjacent VSRs during	adjacent VSRs	Developer/		Operation Phases	
		the Construction phase.		Contractor			
		Street and night time lighting shall also be controlled to minimize					

		glare impact to adjacent VSRs during the operation phase.  onstruction Phase or throughout the project)					
S. 13.9	E1	Egretry Habitat Creation & Management Plan (EHCMP) and Woodland Planting and Management Plan (WPMP)	Compensate for loss of Man  Kam To Road egretry.  Compensate for loss of secondary woodland and hillside plantation of	Project Proponent/ Detailed Design Consultant (EHCMP and	FLN area A1-7 (egretry compensation). KTN areas E1-8 and G1-3	Detailed design phase	N/A
			ecological significance.	WPMP).	(woodland compensation).		
S. 13.9	E2	Detailed design of development along lower reaches of Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream in OU zones F1-2 and F1-3 and detailed design of LMC Loop Eastern Connection Road with restoration of diverted stream and riparian corridor, permanent barrier and underpass on the at- grade section	Minimize impacts on Ma Tso Lung Stream and Ma Tso Lung San Tsuen Stream and riparian corridor of importance to species of conservation significance.	Project Proponent/ Detailed Design Consultant. (design of Ma Tso Lung Stream diversion	KTN areas F1-2 and F1-3 and LMC Loop Eastern Connection Road.	Detailed design and construction phases.	N/A
		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		and buffer zone habitat restoration measures)			

S13.9	E3	Detailed design, implementation and management of Siu Hang	Minimize impacts on Siu	PlanD, Project	FLN area D1-3.	Detailed design,	*
		San Tsuen Stream to have 10m wide vegetated buffer in Open	Hang San Tsuen Stream and	Proponent/		construction and	
		Space zone D1-3, Fanling Bypass to cross stream on viaduct.	stream fauna.	Detailed Design		operation phases.	
				Consultant/			
				Contractor/			
				Maintenance			
				Authority			
S.13.9	E4	Long Valley Nature Park (LVNP) designation, design and	Compensate for wetland loss	Project	Long Valley KTN	Detailed design	N/A
		implementation.	arising from the project and	Proponent/	area C1-9 and	phase	
			protection of Long Valley	Detailed Design	any suitable areas		
			from adverse ecological	Consultant	to be identified		
		Enhancement of non-wetland habitats in LVNP. Planning for the	impacts including provision	(Long Valley	during the		
		advanced provision of alternative foraging habitat along main	of additional/alternative	Nature Park	planning stage		
		river channels for large waterbirds.	habitat for large waterbirds	Habitat Creation			
			using Ng Tung, Sheung Yue	& Management			
			and Shek Sheung River	Plan)			
			channels.				
S13.9	E5	Stringent planning control requirements in Long Valley north and	Protect these wetland areas	PlanD.	KTN areas C2-1	Detailed design	N/A
		west of Sheung Yue River, including Ho Sheung Heung egretry.	from indirect impacts to		and C2-2 , Ho	phase	
			habitats and fauna especially		Sheung Heung		
			breeding ardeids foraging in		egretry and areas		
			these areas and utilizing		north of Long		
			flight-lines from Ho Sheung		Valley along the		
			Heung egretry.		Ng Tung River to		
					the Shenzhen		
			Avoid habitat loss and		River		
			disturbance to fauna of				

Conservation significance, especially resting ardeids  Maintenance of ecological linkages, especially for waterbirds  E6 Planning for creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; and detailed design of Open Space areas and development areas along river corridors.  E7 Building setback and mounding in locations near Long Valley.  E8 Building setback and mounding along northern and northeastern boundaries).  E8 Building setback and mounding along northern and northeastern boundaries).								
Maintenance of ecological linkages with Deep Bay ecosystem and avoidance of severance of these linkages, especially for varietistics surject of the separation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; and detailed design of Open Space areas and development areas along river corridors.  S13.9 E7 Building setback and mounding in locations near Long Valley.  KTN area B3-12 (30m setback and mounding along northern and northeastern boundaries).  Maintenance of ecological linkages with Deep Bay ecosystem, especially for varietistic surject Area and Long Valley.  Minimization of disturbance inhabits and severance of these linkages, especially for Long Valley.  Minimization of disturbance inhabits of fauna using Long Valley.  Minimization of disturbance inhabits of fauna using Long Valley.  Welley.  Minimization of disturbance inhabits of fauna using Long Valley.  Welley.  Minimization of disturbance inhabits of fauna using Long Valley.  Welley.  Minimization of disturbance inhabits of fauna using Long Valley.  Welley.  Minimization of disturbance inhabits of fauna using Long Valley.  Welley.  Minimization of disturbance inhabits of fauna using Long Valley.  Welley.  Minimization of disturbance inhabits of fauna using Long Valley.  Welley.  Minimization of disturbance inhabits of fauna using Long Valley.  Welley.  Minimization of disturbance inhabits of fauna using Long Valley.  Welley.  Minimization of disturbance inhabits of fauna using Long Valley.  Welley.  Minimization of disturbance inhabits of fauna using Long Valley.  Welley.  Minimization of disturbance inhabits of fauna using Long Valley.  Welley.  Minimization of disturbance inhabits of fauna using Long Valley.  Welley.  Minimization of disturbance inhabits of fauna using Long Valley.  Welley.  Minimization of disturbance inhabits of fauna using Long Valley.  Welley.  Minimization of disturbance inhabits of disturbance inhabits of fauna disturbance inhabits of fauna di				conservation significance,				
Since the composition of the continue of the selection				especially nesting ardeids				
Binkages with Deep Bay ecosystem and avoidance of severance of these linkages, especially for waterbirds   Project								
E6 Planning for creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; and detailed design of Open Space areas and development areas along river corridors.  S13.9 E7 Building setback and mounding in locations near Long Valley.  KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries).				Maintenance of ecological				
S13.9 E7 Building setback and mounding along northern and northeastern boundaries).  E6 Planning for creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; and detailed design of Open Space areas and development areas along river corridors.  E7 Building setback and mounding along northern and northeastern boundaries).  E8 Planning for creation of Green Corridors Along the Sheung Yue, Ng Tung and Shek Sheung River channels.  E8 Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority  E8 Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority  E8 Building setback and mounding in locations near Long Valley.  E8 Building setback and mounding along northern and northeastern boundaries).  E8 Planning for creation of Green Corridors Along the Sheung Yue and Shek Sheung Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority  E8 Building setback and mounding in locations near Long Valley.  E8 Building setback and mounding along northern and northeastern boundaries).  E8 Building setback and mounding along northern and northeastern boundaries).				linkages with Deep Bay				
E6 Planning for creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; and detailed design of Open Space areas and development areas along river corridors.  S13.9 E7 Building setback and mounding along northern and northeastern boundaries).  Minimize disturbance to large waterbirds using Ng Tung, Sheung Yue and Shek Sheung River channels.  Sheung River channels.  Sheung River channels.  Consultant/ Contractor/ Maintain ecological linkages within NDA Project Area and between Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.  Minimization of disturbance impacts to fauna using Long Valley.  KTN area B3-12 (30m setback and mounding along northern and northeastern boundaries).  Area along Ng Tung, Sheung Yue Construction and operational Operational Area along Ng Tung, Sheung Yue Construction Amaintain ecological linkages within NDA Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.  Minimization of disturbance impacts to fauna using Long Valley.  Valley.  KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and				ecosystem and avoidance of				
S13.9   E6   Planning for creation of Green Corridors along the Sheung Yue, Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; and detailed design of Open Space areas and development areas along river corridors.   Maintain ecological linkages within NDA Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.   PlanD   KTN area B3-12 (30m setback and mounding along northern and northeastern boundaries).   Maintain ecological forms and structure to large waterbirds using Ng Proponent/ Tung, Sheung Ng Proponent/ Tung, Sheung Ng Proponent/ Tung, Sheung Ng Proponent/ Tung, Sheung Yue and Shek Sheung Constitution and operational operational phases.   N/A				severance of these linkages,				
Ng Tung and Shek Sheung Rivers, retention and provision of screen plantings where feasible; and detailed design of Open Space areas and development areas along river corridors.  Sheung River channels.  Sheung River channels.  Maintain ecological linkages within NDA Project Area and Detailed Design Consultant/ Contractor/ Maintenance Authority  Building setback and mounding in locations near Long Valley.  S13.9  E7  Building setback and mounding along northern and northeastern boundaries).  Maintain ecological linkages within NDA Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.  Minimization of disturbance impacts to fauna using Long Valley.  Valley.  Proponent/ Detailed Design Consultant/ Consultant/ Contractor/ Maintenance Authority  Detailed Design River  Authority  Proponent/ Tung, Sheung Yue construction and operational phase Sheung River Channels.  Pland River  Tung, Sheung Yue and Shek Sheung Consultant/ Consultant/ Consultant/ Contractor/ Maintenance impacts and development areas along river corridors.  Minimization of disturbance impacts to fauna using Long Valley.  Valley.  Valley.  KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and Minimization of Minimization				especially for waterbirds				
screen plantings where feasible; and detailed design of Open Space areas and development areas along river corridors.  Tung, Sheung Yue and Shek Sheung River channels.  Sheung River channels.  Consultant/ Contractor/ Maintenance Authority  Maintenance Authority  Striver  Detailed Design Consultant/ Contractor/ Maintenance Authority  Maintenance Authority  Striver  Detailed Design River  Phases.  Striver  Detailed Design River  Contractor/ Maintenance Authority  Minimization of disturbance impacts to fauna using Long KTN area B3-12 (30m setback from road D3) and KTN area C1- 1 (15m setback and mounding along northern and northeastern boundaries).  Tung, Sheung Yue and Shek Sheung River channels.  Detailed Design Consultant/ Contractor/ Maintenance Authority  PlanD KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and KTN area C1-1 (15m setback and	S13.9	E6	Planning for creation of Green Corridors along the Sheung Yue,	Minimize disturbance to	Project	Area along Ng	Detailed design,	N/A
Space areas and development areas along river corridors.  Sheung River channels.  Consultant/ Contractor/ Maintain ecological linkages within NDA Project Area and between Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.  S13.9  E7  Building setback and mounding in locations near Long Valley.  KTN area B3-12 (30m setback from road D3) and KTN area C1- 1 (15m setback and mounding along northern and northeastern boundaries).  River  PlanD  KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and KTN area C1-1 (15m setback and			Ng Tung and Shek Sheung Rivers, retention and provision of	large waterbirds using Ng	Proponent/	Tung, Sheung Yue	construction and	
Maintain ecological linkages within NDA Project Area and between Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.  S13.9 E7 Building setback and mounding in locations near Long Valley.  KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries).  Contractor/ Maintenance Authority  Authority  N/A  Winimization of disturbance impacts to fauna using Long Valley.  Valley.  Contractor/ Maintenance Authority  Authority  N/A  FIN area B3-12 Detailed design (30m setback phase)  from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries).			screen plantings where feasible; and detailed design of Open	Tung, Sheung Yue and Shek	Detailed Design	and Shek Sheung	operational	
Maintain ecological linkages within NDA Project Area and between Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.  S13.9 E7 Building setback and mounding in locations near Long Valley.  KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries).  Maintain ecological linkages within NDA Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.  PlanD KTN area B3-12 Detailed design phase (30m setback phase)  Valley.  Valley.  KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries).			Space areas and development areas along river corridors.	Sheung River channels.	Consultant/	River	phases.	
within NDA Project Area and between Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.  S13.9 E7 Building setback and mounding in locations near Long Valley.  KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries).  Within NDA Project Area and Authority  Authority  Authority  Authority  FlanD  KTN area B3-12 Detailed design (30m setback phase)  (30m setback phase)  KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries).					Contractor/			
between Project Area and Deep Bay ecosystem, especially for Long Valley and waterbirds.  S13.9 E7 Building setback and mounding in locations near Long Valley.  KTN area B3-12 (30m setback from road D3) and KTN area C1-1 (15m setback and mounding along northern and northeastern boundaries).				Maintain ecological linkages	Maintenance			
Deep Bay ecosystem, especially for Long Valley and waterbirds.  S13.9 E7 Building setback and mounding in locations near Long Valley.  KTN area B3-12 (30m setback from road D3) and KTN area C1- 1 (15m setback and mounding along northern and northeastern boundaries).  Deep Bay ecosystem, especially for Long Valley And waterbirds.  Minimization of disturbance impacts to fauna using Long (30m setback phase (30m setback from road D3) and KTN area C1-1 (15m setback and				within NDA Project Area and	Authority			
E7 Building setback and mounding in locations near Long Valley.  Minimization of disturbance impacts to fauna using Long  KTN area B3-12 (30m setback from road D3) and KTN area C1- 1 (15m setback and mounding along northern and northeastern boundaries).				between Project Area and				
S13.9 E7 Building setback and mounding in locations near Long Valley.  KTN area B3-12 Detailed design phase  KTN area B3-12 (30m setback from road D3) and KTN area C1- 1 (15m setback and mounding along northern and northeastern boundaries).  And waterbirds.  Minimization of disturbance impacts to fauna using Long  Valley.  FlanD  KTN area B3-12 (30m setback phase  from road D3) and  KTN area C1-1 (15m setback and				Deep Bay ecosystem,				
S13.9 E7 Building setback and mounding in locations near Long Valley.  KTN area B3-12 (30m setback from road D3) and KTN area C1- 1 (15m setback and mounding along northern and northeastern boundaries).  Minimization of disturbance impacts to fauna using Long Valley.  PlanD KTN area B3-12 (30m setback phase from road D3) and KTN area C1-1 (15m setback and				especially for Long Valley				
impacts to fauna using Long  KTN area B3-12 (30m setback from road D3) and KTN area C1-  1 (15m setback and mounding along northern and northeastern boundaries).  (30m setback phase  from road D3) and  KTN area C1-1  (15m setback and				and waterbirds.				
KTN area B3-12 (30m setback from road D3) and KTN area C1- 1 (15m setback and mounding along northern and northeastern boundaries).  Valley.  from road D3) and KTN area C1-1 (15m setback and	S13.9	E7	Building setback and mounding in locations near Long Valley.	Minimization of disturbance	PlanD	KTN area B3-12	Detailed design	N/A
1 (15m setback and mounding along northern and northeastern boundaries).  KTN area C1-1 (15m setback and				impacts to fauna using Long		(30m setback	phase	
boundaries). (15m setback and			KTN area B3-12 (30m setback from road D3) and KTN area C1-	Valley.		from road D3) and		
			1 (15m setback and mounding along northern and northeastern			KTN area C1-1		
mounding along			boundaries).			(15m setback and		
						mounding along		
northern and						northern and		
northeastern						northeastern		

					boundaries.		
S13.9	E8	Preparation and implementation of Guidelines for building	Minimize mortality and	PlanD/ Project	Near Long Valley	Detailed design	N/A
		design measures to minimize mortality and light and glare	disturbance impacts on	Proponent/		phase	
		impacts to fauna. Guidelines to address the following measures:	fauna, especially mammals	Developer/			
		Use opaque, non-transparent, non-reflective noise barriers for	and birds.	Detailed Design			
		all developments associated with the Project.		Consultant			
		Measures to include the following:					
		Fritting, or the placement of ceramic lines or dots on glass,					
		which creates a visual barrier to birds and reduces air					
		conditioning loads by lowering heat gain, while still					
		allowing light transmission for interior spaces. It is most					
		successful when the frits are applied on the outside					
		surface. Frosted glass has similar effects;					
		Angled glass to be used only for smaller panes in					
		buildings with a limited amount of glass;					
		The use of glass that reflects UV light (primarily visible to					
		birds, but not to humans) to reduce collisions;					
		Film and art treatment allow glass surfaces to be used a					
		medium of expression, often related to the nature and use					
		of the building, as well indicating to birds their					
		impenetrability;					
		Lightweight external screens can be added to windows or					
		become a façade element of larger buildings, and are					
		suitable where non-operable windows are prevalent,					
		which is often the case in modern buildings in HK					

	E9	Not used					N/A
S13.8	E10	Review development footprint and layout of proposed	Minimize loss of secondary	Project	KTN areas D1-11a	Detailed design	N/A
		developments in KTN areas D1-11a and G1-5 to avoid/minimize	woodland and shrubland of	Proponent/Detail	and G1-5 to	phase	
		direct and indirect impacts on secondary woodland at Ho	ecological value.	ed Design	avoid/minimize		
		Sheung Heung and shrubland at Crest Hill.		Consultant	direct and indirect		
					impacts on		
					secondary		
					woodland at Ho		
					Sheung Heung		
					and		
					Crest Hill		
S13.9	E11	No construction during ardeid breeding season (1 March to 31	Minimize disturbance	Project	Along and within	Detailed design/	۸
		July) along Sheung Yue River north or east of KTN D1-5 and	impacts (including	Proponent/	Sheung Yue and	construction	
		east of D1-9 and C2-3, construction hours restricted to 09.00 to	cumulative impacts with	Detailed Design	Ng Tung Rivers,	phase.	
		17.30 during 1 March to 31 July on new pedestrian bridge over	cycle track project) to flight-	Consultant	Long Valley, Long		
		the Sheung Yue River, new pedestrian bridge over the tidal	lines of breeding ardeids.	Contractor	Valley and		
		section of the Ng Tung River and existing bridge between KTN			watercourse		
		areas C2-2 and C1-8.			upstream areas		
					including KTN		
		Review Design and construction methods for all bridges			area B3-12		
		especially those on the Sheung Yue and tidal Ng Tung Rivers					
		and adopt methods which minimize impacts on Long Valley and					
		the rivers, and disturbance and fragmentation impacts on fauna.					
		No overlap in construction of bridges over main river channels.					
		Measures to ensure no hydrological disruption to Long Valley					
		Watercourse and water supply to Long Valley to be designed at					

		T	1				
		the detailed design stage for the rechannelisation of the Long					
		Valley Watercourse and the development of areas through which					
		it passes, including KTN area B3-12. Contingency plan to					
		address any disruption to be included in LVNP HCMP. Avoid					
		removal or interference with screen planting undertaken under					
		the Construction of Cycle Tracks and Associated Supporting					
		Facilities from Sha Po Tsuen to Shek Sheung project.					
Ecology	(Construct	ion Phase)				1	
S13.9	E12	Compensatory egretry habitat provision and establishment.	Compensate for loss of Man	Project	FLN area A1-7	Construction	۸
			Kam To Road egretry	Proponent/	500m from Man	phase.	
		Review condition and location of egretries before	habitat.	Detailed Design	Kam To Road		
		commencement of works. Formulate and implement additional		Consultant/	Egretry.		
		mitigation measures as appropriate.	Avoid mortality of breeding	Contractor			
			egrets				
		Phasing of works near and within Man Kam To Road Egretry					
		outside breeding season					
1							
S13.9	E13	Review design and construction methods for bridges, especially	Minimize impacts on rivers	Project	Along and within	Detailed design	۸
		those on the Sheung Yue and tidal Ng Tung Rivers, and adopt	and disturbance and	Proponent/	the Sheung Yue,	and construction	
		measures which minimize impacts on rivers and disturbance	fragmentation impacts on	Detailed Design	Ng Tung and	phases.	
		and fragmentation impacts on fauna.	fauna	Consultant/	Shek Sheung		
				Contractor	Rivers		
I		No construction during ardeid breeding season (1 March to 31					
1		July) along Sheung Yue River north and east of KTN area D1-5					
ı		and east of D1-9 and C2-3 and restriction of working hours on					
ı		new pedestrian bridges over the Sheung Yue River and tidal Ng					
ı		Tung River to 09.00 to 17.30 during the ardeid breeding season					

		(1 March to 31 July)					
		Provision of alternative foraging habitat along main river channels for large waterbirds.					
S13.9	E14	Buffer zone of 15-30m as appropriate on both sides (not less	Minimize impacts direct and	PlanD/ Project	KTN areas H1-1,	Detailed design	N/A
		than 45m total width) of Ma Tso Lung Stream north of the point	indirect impacts of habitat	Proponent/	F12 and F1-3 and	and construction	
		where it is crossed by the LMC Loop Eastern Connection Road,	loss, disturbance, pollution	Developer/	Lok Ma Chau	phases.	
		and Ma Tso Lung Stream diversion during construction of the	and fragmentation on Ma	Detailed Design	Loop Eastern		
		LMC Loop Eastern Connection Road; development along lower	Tso Lung Stream and marsh	Consultant/	Connection Road.		
		reaches of Ma Tso Lung Stream and Ma Tso Lung San Tsuen	and riparian corridor of	Contractor.			
		Stream in OU zones in KTN areas F1-2 and F1-3 to be set back	importance to species of	(Design of Ma			
		beyond buffer.	conservation significance.	Tso Lung			
				Stream diversion			
		Construction and maintenance of permanent 1.2m high solid		and buffer zone			
		faunal barrier at all at-grade sections of LMC Loop eastern		habitat			
		connection Road north of junction with road D4 within 15-30m		restoration			
		as appropriate of Ma Tso Lung Stream buffer and construction of		measures)			
		faunal underpass beneath road.					
		Compensation for the loss of seasonally wet grassland at Ma					
		Tso Lung by habitat restoration and enhancement along diverted					
		section of Ma Tso Lung Stream.					

S.13.9	E15	Creation and enhancement of proposed Long Valley Nature	Compensate for wetland loss	Project	Long Valley, (KTN	Construction	۸
		Park and creation and enhancement of wetland and buffer	arising from the project	Proponent/	area C1-9).	phase.	
		planting within LVNP.		Contractor			
				(LVNP Detailed			
				Habitat Creation			
				& Management			
				Plan)			
S13.9	E16	Creation of Green Corridors along the Sheung Yue, Ng Tung	Minimize disturbance to	Detailed Design	Ng Tung, Sheung	Detailed design	۸
		and Shek Sheung Rivers, retention and provision of screen	waterbirds using Ng Tung,	Consultant/	Yue and Shek	and Construction	
		plantings where feasible; provision of Open Space areas and	Sheung Yue and Shek	Contractor	Sheung Rivers	phases.	
		development areas along river corridors;	Sheung River channels.				
		Design and erection of 2m high solid dull green site barrier					
		fence between river channel and any active works area along or					
		adjacent to Ng Tung, Sheung Yue and Shek Sheung Rivers.					
		Ng Tung, Sheung Yue and Shek Sheung Rivers screen planting.					
S13.9	E17	Design and erection of 2m high solid dull green site barrier fence	Minimize dust, disturbance,	Contractor	Interface	Construction	N/A
		between active works areas and all areas/habitats of ecological	mortality and other adverse		between	phase.	
		importance on edge of development areas, including along any	ecological impacts on		areas/habitats/		
		roads adjacent to or penetrating into areas/habitats of ecological	habitats, flora and fauna.		fauna/ flora of		
		importance.	Measures to minimize flight-		ecological		
			line impacts to birds,		importance (e.g.		
		Erection of a 2m high dull green site barrier fence at the edge of	especially breeding ardeids.		KTN areas B1-3,		
		the works area or 30m from Ma Tso Lung Stream and			C1-5, C1- 6, C1-		
		tributaries, whichever distance is the greater.			9, C2-2, C2-4,		
					C2-5, D1-8, E1-8,		

					G1- 3, H1-1, Ma		
					Tso Lung Stream		
					and tributaries;		
					FLN areas A1-3,		
					A1-7 and A1-9)		
					and works areas;		
					and around any		
					works areas north		
					of the Fanling		
					Bypass and north		
					of the Ng Tung		
					River west of the		
					western terminus		
					of the Fanling		
					Bypass.		
					Riparian corridor		
					of Ma Tso Lung		
					Stream and		
					tributaries.		
040.0	F40	O	Occupants for the con-	Ductors		O a material in	NI/A
S13.9	E18	Compensatory woodland planting, management and	Compensate for loss of	Project	KTN areas E1-8	Construction	N/A
		maintenance.	secondary woodland and	Proponent/	and G1-3.	phase.	
			hillside plantation of	Contractor			
			ecological significance.				

S13.9	E19	Use opaque, non-transparent, non-reflective noise barriers for	Minimize mortality impacts	Contractor	All construction	Construction	^
		all construction sites.	on birds.		sites	phase.	
		Unnecessary lighting should be avoided.					
S13.9	E20	Pre-site clearance check for presence of flora or fauna of	Minimize impacts to flora	Government/	All construction	Prior to clearance	N/A
		conservation significance and bat roosts. If any are found,	and fauna of conservation	Developer/	sites.	of vegetation and	
		measures should be proposed and implemented to avoid,	significance. Minimize	Contractor/		structures.	
		minimize and/or compensate for impacts; including adjustments	impacts to protected fauna	Ecologist			
		to design, timing of works, transplantation and translocation.	and flora species. Formulate				
		Seek agreement of relevant authorities including AFCD in	and implement mitigation				
		respect of proposed measures, then implement.	measures to avoid, minimize				
			and/or compensate for				
		Pre-site clearance check on all construction sites and pre –	impacts; including				
		works commencement check on watercourses to be physically	adjustments to design,				
		and/or hydrologically impacted by construction activities for	timing of works,				
		presence of protected plant species/specimens of conservation	transplantation and				
		significance. If any are found consider adjustments to avoid,	translocation.				
		minimize and/or compensate for impacts; including adjustments					
		to design, timing of works,					
		Pre-site clearance of construction sites in Crest Hill area, KTN					
		areas D1-7, D1-11 and G1-5 (where Eurasian Hobby was					
		recorded) and on Cheung Po Tau, FLN area A3-1 (where Grey					
		Nightjar was recorded) for presence of any breeding					
		birds/breeding sites. If any are found consider adjustments to					
		avoid, minimize and/or compensate for impacts; including					
		adjustments to design, timing of works, transplantation and					

		translocation. Seek agreement of relevant authorities including					
		AFCD in respect of proposed measures, then implement.					
		Pre-site clearance check on all construction sites for presence of					
		Chinese Bullfrog, translocation to suitable areas including LVNP.					
S13.9	E21	Pre-works commencement check on watercourses to be	Minimize impacts to flora	Government/	All construction	Prior to clearance	N/A
		physically and/or hydrologically impacted by construction	and fauna of conservation	Developer/	sites.	of vegetation and	
		activities for presence of flora or fauna of conservation	significance. Minimize	Contractor/		structures.	
		significance and bat roosts. If any are found consider	impacts to protected fauna	Ecologist			
		adjustments to avoid, minimize and/or compensate for impacts;	and flora species. Consider				
		including adjustments to design, timing of works, transplantation	and implement adjustments				
		and translocation. Seek agreement of relevant authorities	to avoid, minimize or				
		including AFCD in respect of proposed measures, then	compensate for impacts;				
		implement.	including adjustments to				
			design, timing of works,				
		Pre-site clearance check on all construction sites for presence of	transplantation and				
		reptile species of conservation significance, capture and	translocation				
		translocate to receptor site; review translocation options in					
		respect to species in Ma Tso Lung area and determine whether					
		release locally or elsewhere is appropriate. Seek agreement of					
		relevant authorities including AFCD in respect of proposed					
		measures then implement					
		Pre-works commencement check on watercourses to be					
		physically and/or hydrologically impacted by construction					
		activities for presence of Small Snakehead and					
		Sommaniathelphusa zanklon. Capture any Sommaniathelphusa					
		zanklon found and translocate to Ma Tso Lung Stream/ other					

S13.9	E22	Suitable areas including LVNP  Prevention of dust, run-off and pollutants impacting Deep Bay catchment area and areas of ecological importance.	Avoid increase to pollution entering ecologically	Contractor	All construction sites.	Construction	N/A
			sensitive Deep Bay				
			ecosystem.				
		Specific Mitigati	on Measures for Designate	ed Projects			
		DP2- Castle Peak	Road Diversion (Major Im	provement)			
Landscap	oe and Vis	ual (Detailed Design, Prior to Construction, Construction and Op	perational Phases)			1	
S.12.A9	LV1-	General Good Practice Measures - For areas unavoidably		Detailed	Throughout	Prior to	N/A
	DP2	disturbed by the Project on a short term basis e.g. works areas,		Design	NDAs,	Construction,	
		the general principle to try and restore these to their former state		Consultant/		Construction &	
		to suit future land use, should be adhered to.		Contractor		for all planting,	
		With regard to topsoil, where identified, it should be stripped,				this should be	
		treated appropriately, and where suitable and practical stored for				installed as	
		re-use in the construction of the soft landscape works such as				soon as the	
		roadside amenity strips, and open space sites.				areas become	
						available, to	
						achieve early	
						establishment	
S.12.A9	LV4-	Avoid affecting Watercourses – In the detailed design,	Avoid direct impacts to	Detailed	All	Prior to	N/A
MM14.4	DP2	consideration should be made of watercourses, to minimize any	watercourses	Design	watercourses,	Construction	
		impacts e.g. at new bridge crossings, viaducts, road alignment		Consultant/	particularly the	and	
		etc.		Contractor	stream at Siu	Construction	

	1		I	T	T		1
		Guidelines stated should be followed.			Hang	Phase	
		For example, for the stream at Siu Hang San Tsuen in FLN NDA,			San Tsuen that		
		much of the stream is located underneath the viaduct for the			will		
		proposed Fanling Bypass. In order to avoid impacts to the			flow under the		
		stream, the detailed final design of the viaduct should follow			Fanling Bypass		
		guidelines and ensure that no viaduct footings or other			Eastern Section		
		structures are placed in the stream. Bridges and box culverts					
		should also be used to minimize the necessity of watercourse					
		modification and protect the watercourses where necessary.					
S.12.A9	LV5-	Tree Protection & Preservation – Exiting trees to be retained	Protect and Preserve	Government/	Onsite	Prior to	N/A
MM4	DP2	within the Project Site should be carefully protected during	Trees	Detailed		Construction	
		construction.		Design		and	
		In particular OVTs will be preserved according to ETWB		Consultant/		Construction	
		Technical Circular (Works) No. 29/2004. Detailed Tree Protection		Contractor		Phase	
		Specification shall be provided in the Contract Specification.					
		Under this specification, the Contractor shall be required to					
		submit, for approval, a detailed working method statement for					
		the protection of trees prior to undertaking any works adjacent to					
		all retained trees, including trees in Contractor"s works areas.					
		A detailed tree survey will be carried out for the Tree Removal					
		Application (TRA) process which will be carried out at the later					
		detailed design stage of the Project. The detailed tree survey will					
		propose which trees should be retained, transplanted or felled					
		and will include details of tree protection measures for those					
		trees to be retained.					
S.12.A9	LV6-	Tree Transplantation – Trees unavoidably affected by the Project	Transplant Trees where	Government	Onsite where	Prior to	N/A
MM5	DP2	works should be transplanted where practical. Trees should be	suitable for transplantation	Detailed	possible,	Construction,	

		transplanted straight to their final receptor site and not held in a		Design	otherwise	Construction	
		temporary nursery as far as possible. A detailed Tree Transplanting		Consultant/	consider offsite	Phase &	
		Specification shall be provided in the Contract Specification, where		Contractor	locations	Maintenance	
		applicable. Sufficient time for necessary tree root and crown				in Operation	
		preparation periods shall be allowed in the project programme.				Phase	
		A detailed transplanting proposal will be submitted to relevant					
		government departments for approval in accordance with ETWBTC					
		2/2004 and 3/2006 and final locations of transplanted trees should					
		be agreed prior to commencement of the work.					
		For trees associated with highways e.g. roadside planting along					
		highways, that are unavoidably affected and should be					
		transplanted, HyD HQ/GN/13 "Interim Guidelines for Tree					
		Transplanting Works under Highways Department's Vegetation					
		Maintenance Ambit" should be referred to.					
S.12.A9	LV7-	Slope Landscaping – Site formation should be reduced as far as	To avoid substantial slope	Government	Onsite	Prior to	N/A
MM6	DP2	possible. Seeding of modified slopes should be done as soon as	cutting and fill slopes.	Detailed		Construction,	
		grading works are completed to prevent erosion and subsequent	To prevent erosion and	Design		Construction	
		loss of landscape resources and character. Woodland tree	subsequent loss of	Consultant/		Phase &	
		seedlings and/ or shrubs should be planted where slope gradient	landscape resources and	Contractor		Maintenance in	
		and site conditions allow. In addition, landscape planting should be	character.			Operation	
		provided for the retaining structures associated with modified slopes	To ensure man-made			Phase	
		where conditions allow. All slope landscaping works should comply	slopes are as visually				
		with GEO Publication No. 1/2011-Technical Guidelines on	amenable as possible.				
		Landscape Treatment for Slopes.					
S.12.A9	LV9-	Woodland Compensatory Planting –Specific Woodland	Reprovide areas of	Project	In areas identified	Prior to	N/A
MM8	DP2	compensatory planting is proposed for any areas of quality	woodland to compensate	Proponent/	in	Construction,	
		woodland that are unavoidably affected by the Project. The	for	Detailed	the EIA	Construction	

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location and design of the woodland compensatory planting will	those areas of quality	Design	Landscape	Phase &	
principally be within habitats of lower value such as upland	woodland lost.	Consultant/	Mitigation Plans	Maintenance	
grassland. The proposed locations are identified, for example, on		Contractor/	and	in Operation	
the foothills of Tai Shek Mo, and on the higher ground of Fung		Maintenance	as agreed with	Phase	
Kong Shan in KTN NDA; along Fanling Bypass; and a small area		Authority	AFCD		
in the northern FLN NDA.					
The intention of the compensatory woodland will be to recreate					
areas of quality woodland, not necessarily to compensate for loss					
of trees on a like for like basis (See E18 & E27 also).					
Native tree species are suggested for planting in the appropriate					
locations, including Ailanthus fordii, Bischofia javanica,					
Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii,					
Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus					
tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera					
heptaphylla and llex rotunda. In addition some understory					
vegetation may be planted including shrubs such as Atalantia					
buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora					
chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma					
malabathricum, Melastoma dodecandrum, Rhodomyrtus					
tomentosa, Rhaphiolepis indica, and Rhododendron simsii.					
The area allocated for compensatory woodland planting allows in					
part for the fact that it will take some time for the compensatory					
planting to achieve the landscape and ecological function and					
value of the area to be lost. In addition, it allows for the fact that					
not all of the areas identified for planting will prove to be plantable,					
by virtue of topography and ground conditions and, especially,					
because though the areas identified are largely grassland it is					

		inevitable that these areas will already support some patches of					
		trees and shrubs which would be inappropriate for further					
		planting.					
S.12.A9	LV10-	Vertical Greening – Planting of climbers to grow up vertical	Soften hard surfaces and	Government	On appropriate	Prior to	N/A
MM9	DP2	surfaces were appropriate (e.g. viaduct piers, noise barriers).	facilities	Detailed	structures	Construction,	
				Design		Construction	
				Consultant/		Phase &	
				Contractor		Maintenance	
						in Operation	
						Phase	
S.12.A9	LV11-	Screen Planting – Tall screen/buffer trees and shrubs should be	To screen proposed	Government	Along roads,	Prior to	N/A
MM11	DP2	planted. This measure may additionally form part of the	structures such as roads	Detailed	around	Construction,	
		compensatory planting.	and	Design	suitable built	Construction	
			buildings. Improve	Consultant/	structures, or	Phase &	
			compatibility with the	Contractor	around	Maintenance	
			surrounding environment		VSRs to contain	in Operation	
			and create a pleasant		their view out to	Phase	
			pedestrian environment		the		
					NDA structures.		
S.12.A9	LV12-	Road Greening –For viaducts, soft landscaping should be provided	To soften the hard, straight	Government	On viaducts or	Prior to	N/A
MM12	DP2	to soften the hard, straight edges (for climbers used to cover the	edges and provide	Detailed	along	Construction,	
		vertical, hard surfaces of the piers – see MM9 Vertical Greening)	greening	Design	roads.	Construction	
		and shade tolerant plants should be planted, where light is	along roads.	Consultant/		Phase &	
		sufficient, to improve aesthetic value of areas under viaducts. Both		Contractor		Maintenance	
		at grade planting and use of elevated planters should be				in Operation	
		considered for the soft landscaping of viaducts, taking into account				Phase	
		the preference to minimize the overall viaduct bulk and integrate					

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		architectural forms and textural finishes which improve aesthetics.					
		For at grade roads, planting should be considered along central					
		dividers and on road islands e.g. in the middle of roundabouts.					
		(Roadside planting i.e. at the road edge and not in the central					
		divider or road island, is considered part of Screen Planting)					
S.12.A9	LV13-	Marsh/Wetland Compensation –The proposed Long Valley Nature	Compensate for Marsh/	Project	Onsite where	Prior to	N/A
MM13 &	DP2	Park (LVNP) will be designed and implemented to enhance	Wetland lost due to the	Proponent/	possible.	Construction,	
EIA		onwetland areas within the LVNP. (See E4,E15 and E25 also)	Project.	Detailed	Otherwise	Construction	
Annex 13		Also see LV16, LV17, and LV18 as wetland planting should be		Design	consider offsite	Phase &	
		provided along the embankments and beds of modified/		Consultant/	locations	Maintenance	
		reprovisioned watercourses.		Contractor/		in Operation	
				Maintenance		Phase	
				Authority			
S.12.A9	LV14-	Enhancement Planting along Embankment - For channelized	Minimize the necessity of	Government /	Channelized	Prior to	N/A
MM14.3	DP2	watercourses, if these are modified, the Drainage Services	watercourse modification,	Detailed	watercourse,	Construction,	
		Department Practice Note No.1/2005 – Guidelines on	protect watercourses	Design	particularly the	Construction	
		Environmental Considerations for River Channel Design, should be	where	Consultant/	Ма	Phase &	
		considered and appropriate mitigation measures included ensuring	possible and enhance	Contractor	Wat River	Maintenance	
		the new watercourses match the existing as far as possible.	channelized watercourses		Channel	in Operation	
		Measures can include enhancement planting to upgrade the			Diversion	Phase	
		channels as appropriate, including consideration of wetland					
		planting along embankments where appropriate; as well as					
		consideration of the best materials for the channel lining (e.g.					
		gabion). All measures must also ensure any necessary					
		maintenance work can be carried out and that the channel meets					
		all its requirements for water flow, etc.					
		For example, a stretch of the Ma Wat River Channel in the south					

		of FLN NDA will have to be diverted for the construction of the					
		Fanling Bypass Eastern Section. This measure will be particularly					
		relevant in this area.					
S.12.A9	LV15-	Pond Replacement –Principles adopted in the design of the NDAs	Reprovision for ponds lost	Project	E1-7 and C1-9	Prior to	N/A
MM15	DP2	ensure that they incorporate ponds within the RODPs.	due to the Project.	Proponent/	(LVNP) in KNT	Construction,	
		All requirements for ponds stipulated in the planning documents		Detailed Design	NDA	Construction	
		for the formulation of the Preliminary Layout Plan (e.g. at Fung		Consultant/	and generally	Phase	
		Kong Shan Park in E1-7 of KNT ND) should be adhered to.		Contractor/	throughout NDA	Maintenance	
				Maintenance		in Operation	
				Authority		Phase	
Landscap	e and Visua	al (Construction)				•	
S.12.A9	LV16-	Screen Hoarding –Screen hoarding shall be erected along areas of	To screen undesirable	Contractor	Throughout	Construction	^
MM16	DP2	the construction works site boundary where the works site borders	views		NDAs	Phase	
		publically accessible routes and/or is close to visually sensitive	of the works site.				
		receivers (VSRs). It is proposed that the screening be compatible					
		with the surrounding environment and where possible, nonreflective,					
		recessive colours be used.					
		Any works areas near the ecological sensitive areas should erect					
		2m high dull green site boundary fence. Details can refer to the					
		ecological impact assessment (Chapter 13 of the EIA report).					
S.12.A9	LV17-	Light Control – Construction day and night time lighting should be	To minimize glare impact	Government /	Throughout	Construction	^
MM17	DP2	controlled to minimize glare impact to adjacent VSRs during the	to	Contractor	NDAs	and Operation	
		Construction phase.	adjacent VSRs			Phases	
		Street and night time lighting shall also be controlled to minimize					
		glare impact to adjacent VSRs during the operation phase.					
Ecology (	Detailed De	sign, Construction and Operational Phases)				•	
S13.9	E2-DP2	Use opaque, non-transparent, non-reflective noise barriers.	Minimize mortality impacts	Detailed	Within NDA.	Detailed	۸

		Unnecessary lighting should be avoided.	on birds.	Design		design phase,	
		Officeessary lighting should be avoided.	on bilds.				
				Consultant/		Construction	
				Contractor/		phase and	
				Maintenance		Operation	
				Authority		phase.	
Ecology (	Construction	on Phase)					
S.13.9	E3-DP2	Design and erection of 2m high solid dull green site barrier fence	Minimize dust,	Contractor.	Interface	Construction	N/A
		between active works areas and all areas/habitats of ecological	disturbance,		between	phase.	
		importance.	mortality and other		areas/habitats of		
			adverse		ecological		
			ecological impacts on		importance (KTN		
			habitats, flora and fauna.		area B1-3) and		
					works areas.		
S13.9	E4-DP2	Compensatory native woodland planting.	Compensate for loss of	Project	KTN NDA areas	Construction	N/A
			plantation of ecological	Proponent /	E1-	phase.	
			significance.	Contractor	8 and G1-3.		
Cultural H	leritage (Co	nstruction Phase)					
S11.6.2	CH5-	Conducting Construction Vibration Monitoring and Structural	To minimize the potential	Project	Identified	Construction	N/A
	DP2	Strengthening Measures	impacts during	Proponent/	potential	phase, with	
		Construction vibration monitoring and structural strengthening	Construction	Contractor	vibration	details	
		measures should be conducted during Construction phase based	phase on any identified		impacted	specified in	
		on the assessment result of baseline condition survey and	potential vibration		built heritage	baseline	
		baseline vibration impact assessment, so as to ensure the	impacted		features	condition	
		construction performance meets with the vibration standard stated	built heritage features			survey and	
		in the EIA report.				baseline	
						vibration	
						impact	
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	DP3-	- KTN NDA Road P1 and P2 (New Road) and associated new Kwu Tu	ung Interchange (New Road)	and Pak Shek Au	ı Interchange Impro	vement (Major Impre	ovement)
Landscap	e and Visua	al (Detailed Design, Prior to Construction, Construction and Operati	ional Phases)				
S.12.A9	LV1-	General Good Practice Measures - For areas unavoidably		Detailed	Throughout	Prior to	^
	DP3	disturbed by the Project on a short term basis e.g. works areas,		Design	NDAs,	Construction,	
		the general principle to try and restore these to their former state		Consultant/		Construction &	
	'	to suit future land use, should be adhered to.		Contractor		for all planting,	
	'	With regard to topsoil, where identified, it should be stripped,				this should be	
	'	treated appropriately, and where suitable and practical stored for				installed as	
		re-use in the construction of the soft landscape works such as				soon as the	
		roadside amenity strips, and open space sites.				areas become	
	'	'				available, to	
	'	'				achieve early	
						establishment	
S.12.A9	LV4-	Avoid affecting Watercourses – In the detailed design,	Avoid direct impacts to	Detailed	All watercourses,	Prior to	^
MM14.4	DP3	consideration should be made of watercourses, to minimize any	watercourses	Design	particularly the	Construction	
	'	impacts e.g. at new bridge crossings, viaducts, road alignment etc.		Consultant/	stream at Siu	and	
i		Guidelines stated should be followed.		Contractor	Hang	Construction	
ı	'	For example, for the stream at Siu Hang San Tsuen in FLN NDA,			San Tsuen that	Phase	
ı	'	much of the stream is located underneath the viaduct for the			will		
ı	'	proposed Fanling Bypass. In order to avoid impacts to the stream,			flow under the		
i		the detailed final design of the viaduct should follow guidelines and			Fanling Bypass		
ı	'	ensure that no viaduct footings or other structures are placed in the			Eastern Section		
		stream.					
	'	Bridges and box culverts should also be used to minimize the					
		necessity of watercourse modification and protect the watercourses					
	!	where necessary.					

S.12.A9	LV5-	Tree Protection & Preservation – Exiting trees to be retained within	Protect and Preserve	Government	Onsite	Prior to	N/A
MM4	DP3	the Project Site should be carefully protected during construction.	Trees	Detailed		Construction	
		In particular OVTs will be preserved according to ETWB Technical		Design		and	
		Circular (Works) No. 29/2004. Detailed Tree Protection		Consultant/		Construction	
		Specification shall be provided in the Contract Specification. Under		Contractor		Phase	
		this specification, the Contractor shall be required to submit, for					
		approval, a detailed working method statement for the protection of					
		trees prior to undertaking any works adjacent to all retained trees,					
		including trees in Contractor"s works areas.					
		A detailed tree survey will be carried out for the Tree Removal					
		Application (TRA) process which will be carried out at the later					
		detailed design stage of the Project. The detailed tree survey will					
		propose which trees should be retained, transplanted or felled and					
		will include details of tree protection measures for those trees to					
		be retained.					
S.12.A9	LV6-	Tree Transplantation – Trees unavoidably affected by the Project	Transplant Trees where	Government	Onsite where	Prior to	N/A
MM5	DP3	works should be transplanted where practical. Trees should be	suitable for transplantation	Detailed	possible.	Construction,	
		transplanted straight to their final receptor site and not held in a		Design	Otherwise	Construction	
		temporary nursery as far as possible. A detailed Tree Transplanting		Consultant/	consider offsite	Phase &	
		Specification shall be provided in the Contract Specification, where		Contractor	locations.	Maintenance	
		applicable. Sufficient time for necessary tree root and crown				in Operation	
		preparation periods shall be allowed in the project programme.				Phase	
		A detailed transplanting proposal will be submitted to relevant					
		government departments for approval in accordance with ETWBTC					
		2/2004 and 3/2006 and final locations of transplanted trees should					
		be agreed prior to commencement of the work.					
		For trees associated with highways e.g. roadside planting along					

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		highways, that are unavoidably affected and should be					
		transplanted, HyD HQ/GN/13 "Interim Guidelines for Tree					
		Transplanting Works under Highways Department's Vegetation					
		Maintenance Ambit" should be referred to.					
S.12.A9	LV7-	Slope Landscaping – Site formation should be reduced as far as	To avoid substantial slope	Government	Onsite	Prior to	N/A
MM6	DP3	possible. Seeding of modified slopes should be done as soon as	cutting and fill slopes.	Detailed		Construction,	
		grading works are completed to prevent erosion and subsequent	To prevent erosion and	Design		Construction	
		loss of landscape resources and character. Woodland tree	subsequent loss of	Consultant/		Phase &	
		seedlings and/ or shrubs should be planted where slope gradient	landscape resources and	Contractor		Maintenance	
		and site conditions allow.	character.			in Operation	
		In addition, landscape planting should be provided for the	To ensure man-made			Phase	
		retaining structures associated with modified slopes where	slopes				
		conditions allow. All slope landscaping works should comply with	are as visually amenable				
		GEO Publication No. 1/2011-Technical Guidelines on Landscape	as				
		Treatment for Slopes.	possible.				
S.12.A9	LV8-	Compensatory Planting – Compensatory tree planting for felled	Compensate for trees and	Government	Onsite where	Prior to	N/A
MM7	DP3	trees shall be provided to the satisfaction of relevant Government	shrubs lost due to the	Detailed	possible.	Construction,	
		departments. Required numbers and locations of compensatory	Project.	Design	Otherwise	Construction	
		trees shall be determined and agreed separately with Government		Consultant/	consider offsite	Phase &	
		during the Tree Removal Application process under ETWBTC		Contractor	locations	Maintenance	
		3/2006.				in Operation	
		Compensatory planting is proposed at the potential open areas				Phase	
		such as open spaces, amenity areas, open areas of the					
		streetscapes, as well as the open areas within development lots.					
		Compensatory planting for shrubs should be considered in					
		suitable locations. Native species such as Melastoma					
		malabathricum, Diospyros vaccinioides, Gardenia jasminoides,					

		Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma					
I		dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa,					
I		Rhaphiolepis indica, and Rhododendron simsii are suggested					
S.12.A9	LV9-	Woodland Compensatory Planting –Specific Woodland	Reprovide areas of	Project	In areas identified	Prior to	N/A
MM8	DP3	compensatory planting is proposed for any areas of quality	woodland to compensate	Proponent/	in	Construction,	
		woodland that are unavoidably affected by the Project. The	for	Detailed	the EIA	Construction	
		location and design of the woodland compensatory planting will	those areas of quality	Design	Landscape	Phase &	
		principally be within habitats of lower value such as upland	woodland lost.	Consultant/	Mitigation Plans	Maintenance	
		grassland. The proposed locations are identified, for example, on		Contractor/	and	in Operation	
		the foothills of Tai Shek Mo, and on the higher ground of Fung		Maintenance	as agreed with	Phase	
		Kong Shan in KTN NDA; along Fanling Bypass; and a small area		Authority	AFCD		
		in the northern FLN NDA.					
		The intention of the compensatory woodland will be to recreate					
		areas of quality woodland, not necessarily to compensate for loss					
		of trees on a like for like basis (See E18 & E27 also).					
		Native tree species are suggested for planting in the appropriate					
		locations, including Ailanthus fordii, Bischofia javanica,					
		Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii,					
		Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus					
		tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera					
		heptaphylla and llex rotunda. In addition some understory					
		vegetation may be planted including shrubs such as Atalantia					
		buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora					
		chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma					
		malabathricum, Melastoma dodecandrum, Rhodomyrtus					
		tomentosa, Rhaphiolepis indica, and Rhododendron simsii.					
		The area allocated for compensatory woodland planting allows in					

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		part for the fact that it will take some time for the compensatory					
		planting to achieve the landscape and ecological function and					
		value of the area to be lost. In addition, it allows for the fact that					
		not all of the areas identified for planting will prove to be plantable,					
		by virtue of topography and ground conditions and, especially,					
		because though the areas identified are largely grassland it is					
		inevitable that these areas will already support some patches of					
		trees and shrubs which would be inappropriate for further					
		planting.					
S.12.A9	LV10-	Vertical Greening – Planting of climbers to grow up vertical	Soften hard surfaces and	Government	On appropriate	Prior to	N/A
MM9	DP3	surfaces were appropriate (e.g. viaduct piers, noise barriers).	facilities	Detailed	structures	Construction,	
				Design		Construction	
				Consultant/		Phase &	
				Contractor		Maintenance	
						in Operation	
						Phase	
S.12.A9	LV11-	Screen Planting – Tall screen/buffer trees and shrubs should be	To screen proposed	Government	Along roads,	Prior to	N/A
MM11	DP3	planted. This measure may additionally form part of the	structures such as roads	Detailed	around	Construction,	
		compensatory planting.	and	Design	suitable built	Construction	
			buildings. Improve	Consultant/	structures, or	Phase &	
			compatibility with the	Contractor	around	Maintenance	
			surrounding environment		VSRs to contain	in Operation	
			and create a pleasant		their view out to	Phase	
			pedestrian environment		the		
					NDA structures.		
S.12.A9	LV12-	Road Greening –For viaducts, soft landscaping should be provided	To soften the hard, straight	Government	On viaducts or	Prior to	N/A
MM12	DP3	to soften the hard, straight edges (for climbers used to cover the	edges and provide	Detailed	along roads.	Construction,	

		vertical, hard surfaces of the piers – see MM9 Vertical Greening)	greening along roads.	Design		Construction	
		and shade tolerant plants should be planted, where light is		Consultant/		Phase &	
		sufficient, to improve aesthetic value of areas under viaducts. Both		Contractor		Maintenance in	
		at grade planting and use of elevated planters should be considered				Operation Phase	
		for the soft landscaping of viaducts, taking into account					
		the preference to minimize the overall viaduct bulk and integrate					
		architectural forms and textural finishes which improve aesthetics.					
		For at grade roads, planting should be considered along central					
		dividers and on road islands e.g. in the middle of roundabouts.					
		(Roadside planting i.e. at the road edge and not in the central					
		divider or road island, is considered part of Screen Planting)					
S.12.A9	LV13-	Marsh/Wetland Compensation –The proposed Long Valley Nature	Compensate for Marsh/	Project	Onsite where	Prior to	N/A
MM13	DP3	Park (LVNP) will be designed and implemented to enhance	Wetland lost due to the	Proponent/	possible.	Construction,	
EIA		onwetland	Project.	Detailed	Otherwise	Construction	
Annex 13		areas within the LVNP. (See E4,E15 and E25 also)		Design	consider offsite	Phase &	
		Also see LV16, LV17, and LV18 as wetland planting should be		Consultant/	locations	Maintenance	
		provided along the embankments and beds of modified/		Contractor/		in Operation	
		reprovisioned		Maintenance		Phase	
		watercourses.		Authority			
S.12.A9	LV14-	Enhancement Planting along Embankment - For channelized	Minimize the necessity of	Government /	Channelized	Prior to	N/A
MM14.3	DP3	watercourses, if these are modified, the Drainage Services	watercourse modification,	Detailed	watercourse,	Construction,	
		Department Practice Note No.1/2005 – Guidelines on	protect watercourses	Design	particularly the	Construction	
		Environmental Considerations for River Channel Design, should be	where	Consultant/	Ма	Phase &	
		considered and appropriate mitigation measures included ensuring	possible and enhance	Contractor	Wat River	Maintenance	
		the new watercourses match the existing as far as possible.	channelized watercourses		Channel	in Operation	
		Measures can include enhancement planting to upgrade the			Diversion	Phase	
		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					
1		maintenance work can be carried out and that the channel meets					
1		all its requirements for water flow, etc.					
		For example, a stretch of the Ma Wat River Channel in the south					
		of FLN NDA will have to be diverted for the construction of the					
		Fanling Bypass Eastern Section. This measure will be particularly					
		relevant in this area.					
S.12.A9	LV15-	Pond Replacement –Principles adopted in the design of the NDAs		Project	E1-7 and C1-9	Prior to	N/A
MM15	DP3	ensure that they incorporate ponds within the RODPs.		Proponent/	(LVNP) in KNT	Construction,	
		All requirements for ponds stipulated in the planning documents for		Detailed	NDA	Construction	
		the formulation of the Preliminary Layout Plan (e.g. at Fung Kong		Design	and generally	Phase	
		Shan Park in E1-7 of KNT ND) should be adhered to.		Consultant/	throughout NDA	Maintenance	
				Contractor/		in Operation	
				Maintenance		Phase	
				Authority			
Landscap	e and Visu	ual (Construction)		•			
S.12.A9	LV16-	Screen Hoarding –Screen hoarding shall be erected along areas of	To screen undesirable	Contractor	Throughout	Construction	N/A
MM16	DP3	the construction works site boundary where the works site borders	views		NDAs	Phase	
		publically accessible routes and/or is close to visually sensitive	of the works site.				
		receivers (VSRs). It is proposed that the screening be compatible					
		with the surrounding environment and where possible, nonreflective,					
		recessive colours be used.					
		Any works areas near the ecological sensitive areas should erect					
		2m high dull green site boundary fence. Details can refer to the					
		ecological impact assessment (Chapter 13 of the EIA report).					
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S.12.A9	LV17-	Light Control – Construction day and night time lighting should be	To minimize glare impact	Government /	Throughout	Construction	N/A
MM17	DP3	controlled to minimize glare impact to adjacent VSRs during the	to	Contractor	NDAs	and Operation	
		Construction phase.	adjacent VSRs			Phases	
		Street and night time lighting shall also be controlled to minimize					
		glare impact to adjacent VSRs during the operation phase.					
Ecology (	Detailed De	esign, Construction and Operational Phases)					
S13.9	E3-DP3	Use opaque, non-transparent, non-reflective noise barriers.	Minimize mortality impacts	Detailed	Throughout.	Detailed	۸
		Unnecessary lighting should be avoided.	on birds.	Design		design,	
				Consultant/		Construction	
				Contractor		and Operation	
				Maintenance		phases.	
				Authority.			
Ecology (	Constructio	on Phase)					
S.13.9	E4-DP3	Creation of proposed Long Valley Nature Park and creation and	Compensate for wetland	Project	Long Valley	Construction	N/A
		enhancement of wetland and woodland areas and buffer planting	loss arising from the	Proponent/		phase.	
		within LVNP.	project.	Contractor			
				(LVNP			
				Detailed			
				Habitat			
				Creation &			
				Management			
				Plan).			
S.13.9	E5-DP3	Design and erection of 2m high solid dull green site barrier fence	Minimize dust, disturbance,	Contractor.	Interface	Construction	N/A
		between active works areas and all areas/habitats of ecological	mortality and other		between	phase.	
		importance on edge of development areas, including along any	adverse ecological impacts		areas/habitats of		
		roads adjacent to or penetrating into areas/habitats of ecological	on habitats, flora and		ecological		
		importance.	fauna.		importance (KTN		
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			Measures to minimize		areas B1-3, H1-		
			flightline		1)		
			impacts to birds,		and works areas.		
S13.9	E6-DP3	Compensatory native woodland planting.	Compensate for loss of	Project	KTN areas E1-8	Construction	N/A
			plantation of ecological	Proponent /	and	phase.	
			significance.	Contractor	G1-3.		
		DP4- KTN	NDA Road D1 to D5 (New R	Road)			
Landscap	oe and Visu	ual (Detailed Design, Prior to Construction, Construction and O	perational Phases)				
S.12.A9	LV1-	General Good Practice Measures - For areas unavoidably		Detailed Design	Throughout NDAs,	Prior to	N/A
	DP4	disturbed by the Project on a short term basis e.g. works areas,		Consultant/		Construction,	
		the general principle to try and restore these to their former state		Contractor		Construction & for	
		to suit future land use, should be adhered to.				all planting, this	
		With regard to topsoil, where identified, it should be stripped,				should be installed	
		treated appropriately, and where suitable and practical stored for				as soon as the	
		re-use in the construction of the soft landscape works such as				areas become	
		roadside amenity strips, and open space sites.				available, to	
						achieve early	
						establishment	
S.12.A9	LV2-	Minimum Topographical Change –To minimize landscape and	Reduce topographical	Government /	Throughout NDAs,	Prior to	N/A
MM1	DP4	visual impacts, the footprint and elevation of such elements	changes and minimize land	Detailed Design	particularly for	Construction	
		should be optimized to reduce topographical/ landform changes,	resumption	Consultant/	reservoirs		
		as well as reduce land take and interference with natural terrain.		Contractor/			
		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					

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		interesting landform, compatible with the surrounding landscape					
		and to mimic the natural contouring and terrain e.g. introduction					
		and continuation of natural features such as spurs and ridges					
		where appropriate, to support assimilation with the hillside					
		setting.					
S.12.A9	LV3-	Detailed Design (Visual) –The footprint and massing of	Improve visual amenity of	Detailed	Throughout NDAs	Prior to	N/A
MM2	DP4	development components and the works area should also be	the new buildings, NDAs	Design		Construction	
		kept to a practical minimum and the detailed design of	in general and integrate as	Consultant/			
		development components for Construction phase should follow	best possible into the				
		the Sustainable Building Design Guidelines. The form, textures,	surrounding landscape				
		finishes and colours of the proposed development components					
		should aim to be compatible with the existing surroundings. To					
		improve visual amenity designs should be aesthetically pleasing					
		and treatment of structures also improve visual amenity. For					
		example, natural building materials such as stone and timber,					
		should be considered for architectural features, and light earthy					
		tone colours such as shades of green, shades of grey, shades of					
		brown and off-white should also be considered to reduce the					
		visibility of the development components, including all roadwork,					
		buildings and noise barriers. In addition, the design of structures					
		should consider green roofs were feasible, following stated					
		guidelines.					
		All Noise barriers, particularly noise barriers but also any					
		barriers proposed for ecological impact mitigation, should be					
		kept to a practical minimum, and be of such a designed as to					
		integrate as well as possible into the surrounding visual context					
		and be as low as practical to minimize blocking views. Noise					

				I			
		barrier design, including vertical, cantilever or curved, and noise					
		enclosures including semi-enclosure and full enclosure, at grade					
		and/ or elevated, should follow the guidelines stated.					
		Construction time frame should also be considered and designs					
		seek to keep it to a practical minimum.					
S.12.A9	LV4-	Tree Protection & Preservation – Exiting trees to be retained	Protect and Preserve Trees	Government /	Onsite	Prior to	^
MM4	DP4	within the Project Site should be carefully protected during		Detailed Design		Construction and	
		construction. In particular OVTs will be preserved according to		Consultant/		Construction	
		ETWB Technical Circular (Works) No. 29/2004. Detailed Tree		Contractor		Phase	
		Protection Specification shall be provided in the Contract					
		Specification. Under this specification, the Contractor shall be					
		required to submit, for approval, a detailed working method					
		statement for the protection of trees prior to undertaking any					
		works adjacent to all retained trees, including trees in					
		Contractor's works areas.					
		A detailed tree survey will be carried out for the Tree Removal					
		Application (TRA) process which will be carried out at the later					
		detailed design stage of the Project. The detailed tree survey will					
		propose which trees should be retained, transplanted or felled					
		and will include details of tree protection measures for those					
		trees to be retained.					
S.12.A9	LV5-	Tree Transplantation – Trees unavoidably affected by the Project	Transplant Trees where	Government /	Onsite possible.	Prior to	N/A
MM5	DP4	works should be transplanted where practical. Trees should be	suitable for transplantation	Detailed Design	Consider locations	Construction,	
		transplanted straight to their final receptor site and not held in a		Consultant/	where Otherwise	Construction	
		temporary nursery as far as possible. A detailed Tree		Contractor	offsite locations	Phase &	
		Transplanting Specification shall be provided in the Contract				Maintenance in	
		Specification, where applicable. Sufficient time for necessary				Operation Phase	

			1	1		1	1
		tree root and crown preparation periods shall be allowed in the					
		project programme.					
		A detailed transplanting proposal will be submitted to relevant					
		government departments for approval in accordance with					
		ETWBTC 2/2004 and 3/2006 and final locations of transplanted					
		trees should be agreed prior to commencement of the work.					
		For trees associated with highways e.g. roadside planting along					
		highways, that are unavoidably affected and should be					
		transplanted, HyD HQ/GN/13 "Interim Guidelines for Tree					
		Transplanting Works under Highways Department's Vegetation					
		Maintenance Ambit' should be referred to.					
S.12.A9	LV6-	Slope Landscaping – Site formation should be reduced as far as	To avoid substantial slope	Government	Onsite	Prior to	N/A
MM6	DP4	possible. Seeding of modified slopes should be done as soon as	cutting and fill slopes.	Detailed Design		Construction,	
		grading works are completed to prevent erosion and subsequent	To prevent erosion and	Consultant/		Construction	
		loss of landscape resources and character. Woodland tree	subsequent loss of	Contractor		Phase &	
		seedlings and/ or shrubs should be planted where slope	landscape resources and			Maintenance in	
		gradient and site conditions allow.	character.			Operation Phase	
		In addition, landscape planting should be provided for the	To ensure man-made slopes				
		retaining structures associated with modified slopes where	are as visually amenable as				
		conditions allow. All slope landscaping works should comply with	possible.				
		GEO Publication No. 1/2011-Technical Guidelines on Landscape					
		Treatment for Slopes.					
S.12.A9	LV7-	Compensatory Planting – Compensatory tree planting for felled	Compensate for trees and	Government	Onsite where	Prior to	N/A
MM7	DP4	trees shall be provided to the satisfaction of relevant	shrubs lost due to the	Detailed Design	possible.	Construction,	
		Government departments. Required numbers and locations of	Project.	Consultant/	Otherwise	Construction	
		compensatory trees shall be determined and agreed separately		Contractor	consider offsite	Phase &	
		with Government during the Tree Removal Application process			locations	Maintenance in	

		Lundon ETIMPTO 2/2000				On austine Dhara	
		under ETWBTC 3/2006.				Operation Phase	
		Compensatory planting is proposed at the potential open areas					
		such as open spaces, amenity areas, open areas of the					
		streetscapes, as well as the open areas within development lots.					
		Compensatory planting for shrubs should be considered in					
		suitable locations. Native species such as Melastoma					
		malabathricum, Diospyros vaccinioides, Gardenia jasminoides,					
		Ixora chinensis, Ligustrum sinense, Litsea rotundifolia,					
		Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus					
		tomentosa, Rhaphiolepis indica, and Rhododendron simsii are					
		suggested					
S.12.A9	LV8-	Woodland Compensatory Planting –Specific Woodland	Reprovide areas of	Project	In areas identified	Prior to	N/A
MM8	DP4	compensatory planting is proposed for any areas of quality	woodland to compensate for	Proponent/	in the EIA	Construction,	
		woodland that are unavoidably affected by the Project. The	those areas of quality	Detailed Design	Landscape	Construction	
		location and design of the woodland compensatory planting will	woodland lost.	Consultant/	Mitigation Plans	Phase &	
		principally be within habitats of lower value such as upland		Contractor/	and as agreed	Maintenance in	
		grassland. The proposed locations are identified, for example,		Maintenance	with AFCD	Operation Phase	
		on the foothills of Tai Shek Mo, and on the higher ground of		Authority			
		Fung Kong Shan in KTN NDA; along Fanling Bypass; and a					
		small area in the northern FLN NDA.					
		The intention of the compensatory woodland will be to recreate					
		areas of quality woodland, not necessarily to compensate for					
		loss of trees on a like for like basis (See E18 & E27 also).					
		Native tree species are suggested for planting in the appropriate					
		locations, including Ailanthus fordii, Bischofia javanica,					
		Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii,					
		Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus					

		tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera					
		heptaphylla and llex rotunda. In addition some understory					
		vegetation may be planted including shrubs such as Atalantia					
		buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora					
		chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma					
		malabathricum, Melastoma dodecandrum, Rhodomyrtus					
		tomentosa, Rhaphiolepis indica, and Rhododendron simsii.					
		The area allocated for compensatory woodland planting allows					
		in part for the fact that it will take some time for the					
		compensatory planting to achieve the landscape and ecological					
		function and value of the area to be lost. In addition, it allows for					
		the fact that not all of the areas identified for planting will prove					
		to be plantable, by virtue of topography and ground conditions					
		and, especially, because though the areas identified are largely					
		grassland it is inevitable that these areas will already support					
		some patches of trees and shrubs which would be inappropriate					
		for further planting.					
S.12.A9	LV9-	Vertical Greening – Planting of climbers to grow up vertical	Soften hard surfaces and	Government /	On appropriate	Prior to	N/A
MM9	DP4	surfaces were appropriate (e.g. viaduct piers, noise barriers).	facilities	Detailed Design	structures	Construction,	
				Consultant/		Construction	
				Contractor		Phase &	
						Maintenance in	
						Operation Phase	
S.12.A9	LV10-	Screen Planting – Tall screen/buffer trees and shrubs should be	To screen proposed	Government /	Along roads,	Prior to	N/A
MM11	DP4	planted. This measure may additionally form part of the	structures such as roads	Detailed Design	around suitable	Construction,	
		compensatory planting.	and buildings. Improve	Consultant/	built structures,	Construction	
			compatibility with the	Contractor	or around VSRs to	Phase &	

			surrounding environment		contain their view	Maintenance in	
		'	and create a pleasant		out to the NDA	Operation Phase	I
		'	pedestrian environment		structures.	1	l
S.12.A9	LV11-	Road Greening –For viaducts, soft landscaping should be	To soften the hard, straight	Government	On viaducts or	Prior to	N/A
MM12	DP4	provided to soften the hard, straight edges (for climbers used to	edges and provide greening	Detailed Design	along roads.	Construction,	I
		cover the vertical, hard surfaces of the piers – see MM9 Vertical	along roads.	Consultant/	1	Construction	I
		Greening) and shade tolerant plants should be planted, where		Contractor	1	Phase &	I
		light is sufficient, to improve aesthetic value of areas under			1	Maintenance in	I
		viaducts. Both at grade planting and use of elevated planters			1	Operation Phase	I
		should be considered for the soft landscaping of viaducts, taking			1	1	I
		into account the preference to minimize the overall viaduct bulk			1	1	I
		and integrate architectural forms and textural finishes which			1	1	I
		improve aesthetics.			1	1	I
		For at grade roads, planting should be considered along central			1	1	I
		dividers and on road islands e.g. in the middle of roundabouts.			1	1	I
		(Roadside planting i.e. at the road edge and not in the central			1	1	I
		divider or road island, is considered part of Screen Planting)			1	1	ı
S.12.A9	LV12-	Marsh/Wetland Compensation –The proposed Long Valley	Compensate for Marsh/	Project	Onsite where	Prior to	N/A
MM13 &	DP4	Nature Park (LVNP) will be designed and implemented to	Wetland lost due to the	Proponent/	possible.	Construction,	I
EIA		enhance on-wetland areas within the LVNP. (See E4,E15 and	Project.	Detailed Design	Otherwise	Construction	I
Annex		E25 also)		Consultant/	consider offsite	Phase &	I
13		Also see LV16, LV17, and LV18 as wetland planting should be		Contractor/	locations	Maintenance in	I
		provided along the embankments and beds of modified/ re-		Maintenance	1	Operation Phase	I
		provisioned watercourses.		Authority	1	1	ı
S.12.A9	LV13-	Pond Replacement –Principles adopted in the design of the	Reprovision for ponds lost	Project	E1-7 and C1-9	Prior to	N/A
MM15	DP4	NDAs ensure that they incorporate ponds within the RODPs.	due to the Project.	Proponent/	(LVNP) in KNT	Construction,	I
		All requirements for ponds stipulated in the planning documents	1	Detailed Design	NDA and generally	Construction	1

		for the formulation of the Preliminary Layout Plan (e.g. at Fung		Consultant/	throughout NDA	Phase	
		Kong Shan Park in E1-7 of KNT ND) should be adhered to.		Contractor/		Maintenance in	
				Maintenance		Operation Phase	
				Authority			
Landscap	e and Vis	ual (Construction)					
S.12.A9	LV14-	Screen Hoarding –Screen hoarding shall be erected along areas	To screen undesirable views	Contractor			N/A
MM16	DP4	of the construction works site boundary where the works site	of the works site.				
		borders publically accessible routes and/or is close to visually					
		sensitive receivers (VSRs). It is proposed that the screening be					
		compatible with the surrounding environment and where					
		possible, non-reflective, recessive colours be used.					
		Any works areas near the ecological sensitive areas should					
		erect 2m high dull green site boundary fence. Details can refer					
		to the ecological impact assessment (Chapter 13 of the EIA					
		report).					
S.12.A9	LV15-	Light Control – Construction day and night time lighting should	To minimize glare impact to	Government /	Throughout NDAs	Construction and	N/A
MM17	DP4	be controlled to minimize glare impact to adjacent VSRs during	adjacent VSRs	Contractor		Operation Phases	
		the Construction phase.					
		Street and night time lighting shall also be controlled to minimize					
		glare impact to adjacent VSRs during the operation phase.					
Ecology (	Prior to D	Detailed Design Prior to Construction Phase)					
S. 13.9	E1-	Egretry Habitat Creation & Management Plan (EHCMP) and	Compensate for loss of Man	Project	FLN area A1-7	Detailed design	N/A
	DP4	Woodland Planting and Management Plan (WPMP)	Kam To Road egretry.	Proponent/	(egretry	phase.	
			Compensate for loss of	Detailed Design	compensation).		
			secondary woodland and	Consultant	KTN areas E1-8		
			hillside plantation of	(EHCMP and	and G1-3		
			ecological significance.	WPMP).	(woodland		

					compensation).		
Ecology	(Detailed L	Design, Construction and Operational Phases)					
S13.9	E2-	Use opaque, non-transparent, non-reflective noise barriers.	Minimize mortality impacts	Detailed Design	Throughout.	Throughout.	N/A
	DP4	Unnecessary lighting should be avoided.	on birds.	Consultant/			
				Contractor			
				Maintenance			
				Authority.			
Ecology	(Construc	tion Phase)					
S.13.9	E3-	Design and erection of 2m high solid dull green site barrier fence	Minimize dust, disturbance,	Contractor.	Interface between	Construction	N/A
	DP4	between active works areas and all areas/habitats of ecological	mortality and other adverse		areas/habitats of	phase.	
		importance.	ecological impacts on		ecological		
			habitats, flora and fauna.		importance (KTN		
					areas B1-3, E1-8,		
					G1-3 and H1-1)		
					and works areas		
S13.9	E4-	Compensatory native woodland planting.	Compensate for loss of	Project	KTN areas E1-8	Construction	N/A
	DP4		plantation of ecological	Proponent /	and G1-3.	phase.	
			significance.	Contractor			
S13.8	E5-	Maintenance of compensatory native woodland planting.	Compensate for loss of	Maintenance	KTN areas E1-8	Operation	N/A
	DP4		plantation of ecological	Authority.	and G1-3.	phase	
			significance.				
Cultural	Heritage (F	Pre-construction Phase)					
S11.6.1	CH1-	Undertaking Survey-cum-Rescue Excavation	To define the precise	Project	In KTN NDA, for	After land	N/A
	DP4	A Survey-cum-Rescue Excavation should be conducted after	archaeological deposits	Proponent /	Site 1	resumption but	
		land resumption and before the commencement of construction	extent and to preserve the	Contractor/		before	
		works to define the precise archaeological deposits extent and	archaeological resources as	Qualified		Construction	
		to preserve the archaeological resources by record. The	far as possible.	Archaeologist		commencement of	

		excavation should be conducted by a professional archaeologist				the zones	
		and prior to fieldwork commencement, the archaeologist should					
		obtain a Licence to Excavate and Search for Antiquities from the					
		Authority under the AM Ordinance.					
S11.6.1	CH2-	Undertaking Further Archaeological Survey to Cover the	To confirm and verify the	Project	In the not-yet-	After land	N/A
	DP4	Outstanding Areas	findings of the EIA	Proponent/	surveyed- areas	resumption but	
		Further archaeological surveys to cover the outstanding areas of		Contractor/	with medium	before	
		the not-yet-surveyed-area with medium archaeological potential		Qualified	archaeological	construction	
		located with areas with proposed development as presented in		Archaeologist	potential located		
		Figure 11.9 should be implemented after land resumption to			within the work		
		confirm and verify the findings of the EIA. The survey should be			extent of DP4		
		conducted by a professional archaeologist and prior to fieldwork					
		commencement, the archaeologist should obtain a Licence to					
		Excavate and Search for Antiquities from the Authority under the					
		AM Ordinance. It should be noted that the scope of further					
		archaeological survey is based on the current proposed					
		alignment. Any additional works areas which have not been					
		covered by the current archaeological impact assessment					
		should be covered as soon as possible. Subject to the findings					
		of the archaeological survey to be conducted after land					
		resumption, additional mitigation measures would be designed					
		and implemented before the commencement of construction					
		works to mitigate the adverse impact.					
S11.6.1	CH3-	Undertaking Induction Training	To preserve the	Project	Spot E	Before the	N/A
	DP4	Induction training should be provided to the construction	archaeological resources as	Proponent/		commencement of	
		Contractor before the commencement of the excavation works	far as possible	Contractor/		the excavation	
		in Spot E. An induction will be conducted as part of the		Qualified		works and before	

		environmental health and safety induction programme to all site		Archaeologist		site staff are	
		staff before they are deployed on site. The induction will include				deployed on site	
		an introduction on the historical development of the Site, the					
		possible archaeological remains that may be encountered					
		during ground excavation works as well as the reporting					
		procedures in case suspected archaeological remains are					
		identified. A set of the presentation material (in the form of power					
		point presentation) with content details will be prepared by an					
		archaeologist and submitted to AMO for reference and record					
		purpose. The first induction briefing will be video recorded and it					
		will be used as induction briefing material for new site staff.					
S11.6.2	CH4-	Conducting Photographic and Cartographic Records Prior to	To preserve the directly	Project	Entrance Gate of	Prior to Removal /	N/A
	DP4	Removal/Relocation of Impacted Built Heritages	impacted sites by record	Proponent/	HKT03, KT16,	Relocation of	
		Prior to removal/relocation of the directly impacted historical	prior to their removal /	Contractor	KT17 and KT18	features before	
		buildings and cultural/historical landscape features,	relocation			commencement of	
		photographic and cartographic records should be conducted to				construction	
		preserve them by record. Liaison with and obtaining agreement				works	
		from the descendants of these features will be carried out by the					
		Project Proponent.					
S11.6.2	CH5-	Undertaking baseline condition survey and baseline vibration	To minimize the vibration	Project	HKT03 (Main	Preconstruction	N/A
	DP4	impact assessment	impacts during	Proponent/	Building) and	stage before	
		In case any potential vibration impact on any nearby built	preconstruction stage on	Contractor	G308	commencement of	
		heritage features are identified during the pre-construction stage	any identified potential			construction works	
		of the Project, prior to commencement of construction works, a	vibration impacted built				
		baseline condition survey and baseline vibration impact	heritage features				
		assessment should be conducted by a qualified building					
		surveyor or a qualified structural engineer to define the vibration					

		limit (a vibration limit at 15mm/s could be adopted for historic					
		buildings) and to evaluate if construction vibration monitoring					
		and structural strengthening measures are required during					
		construction phase so as to ensure the construction					
		performance meets with the vibration standard stated in the EIA					
		report.					
S11.6.2	CH6-	Relocation of Built Heritages	To preserve the directly	Project	Entrance Gate of	After the	N/A
	DP4	Relocation of built heritages to a reasonable location nearby	impacted sites by relocation	Proponent/	HKT03	photographic and	
		may be required.		Contractor		cartographic	
						records and	
						before	
						commencement of	
						construction works	
Cultural I	Heritage (C	onstruction Phase)			I		
S11.6.2	CH7-	Conducting Construction Vibration Monitoring and Structural	To minimize the potential	Contractor	Identified potential	Construction	N/A
	DP4	Strengthening Measures	impacts during Construction		vibration impacted	phase, with	
		Construction vibration monitoring and structural strengthening	phase on any identified		built heritage	details specified in	
		measures should be conducted during Construction phase	potential vibration impacted		features	baseline condition	
		based on the assessment result of baseline condition survey	built heritage features			survey and	
		and baseline vibration impact assessment, so as to ensure the				baseline vibration	
		construction performance meets with the vibration standard				impact	
		stated in the EIA report.				assessment,	
		DP5- New sewage	e pumping stations (SPSs)	in KTN NDA			
Landscap	e and Visua	al (Detailed Design, Prior to Construction, Construction and Operat	ional Phases)				
S.12.B9	S.12.B9	General Good Practice Measures - For areas unavoidably		Detailed	Throughout	Prior to	N/A
		disturbed by the Project on a short term basis e.g. works areas,		Design	NDAs,	Construction,	
		the general principle to try and restore these to their former state		Consultant/		Construction &	
		I	1	l	l	l .	

		to suit future land use, should be adhered to.		Contractor/		for all planting,	
		With regard to topsoil, where identified, it should be stripped,				this should be	
		treated appropriately, and where suitable and practical stored for				installed as	
		re-use in the construction of the soft landscape works such as				soon as the	
		roadside amenity strips, and open space sites.				areas become	
						available, to	
						achieve early	
						establishment	
S.12.B9	LV2-	Minimum Topographical Change –To minimize landscape	Reduce topographical	Government /	Throughout	Prior to	N/A
MM1	DP5	and visual impacts, the footprint and elevation of such	changes and minimize	Detailed	NDAs,	Construction	
		elements should be optimized to reduce topographical/	land resumption	Design	particularly for		
		landform changes, as well as reduce land take and		Consultant/	reservoirs		
		interference with natural terrain. Where there is a need to		Contractor/			
		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.					
S.12.B9	LV3-	Detailed Design (Visual) –The footprint and massing of	Improve visual amenity of	Detailed	Throughout	Throughout	N/A
MM2	DP5	development components and the works area should also be kept	the new buildings, NDAs in	Design	NDAs	NDAs	
		to a practical minimum and the detailed design of development	general and integrate as	Consultant/			
		components for Construction phase should follow the Sustainable	best possible into the				

		Building Design Guidelines. The form, textures, finishes and	surrounding landscape				
		colours of the proposed development components should aim to be	5				
		compatible with the existing surroundings. To improve visual					
		amenity designs should be aesthetically pleasing and treatment of					
		structures also improve visual amenity. For example, natural					
		building materials such as stone and timber, should be considered					
		for architectural features, and light earthy tone colours such as					
		shades of green, shades of grey, shades of brown and off-white					
		should also be considered to reduce the visibility of the					
		development components, including all roadwork, buildings and					
		noise barriers. In addition, the design of structures should consider					
		green roofs were feasible, following stated guidelines.					
		All Noise barriers, particularly noise barriers but also any					
		barriers proposed for ecological impact mitigation, should be					
		kept to a practical minimum, and be of such a designed as to					
		integrate as well as possible into the surrounding visual					
		context and be as low as practical to minimize blocking					
		views. Noise barrier design, including vertical, cantilever or					
		curved, and noise enclosures including semi-enclosure and					
		full enclosure, at grade and/ or elevated, should follow the					
		guidelines stated.					
		Construction time frame should also be considered					
S.12.B9	LV4-	Tree Protection & Preservation – Exiting trees to be retained within	Protect and Preserve	Government	Onsite	Prior to	^
MM4	DP5	the Project Site should be carefully protected during construction.	Trees	Detailed		Construction	
		In particular OVTs will be preserved according to ETWB Technical		Design		and	
		Circular (Works) No. 29/2004. Detailed Tree Protection		Consultant/		Construction	

		Specification shall be provided in the Contract Specification. Under		Contractor		Phase	
		this specification, the Contractor shall be required to submit, for					
		approval, a detailed working method statement for the protection of					
		trees prior to undertaking any works adjacent to all retained trees,					
		including trees in Contractor"s works areas.					
		A detailed tree survey will be carried out for the Tree					
		Removal Application (TRA) process which will be carried out					
		at the later detailed design stage of the Project. The detailed					
		tree survey will propose which trees should be retained,					
		transplanted or felled and will include details of tree					
		protection measures for those trees to be retained.					
S.12.B9	LV5-	Tree Transplantation – Trees unavoidably affected by the Project	Transplant Trees where	Government	Onsite where	Prior to	N/A
MM5	DP5	works should be transplanted where practical. Trees should be	suitable for transplantation	Detailed	possible.	Construction,,	
		transplanted straight to their final receptor site and not held in a		Design	Otherwise	Construction	
		temporary nursery as far as possible. A detailed Tree Transplanting		Consultant/	consider offsite	Phase &	
		Specification shall be provided in the Contract Specification, where		Contractor	location.	Maintenance	
		applicable. Sufficient time for necessary tree root and crown				in Operation	
		preparation periods shall be allowed in the project programme.				Phase	
		A detailed transplanting proposal will be submitted to relevant					
		government departments for approval in accordance with					
		ETWBTC 2/2004 and 3/2006 and final locations of					
		transplanted trees should be agreed prior to commencement					
		of the work.					
		For trees associated with highways e.g. roadside planting along					

		highways, that are unavoidably affected and should be					
		transplanted, HyD HQ/GN/13 "Interim Guidelines for Tree	1				
		Transplanting Works under Highways Department's Vegetation	1				
		Maintenance Ambit" should be referred to.	!				
S.12.B9	LV6-	Slope Landscaping – Site formation should be reduced as far as	To avoid substantial slope	Government/	Onsite	Prior to	N/A
MM6	DP5	possible. Seeding of modified slopes should be done as soon as	cutting and fill slopes.	Detailed		Construction,	
		grading works are completed to prevent erosion and subsequent	1	Design		Construction	
		loss of landscape resources and character. Woodland tree	To prevent erosion and	Consultant/		Phase &	
		seedlings and/ or shrubs should be planted where slope gradient	subsequent loss of			Maintenance	
		and site conditions allow.	landscape resources and			in Operation	
			character.			Phase	
		In addition, landscape planting should be provided for the	1				
		retaining structures associated with modified slopes where	To ensure man-made				
		conditions allow. All slope landscaping works should comply	slopes are as visually				
		with GEO Publication No. 1/2011-Technical Guidelines on	amenable as possible.				
		Landscape Treatment for Slopes.					
S.12.B9	LV7-	Compensatory Planting – Compensatory tree planting for felled	Compensate for trees and	Government/	Onsite where	Prior to	N/A
MM7	DP5	trees shall be provided to the satisfaction of relevant Government	shrubs lost due to the	Detailed	possible.	Construction,	
		departments. Required numbers and locations of compensatory	Project.	Design		Construction	
		trees shall be determined and agreed separately with Government	J	Consultant/	Otherwise	Phase &	
		during the Tree Removal Application process under ETWBTC	1	Contractor	consider offsite	Maintenance in	
		3/2006.	!		locations	Operation Phase	
			1				
		Compensatory planting is proposed at the potential open areas	1				
		such as open spaces, amenity areas, open areas of the	1				
		streetscapes, as well as the open areas within development lots.	!				

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		Compensatory planting for shrubs should be considered in					
		suitable locations. Native species such as Melastoma					
		malabathricum, Diospyros vaccinioides, Gardenia					
		jasminoides, Ixora chinensis, Ligustrum sinense, Litsea					
		rotundifolia, Melastoma dodecandrum, Atalantia buxifolia,					
		Rhodomyrtus tomentosa, Rhaphiolepis indica, and					
		Rhododendron simsii are suggested					
S.12.B9	LV8-	Woodland Compensatory Planting –Specific Woodland	Reprovide areas of	Project	In areas identified	Prior to	N/A
MM8	DP5	compensatory planting is proposed for any areas of quality	woodland to compensate	Proponent/	in the EIA	Construction,	
		woodland that are unavoidably affected by the Project. The	for those areas of quality	Detailed	Landscape	Construction	
		location and design of the woodland compensatory planting will	woodland lost.	Design	Mitigation Plans	Phase &	
		principally be within habitats of lower value such as upland		Consultant/	and as agreed	Maintenance	
		grassland. The proposed locations are identified, for example, on		Contractor/	with AFCD	in Operation	
		the foothills of Tai Shek Mo, and on the higher ground of Fung		Maintenance		Phase	
		Kong Shan in KTN NDA; along Fanling Bypass; and a small area		Authority			
		in the northern FLN NDA.					
		The intention of the compensatory woodland will be to recreate					
		areas of quality woodland, not necessarily to compensate for loss					
		of trees on a like for like basis (See E18 & E27 also).					
		Native tree species are suggested for planting in the appropriate					
		locations, including Ailanthus fordii, Bischofia javanica,					
		Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii,					
		Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus					
		tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera					
		heptaphylla and llex rotunda. In addition some understory					

		vegetation may be planted including shrubs such as Atalantia					
		buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora					
		chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma					
		malabathricum, Melastoma dodecandrum, Rhodomyrtus					
		tomentosa, Rhaphiolepis indica, and Rhododendron simsii.					
		The area allocated for compensatory woodland planting					
		allows in part for the fact that it will take some time for the					
		compensatory planting to achieve the landscape and					
		ecological function and value of the area to be lost. In					
		addition, it allows for the fact that not all of the areas					
		identified for planting will prove to be plantable, by virtue of					
		topography and ground conditions and, especially, because					
		though the areas identified are largely grassland it is					
		inevitable that these areas will already support some patches					
		of trees and shrubs which would be inappropriate for further					
		planting.					
S.12.B9	LV9-	Vertical Greening – Planting of climbers to grow up vertical	Soften hard surfaces and	Government /	On appropriate	Prior to	N/A
MM9	DP5	surfaces were appropriate (e.g. viaduct piers, noise barriers).	facilities	Detailed	structures	Construction,	
				Design		Construction	
				Consultant/		Phase &	
				Contractor		Maintenance	
						in Operation	
						Phase	
S.12.B9	LV10-	Green Roof – Roof greening where appropriate should be	Reduce exposure to	Government /	On appropriate	Prior to	N/A
MM10	DP5	established on proposed buildings as per the guidelines stated.	untreated concrete	Detailed	buildings	Construction,	
		These guidelines provide further details including	surfaces	Design		Construction	
		information regarding structural loading, design,	and particularly mitigate	Consultant/		Phase &	

		maintenance, etc. considerations as well as providing	visual impact to VSRs at	Contractor		Maintenance	
		information on what types of plants might be suitable.	high levels. Provide			in Operation	
			greening.			Phase	
S.12.B9	LV11-	Screen Planting – Tall screen/buffer trees and shrubs should be	To screen proposed	Government /	Along roads,	Prior to	N/A
MM11	DP5	planted. This measure may additionally form part of the	structures such as roads	Detailed	around	Construction,	
		compensatory planting.	and	Design	suitable built	Construction	
			buildings. Improve	Consultant/	structures, or	Phase &	
			compatibility with the	Contractor	around	Maintenance	
			surrounding environment		VSRs to contain	in Operation	
			and create a pleasant		their view out to	Phase	
			pedestrian environment		the		
					NDA structures.		
S.12.B9	LV12-	Enhancement Planting along Embankment - For channelized	Minimize the necessity of	Government /	Channelized	Prior to	N/A
MM14.3	DP5	watercourses, if these are modified, the Drainage Services	watercourse modification,	Detailed	watercourse,	Construction,	
		Department Practice Note No.1/2005 – Guidelines on	protect watercourses	Design	particularly the	Construction	
		Environmental Considerations for River Channel Design, should be	where	Consultant/	<u>Ma</u>	Phase &	
		considered and appropriate mitigation measures included ensuring	possible and enhance	Contractor	Wat River	Maintenance	
		the new watercourses match the existing as far as possible.	channelized watercourses		<u>Channel</u>	in Operation	
		Measures can include enhancement planting to upgrade the			<u>Diversion</u>	Phase	
		channels as appropriate, including consideration of wetland					
		planting along embankments where appropriate; as well as					
		consideration of the best materials for the channel lining (e.g.					
		gabion). All measures must also ensure any necessary					
		maintenance work can be carried out and that the channel meets					
		all its requirements for water flow, etc.					
		• For example, a stretch of the Ma Wat River Channel in the					

		south of FLN NDA will have to be diverted for the					
		construction of the Fanling Bypass Eastern Section. This					
		measure will be particularly relevant in this area.					
Landscap	e and Visua	al (Construction)					
S.12.B9	LV13-	Screen Hoarding –Screen hoarding shall be erected along areas of	To screen undesirable	Contractor	Throughout	Construction	N/A
MM16	DP5	the construction works site boundary where the works site borders	views of the works site.		NDAs	Phase	
		publically accessible routes and/or is close to visually sensitive					
		receivers (VSRs). It is proposed that the screening be compatible					
		with the surrounding environment and where possible, nonreflective,					
		recessive colours be used.					
		Any works areas near the ecological sensitive areas should					
		erect 2m high dull green site boundary fence. Details can					
		refer to the ecological impact assessment (Chapter 13 of the					
		EIA report).					
S.12.B9	LV14-	Light Control – Construction day and night time lighting should be	To minimize glare impact	Government /	Throughout	Construction	^
MM17	DP5	controlled to minimize glare impact to adjacent VSRs during the	to adjacent VSRs	Contractor	NDAs	and Operation	
		Construction phase.				Phases	
		Street and night time lighting shall also be controlled to					
		minimize glare impact to adjacent VSRs during the operation					
		phase.					
Ecology (	Constructio	on Phase)					
S.13.9	E1-DP5	Design and erection of 2m high solid dull green site barrier fence	Minimize dust,	Contractor.	Interface	Construction	N/A
		between active works areas and all areas/habitats of ecological	disturbance,		between	phase.	
		importance.	mortality and other		areas/habitats of		
			adverse		ecological		

			ecological impacts on		importance and		
			habitats, flora and fauna.		works areas (all		
					sides of KTN		
					area F1-2).		
		DP7-Utilization of Treated Sewage Effluent	t (TSE) from Shek Wu Hui S	Sewage Treatmer	t Works (SWHSTV	V)	
Landsca	pe and Vis	ual (Construction Phase and Operational Phase)					
S.12.9	LV1-	Tree Protection & Preservation – Exiting trees to be retained	Protect and Preserve Trees	Government /	<u>Onsite</u>	Prior to	N/A
MM4	DP7	within the Project Site should be carefully protected during		Detailed		Construction and	
		construction. In particular OVTs will be preserved according to		Design		Construction	
		ETWB Technical Circular (Works) No. 29/2004. Detailed Tree		Consultant/		Phase	
		Protection Specification shall be provided in the Contract		Contractor			
		Specification. Under this specification, the Contractor shall be					
		required to submit, for approval, a detailed working method					
		statement for the protection of trees prior to undertaking any					
		works adjacent to all retained trees, including trees in					
		Contractor's works areas.					
		A detailed tree survey will be carried out for the Tree Removal					
		Application (TRA) process which will be carried out at the later					
		detailed design stage of the Project. The detailed tree survey will					
		propose which trees should be retained, transplanted or felled					
		and will include details of tree protection measures for those					
		trees to be retained.					
S.12.9	LV2-	Vertical Greening – Planting of climbers to grow up vertical	Soften hard surfaces and	Government /	On appropriate	Prior to	N/A
MM9	DP7	surfaces were appropriate (e.g. building edges, piers).	facilities	Detailed	<u>structures</u>	Construction,	
				Design		Construction	
				Consultant/		Phase &	
				Contractor		Maintenance	

	1			1		1	
						in Operation	
						Phase	
S.12.9	LV3-	Green Roof – Roof greening where appropriate should be	Reduce exposure to	Government /	On appropriate	Prior to	N/A
MM10	DP7	established on proposed buildings as per the guidelines stated.	untreated concrete surfaces	Detailed	<u>buildings</u>	Construction,	
		These guidelines provide further details including information	and particularly mitigate	Design		Construction	
		regarding structural loading, design, maintenance, etc.	visual impact to VSRs at	Consultant/		Phase &	
		considerations as well as providing information on what types of	high levels. Provide	Contractor		Maintenance	
		plants might be suitable.	greening.			in Operation	
						Phase	
		DP10- Fanling	Bypass Eastern Section (N	lew Road)			
Landscap	e and Vis	ual (Detailed Design, Prior to Construction, Construction and O	perational Phases)				
S.12.D9	LV1-	General Good Practice Measures - For areas unavoidably		Detailed Design	Throughout NDAs,	Prior to	۸
	DP10	disturbed by the Project on a short term basis e.g. works areas,		Consultant/		Construction,	
		the general principle to try and restore these to their former state		Contractor		Construction & for	
		to suit future land use, should be adhered to.				all planting, this	
		With regard to topsoil, where identified, it should be stripped,				should be installed	
		treated appropriately, and where suitable and practical stored for				as soon as the	
		re-use in the construction of the soft landscape works such as				areas become	
		roadside amenity strips, and open space sites.				available, to	
						achieve early	
						establishment	
S.12.D9	LV2-	Minimum Topographical Change –To minimize landscape and	Reduce topographical	Government/	Throughout NDAs,	Prior to	N/A
MM1	DP10	visual impacts, the footprint and elevation of such elements	changes and minimize land	Detailed Design	particularly for	Construction	
		should be optimized to reduce topographical/ landform changes,	resumption	Consultant/	<u>reservoirs</u>		
		as well as reduce land take and interference with natural terrain.		Contractor			
		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.					
S.12.D9	LV3-	Tree Protection & Preservation – Exiting trees to be retained	Protect and Preserve Trees	Government/	<u>Onsite</u>	Prior to	۸
MM4	DP10	within the Project Site should be carefully protected during		Detailed Design		Construction and	
		construction. In particular OVTs will be preserved according to		Consultant/		Construction	
		ETWB Technical Circular (Works) No. 29/2004. Detailed Tree		Contractor		Phase	
		Protection Specification shall be provided in the Contract					
		Specification. Under this specification, the Contractor shall be					
		required to submit, for approval, a detailed working method					
		statement for the protection of trees prior to undertaking any					
		works adjacent to all retained trees, including trees in					
		Contractor's works areas.					
		A detailed tree survey will be carried out for the Tree Removal					
		Application (TRA) process which will be carried out at the later					
		detailed design stage of the Project. The detailed tree survey will					
		propose which trees should be retained, transplanted or felled					
		and will include details of tree protection measures for those					
		trees to be retained.					
S.12.D9	LV4-	Tree Transplantation – Trees unavoidably affected by the Project	Transplant Trees where	Government/	Onsite where	Prior to	N/A
MM5	DP10	works should be transplanted where practical. Trees should be	suitable for transplantation	Detailed Design	possible.	Construction,	
		transplanted straight to their final receptor site and not held in a		Consultant/	Otherwise	Construction	

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		temporary nursery as far as possible. A detailed Tree		Contractor	consider offsite	Phase &	
		Transplanting Specification shall be provided in the Contract			<u>locations</u>	Maintenance in	
		Specification, where applicable. Sufficient time for necessary				Operation Phase	
		tree root and crown preparation periods shall be allowed in the					
		project programme.					
		A detailed transplanting proposal will be submitted to relevant					
		government departments for approval in accordance with					
		ETWBTC 2/2004 and 3/2006 and final locations of transplanted					
		trees should be agreed prior to commencement of the work.					
		For trees associated with highways e.g. roadside planting along					
		highways, that are unavoidably affected and should be					
		transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree					
		Transplanting Works under Highways Department's Vegetation					
		Maintenance Ambit' should be referred to.					
S.12.D9	LV5-	Slope Landscaping – Site formation should be reduced as far as	To avoid substantial slope	Government/	<u>Onsite</u>	Prior to	N/A
MM6	DP10	possible. Seeding of modified slopes should be done as soon as	cutting and fill slopes.	Detailed Design		Construction,	
		grading works are completed to prevent erosion and subsequent	To prevent erosion and	Consultant/		Construction	
		loss of landscape resources and character. Woodland tree	subsequent loss of	Contractor		Phase &	
		seedlings and/ or shrubs should be planted where slope gradient	landscape resources and			Maintenance in	
		and site conditions allow.	character.			Operation Phase	
		In addition, landscape planting should be provided for the	To ensure man-made slopes				
		retaining structures associated with modified slopes where	are as visually amenable as				
		conditions allow. All slope landscaping works should comply with	possible.				
		GEO Publication No. 1/2011-Technical Guidelines on Landscape					
		Treatment for Slopes.					
S.12.D9	LV6-	Compensatory Planting – Compensatory tree planting for felled	Compensate for trees and	Government/	Onsite where	Prior to	N/A
MM7	DP10	trees shall be provided to the satisfaction of relevant	shrubs lost due to the	Detailed Design	possible.	Construction,	

		Government departments. Required numbers and locations of	Project.	Consultant/	<u>Otherwise</u>	Construction	
		compensatory trees shall be determined and agreed separately		Contractor	consider offsite	Phase &	
		with Government during the Tree Removal Application process			<u>locations</u>	Maintenance in	
		under ETWBTC 3/2006.				Operation Phase	
		Compensatory planting is proposed at the potential open areas					
		such as open spaces, amenity areas, open areas of the					
		streetscapes, as well as the open areas within development lots.					
		Compensatory planting for shrubs should be considered in					
		suitable locations. Native species such as Melastoma					
		malabathricum, Diospyros vaccinioides, Gardenia jasminoides,					
		Ixora chinensis, Ligustrum sinense, Litsea rotundifolia,					
		Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus					
		tomentosa, Rhaphiolepis indica, and Rhododendron simsii are					
		suggested.					
S.12.D9	LV7-	Woodland Compensatory Planting –Specific Woodland	Reprovide areas of	Project	In areas identified	Prior to	N/A
MM8	DP10	compensatory planting is proposed for any areas of quality	woodland to compensate for	Proponent/	in the EIA	Construction,	
		woodland that are unavoidably affected by the Project. The	those areas of quality	Detailed Design	<u>Landscape</u>	Construction	
		location and design of the woodland compensatory planting will	woodland lost.	Consultant/	Mitigation Plans	Phase &	
		principally be within habitats of lower value such as upland		Contractor/	and as agreed	Maintenance in	
		grassland. The proposed locations are identified, for example, on		Maintenance	with AFCD	Operation Phase	
		the foothills of Tai Shek Mo, and on the higher ground of Fung		Authority			
		Kong Shan in KTN NDA; along Fanling Bypass; and a small					
		area in the northern FLN NDA.					
		The intention of the compensatory woodland will be to recreate					
		areas of quality woodland, not necessarily to compensate for					
		loss of trees on a like for like basis (See E18 & E27 also).					
		Native tree species are suggested for planting in the appropriate					

		locations, including Ailanthus fordii, Bischofia javanica,					
		Castanopsis fissa, Celtis sinensis, Cinnamomum burmannii,					
		Cinnamomum camphora, Xanthoxlyum avicennaeHibiscus					
		tiliaceus, Liquidambar formosana, Sapium discolor, Schefflera					
		heptaphylla and llex rotunda. In addition some understory					
		vegetation may be planted including shrubs such as Atalantia					
		buxifolia, Diospyros vaccinioides, Gardenia jasminoides, Ixora					
		chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma					
		malabathricum, Melastoma dodecandrum, Rhodomyrtus					
		tomentosa, Rhaphiolepis indica, and Rhododendron simsii.					
		The area allocated for compensatory woodland planting allows					
		in part for the fact that it will take some time for the					
		compensatory planting to achieve the landscape and ecological					
		function and value of the area to be lost. In addition, it allows for					
		the fact that not all of the areas identified for planting will prove					
		to be plantable, by virtue of topography and ground conditions					
		and, especially, because though the areas identified are largely					
		grassland it is inevitable that these areas will already support					
		some patches of trees and shrubs which would be inappropriate					
		for further planting.					
S.12.D9	LV8-	Vertical Greening – Planting of climbers to grow up vertical	Soften hard surfaces and	Government/	On appropriate	Prior to	N/A
MM9	DP10	surfaces were appropriate (e.g. viaduct piers, noise barriers).	facilities	Detailed Design	<u>structures</u>	Construction,	
				Consultant/		Construction	
				Contractor		Phase &	
						Maintenance in	
						Operation Phase	
S.12.D9	LV9-	Screen Planting – Tall screen/buffer trees and shrubs should be	To screen proposed	Government/	Along roads,	Prior to	N/A

MM11	DP10	planted. This measure may additionally form part of the	structures such as roads	Detailed Design	around suitable	Construction,	
		compensatory planting.	and buildings. Improve	Consultant/	built structures, or	Construction	
			compatibility with the	Contractor	around VSRs to	Phase &	
			surrounding environment		contain their view	Maintenance in	
			and create a pleasant		out to the NDA	Operation Phase	
			pedestrian environment		structures.		
S.12.D9	LV10-	Road Greening –For viaducts, soft landscaping should be	To soften the hard, straight	Government/	On viaducts or	Prior to	N/A
MM12	DP10	provided to soften the hard, straight edges (for climbers used to	edges and provide greening	Detailed Design	along roads.	Construction,	
		cover the vertical, hard surfaces of the piers – see MM9 Vertical	along roads.	Consultant/		Construction	
		Greening) and shade tolerant plants should be planted, where		Contractor		Phase &	
		light is sufficient, to improve aesthetic value of areas under				Maintenance in	
		viaducts. Both at grade planting and use of elevated planters				Operation Phase	
		should be considered for the soft landscaping of viaducts, taking					
		into account the preference to minimize the overall viaduct bulk					
		and integrate architectural forms and textural finishes which					
		improve aesthetics.					
		For at grade roads, planting should be considered along central					
		dividers and on road islands e.g. in the middle of roundabouts.					
		(Roadside planting i.e. at the road edge and not in the central					
		divider or road island, is considered part of Screen Planting)					
S.12.D9	LV11-	Enhancement Planting along Embankment - For channelized	Minimize the necessity of	Government/	<u>Channelized</u>	Prior to	N/A
MM14.3	DP10	watercourses, if these are modified, the Drainage Services	watercourse modification,	Detailed Design	watercourse,	Construction,	
		Department Practice Note No.1/2005 - Guidelines on	protect watercourses where	Consultant/	particularly the Ma	Construction	
		Environmental Considerations for River Channel Design, should	possible and enhance	Contractor	Wat River Channel	Phase &	
		be considered and appropriate mitigation measures included	channelized watercourses		<u>Diversion</u>	Maintenance in	
		ensuring the new watercourses match the existing as far as				Operation Phase	
		possible. Measures can include enhancement planting to					

		upgrade the channels as appropriate, including consideration of					
		wetland planting along embankments where appropriate; as well					
		as consideration of the best materials for the channel lining (e.g.					
		gabion). All measures must also ensure any necessary					
		maintenance work can be carried out and that the channel					
		meets all its requirements for water flow, etc.					
		For example, a stretch of the Ma Wat River Channel in the south					
		of FLN NDA will have to be diverted for the construction of the					
		Fanling Bypass Eastern Section. This measure will be					
		particularly relevant in this area.					
Landscap	e and Vis	ual (Construction)					
S.12.D9	LV12-	Screen Hoarding –Screen hoarding shall be erected along areas	To screen undesirable views	Contractor	Throughout NDAs	Construction	^
MM16	DP10	of the construction works site boundary where the works site	of the works site.			Phase	
		borders publically accessible routes and/or is close to visually					
		sensitive receivers (VSRs). It is proposed that the screening be					
		compatible with the surrounding environment and where					
		possible, non-reflective, recessive colours be used.					
		Any works areas near the ecological sensitive areas should					
		erect 2m high dull green site boundary fence. Details can refer to					
		the ecological impact assessment (Chapter 13 of the EIA report).					
S.12.D9	LV13-	Light Control – Construction day and night time lighting should	To minimize glare impact to	Government /	Throughout NDAs	Construction	۸
MM17	DP10	be controlled to minimize glare impact to adjacent VSRs during	adjacent VSRs	Contractor		and Operation	
		the Construction phase.				phases	
		Street and night time lighting shall also be controlled to minimize					
		glare impact to adjacent VSRs during the operation phase.					
Ecology (	Detailed D	Design, Construction and Operational Phases)	•				
S13.8	E1-	Use opaque, non-transparent, non-reflective noise barriers.	Minimize mortality impacts	Detailed Design	Throughout NDAs	Detailed design,	۸
		•	•				

	DP10	Unnecessary lighting should be avoided.	on birds.	Consultant/		construction and	
				Contractor		Operation phases.	
				Maintenance			
				Authority.			
Ecology (	Construct	ion Phase)				,	
S13.9	E3-	Lower reaches of Siu Hang San Tsuen Stream to have 10m wide	Minimize impacts on Siu	Contractor.	FLN area D1-3.	Construction	*
	DP10	vegetated buffer in Open Space Zone D1-3 and Fanling Bypass	Hang San Tsuen Stream			phase.	
		to cross stream on viaduct.	and stream fauna.				
S.13.9	E4-	Design and erection of 2m high solid dull green site barrier fence	Minimize dust, disturbance,	Contractor.	Interface between	Construction	N/A
	DP10	between active works areas and all areas/habitats of ecological	mortality and other adverse		areas/habitats of	phase.	
		importance.	ecological impacts on		<u>ecological</u>		
			habitats, flora and fauna.		importance and		
			Measures to minimize flight-		works areas (all of		
			line impacts to birds,		the north side of		
			especially breeding ardeids.		the Bypass works		
					areas west of		
					interchange with		
					Sha Tau Kok		
					<u>Road).</u>		
Cultural H	leritage (C	Construction Phase)					
S11.6.2	CH4-	Conducting Construction Vibration Monitoring and Structural	To minimize the potential	Contractor.	Identified potential	Construction	N/A
	DP10	Strengthening Measures	impacts during Construction		vibration impacted	phase, with details	
		Construction vibration monitoring and structural strengthening	phase on any identified		built heritage	specified in	
		measures should be conducted during Construction phase	potential vibration impacted		<u>features</u>	baseline condition	
		based on the assessment result of baseline condition survey and	built heritage features			survey and	
		baseline vibration impact assessment, so as to ensure the				baseline vibration	
		construction performance meets with the vibration standard				impact	

		stated in the EIA report.				assessment,	
	-	DP12-Reprovision of	of temporary wholesale mark	ket in FLN NDA			
Landscap	e and Visi	ual (Detailed Design, Prior to Construction, Construction and Op	perational Phases)				
S.12.D9	LV1-	General Good Practice Measures - For areas unavoidably		Detailed design	Throughout	Prior to	N/A
	DP12	disturbed by the Project on a short term basis e.g. works areas,	,	consultant/	NDAs,	Construction,	
		the general principle to try and restore these to their former state	'	Contractor		Construction & for	
		to suit future land use, should be adhered to.	,			all planting, this	
		With regard to topsoil, where identified, it should be stripped,	'			should be installed	
		treated appropriately, and where suitable and practical stored for	,			as soon as the	
		re-use in the construction of the soft landscape works such as	,			areas become	
		roadside amenity strips, and open space sites.	,			available, to	
		'	'			achieve early	
			'			establishment	
S.12.D9	LV2-	Minimum Topographical Change –To minimize landscape and	Reduce topographical	Government /	Throughout	Prior to	N/A
MM1	DP12	visual impacts, the footprint and elevation of such elements	changes and minimize land	Detailed Design	NDAs, particularly	Construction	
		should be optimized to reduce topographical/ landform changes,	resumption	Consultant/	for reservoirs		
		as well as reduce land take and interference with natural terrain.	'	Contractor			
		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.					

S.12.D9	LV3-	Detailed Design (Visual) –The footprint and massing of	Improve visual amenity of	Detailed Design	Throughout NDAs	Prior to	N/A
MM2	DP12	development components and the works area should also be	the new buildings, NDAs in	Consultant		Construction	
		kept to a practical minimum and the detailed design of	general and integrate as				
		development components for Construction phase should follow	best possible into the				
		the Sustainable Building Design Guidelines. The form,	surrounding landscape				
		textures, finishes and colours of the proposed development					
		components should aim to be compatible with the existing					
		surroundings. To improve visual amenity designs should be					
		aesthetically pleasing and treatment of structures also improve					
		visual amenity. For example, natural building materials such as					
		stone and timber, should be considered for architectural					
		features, and light earthy tone colours such as shades of green,					
		shades of grey, shades of brown and off-white should also be					
		considered to reduce the visibility of the development					
		components, including all roadwork, buildings and noise					
		barriers. In addition, the design of structures should consider					
		green roofs were feasible, following stated guidelines.					
		All Noise barriers, particularly noise barriers but also any					
		barriers proposed for ecological impact mitigation, should be					
		kept to a practical minimum, and be of such a designed as to					
		integrate as well as possible into the surrounding visual context					
		and be as low as practical to minimize blocking views. Noise					
		barrier design, including vertical, cantilever or curved, and noise					
		enclosures including semi-enclosure and full enclosure, at grade					
		and/ or elevated, should follow the guidelines stated.					

		Construction time frame should also be considered and designs seek to keep it to a practical minimum.					
C 40 D0	LV4-		Destant and Desagner Trans	Covernment /	Oneite	Drianta	N/A
S.12.D9		Tree Protection & Preservation – Exiting trees to be retained	Protect and Preserve Trees	Government /	Onsite	Prior to	IN/A
MM4	DP12	within the Project Site should be carefully protected during		Detailed Design		Construction and	
		construction. In particular OVTs will be preserved according to		Consultant/		Construction	
		ETWB Technical Circular (Works) No. 29/2004. Detailed Tree		Contractor		Phase	
		Protection Specification shall be provided in the Contract					
		Specification. Under this specification, the Contractor shall be					
		required to submit, for approval, a detailed working method					
		statement for the protection of trees prior to undertaking any					
		works adjacent to all retained trees, including trees in					
		Contractor's works areas.					
		A detailed tree survey will be carried out for the Tree Removal					
		Application (TRA) process which will be carried out at the later					
		detailed design stage of the Project. The detailed tree survey					
		will propose which trees should be retained, transplanted or					
		felled and will include details of tree protection measures for					
		those trees to be retained.					
S.12.D9	LV5-	Tree Transplantation – Trees unavoidably affected by the Project	Transplant Trees where	Government /	Onsite where	Prior to	N/A
MM5	DP12	works should be transplanted where practical. Trees should be	suitable for transplantation	Detailed Design	possible.	Construction,	
		transplanted straight to their final receptor site and not held in a		Consultant/	Otherwise	Construction	
		temporary nursery as far as possible. A detailed Tree		Contractor	consider offsite	Phase &	
		Transplanting Specification shall be provided in the Contract			locations	Maintenance in	
		Specification, where applicable. Sufficient time for necessary				Operation Phase	
		tree root and crown preparation periods shall be allowed in the					

		project programme.					
		A detailed transplanting proposal will be submitted to relevant					
		government departments for approval in accordance with					
		ETWBTC 2/2004 and 3/2006 and final locations of transplanted					
		trees should be agreed prior to commencement of the work.					
		For trees associated with highways e.g. roadside planting along					
		highways, that are unavoidably affected and should be					
		transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree					
		Transplanting Works under Highways Department's Vegetation					
		Maintenance Ambit' should be referred to.					
S.12.D9	LV6-	Slope Landscaping – Site formation should be reduced as far as	To avoid substantial slope	Government /	Onsite	Prior to	N/A
MM6	DP12	possible. Seeding of modified slopes should be done as soon	cutting and fill slopes.	Detailed Design		Construction,	
		as grading works are completed to prevent erosion and	To prevent erosion and	Consultant/		Construction	
		subsequent loss of landscape resources and character.	subsequent loss of	Contractor		Phase &	
		Woodland tree seedlings and/ or shrubs should be planted	landscape resources and			Maintenance in	
		where slope gradient and site conditions allow.	character.			Operation Phase	
			To ensure man-made slopes				
		In addition, landscape planting should be provided for the	are as visually amenable as				
		retaining structures associated with modified slopes where	possible.				
		conditions allow. All slope landscaping works should comply					
		with GEO Publication No. 1/2011-Technical Guidelines on					
		Landscape Treatment for Slopes.					
S.12.D9	LV7-	Compensatory Planting – Compensatory tree planting for felled	Compensate for trees and	Government /	Onsite where	Prior to	N/A
MM7	DP12	trees shall be provided to the satisfaction of relevant	shrubs lost due to the	Detailed Design	possible.	Construction,	
		Government departments. Required numbers and locations of	Project.	Consultant/	Otherwise	Construction	

		compensatory trees shall be determined and agreed separately		Contractor	consider offsite	Phase &	
		with Government during the Tree Removal Application process			locations	Maintenance in	
		under ETWBTC 3/2006.				Operation Phase	
		Compensatory planting is proposed at the potential open areas					
		such as open spaces, amenity areas, open areas of the					
		streetscapes, as well as the open areas within development lots.					
		Compensatory planting for shrubs should be considered in					
		suitable locations. Native species such as Melastoma					
		malabathricum, Diospyros vaccinioides, Gardenia jasminoides,					
		Ixora chinensis, Ligustrum sinense, Litsea rotundifolia,					
		Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus					
		tomentosa, Rhaphiolepis indica, and Rhododendron simsii are					
		suggested.					
S.12.D9	LV8-	Screen Planting – Tall screen/buffer trees and shrubs should be	To screen proposed	Government /	Along roads,	Prior to	N/A
MM11	DP12	planted. This measure may additionally form part of the	structures such as roads and	Detailed Design	around suitable	Construction,	
		compensatory planting	buildings. Improve	Consultant/	built structures, or	Construction	
			compatibility with the	Contractor	around VSRs to	Phase &	
			surrounding environment		contain their view	Maintenance in	
			and create a pleasant		out to the NDA	Operation Phase	
			pedestrian environment		structures.		

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

### **Implementation status:** ^

- ^ Mitigation measure was fully implemented
- * Observation/reminder was made during site audit but improved/rectified by the contractor
- # Observation/reminder was made during site audit but not yet improved/rectified by the contractor
- X Non-compliance of mitigation measure
- Non-compliance but rectified by the contractor

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

APPENDIX R WASTE GENERATION IN THE REPORTING MONTH Name of Department: Civil Engineering and Development Department

### Monthly Summary Waste Flow Table for 2020

	Actual Quantities of Inert C&D Materials Generated Monthly  Actual Quantities of C&D Wastes Generated Monthly									Monthly	
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (a)	Reused in the Contract (b)	Reused in Other Projects (c)	Disposed as Public Fill (d)	Imported Fill (e)	Metals	Paper / Cardboard Packaging	(See Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³ )
January	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
February	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
March	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.065
April	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.351
Мау	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.793
June	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.202
Sub-total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.411
July	5.907	0.000	5.907	0.000	0.000	0.000	0.000	0.000	1.780	0.000	0.455
August	0.027	0.000	0.024	0.000	0.003	0.000	0.000	0.086	0.000	0.000	0.327
September	0.145	0.000	0.145	0.000	0.000	0.000	0.003	0.059	0.000	0.000	0.503
October	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.717
November	3.024	0.000	0.000	0.101	2.923	0.000	38.540	0.009	0.000	0.000	0.744
December	19.155	0.000	0.151	19.004	0.000	0.000	0.001	0.000	0.002	0.000	0.151
Total	28.258	0.000	6.227	19.105	2.926	0.000	38.544	0.154	1.782	0.000	4.308

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		Foreca	ast of Total Qu	antities of C8	D Materials to	be Generate	d from the Co	ntract*				
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in Other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse		
(in '000m ³ )	(in '000m³) (in '000kg) (in '000kg) (in '000kg) (in '000kg) (in '000kg)											
1,310.619	300.000	1,010.619	0.000	0.000	0.000	20.000	10.000	20.000	0.500	10.000		

Notes: (1) The performance target are given in PS Clause 1.115(14)

- (2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
- (4) The Contractor shall also submit the latest forecast of the amount of C&D materials expected to be generated from the Works, together with a break down of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m³.
- (5) Conversion factors for reporting purpose:

in-situ: rock = 2.5 tonnes/m³; soil = 2.0 tonnes/m³

excavated: rock = 2.0 tonnes/m³; soil = 1.8 tonnes/m³

broken concrete and bitumen = 2.4 tonnes/m³

C&D Waste = 0.9 tonnes/m³

Non-inert C&D material: 6.5m3/dump truck

- (6) Numbers are rounded off to the nearest three decimal places
- * Forecast
- (7) Total Quantity Generated = a+b+c+d+e

Name of Department: Civil Engineering and Development Department

### Monthly Summary Waste Flow Table for 2021

	Actua	l Quantities	of Inert C&D	Materials Ge	nerated Mon	thly	Actual (	Quantities of	C&D Wastes	Generated I	Monthly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (a)	Reused in the Contract (b)	Reused in Other Projects (c)	Disposed as Public Fill (d)	Imported Fill (e)	Metals	Paper / Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³ )
January	43.303	0.000	0.000	43.303	0.000	0.000	0.002	0.120	0.002	0.000	0.220
February	40.246	0.000	0.000	39.933	0.313	0.000	0.000	0.000	0.000	0.000	0.068
March	50.606	0.000	1.664	46.312	0.258	2.372	0.003	0.000	0.002	0.033	0.185
April	30.900	0.000	0.529	29.004	0.315	1.052	0.000	0.000	0.000	0.000	0.066
May	31.720	0.000	2.719	28.328	0.057	0.616	0.000	0.004	0.000	0.000	0.468
June	29.813	0.000	0.155	29.028	0.331	0.299	0.000	0.000	0.000	0.000	0.193
Sub-total	226.588	0.000	5.067	215.908	1.274	4.339	0.005	0.124	0.004	0.033	1.200
July	29.065	0.000	1.354	27.279	0.347	0.085	0.000	0.147	0.002	6.500	0.139
August											
September											
October											
November											
December											
Total	255.653	0.000	6.421	243.187	1.621	4.424	0.005	0.271	0.006	6.533	1.339

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		Foreca	ast of Total Qu	antities of C8	D Materials to	be Generate	d from the Co	ntract*		
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in Other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / Cardboard Packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m³) (in '000kg) (in '000kg) (in '000kg) (in '000kg) (in '000kg)										
1,310.619	300.000	1,010.619	0.000	0.000	0.000	20.000	10.000	20.000	0.500	10.000

Notes: (1) The performance target are given in PS Clause 1.115(14)

- (2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
- (4) The Contractor shall also submit the latest forecast of the amount of C&D materials expected to be generated from the Works, together with a break down of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m³.
- (5) Conversion factors for reporting purpose:

in-situ: rock = 2.5 tonnes/m³; soil = 2.0 tonnes/m³

excavated: rock = 2.0 tonnes/m³; soil = 1.8 tonnes/m³

broken concrete and bitumen = 2.4 tonnes/m³

C&D Waste =  $0.9 \text{ tonnes/m}^3$ 

Slurry = 1.0 tonnes/m3

- (6) Numbers are rounded off to the nearest three decimal places
  - * Forecast
- (7) Total Quantity Generated = a+b+c+d+e

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Name of Department: CEDD

## Contract No.: ND/2019/02

## Year **2020**

### **Waste Flow Table**

	Total	Actual Qua	ntities of Ine	rt C&D Mate	rials Generate	ed Monthly	Actual Qua	antities of No	n-Inert C&D V	Vastes Gener	ated Monthly
Month	Quantity Generated (a) = (b)+(c)+(d)+(e )	Hard Rock and Large Broken Concrete (b)	Reused in the Contract (c)	Reused in other Projects (d)	Disposed as Public Fill* (e)	Imported Fill (f)	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse#
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
Jan	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Feb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
June	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sub-total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
July	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aug	7.99	0.00	0.00	0.00	7.99	0.00	0.00	0.01	0.00	0.00	0.00
Sept	12.55	0.00	0.00	0.00	12.55	0.00	0.00	0.00	0.00	0.00	0.00
Oct	1,499.49	0.00	0.00	0.00	1,499.49	0.00	0.00	0.00	0.00	0.00	9.10
Nov	449.84	0.00	0.00	0.00	449.84	0.00	3.85	0.00	0.00	0.00	28.47
Dec	47.36	0.00	0.00	0.00	47.36	0.00	0.01	0.03	0.00	0.00	39.44
Sub-total	2,017.23	0.00	0.00	0.00	2,017.23	0.00	3.86	0.04	0.00	0.00	77.01
Total	2,017.23	0.00	0.00	0.00	2,017.23	0.00	3.86	0.04	0.00	0.00	77.18

- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) Broken concrete for recycling into aggregates.

			Forecast	of Total Quan	tities of C&D N	Materials to b	e Generated	from the ND/2	2019/02		
Forecast									Plastics		
Made at the End of the Project	Total Quantity Generated	Hard Rock & Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	(see Note 2)	Chemicals Waste	Others, e.g. general refuse
Troject	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
Total:	29,000	8,400	0	25,000	4,000	0	100	1.0	3	0.5	200



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Name of Department: CEDD

Contract No.: ND/2019/02

Year **2021** 

### **Waste Flow Table**

		Actual Qua	antities of Ine	rt C&D Mate	rials Generate	ed Monthly	Actual Quan	tities of Non-	Inert C&D W	astes Genera	ted Monthly
Month	Total Quantity Generated (a) = (b)+(c)+(d)+(e)	Hard Rock and Large Broken Concrete (b)	Reused in the Contract (c)	Reused in other Projects (d)	Disposed as Public Fill* (e)	Imported Fill (f)	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse#
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
Jan	288.53	0.00	0.00	0.00	288.53	0.00	0.00	0.00	0.00	0.00	31.68
Feb	439.77	0.00	0.00	0.00	439.77	0.00	0.01	0.13	0.00	0.00	11.51
Mar	1,333.82	0.00	0.00	0.00	1,333.82	0.00	0.00	0.00	0.00	0.00	3.79
Apr	1,160.76	0.00	0.00	0.00	1,160.76	0.00	0.00	0.00	0.00	0.00	3.02
May	1,301.40	0.00	0.00	0.00	1,301.40	0.00	0.01	0.00	0.00	0.00	4.30
June	1,061.46	0.00	0.00	0.00	1,061.46	0.00	0.00	0.00	0.00	0.00	2.60
Sub-total	5,585.74	0.00	0.00	0.00	5,585.74	0.00	0.02	0.13	0.00	0.00	56.90
July	800.27	0.00	0.00	0.00	800.27	0.00	0.01	0.00	0.00	0.00	7.82
Aug											
Sept											
Oct											
Nov											
Dec											
Sub-total	800.27	0.00	0.00	0.00	800.27	0.00	0.01	0.00	0.00	0.00	7.82
Total	6,386.01	0.00	0.00	0.00	6,386.01	0.00	0.03	0.13	0.00	0.00	64.72

- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) Broken concrete for recycling into aggregates.

			Forecast	of Total Quan	tities of C&D N	Materials to b	e Generated	from the ND/2	2019/02		
Forecast									Plastics		
Made at the End of the	Total Quantity Generated	Hard Rock & Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	(see Note 2)	Chemicals Waste	Others, e.g. general refuse
Project	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
Total:	29,000	8,400	0	25,000	4,000	0	100	1.0	3	0.5	200

Sang Hing – Kuly Joint Venture Contract No.: ND/2019/03

Kwu Tung North and Fanling North New Development Areas, Phase 1:

**Development of Long Valley Nature Park** 

Name of Department: CEDD Contract No.: ND/2019/03

## Monthly Summary Waste Flow Table for <u>2019</u> (Year)

	A	ctual Quantities	of Inert C&D	Materials Gene		y	Actu	` ,	of C&D Wastes	Generated Mo	onthly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (a)	Reused in the Contract (b)	Reused in other Projects (c)	Disposed as Public Fill (d)	Imported Fill*	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m ³ )	(in '000m ³ )	$(in '000m^3)$	(in '000m ³ )	$(in '000m^3)$	(in '000m ³ )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³ )
Jan	_	_	_	_	-	-	-	-	=	-	_
Feb	_		_	_	_	-	ĺ	I	-	_	_
Mar	_	_	_	_	_	-	-	_	_	_	_
Apr	_	_	_	-	-	_	-	_	_	_	_
May	_	_	_	-	-	_	_	_	_	_	_
June	_	_	_	_	_	_	_	_	_	_	_
July	_	_	_	-	-	_	_	_	_	_	_
Aug	_	_	_	_	_	_	_	_	_	_	_
Sept	_	_	_	-	_	-	-	-	_	_	_
Oct	_	_		_	_		1	_	_		_
Nov	_	_	_	_	_	_	1	1	_	_	_
Dec	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0

^{*}Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

Sang Hing – Kuly Joint Venture Contract No.: ND/2019/03

Kwu Tung North and Fanling North New Development Areas, Phase 1:

**Development of Long Valley Nature Park** 

Name of Department: CEDD Contract No.: ND/2019/03

## Monthly Summary Waste Flow Table for <u>2020</u> (Year)

	A	ctual Quantities	of Inert C&D	Materials Gene	rated Monthl	у	Actu	al Quantities o	of C&D Wastes	Generated Mo	onthly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (a)	Reused in the Contract (b)	Reused in other Projects (c)	Disposed as Public Fill (d)	Imported Fill*	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³ )
Jan	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0.01
Mar	0	0	0	0	0	0	0	0	0	0	0.004
Apr	0	0	0	0	0	0	0	0	0	0	0.038
May	0	0	0	0	0	0	0	0	0	0	0.004
Jun	0	0	0	0	0	0	0	0	0	0	0.015
Sub-Total	0	0	0	0	0	0	0	0	0	0	0.071
Jul	0.1	0	0	0	0.1	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0.03
Sep	0	0	0	0	0	0	0	0	0	0	0
Oct	0.08	0	0	0	0.08	0	0	0	0	0	0.038
Nov	0.08	0	0	0	0.08	0	0	0	0	0	0.1
Dec	0.54	0	0	0	0.54	0	0	0	0	0	0.038
Total	0.8	0	0	0	0.8	0	0	0	0	0	0.277

^{*}Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

Sang Hing – Kuly Joint Venture Contract No.: ND/2019/03 Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park

Contract No.: ND/2019/03

Name of Department: CEDD

## Monthly Summary Waste Flow Table for <u>2021</u> (Year)

	A	ctual Quantities	of Inert C&D	Materials Gene	erated Monthl	y	Actu	al Quantities o	of C&D Wastes	Generated Mo	onthly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (a)	Reused in the Contract (b)	Reused in other Projects (c)	Disposed as Public Fill (d)	Imported Fill*	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³ )
Jan	0.83	0	0	0.22	0.61	0	0	0	0	0	0.075
Feb	0	0	0	0	0	0.096	0	0	0	0	0.022
Mar	0.56	0	0	0	0.56	0.26	0	0	0	0	0.15
Apr	0.68	0	0	0	0.68	0.30	0	0	0	0	0.31
May	0.66	0	0	0	0.66	0.15	0	0	0	0	0.21
Jun	0.11	0	0	0	0.11	0.30	0	0	0	0	0.19
Sub-Total	2.84	0	0	0.22	2.62	1.106	0	0	0	0	0.957
Jul	0.26	0	0	0	0.26	0.14	0	0	0	0	0.178
Aug	_	-	ı	_	_	-	-	-	-	_	_
Sep	_		ı	_	_	_				_	_
Oct	_	-	_	-	-	_	_	_	_	_	_
Nov	_	_	1	_	-	_	_	_	_	_	_
Dec	-	-	ı	_	-		-	-	-	_	_
Total	3.1	-	-	0.22	2.88	1.246	0	0	0	0	1.135

^{*}Remark: Imported Fill not taken into account of Total Quantity Generated

#Revised Figure

Sang Hing – Kuly Joint Venture

**Contract No.: ND/2019/03** 

Kwu Tung North and Fanling North New Development Areas, Phase 1:

**Development of Long Valley Nature Park** 

			Forecast o	f Total Quant	ities of C&D Mate	erials to be G	enerated from th	e Contract*		
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³ )
2.5	1	2	0	0.5	5	1	0.2	0.2	1	3

^{*}Remark: Figure to be revised if necessary

- (1) The performance targets are given in ETWB Technical Circular PS Clause 6(14).
- (2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
- The Contractor shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the Works, together with a breakdown of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000 m3. (ETWB Technical Circular PS Clause 5(4)(b) refers). [Delete Note (4) and the table above on the forecast, where inapplicable].
- (5) Total Quantity Generated = (a) + (b) + (c) + (d)



#### Monthly Summary Waste Flow Table for <u>2021</u> (Year)

		Actual (	Quantities of In	ert C&D Mater	ials Generated	Monthly	Actual Ç	uantities of No	n-Inert C&D W	Vastes Generate	ed Monthly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (a)	Reused in the Contract (b)	Reused in other Projects	Disposed as Public Fill (d)	Imported Fill	Metals (f)	Paper/ cardboard packaging (g)	Plastics (h)	Chemical Waste (i)	Others, e.g. general refuse (j)
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
Jan	1,705.91	0.00	0.00	0.00	0.00	1,439.86	0.00	0.00	0.00	0.00	266.05
Feb	2,033.63	0.00	0.00	0.00	159.19	1,700.35	0.00	0.00	0.00	0.00	174.09
Mar	508.67	0.00	0.00	0.00	236.63	68.57	0.00	0.00	0.00	0.00	203.47
Apr	1,227.09	0.00	0.00	0.00	1,222.37	0.00	0.00	0.00	0.00	0.00	4.72
May	3,904.76	0.00	0.00	0.00	3,290.41	588.64	0.00	0.00	0.00	0.00	25.71
June	1,552.26	0.00	0.00	0.00	316.89	1,228.66	0.00	0.00	0.00	0.00	6.71
Sub-total	10,932.32	0.00	0.00	0.00	5,225.49	5,026.08	0.00	0.00	0.00	0.00	680.75
July	1,405.56	0.00	0.00	0.00	1,371.79	0.00	11.64	0.00	0.00	0.00	22.13
Aug											
Sept											
Oct											
Nov											
Dec											
Sub-total	1,405.56	0.00	0.00	0.00	1,371.79	0.00	11.64	0.00	0.00	0.00	22.13
Total	12,337.88	0.00	0.00	0.00	6,597.28	5,026.08	11.64	0.00	0.00	0.00	702.88

- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- $(3) \ Broken \ concrete \ for \ recycling \ into \ aggregates.$
- (4) Total quantity generated = a+b+c+d+e+f+g+h+i+j

## Monthly Summary Waste Flow Table for 2020 (year)

Name of Person completing the record: Pan Fong (EO)

Project : Fanling N	North New Development A	Area, Phase 1: Fa	nling Bypass Eas	stern Section (Shu	ung Him Tong to K	au Lung Hang)					Contract No.: ND	/2019/05
	A	ctual Quantities	of Inert C&D M	aterials Generat	ed Monthly		Actual Quantities of C&D Wastes Generated Monthly					
Month	Total Quantity Generated (a) = (b)+ (c)+(d)+(e)	Hard Rock and Large Broken Concrete (b)	*Reused in the Contract (c)	Reused in other Projects (d)	Disposed as Public Fill (e)	Imported Fill (f)	Metals (g)	Paper/ cardboard packaging/ (h)	Plastics (i) (see Note 3)	Yard Waste (j)	Chemical Waste (k)	Others, e.g. general refuse (I)
	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 kg)
Jan-20												
Feb-20												
Mar-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apr-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
May-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.000
Jun-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	0.000
Sub-total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	2.000
Jul-20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.000	9.000
Aug-20	1.362	0.000	0.035	0.000	1.327	0.000	0.000	0.020	0.001	21.250	0.000	272.000
Sep-20	0.313	0.000	0.000	0.000	0.313	0.000	0.001	0.039	0.003	47.910	0.000	47.930
Oct-20	0.076	0.000	0.000	0.000	0.076	0.000	0.001	0.020	0.001	79.675	0.000	42.290
Nov-20	0.666	0.000	0.238	0.000	0.428	0.000	0.001	0.020	0.000	55.994	0.000	71.000
Dec-20	0.479	0.000	0.252	0.000	0.227	0.942	0.000	0.020	0.005	112.095	0.000	133.000
Total in 2020	2.896	0.000	0.525	0.000	2.371	0.942	0.003	0.169	0.010	316.924	0.000	577.220

^{*}Approx. estimation for each dump truck is 6m3/truck or 12 ton/truck

Total Quantity of Inert C&D Materials Generated:

2.896 (in '000m3) (a) = (b)+ (c)+(d)+(e)

# Monthly Summary Waste Flow Table for 2021 (year)

Name of Person completing the record: Louise Poon (EO)

Project: Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)

,	Ac	ctual Quantities	<b>y</b> , ,			<b>G G</b> /		Actual Qu	antities of C&D	Wastes Genera	ated Monthly	
Month	Total Quantity Generated (a) = (b)+ (c)+(d)+(e)	Hard Rock and Large Broken Concrete (b)	*Reused in the Contract (c)	Reused in other Projects (d)	Disposed as Public Fill (e)	Imported Fill (f)	Metals (g)	Paper/ cardboard packaging/ (h)	Plastics (i) (see Note 3)	Yard Waste (j)	Chemical Waste (k)	Others, e.g. general refuse (I)
	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000m ³ )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 kg)
Jan-21	2.025	0.000	0.300	0.000	1.725	0.564	0.000	0.419	0.065	55.020	3.482	99.590
Feb-21	0.874	0.000	0.066	0.000	0.808	0.000	0.000	0.137	0.000	33.194	0.000	162.010
Mar-21	2.676	0.000	0.582	0.000	2.094	0.000	0.002	0.088	0.002	24.670	0.000	221.160
Apr-21	2.745	0.000	0.480	0.000	2.265	0.282	0.002	0.000	1.678	0.002	0.000	201.690
May-21	2.129	0.000	0.492	0.000	1.637	1.158	0.002	0.170	0.001	3.800	12.000	108.040
Jun-21	1.652	0.000	0.240	0.000	1.412	0.000	0.001	0.000	0.000	3.750	1.700	43.360
Sub-total	12.101	0.000	2.160	0.000	9.941	2.004	0.008	0.814	1.747	120.436	17.182	835.850
Jul-21	2.122	0.000	0.078	0.000	2.044	0.060	5.667	0.296	0.007	6.910	0.000	36.530
Aug-21												
Sep-21												
Oct-21												
Nov-21												
Dec-21												$oxed{oxed}$
Total in 2021	14.222	0.000	2.238	0.000	11.984	2.064	5.675	1.109	1.753	127.346	17.182	872.380
Total of the Project	17.118	0.000	2.763	0.000	14.355	3.006	5.678	1.278	1.763	444.270	17.182	1449.600

Contract No.: ND/2019/05

Total Quantity of Inert C&D Materials Generated:

17.118 (in '000m3) (a) = (b)+ (c)+(d)+(e)

^{*}Approx. estimation for each dump truck is 6m3/truck or 12 ton/truck

# 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 <u>2019</u> (year)

	Act	ual Quantities	of Inert C&D Ma	terials Genera	ted Monthly		Actua	d Quantities	of C&D Wastes	Generated N	Monthly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in the other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000kg	in '000kg	in '000kg	in '000kg	in '000m3
	А	В	С	D	Е	F	G	Н	I	J	K
Jan											
Feb											
Mar											
Apr											
May											
June											
Sub-											
total											
July											
Aug											
Sept											
Oct											
Nov	0.927	0	0	Ŭ		0	0	0	0	0	0,000
Dec	0.428	0	0	0	0.120	0	0	0	0	0	01071
Total	1.355	0	0	0	1.355	0	0	0	0	0	0.079

Notes: (1) The performance targets are given in PS Clause 1.102(14).

- (2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
- *(4) The *Contractor* shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the *works*, together with a breakdown of the nature where the amount of C&D materials expected to be generated from the works is equal to or exceeding 50,000m3. [Delete Note (4) and the table above on the forecast, where inapplicable].
- (5) Total Quantity Generated, A=B+C+D+E+F

Monthly Summary Waste Flow Table for <u>2020</u> (year)

	Act	ual Quantities	of Inert C&D Ma	terials Generat	ted Monthly		Actua	al Quantities	of C&D Wastes	Generated N	Monthly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in the other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000kg	in '000kg	in '000kg	in '000kg	in '000m3
	А	В	С	D	Е	F	G	Н	I	J	K
Jan	1.558	0	0	0	1.558	0	0	0	0	0	0.038
Feb	0.548	0	0	0	0.548	0	0	0	0	0	0.011
Mar	0.145	0	0	0	0.145	0	0	0	0	0	0.022
Apr	1.741	0	0	0	1.741	0	0	0	0	0	0.043
May	0.063	0	0	0	0.063	0	0	0	0	0	0.035
June	0.008	0	0	0	0.008	0	0	0	0	0	0.014
Sub- total	4.062	0	0	0	4.062	0	0	0	0	0	0.162
July	1.562	0	0	0	1.562	0	0	0	0	0	0.025
Aug	1.448	0	0	0	1.448	0	0	0	0	0	0.010
Sept	1.171	0	0	0	1.171	0	0	0	0	0	0.010
Oct	1.000	0	0	0	1.000	0	0	0	0	0	0.043
Nov	3.597	0	0	0	3.597	0	0	0	0	0	0.086
Dec	1.707	0	0	0	1.707	0	0	0	0	0	0.023
Total	14.547	0.000	0.000	0.000	14.547	0.000	0.000	0.000	0.000	0.000	0.358

Notes: (1) The performance targets are given in PS Clause 1.102(14).

- (2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
- *(4) The *Contractor* shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the *works*, together with a breakdown of the nature where the amount of C&D materials expected to be generated from the works is equal to or exceeding 50,000m3. [Delete Note (4) and the table above on the forecast, where inapplicable].
- (5) Total Quantity Generated, A=B+C+D+E+F

Monthly Summary Waste Flow Table for <u>2021</u> (year)

	Act	ual Quantities	of Inert C&D Mat	terials Generat	ted Monthly		Actua	al Quantities	of C&D Wastes	Generated N	Monthly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in the other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastic (see Note 3)	Chemical Waste	Others, e.g. general refuse
	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000m3	in '000kg	in '000kg	in '000kg	in '000kg	in '000m3
	А	В	С	D	Е	F	G	Н	I	J	K
Jan	2.960	0	0	0	2.960	0	0	0	0	0	0.035
Feb	0.498	0	0	0	0.498	0	0	0	0.0035	0	0.006
Mar	0.427	0	0	0	0.427	0	0	0	0	0	0.014
Apr	0.314	0	0	0	0.314	0	0	0	0	0	0.011
May	0.360	0	0	0	0.360	0	0	0	0	0	0.011
June	0.336	0	0	0	0.336	0	0	0	0	0	0.012
Sub- total	4.895	0	0	0	4.89492	0	0	0	0.0035	0	0.08883
July	0.594	0	0	0	0.594	0	0	0	0	0	0.013
Aug											
Sept											
Oct											
Nov											
Dec											
Total	5.489	0.000	0.000	0.000	5.489	0.000	0.000	0.000	0.004	0.000	0.102

Notes: (1) The performance targets are given in PS Clause 1.102(14).

- (2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
- *(4) The *Contractor* shall also submit the latest forecast of the total amount of C&D materials expected to be generated from the *works*, together with a breakdown of the nature where the amount of C&D materials expected to be generated from the works is equal to or exceeding 50,000m3. [Delete Note (4) and the table above on the forecast, where inapplicable].
- (5) Total Quantity Generated, A=B+C+D+E+F

# Monthly Summary Waste Flow Table for <u>2021</u> (year)

Name of Person completing the record: KM LUI (EO)

Project: Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

110ject . 1 a	Toject . Paining North New Development Area, Phase 1. She Pornation and Infrastructure Works										
		Actual Quantit	ies of Inert C&	D Materials Ger	nerated Monthly		A	ctual Quantities	s of C&D Waste	es Generated Mo	onthly
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete (a)	Reused in the Contract	Reused in other Projects (c)	Disposed as Public Fill (d)	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000T)	(in '000T)	(in '000T)	(in '000T)	(in '000T)	(in '000T)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 T)
Jan	0	0	0	0	0	0	0	0	0	13.400	0.695
Feb	0	0	0	0	0	0	0	0.401	0	28.760	0.412
Mar	0.023	0	0	0	0.023	0.191	0	0.311	0	8.600	0.165
Apr	0.244	0	0	0	0.244	2.488	0	0	0	26.000	0.207
May	0	0	0	0	0	10.883	0	0	0	13.000	0.197
Jun	0.805	0	0.801	0	0.004	13.445	0	0.394	0	0	0.047
Sub-total	1.072	0.000	0.801	0.000	0.271	27.007	0.000	1.106	0.000	89.760	1.723
Jul	0.135	0	0.128	0	0.007	20.837	0	0	0	0	0.286
Aug											
Sep											
Oct											
Nov											
Dec		-									
Total	1.207	0.000	0.929	0.000	0.278	47.844	0.000	1.106	0.000	89.760	2.009

Contract No.: ND/2019/07

- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.
- (3) Broken concrete for recycling into aggregates.
- (4) Total Quantity Gernerated = a+b+c+d..

## APPENDIX S COMPLAINT LOG

### Appendix S - Complaint Log

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2020-07-01	Public Road at Portion 6a (ND/2019/01)	13 th July 2020	The EPD visit on 13 July 2020 was to respond the complaint received from the 2nd week in July regarding the dust problem in public road of Portion 6a.  Mr. Tse (EPD) observed muddy wheel track on the public road, and he expressed that the public road should keep free of mud even it was inside the project area. He also advised BKRWJV (the Contractor) to clean up the muddy wheel track and provide rectified photos to him.	A designated person is provided at the ingress/egress for vehicle washing before the wheel washing facility is in use, this is to make sure all vehicle are free of mud before leaving the site.  And, the designated person is also responsible for cleaning the public road if any mud is found on it.	Closed
COM-2020-11-01	Portion 4 and Portion 7 near Dills Corner Garden (ND/2019/01)	11 th November 2020	The EPD inspection at Portion 4 on 11 November 2020 was to respond the complaint regarding the dust problem near Dills Corner Garden referred by a District Council Member. No construction activities was carried out and no obvious dust emission was observed. EPD advised BKRWJV (the Contractor) to increase the height of temporary water barrier and install sprinklers on bare ground.  Another EPD inspection was conducted on 26 November 2020 at	The height of temporary water barrier was increased at Portion 4. Sprinklers were installed on bare ground at Portion 4 and on top soil at Portion 7. Manual water spraying were provided regularly. Hydroseeding will be provided on soil surface at Portion 4 for long-term measures.  Proper implementation of dust mitigation measures will be continuously reviewed and monitored to avoid potential dust impact on site.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			Portion 7 for the dust complaint. During inspection, no obvious dust emission was observed and potential dust may generate from top soil which appear to be dry. EPD advised the Contractor to install sprinklers on top soil for dust suppression.		
COM-2020-11-02	Works Area A & B (ND/2019/05)	27 th November 2020	The complainant complained about the noise generated from the alarm of scissors platform during works for PM's site accommodation on Sunday and called the police force. Police officer has checked that Construction Noise Permit has been applied for the construction work. Also, the complainant complained about the reflective blue color of roof material of site office.	Permit-to-Work system was properly implemented for works at restricted hours. The PME used have been checked in compliance with the valid Construction Noise Permit (CNP No.: GW-RN0788-20). Acoustics mats were erected between works area and noise sensitive receivers. Scissor platform or noisy work activities will be arranged and minimized to be used on Sunday or evening time on weekdays. Specific training for the quieter works arrangement was provided to workers. Also, the blue roof will be covered by non-reflective green roof material.	Closed
COM-2021-01-01	Ma Tso Lung Road (ND/2019/01)	7 th January 2021	A complaint regarding soil deposited on Ma Tso Lung Road was referred by EPD verbally.	No soil / mud deposit or mud track were observed along the Ma Tso Lung Road during investigation and site inspection between Contractor, the <i>Supervisor</i> , ET and IEC. The road condition of Ma Tso Lung Road will be closely monitored and the public road will be regularly cleaned if mud deposit was observed. Wheel washing facilities at every site entrance will be regularly monitored to ensure proper implementation of dust control measures.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
COM-2021-01-02	Ma Tso Lung Road (Near L/P VD5622) (ND/2019/01)	13 th January 2021	A complaint was received from 1823 regarding the suspected odour emitted from muddy water discharged.	Water sample collected from the wastewater treatment facility was clear and no odour was detected. Sewage from chemical toilet was collected on a regular basis by licensed collector. Brownish wastewater was observed discharging upstream of the site from an unknown factory to the uncharted channel which may be potential source of the odour.	Closed
COM-2021-01-03	CTC Storage Yard (ND/2019/05)	22 nd January 2021	A complaint was referred from EPD regarding the noise generated before 7 a.m. on weekdays and machinery noise generated on Sunday from CTC Storage Yard.	No attendance record of workers working for CTC Storage Yard earlier than 8 a.m. and on Sunday (day of complaint) was recorded. To ensure strict compliance to Noise Control Ordinance and prevent noise nuisance to the nearby villages, the Contractor has implemented the following enhancement measures:  1. Issue a memo to the relevant sub-contractor on restricted working hour.  2. Conduct specific training to sub-contractor frontline supervisor and works.  3. Apply a construction noise permit for the suspected location.	Closed
COM-2021-01-04	Ho Sheung Heung (ND/2019/02)	28 th January 2021	A complaint was received from 1823 regarding an idling construction vehicle near Ho Sheung Heung to operate the engine for over 10	Ad-hoc training was provided to workers on switching off idling engines when awaiting on site. Poster for "Switching off idling engines" was posted at site entrance to alert workers on the	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			minutes. Also, the complainant complained on noise nuisance from the speaker during meeting.	issue. For noise nuisance from the meeting, the speaker volume in the future event will be lower as much as possible.	
COM-2021-02-01	CTC Storage Yard (ND/2019/05)	4 th February 2021	A complaint was received from EPD call on 2 nd February 2021 regarding a noise complaint from a Tong Hang villager about noise from CTC storage yard at around 19:00 – 20:00 on 1 st February 2021.	The suspected cause of the complaint was the delivery of a rotary drilling rig by a tractor lorry arrived at CTC Storage Yard at around 19:00 at 1 st February 2021. The delivery time was restricted due to the oversized tractor lorry (width >2.4m and length protruded >1.4m at tractor tail). No loading and unloading was conducted during the time of complaint.  For follow up action, the Contractor will apply Construction Noise Permit for any foreseeable	Closed
				delivery that may not be finished before restricted hours and will notify possible affected village representatives in advance.	
COM-2021-02-02	CTC Storage Yard (ND/2019/05)	16 th February 2021	A complaint was received from EPD call on 10 th February 2021 regarding a noise complaint from a Tong Hang villager about some impact noise from CTC Storage yard at Sunday's daytime (7 th February 2021).	Under investigation, erection of chain link fence for separating works area and adjacent village house was conducted by a sub-contractor on 7 th February 2021 without notification to the Contractor. Sub-contractor has been reminded that any work within site area shall be conducted after instruction by the Contractor and permit-to-work system on restricted hours works shall be strictly followed.	Closed
COM-2021-02-03	CTC Storage Yard (ND/2019/05)	2 nd March 2021	A complaint was received from EPD call on 24 th February 2021 regarding a noise complaint from a Tong Hang villagers about some machinery noise	Further enhancement on erection of acoustics mats and mobile acoustics mat panels was conducted at strategic location at E1-01 for mitigation of the noise impact to the nearby	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			and dust from CTC Storage yard. Joint site inspection of the Contractor, the <i>supervisor</i> and EPD was conducted on the same day for the bored piling at CTC Storage Yard and check on the noise and dust mitigation measures. EPD requested to enhance noise and dust mitigation measures for grabbing operation of the Rotary Drill Rig for construction of piles of E1-01.	sensitive receivers. Regular water spraying has been applied to suppress the dust from grabbing procedure and the skip.	
COM-2021-03-01	Ma Tso Lung Shun Yee San Tsuen (ND/2019/01)	1st March 2021	A complaint was referred from EPD regarding fly-tipping of C&D waste near Ma Tso Lung Shun Yee San Tsuen and muddy public road.	Under investigation, the suspected site near Shun Yee San Tsuen was out of project site boundary. Internal trip ticket system was properly implemented for dump trucks transported from project site to other approved alternative disposal ground. Also, dump trucks were properly washed and mechanical cover of dump trucks were closed while leaving the site.  For follow up action, banners and flags were displayed on site to promote the environmental protection awareness. Regular training was provided to remind the dump truck drivers that	Closed
COM-2021-03-02	CTC Storage Yard (ND/2019/05)	15 th March 2021	A complaint was received from EPD call and an inspection by EPD was conducted on 9 th March 2021 regarding a dust complaint from a Tong Hang villager. The complainant	illegal dumping is strictly prohibited.  For follow up action, the Contractor provided training to remind frontline supervisors and workers to wet the auger before movement when it was dried for preventing any occasional situation that the auger was dried.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
			complained that rotary drill rig shall be equipped with enclosure for dust control and rotary drill rig had exhaust disturbance. Also, the complainant requested to improve wheel washing at site entrance.	The Contractor provided training to brief frontline supervisor and the operators to prevent exhaust disturbance. Also, the drill rigs exhaust pipe shall not face to the public area. If it is avoidable, screens shall be arranged to divert the exhaust gas. An additional cut-off drain was constructed and notice signs were erected for notifying drivers to give wheel washing in front of the cut-off drains.	
COM-2021-03-03	Ma Tso Lung Road (ND/2019/01)	9 th April 2021	A complaint was referred from EPD on 23 March 2021 regarding muddy public access road along Ma Tso Lung Road.	The muddy access road was found generated from a nearby private factory where the access road is not hard paved. The Contractor arranged water browser to help clean up the section of road on 24 th and 25 th March 2021 respectively. Also, dump truck were properly washed at project site exit near Ma Tso Lung Road.	Closed
COM-2021-04-01	Long Valley, Kwu Tung (ND/2019/03)	9 th April 2021	A complaint was referred from EPD regarding to associated impacts arising from construction works at Long Valley Nature Park, causing nuisance and affecting the habitat and ecological value in Long Valley.	Construction works for development of Long Valley Nature Park are conducted according to the recommended mitigation measures stated in Habitat Creation and Management Plan. Wetland creation and restoration works are in progress which include provision of paddy field, turning abandoned agricultural lands into wet agricultural land and provision of open water habitat with bird island. Irrigation channel is under construction for provision of reliable water supply to farmland.  For construction works, the following significant mitigation measures are implemented:  1. Provide noise barriers to minimize noise nuisance to adjacent field where Greater Painted-	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				snipe was found;  2. Arrange concrete pump for concreting works to minimise noise impact;  3. Provide water spraying on the exposed earth to dampen the dusty surface;  4. Provide shade cloth to separate works area and marsh where Greater Painted-snipe were found;  5. Demarcation of temporary vehicle access to prohibit vehicle across the farmland;  6. Provide 2m dull green site boundary fence along Long Valley work areas; and  7. Block the main accesses by temporary barrier to avoid human disturbance.	
COM-2021-04-02	Close to junction of Ma Wat River and Ng Tung River (ND/2019/04, ND/2019/05, ND/2019/06)	23 rd April 2021	A complaint was referred from EPD regarding to suspected polluting effluent discharged from Ma Wat River near junction of Ma Wat River and Ng Tung River.	Under investigation, muddy water was observed from a small stream of Ma Wat River which is outside project site boundary. Contractor's wastewater treatment facilities and mitigation measures on water quality were checked. Latest discharge monitoring results shows the discharge quality in compliance with the limit stated in the discharge licence.  The following mitigation measures will keep implemented and inspected:  1. Installation of silt curtain, geotextiles and concepts blocks for avacuation weeks at Na Tangen.	Closed
				concrete blocks for excavation works at Ng Tung River with regular inspection; 2. Exposed slope paved with concrete to prevent muddy runoff; 3. Setting up wastewater treatment plants at	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				several locations of the site area; 4. Bund/seal off works area near river and set up with dewatering system; 5. Spare water pumps and sand bags for emergency use during heavy rain; 6. Regular training to the operators of wastewater treatment facilities; and 7. Regular checking and maintenance of the wastewater treatment facilities and desilting tank.	
COM-2021-04-03	Near Shek Wu San Tsuen, Sheung Shui (ND/2019/04)	28 th April 2021	A complaint was referred from EPD regarding to construction dust arising from dump trucks from construction sites near Shek Wu San Tsuen.	No obvious dust emission was observed during EPD inspection on 28th and 29th April 2021, However, potential dust impact may arise from sandy materials found on public road and exposed ground surface.  For follow up action, soil debris were removed at public road. Water spraying was provided on the exposed ground surface. Also, all dump trucks are covered properly and wheel wash is provided	Closed
				before leaving site. Implemented of the mitigation measures will keep reviewed and monitored.	
COM-2021-05-17	Near Tong Hang section of Ma Wat River (ND/2019/05)	17 th May 2021	A complaint was referred from EPD regarding to suspected polluting effluent discharged from construction sites near Ma Wat River.	Under investigation, no pollution from works areas near Ma Wat River was observed. For wastewater pollution control, all wastewater treatment facilities have been setup at discharge points. According to the latest discharge monitoring results on April 2021, no non-compliance to limit set in discharge licence was recorded. Regular maintenance and services of the facilities have been conducted. Close monitoring	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/ Mitigation Action	Status
				with checklist has been conducted by operators of	
				the facilities. Mitigation measures such as sealing	
				gaps between concrete blocks/water barriers/pipe	
				pile walls have been implemented to prevent	
				leakage. Implementation of the mitigation	
				measures will keep reviewed and closely	
				monitored.	ļ

## APPENDIX T SUMMARY OF SUCCESSFUL PROSECUTION

## **Appendix T - Summary of Successful Prosecution**

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

APPENDIX U SUMMARY TABLE FOR REQUIRED SUBMISSION UNDER ENVIRONMENTAL PERMIT

DP2	EP-466/2013	Castle Peak R	oad Diversion			
			ion and Infrastructural Works			
	ction commencement da	ate	12-Aug-20			
Operation	on commencement date		tbc			
	EP Condition		Requirements and Submissi	ons	Submission Status	Remarks
		Period	Action	Timeframe		21022111
1.12	Commencement date of construction	Before construction		no later than 8 weeks prior to the commencement of construction	Notified 2 March 2020	
					Established	Pre-construction ET
2.1	Establish of ET		Establish - An ET & IEC of at least 7 years of	no later than 6 weeks before the	5 March 2020 Established 23 January 2020	Construction Phase ET
		Before construction	experience in EM&A or environmental management.	commencement of construction	Established 11 March 2020	Pre-construction IEC
2.2	Employment of IEC		management.		Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	EPD Approved 25 August 2020
2.6	Cultural Heritage Impact Baseline condition survey and baseline vibration impact assessment	Before construction	To Conduct - A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer  Note: The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	*	
	Cultural Heritage Impact Photographic and Cartographic Records/ Proposals on	Others	A copy of Photographic and cartographic records of directly impacted historical buildings at HKT08 and the entrance gate of HKT03	prior to the commencement of the respective removal or relocation works	*	
	relocation of any building	Others	For Approval - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	Deposited 13 May 2021	
2.8	Landscape Plan	Others	Deposit	at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures of the Project	*	
2.10	Traffic Noise Mitigation Measure (implement)	Before operation	Implement all noise mitigation measures as shown in Figure 4 of this Permit	before commencement of operation	*	
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre- Construction ET	
3.4	Monthly EM&A Report	During construction	Submit	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by ET Monthly	
		During construction	Set up and Notify in writing the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
4.2	Dedicated website	During construction and operation	Upload All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	
-	Remarks:	-	•	•		

Remarks:

tbc:To be confirmed
DP: Designated Project

*tentative submission date will be supplemented once available

DP3	EP-467/2013/A		North New Development Area R I Interchange Improvement	Road P1 and P2 and Associated	New Kwu Tung	Interchange and
CEDD Con	ntract No. ND/2019/01 - S	ite Formation	and Infrastructural Works at	KTN NDA		
Construction	on commencement date		12-Aug-20			
Operation	commencement date		tbo			
	EP Condition		Requirements and Sumb	pissions	Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	no later than 8 weeks prior to the commencement of construction	Notified 2 March 2020 Established	
2.1	Establish of ET		Establish -		5 March 2020 Established	Pre-construction ET
		Before construction	An ET & IEC of at least 7 years of experience in EM&A or environmental	no later than 6 weeks before the commencement of construction	23 January 2020 Established	Construction Phase ET
2.2	Employment of IEC		management.		11 March 2020 Established 20 February 2020	Pre-construction IEC  Construction Phase IEC
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre- construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 27 July 2020	EPD Approved 25 August 2020
2.6	Traffic Noise Mitigation Plan	Before construction	For Approval	no later than 1 month before the commencement of consturction	Deposited 31 July 2019	EPD Approved 9 August 2019
2.7	Cultural Heritage Impact Photographic and Cartographic Records	Others	A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical lanscape features at Locatoins KT38, KT44 and KT52	prior to the commencement of the respective removal or relocation works	Deposited 10 February 2021	Pending Approval
2.8	Landscape Plan	Others	Deposit	at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures of the Project	Deposited 13 May 2021	
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre- Construction ET	
3.4	Monthly EM&A Report	During construction	Submit	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by ET Monthly	
		During construction	Set up and Notify in writing the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
4.2	Dedicated website	During construction and	Upload All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
		operation	Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:

tbc:To be confirmed DP: Designated Project

*tentative submission date will be supplemented once available

DP4	EP-468/2013/A	Kwu Tung No	orth New Development Area Ro	oad D1 to D5		
			tion and Infrastructural Works	1		
	on commencement date		1-Jun-20			
Operau	on commencement date		tbc			
	EP Condition		Requirements and Submissi	ions	Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	no later than 8 weeks prior to the commencement of construction	Notified 2 March 2020	
					Established 5 March 2020	Pre-construction ET
2.1	Establish of ET		Establish -		Established	
		Before construction	An ET & IEC of at least 7 years of	no later than 6 weeks before the	23 January 2020	Construction Phase ET
2.2	E 1 4 CIEC	Construction	experience in EM&A or environmental management.	commencement of construction	Established 11 March 2020	Pre-construction IEC
2.2	Employment of IEC				Established 20 February 2020	Construction Phase IEC
		Before		at least 4 weeks before the	Latest submitted on 4	
2.3	Update EM&A Manual	construction	Deposit	commencement of construction	September 2020 by Pre- construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
2.5	Layout Plan	Before	Donosit	no later than 2 weeks before the	Deposited	Pending approval
2.3	24,000 1 1011	construction	Deposit	commencement of construction	14 May 2020	r chang approvar
2.6	Cultural Heritage Impact Baseline condition survey and baseline vibration impact assessment	Before construction	To Conduct - A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer  Note: The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	*	
2.7	Cultural Heritage Impact Photographic and Cartographic Records/ Proposals on relocation of any building	Others	A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at locations HKT03, KT16, KT17 and KT18	prior to the commencement of the respective removal or relocation works	*	
		Others	For Approval - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	Deposited 13 May 2021	
2.8	Compensatory Tree Planting Plan	Before construction	For Approval	prior to the commencement of construction	*	
2.9	Habitat Creation and Management Plan	Others	For Approval	prior to the commencement of construction of relevant part of the Project	Submitted 20 October 2020	EPD approved 4 November 2020
2.10	Traffic Noise Mitigation Plan	Before construction	For Approval	no later than 1 month before commencement of construction	Submitted 31 July 2019	EPD approved 9 August 2019
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre- Construction ET	
3.4	Monthly EM&A Report	During construction	Submit	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by ET  Monthly	
		During construction	Set up and Notify in writing the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
4.2	Dedicated website	During construction and operation	Upload All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available entire construction period and during	N/A	
			Maintain	the first 3-year of operation	N/A	

Remarks: tbc:To be confirmed

DP: Designated Project
*tentative submission date will be supplemented once available

DP7	EP-470/2013	<b>Utilization of</b>	Treated Sewage Effluent (TSE	) from Shek Wu Hui Sewag	ge Treatment Wo	orks
	Contract No. ND/2019/uction commencement		ation and Infrastructural Work 23-Mar-2			
Operat	tion commencement dat	e	tb	c		
	EP Condition		Requirements and Submis	sions	Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	no later than 8 weeks prior to the commencement of construction	Notify 22 January 2020	
2.1	D. H. L. CET				Established 5 March 2020	Pre-construction ET
2.1	Establish of ET	Before	Establish - An ET & IEC of at least 7 years of	no later than 6 weeks before the	Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC	construction	experience in EM&A or environmental management.	commencement of construction	Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 14 May 2020	Pending approval
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre- Construction ET	
3.4	Monthly EM&A Report	During construction	Submit	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by ET Monthly	
		During construction	Set up and Notify in writing the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
4.2	Dedicated website	During construction and operation	Upload All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
		F	Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:

tbc:To be confirmed

DP: Designated Project
*tentative submission date will be supplemented once available

# DP5 EP-469/2013 Sewage Pumping Stations in Kwu Tung North New Development Area CEDD Contract No. ND/2019/02 - Kwu Tung North New Development Area, Phase 1: Roads and Drains between Kwu Tung North New Development Area and Shek Wu Hui Construction commencement date 28-Oct-20

Operation commencement date tbc Requirements and Submissions **EP Condition** Submission Status Remarks Period Action Timeframe Commencement date of Before no later than 8 weeks prior to the Notify Notify in writing 14 October 2020 commencement of construction construction construction Established 5 March 2020 Pre-construction ET 2.1 Establish of ET Established Establish -Construction Phase ET 23 January 2020 An ET & IEC of at least 7 years of no later than 6 weeks before the Refore experience in EM&A or environmental construction commencement of construction Established Pre-construction IEC 11 March 2020 2.2 Employment of IEC Established Construction Phase IEC 20 February 2020 Latest submitted on at least 4 weeks before the Before 4 September 2020 2.3 Update EM&A Manual Deposit construction commencement of construction by Pre-construction ET Management organization of Before no later than 2 weeks before the Deposited the main construction Inform in writing 17 September 2020 construction commencement of construction companies Before no later than 2 weeks before the Deposited 2.5 Location Plans Deposit 15 October 2020 construction commencement of construction at least 6 weeks before the Before commencement of the corresponding 2.6 Landscape Plan Deposit construction parts of landscape and visual mitigation measures Change in EM&A Seek prior approval from the Director 3.1 Others before implementation equirements/ programme ustified by ET leader and verified by IEC Before at least 2 weeks before the Deposited 3.3 Baseline Monitoring Report Submit by Fugro 13 May 2021 construction commencement of construction within 2 weeks after the end of each Submitted by ET During 3.4 Monthly EM&A Report Submit reporting month throughout the construction Monthly entire construction period in place within one month after the During Set up and Notify in writing--Notified commencement of construction of cover all EPs construction he internet address 22 April 2020 the Project. in the shortest time practicable, and Upload -in no event later than 2 weeks after All environmental monitoring results 4.2 Dedicated website the relevant environmental monitoring data are collected or N/A During escribed in Condition 4.1 and all construction and submissions required by this Permit ecome available operation entire construction period and during Maintain N/A the first 3-year of operation

Remarks:

tbc:To be confirmed

DP: Designated Project

*tentative submission date will be supplemented once available

#### Kwu Tung North New Development Area Road D1 to D5 DP4 EP-468/2013/A

CEDD Contract No. ND/2019/03 - Development of Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of

2.1   Entablish of ET	Long Va	alley Nature Park					
Requirements and Submissions Name   Remarks							
Production   Period   Artisis   Observation   Declared   Commencement and not of the commencement and not not of the commencement and not	Operati	on commencement date		tbe			
1.12 commercement after of contraction   C		EP Condition		Requirements and Submissi	ions	Submission Status	Remarks
Section of Early Section   Contraction   C				Action		N. CC 1	
Salaria 2009   Sourcement of Construction   Salaria 2009   Sourcement of Construction   Constr	1.12			Notify in writing		28 April 2020	
Package   Pack							Pre-construction ET
Superiment of EC   Superiment of EC   Superiment of Ecc   Superiment	2.1	Establish of ET	Refore		no later than 6 weeks before the		Construction Phase ET
2.3 Update EMBA Marmal  Before construction  Management apparation of Before construction or construction or communication of personal management or construction or c				experience in EM&A or environmental		Established	Pre-construction IEC
Lighter EMAA Manual   Buffer   Construction   Deposit   Interest and a week before the commencement of construction   September 2020 by Presentative College	2.2	Employment of IEC		management.		Established	Construction Phase IEC
Laboration companies   Laboration   Labora	2.3	Update EM&A Manual		Deposit		Latest submitted on 4 September 2020 by	
2.5 Layout Plan    Continual Heritage Impact - Baseline conditions sarvey and baseline conditions are conditi	2.4	the main construction		Inform in writing			
Deposit							
Cultural Heritage Impact — Baseline condition survey and baseline vibration impact assessment by a qualified structural engineer construction impact assessment by a qualified structural engineer construction impact assessment by a qualified structural engineer construction assessment by a qualified structural engineer in baseline vibration impact assessment by a qualified structural engineer construction assessment by a qualified structural engineer construction assessment by a qualified structural engineer in baseline vibration impact assessment by a qualified structural engineer construction and form part of the Baseline Monitoring Report to be absoluted in and form part of the Baseline Monitoring Report and Cartographic and Cartographic and Cartographic and Cartographic focus of discretly impacted bistorical prior to the commencement of the respective removal or relocation of any builting survey or a qualified structural engineer prior to the commencement of the respective redocation work.  2.8 Compensatory Tree Plunting Before Construction and Management Plan  Others Paproval prior to the commencement of the respective redocation work.  Per Approval prior to the commencement of the respective redocation work.  Pro Approval prior to the commencement of the Project Proposed prior to the commencement of the Project Proposed prior to the commencement of the Project Proposed P	2.5	Layout Plan		Deposit			
A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified building surveyor or a qualified structural engineer construction assessment by a qualified building surveyor or a qualified structural engineer vibration impact suscessment shall be included in and form part of the Baseline Condition and Structural engineer vibration impact assessment shall be included in and form part of the Baseline Condition and Structural engineer vibration impact assessment shall be included in and form part of the Baseline Condition and Structural engineer vibration impact assessment shall be included in and form part of the Baseline Condition and Structural engineer vibration impact assessment shall be included in and form part of the Baseline Condition and Structural engineer vibration impact assessment shall be included in and form part of the Baseline Condition and Structural engineer vibration in and structural engineer.  A copy of Photographic and cartographic end ca						Deposited	
Cultural Heritage Impact — Photographic and Cartographic Records Photographic and Cartographic Records Poposals on relocation of any building  Others  For Approval — Proposals on relocation of any building  2.8. Compensatory Tree Planting Plan  Compensatory Tree Planting Plan  Others  For Approval  Proposals on relocation of any built heritages  For Approval  Proposals on relocation of any built heritages  For Approval  Proposals on relocation of any built heritages  Prior to the commencement of the respective relocation work  N/A  N/A  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respective relocation work  Prior to the commencement of the respec	2.6	Baseline condition survey and baseline vibration impact		A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer  Note:  The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under		•	
Others Proposals on relocation of any built heritages  2.8 Compensatory Tree Planting Plan  2.9 Habitat Creation and Management Plan  Others  For Approval  Others  For Approval  Defore construction  For Approval  Others  For Approval  During construction  nd operation  and op	2.7	Photographic and Cartographic Records/ Proposals on	Others	records of directly impacted historical buildings and cultural/historical landscape features at locations HKT03, KT16, KT17	respective removal or relocation		
2.9 Habitat Creation and Management Plan  Others  For Approval  Different Submitted construction  For Approval  Different Submitted construction  For Approval  Different Submitted construction of relevant part of the Project  For Approval  Different Submitted construction of relevant part of the Project  For Approval  Different Submitted Submitted and I month before commencement of construction of relevant part of the Project  For Approval  Different Submitted Submitted and I month before commencement of construction of relevant part of the Project  For Approval  Different Submitted Submitted and I month before commencement of construction of relevant part of the Project  Submitted by Project Submitted Submitted of Construction of Construct			Others	Proposals on relocation of any built		N/A	
2.9 Habitat Creation and Management Plan  Others  For Approval  2.10 Traffic Noise Mitigation Plan  Before construction  Submit  For Approval  no later than 1 month before commencement of construction  at least 2 weeks before the commencement of construction  Submit display 2019  S	2.8					N/A	
2.10 Traffic Noise Mitigation Plan	2.9	Habitat Creation and		For Approval	prior to the commencement of construction of relevant part of the		EPD approved 4 November 2020
3.4 Monthly EM&A Report  During construction  Submit  Submit  Submit  within 2 weeks after the end of each reporting month throughout the entire construction period  During construction  Set up and Notify in writing—the internet address the internet address  Upload - All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit  During construction and operation  During construction and operation  Upload - All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit  During construction and operation  During construction and operation  Upload - All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit one construction period and during  N/A  Notified 22 April 2020  Cover all EPs	2.10	Traffic Noise Mitigation Plan		For Approval			
3.4 Monthly EM&A Report  During construction  Set up and Notify in writing—the internet address  Lipload— All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit on period and during  Maintain  Submit reporting month throughout the entire construction period Monthly  Monthly EM&A Report  Monthly EM&A Monthly EM&A Report  Monthly EM&A	3.3	Baseline Monitoring Report		Submit			
construction the internet address commencement of construction of the Project.  4.2 Dedicated website  Upload - All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit commental monitoring data are collected or become available.  Mointain entire construction period and during N/A	3.4	Monthly EM&A Report		Submit	reporting month throughout the		
4.2 Dedicated website    During					commencement of construction of		cover all EPs
	4.2	Dedicated website	construction and	All environmental monitoring results described in Condition 4.1 and all	in no event later than 2 weeks after the relevant environmental monitoring data are collected or	N/A	
the first 3-year of operation				Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbe:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

#### DP10 EP-473/2013/A Fanling Bypass Eastern Section

CEDD Contract No. ND/2019/03 - Development of Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park

alley Nature Park					
	1	6-Oct-20			
on commencement date		tbc			
EP Condition	Requirements and Submissions		ons	Submission Status	Remarks
I	Period	Action	Timeframe		
Commencement date of construction	Before construction	Notify in writing	no later than 8 weeks prior to the commencement of construction	Notified 10 August 2020	
				Established 5 March 2020	Pre-construction ET
Establish of ET	Before construction	Establish - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	Established 23 January 2020	Construction Phase ET
				Established	Pre-construction IEC
Employment of IEC				Established	Construction Phase IEC
Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre- construction ET	
Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 18 September 2020	
Location Plans	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 18 September 2020	
Relocation Plan for Rose Bitterling	Before construction	Approval	before the commencement of construction	Submitted 5 November 2020	EPD approved 9 November 2020
Egretry Habitat Creation and Management Plan	Before construction	Approval	before the commencement of construction	Submitted 20 October 2020	EPD approved 4 November 2020
Detailed Design of Siu Hang San Tsuen Stream	Before construction	Deposit	before the commencement of construction	Deposited 13 May 2021	
Traffic Noise Mitigation Plan	Before construction	Approval	no later than 1 month before the commencement of construction	N/A	
Cultural Heritage Impact Baseline condition survey and baseline vibration impact assessment	Before construction	To Conduct - A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer  Note: The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	N/A	
Cultural Heritage Impact Photographic and Cartographic Records/ Proposals on relocation of any building	Others	Deposit - A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at FL19	prior to the commencement of the respective removal or relocation works	N/A	
	Others	For Approval - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	N/A	
Change in EM&A requirements/ programme	Others	Seek prior approval from the Director — justified by ET leader and verified by IEC	before implementation		
Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre- Construction ET	by Fugro
Monthly EM&A Report	During construction	Submit	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by ET Monthly	
Dedicated website	During construction	Set up and Notify in writing the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
	During construction and operation	Upload All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
		Maintain	entire construction period and during the first 3-year of operation	N/A	
	Ction commencement date  EP Condition  Commencement date of construction  Construction  Establish of ET  Employment of IEC  Update EM&A Manual  Management organization of the main construction companies  Location Plan for Rose Bitterling  Egretry Habitat Creation and Management Plan  Detailed Design of Siu Hang San Tsuen Stream  Traffic Noise Mitigation Plan  Cultural Heritage Impact Baseline condition survey and baseline vibration impact assessment  Cultural Heritage Impact assessment	Cion commencement date  Commencement date  EP Condition  Commencement date of construction  Establish of ET  Employment of IEC  Update EM&A Manual  Management organization of the main construction companies  Location Plans  Relocation Plan for Rose Bitterling  Egretry Habitat Creation and Management Plan  Detailed Design of Siu Hang San Tsuen Stream  Traffic Noise Mitigation Plan  Cultural Heritage Impact Baseline condition survey and baseline vibration impact assessment  Cultural Heritage Impact Change in EM&A requirements/ Programme  Change in EM&A requirements/ Programme  Defice Construction  During construction  During construction  During construction  During construction  During construction  During construction	ton commencement date to the section commencement date to commencement date of construction and solutions are constructed as to the section of the section o	The continue commencement date of the Continue commencement date of the Continue con	The commencement date of the commencement date of the commencement of the commencement date of the commencement date of the commencement date of the commencement of commencem

Remarks:
tbc:To be confirmed
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#### DP10 EP-473/2013/A Fanling Bypass Eastern Section

CEDD Contract No. ND/2019/04 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung

Yeuk Ta			1	T		
	ction commencement da	ate	23-Feb-21			
Operation commencement date  EP Condition			tbe			
		Requirements and Submissions			Submission Status	Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	no later than 8 weeks prior to the commencement of construction	Notified 8 September 2020 Established	Pre-construction ET
2.1	Establish of ET		Establish - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	5 March 2020 Established 23 January 2020	Construction Phase ET
2.2	Employment of IEC	Before construction			Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre construction ET	,
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 17 Mar 2021	
2.5	Location Plans	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 10 December 2021	
2.6	Relocation Plan for Rose Bitterling	Before construction	Approval	before the commencement of construction	N/A	
2.7	Egretry Habitat Creation and Management Plan	Before construction	Approval	before the commencement of construction	N/A	
2.8	Detailed Design of Siu Hang San Tsuen Stream	Before construction	Deposit	before the commencement of construction	Deposited 13 May 2021	
2.9	Traffic Noise Mitigation Plan	Before construction	Approval	no later than 1 month before the commencement of construction	Submitted 11 September 2020	EPD Approved 8 October 2020
2.10	Cultural Heritage Impact Baseline condition survey and baseline vibration impact assessment	Before construction	To Conduct - A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer  Note: The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction		
2.11	Cultural Heritage Impact Photographic and Cartographic Records/ Proposals on relocation of any building	Others	Deposit - A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at FL19	prior to the commencement of the respective removal or relocation works		
		Others	For Approval - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	*	
3.1	Change in EM&A requirements/ programme		Seek prior approval from the Director justified by ET leader and verified by IEC	before implementation		
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submitted by Pre- Construction ET	
3.4	Monthly EM&A Report	During construction	Submit	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by ET Monthly	
	Dedicated website	During construction	Set up and Notify in writing the internet address	in place within one month after the commencement of construction of the Project. in the shortest time practicable, and	Notified 22 April 2020	cover all EPs
4.2		During construction and operation	Upload All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A	
			Maintain	entire construction period and during the first 3-year of operation	N/A	

Remarks:
tbe:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available

DP14	EP-546/2017	Fanling North Temporary Sewage Pumping Station							
	CEDD Contract No. ND/2019/04 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen								
North t	o Lung Yeuk Tau)								
Constru	Construction commencement date 16-Feb-21								
Operati	ion commencement dat	e	tbo						
EP Condition Period		Requirements and Submissions		Submission Status	Remarks				
		Period	Action	Timeframe					
1.12	Commencement date of construction	Before construction	Notify in writing	no later than 1 month prior to the commencement of construction	Notified 8 September 2020				
1.14	Commencement date of opeation	Before operation	Notify in writing	no later than 1 month prior to the commencement of operation	N/A				
2.4	IEC Audit Report	After construction	Deposit	within one month upon completion of the construction works	N/A				

#### DP10 EP-473/2013/A Fanling Bypass Eastern Section

CEDD Contract No. ND/2019/05 - Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)

~	ng Hang)					
	iction commencement d		1-Aug-20			
Operation commencement dat			tbc			
			Requirements and Submissions			Remarks
		Period	Action	Timeframe		
1.12	Commencement date of construction	Before construction	Notify in writing	no later than 8 weeks prior to the commencement of construction	Notified 15 June 2020	
2.1	Establish of ET		E. A. L. L.		Established 5 March 2020 Established	Pre-construction ET
		Before	Establish - An ET & IEC of at least 7 years of experience in EM&A or environmental management.	no later than 6 weeks before the commencement of construction	23 January 2020	Construction Phase ET
2.2	Employment of IEC	construction			Established 11 March 2020	Pre-construction IEC
					Established 20 February 2020	Construction Phase IEC
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET	
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 28 May 2020	
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 28 May 2020	EPD Approval 29 June 2020
2.6	Relocation Plan for Rose Bitterling	Before construction	Approval	before the commencement of construction	N/A	
2.7	Egretry Habitat Creation and Management Plan	Before construction	Approval	before the commencement of construction	N/A	
2.8	Detailed Design of Siu Hang San Tsuen Stream	Before construction	Deposit	before the commencement of construction	Deposited 13 May 2021	
2.9	Traffic Noise Mitigation Plan	Before construction	Approval	no later than 1 month before the commencement of construction	Submitted 11 September 2020	EPD Approved 8 October 2020
2.10	Cultural Heritage Impact Baseline condition survey and baseline vibration impact assessment	Before construction	To Conduct - A baseline condition survey and baseline vibration impact assessment by a qualified building surveyor or a qualified structural engineer  Note: The baseline condition survey and baseline vibration impact assessment shall be included in and form part of the Baseline Monitoring Report to be submitted under Condition 3.3	prior to the commencement of construction	Submitted 1 September 2020	Pending Approval
Cultural Heritage Impact Photographic and Cartographic Records/ Proposals on relocation of any building	Others	Deposit - A copy of Photographic and cartographic records of directly impacted historical buildings and cultural/historical landscape features at FL19	prior to the commencement of the respective removal or relocation works	-		
	, ,	Others	For Approval - Proposals on relocation of any built heritages	prior to commencement of the respective relocation work	-	
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submited by Pre- construction ET Submitted 1 September 2020	for EP Condition 2.10
3.4	Monthly EM&A Report	During construction	Submit	within 2 weeks after the end of each reporting month throughout the entire construction period	Submitted by ET monthly	
		During construction	Set up and Notify in writing the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs
4.2	Dedicated website		Upload All environmental monitoring results	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental	N/A	
4.2	Dedicated Website	During construction and operation	described in Condition 4.1 and all submissions required by this Permit	monitoring data are collected or become available		

Remarks: tbc:To be confirmed DP: Designated Project *tentative submission date will be supplemented once available

### DP12 EP-475/2013/A Reprovision of temporary Wholesale Market in Fanling North New Development Area

Contract No. ND/2019/06 - Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market

for Agricultural Products								
	uction commencement		29-Oct-19					
Operat	ion commencement dat	e	tbe					
			Requirements and Submissions			Remarks		
		Period	Action	Timeframe				
1.12	Commencement date of construction	Before construction	Notify in writing	no later than 8 weeks prior to the commencement of construction	Notified 15 October 2019			
2.1	Establish of ET		Establish - An ET & IEC of at least 7 years of		Established 5 March 2020	Pre-construction ET		
		Before		no later than 6 weeks before the	Established 23 January 2020	Construction Phase ET		
2.2	Employment of IEC	construction	experience in EM&A or environmental management.	commencement of construction	Established 11 March 2020	Pre-construction IEC		
					Established 20 February 2020	Construction Phase IEC		
2.3	Update EM&A Manual	Before construction	Deposit	at least 4 weeks before the commencement of construction	Latest submitted on 4 September 2020 by Pre-construction ET			
2.4	Management organization of the main construction companies	Before construction	Inform in writing	no later than 2 weeks before the commencement of construction	Deposited 14 October 2019			
2.5	Layout Plan	Before construction	Deposit	no later than 2 weeks before the commencement of construction	Deposited 14 October 2019			
2.6	Landscape Plan	Others	Deposit	at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures of the Project	*			
3.3	Baseline Monitoring Report	Before construction	Submit	at least 2 weeks before the commencement of construction	Submited by Pre- construction ET			
3.4	Monthly EM&A Report	During construction	Submit	within 2 weeks after the end of each reporting month throughout the entire construction period	Deposited 13 May 2021			
		During construction	Set up and Notify in writing the internet address	in place within one month after the commencement of construction of the Project.	Notified 22 April 2020	cover all EPs		
4.2	Dedicated website	During construction and operation	Upload All environmental monitoring results described in Condition 4.1 and all submissions required by this Permit	in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available	N/A			
			Maintain	entire construction period and during the first 3-year of operation	N/A			
	1	1		1				

Remarks:
the:To be confirmed
DP: Designated Project
*tentative submission date will be supplemented once available