Civil Engineering and Development Department

Service Contract No. WD/04/2020
Development of Lok Ma Chau Loop:
Main Works Package 1 –
Environmental Team

Environmental Permit No.:
EP-477/2013/A
- Development of Lok Ma Chau Loop

Monthly Environmental Monitoring and Audit Report for September 2022

(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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Our ref.: LES/J2021-04/CS/L084
Date : 17 October 2022

By Post & Email

Civil Engineering and Development Department
West Development Office
West Division (5)
26/F, Tsuen Wan Government Office,
38 Sai Lau Kok Road, Tsuen Wan,
New Territories

Attn: Ms. TAM Im Fei

Dear Ms. TAM,

Agreement No. WD/01/2020
Development of Lok Ma Chau Loop: Main Works Package 1 – Independent Environmental Checker

Verification of Monthly EM&A Report (September 2022)

Reference is made to the Monthly Environmental Monitoring and Audit (EM&A) Report of certified by the Environmental Team Leader in October 2022. We hereby verify the captioned submission in accordance with Clause 3.4 of the Environmental Permit No. EP-477/2013/A for the project of Development of Lok Ma Chau Loop.

Should you have any query, please feel free to contact the undersigned.

Yours faithfully,
For and On Behalf Of
Lam Environmental Services Limited

Raymond Dai
Independent Environmental Checker

c.c.	AECOM	Mr. Eric Wong	By Email
	Wellab Limited	Dr. Priscilla Choy	By Email

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EXECUTIVE SUMMARY

Introduction

1. This is the 45th Monthly Environmental Monitoring and Audit (EM&A) Report prepared for Environmental Permit No.: EP-477/2013/A - Development of Lok Ma Chau Loop (hereinafter called "the Project"). This report documents the findings of Environmental Monitoring and Audit (EM&A) works conducted in the period from 1st to 30th September 2022 (hereinafter called "the reporting month").

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

- Contract No. YL/2020/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 1 Site Formation and Infrastructure Works inside Lok Ma Chau Loop and Western Connection Road Phase 1 (hereinafter called the "Contract 1")
- Contract No.: YL/2020/02 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 2 Western Connection Road Phase 2, Connection Roads to Fanling / San Tin Highway and Direct Road Link Phase 1 (hereinafter called the "Contract 2")
- Contract No.: YL/2021/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 3 Direct Road Link Phase 2

Environmental Monitoring and Audit Activities

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

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

Environmental Aspect		Monitoring Parameter	Date
Air Quality		1-hr Total Suspended Particulates (TSP) Monitoring	6th, 9th, 15th, 21st and 27th September 2022
		24-hr TSP Monitoring	5th, 8th, 14th*, 15th#, 20th, 26th and 30th September 2022
Construction Noise		$L_{eq30mins}$	6th, 15th, 21st and 27th September 2022
Water Quality		• Temperature • pH • Turbidity • Water depth • Salinity • Dissolved Oxygen (DO) • Suspended Solids (SS)	2nd, 5th, 7th, 9th 13th, 15th, 17th, 19th, 21st, 23rd, 26th, 28th and 30th September 2022
Ecological	Lok Ma Chau (LMC) Loop	Avifauna flight line survey	16th September 2022
		Mammal monitoring (by infra-red flash cameras)	Temporary suspended as the connectivity between the existing reed marsh and the EA Zone has been fenced off due to other project's land occupier (i.e. emergency hospital)

Environmental Aspect		Monitoring Parameter	Date
Ecological	Western Connection Road (WCR)	Avifauna flight line survey	16th September 2022
		Avifauna survey at Pond 12	7th, 14th, 21st and 28th September 2022
		Herpetofauna survey	13th September 2022
		Aquatic Fauna survey	7th September 2022
		Water Quality Monitoring for Aquatic Fauna	LMC Meander 2nd, 5th, 7th, 9th 13th, 15th, 17th, 19th, 21st, 23rd, 26th, 28th and 30th September 2022 Stream and associated ponds south of Lung Hau Road 2nd, 7th, 13th, 19th and 28th September 2022
Site Environmental Audit		Environmental protection and pollution control measures	Contract 1 and Contract 2 9th, 14th, 21st and 28th September 2022 Contract 3 5th, 13th, 19th and 26th September 2022

Remarks:
* 24-hr TSP Monitoring at Station DMS-3 was rescheduled to 15th September 2022 due to power failure
# 24-hr TSP Monitoring at Station DMS-3 only

Breaches of Action and Limit Levels

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

Table II Summary Table for Environmental Exceedances in the Reporting Month

Environmental Monitoring	Parameter	Action Level	Limit Level	Event & Action		
				Investigation Result	No. of Exceedance related to the Construction Works of the Project	Corrective Action
Air Quality	1-hr TSP	0	0	--	0	--
	24-hr TSP	0	0	--	0	--
Construction Noise	Daytime Leq(30min)	0	0	--	0	--
Water Quality	DO	0	0	--	0	--
	Turbidity	0	0	--	0	--
	SS	0	0	--	0	--

1-hour TSP Monitoring

5. All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

24-hour TSP Monitoring

6. All 24-hour TSP monitoring was conducted as scheduled in the reporting month except the monitoring at DMS-3 on 14th September 2022 was rescheduled to 15th September 2022 due to power failure. No Action/Limit Level exceedance was recorded.

Construction Noise

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

Water Quality

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

Ecological Monitoring

LMC Loop

Avifauna (Flight Line Survey)

9. Avifauna monitoring was conducted as scheduled in the reporting month. Flight lines recorded were in general concentrated mainly on LMC Meander and adjacent areas including Ecological Area Zone (EA Zone) and along Shenzhen River. It demonstrates that the large waterbirds prefer using the flight line corridor above the LMC Meander as well as the unaffected Shenzhen River instead of the centre of LMC Loop.

Mammals

10. According the Clause 11.4.1.2 of EM&A Manual, the objective of mammals monitoring is to monitor the connectivity between the existing reed marsh and the EA. In view of current site condition of Loop, the connectivity between the existing reed marsh and the EA Zone has been fenced off due to other project's land occupier.

11. In addition, the 12-month establishment period of EA zone has also been completed. The mammals monitoring in the Loop has therefore been temporarily suspended since March 2022 and will be resumed subject to the site condition.

Western Connection Road

Avifauna (Flight Line Survey)

12. Avifauna monitoring was conducted as scheduled in the reporting month. Flight lines recorded were in general concentrated mainly on LMC Meander and adjacent areas including Ecological Area Zone (EA Zone) and along Shenzhen River. It demonstrates that the large waterbirds prefer using the flight line corridor above the LMC Meander as well as the unaffected Shenzhen River instead of the centre of LMC Loop.

Avifauna (Pond 12)

13. Avifauna survey at Pond 12 was conducted as scheduled in the reporting month. Weekly count of birds using the Pond was recorded. No significant impact of construction activities on bird use of the pond was observed.

Herpetofauna

14. Herpetofauna survey was conducted as scheduled in the reporting month. No significant impact of construction activities on the numbers of this species was observed.

Aquatic fauna

15. Aquatic fauna survey was conducted as scheduled in the reporting month. No significant impact of construction activities on the stream was observed.

Land Contamination

16. Decontamination for five arsenic-contaminated zones (LD01 - LD05) identified in LMC Loop was completed and the final Remediation Report was submitted and approved by EPD in accordance with Condition 2.16 of the EP-477/2013/A under Contract No. YL/2017/03.
17. No work related to land contamination was conducted in the reporting month.

Site Environmental Audit

18. In the reporting month, weekly joint site inspections to evaluate the site environmental performance had been carried out by the representatives of the Consultants, Independent Environmental Checker (IEC), Environmental Team (ET) and the Contractors. The date(s) of the weekly site environmental audit conducted under the Project are summarized in **Table III**.

Table III Summary Table for Site Environmental Audit in the Reporting Month

Contract(s)	Date(s) of Site Environmental Audit
Contract No. YL/2020/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 1 Site Formation and Infrastructure Works inside Lok Ma Chau Loop and Western Connection Road Phase 1	9th, 14th, 21st and 28th September 2022
Contract No.: YL/2020/02 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 2 Western Connection Road Phase 2, Connection Roads to Fanling / San Tin Highway and Direct Road Link Phase 1	9th, 14th, 21st and 28th September 2022
Contract No.: YL/2021/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 3 Direct Road Link Phase 2	5th, 13th, 19th and 26th September 2022

19. No non-compliance was recorded during the site inspections.

Complaint Log

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

Notification of Summons and Successful Prosecutions

21. No notification of summons or successful prosecution was received in the reporting month.

Reporting Change

22. This report has been prepared in compliance with the reporting requirements for the subsequent monthly EM&A Report as required by the EM&A Manual for Development of Lok Ma Chau Loop (EM&A Manual). No reporting change was made in the reporting month.

Future Key Issues

23. Major site activities for the coming reporting months will include:

Contract No. YL/2020/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 1 Site Formation and Infrastructure Works inside Lok Ma Chau Loop and Western Connection Road Phase 1

(a) Wetland Compensation Establishment Works and Ecological Monitoring.

(b) Additional Ground Investigation and Site Formation.

(c) Deep Cement Mixing Work.

(d) Piling Works for Box Culverts and Western Connection Road.

(e) Pre-drilling and Piling Construction for Vehicular Bridge over the old Shenzhen River Meander.

(f) Drainage works and roadworks.

(g) Road L1 Excavation and Lateral Support (ELS) Cofferdam Construction.

Contract No.: YL/2020/02 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 2 Western Connection Road Phase 2, Connection Roads to Fanling / San Tin Highway and Direct Road Link Phase 1

(a) Tree Felling / Tree Transplant.

(b) Pre-construction Condition Survey inside MTRC tunnel.

(c) Pre-drilling and Trial Pits for Bridge ST01, CTFB and DRL.

(d) Construction of concrete block piling platform for piling works of Retaining Wall BPW1.

(e) Temporary diversion of 2 watermains, 1 gas main and CLP cables for box culvert modification.

(f) Box Culvert Modification at Lok Ma Chau Road (Stage 1).

(g) Demolition of Existing Structures along Lok Ma Chau Road.

(h) Construction of temporary cycle track along Lok Ma Chau Road and San Tin Public Transport Interchange.

(i) Existing Cycle Track Subway Modification.

(j) Construction of Pai Lau.

(k) Bored pile and socketed H-Pile for Bridge DRL, CTFB & ST01.

(l) Construction of Retaining walls RW 8 and RW 9.

(m) Operation of TAR1 and TAR2.

(n) Liaison with utility companies for utility diversion.

(o) Bored Pile at Retaining Wall BPW1.

(p) ELS cofferdam construction for ST01-P02 and P03.

(q) Commission of temporary cycle track along Castle Peak Road (Chau Tau).

(r) Road works along Lok Ma Chau Road.

Contract No.: YL/2021/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 3 Direct Road Link Phase 2

(a) Elevated Passenger Transport Interchange (EPTI) Ground Investigation works.

(b) Elevated Passenger Transport Interchange (EPTI) Bored Pile Construction.

(c) Underground Utilities Diversion at Double-deck Footbridge.

1 INTRODUCTION

1.1 Wellab Limited (WELLAB) was appointed by the Civil Engineering and Development Department (CEDD) under Service Contract No. WD/04/2020 as the Environmental Team to undertake the Environmental Monitoring and Audit (EM&A) programme for the Works Contracts under Main Works Package 1 and the remaining works under Contract No. YL/2017/03 – Development of Lok Ma Chau Loop: Land Decontamination and Advance Engineering Works to ensure that the environmental performance of the Works Contracts comply with the requirements specified in the Environmental Permit (EP), Environmental Monitoring & Audit (EM&A) Manual, Environmental Impact Assessment (EIA) Report of the Project and other relevant statutory requirements.

Purpose of the report

1.2 This is the 45th EM&A Report which summarises the impact monitoring results and audit findings for the EM&A programme in the period from 1st to 30th September 2022.

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, monitoring results and Event / Action Plans.

Section 6: **Ecological Monitoring -** summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequencies, monitoring locations and monitoring results.

Section 7 **Land Contamination -** summarises the remediation works progress for contamination soil and relevant submission.

Section 8 **Waste Management –** summarises the implementation status of waste management.

Section 9: **Environmental Site Inspection -** summarises the audit findings of the

weekly site inspections undertaken within the reporting month.

Section 10: **Implementation Status of Environmental Mitigation Measures -** summarises the compliance status of environmental mitigation measures.

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 and monitoring schedule for the next three months.

Section 13: **Conclusions and Recommendations**

2 PROJECT INFORMATION

Background

2.1 The development at Lok Man Chau (LMC) Loop is one of the ten major infrastructure projects for economic growth of the Hong Kong Special Administrative Region (HKSAR). The HKSAR Government would work with the Shenzhen authorities to tap the land resources of the LMC Loop to meet future development needs and consolidate the strategic position of both cities in the Pan-Pearl River Delta region. The Project is to develop LMC Loop with higher education as the leading land use, complemented by high-tech research and development facilities and cultural and creative industries.

2.2 The planning and engineering study for the Loop development is a designated project (DP) classified under Item 1 Schedule 3 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). In October 2013, the EIA Report (AEIAR-176/2013) of the Project was approved by the Director of Environmental Protection pursuant to the EIA Ordinance in accordance with the EIA Study Brief (No. ESB-201/2008 and ESB-238/2011) and the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM). The Environmental Permit (EP) (EP no.: EP-477/2013) was also granted in November 2013.

2.3 Pursuant to Section 13 of the EIAO, the Director of Environmental Protection amends the Environmental Permit (No. EP-477/2013) based on the Application No. VEP- 595/2021 and the environmental Permit (Permit No. E EP-477/2013/A) was issued on 12th August 2021 for Development of Lok Ma Chau Loop.

2.4 The Loop development is implemented by three works packages in stages, namely: Advance Works, Main Works Package 1 (MWP1) and Main Works Package 2 (MWP2).

2.5 Contract No. YL/2017/03 – Development of Lok Ma Chau Loop: Land Decontamination and Advance Engineering Works (hereinafter called the "Contract") was awarded to Sang Hing – Kuly Joint Venture (hereinafter called the "Contractor 1") in June 2018 for the Advance Works. All construction works of Contract No. YL/2017/03 have been completed and the works were successfully handed over to AFCD and DSD on 30th December 2021.

2.6 For MWP1, there will be a total of 5 Works Contracts and the contract packaging is shown below.

1) Contract 1 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 1 – Site Formation and Infrastructure Works inside Lok Ma Chau Loop and Western Connection Road Phase 1
2) Contract 2 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 2 Western Connection Road Phase 2, Connection Roads to Fanling / San Tin Highway and Direct Road Link Phase 1
3) Contract 3 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 3 – Direct Road Link Phase 2
4) Contract 4 - Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 4 –Fresh Water Service Reservoir and Associated Waterworks
5) Contract 5 - Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 5 – Landscaping Works within Lok Ma Chau Loop

2.7 Contract No. YL/2020/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 1 – Site Formation and Infrastructure Works inside Lok Ma Chau Loop and Western Connection Road Phase 1 (hereinafter called the "Contract 1") was awarded to CRCC-Kwan Lee-Paul Y. JV (hereinafter called the "Contractor 2") in July 2021.

2.8 Contract No.: YL/2020/02 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 2 Western Connection Road Phase 2, Connection Roads to Fanling / San Tin Highway and Direct Road Link Phase 1 (hereinafter called the "Contract 2") was awarded to China Road and Bridge Corporation (hereinafter called the "Contractor 3") in September 2021.

2.9 Contract No.: YL/2021/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 3 Direct Road Link Phase 2 (hereinafter called the "Contract 3") was awarded to Paul Y.-Chun Wo-CRCC JV (hereinafter called the "Contractor 4") in February 2022.

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

- Contract No. YL/2020/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 1 Site Formation and Infrastructure Works inside Lok Ma Chau Loop and Western Connection Road Phase 1 (Contract 1)
- Contract No.: YL/2020/02 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 2 Western Connection Road Phase 2, Connection Roads to Fanling / San Tin Highway and Direct Road Link Phase 1 (Contract 2)
- Contract No.: YL/2021/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 3 Direct Road Link Phase 2 (Contract 3)

2.11 The layout of the construction works under the Project and the scope of works under the Project are summarized in **Table 2.1**.

Table 2.1 Site Layout and Scope of Works under the Project

Contract(s)	Scope of Works	Site Layout Plan
Contract No. YL/2017/03 – Development of Lok Ma Chau Loop: Land Decontamination and Advance Engineering Works (Completed)	a) Land decontamination treatment within the Loop; b) Establishment of an Ecological Area (EA) within the Loop; c) Construction of a temporary access to the Loop; d) Minor improvement works to Ha Wan Tsuen East Road and other ancillary works; e) Construction of temporary noise barriers and miscellaneous road works along Lok Ma Chau Road; f) Ground treatment works to the first batch of land parcels within the Loop for development of buildings and associated facilities for Phase 1 of the Hong Kong – Shenzhen Innovation and Technology Park and development of the western electricity substation; and g) Implementation of environmental mitigation measures for the works mentioned in the items (a) to (f) above.	Figure 1a

Contract(s)	Scope of Works	Site Layout Plan
Contract No. YL/2020/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 1 Site Formation and Infrastructure Works inside Lok Ma Chau Loop and Western Connection Road Phase 1	a) Ground treatment and site formation works; b) Construction of carriageway, footpaths, cycle tracks and a public transport interchange within the Loop; c) Construction of Western Connection Road Phase 1 through widening of existing Ha Wan Tsuen East Road, which includes construction of footpath, cycle track, slopes, retaining walls and a vehicular bridge over the old Shenzhen River meander; d) Provision of other infrastructures, including a tertiary sewage treatment works and sewerage system, water supply system, drainage system, and other associated works; and e) Environmental mitigation measures including about 18 ha offsite wetland compensation and about 1.3 ha offsite woodland compensation.	Figure 1b
Contract No.: YL/2020/02 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 2 Western Connection Road Phase 2, Connection Roads to Fanling / San Tin Highway and Direct Road Link Phase 1	a) Construction of Western Connection Road Phase 2 through widening of a section of existing Lok Ma Chau Road; b) Construction of Direct Road Link Phase 1 comprising a viaduct of about 720mm long; construction of slip roads connecting Lok Ma Chau Road and Fanling Highway / San Tin Highway including a viaduct of about 340 m long; c) Construction of a cycle track cum footbridge; d) Construction of associated works including road improvement works, footpaths, cycle tracks, slopes, retaining walls, water supply system and drainage system; and e) Provision of noise barriers.	Figure 1b
Contract No.: YL/2021/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 3 Direct Road Link Phase 2	a) Construction of an elevated public transport interchange of an approximate area of 5,700 square metres above the existing Lok Ma Chau Spur Line Public Transport Interchange; b) Construction of an approximately 90 metres long double-deck footbridge and a lift tower of approximately 21 metres in height with three lifts and three escalators connecting the elevated public transport interchange mentioned above to the MTR Lok Ma Chau Station; c) Associated modification works within the MTR Lok Ma Chau Station; and d) Associated roadworks, landscaping, electrical and mechanical works and ancillary works.	Figure 1b

Project Organisation

2.12 Different parties with different levels of involvement in the Project organization. The key personnel contact names and numbers are summarised in **Table 2.2**.

Table 2.2 Key Contacts of the Project

Organization	Project Role	Contact Person	Tel No.	Fax No.
CEDD	Project Proponent	Mr. Davy KS CHAN	2417 6370	2412 0358
WELLAB	ET	Dr Priscilla Choy – ET Leader	2898 7388	2898 7076
Lam Environmental Services Limited (LAM)	IEC	Mr. Raymond Dai	2839 5666	2882 3331
Contract No. YL/2020/01				
AECOM	Consultants	Mr. Eric Wong	9861 8664	TBA
CRCC-Kwan Lee-Paul Y. JV	Contractor	Site Agent – Mr. Jeremy Luk	9013 7913	2774 0197
		Senior Engineer – Mr. Max Mak	9263 1116	2774 0197
		Senior Engineer – Mr. Stephen Leung	9770 6390	2774 0197
		Environmental Officer – Ms. Lila Lui	5261 0378	2774 0197
Contract No. YL/2020/02				
AECOM	Consultants	Mr. Eric Wong	9861 8664	TBA
China Road and Bridge Corporation	Contractor	Site Agent – Mr. Raymond Suen	9779 8871	3996 9202
		Construction Team Leader –Mr. Roger Poon	9503 2488	3996 9202
		Environmental Officer – Mr. Calvin So	9724 6254	3996 9202
Contract No. YL/2021/01				
AECOM	Consultants	Mr. Eric Wong	9861 8664	TBA
Paul Y.-Chun Wo-CRCC JV	Contractor	Site Agent – Mr. Desmond Tang	5188 0815	3015 7861
		Section Agent – Mr. Charles Choi	6350 0142	3015 7861
		Environmental Officer – Ms. Apple Lee	6274 7443	3015 7861

Construction Programme

2.13 Copies of contractors' construction programmes are provided in **Appendix A**.

Summary of Construction Works Undertaken During Reporting Month

2.14 The major site activities undertaken in the reporting month included:

Contract No. YL/2020/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 1 Site Formation and Infrastructure Works inside Lok Ma Chau Loop and Western Connection Road Phase 1

(a) Site Formation Works along Western Connection Road Phase 1.

(b) Wetland Compensation Establishment Works and Ecological Monitoring.

(c) Filling Work and Ground Investigation Works for Vehicular Bridge over the Old Shenzhen River Meander.

Contract No.: YL/2020/02 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 2 Western Connection Road Phase 2, Connection Roads to Fanling / San Tin Highway and Direct Road Link Phase 1

(a) Tree Felling / Tree Transplant.

(b) Box Culvert Modification: trial pit excavation and completed with the TTA area. TTA for diversion of pedestrian implemented.

(c) Demolition of Existing Structures.

(d) Piling works for bridges ST01, CTFB and DRL.

(e) Trial pit excavation for ELS for Retaining Wall RW9.

(f) Temporary cycle track along Castle Peak Road.

(g) Excavation and lateral support for Pun Uk Tsuen Pai Lau footing (Stage 1).

Contract No.: YL/2021/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 3 Direct Road Link Phase 2

(a) Pre-drilling.

(b) Associated roadworks and electrical and mechanical works.

(c) Bored pile construction.

(d) Scaffolding works.

Status of Environmental Licences, Notifications and Permits

2.15 A summary of the relevant permits, licences, and/or notifications on environmental protection for the Project is presented in **Table 2.3**.

Table 2.3 Status of Environmental Licences, Notifications and Permits

Contract No.	Permit / License No.	Valid Period		Status
		From	To	
Environmental Permit (EP)				
Contract No. YL/2020/01 Contract No. YL/2020/02	EP-477/2013	22/11/2013	N/A	Valid
Contract No. YL/2021/01	EP-477/2013/A	12/08/2021	N/A	Valid
Construction Noise Permit (CNP)				
Contract No. YL/2020/01	GW-RN0571-22	04/07/2022	03/10/2022	Valid
Contract No. YL/2020/02	GW-RN0826-22	8/09/2022	07/12/2022	Valid
	GW-RN0534-22	30/06/2022	29/09/2022	Expired
Contract No. YL/2021/01	GW-RN0638-22	28/07/2022	27/09/2022	Expired
	GW-RN0906-22	28/09/2022	27/12/2022	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation				
Contract No. YL/2020/01	469726	21/07/2021	Till the Contract ends	Receipt acknowledged by EPD
Contract No. YL/2020/02	471916	20/09/2021	Till the Contract ends	Receipt acknowledged by EPD
Contract No. YL/2021/01	479880	17/05/2022	Till the Contract ends	Receipt acknowledged by EPD
Billing Account for Disposal of Construction Waste				
Contract No. YL/2020/01	7041333	27/07/2021	Till the Contract ends	Valid
Contract No. YL/2020/02	7041861	15/10/2021	Till the Contract ends	Valid
Contract No. YL/2021/01	7043434	22/05/2022	Till the Contract ends	Valid
Registration of Chemical Waste Producer				
Contract No. YL/2020/01	WPN 5213-620-C4632-01	20/08/2021	Till the Contract ends	Valid
Contract No. YL/2020/02	WPN 5213-542-C1232-24	29/11/2021	Till the Contract ends	Valid
Contract No. YL/2021/01	WPN 5213-542-P3483-01	21/04/2022	Till the Contract ends	Valid
Effluent Discharge License under Water Pollution Control Ordinance				
Contract No. YL/2020/01	WT00039466-2021	15/07/2022	21/12/2026	Valid
	WT00041233-2022	18/07/2022	31/07/2027	Valid
Contract No. YL/2020/02	WT00041280-2022	27/07/2022	31/07/2027	Valid
Contract No. YL/2021/01	WT00041259-2022	21/07/2022	31/07/2027	Valid

3 AIR QUALITY MONITORING

Monitoring Requirements

3.1 In accordance with the EM&A Manual for Development of Lok Ma Chau Loop (EM&A Manual), impact 1-hour Total Suspended Particulates (TSP) and 24-hour TSP monitoring were conducted to monitor the air quality for the Project. **Appendix B** shows the established Action/Limit Levels for the air quality monitoring work.

3.2 Impact 1-hour TSP monitoring was conducted for at least three times every 6 days, while impact 24-hour TSP monitoring was conducted for at least once every 6 days at 4 air quality monitoring stations.

Monitoring Location

3.3 Impact air quality monitoring was conducted at the 4 monitoring stations under the Project, as shown in **Figure 2**. **Table 3.1** describes the location of the air quality monitoring stations.

Table 3.1 Location of Air Quality Monitoring Stations

Monitoring Station	Location
DMS-1a (see Note 1)	Village House along Ha Wan Tsuen East Road
DMS-2A (see Note 2)	Village House along Lok Ma Chau Road
DMS-3	Village House along Old Border Road
DMS-4A (see Note 3)	Hong Kong Police Force, Lok Ma Chau Operation Base at Horn Hill

Notes:

1. In view of the disturbance concerned by the villagers near the original air quality monitoring location DMS-1, an alternative location (DMS-1a) was proposed which was verified by IEC and agreed by EPD.
2. Monitoring at DMS-2 (originally proposed in the approved EM&A Manual) was denied during the baseline monitoring. An alternative location (DMS-2A) was proposed which was verified by IEC and agreed by EPD.
3. Proposed replacement monitoring location for Air Sensitive Receiver (ASR) MTL-20 – Village house in Ma Tso Lung (DMS-4A) as no work would be conducted near ASR MTL-20 due to exclusion of the original Eastern Connection Road (ECR) which was verified by IEC and agreed by EPD.

Monitoring Equipment

3.4 **Table 3.2** summarises 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(s)	Equipment	Model and Make	Quantity
DMS-2A DMS-3 DMS-4A	HVS Sampler for 24-hour TSP monitoring	TISCH Model: TE-5170	3
	1-hour TSP Dust Meter	Met One Instruments: AEROCET-831	6
	Calibrator	TISCH Model: TE-5025A	1

Monitoring Station(s)	Equipment	Model and Make	Quantity
(1) DMS-1a	Dust Meter for 1-hour and 24-hour TSP monitoring	Met One Instruments: AEROCET-831	2
DMS-4A	Wind Anemometer	DAVIS Model: Vantage PRO2 6152CUK	1

Remark: (1) The power supply from the Village House at DMS-1a is not secured for operation of HVS. Therefore, dust meter for 24-hr TSP monitoring at DMS-1a is proposed to ensure the monitoring data collection.

Monitoring Parameters and Frequencies

3.5 **Table 3.3** summarises the monitoring parameters and frequencies of impact dust monitoring during the course of the Project activities. The air quality monitoring schedule for the reporting month is shown in **Appendix D**.

Table 3.3 Impact Air Quality Monitoring Parameters and Frequencies

Parameters	Frequency
1-hr TSP	Three times in every 6 days
24-hr TSP	Once per 6 days

Monitoring Methodology and Quality Assurance/Quality Control (QA/QC) Procedure

<u>24-hour TSP Air Quality Monitoring</u>

Instrumentation

3.6 HVSs 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

3.7 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 metres apart;
- The distance between the sampler and an obstacle, such as buildings, was at least twice the height that the obstacle protruded above the sampler;
- A minimum of 2 metres of separation from walls, parapets and penthouses was required for rooftop samples;
- A minimum of 2 metres 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 metres 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 had been obtained to set up the samplers; and
- A secured supply of electricity was provided to operate the samplers.

Filters Preparation

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

3.9 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%.

3.10 Wellab Limited has comprehensive QA and QC programmes.

Operating/Analytical Procedures

3.11 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 m^3/min. and 1.4 m^3/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50;
- The power supply was checked to ensure the sampler worked properly;
- On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air 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 could 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 returned to the Wellab Limited 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

3.12 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 HVSs were calibrated (five-point calibration) using Calibration Kit prior to the commencement of the baseline monitoring and thereafter at bi-monthly intervals.

1-hour and 24-hour TSP Air Quality Monitoring

3.13 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.
- For 24-hour TSP monitoring, the hold time was set for collection of 24-hour TSP samples. A separate automotive battery was used to support the dust meter for 24-hour TSP monitoring.
- 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

3.14 The following maintenance/calibration is 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 prior to the commencement of the baseline monitoring. Dust meter will be checked and calibrated at bi-monthly intervals throughout the air quality monitoring period, if necessary.

Results and Observations

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

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, µg/m³
	Average	Range		
DMS – 1a	84.2	64.9 – 121.2	353	500
DMS – 2A	96.5	51.7 – 147.5	370	
DMS – 3	85.1	52.7 – 124.4	351	
DMS – 4A	82.7	52.8 – 116.2	350	

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

Monitoring Station	Concentration (µg/m³)		Action Level, µg/m³	Limit Level, µg/m³
	Average	Range		
DMS – 1a	83.3	53.3 – 111.3	184	260
DMS – 2A	68.3	21.7 – 112.1	166	
DMS – 3	45.8	20.2 – 66.9	166	
DMS – 4A	47.4	17.9 – 71.1	152	

3.16 All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

3.17 All 24-hour TSP monitoring was conducted as scheduled in the reporting month except the monitoring at DMS-3 on 14th September 2022 was rescheduled to 15th September 2022 due to power failure. No Action/Limit Level exceedance was recorded.

3.18 According to our field observations, the major dust source identified at the designated air quality monitoring stations in the reporting month are as follows:

Table 3.6 Observation at Air Quality Monitoring Stations

Monitoring Station	Major Dust Source
DMS-1a	Road traffic, exposed site area, site vehicle / equipment movement
DMS-2A	Site vehicle / equipment movement
DMS-3	Road traffic
DMS-4A	Road traffic

3.19 The wind speed and wind direction were recorded by the installed Wind Anemometer set at DMS-4A. The location is shown in **Figure 2**.

3.20 The general weather condition and the wind data for the reporting month are summarised in **Appendix I**.

Event and Action Plan

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

4 NOISE MONITORING

Monitoring Requirements

4.1 In accordance with the EM&A Manual, four noise monitoring stations, namely NMS-1, NMS-2, NMS-3 and NMS-4A were selected for impact monitoring for the Project. Impact noise monitoring was conducted for at least once per week during the construction phase of the Project. **Appendix B** shows the established Action / Limit Levels for the noise monitoring works.

Monitoring Location

4.2 Impact noise monitoring was conducted at the 4 monitoring stations under the Project, as shown in **Figure 3**. **Table 4.1** describes the locations of the noise monitoring stations.

Table 4.1 Location of Noise Monitoring Stations

Monitoring Station	Location	Measurement
NMS-1	Village house in Ha Wan Tsuen	Façade Measurement
NMS-2	Village house along existing Ha Wan Tsuen	Free Field
NMS-3	Village house along Old Border Road	Free Field
NMS-4A(see Note 1)	Hong Kong Police Force, Lok Ma Chau Operation Base at Horn Hill	Free Field measurement

Note:

1. Proposed replacement monitoring location for Noise Sensitive Receiver (NSR) MTL-20 – Village house in Ma Tso Lung (DMS-4A) as no work would be conducted near NSR MTL-20 due to exclusion of the original ECR.

Monitoring Equipment

4.3 **Table 4.2** summarises the noise monitoring equipment. Copies of calibration certificates are provided in **Appendix C**.

Table 4.2 Noise Monitoring Equipment

Equipment	Model	Quantity
Integrating Sound Level Meter	BSWA 308	2
Calibrator	SVANTEK SV 30A	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

Monitoring Stations	Parameter	Duration	Frequency
NMS-1 NMS-2 NMS-3 NMS-4A	L_{10}(30 min.) dB(A) L_{90}(30 min.) dB(A) Leq(30 min.) dB(A) (as six consecutive Leq, 5min readings)	0700-1900 hrs on normal weekdays	Once per week

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

Monitoring Methodology and QA/QC Procedures

- The microphone head of the sound level meter was positioned at 1m from the exterior of the noise sensitive facade and lowered sufficiently so that the building's external wall acted as a reflecting surface;
- The battery condition was checked to ensure the correct functioning of the meter;
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
  - frequency weighting : A
  - time weighting : Fast
  - time measurement : L_{eq}(30 min.) dB(A) (as six consecutive $L_{eq, 5min}$ readings) during non-restricted hours (i.e. 0700-1900 hrs on normal weekdays)
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment;
- During the monitoring period, the L_{eq}, L_{90} and L_{10} were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet;
- Noise measurement was paused temporarily during periods of high intrusive noise (e.g. dog barking, helicopter noise) if possible and observation record during measurement period should be provided; and
- Noise monitoring was cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s. The wind speed should be checked with a portable wind speed meter capable of measuring the wind speed in m/s.

Maintenance and Calibration

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

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

4.7 Immediately prior to and following each noise measurement, the accuracy of the sound level meter should be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements would be accepted as valid only if the calibration levels before and after the noise measurement agreed to within 1.0 dB.

Results and Observations

4.8 The noise monitoring results are summarised in **Table 4.4**. Detailed monitoring results and graphical presentations of noise monitoring are shown in **Appendix G**.

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

Monitoring Station	Noise Level, $L_{eq\ (30min)}$ dB(A)		Action Level	Limit Level
	Average	Range		
NMS-1	60.0	50.8 – 63.5	When one documented complaint is received.	75 dB(A)
NMS-2	70.2	66.2 – 71.3		
NMS-3	59.9	55.8 – 61.1		
NMS-4A	53.7	51.2 – 56.8		

Remark: +3dB(A) façade correction included
If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.

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

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

Monitoring Station	Major Noise Source
NMS-1	Excavation works, loading and unloading works, site vehicle / equipment movement (mainly due to other project)
NMS-2	Site vehicle / equipment movement
NMS-3	Road traffic
NMS-4A	Road traffic

Event and Action Plan

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

5 WATER QUALITY MONITORING

Monitoring Requirements

5.1 According to the EM&A Manual, impact water quality monitoring shall be carried out three days per week during the construction period. The interval between two sets of monitoring shall not be less than 36 hours.

5.2 Replicate in-situ measurements and samples collected from each independent sampling event shall be collected to ensure a robust statistically interpretable database.

5.3 Impact water quality monitoring was conducted at three depths (i.e. 1m below surface, mid-depth and 1m above river bed, except where the water depth was less than 6m, mid-depth station might be omitted. Should the water depth be less than 3m, only the mid-depth station was monitored) dissolved oxygen (DO) concentration, DO saturation, suspended solids (SS), turbidity, pH, salinity and temperature were monitored in accordance with the requirements set out in the EM&A Manual.

5.4 **Appendix B** shows the established Action and Limit Levels for the water quality monitoring work.

Monitoring Locations

5.5 Impact water quality monitoring was conducted at 6 monitoring stations under the Project, which is summarised in **Table 5.1**. The locations of monitoring stations are shown in **Figure 4**.

5.6 Based on the updated construction programme under Contract No. YL/2017/03, the water-based construction works for temporary vehicular bridge was completed on 7th April 2021 which was confirmed by Engineer Representative under Contract No. YL/2017/03 via email dated 15th June 2021. The additional monitoring station, BS1 was therefore proposed to be deleted from the water quality monitoring proramme starting from 28th June 2021. Other water quality monitoring stations remain unchanged. This Proposal for Update of Water Quality Monitoring Stations was verified by IEC and agreed by EPD via email dated 22nd June 2021.

Table 5.1 Location for Water Quality Monitoring Stations

Monitoring Station	Location	Nature of the Location
CS1	Control Station at Old Shenzhen River	Control Station at Meander
IS1	Impact Station at Old Shenzhen River	Impact Station at Meander
IS2	Impact Station at Old Shenzhen River	Impact Station at Meander
IS4	Impact Station at Ping Hang Stream	Reference Station
CS5	Control Station at south of Lung Hau	Control Station for IS6
IS6	Impact Station near Lung Hau Road	Impact Station
(1) BS1	Impact Station at Old Shenzhen River Meander	Additional impact station for temporary vehicular bridge

Note:

1. Terminated starting from 28th June 2021 according to Proposal for Update of Water Quality Monitoring Stations (approved by EPD on 22nd June 2021).

Monitoring Equipment

Instrumentation

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

DO and Temperature Measuring Equipment

5.8 The instrument for measuring DO and temperature was portable and weatherproof complete with cable, sensor, comprehensive operation manuals and use DC power source. It was capable of measuring:

- A DO level in the range of 0-20 mg/L and 0-200% saturation; and
- A temperature of 0-45 degree Celsius.

5.9 It had a membrane electrode with automatic temperature compensation complete with a cable.

5.10 Sufficient stocks of spare electrodes and cables were available for replacement where necessary.

5.11 Salinity compensation was built-in in the DO equipment.

Turbidity

5.12 Turbidity was measured in-situ by the nephelometric method. The instrument was portable and weatherproof using a DC power source 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 SS. The turbidity measurement was carried out on split water sample collected from the same depths of SS samples.

Sampler

5.13 A water sampler, consisting of a transparent Polyvinyl Chloride (PVC) of a capacity of not less than two litres which could 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 self-made sampling bucket was also used for sampling at the monitoring station with shallow water.

Water Depth Detector

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

pH

5.15 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.

Salinity

5.16 A portable salinometer capable of recording salinity within the range of 0-40 ppt was used for salinity measurements.

Sample Container and Storage

5.17 Following collection, water samples for laboratory analysis were stored in high density polythene bottles (250ml/1L) with no preservatives added, packed in ice (cooled to 4°C without being frozen) and kept in dark during both on-site temporary storage and shipment to the testing laboratory. The samples were delivered to the laboratory as soon as possible and the laboratory determination work was started within 24 hours after collection of the water samples. Sufficient volume of samples was collected to achieve the detection limit.

5.18 **Table 5.2** also summarises the type of sampling bottle and preservation method for laboratory testing.

Table 5.2 Types of Sampling Bottle and Preservation Method

Parameter	Preservation Method	Type of Sample Container
Total SS	Refrigerate	1 litre plastic bottle

Calibration of In-Situ Instruments

5.19 All in-situ monitoring instruments were checked, calibrated and certified by Wellab Limited before use, and subsequently re-calibrated at 3-month intervals throughout all stages of the water quality monitoring programme. Responses 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 event.

5.20 For the on-site calibration of field equipment (Multi-parameter Water Quality System), the BS 1427:2009, "Guide to on-site test methods for the analysis of waters" was observed.

5.21 Sufficient stocks of spare parts were maintained for replacement when necessary. Backup monitoring equipment was also being made available so that monitoring could proceed uninterrupted even when some equipment was under maintenance, calibration, etc.

5.22 The equipment used for impact water quality monitoring is shown in **Table 5.3** and copies of the calibration certificates are shown in **Appendix C**. All the monitoring equipment complied with the requirements set out in the EM&A Manual.

Table 5.3 Water Quality Monitoring Equipment

Equipment	Model and Make	Quantity
Sonar Water Depth Detector	Garmin Fishfinder 140 / Garmin Striker plus 4	1
Water Sampler	A 2-litre transparent PVC cylinder with latex cups at both ends or self-made sampling bucket	1
Multi-parameter Water Quality System	YSI EXO 1	2

Monitoring Parameters and Frequency

5.23 **Table 5.4** summarises the monitoring parameters, monitoring depths and frequency of the water quality monitoring. The water quality monitoring schedule for the reporting month is shown in **Appendix D**.

Table 5.4 Water Quality Monitoring Parameters, Depths and Frequency

Monitoring Station	Parameter (unit)	Depth	Frequency
CS1, IS1, IS2, IS4, CS5, IS6	• Temperature(°C) • pH (pH unit) • turbidity (NTU) • water depth (m) • salinity (ppt) • DO (mg/L and % of saturation) • SS (mg/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 might be omitted.	• 3 days per week during the construction period of the Project

5.24 Monitoring location/position, time, water depth, sampling depth, pH, salinity, DO saturation, water temperature, tidal stages, weather conditions and any special phenomena or work underway nearby were recorded.

Monitoring Methodology

Instrumentation

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

Operating/Analytical Procedures

5.26 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 values between the first and second readings of each set was more than 25% of the value of the first readings, this set of readings was discarded and further readings were taken.

Laboratory Analytical Methods

5.27 The testing of all parameters was conducted by Wellab Limited for the water samples and comprehensive QA and QC procedures were in place in order to ensure the quality and consistency of results. The testing method, reporting limit and detection limit are provided in **Table 5.5**.

Table 5.5 Laboratory Analysis Method for Water Samples

Determinant	Instrumentation	Analytical Method	Limit of Reporting	Detection Limit
SS	Weighing	APHA 17ed 2540 D	2.5 mg/L	0.5 mg/L

Remark: The limit of reporting, 2.5mg/L has been adopted during baseline water quality monitoring stage

QA/QC Requirements

Decontamination Procedures

5.28 Water sampling equipment used during the course of the monitoring programme was decontaminated by manual washing and rinsed clean seawater/distilled water after each sampling event. All disposal equipment was discarded after sampling.

Sampling Management and Supervision

5.29 All sampling bottles were labelled with the sample identity laboratory number and sampling date. Water samples were dispatched to the testing laboratory for analysis as soon as possible after the sampling. All samples were stored in a cool box and kept at 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.

5.30 The laboratory determination work was started as soon as possible after collection of the water samples.

QC Measures for Sample Testing

5.31 The sample testing and following QC programme were performed by Wellab Limited for every batch of 20 samples:

- ✧ One method blank; and
- ✧ One set of QC samples.

Maintenance and Calibration

5.32 All in-situ monitoring instruments were checked, calibrated and certified by Wellab Limited before use, and subsequently re-calibrated at 3-month intervals throughout all stages of the water quality monitoring programme.

Results and Observations

5.33 The monitoring results and graphical presentation of water quality at the monitoring stations are shown in **Appendix H.**

5.34 The summary of exceedance recorded in the reporting month is shown in **Appendix K** and summarised in the **Table 5.6**. No Action/Limit Level exceedance was recorded in the reporting month.

Table 5.6 Summary of Water Quality Exceedances

Station	Exceedance Level	DO	Turbidity	SS	Total Number of Non-project Related Exceedances	Total Number of project Related Exceedances
IS1	Action Level	0	0	0	0	0
	Limit Level	0	0	0	0	0
IS2	Action Level	0	0	0	0	0
	Limit Level	0	0	0	0	0
IS4	Action Level	0	0	0	0	0
	Limit Level	0	0	0	0	0
IS6	Action Level	0	0	0	0	0
	Limit Level	0	0	0	0	0
Total	Action Level	0	0	0	0	0
	Limit Level	0	0	0	0	0

5.35 No water quality monitoring was conducted at IS6 in the reporting month since the channel was dry.

IS6

5.36 Water quality monitoring was conducted as scheduled in the reporting month.

Event and Action Plan

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

6 ECOLOGICAL MONITORING

LMC Loop

Monitoring Requirements (Avifauna Monitoring – Flight Line Survey)

Monitoring Requirements

6.1 As required under Section 11.4.1.1 of EM&A Manual, flight line corridor survey was required from the beginning of work until 12 months after the establishment of the Ecological Area or completion of work on the Western Connection Road, whichever was the later.

6.2 The purpose of the survey was to identify the number and species composition of birds using the flight line and monitor if there was any impact from construction works.

Monitoring Frequency

6.3 Flight line survey is required to be carried out on monthly basis.

Monitoring Location

6.4 The flight line corridor survey work should be carried out at the Lok Ma Chau Lookout, according to Section 11.4.1.1 of the EM&A Manual. The location at Lok Ma Chau Lookout is shown in **Figure 5a.**

Monitoring Methodology

6.5 Flight lines of birds through the area were surveyed once monthly at Lok Ma Chau Lookout, adjacent to the Loop.

6.6 Observations were carried out at Lok Ma Chau Lookout for two hours from 30 minutes before sunrise in the early morning.

6.7 During the survey, the surveyor marked on a standard map for the estimated location of the flight path used by waterbird species, birds of prey or other larger species of conservation interest passing through the area. Flights involving short hops from point to point were not recorded. The focus was on the flight line corridor over the Loop or the southwest section of old Shenzhen River meander.

6.8 During the survey, species generally commensal with man (e.g. Black-collared Starling), common and widespread in HK (e.g. Crested Myna) or small in size and not prone to following flight lines en masse (e.g. Barn Swallow) were ignored in order to concentrate on species of conservation interest and/or those prone to using flight lines (e.g. large waterbirds).

6.9 For each observation of birds in flight, the number, the species and their height above the ground were recorded. Height above the ground was estimated in relation to the level of the Loop and adjacent fish pond area, and/or the location of the observer.

6.10 Given the difficulty of accurately measuring height above ground from a distance, three height classes were used: 10m, 20m and 30m or above. In practice, this means birds were assigned to ranges of 5-15m (10m height class), 15-25m (20m height class) and 25m or above (30m height class). Approximate heights of observation points were 40m

at Lok Ma Chau Lookout.

6.11 Flight line locations marked on the maps were then overlain with a 100m grid, each square having a unique number.

6.12 The number of birds of each species passing through each 100m grid (the number of "bird-flights") and their height above ground were then entered into an Excel spreadsheet. These data were then mapped, and on the figures produced a greater intensity of colour indicated a higher number of birds, as shown in **Figure 6.**

Monitoring Day

6.13 The flight line survey was carried out on 16th September 2022. Sunrise time at 6:10 am and the survey started at 5:53 am and lasted for 2 hours. The weather was fine throughout the survey.

Monitoring Result

6.14 Total number of birds observed was 144. Six species were included in the record of the flight line survey, including Little Egret, Great Egret, Chinese Pond Heron, Black-crowned Nigh Heron, Grey Heron and Black Kite. **Table 6.1** shows the summary of the number of birds observed in this Survey.

Table 6.1 Number of Birds Observed

Species	Number of Birds	Height class 1	Height Class 2	Height Class 3
Little Egret 小白鷺	83	0	15	68
Great Egret 大白鷺	30	0	9	21
Chinese Pond Heron 池鷺	14	8	5	1
Black-crowned Night Heron 夜鷺	2	2	0	0
Grey Heron 蒼鷺	2	0	1	1
Black Kite 黑鳶	13	0	4	9
Total	144	10	34	100

6.15 The total number of bird-flights (number of birds of each species passing through each 100m square) observed across all 100m grid squares was 1321. **Table 6.2** shows the number of bird-flights for the six species respectively.

Table 6.2 Number of Bird-flights

Species	Total number of Bird-Flights
Little Egret 小白鷺	833
Great Egret 大白鷺	271
Chinese Pond Heron 池鷺	87
Black-crowned Night Heron 夜鷺	10
Grey Heron 蒼鷺	11
Black Kite 黑鳶	109
Total	1321

6.16 The distribution of flight line usage in this survey is shown in **Figure 6**.

6.17 Flight lines recorded were in general concentrated mainly on LMC Meander and adjacent areas including Ecological Area Zone (EA Zone) and along Shenzhen River. It demonstrates that the large waterbirds prefer using the flight line corridor above the LMC Meander as well as the unaffected Shenzhen River instead of the centre of LMC Loop.

Monitoring Requirements (Mammals)

Monitoring Requirements

6.18 As required under Section 11.4.1.2 of the EM&A Manual, monitoring of mammals are required for Eurasian Otter, other mammals and dogs during the site formation and establishment period of Ecological Area.

6.19 The purpose of the monitor is to observe the connectivity between the existing reed marsh and the Ecological Area, and if there was any sign of otter and mammals around the Ecological Area.

Monitoring Location

6.20 Three cameras should be placed where accessible, facing towards the Ecological Area and the Loop. The locations of cameras are subject to the project progress and result of the survey.

Monitoring Methodology

6.21 Monitoring of Eurasians Otter is notoriously difficult due to their secretive and nocturnal habits in Hong Kong. Therefore, remote-sensing (infra-red flash) cameras shall be used to detect any signs of Eurasian Otter and mammals.

Monitoring Results

6.22 In view of current site condition of Loop, the connectivity between the existing reed marsh and the EA Zone has been fenced off due to other project's land occupier. In addition, 12-month establishment period of EA zone has also been completed.

6.23 The mammals monitoring in the Loop was therefore temporarily suspended since March 2022 and will be resumed subject to the site condition.

Western Connection Road

Monitoring Requirements (Avifauna Monitoring – Flight Line Survey)

6.24 Refer to Sections 6.1 to 6.17.

Monitoring Requirements (Avifauna Monitoring – Pond 12)

Monitoring Requirements

6.25 As required under Section 11.4.2.1 of EM&A Manual, weekly counts of the number and

species of bird using Pond 12 was required from the beginning of work until 12 months after the establishment of the Ecological Area or completion of work on the Western Connection Road, whichever is the later.

6.26 The purpose of the survey was to identify the number and species composition of birds using Pond 12 to ensure there would be no impacts greater than predicted from construction works.

Monitoring Frequency

6.27 Pond 12 avifauna survey is required to be carried out on a weekly basis.

Monitoring Location

6.28 Monitoring of avifauna was conducted at Pond 12. Location of Pond 12 is shown in **Figure 5a**.

Monitoring Methodology

6.29 The species and number of birds using Pond 12 were surveyed weekly. Each weekly survey started before the commencement of works of the day, and ended 1 hour after works had begun.

6.30 During the survey, the surveyor would identify and count each bird using Pond 12 with a pair of binoculars and a camera. The abundance and species of the identified birds would be recorded.

Monitoring Result

6.31 Pond 12 avifauna surveys were carried out weekly in the reporting month.

Dates of pond 12 avifauna survey: 7th, 14th, 21st and 28th September 2022

6.32 In total, 221 individuals from 27 avifauna species were recorded at Pond 12 in the reporting month. The detailed results are shown in **Appendix R1**.

6.33 The monitoring results during construction works were compared against the results before the commencement of works of the day. The number of bird species and the abundance of birds recorded at Pond 12 during construction were higher than the results prior to the construction works. (Refer to **Table 6.3**).

Table 6.3 Summary of Avifauna Monitoring Results at Pond 12

Monitoring Date	Number of Species		Abundance	
	Before Construction	During Construction	Before Construction	During Construction
7th September 2022	10	14	15	31
14th September 2022	6	11	13	24
21st September 2022	9	15	27	29
28th September 2022	9	13	29	53

6.34 The monitoring results indicated Pond 12 was utilized by waterbirds and wetland-dependent species in the reporting month. No significant impact of construction activities on bird use of the pond was observed.

Herpetofauna

Monitoring Requirements

6.35 Under Section 11.4.2.2 of EM&A Manual, monitoring of the only herpetofauna species of conservation interest in the area around pond 12, the Chinese Bullfrog, should be conducted before and during the whole construction period.

6.36 The purpose of the survey was to ensure the abundance of the Chinese Bullfrog in the area of Pond 12, LMC Tsuen, and nearby wetlands is not affected by construction works.

Monitoring Frequency

6.37 Herpetofauna monitoring was conducted once monthly during wet season (March to October), including both day-time and night-time survey.

Monitoring Location

6.38 Herpetofauna monitoring was conducted along the designated transect around Pond 12, LMC Tsuen, as well as any nearby wetlands within a 100m radius into which disturbed bull frog may move. Location of the Herpetofauna survey transect is shown in **Figure 5b** for reference.

Monitoring Methodology

6.39 Survey along the transect was conducted once during daytime, and once during night time. Surveyors would actively search for presence of tadpoles, froglets or adults in potential habitats (such as ditches, ponds, marshes and wet agricultural land) through direct observation, or identification of vocalisations.

Monitoring Result

6.40 Herpetofauna survey was carried out once in the reporting month.

Date of Herpetofauna survey:	13th September 2022 (both day-time and night-time survey)

6.41 No potential impact due to the construction activities of Western Connection Road was identified during the survey of Chinese Bullfrog in the reporting month. The detailed results are shown in **Appendix R2**.

Aquatic Fauna

Monitoring Requirements

6.42 Under Section 11.4.2.3 of EM&A Manual, surveys of the population of Rose Bitterling at streams and associated ponds south of Lung Hau Road and monitoring of water quality are required to identify potential impacts.

6.43 The purpose of the survey was to ensure the population of Rose Bitterling at the stream and associated ponds south of Lung Hau Road as well as the water quality at the area where Rose Bitterling is present are not affected by construction works.

Monitoring Frequency

6.44 Monitoring of Rose Bitterling population was conducted monthly during the construction period of WCR to identify potential impacts.

6.45 *In situ* monitoring of water quality was conducted weekly at the stream and associated ponds south of Lung Hau Road where Rose Bitterling is present, and whole site audit was carried out at the construction site to identify potential impacts on the stream.

6.46 *In situ* monitoring of water quality in LMC Meander was conducted weekly during the construction phase and the first 12 months of operation.

Monitoring Location

6.47 Monitoring of Rose Bitterling and *in situ* monitoring of water quality were conducted at the stream and associated ponds south of Lok Ma Chau Road where Rose Bitterling is present. There are 4 sampling points along the stream, and 4 sampling points at the ponds. The sampling locations are shown in **Figure 5c**.

6.48 *In situ* monitoring of water quality in LMC Meander was conducted at 3 monitoring stations, including CS1, IS1 and IS2, as stated in Section 6.3 of the EM&A Manual. The monitoring stations are shown in **Figure 4**.

Monitoring Methodology

6.49 Monitoring of Rose Bitterling was conducted by backside observation with the aid of

binoculars, for 5 minutes at each sampling point. After bankside observation, sweep netting was also carried out at each sampling point, if feasible.

6.50 The number of Rose Bitterling observed on bankside and by sweep netting at each sampling location was recorded. Other human activities or change in environment that may affect the survey result will be specified, if any.

6.51 Measurements for *in situ* monitoring of water quality include temperature, pH, salinity, turbidity and dissolved oxygen. Monitoring equipment for water quality monitoring is presented in Section 5.

Monitoring Result

6.52 Aquatic fauna survey was carried out once and weekly *in situ* water quality monitoring was conducted in the reporting month.

Date of Aquatic Fauna Survey:	7th September 2022
Date of Water Quality Monitoring for Aquatic Fauna	LMC Meander 2nd, 5th, 7th, 9th 13th, 15th, 17th, 19th, 21st, 23rd, 26th, 28th and 30th September 2022 Stream and associated ponds south of Lung Hau Road 2nd, 7th, 13th, 19th and 28th September 2022

6.53 No potential impact due to the runoff from the construction activities of the Western Connection Road was identified during the survey of Aquatic Fauna in the reporting month. In addition, no deterioration in the water quality due to the construction activities of the Western Connection Road was observed.

6.54 The detailed aquatic fauna (Rose Bitterling) results and *In situ* water quality monitoring results at the stream and associated ponds south of Lung Hau Road are shown in **Appendix R3** and **R4** respectively.

6.55 *In situ* water quality monitoring results in LMC Meander at 3 monitoring stations, including CS1, IS1 and IS2 are presented in Section 5 and **Appendix H**. No Action / Limit Level exceedance was recorded.

7 LAND CONTAMINATION

General

7.1 According to the EM&A Manual Section 8.2 and the details of the remediation and associated testing referred to in Chapter 8 of the EIA Report (AEIAR-176/2013), five (5) arsenic-contaminated zones were identified within the Loop. The estimated depth and volume of contaminated soil for each remediation zone are listed in **Table 7.1** below.

Table 7.1 Detailed Contamination Information for Designated Remediation Areas

Contamination Zone ID in EIA	Contamination Hot Spot	Estimated Vertical Extent of Contamination	Estimated Thickness (m)	Estimated Area of Contamination Zone (m^2)	Estimated Volume of Contaminated Soil (m^3)
A-S24	LD-001	2.5m to 4.0m below existing ground level	1.5	4001	6002
A-SG10	LD-002	4.0m to 5.5m below existing ground level	1.5	3520	5280
A-S20	LD-003	2.5m to 4.0m below existing ground level	1.5	4989	7484
A-S03	LD-004-A	2.5m to 4.0m below existing ground level	1.5	4580	6870
A-S03a1	LD-004-B	4.0m to 5.5m below existing ground level	1.5	4452	6678
A-S03c1	LD-004-C	1.0m to 2.5m below existing ground level	1.5	5601	8402
A-S01	LD-005	2.5m to 5.5m below existing ground level	3.0	5576	16728

7.2 Based on the Contract requirements, "Solidification / Stabilisation" was the recommended treatment method to remediate all contaminated soils and Portland cement was proposed to be used for the contaminated soil treatment. The target of soil remediation is listed in **Table 7.2**.

Table 7.2 Contaminant Solidification & Stabilisation Target for Cement Solidification / Stabilisation (CS/S)

Contaminant	Toxicity Characteristic Leaching Procedure (TCLP) Limit of Arsenic	Unconfined Compressive Strength (UCS)
Metal – Arsenic	≤5 mg/L	≥1 Mpa

7.3 Trial of CS/S was undertaken between April and June 2019 and the second trial was conducted in August 2019. According to trial performance results, cement / soil ratios of 10% and 7.5% could achieve the remediation target and these ratios had been adopted for the subsequent remediation work. The proposed cement/soil ratios were accepted by

relevant parties before the remediation work started. The contaminated soil excavation and remediation commenced on site in mid-July 2019.

Remediation Work Progress in the Reporting Month

7.4 As advised by the Contractor, Decontamination for all Hotspots (LD01 - LD05) was completed and backfilling of treated soil was completed on 31 May 2021. After completion of remediation works at each hot spots, Interim Remediation Reports (IRR) would be prepared by the Land Contamination Specialist and submitted to EPD in accordance with Condition 2.16 of the EP-477/2013/A. The status of IRRs are summarised below.

(a) IRR for hot spot LD-001 endorsed by EPD on 6th January 2020
(b) IRR for hot spot LD-003 endorsed by EPD on 18th March 2020
(c) IRR for hot spot LD-002 commented by EPD on 3rd September 2020 and resubmitted by Contractor on 16th September 2020
(d) IRR for hot spot LD-005 endorsed by EPD on 23rd October 2020
(e) Final Remediation Report including the result of hotpsot LD-004 was submitted to EPD on 28th June 2021. The final Remediation Report was approved by EPD with minor comments in August 2021.

7.5 No work related to land contamination was conducted in the reporting month.

8 WASTE MANAGEMENT

General

8.1 Waste management was carried out in accordance with the Waste Management Plan (WMP) for the Project.

Solid and Liquid Waste Management Status

8.2 The amount of waste generated by the activities of the Project in the reporting month is shown **Table 8.1**.

Table 8.1 Quantities of Waste Generated in the Reporting Month

Contract(s)	Waste Type		Quantity this month	Disposal / Dumping Grounds
Contract No. YL/2020/01	Inert	Reused in this Contract (Inert) (in '000 m^3)	0	N/A
		Reused in other Contracts/ Projects (Inert) (in '000 m^3)	0	N/A
		Disposal as Public Fill (Inert) (in '000 m^3)	0	N/A
Contract No. YL/2020/02		Reused in this Contract (Inert) (in '000 m^3)	0	N/A
		Reused in other Contracts/ Projects (Inert) (in '000 m^3)	0	N/A
		Disposal as Public Fill (Inert) (in '000 m^3)	0.252	N/A
Contract No. YL/2021/01		Reused in this Contract (Inert) (in '000 m^3)	0	N/A
		Reused in other Contracts/ Projects (Inert) (in '000 m^3)	0	N/A
		Disposal as Public Fill (Inert) (in '000 m^3)	0.005	N/A
Contract No. YL/2020/01	Non-inert	Recycled Metal ('000kg)	0	N/A
		Recycled Paper / Cardboard Packing ('000kg)	0.130	N/A
		Recycled Plastic ('000kg)	0	N/A
		Chemical Wastes ('000kg)	0	N/A
		General Refuses ('000m^3)	0.109	NENT Landfill
Contract No. YL/2020/02		Recycled Metal ('000kg)	0	N/A
		Recycled Paper / Cardboard Packing ('000kg)	0	N/A
		Recycled Plastic ('000kg)	0	N/A
		Chemical Wastes ('000kg)	0	N/A
		General Refuses ('000m^3)	0.324	NENT Landfill
Contract No. YL/2021/01		Recycled Metal ('000kg)	0	N/A
		Recycled Paper / Cardboard Packing ('000kg)	0	N/A
		Recycled Plastic ('000kg)	0	N/A
		Chemical Wastes ('000kg)	0	N/A
		General Refuses ('000m^3)	0	N/A

8.3 The amount of wastes generated by the construction works of the Project in Waste Flow Table during the reporting month is shown in **Appendix O**.

9 ENVIRONMENTAL SITE INSPECTION

Site Audits

9.1 Site audits were carried out by ET on weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures on the Project site. The summaries of site audits are attached in **Appendix L**.

9.2 Site audits were conducted by ET with the representative of the Consultants, the Contractor and IEC on 5th, 9th, 13th, 14th, 19th, 21st, 26th and 28th September 2022 in the reporting month. Summary of site audits under the Project are presented in **Table 9.1.** The details of observations during site audit are shown in **Table 9.2.**

Table 9.1 Summary of Site Audits

Contract(s)	Date(s) of Site Environmental Audit
Contract No. YL/2020/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 1 Site Formation and Infrastructure Works inside Lok Ma Chau Loop and Western Connection Road Phase 1	9th, 14th, 21st and 28th September 2022
Contract No.: YL/2020/02 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 2 Western Connection Road Phase 2, Connection Roads to Fanling / San Tin Highway and Direct Road Link Phase 1	9th, 14th, 21st and 28th September 2022
Contract No.: YL/2021/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 3 Direct Road Link Phase 2	5th, 13th, 19th and 26th September 2022

9.3 During site inspections in the reporting month, no non-conformance was identified. The observations and recommendations made during the audit sessions are summarised in **Table 9.2**.

Table 9.2 Observations and Recommendations of Site Audit

Parameters	Date	Observations and Recommendations	Follow-up
Contract No. YL/2020/01			
Water Quality	09/09/2022	The wheel washing water should be collected properly at WCR	Improvement/ Rectification was observed during follow-up audit session on 14th September 2022.
Air Quality	14/09/2022	Water spraying should be provided for the dusty generation works and haul road at near Pond 13 for dust suppression.	Improvement/ Rectification was observed during follow-up audit session on 21st September 2022.
Contract No. YL/2020/02			
Air Quality	14/09/2022	To replace the invalid NRMM label for the crane at RW9.	Improvement/ Rectification was observed during follow-up audit session on 21st September t 2022.
Water Quality	14/09/2022	To clear the blocked drain at the site area near Pai Lau.	Improvement/ Rectification was observed during follow-up audit session on 21st September t 2022.
Water Quality	21/09/2022	Clear the accumulated sediment at the sedimentation tank at LCS.	Improvement/ Rectification was observed during follow-up audit session on 28th September 2022.
Contract No. YL/2021/01			
No major environmental deficiency was identified during site inspections.			

10 IMPEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

10.1 According to the EIA Report, EP and the EM&A Manual, the mitigation measures detailed in the documents are recommended to be implemented during the construction phase. An updated summary of the Environmental Mitigation Implementation Schedule is provided in **Appendix M**.

10.2 The Compliance status of Ecological and Noise Mitigation Measures related to the Project according to EP Conditions 2.7 and 2.9 respectively are summarised in **Table 10.1**.

Table 10.1 Compliance Status of Ecological and Noise Mitigation Measures (EP Conditions 2.7 and 2.9)

EP Requirements	Compliance Status	Remarks
Submission and Measures to Mitigate Ecological Impact		
EP Condition 2.7 To reduce the ecological impact during construction and operation stages of the Project, a series of ecological mitigation measures shall be implemented as conforming to the relevant information and recommendations, including those described in Section 12.7 (Ecological Mitigation Measures), contained in the EIA Report. The key ecological mitigation measures shall include:		
(a) conducting pre-construction search for any otter holts/dens and herpetofaunal species of conservation concern in construction sites, with remedial measures such as setting of no works area around otter holts/den and translocation of important species identified, if any;	Yes	**Development of Lok Ma Chau Loop: Land Decontamination and Advance Engineering Works** The pre-construction search has been carried out in November 2018 before the Advance Works commencement. No otter holts/dens and herpetofauna species of conservation concern were identified. **Development of Lok Ma Chau Loop Main Works Package 1 Contract 1 - Site Formation and Infrastructure Works inside Lok Ma Chau Loop and Western Connection Road Phase 1** The pre-construction search has been carried out at Area, 2, 7 & 9 as well as LMC Loop and WCR site areas in May / June 2021 and June / July 2021 respectively before the Works commencement. No otter holts/dens and herpetofauna species of conservation concern were identified.
(b) creating and establishing an Ecological Area, approximately 12.78 ha. in size, containing reed marsh and marsh habitat prior to total clearance of reed marsh in the Loop, including a lowrise building buffer zone of 50m width from the Ecological Area, with appropriate screenplanting;	Yes	Ecological Area has been established under the Contract. Low-rise building buffer zone and screenplanting which will be provided under Main Works Package 1.

EP Requirements	Compliance Status	Remarks
(c) stabilising the bank of the old Shenzhen River meander of the Loop, approximately 3.5 km long, including re-vegetation upon completion of the works and various ecological designs, such as practicability of installation of otter holts and provision of potential feeding area and spraint locations for otters in the stabilised bank;	Yes	The EA design has implemented these measures.
(d) creating a 23 m minimum width vegetated setback at the edges of the Loop along the southwestern and north-eastern sections of the meander;	N/A	Vegetated setback will be provided under Main Works Package 1
(e) installing 3m-high olive green fence around construction areas to allow or deter different animal passages where appropriate;	Yes	The Contractor was reminded to maintain and re-arrange the green fence around construction areas and ensure no disturbance to the exiting trees and reed marsh habitat.
(f) providing (i) permanent compensatory off-site wetland areas; and (ii) construction stage temporary compensatory off-site wetland areas during various construction stages of the Project, in advance of any corresponding wetland loss;	Yes	Creation of off-site wetland areas have been substantially completed.
(g) providing at least 0.4 ha woodland compensation area by planting trees and shrubs near Horn Hill, to compensate for the loss of woodland affected by the Western Connection Road (WCR) and other works of the Project;	N/A	To be implemented under Main Works Package 1
(h) carrying out outside dry-season (from November to February next year), the construction works associated with the site formation in the Ecological Area, stabilization of the bank of the old Shenzhen River meander, Western Connection Road along Ha Wan Tsuen Road, to minimise disturbances to migratory birds/water birds;	Yes	-
(i) using powered mechanical equipment for construction works only during the period 9am to 5pm at and near the old Shenzhen River meander and other identified important ecologically sensitive areas, if any;	Yes	-
(j) prohibiting use of direct lighting on the old Shenzhen River meander and controlling nighttime lighting to reduce potential ecological impact;	Yes	-
(k) implementing measures to minimise magnitude of construction runoff and to avoid/minimise the potential impact of spillage events, if any; and	Yes	-
(l) using opaque noise barriers along the proposed roads and using appropriate glass and façade treatment for buildings in the Loop to minimise the mortality of fast-moving wildlife (e.g. birds).	Yes	The works for noise barriers along Lok Ma Chau Road were completed under the Contract in October 2021. Façade treatment for buildings in the Loop will be provided under the responsible works packages.
Four hard copies and two electronic copies of an Ecological Mitigation / Habitat Creation and Management Plan shall be, at least one month before	Yes	**Development of Lok Ma Chau Loop: Land Decontamination and Advance Engineering Works**

EP Requirements	Compliance Status	Remarks
the commencement of corresponding parts of the works of the Project, deposited with the Director. The Plan(s) shall show the design details, locations, implementation programme, maintenance and management schedules, and drawings in the scale of 1:1,000 or other appropriate scale of the ecological mitigation measures of the Project. Before submission to the Director, the Plan(s) shall be certified by the ET Leader and verified by the IEC as conforming to the relevant information and recommendations contained in the EIA Report. All measures recommended in the finalised submission(s) under this Condition shall be fully and properly implemented.		The HCMP has been submitted and approved under the EP condition 2.7. **<u>Development of Lok Ma Chau Loop Main Works Package 1 – Design and Construction</u>** The HCMP has been submitted under the EP condition 2.7 and approved in December 2021.
EP Condition 2.9 To mitigate construction stage noise impact, the following noise mitigation measures shall be implemented during the construction stage of the Project:		
(a) temporary noise barriers shall be installed along the construction access roads to screen the construction traffic noise and noisy construction activities and equipment during different construction stages of the Project as described in Table 1 and Figures 2a, 2b, 3a and 3b of this Permit;	Yes	The temporary noise barriers (TNBs) along LMC Road were completed under the Contract in October 2021 (Figures 2a and 2b of EP-477/2013/A). (**Appendix N**) The TNBs installation under Contract 2 were completed in August 2022 (Figures 3a and 3b of EP-477/2013/A). (**Appendix N**) Due to the updated site condition, TNB5 deems to serve the function of TNB16 before the commencement of road widening works of the Western Connection Road.
(b) use of movable noise barriers, noise enclosures and quiet powered mechanical equipment for the noisy construction activities and equipment as described in Table 1 and with reference to the typical designs as shown in Figure 4 of this Permit;	Yes	-
(c) concrete lorry mixer(s) shall be operated at least 25 m away from the noise sensitive receivers (NSRs) No. HWTR-6 and HWTR-11 at the Western Connection Road as shown in Figures 2b and 3b as described in Table 1 of this Permit to avoid exceedance due to cumulative construction noise; and	Yes	-
(d) no percussive piling nor blasting by explosive shall be implemented in the Project.	Yes	-

Ecological Mitigation Measures – Offsite Wetland Compensation Areas (OWCAs)

10.3 According to the EIA Report, habitat loss and disturbance impacts are predicted for both construction and operation phase of the development of Lok Ma Chau Loop. All these impacts are expected to be compensated both temporarily (during construction phase) and permanently (during operation phase). Among other measures identified from EIA report to avoid, minimize and compensate for identified impacts, three areas of existing fishpond habitat (Areas 2, 7 and 9) were proposed in the EIA Report to provide OWCAs.

10.4 These Areas are located within a Priority Site for Enhanced Conservation, namely "Deep Bay wetlands outside the Ramsar site". Many of these fishponds are currently participating in the Nature Conservation Management Agreement Scheme in the Northwest New Territories, which has the objective of restoring and enhancing the conservation value of commercial fishponds in the area. In general, the activities involved in the establishment of OWCAs are in nature the same as those associated with commercial fishpond management currently taking place in the area. Therefore, there are no direct implications for the ecological impacts OWCAs according to Section 12.7.9 of EIA report.

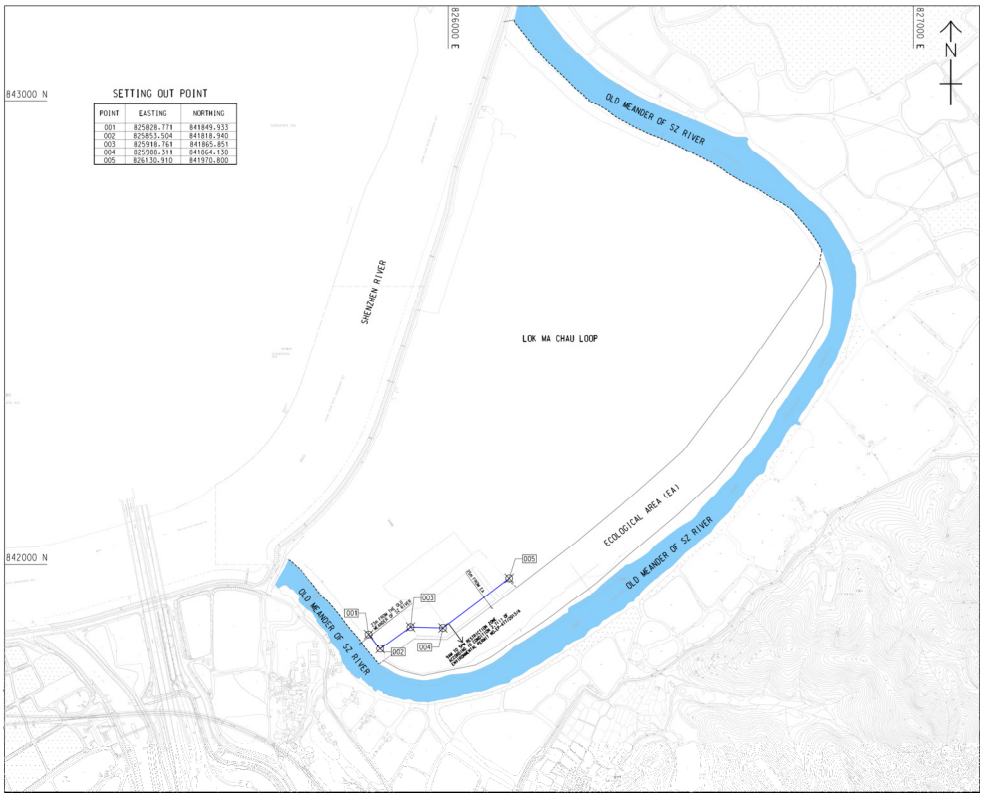
10.5 Under Environmental Permit (EP) number EP-477/2013/A, an Ecological Mitigation/ Habitat Creation and Management Plan (HCMP) is required for all habitat compensation measures required by the Project EIA. The OWCAs are established according to the HCMP which provides a framework and specifications for development and management of the OWCAs.

10.6 The OWCAs (Areas 2, 7 and 9) has been substantial completed and defect rectification works were conducted in the reporting month.

Ecological Mitigation Measures – Installation of 3m-high Olive Green Fence

10.7 The green fence around the future Ribbon Park Reedbed has been removed and replaced by the hoarding due to the other project's land occupier since March 2022.

10.8 Installation of the green fence alongside the Ecological Area and the Meander was proposed and completed on 20th May 2022. The layout plan of the green fence installation is shown below:-



10.9 The Contractor was reminded to maintain the green fence around construction areas and ensure no disturbance to the exiting trees and reed marsh habitat subject to the latest situation of LMC Loop.

11 ENVIRONMENTAL NON-CONFORMANCE (EXCEEDANCES)

Summary of Exceedances

11.1 Summary of exceedances is provided in **Appendix K**.

11.2 No Action/Limit Level exceedance was recorded for air quality, construction noise and water quality monitoring.

Summary of Environmental Complaint

11.3 No environmental complaint was received in the reporting month. The statistical summary table of the environmental complaints is presented in **Table 11.1** and the details and status of the investigation are presented in Complaint Log as attached in **Appendix P**.

Table 11.1 Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Project related complaint
Jan 2019 – Aug 2022	11	11	1
Sep 2022	0		0

Summary of Notification of Summons and Successful Prosecutions

11.4 There was no prosecution or notification of summons received since the commencement of the Project. The statistical summary table of the summons and prosecution are presented in **Table 11.2** and **11.3** respectively. Summary of successful prosecution as attached in **Appendix Q**.

Table 11.2 Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Project related summon
Jan 2019 – Aug 2022	0	0	0
Sep 2022	0		0

Table 11.3 Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Project related Prosecution
Jan 2019 – Aug 2022	0	0	0
Sep 2022	0		0

12 FUTURE KEY ISSUES

Key Issues in the Coming Months

12.1 Major site activities for the coming reporting months will include:

Contract No. YL/2020/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 1 Site Formation and Infrastructure Works inside Lok Ma Chau Loop and Western Connection Road Phase 1

(a) Wetland Compensation Establishment Works and Ecological Monitoring.

(b) Site Formation Works for construction of Western Connection Road Phase 1.

(c) Deep Cement Mixing Work.

(d) Piling Works for Box Culverts and Western Connection Road Phase 1.

(e) Pre-drilling and Piling Construction for Vehicular Bridge over the old Shenzhen River Meander.

(f) Drainage works and roadworks.

(g) Road L1 Excavation and Lateral Support (ELS) Cofferdam Construction.

Contract No.: YL/2020/02 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 2 Western Connection Road Phase 2, Connection Roads to Fanling / San Tin Highway and Direct Road Link Phase 1

(a) Tree Felling / Tree Transplant.

(b) Pre-construction Condition Survey inside MTRC tunnel.

(c) Pre-drilling and Trial Pits for Bridge ST01, CTFB and DRL.

(d) Construction of concrete block piling platform for piling works of Retaining Wall BPW1.

(e) Box Culvert Modification at Lok Ma Chau Road (Stage 1)

(f) Demolition of Existing Structures along Lok Ma Chau Road.

(g) Construction of temporary cycle track along Lok Ma Chau Road and San Tin Public Transport Interchange.

(h) Existing Cycle Track Subway Modification.

(i) Bored pile and socketed H-Pile for Bridge DRL, CTFB & ST01.

(j) Construction of Retaining walls RW 8 and RW 9.

(k) Operation of TAR1 and TAR2.

(l) Utilities diversion works.

(m) Bored Pile at Retaining Wall BPW1.

(n) ELS cofferdam construction for ST01-P02 and P03.

(o) Commission of temporary cycle track along Castle Peak Road (Chau Tau).

(p) Road works along Lok Ma Chau Road.

Contract No.: YL/2021/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 3 Direct Road Link Phase 2

(a) Elevated Passenger Transport Interchange (EPTI) Ground Investigation works.

(b) Elevated Passenger Transport Interchange (EPTI) Bored Pile Construction.

(c) Underground Utilities Diversion at Double-deck Footbridge.

12.2 Dust can be generated during construction works and exposed site area during dry weather. To prevent high dust concentrations during dry weather, the Contractor should pay attention on the air quality mitigation measures as far as practicable to minimise the dust impact to the villages which are located adjacent to the Project works. The Contractor was also reminded to follow the Project Implementation Schedule in the approved EIA report / EM&A Manual to implement appropriate dust control measures including "watering in all works areas once per hour during working hours to control fugitive dust impact, particularly during dry weather and covering any excavated or stockpile of dusty material by impervious sheets and spraying all dusty material with water immediately prior to any loading transfer operations to keep the dusty materials wet during material handling at the stockpile areas" as well as the relevant dust control practices as stipulated in the Air Pollution Control (Construction Dust) Regulation such that no adverse dust impact would arise from the Project works.

12.3 Ecology is also one of the key environmental issues during construction of the Project. Noise pollution has a negative impact on wildlife species by reducing habitat quality. Therefore, noise mitigation measures such as using quiet plants and noise barriers should be in place, where applicable. In addition, the Contractor was reminded to frequently check and maintain the acoustic materials wrapped on noisy part of PME and ensure no gaps between noise barriers; proactively identify any potential construction noise impact to NSRs and provide sufficient mitigation measures if necessary. All ecological mitigation measures recommended in the Project Implementation Schedule in EP / approved EIA report / EM&A Manual should be properly implemented and maintained as far as practicable.

12.4 The Contractor is also recommended to arrange and maintain water quality mitigation measures. 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 site/sediment trap. The sediment/silt traps should be incorporated in the permanent drainage channels to enhance deposition rates. Efficient silt removal facilities shall deploy to ensure all treated effluent from wastewater treatment plant shall meet the requirements as stated in relevant WPCO licences. Wheel washing facilities shall be probably designed, established and utilized. The site drainage plan shall also be updated based on the site conditions and latest construction programmes.

Monitoring Schedule for the Next Month

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

Construction Programme for the Next Month

12.6 Tentative construction programmes are provided in **Appendix A**.

13 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

13.1 The EM&A Report presents the EM&A works undertaken in September 2022 in accordance with EM&A Manual.

Air Quality

1-hour TSP Monitoring

13.2 All 1-hour TSP monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

24-hour TSP Monitoring

13.3 All 24-hour TSP monitoring was conducted as scheduled in the reporting month except the monitoring at DMS-3 on 14th September 2022 was rescheduled to 15th September 2022 due to power failure. No Action/Limit Level exceedance was recorded.

Construction Noise

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

Water Quality

13.5 Water quality monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

Ecological Monitoring

LMC Loop

Avifauna (Flight Line Survey)

13.6 Avifauna monitoring was conducted as scheduled in the reporting month. Flight lines recorded were in general concentrated mainly on LMC Meander and adjacent areas including EA Zone and along Shenzhen River. It demonstrates that the large waterbirds prefer using the flight line corridor above the LMC Meander as well as the unaffected Shenzhen River instead of the centre of LMC Loop.

Mammals

13.7 According to Clause 11.4.1.2 of the EM&A Manual, the connectivity between the existing reed marsh and the EA Zone has been fenced off due to other project's land occupier.

13.8 In addition, the 12-month establishment period of EA zone has been completed. The mammals monitoring in the Loop was therefore temporarily suspended in the reporting month and will be resumed subject to the site condition.

Western Connection Road

Avifauna (Flight Line Survey)

13.9 Avifauna monitoring was conducted as scheduled in the reporting month. Flight lines recorded were in general concentrated mainly on LMC Meander and adjacent areas including Ecological Area Zone (EA Zone) and along Shenzhen River. It demonstrates that the large waterbirds prefer using the flight line corridor above the LMC Meander as well as the unaffected Shenzhen River instead of the centre of LMC Loop.

Avifauna (Pond 12)

13.10 Avifauna survey at Pond 12 was conducted as scheduled in the reporting month. Weekly count of birds using the Pond was recorded. No significant impact of construction activities on bird use of the pond was observed.

Herpetofauna

13.11 Herpetofauna survey was conducted as scheduled in the reporting month. No significant impact of construction activities on the numbers of this species was observed.

Aquatic fauna

13.12 Aquatic fauna survey was conducted as scheduled in the reporting month. No significant impact of construction activities on the stream was observed.

Land Contamination

13.13 Decontamination for five arsenic-contaminated zones (LD01 - LD05) identified in LMC Loop was completed and the final Remediation Report was submitted and approved by EPD in accordance with Condition 2.16 of the EP-477/2013/A under Contract No. YL/2017/03.

13.14 No work related to land contamination was conducted in the reporting month.

Environmental Site Inspection

13.15 Environmental site inspections were conducted on 5th, 9th, 13th, 14th, 19th, 21st, 26th and 28th September 2022 by ET in the reporting month.

Environmental Complaints, Summons and Prosecutions

13.16 No environmental complaint, notification of summons or successful prosecution was received in the reporting month.

13.17 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

13.18 According to the environmental audit performed in the reporting month, the following recommendations were made:

Air Quality Impact

- To enhance the dust suppression measures such as water spraying on all haul roads, exposed work site areas and dust generation works;
- To maintain the impervious material to cover the stockpile of dusty materials;
- To design, establish and properly use the wheel washing facilities at the site exits; and
- To inspect NRMM labels which should be displayed for all regulated machines.

Noise Impact

- To inspect the noise sources inside the site;
- To space out noisy equipment and position the equipment as far away as possible from sensitive receivers;
- To provide temporary noise barriers or other appropriate sound reduction measures for operations of noisy equipment near the noise sensitive receivers, if necessary.

Water Impact

- To prevent any surface runoff discharge into the old Shenzhen River meander or stream;
- To review and implement temporary drainage system;
- To identify any wastewater discharges from site;
- To remove the sand, floating rubbish or dusty material away from the EA zone, old Shenzhen River meander or stream;
- To divert all the water generated from construction site to de-silting facilities with enough handling capacity before discharge;
- To review the capacity of de-silting facilities for discharge;
- To ensure the drainage facilities are probably maintained and not be clogged with sediment to avoid overflow;
- To cover the exposed slope surfaces by tarpaulin or other means;
- To designate the area for wheel washing and set up the associated drainage for water from a wheel wash;
- To pave the exit points; and
- To implement the effective water quality mitigation measures according to the site drainage plan.

Ecology Impact

- To maintain the 3m high olive green fence around the construction site;
- To provide and maintain visual barrier along Ha Wan Tsuen Road;
- To ensure the powered mechanical equipment for construction works only during the period 9am to 5pm at and near the old Shenzhen River meander and other identified important ecologically sensitive areas, if any; and
- To prevent any surface runoff discharge into the stream.

Waste/Chemical Management

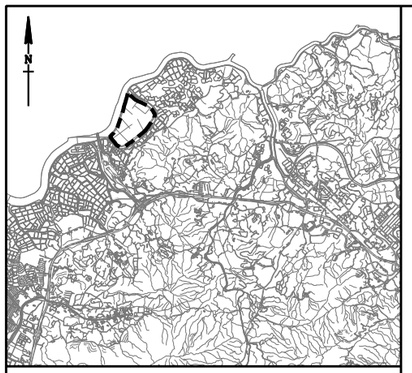
- To check for any accumulation of waste materials or rubbish on site;
- To carry out inspection of dump trucks at site exit to ensure inert and non-inert C&D

materials are properly segregated before delivering off site;
- To avoid any discharge or accidental spillage of chemical waste or oil directly from the site;
- To maintain the drip tray well to prevent oil and chemical leakage; and
- To avoid improper handling, storage and dispose of oil drums or chemical containers on site.

Landscape and Visual

- To erect and maintain the protection fencing and tree protection zone around the preserved trees; and
- To regularly clear the construction materials within the tree protection zone.

FIGURE(S)



圖例 LEGEND

- 擬議土地除污及相關工程 Proposed Land Decontamination and Associated Works
- 擬議土地處理工程 Proposed Ground Treatment Works
- 擬議生態區 Proposed Ecological Area
- 擬議臨時行車橋 Proposed Temporary Vehicular Bridge
- 擬議小型道路改善工程 Proposed Minor Road Improvement Works
- 擬議臨時隔音屏障及各種道路工程 Proposed Temporary Noise Barriers and Miscellaneous Road Works

工務計劃項目第748CL號—落馬洲河套地區發展：土地除污及前期工程

PWP ITEM No. 748CL-DEVELOPMENT OF LOK MA CHAU LOOP : LAND DECONTAMINATION AND ADVANCE ENGINEERING WORKS

FIGURE 1 a

LAYOUT PLAN

R:\Sketch-WDO\W1\W1-008\W1-008.dgn

1/2/2018

A3 420MM X 297MM

ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

圖例:

- 施工區範圍 SITE BOUNDARY
- 擬議道路，單車徑，行人路和相關基建工程 ROAD, CYCLE TRACK, FOOTPATH WORKS
- 擬議公共運輸交匯處 TRANSPORT INTERCHANGE
- 擬議工地平整及基建配套設施 SITE FORMATION AND INFRASTRUCTURE WORKS
- 擬議深圳河的底泥處理 RIVER DEODORISATION WORKS
- 擬議美化市容地帶，休憩用地，場外生態補償和相關綠化工程 AMENITY, LEISURE AND ECOLOGICAL PROVISIONS
- 擬議污水處理廠 SEWAGE TREATMENT WORKS
- 食水配水庫和供水系統 FRESHWATER SERVICE RESERVOIR AND WATERMAINS
- 擬議斜坡 SLOPEWORKS

N

Legend

- Approximated Extent of Contract 1
- Approximated Extent of Contract 2
- Approximated Extent of Contract 3
- Approximated Extent of Contract 4
- Approximated Extent of Contract 5
- Approximated Extent of Contract 6

落馬洲河套地區
LOK MA CHAU LOOP

港鐵落馬洲站
MTR LOK MA CHAU STATION

深圳河
SHENZHEN RIVER

擬議落馬洲河套地區食水配水庫
(食水配水庫的工地平整及供水系統水管敷設由其他工程項目建造)
LMCL MWP1 FRESHWATER SERVICE RESERVOIR (SITE FORMATION AND WATERMAINS BY OTHERS)

現有食水管
EXISTING WATERMAINS

粉嶺公路
FANLING HIGHWAY

HORN HILL (NGAU KOK SHAN)
MA TSO LUNG
PING HANG
TAI LAU HAU
LOK MA CHAU
FUNG KONG SHAN
CREST HILL (TAI SHEK MO)
SAM PO SHUE
SAN TIN
HADDEN HILL (KI LUN SHAN)
KWU TUNG RESERVOIR
EAST RAIL LINE
CASTLE PEAK ROAD

AECOM

PROJECT
項目
DEVELOPMENT OF LOK MA CHAU LOOP MAIN WORKS PACKAGE 1 DESIGN AND CONSTRUCTION

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

CONSULTANT
工程顧問公司
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

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

STATUS
狀況

SCALE 比例: A1 1 : 8000
DIMENSION UNIT 尺寸單位: METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60588085
CONTRACT NO. 合約編號: CE 5/2018(CE)

SHEET TITLE
圖紙名稱
落馬洲河套地區發展 - 第一期主體工程 - 工程平面圖（圖一）
PROJECT LAYOUT (Figure 1b)

SHEET NUMBER
圖紙編號
60588085/ SK0099

Plot File by: Tsuiwy
PATH: P:\PROJECTS\60588085\DRAWING\GISKETCH\SK0099.dgn
5/5/2020

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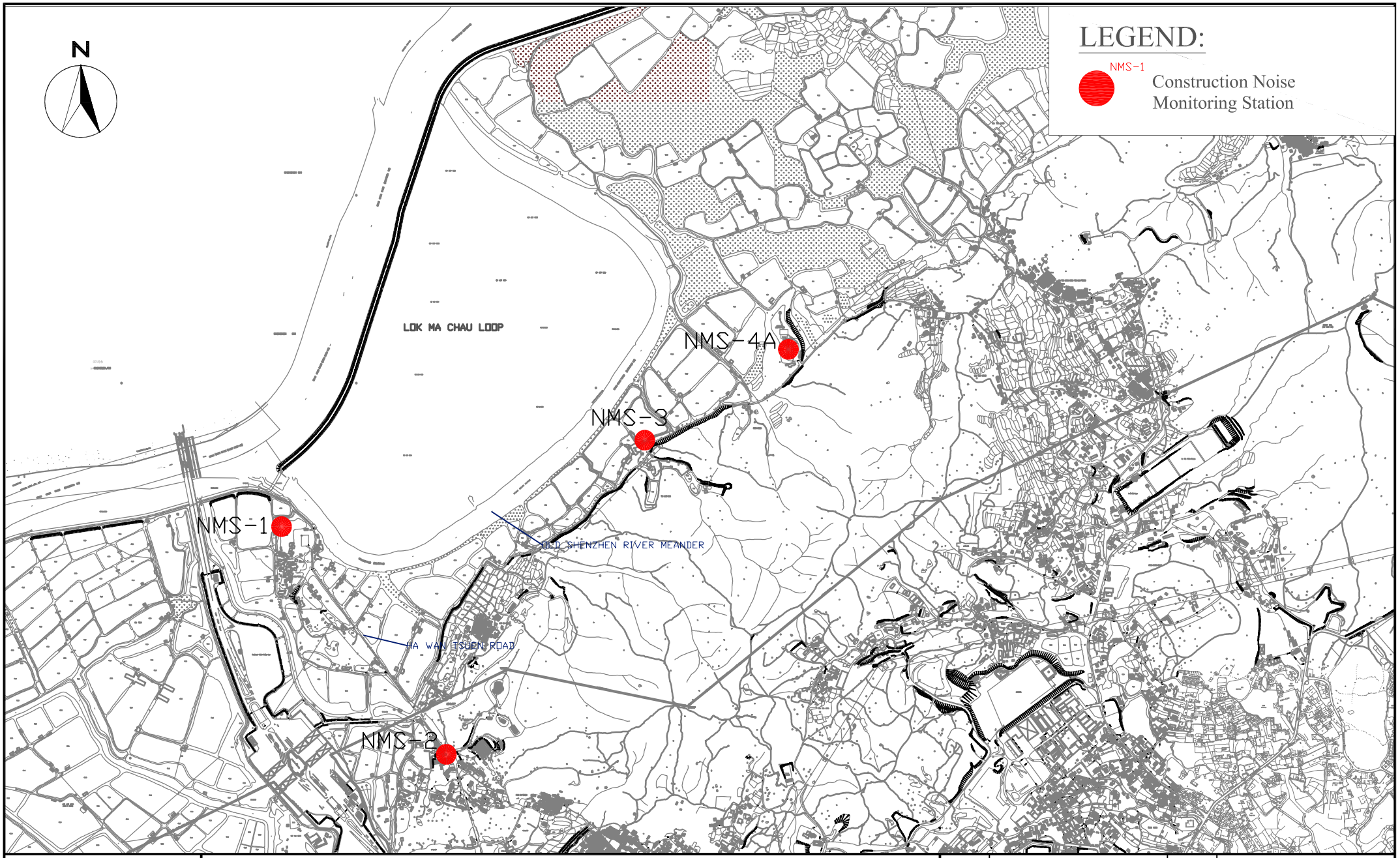
Service Contract No. WD/04/2020
Development of Lok Man Chau Loop: Main Work Package 1 - Environmental Team
Location of Air Quality Monitoring Stations

SCALE	1:400 A4	DATE	May 2021
CHECK	PC	DRAWN	IT
JOB No.	WMA21009	FIGURE NO. Fig 2	REV –

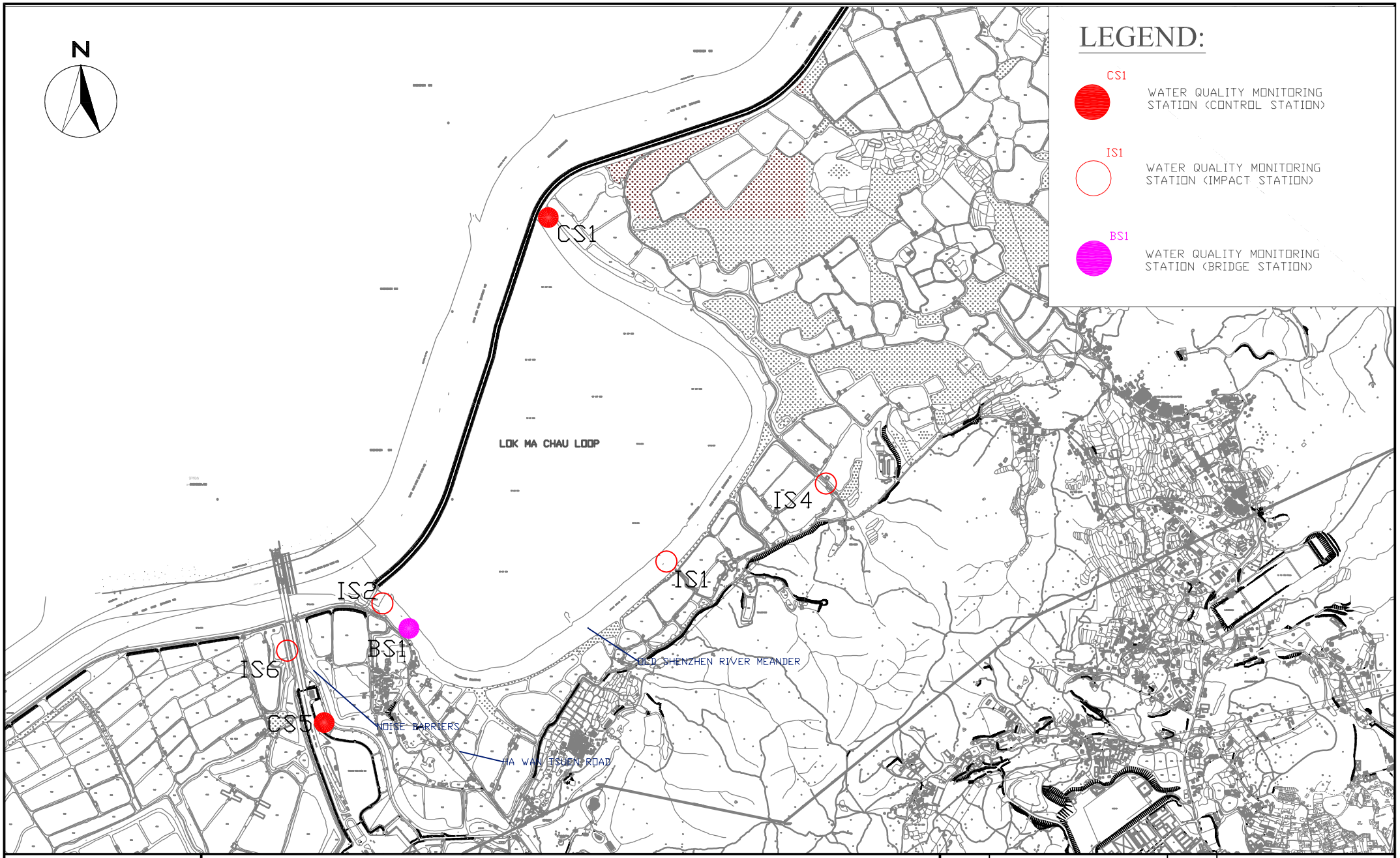


WELLAB 匯力
consulting . testing . research

Service Contract No. WD/04/2020
Development of Lok Man Chau Loop: Main Work Package 1 - Environmental Team

Location of Noise Monitoring Stations

SCALE	1:400 A4	DATE	May 2021
CHECK	PC	DRAWN	IT
JOB No.	WMA 21009	FIGURE NO.	Fig 3
		REV	-



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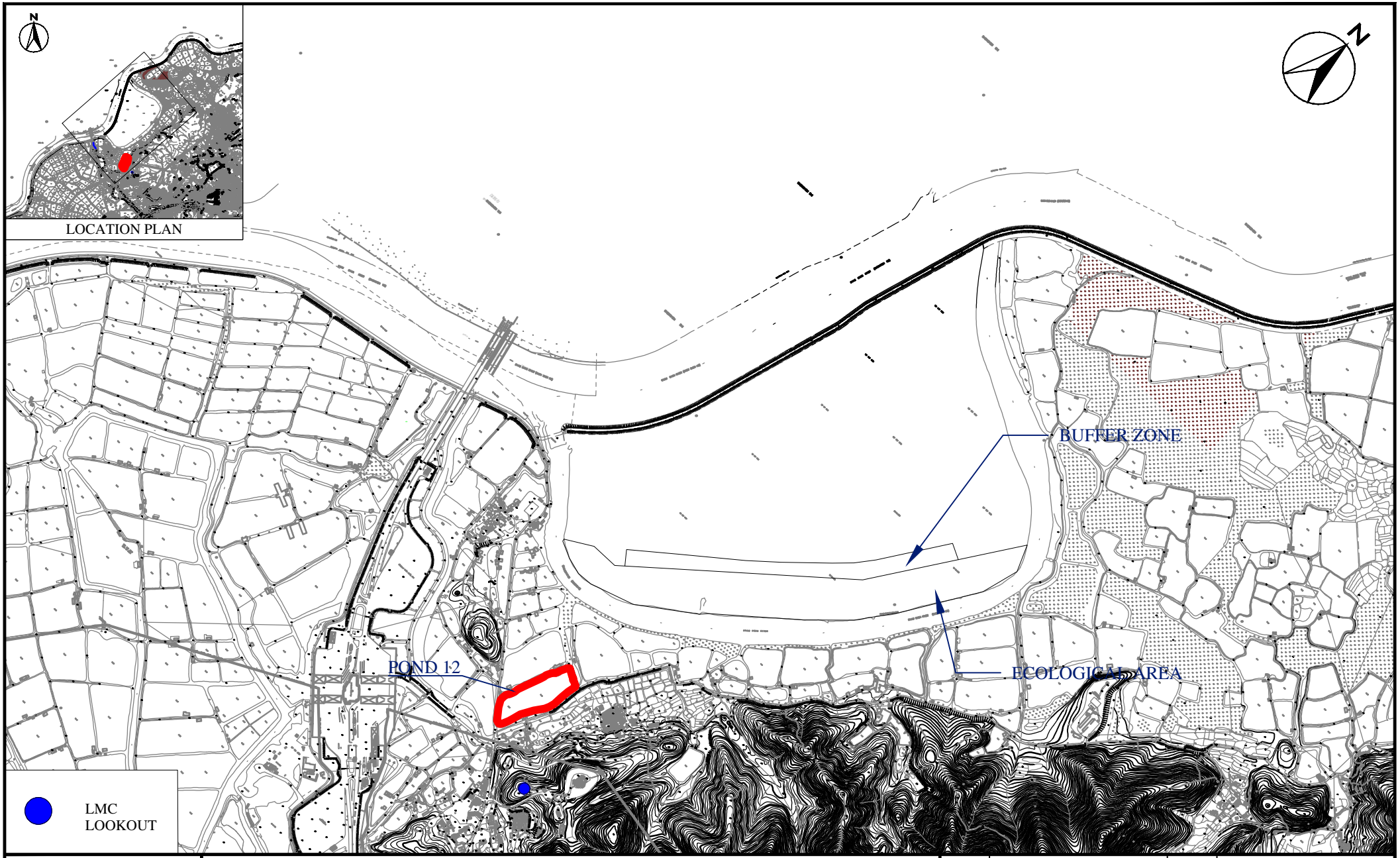
Service Contract No. WD/04/2020
Development of Lok Man Chau Loop: Main Work Package 1 - Environmental Team

Location of Water Quality Monitoring Stations

SCALE	1:400 A4	DATE	May 2021
CHECK	PC	DRAWN	IT
JOB No.	WMA 21009	FIGURE NO.	Fig 4
		REV	-



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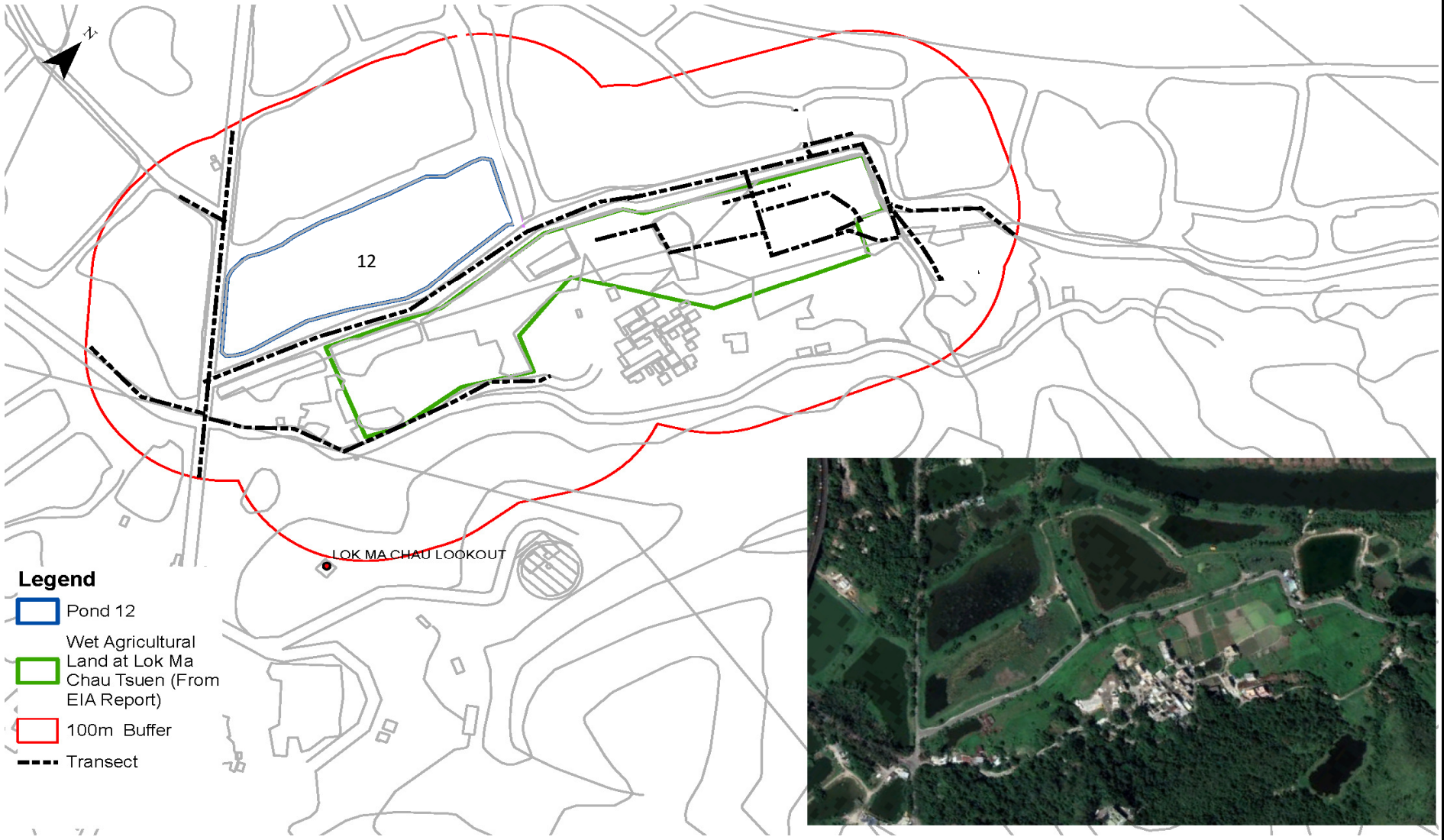
Service Contract No. WD/04/2020
Development of Lok Ma Chau Loop: Main Works Package 1 - Environmental Team
Locations of Pond 12 and Lok Ma Chau Lookout

SCALE	1:14000 @A4	DATE	MAR 2022
CHECK	IT	DRAWN	ML
JOB No.	WMA 21009	FIGURE NO.	Fig 5a
		REV	-



Service Contract No. WD/04/2020
Development of Lok Ma Chau Loop Main Work Package 1 - Environmental Team

Locations of Transect for Monitoring of Chinese Bull Frog

Scale	Project No.
N.T.S	WMA21009
Date	Figure
Mar-22	5b

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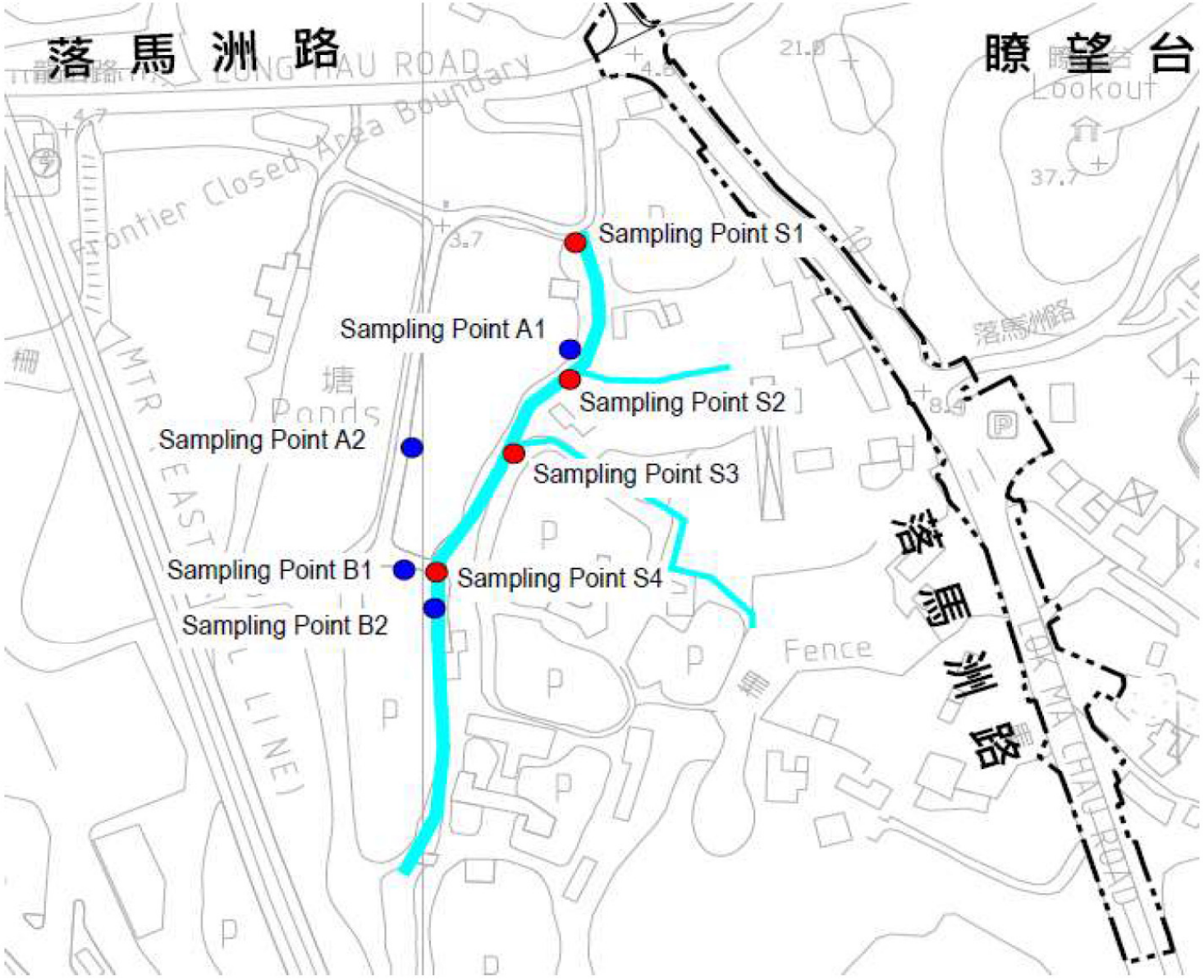
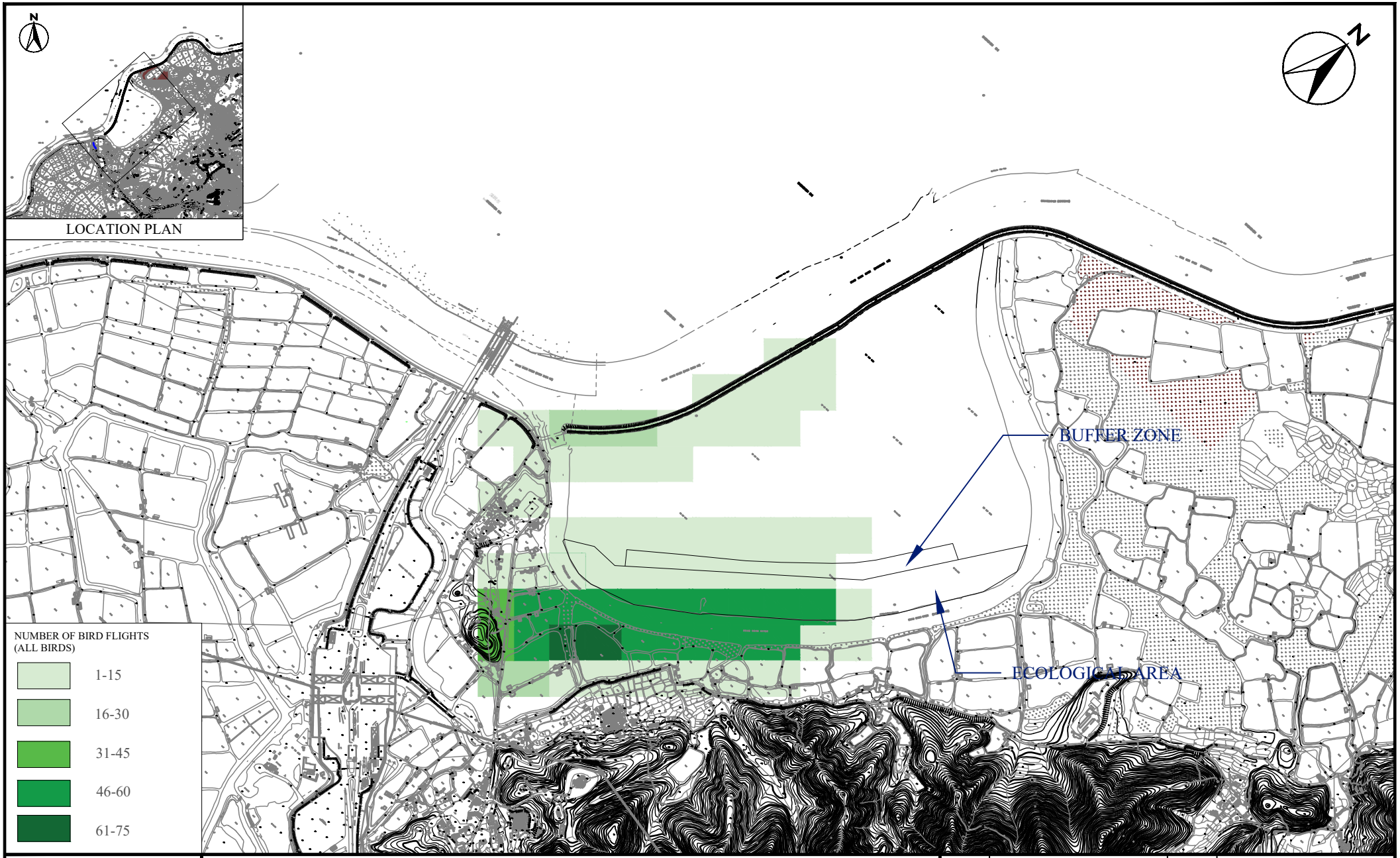


Service Contract No. WD/04/2020 Development of Lok Ma Chau Loop Main Work Package 1 - Environmental Team Locations of Rose Bitterling Sampling Points	Scale N.T.S	Project No. WMA21009	WELLAB 匯力 consulting . testing . research
	Date Mar-22	Figure 5c	



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Service Contract No. WD/04/2020
Development of Lok Ma Chau Loop: Main Works Package 1 - Environmental Team

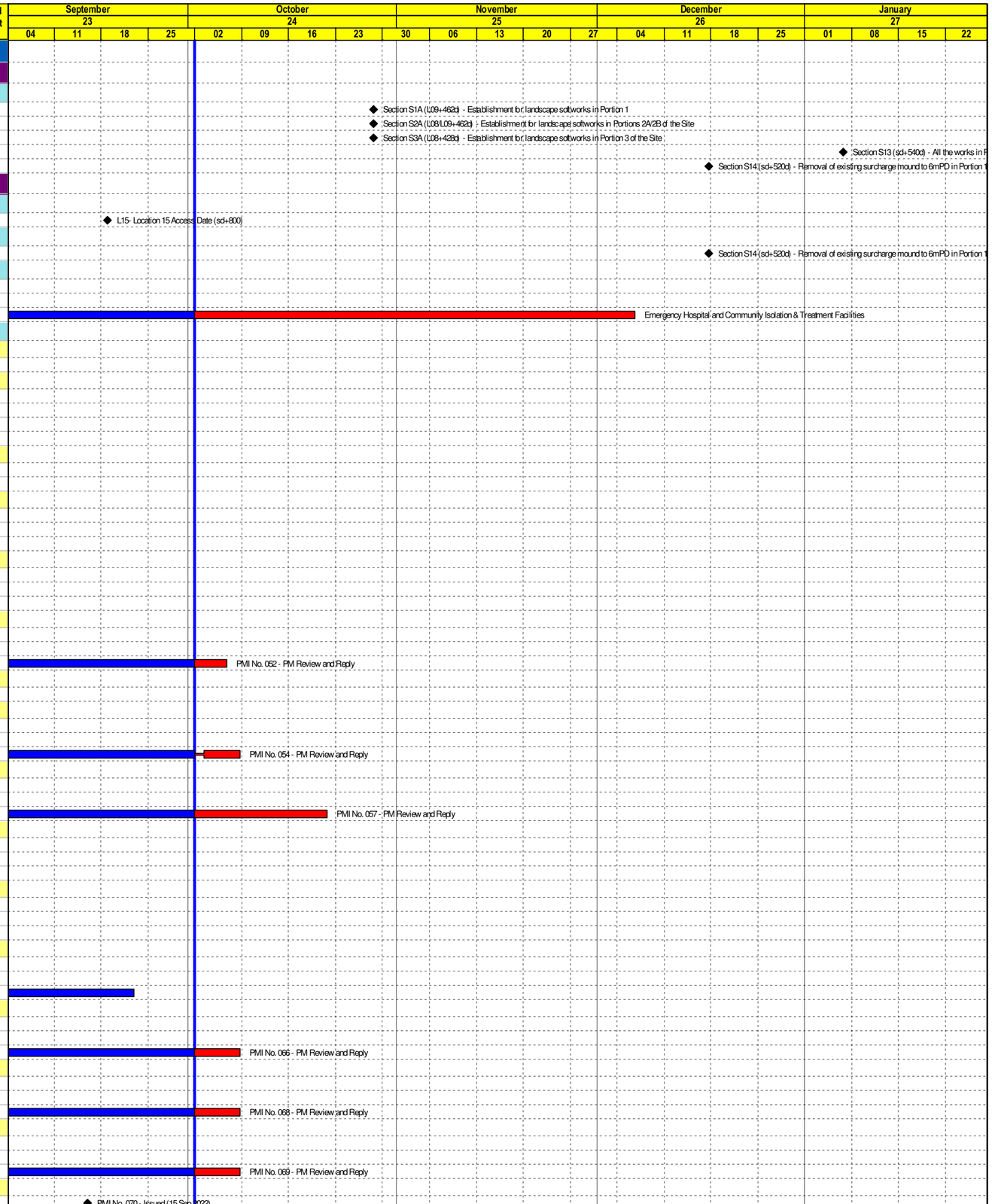
Flight Lines of All Bird Species

SCALE	1:14000 @A4	DATE	September 2022
CHECK	IT	DRAWN	ML
JOB No.	WMA 21009	FIGURE NO.	Fig 6
		REV	-

APPENDIX A
CONSTRUCTION PROGRAMME

Contract No. YL/2020/01 - Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 1 Site Formation and Infrastructure Works inside Lok Ma Chau Loop and Western Connection Road Phase 1

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float
Contract No. YL/2020/01 - Detailed Programme (Sep 2022)		285	31-Aug-21 A	18-Oct-23	13-Oct-21	12-Nov-26	436
Contract Data Part 1		70	28-Oct-22	06-Jan-23	28-Oct-22	06-Jan-23	0
Contract Section Completions		70	28-Oct-22	06-Jan-23	28-Oct-22	06-Jan-23	0
S01A	Section S1A (L09+462d) - Establishment for landscape softworks in Portion 1	0		28-Oct-22*		28-Oct-22	0
S02A	Section S2A (L08/L09+462d) - Establishment for landscape softworks in Portions 2A/2B of the Site	0		28-Oct-22*		28-Oct-22	0
S03A	Section S3A (L08+428d) - Establishment for landscape softworks in Portion 3 of the Site	0		28-Oct-22*		28-Oct-22	0
S13	Section S13 (sd+540d) - All the works in Portion 21 of the Site (excluding TAR 1)	0		06-Jan-23*		06-Jan-23	0
S14	Section S14 (sd+520d) - Removal of existing surcharge mound to 6mPD in Portion 19 of the Site	0		17-Dec-22*		17-Dec-22	0
Planned Completion Dates		259	22-Feb-22 A	17-Dec-22	13-Oct-21	12-Nov-26	555
Planned Access Dates to Part of the Site		0	19-Sep-22 A	19-Sep-22 A	12-Nov-26	12-Nov-26	
AL15	L15- Location 15 Access Date (sd+800)	0	19-Sep-22 A		12-Nov-26		
Planned Section Completions		0	17-Dec-22	17-Dec-22	17-Dec-22	17-Dec-22	0
PS14	Section S14 (sd+520d) - Removal of existing surcharge mound to 6mPD in Portion 19 of the Site	0		17-Dec-22*		17-Dec-22	0
Compensation Events (raised by Contractor)		191	22-Feb-22 A	06-Dec-22	13-Oct-21	12-Nov-26	1436
CE-2202I	Loop Management System Part 7 - Implementation (Approx. 0.2 hectare)	0	19-Apr-22 A		12-Nov-26		
CE-2202J	Loop Management System Part 8 - Implementation (Approx. 0.1 hectare)	0	23-Apr-22 A		12-Nov-26		
CE-2213	Emergency Hospital and Community Isolation & Treatment Facilities	191	22-Feb-22 A	06-Dec-22	13-Oct-21	17-Dec-21	-354
Project Manager's Instruction (PMI)		130	29-Apr-22 A	22-Oct-22	28-Oct-21	12-Nov-26	576
PMI No. 045 - Design Review for Meander Bridge		0	30-Apr-22 A	30-Apr-22 A	12-Oct-22	12-Oct-22	
PMI045-100	PMI No. 045 - Issued (28 Apr 2022)	0		30-Apr-22 A		12-Oct-22	
PMI No. 046 - Construction of Fence for Wetland Compensation Area (Quotation)		113	29-Apr-22 A	02-Aug-22 A	05-Jan-22	12-Nov-26	
PMI046-100	PMI No. 046 - Issued (28 Apr 2022)	0		29-Apr-22 A		12-Nov-26	
PMI046-110	PMI No. 046 - Quotation Preparation and Submission	100	29-Apr-22 A	19-May-22 A	05-Jan-22	05-Jan-22	
PMI046-120	PMI No. 046 - PM Review and Reply	14	20-May-22 A	02-Aug-22 A	05-Jan-22	05-Jan-22	
PMI046-130	PMI No. 046 - Fence no longer required	0		02-Aug-22 A		05-Jan-22	
PMI No. 048 - Detailed Design for Meander Bridge		0	19-May-22 A	16-Aug-22 A	12-Oct-22	12-Nov-26	
PMI048-100	PMI No. 048 - Issued (16 May 2022)	0		19-May-22 A		12-Oct-22	
PMI048-CE053	CE No. 048 - Issued (15 Aug 2022)	0		16-Aug-22 A		12-Nov-26	
PMI No. 050 - Filling Up Ponds and Proceed the Associated Temporary Works for WCR (Quotation)		104	20-May-22 A	08-Jul-22 A	24-Jun-22	24-Jun-22	
PMI050-100	PMI No. 050 - Issued (18 May 2022)	0		20-May-22 A		24-Jun-22	
PMI050-110	PMI No. 050 - Quotation Preparation and Submission	21	21-May-22 A	10-Jun-22 A	24-Jun-22	24-Jun-22	
PMI050-120	PMI No. 050 - PM Review and Reply	57	11-Jun-22 A	08-Jul-22 A	24-Jun-22	24-Jun-22	
PMI No. 051 - Construction of Box Culvert A1 (Portion 7, L1) and Box Culvert C (Whole) (Quotation)		92	20-May-22 A	05-Jul-22 A	21-Nov-22	05-Dec-22	
PMI051-100	PMI No. 051 - Issued (18 May 2022)	0		20-May-22 A		21-Nov-22	
PMI051-110	PMI No. 051 - Quotation Preparation and Submission	21	21-May-22 A	21-Jun-22 A	05-Dec-22	05-Dec-22	
PMI051-120	PMI No. 051 - PM Review and Reply	14	22-Jun-22 A	05-Jul-22 A	05-Dec-22	05-Dec-22	
PMI No. 052 - Construction of Road L1 (Portion 18C) and Associated Civil Works (Quotation)		104	20-May-22 A	06-Oct-22	21-Jul-22	22-Aug-22	-15
PMI052-100	PMI No. 052 - Issued (18 May 2022)	0		20-May-22 A		21-Jul-22	
PMI052-110	PMI No. 052 - Quotation Preparation and Submission	21	21-May-22 A	19-Jul-22 A	21-Jul-22	21-Jul-22	
PMI052-120	PMI No. 052 - PM Review and Reply	20	20-Jul-22 A	06-Oct-22	18-Aug-22	22-Aug-22	-45
PMI No. 053 - Construction of Fence for Offsite Wetland Compensation Area 2		0	13-Jul-22 A	13-Jul-22 A	05-Jan-22	05-Jan-22	
PMI053-100	PMI No. 053 - Issued (11 Jul 2022)	0		13-Jul-22 A		05-Jan-22	
PMI No. 054 - Construction of Road L1 and Associated HSITP Phase 1 Works (Quotation)		114	07-Jun-22 A	08-Oct-22	27-May-22	01-Jun-22	-43
PMI054-100	PMI No. 054 - Issued (2 Jun 2022)	0		07-Jun-22 A		27-May-22	
PMI054-110	PMI No. 054 - Quotation Preparation and Submission	60	08-Jun-22 A	06-Aug-22 A	27-May-22	27-May-22	
PMI054-120	PMI No. 054 - PM Review and Reply	30	08-Aug-22 A	08-Oct-22	27-May-22	01-Jun-22	-129
PMI No. 057 - Commence Civil Works in early March 2022 in connection with WCR (Quotation)		116	14-Jun-22 A	21-Oct-22	22-Mar-22	10-Apr-22	-65
PMI057-100	PMI No. 057 - Issued (13 Jun 2022)	0		14-Jun-22 A		22-Mar-22	
PMI057-110	PMI No. 057 - Quotation Preparation and Submission	48	15-Jun-22 A	01-Aug-22 A	22-Mar-22	22-Mar-22	
PMI057-120	PMI No. 057 - PM Review and Reply	43	02-Aug-22 A	21-Oct-22	22-Mar-22	10-Apr-22	-194
PMI No. 059 - Revised Structural and Aesthetic Detail for Pai Lau		96	23-Jun-22 A	12-Jul-22 A	23-Dec-22	23-Dec-22	
PMI059-100	PMI No. 059 - Issued (22 Jun 2022)	0		23-Jun-22 A		23-Dec-22	
PMI059-110	PMI No. 059 - Quotation Preparation and Submission	21	24-Jun-22 A	28-Jun-22 A	23-Dec-22	23-Dec-22	
PMI059-120	PMI No. 059 - PM Review and Reply	14	29-Jun-22 A	12-Jul-22 A	23-Dec-22	23-Dec-22	
PMI No. 060 - Filling Up Fish Ponds and Proceed with Associated Temporary Works for WCR		89	21-May-22 A	21-Jul-22 A	24-Jun-22	24-Jun-22	
PMI060-100	PMI No. 060 - Issued (21 Jul 2022)	0		21-Jul-22 A		24-Jun-22	
PMI060-110	PMI No. 060 - Quotation Preparation and Submission (same as PMI No. 050)	21	21-May-22 A	10-Jun-22 A	24-Jun-22	24-Jun-22	
PMI060-120	PMI No. 060 - PM Review and Reply (same as PMI No. 050)	14	11-Jun-22 A	08-Jul-22 A	24-Jun-22	24-Jun-22	
PMI No. 065 - Design, Supply and Installation of Support for Interim DN400 Watermain		118	20-Jul-22 A	23-Sep-22 A	02-Jun-22	12-Nov-26	
PMI065-100	PMI No. 065 - Issued (19 Jul 2022)	0		20-Jul-22 A		12-Nov-26	
PMI065-110	PMI No. 065 - Quotation Preparation and Submission	21	21-Jul-22 A	10-Aug-22 A	02-Jun-22	02-Jun-22	
PMI065-120	PMI No. 065 - PM Review and Reply (Withdrawn)	41	11-Aug-22 A	23-Sep-22 A	02-Jun-22	02-Jun-22	
PMI No. 066 - Carry-out Piling Works for the Construction of Box Culvert C (Whole) (Quotation)		114	19-Jul-22 A	08-Oct-22	28-Oct-21	12-Nov-26	581
PMI066-100	PMI No. 066 - Issued (18 Jul 2022)	0		19-Jul-22 A		12-Nov-26	
PMI066-110	PMI No. 066 - Quotation Preparation and Submission	21	20-Jul-22 A	08-Aug-22 A	28-Oct-21	28-Oct-21	
PMI066-120	PMI No. 066 - PM Review and Reply	28	09-Aug-22 A	08-Oct-22	28-Oct-21	03-Nov-21	-339
PMI No. 068 - Carry-out Piling Works for Construction of Box Culvert A1 (From Ch0-120) (Quotation)		106	23-Jul-22 A	08-Oct-22	11-Nov-21	12-Nov-26	581
PMI068-100	PMI No. 068 - Issued (22 Jul 2022)	0		25-Jul-22 A		12-Nov-26	
PMI068-110	PMI No. 068 - Quotation Preparation and Submission	21	23-Jul-22 A	26-Jul-22 A	11-Nov-21	11-Nov-21	
PMI068-120	PMI No. 068 - PM Review and Reply	14	27-Jul-22 A	08-Oct-22	11-Nov-21	17-Nov-21	-325
PMI No. 069 - Construction of Box Culvert C (Whole) (Quotation)		108	28-Jul-22 A	08-Oct-22	30-Oct-21	12-Nov-26	581
PMI069-100	PMI No. 069 - Issued (27 Jul 2022)	0		28-Jul-22 A		12-Nov-26	
PMI069-110	PMI No. 069 - Quotation Preparation and Submission	21	29-Jul-22 A	01-Aug-22 A	30-Oct-21	30-Oct-21	
PMI069-120	PMI No. 069 - PM Review and Reply	14	02-Aug-22 A	08-Oct-22	30-Oct-21	05-Nov-21	-337
PMI No. 070 - Piling Works for Box Culvert A1 (Ch 0-75) and Box Culvert C to Complete by 28 Jan 202		0	16-Sep-22 A	16-Sep-22 A	29-Oct-21	29-Oct-21	
PMI070-100	PMI No. 070 - Issued (15 Sep 2022)	0		16-Sep-22 A		29-Oct-21	



CRCC - Kwan Lee - Paul Y. JV

Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

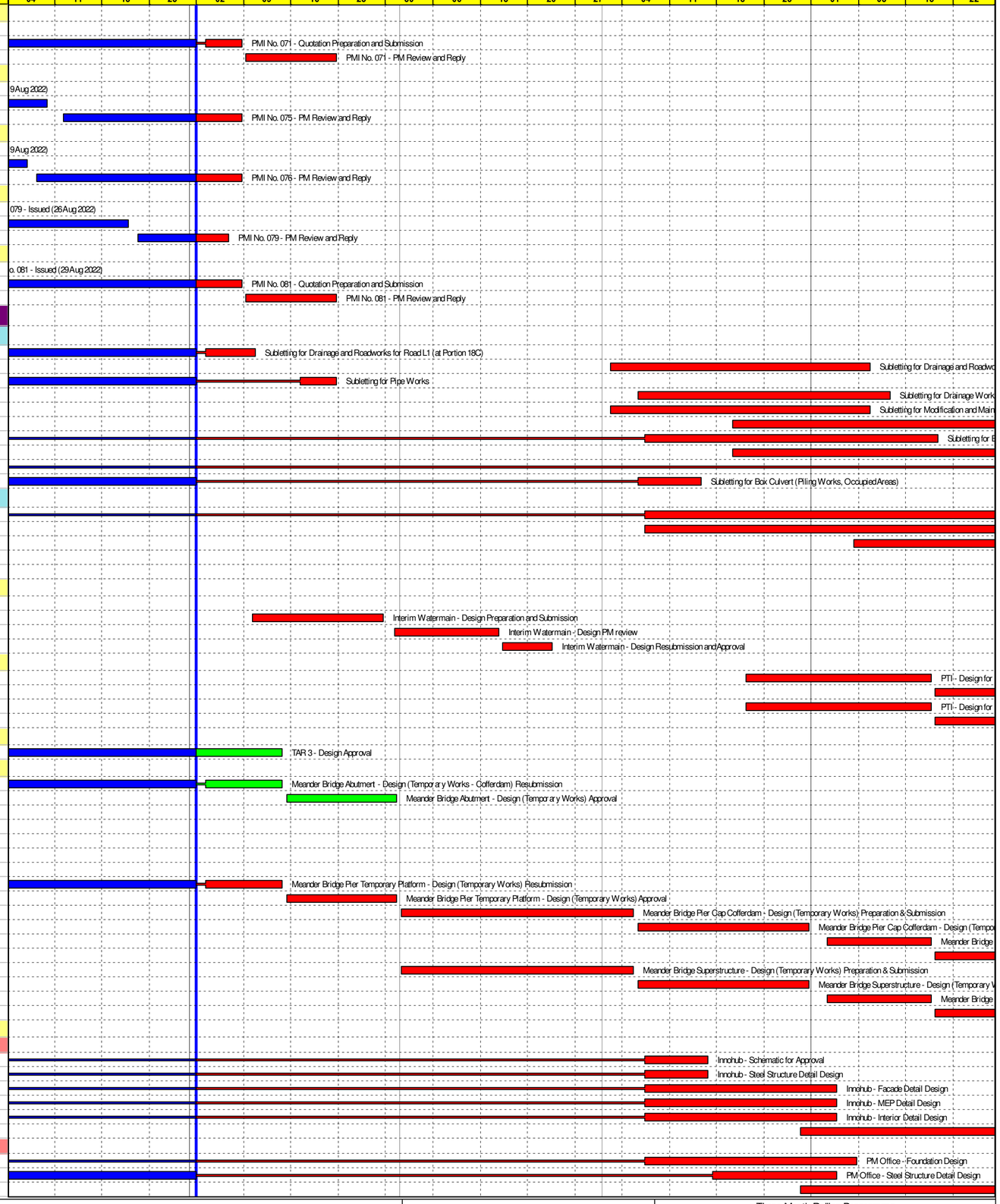
Contract YL/2020/01 - Lok Ma Chau Loop Main Works Package 1

Three Month Rolling Programme

Project ID : YL12-2209
Layout : YL-02 3MRP
Date : 05-Oct-22/ Page 1 of 9

Three Month Rolling Programme			
Date	Revision	Checked	Approved
05-Oct-22	MPR No. 15		

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float
PMI No. 071 - Interim TWin DN300 Watermains in lieu of Interim DN400 Watermain		28	02-Aug-22 A	22-Oct-22	12-May-22	01-Jun-22	-48
PMI071-100	PMI No. 071 - Issued (01 Aug 2022)	0		02-Aug-22 A		12-May-22	
PMI071-110	PMI No. 071 - Quotation Preparation and Submission	40	03-Aug-22 A	08-Oct-22	13-May-22	18-May-22	-143
PMI071-120	PMI No. 071 - PM Review and Reply	14	09-Oct-22	22-Oct-22	19-May-22	01-Jun-22	-143
PMI No. 075 - Box Culvert C (Whole) by 31 July 2023 (Quotation)		11	22-Aug-22 A	08-Oct-22	13-Nov-21	19-Nov-21	-111
PMI075-100	PMI No. 075 - Issued (19 Aug 2022)	0		22-Aug-22 A		13-Nov-21	
PMI075-110	PMI No. 075 - Quotation Preparation and Submission	21	23-Aug-22 A	10-Sep-22 A	13-Nov-21	13-Nov-21	
PMI075-120	PMI No. 075 - PM Review and Reply	14	12-Sep-22 A	08-Oct-22	13-Nov-21	19-Nov-21	-323
PMI No. 076 - Box Culvert A (CH 0 to 75) (Quotation)		10	22-Aug-22 A	08-Oct-22	23-Nov-21	29-Nov-21	-107
PMI076-100	PMI No. 076 - Issued (19 Aug 2022)	0		22-Aug-22 A		23-Nov-21	
PMI076-110	PMI No. 076 - Quotation Preparation and Submission	21	23-Aug-22 A	07-Sep-22 A	23-Nov-21	23-Nov-21	
PMI076-120	PMI No. 076 - PM Review and Reply	14	08-Sep-22 A	08-Oct-22	23-Nov-21	29-Nov-21	-313
PMI No. 079 - Construction of Meander Bridge (Quotation)		12	29-Aug-22 A	06-Oct-22	25-Jun-22	29-Jun-22	-33
PMI079-100	PMI No. 079 - Issued (26 Aug 2022)	0		29-Aug-22 A		25-Jun-22	
PMI079-110	PMI No. 079 - Quotation Preparation and Submission	21	30-Aug-22 A	22-Sep-22 A	25-Jun-22	25-Jun-22	
PMI079-120	PMI No. 079 - PM Review and Reply	14	23-Sep-22 A	06-Oct-22	25-Jun-22	29-Jun-22	-99
PMI No. 081- Realign Part of Green Fence Alongside Ecological Area		18	30-Aug-22 A	22-Oct-22	12-Nov-21	08-Dec-21	-109
PMI081-100	PMI No. 081 - Issued (29 Aug 2022)	0		30-Aug-22 A		12-Nov-21	
PMI081-110	PMI No. 081 - Quotation Preparation and Submission	21	31-Aug-22 A	08-Oct-22	12-Nov-21	18-Nov-21	-324
PMI081-120	PMI No. 081 - PM Review and Reply	14	09-Oct-22	22-Oct-22	25-Nov-21	08-Dec-21	-318
Preliminary and Preparations		219	31-Aug-21 A	03-Jun-23	29-Oct-21	12-Nov-26	490
Subletting		430	01-Sep-21 A	03-Jun-23	22-Feb-22	28-Sep-22	-198
PRE-310A	Subletting for Drainage and Roadworks for Road L1 (at Portion 18C)	30	21-Feb-22 A	10-Oct-22	16-Aug-22	22-Aug-22	-39
PRE-310B	Subletting for Drainage and Roadworks for Road D1 (Under Closed Loop Management)	30	02-Dec-22	09-Jan-23	02-Apr-22	13-May-22	-198
PRE-315	Subletting for Pipe Works	30	21-Feb-22 A	22-Oct-22	06-May-22	13-May-22	-134
PRE-325	Subletting for Drainage Work and Roadwork for WCR	30	06-Dec-22	12-Jan-23	26-Apr-22	01-Jun-22	-185
PRE-365	Subletting for Modification and Maintainance of Existing Boundary Patrol Road (Area Under Closed Loop Management)	30	02-Dec-22	09-Jan-23	02-Jun-22	09-Jul-22	-151
PRE-385	Subletting for Irrigation System (Road D1)	45	20-Dec-22	17-Feb-23	25-Apr-22	18-Jun-22	-198
PRE-395	Subletting for E&M Works at STW	173	01-Sep-21 A	19-Jan-23	22-Feb-22	02-Apr-22	-236
PRE-415A	Subletting for Civil Works for Utilities at Road D1 and Road L1	45	20-Dec-22	17-Feb-23	25-Apr-22	18-Jun-22	-198
PRE-432	Subletting for Box Culvert (R.C. Works, Occupied Areas)	28	20-Jan-22 A	03-Jun-23	28-Jun-22	28-Sep-22	-198
PRE-433	Subletting for Box Culvert (Piling Works, Occupied Areas)	28	27-Jan-22 A	15-Dec-22	25-Mar-22	04-Apr-22	-208
Design Submissions for the Works		219	31-Aug-21 A	04-May-23	29-Oct-21	12-Nov-26	501
PRE-435A	Prepare, Submit, Processing & Approval for Alternative Design for STW (On Hold)	255	31-Aug-21 A	04-May-23	28-Jun-22	14-Nov-22	-135
PRE-455	Prepare, Submit, Processing & Approval for Noise Barrier for Public Transportation Interchange (PTI) (On Hold)	90	07-Dec-22	29-Mar-23	06-Sep-22	22-Dec-22	-76
PRE-460	Prepare, Submit, Processing & Approval for MiC and its Foundation for ADB of STW (On Hold)	90	07-Jan-23	02-May-23	04-Jul-22	19-Oct-22	-155
PRE-465	Approved Status of E&M Submissions for STW Batch 1	0		29-Jan-23*		16-Apr-22	-288
PRE-495	Prepare, Submit, Processing & Approval for Design of Pai Lau	35	25-Apr-22 A	07-Jun-22 A	07-Dec-23	07-Dec-23	
Interim Watermains		327	07-Jun-22 A	23-Nov-22	02-Jun-22	23-Aug-22	-76
KD1-090	Issued PMI No. 054 - Construction of Section of Road L1 and Associated Works for HSITP Phase 1 Package	0		07-Jun-22 A		02-Jun-22	
KD1-100	Interim Watermain - Design Preparation and Submission	18	10-Oct-22	29-Oct-22	28-Jun-22	19-Jul-22	-85
KD1-110	Interim Watermain - Design PM review	14	31-Oct-22	15-Nov-22	30-Jul-22	15-Aug-22	-76
KD1-120	Interim Watermain - Design Resubmission and Approval	7	16-Nov-22	23-Nov-22	16-Aug-22	23-Aug-22	-76
Public Transport Interchange (PTI)		42	22-Dec-22	16-Feb-23	22-Sep-22	11-Nov-22	-76
S7-497	PTI - Design for Foundation Temporary Works Preparation & Submission	21	22-Dec-22	18-Jan-23	22-Sep-22	18-Oct-22	-76
S7-498	PTI - Design for Foundation Temporary Works PM Review	21	19-Jan-23	16-Feb-23	19-Oct-22	11-Nov-22	-76
S7-502	PTI - Design for Noise Barrier Preparation & Submission	21	22-Dec-22	18-Jan-23	22-Sep-22	18-Oct-22	-76
S7-503	PTI - Design for Noise Barrier PM Review	21	19-Jan-23	16-Feb-23	19-Oct-22	11-Nov-22	-76
TAR3		6	29-Mar-22 A	14-Oct-22	07-May-23	19-May-23	217
KD2-105A	TAR 3 - Design Approval	6	29-Mar-22 A	14-Oct-22	07-May-23	19-May-23	217
Meander Bridge		229	30-Apr-22 A	08-Feb-23	14-May-22	12-Nov-26	1112
KD7-109	Meander Bridge Abutment - Design (Temporary Works - Cofferdam) Resubmission	28	14-Jul-22 A	14-Oct-22	12-Oct-22	22-Oct-22	7
KD7-110	Meander Bridge Abutment - Design (Temporary Works) Approval	14	15-Oct-22	31-Oct-22	24-Oct-22	08-Nov-22	7
KD7-111	PMI No. 045 - Design Review for Meander Bridge (Received)	0		30-Apr-22 A		12-Nov-26	
KD7-113	Meander Bridge Abutment - Design (Feasibility Study) Preparation & Submission Including ICE	14	03-May-22 A	19-May-22 A	12-Nov-26	12-Nov-26	
KD7-114	Meander Bridge Abutment - Design (Feasibility Study) PM Review and Acceptance	23	13-May-22 A	29-Jul-22 A	12-Nov-26	12-Nov-26	
KD7-200	PMI No. 048 - Detailed Design for Meander Bridge (Received)	0		19-May-22 A		14-May-22	
KD7-608	Meander Bridge Pier Temporary Platform - Design (Temporary Works) PM Review	21	05-Jul-22 A	15-Jul-22 A	14-May-22	14-May-22	
KD7-609	Meander Bridge Pier Temporary Platform - Design (Temporary Works) Resubmission	14	16-Jul-22 A	14-Oct-22	14-May-22	25-May-22	-117
KD7-610	Meander Bridge Pier Temporary Platform - Design (Temporary Works) Approval	14	15-Oct-22	31-Oct-22	26-May-22	11-Jun-22	-117
KD7-611	Meander Bridge Pier Cap Cofferdam - Design (Temporary Works) Preparation & Submission	30	01-Nov-22	05-Dec-22	13-Jun-22	18-Jul-22	-117
KD7-612	Meander Bridge Pier Cap Cofferdam - Design (Temporary Works) PM Review	21	06-Dec-22	31-Dec-22	19-Jul-22	11-Aug-22	-117
KD7-613	Meander Bridge Pier Cap Cofferdam - Design (Temporary Works) Resubmission	14	03-Jan-23	18-Jan-23	12-Aug-22	27-Aug-22	-117
KD7-614	Meander Bridge Pier Cap Cofferdam - Design (Temporary Works) Approval	14	19-Jan-23	08-Feb-23	29-Aug-22	14-Sep-22	-117
KD7-617	Meander Bridge Superstructure - Design (Temporary Works) Preparation & Submission	30	01-Nov-22	05-Dec-22	01-Nov-22	05-Dec-22	0
KD7-618	Meander Bridge Superstructure - Design (Temporary Works) PM Review	21	06-Dec-22	31-Dec-22	06-Dec-22	31-Dec-22	0
KD7-619	Meander Bridge Superstructure - Design (Temporary Works) Resubmission	14	03-Jan-23	18-Jan-23	03-Jan-23	18-Jan-23	0
KD7-620	Meander Bridge Superstructure - Design (Temporary Works) Approval	14	19-Jan-23	08-Feb-23	19-Jan-23	08-Feb-23	0
Site Office		298	07-Feb-22 A	09-Feb-23	18-Dec-21	23-May-22	-213
Innohub / Reception & Atrium Module		288	18-Feb-22 A	09-Feb-23	22-Feb-22	23-Apr-22	-236
PRE-0895	Innohub - Schematic for Approval	12	18-Feb-22 A	16-Dec-22	22-Feb-22	03-Mar-22	-236
PRE-0900	Innohub - Steel Structure Detail Design	12	18-Feb-22 A	16-Dec-22	22-Feb-22	03-Mar-22	-236
PRE-0910	Innohub - Facade Detail Design	25	18-Feb-22 A	04-Jan-23	04-Mar-22	29-Mar-22	-227
PRE-0915	Innohub - MEP Detail Design	25	18-Feb-22 A	04-Jan-23	09-Mar-22	02-Apr-22	-223
PRE-1005	Innohub - Interior Detail Design	25	18-Feb-22 A	04-Jan-23	09-Mar-22	02-Apr-22	-223
PRE-1045	Innohub - Exterior Staircase Design and Procurement	31	30-Dec-22	09-Feb-23	15-Mar-22	23-Apr-22	-236
PM Site Office		298	07-Feb-22 A	09-Feb-23	18-Dec-21	23-May-22	-213
PRE-0919	PM Office - Foundation Design	25	11-Feb-22 A	07-Jan-23	18-Dec-21	19-Jan-22	-284
PRE-0920	PM Office - Steel Structure Detail Design	13	07-Feb-22 A	04-Jan-23	04-Mar-22	18-Mar-22	-236
PRE-1055	PM Office - Exterior Staircase Design and Procurement	31	30-Dec-22	09-Feb-23	12-Apr-22	23-May-22	-213



CRCC - Kwan Lee - Paul Y. JV

Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
◆◆ Milestone

Contract YL/2020/01 - Lok Ma Chau Loop Main Works Package 1

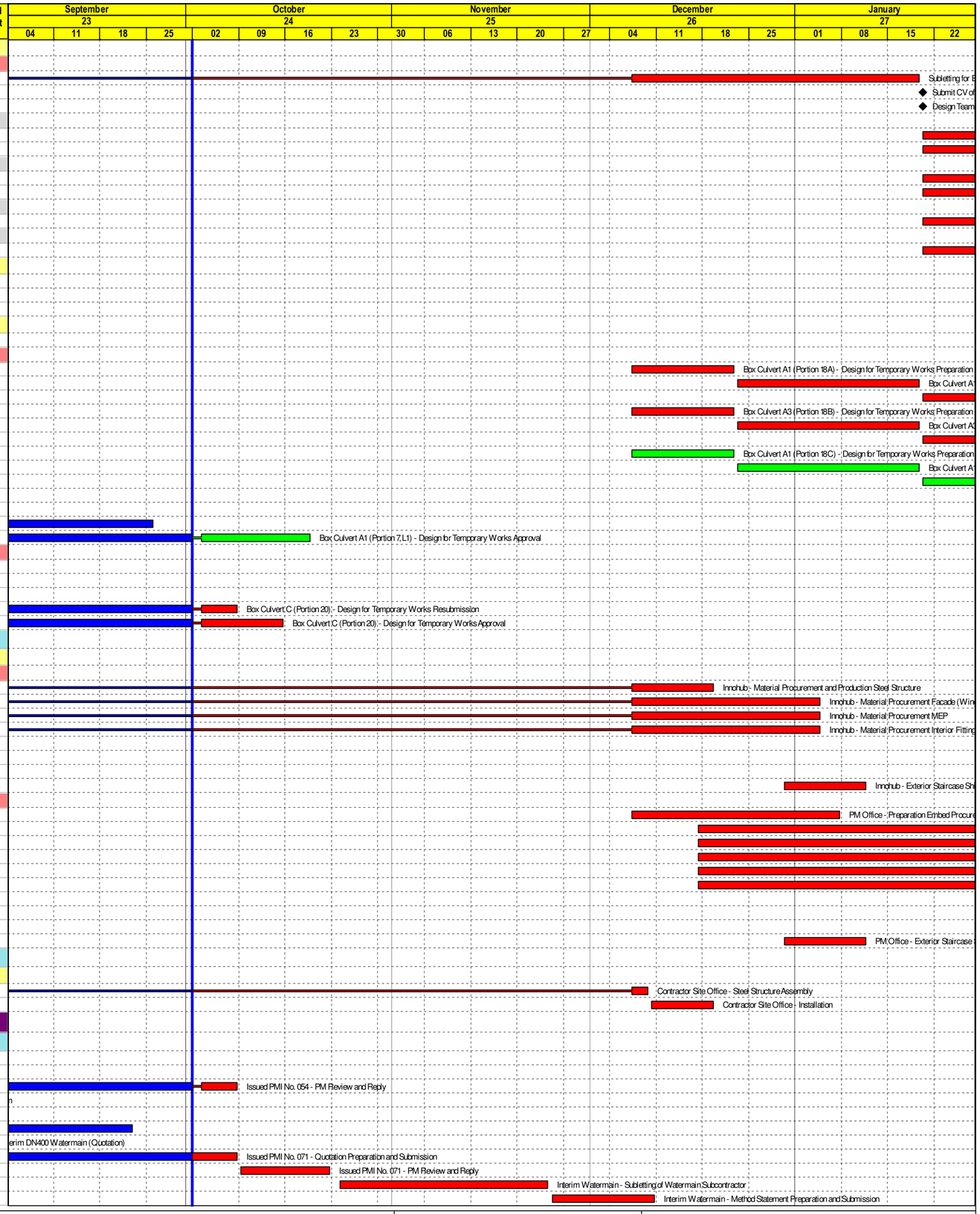
Three Month Rolling Programme

Project ID : YL12-2209
Layout : YL-02 3MRP
Date : 05-Oct-22/ Page 2 of 9

Three Month Rolling Programme

Date	Revision	Checked	Approved
05-Oct-22	MPR No. 15		

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float
Sewage Treatment Works		548	01-Sep-21 A	02-Mar-23	18-Feb-22	01-Jul-22	-244
STW - E&M		548	01-Sep-21 A	02-Mar-23	18-Feb-22	01-Jul-22	-244
PRE-EM005	Subletting for E&M Subcontractor at STW	122	01-Sep-21 A	19-Jan-23	18-Feb-22	02-Apr-22	-292
PRE-EM010	Submit CV of Treatment Specialist	0	20-Jan-23		07-Apr-22		-288
PRE-EM015	Design Team of E&M Subcontractor Move-in to LMCL Site Office	0	20-Jan-23*		29-Apr-22		-265
Design Submission Schedule		10	20-Jan-23	29-Jan-23	07-Apr-22	16-Apr-22	-288
PRE-EM020	Preparation & Submission of Design Submission Schedule	10	20-Jan-23	29-Jan-23	07-Apr-22	16-Apr-22	-288
PRE-EM030	Preparation & Submission of Drawing Submission Schedule	10	20-Jan-23	29-Jan-23	07-Apr-22	16-Apr-22	-288
Equipment & Material Submission Schedule		10	20-Jan-23	29-Jan-23	07-Apr-22	16-Apr-22	-288
PRE-EM040	Preparation & Submission of Equipment & Material Submission Schedule	10	20-Jan-23	29-Jan-23	07-Apr-22	16-Apr-22	-288
PRE-EM050	Preparation & Submission of Sample Submission Schedule	10	20-Jan-23	29-Jan-23	07-Apr-22	16-Apr-22	-288
Inlet Works (Primary Treatment System)		42	20-Jan-23	02-Mar-23	21-May-22	01-Jul-22	-244
PRE-EM070	Preparation & Submission of Inlet Works (Primary Treatment System)	42	20-Jan-23	02-Mar-23	21-May-22	01-Jul-22	-244
Primary Sedimentation System		42	20-Jan-23	02-Mar-23	07-Apr-22	18-May-22	-288
PRE-EM100	Preparation & Submission of Primary Sedimentation System	42	20-Jan-23	02-Mar-23	07-Apr-22	18-May-22	-288
Pai Lau		34	26-Apr-22 A	07-Jun-22 A	07-Dec-23	07-Dec-23	
PL-110	Pai Lau - Design Temporary Work for Foundation PM Review	9	26-Apr-22 A	06-May-22 A	07-Dec-23	07-Dec-23	
PL-120	Pai Lau - Design Temporary Work for Foundation Resubmission	8	07-May-22 A	17-May-22 A	07-Dec-23	07-Dec-23	
PL-130	Pai Lau - Design Temporary Work for Foundation Approval	18	17-May-22 A	07-Jun-22 A	07-Dec-23	07-Dec-23	
Box Culverts		91	20-May-22 A	01-Feb-23	29-Oct-21	12-Nov-26	537
12-100	Issued PMI No. 051- Construction of Box Culvert A1 and Box Culvert C	0		20-May-22 A		12-Nov-26	
Box Culvert A1. A2, A3		172	05-Jul-22 A	01-Feb-23	26-Feb-22	18-Mar-23	39
12A-102	Box Culvert A1 (Portion 18A) - Design for Temporary Works Preparation and Submission (Area Occupied)	14	07-Dec-22	22-Dec-22	14-Jun-22	29-Jun-22	-147
12A-103	Box Culvert A1 (Portion 18A) - Design for Temporary Works PM Review	21	23-Dec-22	19-Jan-23	30-Jun-22	25-Jul-22	-147
12A-104	Box Culvert A1 (Portion 18A) - Design for Temporary Works Resubmission	7	20-Jan-23	01-Feb-23	26-Jul-22	02-Aug-22	-147
12B-102	Box Culvert A3 (Portion 18B) - Design for Temporary Works Preparation and Submission (Area Occupied)	14	07-Dec-22	22-Dec-22	26-Feb-22	14-Mar-22	-232
12B-103	Box Culvert A3 (Portion 18B) - Design for Temporary Works PM Review	21	23-Dec-22	19-Jan-23	15-Mar-22	08-Apr-22	-232
12B-104	Box Culvert A3 (Portion 18B) - Design for Temporary Works Resubmission	7	20-Jan-23	01-Feb-23	09-Apr-22	20-Apr-22	-232
12C-107	Box Culvert A1 (Portion 18C) - Design for Temporary Works Preparation and Submission (Area Occupied)	14	07-Dec-22	22-Dec-22	18-Jan-23	07-Feb-23	33
12C-108	Box Culvert A1 (Portion 18C) - Design for Temporary Works PM Review	21	23-Dec-22	19-Jan-23	08-Feb-23	03-Mar-23	33
12C-109	Box Culvert A1 (Portion 18C) - Design for Temporary Works Resubmission	7	20-Jan-23	01-Feb-23	04-Mar-23	11-Mar-23	33
KD6-197	Box Culvert A1 (Portion 7,L1) - Design for Temporary Works Preparation & Submission	7	05-Jul-22 A	21-Jul-22 A	03-Mar-23	03-Mar-23	
KD6-198	Box Culvert A1 (Portion 7,L1) - Design for Temporary Works PM Review	21	22-Jul-22 A	29-Jul-22 A	03-Mar-23	03-Mar-23	
KD6-199	Box Culvert A1 (Portion 7,L1) - Design for Temporary Works Resubmission	15	30-Jul-22 A	26-Sep-22 A	03-Mar-23	03-Mar-23	
KD6-200	Box Culvert A1 (Portion 7,L1) - Design for Temporary Works Approval	14	17-Aug-22 A	19-Oct-22	03-Mar-23	18-Mar-23	122
Box Culvert C		22	02-Jul-22 A	15-Oct-22	29-Oct-21	12-Nov-26	579
S9-115	Box Cuvlert C (Portion 20) - CSD Approval	14	02-Jul-22 A	18-Jul-22 A	29-Oct-21	29-Oct-21	
S9-202	Box Culvert C (Portion 20) - Design for Temporary Works Preparation & Submission	7	20-Jul-22 A	27-Jul-22 A	12-Nov-26	12-Nov-26	
S9-203	Box Culvert C (Portion 20) - Design for Temporary Works PM Review	14	28-Jul-22 A	04-Aug-22 A	29-Oct-21	29-Oct-21	
S9-204	Box Culvert C (Portion 20) - Design for Temporary Works Resubmission	26	05-Aug-22 A	08-Oct-22	29-Oct-21	03-Nov-21	-272
S9-205	Box Culvert C (Portion 20) - Design for Temporary Works Approval	14	16-Aug-22 A	15-Oct-22	29-Oct-21	10-Nov-21	-339
Fabrication and Delivery		317	17-Jan-22 A	16-Feb-23	18-Dec-21	13-May-22	-240
Site Office		317	17-Jan-22 A	16-Feb-23	18-Dec-21	13-May-22	-240
Innohub / Reception & Atrium Module		290	17-Jan-22 A	11-Jan-23	02-Mar-22	02-Apr-22	-269
SO-1020	Innohub - Material Procurement and Production Steel Structure	37	17-Jan-22 A	19-Dec-22	02-Mar-22	14-Mar-22	-229
SO-1050	Innohub - Material Procurement Facade (Window and Cladding)	30	12-Feb-22 A	04-Jan-23	04-Mar-22	29-Mar-22	-227
SO-1060	Innohub - Material Procurement MEP	30	12-Feb-22 A	04-Jan-23	09-Mar-22	02-Apr-22	-223
SO-1070	Innohub - Material Procurement Interior Fittings & Flooring	30	12-Feb-22 A	04-Jan-23	09-Mar-22	02-Apr-22	-223
SO-1150	Innohub - Module Shipment G/F (16 nrs)	1	11-Apr-22 A	11-Apr-22 A	26-Mar-22	26-Mar-22	
SO-1160	Innohub - Module Shipment 1/F (13 nrs)	1	11-Apr-22 A	11-Apr-22 A	26-Mar-22	26-Mar-22	
SO-1170	Innohub - Module Shipment 2/F (11 nrs)	1	11-Apr-22 A	11-Apr-22 A	02-Apr-22	02-Apr-22	
SO-1400	Innohub - Exterior Staircase Shipment	10	30-Dec-22	11-Jan-23	15-Mar-22	25-Mar-22	-236
PM Site Office		251	11-Apr-22 A	16-Feb-23	18-Dec-21	13-May-22	-227
SO-1025	PM Office - Preparation Embed Procurement	25	07-Dec-22	07-Jan-23	18-Dec-21	19-Jan-22	-284
SO-1030	PM Office - Material Procurement and Production Steel Structure	46	17-Dec-22	16-Feb-23	04-Mar-22	30-Apr-22	-236
SO-1080	PM Office - Material Procurement Facade (Window and Cladding)	38	17-Dec-22	07-Feb-23	24-Mar-22	13-May-22	-219
SO-1090	PM Office - Material Procurement MEP	38	17-Dec-22	07-Feb-23	24-Mar-22	13-May-22	-219
SO-1100	PM Office - Material Procurement Interior Fittings & Flooring	38	17-Dec-22	07-Feb-23	24-Mar-22	13-May-22	-219
SO-1110	PM Office - Material Procurement Toilet	38	17-Dec-22	07-Feb-23	24-Mar-22	13-May-22	-219
SO-1370	PM Office - Module Shipment G/F (15+38=53 nrs)	14	11-Apr-22 A	29-Apr-22 A	25-Mar-22	25-Mar-22	
SO-1380	PM Office - Module Shipment 1/F (2+40+11=53 nrs)	29	29-Apr-22 A	20-Jun-22 A	14-Apr-22	14-Apr-22	
SO-1390	PM Office - Module Shipment 2/F (29+24=53 nrs)	16	21-Jun-22 A	14-Jul-22 A	14-Apr-22	14-Apr-22	
SO-1410	PM Office - Exterior Staircase Shipment	10	30-Dec-22	11-Jan-23	12-Apr-22	26-Apr-22	-213
Site Office and Innohub		251	17-Feb-22 A	19-Dec-22	22-Feb-22	05-Mar-22	-236
Contractor Site Office (Area Occupied)		251	17-Feb-22 A	19-Dec-22	22-Feb-22	05-Mar-22	-236
SO-1450	Contractor Site Office - Steel Structure Assembly	7	17-Feb-22 A	09-Dec-22	22-Feb-22	24-Feb-22	-236
SO-1460	Contractor Site Office - Installation	8	10-Dec-22	19-Dec-22*	25-Feb-22	05-Mar-22	-236
Key Date KD1 - Interim Watermain		173	07-Jun-22 A	13-Feb-23	12-May-22	12-Nov-26	533
KD1 - Submissions		159	07-Jun-22 A	07-Jan-23	12-May-22	12-Nov-26	547
KD1-0900	Issued PMI No. 054 - Construction of Section of Road L1 and Associated Works for HSITP Phase 1 Package 1A Commissioning	0		07-Jun-22 A		27-May-22	
KD1-0901	Issued PMI No. 054 - Quotation Preparation and Submission	60	08-Jun-22 A	06-Aug-22 A	27-May-22	27-May-22	
KD1-0902	Issued PMI No. 054 - PM Review and Reply	30	08-Aug-22 A	08-Oct-22	27-May-22	01-Jun-22	-106
KD1-0903	Issued PMI No. 065 - Design, Supply and Installation of Support for Interim DN400 Watermain	0		20-Jul-22 A		12-Nov-26	
KD1-0904	Issued PMI No. 065 - Quotation Preparation and Submission	21	21-Jul-22 A	10-Aug-22 A	02-Jun-22	02-Jun-22	
KD1-0905	Issued PMI No. 065 - PM Review and Reply (Withdrawn)	41	11-Aug-22 A	23-Sep-22 A	02-Jun-22	02-Jun-22	
KD1-0906	Issued PMI No. 071 - Interim Twin DN300 Watermains in lieu of Interim DN400 Watermain (Quotation)	0		02-Aug-22 A		12-May-22	
KD1-0907	Issued PMI No. 071 - Quotation Preparation and Submission	40	03-Aug-22 A	08-Oct-22	12-May-22	18-May-22	-143
KD1-0908	Issued PMI No. 071 - PM Review and Reply	14	09-Oct-22	22-Oct-22	19-May-22	01-Jun-22	-143
KD1-1000	Interim Watermain - Subletting of Watermain Subcontractor	28	24-Oct-22	24-Nov-22	02-Jun-22	06-Jul-22	-118
KD1-1005	Interim Watermain - Method Statement Preparation and Submission	14	25-Nov-22	10-Dec-22	07-Jul-22	22-Jul-22	-118



CRCC - Kwan Lee - Paul Y. JV

Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
◆◆ Milestone

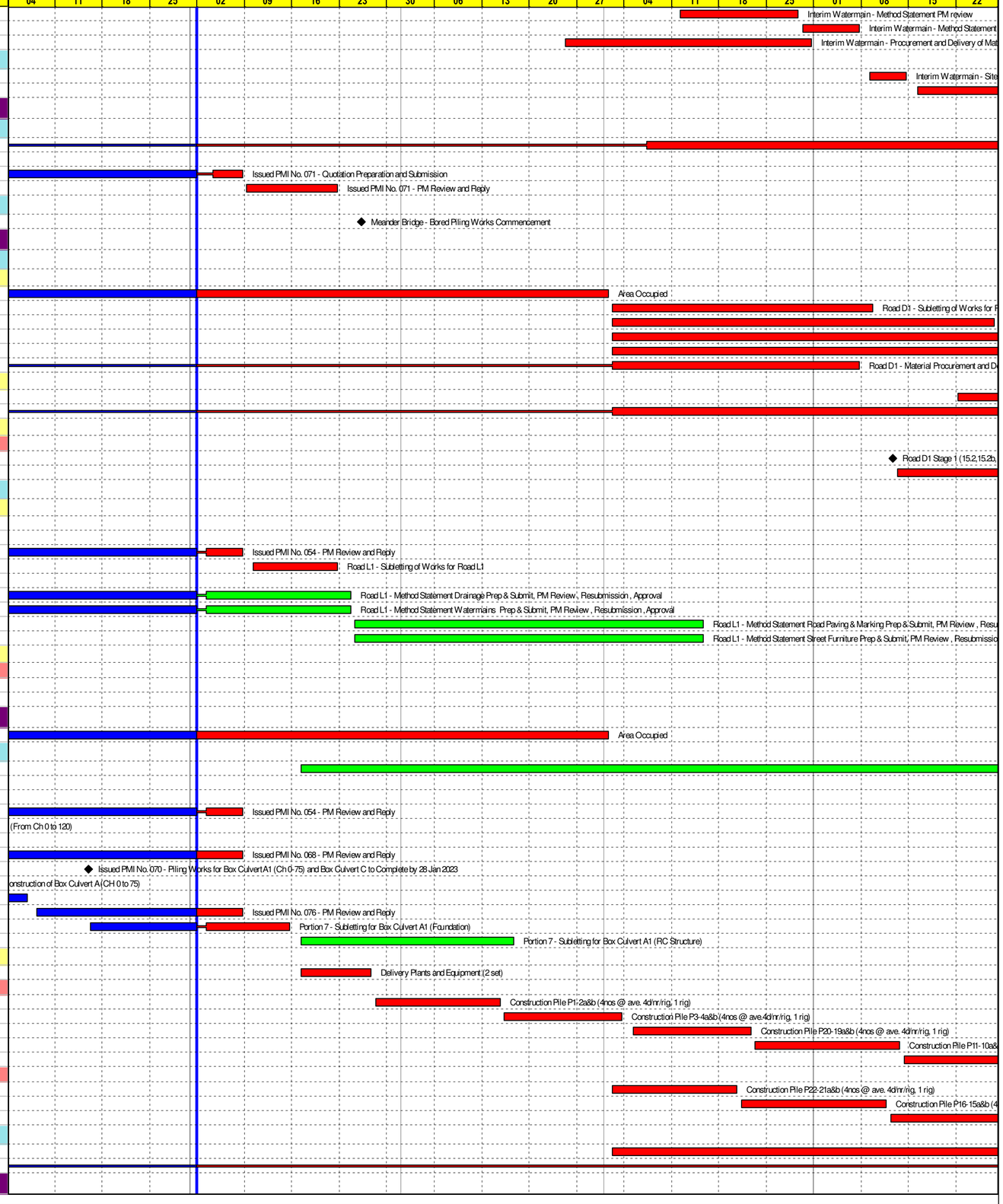
Contract YL/2020/01 - Lok Ma Chau Loop Main Works Package 1

Three Month Rolling Programme

Project ID : YL12-2209
Layout : YL-02 3MRP
Date : 05-Oct-22/ Page 3 of 9

Three Month Rolling Programme			
Date	Revision	Checked	Approved
05-Oct-22	MPR No. 15		

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float
KD1-1010	Interim Watermain - Method Statement PM review	14	12-Dec-22	29-Dec-22	23-Jul-22	08-Aug-22	-118
KD1-1015	Interim Watermain - Method Statement Resubmission and Approval	7	30-Dec-22	07-Jan-23	09-Aug-22	16-Aug-22	-118
KD1-1020	Interim Watermain - Procurement and Delivery of Materials	30	25-Nov-22	31-Dec-22	13-Jul-22	16-Aug-22	-113
KD1 - Construction		27	09-Jan-23	13-Feb-23	17-Aug-22	17-Sep-22	-118
KD1-1025	Interim Watermain - Site Set-up	6	09-Jan-23	14-Jan-23	17-Aug-22	23-Aug-22	-118
KD1-1030	Interim Watermain - Excavation	21	16-Jan-23	13-Feb-23	24-Aug-22	17-Sep-22	-118
Key Date KD2 - TAR 3		90	07-Feb-22 A	03-Jul-23	14-May-22	14-Mar-23	-43
KD2 - Submission and Coordination		89	07-Feb-22 A	03-Jul-23	14-May-22	14-Mar-23	-43
KD2-1000	TAR 3 - Consultation with CLP on Requirements for Delivery Route	182	07-Feb-22 A	03-Jul-23	24-Aug-22	14-Mar-23	-87
KD2-1100	Issued PMI No. 071 - Issued (01 Aug 2022)	0		02-Aug-22 A		14-May-22	
KD2-1110	Issued PMI No. 071 - Quotation Preparation and Submission	40	03-Aug-22 A	08-Oct-22	14-May-22	18-May-22	-143
KD2-1120	Issued PMI No. 071 - PM Review and Reply	14	09-Oct-22	22-Oct-22	19-May-22	01-Jun-22	-143
KD2 - Construction		0	26-Oct-22	26-Oct-22	14-Feb-23	14-Feb-23	88
KD2-1053	Meander Bridge - Bored Piling Works Commencement	0	26-Oct-22		14-Feb-23		88
Key Date KD3 - Road D1 and L1		231	25-Jan-22 A	18-Oct-23	31-Jan-22	14-Jun-23	-49
KD3 - ROAD D1 Construction		231	25-Jan-22 A	18-Oct-23	31-Jan-22	14-Jun-23	-49
KD3 - D1 - Submissions		128	21-Feb-22 A	17-Feb-23	31-Jan-22	18-Jun-22	-88
KD3-0900	Area Occupied	282	22-Feb-22 A	01-Dec-22	31-Jan-22	01-Apr-22	-244
KD3-1000	Road D1 - Subletting of Works for Road D1	30	02-Dec-22	09-Jan-23	02-Apr-22	13-May-22	-198
KD3-1005	Road D1 - Design & MS Site Formation Prep & Submit(7d), PM Review(21d), Resubmission(6d), Approval(14d)	42	02-Dec-22	27-Jan-23	02-Apr-22	27-May-22	-198
KD3-1010	Road D1 - Design & MS Drainage Prep & Submit(15d), PM Review(21d), Resubmission(10d), Approval(14d)	60	02-Dec-22	17-Feb-23	02-Apr-22	18-Jun-22	-198
KD3-1015	Road D1 - Design & MS Watermains Prep & Submit(15d), PM Review(21d), Resubmission(10d), Approval(14d)	60	02-Dec-22	17-Feb-23	02-Apr-22	18-Jun-22	-198
KD3-1035	Road D1 - Material Procurement and Delivery	30	21-Feb-22 A	07-Jan-23	16-May-22	18-Jun-22	-167
KD3 - D1 - DCM Works at Portion 7 (Area Occupied)		231	25-Jan-22 A	18-Oct-23	28-Feb-22	14-Jun-23	-49
S7-1425	Portion 7 - Surcharging Works	270	22-Jan-23	18-Oct-23	18-Sep-22	14-Jun-23	-126
S7-1435	Portion 7 - DCM Works	274	25-Jan-22 A	14-Oct-23	28-Feb-22	06-Jan-23	-227
KD3 - D1 - Construction (Area Occupied)		14	12-Jan-23	02-Feb-23	01-Jun-22	18-Jun-22	-185
KD3 - Road D1 Stage 1 (Road Next to Portion 15.2 and 15.2b)		14	12-Jan-23	02-Feb-23	01-Jun-22	18-Jun-22	-185
KD3-2684	Road D1 Stage 1 (15.2,15.2b, 200,m) - DCM Complete (15.2,15.2b)	0		12-Jan-23		01-Jun-22	-185
KD3-2685	Road D1 Stage 1 (15.2,15.2b, 200,m) - Site Formation	14	13-Jan-23	02-Feb-23	02-Jun-22	18-Jun-22	-185
KD3 - ROAD L1 Construction		108	07-Jun-22 A	01-Apr-23	27-May-22	20-May-23	19
KD3 - L1 - Submissions		67	07-Jun-22 A	15-Dec-22	27-May-22	20-May-23	60
KD3-0100	Issued PMI No. 054 - Construction of Section of Road L1 and Associated Works for HSITP Phase 1 Package 1A Commissioning	0		07-Jun-22 A		27-May-22	
KD3-0101	Issued PMI No. 054 - Quotation Preparation and Submission	60	08-Jun-22 A	06-Aug-22 A	27-May-22	27-May-22	
KD3-0102	Issued PMI No. 054 - PM Review and Reply	30	08-Aug-22 A	08-Oct-22	27-May-22	01-Jun-22	-106
KD3-1170	Road L1 - Subletting of Works for Road L1	12	10-Oct-22	22-Oct-22	09-Aug-22	22-Aug-22	-50
KD3-1175	Road L1 - Method Statement Site Formation Prep & Submit, PM Review , Resubmission , Approval	21	09-Aug-22 A	29-Aug-22 A	16-Aug-22	16-Aug-22	
KD3-1180	Road L1 - Method Statement Drainage Prep & Submit, PM Review , Resubmission , Approval	45	24-Aug-22 A	24-Oct-22	03-Mar-23	23-Mar-23	122
KD3-1185	Road L1 - Method Statement Watermains Prep & Submit, PM Review , Resubmission , Approval	45	24-Aug-22 A	24-Oct-22	03-Mar-23	23-Mar-23	122
KD3-1190	Road L1 - Method Statement Road Paving & Marking Prep & Submit, PM Review , Resubmission , Approval	45	25-Oct-22	15-Dec-22	24-Mar-23	20-May-23	122
KD3-1195	Road L1 - Method Statement Street Furniture Prep & Submit, PM Review , Resubmission , Approval	45	25-Oct-22	15-Dec-22	24-Mar-23	20-May-23	122
KD3 - L1 - Construction		131	24-Oct-22	01-Apr-23	23-Aug-22	17-Jan-23	-60
KD3 - Road L1 Stage 1 (Portion 18C, Next to Portion 17B Hammerhead) 260m		131	24-Oct-22	01-Apr-23	23-Aug-22	17-Jan-23	-60
KD3-5305	Portion 18C Road L1 (CH1170-1430) Stage 1 - Formation of Road L1 (S12C)	31	24-Oct-22	28-Nov-22	23-Aug-22	16-Sep-22	-60
KD3-5315	Portion 18C Road L1 (CH1170-1430) Stage 2 - Formation of Road L1 (S12C)	100	29-Nov-22	01-Apr-23	17-Sep-22	17-Jan-23	-60
Key Date KD6 - Box Culverts A2 and A1 in Portion 7		214	07-Feb-22 A	30-May-23	05-Nov-21	12-Nov-26	491
KD6-0400	Area Occupied	282	22-Feb-22 A	01-Dec-22	23-Jan-22	24-Mar-22	-252
KD6 - Box Culvert A1 (Portion 7, CH 0-75) 75m (CSD Scheme)		179	07-Jun-22 A	01-Mar-23	05-Nov-21	12-Nov-26	526
KD6-5105	Interface Portion 7 - CLP ESS Excavation and ELS Installation (Depth 4m from Existing Level)	110	17-Oct-22*	01-Mar-23	17-Oct-23	01-Mar-24	296
KD6-5234	Issued PMI No. 054 - Construction of Section of Road L1 and Associated Works for HSITP Phase 1 Package 1A Commissioning	0		07-Jun-22 A		12-Nov-21	
KD6-5235	Issued PMI No. 054 - Quotation Preparation and Submission	60	08-Jun-22 A	06-Aug-22 A	12-Nov-21	12-Nov-21	
KD6-5245	Issued PMI No. 054 - PM Review and Reply	30	08-Aug-22 A	08-Oct-22	12-Nov-21	17-Nov-21	-260
KD6-5246	Issued PMI No. 068 - Carry-out Piling Works for the Construction of Box Culvert A1 (From Ch 0 to 120)	0		25-Jul-22 A		12-Nov-26	
KD6-5247	Issued PMI No. 068 - Quotation Preparation and Submission	21	23-Jul-22 A	26-Jul-22 A	11-Nov-21	11-Nov-21	
KD6-5248	Issued PMI No. 068 - PM Review and Reply	14	27-Jul-22 A	08-Oct-22	11-Nov-21	17-Nov-21	-325
KD6-5249A	Issued PMI No. 070 - Piling Works for Box Culvert A1 (Ch 0-75) and Box Culvert C to Complete by 28 Jan 2023	0		16-Sep-22 A		17-Nov-21	
KD6-5249	Issued PMI No. 076 - Construction of Box Culvert A(CH 0 to 75)	0		22-Aug-22 A		13-Nov-21	
KD6-5251	Issued PMI No. 076 - Quotation Preparation and Submission	21	23-Aug-22 A	07-Sep-22 A	23-Nov-21	23-Nov-21	
KD6-5252	Issued PMI No. 076 - PM Review and Reply	14	08-Sep-22 A	08-Oct-22	23-Nov-21	29-Nov-21	-313
KD6-5300	Portion 7 - Subletting for Box Culvert A1 (Foundation)	24	16-Sep-22 A	15-Oct-22	05-Nov-21	17-Nov-21	-266
KD6-5580	Portion 7 - Subletting for Box Culvert A1 (RC Structure)	28	17-Oct-22	17-Nov-22	15-Feb-23	18-Mar-23	97
Box Culvert A1 (CH 0-75) Foundation (CSD)		90	17-Oct-22	06-Feb-23	18-Nov-21	11-Mar-22	-266
KD6-5310	Delivery Plants and Equipment (2 set)	10	17-Oct-22	27-Oct-22	18-Nov-21	29-Nov-21	-266
Box Culvert A1 (CH 0-75) Workfront 1		80	28-Oct-22	06-Feb-23	30-Nov-21	11-Mar-22	-266
KD6-5320	Construction Pile P1-2a&b (4nos @ ave. 4d/nr/rig, 1 rig)	16	28-Oct-22	15-Nov-22	30-Nov-21	17-Dec-21	-266
KD6-5340	Construction Pile P3-4a&b (4nos @ ave.4d/nr/rig, 1 rig)	16	16-Nov-22	03-Dec-22	18-Dec-21	06-Jan-22	-266
KD6-5350	Construction Pile P20-19a&b (4nos @ ave. 4d/nr/rig, 1 rig)	16	05-Dec-22	22-Dec-22	10-Jan-22	27-Jan-22	-266
KD6-5360	Construction Pile P11-10a&b (4nos @ ave. 4d/nr/rig, 1 rig)	16	23-Dec-22	13-Jan-23	28-Jan-22	21-Feb-22	-266
KD6-5370	Construction Pile P18-17a&b (4nos @ ave. 4d/nr/rig, 1 rig)	16	14-Jan-23	06-Feb-23	22-Feb-22	11-Mar-22	-266
Box Culvert A1 (CH 0-75) Workfront 2		48	02-Dec-22	03-Feb-23	30-Dec-21	02-Mar-22	-272
KD6-5330	Construction Pile P22-21a&b (4nos @ ave. 4d/nr/rig, 1 rig)	16	02-Dec-22	20-Dec-22	30-Dec-21	18-Jan-22	-272
KD6-5390	Construction Pile P16-15a&b (4nos @ ave. 4d/nr/rig, 1 rig)	16	21-Dec-22	11-Jan-23	19-Jan-22	11-Feb-22	-272
KD6-5410	Construction Pile P14-13a&b (4nos @ ave. 4d/nr/rig, 1 rig)	16	12-Jan-23	03-Feb-23	12-Feb-22	02-Mar-22	-272
KD6 - Box Culvert A2 (Including Border Patrol Road & Portion 7) (Area Occupied)		173	07-Feb-22 A	30-May-23	25-Mar-22	29-Nov-22	-70
KD6-0500	Portion 7 - Application to Border Police for Boundary Patrol RoadTTA	180	02-Dec-22	30-May-23	03-Jun-22	29-Nov-22	-182
KD6-1005	Portion 7 - Box Culvert A2 Method Statement Submission and Approval	18	07-Feb-22 A	03-Mar-23	25-Mar-22	30-Mar-22	-272
Key Date KD7 - Meander Bridge and CLP Transformer Delivery		146	15-Jan-22 A	04-Mar-23	27-Apr-22	12-Nov-26	525



CRCC - Kwan Lee - Paul Y. JV

- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- ◆◆ Milestone

Contract YL/2020/01 - Lok Ma Chau Loop Main Works Package 1

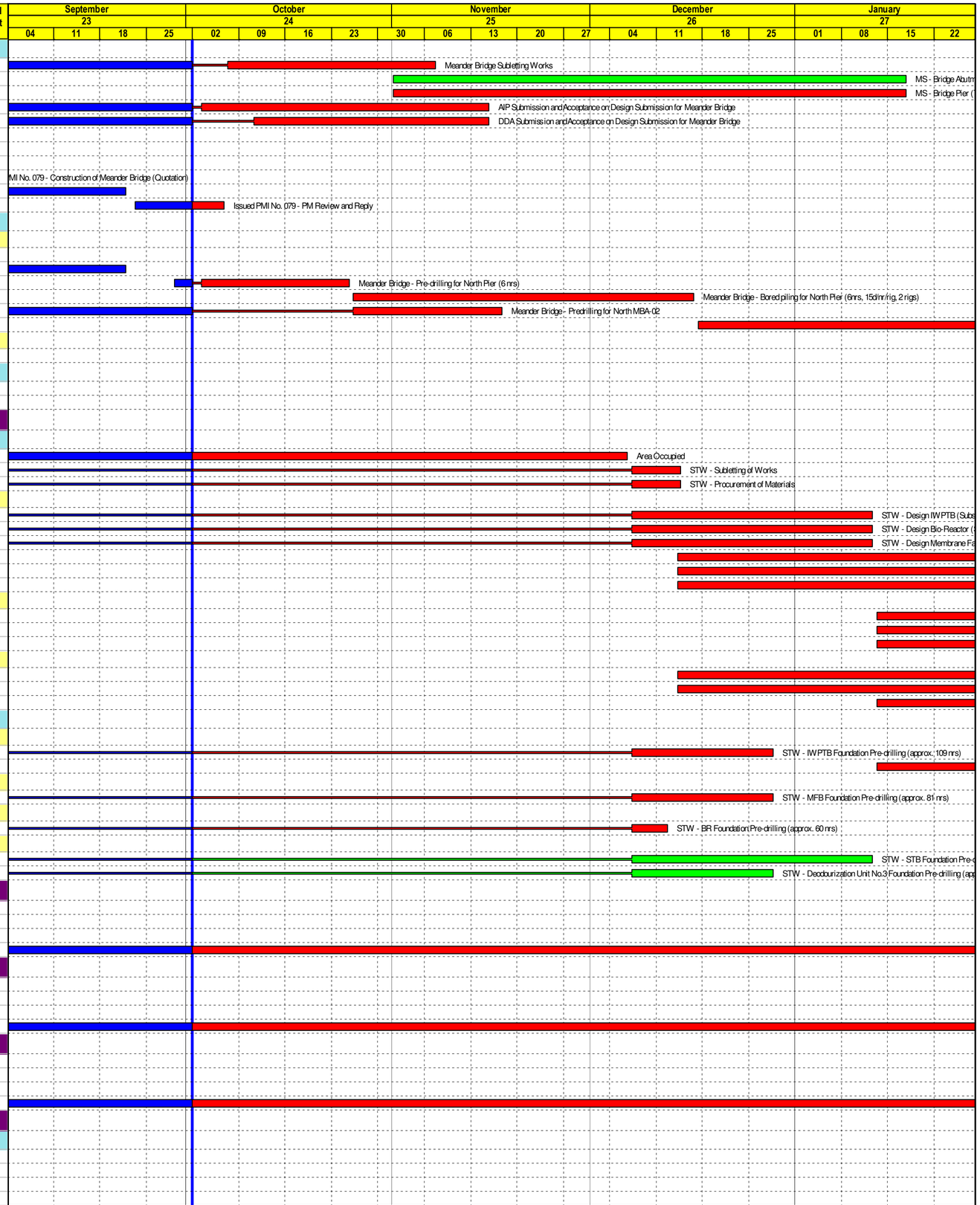
Three Month Rolling Programme

Project ID : YL12-2209
Layout : YL-02 3MRP
Date : 05-Oct-22/ Page 4 of 9

Three Month Rolling Programme

Date	Revision	Checked	Approved
05-Oct-22	MPR No. 15		

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float
KD7 - Submissions		128	15-Jan-22 A	17-Jan-23	25-Jun-22	12-Nov-26	543
KD7-1010	Meander Bridge Subletting Works	107	29-Apr-22 A	07-Nov-22	30-Jun-22	01-Aug-22	-81
KD7-1175	MS - Bridge Abutment (Temporary Works) Prep & Submit (14d), PM Review (21d), Resubmit (7d), Approval (21d)	64	01-Nov-22	17-Jan-23	09-Nov-22	30-Jan-23	7
KD7-1180	MS - Bridge Pier (Temporary Works) Prep & Submit (14d), PM Review (21d), Resubmit (7d), Approval (21d)	64	01-Nov-22	17-Jan-23	30-Jun-22	14-Sep-22	-102
KD7-2025	AIP Submission and Acceptance on Design Submission for Meander Bridge	51	15-Jan-22 A	15-Nov-22	02-Jul-22	13-Aug-22	-77
KD7-2035	DDA Submission and Acceptance on Design Submission for Meander Bridge	33	29-Jan-22 A	15-Nov-22	09-Jul-22	13-Aug-22	-77
KD7-2040	PMI No. 045 - Design Review for Meander Bridge	0		30-Apr-22 A		12-Nov-26	
KD7-2045	PMI No. 048 - Detailed Design for Meander Bridge	0		19-May-22 A		12-Nov-26	
KD7-2050	Meander Bridge Feasibility Study Report Submission, Review and Acceptance	64	12-May-22 A	27-Jul-22 A	09-Jul-22	09-Jul-22	
KD7-2055	Issued PMI No. 079 - Construction of Meander Bridge (Quotation)	0		29-Aug-22 A		25-Jun-22	
KD7-2065	Issued PMI No. 079 - Quotation Preparation and Submission	21	30-Aug-22 A	22-Sep-22 A	25-Jun-22	25-Jun-22	
KD7-2075	Issued PMI No. 079 - PM Review and Reply	14	23-Sep-22 A	06-Oct-22	25-Jun-22	29-Jun-22	-99
KD7 - Substructure		231	26-May-22 A	04-Mar-23	30-Jun-22	30-Jan-23	-29
Meander Bridge North Side		231	26-May-22 A	04-Mar-23	30-Jun-22	30-Jan-23	-29
KD7-1342	Meander Bridge - Installation of Silt Curtain	6	02-Aug-22 A	08-Aug-22 A	09-Jul-22	09-Jul-22	
KD7-1345	Meander Bridge - Forming Access Platform	30	18-Aug-22 A	22-Sep-22 A	09-Jul-22	09-Jul-22	
KD7-1350	Meander Bridge - Pre-drilling for North Pier (6 nrs)	21	29-Sep-22 A	25-Oct-22	30-Jun-22	22-Jul-22	-78
KD7-2240	Meander Bridge - Bored piling for North Pier (6nrs, 15d/nr/rig, 2 rigs)	45	26-Oct-22	16-Dec-22	23-Jul-22	14-Sep-22	-78
KD7-2280	Meander Bridge - Predrilling for North MBA-02	21	26-May-22 A	17-Nov-22	21-Oct-22	12-Nov-22	-4
KD7-2290	Meander Bridge - Bored piling for MBA-02 (8nrs, 15d/nr/rig, 2 rigs)	60	17-Dec-22	04-Mar-23	14-Nov-22	30-Jan-23	-29
Meander Bridge South Side		6	17-Jun-22 A	23-Jun-22 A	28-Oct-22	28-Oct-22	
KD7-2060	Meander Bridge - Removal and Installation of Silt Curtain	6	17-Jun-22 A	23-Jun-22 A	28-Oct-22	28-Oct-22	
KD7 - DCM		50	26-Oct-22	23-Dec-22	27-Apr-22	23-May-22	-178
KD7-2440	DCM4 Cluster Installation (249 nrs, 1 rig) (WCR, Section 6)	9	26-Oct-22	04-Nov-22	27-Apr-22	27-Apr-22	-157
KD7-2445	DCM7 Cluster Installation (91nrs, 1 rig) (WCR, Section 6)	0	23-Dec-22	23-Dec-22	23-May-22	23-May-22	-178
Key Date KD8 - Sewage Treatment Works (STW) Buildings		196	05-Nov-21 A	02-May-23	18-Dec-21	30-Oct-23	70
KD8 - Submissions		196	05-Nov-21 A	02-May-23	18-Dec-21	19-Oct-22	-75
KD8-0900	Area Occupied	282	22-Feb-22 A	06-Dec-22	18-Dec-21	21-Feb-22	-288
KD8-1005	STW - Subletting of Works	47	30-Dec-21 A	14-Dec-22	08-Jun-22	15-Jun-22	-152
KD8-1010	STW - Procurement of Materials	47	30-Dec-21 A	14-Dec-22	08-Jun-22	15-Jun-22	-152
KD8 - Design		435	05-Nov-21 A	02-May-23	22-Feb-22	19-Oct-22	-155
KD8-1015	STW - Design IWPTB (Substructure TW) Prep & Submit, PM Review, Resubmit, Approval	58	05-Nov-21 A	12-Jan-23	24-May-22	27-Jun-22	-164
KD8-1020	STW - Design Bio-Reactor (Substructure TW) Prep & Submit, PM Review, Resubmit, Approval	58	05-Nov-21 A	12-Jan-23	22-Feb-22	26-Mar-22	-236
KD8-1025	STW - Design Membrane Facilities (Substructure TW) Prep & Submit, PM Review, Resubmit, Approval	58	05-Nov-21 A	12-Jan-23	03-Mar-22	06-Apr-22	-228
KD8-1030	STW - Design Sludge Treatment Bld (Substructure TW) Prep & Submit, PM Review, Resubmit, Approval	58	14-Dec-22	27-Feb-23	28-Mar-22	10-Jun-22	-213
KD8-1035	STW - Design Chem. Storage & FH Pump Room Prep & Submit (45d), PM Review (21d), Resubmit (21d), Approval (21d)	108	14-Dec-22	02-May-23	20-Apr-22	27-Aug-22	-197
KD8-1040	STW - Design DOU No. 3 (Substructure TW) Prep & Submit (45d), PM Review (21d), Resubmit (21d), Approval (21d)	108	14-Dec-22	02-May-23	11-Jun-22	19-Oct-22	-155
KD8 - Shop Drawings		58	13-Jan-23	25-Mar-23	28-Mar-22	03-Sep-22	-164
KD8-3330	STW - Shop Drawings for IWPTB (Substructure TW) Prep & Submit, PM Review, Resubmit, Approval	58	13-Jan-23	25-Mar-23	28-Jun-22	03-Sep-22	-164
KD8-3335	STW - Shop Drawings for Bio-Reactor (Substructure TW) Prep & Submit, PM Review, Resubmit, Approval	58	13-Jan-23	25-Mar-23	28-Mar-22	10-Jun-22	-236
KD8-3340	STW - Shop Drawings for Membrane Facilities (Substructure TW) Prep & Submit, PM Review, Resubmit, Approval	58	13-Jan-23	25-Mar-23	07-Apr-22	20-Jun-22	-228
KD8 - Method Statement		81	14-Dec-22	25-Mar-23	28-Mar-22	03-Sep-22	-164
KD8-1330	STW - MS IWPTB (Substructure TW) Prep & Submit, PM Review, Resubmit, Approval	58	14-Dec-22	27-Feb-23	28-Jun-22	03-Sep-22	-141
KD8-1335	STW - MS Bio-Reactor (Substructure TW) Prep & Submit, PM Review, Resubmit, Approval	58	14-Dec-22	27-Feb-23	28-Mar-22	10-Jun-22	-213
KD8-1340	STW - MS Membrane Facilities (Substructure TW) Prep & Submit, PM Review, Resubmit, Approval	58	13-Jan-23	25-Mar-23	07-Apr-22	20-Jun-22	-228
KD8 - Construction		406	06-Dec-21 A	27-Apr-23	08-Jun-22	30-Oct-23	152
KD8 - Inlet Works and Primary Treatment Building (IWPTB) (Area Occupied)		406	06-Dec-21 A	27-Apr-23	08-Jun-22	05-Oct-22	-164
KD8-2014	STW - IWPTB Foundation Pre-drilling (approx. 109 nrs)	55	06-Dec-21 A	28-Dec-22	08-Jun-22	27-Jun-22	-152
KD8-2015	STW - IWPTB Foundation Socketed H-piles for IW PTB (109 nrs @ 3d/pile/rig, 4 rigs)	82	13-Jan-23	27-Apr-23	28-Jun-22	05-Oct-22	-164
KD8 - Membrane Facility Building (MFB) (Area Occupied)		42	03-Jan-22 A	28-Dec-22	14-Sep-22	05-Oct-22	-70
KD8-2004	STW - MFB Foundation Pre-drilling (approx. 81 nrs)	42	03-Jan-22 A	28-Dec-22	14-Sep-22	05-Oct-22	-70
KD8 - Bio-Reactor (BRB) (Area Occupied)		50	22-Dec-21 A	12-Dec-22	14-Sep-22	19-Sep-22	-70
KD8-1195	STW - BR Foundation Pre-drilling (approx. 60 nrs)	50	22-Dec-21 A	12-Dec-22	14-Sep-22	19-Sep-22	-70
KD8 - Sludge Treatment Building (STB) (Area Occupied)		60	11-Jan-22 A	12-Jan-23	02-Jun-23	30-Oct-23	234
KD8-2352	STW - STB Foundation Pre-drilling (approx. 85 nrs)	60	11-Jan-22 A	12-Jan-23	02-Jun-23	07-Jul-23	139
KD8-2375	STW - Deodourization Unit No.3 Foundation Pre-drilling (approx. 4 nrs)	27	10-Feb-22 A	28-Dec-22	10-Oct-23	30-Oct-23	246
Section 1A - Wetland Compensation Establishment Works at Portion 1		391	29-Jun-22 A	25-Jul-23	05-Jan-22	12-Nov-26	1205
S1A-0800	Portion 1 - Joint Inspection with AFCD and PM (Aecom) Inspection	0		29-Jun-22 A		12-Nov-26	
S1A-0900	Portion 1 - PM (Aecom) Inspection of Area 2	0		25-Jul-22 A		05-Jan-22	
S1A-0910	PMI No. 046 - Fence no longer required	0		02-Aug-22 A		05-Jan-22	
S1A-2000	Portion 1 - Establishment Works and Ecological Monitoring (Area 7)	365	26-Jul-22 A	25-Jul-23	05-Jan-22	28-Oct-22	-270
Section 2A - Wetland Compensation Establishment Works at Portion 2A/2B		391	29-Jun-22 A	25-Jul-23	05-Jan-22	12-Nov-26	1205
S2A-0800	Portion 2A/2B - Joint Inspection with AFCD and PM (Aecom) Inspection	0		29-Jun-22 A		12-Nov-26	
S2A-0900	Portion 2A/2B - PM (Aecom) Inspection of Area 2	0		25-Jul-22 A		05-Jan-22	
S2A-0910	PMI No. 046 - Fence no longer required	0		02-Aug-22 A		05-Jan-22	
S2A-2000	Portion 2A/2B - Establishment Works and Ecological Monitoring (Area 2, Area 9)	365	26-Jul-22 A	25-Jul-23	05-Jan-22	28-Oct-22	-270
Section 3A - Wetland Compensation Establishment Works at Portion 3		391	29-Jun-22 A	25-Jul-23	05-Jan-22	12-Nov-26	1205
S3A-0800	Portion 3 - Joint Inspection with AFCD and PM (Aecom) Inspection	0		29-Jun-22 A		12-Nov-26	
S3A-0900	Portion 3 - PM (Aecom) Inspection of Area 2	0		25-Jul-22 A		12-Nov-26	
S3A-0910	PMI No. 046 - Fence no longer required	0		02-Aug-22 A		05-Jan-22	
S3A-2000	Portion 3 - Establishment Works and Ecological Monitoring (Area 9)	365	26-Jul-22 A	25-Jul-23	05-Jan-22	28-Oct-22	-270
Section 6 - Western Connection Road (WCR)		206	07-Apr-22 A	28-Mar-23	21-Feb-22	12-Nov-26	516
S6 WCR Submission		112	18-May-22 A	21-Oct-22	22-Mar-22	24-Jun-22	-40
S6-1005A	Issued PMI No. 050 - Filling Up Ponds and Proceed the Associated Temporary Works for WCR	0		18-May-22 A		24-Jun-22	
S6-1005B	Issued PMI No. 050 - Quotation Preparation and Submission	21	21-May-22 A	10-Jun-22 A	24-Jun-22	24-Jun-22	
S6-1005C	Issued PMI No. 050 - PM Review and Reply	14	11-Jun-22 A	08-Jul-22 A	24-Jun-22	24-Jun-22	
S6-1006A	Issued PMI No. 060 - Issued (21 Jul 2022)	0		21-Jul-22 A		24-Jun-22	



CRCC - Kwan Lee - Paul Y. JV

Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

Contract YL/2020/01 - Lok Ma Chau Loop Main Works Package 1

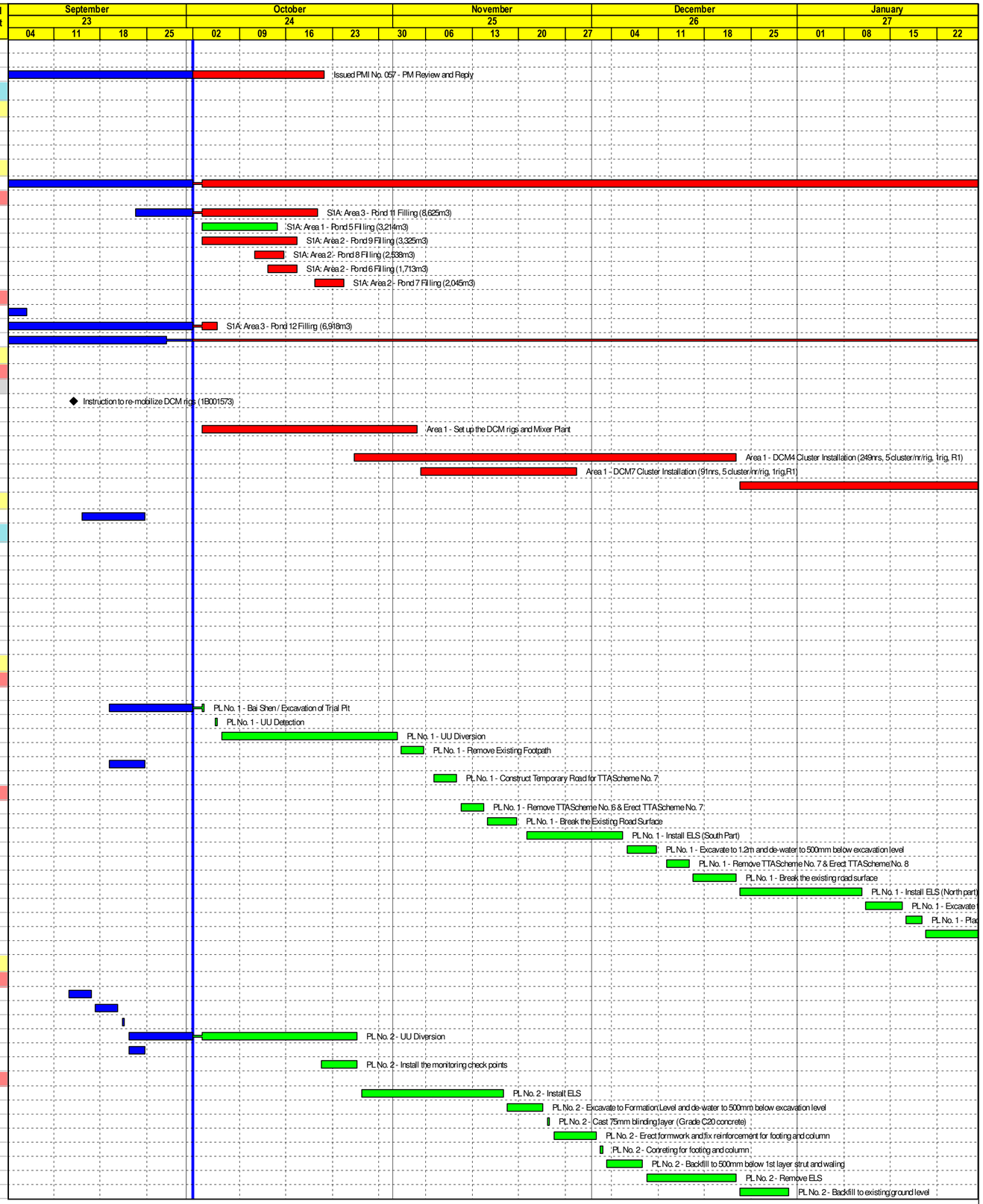
Three Month Rolling Programme

Project ID : YL12-2209
Layout : YL-02 3MRP
Date : 05-Oct-22/ Page 5 of 9

Three Month Rolling Programme

Date	Revision	Checked	Approved
05-Oct-22	MPR No. 15		

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float
S6-1015A	Issued PMI No. 057 - Commence Civil Works in early March 2022 in connection with WCR	0		14-Jun-22 A		22-Mar-22	
S6-1015B	Issued PMI No. 057 - Quotation Preparation and Submission	48	15-Jun-22 A	01-Aug-22 A	22-Mar-22	22-Mar-22	
S6-1015C	Issued PMI No. 057 - PM Review and Reply	31	02-Aug-22 A	21-Oct-22	22-Mar-22	10-Apr-22	-194
S6 WCR Works		150	19-May-22 A	28-Mar-23	21-Feb-22	12-Nov-26	516
S6 WCR: Preliminary and Demolition Works		120	19-May-22 A	28-Jul-22 A	24-Jun-22	31-Oct-23	
S6-1073D	Issued PMI No. 020 - Carry out Asbestos Investigation for Existing Corrugated Sheeting	0		19-May-22 A		24-Jun-22	
S6-1080	Portion 6 - Demarcate Site and Fence off Existing Ha Wan Tsuen Road	17	30-May-22 A	18-Jun-22 A	31-Oct-23	31-Oct-23	
S6-1090	Portion 6 - Site Clearance	10	20-Jun-22 A	28-Jul-22 A	31-Oct-23	31-Oct-23	
S6 WCR: Pond Filling		95	13-Jul-22 A	28-Mar-23	21-Feb-22	01-Mar-23	-10
S6-5045	S1A: Liaison with Villagers	212	13-Jul-22 A	28-Feb-23	21-Feb-22	19-Jul-22	-182
Pond Filling Work Front 1		25	23-Sep-22 A	24-Oct-22	24-Jun-22	01-Mar-23	7
S6-5110	S1A: Area 3 - Pond 11 Filling (8,625m3)	23	23-Sep-22 A	20-Oct-22	24-Jun-22	12-Jul-22	-83
S6-5112	S1A: Area 1 - Pond 5 Filling (3,214m3)	10	03-Oct-22	14-Oct-22	21-Oct-22	01-Mar-23	15
S6-5130	S1A: Area 2 - Pond 9 Filling (3,325m3)	12	03-Oct-22	17-Oct-22	24-Jun-22	08-Jul-22	-83
S6-7775	S1A: Area 2 - Pond 8 Filling (2,538m3)	5	11-Oct-22	15-Oct-22	02-Jul-22	07-Jul-22	-83
S6-7785	S1A: Area 2 - Pond 6 Filling (1,713m3)	4	13-Oct-22	17-Oct-22	05-Jul-22	08-Jul-22	-83
S6-7795	S1A: Area 2 - Pond 7 Filling (2,045m3)	4	20-Oct-22	24-Oct-22	12-Jul-22	15-Jul-22	-83
Pond Filling Work Front 2		63	02-Aug-22 A	28-Mar-23	24-Jun-22	16-Aug-22	-86
S6-5100	S1A: Area 3 - Pond 13 Filling (10,765m3)	32	02-Aug-22 A	07-Sep-22 A	24-Jun-22	24-Jun-22	
S6-5104	S1A: Area 3 - Pond 12 Filling (6,918m3)	26	16-Aug-22 A	05-Oct-22	24-Jun-22	25-Jun-22	-83
S6-5106	S1A: Area 2 - Pond 10 Filling (12,858m3) - Suspended from 28 Sep 2022	49	18-Aug-22 A	28-Mar-23	20-Jul-22	16-Aug-22	-86
S6 WCR: DCM Works		72	26-Jul-22 A	08-Feb-23	22-Mar-22	16-Aug-22	-64
DCM Works - Rig 1		72	26-Jul-22 A	08-Feb-23	22-Mar-22	16-Aug-22	-64
Area 1 - DCM 4 & 7 (at MB), and DCM5		72	26-Jul-22 A	08-Feb-23	22-Mar-22	16-Aug-22	-64
S6-5161	Instruction to re-mobilize DCM rigs (1B001573)	0		14-Sep-22 A		22-Mar-22	
S6-5170	Area 1 - General Clearance and Backfill	13	26-Jul-22 A	09-Aug-22 A	22-Mar-22	22-Mar-22	
S6-5172	Area 1 - Set up the DCM rigs and Mixer Plant	28	03-Oct-22	04-Nov-22	22-Mar-22	27-Apr-22	-157
S6-5174	Area 1 - CPT for DCM4 & DCM5	14	29-Jul-22 A	02-Aug-22 A	22-Mar-22	22-Mar-22	
S6-5176	Area 1 - DCM4 Cluster Installation (249nrs, 5 cluster/nr/rig, 1rig, R1)	50	26-Oct-22	22-Dec-22	28-Apr-22	28-Jun-22	-148
S6-5178	Area 1 - DCM7 Cluster Installation (91nrs, 5 cluster/nr/rig, 1rig,R1)	20	05-Nov-22	28-Nov-22	28-Apr-22	23-May-22	-157
S6-5180	Area 1 - DCM5 Cluster Installation (100nrs, 5 cluster/nr/rig, 1rig, R1) Part 1	34	23-Dec-22	08-Feb-23	08-Jul-22	16-Aug-22	-141
S6 WCR: Instrumentation		9	15-Sep-22 A	24-Sep-22 A	12-Nov-26	12-Nov-26	
S6-1035	Portion 6 - Instrument Installation Type Prism (9 nrs)	9	15-Sep-22 A	24-Sep-22 A	12-Nov-26	12-Nov-26	
S6 WCR Pai Lau		143	07-Apr-22 A	07-Feb-23	23-Dec-22	12-Nov-26	535
S6-2000	Preparation of TTA scheme and arrangement of 1st TMLG	36	09-Apr-22 A	26-May-22 A	12-Nov-26	12-Nov-26	
S6-2010	Obtain approval of TTA scheme from TMLG and RWA from RMO	5	27-May-22 A	01-Jun-22 A	12-Nov-26	12-Nov-26	
S6-3865	Application for Excavation Permit	0		07-Apr-22 A		21-Oct-23	
S6-5631	Issued PMI No. 059 - Revised Structural and Aesthetic Detail for Pai Lau	0		23-Jun-22 A		19-Oct-23	
S6-5632	Issued PMI No. 059 - Quotation Preparation and Submission	21	24-Jun-22 A	28-Jun-22 A	23-Dec-22	23-Dec-22	
S6-5633	Issued PMI No. 059 - PM Review and Reply	14	29-Jun-22 A	12-Jul-22 A	23-Dec-22	23-Dec-22	
S6-5635	Method Statement for Pai Lau Construction Phase 1	24	12-Apr-22 A	10-May-22 A	12-Nov-26	12-Nov-26	
S6-5636	Design for ELS of Pai Lau Construction	36	25-Apr-22 A	08-Jun-22 A	12-Nov-26	12-Nov-26	
Pai Lau No.1 Construction (Location 15, LMC Road)		124	01-Sep-22 A	03-Feb-23	19-Oct-23	20-Feb-24	309
PL No.1 - Preparation Works		58	01-Sep-22 A	10-Nov-22	19-Oct-23	27-Nov-23	309
S6-3615	PL No. 1 - Erect TTA Scheme No. 6	2	01-Sep-22 A	02-Sep-22 A	19-Oct-23	19-Oct-23	
S6-3665	PL No. 1 - Bai Shen / Excavation of Trial Pit	7	19-Sep-22 A	03-Oct-22	19-Oct-23	19-Oct-23	309
S6-5646	PL No. 1 - UU Detection	1	05-Oct-22	05-Oct-22	20-Oct-23	20-Oct-23	309
S6-5656	PL No. 1 - UU Diversion	23	06-Oct-22	01-Nov-22	21-Oct-23	17-Nov-23	309
S6-5666	PL No. 1 - Remove Existing Footpath	4	02-Nov-22	05-Nov-22	18-Nov-23	22-Nov-23	309
S6-5676	PL No. 1 - Install the Monitoring Check Points	6	19-Sep-22 A	24-Sep-22 A	23-Nov-23	23-Nov-23	
S6-5686	PL No. 1 - Construct Temporary Road for TTA Scheme No. 7	4	07-Nov-22	10-Nov-22	23-Nov-23	27-Nov-23	309
PL No.1 - Foundation		66	11-Nov-22	03-Feb-23	28-Nov-23	20-Feb-24	309
S6-3625	PL No. 1 - Remove TTA Scheme No. 6 & Erect TTA Scheme No. 7	3	11-Nov-22	14-Nov-22	28-Nov-23	30-Nov-23	309
S6-3675	PL No. 1 - Break the Existing Road Surface	5	15-Nov-22	19-Nov-22	01-Dec-23	06-Dec-23	309
S6-3685	PL No. 1 - Install ELS (South Part)	13	21-Nov-22	05-Dec-22	07-Dec-23	21-Dec-23	309
S6-3695	PL No. 1 - Excavate to 1.2m and de-water to 500mm below excavation level	5	06-Dec-22	10-Dec-22	22-Dec-23	29-Dec-23	309
S6-5696	PL No. 1 - Remove TTA Scheme No. 7 & Erect TTA Scheme No. 8	4	12-Dec-22	15-Dec-22	30-Dec-23	04-Jan-24	309
S6-5706	PL No. 1 - Break the existing road surface	6	16-Dec-22	22-Dec-22	05-Jan-24	11-Jan-24	309
S6-5716	PL No. 1 - Install ELS (North part)	13	23-Dec-22	10-Jan-23	12-Jan-24	26-Jan-24	309
S6-5726	PL No. 1 - Excavate to formation level	5	11-Jan-23	16-Jan-23	27-Jan-24	01-Feb-24	309
S6-5736	PL No. 1 - Place 500mm rock fill on final excavation level	3	17-Jan-23	19-Jan-23	02-Feb-24	05-Feb-24	309
S6-5746	PL No. 1 - Remove TTA Scheme No. 8 & Erect TTA Scheme No. 30	4	20-Jan-23	28-Jan-23	06-Feb-24	09-Feb-24	309
S6-5756	PL No. 1 - Erect formwork and fix reinforcement	5	30-Jan-23	03-Feb-23	15-Feb-24	20-Feb-24	309
Pai Lau No. 2 Construction (Location 11, HWT Road)		118	13-Sep-22 A	07-Feb-23	23-Dec-23	03-May-24	364
PL No.2 - Preparation Works		36	13-Sep-22 A	26-Oct-22	23-Dec-23	18-Jan-24	364
S6-5816	PL No. 2 - Bai Shen / Excavation of Trial Pit	4	13-Sep-22 A	16-Sep-22 A	23-Dec-23	23-Dec-23	
S6-5826	PL No. 2 - Erect TTA Scheme No. 4	3	17-Sep-22 A	20-Sep-22 A	23-Dec-23	23-Dec-23	
S6-5836	PL No. 2 - UU detection	1	21-Sep-22 A	21-Sep-22 A	23-Dec-23	23-Dec-23	
S6-5846	PL No. 2 - UU Diversion	23	22-Sep-22 A	26-Oct-22	23-Dec-23	18-Jan-24	364
S6-5856	PL No. 2 - Remove Existing Road Surface	3	22-Sep-22 A	24-Sep-22 A	13-Jan-24	13-Jan-24	
S6-5866	PL No. 2 - Install the monitoring check points	5	21-Oct-22	26-Oct-22	13-Jan-24	18-Jan-24	364
PL No.2 - Foundation		54	27-Oct-22	30-Dec-22	19-Jan-24	26-Mar-24	364
S6-2110	PL No. 2 - Install ELS	19	27-Oct-22	17-Nov-22	19-Jan-24	09-Feb-24	364
S6-5876	PL No. 2 - Excavate to Formation Level and de-water to 500mm below excavation level	5	18-Nov-22	23-Nov-22	15-Feb-24	20-Feb-24	364
S6-5886	PL No. 2 - Cast 75mm blinding layer (Grade C20 concrete)	1	24-Nov-22	24-Nov-22	21-Feb-24	21-Feb-24	364
S6-5896	PL No. 2 - Erect formwork and fix reinforcement for footing and column	6	25-Nov-22	01-Dec-22	22-Feb-24	28-Feb-24	364
S6-5906	PL No. 2 - Conreting for footing and column	1	02-Dec-22	02-Dec-22	29-Feb-24	29-Feb-24	364
S6-5916	PL No. 2 - Backfill to 500mm below 1st layer strut and waling	5	03-Dec-22	08-Dec-22	01-Mar-24	06-Mar-24	364
S6-5926	PL No. 2 - Remove ELS	12	09-Dec-22	22-Dec-22	07-Mar-24	20-Mar-24	364
S6-5936	PL No. 2 - Backfill to existing ground level	5	23-Dec-22	30-Dec-22	21-Mar-24	26-Mar-24	364



CRCC - Kwan Lee - Paul Y. JV

Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone

Contract YL/2020/01 - Lok Ma Chau Loop Main Works Package 1

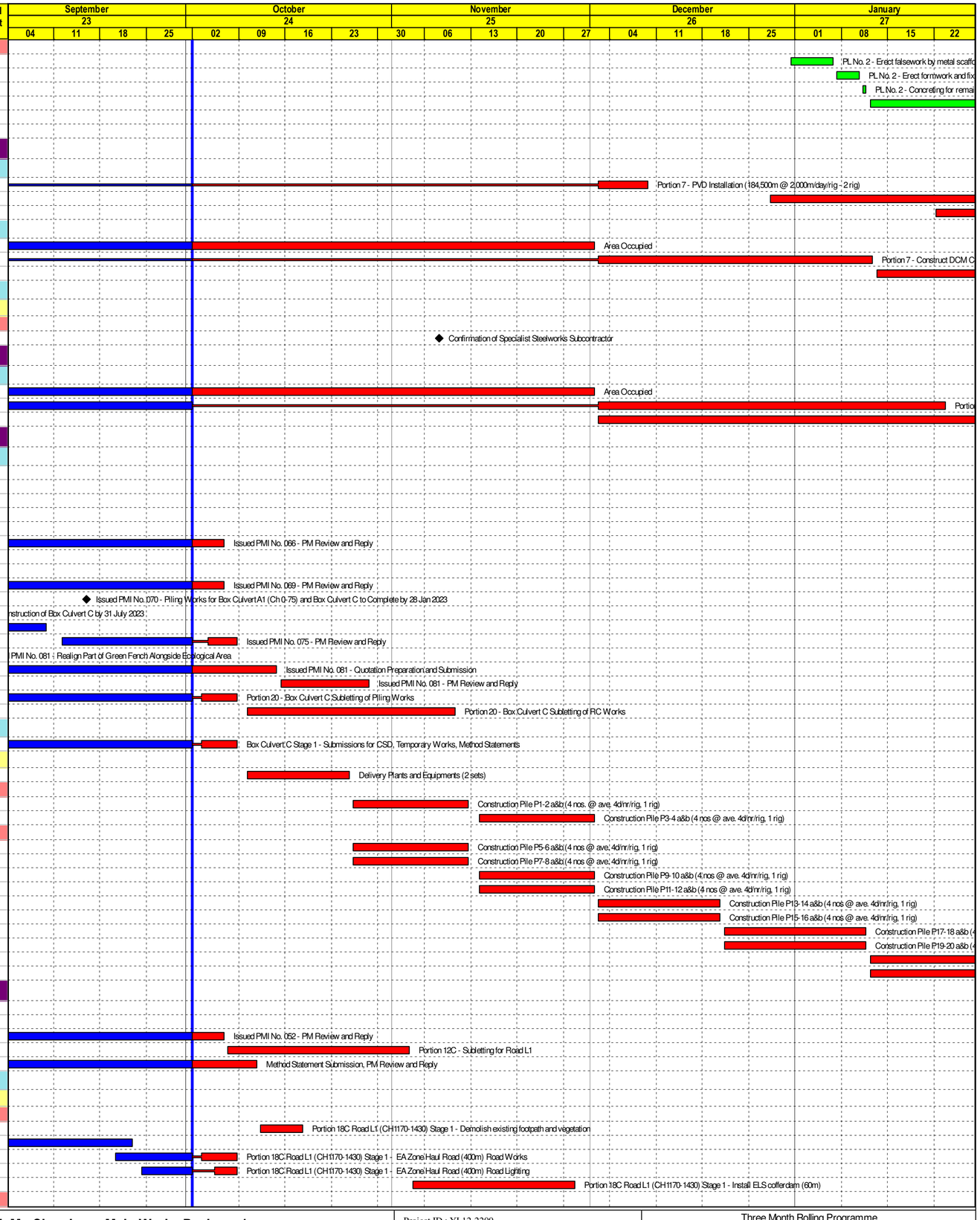
Three Month Rolling Programme

Project ID : YL12-2209
Layout : YL-02 3MRP
Date : 05-Oct-22/ Page 6 of 9

Three Month Rolling Programme

Date	Revision	Checked	Approved
05-Oct-22	MPR No. 15		

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float
PL No.2 - Superstructure		28	31-Dec-22	07-Feb-23	27-Mar-24	03-May-24	364
S6-2100	PL No. 2 - Erect falsework by metal scaffold ng	5	31-Dec-22	06-Jan-23	27-Mar-24	05-Apr-24	364
S6-5946	PL No. 2 - Erect formwork and fix reinforcement for remaining column	3	07-Jan-23	10-Jan-23	06-Apr-24	09-Apr-24	364
S6-5956	PL No. 2 - Concreting for remaining column	1	11-Jan-23	11-Jan-23	10-Apr-24	10-Apr-24	364
S6-5966	PL No. 2 - Erect formwork and fix reinforcement for beam and roof	11	12-Jan-23	28-Jan-23	11-Apr-24	23-Apr-24	364
S6-5976	PL No. 2 - Concreting for beam and roof	1	30-Jan-23	30-Jan-23	24-Apr-24	24-Apr-24	364
S6-5986	PL No. 2 - Remove formwork and falsework	7	31-Jan-23	07-Feb-23	25-Apr-24	03-May-24	364
Section 7 - Ground Treatment Works and Site Formation at Portion 7 (Area Oc		240	03-Jan-22 A	18-Oct-23	27-Dec-21	13-Jun-23	-50
S7 Ground Improvement - PVD/Surcharge (Area Occupied)		240	03-Jan-22 A	18-Oct-23	29-Jun-22	13-Jun-23	-50
S7-1090	Portion 7 - PVD Installation (184,500m @ 2,000m/day/rig - 2 rig)	45	03-Jan-22 A	09-Dec-22	29-Jun-22	07-Jul-22	-130
S7-1100	Portion 7 - General Fill to Surcharge 2m High (23,780m3 @ 600m3/d)	28	28-Dec-22	03-Feb-23	22-Aug-22	23-Sep-22	-105
S7-1140	Portion 7 - Surcharge Period (9 months) (23,900m3)	270	22-Jan-23	18-Oct-23	17-Sep-22	13-Jun-23	-127
S7 Ground Improvement - DCM (Area Occupied)		158	26-Jan-22 A	14-Apr-23	27-Dec-21	06-Jul-22	-104
S7-1165	Area Occupied	280	24-Feb-22 A	01-Dec-22	27-Dec-21	25-Feb-22	-279
S7-1190	Portion 7 - Construct DCM Clusters Stage 1 (15,2,15,2b, 200m) 28,790 of 194,330 @ 180m3/d/auger - 4 auger	52	26-Jan-22 A	12-Jan-23	26-Feb-22	06-Apr-22	-228
S7-1191	Portion 7 - Construct DCM Clusters Stage 2 (18D,15.5,15.4, 350m) 50,382 of 194,330 @ 180m3/d/auger - 4 auger	71	13-Jan-23	14-Apr-23	07-Apr-22	06-Jul-22	-228
S7 Civil Structures (Area Occupied)		0	08-Nov-22	08-Nov-22	23-Dec-22	23-Dec-22	45
S7 - Public Transport Interchange (PTI) (Area Occupied)		0	08-Nov-22	08-Nov-22	23-Dec-22	23-Dec-22	45
S7 - PTI Preliminary Submissions		0	08-Nov-22	08-Nov-22	23-Dec-22	23-Dec-22	45
PRE-700	Confirmation of Specialist Steelworks Subcontractor	0	08-Nov-22*		23-Dec-22		45
Section 8 - Ground Treatment Works and Site Formation at Portion 8 (Area Oc		554	24-Feb-22 A	31-Aug-23	23-Dec-21	21-Nov-22	-283
S8 STW - Site Formation		554	24-Feb-22 A	31-Aug-23	23-Dec-21	21-Nov-22	-283
S8-1105	Area Occupied	280	24-Feb-22 A	01-Dec-22	23-Dec-21	21-Feb-22	-283
S8-1110	Portion 8 - Stage 3 - General Fill to Surcharge 2m High (26,615m3 @ 360m3/d)	68	24-Feb-22 A	23-Jan-23	22-Feb-22	15-Apr-22	-283
S8-1140	Portion 8 - Stage 3 - Surcharge Period (9 months) (33,040m3)	273	02-Dec-22	31-Aug-23	22-Feb-22	21-Nov-22	-283
Section 9 - Box Culvert Construction at Portion 20		210	20-Jan-22 A	03-Feb-23	28-Oct-21	12-Nov-26	536
S9 - Submission		210	20-Jan-22 A	10-Nov-22	28-Oct-21	12-Nov-26	569
S9-5371	Issued PMI No. 051 - Construction of Box Culvert A1 and Box Culvert C	0		20-May-22 A		29-Oct-21	
S9-5372	Issued PMI No. 051 - Quotation Preparation and Submission	21	21-May-22 A	21-Jun-22 A	29-Oct-21	29-Oct-21	
S9-5373	Issued PMI No. 051 - PM Review and Reply	14	22-Jun-22 A	08-Jul-22 A	29-Oct-21	29-Oct-21	
S9-5375	Issued PMI No. 066 - Carry-out Piling Works for Construction of Box Culvert C (Whole)	0		19-Jul-22 A		12-Nov-26	
S9-5376	Issued PMI No. 066 - Quotation Preparation and Submission	21	20-Jul-22 A	08-Aug-22 A	28-Oct-21	28-Oct-21	
S9-5377	Issued PMI No. 066 - PM Review and Reply	28	09-Aug-22 A	06-Oct-22	29-Oct-21	02-Nov-21	-338
S9-5378	Issued PMI No. 069 - Construction of Box Culvert C	0		28-Jul-22 A		12-Nov-26	
S9-5379	Issued PMI No. 069 - Quotation Preparation and Submission	21	29-Jul-22 A	01-Aug-22 A	30-Oct-21	30-Oct-21	
S9-5380	Issued PMI No. 069 - PM Review and Reply	14	02-Aug-22 A	06-Oct-22	30-Oct-21	03-Nov-21	-337
S9-5385	Issued PMI No. 070 - Piling Works for Box Culvert A1 (Ch 0-75) and Box Culvert C to Complete by 28 Jan 2023	0		16-Sep-22 A		29-Oct-21	
S9-5390	Issued PMI No. 075 - Construction of Box Culvert C by 31 July 2023	0		22-Aug-22 A		13-Nov-21	
S9-5400	Issued PMI No. 075 - Quotation Preparation and Submission	21	23-Aug-22 A	10-Sep-22 A	15-Nov-21	15-Nov-21	
S9-5410	Issued PMI No. 075 - PM Review and Reply	14	12-Sep-22 A	06-Oct-22	15-Nov-21	19-Nov-21	-323
S9-5415	Issued PMI No. 081 - Realign Part of Green Fench Alongside Ecological Area	0		30-Aug-22 A		12-Nov-21	
S9-5425	Issued PMI No. 081 - Quotation Preparation and Submission	21	31-Aug-22 A	14-Oct-22	12-Nov-21	24-Nov-21	-324
S9-5435	Issued PMI No. 081 - PM Review and Reply	14	15-Oct-22	28-Oct-22	25-Nov-21	08-Dec-21	-324
S9-5679	Portion 20 - Box Culvert C Subletting of Piling Works	28	20-Jan-22 A	08-Oct-22	29-Oct-21	03-Nov-21	-272
S9-5680	Portion 20 - Box Culvert C Subletting of RC Works	28	10-Oct-22	10-Nov-22	25-May-22	27-Jun-22	-113
S9 Box Culvert C - (CSD Scheme)		299	25-Jan-22 A	03-Feb-23	29-Oct-21	04-Jun-22	-198
S9-5000	Box Culvert C Stage 1 - Submissions for CSD, Temporary Works, Method Statements	21	25-Jan-22 A	08-Oct-22	29-Oct-21	03-Nov-21	-272
S9 Box Culvert C - Foundation Works (CSD)		94	10-Oct-22	03-Feb-23	04-Nov-21	04-Jun-22	-198
S9-5420	Delivery Plants and Equipments (2 sets)	14	10-Oct-22	25-Oct-22	04-Nov-21	19-Nov-21	-272
Box C - Piles P1-P4 (Footprint inside Road L1)		32	26-Oct-22	01-Dec-22	20-Nov-21	29-Dec-21	-272
S9-5430	Construction Pile P1-2 a&b (4 nos. @ ave. 4d/m/rig, 1 rig)	16	26-Oct-22	12-Nov-22	20-Nov-21	08-Dec-21	-272
S9-5460	Construction Pile P3-4 a&b (4 nos @ ave. 4d/m/rig, 1 rig)	16	14-Nov-22	01-Dec-22	09-Dec-21	29-Dec-21	-272
Box C - Piles P5-P24 (outside Road L1)		80	26-Oct-22	03-Feb-23	20-Nov-21	04-Jun-22	-198
S9-5440	Construction Pile P5-6 a&b (4 nos @ ave. 4d/m/rig, 1 rig)	16	26-Oct-22	12-Nov-22	20-Nov-21	08-Dec-21	-272
S9-5450	Construction Pile P7-8 a&b (4 nos @ ave. 4d/m/rig, 1 rig)	16	26-Oct-22	12-Nov-22	20-Nov-21	08-Dec-21	-272
S9-5470	Construction Pile P9-10 a&b (4 nos @ ave. 4d/m/rig, 1 rig)	16	14-Nov-22	01-Dec-22	09-Dec-21	29-Dec-21	-272
S9-5480	Construction Pile P11-12 a&b (4 nos @ ave. 4d/m/rig, 1 rig)	16	14-Nov-22	01-Dec-22	09-Dec-21	29-Dec-21	-272
S9-5490	Construction Pile P13-14 a&b (4 nos @ ave. 4d/m/rig, 1 rig)	16	02-Dec-22	20-Dec-22	02-Apr-22	25-Apr-22	-198
S9-5500	Construction Pile P15-16 a&b (4 nos @ ave. 4d/m/rig, 1 rig)	16	02-Dec-22	20-Dec-22	02-Apr-22	25-Apr-22	-198
S9-5510	Construction Pile P17-18 a&b (4 nos @ ave. 4d/m/rig, 1 rig)	16	21-Dec-22	11-Jan-23	26-Apr-22	16-May-22	-198
S9-5520	Construction Pile P19-20 a&b (4 nos @ ave. 4d/m/rig, 1 rig)	16	21-Dec-22	11-Jan-23	26-Apr-22	16-May-22	-198
S9-5530	Construction Pile P21-22 a&b (4 nos @ ave. 4d/m/rig, 1 rig)	16	12-Jan-23	03-Feb-23	17-May-22	04-Jun-22	-198
S9-5540	Construction Pile P23-24 a&b (4 nos @ ave. 4d/m/rig, 1 rig)	16	12-Jan-23	03-Feb-23	17-May-22	04-Jun-22	-198
Section 12C - Road L1 and Box Culvert A1 at Portion 18C		186	20-May-22 A	18-Mar-23	21-Jul-22	14-Apr-23	10
S12C-1010	Issued PMI No. 052 - Construction of Road L1 and Associated HSITP Phase 1 Works	0		20-May-22 A		21-Jul-22	
S12C-1020	Issued PMI No. 052 - Quotation Preparation and Submission	21	21-May-22 A	19-Jul-22 A	21-Jul-22	21-Jul-22	
S12C-1030	Issued PMI No. 052 - PM Review and Reply	24	20-Jul-22 A	06-Oct-22	21-Jul-22	25-Jul-22	-73
S12C-1032	Portion 12C - Subletting for Road L1	28	07-Oct-22	03-Nov-22	26-Jul-22	22-Aug-22	-73
S12C-1035	Method Statement Submission, PM Review and Reply	25	09-Aug-22 A	11-Oct-22	06-Aug-22	15-Aug-22	-57
Section 12C - Construction		213	02-Jul-22 A	18-Mar-23	16-Aug-22	14-Apr-23	19
Section 12C - Road L1 - Portion18C (CH 1170 to 1430) 260m		182	08-Aug-22 A	18-Mar-23	16-Aug-22	03-Jan-23	-60
S12C Road L1 - Stage 1 (CH 1170 to 1430) 260m		94	08-Aug-22 A	28-Nov-22	16-Aug-22	16-Sep-22	-60
S12C-5000	Portion 18C Road L1 (CH1170-1430) Stage 1 - Demolish existing footpath and vegetation	6	12-Oct-22	18-Oct-22	16-Aug-22	22-Aug-22	-46
S12C-5005	Portion 18C Road L1 (CH1170-1430) Stage 1 - EA Zone Haul Road (400m) Earthworks	40	08-Aug-22 A	23-Sep-22 A	22-Aug-22	22-Aug-22	
S12C-5010	Portion 18C Road L1 (CH1170-1430) Stage 1 - EA Zone Haul Road (400m) Road Works	10	20-Sep-22 A	08-Oct-22	17-Aug-22	22-Aug-22	-38
S12C-5014	Portion 18C Road L1 (CH1170-1430) Stage 1 - EA Zone Haul Road (400m) Road Lighting	6	24-Sep-22 A	08-Oct-22	18-Aug-22	22-Aug-22	-38
S12C-5030	Portion 18C Road L1 (CH1170-1430) Stage 1 - Install ELS cofferdam (60m)	21	04-Nov-22	28-Nov-22	23-Aug-22	16-Sep-22	-60
S12C Road L1 - Stage 2 (CH 1170 to 1430) 260m		131	10-Oct-22	18-Mar-23	17-Sep-22	03-Jan-23	-60



CRCC - Kwan Lee - Paul Y. JV

- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- ◆◆ Milestone

Contract YL/2020/01 - Lok Ma Chau Loop Main Works Package 1

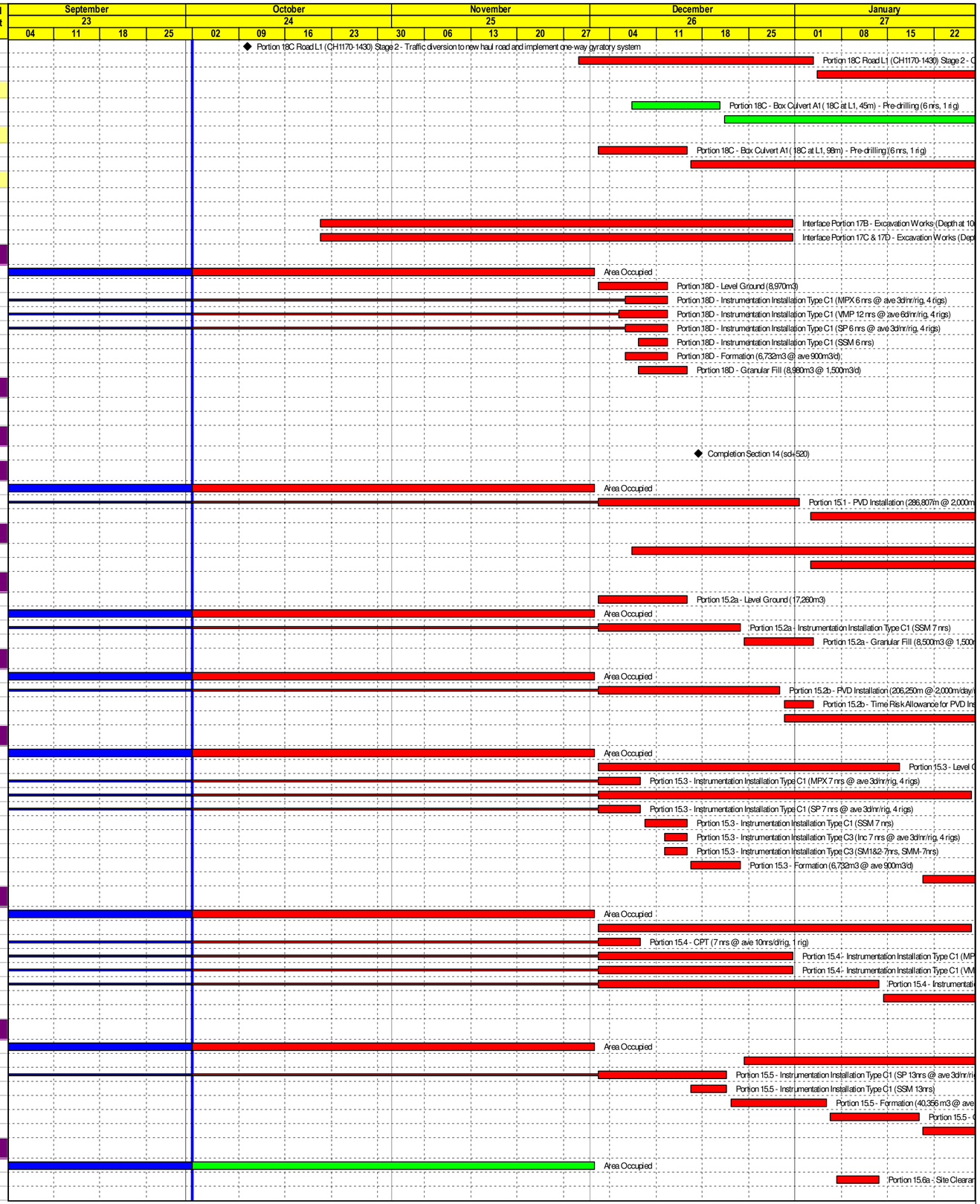
Three Month Rolling Programme

Project ID : YL12-2209
Layout : YL-02 3MRP
Date : 05-Oct-22/ Page 7 of 9

Three Month Rolling Programme

Date	Revision	Checked	Approved
05-Oct-22	MPR No. 15		

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float
S12C-5050	Portion 18C Road L1 (CH1170-1430) Stage 2 - Traffic diversion to new haul road and implement one-way gyratory system	0	10-Oct-22		17-Sep-22		-17
S12C-5055	Portion 18C Road L1 (CH1170-1430) Stage 2 - Construct ELS cofferdam	28	29-Nov-22	03-Jan-23	17-Sep-22	21-Oct-22	-60
S12C-5065	Portion 18C Road L1 (CH1170-1430) Stage 2 - UU installation (drainage, sewage, fresh water, towngas, CLP, telecom)	60	04-Jan-23	18-Mar-23	22-Oct-22	03-Jan-23	-60
Section 12C - Box Culvert A1 (Portion 18C, CH 75-120) 45m (Area Occupied)		44	07-Dec-22	03-Feb-23	18-Feb-23	14-Apr-23	56
S12C-5400	Portion 18C - Box Culvert A1 (18C at L1, 45m) - Pre-drilling (6 nrs, 1 rig)	12	07-Dec-22	20-Dec-22	18-Feb-23	03-Mar-23	56
S12C-5410	Portion 18C - Box Culvert A1 (18C at L1, 45m) - Piling Works (18/18nrs @ 3.5nr/rig, 2 rigs)	32	21-Dec-22	03-Feb-23	04-Mar-23	14-Apr-23	56
Section 12C - Box Culvert A1 (Portion 18C, CH 120-158) 38m (Area Occupied)		76	02-Dec-22	08-Mar-23	21-Nov-22	24-Feb-23	-10
S12C-5470	Portion 18C - Box Culvert A1 (18C at L1, 98m) - Pre-drilling (6 nrs, 1 rig)	12	02-Dec-22	15-Dec-22	21-Nov-22	03-Dec-22	-10
S12C-5480	Portion 18C - Box Culvert A1 (18C at L1, 98m) - Pre-bored H-pile (36 nrs @ ave 3.5d/nr/rig, 2 rigs)	64	16-Dec-22	08-Mar-23	05-Dec-22	24-Feb-23	-10
S12C - Interface with HSITP Contractor		152	02-Jul-22 A	31-Dec-22	21-Oct-22	31-Dec-22	0
S12C-3335	Interface Contractor (HSITP Contractor) - Temporary Water Supply System	14	02-Jul-22 A	18-Jul-22 A	21-Oct-22	21-Oct-22	
S12C-3345	Interface Contractor (HSITP Contractor) - Site Temporary Drainage	14	02-Jul-22 A	18-Jul-22 A	21-Oct-22	21-Oct-22	
S12C-3355	Interface Portion 17B - Excavation Works (Depth at 10m from Existing Level)	60	21-Oct-22	31-Dec-22*	21-Oct-22	31-Dec-22	0
S12C-3365	Interface Portion 17C & 17D - Excavation Works (Depth at 2m from Existing Level)	60	21-Oct-22	31-Dec-22*	21-Oct-22	31-Dec-22	0
Section 12D - Ground Treatment Works and Site Formation at Portion 18D (Are		128	13-Dec-21 A	15-Dec-22	22-Apr-22	02-Sep-22	-37
S12D-1086	Area Occupied	280	24-Feb-22 A	01-Dec-22	22-Apr-22	21-Jun-22	-163
S12D-1090	Portion 18D - Level Ground (8,970m3)	9	02-Dec-22	12-Dec-22	22-Jun-22	02-Jul-22	-136
S12D-1100	Portion 18D - Instrumentation Installation Type C1 (MPX 6 nrs @ ave 3d/nr/rig, 4 rigs)	59	13-Dec-21 A	12-Dec-22	24-Aug-22	30-Aug-22	-86
S12D-1110	Portion 18D - Instrumentation Installation Type C1 (VMP 12 nrs @ ave 6d/nr/rig, 4 rigs)	58	15-Dec-21 A	12-Dec-22	23-Aug-22	30-Aug-22	-86
S12D-1120	Portion 18D - Instrumentation Installation Type C1 (SP 6 nrs @ ave 3d/nr/rig, 4 rigs)	56	16-Dec-21 A	12-Dec-22	24-Aug-22	30-Aug-22	-86
S12D-1130	Portion 18D - Instrumentation Installation Type C1 (SSM 6 nrs)	4	08-Dec-22	12-Dec-22	26-Aug-22	30-Aug-22	-86
S12D-1135	Portion 18D - Formation (6,732m3 @ ave 900m3/d)	6	06-Dec-22	12-Dec-22	24-Aug-22	30-Aug-22	-86
S12D-1140	Portion 18D - Granular Fill (8,980m3 @ 1,500m3/d)	7	08-Dec-22	15-Dec-22	26-Aug-22	02-Sep-22	-86
Section 13 - Ground Treatment Works and Site Formation at Portion 21 (Area C		160	26-Jul-22 A	08-Feb-23	22-Mar-22	23-Aug-22	-135
S13-1050	Portion 21 - Level Ground (2,910m3)	12	26-Jul-22 A	08-Aug-22 A	22-Mar-22	22-Mar-22	
S13-1060	Portion 21 - Construct DCM Clusters (DCM4, DCM5 see Section 6)	84	26-Oct-22	08-Feb-23	28-Apr-22	23-Aug-22	-135
Section 14 - Ground Treatment Works and Site Formation at Portion 19 (Area C		0	17-Dec-22	17-Dec-22	16-Dec-22	16-Dec-22	0
S14-PC	Completion Section 14 (scl=520)	0		17-Dec-22*		16-Dec-22	0
Section 15.1 - Ground Treatment Works and Site Formation at Portion 15.1 (An		137	13-Dec-21 A	15-Mar-23	31-Dec-21	18-Aug-22	-77
S15.1-1105	Area Occupied	280	24-Feb-22 A	01-Dec-22	31-Dec-21	01-Mar-22	-275
S15.1-1110	Portion 15.1 - PVD Installation (286,807m @ 2,000m/day/rig - 2 rigs)	84	13-Dec-21 A	01-Jan-23	02-Mar-22	01-Apr-22	-275
S15.1-1120	Portion 15.1 - General Fill to Surcharge 2m High (39,140m3 @ 600m3/d)	58	03-Jan-23	15-Mar-23	11-Jun-22	18-Aug-22	-169
Section 15.2 - Ground Treatment Works and Site Formation at Portion 15.2 (An		94	07-Dec-22	03-Apr-23	16-Mar-22	06-Jul-22	-222
S15.2-1030	Portion 15.2 - MS Earthwork Preparation, Submission, & Approval	78	07-Dec-22	15-Mar-23	16-Mar-22	22-Jun-22	-217
S15.2-1140	Portion 15.2 - PVD Installation (993,000m @ 3,000m/day/rig - 4 rigs)	74	03-Jan-23	03-Apr-23	02-Apr-22	06-Jul-22	-222
Section 15.2a - Ground Treatment Works and Site Formation at Portion 15.2a (		117	29-Jan-22 A	03-Jan-23	14-Apr-22	13-Jul-22	-61
S15.2a-1040	Portion 15.2a - Level Ground (17,260m3)	12	02-Dec-22	15-Dec-22	22-Jun-22	06-Jul-22	-136
S15.2a-1085	Area Occupied	280	24-Feb-22 A	01-Dec-22	14-Apr-22	13-Jun-22	-171
S15.2a-1090	Portion 15.2a - Instrumentation Installation Type C1 (SSM 7 nrs)	34	29-Jan-22 A	23-Dec-22	14-Jun-22	06-Jul-22	-143
S15.2a-1100	Portion 15.2a - Granular Fill (8,500m3 @ 1,500m3/d)	6	24-Dec-22	03-Jan-23	07-Jul-22	13-Jul-22	-143
Section 15.2b - Ground Treatment Works and Site Formation at Portion 15.2b (		124	11-Feb-22 A	10-Feb-23	29-Apr-22	16-Sep-22	-55
S15.2b-1105	Area Occupied	280	24-Feb-22 A	01-Dec-22	29-Apr-22	28-Jun-22	-156
S15.2b-1110	Portion 15.2b - PVD Installation (206,250m @ 2,000m/day/rig - 2 rigs)	37	11-Feb-22 A	29-Dec-22	29-Jun-22	26-Jul-22	-156
S15.2b-1120	Portion 15.2b - Time Risk Allowance for PVD Installation	3	30-Dec-22	03-Jan-23	27-Jul-22	29-Jul-22	-129
S15.2b-1130	Portion 15.2b - General Fill to Surcharge (19,471m3 @ 600m3/d)	32	30-Dec-22	10-Feb-23	10-Aug-22	16-Sep-22	-117
Section 15.3 - Ground Treatment Works and Site Formation at Portion 15.3 (An		148	13-Dec-21 A	05-Feb-23	30-Jun-22	09-Nov-22	-34
S15.3-1035	Area Occupied	280	24-Feb-22 A	01-Dec-22	30-Jun-22	29-Aug-22	-94
S15.3-1040	Portion 15.3 - Level Ground (16,700m3)	36	02-Dec-22	16-Jan-23	30-Aug-22	13-Oct-22	-78
S15.3-1060	Portion 15.3 - Instrumentation Installation Type C1 (MPX 7 nrs @ ave 3d/nr/rig, 4 rigs)	45	31-Dec-21 A	08-Dec-22	30-Aug-22	05-Sep-22	-78
S15.3-1070	Portion 15.3 - Instrumentation Installation Type C1 (VMP 14 nrs @ ave 6d/nr/rig, 4 rigs)	95	13-Dec-21 A	27-Jan-23	20-Sep-22	09-Nov-22	-61
S15.3-1080	Portion 15.3 - Instrumentation Installation Type C1 (SP 7 nrs @ ave 3d/nr/rig, 4 rigs)	58	14-Dec-21 A	08-Dec-22	20-Sep-22	26-Sep-22	-61
S15.3-1090	Portion 15.3 - Instrumentation Installation Type C1 (SSM 7 nrs)	6	09-Dec-22	15-Dec-22	27-Sep-22	05-Oct-22	-61
S15.3-1100	Portion 15.3 - Instrumentation Installation Type C3 (Inc 7 nrs @ ave 3d/nr/rig, 4 rigs)	4	12-Dec-22	15-Dec-22	29-Sep-22	05-Oct-22	-61
S15.3-1110	Portion 15.3 - Instrumentation Installation Type C3 (SM1&2-7nrs, SMM-7nrs)	4	12-Dec-22	15-Dec-22	29-Sep-22	05-Oct-22	-61
S15.3-1115	Portion 15.3 - Formation (6,732m3 @ ave 900m3/d)	7	16-Dec-22	23-Dec-22	06-Oct-22	13-Oct-22	-61
S15.3-1120	Portion 15.3 - Granular Fill (12,080m3 @ 1,500m3/d)	11	20-Jan-23	06-Feb-23	14-Oct-22	26-Oct-22	-81
Section 15.4 - Ground Treatment Works and Site Formation at Portion 15.4 (An		163	20-Dec-21 A	22-Mar-23	07-Jan-22	27-Jun-22	-98
S15.4-1035	Area Occupied	280	22-Feb-22 A	01-Dec-22	07-Jan-22	08-Mar-22	-268
S15.4-1040	Portion 15.4 - Level Ground (13,260m3)	42	02-Dec-22	27-Jan-23	07-May-22	27-Jun-22	-173
S15.4-1050	Portion 15.4 - CPT (7 nrs @ ave 10nrs/d/rig, 1 rig)	48	28-Dec-21 A	08-Dec-22	07-May-22	14-May-22	-173
S15.4-1060	Portion 15.4 - Instrumentation Installation Type C1 (MPX 30 nrs @ ave 3d/nr/rig, 12 rigs)	68	23-Dec-21 A	31-Dec-22	09-Mar-22	06-Apr-22	-219
S15.4-1070	Portion 15.4 - Instrumentation Installation Type C1 (VMP 60 nrs @ ave 6d/nr/rig, 12 rigs)	71	20-Dec-21 A	31-Dec-22	09-Mar-22	06-Apr-22	-219
S15.4-1080	Portion 15.4 - Instrumentation Installation Type C1 (SP 30 nrs @ ave 3d/nr/rig, 12 rigs)	79	22-Dec-21 A	13-Jan-23	09-Mar-22	21-Apr-22	-219
S15.4-1090	Portion 15.4 - Instrumentation Installation Type C1 (SSM 30 nrs)	10	14-Jan-23	30-Jan-23	22-Apr-22	04-May-22	-219
S15.4-1095	Portion 15.4 - Formation (87,870m3 @ ave 1,800m3/d)	44	31-Jan-23	22-Mar-23	05-May-22	27-Jun-22	-219
Section 15.5 - Ground Treatment Works and Site Formation at Portion 15.5 (An		180	23-Dec-21 A	06-May-23	30-Dec-21	29-Jul-22	-104
S15.5-1025	Area Occupied	280	24-Feb-22 A	01-Dec-22	30-Dec-21	28-Feb-22	-276
S15.5-1030	Portion 15.5 - MS Earthwork Preparation, Submission, & Approval	60	24-Dec-22	11-Mar-23	31-Mar-22	16-Jun-22	-219
S15.5-1080	Portion 15.5 - Instrumentation Installation Type C1 (SP 13nrs @ ave 3d/nr/rig, 8 rigs)	49	23-Dec-21 A	21-Dec-22	01-Mar-22	19-Mar-22	-226
S15.5-1090	Portion 15.5 - Instrumentation Installation Type C1 (SSM 13nrs)	5	16-Dec-22	21-Dec-22	15-Mar-22	19-Mar-22	-226
S15.5-1095	Portion 15.5 - Formation (40,356 m3 @ ave 900m3/d)	10	22-Dec-22	05-Jan-23	21-Mar-22	31-Mar-22	-226
S15.5-1100	Portion 15.5 - Granular Fill (17,400m3 @ 1,800m3/d)	12	06-Jan-23	19-Jan-23	01-Apr-22	19-Apr-22	-226
S15.5-1110	Portion 15.5 - PVD Installation (537,000m @ 2,000m/day/rig - 3 rigs)	83	20-Jan-23	06-May-23	20-Apr-22	29-Jul-22	-226
Section 15.6a - Ground Treatment Works and Site Formation at Portion 15.6a (		157	24-Feb-22 A	06-May-23	17-Oct-22	18-Apr-23	-7
S15.6a-0900	Area Occupied	280	24-Feb-22 A	01-Dec-22	17-Oct-22	16-Dec-22	15
S15.6a-1000	Portion 15.6a - Site Clearance and Preparation Works (Ecological survey, Tree Survey)	6	07-Jan-23	13-Jan-23	17-Dec-22	23-Dec-22	-15
S15.6a-1040	Portion 15.6a - Level Ground (144,240m3)	80	28-Jan-23	06-May-23	06-Jan-23	18-Apr-23	-15



CRCC - Kwan Lee - Paul Y. JV

Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
◆◆ Milestone

Contract YL/2020/01 - Lok Ma Chau Loop Main Works Package 1

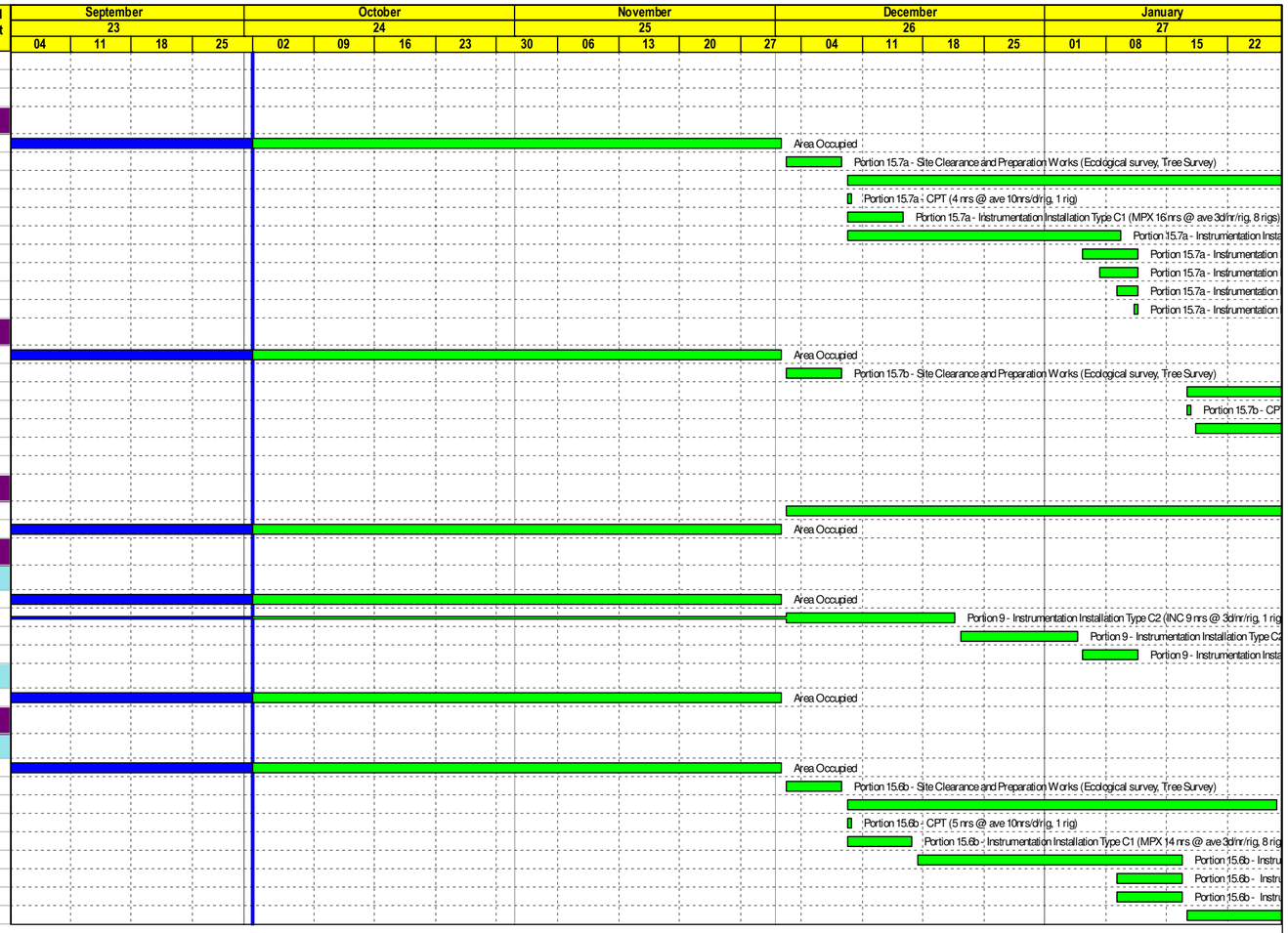
Three Month Rolling Programme

Project ID : YL12-2209
Layout : YL-02 3MRP
Date : 05-Oct-22/ Page 8 of 9

Three Month Rolling Programme

Date	Revision	Checked	Approved
05-Oct-22	MPR No. 15		

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float
S15.6a-1050	Portion 15.6a - CPT (5 nrs @ ave 10nrs/d/rig, 1 rig)	1	28-Jan-23	28-Jan-23	06-Jan-23	06-Jan-23	-15
S15.6a-1060	Portion 15.6a - Instrumentation Installation Type C1 (MPX 22 nrs @ ave 3d/nr/rig, 10 rigs)	7	28-Jan-23	04-Feb-23	06-Jan-23	13-Jan-23	-15
S15.6a-1070	Portion 15.6a - Instrumentation Installation Type C1 (VMP 44 nrs @ ave 6d/nr/rig, 10 rigs)	25	28-Jan-23	25-Feb-23	06-Jan-23	08-Feb-23	-15
Section 15.7a - Ground Treatment Works and Site Formation at Portion 15.7a (		120	24-Feb-22 A	01-Feb-23	19-Dec-22	20-Apr-23	30
S15.7a-0900	Area Occupied	280	24-Feb-22 A	01-Dec-22	19-Dec-22	17-Feb-23	78
S15.7a-1000	Portion 15.7a - Site Clearance and Preparation Works (Ecological survey, Tree Survey)	6	02-Dec-22	08-Dec-22	18-Feb-23	24-Feb-23	60
S15.7a-1040	Portion 15.7a - Level Ground (64,890m3)	40	09-Dec-22	01-Feb-23	25-Feb-23	17-Apr-23	60
S15.7a-1050	Portion 15.7a - CPT (4 nrs @ ave 10nrs/d/rig, 1 rig)	1	09-Dec-22	09-Dec-22	17-Apr-23	17-Apr-23	99
S15.7a-1060	Portion 15.7a - Instrumentation Installation Type C1 (MPX 16 nrs @ ave 3d/nr/rig, 8 rigs)	6	09-Dec-22	15-Dec-22	25-Feb-23	03-Mar-23	60
S15.7a-1070	Portion 15.7a - Instrumentation Installation Type C1 (VMP 32 nrs @ ave 6d/nr/rig, 8 rigs)	24	09-Dec-22	09-Jan-23	17-Mar-23	18-Apr-23	77
S15.7a-1080	Portion 15.7a - Instrumentation Installation Type C1 (SP 16 nrs @ ave 3d/nr/rig, 8 rigs)	6	05-Jan-23	11-Jan-23	14-Apr-23	20-Apr-23	77
S15.7a-1090	Portion 15.7a - Instrumentation Installation Type C1 (SSM 16 nrs)	4	07-Jan-23	11-Jan-23	17-Apr-23	20-Apr-23	77
S15.7a-1100	Portion 15.7a - Instrumentation Installation Type C2 (INC 1 nrs @ ave 3d/nr/rig, 1 rig)	3	09-Jan-23	11-Jan-23	18-Apr-23	20-Apr-23	77
S15.7a-1110	Portion 15.7a - Instrumentation Installation Type C2 (SM1&2-1nr, SMM-1nr)	1	11-Jan-23	11-Jan-23	20-Apr-23	20-Apr-23	77
Section 15.7b - Ground Treatment Works and Site Formation at Portion 15.7b (		128	24-Feb-22 A	21-Feb-23	19-Dec-22	28-Mar-23	14
S15.7b-0900	Area Occupied	280	24-Feb-22 A	01-Dec-22	19-Dec-22	17-Feb-23	78
S15.7b-1000	Portion 15.7b - Site Clearance and Preparation Works (Ecological survey, Tree Survey)	6	02-Dec-22	08-Dec-22	18-Feb-23	24-Feb-23	60
S15.7b-1040	Portion 15.7b - Level Ground (11,270m3)	24	17-Jan-23	17-Feb-23	25-Feb-23	24-Mar-23	30
S15.7b-1050	Portion 15.7b - CPT (5 nrs @ ave 10nrs/d/rig, 1 rig)	1	17-Jan-23	17-Jan-23	25-Feb-23	25-Feb-23	30
S15.7b-1060	Portion 15.7b - Instrumentation Installation Type C1 (MPX 20 nrs @ ave 3d/nr/rig, 10 rigs)	6	18-Jan-23	28-Jan-23	27-Feb-23	04-Mar-23	30
S15.7b-1070	Portion 15.7b - Instrumentation Installation Type C1 (VMP 40 nrs @ ave 6d/nr/rig, 10 rigs)	20	30-Jan-23	21-Feb-23	06-Mar-23	28-Mar-23	30
S15.7b-1080	Portion 15.7b - Instrumentation Installation Type C1 (SP 20 nrs @ ave 3d/nr/rig, 10 rigs)	6	01-Feb-23	07-Feb-23	08-Mar-23	14-Mar-23	30
Section 15.8 - Reed Bed Area (Area Occupied)		140	24-Feb-22 A	24-Mar-23	13-Oct-22	04-Apr-23	4
PRE-335	Portion 15.8 - Prepare, Submit & Coordination for Reed Transplant	90	02-Dec-22	24-Mar-23	13-Dec-22	04-Apr-23	9
S15.8-1000	Area Occupied	280	24-Feb-22 A	01-Dec-22	13-Oct-22	12-Dec-22	11
Section 16 - Works Not Covered by Other Sections of the Works (Area Occupie		151	09-Nov-21 A	11-Jan-23	22-Dec-23	07-May-25	330
S16 Portion 9 of the Site - North Meander		151	09-Nov-21 A	11-Jan-23	22-Dec-23	28-Mar-24	172
S16-1035	Area Occupied	282	22-Feb-22 A	01-Dec-22	22-Dec-23	20-Feb-24	446
S16-1050	Portion 9 - Instrumentation Installation Type C2 (INC 9 nrs @ 3d/nr/rig, 1 rig)	99	09-Nov-21 A	21-Dec-22	21-Feb-24	11-Mar-24	357
S16-1060	Portion 9 - Instrumentation Installation Type C2 (SM1&2-9nrs, SMM-9nrs)	9	22-Dec-22	04-Jan-23	12-Mar-24	21-Mar-24	357
S16-1070	Portion 9 - Instrumentation Installation Type C3 (SM1&2-6nrs, SMM-6nrs)	6	05-Jan-23	11-Jan-23	22-Mar-24	28-Mar-24	357
S16 Portion 10 of the Site		280	24-Feb-22 A	01-Dec-22	07-Mar-25	07-May-25	887
S16-1011	Area Occupied	280	24-Feb-22 A	01-Dec-22	07-Mar-25	07-May-25	887
Section 20 - Ground Treatment Works and Site Formation at Portion 15.6b (Are		122	24-Feb-22 A	04-Feb-23	21-Apr-23	18-Aug-23	76
Section 20 - Ground Treatment Works at Portion 15.6b		122	24-Feb-22 A	04-Feb-23	21-Apr-23	18-Aug-23	76
S20-0900	Area Occupied	280	24-Feb-22 A	01-Dec-22	21-Apr-23	20-Jun-23	201
S20-1000	Portion 15.6b - Site Clearance and Preparation Works (Ecological survey, Tree Survey)	6	02-Dec-22	08-Dec-22	21-Jun-23	28-Jun-23	159
S20-1010	Portion 15.6b - Level Ground (7,780m3)	36	09-Dec-22	27-Jan-23	29-Jun-23	10-Aug-23	159
S20-1020	Portion 15.6b - CPT (5 nrs @ ave 10nrs/d/rig, 1 rig)	1	09-Dec-22	09-Dec-22	29-Jun-23	29-Jun-23	159
S20-1030	Portion 15.6b - Instrumentation Installation Type C1 (MPX 14 nrs @ ave 3d/nr/rig, 8 rigs)	7	09-Dec-22	16-Dec-22	29-Jun-23	07-Jul-23	159
S20-1040	Portion 15.6b - Instrumentation Installation Type C1 (VMP 28 nrs @ ave 6d/nr/rig, 8 rigs)	23	17-Dec-22	16-Jan-23	08-Jul-23	03-Aug-23	159
S20-1050	Portion 15.6b - Instrumentation Installation Type C1 (SP 14 nrs @ ave 3d/nr/rig, 8 rigs)	7	09-Jan-23	16-Jan-23	27-Jul-23	03-Aug-23	159
S20-1060	Portion 15.6b - Instrumentation Installation Type C1 (SSM 14 nrs)	7	09-Jan-23	16-Jan-23	27-Jul-23	03-Aug-23	159
S20-1070	Portion 15.6b - Granular Fill (19,010m3 @ 1,500m3/d)	13	17-Jan-23	04-Feb-23	04-Aug-23	18-Aug-23	159



CRCC - Kwan Lee - Paul Y. JV

Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
◆◆ Milestone

Contract YL/2020/01 - Lok Ma Chau Loop Main Works Package 1

Three Month Rolling Programme

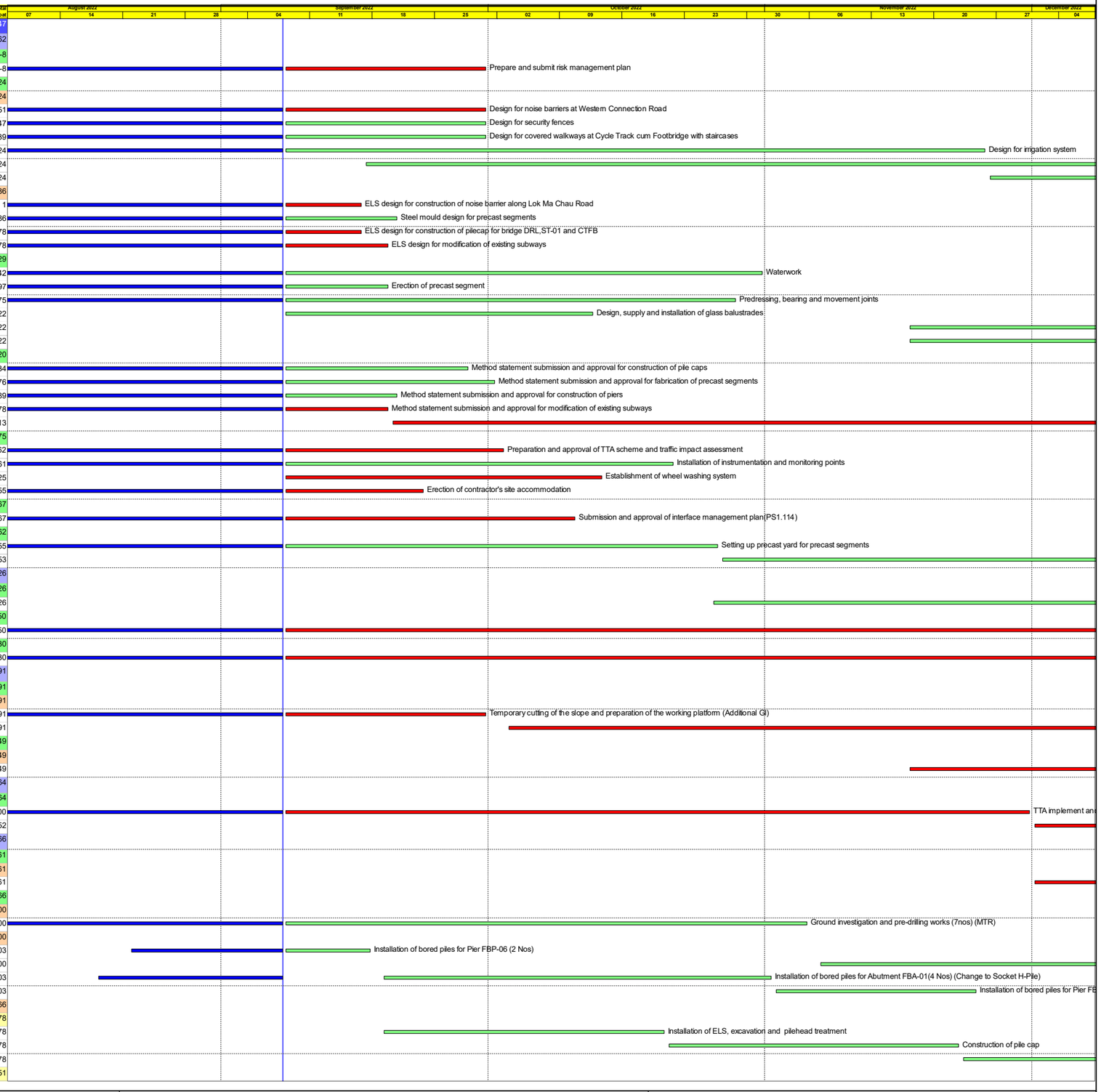
Project ID : YL12-2209
Layout : YL-02 3MRP
Date : 05-Oct-22/ Page 9 of 9

Three Month Rolling Programme			
Date	Revision	Checked	Approved
05-Oct-22	MPR No. 15		

Contract No. YL/2020/02 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 2 Western Connection Road Phase 2, Connection Roads to Fanling / San Tin Highway and Direct Road Link Phase 1

Contract No. YL/2020/02 Western Connection Road Phase 2, Connection Roads to Fanling/San Tin Highway and DRL Phase 1

Activity ID	Activity Name	Actual Duration	Remaining Duration	Start	Finish	Total Float
Western Connection Road Phase 2, Connection Roads to Fanling/San Tin Highway and DRL Pha		359	419	15-Sep-21 A	31-Oct-23	-47
General Submission,Preliminaries, Contractor's Design,Method Statement Submission and Apı		358	310	15-Sep-21 A	14-Jul-23	62
General Submission		307	20	15-Sep-21 A	30-Sep-22	-8
GSS1150	Prepare and submit risk management plan	307	20	15-Sep-21 A	30-Sep-22	-8
Contractor's Design Submission and Approval		269	188	29-Oct-21 A	14-Apr-23	24
Major Permanent Works Design		269	188	29-Oct-21 A	14-Apr-23	24
MPW1010	Design for noise barriers at Western Connection Road	269	20	29-Oct-21 A	30-Sep-22	-51
MPW1015	Design for security fences	230	20	14-Dec-21 A	30-Sep-22	47
MPW1020	Design for covered walkways at Cycle Track cum Footbridge with staircases	199	20	19-Jan-22 A	30-Sep-22	39
MPW1025	Design for irrigation system	114	68	28-Apr-22 A	25-Nov-22	24
MPW1035	Design for road lighting system	0	120	17-Sep-22	03-Feb-23	24
MPW1045	Design for interim water main along temporary access road TAR1	0	120	26-Nov-22	14-Apr-23	24
Major Temporary Works Design		247	11	24-Nov-21 A	20-Sep-22	86
MTW1030	ELS design for construction of noise barrier along Lok Ma Chau Road	247	8	24-Nov-21 A	16-Sep-22	1
MTW1055	Steel mould design for precast segments	212	11	04-Jan-22 A	20-Sep-22	86
MTW1080	ELS design for construction of pilecap for bridge DRL,ST-01 and CTFB	218	8	28-Dec-21 A	16-Sep-22	-78
MTW1100	ELS design for modification of existing subways	178	10	12-Feb-22 A	19-Sep-22	-78
Subcontracting		181	90	09-Feb-22 A	21-Dec-22	229
MTW3280	Waterwork	165	46	28-Feb-22 A	31-Oct-22	42
MTW3300	Erection of precast segment	181	10	09-Feb-22 A	19-Sep-22	197
MTW3320	Predressing, bearing and movement joints	121	44	20-Apr-22 A	28-Oct-22	275
MTW3340	Design, supply and installation of glass balustrades	0	30	08-Sep-22	12-Oct-22	22
MTW3380	Design, supply and installation of steelworks and noise barrier panels and covered walkway	0	30	17-Nov-22	21-Dec-22	22
MTW3400	Design, supply and installation of lighting system	0	30	17-Nov-22	21-Dec-22	22
Method Statement Submission and Approval for Major Construction Works		247	80	24-Nov-21 A	09-Dec-22	120
MSS1060	Method statement submission and approval for construction of pile caps	247	18	24-Nov-21 A	28-Sep-22	34
MSS1065	Method statement submission and approval for fabrication of precast segments	217	21	29-Dec-21 A	01-Oct-22	76
MSS1070	Method statement submission and approval for construction of piers	227	11	17-Dec-21 A	20-Sep-22	189
MSS1090	Method statement submission and approval for modification of existing subways	137	10	01-Apr-22 A	19-Sep-22	-78
MSS2010	Method statement submission and approval for erection of precast segments for ST01	0	70	20-Sep-22	09-Dec-22	-13
Preliminaries		309	44	03-Nov-21 A	21-Oct-22	75
PRE1020	Preparation and approval of TTA scheme and traffic impact assessment	309	25	03-Nov-21 A	02-Oct-22	-162
PRE1040	Installation of instrumentation and monitoring points	205	35	29-Dec-21 A	21-Oct-22	61
PRE1050	Establishment of wheel washing system	0	28	08-Sep-22	13-Oct-22	-25
PRE1060	Erection of contractor's site accommodation	251	13	03-Nov-21 A	23-Sep-22	-55
Interface Management Plan		290	25	15-Sep-21 A	10-Oct-22	-67
PRE1070	Submission and approval of interface management plan(PS1.114)	290	25	15-Sep-21 A	10-Oct-22	-67
Prefabrication of Precast Units		87	310	13-Jun-22 A	14-Jul-23	62
FPS1000	Setting up precast yard for precast segments	75	42	13-Jun-22 A	26-Oct-22	55
FPS1010	Fabrication of precast segments	0	210	27-Oct-22	14-Jul-23	53
Section 1 of the Works- Completion of the Works within Portion 1,2A,2B,3,5,7,8,9&10 of the Site		138	159	22-Mar-22 A	23-Mar-23	26
Laying of Interim Water Main along TAR1 in Portion 2A and 2B		0	121	26-Oct-22	23-Mar-23	26
S010240	Laying of interim water main CHA80 to CHA262.834 along TAR1 including testing in Portion 2B	0	121	26-Oct-22	23-Mar-23	26
Existing Cycle Track Subway Modification		45	83	18-Jul-22 A	16-Dec-22	-150
S011035	Construction of Temp Cycle Track (Delay Event#3) and demolition of existing cycle track ramp (Bay ST12 to Bay ST14)	45	83	18-Jul-22 A	16-Dec-22	-150
Retaining Walls		138	94	22-Mar-22 A	31-Dec-22	-30
S011060	Preparation and Construction of Retaining Wall RW9(16 bays) and backfilling	138	94	22-Mar-22 A	31-Dec-22	-30
Section 2A of the Works-Completion of the Works at Lok Ma Chau Road within Portion 1,5 and		173	339	09-Feb-22 A	31-Oct-23	-91
Retaining Walls		173	339	09-Feb-22 A	31-Oct-23	-91
Retaining Wall BP1		173	339	09-Feb-22 A	31-Oct-23	-91
S02A720	Temporary cutting of the slope and preparation of the working platform (Additional GI)	173	19	09-Feb-22 A	30-Sep-22	-91
S02A725	Installation of bored piles (46 nos)	0	320	03-Oct-22	31-Oct-23	-91
Noise Barriers		0	80	17-Nov-22	24-Feb-23	-49
Permanent Noise Barrier		0	80	17-Nov-22	24-Feb-23	-49
S02A330	Noise barrier NB13(1bay 12m) and NB14(68m)	0	80	17-Nov-22	24-Feb-23	-49
Section 2B of the Works-Completion of the Works at Junction of Castle Peak Road and Lok Ma		155	122	06-Apr-22 A	07-Jan-23	-64
Box Culvert Modification Works within Portion 10		155	122	06-Apr-22 A	07-Jan-23	-64
S02B110	TTA implement and Installation of ELS and construction of box culvert from CHA 0 to CHA13.715	126	69	06-Apr-22 A	30-Nov-22	-200
S02B120	Construction of temporary drainage channel and diversion of the existing drainage	0	30	01-Dec-22*	07-Jan-23	-52
Section 2C of the Works- Completion of Substructure and Piling Works of ST01 and CTFB		181	102	27-Jan-22 A	11-Jan-23	166
Substructure and Piling Works for Bridge ST01		0	16	01-Dec-22	19-Dec-22	-161
Preparation Works		0	16	01-Dec-22	19-Dec-22	-161
S02C115	Modification of existing channel to facilitate ST01-B01 piling works	0	16	01-Dec-22	19-Dec-22	-161
Substructure and Piling Works for CTFB		181	102	27-Jan-22 A	11-Jan-23	166
G.I and Pre-drilling		181	48	27-Jan-22 A	05-Nov-22	100
S02C650	Ground investigation and pre-drilling works (7nos) (MTR)	181	48	27-Jan-22 A	05-Nov-22	100
Piling Works		18	88	18-Aug-22 A	22-Dec-22	100
S02C662	Installation of bored piles for Pier FBP-06 (2 Nos)	15	8	22-Aug-22 A	17-Sep-22	103
S02C664	Installation of bored piles for abutment FBA-02 (4 Nos)	0	40	07-Nov-22	22-Dec-22	100
S02C682	Installation of bored piles for Abutment FBA-01(4 Nos) (Change to Socket H-Pile)	18	36	18-Aug-22 A	01-Nov-22	103
S02C684	Installation of bored piles for Pier FBP-01(2 Nos)	0	20	02-Nov-22	24-Nov-22	103
Pilehead Treatment,Pile Cap and Pier/Abutment Construction		0	94	19-Sep-22	11-Jan-23	166
At Pier FBP-06		0	82	19-Sep-22	24-Dec-22	178
S02C748	Installation of ELS, excavation and pilehead treatment	0	26	19-Sep-22	20-Oct-22	178
S02C750	Construction of pile cap	0	28	21-Oct-22	22-Nov-22	178
S02C752	Construction of pier FBP-06	0	28	23-Nov-22	24-Dec-22	178
At Abutment FBA-01		0	58	02-Nov-22	11-Jan-23	151



Actual Work
Remaining Work
Critical Remaining Work
Milestone

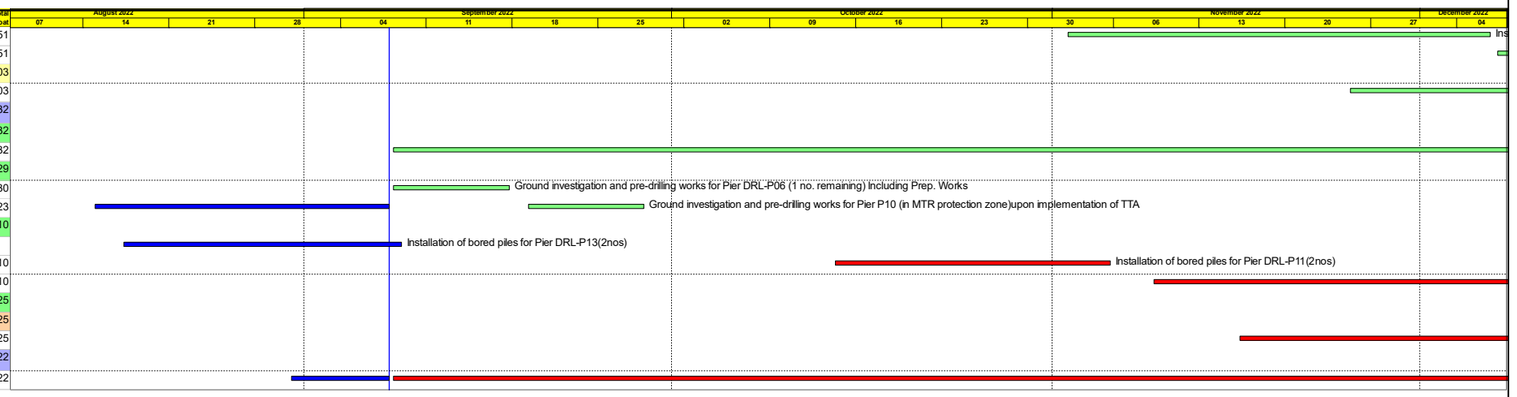
中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

Three Month Rolling Programme (Data Date : 08-Sep-22)

3 Months Rolling Programme			
Date	Revision	Checked	Approved
08-Sep-22	3 Months Rolling Prog...	DML	RS

Contract No. YL/2020/02 Western Connection Road Phase 2, Connection Roads to Fanling/San Tin Highway and DRL Phase 1

Activity ID	Activity Name	Actual Duration	Remaining Duration	Start	Finish	Total Float
S02C1060	Installation of ELS, excavation and pilehead treatment	0	30	02-Nov-22	06-Dec-22	151
S02C1070	Construction of pile cap	0	28	07-Dec-22	11-Jan-23	151
At Pier FBP-01		0	26	25-Nov-22	24-Dec-22	103
S02C760	Installation of ELS, excavation and pilehead treatment	0	26	25-Nov-22	24-Dec-22	103
Section 3 of the Works- Completion of the works of Direct Road Link within Portion 1,2A,2B, 5 a		25	150	15-Aug-22 A	04-Feb-23	32
Preparation Works		0	150	08-Sep-22	04-Feb-23	32
S033170	Preparation works for DRL-P07 (Permit from DSD, Temp Works Design & Approval + Construction of Working Platform)	0	150	08-Sep-22	04-Feb-23	32
G.I and Pre-drilling		24	21	15-Aug-22 A	28-Sep-22	29
S033130.1	Ground investigation and pre-drilling works for Pier DRL-P06 (1 no. remaining) Including Prep. Works	0	10	08-Sep-22	17-Sep-22	30
S033150	Ground investigation and pre-drilling works for Pier P10 (in MTR protection zone)upon implementation of TTA	21	9	15-Aug-22 A	28-Sep-22	23
Piling Works		20	52	17-Aug-22 A	13-Dec-22	-10
S033220	Installation of bored piles for Pier DRL-P13(2nos)	20	0	17-Aug-22 A	09-Sep-22 A	
S033260	Installation of bored piles for Pier DRL-P11(2nos)	0	20	14-Oct-22	05-Nov-22	-10
S033280	Installation of bored piles for Pier DRL-P10(2nos) upon implementation of TTA	0	30	09-Nov-22	13-Dec-22	-10
Pilehead Treatment and Construction of Pile Cap		0	26	16-Nov-22	15-Dec-22	-25
At Pier DRL P-13		0	26	16-Nov-22	15-Dec-22	-25
S033500	Installation of ELS, excavation and pilehead treatment	0	26	16-Nov-22	15-Dec-22	-25
Section 5 of the Works- Completion of the works within Portion 6 of the Site		7	167	31-Aug-22 A	31-Mar-23	-22
S050100	Construction of Pai Lau	7	167	31-Aug-22 A	31-Mar-23	-22



Actual Work
Remaining Work
Critical Remaining Work
Milestone

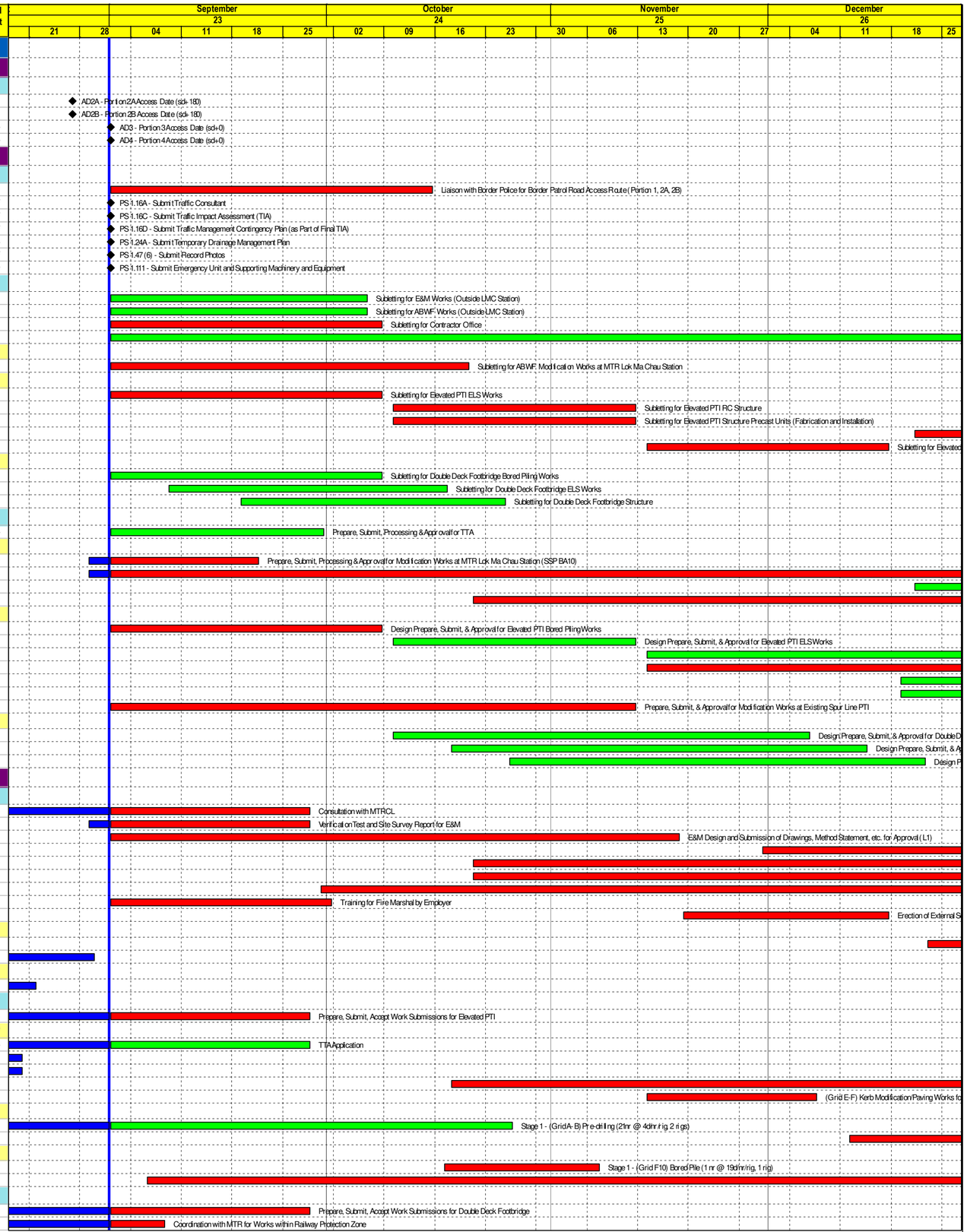
中國路橋工程有限責任公司
CHINA ROAD AND BRIDGE CORPORATION

Three Month Rolling Programme (Data Date : 08-Sep-22)

3 Months Rolling Programme			
Date	Revision	Checked	Approved
08-Sep-22	3 Months Rolling Prog...	DML	RS

Contract No. YL/2021/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 3 Direct Road Link Phase 2

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float
Contract No. YL/2021/01 - Contract 3 - Updated Programme (Au		446	14-Mar-22 A	03-Jun-25	28-Feb-22	26-Aug-26	175
Contract Data Part 1		0	27-Aug-22 A	01-Sep-22	28-Feb-22	01-Sep-22	0
Access Dates to Part of the Site		0	27-Aug-22 A	01-Sep-22	28-Feb-22	01-Sep-22	0
AD2A	AD2A - Portion 2A Access Date (sd+ 180)	0	27-Aug-22 A		01-Sep-22		
AD2B	AD2B - Portion 2B Access Date (sd+ 180)	0	27-Aug-22 A		01-Sep-22		
AD3	AD3 - Portion 3 Access Date (sd+0)	0	01-Sep-22*		28-Feb-22		-185
AD4	AD4 - Portion 4 Access Date (sd+0)	0	01-Sep-22*		28-Feb-22		-185
Submissions and Preparation		129	29-Aug-22 A	02-Aug-23	28-Feb-22	26-Aug-26	436
Preliminary Submissions		15	01-Sep-22	15-Oct-22	28-Feb-22	27-Aug-22	-16
PRE-026	Liaison with Border Police for Border Patrol Road Access Route (Portion 1, 2A, 2B)	36	01-Sep-22	15-Oct-22	18-Jul-22	27-Aug-22	-39
PRE-300	PS 1.16A - Submit Traffic Consultant	0		01-Sep-22*		07-Mar-22	-177
PRE-340	PS 1.16C - Submit Traffic Impact Assessment (TIA)	0		01-Sep-22*		07-Mar-22	-177
PRE-350	PS 1.16D - Submit Traffic Management Contingency Plan (as Part of Final TIA)	0		01-Sep-22*		07-Mar-22	-177
PRE-370	PS 1.24A - Submit Temporary Drainage Management Plan	0		01-Sep-22*		28-Feb-22	-184
PRE-380	PS 1.47 (6) - Submit Record Photos	0		01-Sep-22*		07-Mar-22	-177
PRE-460	PS 1.111 - Submit Emergency Unit and Supporting Machinery and Equipment	0		01-Sep-22*		14-Mar-22	-170
Subletting		122	01-Sep-22	01-Feb-23	11-Jun-22	10-May-25	669
PRE-570	Subletting for E&M Works (Outside LMC Station)	28	01-Sep-22	06-Oct-22	24-Feb-23	28-Mar-23	141
PRE-575	Subletting for ABWF Works (Outside LMC Station)	28	01-Sep-22	06-Oct-22	29-Jul-24	29-Aug-24	561
PRE-770	Subletting for Contractor Office	30	01-Sep-22	08-Oct-22*	25-Jun-22	30-Jul-22	-57
PRE-900	Subletting for Other Sub-contractors, Consultants, Service Providers	120	01-Sep-22	30-Jan-23	07-Dec-24	10-May-25	671
Modification Works at MTR Lok Ma Chau Station		40	01-Sep-22	20-Oct-22	11-Jun-22	28-Jul-22	-69
PRE-255	Subletting for ABWF Modification Works at MTR Lok Ma Chau Station	40	01-Sep-22	20-Oct-22	11-Jun-22	28-Jul-22	-69
Elevated PTI		122	01-Sep-22	01-Feb-23	21-Jun-22	19-Dec-22	-31
PRE-270	Subletting for Elevated PTI ELS Works	30	01-Sep-22	08-Oct-22	21-Jun-22	26-Jul-22	-61
PRE-280	Subletting for Elevated PTI RC Structure	30	10-Oct-22	12-Nov-22	27-Jul-22	30-Aug-22	-61
PRE-285	Subletting for Elevated PTI Structure Precast Units (Fabrication and Installation)	30	10-Oct-22	12-Nov-22	31-Aug-22	07-Oct-22	-31
PRE-295	Subletting for Elevated PTI Lift and Escalator Installation	30	21-Dec-22	01-Feb-23	15-Nov-22	19-Dec-22	-31
PRE-950	Subletting for Elevated PTI Lighting System	30	14-Nov-22	17-Dec-22*	31-Aug-22	07-Oct-22	-61
Double Deck Footbridge		44	01-Sep-22	25-Oct-22	12-Sep-22	26-Jan-23	73
PRE-310	Subletting for Double Deck Footbridge Bored Piling Works	30	01-Sep-22	08-Oct-22	12-Sep-22	18-Oct-22	8
PRE-320	Subletting for Double Deck Footbridge ELS Works	30	09-Sep-22	17-Oct-22	07-Dec-22	13-Jan-23	73
PRE-330	Subletting for Double Deck Footbridge Structure	30	19-Sep-22	25-Oct-22	15-Dec-22	26-Jan-23	73
Design/ MS/ Temporary Works Submissions		129	29-Aug-22 A	02-Aug-23	30-Jun-22	26-Aug-26	436
PRE-200	Prepare, Submit, Processing & Approval for TTA	30	01-Sep-22	30-Sep-22	28-Jul-26	26-Aug-26	1426
Modification Works at MTR Lok Ma Chau Station		155	29-Aug-22 A	08-Mar-23	30-Jun-22	05-Oct-23	171
PRE-220	Prepare, Submit, Processing & Approval for Modification Works at MTR Lok Ma Chau Station (SSP BA10)	60	29-Aug-22 A	21-Sep-22	29-Jul-22	17-Aug-22	-29
PRE-720	Design Prepare, Submit, & Approval for LMC Station Modification E&M Installation	150	29-Aug-22 A	02-Mar-23	30-Jun-22	22-Dec-22	-53
PRE-730	Design Prepare, Submit, & Approval for LMC Station Demolition Works	60	21-Dec-22	08-Mar-23	26-Jul-23	05-Oct-23	171
PRE-735	Design Prepare, Submit, & Approval for Architectural Builder's Works and Finishes	60	21-Oct-22	31-Dec-22	29-Jul-22	10-Oct-22	-69
Elevated PTI		270	01-Sep-22	02-Aug-23	12-Jul-22	17-Nov-23	89
PRE-600	Design Prepare, Submit, & Approval for Elevated PTI Bored Piling Works	30	01-Sep-22	08-Oct-22	25-Jul-22	27-Aug-22	-33
PRE-610	Design Prepare, Submit, & Approval for Elevated PTI ELS Works	30	10-Oct-22	12-Nov-22	06-Dec-22	12-Jan-23	49
PRE-620	Design Prepare, Submit, & Approval for Elevated PTI Structure	60	14-Nov-22	30-Jan-23	13-Jan-23	28-Mar-23	49
PRE-621	Design Prepare, Submit, & Approval for Elevated PTI Precast Units	60	14-Nov-22	30-Jan-23	19-Oct-22	29-Dec-22	-22
PRE-640	Design Prepare, Submit, & Approval for Elevated PTI Road Lighting Sytem	180	19-Dec-22	02-Aug-23	14-Apr-23	17-Nov-23	89
PRE-645	Design Prepare, Submit, & Approval for Elevated PTI E&M System	180	19-Dec-22	02-Aug-23	14-Apr-23	17-Nov-23	89
PRE-700	Prepare, Submit, & Approval for Modification Works at Existing Spur Line PTI	60	01-Sep-22	12-Nov-22	12-Jul-22	20-Sep-22	-44
Double Deck Footbridge		64	10-Oct-22	22-Dec-22	19-Oct-22	25-Mar-23	73
PRE-515	Design Prepare, Submit, & Approval for Double Deck Footbridge Bored Piling Works	50	10-Oct-22	06-Dec-22	19-Oct-22	15-Dec-22	8
PRE-650	Design Prepare, Submit, & Approval for Double Deck Footbridge ELS Works	50	18-Oct-22	14-Dec-22	14-Jan-23	17-Mar-23	73
PRE-660	Design Prepare, Submit, & Approval for Double Deck Footbridge Structure	50	26-Oct-22	22-Dec-22	27-Jan-23	25-Mar-23	73
Construction		170	14-Mar-22 A	23-Jun-23	30-Jun-22	26-Aug-26	452
Modification Works at MTR Lok Ma Chau Station		133	28-Mar-22 A	21-Feb-23	30-Jun-22	03-May-23	-17
LMC-100	Consultation with MTRCL	50	28-Mar-22 A	28-Sep-22	30-Jun-22	27-Jul-22	-53
LMC-105	Verification Test and Site Survey Report for E&M	26	29-Aug-22 A	28-Sep-22	30-Jun-22	27-Jul-22	-53
LMC-106	E&M Design and Submission of Drawings, Method Statement, etc. for Approval (L1)	65	01-Sep-22	18-Nov-22	30-Jun-22	15-Sep-22	-53
LMC-107	E&M Design and Submission of Drawings, Method Statement, etc. for Approval (L2)	65	30-Nov-22	21-Feb-23	29-Sep-22	15-Dec-22	-51
LMC-108	ABWF Submission of Shop Drawings and Method Statement for Approval (L1)	60	21-Oct-22	31-Dec-22	29-Jul-22	10-Oct-22	-69
LMC-109	ABWF Submission of Shop Drawings and Method Statement for Approval (L2)	60	21-Oct-22	31-Dec-22*	29-Jul-22	10-Oct-22	-69
LMC-120	Submission of FSI 314	74	30-Sep-22	29-Dec-22*	30-Sep-22	29-Dec-22	0
LMC-135	Training for Fire Marshal by Employer	31	01-Sep-22	01-Oct-22*	26-Aug-22	25-Sep-22	-6
LMC-150	Erection of External Scaffold and Platform for Delivery of Materials to Station	25	19-Nov-22	17-Dec-22	16-Sep-22	17-Oct-22	-53
Level 1 + 1M (Mezzanine)		102	10-Aug-22 A	12-Jan-23	22-Oct-22	03-May-23	-37
LMC-250	LMC L1 - E&M Diversion Works including SWP Pipes, Lighting, Power Sockets, etc. Near Opening	15	23-Dec-22	12-Jan-23	22-Oct-22	09-Nov-22	-52
LMC-366	LMC L1 - Construct Hoarding at Main Corridor	15	10-Aug-22 A	30-Aug-22 A	03-May-23	03-May-23	
Level 2 + 2M (Mezzanine)		17	10-Aug-22 A	22-Aug-22 A	22-Apr-23	22-Apr-23	
LMC-470	LMC L2 - Construct Hoarding at main Corridor	17	10-Aug-22 A	22-Aug-22 A	22-Apr-23	22-Apr-23	
Elevated PTI		376	14-Mar-22 A	23-Jun-23	02-Aug-22	26-Aug-26	940
EPTI-375	Prepare, Submit, Accept Work Submissions for Elevated PTI	60	14-Mar-22 A	28-Sep-22	02-Aug-22	27-Aug-22	-26
Preparation		250	26-May-22 A	14-Mar-23	24-Aug-22	26-Aug-26	1020
EPTI-1090	TTA Application	45	26-May-22 A	28-Sep-22	31-Jul-26	26-Aug-26	1154
EPTI-1140	Stage 1 - (Grid A- B, Line 1-6) Demolition of Existing Structure	30	15-Aug-22 A	20-Aug-22 A	26-Aug-26	26-Aug-26	
EPTI-1150	Stage 1 - (Grid A- B, Line 7-10) Demolition of Existing Structure	30	15-Aug-22 A	20-Aug-22 A	20-Sep-22	20-Sep-22	
EPTI-1380	Stage 2 - (Grid A- G) Underground Utility Diversion & Road Lighting Diversion	120	18-Oct-22	14-Mar-23	24-Aug-22	17-Jan-23	-44
EPTI-1390	(Grid E-F) Kerb Modification/Paving Works for TTA Stage 2	21	14-Nov-22	07-Dec-22	21-Sep-22	17-Oct-22	-44
Pre-drilling Works (65 nr)		101	07-Jul-22 A	06-Jan-23	20-Sep-22	12-Nov-22	-44
EPTI-1160	Stage 1 - (Grid A- B) Pre-drilling (21nr @ 4dhr/rig, 2 rigs)	42	07-Jul-22 A	26-Oct-22	20-Sep-22	12-Nov-22	15
EPTI-1410	Stage 2 - (Grid C) Pre-drilling (5nr @ 4d/nr/rig, 1 rig)	20	12-Dec-22	06-Jan-23	21-Oct-22	12-Nov-22	-44
Piling Works (65 nr)		233	06-Sep-22	23-Jun-23	29-Aug-22	15-Jun-23	-6
EPTI-1170	Stage 1 - (Grid F10) Bored Pile (1 nr @ 19d/nr/rig, 1 rig)	19	17-Oct-22	07-Nov-22	29-Aug-22	20-Sep-22	-39
EPTI-1180	Stage 1 & 2 - (Grid A- E) Bored Pile (31nr @ 15dhr/rig, 2 rigs)	233	06-Sep-22	23-Jun-23	30-Aug-22	15-Jun-23	-6
Double Deck Footbridge		220	07-Jun-22 A	07-Feb-23	18-Jul-22	15-Dec-22	-39
DDF-070	Prepare, Submit, Accept Work Submissions for Double Deck Footbridge	52	11-Jul-22 A	28-Sep-22	18-Jul-22	12-Aug-22	-39
DDF-075	Coordination with MTR for Works within Railway Protection Zone	52	11-Jul-22 A	08-Sep-22	18-Jul-22	25-Jul-22	-39



Paul Y. – Chun Wo – CRCC JV

Remaining Level of Effort ◆ ◆ Milesto...
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work

Contract YL/2021/01 - Lok Ma Chau Loop Main Works Package 1 - Contract 3

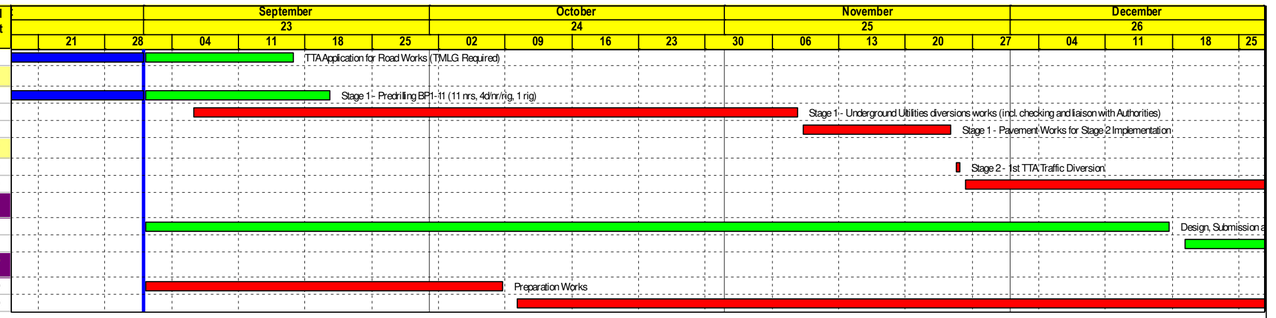
Three Month Rolling Programme

Project ID : YLC3-FP3-UPD7-220914
Layout : YL202101 C3 MPR App B-3MRP
Date : 14-Sep-22 / Page 1 of 2

Three Month Rolling Programme

Date	Revision	Checked	Approved
14-Sep-22	MPR No. 7		

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Late Start	Late Finish	Total Float
DDF-080	TTA Application for Road Works (TMLG Required)	69	27-Jun-22A	16-Sep-22	09-Sep-22	24-Sep-22	7
Stage 1		105	07-Jun-22A	24-Nov-22	22-Jul-22	15-Dec-22	18
DDF-1010	Stage 1 - Predrilling BP1-11 (11 nrs, 4d/nr/rig, 1 rig)	44	07-Jun-22A	20-Sep-22	28-Nov-22	15-Dec-22	72
DDF-1020	Stage 1 - Underground Utilities diversions works (incl. checking and liaison with Authorities)	52	06-Sep-22	08-Nov-22	22-Jul-22	21-Sep-22	-39
DDF-1030	Stage 1 - Pavement Works for Stage 2 Implementation	14	09-Nov-22	24-Nov-22	22-Sep-22	10-Oct-22	-39
Stage 2		57	25-Nov-22	07-Feb-23	11-Oct-22	15-Dec-22	-39
DDF-1040	Stage 2 - 1st TTA Traffic Diversion	1	25-Nov-22	25-Nov-22	11-Oct-22	11-Oct-22	-39
DDF-1050	Stage 2 - Underground Utilities Diversion & Road Lighting Diversion (Stage 2)	56	26-Nov-22	07-Feb-23	12-Oct-22	15-Dec-22	-39
Portion 3 (Access Not Granted)		135	01-Sep-22	16-Feb-23	07-Dec-24	28-May-25	671
P3-105	Design, Submission and Approval	90	01-Sep-22	17-Dec-22	07-Dec-24	29-Mar-25	671
P3-110	Coordination with C1 and Site Clearance	45	19-Dec-22	16-Feb-23	31-Mar-25	28-May-25	671
Portion 4 (Access Not Granted)		810	01-Sep-22	03-Jun-25	01-Mar-22	23-Nov-24	-150
P4-105	Preparation Works	30	01-Sep-22	08-Oct-22	01-Mar-22	04-Apr-22	-150
P4-110	Upkeeping and Maintenance of Completed Works at Portion 4	780	10-Oct-22	03-Jun-25	06-Apr-22	23-Nov-24	-150



Paul Y. – Chun Wo – CRCC JV

Remaining Level of Effort ◆ Milesto...
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work

Contract YL/2021/01 - Lok Ma Chau Loop Main Works Package 1 - Contract 3

Three Month Rolling Programme

Project ID : YLC3-FP3-UPD7-220914
Layout : YL202101 C3 MPR App B-3MRP
Date : 14-Sep-22 / Page 2 of 2

Three Month Rolling Programme

Date	Revision	Checked	Approved
14-Sep-22	MPR No. 7		

APPENDIX B
ACTION AND LIMIT LEVELS

Appendix B - Action and Limit Levels

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

Location	Action Level, µg/m^3	Limit Level, µg/m^3
DMS – 1a	353	500
DMS – 2A	370	
DMS – 3	351	
DMS – 4A	350	

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

Location	Action Level, µg/m^3	Limit Level, µg/m^3
DMS – 1	184	260
DMS – 2A	166	
DMS – 3	166	
DMS – 4A	152	

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 Action and Limit Levels for Water Quality

Parameter (unit)	Water Depth	Action Level	Limit Level
DO (mg/L)	Depth average	IS1: 7.0 / NA(4) IS2: 5.3 / NA(4) IS4: 4.1 / NA(4) IS6: 5.9 BS1:3.9 / NA(4)	IS1: 6.8 or 4(4) IS2: 5.2 or 4(4) IS4: 3.8 or 4(4) IS6: 5.8 BS1: 3.7 or 4(4)
Turbidity (NTU)	Depth average	IS1: 27.7 IS2: 35.5 IS4: 70.9 BS1:29.9	IS1: 29.9 IS2: 38.1 IS4: 74.6 BS1:32.6
		IS6: 120% of upstream control station (CS5)	IS6: 130% of upstream control station (CS5)
SS (mg/L)	Depth average	IS1: 28.0 IS2: 39.8 IS4: 155 BS1:36.5	IS1: 28.8 IS2: 41.2 IS4: 175 BS1:36.9
		IS6: 120% of upstream control station (CS5)	IS6: 130% of upstream control station (CS5)

Note:
(1) Depth-averaged was calculated by taking the arithmetic means of reading of all three depths
(2) For DO, non-compliance of the water quality limit would occur when monitoring result at impact stations was lower that the limit.
(3) For SS & turbidity, non-compliance of the water quality limits would occur when monitoring result at impact stations was higher than the limits.
(4) The proposal of adopting 4 mg/L as the Limit Level of DO for the period from April to September due to seasonal change of DO was accepted by EPD via email on 10 Dec 2019.

APPENDIX C
COPIES OF CALIBRATION CERTIFCATES

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

File No. WMA21009/04/0008

Station DMS-2A - Village House along Lok Ma Chau Road
Operator: CH

Date: 20-Jul-22
Next Due Date: 19-Sep-22

Equipment No.: WA-12-04
Serial No. 1659

Ambient Condition			
Temperature, Ta (K)	303	Pressure, Pa (mmHg)	759.3

Orifice Transfer Standard Information					
Serial No.	2896	Slope, mc	0.0588	Intercept, bc	-0.01030
Last Calibration Date:	20-Jan-22	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	20-Jan-23	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	12.4	3.49	59.59	7.8	2.77
2	10.7	3.24	55.37	6.5	2.53
3	8.8	2.94	50.23	5.4	2.30
4	6.4	2.51	42.86	4.0	1.98
5	3.6	1.88	32.19	2.3	1.50

By Linear Regression of Y on X

Slope , mw = 0.0454 **Intercept, bw =** 0.0334

Correlation coefficient* = 0.9993

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.02**

Remarks:

Conducted by: Ho Ka Ch Signature: Date: 20/7/2022
Checked by: Ho Man Hei Signature: Date: 20/7/2022

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

File No. WMA21009/04/0009

Station DMS-2A - Village House along Lok Ma Chau Road
Operator: CH
Date: 16-Sep-22
Next Due Date: 15-Nov-22
Equipment No.: WA-12-04
Serial No. 1659

Ambient Condition			
Temperature, Ta (K)	308	Pressure, Pa (mmHg)	754.7

Orifice Transfer Standard Information					
Serial No.	2896	Slope, mc	0.0588	Intercept, bc	-0.01030
Last Calibration Date:	20-Jan-22	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	20-Jan-23	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	12.1	3.41	58.21	7.2	2.63
2	10.3	3.15	53.72	6.1	2.42
3	8.9	2.92	49.95	5.4	2.28
4	6.2	2.44	41.72	4.0	1.96
5	3.5	1.83	31.39	2.3	1.49

By Linear Regression of Y on X

Slope , mw = 0.0420 **Intercept, bw =** 0.1823

Correlation coefficient* = 0.9993

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ 4.11

Remarks:

Conducted by: Ho Ka Chu Signature: Date: 16/9/2022
Checked by: Chu Man Hei Signature: Date: 16/9/2022

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

File No. WMA21009/24/0008

Station DMS-3 - Village House along Old Border Road
Operator: CH

Date: 20-Jul-22
Next Due Date: 19-Sep-22

Equipment No.: WA-12-24
Serial No. 10576

Ambient Condition			
Temperature, Ta (K)	304	Pressure, Pa (mmHg)	759.8

Orifice Transfer Standard Information					
Serial No.	2896	Slope, mc	0.0588	Intercept, bc	-0.01030
Last Calibration Date:	20-Jan-22	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	20-Jan-23	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	12.8	3.54	60.46	8.2	2.83
2	10.1	3.15	53.72	6.4	2.50
3	8.0	2.80	47.83	5.0	2.21
4	6.5	2.52	43.13	4.3	2.05
5	4.4	2.08	35.52	2.8	1.66

By Linear Regression of Y on X

Slope , mw = 0.0466 **Intercept, bw =** 0.0102

Correlation coefficient* = 0.9988

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.14**

Remarks:

Conducted by: Ka Ch Signature: Date: 20/7/2022
Checked by: LEE MAN HEI Signature: Date: 20/7/2022

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

File No. WMA21009/24/0009

Station DMS-3 - Village House along Old Border Road
Operator: CH
Date: 16-Sep-22
Next Due Date: 15-Nov-22
Equipment No.: WA-12-24
Serial No. 10576

Ambient Condition			
Temperature, Ta (K)	307.5	Pressure, Pa (mmHg)	754.6

Orifice Transfer Standard Information					
Serial No.	2896	Slope, mc	0.0588	Intercept, bc	-0.01030
Last Calibration Date:	20-Jan-22	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	20-Jan-23	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	12.7	3.50	59.68	7.7	2.72
2	10.5	3.18	54.28	6.5	2.50
3	8.1	2.79	47.69	5.1	2.22
4	6.6	2.52	43.07	4.1	1.99
5	4.3	2.03	34.80	2.7	1.61

By Linear Regression of Y on X

Slope , mw = 0.0449 **Intercept, bw =** 0.0576

Correlation coefficient* = 0.9996

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.10**

Remarks:

Conducted by: Ho Ka Ho Signature: Date: 16/9/2022
Checked by: Ho MAN HEI Signature: Date: 16/9/2022

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

File No. WMA21009/07/0008

Station DMS-4A - Hong Kong Police Force, Lok Ma Chau Operation Base at Horn Hill
Operator: CH

Date: 20-Jul-22
Next Due Date: 19-Sep-22

Equipment No.: WA-12-07
Serial No. 1801

Ambient Condition			
Temperature, Ta (K)	304.5	Pressure, Pa (mmHg)	759.8

Orifice Transfer Standard Information					
Serial No.	2896	Slope, mc	0.0588	Intercept, bc	-0.01030
Last Calibration Date:	20-Jan-22	**mc x Qstd + bc = $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$**			
Next Calibration Date:	20-Jan-23	**Qstd = $\{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ -bc} / mc**			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	12.1	3.44	58.74	7.6	2.73
2	10.1	3.14	53.68	6.4	2.50
3	8.8	2.93	50.12	5.8	2.38
4	6.9	2.60	44.40	4.3	2.05
5	3.4	1.82	31.22	2.2	1.47

By Linear Regression of Y on X

Slope , mw = 0.0463 **Intercept, bw =** 0.0211

Correlation coefficient* = 0.9987

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

Therefore, Set Point; W = (mw x Qstd + bw)^2 x (760 / Pa) x (Ta / 298) = **4.14**

Remarks:

Conducted by: Ho Ka Chu Signature: Date: 20/7/2022
Checked by: LEE MAN HEI Signature: Date: 20/7/2022

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High-Volume TSP Sampler
5-POINT CALIBRATION DATA SHEET

File No. WMA21009/07/0009

Station: DMS-4A - Hong Kong Police Force, Lok Ma Chau Operation Base at Horn Hill
Operator: CH
Date: 16-Sep-22
Next Due Date: 15-Nov-22
Equipment No.: WA-12-07
Serial No. 1801

Ambient Condition			
Temperature, Ta (K)	306.8	Pressure, Pa (mmHg)	754.1

Orifice Transfer Standard Information					
Serial No.	2896	Slope, mc	0.0588	Intercept, bc	-0.01030
Last Calibration Date:	20-Jan-22	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	20-Jan-23	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler

Calibration Point	Orfice			HVS	
	ΔH (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) **X - axis**	ΔW (HVS), in. of water	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ **Y-axis**
1	12.4	3.46	59.02	7.3	2.65
2	10.6	3.20	54.58	6.2	2.44
3	8.5	2.86	48.89	5.0	2.20
4	7.0	2.60	44.39	4.5	2.08
5	3.6	1.86	31.88	2.3	1.49

By Linear Regression of Y on X

Slope , mw = 0.0421 **Intercept, bw =** 0.1623

Correlation coefficient* = 0.9975

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ **4.04**

Remarks:

Conducted by: Ho Ka Chu Signature: Date: 16/9/2022
Checked by: Ng Man Hei Signature: Date: 16/9/2022

TISCH Environmental

RECALIBRATION DUE DATE:
January 20, 2023

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	January 20, 2022	**Rootsmeter S/N:** 438320	**Ta:** 293	°K
Operator:	Jim Tisch		**Pa:** 759.7	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **2896**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4610	3.2	2.00
2	3	4	1	1.0360	6.4	4.00
3	5	6	1	0.9190	7.9	5.00
4	7	8	1	0.8780	8.8	5.50
5	9	10	1	0.7250	12.7	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
1.0124	0.6929	1.4260	0.9958	0.6816	0.8783
1.0081	0.9731	2.0166	0.9916	0.9571	1.2420
1.0061	1.0948	2.2546	0.9896	1.0768	1.3887
1.0049	1.1445	2.3647	0.9884	1.1258	1.4564
0.9997	1.3789	2.8519	0.9833	1.3563	1.7565
QSTD	**m=**	**2.07510**	**QA**	**m=**	**1.29939**
	b=	**-0.01030**		**b=**	**-0.00634**
	r=	**0.99995**		**r=**	**0.99995**

Calculations

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

For subsequent flow rate calculations:

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

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

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

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

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

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

www.tisch-env.com
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FAX: (513)467-9009

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TEST REPORT

APPLICANT: **Wellab Limited**
(EM&A Department)
Room 1808, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	36896
Date of Issue:	2022-07-11
Date Received:	2022-07-08
Date Tested:	2022-07-09
Date Completed:	2022-07-11
Next Due Date:	2022-09-10
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.	: 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

****

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)
Room 1808, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	37140
Date of Issue:	2022-09-13
Date Received:	2022-09-10
Date Tested:	2022-09-10
Date Completed:	2022-09-13
Next Due Date:	2022-11-12
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.	: 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)	1.089

****

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

PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab Limited**
(EM&A Department)
Room 1808, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	36896B
Date of Issue:	2022-07-11
Date Received:	2022-07-08
Date Tested:	2022-07-09
Date Completed:	2022-07-11
Next Due Date:	2022-09-10
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.	: X23809
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-03

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.094

****

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PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab Limited**
(EM&A Department)
Room 1808, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	37140B
Date of Issue:	2022-09-13
Date Received:	2022-09-10
Date Tested:	2022-09-10
Date Completed:	2022-09-13
Next Due Date:	2022-11-12
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.	: X23809
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-03

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.091

****

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PATRICK TSE
General Manager

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TEST REPORT

APPLICANT: **Wellab Limited**
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Room 1808, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	36896C
Date of Issue:	2022-07-11
Date Received:	2022-07-08
Date Tested:	2022-07-09
Date Completed:	2022-07-11
Next Due Date:	2022-09-10
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
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)	1.081

****

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TEST REPORT

APPLICANT: **Wellab Limited**
(EM&A Department)
Room 1808, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	37140C
Date of Issue:	2022-09-13
Date Received:	2022-09-10
Date Tested:	2022-09-10
Date Completed:	2022-09-13
Next Due Date:	2022-11-12
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
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)	1.076

****

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TEST REPORT

APPLICANT: **Wellab Limited**
(EM&A Department)
Room 1808, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	37019A
Date of Issue:	2022-08-29
Date Received:	2022-08-26
Date Tested:	2022-08-26
Date Completed:	2022-08-29
Next Due Date:	2022-10-28
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.	: X24477
Flow rate	: 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)	1.105

****

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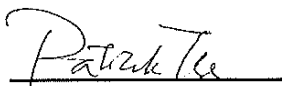

PATRICK TSE
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TEST REPORT

APPLICANT: **Wellab Limited**
(EM&A Department)
Room 1808, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	37019B
Date of Issue:	2022-08-29
Date Received:	2022-08-26
Date Tested:	2022-08-26
Date Completed:	2022-08-29
Next Due Date:	2022-10-28
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.	: X24479
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
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)	1.085

****

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

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TEST REPORT

APPLICANT: **Wellab Limited**
(EM&A Department)
Room 1808, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	37019D
Date of Issue:	2022-08-29
Date Received:	2022-08-26
Date Tested:	2022-08-26
Date Completed:	2022-08-29
Next Due Date:	2022-10-28
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.	: X24478
Flow rate	: 0.1 cfm
Zero Count Test	: 0 count per 1 minute
Equipment No.	: WA-01-10

Test Conditions:

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

Test Specifications & Methodology:

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

Results:

Correlation Factor (CF)	1.113

****

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

PATRICK TSE
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TEST REPORT

APPLICANT: **Wellab Limited**
(EM&A Department)
Room 1808, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	36405E
Date of Issue:	2022-03-07
Date Received:	2022-03-04
Date Tested:	2022-03-04
Date Completed:	2022-03-07
Next Due Date:	2023-03-06
Page:	1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for calibration:

Description	: Sound Level Meter
Manufacturer	: BSWA
Model No.	: BSWA 308
Serial No.	: 580008
Equipment No.	: WN-01-06

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:
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TEST REPORT

APPLICANT: **Wellab Limited**
(EM&A Department)
Room 1808, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	36481A
Date of Issue:	2022-03-14
Date Received:	2022-03-11
Date Tested:	2022-03-11
Date Completed:	2022-03-14
Next Due Date:	2023-03-13
Page:	1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for calibration:

Description	: Sound Level Meter
Manufacturer	: BSWA
Model No.	: BSWA 308
Serial No.	: 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

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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.:	35909A
Date of Issue:	2021-10-04
Date Received:	2021-10-02
Date Tested:	2021-10-02
Date Completed:	2021-10-04
Next Due Date:	2022-10-03
Page:	1 of 1

ATTN: **Ms. Meiling Tang**

Certificate of Calibration

Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: SVANTEK
Model No.	: SV30A
Serial No.	: 24780
Equipment No.	: N-09-05

Test conditions:

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

Methodology:

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

Results:

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

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

PATRICK TSE
General Manager

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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.:	37018C
		Date of Issue:	2022-07-18
		Date Received:	2022-07-15
		Date Tested:	2022-07-15
		Date Completed:	2022-07-18
		Next Due Date:	2023-01-17
ATTN:	**Ms. Meiling Tang**	Page:	1 of 2

Certificate of Calibration

Item for calibration:

Description	: Weather Stations, Vantage Pro2
Manufacturer	: Davis Instruments
Model No.	: 6152CUK
Serial No.	: AK130520006

Test conditions:

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

Test Specifications:

1. Performance check of anemometer
2. Performance check of wind direction sensor

Methodology:

In-house method with reference anemometer

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

PATRICK TSE
Laboratory Manager

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New Territories, Hong Kong
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TEST REPORT

Test Report No.:	37018C
Date of Issue:	2022-07-18
Date Received:	2022-07-15
Date Tested:	2022-07-15
Date Completed:	2022-07-18
Next Due Date:	2023-01-17
Page:	2 of 2

Results:

1. Performance check of anemometer

Air Velocity, m/s		Difference D (m/s)
Instrument Reading (V1)	Reference Value (V1)	D = V1 – V2
2.00	2.00	0.00

2. Performance check of wind direction sensor

Wind Direction (°)		Difference D (°)
Instrument Reading (W1)	Reference Value (W2)	D = W1 - W2
0	0	0
45	45	0
90	90	0
135.2	135	0.2
180	180	0
225.1	225	0.1
270.1	270	0.1
315	315	0
360	360	0

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

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TEST REPORT

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

ATTN: **Miss Mei Ling Tang**

Test Report No.:	36871B
Date of Issue:	2022-06-25
Date Received:	2022-06-23
Date Tested:	2022-06-23 to 2022-06-25
Date Completed:	2022-06-25
Page:	1 of 2

Certificate of Calibration

Item for calibration:

YSI EXO1 Multiparameter Sondes	Equipment No.: SW-08-108	
Manufacturer:	YSI Incorporated, a Xylem brand	
Description:	Model No.	Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599502-24	17B100681
- EXO Optical DO Sensor, Ti	599100-01	16J100992
- EXO conductivity/Temperature Sensor, Ti	599870	17H103451
- EXO Turbidity Sensor, Ti	599101-01	20J103612
- EXO pH Sensor Assembly, Guarded, Ti	599701	17B103616

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

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

PATRICK TSE
General Manager

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TEST REPORT

Test Report No.:	36871B
Date of Issue:	2022-06-25
Date Received:	2022-06-23
Date Tested:	2022-06-23 to 2022-06-25
Date Completed:	2022-06-25
Page:	2 of 2

Certificate of Calibration

Results:

Conductivity performance checking

	Instrument Readings (µS/cm)	Accetance Criteria	Comment
KCl stock solution (12890 µS/cm)	13100	12246-13534	Pass

Temperature performance checking

Reference thermometer-E431 Readings (°C)	Instrument Readings (°C)	Correction (°C)	Comment
20.0	20.001	-0.001	N/A

pH performance checking

	Instrument Readings (pH unit)	Accetance Criteria	Comment
pH QC buffer 4.00	4.01	4.00 ± 0.10	Pass
pH QC buffer 6.86	6.87	6.86 ± 0.10	Pass
pH QC buffer 9.18	9.21	9.18 ± 0.10	Pass

D.O. performance checking

	Instrument Readings (mg/L)	Accetance Criteria	Comment
Zero DO soultion	0.05	<0.1mg/L	Pass

Winkler Titration value (mg/L)	Instrument Readings (mg/L)	Accetance Criteria	Comment
8.10	7.97	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	10.10	9.0-11.0	Pass
50 NTU	51.21	45.0-55.0	Pass
100 NTU	101.0	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

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

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TEST REPORT

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

Test Report No.:	37139C
Date of Issue:	2022-09-25
Date Received:	2022-09-24
Date Tested:	2022-09-24 to 2022-09-25
Date Completed:	2022-09-25

ATTN: **Miss Mei Ling Tang**

Page: 1 of 2

Certificate of Calibration

Item for calibration:

YSI EXO1 Multiparameter Sondes	Equipment No.: SW-08-121	
Manufacturer:	YSI Incorporated, a Xylem brand	
Description:	Model No.	Serial No.
- EXO1 Sonde, 100 meter Depth, 4 Sensor ports	599502-24	17B101447
- EXO Optical DO Sensor, Ti	599100-01	16J101001
- EXO conductivity/Temperature Sensor, Ti	599870	17B100798
- EXO Turbidity Sensor, Ti	599101-01	17B102266
- EXO pH Sensor Assembly, Guarded, Ti	599701	17B100250

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.**

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TEST REPORT

Test Report No.:	37139C
Date of Issue:	2022-09-25
Date Received:	2022-09-24
Date Tested:	2022-09-24 to 2022-09-25
Date Completed:	2022-09-25

Certificate of Calibration

Results:

Conductivity performance checking

	Instrument Readings (µS/cm)	Accetance Criteria	Comment
KCl stock solution (12890 µS/cm)	12900	12246-13534	Pass

Temperature performance checking

Reference thermometer-E431 Readings (°C)	Instrument Readings (°C)	Correction (°C)	Comment
20.0	20.001	-0.001	N/A

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	6.87	6.86 ± 0.10	Pass
pH QC buffer 9.18	9.17	9.18 ± 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
8.16	8.00	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	10.11	9.0-11.0	Pass
50 NTU	50.07	45.0-55.0	Pass
100 NTU	100.8	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

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

APPENDIX D
ENVIRONMENTAL MONITORING SCHEDULES

Service Contract No. WD/04/2020
Development of Lok Ma Chau Loop: Main Works Package 1 – Environmental Team
Impact Monitoring Schedule (September 2022)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1-Sep	2-Sep	3-Sep
					Aquatic Fauna Survey (Water Quality Monitoring only) Water Quality Monitoring	
4-Sep	5-Sep	6-Sep	7-Sep	8-Sep	9-Sep	10-Sep
	24hr TSP Water Quality Monitoring	1hr TSP X 3 Noise	Aquatic Fauna Survey Water Quality Monitoring Avifauna Survey (Pond 12)	24hr TSP	1hr TSP X 3 Water Quality Monitoring	
11-Sep	**12-Sep**	13-Sep	14-Sep	15-Sep	16-Sep	17-Sep
		Aquatic Fauna Survey (Water Quality Monitoring only) Herpetofauna Survey Water Quality Monitoring	24hr TSP (except DMS-3*) Avifauna Survey (Pond 12)	1hr TSP X 3 Noise 24hr TSP (DMS-3) Water Quality Monitoring	Avifauna flight line survey	Water Quality Monitoring
18-Sep	19-Sep	20-Sep	21-Sep	22-Sep	23-Sep	24-Sep
	Aquatic Fauna Survey (Water Quality Monitoring only) Water Quality Monitoring	24hr TSP	1hr TSP X 3 Noise Water Quality Monitoring Avifauna Survey (Pond 12)		Water Quality Monitoring	
25-Sep	26-Sep	27-Sep	28-Sep	29-Sep	30-Sep	
	24hr TSP Water Quality Monitoring	1hr TSP X 3 Noise	Aquatic Fauna Survey (Water Quality Monitoring only) Water Quality Monitoring Avifauna Survey (Pond 12)		24hr TSP Water Quality Monitoring	

Remark: * 24hr TSP monitoring at DMS-3 was re-scheduled to 15 Sept 2022 due to power failure

Air Quality Monitoring Station
DMS-1a - Village House along Ha Wan Tsuen East Road
DMS-2A - Village house along Lok Ma Chau Road
DMS-3 - Village house along Old Border Road
DMS-4A - Hong Kong Police Force, Lok Ma Chau Operation Base at Horn Hill

Noise Monitoring Station
NMS-1 - Village House in Ha Wan Tsuen
NMS-2 - Village house along existing Ha Wan Tsuen East Road
NMS-3 - Village house along Old Border Road
NMS-4A - Hong Kong Police Force, Lok Ma Chau Operation Base at Horn Hill

Water Quality Monitoring Station
CS1 - Control Station at Old Shenzhen River Meander
IS1 - Impact Station at Old Shenzhen River Meander
IS2 - Impact Station at Old Shenzhen River Meander
IS4 - Impact Station for at Ping Hang Stream
CS5 - Control Station at channel at south of Lung Hau Road
IS6 - Impact Station next to Lung Hau Road
BS1 - Impact Station at Old Shenzhen River Meander
(Terminated starting from 28 June 2021- approved by EPD via email dated 22 June 2021)

Service Contract No. WD/04/2020
Development of Lok Ma Chau Loop: Main Works Package 1 – Environmental Team
Tentative Impact Monitoring Schedule (October 2022)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1-Oct
2-Oct	3-Oct	**4-Oct**	5-Oct	6-Oct	7-Oct	8-Oct
	1hr TSP X 3 Water Quality Monitoring		Water Quality Monitoring Avifauna Survey (Pond 12)	24hr TSP	Aquatic Fauna Survey (Water Quality Monitoring only) 1hr TSP X 3 Noise Water Quality Monitoring	
9-Oct	10-Oct	11-Oct	12-Oct	13-Oct	14-Oct	15-Oct
	Water Quality Monitoring	Aquatic Fauna Survey (Water Quality Monitoring only)	24hr TSP Water Quality Monitoring Avifauna Survey (Pond 12)	1hr TSP X 3 Noise	Water Quality Monitoring	
16-Oct	17-Oct	18-Oct	19-Oct	20-Oct	21-Oct	22-Oct
	Water Quality Monitoring	24hr TSP	1hr TSP X 3 Noise Water Quality Monitoring Avifauna Survey (Pond 12)	Aquatic Fauna Survey (Water Quality Monitoring only) Herpetofauna Survey	Water Quality Monitoring Avifauna flight line survey	
23-Oct	24-Oct	25-Oct	26-Oct	27-Oct	28-Oct	29-Oct
	24hr TSP Water Quality Monitoring	1hr TSP X 3 Noise	Aquatic Fauna Survey Water Quality Monitoring Avifauna Survey (Pond 12)		24hr TSP Water Quality Monitoring	
30-Oct	31-Oct					
	Aquatic Fauna Survey (Water Quality Monitoring only) 1hr TSP X 3 Noise Water Quality Monitoring					

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

Air Quality Monitoring Station
DMS-1a - Village House along Ha Wan Tsuen East Road
DMS-2A - Village house along Lok Ma Chau Road
DMS-3 - Village house along Old Border Road
DMS-4A - Hong Kong Police Force, Lok Ma Chau Operation Base at Horn Hill

Noise Monitoring Station
NMS-1 - Village House in Ha Wan Tsuen
NMS-2 - Village house along existing Ha Wan Tsuen East Road
NMS-3 - Village house along Old Border Road
NMS-4A - Hong Kong Police Force, Lok Ma Chau Operation Base at Horn Hill

Water Quality Monitoring Station
CS1 - Control Station at Old Shenzhen River Meander
IS1 - Impact Station at Old Shenzhen River Meander
IS2 - Impact Station at Old Shenzhen River Meander
IS4 - Impact Station for at Ping Hang Stream
CS5 - Control Station at channel at south of Lung Hau Road
IS6 - Impact Station next to Lung Hau Road
BS1 - Impact Station at Old Shenzhen River Meander
(Terminated starting from 28 June 2021- approved by EPD via email dated 22 June 2021)

APPENDIX E
1-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATION

Appendix E - 1-hour TSP Monitoring Results

Location DMS-1a - Village House along Ha Wan Tsuen East Road			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
6-Sep-22	9:00	Sunny	78.1
6-Sep-22	10:00	Sunny	64.9
6-Sep-22	11:00	Sunny	66.2
9-Sep-22	8:00	Sunny	71.4
9-Sep-22	9:00	Sunny	68.5
9-Sep-22	10:00	Sunny	81.9
15-Sep-22	8:30	Sunny	87.9
15-Sep-22	9:30	Sunny	84.6
15-Sep-22	10:30	Sunny	121.2
21-Sep-22	8:30	Cloudy	83.6
21-Sep-22	9:30	Cloudy	94.0
21-Sep-22	10:30	Cloudy	114.3
27-Sep-22	9:00	Sunny	78.7
27-Sep-22	10:00	Sunny	82.3
27-Sep-22	11:00	Sunny	84.7
		Minimum	64.9
		Maximum	121.2
		Average	84.2

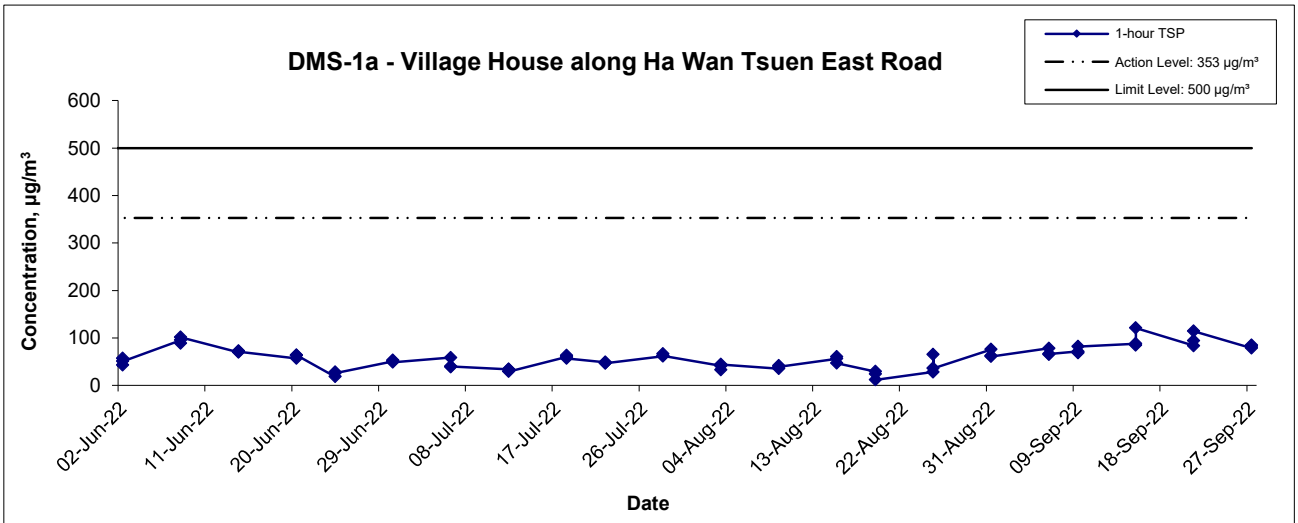
Location DMS-2A - Village House along Lok Ma Chau Road			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
6-Sep-22	13:00	Sunny	98.9
6-Sep-22	14:00	Sunny	98.6
6-Sep-22	15:00	Sunny	83.6
9-Sep-22	13:30	Sunny	51.7
9-Sep-22	14:30	Sunny	52.9
9-Sep-22	15:30	Sunny	53.2
15-Sep-22	13:00	Sunny	147.5
15-Sep-22	14:00	Sunny	134.1
15-Sep-22	15:00	Sunny	143.2
21-Sep-22	13:10	Cloudy	107.7
21-Sep-22	14:10	Cloudy	123.9
21-Sep-22	15:10	Cloudy	131.4
27-Sep-22	8:45	Sunny	75.8
27-Sep-22	9:45	Sunny	68.1
27-Sep-22	10:45	Sunny	77.0
		Minimum	51.7
		Maximum	147.5
		Average	96.5

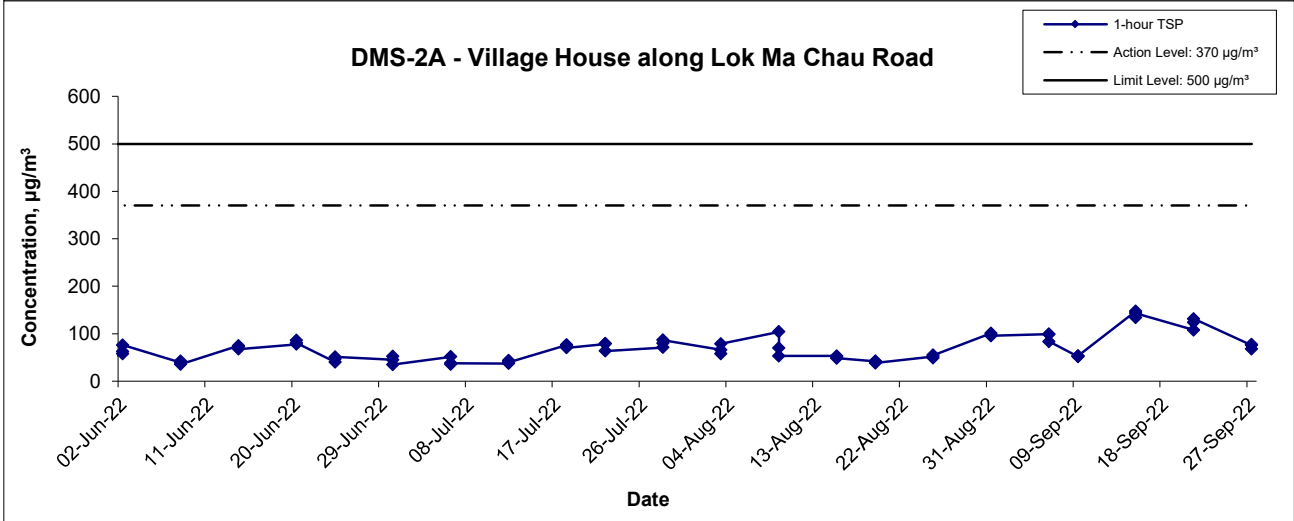
Appendix E - 1-hour TSP Monitoring Results

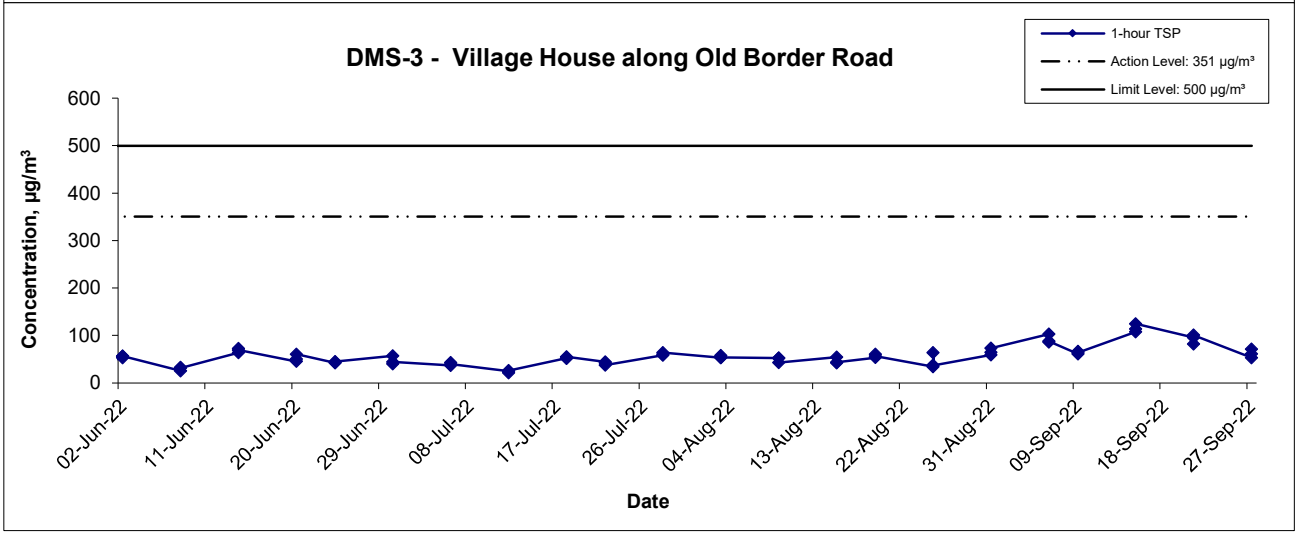
Location DMS-3 - Village House along Old Border Road			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
6-Sep-22	9:00	Sunny	102.9
6-Sep-22	10:00	Sunny	85.9
6-Sep-22	11:00	Sunny	87.7
9-Sep-22	9:00	Sunny	61.3
9-Sep-22	10:00	Sunny	66.4
9-Sep-22	11:00	Sunny	64.0
15-Sep-22	9:00	Sunny	107.4
15-Sep-22	10:00	Sunny	113.9
15-Sep-22	11:00	Sunny	124.4
21-Sep-22	8:30	Cloudy	95.4
21-Sep-22	9:30	Cloudy	82.1
21-Sep-22	10:30	Cloudy	100.5
27-Sep-22	8:30	Sunny	52.7
27-Sep-22	9:30	Sunny	71.4
27-Sep-22	10:30	Sunny	61.1
		Minimum	52.7
		Maximum	124.4
		Average	85.1

Location DMS-4A - Hong Kong Police Force, Lok Ma Chau Operation Base at Horn Hill			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
6-Sep-22	9:00	Sunny	81.8
6-Sep-22	10:00	Sunny	81.0
6-Sep-22	11:00	Sunny	83.2
9-Sep-22	8:20	Sunny	52.8
9-Sep-22	9:20	Sunny	56.2
9-Sep-22	10:20	Sunny	60.9
15-Sep-22	9:00	Sunny	115.6
15-Sep-22	10:00	Sunny	111.6
15-Sep-22	11:00	Sunny	116.2
21-Sep-22	8:50	Cloudy	80.3
21-Sep-22	9:50	Cloudy	102.9
21-Sep-22	10:50	Cloudy	110.8
27-Sep-22	8:15	Sunny	65.7
27-Sep-22	9:15	Sunny	59.8
27-Sep-22	10:15	Sunny	62.2
		Minimum	52.8
		Maximum	116.2
		Average	82.7

1-hour TSP Concentration Levels

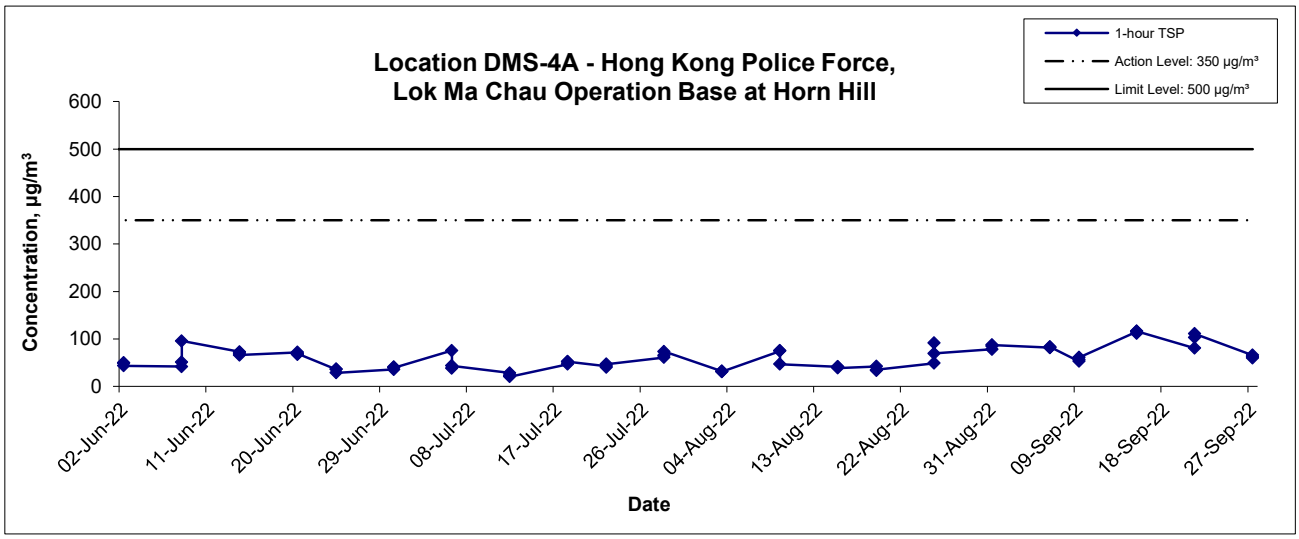






Title: Service Contract No. WD/04/2020 Development of Lok Ma Chau Loop: Main Works Package 1 - Environmental Team Graphical Presentation of 1-hour TSP Monitoring Results	Scale: N.T.S	Project No.: WMA21009	WELLAB 匯力 consulting . testing . research
	Date: Sept 22	Appendix: E	

1-hour TSP Concentration Levels



Title	Service Contract No. WD/04/2020 Development of Lok Ma Chau Loop: Main Works Package 1 - Environmental Team Graphical Presentation of 1-hour TSP Monitoring Results	Scale N.T.S	Project No. WMA21009	WELLAB 匯力 consulting . testing . research
		Date Sept 22	Appendix E	

APPENDIX F
24-HOUR TSP MONITORING RESULTS AND GRAPHICAL PRESENTATION

Appendix F - 24-hour TSP Monitoring Results

Location DMS-1a - Village House along Ha Wan Tsuen East Road			
Date	Time	Weather	Particulate Concentration ($\mu g/m^3$)
5-Sep-22	9:00	Sunny	92.2
8-Sep-22	8:00	Sunny	53.3
14-Sep-22	8:30	Sunny	95.4
20-Sep-22	10:45	Cloudy	111.3
26-Sep-22	9:00	Sunny	76.7
30-Sep-22	9:00	Rainy	70.9
		Minimum	53.3
		Maximum	111.3
		Average	83.3

Appendix F - 24-hour TSP Monitoring Results

Location DMS-2A - Village House along Lok Ma Chau Road

Start Date	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. ($\mu g/m^3$)
				Initial	Final		Initial	Final		Initial	Final			
5-Sep-22	Sunny	300.0	756.3	2.9020	3.0625	0.1605	1965.7	1989.7	24.0	1.218	1.220	1.219	1754.8	91.5
8-Sep-22	Sunny	301.1	763.8	2.9379	3.0006	0.0627	1989.7	2013.7	24.0	1.223	1.222	1.223	1760.5	35.6
14-Sep-22	Sunny	299.5	758.0	2.9657	3.1629	0.1972	2013.7	2037.7	24.0	1.220	1.222	1.221	1758.4	112.1
20-Sep-22	Cloudy	299.7	759.1	2.9770	3.0988	0.1218	2037.7	2061.7	24.0	1.239	1.235	1.237	1781.2	68.4
26-Sep-22	Sunny	300.8	759.8	2.9587	3.1023	0.1436	2061.7	2085.7	24.0	1.237	1.233	1.235	1778.5	80.7
30-Sep-22	Cloudy	299.3	761.7	3.0201	3.0588	0.0387	2085.7	2109.7	24.0	1.236	1.245	1.240	1785.9	21.7
													Min	21.7
													Max	112.1
													Average	68.3

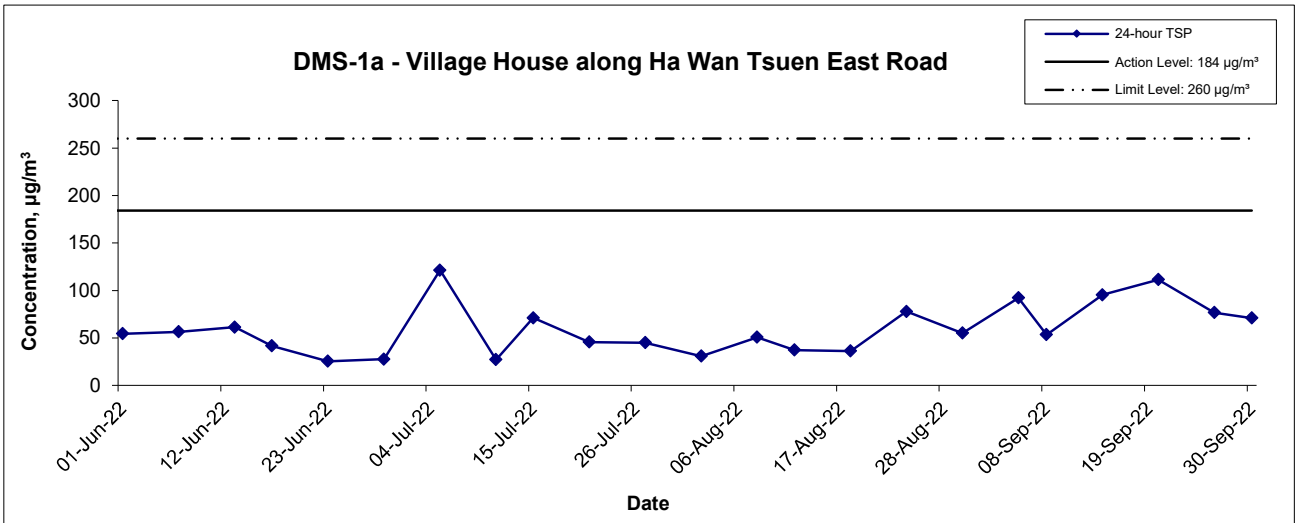
Location DMS-3 - Village House along Old Border Road

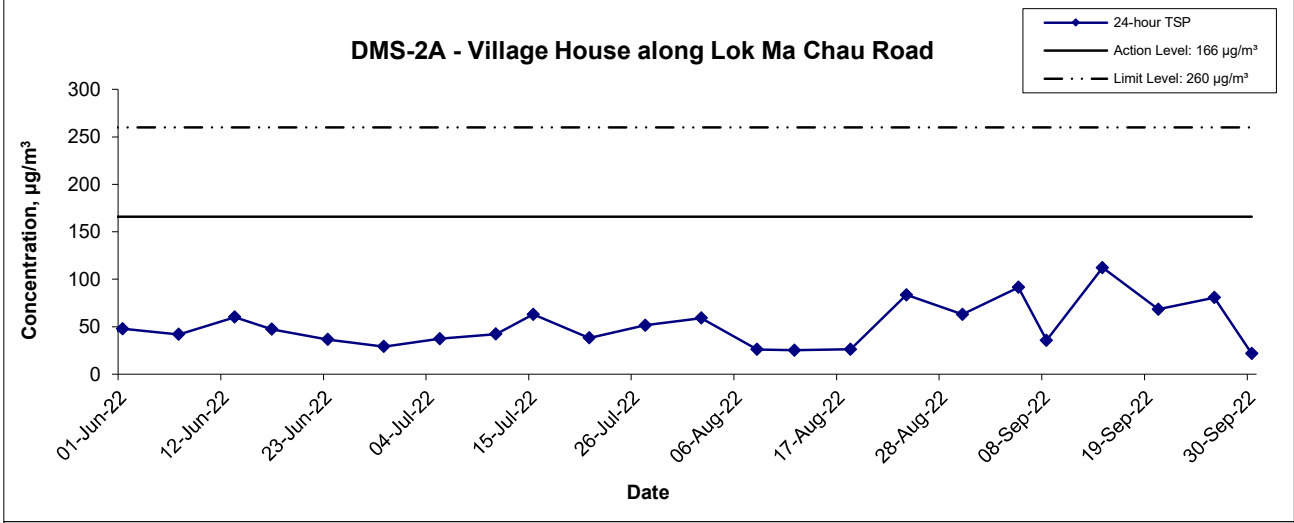
Start Date	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. ($\mu g/m^3$)
				Initial	Final		Initial	Final		Initial	Final			
5-Sep-22	Sunny	300.0	756.3	2.9690	3.0235	0.0545	2888.6	2912.6	24.0	1.215	1.217	1.216	1751.5	31.1
8-Sep-22	Sunny	301.1	763.8	2.9457	3.0462	0.1005	2912.6	2936.6	24.0	1.221	1.220	1.220	1757.1	57.2
15-Sep-22	Sunny	299.5	758.0	2.9489	3.0663	0.1174	2936.6	2960.6	24.0	1.218	1.219	1.219	1755.1	66.9
20-Sep-22	Cloudy	306.9	757.1	2.8719	2.9571	0.0852	2960.6	2984.6	24.0	1.219	1.219	1.219	1755.2	48.5
26-Sep-22	Sunny	300.8	759.8	2.9639	3.0543	0.0904	2984.6	3008.6	24.0	1.236	1.232	1.234	1776.8	50.9
30-Sep-22	Cloudy	299.3	761.7	2.9645	3.0005	0.0360	3008.6	3032.6	24.0	1.234	1.243	1.239	1783.7	20.2
													Min	20.2
													Max	66.9
													Average	45.8

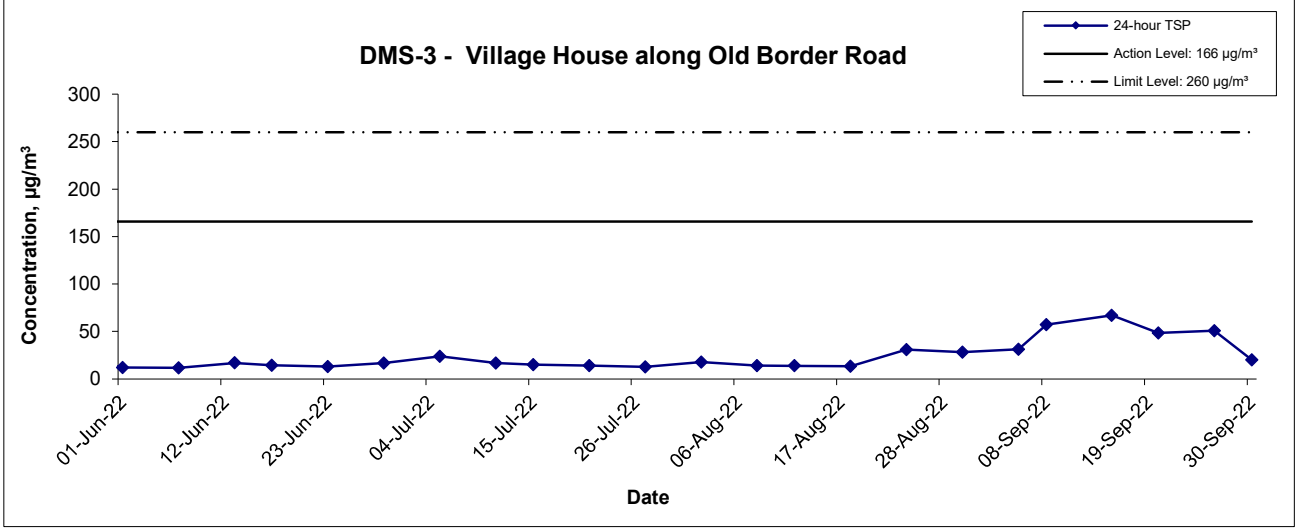
Location DMS-4A - Hong Kong Police Force, Lok Ma Chau Operation Base at Horn Hill

Start Date	Weather Condition	Air Temp. (K)	Atmospheric Pressure, Pa (mmHg)	Filter Weight (g)		Particulate weight (g)	Elapse Time		Sampling Time(hrs.)	Flow Rate (m^3/min.)		Av. flow (m^3/min)	Total vol. (m^3)	Conc. ($\mu g/m^3$)
				Initial	Final		Initial	Final		Initial	Final			
5-Sep-22	Sunny	300.0	756.3	2.9359	3.0388	0.1029	32449.4	32473.4	24.0	1.217	1.219	1.218	1753.3	58.7
8-Sep-22	Sunny	301.1	763.8	2.9402	3.0039	0.0637	32473.4	32497.4	24.0	1.222	1.221	1.221	1758.9	36.2
14-Sep-22	Sunny	299.5	758.0	2.8487	2.9736	0.1249	32497.4	32521.4	24.0	1.219	1.221	1.220	1757.6	71.1
20-Sep-22	Cloudy	299.7	759.1	2.9028	2.9897	0.0869	32521.4	32545.4	24.0	1.233	1.229	1.231	1772.3	49.0
26-Sep-22	Sunny	300.8	759.8	2.9640	3.0549	0.0909	32545.4	32569.4	24.0	1.231	1.227	1.229	1769.7	51.4
30-Sep-22	Cloudy	299.3	761.7	2.9098	2.9416	0.0318	32569.4	32593.4	24.0	1.229	1.239	1.234	1777.0	17.9
													Min	17.9
													Max	71.1
													Average	47.4

24-hour TSP Concentration Levels

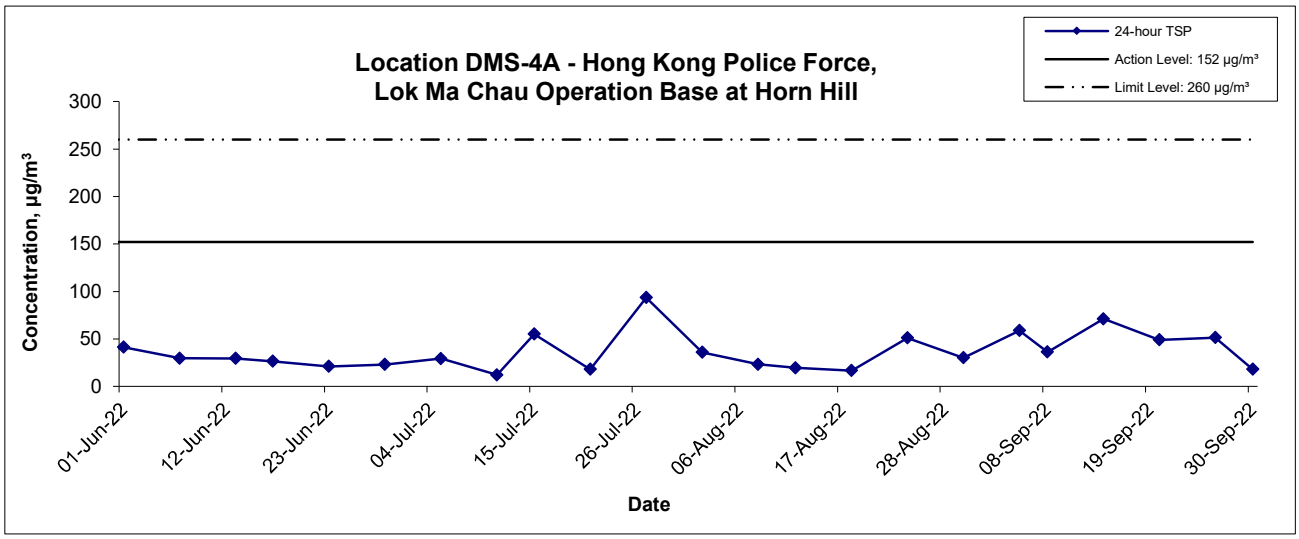






Title: Service Contract No. WD/04/2020 Development of Lok Ma Chau Loop: Main Works Package 1 - Environmental Team Graphical Presentation of 24-hour TSP Monitoring Results	Scale: N.T.S Date: Sept 22	Project No.: WMA21009 Appendix: F	WELLAB 匯力 consulting . testing . research

24-hour TSP Concentration Levels



Title	Service Contract No. WD/04/2020 Development of Lok Ma Chau Loop: Main Works Package 1 - Environmental Team Graphical Presentation of 24-hour TSP Monitoring Results	Scale N.T.S	Project No. WMA21009	WELLAB 匯力 consulting . testing . research
		Date Sept 22	Appendix F	

APPENDIX G
NOISE MONITORING RESULTS AND GRAPHICAL PRESENTATION

Appendix G - Noise Monitoring Results

Location NMS-1 -Village house in Ha Wan Tsuen							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
6-Sep-22	Sunny	11:15	56.3	57.9	52.9	59.4	47.3
		11:20	57.5	60.1	52.6		
		11:25	60.5	62.1	58.4		
		11:30	60.4	62.0	58.3		
		11:35	61.8	64.1	57.1		
		11:40	57.4	61.7	51.0		
15-Sep-22	Sunny	09:45	53.2	56.2	44.6	50.8	
		09:50	47.5	49.9	44.2		
		09:55	50.0	52.7	44.8		
		10:00	50.6	52.3	48.6		
		10:05	50.4	51.9	48.6		
		10:10	51.1	53.4	48.6		
21-Sep-22	Cloudy	08:55	58.5	60.7	56.4	58.9	
		09:00	58.2	60.9	55.8		
		09:05	57.2	57.7	52.7		
		09:10	62.0	66.9	52.7		
		09:15	58.2	61.8	54.1		
		09:20	57.2	59.3	54.3		
27-Sep-22	Sunny	10:30	64.3	65.4	62.9	63.5	
		10:35	63.8	64.5	62.8		
		10:40	64.3	65.0	63.6		
		10:45	64.7	65.8	63.7		
		10:50	63.4	64.4	58.5		
		10:55	57.7	60.0	54.4		

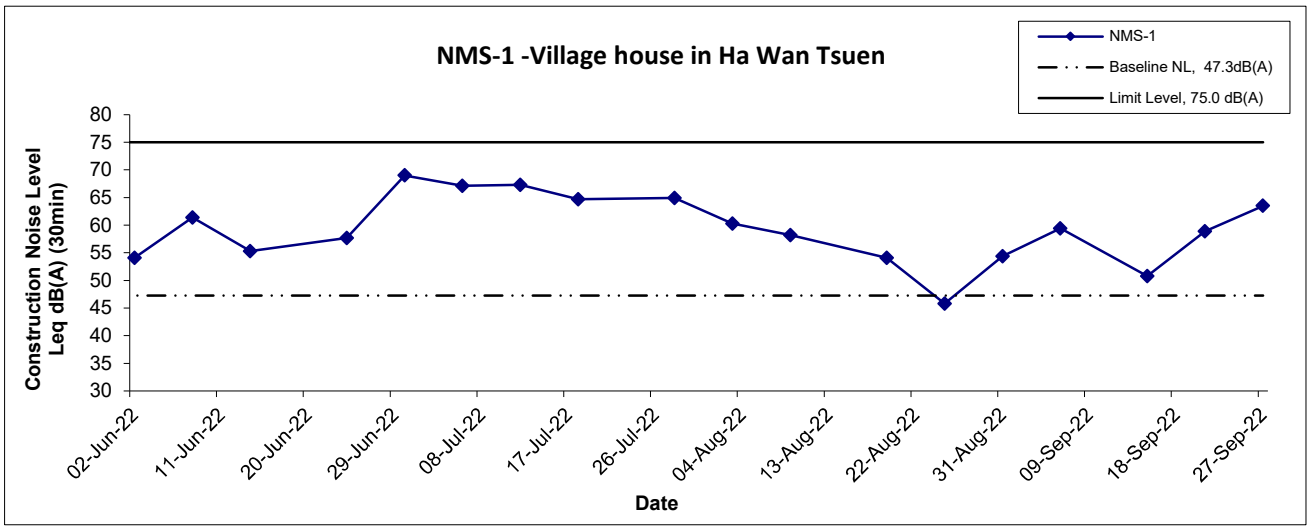
Location NMS-2 - Village house along existing Ha Wan Tsuen East Road							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
6-Sep-22	Sunny	13:00	69.3	72.9	57.8	71.2	68.4
		13:05	70.4	71.6	58.3		
		13:10	69.1	71.8	59.0		
		13:15	70.9	74.5	59.1		
		13:20	71.9	74.8	58.9		
		13:25	73.9	76.6	58.8		
15-Sep-22	Sunny	13:00	64.4	67.5	52.2	66.2	
		13:05	64.2	66.9	52.7		
		13:10	66.1	68.8	53.3		
		13:15	64.3	66.8	52.6		
		13:20	65.6	69.3	53.6		
		13:25	69.7	72.3	58.8		
21-Sep-22	Cloudy	13:40	71.5	72.3	52.5	71.3	
		13:45	70.9	73.8	52.6		
		13:50	70.2	70.4	53.2		
		13:55	69.8	71.4	53.2		
		14:00	72.3	74.5	53.8		
		14:05	72.4	74.9	54.6		
27-Sep-22	Sunny	11:15	68.0	72.2	53.9	70.5	
		11:20	72.0	73.1	54.7		
		11:25	67.9	71.5	53.8		
		11:30	67.0	67.3	53.0		
		11:35	71.2	74.9	54.8		
		11:40	73.3	73.1	54.3		

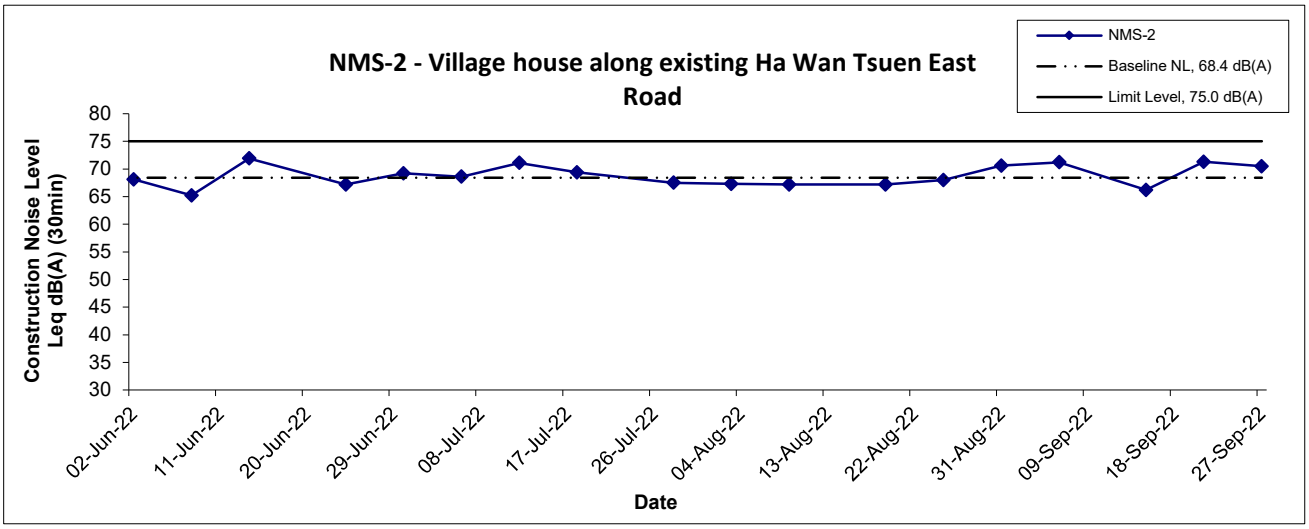
Appendix G - Noise Monitoring Results

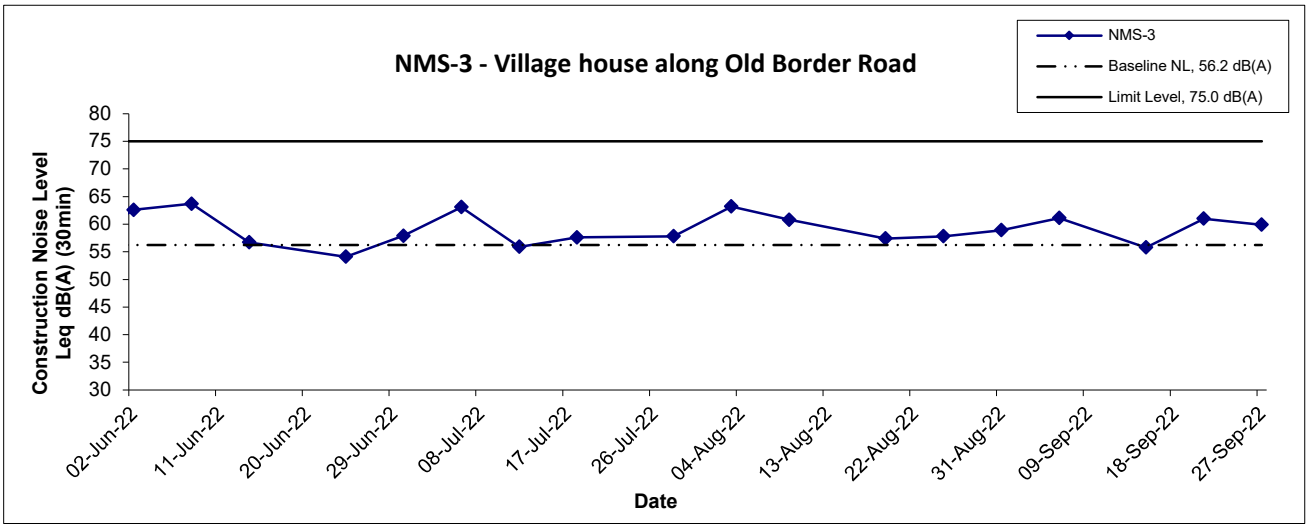
Location NMS-3 - Village house along Old Border Road							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
6-Sep-22	Sunny	10:10	60.7	61.3	60.1	61.1	56.2
		10:05	60.9	61.0	59.7		
		10:00	61.3	61.4	60.3		
		09:55	61.0	61.2	60.0		
		09:50	61.5	61.6	60.4		
		09:45	61.1	61.8	60.0		
15-Sep-22	Sunny	10:55	56.8	57.7	54.7	55.8	
		11:00	55.5	56.2	54.7		
		11:05	55.9	56.6	54.9		
		11:10	55.4	56.0	54.7		
		11:15	55.2	55.8	54.5		
		11:20	55.5	56.4	54.7		
21-Sep-22	Cloudy	09:50	61.1	61.6	60.4	61.0	
		09:55	60.8	61.3	60.3		
		10:00	61.0	61.8	60.3		
		10:05	60.9	61.5	60.4		
		10:10	61.1	61.9	60.0		
		10:15	60.8	61.6	59.9		
27-Sep-22	Sunny	09:05	59.6	60.3	58.8	59.9	
		09:10	60.3	60.5	58.8		
		09:15	60.9	62.9	58.7		
		09:20	59.4	60.2	58.5		
		09:25	59.3	59.9	58.8		
		09:30	59.7	60.6	58.6		

Location NMS-4A - Hong Kong Police Force, Lok Ma Chau Operation Base at Horn Hill							
Date	Weather	Time	Unit: dB (A) (5-min)			Average	Baseline Level
			L_{eq}	L_{10}	L_{90}	L_{eq}	L_{eq}
6-Sep-22	Sunny	09:25	51.7	53.6	48.4	56.8	52.5
		09:30	52.7	54.0	48.2		
		09:35	53.1	55.0	48.3		
		09:40	52.0	53.6	49.2		
		09:45	53.1	55.8	48.7		
		09:50	63.0	68.7	49.3		
15-Sep-22	Sunny	09:00	52.5	53.5	50.7	52.9	
		09:05	56.1	57.7	51.2		
		09:10	53.5	54.5	51.5		
		09:15	49.7	49.7	48.2		
		09:20	51.7	54.3	48.2		
		09:25	50.7	52.9	47.9		
21-Sep-22	Cloudy	10:50	50.2	50.6	48.2	51.3	
		10:55	51.4	52.5	48.4		
		11:00	49.5	51.3	47.8		
		11:05	49.1	52.0	45.3		
		11:10	53.8	55.9	51.4		
		11:15	51.7	52.9	50.6		
27-Sep-22	Sunny	08:20	50.3	51.7	48.5	51.2	
		08:25	51.9	52.3	48.6		
		08:30	49.9	50.8	48.4		
		08:35	50.7	52.2	49.1		
		08:40	51.3	52.6	48.3		
		08:45	52.4	54.1	49.8		

Noise Levels

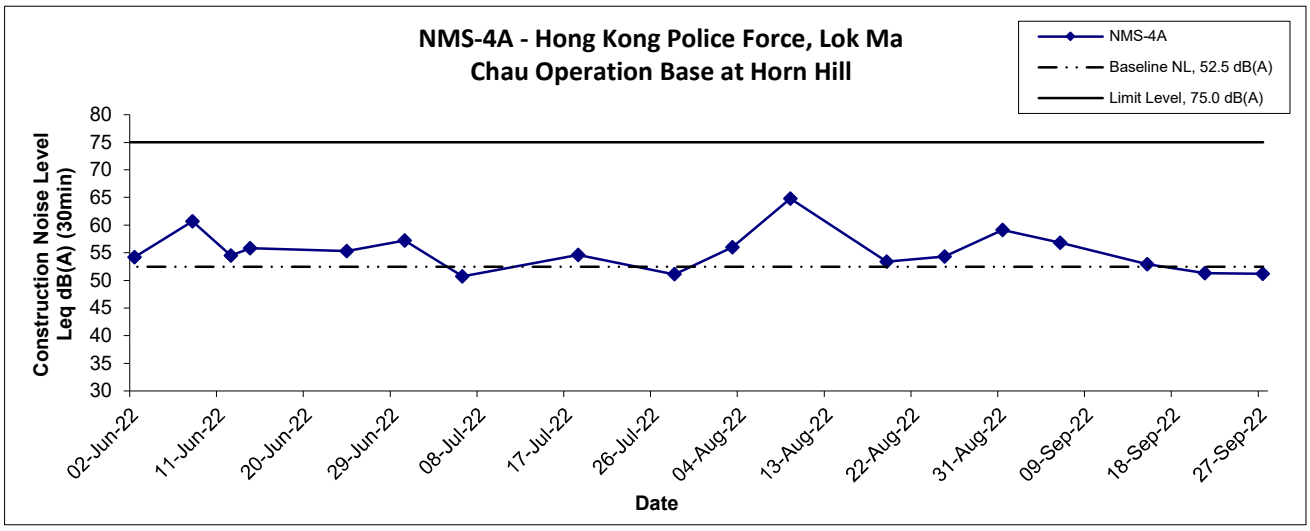






Title: Service Contract No. WD/04/2020 Development of Lok Ma Chau Loop: Main Works Package 1 - Environmental Team Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S	Project No.: WMA21009	WELLAB 匯力 consulting . testing . research
	Date: Sept 22	Appendix: G	

Noise Levels



Title: Service Contract No. WD/04/2020 Development of Lok Ma Chau Loop: Main Works Package 1 - Environmental Team Graphical Presentation of Construction Noise Monitoring Results	Scale: N.T.S Date: Sept 22	Project No. WMA21009 Appendix: G	WELLAB 匯力 consulting . testing . research

APPENDIX H
WATER QUALITY MONITORING RESULTS AND GRAPHICAL PRESENTATION

Water Quality Monitoring Results at CS1

Date	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Sep-22	Cloudy	Calm	11:09	Middle	0.5	31.2 31.2	31.2	7.4 7.4	7.4	0.5 0.5	0.5	67.6 66.8	67.2	5.0 4.9	5.0	7.1 7.0	7.1	20 19	19.5
5-Sep-22	Sunny	Calm	11:47	Middle	0.5	35.1 35.1	35.1	8.5 8.5	8.5	0.5 0.5	0.5	130.1 130.6	130.4	9.0 9.0	9.0	9.8 9.1	9.5	23 21	22.0
7-Sep-22	Cloudy	Calm	11:02	Middle	0.5	30.9 31.0	31.0	8.4 8.5	8.5	0.6 0.6	0.6	94.7 94.6	94.7	7.0 7.0	7.0	9.7 9.2	9.5	15 18	16.5
9-Sep-22	Sunny	Calm	11:10	Middle	0.5	31.9 31.8	31.9	7.6 7.6	7.6	0.5 0.5	0.5	66.4 66.1	66.3	4.9 4.8	4.9	6.8 6.7	6.8	12 11	11.5
13-Sep-22	Sunny	Calm	11:15	Middle	0.5	33.2 33.1	33.2	7.1 7.1	7.1	0.6 0.6	0.6	105.8 105.9	105.9	7.6 7.6	7.6	8.7 8.7	8.7	13 15	14.0
15-Sep-22	Sunny	Calm	11:32	Middle	0.5	32.3 32.4	32.4	7.9 7.9	7.9	0.6 0.6	0.6	107.9 108.0	108.0	7.8 7.8	7.8	7.0 7.0	7.0	18 17	17.5
17-Sep-22	Sunny	Calm	10:59	Middle	0.5	32.5 32.5	32.5	7.9 7.9	7.9	1.0 1.0	1.0	95.4 95.1	95.3	6.9 6.9	6.9	8.2 8.2	8.2	10 12	11.0
19-Sep-22	Cloudy	Calm	10:18	Middle	0.5	33.2 33.2	33.2	8.1 8.1	8.1	1.2 1.2	1.2	102.4 102.5	102.5	7.3 7.3	7.3	8.1 8.1	8.1	10 9	9.5
21-Sep-22	Sunny	Calm	11:20	Middle	0.6	27.4 27.4	27.4	7.4 7.4	7.4	0.03 0.03	0.03	73.6 73.5	73.6	5.8 5.8	5.8	4.7 5.1	4.9	8 8	8.0
23-Sep-22	Sunny	Calm	10:53	Middle	0.5	31.3 31.3	31.3	8.2 8.3	8.3	0.9 0.9	0.9	110.5 110.7	110.6	8.1 8.1	8.1	16.1 16.1	16.1	30 36	33.0
26-Sep-22	Sunny	Calm	11:24	Middle	0.6	27.3 27.3	27.3	7.3 7.3	7.3	0.3 0.3	0.3	77.9 77.6	77.8	6.2 6.1	6.2	7.2 7.1	7.2	16 15	15.5
28-Sep-22	Fine	Calm	12:14	Middle	0.5	31.6 31.7	31.7	7.6 7.6	7.6	1.4 1.4	1.4	87.6 87.2	87.4	6.4 6.4	6.4	6.1 6.2	6.2	18 20	19.0
30-Sep-22	Rainy	Calm	10:51	Middle	0.5	28.2 28.2	28.2	7.5 7.5	7.5	1.3 1.3	1.3	88.8 88.8	88.8	6.9 6.9	6.9	6.4 6.4	6.4	12 10	11.0

Remarks: *DA: Depth-Averaged
**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Water Quality Monitoring Results at CS5

Date	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Sep-22	Cloudy	Calm	10:13	Middle	0.1	29.6 29.6	29.6	7.8 7.8	7.8	0.5 0.5	0.5	114.7 115.0	114.9	8.7 8.7	8.7	1.3 1.3	1.3	4 4	4.0
5-Sep-22	Sunny	Calm	10:40	Middle	0.1	32.0 32.0	32.0	8.2 8.2	8.2	0.4 0.4	0.4	126.4 126.4	126.4	9.2 9.2	9.2	4.3 4.7	4.5	6 6	6.0
7-Sep-22	Cloudy	Calm	09:53	Middle	0.3	28.4 28.4	28.4	8.6 8.6	8.6	0.1 0.1	0.1	60.2 60.0	60.1	4.7 4.7	4.7	5.0 5.0	5.0	7 7	7.0
9-Sep-22	Sunny	Calm	10:06	Middle	0.5	29.6 29.6	29.6	7.3 7.3	7.3	1.9 1.9	1.9	61.3 60.9	61.1	4.6 4.6	4.6	13.7 13.9	13.8	24 27	25.5
13-Sep-22	Sunny	Calm	10:10	Middle	0.2	30.0 30.0	30.0	7.5 7.5	7.5	0.5 0.5	0.5	57.3 57.3	57.3	4.3 4.3	4.3	32.3 32.1	32.2	16 18	17.0
15-Sep-22	Sunny	Calm	10:43	Middle	0.1	33.1 33.1	33.1	9.2 9.2	9.2	0.3 0.3	0.3	142.5 143.0	142.8	10.2 10.2	10.2	9.7 9.7	9.7	35 36	35.5
17-Sep-22	Sunny	Calm	09:34	Middle	0.1	30.9 30.9	30.9	8.6 8.6	8.6	0.3 0.3	0.3	125.7 126.1	125.9	9.3 9.4	9.4	11.2 11.3	11.3	25 22	23.5
19-Sep-22	Cloudy	Calm	09:03	Middle	0.1	30.4 30.4	30.4	8.5 8.5	8.5	0.3 0.3	0.3	139.6 139.6	139.6	10.5 10.5	10.5	7.8 7.7	7.8	26 21	23.5
21-Sep-22	Sunny	Calm	09:45	Middle	0.3	28.6 28.6	28.6	7.4 7.4	7.4	0.5 0.5	0.5	78.2 77.7	78.0	6.0 6.0	6.0	3.2 3.2	3.2	7 6	6.5
23-Sep-22	Sunny	Calm	10:02	Middle	0.5	29.4 29.5	29.5	8.3 8.3	8.3	2.9 2.9	2.9	57.2 56.4	56.8	4.3 4.2	4.3	4.8 4.7	4.8	6 6	6.0
26-Sep-22	Sunny	Calm	10:19	Middle	0.4	29.5 29.5	29.5	7.2 7.2	7.2	2.9 2.9	2.9	74.6 74.3	74.5	5.6 5.6	5.6	30.8 30.3	30.6	40 37	38.5
28-Sep-22	Fine	Calm	10:52	Middle	0.1	30.4 30.4	30.4	7.5 7.5	7.5	1.4 1.4	1.4	73.2 73.1	73.2	5.5 5.5	5.5	33.4 33.6	33.5	61 60	60.5
30-Sep-22	Rainy	Calm	09:52	Middle	0.2	27.8 27.8	27.8	7.6 7.6	7.6	0.2 0.2	0.2	76.3 76.3	76.3	6.0 6.0	6.0	38.6 38.5	38.6	47 42	44.5

Remarks: *DA: Depth-Averaged
**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Water Quality Monitoring Results at IS1

Date	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Sep-22	Cloudy	Calm	10:47	Middle	0.5	27.0 27.0	27.0	6.8 6.8	6.8	0.04 0.04	0.04	67.9 67.4	67.7	5.4 5.4	5.4	5.6 6.2	5.9	8 9	8.5
5-Sep-22	Sunny	Calm	11:20	Middle	0.5	27.3 27.2	27.3	7.0 6.9	7.0	0.1 0.1	0.1	65.7 64.8	65.3	5.2 5.2	5.2	10.2 11.0	10.6	30 24	27.0
7-Sep-22	Cloudy	Calm	10:25	Middle	0.5	27.9 27.9	27.9	7.8 7.8	7.8	0.2 0.2	0.2	52.8 52.5	52.7	4.1 4.1	4.1	10.6 10.7	10.7	14 12	13.0
9-Sep-22	Sunny	Calm	10:43	Middle	0.5	29.4 29.4	29.4	7.2 7.2	7.2	0.4 0.4	0.4	73.1 73.0	73.1	5.6 5.6	5.6	14.3 14.6	14.5	29 25	27.0
13-Sep-22	Sunny	Calm	10:49	Middle	0.5	27.5 27.6	27.6	8.1 8.1	8.1	0.1 0.1	0.1	64.0 62.9	63.5	5.1 5.0	5.1	6.6 6.4	6.5	8 8	8.0
15-Sep-22	Sunny	Calm	11:15	Middle	0.5	30.0 30.0	30.0	7.0 7.0	7.0	0.5 0.5	0.5	69.4 69.3	69.4	5.2 5.2	5.2	10.9 10.7	10.8	18 15	16.5
17-Sep-22	Sunny	Calm	10:29	Middle	0.5	32.9 32.9	32.9	8.0 8.0	8.0	1.2 1.2	1.2	102.2 102.2	102.2	7.3 7.3	7.3	7.3 7.4	7.4	16 16	16.0
19-Sep-22	Cloudy	Calm	09:41	Middle	0.5	32.7 32.7	32.7	7.8 7.8	7.8	1.2 1.2	1.2	101.8 101.8	101.8	7.3 7.3	7.3	7.4 7.4	7.4	10 11	10.5
21-Sep-22	Sunny	Calm	11:05	Middle	0.5	27.3 27.2	27.3	7.2 7.2	7.2	0.03 0.03	0.03	85.7 85.3	85.5	6.8 6.8	6.8	4.5 4.5	4.5	4 4	4.0
23-Sep-22	Sunny	Calm	10:36	Middle	0.6	26.6 26.6	26.6	8.9 8.9	8.9	0.2 0.2	0.2	56.3 56.1	56.2	4.5 4.5	4.5	5.4 5.5	5.5	10 8	9.0
26-Sep-22	Sunny	Calm	11:04	Middle	0.5	27.1 27.0	27.1	7.0 6.9	7.0	0.2 0.2	0.2	84.2 83.6	83.9	6.7 6.7	6.7	5.0 5.1	5.1	10 11	10.5
28-Sep-22	Fine	Calm	11:35	Middle	0.5	30.8 30.8	30.8	7.7 7.7	7.7	1.2 1.2	1.2	99.5 99.5	99.5	7.4 7.4	7.4	14.5 14.6	14.6	20 18	19.0
30-Sep-22	Rainy	Calm	10:24	Middle	0.5	27.8 27.8	27.8	6.9 6.9	6.9	1.6 1.6	1.6	60.9 60.5	60.7	4.7 4.7	4.7	7.8 7.9	7.9	14 16	15.0

Remarks: *DA: Depth-Averaged
**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Water Quality Monitoring Results at IS2

Date	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Sep-22	Cloudy	Calm	09:49	Middle	0.1	30.0 30.0	30.0	7.3 7.3	7.3	0.4 0.4	0.4	57.0 56.7	56.9	4.3 4.3	4.3	21.3 21.4	21.4	30 24	27.0
5-Sep-22	Sunny	Calm	10:10	Middle	0.1	30.4 30.5	30.5	7.4 7.4	7.4	0.4 0.4	0.4	75.6 75.5	75.6	5.7 5.7	5.7	13.7 14.0	13.9	30 35	32.5
7-Sep-22	Cloudy	Calm	09:41	Middle	0.1	30.5 30.5	30.5	7.5 7.6	7.6	1.1 1.1	1.1	63.9 63.6	63.8	4.8 4.7	4.8	19.7 19.1	19.4	27 23	25.0
9-Sep-22	Sunny	Calm	09:44	Middle	0.2	30.0 30.0	30.0	7.3 7.3	7.3	6.0 6.0	6.0	70.6 70.6	70.6	5.2 5.2	5.2	27.6 26.7	27.2	25 24	24.5
13-Sep-22	Sunny	Calm	09:59	Middle	0.1	31.1 31.1	31.1	7.1 7.1	7.1	0.8 0.8	0.8	62.0 62.0	62.0	4.6 4.6	4.6	27.4 27.6	27.5	26 27	26.5
15-Sep-22	Sunny	Calm	09:59	Middle	0.1	31.4 31.4	31.4	7.2 7.2	7.2	1.7 1.7	1.7	84.2 84.1	84.2	6.2 6.2	6.2	11.2 11.0	11.1	21 21	21.0
17-Sep-22	Sunny	Calm	09:54	Middle	0.1	31.8 31.8	31.8	7.6 7.6	7.6	1.7 1.7	1.7	80.9 80.8	80.9	5.9 5.9	5.9	12.5 12.5	12.5	22 21	21.5
19-Sep-22	Cloudy	Calm	09:21	Middle	0.1	31.9 31.9	31.9	7.6 7.6	7.6	1.8 1.8	1.8	79.3 79.0	79.2	5.8 5.7	5.8	14.2 14.1	14.2	10 10	10.0
21-Sep-22	Sunny	Calm	09:18	Middle	0.2	29.8 29.8	29.8	7.3 7.3	7.3	2.4 2.4	2.4	98.5 98.2	98.4	7.4 7.4	7.4	11.0 10.7	10.9	33 30	31.5
23-Sep-22	Sunny	Calm	09:53	Middle	0.4	30.5 30.5	30.5	7.8 7.8	7.8	7.1 7.1	7.1	67.0 66.7	66.9	4.8 4.8	4.8	21.7 20.9	21.3	30 32	31.0
26-Sep-22	Sunny	Calm	09:51	Middle	0.2	29.6 29.6	29.6	7.1 7.1	7.1	6.3 6.3	6.3	91.9 91.9	91.9	6.8 6.8	6.8	34.1 34.4	34.3	36 32	34.0
28-Sep-22	Fine	Calm	11:09	Middle	0.1	30.5 30.6	30.6	7.7 7.7	7.7	7.2 7.2	7.2	86.6 86.5	86.6	6.2 6.2	6.2	32.0 31.6	31.8	32 31	31.5
30-Sep-22	Rainy	Calm	09:33	Middle	0.1	28.4 28.4	28.4	7.0 7.0	7.0	3.3 3.3	3.3	64.2 63.2	63.7	4.9 4.8	4.9	12.7 14.0	13.4	26 24	25.0

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

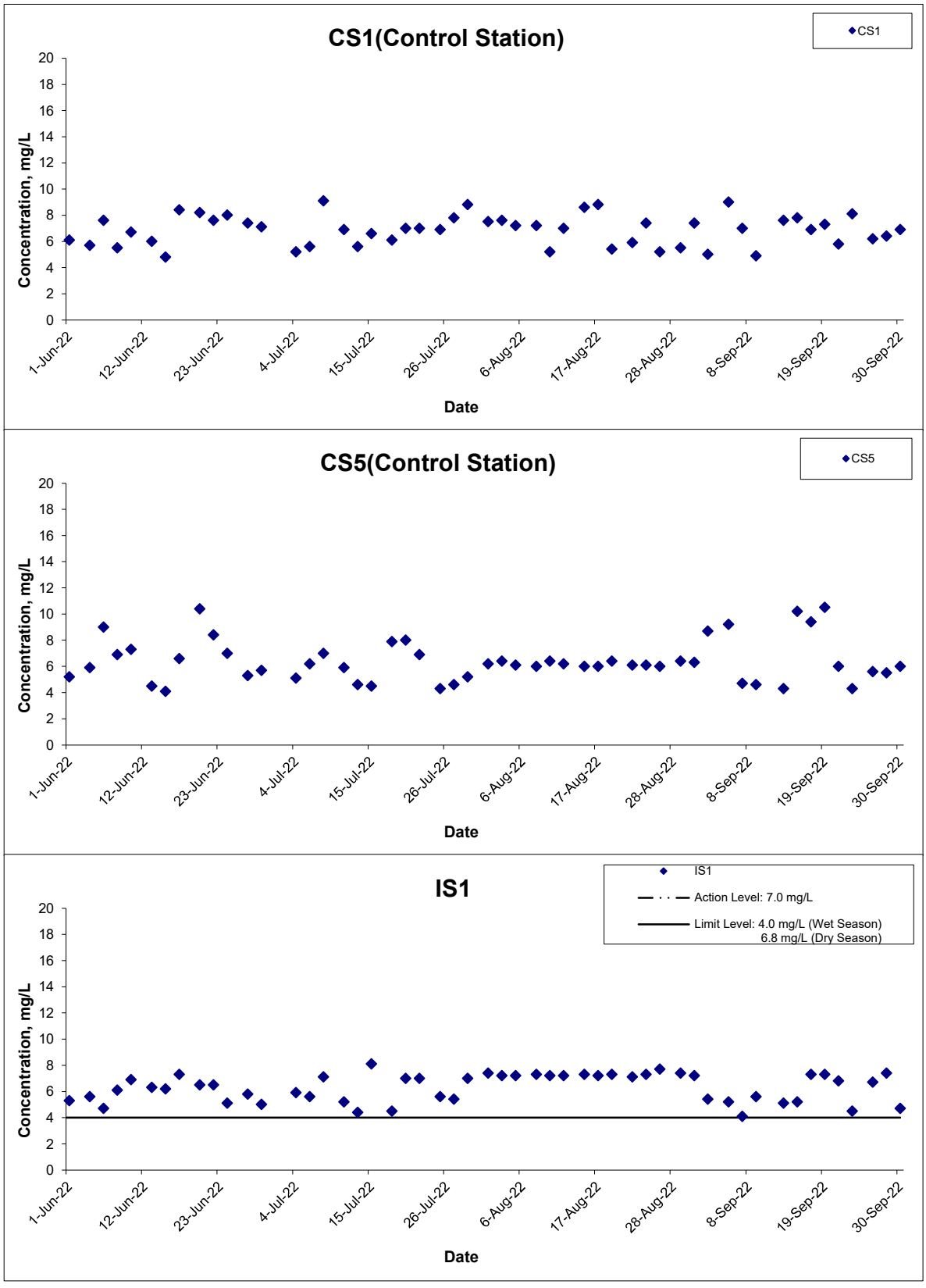
Water Quality Monitoring Results at IS4

Date	Weather Condition	Sea Condition**	Sampling Time	Depth (m)		Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)		Suspended Solids (mg/L)	
						Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
2-Sep-22	Cloudy	Calm	10:29	Middle	0.2	26.4 26.4	26.4	6.8 6.8	6.8	0.1 0.1	0.1	59.3 59.1	59.2	4.8 4.8	4.8	8.8 8.4	8.6	11 12	11.5
5-Sep-22	Sunny	Calm	10:59	Middle	0.1	26.8 26.8	26.8	7.0 6.9	7.0	0.1 0.1	0.1	56.8 55.5	56.2	4.5 4.4	4.5	10.5 11.1	10.8	23 25	24.0
7-Sep-22	Cloudy	Calm	10:11	Middle	0.2	27.3 27.3	27.3	8.2 8.2	8.2	0.1 0.1	0.1	54.4 54.7	54.6	4.3 4.3	4.3	10.4 10.4	10.4	11 13	12.0
9-Sep-22	Sunny	Calm	10:24	Middle	0.1	26.1 26.1	26.1	7.0 7.0	7.0	0.1 0.1	0.1	55.5 54.5	55.0	4.5 4.4	4.5	37.9 37.6	37.8	112 111	111.5
13-Sep-22	Sunny	Calm	10:28	Middle	0.1	27.7 27.7	27.7	8.1 8.1	8.1	0.1 0.1	0.1	57.3 56.3	56.8	4.5 4.4	4.5	9.3 9.2	9.3	10 9	9.5
15-Sep-22	Sunny	Calm	10:59	Middle	0.1	27.6 27.7	27.7	7.2 7.2	7.2	0.1 0.1	0.1	56.4 56.1	56.3	4.4 4.4	4.4	5.2 5.5	5.4	3 4	3.5
17-Sep-22	Sunny	Calm	10:41	Middle	0.1	27.3 27.3	27.3	7.2 7.2	7.2	0.1 0.1	0.1	59.7 59.6	59.7	4.7 4.7	4.7	11.2 11.2	11.2	9 9	9.0
19-Sep-22	Cloudy	Calm	10:00	Middle	0.1	28.2 28.3	28.3	7.6 7.6	7.6	0.1 0.1	0.1	58.5 58.2	58.4	4.6 4.5	4.6	17.6 17.6	17.6	12 12	12.0
21-Sep-22	Sunny	Calm	10:22	Middle	0.1	26.4 26.3	26.4	7.0 7.0	7.0	0.1 0.1	0.1	60.9 60.3	60.6	4.9 4.9	4.9	19.2 20.0	19.6	19 19	19.0
23-Sep-22	Sunny	Calm	10:15	Middle	0.1	26.6 26.6	26.6	8.9 8.9	8.9	0.2 0.2	0.2	57.0 56.6	56.8	4.6 4.5	4.6	5.9 5.3	5.6	9 11	10.0
26-Sep-22	Sunny	Calm	10:41	Middle	0.1	26.3 26.3	26.3	6.9 6.9	6.9	0.1 0.1	0.1	51.7 51.5	51.6	4.2 4.2	4.2	38.2 38.0	38.1	58 48	53.0
28-Sep-22	Fine	Calm	11:59	Middle	0.1	27.5 27.5	27.5	7.6 7.5	7.6	0.2 0.2	0.2	55.1 54.6	54.9	4.4 4.3	4.4	17.3 17.3	17.3	12 13	12.5
30-Sep-22	Rainy	Calm	10:08	Middle	0.1	26.3 26.2	26.3	6.9 6.9	6.9	0.1 0.1	0.1	59.8 58.9	59.4	4.8 4.8	4.8	10.5 10.1	10.3	16 17	16.5

Remarks: *DA: Depth-Averaged

**Calm: Small or no wave; Moderate: Between calm and rough; Rough : White capped or rougher.

Dissolved Oxygen



Title	Service Contract No. WD/04/2020 Development of Lok Ma Chau Loop: Main Works Package 1 - Environmental Team Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA21009	WELLAB 匯力 consulting . testing . research
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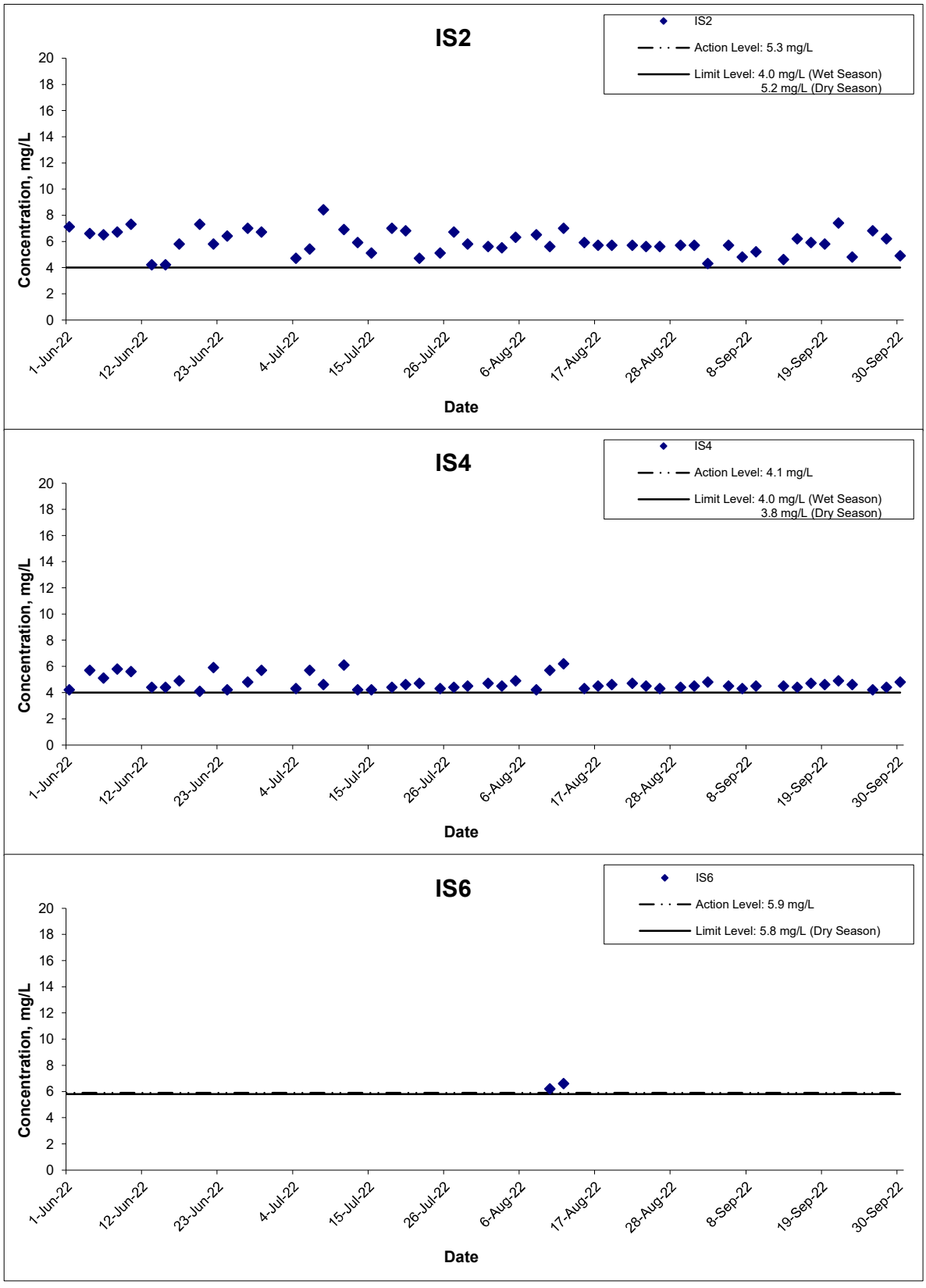
Dissolved Oxygen



Title	Service Contract No. WD/04/2020 Development of Lok Ma Chau Loop: Main Works Package 1 - Environmental Team Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA21009	WELLAB 匯力 consulting . testing . research
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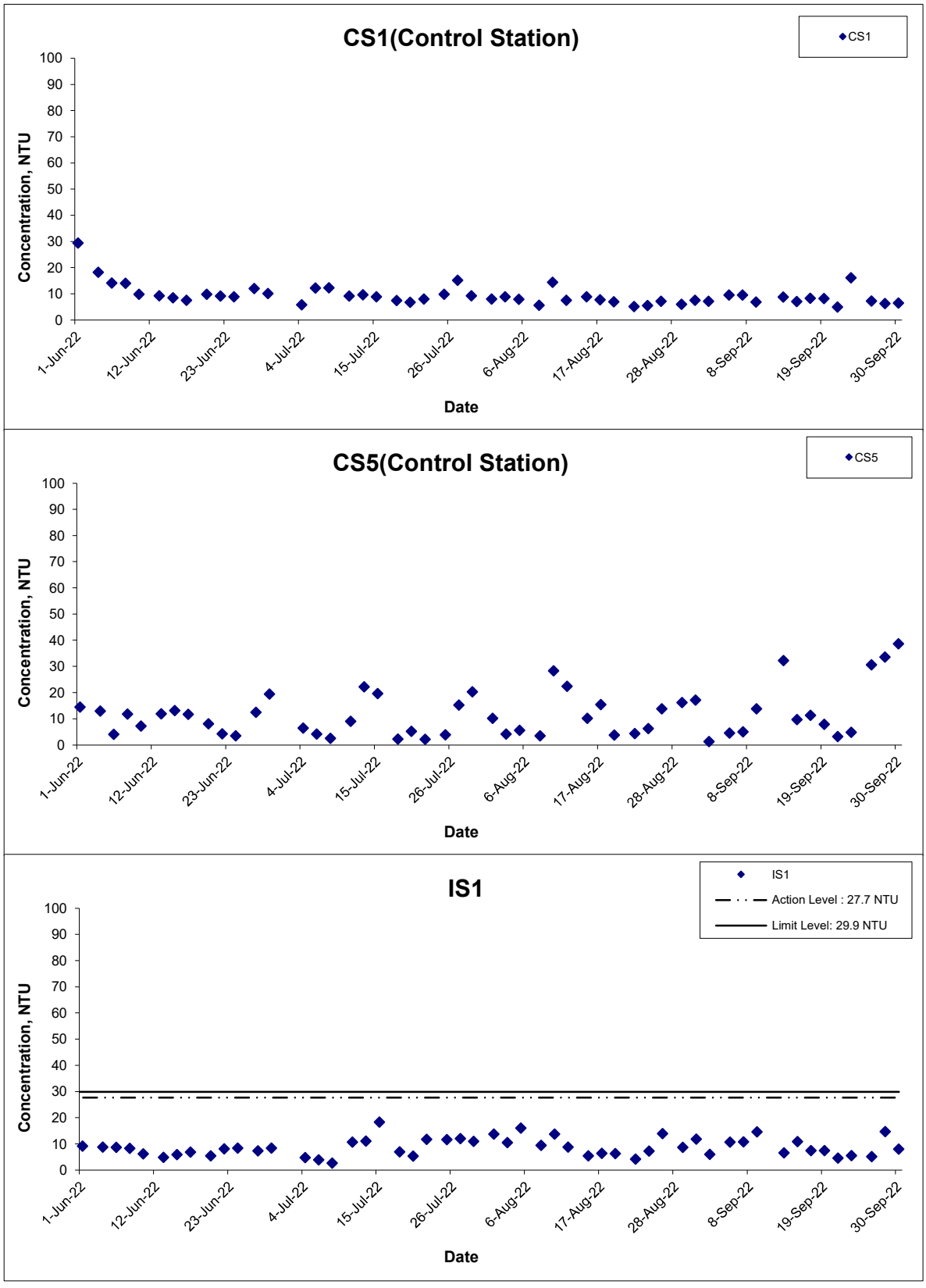
Turbidity



Title	Service Contract No. WD/04/2020 Development of Lok Ma Chau Loop: Main Works Package 1 - Environmental Team Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: WMA21009	WELLAB 匯力 consulting . testing . research
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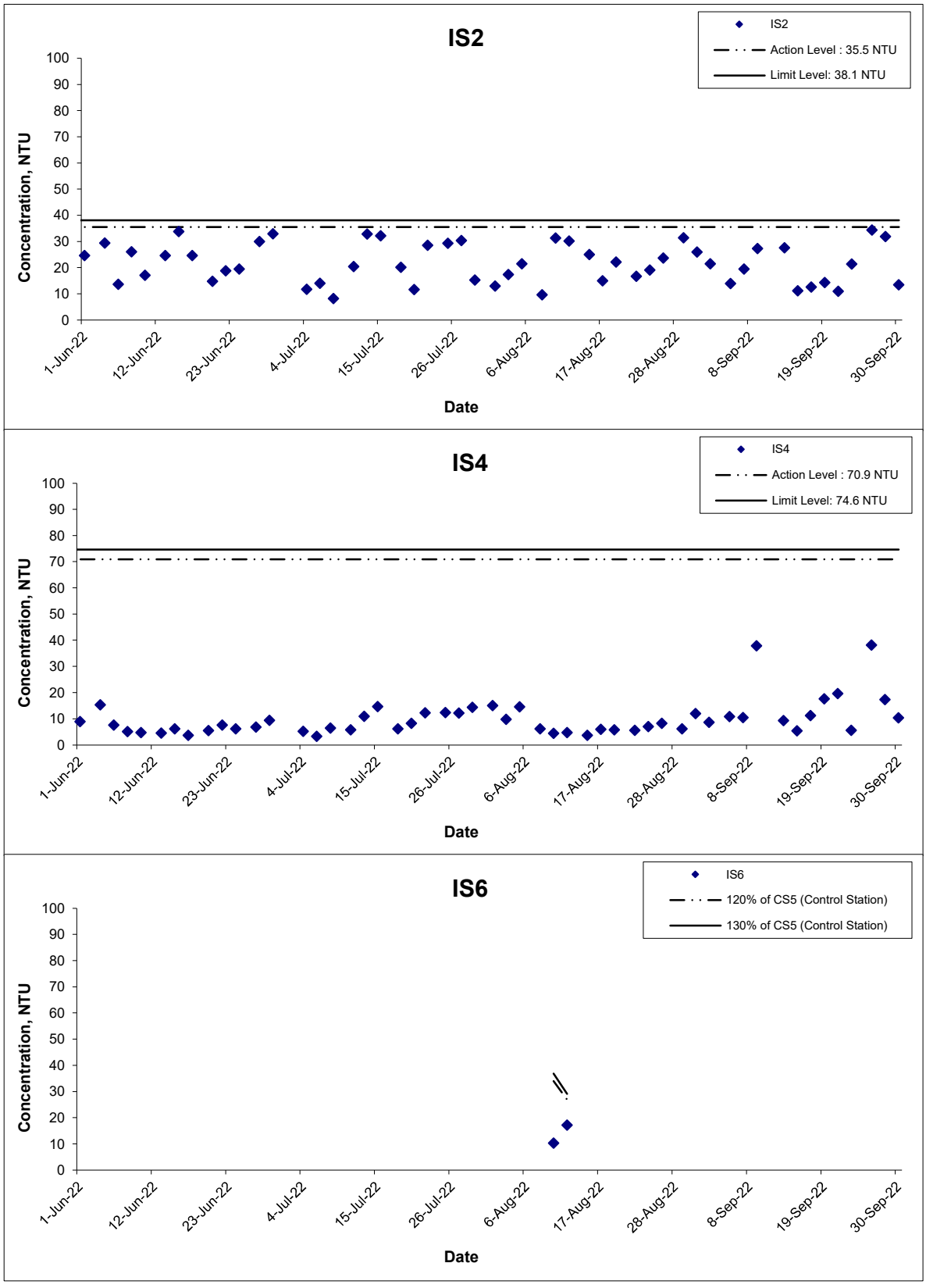
Turbidity



Title	Service Contract No. WD/04/2020 Development of Lok Ma Chau Loop: Main Works Package 1 - Environmental Team Graphical Presentation of Water Quality Monitoring Results	Scale: N.T.S	Project No.: WMA21009	WELLAB 匯力 consulting . testing . research
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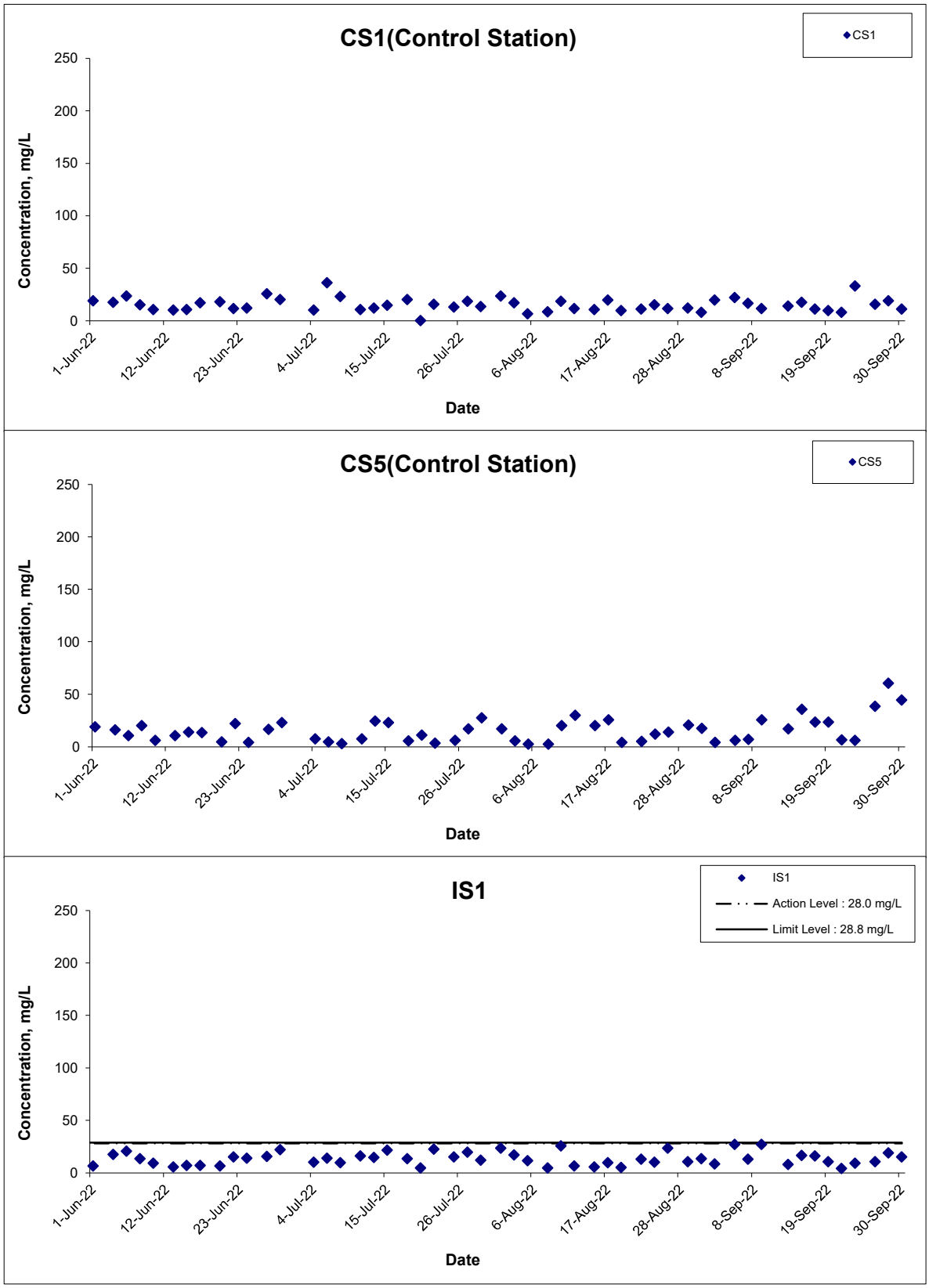
Suspended Solids



Remark: The graphical point at zero concentration is presented as <2.5 mg/L

Title	Service Contract No. WD/04/2020 Development of Lok Ma Chau Loop: Main Works Package 1 - Environmental Team	Scale	N.T.S	Project No. WMA21009
	Graphical Presentation of Water Quality Monitoring Results	Date	Sept 22	Appendix H

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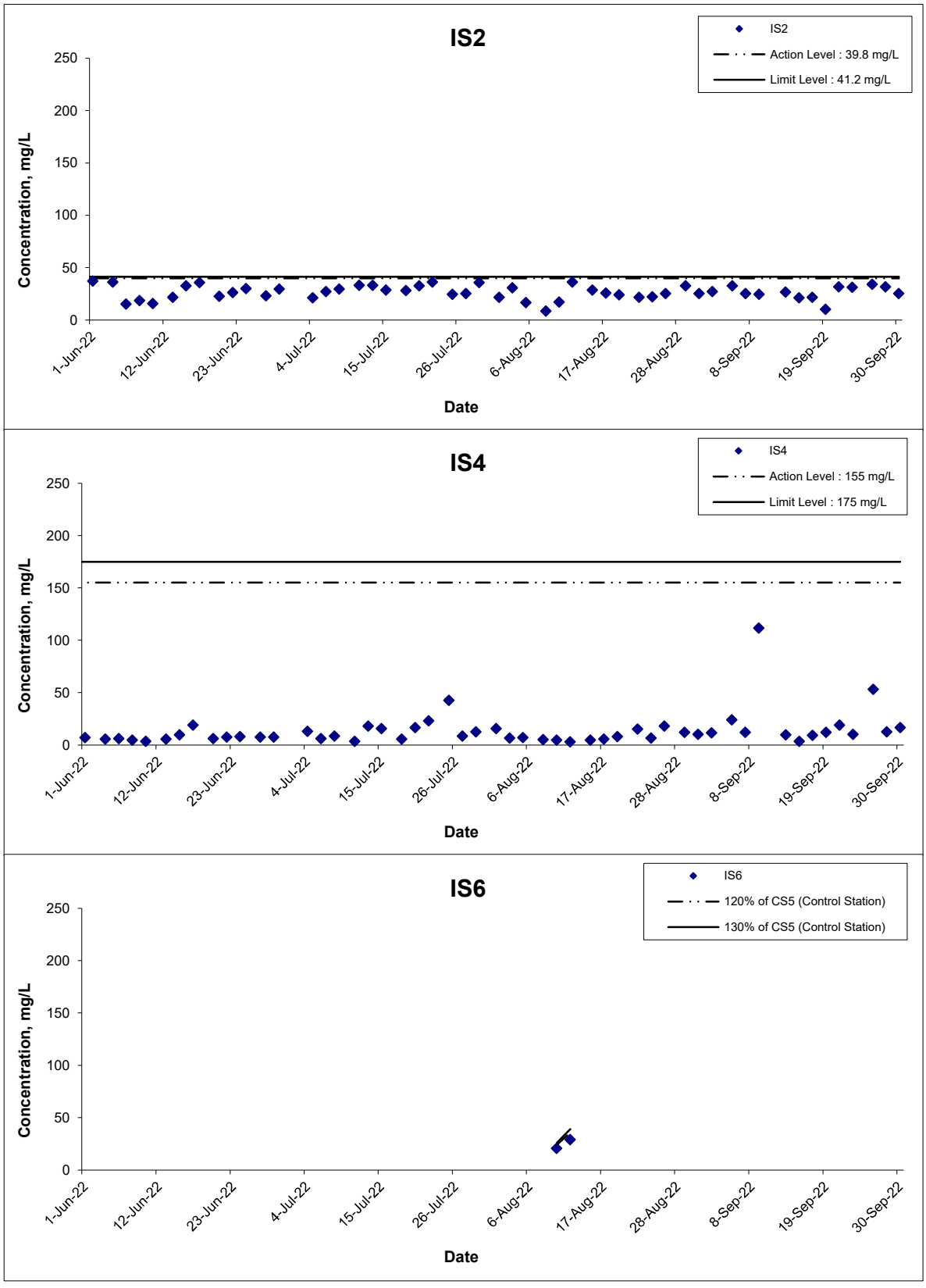
Suspended Solids



Title	Service Contract No. WD/04/2020 Development of Lok Ma Chau Loop: Main Works Package 1 - Environmental Team Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. WMA21009	WELLAB 匯力 consulting . testing . research
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APPENDIX I
WEATHER CONDITION

APPENDIX I –
GENERAL WEATHER CONDITIONS DURING THE MONITORING PERIOD

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
1 September 2022	29.4	78	2.8
2 September 2022	29.5	63	0.0
3 September 2022	30.0	54	0.0
4 September 2022	30.8	55	0.0
5 September 2022	31.1	52	0.0
6 September 2022	30.8	61	0.0
7 September 2022	28.4	81	8.6
8 September 2022	29.5	70	Trace
9 September 2022	29.6	55	0.0
10 September 2022	28.9	76	Trace
11 September 2022	29.4	78	0.0
12 September 2022	30.8	66	0.0
13 September 2022	31.7	56	0.0
14 September 2022	31.7	46	0.0
15 September 2022	31.3	52	0.0
16 September 2022	30.8	63	Trace

Date	Mean Air Temperature (°C)	Mean Relative Humidity (%)	Precipitation (mm)
17 September 2022	31.1	69	Trace
18 September 2022	30.1	77	20.3
19 September 2022	28.8	77	3.3
20 September 2022	28.9	79	3.5
21 September 2022	28.1	72	8.5
22 September 2022	28.5	73	0.0
23 September 2022	28.5	77	13.4
24 September 2022	28.3	71	0.0
25 September 2022	28.8	71	0.0
26 September 2022	29.4	70	0.0
27 September 2022	29.2	72	Trace
28 September 2022	28.8	73	0.0
29 September 2022	28.0	81	8.1
30 September 2022	26.4	91	102.7

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

Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
1-Sep-2022	00:00	0.4	SSE
1-Sep-2022	01:00	0.9	SSE
1-Sep-2022	02:00	0.4	SSE
1-Sep-2022	03:00	0.4	SSE
1-Sep-2022	04:00	0.4	SSE
1-Sep-2022	05:00	0.0	SSE
1-Sep-2022	06:00	0.0	SSE
1-Sep-2022	07:00	0.4	SSE
1-Sep-2022	08:00	0.0	SSE
1-Sep-2022	09:00	0.0	SSE
1-Sep-2022	10:00	0.0	SSE
1-Sep-2022	11:00	0.0	SSE
1-Sep-2022	12:00	0.0	SSE
1-Sep-2022	13:00	0.0	SSE
1-Sep-2022	14:00	0.0	SSE
1-Sep-2022	15:00	0.0	SSE
1-Sep-2022	16:00	0.0	SSE
1-Sep-2022	17:00	0.0	SSE
1-Sep-2022	18:00	0.0	SSE
1-Sep-2022	19:00	0.0	SSE
1-Sep-2022	20:00	0.0	SSE
1-Sep-2022	21:00	0.0	SSE
1-Sep-2022	22:00	0.0	S
1-Sep-2022	23:00	0.0	S
2-Sep-2022	00:00	0.0	SSE
2-Sep-2022	01:00	0.0	SSE
2-Sep-2022	02:00	0.4	SSE
2-Sep-2022	03:00	0.0	SSW
2-Sep-2022	04:00	0.0	SSE
2-Sep-2022	05:00	0.0	SSE
2-Sep-2022	06:00	0.0	SSE
2-Sep-2022	07:00	0.0	SSE
2-Sep-2022	08:00	0.0	SSE
2-Sep-2022	09:00	0.0	SSE
2-Sep-2022	10:00	0.0	S
2-Sep-2022	11:00	0.0	N
2-Sep-2022	12:00	0.0	NNE
2-Sep-2022	13:00	0.0	SSW
2-Sep-2022	14:00	0.0	SSE
2-Sep-2022	15:00	0.0	S
2-Sep-2022	16:00	0.0	SSE
2-Sep-2022	17:00	0.0	SSE
2-Sep-2022	18:00	0.0	SSE
2-Sep-2022	19:00	0.0	SSE
2-Sep-2022	20:00	0.0	SSE
2-Sep-2022	21:00	0.0	SSE
2-Sep-2022	22:00	0.0	SSE
2-Sep-2022	23:00	0.0	SSE
3-Sep-2022	00:00	0.4	SSE
3-Sep-2022	01:00	0.4	SSE
3-Sep-2022	02:00	0.4	SSE
3-Sep-2022	03:00	0.4	SSE
3-Sep-2022	04:00	0.0	SSE
3-Sep-2022	05:00	0.4	SSE

Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
3-Sep-2022	06:00	0.0	SSE
3-Sep-2022	07:00	0.0	SSW
3-Sep-2022	08:00	0.0	SSE
3-Sep-2022	09:00	0.0	N
3-Sep-2022	10:00	0.0	SSE
3-Sep-2022	11:00	0.0	---
3-Sep-2022	12:00	0.0	---
3-Sep-2022	13:00	0.0	---
3-Sep-2022	14:00	0.0	---
3-Sep-2022	15:00	0.0	---
3-Sep-2022	16:00	0.0	---
3-Sep-2022	17:00	0.0	---
3-Sep-2022	18:00	0.0	---
3-Sep-2022	19:00	0.0	ESE
3-Sep-2022	20:00	0.0	---
3-Sep-2022	21:00	0.0	SE
3-Sep-2022	22:00	0.0	SSE
3-Sep-2022	23:00	0.0	S
4-Sep-2022	00:00	0.0	SSE
4-Sep-2022	01:00	0.0	SSW
4-Sep-2022	02:00	0.4	SSW
4-Sep-2022	03:00	0.4	SSW
4-Sep-2022	04:00	0.0	SSW
4-Sep-2022	05:00	0.0	SSE
4-Sep-2022	06:00	0.0	SSE
4-Sep-2022	07:00	0.0	SSW
4-Sep-2022	08:00	0.0	SSE
4-Sep-2022	09:00	0.0	SSE
4-Sep-2022	10:00	0.0	SSW
4-Sep-2022	11:00	0.0	SSW
4-Sep-2022	12:00	0.0	W
4-Sep-2022	13:00	0.4	WSW
4-Sep-2022	14:00	0.4	WSW
4-Sep-2022	15:00	0.0	---
4-Sep-2022	16:00	0.0	---
4-Sep-2022	17:00	0.0	W
4-Sep-2022	18:00	0.0	---
4-Sep-2022	19:00	0.0	WSW
4-Sep-2022	20:00	0.0	---
4-Sep-2022	21:00	0.0	---
4-Sep-2022	22:00	0.0	---
4-Sep-2022	23:00	0.0	SSW
5-Sep-2022	00:00	0.0	SSW
5-Sep-2022	01:00	0.4	SSW
5-Sep-2022	02:00	0.0	WSW
5-Sep-2022	03:00	0.4	SSW
5-Sep-2022	04:00	0.9	SSW
5-Sep-2022	05:00	0.9	SSW
5-Sep-2022	06:00	0.4	SSW
5-Sep-2022	07:00	0.4	SW
5-Sep-2022	08:00	0.4	SSW
5-Sep-2022	09:00	0.4	SSW
5-Sep-2022	10:00	0.4	SSW
5-Sep-2022	11:00	0.4	SSW

Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
5-Sep-2022	12:00	0.4	SSW
5-Sep-2022	13:00	0.4	SSW
5-Sep-2022	14:00	0.4	SSW
5-Sep-2022	15:00	0.4	SSW
5-Sep-2022	16:00	0.4	SSW
5-Sep-2022	17:00	0.4	SSW
5-Sep-2022	18:00	0.0	WSW
5-Sep-2022	19:00	0.4	WNW
5-Sep-2022	20:00	0.0	SW
5-Sep-2022	21:00	0.0	WSW
5-Sep-2022	22:00	0.4	WSW
5-Sep-2022	23:00	0.4	WSW
6-Sep-2022	00:00	0.4	SSW
6-Sep-2022	01:00	0.9	SW
6-Sep-2022	02:00	0.9	SSW
6-Sep-2022	03:00	0.9	SSW
6-Sep-2022	04:00	0.9	SSW
6-Sep-2022	05:00	0.9	SSW
6-Sep-2022	06:00	0.9	SSW
6-Sep-2022	07:00	0.9	SSW
6-Sep-2022	08:00	0.4	SSW
6-Sep-2022	09:00	0.4	SSW
6-Sep-2022	10:00	0.4	SSW
6-Sep-2022	11:00	0.0	SSW
6-Sep-2022	12:00	0.4	SSW
6-Sep-2022	13:00	0.4	SSW
6-Sep-2022	14:00	0.4	SSW
6-Sep-2022	15:00	0.9	SSW
6-Sep-2022	16:00	0.4	SSW
6-Sep-2022	17:00	0.4	SSW
6-Sep-2022	18:00	0.4	SW
6-Sep-2022	19:00	0.4	SSW
6-Sep-2022	20:00	0.0	SW
6-Sep-2022	21:00	0.0	SSW
6-Sep-2022	22:00	0.0	WSW
6-Sep-2022	23:00	0.0	---
7-Sep-2022	00:00	0.0	SW
7-Sep-2022	01:00	0.0	SSW
7-Sep-2022	02:00	0.4	SSW
7-Sep-2022	03:00	0.4	WSW
7-Sep-2022	04:00	0.4	W
7-Sep-2022	05:00	0.4	NE
7-Sep-2022	06:00	0.0	NNE
7-Sep-2022	07:00	0.4	SSW
7-Sep-2022	08:00	0.4	SSW
7-Sep-2022	09:00	0.4	WSW
7-Sep-2022	10:00	0.0	SSW
7-Sep-2022	11:00	0.0	SSW
7-Sep-2022	12:00	0.0	---
7-Sep-2022	13:00	0.0	SSW
7-Sep-2022	14:00	0.4	WSW
7-Sep-2022	15:00	0.0	SW
7-Sep-2022	16:00	0.4	SW
7-Sep-2022	17:00	0.0	---

Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
7-Sep-2022	18:00	0.0	---
7-Sep-2022	19:00	0.0	---
7-Sep-2022	20:00	0.0	---
7-Sep-2022	21:00	0.0	WSW
7-Sep-2022	22:00	0.0	---
7-Sep-2022	23:00	0.0	WNW
8-Sep-2022	00:00	0.0	S
8-Sep-2022	01:00	0.0	WSW
8-Sep-2022	02:00	0.0	NE
8-Sep-2022	03:00	0.0	NE
8-Sep-2022	04:00	0.4	NNE
8-Sep-2022	05:00	0.9	NNE
8-Sep-2022	06:00	1.3	NNE
8-Sep-2022	07:00	1.3	NNE
8-Sep-2022	08:00	0.4	NNE
8-Sep-2022	09:00	0.0	W
8-Sep-2022	10:00	0.0	WSW
8-Sep-2022	11:00	0.0	SW
8-Sep-2022	12:00	0.0	NW
8-Sep-2022	13:00	0.0	---
8-Sep-2022	14:00	0.0	---
8-Sep-2022	15:00	0.0	---
8-Sep-2022	16:00	0.0	---
8-Sep-2022	17:00	0.0	---
8-Sep-2022	18:00	0.0	WNW
8-Sep-2022	19:00	0.0	---
8-Sep-2022	20:00	0.0	---
8-Sep-2022	21:00	0.0	---
8-Sep-2022	22:00	0.0	---
8-Sep-2022	23:00	0.0	SSW
9-Sep-2022	00:00	0.0	SSW
9-Sep-2022	01:00	0.0	WSW
9-Sep-2022	02:00	0.0	NE
9-Sep-2022	03:00	0.0	NE
9-Sep-2022	04:00	0.0	ENE
9-Sep-2022	05:00	0.4	NE
9-Sep-2022	06:00	0.9	NE
9-Sep-2022	07:00	0.0	NNE
9-Sep-2022	08:00	0.0	---
9-Sep-2022	09:00	0.0	---
9-Sep-2022	10:00	0.0	---
9-Sep-2022	11:00	0.0	---
9-Sep-2022	12:00	0.0	---
9-Sep-2022	13:00	0.0	---
9-Sep-2022	14:00	0.0	---
9-Sep-2022	15:00	0.0	WNW
9-Sep-2022	16:00	0.0	W
9-Sep-2022	17:00	0.4	W
9-Sep-2022	18:00	0.0	W
9-Sep-2022	19:00	0.0	---
9-Sep-2022	20:00	0.0	---
9-Sep-2022	21:00	0.0	W
9-Sep-2022	22:00	0.0	W
9-Sep-2022	23:00	0.0	W

Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
10-Sep-2022	00:00	0.0	ENE
10-Sep-2022	01:00	0.9	NNE
10-Sep-2022	02:00	0.9	NE
10-Sep-2022	03:00	0.9	NNE
10-Sep-2022	04:00	0.9	NE
10-Sep-2022	05:00	0.9	NNE
10-Sep-2022	06:00	0.4	NNE
10-Sep-2022	07:00	0.4	NNE
10-Sep-2022	08:00	0.0	NNE
10-Sep-2022	09:00	0.0	NNE
10-Sep-2022	10:00	0.0	NNE
10-Sep-2022	11:00	0.0	---
10-Sep-2022	12:00	0.0	---
10-Sep-2022	13:00	0.0	---
10-Sep-2022	14:00	0.0	---
10-Sep-2022	15:00	0.0	---
10-Sep-2022	16:00	0.0	---
10-Sep-2022	17:00	0.0	---
10-Sep-2022	18:00	0.0	---
10-Sep-2022	19:00	0.0	---
10-Sep-2022	20:00	0.0	---
10-Sep-2022	21:00	0.0	---
10-Sep-2022	22:00	0.0	---
10-Sep-2022	23:00	0.0	---
11-Sep-2022	00:00	0.0	---
11-Sep-2022	01:00	0.0	SSE
11-Sep-2022	02:00	0.0	SSW
11-Sep-2022	03:00	0.0	SSW
11-Sep-2022	04:00	0.0	SSE
11-Sep-2022	05:00	0.0	SSE
11-Sep-2022	06:00	0.0	SSE
11-Sep-2022	07:00	0.0	SSE
11-Sep-2022	08:00	0.0	SSE
11-Sep-2022	09:00	0.0	SSE
11-Sep-2022	10:00	0.0	---
11-Sep-2022	11:00	0.0	W
11-Sep-2022	12:00	0.0	---
11-Sep-2022	13:00	0.0	---
11-Sep-2022	14:00	0.0	---
11-Sep-2022	15:00	0.0	---
11-Sep-2022	16:00	0.0	---
11-Sep-2022	17:00	0.0	---
11-Sep-2022	18:00	0.0	---
11-Sep-2022	19:00	0.0	---
11-Sep-2022	20:00	0.0	---
11-Sep-2022	21:00	0.0	---
11-Sep-2022	22:00	0.0	---
11-Sep-2022	23:00	0.0	---
12-Sep-2022	00:00	0.0	---
12-Sep-2022	01:00	0.0	SSW
12-Sep-2022	02:00	0.4	SSW
12-Sep-2022	03:00	0.4	SSW
12-Sep-2022	04:00	0.4	WSW
12-Sep-2022	05:00	0.4	SSE

Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
12-Sep-2022	06:00	0.0	SSE
12-Sep-2022	07:00	0.0	SSE
12-Sep-2022	08:00	0.0	NE
12-Sep-2022	09:00	0.0	S
12-Sep-2022	10:00	0.0	---
12-Sep-2022	11:00	0.0	---
12-Sep-2022	12:00	0.0	---
12-Sep-2022	13:00	0.0	---
12-Sep-2022	14:00	0.0	---
12-Sep-2022	15:00	0.0	---
12-Sep-2022	16:00	0.0	---
12-Sep-2022	17:00	0.0	---
12-Sep-2022	18:00	0.0	---
12-Sep-2022	19:00	0.0	WSW
12-Sep-2022	20:00	0.0	W
12-Sep-2022	21:00	0.0	WSW
12-Sep-2022	22:00	0.4	WSW
12-Sep-2022	23:00	0.0	WSW
13-Sep-2022	00:00	0.4	SSW
13-Sep-2022	01:00	0.0	WSW
13-Sep-2022	02:00	0.0	SSW
13-Sep-2022	03:00	0.0	NE
13-Sep-2022	04:00	0.0	SSE
13-Sep-2022	05:00	0.0	NNE
13-Sep-2022	06:00	0.0	NNE
13-Sep-2022	07:00	0.0	NE
13-Sep-2022	08:00	0.4	NE
13-Sep-2022	09:00	0.0	NE
13-Sep-2022	10:00	0.0	NE
13-Sep-2022	11:00	0.0	---
13-Sep-2022	12:00	0.0	---
13-Sep-2022	13:00	0.0	---
13-Sep-2022	14:00	0.0	---
13-Sep-2022	15:00	0.0	---
13-Sep-2022	16:00	0.0	WSW
13-Sep-2022	17:00	0.0	W
13-Sep-2022	18:00	0.0	---
13-Sep-2022	19:00	0.0	---
13-Sep-2022	20:00	0.0	---
13-Sep-2022	21:00	0.0	---
13-Sep-2022	22:00	0.0	---
13-Sep-2022	23:00	0.0	---
14-Sep-2022	00:00	0.0	WSW
14-Sep-2022	01:00	0.0	WNW
14-Sep-2022	02:00	0.4	SSW
14-Sep-2022	03:00	0.0	SSW
14-Sep-2022	04:00	0.0	SSE
14-Sep-2022	05:00	0.4	NNE
14-Sep-2022	06:00	0.9	NNE
14-Sep-2022	07:00	1.3	NNE
14-Sep-2022	08:00	0.4	NNE
14-Sep-2022	09:00	0.0	NNE
14-Sep-2022	10:00	0.0	---
14-Sep-2022	11:00	0.0	---

Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
14-Sep-2022	12:00	0.0	---
14-Sep-2022	13:00	0.0	---
14-Sep-2022	14:00	0.0	---
14-Sep-2022	15:00	0.0	---
14-Sep-2022	16:00	0.0	---
14-Sep-2022	17:00	0.0	---
14-Sep-2022	18:00	0.0	---
14-Sep-2022	19:00	0.0	---
14-Sep-2022	20:00	0.0	---
14-Sep-2022	21:00	0.0	---
14-Sep-2022	22:00	0.0	---
14-Sep-2022	23:00	0.0	---
15-Sep-2022	00:00	0.0	NE
15-Sep-2022	01:00	0.0	ENE
15-Sep-2022	02:00	0.0	SSE
15-Sep-2022	03:00	0.0	NE
15-Sep-2022	04:00	0.4	NNE
15-Sep-2022	05:00	0.9	NE
15-Sep-2022	06:00	0.0	NNE
15-Sep-2022	07:00	0.4	W
15-Sep-2022	08:00	0.4	W
15-Sep-2022	09:00	0.0	W
15-Sep-2022	10:00	0.0	---
15-Sep-2022	11:00	0.0	---
15-Sep-2022	12:00	0.0	W
15-Sep-2022	13:00	0.0	W
15-Sep-2022	14:00	0.0	W
15-Sep-2022	15:00	0.0	W
15-Sep-2022	16:00	0.0	WNW
15-Sep-2022	17:00	0.0	---
15-Sep-2022	18:00	0.0	---
15-Sep-2022	19:00	0.0	---
15-Sep-2022	20:00	0.0	---
15-Sep-2022	21:00	0.0	---
15-Sep-2022	22:00	0.0	---
15-Sep-2022	23:00	0.0	W
16-Sep-2022	00:00	0.0	---
16-Sep-2022	01:00	0.0	NE
16-Sep-2022	02:00	0.4	NE
16-Sep-2022	03:00	0.0	NE
16-Sep-2022	04:00	0.9	NE
16-Sep-2022	05:00	0.9	NNE
16-Sep-2022	06:00	0.9	NE
16-Sep-2022	07:00	0.9	NE
16-Sep-2022	08:00	0.9	NNE
16-Sep-2022	09:00	0.9	NE
16-Sep-2022	10:00	0.0	---
16-Sep-2022	11:00	0.0	---
16-Sep-2022	12:00	0.0	---
16-Sep-2022	13:00	0.0	---
16-Sep-2022	14:00	0.0	---
16-Sep-2022	15:00	0.0	---
16-Sep-2022	16:00	0.0	---
16-Sep-2022	17:00	0.0	---

Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
16-Sep-2022	18:00	0.0	---
16-Sep-2022	19:00	0.0	---
16-Sep-2022	20:00	0.0	---
16-Sep-2022	21:00	0.0	---
16-Sep-2022	22:00	0.0	---
16-Sep-2022	23:00	0.0	---
17-Sep-2022	00:00	0.4	NE
17-Sep-2022	01:00	0.4	NE
17-Sep-2022	02:00	0.4	NNE
17-Sep-2022	03:00	0.9	NNE
17-Sep-2022	04:00	1.3	NNE
17-Sep-2022	05:00	1.8	NNE
17-Sep-2022	06:00	1.8	NNE
17-Sep-2022	07:00	1.3	NNE
17-Sep-2022	08:00	1.8	WSW
17-Sep-2022	09:00	0.0	NW
17-Sep-2022	10:00	0.0	WSW
17-Sep-2022	11:00	0.0	---
17-Sep-2022	12:00	0.0	---
17-Sep-2022	13:00	0.0	WSW
17-Sep-2022	14:00	0.0	WSW
17-Sep-2022	15:00	0.0	---
17-Sep-2022	16:00	0.0	---
17-Sep-2022	17:00	0.0	---
17-Sep-2022	18:00	1.8	NNE
17-Sep-2022	19:00	0.4	NE
17-Sep-2022	20:00	0.0	WNW
17-Sep-2022	21:00	0.0	W
17-Sep-2022	22:00	0.4	W
17-Sep-2022	23:00	0.0	---
18-Sep-2022	00:00	0.0	---
18-Sep-2022	01:00	0.0	---
18-Sep-2022	02:00	0.0	NE
18-Sep-2022	03:00	0.9	NE
18-Sep-2022	04:00	0.4	NNE
18-Sep-2022	05:00	0.0	NE
18-Sep-2022	06:00	0.0	---
18-Sep-2022	07:00	0.4	NNE
18-Sep-2022	08:00	0.4	SW
18-Sep-2022	09:00	0.9	WSW
18-Sep-2022	10:00	0.0	WSW
18-Sep-2022	11:00	0.0	WSW
18-Sep-2022	12:00	0.4	WSW
18-Sep-2022	13:00	0.0	---
18-Sep-2022	14:00	0.0	---
18-Sep-2022	15:00	0.0	---
18-Sep-2022	16:00	0.0	SSW
18-Sep-2022	17:00	0.0	SW
18-Sep-2022	18:00	0.0	SSW
18-Sep-2022	19:00	0.4	SW
18-Sep-2022	20:00	0.0	WSW
18-Sep-2022	21:00	0.0	SW
18-Sep-2022	22:00	0.4	SW
18-Sep-2022	23:00	0.4	SSW

Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
19-Sep-2022	00:00	0.4	SSW
19-Sep-2022	01:00	0.4	SSW
19-Sep-2022	02:00	0.9	SSW
19-Sep-2022	03:00	1.3	SW
19-Sep-2022	04:00	0.4	SSW
19-Sep-2022	05:00	0.4	SSW
19-Sep-2022	06:00	1.3	SSW
19-Sep-2022	07:00	0.9	SSW
19-Sep-2022	08:00	0.4	SSW
19-Sep-2022	09:00	0.9	SW
19-Sep-2022	10:00	0.4	SSW
19-Sep-2022	11:00	0.4	SSW
19-Sep-2022	12:00	0.4	SSW
19-Sep-2022	13:00	0.4	SSW
19-Sep-2022	14:00	0.4	SSW
19-Sep-2022	15:00	0.4	SSW
19-Sep-2022	16:00	1.3	SSW
19-Sep-2022	17:00	1.8	SSW
19-Sep-2022	18:00	0.4	SSW
19-Sep-2022	19:00	0.4	SSW
19-Sep-2022	20:00	0.0	SSW
19-Sep-2022	21:00	0.4	SW
19-Sep-2022	22:00	0.4	SSW
19-Sep-2022	23:00	0.9	SSW
20-Sep-2022	00:00	0.9	SSW
20-Sep-2022	01:00	0.9	SSW
20-Sep-2022	02:00	0.9	SW
20-Sep-2022	03:00	0.9	WSW
20-Sep-2022	04:00	0.9	SSW
20-Sep-2022	05:00	0.9	SSW
20-Sep-2022	06:00	0.9	SSW
20-Sep-2022	07:00	0.4	WSW
20-Sep-2022	08:00	0.4	SSW
20-Sep-2022	09:00	0.9	SSW
20-Sep-2022	10:00	0.9	SSW
20-Sep-2022	11:00	0.4	SSW
20-Sep-2022	12:00	0.0	SSW
20-Sep-2022	13:00	0.0	SSW
20-Sep-2022	14:00	0.4	SSW
20-Sep-2022	15:00	0.0	SSW
20-Sep-2022	16:00	0.0	SSW
20-Sep-2022	17:00	0.0	SSW
20-Sep-2022	18:00	0.0	SSW
20-Sep-2022	19:00	0.0	SSW
20-Sep-2022	20:00	0.0	SW
20-Sep-2022	21:00	0.0	SSW
20-Sep-2022	22:00	0.0	WSW
20-Sep-2022	23:00	0.4	SSW
21-Sep-2022	00:00	1.3	SSW
21-Sep-2022	01:00	0.9	SSW
21-Sep-2022	02:00	0.4	SSW
21-Sep-2022	03:00	0.4	SSW
21-Sep-2022	04:00	0.4	SSW
21-Sep-2022	05:00	0.9	SSW

Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
21-Sep-2022	06:00	0.9	W
21-Sep-2022	07:00	0.4	WSW
21-Sep-2022	08:00	0.9	W
21-Sep-2022	09:00	0.0	SSW
21-Sep-2022	10:00	0.0	SSW
21-Sep-2022	11:00	0.0	SSW
21-Sep-2022	12:00	0.0	SSW
21-Sep-2022	13:00	0.0	---
21-Sep-2022	14:00	0.0	WSW
21-Sep-2022	15:00	0.0	SW
21-Sep-2022	16:00	0.0	S
21-Sep-2022	17:00	0.0	---
21-Sep-2022	18:00	0.0	---
21-Sep-2022	19:00	0.0	W
21-Sep-2022	20:00	0.0	W
21-Sep-2022	21:00	0.0	W
21-Sep-2022	22:00	0.0	---
21-Sep-2022	23:00	0.0	---
22-Sep-2022	00:00	0.0	---
22-Sep-2022	01:00	0.0	---
22-Sep-2022	02:00	0.0	SSE
22-Sep-2022	03:00	0.0	ENE
22-Sep-2022	04:00	0.0	SSW
22-Sep-2022	05:00	0.4	W
22-Sep-2022	06:00	0.4	NE
22-Sep-2022	07:00	0.4	NNE
22-Sep-2022	08:00	0.4	WSW
22-Sep-2022	09:00	0.0	WSW
22-Sep-2022	10:00	0.4	SSW
22-Sep-2022	11:00	0.9	SSW
22-Sep-2022	12:00	0.4	SSW
22-Sep-2022	13:00	0.9	SW
22-Sep-2022	14:00	0.4	WSW
22-Sep-2022	15:00	0.0	SSW
22-Sep-2022	16:00	0.4	SSW
22-Sep-2022	17:00	0.4	WSW
22-Sep-2022	18:00	0.4	WSW
22-Sep-2022	19:00	0.4	SSW
22-Sep-2022	20:00	0.0	SSW
22-Sep-2022	21:00	0.0	SSW
22-Sep-2022	22:00	0.0	WSW
22-Sep-2022	23:00	0.4	SSW
23-Sep-2022	00:00	0.4	SSW
23-Sep-2022	01:00	0.4	WSW
23-Sep-2022	02:00	0.9	SW
23-Sep-2022	03:00	0.9	SW
23-Sep-2022	04:00	0.9	SSW
23-Sep-2022	05:00	0.9	SSW
23-Sep-2022	06:00	0.4	WSW
23-Sep-2022	07:00	0.4	WSW
23-Sep-2022	08:00	0.4	SSW
23-Sep-2022	09:00	0.0	SSW
23-Sep-2022	10:00	0.0	SSW
23-Sep-2022	11:00	0.0	SSW

Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
23-Sep-2022	12:00	0.0	SSW
23-Sep-2022	13:00	0.0	SSW
23-Sep-2022	14:00	0.0	SSW
23-Sep-2022	15:00	0.0	SSW
23-Sep-2022	16:00	0.0	WSW
23-Sep-2022	17:00	0.0	SW
23-Sep-2022	18:00	0.4	SSW
23-Sep-2022	19:00	0.4	SSW
23-Sep-2022	20:00	0.0	WSW
23-Sep-2022	21:00	0.0	WSW
23-Sep-2022	22:00	0.4	SSW
23-Sep-2022	23:00	0.0	SSW
24-Sep-2022	00:00	0.0	SSW
24-Sep-2022	01:00	0.0	SSW
24-Sep-2022	02:00	0.4	SSW
24-Sep-2022	03:00	0.4	SSW
24-Sep-2022	04:00	0.0	WSW
24-Sep-2022	05:00	0.4	WSW
24-Sep-2022	06:00	0.0	WSW
24-Sep-2022	07:00	0.9	NE
24-Sep-2022	08:00	0.0	NE
24-Sep-2022	09:00	0.0	WNW
24-Sep-2022	10:00	0.0	W
24-Sep-2022	11:00	0.0	WSW
24-Sep-2022	12:00	0.0	SW
24-Sep-2022	13:00	0.0	SSW
24-Sep-2022	14:00	0.0	SW
24-Sep-2022	15:00	0.0	---
24-Sep-2022	16:00	0.0	---
24-Sep-2022	17:00	0.0	---
24-Sep-2022	18:00	0.0	---
24-Sep-2022	19:00	0.0	S
24-Sep-2022	20:00	0.0	WSW
24-Sep-2022	21:00	0.0	SSW
24-Sep-2022	22:00	0.0	SW
24-Sep-2022	23:00	0.0	SSW
25-Sep-2022	00:00	0.0	SSW
25-Sep-2022	01:00	0.4	SSW
25-Sep-2022	02:00	0.4	SSW
25-Sep-2022	03:00	0.0	SSW
25-Sep-2022	04:00	0.0	SSW
25-Sep-2022	05:00	0.0	SSW
25-Sep-2022	06:00	0.4	SSW
25-Sep-2022	07:00	0.9	W
25-Sep-2022	08:00	0.9	SW
25-Sep-2022	09:00	0.4	SSW
25-Sep-2022	10:00	0.4	WSW
25-Sep-2022	11:00	0.9	SW
25-Sep-2022	12:00	1.3	SSW
25-Sep-2022	13:00	0.4	SSW
25-Sep-2022	14:00	0.0	SW
25-Sep-2022	15:00	0.4	SSW
25-Sep-2022	16:00	0.4	SSW
25-Sep-2022	17:00	0.4	SSW

Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
25-Sep-2022	18:00	0.4	SW
25-Sep-2022	19:00	0.4	SSW
25-Sep-2022	20:00	0.0	WSW
25-Sep-2022	21:00	0.4	WSW
25-Sep-2022	22:00	0.0	SW
25-Sep-2022	23:00	0.4	SSW
26-Sep-2022	00:00	0.4	SSW
26-Sep-2022	01:00	0.9	SSW
26-Sep-2022	02:00	1.3	SSW
26-Sep-2022	03:00	0.9	SSW
26-Sep-2022	04:00	0.9	SSW
26-Sep-2022	05:00	0.9	SW
26-Sep-2022	06:00	0.9	SSW
26-Sep-2022	07:00	0.4	SSW
26-Sep-2022	08:00	0.4	WSW
26-Sep-2022	09:00	0.4	SW
26-Sep-2022	10:00	0.0	SSW
26-Sep-2022	11:00	0.4	SSW
26-Sep-2022	12:00	0.9	SSW
26-Sep-2022	13:00	0.4	SSW
26-Sep-2022	14:00	0.4	SSW
26-Sep-2022	15:00	0.4	SSW
26-Sep-2022	16:00	0.0	SSW
26-Sep-2022	17:00	0.4	SSW
26-Sep-2022	18:00	0.9	SSW
26-Sep-2022	19:00	0.9	SSW
26-Sep-2022	20:00	0.9	SSW
26-Sep-2022	21:00	0.9	SSW
26-Sep-2022	22:00	0.9	SSW
26-Sep-2022	23:00	0.9	SSW
27-Sep-2022	00:00	1.3	SSW
27-Sep-2022	01:00	1.3	SSW
27-Sep-2022	02:00	0.9	SSW
27-Sep-2022	03:00	0.9	SSW
27-Sep-2022	04:00	0.9	SSW
27-Sep-2022	05:00	0.9	SSW
27-Sep-2022	06:00	0.9	SSW
27-Sep-2022	07:00	0.9	SSW
27-Sep-2022	08:00	0.9	SW
27-Sep-2022	09:00	0.4	SW
27-Sep-2022	10:00	0.9	SSW
27-Sep-2022	11:00	0.4	WSW
27-Sep-2022	12:00	0.4	SW
27-Sep-2022	13:00	1.3	SSW
27-Sep-2022	14:00	1.3	SW
27-Sep-2022	15:00	0.4	SW
27-Sep-2022	16:00	0.0	SSW
27-Sep-2022	17:00	0.4	SSW
27-Sep-2022	18:00	0.4	SW
27-Sep-2022	19:00	0.4	WSW
27-Sep-2022	20:00	0.4	SSW
27-Sep-2022	21:00	0.9	SSW
27-Sep-2022	22:00	0.9	SSW
27-Sep-2022	23:00	1.3	SSW

Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
28-Sep-2022	00:00	0.9	WSW
28-Sep-2022	01:00	0.0	WSW
28-Sep-2022	02:00	0.4	WSW
28-Sep-2022	03:00	0.9	SSW
28-Sep-2022	04:00	1.3	SSW
28-Sep-2022	05:00	1.3	SSW
28-Sep-2022	06:00	1.3	SW
28-Sep-2022	07:00	1.3	WSW
28-Sep-2022	08:00	0.9	W
28-Sep-2022	09:00	0.0	SSW
28-Sep-2022	10:00	0.4	SSW
28-Sep-2022	11:00	0.4	SSW
28-Sep-2022	12:00	0.0	SW
28-Sep-2022	13:00	0.4	SSW
28-Sep-2022	14:00	0.4	SSW
28-Sep-2022	15:00	0.0	SSW
28-Sep-2022	16:00	0.4	SW
28-Sep-2022	17:00	0.4	SSW
28-Sep-2022	18:00	0.0	SW
28-Sep-2022	19:00	0.4	SW
28-Sep-2022	20:00	0.4	SW
28-Sep-2022	21:00	0.4	SW
28-Sep-2022	22:00	0.4	SSW
28-Sep-2022	23:00	1.3	SW
29-Sep-2022	00:00	0.9	SSW
29-Sep-2022	01:00	0.4	SSW
29-Sep-2022	02:00	0.4	SSW
29-Sep-2022	03:00	0.4	SW
29-Sep-2022	04:00	0.0	WSW
29-Sep-2022	05:00	0.4	SSW
29-Sep-2022	06:00	0.0	SW
29-Sep-2022	07:00	0.9	SSW
29-Sep-2022	08:00	0.0	SW
29-Sep-2022	09:00	0.0	SW
29-Sep-2022	10:00	0.0	---
29-Sep-2022	11:00	0.0	W
29-Sep-2022	12:00	0.0	SW
29-Sep-2022	13:00	0.0	W
29-Sep-2022	14:00	0.0	SW
29-Sep-2022	15:00	0.0	SW
29-Sep-2022	16:00	0.4	SSW
29-Sep-2022	17:00	0.0	---
29-Sep-2022	18:00	0.0	WSW
29-Sep-2022	19:00	0.0	---
29-Sep-2022	20:00	0.0	SW
29-Sep-2022	21:00	0.0	SSW
29-Sep-2022	22:00	0.0	WSW
29-Sep-2022	23:00	0.4	SSW
30-Sep-2022	00:00	0.9	SSW
30-Sep-2022	01:00	0.4	SSW
30-Sep-2022	02:00	0.9	SSW
30-Sep-2022	03:00	1.3	SW
30-Sep-2022	04:00	0.9	SSW
30-Sep-2022	05:00	0.9	SSW

Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
30-Sep-2022	06:00	0.4	WSW
30-Sep-2022	07:00	0.4	SW
30-Sep-2022	08:00	0.0	SSW
30-Sep-2022	09:00	0.4	WSW
30-Sep-2022	10:00	0.4	SSW
30-Sep-2022	11:00	0.4	SW
30-Sep-2022	12:00	0.4	SSW
30-Sep-2022	13:00	0.9	SW
30-Sep-2022	14:00	0.4	SW
30-Sep-2022	15:00	0.4	SSW
30-Sep-2022	16:00	1.3	SW
30-Sep-2022	17:00	1.3	SSW
30-Sep-2022	18:00	0.4	SSW
30-Sep-2022	19:00	0.4	SSW
30-Sep-2022	20:00	0.9	SSW
30-Sep-2022	21:00	0.4	SSW
30-Sep-2022	22:00	0.0	WSW
30-Sep-2022	23:00	0.4	SW

APPENDIX J
EVENT ACTION PLANS

Appendix J Event / Action Plan for Air Quality

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; and 3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.	1. Notify Contractor.	1. Identify source, investigate the causes of exceedance and propose remedial measures 2. Rectify any unacceptable practice and implement remedial measures; and 3. Amend working methods agreed with ER if appropriate.
2. Exceedance for two or more consecutive samples	Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC,ER and Contractor; 3. Advise the ER and Contractor on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC, ER and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and ER; and 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and 5. Supervise 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. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 3. Implement the agreed proposals; and 4. Amend proposal if appropriate.

LIMIT LEVEL				
1.Exceedance for one sample	Identify source, investigate the causes of exceedanceand propose remedial measures; 2. Inform ER, Contractor, IEC and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET, ER and Contractor on possible remedial measures; 4. Advise the ER and ET on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial 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	Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC, Contractor and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and 5. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise and ensure remedial measures properly implemented; and 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; 5. Resubmit proposals if problem still not under control; 6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event / Action Plan for Construction Noise

EVENT	ACTION			
	ET	**IEC**	**ER**	**CONTRACTOR**
Action Level	Notify IEC, ER and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented	1. Submit noise mitigation proposals to IEC and ER; 2. Implement noise mitigation proposals.
Limit Level	. Identify source; 2. Inform IEC, ER, EPD and Contractor; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event and Action Plan for Water Quality

	Action			
Event	**ET**	**IEC**	**ER**	**Contractor**
Action level being exceeded by one sampling day	. 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 non-compliance in writing; 3. Rectify unacceptable practice; 4.Check all plant and equipment; 5. Consider changes of working methods; 6. Discuss with ER, ET and IEC and purpose remedial measures to IEC and ER; and 7. Implement the agreed mitigation measures.
Action level being exceeded by two or more consecutive sampling days	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 non-compliance 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	Repeat measurement on next day of exceedance to confirm findings;	1. Discuss with ET, Contractor and ER on the implemented mitigation	1. Discuss with ET, IEC and Contractor on the implemented remedial	1. Identify source(s) of impact; 2. Inform the ER and confirm notification of

	Action			
Event	**ET**	**IEC**	**ER**	**Contractor**
sampling day	2. Inform IEC, contractor and ER; 3. Rectify unacceptable practice; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Consider changes of working methods; 6. Discuss mitigation measures with IEC, ER and Contractor; and 7. Ensure the agreed remedial measures are implemented	measures; 2. Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and 3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.	measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the remedial measures to be implemented; and 4. Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures.	the non-compliance in writing; 3. Rectify unacceptable practice; 4. Check all plant and equipment and consider changes of working methods; 5. Discuss with ET, IEC and ER and submit proposal of additional mitigation measures to ER and IEC within 3 working days of notification; and 6. Implement the agreed remedial measures.
Limit level being exceeded by two or more consecutive sampling days	Inform IEC, contractor and ER; 2. Check monitoring data, all plant, equipment and Contractor's working methods; 3. Discuss mitigation measures with IEC, ER and Contractor; and 4. Ensure mitigation measures are implemented; and 5. Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days	1. Discuss with ET, Contractor and ER on the implemented mitigation measures; 2. Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and 3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.	1. Discuss with ET, IEC and Contractor on the implemented remedial measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the remedial measures to be implemented; 4. Discuss with ET and IEC on the effectiveness of the implemented mitigation measures; and 5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the dredging activities until no exceedance of Limit level.	1. Identify source(s) of impact; 2. Inform the ER and confirm notification of the non-compliance in writing; 3. Rectify unacceptable practice; 4. Check all plant and equipment and consider changes of working methods; 5. Discuss with ET, IEC and ER and submit proposal of additional mitigation measures to ER and IEC within 3 working days of notification; and 6. Implement the agreed remedial measures. 7. As directed by the ER, to slow down or stop all or part of the dredging activities until no exceedance of Limit level.

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

Each step of actions required shall be implemented within 1 working day unless otherwise specified or agreed with EPD.

APPENDIX K
SUMMARY OF EXCEEDANCE

Appendix K Exceedance Report

(A) Exceedance Report for Air Quality

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of the Project	
		Action Level	Limit Level	Action Level	Limit Level
Air Quality	1-hr TSP	0	0	0	0
	24-hr TSP	0	0	0	0

(B) Exceedance Report for Construction Noise

Environmental Monitoring	Parameter	No. of non-project related Exceedance		No. of Exceedance related to the Construction Activities of the Project	
		Action Level	Limit Level	Action Level	Limit Level
Noise	L_{eq}(30 min.) 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 the Project	
		Action Level	Limit Level	Action Level	Limit Level
Water Quality	Dissolved Oxygen (DO)	0	0	0	0
	Turbidity	0	0	0	0
	Suspended Solids (SS)	0	0	0	0

APPENDIX L
SITE AUDIT SUMMARY

Contract No. YL/2020/01 - Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 1 Site Formation and Infrastructure Works inside Lok Ma Chau Loop and Western Connection Road Phase 1

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	220909
Date	9 September 2022 (Friday)
Time	15:00-16:00

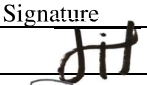
Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220909-R01	• The wheel washing water should be collected properly at WCR.	D4
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• 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. Fisheries	
	• No environmental deficiency was identified during site inspection.	
	J. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	K. Others	
	Follow-up on previous audit section (Ref. No.: 220831), all environmental deficiencies have been improved/ rectified by the contractor.	

	Name	Signature	Date
Recorded by	Ivy Tam		9 September 2022
Checked by	Dr. Priscilla Choy		9 September 2022

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	220914
Date	14 September 2022 (Wednesday)
Time	9:30-10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
220914-R01	• Water spraying should be provided for the dusty generation works and haul road at near Pond 13 for dust suppression.	B1, B11
	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. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Fisheries	
	• No environmental deficiency was identified during site inspection.	
	J. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	K. Others	
	Follow-up on previous audit section (Ref. No.: 220909), all environmental deficiencies have been improved/ rectified by the contractor.	

	Name	Signature	Date
Recorded by	Him Ng		16 September 2022
Checked by	Dr. Priscilla Choy		16 September 2022

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	220921
Date	21 September 2022 (Wednesday)
Time	9:30-10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• 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. Fisheries	
	• No environmental deficiency was identified during site inspection.	
	J. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	K. Others	
	Follow-up on previous audit section (Ref. No.: 220914), all environmental deficiencies have been improved/ rectified by the contractor.	

	Name	Signature	Date
Recorded by	Him Ng		22 September 2022
Checked by	Dr. Priscilla Choy		22 September 2022

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	220928
Date	28 September 2022 (Wednesday)
Time	13:45-14:45

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• 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. Fisheries	
	• No environmental deficiency was identified during site inspection.	
	J. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	K. Others	
	Follow-up on previous audit section (Ref. No.: 220921), no environmental deficiencies was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		29 September 2022
Checked by	Dr. Priscilla Choy		29 September 2022

Contract No. YL/2020/02 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 2 Western Connection Road Phase 2, Connection Roads to Fanling / San Tin Highway and Direct Road Link Phase 1

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	220909
Date	9 September 2022 (Friday)
Time	14:00 – 15:00

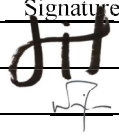
Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• 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. Fisheries	
	• No environmental deficiency was identified during site inspection.	
	J. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	K. Others	
	• Follow-up on previous audit section (Ref. No.: 220831), all environmental deficiencies were rectified/ improved by the contractor.	

	Name	Signature	Date
Recorded by	Ivy Tam		9 September 2022
Checked by	Dr. Priscilla Choy		9 September 2022

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	220914
Date	14 September 2022 (Wednesday)
Time	14:00 – 15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
220914-R01	• To replace the invalid NRMM label for the crane at RW9.	B24
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220914-R02	• To clear the blocked drain at the site area near Pai Lau.	D8
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• 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. Fisheries	
	• No environmental deficiency was identified during site inspection.	
	J. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	K. Others	
	• Follow-up on previous audit section (Ref. No.: 220909), no major environmental deficiency was observed/identified during site inspection.	

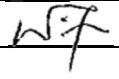
	Name	Signature	Date
Recorded by	Him Ng		16 September 2022
Checked by	Dr. Priscilla Choy		16 September 2022

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	220921
Date	21 September 2022 (Wednesday)
Time	14:00 – 15:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
220921-R01	• Clear the accumulated sediment at the sedimentation tank at LCS	D7iii.
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• 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. Fisheries	
	• No environmental deficiency was identified during site inspection.	
	J. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	K. Others	
	• Follow-up on previous audit section (Ref. No.: 220914), all environmental deficiencies have been improved/ rectified by the contractor.	

	Name	Signature	Date
Recorded by	Him Ng		22 September 2022
Checked by	Dr. Priscilla Choy		22 September 2022

Service Contract No. WD/04/2020

Development of Lok Ma Chau Loop: Main Works Package 1 – Environmental Team

Contract No. YL/2020/02 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 2 Western Connection Road Phase 2, Connection Roads to Fanling / San Tin Highway and Direct Road Link Phase 1

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	220928
Date	28 September 2022 (Wednesday)
Time	09:00 – 11:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• 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. Fisheries	
	• No environmental deficiency was identified during site inspection.	
	J. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	K. Others	
	• Follow-up on previous audit section (Ref. No.: 220921), all environmental deficiencies have been improved/ rectified by the contractor.	

	Name	Signature	Date
Recorded by	Adrian Lam		29 September 2022
Checked by	Dr. Priscilla Choy		29 September 2022

Contract No. YL/2021/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 3 Direct Road Link Phase 2

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	220905
Date	5 September 2022 (Monday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• 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. Fisheries	
	• No environmental deficiency was identified during site inspection.	
	J. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	K. Others	
	• Follow-up on previous audit section (Ref. No.: 220829), no major environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		6 September 2022
Checked by	Dr. Priscilla Choy		6 September 2022

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	220913
Date	13 September 2022 (Tuesday)
Time	14:00 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. 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. Landscape and Visual	
	• No environmental deficiency was identified during site inspection.	
	H. Ecology	
	• No environmental deficiency was identified during site inspection.	
	I. Fisheries	
	• No environmental deficiency was identified during site inspection.	
	J. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	K. Others	
	• Follow-up on previous audit section (Ref. No.: 220905), no major environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		15 September 2022
Checked by	Dr. Priscilla Choy		15 September 2022

Weekly Site Inspection Record Summary
Inspection Information

Checklist Reference Number	220919
Date	19 September 2022 (Monday)
Time	14:15 – 15:00

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• 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. Fisheries	
	• No environmental deficiency was identified during site inspection.	
	J. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	K. Others	
	• Follow-up on previous audit section (Ref. No.: 220913), no major environmental deficiency was identified during site inspection.	

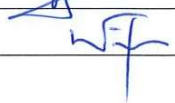
	Name	Signature	Date
Recorded by	Him Ng		19 September 2022
Checked by	Dr. Priscilla Choy		19 September 2022

Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	220926
Date	26 September 2022 (Monday)
Time	14:00 – 15:15

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	**Remarks/Observations**	**Related Item No.**
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	E. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	F. Land Contamination	
	• 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. Fisheries	
	• No environmental deficiency was identified during site inspection.	
	J. Permits/Licences	
	• No environmental deficiency was identified during site inspection.	
	K. Others	
	• Follow-up on previous audit section (Ref. No.: 220919), no major environmental deficiency was identified during site inspection.	

	Name	Signature	Date
Recorded by	Adrian Lam		27 September 2022
Checked by	Dr. Priscilla Choy		27 September 2022

APPENDIX M
ENVIRONMENTAL MITIGATION IMPLEMENTATION SCHEDULE (EMIS)

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
Construction Dust Impact							
S3.8	D1-DP 1/DP2/ DP3	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 1.6 L/m2 to achieve the respective dust removal efficiencies	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction stage	*^
S3.8	D2-DP 1/DP2/ DP3	The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation • All vehicles shall be shut down in intermittent use • Only well-maintained plant should be operated on-site to avoid emission of dark smoke • Valid No-Road Mobile Machinery (NRMM) labels should be provided to regulated machines	Reduce air pollution emission from construction vehicles and plants	Contractor	All construction sites	Construction stage	^ ^ *
S3.8	D2-DP 1/DP2/ DP3	• Following dust suppression measures should also be incorporated by the Contractor to control the dust nuisance throughout the construction Phase • Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; • Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; • A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones; • The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty material do not leak from	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction stage	^ ^ ^ ^ ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		the vehicle; • Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores; • When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period. • The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials; Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously; • Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; • Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; Any skip hoist for material transport should be totally enclosed by impervious sheeting; • Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by					^ ^ ^ ^ ^ ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		impervious sheeting or placed in an area sheltered on the top and the 3 sides; • Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed; • Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and • Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.					N/A N/A ^
S3.8	D4-DP1/DP2/DP3	Implement regular dust monitoring under EM&A programme during the construction stage.	Monitoring of dust impact	Contractor	Selected representative dust monitoring station	Construction stage	^
Construction Noise Impact							
S4.8	N-CP1-DP1/DP2/DP3	Implement the following good site management practices: • Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; • Machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; • Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; silencers or mufflers on construction	Control construction airborne noise	Contractor	All construction sites	Construction stage	^ ^ ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		equipment should be properly fitted and maintained during the construction works; • Mobile plant should be sited as far away from NSRs as possible and practicable; • Material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.					^ ^
S4.8	N-CP2-DP1/DP2/DP3	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 screening.	Contractor	All construction sites where practicable	Construction phase	^
S4.8	N-CP3-DP1/DP2/DP3	Install movable noise barriers and full enclosure, screen the noisy plants including air compressor and generator.	Screen the noisy plant items to be used at all construction sites	Contractor	All construction sites where practicable	Construction phase	^
S4.8	N-CP4-DP1/DP2/DP3	Use of “Quiet” Plant and Working Methods	Reduce the noise levels of plant items	Contractor	All construction sites where practicable	Construction phase	^
S4.8	N-CP5-DP1/DP2/DP3	Sequencing operation of construction plants where practicable.	Operate sequentially within the same work site to reduce the construction airborne noise	Contractor	All construction sites where practicable	Construction phase	^
S4.8	N-CP6-DP2	Setting the concrete lorry mixer at around 25m away from the existing NSRs along Ha Wan Tsuen Road and Lok Ma Chau Road	Reduce the noise levels from concrete lorry mixer	Contractor	Sections with NSRs along Ha Wan Tsuen Road and Lok	Construction phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
					Ma Chau Road		
S4.8	N-CP8-DP2	Provide temporary noise barrier during construction phase.	Control airborne noise from construction access road traffic	Contractor	Refer to Figure 4-8 of the EIA report	Construction phase	^
S4.8	N-CP7-DP2/N-CP6-DP1/N-CP6-DP3	Implement a noise monitoring under EM&A programme.	Monitor the construction noise levels at the selected representative locations	Contractor	Selected representative noise monitoring station	Construction phase	^
Water Quality Impact (Construction Phase)							
S5.7	W1-CP-DP1/DP2/DP3	Construction Runoff and Site Drainage In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures, where appropriate, should include the following: • Update and implementation of 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.	Minimize water quality impact from construction site runoff and general construction activities	Contractor	All construction sites where practicable	Construction phase	^ ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		• 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 8 m3 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					^ ^ ^ ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		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 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.					* ^ ^ * ^ *

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		• All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities should be provided at every construction site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheelwash 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					^ ^ ^ ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		sewage or wastewater into the meander, wetlands and fish ponds.					
S5.7	W3-CP-DP1/DP2/DP3	*Groundwater from Contaminated Area* • No mitigation measure is required for groundwater treatment in LMC Loop. • Additional investigation is required to identify if contaminated groundwater is found. • If the investigation results indicated that the groundwater to be generated from construction works would be contaminated, the contaminated groundwater should be either discharged into recharged wells, or properly treated in compliance with the requirements of Technical Memorandum on Standards for Effluents Discharged into Drainage on Sewerage Systems, Inland and Coastal Waters. • If recharged well method were used, the groundwater quality in the recharged well should not be affected by recharging operation, i.e. the pollution levels of the recharged groundwater should not be higher than that in the recharging wells. • If treatment and discharge method were used, the design of wastewater treatment facilities, such as active carbon and petrol interceptor, should be submitted to the EPD and a discharge license should be obtained under the WPCO through the Regional Offices of EPD.	Minimize groundwater quality impact from contaminated area	Contractor	Areas where contamination is found.	Construction phase	N/A N/A N/A N/A N/A
S5.7	W3-CP-DP1/DP2/DP3	*Sewage from Workforce* • Portable chemical toilets and sewage holding tanks should be provided for handling the construction sewage generated by the workforce. A licensed contractor should be employed to provide appropriate and adequate	Minimize water quality from sewage effluent	Contractor	All construction sites where practicable	Construction phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		portable toilets to cater 0.15m3/day/employed populations 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.					^ ^
S5.7	W4-CP -DP1	*Riverbanks Formation* • In order to prevent sediment transport during riverbank works, deployment of silt curtain should be implemented, especially when construction works encroach or occur in close distance to water body. It is recommended to carry out all the riverbank works within a cofferdam or diaphragm wall. • Water quality of the Shenzhen River and the meander would be monitored to ensure effectiveness of the implemented mitigation measures.	Minimize water quality impact from riverbank works	Contractor	Riverbank works	Construction Phase	^ ^
S5.7	W1-CP -BR	*Bio-remediation in Shenzhen River* • Water quality monitoring and audit is recommended to ensure that the proposed bio-remediation operation would not result in adverse water quality impact. Details of the water quality monitoring programme are presented in the EM&A Manual. If unacceptable water quality impact in the receiving water is recorded, additional measures such as slowing down, or rescheduling of works should be	Minimize water quality impact from bio-remediation of Shenzhen River	Contractor	Shenzhen River where practicable	Construction phase	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		implemented as necessary.					
S5.7	W4-CP-DP3	*Construction of Viaduct across Reedbed in LMC Station* As a precautionary measures, three options are recommended to ensure the compliance of No Net Increase in Pollution Load in Deep Bay for further consideration. They include: • On-site compensate the same area of the occupied reedbed; • Provide pilot plant during construction; or • Increase the hydraulic retention time of the proposed Loop STW. Details of these measures will be subject to further liaison with MTRC and a separate VEP application.	Minimize water quality impact from of viaduct on reedbed	Contractor	Construction sites across reedbed in LMC Station	Construction phase	N/A
S5.7	W5-CP-DP2/DP3	*Construction of Bridge Crossing* • Good site management as stipulated in ProPECC PN1/94 should be fully implemented to avoid polluted liquid or solid wastes from falling into the WSRs. • All the fishponds will be drained and no fishpond will be affected by bridge crossing. • In the meander, cofferdam or diaphragm walls should be deployed for protecting fish ponds or nearby rivers during bridge pier construction and or road widening work at fishponds. • For the low level viaducts crossing the small streams at Ma Tso Lung, Ping Hang and channel near Lung Hau Road, precast structures will be used such that there will be no construction work in the water streams, and thus, to avoid direct water quality impacts.	Minimize water quality impact from construction of bridge crossing	Contractor	Construction sites for bridge crossing where practicable	Construction phase	N/A N/A N/A N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
Waste Management (Construction Waste)							
S7.6	WM1-DP1/DP2/DP3	<u>*Waste Reduction Measures*</u> Waste reduction is best achieved at the planning and design phase, as well as by ensuring the implementation of good site practices. The following recommendations are proposed to achieve reduction: • Segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal; • proper storage and site practices to minimize the potential for damage and contamination of construction materials; • plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste; • sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc.); • provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.	Reduce waste generation	Contractor	All construction sites where practicable	Construction phase	^ ^ ^ ^ ^
S7.6	WM2-DP1/DP2/DP3	Prepare Waste Management Plan and submit to the Engineer for approval	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	^
S7.6	WM2-DP1/DP2/DP3	<u>*Good Site Practice*</u> The following good site practices are recommended throughout the construction activities: • Nomination of an approved personnel, such as a site manager, to be responsible for the implementation of	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site; • Training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling; • Provision of sufficient waste disposal points and regular collection for disposal; • Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; • Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;					^ ^ ^ ^
S7.6	WM4-DP1/DP2/DP3	*Storage of Waste* The following recommendation should be implemented to minimize the impacts: • Waste such as soil should be handled and stored well to ensuresecure containment; • Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; • Different locations should be designated to stockpile each material to enhance reuse;	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	^ ^ ^
S7.6	WM5-DP1/DP2/DP3	*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	Minimize waste impact from storage	Contractor	All construction sites	Construction phase	^ ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		waste transportation; • Obtain relevant waste disposal permits from the appropriate authorities; and • Disposal of waste should be done at licensed waste disposal facilities.					^ ^
S7.6	WM6-DP1/DP2/DP3	*Excavated and C&D Material* Wherever practicable, C&D materials should be segregated from other wastes to avoid contamination and ensure acceptability at Public Fill Reception Facilities areas or reclamation sites. The following mitigation measures should be implemented in handling the excavated and C&D materials: • Maintain temporary stockpiles and reuse excavated fill material for backfilling; • Carry out on-site sorting; • Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; and • Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified. The recommended C&D materials handling should include: • On-site Sorting of C&D Materials • Reuse of C&D Materials • Use of Standard Formwork and Planning of Construction Materials Purchasing • Provision of Wheel Wash Facilities Details refer to Section 7.6.1.4 of the EIA report.	Minimize waste impacts from excavated and C&D material	Contractor	All construction sites	Construction phase	^ ^ ^ ^ ^ ^ ^ ^
S7.6	WM7-D	*Contaminated Soil* As a precaution, it is recommended that standard good site	Remediate contaminated	Contractor	All construction	Construction	

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
	P1/DP2 /DP3	practice should be implemented during the construction phase to minimize any potential exposure to contaminated soils or groundwater. The details of mitigation measures to minimize the potential environmental implications arising from the handling of contaminated materials refer to Land Contamination Section.	soil		sites where applicable	phase	N/A
S7.6	WM8-D P1/DP2 /DP3	*Chemical Waste* • If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producers. Chemical wastes should be stored in appropriate containers and collected by a licensed chemical waste contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Control the chemical waste and ensure proper storage, handling and disposal	Contractor	All construction sites	Construction phase	^
S7.6	WM9-D P1/DP2 /DP3	*General Waste* • General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling. • Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean.	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction phase	^ ^ ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		• A reputable waste collector should be employed to remove general refuse on a daily basis.					
S7.6	WM10-DP1/DP2	*Sewage* • The WMP should document the locations and number of portable chemical toilets depending on the number of workers, land availability, site condition and activities. • Regularly collection by licensed collectors should be arranged to minimize potential environmental impacts.	Minimize production of sewage impacts	Contractor	All construction sites	Construction phase	^ ^
S7.6	WM11-DP2	*Sediment* The following mitigation measures are recommended during transportation and stockpiling: • stockpiling area(s) must be properly designed and closed to the dredging locations as far as possible; • Stockpiling area(s) should be lined with impermeable sheeting and bunded; • stockpiles should be properly covered by impermeable sheeting; • vehicles delivering the sediments should be covered, and truck bodies and tailgates should be sealed to prevent any discharge during transportation; • bulk earth moving equipments should be utilized as much as possible to minimize workers' handling and contact of the excavated materials; and • personal protective clothing should be provided to site	Minimize waste impacts from sediment	Contractor	All construction sites	Construction phase	N/A N/A N/A N/A N/A N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		workers. In case contamination of excavated materials is confirmed after testing, the mitigation measures described in Land Contamination Impacts section should also be implemented to minimize potential environmental impacts.					
Land Contamination							
S8.7	LC1-D P2/DP3	<u>*Remediation of arsenic-contaminated soil*</u> • "Solidification/Stabilization" (S/S) treatment method was proposed for the remediation of arsenic-contaminated soil. Toxicity Characteristic Leaching Procedure (TCLP) test should be undertaken after S/S in order to ensure that the contaminant will not leach to the environment. Unconfined Compressive Strength (UCS) test should be conducted, and not less than 1MPa should be met prior to the backfilling or stockpiled for future reuse within the study area. Off-site disposal or reuse of the solidified material is not allowed.	To remediate arsenic-contaminated soil	Project Proponent/ Contractor	LMC Loop, contaminated area	Prior to commencement of construction works within the contaminated area	N/A
S8.7	LC1-D P1/DP2 /DP3	<u>*Excavation and Transportation*</u> • Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety; • In case the soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table by installing well points or similar	To minimise the potential environmental impacts arising from the handling of contaminated materials	Contractor	Contaminated area		N/A N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		means; • Excavation should be carried out during dry season as far as possible to minimise contaminated runoff from contaminated 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 contaminated soil to minimize contaminated runoff; • Supply of suitable clean backfill material after excavation, if required; • Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or contaminated run-off, and truck bodies and tailgates should be sealed to prevent any discharge during transport or during wet season; • Speed control for the trucks carrying contaminated materials should be enforced; and • Vehicle wheel washing facilities at the site's exit points should be established and used.					N/A N/A N/A N/A N/A N/A
S8.7	LC3-DP1/DP2/DP3	*Solidification/Stabilization* • The loading, unloading, handling, transfer or storage of cement should be carried out in an enclosed system;	To minimize the potential environmental impacts arising from the handling	Contractor	Contaminated area	The course of remediation	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		• Mixing process and other associated material handling activities should be properly scheduled to minimise 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 contaminated soil and cement / water / other additive(s) should be undertaken at a solidification plant to minimise 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; • The run-off contained in the concrete bund area along the perimeter of the paved solidification / stabilization area, if any, will be collected, stored and used for the mixing process of cement / contaminated soil; • If stockpile of treated soil is required, the stockpiling site(s) should be lined with impermeable sheeting and bunded. • Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or site run-off during rainy season; and If necessary, there should be clear and separated areas for stockpiling of untreated and treated materials.	of contaminated materials				N/A N/A N/A N/A N/A N/A N/A
S8.7	LC4-D P3	<u>Safety Measures</u> • Set up a list of safety measures for site workers;	To minimize the potential adverse effects on health	Contractor	Contaminated area	The course of remediation	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		• Provide written information and training on safety for site workers; • Keep a log-book and plan showing the contaminated zones 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 workers' handling and contact of the contaminated materials; and • Eating, drinking and smoking should not be allowed in contaminated areas to avoid inadvertent ingestion of contaminant.	and safety of construction workers				
S8.8	LC5-DP3	Re-appraisal on the entire contamination assessment area for associated infrastructure in the adjacent areas in Hong Kong outside LMC Loop.	Ensure any potential contamination activities from land use changes after the approval of this land contamination assessment study	Project Proponent /Detailed design consultant	Entire contamination assessment area for associated infrastructure in	After land resumption	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
					the adjacent areas in Hong Kong outside LMC Loop		
Landscape and Visual Impact (Construction Phase)							
S11.5.4 Table11.5 .9	L-CP1-DP1/DP3	*Preservation and Protection of Existing Trees (Good Site Practice)* • The proposed works should avoid disturbance to the existing trees within and close to the works areas. The tree preservation proposals shall be coordinated with the layout and design of the engineering and architectural works at detailed design phase for further retention of individual trees. • It is recommended that a full detailed tree survey and felling application will be undertaken and submitted for approval by the relevant government departments in accordance with ETWB TCW No. 3/2006, 'Tree Preservation'. This will be conducted during the detailed design phase of the project and submitted to DLO for approval. The methodology and scope including the programme for the tree survey and felling application are also subject to the approval of the relevant authorities. • Trees which are not in conflict with the proposals would be retained and shall be protected by means of fencing during	Avoid disturbance and protection of existing trees	Detailed design consultant/ Contractor	Within project site	Detailed design and construction phase	^ ^ ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		construction phase to prevent damage to tree canopies and root zones from vehicles and storage of materials. • Specifications for the protection of existing trees will be provided during the preparation of the detailed tree survey by Detailed Design consultants at detailed design and construction phase.					^
S11.5.4 Table 11.5.9	L-CP2-DP1/DP2/DP3	*Works Area and Temporary Works Areas (Good Site Practice)* • The construction sequence and construction programme shall be optimized in order to minimize the duration of impact. • Construction site controls shall be enforced including the storage of materials, the location and appearance of site accommodation and site storage; and the careful design of site lighting to prevent light spillage. • The temporary works areas shall be restored to its original condition or enhanced through the introduction of new amenity areas or planting areas following the completion of the construction phase.	Minimize landscape impacts	Contractor	The whole project area where applicable	Construction phase	^ ^ ^
	L-CP3-DP1/DP2/DP3	*Advance Implementation of Mitigation Planting* • Replanting of existing / disturbed vegetation shall be undertaken at the earliest possible stage of the construction phase of the project using predominantly native plant species although ornamental species may be used for roadside planting and amenity areas.	Minimize landscape impacts	Contractor	The whole project area where applicable	Construction phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
	L-CP4-DP1/DP2/DP3	*Transplantation of Existing Trees* • Some specimens have relatively higher amenity value which are in conflict with the proposals shall be considered for transplantation. For trees affected by the proposed infrastructure works the final receptor sites shall be preferably adjacent to their current locations alongside of the alignment to retain their contribution to the local landscape context. For the LMC Loop the receptor locations will be selected to allow the trees to be moved directly to their final locations in accordance with the detailed landscape proposals. • The transplanting proposals are subject to review at the detailed design phase and to agreement-in-principle with the relevant management and maintenance agents and/or government departments. The implementation programme for the proposed works shall reserve sufficient time for the advanced tree transplanting preparation works to enhance the survival of the transplanted trees. • The transplanting proposals will be subject to the findings of the detailed tree survey and felling application to be undertaken by the detailed design consultants and following approval by the relevant departments.	Minimize landscape impacts	Contractor	The whole project area where applicable	Construction phase	^ ^ ^
	L-CP6-DP1/D	*Creation of Wetland and Landscape Buffer* • The existing reedbed acquired for development areas for	Compensation of the loss of landscape resources	Project Proponent/	The whole project area	Detailed design, construction and	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
	P2	the project will be reinstated as part of the Ecological Area. The reinstatement shall be undertaken at the earliest possible stage during the construction phase of the project. • Creation of 12.78ha of Ecological Area (EA) containing reed marsh and marsh will be created at the southern portion of the LMC Loop, and a 50m width landscape buffer area will be set up in between the EA and the development area. Wetland creation concepts please refer to Figure 11.9zf and Chapter 12 Ecology Impact Assessment of this EIA. • Native tree and shrub mix will be utilised for the creation of landscape buffer along northern edge of EA to support the creation of avifauna habitat from ecologist perspectives as well as enhance the aesthetic and landscape diversity within the LMC Loop Development. • Creation of minimum 11.72 Ha. of permanent compensatory off-site wetland areas at Sam Po Shue and Hoo Hok Wai. For the potential locations for off-site wetlands please refer to Figure 11.9zf and 11.9zh, Chapter 2 Project Description and Chapter 12 Ecology Impact Assessment of this EIA.		Detailed design consultant/ Contractor/ Operator	where applicable	operational phases	^ ^ ^
	V-CP5-DP1/DP2/DP3	*Coordination with Concurrent Projects* • Coordinated implementation programme with concurrent projects to minimise impacts and where possible reduce	Minimize landscape impacts	Contractor	The whole project area where	Construction phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		the period of disturbance.			applicable		
S11.6.5 Table 11.6.3	V-CP1-DP3	*Preservation and Protection of Existing Trees (Good Site Practice)* • The proposed works should avoid disturbance to the existing trees within and close to the works areas. The tree preservation proposals shall be coordinated with the layout and design of the engineering and architectural works at detailed design phase for further retention of individual trees. • The preservation of existing tree shall provide instant greening and screening effect for proposed works.	Minimise visual impact	Detailed design consultant / Contractor	The whole project area where applicable	Detailed design and construction phase	^
	V-CP2-DP3	*Works Area and Temporary Works Areas (Good Site Practice)* • The construction sequence and construction programme shall be optimized in order to minimize the duration of impact. • Construction site controls shall be enforced including the storage of materials, the location and appearance of site accommodation and site storage; and the careful design of site lighting to prevent light spillage. • Hoarding designed with recessive colour shall be set up around the construction site providing screening effect for the construction works. • The site office or temporary above-ground structures shall	Minimise visual impact	Contractor	The whole project area where applicable	Construction phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		be sited at less visual prominent locations.					
	V-CP3-DP3	*Advance Implementation of Mitigation Planting* • Replanting of existing / disturbed vegetation shall be undertaken at the earliest possible stage of the construction phase of the project using predominantly native plant species although ornamental species may be used for roadside planting and amenity areas.	Minimise visual impact and advance mitigation planting for screening purpose.	Detailed design consultant / Contractor	The whole project area where applicable	Detailed design and construction phases	N/A
	V-CP5-DP3	*Coordination with Concurrent Projects* • Coordinated implementation programme with concurrent projects to minimise impacts and where possible reduce the period of disturbance.	Minimize visual impacts	Contractor	The whole project area where applicable	Construction phase	^
Ecology (Construction Phase)							
S12.7	E1-DP1	*Disturbance to Fish Ponds at HHW* • Development set back a minimum of 23m from the edge Meander. • Management of fish pond habitat to enhance ecological value to twice existing value, in order to compensate for disturbance to large waterbirds. • Creation and establishment will occur prior to commencement of substantive works associated with any element of the project for which fish pond compensation is required. *Construction phase*	On the disturbance to fish ponds at HHW	Detailed design consultant/ Contractor	Fish ponds at HHW and LMC	Detailed design, construction phase	N/A N/A N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		• Erection of a 3m high, dull green site boundary fence to minimise disturbance to wetland habitats caused by human activity in LMC Loop.					^
S12.7	E2-DP1 /DP3	<u>*Construction run-off*</u> • Temporary sewerage and drainage will be designed and installed to collect wastewater and prevent it from entering nearby water bodies; • Proper locations well away from nearby water bodies will be used for temporary storage of materials (i.e. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction debris and spoil, and these will be identified before commencement of works; • To prevent muddy water entering nearby water bodies, work sites close to nearby water bodies will be isolated, using such items as sandbags or silt curtains with lead edge at bottom and properly supported props. Other protective measures will also be taken to ensure that no pollution or siltation occurs to the water gathering grounds of the work site; • If temporary access along a riverbed is unavoidable, this will be kept to the minimum in width and length. Temporary river crossings will be supported on stilts above the river bed; • Stockpiling of construction materials, if necessary, will be	Minimise the indirect impact from the increasing suspended solids and pollutants in LMC Meander	Contractor	Seawall,	During construction	^ ^ ^ ^ ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		properly covered and located away from nearby water bodies; • Construction debris and spoil will be covered and/or properly disposed of as soon as possible to avoid being washed into nearby water bodies; • Construction effluent, site run-off and sewage will be properly collected and/or treated. Wastewater from any construction site will be minimised via the following in descending order: reuse, recycling and treatment; • Proper locations for discharge outlets of wastewater treatment facilities well away from sensitive receivers will be identified (i.e. treated wastewater will not be discharged into LMC Meander, natural streams, marsh, reedbed, active or abandoned fish ponds); • Adequate lateral support will be erected where necessary in order to prevent soil/mud from slipping into the Ecological Area or LMC Meander; • Site boundary will be clearly marked and any works beyond the boundary strictly prohibited; • Regular water monitoring and site audit will be carried out at adequate points along LMC Meander, and at the outfalls of the natural streams around LMC Loop. If the monitoring and audit results show that pollution occurs, adequate measures including temporarily cessation of works will be					^ ^ ^ ^ ^ ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		considered.					
S12.7	E3-DP1 /DP2/D P3	*Pollutant Runoff to Downstream areas from Accidental Spillage* • Prepare an emergency contingency plan The plan will include, but not be limited to, the following: - Potential emergency situations; - Chemicals or hazardous materials used on-site (and their location); - Emergency response team; - Emergency response procedures; - List of emergency telephone hotlines; - Locations and types of emergency response equipment; - Training plan and testing for effectiveness.	Minimize indirect impact from pollutant runoff to downstream areas from accidental spillage	Contractor/ Operator	Area within project site near streams	Construction phase and operation phase	^
S12.7	E4-DP1 /DP2/D P3	• Use opaque, non-transparent, non-reflective noise barriers for all developments associated with the Project. • Design of buildings should not incorporate use of night-time lighting at or near top of buildings, highly reflective materials should not be used where vegetation is adjacent and glass surfaces should not be angled upwards in a way that reflects the sky. Unnecessary lighting should be eliminated. Appropriate glass and façade treatments should be used where required to minimise impact. Unnecessary lighting should be avoided. These include the following:	Minimize the mortality impacts on birds	Developer / Detailed design consultant/ contractor/ operator	Area within project site	Detailed design, construction and operation phases	^ ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		• Fritting, or the placement of ceramic lines or dots on glass, has little effect on the human-perceived transparency of the window but creates a visual barrier to birds outside. This treatment also has the advantage of reducing 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 may 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) acts to reduce collision.					^
		• 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.					
		In terms of reducing night-time mortality impacts, eliminating unnecessary lighting is one of the easiest methods, and has the added advantage of saving energy and expense. Potential impacts of nocturnal avian collision with buildings should be minimised by not creating sky glow from the use of night-time					

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		lighting at or near the top of buildings or other structures. In addition to avoiding uplighting, light spillage should be minimised, while green and blue lights should be used where possible. As far as possible, lights should be controlled by motion sensors, and building operations should be managed in such a way as reduce or eliminate night lighting near windows. The potential advantages of removing unnecessary lighting in terms of reducing the carbon footprint of the LMC Loop development are obvious.					
S12.7	E5-DP1 /DP2/D P3	• Minimize loss of natural vegetation along LMC Meander, and suitable replacement planting with possible installation of otter holts and the provision of potential feeding area and spraint locations for otters in the stabilized bank subject to detailed design. • No significant change to velocity of water flow, water level or water quality. • No direct lighting on Meander. • 3m high, dull green site boundary fence for all developments associated with the project. • Pre-construction surveys for otter holts or natal dens will be conducted in LMC Loop before the commencement of construction works. Work in the area of any otter holt found to cease pending examination by experienced Ecologist. If in use for breeding, works in the area will temporarily stop until end of breeding activity. • No construction activities within 100m of LMC Meander	Minimize impacts on Eurasian Otter	Detailed design consultant/ Contractor	Construction site within the project	Detailed design, construction phase	^ ^ ^ ^ ^ ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		between one hour prior to sunset and one hour after sunrise. • Provision of compensatory reed marsh in the Ecological Area in LMC Loop, including open water channels and islands within the reed marsh, both of which features are considered to be used by the species.					^
S12.7	E8-DP2	• Refer to E2 and E3	Prevent impacts on Rose Bitterling, small snakehead and *Somanniathelphus zanklon*	Contractor	Within project site	Construction phase	^
S12.7	E10-DP 1	• Preserve undisturbed, semi-natural habitat conditions of LMC Meander and adjacent areas of LMC Loop up to approximately 150m in width in order to avoid disturbance to core part of flight line corridor. • This area to comprise an Ecological Area largely constituting reed marsh and a 50m wide buffer zone densely planted with shrubs and trees. Small number of low buildings (max 14mPD high, except the building height of on-site STW is 15mPD high) allowed in inner 25m of this area at a plot ratio of 0.1. • At Ha Wan Tsuen entry point for many birds to LMC Loop area provide a wider Ecological Area to minimize disturbance from nearby buildings.	Minimize impacts on flight line corridor from LMC Loop development	Developer / Detailed design consultant/ Contractor/ Operator	Within project site	Detailed design, construction and operation phases	^ ^ ^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		• Further minimisation of impact by maintaining a lower building height in areas adjacent to the buffer zone for the EA. In addition, the sewage treatment works, which is located near the point where many birds cross from the Meander to HHW, should not exceed 15mPD.					N/A
S12.7	E11-DP 1	• Employ site boundary fence as long as possible. Use of movable barrier for more intense site formation activity. Provision of fencing with 30cm gap between the existing reed marsh and LMC Meander during the establishment period of Ecological Area and the gap will be closed once established. • Restrict work to period from 0900h to 1700h. All major works along the edge of LMC Meander and in the Ecological Area will be conducted in the wet season.	Minimize disturbance impacts of mitigation provisions	Contractor	Within project site	Construction phase	^ ^
S12.7	E12-DP 1/DP2/ DP3	• Minimal night-time lighting • No direct light on Meander	Minimize impacts on LMC Meander	Contractor/ Operator	All	Construction and operation phases	^ ^
S12.7	E13-DP 2	• Construction limited to wet season between the hours of 9am and 5pm. • Use of opaque visual/noise barriers and planting of trees shrubs along length of road adjacent to fish ponds. • Compensatory habitat management elsewhere to mitigate wetland loss.	Minimize impacts from the construction and operation disturbance impacts	Contractor/ Operator	Pond habitat along alignment (mainly Ha Wan Tsuen Road)	Construction and operation phases	^ ^ ^
S12.7	E13-DP	• Use of viaduct alignment to minimize wetland loss.	Minmize wetland loss	Project	Within project	Detailed design	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
	3	Compensatory wetland habitat elsewhere.		Proponent / Detailed design consultant / Contractor /	site	and construction phases	
S12.7	E16-DP 1	• Provision of compensatory reed marsh in the Ecological Area will provide habitat suitable for Common Evening Hawker. • Measures designed to protect other fauna and water quality will generally benefit odonata.	Protect Odonata	Project Proponent/ Detailed design consultant/ Contractor Operator	Ecological area	EA established prior to construction and manage at all phases	^ ^
S12.7	E14-DP 2	• Replacement planting of native tree species relevant to Deep Bay area and the area impacted. Planting to occur in tandem with that required for woodland loss arising	Minimize the ecological impacts	Contractor	Woodland and shrubland habitat along Ha Wan Tsuen Road	Construction phase	^
S12.7	E15-DP 2	• Use noise/visual barriers to minimise disturbance. • Construction activities should not be carried out before 0900h or after 1700h in order to minimise disturbance to the flight line corridor (and to mammals).	Minimize impacts on flight line corridor from Western Connection Road	Contractor	Construction site from Western Connection Road	Construction phase	^ ^
S12.7	E16-DP 2	• Use of opaque visual/noise barriers and roadside planting of trees and shrubs to minimize disturbance impacts.	Minimize impacts on flight line corridor from	Project Proponent/	Construction site from	Detailed design, construction and	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
			Western Connection Road	Detailed design consultant/ Contractor Operator	Western Connection Road	operation phases	
S12.9	EG2-D P3	All generic mitigation measures proposed in Tables 12.82a and 12.82b in the EIA report.	Avoid, minimize and mitigate overall ecological impact.	Project proponent / contractor / detailed design consultant / developer / operator	All areas.	All phases	^
Fisheries (Construction Phase)							
S13.7	F4-	• Reprovision of replacement Artificial Reefs(of the same volume as the existing ARs inside Marine Exclusion Zone)	Mitigate water quality impacts on the existing ARs	Project proponent	To be determined	Construction phase or operation phase	N/A
S11.7	F2	• Reduce re-suspension of sediments • Limit dredging and works fronts. • Good site practices • Strict enforcement of no marine dumping • Spill response plan	Minimise marine water quality impacts	Contractor	Seawall	During construction	N/A N/A N/A N/A N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
S13.7	F4-DP3	During the construction phase, a layer of sheet pile wall will be erected along the site boundary adjacent to fish ponds after commencement of site works. The sheet pile wall will be constructed by silent piling method (Press-in method) which induces minimal vibration. Therefore the stability of the fish pond bund will not be influenced by the construction of the sheet pile wall, subsequent construction works and the loading from the road during operational phase. In addition, the sheet pile wall will have grouting or a grout curtain to avoid water seepage from the fish pond to the excavation area. With these measures, significant impacts are not anticipated.	Bund stability	Contractor	Fish ponds	Construction phase	N/A
S13.7	F5-DP3	Temporary traffic arrangements will be instigated to maintain or provide alternative access to fish ponds during construction phase.	Prevent Blockage of Access Roads to Fish Ponds	Contractor	Fish ponds	Construction phase	^
S13.7	F6-DP3	Standard mitigation measures to control site runoff and other pollutants caused by construction activities and good site practices will be implemented during the construction phase of the Project. Excavated material and other inert construction wastes produced will be transferred to proper recipients (i.e. landfill) (see Waste Management Section). Sewage from the proposed development will be dealt with via a sewerage system and will not be discharged directly to surrounding water bodies.	Avoid water quality impact	Contractor	Fish ponds	Construction phase	^
S13.7	F7-DP3	*Dust Minimization* • During all excavation works, good site practice should be adopted to minimize impacts on fisheries. The below site practices should be adopted during this time. • Any excavated or stockpile of dusty material should be	Dust minimization	Contractor	Fish ponds	Construction phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; • Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; • 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; • Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety; • In case the soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table by installing well points or similar means; • Supply of suitable clean backfill material after excavation, if required; • Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or					

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		contaminated run-off, and truck bodies and tailgates should be sealed to prevent any discharge during transport or during wet season; • Speed control for the trucks carrying contaminated materials should be enforced; and • Vehicle wheel washing facilities at the site's exit points should be established and used.					
S13.7	F8-DP3	*Contingency plan* The contractor should prepare an emergency contingency plan for actions to be taken if significant impacts, such as accidental spillage of chemicals, water seepage from fish ponds, damaged/ destabilized pond bunds, pond water contamination by site runoff, on fish ponds occur. The contractor should submit the emergency contingency plan dealing with, but not limited to, the aforementioned potential impacts to the engineer for review, comment and approval. The fish pond operators will also be consulted for the details of the contingency plan, which will also be submitted to AFCD for review and comment. The plan should include, but not limited to, the following: • Potential emergency situations; • Chemicals or hazardous materials used on-site (and their location); • Emergency response team; • Emergency response procedures; • List of emergency telephone hotlines; • Locations and types of emergency response equipment;	Deal with any accidental spillage event	Contractor / Operator	Fish ponds	Construction and operational phases	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		• Training plan and testing for effectiveness.					
Food Safety (Construction Phase)							
S15	F1-DP3	*Contingency plan* The contractor should have effective communication with Food and Environmental Hygiene Department (FEHD) / Centre of Food Safety (CFS), on food surveillance and food incidents. Food Surveillance Programme (http://www.cfs.gov.hk/english/programme/programme_fs/programme_fs.html). is undertaken by CFS to inspect food safety in Hong Kong, with a three-tier surveillance strategy (consisting of routine food surveillance, targeted food surveillance and seasonal food surveillance). Under this programme, aquatic products (including pond fish) at import, wholesale and retail levels are sampled for microbiological (i.e. bacteria and viruses), chemical (i.e. natural toxins, food additives and contaminants) and radiation testings. All food safety surveillance results of by a monthly "Food Safety Report" in press releases and also presented in CFS website. If pond fish samples do not comply with food safety standards and they are verified to be from fish ponds of concerned under this study through "food tracing", fish selling shall be stopped as instructed by CFS.	Minimize significant impacts on fish ponds	Contractor	Fish pond within project site	Construction phase	N/A
S15	F2-DP3	*Dust Minimization* • During all excavation works, good site practice should be adopted to minimize the release of TSP, impact of land contamination and the associated food safety implications. The below site practices should be adopted during excavation works.	Dust minimization	Contractor	Fish pond within project site	Construction phase	^

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		• Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; • Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; • 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; • Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety; • In case the soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table by installing well points or similar means; • Supply of suitable clean backfill material after excavation, if required; • Vehicles containing any excavated materials should be					

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to Implement the measures?	Implementation Status
		suitably covered to limit potential dust emissions or contaminated run-off, and truck bodies and tailgates should be sealed to prevent any discharge during transport or during wet season; • Speed control for the trucks carrying contaminated materials should be enforced; and • Vehicle wheel washing facilities at the site's exit points should be established and used.					

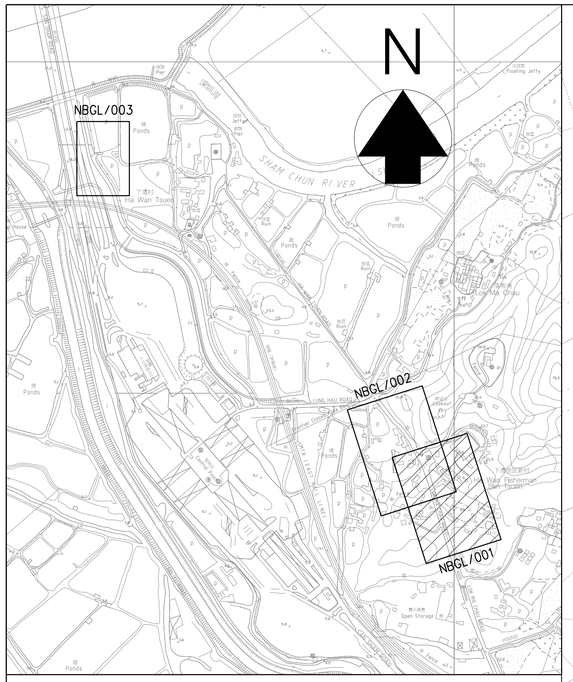
Remarks: ^ Compliance of mitigation measure

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

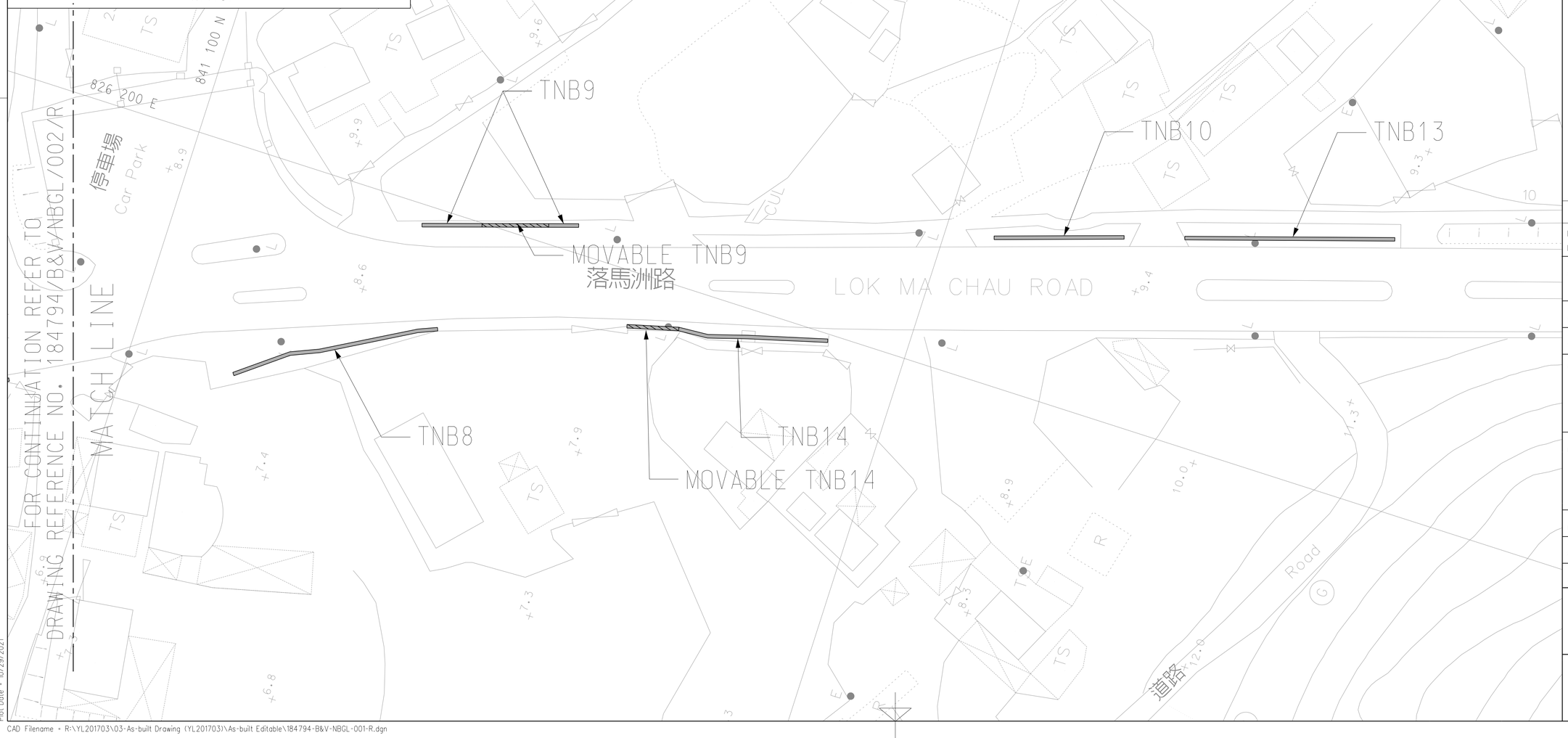
\# Recommendation was made during site audit but not yet improved/rectified by the contractor.

N/A Not Applicable at this stage as no such site activities were conducted in the reporting period (e.g. concrete batching plan, barging point, seawall dredging and filling, bored piling, landscaping works etc)

APPENDIX N
TEMPORARY NOISE BARRIERS



LOCATION PLAN
N.T.S.



NOTES:

1. FOR DETAILS OF NOISE BARRIER, PLEASE REFER TO DRAWING NO. 184794/B&V/NB15/001/R & NO. 184794/B&V/NB15/002/R.

LEGEND:

- 1.5m - HIGH TEMPORARY NOISE BARRIER
- 1.5m - HIGH MOVEABLE TEMPORARY NOISE BARRIER

WORK AS EXECUTED

DATE OF COMMENCEMENT : 22 JUN 2018
DATE OF COMPLETION :

核准
Approved

合約編號 Contract No. YL/2017/03

合約編號 Agreement No. CE 5/2014 (CE)

合約名稱 Contract title
DEVELOPMENT OF LOK MA CHAU LOOP: LAND DECONTAMINATION AND ADVANCE ENGINEERING WORKS

圖則名稱 Drawing title AS-CONSTRUCTED DRAWING
NOISE BARRIER - GENERAL LAYOUT PLAN
(SHEET 1 OF 3)

圖則參考編號 Drawing Reference No. 184794/NBGL/001/R	修訂 Revision –
合約圖則編號 Contract Drawing No.	修訂 Revision –

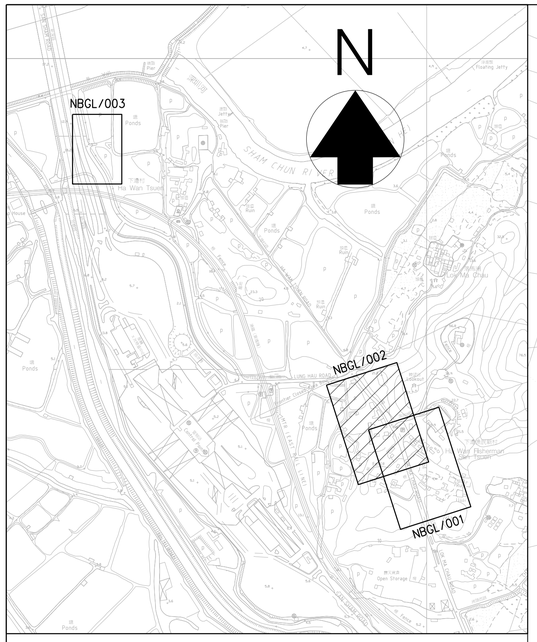
比例 Scale A1 1 : 300
A3 1 : 600

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

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date : 10/29/2021

CAD Filename : R:\YL201703\03-As-built Drawing (YL201703)\As-built Editable\184794-B&V-NBGL-001-R.dgn



LOCATION PLAN
N.T.S.

NOTES:

1. FOR DETAILS OF NOISE BARRIER, PLEASE REFER TO DRAWING NO. 184794/B&V/NB15/001/R & NO. 184794/B&V/NB15/002/R.

LEGEND:

- 1.5m - HIGH TEMPORARY NOISE BARRIER
- 1.5m - HIGH MOVEABLE TEMPORARY NOISE BARRIER

WORK AS EXECUTED

DATE OF COMMENCEMENT : 22 JUN 2018
DATE OF COMPLETION :

核准
Approved

合約編號
Contract No. YL/2017/03

合約編號
Agreement No. CE 5/2014 (CE)

合約名稱
Contract title
DEVELOPMENT OF LOK MA CHAU LOOP: LAND DECONTAMINATION AND ADVANCE ENGINEERING WORKS

圖則名稱
Drawing title AS-CONSTRUCTED DRAWING

NOISE BARRIER - GENERAL LAYOUT PLAN

(SHEET 2 OF 3)

圖則參考編號 Drawing Reference No. 184794/NBGL/002/R	修訂 Revision –
合約圖則編號 Contract Drawing No.	修訂 Revision –

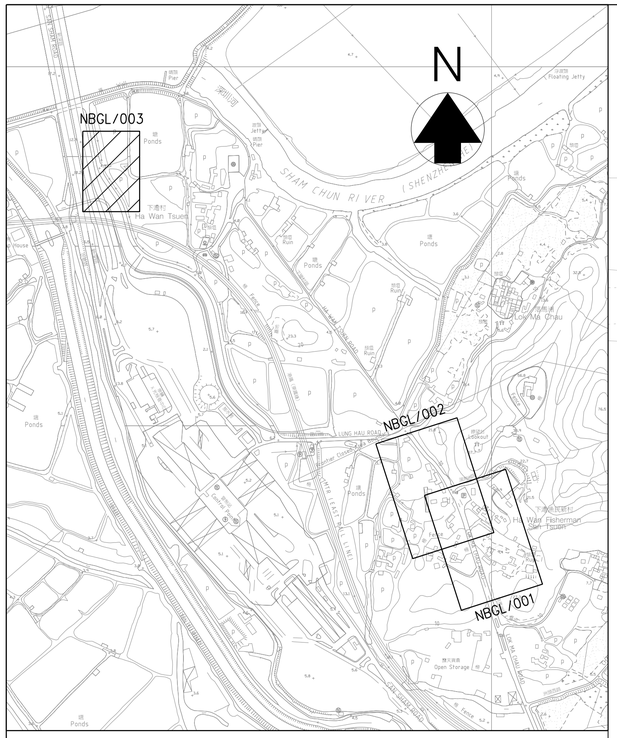
比例 Scale A1 1 : 300
A3 1 : 600

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

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 10/29/2021

CAD Filename = R:\YL201703\03-As-built Drawing (YL201703)\As-built Editable\184794-B&V-NBGL-002-R.dgn



LOCATION PLAN
N.T.S.

NOTE:

1. FOR DETAILS OF NOISE BARRIER, PLEASE REFER TO DRAWING NO. 184794/B&V/NB08/001/R.

LEGEND:

0.8m - HIGH TEMPORARY NOISE BARRIER (TYPE A)

0.8m - HIGH TEMPORARY NOISE BARRIER (TYPE B)

825500 E

841800 N

825400 E

TNB1

TNB15

LOK MA CHAU ROAD

新深路

排水口 Outfall

渠 Nullah

WORK AS EXECUTED

DATE OF COMMENCEMENT : 22 JUN 2018

DATE OF COMPLETION :

核准 Approved

合約編號 Contract No. YL/2017/03

合約編號 Agreement No. CE 5/2014 (CE)

合約名稱 Contract title

DEVELOPMENT OF LOK MA CHAU LOOP: LAND DECONTAMINATION AND ADVANCE ENGINEERING WORKS

圖則名稱 Drawing title AS-CONSTRUCTED DRAWING

NOISE BARRIER - GENERAL LAYOUT PLAN

(SHEET 3 OF 3)

圖則參考編號 Drawing Reference No. 184794/NBGL/003/R 修訂 Revision –

合約圖則編號 Contract Drawing No. 修訂 Revision –

比例 Scale A1 1 : 200 A3 1 : 400

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

BINNIES HONG KONG LIMITED 賓尼斯工程顧問有限公司

Plot Date = 11/1/2021

CAD Filename = R:\YL201703\03-As-built Drawing (YL201703)\As-built Editable\184794-B&V-NBGL-003-R.dgn

YL/2017/03
Development of Lok Ma Chau Loop – Land Decontamination and Advance Engineering Works
Record Photographs for Temporary Noise Barriers at Lok Ma Chau Road

TNB ID	Photo
TNB1	
TNB2 TNB11	
TNB3 TNB4	

YL/2017/03
Development of Lok Ma Chau Loop – Land Decontamination and Advance Engineering Works
Record Photographs for Temporary Noise Barriers at Lok Ma Chau Road

TNB ID	Photo
TNB6	
TNB7	
TNB8	

YL/2017/03
Development of Lok Ma Chau Loop – Land Decontamination and Advance Engineering Works
Record Photographs for Temporary Noise Barriers at Lok Ma Chau Road

TNB ID	Photo
TNB9	
TNB10	
TNB13	

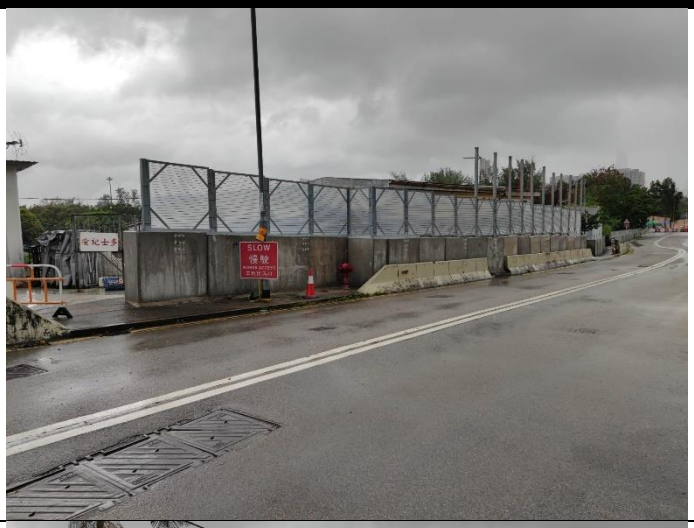
YL/2017/03
Development of Lok Ma Chau Loop – Land Decontamination and Advance Engineering Works
Record Photographs for Temporary Noise Barriers at Lok Ma Chau Road

TNB ID	Photo
TNB14	
TNB15	

YL/2020/02 – Western Connection Road Phase 2, Connection Roads to Fanling/San Tin Highway and Direct Road Link Phase 1

Record Photographs for Temporary Noise Barriers at Lok Ma Chau Road in September 2022

TNB ID	Photo	Construction Status
2		Completed
3		Completed
4		Completed
5		Completed

TNB ID	Photo	Construction Status
6		Completed
7		Completed
8		Completed

TNB ID	Photo	Construction Status
9	 	Completed
10		Completed

TNB ID	Photo	Construction Status
11		Completed
12		Completed
13		Completed

TNB ID	Photo	Construction Status
		
14		Completed
17		Completed

APPENDIX O
WASTE GENERATION IN THE REPORTING MONTH

Contract No. YL/2020/01 - Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 1 Site Formation and Infrastructure Works inside Lok Ma Chau Loop and Western Connection Road Phase 1

Monthly Summary Waste Flow Table for 2022 (year)

Name of Person completing the record: Lila Lui (EO)

Development of Lok Ma Chau Loop : Main Works Package 1 – Contract 1 Site Formation and Infrastructure Works inside Lok Ma Chau Loop and Western Connection Contract No.: YL/2020/01

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly					
	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	Metals	Paper/ cardboard packaging/	Plastics	Yard Waste	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
Jan-22	1.485	0.000	1.472	0.000	0.013	0.000	0.000	0.000	0.000	76.140	0.000	1.730
Feb-22	0.242	0.000	0.000	0.000	0.242	0.000	9.150	0.000	0.000	24.170	0.000	0.426
Mar-22	0.120	0.000	0.000	0.000	0.120	0.000	0.000	0.000	0.000	0.000	0.000	0.143
Apr-22	0.058	0.000	0.000	0.000	0.058	0.000	0.000	0.000	0.000	0.000	0.000	0.068
May-22	0.022	0.000	0.000	0.000	0.022	0.000	0.001	0.000	0.010	13.630	0.000	0.021
Jun-22	0.004	0.000	0.000	0.000	0.004	0.000	0.008	0.000	0.019	0.000	0.000	0.023
Sub-total	1.930	0.000	1.472	0.000	0.458	0.000	9.159	0.000	0.030	113.940	0.000	2.411
Jul-22	0.000	0.000	0.000	0.000	0.000	3.016	0.000	0.201	0.018	0.000	0.000	0.140
Aug-22	0.004	0.000	0.000	0.000	0.004	6.415	0.003	0.352	0.054	0.000	0.000	0.160
Sep-22	0.000	0.000	0.000	0.000	0.000	14.335	0.000	0.130	0.000	0.000	0.000	0.109
Oct-22												
Nov-22												
Dec-22												
Total	1.934	0.000	1.472	0.000	0.462	23.766	9.162	0.683	0.102	113.940	0.000	2.820

Remarks:

1.Assume the density of soil fill=2.0 tonnes/m3
2.Assume the density of rock and broken concrete=2.5 tonnes/m3
3.Assume the density of refuse = 1.5 tonnes/m3
4. The inert C&D material except slurry and bentonite are disposed at Tuen Mun 38
5. The slurry and bentonite are disposed at Tseung Kuwn O 137.
6.The non-inert C&D wastes, including general refuse are disposed at NENT

Contract No. YL/2020/02 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 2 Western Connection Road Phase 2, Connection Roads to Fanling / San Tin Highway and Direct Road Link Phase 1

Monthly Summary Waste Flow Table for 2022 (year)

Name of Person completing the record: Calvin So (EO)

Project : Development of Lok Ma Chau Loop: Main Works Package 1– Contract 2, Western Connection Road Phase 2, Connection Roads in Fanling / San Tin Highway and Direct Road Link Phase 1

Contract No.: YL/2020/02

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m^3)
Jan	0.000	0.000	0.000	0.000	0.000	0.458	0.000	0.000	0.000	0.000	0.131
Feb	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.121
Mar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.040
Apr	0.000	0.000	0.000	0.000	0.063	0.000	0.000	0.000	0.000	0.000	0.121
May	0.000	0.000	0.000	0.000	0.018	0.000	0.000	0.000	0.000	0.000	0.184
Jun	0.000	0.000	0.000	0.000	0.167	0.000	0.000	0.000	0.000	0.000	0.576
Sub-total	0.000	0.000	0.000	0.000	0.248	0.503	0.000	0.000	0.000	0.000	1.173
Jul	0.000	0.000	0.000	0.000	0.090	0.000	0.000	0.000	0.000	0.000	0.175
Aug	0.000	0.000	0.000	0.000	0.518	0.243	0.000	0.000	0.000	0.000	0.512
Sep	0.000	0.000	0.000	0.000	0.252	0.000	0.000	0.000	0.000	0.000	0.324
Oct	-	-	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-
Total	0.000	0.000	0.000	0.000	1.107	0.746	0.000	0.000	0.000	0.000	2.184

Note:

1. For non-inert portion of C&D material, assume the density of 1 m^3 general refuse is equal to 200 kg.
2. For inert portion of C&D material, assume 6 m^3 per each full-filled dump truck.
3. All values are round off to the third decimal places.

Contract No. YL/2021/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 3 Direct Road Link Phase 2

Monthly Summary Waste Flow Table for 2022 (year)

Name of Person completing the record:

Development of Lok Ma Chau Loop : Main Works Package 1 – Contract 3 Contract No.: YL/2021/01

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly					
	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	Metals	Paper/ cardboard packaging/	Plastics (see Note 3)	Yard Waste	Chemical Waste	Others, e.g. general refuse
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
Jan-22												
Feb-22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mar-22	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-22	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-22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.002
Jun-22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sub-total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.002
Jul-22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aug-22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
Sep-22	0.005	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oct-22												
Nov-22												
Dec-22												
Total	0.005	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.010	0.000	0.005

Remarks:

1.Assume the density of soil fill=2.0 tonnes/m3

2.Assume the density of rock and broken concrete=2.5 tonnes/m3

3.Assume the density of refuse = 1.5 tonnes/m3

4. The inert C&D material except slurry and bentonite are disposed at Tuen Mun 38

5. The slurry and bentonite are disposed at Tseung Kuwn O 137.

6.The non-inert C&D wastes, including general refuse are disposed at NENT

APPENDIX P
COMPLAINT LOGS

Appendix P - Complaint Log

Contract No. YL/2017/03 – Development of Lok Ma Chau Loop: Land Decontamination and Advance Engineering Works

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Complaint Nature	Investigation Finding	Status
1	9-Sep-19	EPD	EPD Ref: 25222-19	Water quality and air quality	Non-project related	Interim report was submitted to EPD on 23 Sep 2019
2	11-Oct-19	EPD	EPD Ref: 28550-19	Air quality	Non-project related	Interim report was submitted to EPD on 6 Nov 2019
3	30-Oct-19	EPD	EPD Ref: 30478-19	Air quality	Non-project related	Interim report was submitted to EPD 14 Nov 2019
4	10-Dec-19	1823 (CEDD)	1823 Case no: 2-6145710343	Noise and air quality	Non-project related	Final reply to 1823 on 24 Dec 2019. IR prepared by Contractor was agreed by IEC and ET
5	5-Mar-21	1823	1823 Case no: 3-6641544979	Air quality	Non-project related	Final reply to 1823 on 11 Mar 2021. IR prepared by Contractor was agreed by IEC and ET

Contract No. YL/2020/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 1 – Site Formation and Infrastructure Works inside Lok Ma Chau Loop and Western Connection Road Phase 1 / Contract No.: YL/2020/02 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 2 Western Connection Road Phase 2, Connection Roads to Fanling / San Tin Highway and Direct Road Link Phase 1 / Contract No.: YL/2021/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 3 Direct Road Link Phase 2

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
COM-2021-10-01	11 October 2021	EPD	EPD File Ref.: N07/RN/00024120-21	EPD received a public complaint on 11 October 2021. The complainant alleged the following: (a) Discharge of muddy water from construction sites of "Development of Lok Ma Chau Loop" project to Shenzhen River in the morning of 8 October 2021; and, (b) Use of powered mechanical equipment (including excavators and dump trucks) in the construction sites of "Development of Lok Ma Chau Loop" project on Sunday.	(a) Water Quality Non-project related According to the interim report, wastewater treatment facilities and relevant mitigation measures were properly implemented and there is no direct evidence to demonstrate the muddy discharge was inducted by the Contract. Further preventive measures, such as increasing the height of the temporary drainage by using sandbag and providing the earth bund with geo-textile along the site boundary, were implemented on 12 October 2021 in order to avoid muddy water from leaking into Shen Zhen River. (b) Noise Project related Typhoon No. 8 (Tropical cyclone: Lion Rock) was hoisted on 9 October 2021. Severe rainfall was recorded due to the adverse weather. To avoid leakage of the muddy water into the meander of the Shenzhen River, JV mobilized an excavator and dump truck to clear the blockage as an emergency measure. ET reminded the Contractor to update the site drainage	Interim report was submitted to EPD on 29 Oct 2021

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
					plan according to the construction programme and closely check the effectiveness of the implemented mitigation measures on site so that the EP, EIA and EM&A manual recommendation and requirements are complied with. In addition, the Contractor was also reminded to prepare a contingency plan for emergency environmental incidents.	
COM-2021-11-01	15 November 2021	EPD	EPD File Ref.: N06/RN/00027302-21	EPD received a public complaint on 15 November 2021. The complainant concerned about the dust nuisance in the construction sites of "Development of Lok Ma Chau Loop" project.	According to the interim report, dust mitigation measures have been properly implemented on site: - Haul road of the main site have been paved with concrete and the speed of the vehicle has been restricted to below 8kmper hour within the construction area to minimize fugitive dust emission. - Wheel washing fallibilities have been established at the location where the vehicles into the haul road in order to keep clear of any loose surface material. - Mist spray and water trucks have been provided to water the paved haul road regularly and at least once per hour on exposed work site. - Water spray has been provided during the handling of the fill material at the site and all the dusty loads transported to, from and between site location have been covered. - Induction training and tool box talk have been provided to the site staff and workers regarding the dust suppression measure. - Temporary covers have been provided to stockpile of the dusty materials and the exposed slope.	Interim report was submitted to EPD on 25 Nov 2021

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
					Further preventive measures, establishment of the automatic water spray system along the haul road and increasing the amount of the mist spray machine to enhance the efficiency of the dust suppression measures will also be provided.	
COM-2022-01-01	2 January 2022	EPD	EPD File Ref.: N06/RN/000000184-22	EPD received a public complaint by phone in Jan 2022 regarding noise from general construction work associated with the Lok Ma Chau Loop Development Project being carried out on 2.1.2022 at around 15:30 hours (i.e. within the restricted hours on Sunday).	According to the location under complaint, the work was likely carried out within the work site of "Direct Road Link to MTR Lok Ma Chau Station" and/or "Western Connection Road". Therefore, interim reports were submitted by Contract No.: YL/2020/01 and YL/2020/02 respectively:- <u>Contract No.: YL/2020/01</u> According to the site diary, no construction work was carried out during restricted hours at the location under complaint for YL/2020/01 on 2 January 2022. For prevention measure, Permit –to –Work system has been implemented for all the construction works being conducted in the restricted hours to enhance site control. All the construction works need to inform JV at least one day in advance. In addition, all staff and workers involved in the site operation during the restricted hours have to obtain a valid site pass and display to the security guards when entering site area for the enhancement of the site security system. Based on the above information and investigation findings, the noise complaint is not related to the	Interim report was submitted to EPD on 14 Feb 2022

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
					construction works of the Contract YL/2020/01. Contract No.: YL/2020/02 According to the site diary, no construction work was carried out during restricted hours at the location under complaint on 2 January 2022 for YL/2020/02. Nevertheless, construction team was reminded to strictly follow the requirement stated in the issued construction noise permit when construction work is required during restricted hours. Based on the above information and investigation findings, the noise complaint is not related to the construction works of the Contract YL/2020/02.	
COM-2022-04-01	4 April 2022	1823	1823 Case no: 3-7155426748	The complainant concerned about the muddy surface runoff arising from the construction works of "Development of Lok Ma Chau Loop" project. at Lok Ma Chau Road near Ha Wan Tsuen Road.	According to the interim report, no construction works was carried out at the location of complaint which is outside the site boundary of the Project from 1st April to 4th April 2022. Appropriate water quality mitigation measures have been properly implemented on site and there is no direct evidence to demonstrate the muddy discharge was inducted by the Project. Further preventive measures, such as set up a monitoring point at the exit of the site to check the wheels of the vehicles are clean enough so that no mud and grit adhered to the wheels of the trucks when leaving the site. In addition, sprinkler truck will be only operated at appropriate location within the project site to avoid nuisance to the public road user.	Final reply to 1823 on 12 April 2022. Interim report prepared by Contractor was agreed by IEC and ET

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
COM-2022-08-01	1 August 2022	EPD	EPD File Ref.: N06/RN/00015561-22	The complainant concerned about the muddy water discharged by a piling contractor "德運建築鑽探有限公司" on 20th July 2022	Contract No.: YL/2020/01 德運建築鑽探有限公司 is not related to the Contract No. YL/2020/01. After checking on site, the complaint was referred to other party.	Interim report was submitted to EPD on 18 Aug 2022
COM-2022-08-02	4 August 2022	EPD	EPD File Ref.: N06/RN/00015953-22	The complainant concerned about the muddy water discharging to the public area from a construction site near Fu Tai Car Park.	Contract No.: YL/2020/02 Joint site investigation with RSS was carried out on 5 Aug 2022 near Fu Tai Carpark. There were no construction works carried out near Fu Tai Carpark and no muddy water was noted. Preventive measures (sand bag bund) had been provided.	Interim report was submitted to EPD on 18 Aug 2022

APPENDIX Q
SUMMARY OF SUCCESSFUL PROSECUTION

Appendix Q - Summary of Successful Prosecution

Date of Successful Prosecution	Details of the Successful Prosecution	Status	Follow Up
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APPENDIX R
ECOLOGICAL MONITORING RESULTS

Appendix R1 – Avifauna Monitoring Results (Pond 12)

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	7th September 2022
					Weather Condition	Sunny
					Abundance	
					Maximum count of bird species recorded (Point Count – 15 mins interval)	
					Before Construction	During Construction
Black Kite	*Milvus migrans*	黑鳶	R, WV			1
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		3	
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	R, WV	LC	1	
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R			3
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	1	1
Crested Myna	*Acridotheres cristatellus*	八哥	R		2	4
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)		2
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)		4
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	1	1
Long-tailed Shrike	*Lanius schach*	棕背伯勞	R			1
Oriental Magpie-Robin	*Copsychus saularis*	鵲鴝	R		2	
Plain Prinia	*Prinia inornata*	純色鷦鶯	R		1	
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵐	R			5
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R		1	4
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R		2	1

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	7th September 2022
					Weather Condition	Sunny
					Abundance	
					Maximum count of bird species recorded (Point Count – 15 mins interval)	
					Before Construction	During Construction
White-shouldered Starling	*Sturnia sinensis*	灰背椋鳥	M, WV, Sv	LC		1
Yellow Bittern	*Ixobrychus sinensis*	黃葦鴆	USV, UPM	(LC)		1
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R		1	2
Total No. of Species					**10**	**14**
No. of Birds Recorded					**15**	**31**

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	14th September 2022
					Weather Condition	Sunny
					Abundance	
					Maximum count of bird species recorded (Point Count – 15 mins interval)	
					Before Construction	During Construction
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		1	1
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R			2
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)		1
Crested Myna	*Acridotheres cristatellus*	八哥	R			1
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	1	1
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵐	R		3	7
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R		5	5
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R			2
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R		1	1
Yellow Bittern	*Ixobrychus sinensis*	黃葦鳽	USV, UPM	(LC)		2
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R		2	1
Total No. of Species					**6**	**11**
No. of Birds Recorded					**13**	**24**

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	21th September 2022
					Weather Condition	Fine
					Abundance	
					Maximum count of bird species recorded (Point Count – 15 mins interval)	
					Before Construction	During Construction
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		3	1
Black-crowned Night Heron	*Nycticorax nycticorax*	夜鷺	R, WV	LC	3	2
Black Drongo	*Dicrurus macrocercus*	黑卷尾	Sv		3	2
Chinese Bulbul	*Pycnonotus sinensis*	白頭鵐	R		5	1
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	6	3
Crested Myna	*Acridotheres cristatellus*	八哥	R			2
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)		1
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	3	2
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)		4
Pied Kingfisher	*Ceryle rudis*	斑魚狗	UR	(LC)		1
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵐	R		1	5
Spotted Dove	*Streptopelia chinensis*	珠頸斑鳩	R			2
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R		2	1
White Wagtail	*Motacilla alba*	白鶺鴒	PM, WV			1
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R		1	1
Total No. of Species					**9**	**15**

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	21th September 2022
					Weather Condition	Fine
					Abundance	
					Maximum count of bird species recorded (Point Count – 15 mins interval)	
					Before Construction	During Construction
No. of Birds Recorded					27	29

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	28th September 2022
					Weather Condition	Sunny
					Abundance	
					Maximum count of bird species recorded (Point Count – 15 mins interval)	
					Before Construction	During Construction
Azure-winged Magpie	*Cyanopica cyanus*	灰喜鵲	(Not included)		8	4
Black-collared Starling	*Gracupica nigricollis*	黑領椋鳥	R		3	3
Chinese Pond Heron	*Ardeola bacchus*	池鷺	R	PRC(RC)	2	3
Collared Crow	*Corvus torquatus*	白頸鴉	UR	LC, VU		1
Crested Myna	*Acridotheres cristatellus*	八哥	R		4	6
Greater Coucal	*Centropus sinensis*	褐翅鴉鵑	R	(VU)	1	
Great Egret	*Ardea alba*	大白鷺	R, WV	PRC(RC)	1	1
Grey Heron	*Ardea cinerea*	蒼鷺	WV	PRC	1	
Little Egret	*Egretta garzetta*	小白鷺	R	PRC(RC)	7	25
Purple Heron	*Ardea purpurea*	草鷺	R	RC		1
Red-whiskered Bulbul	*Pycnonotus jocosus*	紅耳鵯	R			1
Scaly-breasted Munia	*Lonchura punctulata*	斑文鳥	R			2
White-breasted Waterhen	*Amaurornis phoenicurus*	白胸苦惡鳥	R			1
White-throated Kingfisher	*Halcyon smyrnensis*	白胸翡翠	R		2	2
Yellow-bellied Prinia	*Prinia flaviventris*	黃腹鷦鶯	R			3

Common Name	Species Name	Chinese Name	Hong Kong Status	Conservation Status	Date	28th September 2022
					Weather Condition	Sunny
					Abundance	
					Maximum count of bird species recorded (Point Count – 15 mins interval)	
					Before Construction	During Construction
Total No. of Species					9	13
No. of Birds Recorded					29	53

Note:

R – Resident; WV – Winter visitor; PM – Passage migrant; CPM - Common Passage Migrant; UPM – Uncommon 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; OV - Occasional visitor

Status was decided according to AFCD biodiversity website (www.hkbiodiversity.net)

Cap. 170: All bird species are under protection of Wild Animals Protection Ordinance

Cap.586 : Endangered Species of Animals and Plants Ordinance (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

EN: Endangered in IUCN Red List Status

(EN): Endangered 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; PGC=Potential 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)

Appendix R2 – Herpetofauna (Chinese Bullfrog) Survey Results

Common Name	Species Name	Chinese Name	Date: 13th September 2022					
			Weather Condition: Fine					
			Counts					
			Transect Walk					
			Day Transect			Night Transect		
			WAL	AFP	Others	WAL	AFP	Others
Chinese Bullfrog	*Hoplobatrachus rugulosus*	虎紋蛙	0	0	0	0	0	0

WAL – Wet Agricultural Land, AFP – Abandoned Fishpond

Appendix R3 – Aquatic Fauna (Rose Bitterling) Survey Results

Common Name	**Species Name**	**Chinese Name**	**Date: 7th September 2022**							
			Weather Condition: Rainy							
			Counts							
			Location(s)							
			S1	**S2**	**S3**	**S4**	**A1**	**A2**	**B1**	**B2**
Rose Bitterling	*Rhodeus ocellatus*	高體鱊鮍	Direct Observation:							
			0	0	0	0	0	2	0	0
			Sweep Netting:							
			0	0	0	0	0	0	0	0

Service Contract No. WD/04/2020
Development of Lok Ma Chau Loop: Main Works Package 1 – Environmental Team
Water Quality Monitoring Results on 02-Sep-22

Location	Weather Condition	Start Time	Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)	
			Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
A1	Sunny	13:36	31.3 31.3	31.3	7.1 7.1	7.1	0.1 0.1	0.1	37.2 36.1	36.7	2.8 2.7	2.8	2.1 2.1	2.1
A2	Sunny	13:20	31.9 31.9	31.9	7.2 7.2	7.2	0.1 0.1	0.1	61.9 61.5	61.7	4.5 4.5	4.5	2.7 2.6	2.7
B1	Sunny	13:13	31.2 31.2	31.2	7.4 7.4	7.4	0.1 0.1	0.1	112.2 112.4	112.3	8.3 8.3	8.3	4.5 4.4	4.5
B2	Sunny	13:05	31.6 31.5	31.6	7.3 7.3	7.3	0.1 0.1	0.1	100.1 101.2	100.7	7.4 7.5	7.5	5.1 5.3	5.2
S1	Sunny	13:43	31.1 31.1	31.1	7.0 7.0	7.0	0.1 0.1	0.1	55.7 55.4	55.6	4.1 4.1	4.1	19.1 18.5	18.8
S2	Sunny	13:30	30.5 30.7	30.6	7.3 7.3	7.3	0.1 0.1	0.1	74.5 74.3	74.4	5.6 5.6	5.6	2.4 2.1	2.3
S3	Sunny	12:52	29.6 29.6	29.6	7.3 7.3	7.3	0.1 0.1	0.1	61.4 60.0	60.7	4.7 4.6	4.7	6.0 6.2	6.1
S4	Sunny	12:59	30.7 30.7	30.7	7.2 7.2	7.2	0.1 0.1	0.1	42.8 42.2	42.5	3.2 3.2	3.2	4.5 4.8	4.7

Service Contract No. WD/04/2020
Development of Lok Ma Chau Loop: Main Works Package 1 – Environmental Team
Water Quality Monitoring Results on 07-Sep-22

Location	Weather Condition	Start Time	Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)	
			Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
A1	Sunny	10:40	30.5 30.5	30.5	7.0 7.0	7.0	0.1 0.1	0.1	25.2 24.8	25.0	1.9 1.9	1.9	2.3 2.1	2.2
A2	Sunny	10:15	30.6 30.6	30.6	6.8 6.9	6.9	0.1 0.1	0.1	39.4 37.5	38.5	3.0 2.8	2.9	3.6 3.4	3.5
B1	Sunny	10:08	30.2 30.2	30.2	6.8 6.8	6.8	0.1 0.1	0.1	75.9 75.6	75.8	5.7 5.7	5.7	7.7 7.3	7.5
B2	Sunny	10:02	30.1 30.2	30.2	7.2 7.0	7.1	0.1 0.1	0.1	73.7 72.0	72.9	5.6 5.4	5.5	7.8 7.7	7.8
S1	Sunny	10:47	29.5 29.5	29.5	6.9 6.9	6.9	0.1 0.1	0.1	38.0 37.8	37.9	2.9 2.9	2.9	15.0 15.6	15.3
S2	Sunny	10:34	29.5 29.5	29.5	7.1 7.1	7.1	0.1 0.1	0.1	62.8 61.7	62.3	4.8 4.7	4.8	3.7 3.5	3.6
S3	Sunny	09:47	29.1 29.1	29.1	7.1 7.1	7.1	0.1 0.1	0.1	46.9 46.7	46.8	3.6 3.6	3.6	3.3 3.3	3.3
S4	Sunny	09:55	29.0 29.0	29.0	7.2 7.2	7.2	0.1 0.1	0.1	48.1 47.4	47.8	3.7 3.6	3.7	2.3 2.3	2.3

Service Contract No. WD/04/2020
Development of Lok Ma Chau Loop: Main Works Package 1 – Environmental Team
Water Quality Monitoring Results on 13-Sep-22

Location	Weather Condition	Start Time	Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)	
			Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
A1	Sunny	10:16	30.9 30.9	30.9	7.1 7.1	7.1	0.1 0.1	0.1	25.2 24.6	24.9	1.9 1.8	1.9	2.4 2.0	2.2
A2	Sunny	09:59	31.0 31.0	31.0	7.1 7.0	7.1	0.1 0.1	0.1	23.3 21.2	22.3	1.7 1.6	1.7	2.2 2.2	2.2
B1	Sunny	09:52	30.7 30.7	30.7	7.5 7.4	7.5	0.1 0.1	0.1	101.6 100.8	101.2	7.6 7.5	7.6	12.5 11.9	12.2
B2	Sunny	09:45	31.1 31.2	31.2	7.8 7.8	7.8	0.1 0.1	0.1	113.5 115.8	114.7	8.4 8.6	8.5	10.8 10.5	10.7
S1	Sunny	10:23	29.4 29.4	29.4	6.9 6.9	6.9	0.1 0.1	0.1	30.5 29.6	30.1	2.3 2.3	2.3	15.8 16.1	16.0
S2	Sunny	10:09	29.9 29.9	29.9	7.4 7.4	7.4	0.1 0.1	0.1	62.7 62.2	62.5	4.7 4.7	4.7	2.9 2.8	2.9
S3	Sunny	09:32	29.5 29.5	29.5	7.2 7.2	7.2	0.1 0.1	0.1	45.1 44.5	44.8	3.4 3.4	3.4	2.3 2.3	2.3
S4	Sunny	09:39	30.0 30.0	30.0	7.4 7.4	7.4	0.1 0.1	0.1	48.0 47.2	47.6	3.6 3.6	3.6	7.4 6.3	6.9

Service Contract No. WD/04/2020
Development of Lok Ma Chau Loop: Main Works Package 1 – Environmental Team
Water Quality Monitoring Results on 19-Sep-22

Location	Weather Condition	Start Time	Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)	
			Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
A1	Sunny	13:19	30.8 30.8	30.8	7.2 7.2	7.2	0.1 0.1	0.1	39.9 39.5	39.7	3.0 2.9	3.0	2.3 2.3	2.3
A2	Sunny	13:02	31.1 31.0	31.1	7.4 7.3	7.4	0.1 0.1	0.1	33.7 29.1	31.4	2.5 2.2	2.4	2.0 2.0	2.0
B1	Sunny	12:55	31.5 31.5	31.5	8.7 8.8	8.8	0.1 0.1	0.1	135.9 134.9	135.4	10.0 9.9	10.0	12.2 11.8	12.0
B2	Sunny	12:49	31.7 31.7	31.7	8.6 8.6	8.6	0.1 0.1	0.1	129.4 132.3	130.9	9.5 9.7	9.6	11.6 11.5	11.6
S1	Sunny	13:26	29.5 29.5	29.5	7.1 7.1	7.1	0.1 0.1	0.1	34.4 33.1	33.8	2.6 2.5	2.6	15.0 14.9	15.0
S2	Sunny	13:14	30.8 30.8	30.8	7.4 7.4	7.4	0.1 0.1	0.1	74.8 74.1	74.5	5.6 5.5	5.6	6.6 6.4	6.5
S3	Sunny	12:37	29.8 29.8	29.8	7.1 7.1	7.1	0.1 0.1	0.1	45.5 45.1	45.3	3.5 3.4	3.5	2.2 2.1	2.2
S4	Sunny	12:43	31.1 31.1	31.1	7.2 7.2	7.2	0.1 0.1	0.1	52.8 52.2	52.5	3.9 3.9	3.9	6.4 6.4	6.4

Service Contract No. WD/04/2020
Development of Lok Ma Chau Loop: Main Works Package 1 – Environmental Team
Water Quality Monitoring Results on 28-Sep-22

Location	Weather Condition	Start Time	Temperature (°C)		pH		Salinity ppt		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity(NTU)	
			Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
A1	Sunny	11:13	29.7 29.7	29.7	7.1 7.1	7.1	0.1 0.1	0.1	24.8 24.6	24.7	1.9 1.9	1.9	3.5 3.3	3.4
A2	Sunny	10:47	29.8 29.8	29.8	7.2 7.2	7.2	0.1 0.1	0.1	42.0 41.7	41.9	3.2 3.2	3.2	4.2 4.4	4.3
B1	Sunny	10:40	29.3 29.3	29.3	7.1 7.0	7.1	0.1 0.1	0.1	55.4 55.7	55.6	4.2 4.3	4.3	14.4 14.4	14.4
B2	Sunny	10:33	29.6 29.6	29.6	7.4 7.4	7.4	0.1 0.1	0.1	88.5 88.3	88.4	6.7 6.7	6.7	11.9 11.8	11.9
S1	Sunny	11:20	28.9 28.9	28.9	7.2 7.2	7.2	0.1 0.1	0.1	32.7 32.5	32.6	2.5 2.5	2.5	14.9 14.8	14.9
S2	Sunny	11:05	29.9 30.0	30.0	7.3 7.3	7.3	0.1 0.1	0.1	62.5 62.2	62.4	4.7 4.7	4.7	3.9 4.0	4.0
S3	Sunny	10:18	29.5 29.5	29.5	7.3 7.3	7.3	0.1 0.1	0.1	59.0 58.6	58.8	4.5 4.5	4.5	2.7 2.8	2.8
S4	Sunny	10:26	29.4 29.4	29.4	7.3 7.3	7.3	0.1 0.1	0.1	46.7 46.5	46.6	3.6 3.6	3.6	2.4 2.5	2.5