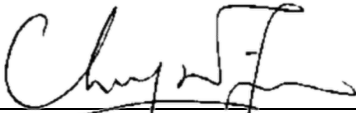


# Civil Engineering and Development Department

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

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

**Quarterly Environmental Monitoring and  
Audit Report for April to June 2024  
(Version 1.0)**

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

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

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

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Our ref.: LES/J2021-04/CS/L190  
Date : 11 September 2024

**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: Mr. YIU Wai Kei, Ricky**

Dear Mr. Yiu,

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

**Verification of Quarterly EM&A Report (April to June 2024)**

Reference is made to the Quarterly Environmental Monitoring and Audit (EM&A) Report of certified by the Environmental Team Leader in September 2024. We hereby verify the captioned submission in accordance with Clause 14.4 of the EM&A Manual 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  
Wellab Limited

Mr. Eric Wong  
Dr. Priscilla Choy

By Email  
By Email

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**EXECUTIVE SUMMARY****Introduction**

1. This is the 22<sup>nd</sup> Quarterly Environmental Monitoring and Audit (EM&A) Report prepared for the project with Environmental Permit No.: EP-477/2013/B - Development of Lok Ma Chau Loop (hereinafter called “the Project”). This report documents the findings of Environmental Monitoring and Audit (EM&A) work conducted in the period from 1<sup>st</sup> April to 30<sup>th</sup> June 2024.

**Summary of Construction Works undertaken during the Reporting Quarter**

2. During the reporting quarter, 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 (hereinafter called the “Contract 3”)

**Environmental Monitoring and Audit Works**

3. Environmental monitoring for the Project was performed in accordance with the EM&A Manual and the monitoring results were checked and reviewed. Site Inspections/Audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.
4. Summary of the environmental exceedances of the reporting quarter for the Project is tabulated in **Table I**.

**Table I Summary Table for Events Recorded in the Reporting Quarter**

Environmental Monitoring	Parameter	No. of Non-Project related Exceedances		No. of Exceedance related to the Construction Works of the Project		Action Taken
		Action Level	Limit Level	Action Level	Limit Level	
Air Quality	1-hr TSP	0	0	0	0	N/A
	24-hr TSP	0	0	0	0	N/A
Construction Noise	Daytime Leq(30min)	0	0	0	0	N/A
Water Quality	DO	0	0	0	0	N/A
	Turbidity	0	0	0	0	N/A
	SS	0	0	0	0	N/A

**Air Quality**

5. All construction air quality monitoring including 1-hour TSP and 24-hour TSP monitoring were conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded.

**Construction Noise**

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

**Water Quality**

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

**Ecological Monitoring**LMC Loop*Avifauna (Flight Line Survey)*

8. Avifauna monitoring was conducted as scheduled in the reporting quarter. Flight lines recorded were in general concentrated mainly on LMC Meander and adjacent areas including Ecological Area Zone (EA Zone). It demonstrates that the large waterbirds prefer using the flight line corridor above the LMC Meander and EA Zone.

*Mammals*

9. According to 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.
10. 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)*

11. Avifauna monitoring was conducted as scheduled in the reporting quarter. Flight lines recorded were in general concentrated mainly on LMC Meander and adjacent areas including Ecological Area Zone (EA Zone). It demonstrates that the large waterbirds prefer using the flight line corridor above the LMC Meander and EA Zone.

*Avifauna (Pond 12)*

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

*Herptofauna*

13. Herptofauna survey was conducted as scheduled in the reporting quarter. It was observed that the shallow agricultural ponds where Chinese Bullfrog was recorded have been altered into relatively dry agricultural lands, which may have an effect on the local Chinese Bullfrog population. However, no significant impact of construction activities on this species was observed.

*Aquatic fauna*

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

**Contaminated Soil Remediation**

15. 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.
16. No work related to land contamination was conducted in the reporting quarter.

**Environmental Non-Compliance**

17. No environmental non-compliance was recorded in the site inspections during the reporting quarter.

**Environmental Complaint**

18. Two environmental complaints related to water quality were received in the reporting quarter. The Complaint Log is presented in **Appendix M**.

**Notification of Summons and Successful Prosecutions**

19. No notification of summons or successful environmental prosecutions was received in the reporting quarter.

**Reporting Change**

20. This report has been prepared in compliance with the reporting requirements for the Quarterly 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 quarter.

**Future Key Issues**

21. The major site activities for the coming three months 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) WCR Retaining Wall and Slope Work
- (b) WCR Drainage Work and Fresh Watermains
- (c) Drainage Works and Roadworks
- (d) Meander Bridge South and Middle Spans Construction
- (e) HWT Pai Lau Finishing Works
- (f) Box Culvert A1 Outfall Portion Construction



- (g) Wetland Fence Construction
- (h) PT1 drainage works

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

Reedbed Cell No. 3A

- (a) Monthly monitoring of the polishing function of the Reedbed Cell No. 3A

Direct Road Link (DRL)

- (b) Temporary works.
- (c) Bored Pile works.
- (d) Sheet piling works.
- (e) ELS works.
- (f) Segment precast.
- (g) Pier construction.
- (h) Construction of pile cap.
- (i) Pre-drill works.
- (j) Construction of Base Slab.
- (k) Pierhead segment erection.

Lok Ma Chau (LMC) Road

- (l) Sheet-piling works.
- (m) Drainage works.
- (n) Bored piling works.
- (o) Water main installation.
- (p) Pile cap construction.
- (q) Nullah modification works
- (r) Site formation.
- (s) Underground utilities works.
- (t) Construction of noise barrier.
- (u) Construction of box culvert.
- (v) Construction of retaining wall.
- (w) Construction of concrete structure.
- (x) Carpark traffic diversion works.

Fanling Highway

- (y) Construction of retaining wall.
- (z) Pier construction.
- (aa) Installation of pierhead segment.
- (bb) Backfilling works for retaining wall.
- (cc) Sheet-piling works for retaining wall.
- (dd) Full span erection.
- (ee) Fabrication of precast segment.
- (ff) Installation of parapet at retaining wall.
- (gg) Construction of subway.

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

- (a) LMC Station Structural Steel Materials Delivery
- (b) LMC Station Strengthening Works
- (c) ELS Works and Pile Caps & Tie Beam Construction at Elevated PTI and Double deck Footbridge
- (d) Elevated PTI Superstructure Construction

22. Potential environmental impacts arising from the above construction activities are mainly associated with construction dust, noise, water quality, waste management and ecology.

## 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 22<sup>nd</sup> Quarterly EM&A Report which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period from April to June 2024.

### **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 period.

Section 3: **Environmental Monitoring and Audit Requirement** – summarises monitoring location and parameters, monitoring programmes, monitoring frequencies, Action and Limit Levels, Event / Action Plans, and Site Audit inspection.

Section 4: **Monitoring Results** – summarises the monitoring results in the reporting quarter.

Section 5: **Environmental Site Inspection** – summarises the audit findings of the weekly site inspections undertaken within the reporting period.

Section 6: **Non-Compliance of the Environmental Quality Performance Limits (Action and Limit)** – summarises any monitoring exceedance, environmental complaints, environmental summons and successful prosecutions within the reporting period.

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

Section 8: **Conclusions and Recommendations**

## 2 PROJECT INFORMATION

### Background

- 2.1 The 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. EP-477/2013/A) was issued on 12<sup>th</sup> August 2021 for Development of Lok Ma Chau Loop. In December 2023, the Director of Environmental Protection further amends the Environmental Permit (No. EP-477/2013/A) based on the Application No. VEP-629/2023 and the latest Environmental Permit (No. EP-477/2013/B) was issued on 29<sup>th</sup> December 2023 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 in June 2018 for the Advance Works.
- 2.6 For MWP1, there is 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 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 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 in February 2022.
- 2.10 During the reporting quarter, 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 and the scope of works under the Contracts are summarised in **Table 2.1**.

**Table 2.1 Site Layout and Scope of Works under the Contracts**

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	<ul style="list-style-type: none"> <li>a) Ground treatment and site formation works;</li> <li>b) Construction of carriageway, footpaths, cycle tracks and a public transport interchange within the Loop;</li> <li>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;</li> <li>d) Provision of other infrastructures, including a tertiary sewage treatment works and sewerage system, water supply system, drainage system, and other associated works; and</li> <li>- Environmental mitigation measures including about 18 ha offsite wetland compensation and about 1.3 ha offsite woodland compensation.</li> </ul>	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	<ul style="list-style-type: none"> <li>a) Construction of Western Connection Road Phase 2 through widening of a section of existing Lok Ma Chau Road;</li> <li>b) Construction of Direct Road Link Phase 1 comprising a viaduct of about 720m long; construction of slip roads connecting Lok Ma Chau Road and Fanling Highway / San Tin Highway including a viaduct of about 340 m long;</li> <li>c) Construction of a cycle track cum footbridge;</li> <li>d) Construction of associated works including road improvement works, footpaths, cycle tracks, slopes, retaining walls, water supply system and drainage system; and</li> <li>(a) Provision of noise barriers.</li> </ul>	Figure 1b
Contract No.: YL/2021/01 – Development of Lok Ma Chau Loop: Main Works Package 1 – Contract 3 Direct Road Link Phase 2	<ul style="list-style-type: none"> <li>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;</li> <li>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;</li> <li>c) Associated modification works within the MTR Lok Ma Chau Station; and</li> <li>e) Associated roadworks, landscaping, electrical and mechanical works and ancillary works.</li> </ul>	Figure 1b

**Contracts Organization**

2.12 There are different parties with different levels of involvement in the Contracts 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	24176370	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
<b>Contract No. YL/2020/01</b>				
AECOM	Consultants	Mr. Eric Wong	9861 8664	TBA
CRCC-Kwan Lee-Paul Y. JV	Contractor	Site Agent – Mr. Sam Lee	9284 1964	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 / Mr. Kobe Lee	52610378 / 96039686	27740197
<b>Contract No. YL/2020/02</b>				
AECOM	Consultants	Mr. Eric Wong	9861 8664	TBA
China Road and Bridge Corporation	Contractor	Site Agent – Mr. Roger Poon	9503 2488	3996 9202
		Construction Team Leader – Mr. Angus Mok	98389224	3996 9202
		Environmental Officer – Mr. Calvin So	9724 6254	3996 9202
<b>Contract No. YL/2021/01</b>				
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 – Mr. Tino Law	6856 4150	3015 7861

**Summary of Construction Works Undertaken during Reporting Quarter**

2.13 The major site activities undertaken in the reporting quarter 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

<b>Month(s)</b>	<b>Major Site Activities</b>
<b>Apr 2024</b>	<ul style="list-style-type: none"> <li>(a) North Span Bridge Deck Construction Work and South Side Superstructure for Vehicular Bridge over the Old Shenzhen River Meander</li> <li>(b) Excavation and Lateral Support (ELS) Cofferdam Construction for Box Culvert A and C</li> <li>(c) Excavation and Lateral Support (ELS) Cofferdam Construction and Underground Utilities (UU) installation for Road L1</li> <li>(d) Drainage works for Public Transport Interchange</li> <li>(e) Retaining Wall Works, Drainage Works and Roadworks for Western Connection Road</li> </ul>
<b>May 2024</b>	<ul style="list-style-type: none"> <li>(a) North Span Bridge Deck Construction Work and South Side Superstructure for Vehicular Bridge over the Old Shenzhen River Meander</li> <li>(b) Excavation and Lateral Support (ELS) Cofferdam Construction for Box Culvert A</li> <li>(c) Excavation and Lateral Support (ELS) Cofferdam Construction and Underground Utilities (UU) installation for Road L1</li> <li>(d) Drainage works and Excavation and Lateral Support (ELS) Cofferdam Construction for Public Transport Interchange</li> <li>(e) Retaining Wall Works, Drainage Works and Roadworks for Western Connection Road</li> </ul>
<b>Jun 2024</b>	<ul style="list-style-type: none"> <li>(a) North, Middle and South Span Bridge Deck Construction Work and South Side Superstructure for Vehicular Bridge over the Old Shenzhen River Meander</li> <li>(b) Excavation and Lateral Support (ELS) Cofferdam Construction for Box Culvert A and C</li> <li>(c) Excavation and Lateral Support (ELS) Cofferdam Construction and Underground Utilities (UU) installation, Drainage and sewerage works for Road L1</li> <li>(d) Drainage works and Excavation and Lateral Support (ELS) Cofferdam Construction for Public Transport Interchange</li> <li>(e) Retaining Wall Works, Drainage Works, Watermain works and Roadworks for Western Connection Road</li> </ul>

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

<b>Month(s)</b>	<b>Major Site Activities</b>
<b>Apr 2024</b>	<p><u>Reedbed Cell No. 3A</u></p> <ul style="list-style-type: none"> <li>(a) Monthly monitoring of the polishing function of the Reedbed Cell No. 3A</li> </ul> <p><u>DRL</u></p> <ul style="list-style-type: none"> <li>(b) Temporary works are in progress</li> <li>(c) Bored Pile works are in progress</li> </ul>



Month(s)	Major Site Activities
	(d) Sheet piling is in progress (e) ELS works are in progress (f) ABWF works are in progress (g) Pier construction (h) Backfilling of piling platform is in progress <u>LMC Road</u> (i) Sheet-piling works (j) Drainage works (k) Bored piling works (l) Water main installation (m) Pile cap construction (n) Nullah modification works (o) Site formation (p) ABWF works are in progress (q) Construction of box culvert (r) Construction of retaining wall <u>Fanling Highway</u> (s) Installation of pierhead segment (t) Sheet-piling works for retaining wall (u) Backfilling works for retaining wall (v) Installation of parapet at retaining wall (w) Bored Piling works are in progress
<b>May 2024</b>	<u>Reedbed Cell No. 3A</u> (a) Monthly monitoring of the polishing function of the Reedbed Cell No. 3A <u>DRL</u> (b) Temporary works are in progress (c) Bored Pile works are in progress (d) Sheet piling is in progress (e) ELS works are in progress (f) ABWF works are in progress (g) Pier construction (h) Backfilling of piling platform is in progress <u>LMC Road</u> (i) Sheet-piling works (j) Drainage works (k) Bored piling works (l) Water main installation (m) Pile cap construction (n) Nullah modification works (o) Site formation (p) ABWF works are in progress (q) Construction of box culvert (r) Construction of retaining wall <u>Fanling Highway</u> (s) Installation of pierhead segment (t) Sheet-piling works for retaining wall (u) Backfilling works for retaining wall (v) Installation of parapet at retaining wall (w) Bored Piling works are in progress
<b>Jun 2024</b>	<u>Reedbed Cell No. 3A</u> (a) Monthly monitoring of the polishing function of the Reedbed Cell No. 3A <u>DRL</u> (b) Temporary works are in progress. (c) Bored Piling works are in progress.

Month(s)	Major Site Activities
	(d) Sheet piling is in progress. (e) ELS works are in progress. (f) Excavation is in progress. (g) ABWF works are in progress. (h) Pier construction. (i) Backfilling of piling platform is in progress. <u>LMC Road</u> (j) Sheet-piling works. (k) Drainage works. (l) Bored piling works. (m) Water main installation. (n) Pile cap construction. (o) Nullah modification works (p) Site formation. (q) ABWF works are in progress. (r) Construction of box culvert. (s) Construction of retaining wall. (t) Pier construction. (u) Construction of Noise Barriers. (v) Traffic islands modification works are in progress. <u>Fanling Highway</u> (w) Installation of pierhead segment. (x) Sheet-piling works for retaining wall. (y) Backfilling works for retaining wall. (z) Bored Piling works are in progress. (aa) Construction of subway.

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Month(s)	Major Site Activities
<b>Apr 2024</b>	(a) Underground Utility detection (b) Trial pit excavation (c) Material / Waste Lifting and Delivery (d) Utilities diversion (e) Erect external scaffold outside LMC Station (f) E&M (g) Double Deck Footbridge (h) Temporary Lighting system (i) Site Demarcation (j) ELS installation Works (k) Tie beam and pile cap construction (l) Column construction (m) Falsework at EPTI (n) EPTI RC deck construction
<b>May 2024</b>	(a) Underground Utility detection (b) Trial pit excavation (c) Material / Waste Lifting and Delivery (d) Utilities diversion (e) Erect external scaffold outside LMC Station (f) E&M (g) Double Deck Footbridge (h) Temporary Lighting system (i) Site Demarcation

Month(s)	Major Site Activities
	(j) ELS installation Works (k) Tie beam and pile cap construction (l) Column construction (m) Falsework at EPTI (n) EPTI RC deck construction
<b>Jun 2024</b>	(a) Underground Utility detection (b) Trial pit excavation (c) Material / Waste Lifting and Delivery (d) Utilities diversion (e) Erect external scaffold outside LMC Station (f) E&M (g) Double Deck Footbridge (h) Temporary Lighting system (i) Site Demarcation (j) ELS installation Works (k) Tie beam and pile cap construction (l) Column construction (m) Falsework at EPTI (n) EPTI RC deck construction

### Status of Environmental Licences, Notifications and Permits

2.14 A summary of the relevant permits, licences and/or notifications on environmental protection for the Contracts 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	
<b>Environmental Permit (EP)</b>				
Contract No. YL/2020/01	EP-477/2013	22/11/2013	11/08/2021	Replaced by EP-473/2013/A
Contract No. YL/2020/02	EP-477/2013/A	12/08/2021	28/12/2023	Replaced by EP-473/2013/B
Contract No. YL/2021/01	EP-477/2013/B	29/12/2023	N/A	Valid
<b>Construction Noise Permit (CNP)</b>				
Contract No. YL/2020/01	GW-RN0158-24	9/02/2024	08/04/2024	Expired in the reporting period
	GW-RN0280-24	15/03/2024	14/06/2024	Expired in the reporting period
	GW-RN0393-24	9/04/2024	08/06/2024	Expired in the reporting period
	GW-RN0642-24	15/06/2024	14/09/2024	Valid
	GW-RN0643-24	09/06/2024	08/08/2024	Valid
Contract No. YL/2020/02	GW-RN0188-24	21/02/2024	02/04/2024	Expired in the reporting period
	GW-RN0339-24	29/03/2024	28/05/2024	Expired in the reporting period
	GW-RN0493-24	10/05/2024	09/08/2024	Valid
	GW-RN0547-24	17/05/2024	16/08/2024	Valid
	GW-RN0572-24	29/05/2024	28/08/2024	Valid
	GW-RN0601-24	31/05/2024	30/08/2024	Valid

Contract No.	Permit / License No.	Valid Period		Status
		From	To	
Contract No. YL/2021/01	GW-RN0180-24	28/02/2024	27/04/2024	Expired in the reporting period
	GW-RN0403-24	19/04/2024	07/07/2024	Valid
	GW-RN0476-24	28/04/2024	27/06/2024	Expired in the reporting period
	GW-RN0713-24	28/06/2024	27/09/2024	Valid
<b>Notification pursuant to Air Pollution Control (Construction Dust) Regulation</b>				
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	17/5/2022	Till the Contract ends	Receipt acknowledged by EPD
<b>Billing Account for Disposal of Construction Waste</b>				
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
<b>Registration of Chemical Waste Producer</b>				
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
<b>Effluent Discharge License under Water Pollution Control Ordinance</b>				
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
	WT00042556-2022	23/11/2022	30/11/2027	Valid
	WT00043043-2023	21/04/2023	30/04/2028	Valid
	WT10001592-2023	7/09/2023	30/09/2028	Valid
	WT10001042-2023	29/11/2023	30/11/2028	Valid
	WT10003163-2024	18/06/2024	30/06/2029	Valid

Contract No.	Permit / License No.	Valid Period		Status
		From	To	
Contract No. YL/2021/01	WT00041259-2022	21/07/2022	31/07/2027	Valid
<b>Specified Processes for Cement Works under Air Pollution Control Ordinance</b>				
Contract No. YL/2020/01	L-3-270(1)	25/04/2023	24/04/2025	Valid

### Summary of EM&A Requirements

2.15 The EM&A programme requires construction noise monitoring, air quality monitoring, water quality monitoring, ecological monitoring and environmental site audits. The EM&A requirements are described in the following sections, including:

- All monitoring parameters;
- Action and Limit levels for all environmental parameters;
- Event / Action Plans;
- Environmental mitigation measures, as recommended in the Project EIA study final report; and
- Environmental requirements in contract documents.

### 3 ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENT

#### Monitoring Parameters and Monitoring Locations

##### *Air Quality Monitoring*

- 3.1 In accordance with the EM&A Manual, impact 1-hour and 24-hour TSP monitoring was conducted to monitor the air quality for the Project. The locations of monitoring stations are shown in **Figure 2**. **Table 3.1** describes the locations 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-2B (see Note 3)	Site boundary near Village House along Lok Ma Chau Road
DMS-3	Village House along Old Border Road
DMS-4A (see Note 4)	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, verified by IEC and agreed by EPD.
3. Alternative location (DMS-2B) was proposed due to DMS-2A is situated within the site area for upcoming road widening works which was verified by IEC and agreed by EPD.
4. 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.

- 3.2 **Table 3.2** summarises the monitoring parameters and frequencies of impact air quality monitoring during the Works Contracts activities.

**Table 3.2 Impact Air Quality Monitoring Parameters, Frequency and Duration**

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

##### *Noise Monitoring*

- 3.3 In accordance with the EM&A Manual, construction noise monitoring was conducted to monitor the construction noise arising from the construction activities. The locations of the monitoring stations are shown in **Figure 3**. **Table 3.3** describes the locations of the noise monitoring stations.

**Table 3.3 Location of Noise Monitoring Stations**

Monitoring Station	Location	Measurement
NMS-1	Village house in Ha Wan Tsuen	Façade
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

Note:

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

3.4 **Table 3.4** summarises the monitoring parameters and frequencies of construction noise monitoring during the Works Contracts activities.

**Table 3.4 Noise Monitoring Parameters, Duration and Frequency**

Monitoring Station	Parameter	Duration	Frequency
NMS-1 NMS-2 NMS-3 NMS-4A	L <sub>10</sub> (30 min.) dB(A) L <sub>90</sub> (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 (Leq). 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<sub>10</sub> 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<sub>10</sub>.

L<sub>90</sub> is the level exceeded for 90% of the time. For 90% of the time, the noise level is above this level.

### *Water Quality Monitoring*

3.5 In accordance with the EM&A Manual, impact water quality monitoring was conducted to monitor the water quality for the Project. The locations of the monitoring stations are shown in **Figure 4**. **Table 3.5** describes the locations of the water quality monitoring stations.

3.6 Based on the updated construction programme under Contract No. YL/2017/03, the water-based construction works for temporary vehicular bridge was completed on 7<sup>th</sup> April 2021 and the completion was confirmed by Engineer Representative under Contract No. YL/2017/03 via email dated 15<sup>th</sup> June 2021. The additional monitoring station, BS1, was therefore proposed to be deleted from the water quality monitoring programme starting from 28<sup>th</sup> 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 22<sup>nd</sup> June 2021.

**Table 3.5 Location of 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
<sup>(1)</sup> BS1	Impact Station at Old Shenzhen River Meander	Additional impact station for temporary vehicular bridge

Note:

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

3.7 **Table 3.6** summarises the monitoring parameters, monitoring depths and frequency of the water quality monitoring during the Works Contracts activities.

**Table 3.6 Water Quality Monitoring Parameters, Depths and Frequency**

Monitoring Station	Parameter (unit)	Depth	Frequency
CS1, IS1, IS2, IS4, CS5, IS6, BS1	<ul style="list-style-type: none"> <li>• Temperature(°C)</li> <li>• pH (pH unit)</li> <li>• turbidity (NTU)</li> <li>• water depth (m)</li> <li>• salinity (ppt)</li> <li>• DO (mg/L and % of saturation)</li> <li>• SS (mg/L)</li> </ul>	<ul style="list-style-type: none"> <li>• 3 water depths: 1m below water surface, mid-depth and 1m above river bed.</li> <li>• If the water depth was less than 3m, mid-depth sampling only.</li> <li>• If water depth was less than 6m, mid-depth might be omitted.</li> </ul>	<ul style="list-style-type: none"> <li>• 3 days per week during the construction period of the Contract</li> </ul>

#### Monitoring Methodology and Calibration Details

3.8 Monitoring works/equipment were conducted/calibrated regularly in accordance with the EM&A Manual. Copies of calibration certificates could be referred to the relevant Monthly EM&A Reports.

#### Environmental Quality Performance Limits (Action and Limit Levels)

3.9 The environmental quality performance limits i.e. Action and Limit Levels were derived from the baseline monitoring results. Should the measured environmental quality parameters exceed the Action/Limit Levels, the respective action plans would be implemented. The Action/Limit Levels for each environmental parameter are given in **Appendix A**.

#### Landscape and Visual

3.10 Inspection of the implementation of landscape and visual mitigation measures was conducted during weekly site audit. Most of the necessary mitigation measures have been implemented and recommended follow-up actions have been discharged by the Contractors. Details of the audit findings and implementation status are summarised in **Appendix K** and **Appendix J**.

#### Ecology Monitoring

##### LMC Loop

##### *Avifauna (Flight Line Survey)*

3.11 Avifauna monitoring was carried out on a monthly basis to identify the number and species composition of birds using the flight line and monitor if there was any impact from construction works. The flight line corridor survey work was carried out at the Lok Ma Chau Lookout, according to Section 11.4.1.1 of the EM&A Manual.



*Mammals*

- 3.12 Monitoring of mammals was also required for Eurasian Otter, other mammals and dogs during the site formation and establishment period of Ecological Area, 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.
- 3.13 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.
- 3.14 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**Avifauna (Flight Line Survey)*

- 3.15 Refer to Section 3.11.

*Avifauna (Pond 12)*

- 3.16 Pond 12 avifauna survey was required to be carried out on a weekly basis to identify the number and species composition of birds using Pond 12, according to Section 11.4.2.1 of the EM&A Manual. Location of Pond 12 is shown in **Figure 5a**.

*Herpetofauna*

- 3.17 Herpetofauna monitoring of the only herpetofauna species of conservation interest in the area around Pond 12, the Chinese Bullfrog, was required to be conducted once monthly during wet season (March to October), including both day-time and night-time survey. The purpose of the survey is to ensure the abundance of the Chinese Bullfrog in the area of Pond 12, LMC Tsuen, and nearby wetlands is not affected by the construction works. The monitoring was conducted according to Section 11.4.2.2 of the EM&A Manual. Location of the Herpetofauna survey transect is shown in **Figure 5b** for reference.

*Aquatic Fauna*

- 3.18 Monthly surveys of the population of Rose Bitterling at streams and associated ponds south of Lung Hau Road, weekly *in-situ* monitoring of water quality and whole site audit were required 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. Weekly *in-situ* monitoring of water quality in LMC Meander was also required during the construction phase and the first 12 months of operation. The monitoring was conducted according to Section 11.4.2.3 of the EM&A Manual.
- 3.19 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 were 4 sampling points along the stream, and 4 sampling points at the ponds. The sampling locations are shown in **Figure 5c**.
- 3.20 *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**.

- 3.21 Measurements for *in-situ* monitoring of water quality included temperature, pH, salinity, turbidity and dissolved oxygen. Monitoring works/equipment were conducted/calibrated regularly in accordance with the EM&A Manual. Copies of calibration certificates were provided in relevant Monthly EM&A Reports.

### **Land Contamination**

- 3.22 According to Section 8.2 of EM&A Manual 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. 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.
- 3.23 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.
- 3.24 As advised by the Contractor, Decontamination for all hot spots (LD01 – LD05) was completed and backfilling of treated soil was completed on 31<sup>st</sup> May 2021. After completion of remediation works at each hot spots, Interim Remediation Reports (IRR) was 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 is summarised below:
- (a) IRR for hot spot LD-001 endorsed by EPD on 6<sup>th</sup> January 2020
  - (b) IRR for hot spot LD-003 endorsed by EPD on 18<sup>th</sup> March 2020
  - (c) IRR for hot spot LD-002 commented by EPD on 3<sup>rd</sup> September 2020 and resubmitted by Contractor on 16<sup>th</sup> September 2020
  - (d) IRR for hot spot LD-005 endorsed by EPD on 23<sup>rd</sup> October 2020
  - (e) Final Remediation Report including the result of hotspots LD-004 was submitted to EPD on 28<sup>th</sup> June 2021. The final Remediation Report was approved by EPD with minor comments in August 2021.

- 3.25 No work related to land contamination was conducted in the reporting quarter.

### **Site Audit Summary**

- 3.26 Site audit was carried out on a weekly basis to monitor and audit the timely implementation of proper environmental management practices and mitigation measure of the Project. The observations and recommendations made during the reporting period are summarised in **Appendix K**.

### **Environmental Mitigation Measures**

- 3.27 Relevant mitigation measures as recommended in the project EIA report have been stipulated in the Project EM&A Manual for the Contractors to implement. A summary of the Environmental Mitigation Implementation Schedule (EMIS) is given in **Appendix J**.

**Status of Waste Management**

- 3.28 The amount of wastes generated by the major site activities of this Project during the reporting quarter is shown in **Appendix L**.

## 4 MONITORING RESULTS

### Monitoring Schedule

4.1 The environmental monitoring schedules in the reporting quarter are presented in **Appendix O**.

### Weather Conditions

4.2 The details of weather conditions for each individual monitoring session were presented in relevant monthly EM&A reports.

4.3 The weather conditions and wind data in the reporting quarter is summarised in **Appendix G**.

### Air Quality

#### *1-hour and 24-hour TSP Monitoring*

4.4 All construction air quality monitoring was conducted as scheduled during the reporting quarter.

4.5 No Action/Limit Level exceedance was recorded in this reporting quarter. A summary of exceedance is attached in **Appendix I**.

4.6 **Table 4.1** and **Table 4.2** summarise the air quality monitoring results which are extracted from the monthly reports for this Project. The graphical presentations of the air quality monitoring results are shown in **Appendix B** and **Appendix C**.

**Table 4.1 Summary of 1-hour TSP Monitoring Results in Reporting Quarter**

Reporting Months	Air Quality Monitoring Station	Average $\mu\text{g}/\text{m}^3$	Range $\mu\text{g}/\text{m}^3$	Action Level $\mu\text{g}/\text{m}^3$	Limit Level $\mu\text{g}/\text{m}^3$
Apr 2024	DMS – 1a	63.3	34.9 – 99.4	353	500
	DMS – 2B	79.9	39.8 – 138.8	370	
	DMS – 3	53.5	32.3 – 80.8	351	
	DMS – 4A	54.4	27.7 – 91.7	350	
May 2024	DMS – 1a	53.4	15.9 – 112.2	353	
	DMS – 2B	61.3	16.9 – 109.5	370	
	DMS – 3	43.3	13.5 – 77.5	351	
	DMS – 4A	45.7	15.8 – 79.7	350	
Jun 2024	DMS – 1a	41.1	18.1 – 74.5	353	
	DMS – 2B	45.1	30.5 – 64.0	370	
	DMS – 3	39.8	22.0 – 73.7	351	
	DMS – 4A	46.5	27.5 – 78.3	350	

**Table 4.2 Summary of 24-hour TSP Monitoring Results in Reporting Quarter**

Reporting Months	Monitoring Station	Average $\mu\text{g}/\text{m}^3$	Range $\mu\text{g}/\text{m}^3$	Action Level $\mu\text{g}/\text{m}^3$	Limit Level $\mu\text{g}/\text{m}^3$
Apr 2024	DMS – 1a	66.1	41.6 – 101.4	184	260
	DMS – 2B	73.8	58.9 – 97.5	166	
	DMS – 3	32.8	13.4 – 48.9	166	
	DMS – 4A	30.3	16.7 – 39.9	152	
May 2024	DMS – 1a	62.8	25.0 – 84.5	184	
	DMS – 2B	65.6	38.9 – 94.3	166	
	DMS – 3	37.0	24.8 – 48.2	166	
	DMS – 4A	20.9	13.4 – 25.5	152	

Reporting Months	Monitoring Station	Average $\mu\text{g}/\text{m}^3$	Range $\mu\text{g}/\text{m}^3$	Action Level $\mu\text{g}/\text{m}^3$	Limit Level $\mu\text{g}/\text{m}^3$
Jun 2024	DMS – 1a	53.0	36.0 – 102.2	184	
	DMS – 2B	49.5	36.5 – 79.0	166	
	DMS – 3	25.7	18.0 – 39.2	166	
	DMS – 4A	14.0	10.9 – 17.7	152	

### Construction Noise

- 4.7 All construction noise monitoring was conducted as scheduled in the reporting quarter.
- 4.8 No Action/Limit Level exceedance was recorded. A summary of exceedance is attached in **Appendix I**.
- 4.9 **Table 4.3** summarises the noise monitoring results which were extracted from the monthly reports for this Project. The graphical presentations of the construction noise monitoring results are shown in **Appendix D**.

**Table 4.3 Summary of Noise Monitoring Results in Reporting Quarter**

Reporting Months	Monitoring Station	Average $L_{\text{eq}} (30 \text{ min}), \text{dB(A)}$	Range $L_{\text{eq}} (30 \text{ min}), \text{dB(A)}$	Action Level	Limit Level, $\text{dB(A)}$
Apr 2024	NMS-1	60.8	55.2 – 65.2	When one documented complaint is received	75.0
	NMS-2	73.9	72.2 – 74.6		
	NMS-3	54.7	52.0 – 55.5		
	NMS-4A	54.6	52.7 – 56.0		
May 2024	NMS-1	63.4	57.2 – 67.8		
	NMS-2	72.6	69.8 – 74.3		
	NMS-3	58.1	57.0 – 59.1		
	NMS-4A	54.8	50.6 – 58.3		
Jun 2024	NMS-1	64.4	59.0 – 68.4		
	NMS-2	72.2	70.2 – 73.4		
	NMS-3	58.8	54.8 – 61.9		
	NMS-4A	58.2	53.4 – 62.2		

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.

### Water Quality

- 4.10 All water quality monitoring was conducted as scheduled in the reporting quarter.
- 4.11 No water quality monitoring was conducted at IS6 in the reporting quarter since the channel was dry. Water quality monitoring station, IS6 would be further reviewed and a proposal for any alternative monitoring location including justification will be submitted for approval from IEC and EPD.
- 4.12 No Action/Limit Level exceedance was recorded. Photo records were provided in relevant monthly EM&A reports. A summary of exceedance is attached in **Appendix I**.
- 4.13 **Table 4.4** summarises the water quality monitoring results which were extracted from the monthly reports for this Project. The graphical presentations of the water quality monitoring results are shown in **Appendix E**.

**Table 4.4 Summary of Water Quality Monitoring Results in Reporting Quarter**

Reporting Months	Monitoring Station	Average (Depth average)	Range	Action Level	Limit Level
DO (mg/L)					
Apr 2024	IS1	8.1	7.1 – 14.3	<u>7.0 / NA<sup>(4)</sup></u>	<u>6.8 or 4<sup>(4)</sup></u>
	IS2	6.4	5.4 – 11.6	<u>5.3 / NA<sup>(4)</sup></u>	<u>5.2 or 4<sup>(4)</sup></u>
	IS4	5.3	4.3 – 8.6	<u>4.1 / NA<sup>(4)</sup></u>	<u>3.8 or 4<sup>(4)</sup></u>
May 2024	IS1	6.7	4.2 – 9.8	<u>7.0 / NA<sup>(4)</sup></u>	<u>6.8 or 4<sup>(4)</sup></u>
	IS2	5.4	4.2 – 6.9	<u>5.3 / NA<sup>(4)</sup></u>	<u>5.2 or 4<sup>(4)</sup></u>
	IS4	4.7	4.2 – 5.0	<u>4.1 / NA<sup>(4)</sup></u>	<u>3.8 or 4<sup>(4)</sup></u>
Jun 2024	IS1	7.9	4.6 – 11.1	<u>7.0 / NA<sup>(4)</sup></u>	<u>6.8 or 4<sup>(4)</sup></u>
	IS2	5.7	4.2 – 8.2	<u>5.3 / NA<sup>(4)</sup></u>	<u>5.2 or 4<sup>(4)</sup></u>
	IS4	5.0	4.1 – 7.4	<u>4.1 / NA<sup>(4)</sup></u>	<u>3.8 or 4<sup>(4)</sup></u>
Turbidity (NTU)					
Apr 2024	IS1	14.3	5.9 – 25.4	<u>27.7</u>	<u>29.9</u>
	IS2	28.5	14.3 – 34.2	<u>35.5</u>	<u>38.1</u>
	IS4	23.7	8.3 – 55.0	<u>70.9</u>	<u>74.6</u>
May 2024	IS1	14.9	8.2 – 24.1	<u>27.7</u>	<u>29.9</u>
	IS2	25.3	15.3 – 32.3	<u>35.5</u>	<u>38.1</u>
	IS4	8.4	4.9 – 20.0	<u>70.9</u>	<u>74.6</u>
Jun 2024	IS1	12.6	4.5 – 26.7	<u>27.7</u>	<u>29.9</u>
	IS2	25.7	16.2 – 32.5	<u>35.5</u>	<u>38.1</u>
	IS4	6.3	3.0 – 15.3	<u>70.9</u>	<u>74.6</u>
SS (mg/L)					
Apr 2024	IS1	14.9	8.5 – 24.5	<u>28.0</u>	<u>28.8</u>
	IS2	25.9	15.0 – 35.0	<u>39.8</u>	<u>41.2</u>
	IS4	20.1	5.5 – 49.5	<u>155</u>	<u>175</u>
May 2024	IS1	17.5	8.5 – 27.0	<u>28.0</u>	<u>28.8</u>
	IS2	26.4	17.5 – 37.5	<u>39.8</u>	<u>41.2</u>
	IS4	9.4	4.0 – 46.0	<u>155</u>	<u>175</u>
Jun 2024	IS1	13.5	4.5 – 26.0	<u>28.0</u>	<u>28.8</u>
	IS2	24.6	15.5 – 31.0	<u>39.8</u>	<u>41.2</u>
	IS4	6.3	3.0 – 12.0	<u>155</u>	<u>175</u>

Notes:

- (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 than 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<sup>th</sup> Dec 2019.

## Ecological Monitoring

### *LMC Loop*

#### *Avifauna (Flight Line Survey)*

4.14 Monthly flight line survey was conducted by ET as scheduled in the reporting quarter. The flight line survey was carried out on 26<sup>th</sup> April 2024, 24<sup>th</sup> May 2024 and 21<sup>st</sup> June 2024.

4.15 **Table 4.5** shows the summary of flight line survey results including the number of birds observed and the number of bird-flights for the species in the reporting quarter.

**Table 4.5 Summary of Flight Line Survey Results in the Reporting Quarter**

Species	Apr 2024		May 2024		Jun 2023	
	Birds Observed	Bird-flights	Birds Observed	Bird-flights	Birds Observed	Bird-flights
Little Egret 小白鷺	5	50	22	179	14	128
Great Egret 大白鷺	67	624	76	721	50	456
Chinese Pond Heron 池鷺	7	43	11	66	2	13
Grey Heron 蒼鷺	1	4	-	-	9	79
Great Cormorant 普通鸕鶿	3	27	-	-	-	-
Cattle Egret 牛背鷺	-	-	1	10	-	-
Collared Crow 白頸鴉	-	-	1	10	-	-
Black Kite 黑鳶	-	-	-	-	1	10
<b>Total</b>	83	748	111	986	76	686

4.16 In the reporting quarter, flight lines recorded were in general concentrated mainly on LMC Meander and adjacent areas including Ecological Area Zone (EA Zone). It demonstrates that the large waterbirds prefer using the flight line corridor above the LMC Meander and EA Zone.

4.17 The distribution of flight line usage in the reporting quarter is shown in **Appendix F**.

#### *Mammals*

4.18 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.

4.19 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*

##### *Avifauna (Flight Line Survey)*

4.20 Refer to Sections 4.14 to 4.17.

##### *Avifauna (Pond 12)*

4.21 Pond 12 avifauna surveys were carried out weekly as scheduled in the reporting quarter. The date of avifauna survey was shown in **Table 4.6**.

**Table 4.6 The Date of Avifauna Survey in the Reporting Quarter**

Month	Dates of Pond 12 Avifauna Survey
Apr 2024	2 <sup>nd</sup> , 9 <sup>th</sup> , 15 <sup>th</sup> , 25 <sup>th</sup> and 29 <sup>th</sup>
May 2024	7 <sup>th</sup> , 13 <sup>th</sup> , 21 <sup>st</sup> and 28 <sup>th</sup>
Jun 2024	6 <sup>th</sup> , 11 <sup>th</sup> , 18 <sup>th</sup> and 25 <sup>th</sup>

- 4.22 **Table 4.7** shows the monitoring results during construction works as compared against the results before the commencement of works of the day. The monitoring results indicated Pond 12 was utilized by waterbird and wetland-dependent species in the reporting quarter during the monitoring. No significant impact of construction activities on bird use of the pond was observed.

**Table 4.7 Summary of Avifauna Monitoring Results at Pond 12**

Report Month	Number of Species		Abundance	
	Before Construction	During Construction	Before Construction	During Construction
Apr 2024	22	30	79	147
May 2024	18	30	71	132
Jun 2024	14	21	59	133

#### *Herpetofauna*

- 4.23 Herpetofauna survey was conducted as scheduled on 23<sup>rd</sup> April 2024, 28<sup>th</sup> May 2024 and 12<sup>th</sup> June 2024. No potential impact due to the construction activities of Western Connection Road was identified during the survey of Chinese Bullfrog in the reporting quarter. It was observed that the shallow agricultural ponds where Chinese Bullfrog was recorded have been altered into relatively dry agricultural lands, which may have an effect on the local Chinese Bullfrog population.

#### *Aquatic Fauna*

- 4.24 Aquatic fauna survey was conducted as scheduled in the reporting quarter. The monthly aquatic fauna survey was carried out on 10<sup>th</sup> April 2024, 22<sup>nd</sup> May 2024 and 6<sup>th</sup> June 2024 while *in-situ* water monitoring for aquatic fauna at the stream and associated ponds south of Lok Ma Chau Road was shown in **Table 4.8**.

**Table 4.8 Date of Water Quality Monitoring for Aquatic Fauna in the Reporting Quarter**

Month	Dates of Water Quality Monitoring at the Stream and Associated Ponds South of Lung Hau Road
Apr 2024	2 <sup>nd</sup> , 10 <sup>th</sup> , 19 <sup>th</sup> , 23 <sup>rd</sup> and 29 <sup>th</sup>
May 2024	8 <sup>th</sup> , 14 <sup>th</sup> , 22 <sup>nd</sup> and 28 <sup>th</sup>
Jun 2024	6 <sup>th</sup> , 12 <sup>th</sup> , 19 <sup>th</sup> and 28 <sup>th</sup>

- 4.25 No Action / Limit Level exceedance was recorded for the *in-situ* water quality monitoring in the report quarter.
- 4.26 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 quarter. In addition, no deterioration in the water quality due to the construction activities of the Western Connection Road was observed.



- 4.27 During the monitoring on 23<sup>rd</sup> April 2024, adverse water quality at S3 and S4 were observed due to the rainfall lead to the erosion from natural habitat along the stream. Therefore, relative higher turbidity results were recorded. In addition, during the monitoring on 19<sup>th</sup> and 29<sup>th</sup> June 2024, muddy water was observed at S2, S3 and S4 which is also considered due to the rainfall lead to the erosion from natural habitat along the stream. Therefore, relative higher turbidity results were also recorded.
- 4.28 Relevant Monthly EM&A Reports could be referred to for the ecological monitoring photo records and results.

## 5 ENVIRONMENTAL SITE INSPECTION

### Site Audits

- 5.1 Site audits were carried out by ET on weekly basis in the reporting quarter to monitor the timely implementation of proper environmental management practices and mitigation measures on the project site. No non-conformance was identified and the observation and recommendations made in each individual site audit session in the reporting period are summarised in **Appendix K**.

### Implementation Status of Environmental Mitigation Measures

- 5.2 According to the EIA Report, Environmental Permit and the EM&A Manual of the Project, 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 (EMIS) is provided in **Appendix J**.

### Solid and Liquid Waste Management Status

- 5.3 In accordance with the EM&A Manual, waste management was audited during weekly site audit to determine if wastes are being managed in accordance with the Waste Management Plan (WMP) prepared for the Project and the relevant legislative and contractual requirements. Waste management practice including waste handling, storage, transportation and disposal were audited.
- 5.4 The Contractors are advised to minimize the wastes generated through the recycling or reusing. All mitigation measures stipulated in the EM&A Manual and waste management plans shall be fully implemented. The status of implementation of waste management and reduction measures are summarised in **Appendix J**.
- 5.5 Waste generated from this Project includes inert C&D materials and non-inert C&D materials. Non-inert C&D materials are made up of general refuse and waste that cannot be reused or recycled and has to be disposed of at the designated landfill sites. The amount of wastes generated by the construction works of the Project during the reporting quarter is shown in **Appendix L**.

## **6 NON-COMPLIANCE (EXCEEDANCES) OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS (ACTION AND LIMIT LEVELS)**

### **Summary of Exceedances**

- 6.1 Environmental monitoring works were performed in the reporting quarter and all monitoring results were checked and reviewed. A summary of exceedance is attached in **Appendix I**.
- 6.2 No exceedance of Action/Limit Level of air quality, construction noise and water quality was recorded in the reporting quarter.

### **Summary of Environmental Non-Compliance**

- 6.3 No environmental non-compliance was recorded in the reporting quarter. The observations and recommendations made in each individual site audit session were presented in **Appendix K**.

### **Summary of Environmental Complaint**

- 6.4 Two environmental complaints related to water quality were received in the reporting quarter. The Cumulative Complaint Log since the commencement of the Project is attached in **Appendix M**.

### **Summary of Environmental Summon and Successful Prosecution**

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

### **Event and Action Plan**

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

## 7 FUTURE KEY ISSUES

### Key Issues in the Coming Three Months

7.1 The major construction activities undertaken in the coming three 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) WCR Retaining Wall and Slope Work
- (b) WCR Drainage Work and Fresh Watermains
- (c) Drainage Works and Roadworks
- (d) Meander Bridge South and Middle Spans Construction
- (e) HWT Pai Lau Finishing Works
- (f) Box Culvert A1 Outfall Portion Construction
- (g) Wetland Fence Construction
- (h) PT1 drainage works

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

Reedbed Cell No. 3A

- (a) Monthly monitoring of the polishing function of the Reedbed Cell No. 3A

Direct Road Link (DRL)

- (b) Temporary works.
- (c) Bored Pile works.
- (d) Sheet piling works.
- (e) ELS works.
- (f) Segment precast.
- (g) Pier construction.
- (h) Construction of pile cap.
- (i) Pre-drill works.
- (j) Construction of Base Slab.
- (k) Pierhead segment erection.

Lok Ma Chau (LMC) Road

- (l) Sheet-piling works.
- (m) Drainage works.
- (n) Bored piling works.
- (o) Water main installation.
- (p) Pile cap construction.
- (q) Nullah modification works
- (r) Site formation.
- (s) Underground utilities works.
- (t) Construction of noise barrier.
- (u) Construction of box culvert.

- (v) Construction of retaining wall.
- (w) Construction of concrete structure.
- (x) Carpark traffic diversion works.

#### Fanling Highway

- (y) Construction of retaining wall.
- (z) Pier construction.
- (aa) Installation of pierhead segment.
- (bb) Backfilling works for retaining wall.
- (cc) Sheet-piling works for retaining wall.
- (dd) Full span erection.
- (ee) Fabrication of precast segment.
- (ff) Installation of parapet at retaining wall.
- (gg) Construction of subway.

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

- (a) LMC Station Structural Steel Materials Delivery
- (b) LMC Station Strengthening Works
- (c) ELS Works and Pile Caps & Tie Beam Construction at Elevated PTI and Double deck Footbridge
- (d) Elevated PTI Superstructure Construction

7.2 Potential environmental impacts arising from the above construction activities are mainly associated with construction dust, noise, water quality, waste management and ecology. Relevant Monthly EM&A Reports could be referred to for the proactive Environmental Protection Proforma summarising the major site activities, potential environmental impacts and recommended mitigation measures for the coming months.

#### **Monitoring Schedule**

7.3 The environmental monitoring schedules for the next reporting quarter are presented in **Appendix O**.

## 8 CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

- 8.1 This Quarterly EM&A Report presents the EM&A work undertaken in April to June 2024 in accordance with EM&A Manual.
- 8.2 Environmental monitoring and audit works were performed in the reporting quarter and all monitoring results were checked and reviewed.

#### Air Quality Monitoring

- 8.3 All construction air quality monitoring including 1-hour TSP and 24-hour TSP monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded.

#### Construction Noise Monitoring

- 8.4 All construction noise monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded.

#### Water Quality Monitoring

- 8.5 All water quality monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded.

#### LMC Loop

##### *Avifauna (Flight Line Survey)*

- 8.6 Avifauna monitoring was conducted as scheduled in the reporting quarter. Flight lines recorded were in general concentrated mainly on LMC Meander and adjacent areas including Ecological Area Zone (EA Zone). It demonstrates that the large waterbirds prefer using the flight line corridor above the LMC Meander and EA Zone.

##### *Mammals*

- 8.7 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.
- 8.8 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 quarter and will be resumed subject to the site condition.

#### Western Connection Road

##### *Avifauna (Flight Line Survey)*

- 8.9 Avifauna monitoring was conducted as scheduled in the reporting quarter. Flight lines recorded were in general concentrated mainly on LMC Meander and adjacent areas including Ecological Area Zone (EA Zone). It demonstrates that the large waterbirds prefer using the flight line corridor above the LMC Meander and EA Zone.

*Avifauna (Pond 12)*

- 8.10 Avifauna survey at Pond 12 was conducted as scheduled in the reporting quarter. No significant impact of construction activities on bird use of the pond was observed.

*Herptofauna*

- 8.11 Herptofauna survey was conducted as scheduled in the reporting quarter. It was observed that the shallow agricultural ponds where Chinese Bullfrog was recorded have been altered into relatively dry agricultural lands, which may have an effect on the local Chinese Bullfrog population.

*Aquatic fauna*

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

Land Contamination

- 8.13 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.
- 8.14 No work related to land contamination was conducted in the reporting quarter.

Environmental Site inspections

- 8.15 Environmental site inspections were conducted as weekly basis in the reporting quarter. No environmental non-compliance was recorded.

Environmental Complaint and Successful Prosecution

- 8.16 Two environmental complaints related to water quality respectively were received in the reporting quarter.
- 8.17 No notification of summons or successful prosecutions related to environmental was received in the reporting quarter.

**Recommendations**

- 8.18 The mitigation measures recommended in the EIA report and EM&A Manual are considered effective and efficient in minimizing environmental impacts due to construction of the Project during the reporting quarter. The EM&A programme implemented by the ET has effectively monitored the environmental impacts arising from the construction activities and ensure the proper implementation of mitigation measures.
- 8.19 The effectiveness and efficiency of the EM&A programme will be continuously reviewed. The EM&A programme will be improved if deficiencies of the existing EM&A programme are identified.
- 8.20 According to the environmental audits performed in the reporting quarter, the following

recommendations were provided to remediate any potential impacts due to the Project:

#### *Air Quality Impact*

- To provide the dust suppression measures such as water spraying on all haul roads, exposed work site areas and dust generation works;
- To provide and maintain impervious materials to cover the stockpiles of dusty materials or erecting dust screen for the work site near public road;
- To design, establish and properly use the wheel washing facilities at the site exits;
- To pave the site exits / entrances;
- To keep maintain machinery to prevent emission of black smoke; and
- To inspect NRMM labels which should be displayed for all regulated machines.

#### *Construction 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; and
- To provide and maintain properly temporary noise barriers or other appropriate sound reduction measures for operations of noisy equipment near the noise sensitive receivers, if necessary.

#### *Water Impact*

- To properly deploy and check regularly the silt curtain, ensure the works area are completely surrounded, and prevent any surface runoff discharge into the old Shenzhen River meander or stream;
- To establish, review and implement temporary drainage system and ensure waste water was trapped and collected;
- To identify any wastewater discharges from site;
- To provide maintenance on any leaking hoses to prevent water leakage;
- To divert all the water generated from construction site to de-silting facilities with enough handling capacity before discharge;
- To provide and enhance the protection and bunding around the storage area for excavated materials;
- To review the capacity of de-silting facilities for discharge and update maintenance records of wastewater treatment facilities;
- To ensure the drainage facilities are probably protected and maintained;
- To maintain the cover for 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 ensure vehicles leaving the site are free from debris of dirt;
- To implement the effective water quality mitigation measures according to the site drainage plan, and review the site drainage plan measures as appropriate; and
- To regularly clear any floating vegetation at the meander to ensure a good flow of water, and floating rubbish within the silt curtain to avoid rubbish accumulation.



*Ecology Impact*

- To maintain properly the 3m high olive-green fence around the construction site and along the works of meander bridge;
- 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;
- To prevent any surface runoff discharge into the stream, further enhance and secure the existing mitigation measures so as to prevent debris and runoff from discharging into nearby nullah; and
- The animal tunnel / passage should be free of obstruction and maintained to enhance its effectiveness.

*Waste/Chemical Management*

- To check for any accumulation of waste materials or rubbish on site and remove them promptly;
- To provide appropriate receptacles to ensure proper disposal of wastes on site;
- To avoid disposal of construction waste into the stream;
- 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 equipment and the site;
- To clear any old spillage in the site area;
- To maintain the drip tray well and/or provide tarpaulin sheet properly for equipment to prevent oil and chemical leakage;
- To avoid improper handling, storage and dispose of oil drums or chemical containers on site.

*Landscape and Visual*

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

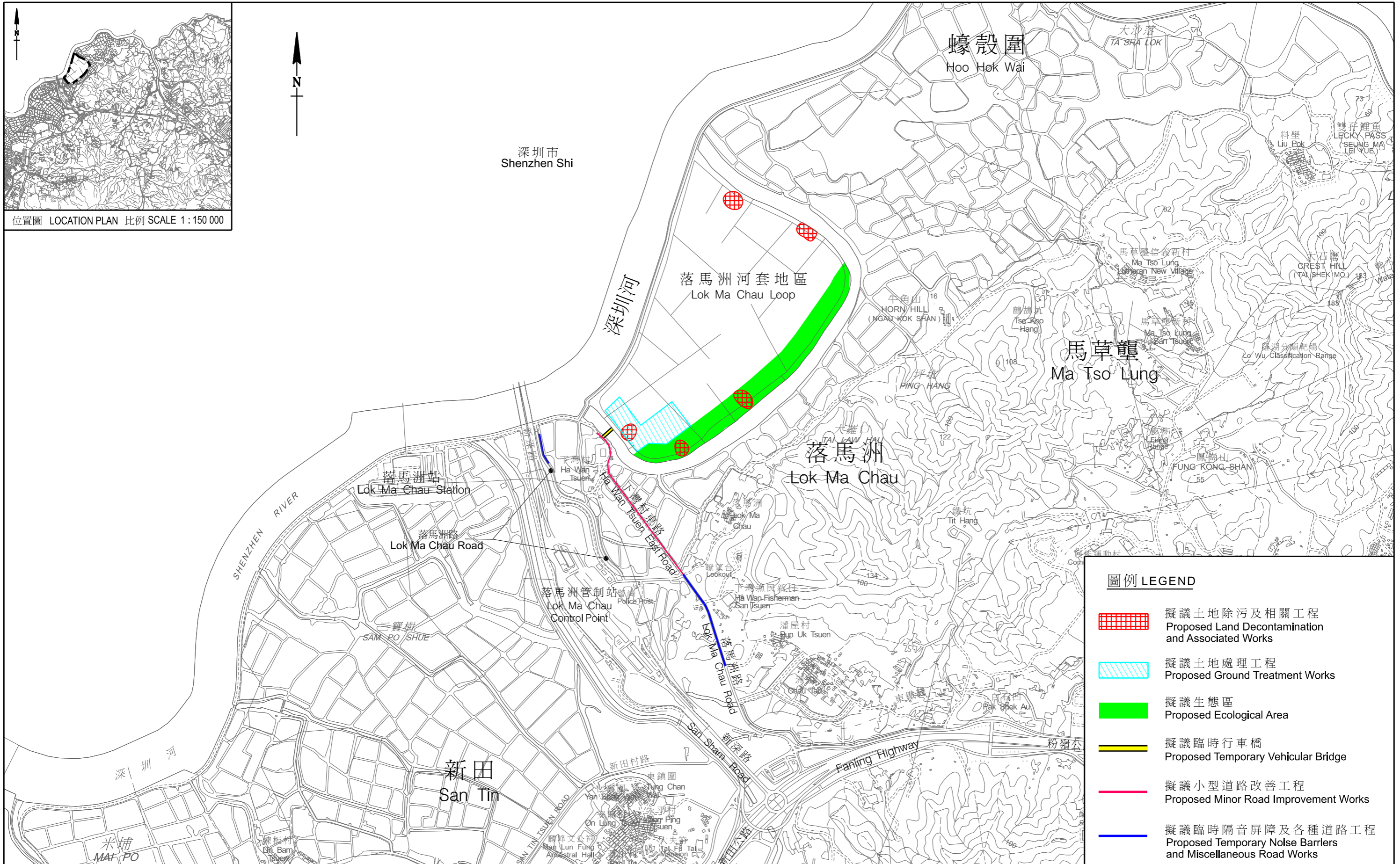
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**FIGURE(S)**

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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

ISO A1 594mm x 841mm  
 Approved:  
 Checked:  
 Designer:  
 Project Management Initials:  
 5/12/2020  
 PATH \PROJECTS\0508085\DRAWING\SKETCH\SK0099.dgn  
 This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and disclaims any liability whatsoever, for any error, omission or delay in this drawing without AECOM's express written consent. All measurements must be obtained from the stated dimensions.

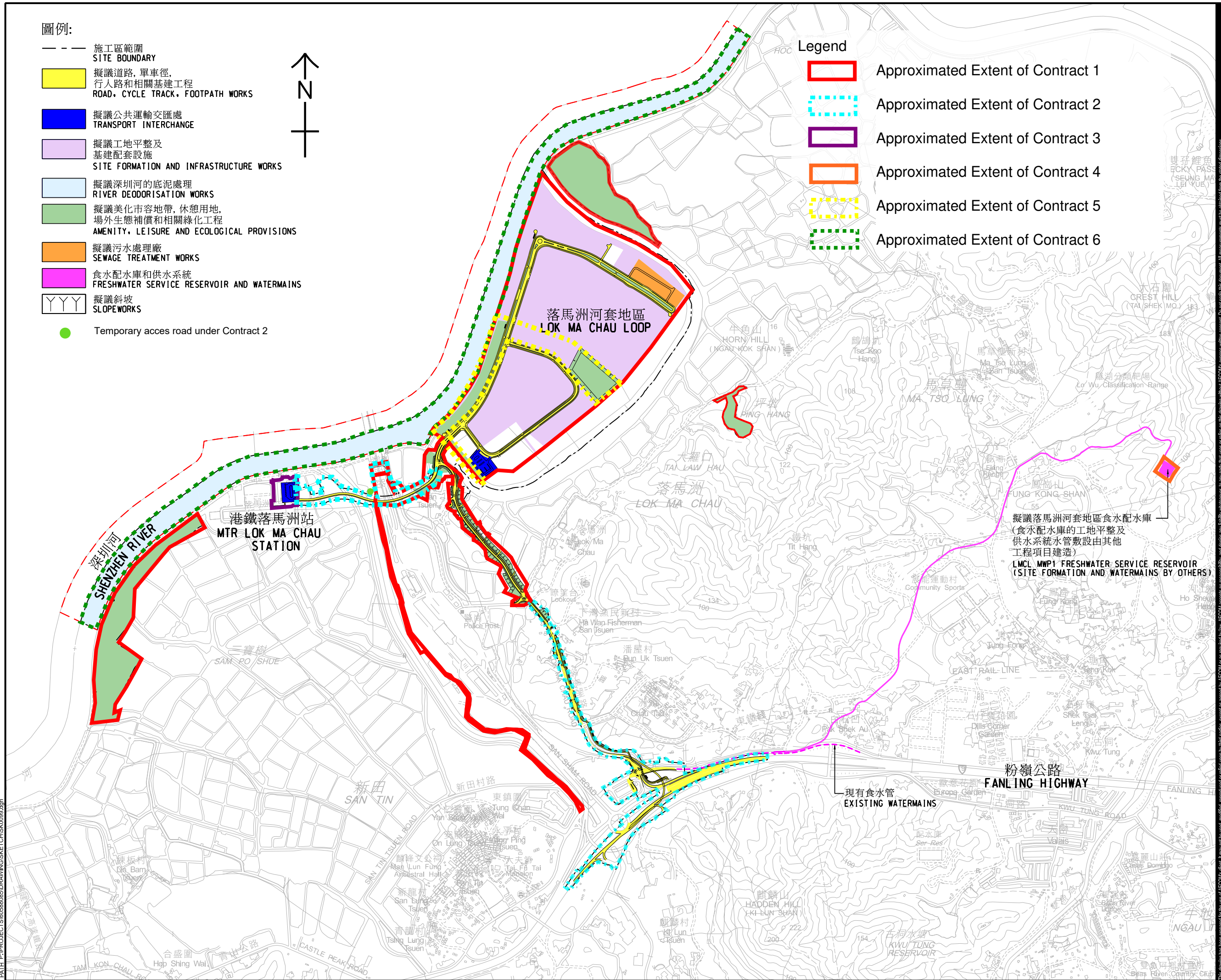
**圖例:**

- 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
- YYY 擬議斜坡  
SLOPEWORKS
- Temporary access road under Contract 2



**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



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

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

**CONSULTANT**  
 AECOM Asia Company Ltd.  
 www.aecom.com

**SUB-CONSULTANTS**  
 分列工程師有限公司

**ISSUE/REVISION**

No.	DATE	DESCRIPTION	CHK.

**STATUS**

**SCALE                      DIMENSION UNIT**

A1 1: 8000                      METRES

**KEY PLAN**

**PROJECT NO.**                      **CONTRACT NO.**  
 60588085                              CE 5/2018(CE)

**SHEET TITLE**  
 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**  
 60588085/SK0099

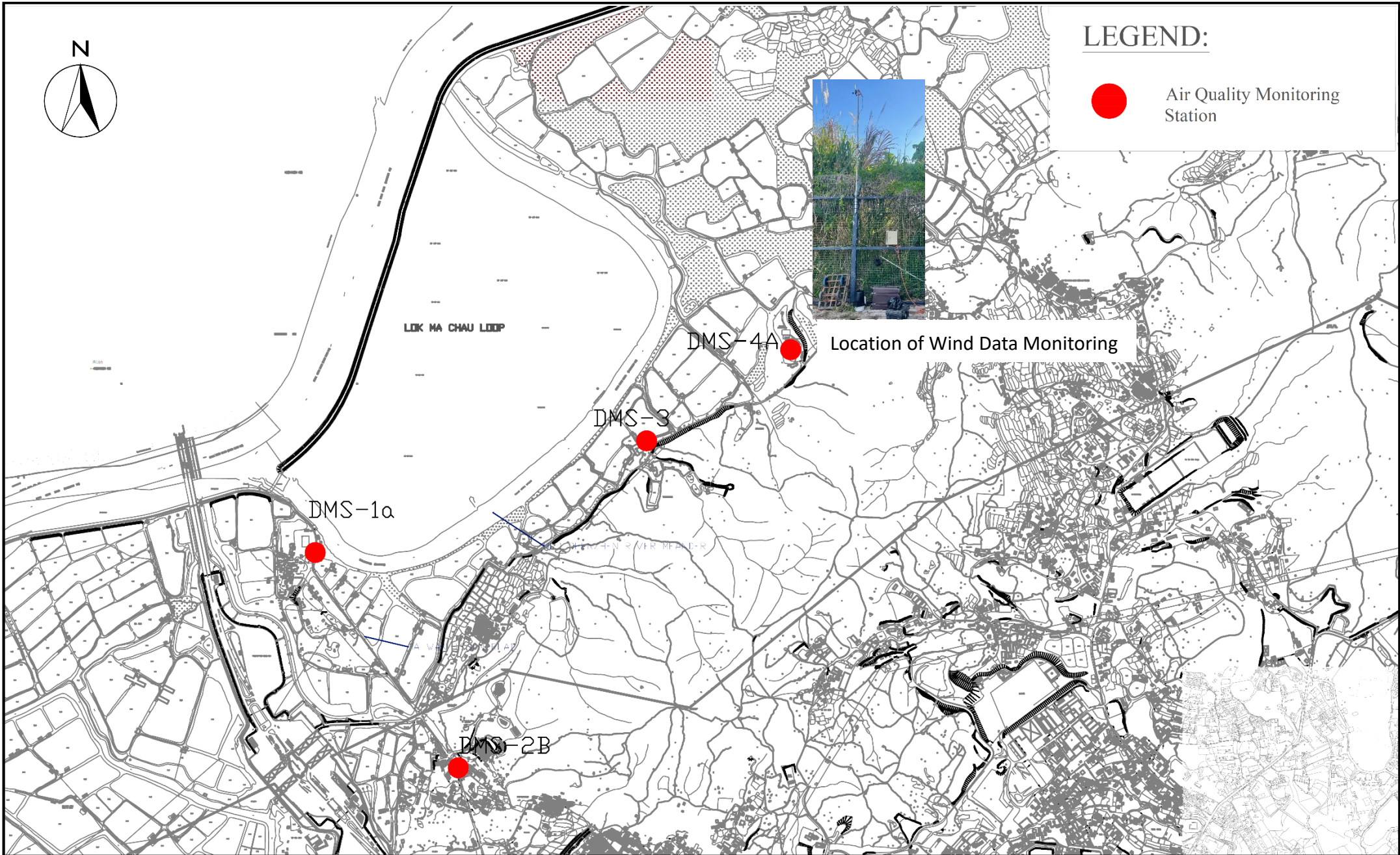


**LEGEND:**

 Air Quality Monitoring Station



Location of Wind Data Monitoring

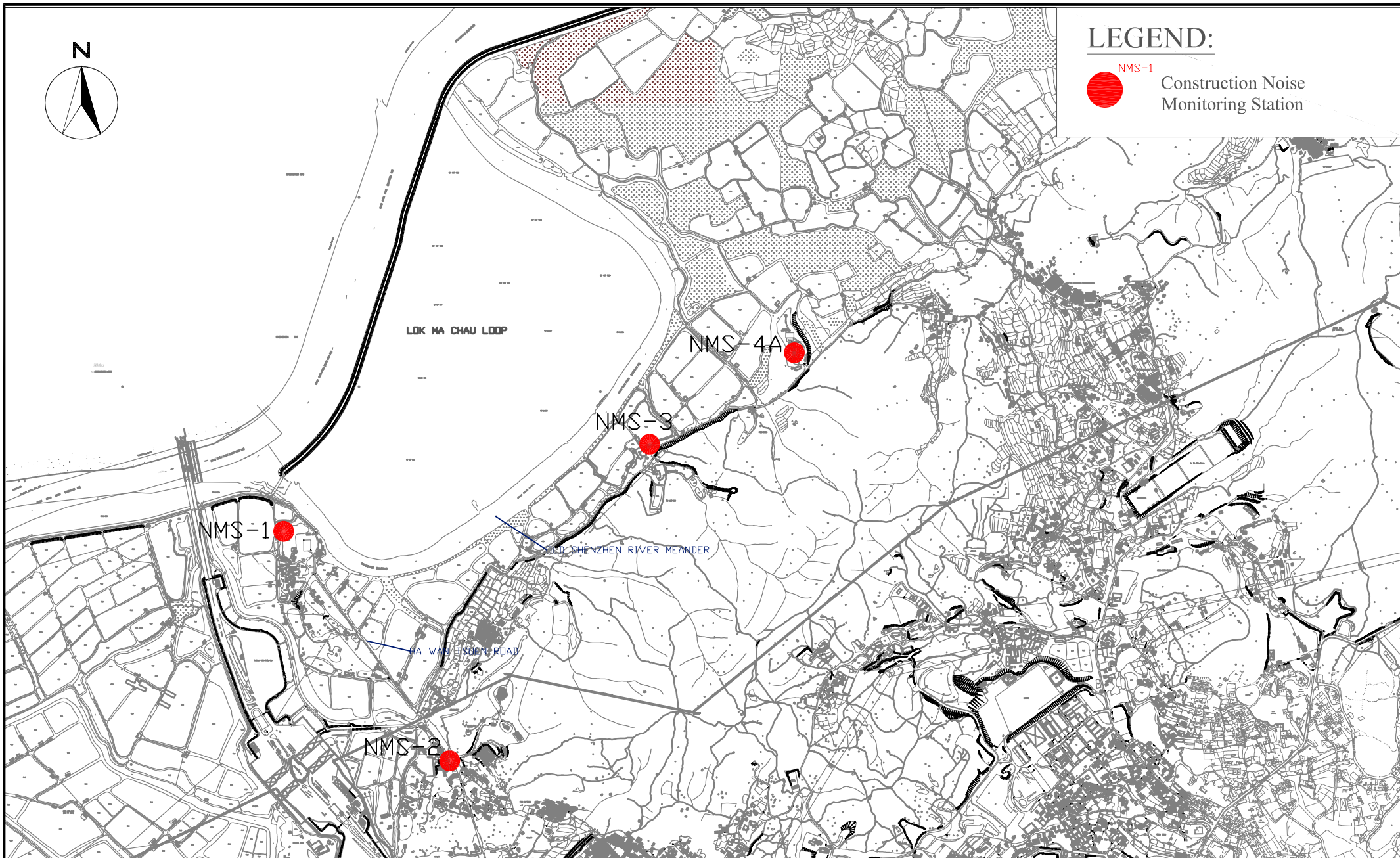


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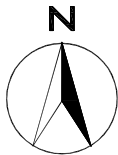


**LEGEND:**

NMS-1  
 Construction Noise Monitoring Station

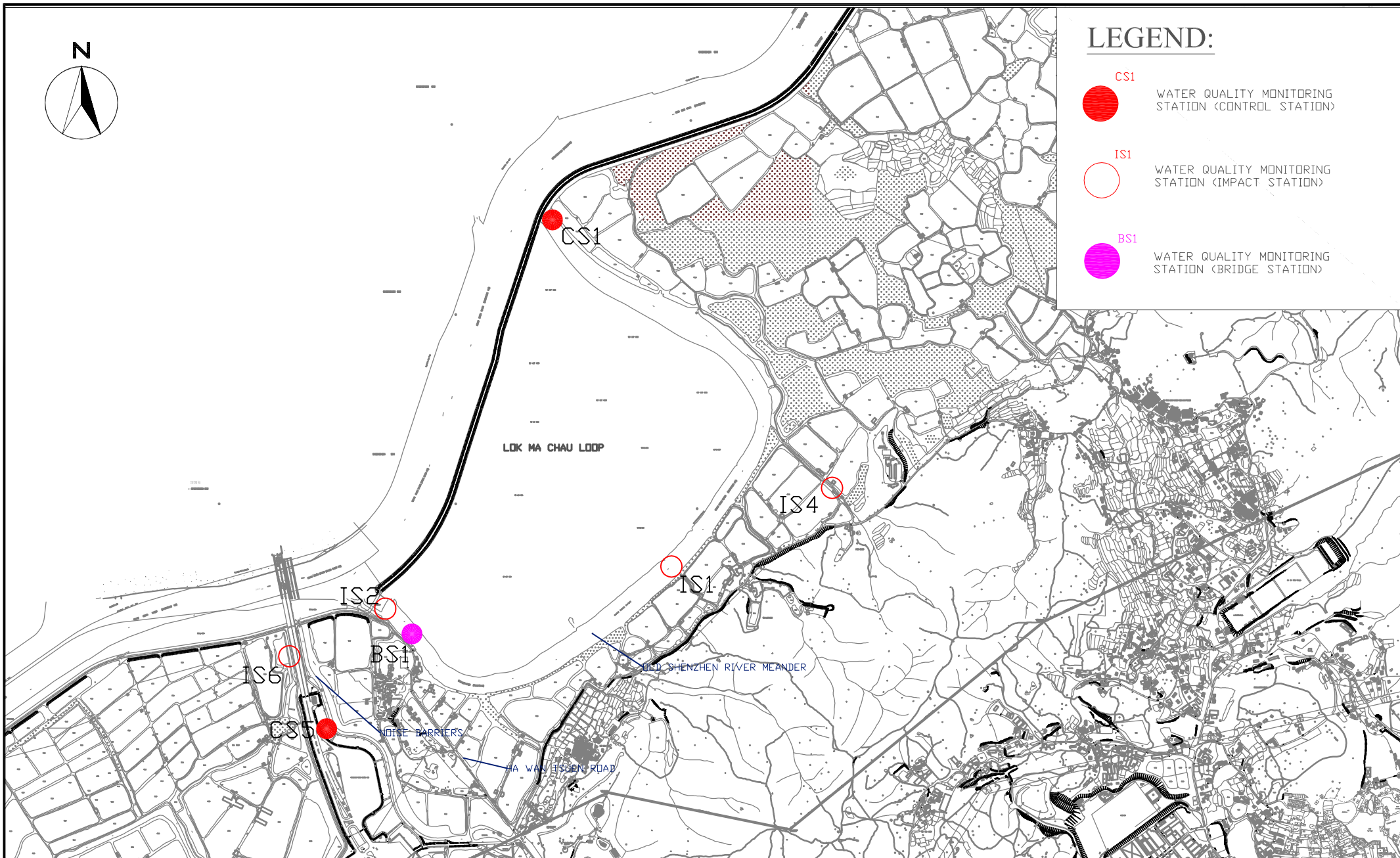


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CHECK	PC	DRAWN	IT
JOB No.	WMA 21009	FIGURE NO.	Fig 3
		REV	-

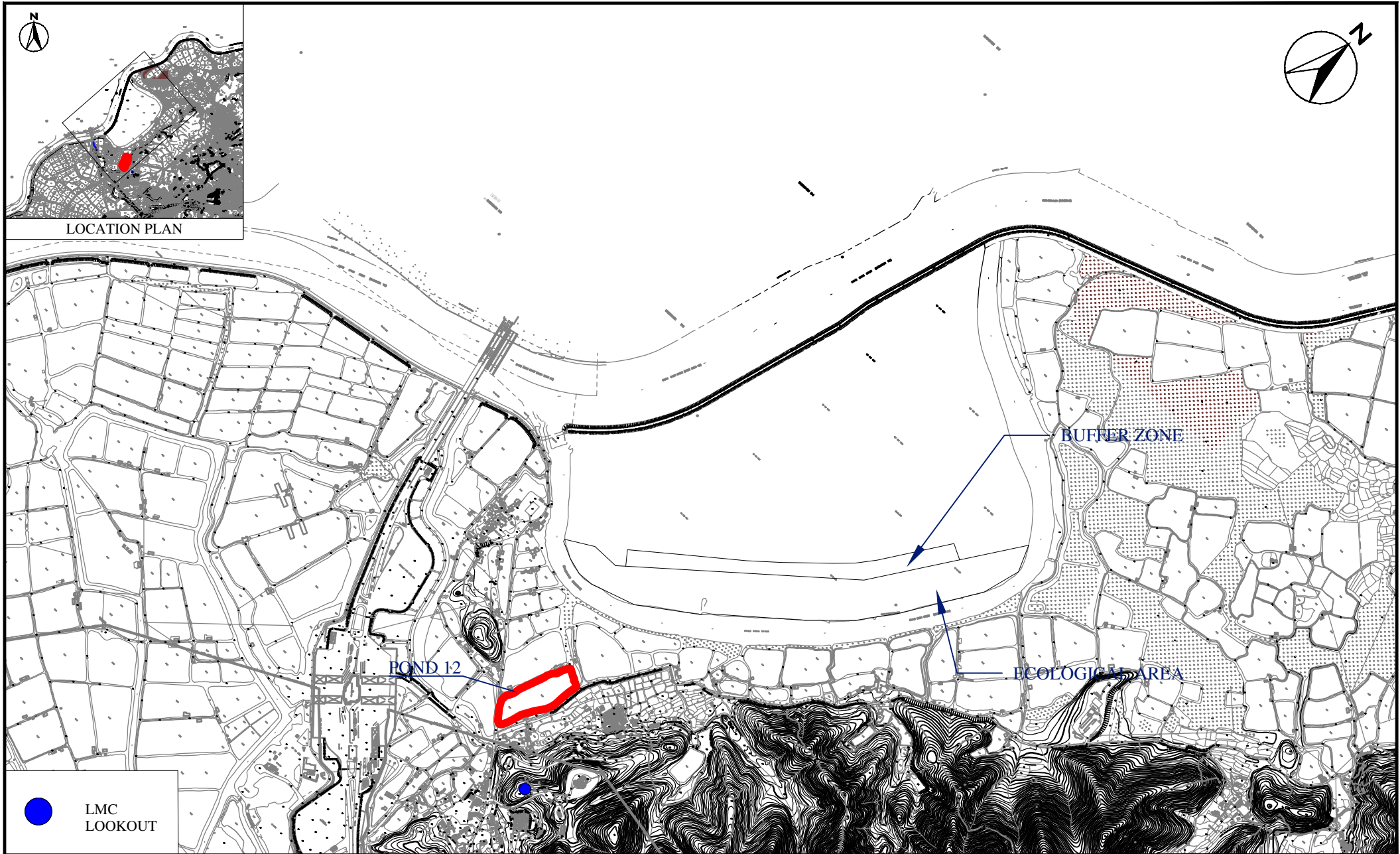


### LEGEND:

- CS1 WATER QUALITY MONITORING STATION (CONTROL STATION)
- IS1 WATER QUALITY MONITORING STATION (IMPACT STATION)
- BS1 WATER QUALITY MONITORING STATION (BRIDGE STATION)

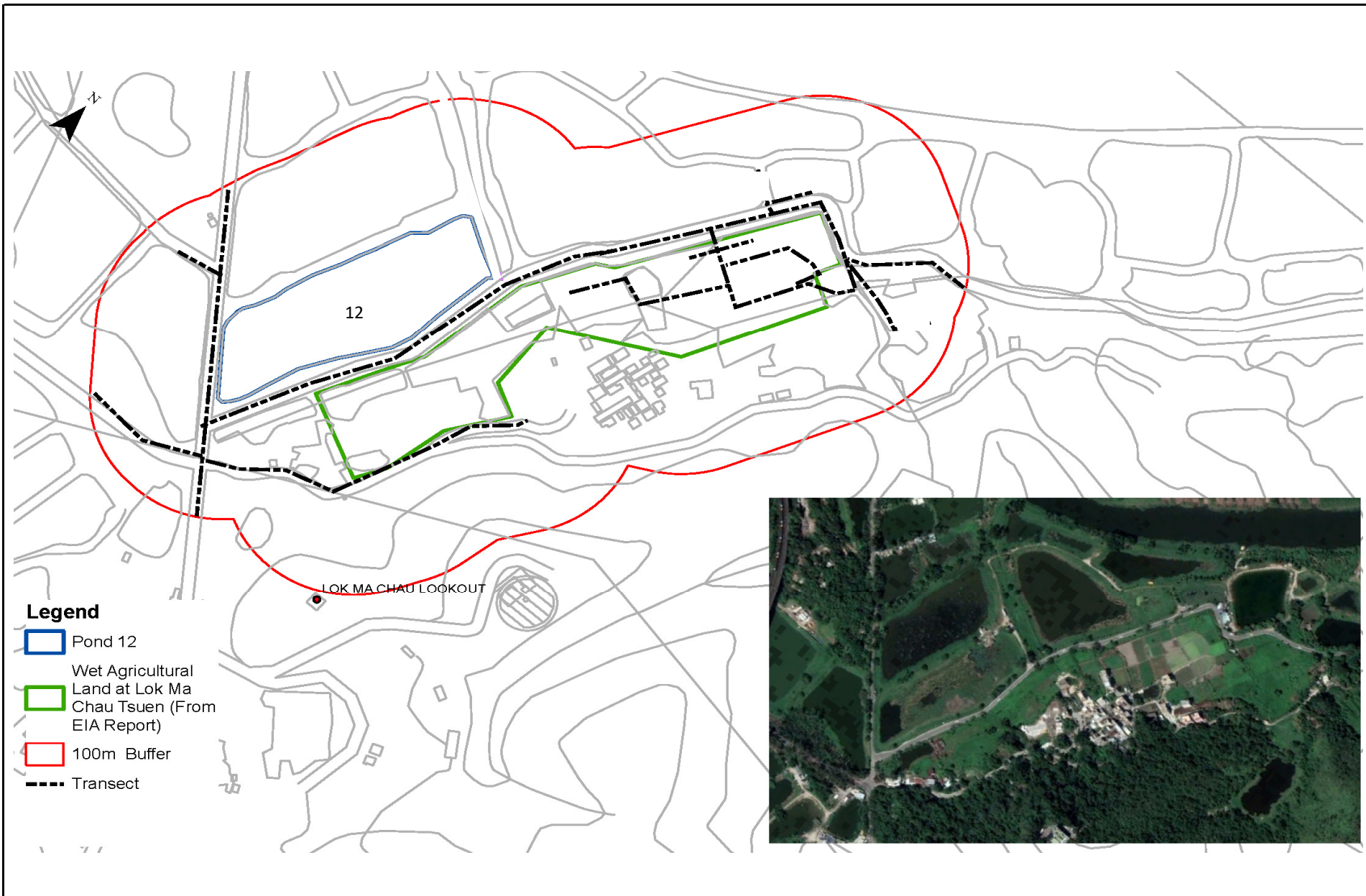


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CHECK	PC	DRAWN	IT
JOB No.	WMA 21009	FIGURE NO.	Fig 4
		REV	-



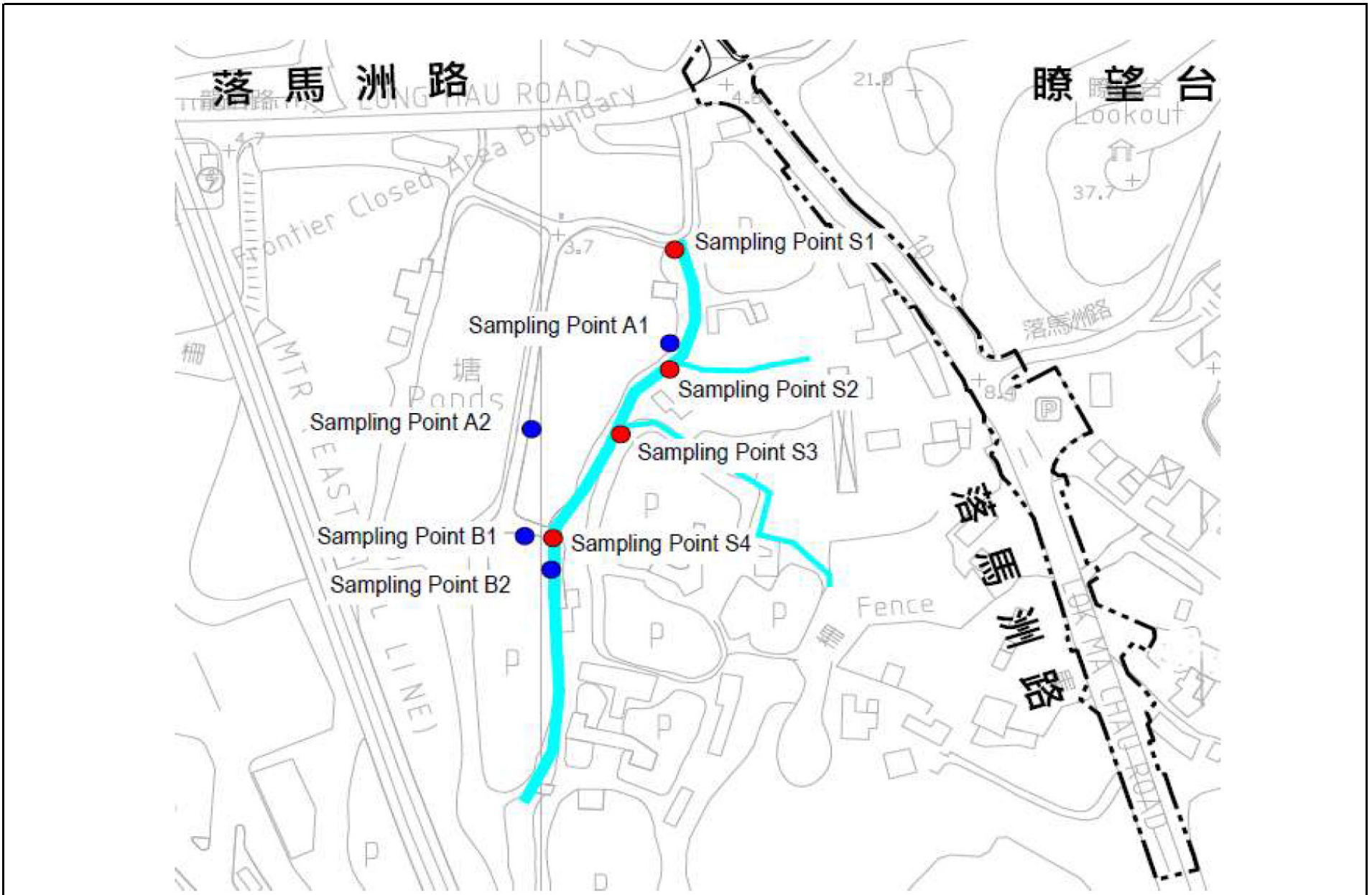
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CHECK	IT	DRAWN	ML
JOB No.	WMA 21009	FIGURE NO.	Fig 5a
		REV	-





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



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	
Date	Mar-22	Figure	5c	

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**APPENDIX A  
ACTION AND LIMIT LEVELS**

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## Appendix A - Action and Limit Levels

**Table A-1 Action and Limit Levels for 1-Hour TSP**

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
DMS – 1a	353	500
DMS – 2A	370	
DMS – 3	351	
DMS – 4A	350	

**Table A-2 Action and Limit Levels for 24-Hour TSP**

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
DMS – 1	184	260
DMS – 2A	166	
DMS – 3	166	
DMS – 4A	152	

**Table A-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 A-4 Action and Limit Levels for Water Quality**

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

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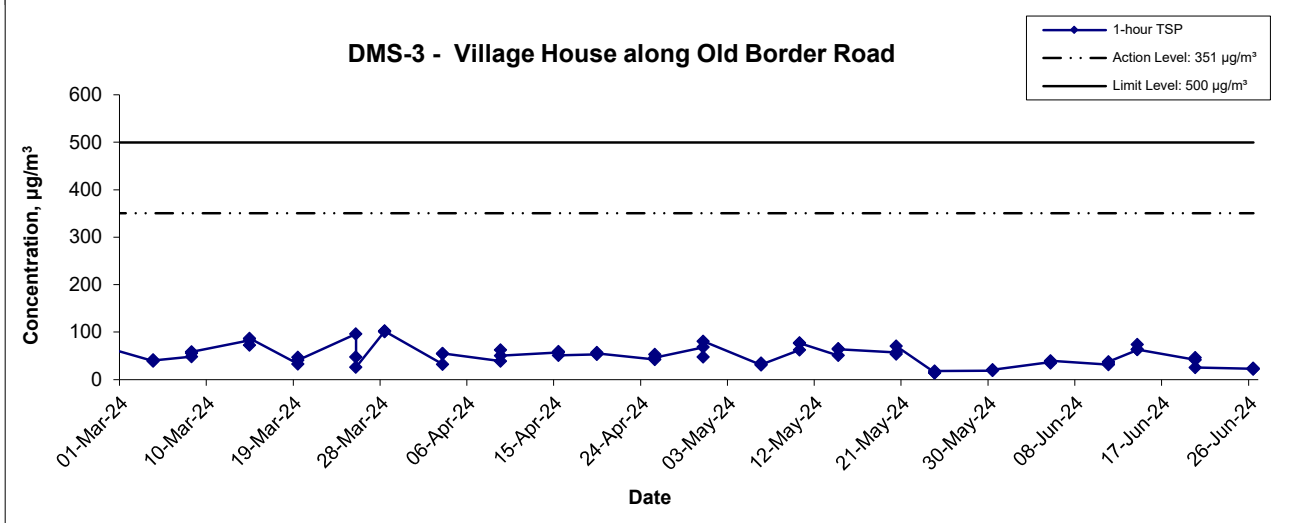
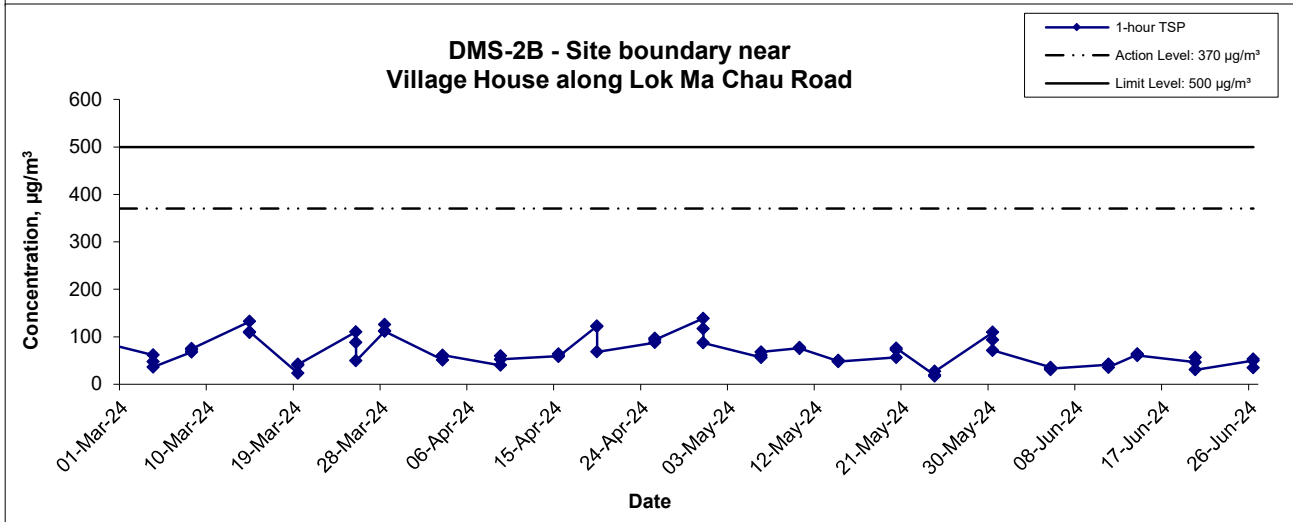
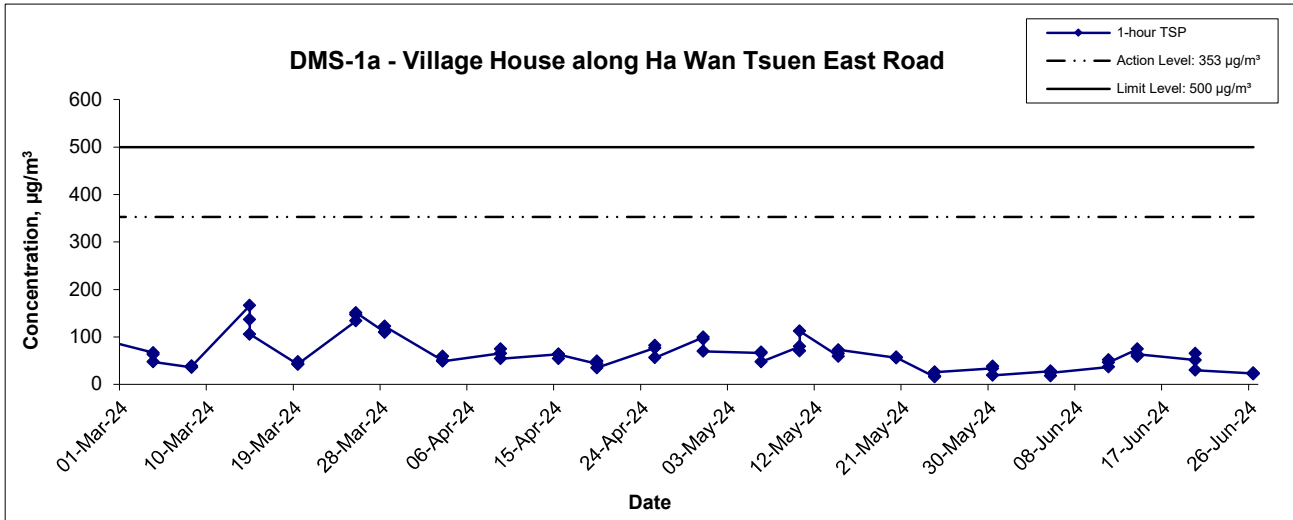
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**APPENDIX B  
GRAPHICAL PRESENTATION OF 1-  
HOUR TSP MONITORING RESULTS**

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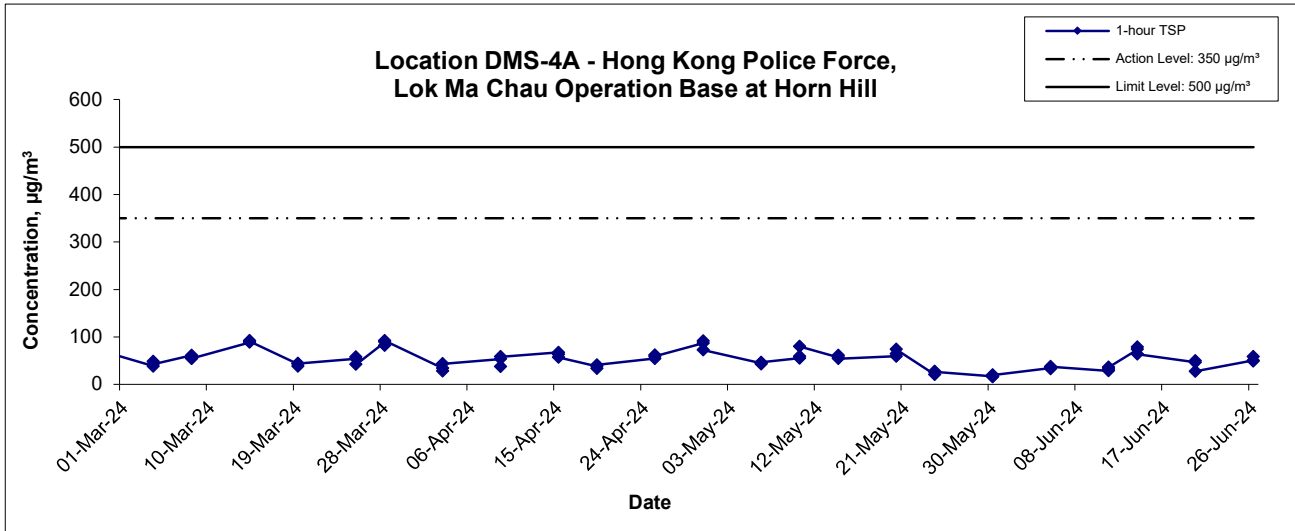
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## 1-hour TSP Concentration Levels



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	consulting . testing . research
	Date	Jun 24	Appendix	B	

# 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	
	Date Jun 24	Appendix B	



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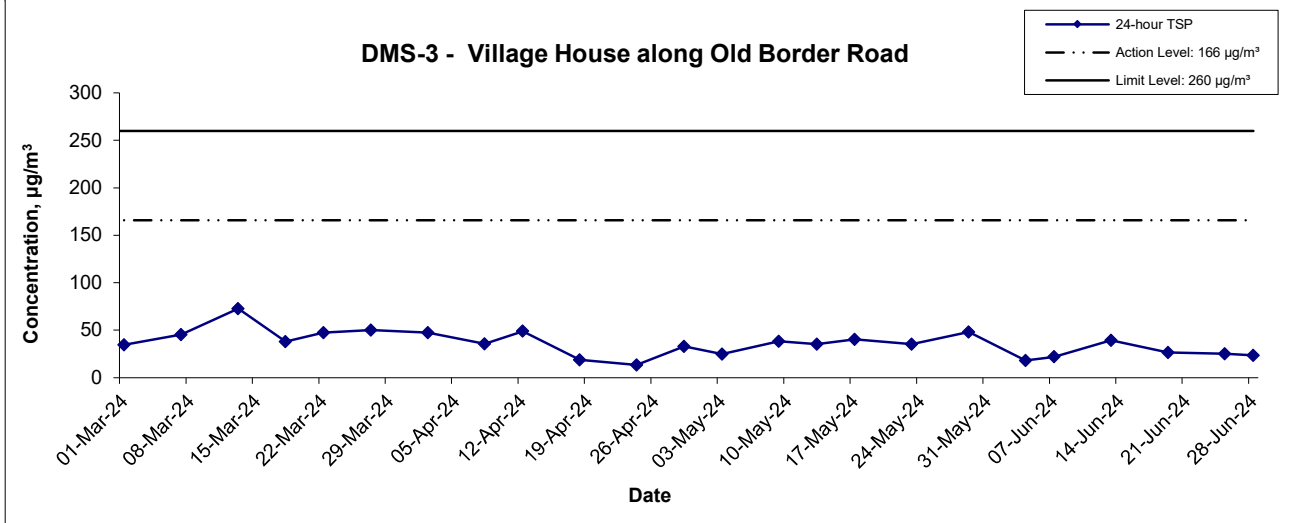
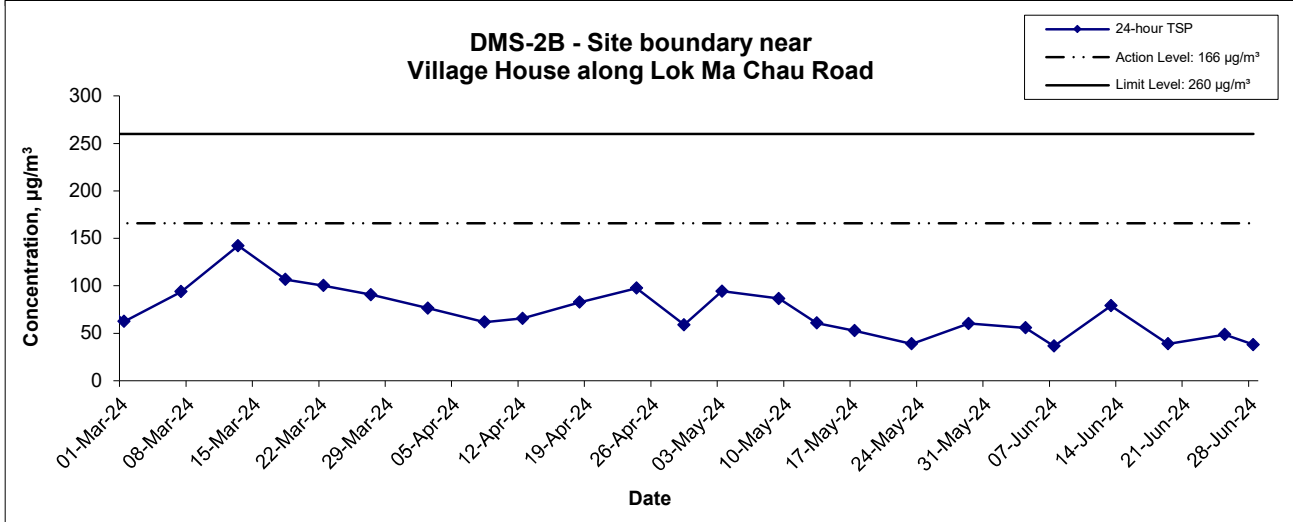
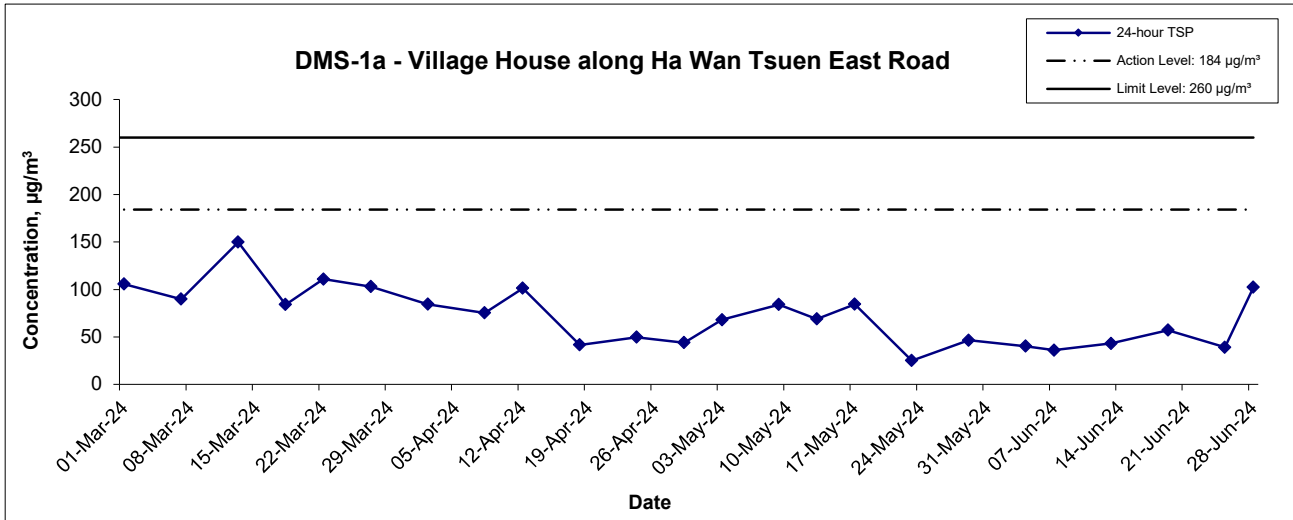
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**APPENDIX C  
GRAPHICAL PRESENTATION OF 24-  
HOUR TSP MONITORING RESULTS**

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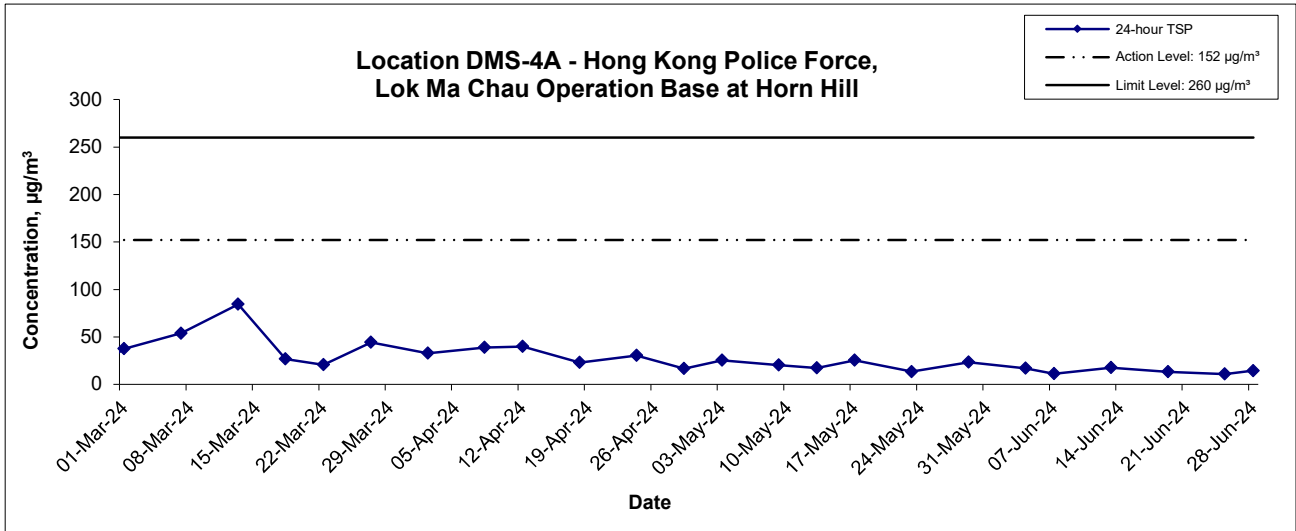
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## 24-hour TSP Concentration Levels



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	consulting . testing . research
	Date	Jun 24	Appendix	C	

## 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	consulting . testing . research
	Date	Jun 24	Appendix	C	

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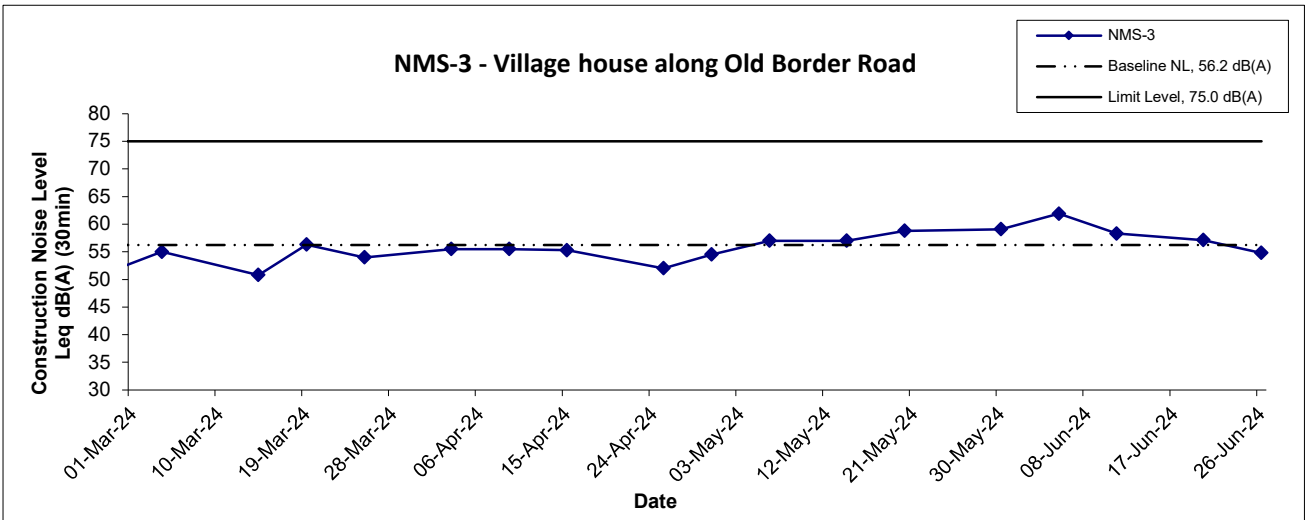
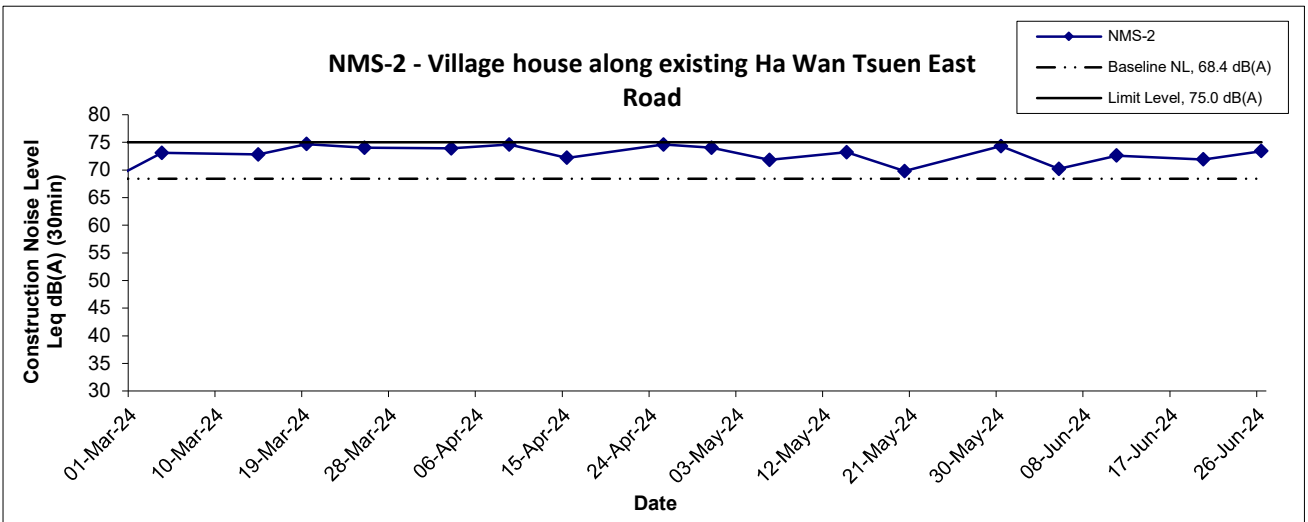
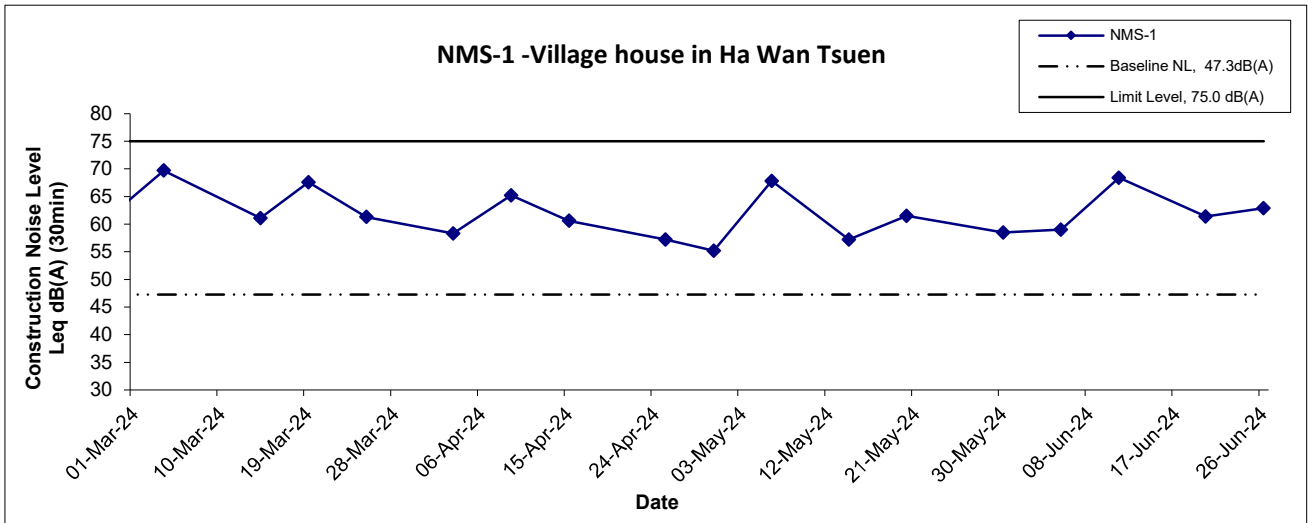
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**APPENDIX D  
GRAPHICAL PRESENTATION OF  
NOISE MONITORING RESULTS**

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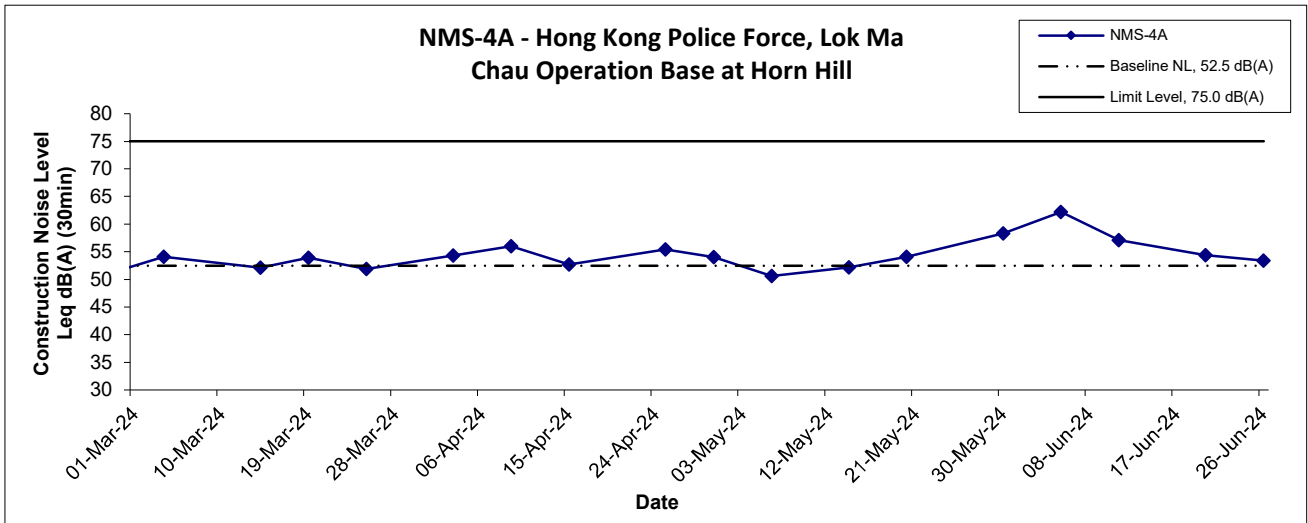
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## Noise Levels



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	
	Date Jun 24	Appendix D	

## 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	
	Date Jun 24	Appendix D	

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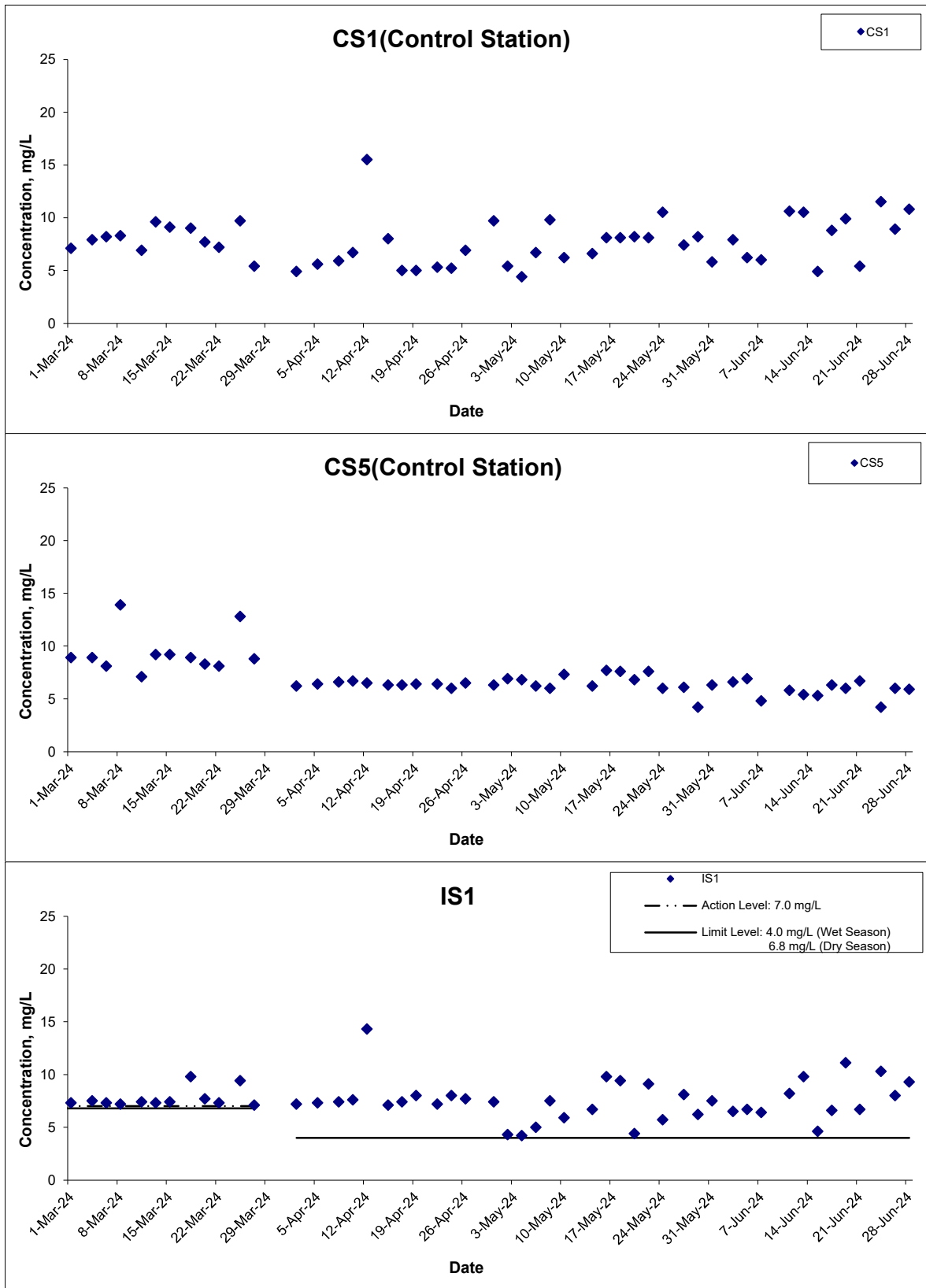
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**APPENDIX E  
GRAPHICAL PRESENTATION OF  
WATER QUALITY MONITORING  
RESULTS**

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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

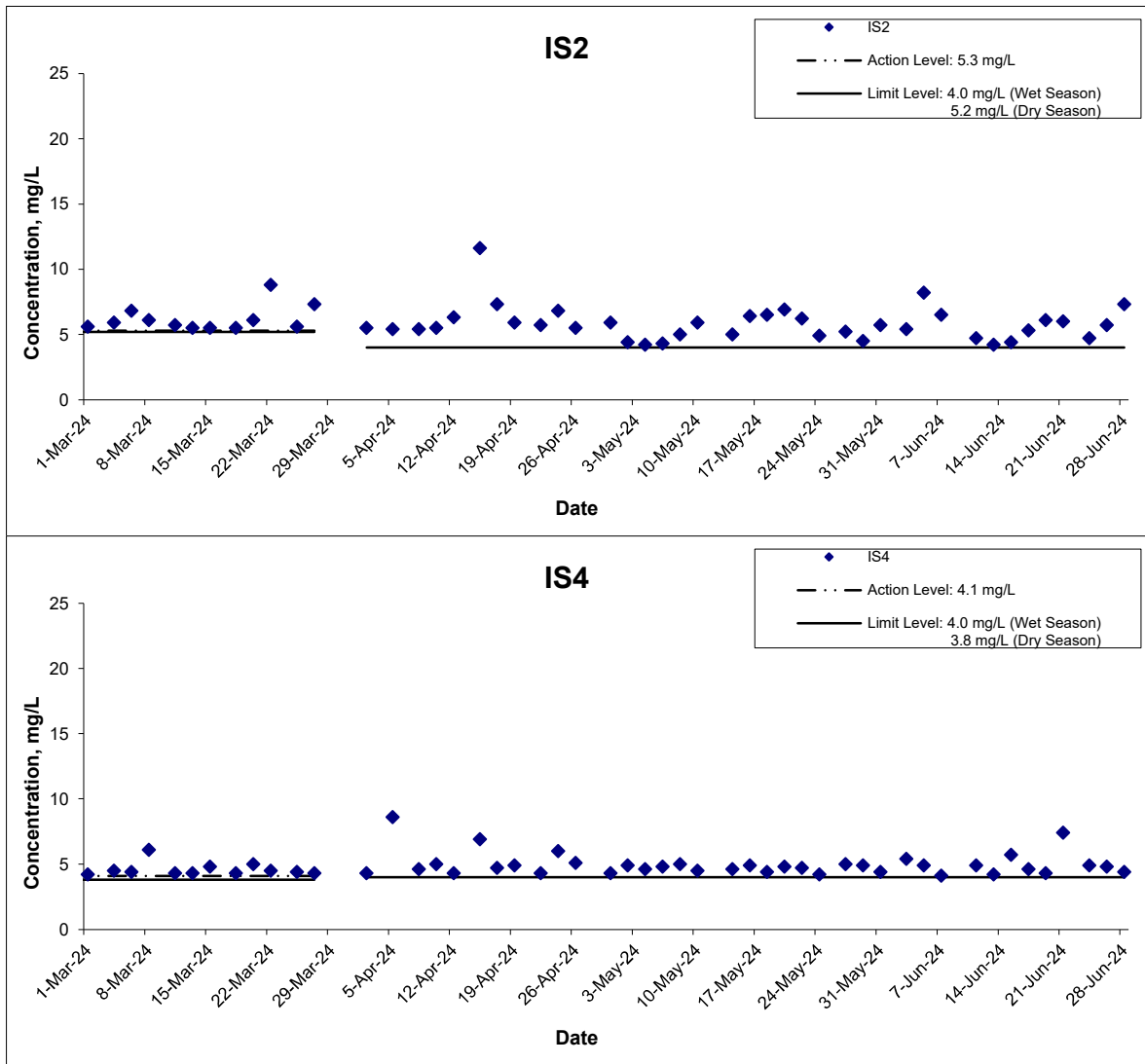
Scale  
 N.T.S  
 Date  
 Jun 24

Project  
 No. WMA21009  
 Appendix  
 E





## 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

Date

Jun 24

Project No.

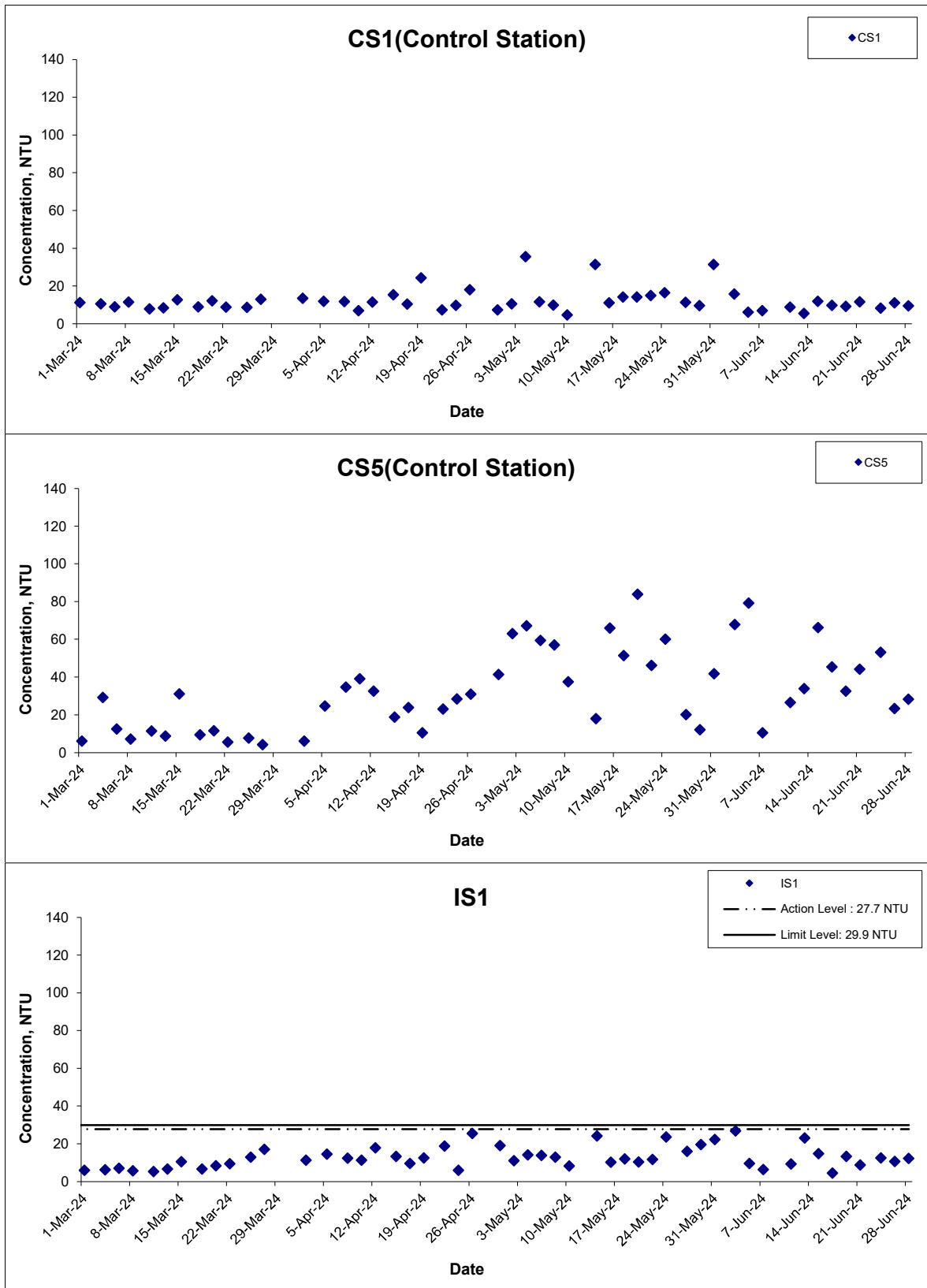
WMA21009

Appendix

E



## Turbidity



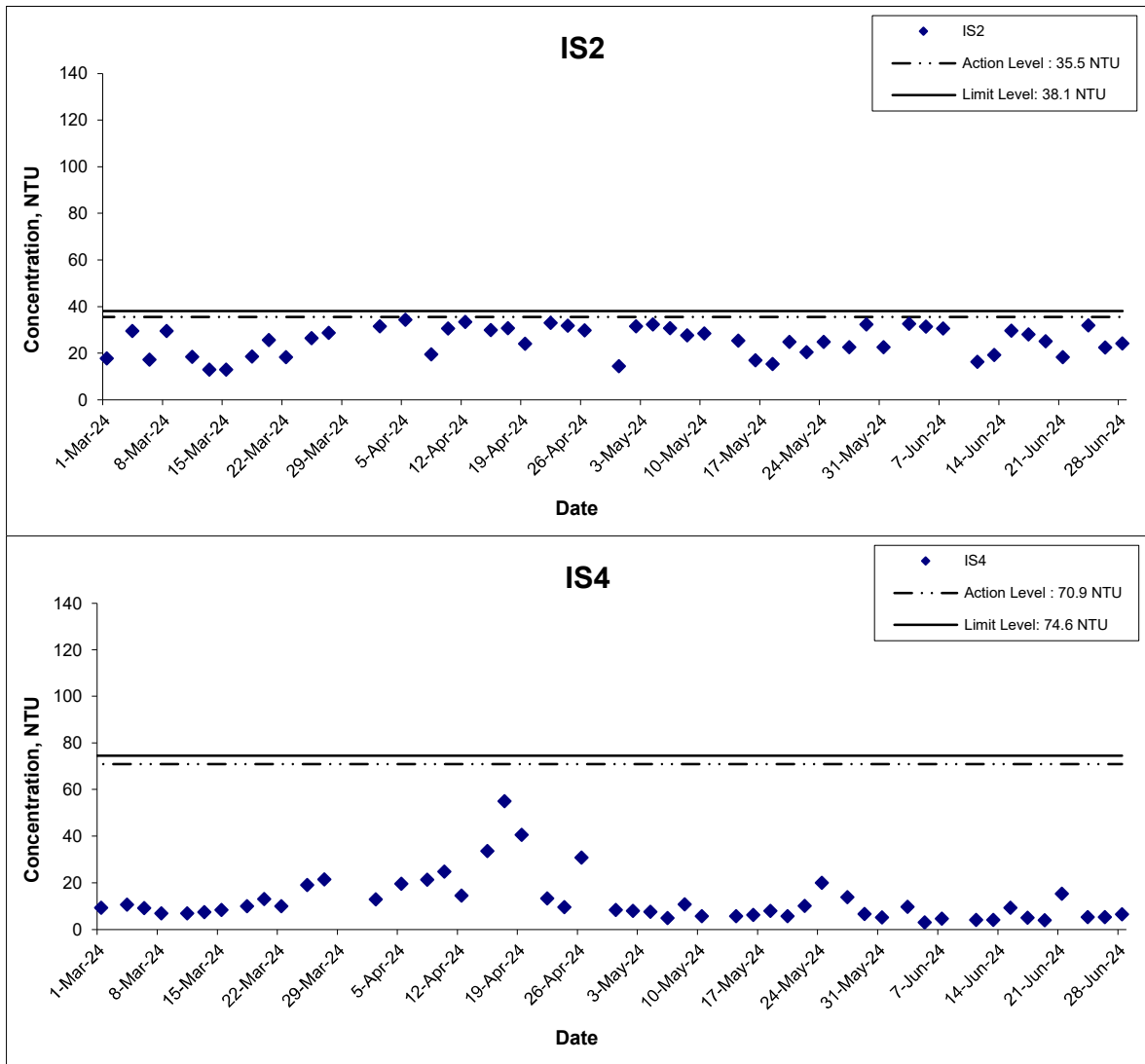
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 Service Contract No. WD/04/2020  
 Development of Lok Ma Chau Loop:  
 Main Works Package 1 - Environmental Team  
 Graphical Presentation of Water Quality Monitoring  
 Results

Scale  
 N.T.S  
 Date  
 Jun 24

Project  
 No. WMA21009  
 Appendix  
 E

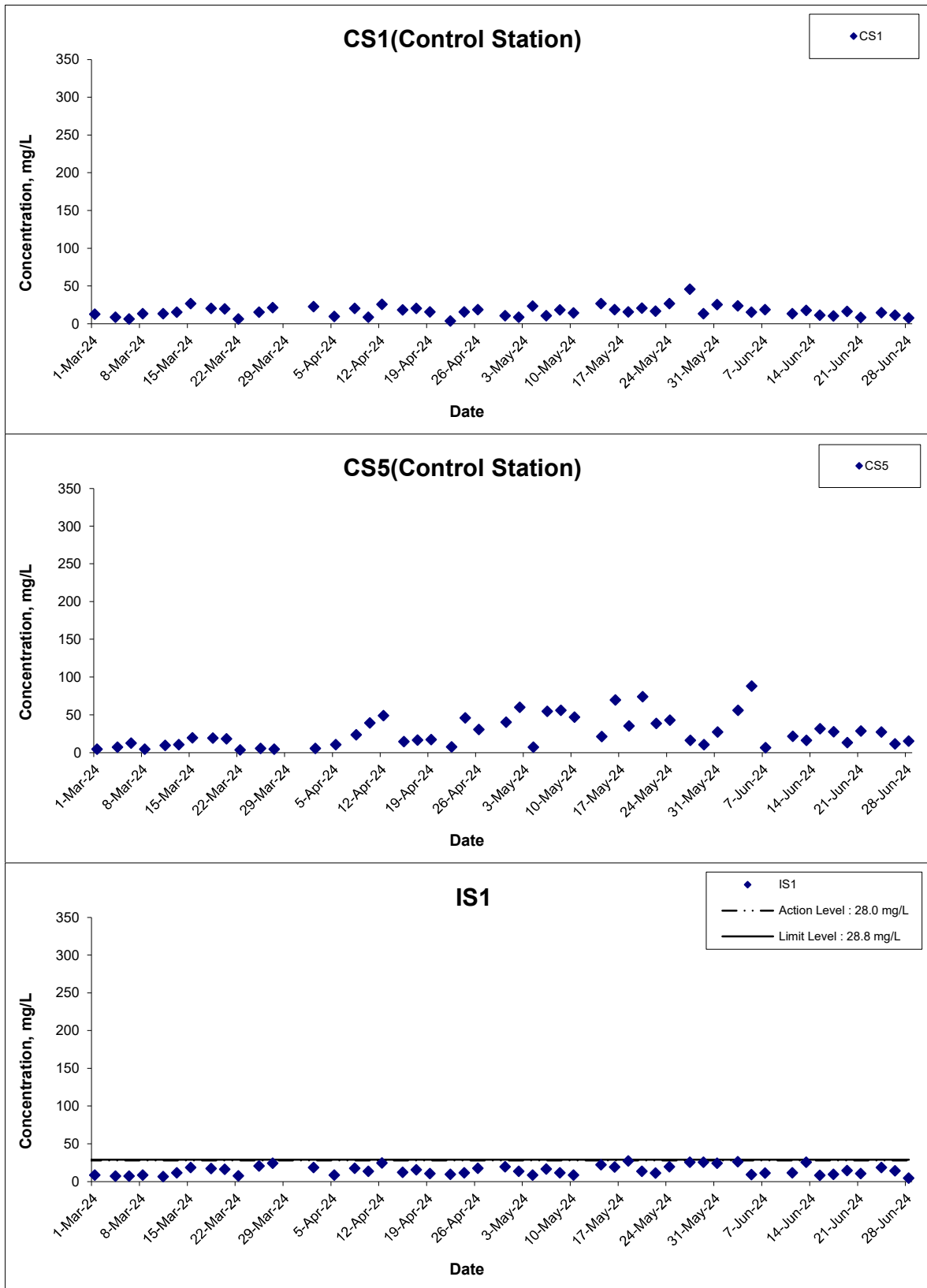


## Turbidity



Title Service Contract No. WD/04/2020 Development of Lok Ma Chau Loop: Main Works Package 1 - Environmental Team  <b>Graphical Presentation of Water Quality Monitoring Results</b>	Scale	N.T.S	Project No.	WMA21009
	Date	Jun 24	Appendix	E

## Suspended Solids



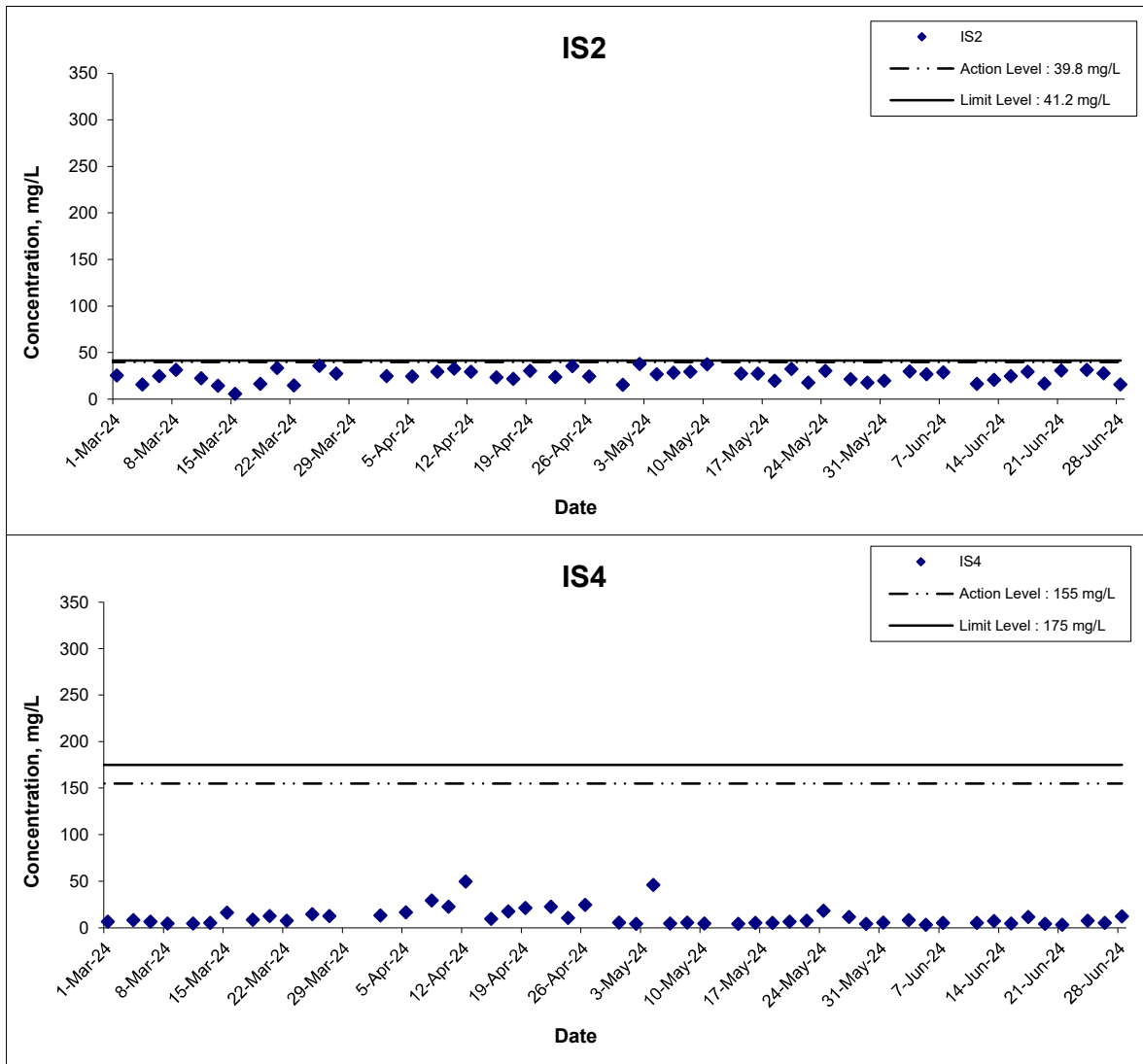
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 Service Contract No. WD/04/2020  
 Development of Lok Ma Chau Loop:  
 Main Works Package 1 - Environmental Team  
 Graphical Presentation of Water Quality Monitoring  
 Results

Scale  
 N.T.S  
 Date  
 Jun 24

Project  
 No. WMA21009  
 Appendix  
 E



## 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	匯力 consulting . testing . research
	Date Jun 24	Appendix E	

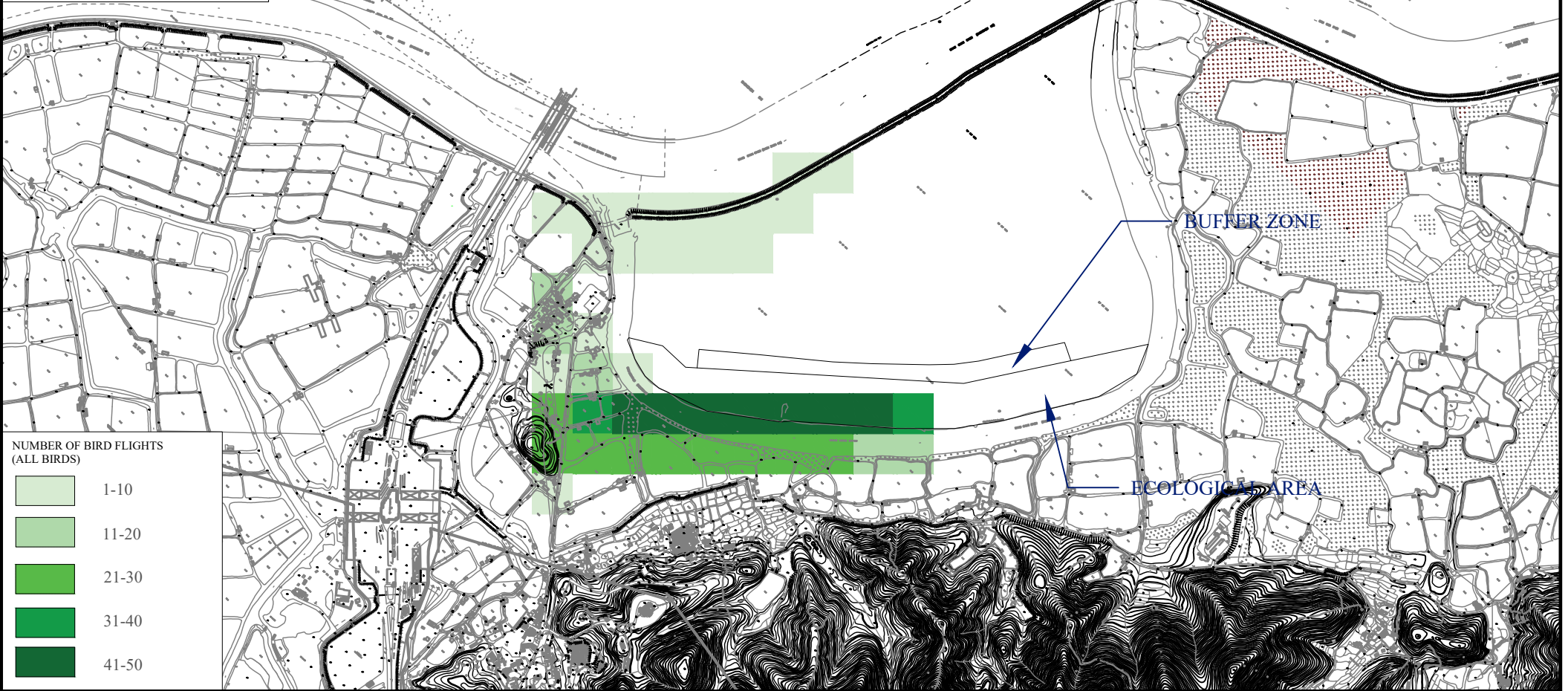
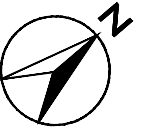
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**APPENDIX F  
DISTRIBUTION OF FLIGHT LINE  
USAGE**

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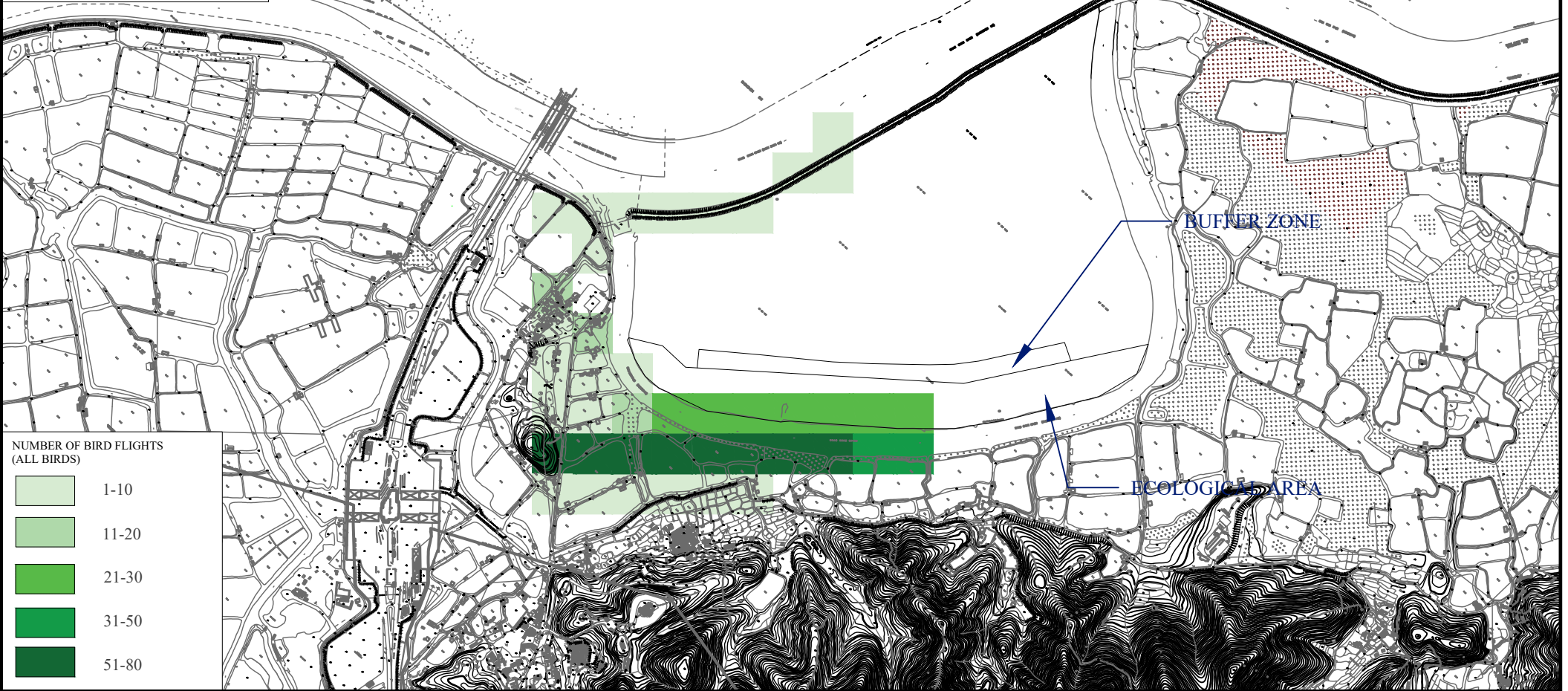
NUMBER OF BIRD FLIGHTS  
(ALL BIRDS)

- 1-10
- 11-20
- 21-30
- 31-40
- 41-50

SCALE	1:14000 @A4	DATE	April 2024
CHECK	IT	DRAWN	ML
JOB No.	WMA 21009	FIGURE NO.	Fig 6
		REV	-



LOCATION PLAN



NUMBER OF BIRD FLIGHTS  
(ALL BIRDS)

- 1-10
- 11-20
- 21-30
- 31-50
- 51-80



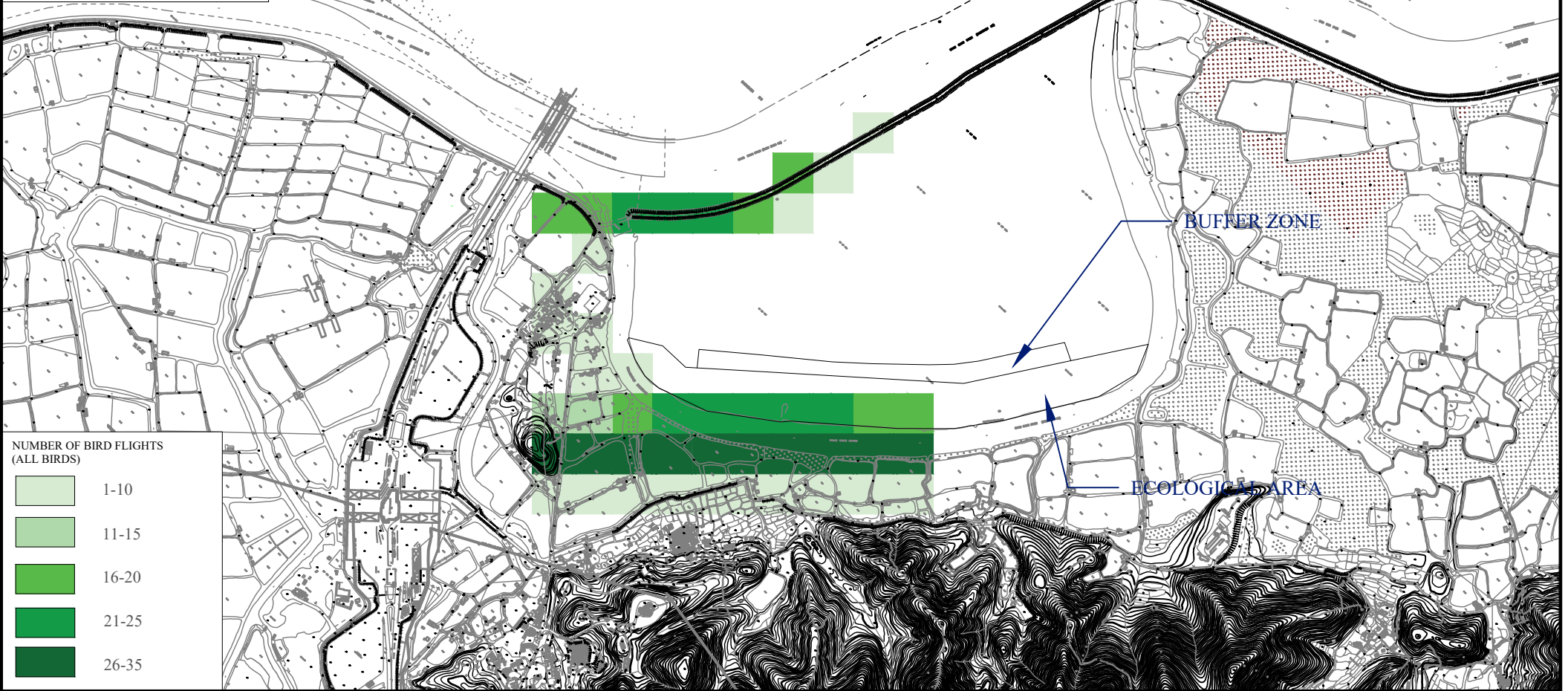
Service Contract No. WD/04/2020  
 Development of Lok Ma Chau Loop: Main Works Package 1 - Environmental Team  
 Flight Lines of All Bird Species

SCALE	1:14000 @A4	DATE	May 2024
CHECK	IT	DRAWN	ML
JOB No.	WMA 21009	FIGURE NO.	Fig 6
		REV	-

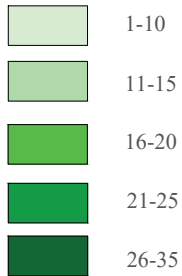




LOCATION PLAN



NUMBER OF BIRD FLIGHTS  
(ALL BIRDS)



SCALE	1:14000 @A4	DATE	June 2024
CHECK	IT	DRAWN	ML
JOB No.	WMA 21009	FIGURE NO.	Fig 6
		REV	-

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**APPENDIX G**  
**WEATHER CONDITION**

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

<b>Date</b>	<b>Mean Air Temperature (°C)</b>	<b>Mean Relative Humidity (%)</b>	<b>Precipitation (mm)</b>
1 April 2024	27.3	81	Trace
2 April 2024	27.0	80	0
3 April 2024	27.3	80	Trace
4 April 2024	27.2	81	Trace
5 April 2024	26.5	81	0.3
6 April 2024	24.4	89	2.7
7 April 2024	25.4	88	0.9
8 April 2024	25.1	87	0
9 April 2024	22.9	79	Trace
10 April 2024	23.7	68	0
11 April 2024	24.5	77	0
12 April 2024	25.8	78	0
13 April 2024	26.9	77	0
14 April 2024	27.7	78	0
15 April 2024	27.7	79	0
16 April 2024	27.9	77	0
17 April 2024	28.4	78	0

<b>Date</b>	<b>Mean Air Temperature (°C)</b>	<b>Mean Relative Humidity (%)</b>	<b>Precipitation (mm)</b>
18 April 2024	26.9	80	8.6
19 April 2024	27.6	80	2.2
20 April 2024	27.4	81	42.2
21 April 2024	23.9	90	81.6
22 April 2024	25.2	90	13.2
23 April 2024	25.4	91	40.0
24 April 2024	25.9	88	Trace
25 April 2024	26.6	86	5.7
26 April 2024	27.3	88	25.0
27 April 2024	28.8	85	0.8
28 April 2024	25.4	90	12.2
29 April 2024	27.7	85	0
30 April 2024	28.6	81	21.7

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

<b>Date</b>	<b>Mean Air Temperature (°C)</b>	<b>Mean Relative Humidity (%)</b>	<b>Precipitation (mm)</b>
1 May 2024	23.7	92	52.9
2 May 2024	24.6	88	1.1
3 May 2024	24.3	87	Trace
4 May 2024	24.0	93	75.1
5 May 2024	25.3	86	5.3
6 May 2024	27.7	82	0.0
7 May 2024	27.2	80	0.0
8 May 2024	26.7	76	Trace
9 May 2024	25.8	68	0.0
10 May 2024	25.3	72	Trace
11 May 2024	26.7	81	Trace
12 May 2024	27.1	85	3.1
13 May 2024	26.4	81	0.7
14 May 2024	25.5	64	0.0
15 May 2024	26.4	62	0.0
16 May 2024	26.2	60	0.0
17 May 2024	25.9	71	Trace
18 May 2024	26.3	71	Trace

<b>Date</b>	<b>Mean Air Temperature (°C)</b>	<b>Mean Relative Humidity (%)</b>	<b>Precipitation (mm)</b>
19 May 2024	25.1	83	17.5
20 May 2024	24.5	92	30.7
21 May 2024	25.3	95	45.3
22 May 2024	26.1	91	Trace
23 May 2024	25.9	91	2.5
24 May 2024	25.3	92	17.6
25 May 2024	26.3	91	7.8
26 May 2024	27.4	87	0.3
27 May 2024	28.4	85	6.7
28 May 2024	28.1	83	8.9
29 May 2024	25.8	70	0.0
30 May 2024	25.5	86	3.7
31 May 2024	27.2	91	13.4

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

<b>Date</b>	<b>Mean Air Temperature (°C)</b>	<b>Mean Relative Humidity (%)</b>	<b>Precipitation (mm)</b>
1 June 2024	27.1	88	54
2 June 2024	28.0	84	32
3 June 2024	25.3	91	86
4 June 2024	24.1	86	29
5 June 2024	24.4	90	85
6 June 2024	26.5	88	Trace
7 June 2024	25.6	92	1.6
8 June 2024	26.3	90	6.8
9 June 2024	26.6	93	33.5
10 June 2024	28.5	85	0.2
11 June 2024	29.1	84	0.6
12 June 2024	29.5	83	8.3
13 June 2024	29.9	83	4.9
14 June 2024	29.7	82	32
15 June 2024	28.2	86	28.3
16 June 2024	28.8	86	17.5
17 June 2024	30.1	80	Trace
18 June 2024	29.9	81	4.6

<b>Date</b>	<b>Mean Air Temperature (°C)</b>	<b>Mean Relative Humidity (%)</b>	<b>Precipitation (mm)</b>
19 June 2024	30.0	80	9.4
20 June 2024	30.0	82	5.0
21 June 2024	30.8	76	0.0
22 June 2024	31.2	75	0.0
23 June 2024	30.5	78	4.7
24 June 2024	30.8	77	0.3
25 June 2024	30.1	79	19.0
26 June 2024	30.4	79	0.0
27 June 2024	30.7	79	1.4
28 June 2024	31.0	75	1.6
29 June 2024	29.2	82	15.5
30 June 2024	30.3	79	8.7

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



## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
1-Apr-2024	0:00	0.0	N
1-Apr-2024	1:00	0.4	N
1-Apr-2024	2:00	0.4	N
1-Apr-2024	3:00	0.4	N
1-Apr-2024	4:00	0.4	N
1-Apr-2024	5:00	0.9	N
1-Apr-2024	6:00	0.9	N
1-Apr-2024	7:00	0.9	N
1-Apr-2024	8:00	0.4	N
1-Apr-2024	9:00	0.4	N
1-Apr-2024	10:00	0.4	N
1-Apr-2024	11:00	0.4	N
1-Apr-2024	12:00	0.4	N
1-Apr-2024	13:00	0.4	N
1-Apr-2024	14:00	0.0	N
1-Apr-2024	15:00	0.0	N
1-Apr-2024	16:00	0.0	N
1-Apr-2024	17:00	0.0	N
1-Apr-2024	18:00	0.0	N
1-Apr-2024	19:00	0.0	N
1-Apr-2024	20:00	0.0	N
1-Apr-2024	21:00	0.0	N
1-Apr-2024	22:00	0.0	N
1-Apr-2024	23:00	0.4	N
2-Apr-2024	0:00	0.4	N
2-Apr-2024	1:00	0.9	N
2-Apr-2024	2:00	0.9	N
2-Apr-2024	3:00	0.9	N
2-Apr-2024	4:00	0.9	N
2-Apr-2024	5:00	0.9	N
2-Apr-2024	6:00	1.3	N
2-Apr-2024	7:00	0.4	N
2-Apr-2024	8:00	0.4	N
2-Apr-2024	9:00	0.4	N
2-Apr-2024	10:00	0.4	N
2-Apr-2024	11:00	0.4	N
2-Apr-2024	12:00	0.0	N
2-Apr-2024	13:00	0.0	N
2-Apr-2024	14:00	0.0	N
2-Apr-2024	15:00	0.0	N
2-Apr-2024	16:00	0.0	N
2-Apr-2024	17:00	0.0	N
2-Apr-2024	18:00	0.0	N
2-Apr-2024	19:00	0.0	---
2-Apr-2024	20:00	0.0	---
2-Apr-2024	21:00	0.0	---
2-Apr-2024	22:00	0.0	N
2-Apr-2024	23:00	0.0	N
2-Apr-2024	0:00	0.0	N
2-Apr-2024	1:00	0.0	N
2-Apr-2024	2:00	0.0	N
2-Apr-2024	3:00	0.0	N
2-Apr-2024	4:00	0.0	N
2-Apr-2024	5:00	0.0	N
2-Apr-2024	6:00	0.0	N
2-Apr-2024	7:00	0.0	N
2-Apr-2024	8:00	0.0	N

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
2-Apr-2024	9:00	0.0	N
3-Apr-2024	10:00	0.4	N
3-Apr-2024	11:00	0.4	N
3-Apr-2024	12:00	0.4	N
3-Apr-2024	13:00	0.9	N
3-Apr-2024	14:00	0.9	N
3-Apr-2024	15:00	0.0	N
3-Apr-2024	16:00	0.4	N
3-Apr-2024	17:00	0.4	N
3-Apr-2024	18:00	0.0	N
3-Apr-2024	19:00	0.0	N
3-Apr-2024	20:00	0.0	N
3-Apr-2024	21:00	0.0	N
3-Apr-2024	22:00	0.0	N
3-Apr-2024	23:00	0.0	N
4-Apr-2024	0:00	0.0	N
4-Apr-2024	1:00	0.0	N
4-Apr-2024	2:00	0.0	N
4-Apr-2024	3:00	0.0	---
4-Apr-2024	4:00	0.0	N
4-Apr-2024	5:00	0.0	N
4-Apr-2024	6:00	0.0	N
4-Apr-2024	7:00	0.0	N
4-Apr-2024	8:00	0.0	N
4-Apr-2024	9:00	0.9	N
4-Apr-2024	10:00	0.4	N
4-Apr-2024	11:00	0.4	N
4-Apr-2024	12:00	0.9	N
4-Apr-2024	13:00	0.9	N
4-Apr-2024	14:00	0.9	N
4-Apr-2024	15:00	0.9	N
4-Apr-2024	16:00	0.9	N
4-Apr-2024	17:00	0.4	N
4-Apr-2024	18:00	0.0	N
4-Apr-2024	19:00	0.0	N
4-Apr-2024	20:00	0.0	N
4-Apr-2024	21:00	0.0	N
4-Apr-2024	22:00	0.0	N
4-Apr-2024	23:00	0.0	N
5-Apr-2024	0:00	0.0	---
5-Apr-2024	1:00	0.0	N
5-Apr-2024	2:00	0.0	N
5-Apr-2024	3:00	0.0	N
5-Apr-2024	4:00	0.0	N
5-Apr-2024	5:00	0.4	N
5-Apr-2024	6:00	0.0	N
5-Apr-2024	7:00	0.0	N
5-Apr-2024	8:00	0.4	N
5-Apr-2024	9:00	0.4	N
5-Apr-2024	10:00	0.4	N
5-Apr-2024	11:00	0.4	N
5-Apr-2024	12:00	0.9	N
5-Apr-2024	13:00	0.4	N
5-Apr-2024	14:00	0.4	N
5-Apr-2024	15:00	1.3	N
5-Apr-2024	16:00	1.3	N
5-Apr-2024	17:00	0.4	N

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
5-Apr-2024	18:00	0.4	N
5-Apr-2024	19:00	0.0	N
5-Apr-2024	20:00	0.9	N
5-Apr-2024	21:00	0.4	N
5-Apr-2024	22:00	0.9	N
5-Apr-2024	23:00	2.2	N
6-Apr-2024	0:00	3.6	N
6-Apr-2024	1:00	1.8	N
6-Apr-2024	2:00	2.2	N
6-Apr-2024	3:00	2.7	N
6-Apr-2024	4:00	1.8	N
6-Apr-2024	5:00	1.3	N
6-Apr-2024	6:00	2.2	N
6-Apr-2024	7:00	2.7	N
6-Apr-2024	8:00	2.2	N
6-Apr-2024	9:00	1.3	N
6-Apr-2024	10:00	0.9	N
6-Apr-2024	11:00	0.9	N
6-Apr-2024	12:00	0.4	N
6-Apr-2024	13:00	0.0	N
6-Apr-2024	14:00	0.4	N
6-Apr-2024	15:00	0.0	NNE
6-Apr-2024	16:00	0.4	NNE
6-Apr-2024	17:00	0.0	N
6-Apr-2024	18:00	0.4	N
6-Apr-2024	19:00	0.4	N
6-Apr-2024	20:00	0.4	N
6-Apr-2024	21:00	0.4	N
6-Apr-2024	22:00	0.4	N
6-Apr-2024	23:00	0.0	N
7-Apr-2024	0:00	0.0	N
7-Apr-2024	1:00	0.0	N
7-Apr-2024	2:00	0.0	N
7-Apr-2024	3:00	0.4	N
7-Apr-2024	4:00	0.0	N
7-Apr-2024	5:00	0.4	N
7-Apr-2024	6:00	0.9	N
7-Apr-2024	7:00	0.0	N
7-Apr-2024	8:00	0.9	N
7-Apr-2024	9:00	0.9	N
7-Apr-2024	10:00	0.4	N
7-Apr-2024	11:00	0.9	N
7-Apr-2024	12:00	0.4	N
7-Apr-2024	13:00	0.4	NNE
7-Apr-2024	14:00	0.4	NNE
7-Apr-2024	15:00	0.0	NNE
7-Apr-2024	16:00	0.0	N
7-Apr-2024	17:00	0.4	N
7-Apr-2024	18:00	0.0	N
7-Apr-2024	19:00	0.0	N
7-Apr-2024	20:00	0.0	N
7-Apr-2024	21:00	0.0	N
7-Apr-2024	22:00	0.4	N
7-Apr-2024	23:00	0.0	N
8-Apr-2024	0:00	0.4	N
8-Apr-2024	1:00	0.4	N
8-Apr-2024	2:00	0.0	N

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
8-Apr-2024	3:00	0.0	N
8-Apr-2024	4:00	0.4	N
8-Apr-2024	5:00	0.0	N
8-Apr-2024	6:00	0.4	N
8-Apr-2024	7:00	0.0	N
8-Apr-2024	8:00	0.0	N
8-Apr-2024	9:00	0.4	N
8-Apr-2024	10:00	0.4	N
8-Apr-2024	11:00	0.0	N
8-Apr-2024	12:00	0.0	N
8-Apr-2024	13:00	0.0	N
8-Apr-2024	14:00	0.0	NNE
8-Apr-2024	15:00	0.0	NNE
8-Apr-2024	16:00	0.0	NNE
8-Apr-2024	17:00	0.4	NNE
8-Apr-2024	18:00	0.4	NNE
8-Apr-2024	19:00	0.4	NNE
8-Apr-2024	20:00	0.0	---
8-Apr-2024	21:00	0.0	---
8-Apr-2024	22:00	0.0	N
8-Apr-2024	23:00	0.4	N
9-Apr-2024	0:00	0.0	N
9-Apr-2024	1:00	0.0	N
9-Apr-2024	2:00	0.0	N
9-Apr-2024	3:00	0.0	N
9-Apr-2024	4:00	0.4	N
9-Apr-2024	5:00	0.9	N
9-Apr-2024	6:00	0.4	N
9-Apr-2024	7:00	0.0	N
9-Apr-2024	8:00	0.0	N
9-Apr-2024	9:00	0.4	N
9-Apr-2024	10:00	0.9	N
9-Apr-2024	11:00	0.4	N
9-Apr-2024	12:00	1.3	N
9-Apr-2024	13:00	1.3	N
9-Apr-2024	14:00	0.4	N
9-Apr-2024	15:00	0.4	N
9-Apr-2024	16:00	0.9	N
9-Apr-2024	17:00	0.9	N
9-Apr-2024	18:00	0.4	N
9-Apr-2024	19:00	0.4	N
9-Apr-2024	20:00	1.3	N
9-Apr-2024	21:00	1.3	N
9-Apr-2024	22:00	1.8	N
9-Apr-2024	23:00	1.3	N
10-Apr-2024	0:00	0.9	N
10-Apr-2024	1:00	0.0	N
10-Apr-2024	2:00	0.4	N
10-Apr-2024	3:00	0.4	N
10-Apr-2024	4:00	0.4	N
10-Apr-2024	5:00	0.9	N
10-Apr-2024	6:00	0.9	N
10-Apr-2024	7:00	0.9	N
10-Apr-2024	8:00	0.4	N
10-Apr-2024	9:00	0.0	N
10-Apr-2024	10:00	0.0	---
10-Apr-2024	11:00	0.0	N

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
10-Apr-2024	12:00	0.9	NNE
10-Apr-2024	13:00	1.3	NNE
10-Apr-2024	14:00	0.9	NNE
10-Apr-2024	15:00	0.9	N
10-Apr-2024	16:00	1.3	NNE
10-Apr-2024	17:00	1.8	N
10-Apr-2024	18:00	0.9	NNE
10-Apr-2024	19:00	0.0	NNE
10-Apr-2024	20:00	0.0	NNE
10-Apr-2024	21:00	0.0	NNE
10-Apr-2024	22:00	0.9	NNE
10-Apr-2024	23:00	0.9	NNE
11-Apr-2024	0:00	1.3	N
11-Apr-2024	1:00	0.4	N
11-Apr-2024	2:00	0.4	N
11-Apr-2024	3:00	0.4	N
11-Apr-2024	4:00	0.4	N
11-Apr-2024	5:00	0.4	N
11-Apr-2024	6:00	0.4	N
11-Apr-2024	7:00	0.9	N
11-Apr-2024	8:00	0.4	N
11-Apr-2024	9:00	0.4	N
11-Apr-2024	10:00	1.3	N
11-Apr-2024	11:00	1.8	NNE
11-Apr-2024	12:00	0.4	NNE
11-Apr-2024	13:00	0.9	NNE
11-Apr-2024	14:00	0.9	NNE
11-Apr-2024	15:00	0.9	NNE
11-Apr-2024	16:00	0.4	NNE
11-Apr-2024	17:00	0.4	NNE
11-Apr-2024	18:00	0.4	NNE
11-Apr-2024	19:00	0.0	NNE
11-Apr-2024	20:00	0.0	NNE
11-Apr-2024	21:00	0.4	NNE
11-Apr-2024	22:00	0.4	NNE
11-Apr-2024	23:00	0.0	NNE
12-Apr-2024	0:00	0.0	NNE
12-Apr-2024	1:00	0.0	NNE
12-Apr-2024	2:00	0.0	NNE
12-Apr-2024	3:00	0.0	---
12-Apr-2024	4:00	0.0	NNE
12-Apr-2024	5:00	0.0	NNE
12-Apr-2024	6:00	0.0	---
12-Apr-2024	7:00	0.0	---
12-Apr-2024	8:00	0.0	---
12-Apr-2024	9:00	0.0	---
12-Apr-2024	10:00	0.0	N
12-Apr-2024	11:00	0.0	N
12-Apr-2024	12:00	0.9	N
12-Apr-2024	13:00	0.9	NNE
12-Apr-2024	14:00	0.9	NNE
12-Apr-2024	15:00	1.3	NNE
12-Apr-2024	16:00	1.8	NNE
12-Apr-2024	17:00	0.9	N
12-Apr-2024	18:00	0.9	N
12-Apr-2024	19:00	0.0	NNE
12-Apr-2024	20:00	0.0	N

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
12-Apr-2024	21:00	0.0	---
12-Apr-2024	22:00	0.0	---
12-Apr-2024	23:00	0.0	NNE
13-Apr-2024	0:00	0.0	---
13-Apr-2024	1:00	0.0	---
13-Apr-2024	2:00	0.0	---
13-Apr-2024	3:00	0.0	---
13-Apr-2024	4:00	0.0	---
13-Apr-2024	5:00	0.0	---
13-Apr-2024	6:00	0.0	---
13-Apr-2024	7:00	0.0	---
13-Apr-2024	8:00	0.0	---
13-Apr-2024	9:00	0.0	---
13-Apr-2024	10:00	0.0	NNE
13-Apr-2024	11:00	0.0	NNE
13-Apr-2024	12:00	0.9	NNE
13-Apr-2024	13:00	0.9	NNE
13-Apr-2024	14:00	1.3	NNE
13-Apr-2024	15:00	1.8	NNE
13-Apr-2024	16:00	1.8	NNE
13-Apr-2024	17:00	0.4	NNE
13-Apr-2024	18:00	0.0	N
13-Apr-2024	19:00	0.0	N
13-Apr-2024	20:00	0.0	N
13-Apr-2024	21:00	0.0	N
13-Apr-2024	22:00	0.0	NNE
13-Apr-2024	23:00	0.0	---
14-Apr-2024	0:00	0.0	NNE
14-Apr-2024	1:00	0.0	NNE
14-Apr-2024	2:00	0.0	NNE
14-Apr-2024	3:00	0.0	NNE
14-Apr-2024	4:00	0.0	NNE
14-Apr-2024	5:00	0.0	---
14-Apr-2024	6:00	0.0	---
14-Apr-2024	7:00	0.0	---
14-Apr-2024	8:00	0.0	NNE
14-Apr-2024	9:00	0.0	NNE
14-Apr-2024	10:00	0.0	NNE
14-Apr-2024	11:00	0.4	NNE
14-Apr-2024	12:00	0.4	NNE
14-Apr-2024	13:00	0.9	N
14-Apr-2024	14:00	0.9	NNE
14-Apr-2024	15:00	0.4	NNE
14-Apr-2024	16:00	0.4	NNE
14-Apr-2024	17:00	0.4	NNE
14-Apr-2024	18:00	0.0	NNE
14-Apr-2024	19:00	0.0	N
14-Apr-2024	20:00	0.0	---
14-Apr-2024	21:00	0.0	---
14-Apr-2024	22:00	0.0	N
14-Apr-2024	23:00	0.0	NNE
15-Apr-2024	0:00	0.0	NNE
15-Apr-2024	1:00	0.0	---
15-Apr-2024	2:00	0.0	---
15-Apr-2024	3:00	0.0	---
15-Apr-2024	4:00	0.0	NNE
15-Apr-2024	5:00	0.0	NNE

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
15-Apr-2024	6:00	0.0	NNE
15-Apr-2024	7:00	0.0	NNE
15-Apr-2024	8:00	0.0	NNE
15-Apr-2024	9:00	0.0	NNE
15-Apr-2024	10:00	0.4	N
15-Apr-2024	11:00	0.9	NNE
15-Apr-2024	12:00	0.4	NNE
15-Apr-2024	13:00	0.4	NNE
15-Apr-2024	14:00	0.9	NNE
15-Apr-2024	15:00	0.9	NNE
15-Apr-2024	16:00	0.4	NNE
15-Apr-2024	17:00	0.0	N
15-Apr-2024	18:00	0.0	N
15-Apr-2024	19:00	0.0	N
15-Apr-2024	20:00	0.0	N
15-Apr-2024	21:00	0.0	---
15-Apr-2024	22:00	0.0	---
15-Apr-2024	23:00	0.0	---
16-Apr-2024	0:00	0.0	---
16-Apr-2024	1:00	0.0	---
16-Apr-2024	2:00	0.0	---
16-Apr-2024	3:00	0.0	---
16-Apr-2024	4:00	0.0	N
16-Apr-2024	5:00	0.0	---
16-Apr-2024	6:00	0.0	N
16-Apr-2024	7:00	0.0	---
16-Apr-2024	8:00	0.0	---
16-Apr-2024	9:00	0.0	N
16-Apr-2024	10:00	0.4	N
16-Apr-2024	11:00	1.8	NNE
16-Apr-2024	12:00	2.7	NNE
16-Apr-2024	13:00	2.2	NNE
16-Apr-2024	14:00	2.2	NNE
16-Apr-2024	15:00	1.3	NNE
16-Apr-2024	16:00	1.3	NNE
16-Apr-2024	17:00	0.4	NNE
16-Apr-2024	18:00	0.4	NNE
16-Apr-2024	19:00	0.0	NNE
16-Apr-2024	20:00	0.0	---
16-Apr-2024	21:00	0.0	N
16-Apr-2024	22:00	0.0	---
16-Apr-2024	23:00	0.0	---
17-Apr-2024	0:00	0.0	---
17-Apr-2024	1:00	0.0	NNE
17-Apr-2024	2:00	0.0	NNE
17-Apr-2024	3:00	0.0	---
17-Apr-2024	4:00	0.0	---
17-Apr-2024	5:00	0.0	---
17-Apr-2024	6:00	0.0	NNE
17-Apr-2024	7:00	0.0	NNE
17-Apr-2024	8:00	0.0	NNE
17-Apr-2024	9:00	0.4	N
17-Apr-2024	10:00	0.4	N
17-Apr-2024	11:00	0.9	NNE
17-Apr-2024	12:00	0.4	NNE
17-Apr-2024	13:00	0.4	NNE
17-Apr-2024	14:00	1.3	NNE

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
17-Apr-2024	15:00	0.9	NNE
17-Apr-2024	16:00	2.2	NNE
17-Apr-2024	17:00	1.8	NNE
17-Apr-2024	18:00	0.4	NNE
17-Apr-2024	19:00	0.0	NNE
17-Apr-2024	20:00	0.0	---
17-Apr-2024	21:00	0.0	---
17-Apr-2024	22:00	0.0	---
17-Apr-2024	23:00	0.0	---
18-Apr-2024	0:00	0.0	---
18-Apr-2024	1:00	0.0	---
18-Apr-2024	2:00	0.0	---
18-Apr-2024	3:00	0.0	---
18-Apr-2024	4:00	0.0	NNE
18-Apr-2024	5:00	0.0	NNE
18-Apr-2024	6:00	0.0	NNE
18-Apr-2024	7:00	0.0	NNE
18-Apr-2024	8:00	0.0	---
18-Apr-2024	9:00	0.0	NNE
18-Apr-2024	10:00	0.0	N
18-Apr-2024	11:00	0.4	NNE
18-Apr-2024	12:00	0.4	NNE
18-Apr-2024	13:00	0.4	N
18-Apr-2024	14:00	2.2	N
18-Apr-2024	15:00	0.4	N
18-Apr-2024	16:00	0.0	N
18-Apr-2024	17:00	0.0	---
18-Apr-2024	18:00	0.0	NNE
18-Apr-2024	19:00	0.0	NNE
18-Apr-2024	20:00	0.0	N
18-Apr-2024	21:00	0.4	N
18-Apr-2024	22:00	0.0	N
18-Apr-2024	23:00	0.0	N
19-Apr-2024	0:00	0.0	N
19-Apr-2024	1:00	0.0	N
19-Apr-2024	2:00	0.0	N
19-Apr-2024	3:00	0.4	N
19-Apr-2024	4:00	0.4	N
19-Apr-2024	5:00	0.0	---
19-Apr-2024	6:00	0.0	N
19-Apr-2024	7:00	0.0	N
19-Apr-2024	8:00	0.4	N
19-Apr-2024	9:00	0.4	N
19-Apr-2024	10:00	0.4	N
19-Apr-2024	11:00	0.4	N
19-Apr-2024	12:00	0.9	N
19-Apr-2024	13:00	0.9	NNE
19-Apr-2024	14:00	0.0	NNE
19-Apr-2024	15:00	0.0	N
19-Apr-2024	16:00	0.4	N
19-Apr-2024	17:00	0.0	N
19-Apr-2024	18:00	0.0	NNE
19-Apr-2024	19:00	0.0	NNE
19-Apr-2024	20:00	0.0	NNE
19-Apr-2024	21:00	0.0	N
19-Apr-2024	22:00	0.0	N
19-Apr-2024	23:00	0.0	N



## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
20-Apr-2024	0:00	0.0	N
20-Apr-2024	1:00	0.0	N
20-Apr-2024	2:00	0.0	N
20-Apr-2024	3:00	0.0	N
20-Apr-2024	4:00	0.0	N
20-Apr-2024	5:00	0.0	N
20-Apr-2024	6:00	0.0	N
20-Apr-2024	7:00	0.0	N
20-Apr-2024	8:00	0.4	N
20-Apr-2024	9:00	0.4	NNE
20-Apr-2024	10:00	0.4	NNE
20-Apr-2024	11:00	0.4	NNE
20-Apr-2024	12:00	0.0	NNE
20-Apr-2024	13:00	0.4	NNE
20-Apr-2024	14:00	0.4	NNE
20-Apr-2024	15:00	0.0	NNE
20-Apr-2024	16:00	0.0	NNE
20-Apr-2024	17:00	0.0	N
20-Apr-2024	18:00	0.0	N
20-Apr-2024	19:00	0.4	N
20-Apr-2024	20:00	0.4	N
20-Apr-2024	21:00	0.4	N
20-Apr-2024	22:00	0.0	N
20-Apr-2024	23:00	0.9	N
21-Apr-2024	0:00	0.0	N
21-Apr-2024	1:00	0.4	N
21-Apr-2024	2:00	0.0	N
21-Apr-2024	3:00	0.4	N
21-Apr-2024	4:00	0.9	N
21-Apr-2024	5:00	0.0	N
21-Apr-2024	6:00	0.0	N
21-Apr-2024	7:00	0.9	N
21-Apr-2024	8:00	0.4	N
21-Apr-2024	9:00	0.0	N
21-Apr-2024	10:00	0.0	N
21-Apr-2024	11:00	0.0	N
21-Apr-2024	12:00	0.0	N
21-Apr-2024	13:00	0.0	N
21-Apr-2024	14:00	0.0	N
21-Apr-2024	15:00	0.0	NE
21-Apr-2024	16:00	0.4	N
21-Apr-2024	17:00	0.0	N
21-Apr-2024	18:00	0.0	N
21-Apr-2024	19:00	0.0	NNE
21-Apr-2024	20:00	0.0	---
21-Apr-2024	21:00	0.0	N
21-Apr-2024	22:00	0.0	N
21-Apr-2024	23:00	0.0	N
22-Apr-2024	0:00	0.0	---
22-Apr-2024	1:00	0.0	---
22-Apr-2024	2:00	0.0	---
22-Apr-2024	3:00	0.0	---
22-Apr-2024	4:00	0.4	N
22-Apr-2024	5:00	0.4	N
22-Apr-2024	6:00	0.0	---
22-Apr-2024	7:00	0.0	---
22-Apr-2024	8:00	0.0	N

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
22-Apr-2024	9:00	0.0	---
22-Apr-2024	10:00	0.0	---
22-Apr-2024	11:00	0.0	N
22-Apr-2024	12:00	0.0	---
22-Apr-2024	13:00	0.0	---
22-Apr-2024	14:00	0.0	---
22-Apr-2024	15:00	0.0	N
22-Apr-2024	16:00	0.0	N
22-Apr-2024	17:00	0.0	N
22-Apr-2024	18:00	0.0	N
22-Apr-2024	19:00	0.0	---
22-Apr-2024	20:00	0.0	---
22-Apr-2024	21:00	0.0	---
22-Apr-2024	22:00	0.0	---
22-Apr-2024	23:00	0.0	N
23-Apr-2024	0:00	0.0	N
23-Apr-2024	1:00	0.0	N
23-Apr-2024	2:00	0.0	N
23-Apr-2024	3:00	0.0	N
23-Apr-2024	4:00	0.0	N
23-Apr-2024	5:00	0.4	N
23-Apr-2024	6:00	0.0	N
23-Apr-2024	7:00	0.4	N
23-Apr-2024	8:00	0.0	N
23-Apr-2024	9:00	0.0	N
23-Apr-2024	10:00	0.4	N
23-Apr-2024	11:00	0.4	N
23-Apr-2024	12:00	0.4	N
23-Apr-2024	13:00	0.9	E
23-Apr-2024	14:00	0.0	ENE
23-Apr-2024	15:00	0.0	---
23-Apr-2024	16:00	0.0	---
23-Apr-2024	17:00	0.0	SW
23-Apr-2024	18:00	0.4	WSW
23-Apr-2024	19:00	0.0	WNW
23-Apr-2024	20:00	0.0	---
23-Apr-2024	21:00	0.0	WNW
23-Apr-2024	22:00	0.0	---
23-Apr-2024	23:00	0.0	---
24-Apr-2024	0:00	0.0	---
24-Apr-2024	1:00	0.0	---
24-Apr-2024	2:00	0.0	---
24-Apr-2024	3:00	0.0	---
24-Apr-2024	4:00	0.0	NNW
24-Apr-2024	5:00	0.0	WNW
24-Apr-2024	6:00	0.0	---
24-Apr-2024	7:00	0.0	---
24-Apr-2024	8:00	0.0	---
24-Apr-2024	9:00	0.0	---
24-Apr-2024	10:00	0.0	---
24-Apr-2024	11:00	0.0	W
24-Apr-2024	12:00	0.0	W
24-Apr-2024	13:00	0.0	W
24-Apr-2024	14:00	0.0	WSW
24-Apr-2024	15:00	0.4	WSW
24-Apr-2024	16:00	0.9	WSW
24-Apr-2024	17:00	0.4	WSW

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
24-Apr-2024	18:00	0.4	WSW
24-Apr-2024	19:00	0.4	WSW
24-Apr-2024	20:00	0.0	WSW
24-Apr-2024	21:00	0.0	WSW
24-Apr-2024	22:00	0.4	WSW
24-Apr-2024	23:00	0.9	WSW
25-Apr-2024	0:00	0.4	WSW
25-Apr-2024	1:00	0.4	WSW
25-Apr-2024	2:00	0.4	WSW
25-Apr-2024	3:00	0.4	WSW
25-Apr-2024	4:00	0.9	WSW
25-Apr-2024	5:00	0.4	WSW
25-Apr-2024	6:00	0.0	WSW
25-Apr-2024	7:00	0.4	WSW
25-Apr-2024	8:00	1.3	WSW
25-Apr-2024	9:00	0.4	W
25-Apr-2024	10:00	0.4	W
25-Apr-2024	11:00	0.0	WNW
25-Apr-2024	12:00	0.0	W
25-Apr-2024	13:00	0.4	E
25-Apr-2024	14:00	0.9	E
25-Apr-2024	15:00	2.7	E
25-Apr-2024	16:00	1.8	E
25-Apr-2024	17:00	0.0	E
25-Apr-2024	18:00	0.0	E
25-Apr-2024	19:00	0.0	---
25-Apr-2024	20:00	0.4	W
25-Apr-2024	21:00	0.9	W
25-Apr-2024	22:00	0.0	W
25-Apr-2024	23:00	0.4	W
26-Apr-2024	0:00	0.4	WSW
26-Apr-2024	1:00	0.4	WSW
26-Apr-2024	2:00	0.0	W
26-Apr-2024	3:00	0.4	WSW
26-Apr-2024	4:00	0.0	WSW
26-Apr-2024	5:00	0.4	W
26-Apr-2024	6:00	0.4	W
26-Apr-2024	7:00	0.4	W
26-Apr-2024	8:00	0.0	E
26-Apr-2024	9:00	0.4	E
26-Apr-2024	10:00	0.0	W
26-Apr-2024	11:00	0.0	W
26-Apr-2024	12:00	0.0	W
26-Apr-2024	13:00	0.0	WSW
26-Apr-2024	14:00	0.0	W
26-Apr-2024	15:00	0.0	---
26-Apr-2024	16:00	0.0	---
26-Apr-2024	17:00	0.0	E
26-Apr-2024	18:00	0.4	WNW
26-Apr-2024	19:00	0.0	W
26-Apr-2024	20:00	0.0	N
26-Apr-2024	21:00	0.4	W
26-Apr-2024	22:00	0.0	---
26-Apr-2024	23:00	0.0	WNW
27-Apr-2024	0:00	0.0	N
27-Apr-2024	1:00	0.0	---
27-Apr-2024	2:00	0.0	---

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
27-Apr-2024	3:00	0.0	---
27-Apr-2024	4:00	0.0	---
27-Apr-2024	5:00	0.0	---
27-Apr-2024	6:00	0.0	E
27-Apr-2024	7:00	0.0	---
27-Apr-2024	8:00	0.0	---
27-Apr-2024	9:00	0.0	---
27-Apr-2024	10:00	0.0	ENE
27-Apr-2024	11:00	0.0	E
27-Apr-2024	12:00	0.0	E
27-Apr-2024	13:00	0.0	E
27-Apr-2024	14:00	0.4	E
27-Apr-2024	15:00	0.4	E
27-Apr-2024	16:00	0.4	E
27-Apr-2024	17:00	0.4	E
27-Apr-2024	18:00	0.0	E
27-Apr-2024	19:00	0.0	E
27-Apr-2024	20:00	0.0	NNW
27-Apr-2024	21:00	0.0	NW
27-Apr-2024	22:00	0.0	N
27-Apr-2024	23:00	0.0	N
28-Apr-2024	0:00	0.4	N
28-Apr-2024	1:00	0.9	N
28-Apr-2024	2:00	0.4	N
28-Apr-2024	3:00	0.4	N
28-Apr-2024	4:00	0.4	N
28-Apr-2024	5:00	0.4	N
28-Apr-2024	6:00	0.4	N
28-Apr-2024	7:00	0.4	N
28-Apr-2024	8:00	0.4	N
28-Apr-2024	9:00	0.9	N
28-Apr-2024	10:00	0.9	N
28-Apr-2024	11:00	1.8	N
28-Apr-2024	12:00	2.2	N
28-Apr-2024	13:00	0.9	N
28-Apr-2024	14:00	0.4	N
28-Apr-2024	15:00	0.9	N
28-Apr-2024	16:00	1.8	N
28-Apr-2024	17:00	1.8	N
28-Apr-2024	18:00	1.3	N
28-Apr-2024	19:00	0.4	N
28-Apr-2024	20:00	0.4	N
28-Apr-2024	21:00	0.9	N
28-Apr-2024	22:00	0.4	N
28-Apr-2024	23:00	0.4	N
29-Apr-2024	0:00	0.0	N
29-Apr-2024	1:00	0.4	N
29-Apr-2024	2:00	0.0	N
29-Apr-2024	3:00	0.0	N
29-Apr-2024	4:00	0.4	N
29-Apr-2024	5:00	0.4	N
29-Apr-2024	6:00	0.0	N
29-Apr-2024	7:00	0.0	N
29-Apr-2024	8:00	0.0	N
29-Apr-2024	9:00	0.0	N
29-Apr-2024	10:00	0.4	N
29-Apr-2024	11:00	0.0	N

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
29-Apr-2024	12:00	0.0	N
29-Apr-2024	13:00	0.4	E
29-Apr-2024	14:00	0.4	E
29-Apr-2024	15:00	0.4	E
29-Apr-2024	16:00	0.0	E
29-Apr-2024	17:00	0.0	E
29-Apr-2024	18:00	0.0	E
29-Apr-2024	19:00	0.0	E
29-Apr-2024	20:00	0.0	E
29-Apr-2024	21:00	0.0	E
29-Apr-2024	22:00	0.0	E
29-Apr-2024	23:00	0.0	E
30-Apr-2024	0:00	0.0	N
30-Apr-2024	1:00	0.0	E
30-Apr-2024	2:00	0.4	E
30-Apr-2024	3:00	0.0	E
30-Apr-2024	4:00	0.4	E
30-Apr-2024	5:00	0.0	E
30-Apr-2024	6:00	0.0	E
30-Apr-2024	7:00	0.0	E
30-Apr-2024	8:00	0.0	E
30-Apr-2024	9:00	0.4	E
30-Apr-2024	10:00	0.4	E
30-Apr-2024	11:00	0.4	E
30-Apr-2024	12:00	0.0	E
30-Apr-2024	13:00	0.4	E
30-Apr-2024	14:00	0.4	E
30-Apr-2024	15:00	0.4	E
30-Apr-2024	16:00	0.0	E
30-Apr-2024	17:00	0.0	E
30-Apr-2024	18:00	0.0	N
30-Apr-2024	19:00	0.0	E
30-Apr-2024	20:00	0.0	---
30-Apr-2024	21:00	0.0	N
30-Apr-2024	22:00	0.4	N
30-Apr-2024	23:00	0.0	---

## Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
1-May-2024	0:00	0.0	N
1-May-2024	1:00	0.0	N
1-May-2024	2:00	0.0	N
1-May-2024	3:00	0.4	N
1-May-2024	4:00	1.3	N
1-May-2024	5:00	0.9	N
1-May-2024	6:00	0.9	N
1-May-2024	7:00	0.4	N
1-May-2024	8:00	0.0	N
1-May-2024	9:00	0.0	ESE
1-May-2024	10:00	0.0	---
1-May-2024	11:00	0.0	---
1-May-2024	12:00	0.0	ENE
1-May-2024	13:00	0.0	N
1-May-2024	14:00	0.0	N
1-May-2024	15:00	0.0	N
1-May-2024	16:00	0.0	N
1-May-2024	17:00	0.0	N
1-May-2024	18:00	0.0	---
1-May-2024	19:00	0.0	---
1-May-2024	20:00	0.0	---
1-May-2024	21:00	0.0	---
1-May-2024	22:00	0.0	---
1-May-2024	23:00	0.0	---
2-May-2024	0:00	0.0	N
2-May-2024	1:00	0.0	N
2-May-2024	2:00	0.0	N
2-May-2024	3:00	0.0	N
2-May-2024	4:00	0.0	N
2-May-2024	5:00	0.0	N
2-May-2024	6:00	0.0	---
2-May-2024	7:00	0.0	N
2-May-2024	8:00	0.0	N
2-May-2024	9:00	0.0	N
2-May-2024	10:00	0.0	N
2-May-2024	11:00	0.0	N
2-May-2024	12:00	0.4	N
2-May-2024	13:00	0.4	N
2-May-2024	14:00	0.9	N
2-May-2024	15:00	0.4	N
2-May-2024	16:00	0.9	N
2-May-2024	17:00	0.9	N
2-May-2024	18:00	1.3	N
2-May-2024	19:00	0.9	N
2-May-2024	20:00	0.9	N
2-May-2024	21:00	0.9	N
2-May-2024	22:00	1.3	N
2-May-2024	23:00	1.3	N
3-May-2024	0:00	0.9	N
3-May-2024	1:00	0.4	N
3-May-2024	2:00	1.8	N
3-May-2024	3:00	1.8	N
3-May-2024	4:00	2.2	N
3-May-2024	5:00	2.7	N
3-May-2024	6:00	1.3	N
3-May-2024	7:00	2.2	N
3-May-2024	8:00	1.8	N

## Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
3-May-2024	9:00	0.9	N
3-May-2024	10:00	1.3	N
3-May-2024	11:00	0.9	N
3-May-2024	12:00	1.8	N
3-May-2024	13:00	2.2	N
3-May-2024	14:00	2.2	N
3-May-2024	15:00	0.9	N
3-May-2024	16:00	1.8	N
3-May-2024	17:00	1.3	N
3-May-2024	18:00	0.9	N
3-May-2024	19:00	0.9	N
3-May-2024	20:00	0.4	N
3-May-2024	21:00	0.4	N
3-May-2024	22:00	1.3	N
3-May-2024	23:00	1.3	N
4-May-2024	0:00	1.8	N
4-May-2024	1:00	2.7	N
4-May-2024	2:00	1.8	N
4-May-2024	3:00	0.4	N
4-May-2024	4:00	3.1	N
4-May-2024	5:00	1.8	N
4-May-2024	6:00	1.8	N
4-May-2024	7:00	1.8	N
4-May-2024	8:00	1.3	N
4-May-2024	9:00	1.3	N
4-May-2024	10:00	0.9	N
4-May-2024	11:00	1.8	N
4-May-2024	12:00	0.4	N
4-May-2024	13:00	0.9	N
4-May-2024	14:00	0.0	N
4-May-2024	15:00	0.4	N
4-May-2024	16:00	0.4	E
4-May-2024	17:00	0.0	N
4-May-2024	18:00	0.9	N
4-May-2024	19:00	0.0	E
4-May-2024	20:00	0.0	N
4-May-2024	21:00	0.0	N
4-May-2024	22:00	0.4	N
4-May-2024	23:00	0.4	N
5-May-2024	0:00	0.0	N
5-May-2024	1:00	0.0	N
5-May-2024	2:00	0.0	W
5-May-2024	3:00	0.0	W
5-May-2024	4:00	0.0	N
5-May-2024	5:00	0.0	N
5-May-2024	6:00	0.0	N
5-May-2024	7:00	0.0	N
5-May-2024	8:00	0.0	N
5-May-2024	9:00	0.0	N
5-May-2024	10:00	0.0	N
5-May-2024	11:00	0.0	N
5-May-2024	12:00	0.0	N
5-May-2024	13:00	0.0	N
5-May-2024	14:00	0.0	N
5-May-2024	15:00	0.0	N
5-May-2024	16:00	0.0	N
5-May-2024	17:00	0.0	N

## Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
5-May-2024	18:00	0.0	N
5-May-2024	19:00	0.0	N
5-May-2024	20:00	0.0	N
5-May-2024	21:00	0.0	N
5-May-2024	22:00	0.0	N
5-May-2024	23:00	0.0	N
6-May-2024	0:00	0.0	---
6-May-2024	1:00	0.0	N
6-May-2024	2:00	0.0	W
6-May-2024	3:00	0.0	---
6-May-2024	4:00	0.0	N
6-May-2024	5:00	0.0	N
6-May-2024	6:00	0.0	N
6-May-2024	7:00	0.0	---
6-May-2024	8:00	0.0	N
6-May-2024	9:00	0.0	---
6-May-2024	10:00	0.0	---
6-May-2024	11:00	0.0	E
6-May-2024	12:00	0.4	E
6-May-2024	13:00	0.4	E
6-May-2024	14:00	0.4	E
6-May-2024	15:00	0.4	E
6-May-2024	16:00	0.4	E
6-May-2024	17:00	0.0	E
6-May-2024	18:00	0.0	E
6-May-2024	19:00	0.0	E
6-May-2024	20:00	0.0	---
6-May-2024	21:00	0.0	E
6-May-2024	22:00	0.4	E
6-May-2024	23:00	0.4	E
7-May-2024	0:00	0.0	---
7-May-2024	1:00	0.0	---
7-May-2024	2:00	0.0	---
7-May-2024	3:00	0.0	---
7-May-2024	4:00	0.0	---
7-May-2024	5:00	0.0	---
7-May-2024	6:00	0.0	---
7-May-2024	7:00	0.0	ENE
7-May-2024	8:00	0.0	ENE
7-May-2024	9:00	0.0	ENE
7-May-2024	10:00	0.0	ENE
7-May-2024	11:00	0.0	E
7-May-2024	12:00	0.0	E
7-May-2024	13:00	0.4	E
7-May-2024	14:00	0.9	W
7-May-2024	15:00	0.9	W
7-May-2024	16:00	0.4	W
7-May-2024	17:00	1.3	W
7-May-2024	18:00	2.2	W
7-May-2024	19:00	0.4	W
7-May-2024	20:00	0.4	W
7-May-2024	21:00	0.9	W
7-May-2024	22:00	0.4	W
7-May-2024	23:00	0.9	W
8-May-2024	0:00	0.4	W
8-May-2024	1:00	0.0	W
8-May-2024	2:00	0.0	W



## Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
8-May-2024	3:00	0.0	W
8-May-2024	4:00	0.0	W
8-May-2024	5:00	0.0	W
8-May-2024	6:00	0.4	W
8-May-2024	7:00	0.0	W
8-May-2024	8:00	0.4	W
8-May-2024	9:00	0.4	W
8-May-2024	10:00	0.0	W
8-May-2024	11:00	0.0	W
8-May-2024	12:00	0.4	W
8-May-2024	13:00	0.4	W
8-May-2024	14:00	0.0	W
8-May-2024	15:00	0.0	NNW
8-May-2024	16:00	0.0	WNW
8-May-2024	17:00	0.4	NW
8-May-2024	18:00	0.4	W
8-May-2024	19:00	0.9	W
8-May-2024	20:00	1.3	W
8-May-2024	21:00	1.3	W
8-May-2024	22:00	0.4	W
8-May-2024	23:00	0.0	W
9-May-2024	0:00	0.0	W
9-May-2024	1:00	0.4	W
9-May-2024	2:00	0.0	W
9-May-2024	3:00	0.9	W
9-May-2024	4:00	0.9	W
9-May-2024	5:00	0.4	W
9-May-2024	6:00	0.9	W
9-May-2024	7:00	0.4	W
9-May-2024	8:00	2.2	W
9-May-2024	9:00	0.9	W
9-May-2024	10:00	1.8	W
9-May-2024	11:00	1.8	W
9-May-2024	12:00	1.3	W
9-May-2024	13:00	0.9	W
9-May-2024	14:00	1.3	W
9-May-2024	15:00	0.9	NNW
9-May-2024	16:00	0.4	W
9-May-2024	17:00	0.4	NW
9-May-2024	18:00	0.4	W
9-May-2024	19:00	0.9	W
9-May-2024	20:00	0.9	W
9-May-2024	21:00	0.4	W
9-May-2024	22:00	0.4	W
9-May-2024	23:00	0.9	W
10-May-2024	0:00	1.8	W
10-May-2024	1:00	1.3	W
10-May-2024	2:00	1.3	W
10-May-2024	3:00	1.3	W
10-May-2024	4:00	1.8	W
10-May-2024	5:00	1.3	W
10-May-2024	6:00	1.3	W
10-May-2024	7:00	1.3	W
10-May-2024	8:00	2.2	WSW
10-May-2024	9:00	1.8	W
10-May-2024	10:00	0.9	WSW
10-May-2024	11:00	0.9	WSW

## Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
10-May-2024	12:00	0.4	W
10-May-2024	13:00	0.9	W
10-May-2024	14:00	0.4	WNW
10-May-2024	15:00	0.9	NNW
10-May-2024	16:00	0.4	W
10-May-2024	17:00	0.9	W
10-May-2024	18:00	1.3	W
10-May-2024	19:00	0.4	W
10-May-2024	20:00	0.9	W
10-May-2024	21:00	0.4	W
10-May-2024	22:00	0.4	W
10-May-2024	23:00	0.4	SW
11-May-2024	0:00	0.0	N
11-May-2024	1:00	0.9	N
11-May-2024	2:00	0.4	N
11-May-2024	3:00	0.4	N
11-May-2024	4:00	0.9	N
11-May-2024	5:00	0.9	N
11-May-2024	6:00	0.4	N
11-May-2024	7:00	0.9	N
11-May-2024	8:00	0.4	N
11-May-2024	9:00	0.4	N
11-May-2024	10:00	0.4	N
11-May-2024	11:00	0.4	W
11-May-2024	12:00	0.4	W
11-May-2024	13:00	0.4	W
11-May-2024	14:00	0.4	W
11-May-2024	15:00	0.4	W
11-May-2024	16:00	0.0	W
11-May-2024	17:00	0.9	W
11-May-2024	18:00	1.3	W
11-May-2024	19:00	0.9	W
11-May-2024	20:00	0.4	W
11-May-2024	21:00	0.0	W
11-May-2024	22:00	0.0	W
11-May-2024	23:00	0.0	WNW
12-May-2024	0:00	0.0	WSW
12-May-2024	1:00	0.0	WSW
12-May-2024	2:00	0.0	W
12-May-2024	3:00	0.0	W
12-May-2024	4:00	0.0	---
12-May-2024	5:00	0.0	W
12-May-2024	6:00	0.0	---
12-May-2024	7:00	0.0	NW
12-May-2024	8:00	0.0	---
12-May-2024	9:00	0.0	NW
12-May-2024	10:00	0.0	SW
12-May-2024	11:00	0.0	---
12-May-2024	12:00	0.0	---
12-May-2024	13:00	0.0	ESE
12-May-2024	14:00	0.0	ENE
12-May-2024	15:00	0.0	SW
12-May-2024	16:00	0.0	N
12-May-2024	17:00	0.0	N
12-May-2024	18:00	0.0	---
12-May-2024	19:00	0.0	---
12-May-2024	20:00	0.0	---

## Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
12-May-2024	21:00	0.0	---
12-May-2024	22:00	0.0	---
12-May-2024	23:00	0.0	---
13-May-2024	0:00	0.0	---
13-May-2024	1:00	0.0	---
13-May-2024	2:00	0.0	NNE
13-May-2024	3:00	0.0	N
13-May-2024	4:00	0.0	---
13-May-2024	5:00	0.0	---
13-May-2024	6:00	0.0	---
13-May-2024	7:00	0.0	---
13-May-2024	8:00	0.4	N
13-May-2024	9:00	0.4	N
13-May-2024	10:00	0.0	N
13-May-2024	11:00	0.4	NE
13-May-2024	12:00	0.4	NNE
13-May-2024	13:00	0.0	NNE
13-May-2024	14:00	0.0	NNE
13-May-2024	15:00	0.0	NE
13-May-2024	16:00	0.9	NE
13-May-2024	17:00	0.9	NNE
13-May-2024	18:00	0.4	NNE
13-May-2024	19:00	1.8	NNE
13-May-2024	20:00	1.3	NNE
13-May-2024	21:00	1.3	NNE
13-May-2024	22:00	1.3	NNE
13-May-2024	23:00	1.8	NNE
14-May-2024	0:00	1.3	NNE
14-May-2024	1:00	1.3	NNE
14-May-2024	2:00	1.8	NNE
14-May-2024	3:00	1.8	W
14-May-2024	4:00	1.8	W
14-May-2024	5:00	1.3	W
14-May-2024	6:00	1.3	W
14-May-2024	7:00	0.9	W
14-May-2024	8:00	0.9	W
14-May-2024	9:00	0.9	W
14-May-2024	10:00	0.4	W
14-May-2024	11:00	0.4	W
14-May-2024	12:00	0.4	W
14-May-2024	13:00	0.4	W
14-May-2024	14:00	0.4	W
14-May-2024	15:00	0.4	W
14-May-2024	16:00	0.4	W
14-May-2024	17:00	0.4	WNW
14-May-2024	18:00	0.9	W
14-May-2024	19:00	0.4	W
14-May-2024	20:00	0.4	WNW
14-May-2024	21:00	0.0	W
14-May-2024	22:00	0.9	W
14-May-2024	23:00	0.4	W
15-May-2024	0:00	0.4	W
15-May-2024	1:00	0.4	W
15-May-2024	2:00	0.4	W
15-May-2024	3:00	0.4	W
15-May-2024	4:00	0.0	W
15-May-2024	5:00	0.4	W

## Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
15-May-2024	6:00	0.4	W
15-May-2024	7:00	0.0	W
15-May-2024	8:00	0.0	W
15-May-2024	9:00	0.0	W
15-May-2024	10:00	0.0	W
15-May-2024	11:00	0.4	W
15-May-2024	12:00	0.4	SSW
15-May-2024	13:00	0.4	W
15-May-2024	14:00	0.4	W
15-May-2024	15:00	0.4	WNW
15-May-2024	16:00	0.4	ENE
15-May-2024	17:00	0.0	E
15-May-2024	18:00	0.4	W
15-May-2024	19:00	0.4	W
15-May-2024	20:00	0.4	W
15-May-2024	21:00	0.0	W
15-May-2024	22:00	0.0	W
15-May-2024	23:00	0.0	---
16-May-2024	0:00	0.0	NNW
16-May-2024	1:00	0.0	NW
16-May-2024	2:00	0.0	W
16-May-2024	3:00	0.0	W
16-May-2024	4:00	0.0	W
16-May-2024	5:00	0.4	W
16-May-2024	6:00	1.3	W
16-May-2024	7:00	0.4	W
16-May-2024	8:00	0.4	W
16-May-2024	9:00	1.3	W
16-May-2024	10:00	2.2	W
16-May-2024	11:00	2.2	W
16-May-2024	12:00	1.8	W
16-May-2024	13:00	1.3	W
16-May-2024	14:00	0.9	W
16-May-2024	15:00	0.9	W
16-May-2024	16:00	1.8	W
16-May-2024	17:00	2.2	W
16-May-2024	18:00	0.4	W
16-May-2024	19:00	2.2	W
16-May-2024	20:00	1.8	W
16-May-2024	21:00	1.3	W
16-May-2024	22:00	0.9	W
16-May-2024	23:00	0.9	W
17-May-2024	0:00	0.4	W
17-May-2024	1:00	1.3	W
17-May-2024	2:00	1.3	W
17-May-2024	3:00	0.0	W
17-May-2024	4:00	0.0	W
17-May-2024	5:00	0.9	W
17-May-2024	6:00	0.9	W
17-May-2024	7:00	0.9	W
17-May-2024	8:00	0.4	W
17-May-2024	9:00	0.9	W
17-May-2024	10:00	0.4	W
17-May-2024	11:00	0.0	SSW
17-May-2024	12:00	0.4	W
17-May-2024	13:00	0.4	W
17-May-2024	14:00	0.4	NNW

## Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
17-May-2024	15:00	0.4	NNW
17-May-2024	16:00	0.0	NNW
17-May-2024	17:00	0.0	W
17-May-2024	18:00	0.0	W
17-May-2024	19:00	0.4	W
17-May-2024	20:00	0.0	W
17-May-2024	21:00	0.0	W
17-May-2024	22:00	0.4	W
17-May-2024	23:00	0.9	W
18-May-2024	0:00	0.0	W
18-May-2024	1:00	0.0	NW
18-May-2024	2:00	0.0	---
18-May-2024	3:00	0.0	---
18-May-2024	4:00	0.0	---
18-May-2024	5:00	0.0	W
18-May-2024	6:00	0.4	W
18-May-2024	7:00	0.4	W
18-May-2024	8:00	0.4	W
18-May-2024	9:00	0.4	W
18-May-2024	10:00	0.4	W
18-May-2024	11:00	0.4	W
18-May-2024	12:00	0.4	W
18-May-2024	13:00	0.9	W
18-May-2024	14:00	0.4	W
18-May-2024	15:00	1.3	W
18-May-2024	16:00	0.4	W
18-May-2024	17:00	0.4	W
18-May-2024	18:00	0.4	W
18-May-2024	19:00	0.9	W
18-May-2024	20:00	0.4	W
18-May-2024	21:00	0.9	W
18-May-2024	22:00	0.4	W
18-May-2024	23:00	0.4	W
19-May-2024	0:00	0.9	W
19-May-2024	1:00	0.9	W
19-May-2024	2:00	1.3	W
19-May-2024	3:00	0.9	W
19-May-2024	4:00	0.9	W
19-May-2024	5:00	0.9	W
19-May-2024	6:00	0.4	W
19-May-2024	7:00	1.3	W
19-May-2024	8:00	1.3	W
19-May-2024	9:00	1.3	W
19-May-2024	10:00	1.3	W
19-May-2024	11:00	0.9	W
19-May-2024	12:00	2.2	W
19-May-2024	13:00	2.7	W
19-May-2024	14:00	2.7	W
19-May-2024	15:00	2.2	W
19-May-2024	16:00	1.3	W
19-May-2024	17:00	2.2	W
19-May-2024	18:00	1.3	W
19-May-2024	19:00	1.3	W
19-May-2024	20:00	0.9	W
19-May-2024	21:00	2.7	W
19-May-2024	22:00	2.2	WSW
19-May-2024	23:00	2.7	WSW

## Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
20-May-2024	0:00	1.3	WSW
20-May-2024	1:00	2.7	WSW
20-May-2024	2:00	2.7	SW
20-May-2024	3:00	2.7	SW
20-May-2024	4:00	2.7	SW
20-May-2024	5:00	1.8	SW
20-May-2024	6:00	1.8	W
20-May-2024	7:00	3.1	WSW
20-May-2024	8:00	2.7	W
20-May-2024	9:00	2.7	W
20-May-2024	10:00	0.9	W
20-May-2024	11:00	2.2	W
20-May-2024	12:00	2.2	W
20-May-2024	13:00	2.7	WSW
20-May-2024	14:00	2.2	WSW
20-May-2024	15:00	1.3	W
20-May-2024	16:00	0.9	WSW
20-May-2024	17:00	1.8	W
20-May-2024	18:00	1.8	W
20-May-2024	19:00	1.8	W
20-May-2024	20:00	1.3	W
20-May-2024	21:00	1.3	W
20-May-2024	22:00	3.1	WSW
20-May-2024	23:00	2.2	WSW
21-May-2024	0:00	1.8	WSW
21-May-2024	1:00	1.8	WSW
21-May-2024	2:00	1.3	WSW
21-May-2024	3:00	1.8	WSW
21-May-2024	4:00	1.3	WSW
21-May-2024	5:00	0.4	WSW
21-May-2024	6:00	0.4	WSW
21-May-2024	7:00	1.8	WSW
21-May-2024	8:00	1.8	WSW
21-May-2024	9:00	0.9	WSW
21-May-2024	10:00	0.9	WSW
21-May-2024	11:00	0.9	WSW
21-May-2024	12:00	0.0	WSW
21-May-2024	13:00	0.0	WSW
21-May-2024	14:00	0.0	WSW
21-May-2024	15:00	0.4	SW
21-May-2024	16:00	0.4	SW
21-May-2024	17:00	0.9	SSW
21-May-2024	18:00	0.0	S
21-May-2024	19:00	0.0	---
21-May-2024	20:00	0.0	---
21-May-2024	21:00	0.0	---
21-May-2024	22:00	0.0	---
21-May-2024	23:00	0.0	---
22-May-2024	0:00	0.0	---
22-May-2024	1:00	0.0	---
22-May-2024	2:00	0.0	---
22-May-2024	3:00	0.0	---
22-May-2024	4:00	0.0	---
22-May-2024	5:00	0.0	---
22-May-2024	6:00	0.0	---
22-May-2024	7:00	0.0	---
22-May-2024	8:00	0.0	---

## Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
22-May-2024	9:00	0.0	SSE
22-May-2024	10:00	0.0	SE
22-May-2024	11:00	0.0	SSE
22-May-2024	12:00	0.0	---
22-May-2024	13:00	0.0	SSE
22-May-2024	14:00	0.0	S
22-May-2024	15:00	0.0	S
22-May-2024	16:00	0.4	SSW
22-May-2024	17:00	0.0	SSW
22-May-2024	18:00	0.0	SSW
22-May-2024	19:00	0.0	S
22-May-2024	20:00	0.0	W
22-May-2024	21:00	0.0	NE
22-May-2024	22:00	0.0	---
22-May-2024	23:00	0.0	NE
23-May-2024	0:00	0.0	---
23-May-2024	1:00	0.0	---
23-May-2024	2:00	0.0	---
23-May-2024	3:00	0.0	---
23-May-2024	4:00	0.0	NE
23-May-2024	5:00	0.0	---
23-May-2024	6:00	0.0	NE
23-May-2024	7:00	0.0	NE
23-May-2024	8:00	0.0	NE
23-May-2024	9:00	0.9	NE
23-May-2024	10:00	0.4	NE
23-May-2024	11:00	0.4	NE
23-May-2024	12:00	0.9	NE
23-May-2024	13:00	0.4	NE
23-May-2024	14:00	0.4	NE
23-May-2024	15:00	0.4	NE
23-May-2024	16:00	0.4	NE
23-May-2024	17:00	0.0	N
23-May-2024	18:00	0.0	N
23-May-2024	19:00	0.0	N
23-May-2024	20:00	0.0	---
23-May-2024	21:00	0.0	N
23-May-2024	22:00	0.0	N
23-May-2024	23:00	0.0	N
24-May-2024	0:00	0.0	N
24-May-2024	1:00	0.0	N
24-May-2024	2:00	0.0	N
24-May-2024	3:00	0.0	N
24-May-2024	4:00	0.0	N
24-May-2024	5:00	0.0	N
24-May-2024	6:00	0.0	N
24-May-2024	7:00	0.0	N
24-May-2024	8:00	0.9	N
24-May-2024	9:00	0.9	N
24-May-2024	10:00	0.4	N
24-May-2024	11:00	0.0	N
24-May-2024	12:00	0.0	N
24-May-2024	13:00	0.0	---
24-May-2024	14:00	0.0	---
24-May-2024	15:00	0.0	---
24-May-2024	16:00	0.0	---
24-May-2024	17:00	0.0	N

## Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
24-May-2024	18:00	0.0	N
24-May-2024	19:00	0.0	N
24-May-2024	20:00	0.4	N
24-May-2024	21:00	0.4	N
24-May-2024	22:00	0.0	N
24-May-2024	23:00	0.4	N
25-May-2024	0:00	0.0	N
25-May-2024	1:00	0.0	N
25-May-2024	2:00	0.0	---
25-May-2024	3:00	0.0	---
25-May-2024	4:00	0.0	---
25-May-2024	5:00	0.0	---
25-May-2024	6:00	0.0	N
25-May-2024	7:00	0.0	---
25-May-2024	8:00	0.0	---
25-May-2024	9:00	0.0	N
25-May-2024	10:00	0.0	N
25-May-2024	11:00	0.0	N
25-May-2024	12:00	0.4	N
25-May-2024	13:00	0.9	ENE
25-May-2024	14:00	0.9	ENE
25-May-2024	15:00	0.9	ENE
25-May-2024	16:00	0.4	N
25-May-2024	17:00	0.4	N
25-May-2024	18:00	0.4	N
25-May-2024	19:00	0.4	N
25-May-2024	20:00	0.0	N
25-May-2024	21:00	0.0	N
25-May-2024	22:00	0.0	N
25-May-2024	23:00	0.0	---
26-May-2024	0:00	0.0	N
26-May-2024	1:00	0.0	---
26-May-2024	2:00	0.0	ENE
26-May-2024	3:00	0.0	---
26-May-2024	4:00	0.0	---
26-May-2024	5:00	0.0	---
26-May-2024	6:00	0.0	---
26-May-2024	7:00	0.0	---
26-May-2024	8:00	0.0	---
26-May-2024	9:00	0.0	---
26-May-2024	10:00	0.0	---
26-May-2024	11:00	0.0	---
26-May-2024	12:00	0.0	---
26-May-2024	13:00	0.0	NNE
26-May-2024	14:00	0.4	NNE
26-May-2024	15:00	0.0	NNE
26-May-2024	16:00	0.0	NNE
26-May-2024	17:00	0.0	NE
26-May-2024	18:00	0.0	NE
26-May-2024	19:00	0.0	E
26-May-2024	20:00	0.0	ENE
26-May-2024	21:00	0.0	WSW
26-May-2024	22:00	0.0	---
26-May-2024	23:00	0.0	WSW
27-May-2024	0:00	0.0	---
27-May-2024	1:00	0.0	---
27-May-2024	2:00	0.0	---



## Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
27-May-2024	3:00	0.0	WNW
27-May-2024	4:00	0.0	ENE
27-May-2024	5:00	0.0	NNW
27-May-2024	6:00	0.0	ENE
27-May-2024	7:00	0.0	ENE
27-May-2024	8:00	0.0	ENE
27-May-2024	9:00	0.0	E
27-May-2024	10:00	0.0	ENE
27-May-2024	11:00	0.4	E
27-May-2024	12:00	0.9	ENE
27-May-2024	13:00	0.9	ENE
27-May-2024	14:00	0.4	E
27-May-2024	15:00	0.4	E
27-May-2024	16:00	0.4	E
27-May-2024	17:00	0.4	E
27-May-2024	18:00	0.4	E
27-May-2024	19:00	0.0	E
27-May-2024	20:00	0.0	E
27-May-2024	21:00	0.0	---
27-May-2024	22:00	0.0	---
27-May-2024	23:00	0.0	E
28-May-2024	0:00	0.0	---
28-May-2024	1:00	0.0	ENE
28-May-2024	2:00	0.0	---
28-May-2024	3:00	0.0	---
28-May-2024	4:00	0.0	---
28-May-2024	5:00	0.0	---
28-May-2024	6:00	0.0	---
28-May-2024	7:00	0.0	WSW
28-May-2024	8:00	0.0	---
28-May-2024	9:00	0.0	SSW
28-May-2024	10:00	0.0	N
28-May-2024	11:00	0.0	N
28-May-2024	12:00	0.4	N
28-May-2024	13:00	0.0	N
28-May-2024	14:00	0.4	N
28-May-2024	15:00	0.9	N
28-May-2024	16:00	0.4	N
28-May-2024	17:00	0.4	W
28-May-2024	18:00	0.0	W
28-May-2024	19:00	0.4	N
28-May-2024	20:00	0.9	N
28-May-2024	21:00	3.6	N
28-May-2024	22:00	1.8	N
28-May-2024	23:00	2.2	N
29-May-2024	0:00	4.9	N
29-May-2024	1:00	3.1	N
29-May-2024	2:00	4.5	N
29-May-2024	3:00	3.1	N
29-May-2024	4:00	3.1	N
29-May-2024	5:00	1.3	N
29-May-2024	6:00	1.8	N
29-May-2024	7:00	1.3	N
29-May-2024	8:00	1.8	N
29-May-2024	9:00	1.3	N
29-May-2024	10:00	1.3	N
29-May-2024	11:00	1.3	N

## Appendix I - Wind Data

Date	Time	Wind Speed m/s	Direction
29-May-2024	12:00	1.3	N
29-May-2024	13:00	1.3	N
29-May-2024	14:00	1.3	N
29-May-2024	15:00	0.9	WSW
29-May-2024	16:00	1.3	WSW
29-May-2024	17:00	1.3	WSW
29-May-2024	18:00	1.3	W
29-May-2024	19:00	0.9	W
29-May-2024	20:00	2.7	W
29-May-2024	21:00	3.1	W
29-May-2024	22:00	1.3	N
29-May-2024	23:00	1.3	W
30-May-2024	0:00	1.3	W
30-May-2024	1:00	1.8	W
30-May-2024	2:00	1.8	W
30-May-2024	3:00	2.2	W
30-May-2024	4:00	1.8	W
30-May-2024	5:00	1.8	W
30-May-2024	6:00	1.3	W
30-May-2024	7:00	0.4	W
30-May-2024	8:00	1.3	W
30-May-2024	9:00	1.3	W
30-May-2024	10:00	1.3	W
30-May-2024	11:00	1.8	W
30-May-2024	12:00	1.3	W
30-May-2024	13:00	1.8	W
30-May-2024	14:00	2.2	W
30-May-2024	15:00	1.8	W
30-May-2024	16:00	1.3	W
30-May-2024	17:00	0.4	W
30-May-2024	18:00	0.9	W
30-May-2024	19:00	1.3	W
30-May-2024	20:00	1.3	W
30-May-2024	21:00	1.3	W
30-May-2024	22:00	1.3	W
30-May-2024	23:00	1.3	WSW
31-May-2024	0:00	0.9	WSW
31-May-2024	1:00	0.9	WSW
31-May-2024	2:00	1.3	WSW
31-May-2024	3:00	1.3	WSW
31-May-2024	4:00	0.9	WSW
31-May-2024	5:00	1.8	WSW
31-May-2024	6:00	0.9	WSW
31-May-2024	7:00	0.4	WSW
31-May-2024	8:00	0.4	WSW
31-May-2024	9:00	0.0	WSW
31-May-2024	10:00	0.0	WSW
31-May-2024	11:00	0.0	WSW
31-May-2024	12:00	0.0	WSW
31-May-2024	13:00	0.4	WSW
31-May-2024	14:00	0.0	W
31-May-2024	15:00	0.4	WSW
31-May-2024	16:00	0.0	WSW
31-May-2024	17:00	0.0	E
31-May-2024	18:00	0.0	W
31-May-2024	19:00	0.0	W
31-May-2024	20:00	0.0	WSW

## Appendix I - Wind Data

<b>Date</b>	<b>Time</b>	<b>Wind Speed m/s</b>	<b>Direction</b>
31-May-2024	21:00	0.0	WSW
31-May-2024	22:00	0.0	WSW
31-May-2024	23:00	0.4	WSW

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
1-Jun-2024	0:00	0.0	WSW
1-Jun-2024	1:00	0.0	W
1-Jun-2024	2:00	0.0	WSW
1-Jun-2024	3:00	0.4	WSW
1-Jun-2024	4:00	0.0	WSW
1-Jun-2024	5:00	0.0	---
1-Jun-2024	6:00	0.0	ENE
1-Jun-2024	7:00	0.4	WSW
1-Jun-2024	8:00	0.4	ENE
1-Jun-2024	9:00	0.4	ENE
1-Jun-2024	10:00	0.9	ENE
1-Jun-2024	11:00	0.4	ENE
1-Jun-2024	12:00	0.4	E
1-Jun-2024	13:00	0.0	ENE
1-Jun-2024	14:00	0.4	ENE
1-Jun-2024	15:00	0.0	ENE
1-Jun-2024	16:00	0.4	ENE
1-Jun-2024	17:00	2.2	ENE
1-Jun-2024	18:00	2.2	E
1-Jun-2024	19:00	1.8	ENE
1-Jun-2024	20:00	0.4	E
1-Jun-2024	21:00	0.4	E
1-Jun-2024	22:00	0.9	E
1-Jun-2024	23:00	0.4	E
2-Jun-2024	0:00	0.4	E
2-Jun-2024	1:00	0.0	E
2-Jun-2024	2:00	0.0	ENE
2-Jun-2024	3:00	0.0	---
2-Jun-2024	4:00	0.0	---
2-Jun-2024	5:00	0.0	---
2-Jun-2024	6:00	0.0	---
2-Jun-2024	7:00	0.0	ENE
2-Jun-2024	8:00	0.0	---
2-Jun-2024	9:00	0.0	E
2-Jun-2024	10:00	0.0	ENE
2-Jun-2024	11:00	0.0	E
2-Jun-2024	12:00	0.9	E
2-Jun-2024	13:00	0.0	ENE
2-Jun-2024	14:00	0.0	E
2-Jun-2024	15:00	0.0	E
2-Jun-2024	16:00	0.0	---
2-Jun-2024	17:00	0.0	E
2-Jun-2024	18:00	0.0	E
2-Jun-2024	19:00	0.0	---
2-Jun-2024	20:00	0.0	---
2-Jun-2024	21:00	0.0	---
2-Jun-2024	22:00	0.0	---
2-Jun-2024	23:00	0.0	---
3-Jun-2024	0:00	0.0	---
3-Jun-2024	1:00	0.0	---
3-Jun-2024	2:00	0.0	---
3-Jun-2024	3:00	0.0	---
3-Jun-2024	4:00	0.0	---
3-Jun-2024	5:00	0.0	---
3-Jun-2024	6:00	0.0	---
3-Jun-2024	7:00	0.0	---
3-Jun-2024	8:00	0.0	---

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
3-Jun-2024	9:00	0.0	---
3-Jun-2024	10:00	0.0	---
3-Jun-2024	11:00	0.0	---
3-Jun-2024	12:00	0.0	---
3-Jun-2024	13:00	0.0	---
3-Jun-2024	14:00	0.0	---
3-Jun-2024	15:00	0.0	---
3-Jun-2024	16:00	0.0	---
3-Jun-2024	17:00	0.0	---
3-Jun-2024	18:00	0.0	---
3-Jun-2024	19:00	0.0	---
3-Jun-2024	20:00	0.0	---
3-Jun-2024	21:00	0.0	---
3-Jun-2024	22:00	0.0	---
3-Jun-2024	23:00	0.0	---
4-Jun-2024	0:00	0.0	---
4-Jun-2024	1:00	0.0	---
4-Jun-2024	2:00	0.0	---
4-Jun-2024	3:00	0.0	---
4-Jun-2024	4:00	0.0	---
4-Jun-2024	5:00	0.0	---
4-Jun-2024	6:00	0.0	---
4-Jun-2024	7:00	0.0	---
4-Jun-2024	8:00	0.0	---
4-Jun-2024	9:00	0.0	---
4-Jun-2024	10:00	0.0	---
4-Jun-2024	11:00	0.0	---
4-Jun-2024	12:00	0.0	---
4-Jun-2024	13:00	0.0	---
4-Jun-2024	14:00	1.3	WSW
4-Jun-2024	15:00	1.8	WSW
4-Jun-2024	16:00	2.7	WSW
4-Jun-2024	17:00	0.9	WSW
4-Jun-2024	18:00	1.8	WSW
4-Jun-2024	19:00	3.1	WSW
4-Jun-2024	20:00	1.8	WSW
4-Jun-2024	21:00	2.2	WSW
4-Jun-2024	22:00	1.3	WSW
4-Jun-2024	23:00	1.3	WSW
5-Jun-2024	0:00	2.2	WSW
5-Jun-2024	1:00	1.8	WSW
5-Jun-2024	2:00	1.8	WSW
5-Jun-2024	3:00	2.7	WSW
5-Jun-2024	4:00	2.2	WSW
5-Jun-2024	5:00	1.8	WSW
5-Jun-2024	6:00	2.2	WSW
5-Jun-2024	7:00	0.9	WSW
5-Jun-2024	8:00	0.9	WSW
5-Jun-2024	9:00	0.9	WSW
5-Jun-2024	10:00	1.3	WSW
5-Jun-2024	11:00	1.8	WSW
5-Jun-2024	12:00	1.8	WSW
5-Jun-2024	13:00	0.9	WSW
5-Jun-2024	14:00	0.9	WSW
5-Jun-2024	15:00	0.4	SW
5-Jun-2024	16:00	0.4	WSW
5-Jun-2024	17:00	1.3	WSW

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
5-Jun-2024	18:00	1.3	WSW
5-Jun-2024	19:00	0.4	WSW
5-Jun-2024	20:00	0.4	WSW
5-Jun-2024	21:00	0.0	WSW
5-Jun-2024	22:00	0.4	WSW
5-Jun-2024	23:00	0.0	WSW
6-Jun-2024	0:00	0.4	WSW
6-Jun-2024	1:00	0.4	WSW
6-Jun-2024	2:00	0.0	WSW
6-Jun-2024	3:00	0.4	WSW
6-Jun-2024	4:00	0.4	WSW
6-Jun-2024	5:00	0.0	---
6-Jun-2024	6:00	0.0	---
6-Jun-2024	7:00	0.0	WSW
6-Jun-2024	8:00	0.4	WSW
6-Jun-2024	9:00	0.4	WSW
6-Jun-2024	10:00	0.0	WSW
6-Jun-2024	11:00	0.0	WSW
6-Jun-2024	12:00	0.0	S
6-Jun-2024	13:00	0.0	WSW
6-Jun-2024	14:00	0.0	WSW
6-Jun-2024	15:00	0.0	---
6-Jun-2024	16:00	0.0	WSW
6-Jun-2024	17:00	0.0	WSW
6-Jun-2024	18:00	0.0	WSW
6-Jun-2024	19:00	0.0	W
6-Jun-2024	20:00	0.0	WSW
6-Jun-2024	21:00	0.0	---
6-Jun-2024	22:00	0.9	WSW
6-Jun-2024	23:00	0.4	WSW
7-Jun-2024	0:00	0.4	WSW
7-Jun-2024	1:00	0.0	---
7-Jun-2024	2:00	0.0	WSW
7-Jun-2024	3:00	0.0	WSW
7-Jun-2024	4:00	0.0	WSW
7-Jun-2024	5:00	0.0	---
7-Jun-2024	6:00	0.4	WSW
7-Jun-2024	7:00	0.9	WSW
7-Jun-2024	8:00	0.9	WSW
7-Jun-2024	9:00	0.9	WSW
7-Jun-2024	10:00	1.3	WSW
7-Jun-2024	11:00	1.3	WSW
7-Jun-2024	12:00	1.3	WSW
7-Jun-2024	13:00	1.3	WSW
7-Jun-2024	14:00	0.9	WSW
7-Jun-2024	15:00	0.9	WSW
7-Jun-2024	16:00	0.9	WSW
7-Jun-2024	17:00	1.3	WSW
7-Jun-2024	18:00	1.3	WSW
7-Jun-2024	19:00	1.3	WSW
7-Jun-2024	20:00	0.4	WSW
7-Jun-2024	21:00	1.8	WSW
7-Jun-2024	22:00	0.4	WSW
7-Jun-2024	23:00	0.4	WSW
8-Jun-2024	0:00	0.9	WSW
8-Jun-2024	1:00	1.8	WSW
8-Jun-2024	2:00	1.3	WSW

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
8-Jun-2024	3:00	0.9	WSW
8-Jun-2024	4:00	0.9	WSW
8-Jun-2024	5:00	0.4	WSW
8-Jun-2024	6:00	1.3	WSW
8-Jun-2024	7:00	0.9	WSW
8-Jun-2024	8:00	2.2	WSW
8-Jun-2024	9:00	1.3	WSW
8-Jun-2024	10:00	0.4	WSW
8-Jun-2024	11:00	1.3	WSW
8-Jun-2024	12:00	0.9	WSW
8-Jun-2024	13:00	0.9	WSW
8-Jun-2024	14:00	1.8	WSW
8-Jun-2024	15:00	0.9	WSW
8-Jun-2024	16:00	0.9	WSW
8-Jun-2024	17:00	1.3	WSW
8-Jun-2024	18:00	2.2	WSW
8-Jun-2024	19:00	2.7	WSW
8-Jun-2024	20:00	1.8	WSW
8-Jun-2024	21:00	0.4	WSW
8-Jun-2024	22:00	0.0	WSW
8-Jun-2024	23:00	0.0	WSW
9-Jun-2024	0:00	0.0	W
9-Jun-2024	1:00	0.0	WSW
9-Jun-2024	2:00	0.0	NNW
9-Jun-2024	3:00	0.0	W
9-Jun-2024	4:00	0.0	---
9-Jun-2024	5:00	0.0	---
9-Jun-2024	6:00	0.0	W
9-Jun-2024	7:00	0.0	NW
9-Jun-2024	8:00	0.0	WSW
9-Jun-2024	9:00	1.3	E
9-Jun-2024	10:00	0.0	---
9-Jun-2024	11:00	0.0	---
9-Jun-2024	12:00	0.0	WNW
9-Jun-2024	13:00	0.0	W
9-Jun-2024	14:00	0.4	WSW
9-Jun-2024	15:00	0.4	WSW
9-Jun-2024	16:00	0.4	WSW
9-Jun-2024	17:00	0.4	WSW
9-Jun-2024	18:00	0.4	WSW
9-Jun-2024	19:00	0.0	NW
9-Jun-2024	20:00	0.0	NW
9-Jun-2024	21:00	0.0	WSW
9-Jun-2024	22:00	0.0	WSW
9-Jun-2024	23:00	0.0	WSW
10-Jun-2024	0:00	0.0	WNW
10-Jun-2024	1:00	0.0	W
10-Jun-2024	2:00	0.0	WSW
10-Jun-2024	3:00	0.0	WSW
10-Jun-2024	4:00	0.0	---
10-Jun-2024	5:00	0.0	WSW
10-Jun-2024	6:00	0.0	---
10-Jun-2024	7:00	0.0	---
10-Jun-2024	8:00	0.0	---
10-Jun-2024	9:00	0.0	---
10-Jun-2024	10:00	0.4	WSW
10-Jun-2024	11:00	0.4	E

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
10-Jun-2024	12:00	0.9	E
10-Jun-2024	13:00	0.4	ENE
10-Jun-2024	14:00	0.9	E
10-Jun-2024	15:00	0.0	ENE
10-Jun-2024	16:00	0.0	E
10-Jun-2024	17:00	0.4	E
10-Jun-2024	18:00	0.0	ENE
10-Jun-2024	19:00	0.0	ENE
10-Jun-2024	20:00	0.0	ENE
10-Jun-2024	21:00	0.0	ENE
10-Jun-2024	22:00	0.0	ENE
10-Jun-2024	23:00	0.0	---
11-Jun-2024	0:00	0.0	---
11-Jun-2024	1:00	0.0	---
11-Jun-2024	2:00	0.0	---
11-Jun-2024	3:00	0.0	---
11-Jun-2024	4:00	0.0	NW
11-Jun-2024	5:00	0.0	NW
11-Jun-2024	6:00	0.0	NW
11-Jun-2024	7:00	0.0	---
11-Jun-2024	8:00	0.0	WNW
11-Jun-2024	9:00	0.0	WNW
11-Jun-2024	10:00	0.0	W
11-Jun-2024	11:00	0.4	E
11-Jun-2024	12:00	0.4	E
11-Jun-2024	13:00	0.4	ENE
11-Jun-2024	14:00	0.4	E
11-Jun-2024	15:00	0.0	ENE
11-Jun-2024	16:00	0.4	ENE
11-Jun-2024	17:00	0.4	E
11-Jun-2024	18:00	0.4	E
11-Jun-2024	19:00	0.0	E
11-Jun-2024	20:00	0.0	---
11-Jun-2024	21:00	0.0	---
11-Jun-2024	22:00	0.0	---
11-Jun-2024	23:00	0.0	---
12-Jun-2024	0:00	0.0	---
12-Jun-2024	1:00	0.0	---
12-Jun-2024	2:00	0.0	---
12-Jun-2024	3:00	0.0	---
12-Jun-2024	4:00	0.0	---
12-Jun-2024	5:00	0.0	NNW
12-Jun-2024	6:00	0.0	---
12-Jun-2024	7:00	0.0	---
12-Jun-2024	8:00	0.0	E
12-Jun-2024	9:00	0.0	E
12-Jun-2024	10:00	0.4	E
12-Jun-2024	11:00	0.9	E
12-Jun-2024	12:00	0.9	E
12-Jun-2024	13:00	1.3	E
12-Jun-2024	14:00	0.4	ENE
12-Jun-2024	15:00	0.4	ENE
12-Jun-2024	16:00	0.9	ENE
12-Jun-2024	17:00	0.0	ENE
12-Jun-2024	18:00	0.0	---
12-Jun-2024	19:00	0.0	---
12-Jun-2024	20:00	0.0	---



## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
12-Jun-2024	21:00	0.0	---
12-Jun-2024	22:00	0.0	ENE
12-Jun-2024	23:00	0.0	ENE
13-Jun-2024	0:00	0.0	ENE
13-Jun-2024	1:00	0.0	---
13-Jun-2024	2:00	0.0	---
13-Jun-2024	3:00	0.0	---
13-Jun-2024	4:00	0.0	ENE
13-Jun-2024	5:00	0.0	ENE
13-Jun-2024	6:00	0.0	ENE
13-Jun-2024	7:00	0.0	ENE
13-Jun-2024	8:00	0.0	ENE
13-Jun-2024	9:00	0.0	ENE
13-Jun-2024	10:00	0.4	E
13-Jun-2024	11:00	1.3	E
13-Jun-2024	12:00	1.3	E
13-Jun-2024	13:00	1.3	E
13-Jun-2024	14:00	1.8	E
13-Jun-2024	15:00	1.3	E
13-Jun-2024	16:00	0.9	ENE
13-Jun-2024	17:00	0.4	ENE
13-Jun-2024	18:00	0.4	ENE
13-Jun-2024	19:00	0.0	ENE
13-Jun-2024	20:00	0.0	ENE
13-Jun-2024	21:00	0.0	ENE
13-Jun-2024	22:00	0.0	---
13-Jun-2024	23:00	0.0	---
14-Jun-2024	0:00	0.0	---
14-Jun-2024	1:00	0.0	---
14-Jun-2024	2:00	0.0	ENE
14-Jun-2024	3:00	0.0	ENE
14-Jun-2024	4:00	0.0	ENE
14-Jun-2024	5:00	0.0	ENE
14-Jun-2024	6:00	0.0	E
14-Jun-2024	7:00	0.0	E
14-Jun-2024	8:00	0.0	---
14-Jun-2024	9:00	0.0	NNW
14-Jun-2024	10:00	0.4	ENE
14-Jun-2024	11:00	0.0	W
14-Jun-2024	12:00	0.0	WNW
14-Jun-2024	13:00	0.0	---
14-Jun-2024	14:00	0.0	---
14-Jun-2024	15:00	0.0	---
14-Jun-2024	16:00	0.0	E
14-Jun-2024	17:00	0.0	ENE
14-Jun-2024	18:00	0.0	---
14-Jun-2024	19:00	0.0	---
14-Jun-2024	20:00	0.0	---
14-Jun-2024	21:00	0.0	---
14-Jun-2024	22:00	0.0	---
14-Jun-2024	23:00	0.0	ENE
15-Jun-2024	0:00	0.0	---
15-Jun-2024	1:00	0.0	ENE
15-Jun-2024	2:00	0.0	ENE
15-Jun-2024	3:00	0.0	ENE
15-Jun-2024	4:00	0.0	---
15-Jun-2024	5:00	0.0	ENE

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
15-Jun-2024	6:00	0.4	ENE
15-Jun-2024	7:00	0.9	E
15-Jun-2024	8:00	0.9	E
15-Jun-2024	9:00	0.0	---
15-Jun-2024	10:00	0.0	---
15-Jun-2024	11:00	0.0	---
15-Jun-2024	12:00	0.0	---
15-Jun-2024	13:00	0.0	---
15-Jun-2024	14:00	0.4	E
15-Jun-2024	15:00	0.0	W
15-Jun-2024	16:00	0.9	E
15-Jun-2024	17:00	0.9	WNW
15-Jun-2024	18:00	0.0	WNW
15-Jun-2024	19:00	1.3	E
15-Jun-2024	20:00	0.0	---
15-Jun-2024	21:00	0.0	---
15-Jun-2024	22:00	0.0	WNW
15-Jun-2024	23:00	0.0	---
16-Jun-2024	0:00	0.0	WNW
16-Jun-2024	1:00	0.0	WNW
16-Jun-2024	2:00	0.4	WNW
16-Jun-2024	3:00	0.4	WNW
16-Jun-2024	4:00	0.0	WNW
16-Jun-2024	5:00	0.4	WNW
16-Jun-2024	6:00	1.3	WNW
16-Jun-2024	7:00	0.9	WNW
16-Jun-2024	8:00	0.0	WNW
16-Jun-2024	9:00	0.0	WSW
16-Jun-2024	10:00	0.4	ENE
16-Jun-2024	11:00	0.9	ENE
16-Jun-2024	12:00	0.4	ENE
16-Jun-2024	13:00	0.9	E
16-Jun-2024	14:00	0.0	E
16-Jun-2024	15:00	0.9	E
16-Jun-2024	16:00	0.4	ENE
16-Jun-2024	17:00	0.4	ENE
16-Jun-2024	18:00	0.0	ENE
16-Jun-2024	19:00	0.0	E
16-Jun-2024	20:00	0.0	E
16-Jun-2024	21:00	0.0	ENE
16-Jun-2024	22:00	0.0	---
16-Jun-2024	23:00	0.0	N
17-Jun-2024	0:00	0.0	NNW
17-Jun-2024	1:00	0.0	ENE
17-Jun-2024	2:00	0.0	ENE
17-Jun-2024	3:00	0.0	ENE
17-Jun-2024	4:00	0.0	---
17-Jun-2024	5:00	0.0	---
17-Jun-2024	6:00	0.0	ENE
17-Jun-2024	7:00	0.0	ENE
17-Jun-2024	8:00	0.0	ENE
17-Jun-2024	9:00	0.0	ENE
17-Jun-2024	10:00	0.4	ENE
17-Jun-2024	11:00	0.4	ENE
17-Jun-2024	12:00	0.4	ENE
17-Jun-2024	13:00	0.4	ENE
17-Jun-2024	14:00	0.4	ENE

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
17-Jun-2024	15:00	0.9	ENE
17-Jun-2024	16:00	0.4	ENE
17-Jun-2024	17:00	0.4	ENE
17-Jun-2024	18:00	0.4	ENE
17-Jun-2024	19:00	0.0	ENE
17-Jun-2024	20:00	0.0	ENE
17-Jun-2024	21:00	0.0	ENE
17-Jun-2024	22:00	0.0	ENE
17-Jun-2024	23:00	0.0	ENE
18-Jun-2024	0:00	0.0	ENE
18-Jun-2024	1:00	0.0	ENE
18-Jun-2024	2:00	0.0	ENE
18-Jun-2024	3:00	0.0	ENE
18-Jun-2024	4:00	0.0	ENE
18-Jun-2024	5:00	0.0	NW
18-Jun-2024	6:00	0.0	---
18-Jun-2024	7:00	0.0	N
18-Jun-2024	8:00	0.0	N
18-Jun-2024	9:00	0.0	ENE
18-Jun-2024	10:00	0.4	ENE
18-Jun-2024	11:00	0.0	ENE
18-Jun-2024	12:00	0.4	ENE
18-Jun-2024	13:00	0.4	ENE
18-Jun-2024	14:00	0.4	ENE
18-Jun-2024	15:00	0.4	ENE
18-Jun-2024	16:00	0.0	ENE
18-Jun-2024	17:00	0.0	ENE
18-Jun-2024	18:00	0.0	ENE
18-Jun-2024	19:00	0.0	ENE
18-Jun-2024	20:00	0.0	ENE
18-Jun-2024	21:00	0.0	ENE
18-Jun-2024	22:00	0.0	ENE
18-Jun-2024	23:00	0.0	N
19-Jun-2024	0:00	0.0	---
19-Jun-2024	1:00	0.0	ENE
19-Jun-2024	2:00	0.0	ENE
19-Jun-2024	3:00	0.0	ENE
19-Jun-2024	4:00	0.0	N
19-Jun-2024	5:00	0.0	ENE
19-Jun-2024	6:00	0.0	NNE
19-Jun-2024	7:00	0.0	N
19-Jun-2024	8:00	0.0	ENE
19-Jun-2024	9:00	0.0	ENE
19-Jun-2024	10:00	0.4	ENE
19-Jun-2024	11:00	0.4	ENE
19-Jun-2024	12:00	0.4	ENE
19-Jun-2024	13:00	0.9	ENE
19-Jun-2024	14:00	0.4	ENE
19-Jun-2024	15:00	0.0	ENE
19-Jun-2024	16:00	0.9	ENE
19-Jun-2024	17:00	0.4	ENE
19-Jun-2024	18:00	0.4	ENE
19-Jun-2024	19:00	0.0	---
19-Jun-2024	20:00	0.0	NW
19-Jun-2024	21:00	0.0	NW
19-Jun-2024	22:00	0.0	---
19-Jun-2024	23:00	0.0	---

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
20-Jun-2024	0:00	0.0	NW
20-Jun-2024	1:00	0.0	NW
20-Jun-2024	2:00	0.0	---
20-Jun-2024	3:00	0.0	---
20-Jun-2024	4:00	0.0	---
20-Jun-2024	5:00	0.0	---
20-Jun-2024	6:00	0.0	---
20-Jun-2024	7:00	0.0	WNW
20-Jun-2024	8:00	0.0	NW
20-Jun-2024	9:00	0.4	W
20-Jun-2024	10:00	0.0	ENE
20-Jun-2024	11:00	0.4	ENE
20-Jun-2024	12:00	0.4	ENE
20-Jun-2024	13:00	0.4	ENE
20-Jun-2024	14:00	0.4	ENE
20-Jun-2024	15:00	0.9	ENE
20-Jun-2024	16:00	0.9	ENE
20-Jun-2024	17:00	0.4	ENE
20-Jun-2024	18:00	0.4	NW
20-Jun-2024	19:00	0.4	NW
20-Jun-2024	20:00	0.0	NNW
20-Jun-2024	21:00	0.0	NNW
20-Jun-2024	22:00	0.0	---
20-Jun-2024	23:00	0.0	NW
21-Jun-2024	0:00	0.0	---
21-Jun-2024	1:00	0.0	---
21-Jun-2024	2:00	0.0	---
21-Jun-2024	3:00	0.0	---
21-Jun-2024	4:00	0.0	NW
21-Jun-2024	5:00	0.0	WNW
21-Jun-2024	6:00	0.0	NW
21-Jun-2024	7:00	0.0	NW
21-Jun-2024	8:00	0.0	---
21-Jun-2024	9:00	0.0	WNW
21-Jun-2024	10:00	0.4	E
21-Jun-2024	11:00	0.9	E
21-Jun-2024	12:00	0.9	E
21-Jun-2024	13:00	1.3	E
21-Jun-2024	14:00	1.3	ENE
21-Jun-2024	15:00	0.9	ENE
21-Jun-2024	16:00	0.4	ENE
21-Jun-2024	17:00	0.4	ENE
21-Jun-2024	18:00	0.0	ENE
21-Jun-2024	19:00	0.0	ENE
21-Jun-2024	20:00	0.0	ENE
21-Jun-2024	21:00	0.0	---
21-Jun-2024	22:00	0.0	N
21-Jun-2024	23:00	0.0	---
22-Jun-2024	0:00	0.0	---
22-Jun-2024	1:00	0.0	WNW
22-Jun-2024	2:00	0.0	WSW
22-Jun-2024	3:00	0.0	---
22-Jun-2024	4:00	0.0	---
22-Jun-2024	5:00	0.0	---
22-Jun-2024	6:00	0.0	---
22-Jun-2024	7:00	0.0	---
22-Jun-2024	8:00	0.0	W

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
22-Jun-2024	9:00	0.0	W
22-Jun-2024	10:00	0.0	WNW
22-Jun-2024	11:00	0.0	W
22-Jun-2024	12:00	0.4	E
22-Jun-2024	13:00	0.9	ENE
22-Jun-2024	14:00	0.9	ENE
22-Jun-2024	15:00	1.3	E
22-Jun-2024	16:00	0.9	E
22-Jun-2024	17:00	0.4	E
22-Jun-2024	18:00	0.0	ENE
22-Jun-2024	19:00	0.0	NNW
22-Jun-2024	20:00	0.4	W
22-Jun-2024	21:00	0.4	W
22-Jun-2024	22:00	0.0	W
22-Jun-2024	23:00	0.0	W
23-Jun-2024	0:00	0.0	W
23-Jun-2024	1:00	0.0	---
23-Jun-2024	2:00	0.0	NNW
23-Jun-2024	3:00	0.0	NW
23-Jun-2024	4:00	0.0	WNW
23-Jun-2024	5:00	0.0	NW
23-Jun-2024	6:00	0.0	---
23-Jun-2024	7:00	0.0	---
23-Jun-2024	8:00	0.0	NW
23-Jun-2024	9:00	0.0	ENE
23-Jun-2024	10:00	0.4	ENE
23-Jun-2024	11:00	0.4	ENE
23-Jun-2024	12:00	0.4	ENE
23-Jun-2024	13:00	0.4	ENE
23-Jun-2024	14:00	0.4	ENE
23-Jun-2024	15:00	0.4	ENE
23-Jun-2024	16:00	0.4	ENE
23-Jun-2024	17:00	0.9	NW
23-Jun-2024	18:00	0.4	NW
23-Jun-2024	19:00	0.4	W
23-Jun-2024	20:00	0.0	NNW
23-Jun-2024	21:00	0.0	WNW
23-Jun-2024	22:00	0.0	WNW
23-Jun-2024	23:00	0.0	NW
24-Jun-2024	0:00	0.0	WNW
24-Jun-2024	1:00	0.0	WNW
24-Jun-2024	2:00	0.0	WNW
24-Jun-2024	3:00	0.0	W
24-Jun-2024	4:00	0.0	W
24-Jun-2024	5:00	0.0	W
24-Jun-2024	6:00	0.0	W
24-Jun-2024	7:00	0.0	---
24-Jun-2024	8:00	0.4	ENE
24-Jun-2024	9:00	0.0	ENE
24-Jun-2024	10:00	0.0	---
24-Jun-2024	11:00	0.0	ENE
24-Jun-2024	12:00	0.4	ENE
24-Jun-2024	13:00	0.4	ENE
24-Jun-2024	14:00	0.9	ENE
24-Jun-2024	15:00	0.0	ENE
24-Jun-2024	16:00	0.4	E
24-Jun-2024	17:00	0.0	ENE

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
24-Jun-2024	18:00	0.0	ENE
24-Jun-2024	19:00	0.0	NW
24-Jun-2024	20:00	0.0	NNW
24-Jun-2024	21:00	0.0	NW
24-Jun-2024	22:00	0.0	NW
24-Jun-2024	23:00	0.0	WNW
25-Jun-2024	0:00	0.0	WNW
25-Jun-2024	1:00	0.0	---
25-Jun-2024	2:00	0.0	NNW
25-Jun-2024	3:00	0.0	NW
25-Jun-2024	4:00	0.0	NNW
25-Jun-2024	5:00	0.0	W
25-Jun-2024	6:00	0.0	W
25-Jun-2024	7:00	0.0	W
25-Jun-2024	8:00	0.0	ENE
25-Jun-2024	9:00	0.0	ENE
25-Jun-2024	10:00	0.0	WNW
25-Jun-2024	11:00	0.4	E
25-Jun-2024	12:00	0.4	ENE
25-Jun-2024	13:00	0.4	ENE
25-Jun-2024	14:00	0.9	ENE
25-Jun-2024	15:00	0.4	ENE
25-Jun-2024	16:00	0.0	ENE
25-Jun-2024	17:00	0.0	ENE
25-Jun-2024	18:00	0.0	ENE
25-Jun-2024	19:00	0.0	ENE
25-Jun-2024	20:00	0.0	---
25-Jun-2024	21:00	0.0	---
25-Jun-2024	22:00	0.4	NW
25-Jun-2024	23:00	0.0	W
26-Jun-2024	0:00	0.0	NW
26-Jun-2024	1:00	0.0	W
26-Jun-2024	2:00	0.4	WNW
26-Jun-2024	3:00	0.0	W
26-Jun-2024	4:00	0.0	---
26-Jun-2024	5:00	0.0	WNW
26-Jun-2024	6:00	0.0	WNW
26-Jun-2024	7:00	0.0	W
26-Jun-2024	8:00	0.4	W
26-Jun-2024	9:00	0.9	W
26-Jun-2024	10:00	0.4	W
26-Jun-2024	11:00	0.9	W
26-Jun-2024	12:00	1.3	W
26-Jun-2024	13:00	1.3	W
26-Jun-2024	14:00	1.3	W
26-Jun-2024	15:00	0.9	NW
26-Jun-2024	16:00	0.4	NNW
26-Jun-2024	17:00	0.9	NW
26-Jun-2024	18:00	0.9	W
26-Jun-2024	19:00	0.4	W
26-Jun-2024	20:00	0.0	W
26-Jun-2024	21:00	0.0	W
26-Jun-2024	22:00	0.0	W
26-Jun-2024	23:00	0.0	W
27-Jun-2024	0:00	0.0	---
27-Jun-2024	1:00	0.0	WNW
27-Jun-2024	2:00	0.0	NW

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
27-Jun-2024	3:00	0.0	W
27-Jun-2024	4:00	0.0	---
27-Jun-2024	5:00	0.9	W
27-Jun-2024	6:00	0.4	W
27-Jun-2024	7:00	0.0	WSW
27-Jun-2024	8:00	0.4	W
27-Jun-2024	9:00	1.3	W
27-Jun-2024	10:00	0.9	W
27-Jun-2024	11:00	0.9	W
27-Jun-2024	12:00	0.9	W
27-Jun-2024	13:00	0.9	W
27-Jun-2024	14:00	0.4	W
27-Jun-2024	15:00	0.9	W
27-Jun-2024	16:00	0.9	W
27-Jun-2024	17:00	1.3	W
27-Jun-2024	18:00	0.4	NNW
27-Jun-2024	19:00	0.9	W
27-Jun-2024	20:00	0.9	W
27-Jun-2024	21:00	0.4	W
27-Jun-2024	22:00	0.0	W
27-Jun-2024	23:00	0.0	W
28-Jun-2024	0:00	0.0	W
28-Jun-2024	1:00	0.0	---
28-Jun-2024	2:00	0.0	---
28-Jun-2024	3:00	0.0	---
28-Jun-2024	4:00	0.0	NW
28-Jun-2024	5:00	0.0	---
28-Jun-2024	6:00	0.0	---
28-Jun-2024	7:00	0.0	---
28-Jun-2024	8:00	0.0	---
28-Jun-2024	9:00	0.0	WNW
28-Jun-2024	10:00	0.4	E
28-Jun-2024	11:00	0.4	E
28-Jun-2024	12:00	0.9	ENE
28-Jun-2024	13:00	0.4	ENE
28-Jun-2024	14:00	0.9	ENE
28-Jun-2024	15:00	0.9	ENE
28-Jun-2024	16:00	0.4	ENE
28-Jun-2024	17:00	0.4	ENE
28-Jun-2024	18:00	0.0	ENE
28-Jun-2024	19:00	0.0	ENE
28-Jun-2024	20:00	0.0	---
28-Jun-2024	21:00	0.0	---
28-Jun-2024	22:00	0.0	---
28-Jun-2024	23:00	0.0	---
29-Jun-2024	0:00	0.0	NNW
29-Jun-2024	1:00	0.0	NW
29-Jun-2024	2:00	0.0	NW
29-Jun-2024	3:00	0.0	---
29-Jun-2024	4:00	0.0	---
29-Jun-2024	5:00	0.4	NW
29-Jun-2024	6:00	0.4	NW
29-Jun-2024	7:00	0.0	ENE
29-Jun-2024	8:00	0.0	NW
29-Jun-2024	9:00	0.0	NW
29-Jun-2024	10:00	0.0	E
29-Jun-2024	11:00	0.4	E

## Appendix G - Wind Data

Date	Time	Wind Speed m/s	Direction
29-Jun-2024	12:00	2.7	E
29-Jun-2024	13:00	1.8	ENE
29-Jun-2024	14:00	3.1	ENE
29-Jun-2024	15:00	1.3	E
29-Jun-2024	16:00	0.0	ENE
29-Jun-2024	17:00	0.0	E
29-Jun-2024	18:00	0.0	N
29-Jun-2024	19:00	0.0	ENE
29-Jun-2024	20:00	0.0	ENE
29-Jun-2024	21:00	0.0	ENE
29-Jun-2024	22:00	0.0	ENE
29-Jun-2024	23:00	0.0	ENE
30-Jun-2024	0:00	0.0	ENE
30-Jun-2024	1:00	0.0	ENE
30-Jun-2024	2:00	0.0	ENE
30-Jun-2024	3:00	0.0	ENE
30-Jun-2024	4:00	0.0	ENE
30-Jun-2024	5:00	0.0	ENE
30-Jun-2024	6:00	0.0	NE
30-Jun-2024	7:00	0.0	E
30-Jun-2024	8:00	0.0	---
30-Jun-2024	9:00	0.0	E
30-Jun-2024	10:00	0.0	E
30-Jun-2024	11:00	0.4	ENE
30-Jun-2024	12:00	1.8	ENE
30-Jun-2024	13:00	3.1	E
30-Jun-2024	14:00	2.2	ENE
30-Jun-2024	15:00	2.2	ENE
30-Jun-2024	16:00	1.8	E
30-Jun-2024	17:00	0.9	ENE
30-Jun-2024	18:00	0.0	ENE
30-Jun-2024	19:00	0.0	NE
30-Jun-2024	20:00	0.0	ENE
30-Jun-2024	21:00	0.0	ENE
30-Jun-2024	22:00	0.0	ENE
30-Jun-2024	23:00	0.0	ENE



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**APPENDIX H**  
**EVENT ACTION PLANS**

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**Appendix H Event / Action Plan for Air Quality**

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
<b>ACTION LEVEL</b>				
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>2. Inform IEC,ER and Contractor;</li> <li>3. Repeat measurement to confirm finding; and</li> <li>4. Increase monitoring frequency to daily.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method; and</li> <li>3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures</li> <li>2. Rectify any unacceptable practice and implement remedial measures; and</li> <li>3. Amend working methods agreed with ER if appropriate.</li> </ol>
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>2. Inform IEC,ER and Contractor;</li> <li>3. Advise the ER and Contractor on the effectiveness of the proposed remedial measures;</li> <li>4. Repeat measurements to confirm findings;</li> <li>5. Increase monitoring frequency to daily;</li> <li>6. Discuss with IEC, ER and Contractor on remedial actions required;</li> <li>7. If exceedance continues, arrange meeting with IEC and ER; and</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> <li>4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and</li> <li>5. Supervise Implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor; and</li> <li>3. Supervise and ensure remedial measures properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures</li> <li>2. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification;</li> <li>3. Implement the agreed proposals; and</li> <li>4. Amend proposal if appropriate.</li> </ol>

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
<b>LIMIT LEVEL</b>				
1.Exceedance for one sample	<p>Identify source, investigate the causes of exceedance and propose remedial measures;</p> <p>2. Inform ER, Contractor, IEC and EPD;</p> <p>3. Repeat measurement to confirm finding;</p> <p>4. Increase monitoring frequency to daily;</p> <p>5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</p>	<p>1. Check monitoring data submitted by ET;</p> <p>2. Check Contractor's working method;</p> <p>3. Discuss with ET, ER and Contractor on possible remedial measures;</p> <p>4. Advise the ER and ET on the effectiveness of the proposed remedial measures;</p> <p>5. Supervise implementation of remedial measures.</p>	<p>1. Confirm receipt of notification of failure in writing;</p> <p>2. Notify Contractor; and</p> <p>3. Supervise and ensure remedial measures properly implemented.</p>	<p>1. Identify source, investigate the causes of exceedance and propose remedial measures;</p> <p>2. Take immediate action to avoid further exceedance;</p> <p>3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification;</p> <p>4. Implement the agreed proposals; and</p> <p>5. Amend proposal if appropriate.</p>
2.Exceedance for two or more consecutive samples	<p>Notify IEC, ER, Contractor and EPD;</p> <p>2. Identify source;</p> <p>3. Repeat measurement to confirm findings;</p> <p>4. Increase monitoring frequency to daily;</p> <p>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</p> <p>6. Arrange meeting with IEC, Contractor and ER to discuss the remedial actions to be taken;</p> <p>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</p>	<p>1. Check monitoring data submitted by ET;</p> <p>2. Check Contractor's working method;</p> <p>3. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</p> <p>4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and</p> <p>5. Supervise the implementation</p>	<p>1. Confirm receipt of notification of failure in writing;</p> <p>2. Notify Contractor;</p> <p>3. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented;</p> <p>4. Supervise and ensure remedial measures properly implemented; and</p> <p>5. If exceedance continues,</p>	<p>1. Identify source, investigate the causes of exceedance and propose remedial measures;</p> <p>2. Take immediate action to avoid further exceedance;</p> <p>3. Submit proposals for remedial actions to ER with a copy to ET and IEC within 3 working days of notification;</p> <p>4. Implement the agreed proposals;</p> <p>5. Resubmit proposals if problem still not under control;</p> <p>6. Stop the relevant portion of works as</p>

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	8. If exceedance stops, cease additional monitoring.	of remedial measures.	consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	determined by the ER until the exceedance is abated.

## Event / Action Plan for Construction Noise

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

## Event and Action Plan for Water Quality

	<b>Action</b>			
<b>Event</b>	<b>ET</b>	<b>IEC</b>	<b>ER</b>	<b>Contractor</b>
Action level being exceeded by one sampling day	<ol style="list-style-type: none"> <li>1. Inform IEC, Contractor and ER;</li> <li>2. Check monitoring data, all plant, equipment and Contractor's working methods; and</li> <li>3. Discuss remedial measures with IEC and Contractor and ER.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET, ER and Contractor on the implemented mitigation measures;</li> <li>2. Review proposals on remedial measures submitted by Contractor and advise the ER accordingly; and</li> <li>3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with IEC, ET and Contractor on the implemented mitigation measures;</li> <li>2. Make agreement on the remedial measures to be implemented;</li> <li>3. Supervise the implementation of agreed remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source(s) of impact;</li> <li>2. Inform the ER and confirm notification of the non-compliance in writing;</li> <li>3. Rectify unacceptable practice;</li> <li>4. Check all plant and equipment;</li> <li>5. Consider changes of working methods;</li> <li>6. Discuss with ER, ET and IEC and purpose remedial measures to IEC and ER; and</li> <li>7. Implement the agreed mitigation measures.</li> </ol>
Action level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurement on next day of exceedance to confirm findings;</li> <li>2. Inform IEC, contractor and ER;</li> <li>3. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>4. Discuss remedial measures with IEC, contractor and ER</li> <li>5. Ensure remedial measures are implemented</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET, Contractor and ER on the implemented mitigation measures;</li> <li>2. Review the proposed remedial measures submitted by Contractor and advise the ER accordingly; and</li> <li>3. Review and advise the ET and ER on the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET, IEC and Contractor on the proposed mitigation measures;</li> <li>2. Make agreement on the remedial measures to be implemented ; and</li> <li>3. Discuss with ET, IEC and Contractor on the effectiveness of the implemented remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source(s) of impact;</li> <li>2. Inform the ER and confirm notification of the non-compliance in writing;</li> <li>3. Rectify unacceptable practice;</li> <li>4. Check all plant and equipment and consider changes of working methods;</li> <li>5. Discuss with ET, IEC and ER and submit proposal of remedial measures to ER and IEC within 3 working days of notification; and</li> <li>6. Implement the agreed mitigation measures.</li> </ol>
Limit level being exceeded by one sampling day	<ol style="list-style-type: none"> <li>1. Repeat measurement on next day of exceedance to confirm findings;</li> <li>2. Inform IEC, contractor and ER;</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET, Contractor and ER on the implemented mitigation measures;</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET, IEC and Contractor on the implemented remedial measures;</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source(s) of impact;</li> <li>2. Inform the ER and confirm notification of the non-compliance in writing;</li> </ol>

	<b>Action</b>			
<b>Event</b>	<b>ET</b>	<b>IEC</b>	<b>ER</b>	<b>Contractor</b>
	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	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.	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.	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.

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**APPENDIX I  
SUMMARY OF EXCEEDANCE**

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**Appendix I: Exceedance Report****Reporting Quarter: April to June 2024****(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	$L_{eq}(30 \text{ min.}) \text{ dB(A)}$	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

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**APPENDIX J  
ENVIRONMENTAL MITIGATION  
IMPLEMENTATION SCHEDULE (EMIS)**

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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
<b>Construction Dust Impact</b>							
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/m <sup>2</sup> 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 <ul style="list-style-type: none"> <li>All vehicles shall be shut down in intermittent use</li> <li>Only well-maintained plant should be operated on-site to avoid emission of dark smoke</li> <li>Valid No-Road Mobile Machinery (NRMM) labels should be provided to regulated machines</li> </ul>	Reduce air pollution emission from construction vehicles and plants	Contractor	All construction sites	Construction stage	^ ^ *
S3.8	D2-DP 1/DP2/ DP3	<ul style="list-style-type: none"> <li>Following dust suppression measures should also be incorporated by the Contractor to control the dust nuisance throughout the construction Phase</li> <li>Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading;</li> <li>Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;</li> <li>A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones;</li> <li>The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty material do not leak from</li> </ul>	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
		<p>impervious sheeting or placed in an area sheltered on the top and the 3 sides;</p> <ul style="list-style-type: none"> <li>• 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;</li> <li>• 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</li> <li>• Exposed earth should be properly treated by compaction, turving, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.</li> </ul>					<p>N/A</p> <p>N/A</p> <p>^</p>
S3.8	D4-DP 1/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	^
<b>Construction Noise Impact</b>							
S4.8	N-CP1-DP1/D P2/DP3	<p>Implement the following good site management practices:</p> <ul style="list-style-type: none"> <li>• Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme;</li> <li>• Machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum;</li> <li>• Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; silencers or mufflers on construction</li> </ul>	Control construction airborne noise	Contractor	All construction sites	Construction stage	<p>^</p> <p>^</p> <p>^</p>

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
		<p>equipment should be properly fitted and maintained during the construction works;</p> <ul style="list-style-type: none"> <li>• Mobile plant should be sited as far away from NSRs as possible and practicable;</li> <li>• Material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.</li> </ul>					<p>^</p> <p>^</p>
S4.8	N-CP2-DP1/D P2/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/D P2/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/D P2/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/D P2/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-D P1/N-C P6-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	^
<b>Water Quality Impact (Construction Phase)</b>							
S5.7	W1-CP-DP1/D P2/DP3	<p>Construction Runoff and Site Drainage</p> <p>In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures, where appropriate, should include the following:</p> <ul style="list-style-type: none"> <li>Update and implementation of Stormwater Pollution Control Plan</li> <li>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.</li> </ul>	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
		<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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</li> </ul>					<p>#</p> <p>*</p> <p>^</p> <p>^</p>



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
		<p>slope surfaces should be covered by tarpaulin or other means.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> </ul>					<p style="text-align: center;">*</p> <p style="text-align: center;">^</p> <p style="text-align: center;">#</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p>

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
		<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts.</li> <li>• 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.</li> <li>• 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</li> </ul>					<p>#</p> <p>^</p> <p>#</p> <p>^</p> <p>^</p>

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/D P2/DP3	<u>Groundwater from Contaminated Area</u> <ul style="list-style-type: none"> <li>No mitigation measure is required for groundwater treatment in LMC Loop.</li> <li>Additional investigation is required to identify if contaminated groundwater is found.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ul>	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/D P2/DP3	<u>Sewage from Workforce</u> <ul style="list-style-type: none"> <li>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</li> </ul>	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
		<p>portable toilets to cater 0.15m<sup>3</sup>/day/employed populations and be responsible for appropriate disposal and maintenance.</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>					<p>^</p> <p>^</p>
S5.7	W4-CP -DP1	<p><u>Riverbanks Formation</u></p> <ul style="list-style-type: none"> <li>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.</li> <li>Water quality of the Shenzhen River and the meander would be monitored to ensure effectiveness of the implemented mitigation measures.</li> </ul>	Minimize water quality impact from riverbank works	Contractor	Riverbank works	Construction Phase	<p>^</p> <p>^</p>
S5.7	W1-CP -BR	<p><u>Bio-remediation in Shenzhen River</u></p> <ul style="list-style-type: none"> <li>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&amp;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</li> </ul>	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	<p><u>Construction of Viaduct across Reedbed in LMC Station</u></p> <p>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:</p> <ul style="list-style-type: none"> <li>• On-site compensate the same area of the occupied reedbed;</li> <li>• Provide pilot plant during construction; or</li> <li>• Increase the hydraulic retention time of the proposed Loop STW.</li> </ul> <p>Details of these measures will be subject to further liaison with MTRC and a separate VEP application.</p>	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/D P3	<p><u>Construction of Bridge Crossing</u></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• All the fishponds will be drained and no fishpond will be affected by bridge crossing.</li> <li>• 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.</li> <li>• 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.</li> </ul>	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



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
		<p>good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site;</p> <ul style="list-style-type: none"> <li>• Training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling;</li> <li>• Provision of sufficient waste disposal points and regular collection for disposal;</li> <li>• Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;</li> <li>• Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;</li> </ul>					<p>^</p> <p>^</p> <p>^</p> <p>^</p>
S7.6	WM4-D P1/DP2 /DP3	<p><u>Storage of Waste</u></p> <p>The following recommendation should be implemented to minimize the impacts:</p> <ul style="list-style-type: none"> <li>• Waste such as soil should be handled and stored well to ensure secure containment;</li> <li>• Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away;</li> <li>• Different locations should be designated to stockpile each material to enhance reuse;</li> </ul>	Minimize waste generation during construction	Contractor	All construction sites	Construction phase	<p>*</p> <p>^</p> <p>^</p>
S7.6	WM5-D P1/DP2 /DP3	<p><u>Collection and Transportation of Waste</u></p> <p>The following recommendation should be implemented to minimize the impacts:</p> <ul style="list-style-type: none"> <li>• Remove waste in timely manner;</li> <li>• Employ the trucks with cover or enclosed containers for waste transportation;</li> </ul>	Minimize waste impact from storage	Contractor	All construction sites	Construction phase	<p>*</p> <p>^</p>

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
		<ul style="list-style-type: none"> <li>Obtain relevant waste disposal permits from the appropriate authorities; and</li> <li>Disposal of waste should be done at licensed waste disposal facilities.</li> </ul>					<p>^</p> <p>^</p>
S7.6	WM6-D P1/DP2 /DP3	<p><u>Excavated and C&amp;D Material</u></p> <p>Wherever practicable, C&amp;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&amp;D materials:</p> <ul style="list-style-type: none"> <li>Maintain temporary stockpiles and reuse excavated fill material for backfilling;</li> <li>Carry out on-site sorting;</li> <li>Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; and</li> <li>Implement a trip-ticket system for each works contract to ensure that the disposal of C&amp;D materials are properly documented and verified.</li> </ul> <p>The recommended C&amp;D materials handling should include:</p> <ul style="list-style-type: none"> <li>On-site Sorting of C&amp;D Materials</li> <li>Reuse of C&amp;D Materials</li> <li>Use of Standard Formwork and Planning of Construction Materials Purchasing</li> <li>Provision of Wheel Wash Facilities</li> </ul> <p>Details refer to Section 7.6.1.4 of the EIA report.</p>	Minimize waste impacts from excavated and C&D material	Contractor	All construction sites	Construction phase	<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>
S7.6	WM7-D P1/DP2	<p><u>Contaminated Soil</u></p> <p>As a precaution, it is recommended that standard good site practice should be implemented during the construction phase to</p>	Remediate contaminated soil	Contractor	All construction sites where	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
	/DP3	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.			applicable		
S7.6	WM8-D P1/DP2 /DP3	<p><u>Chemical Waste</u></p> <ul style="list-style-type: none"> <li>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.</li> </ul>	Control the chemical waste and ensure proper storage, handling and disposal	Contractor	All construction sites	Construction phase	*
S7.6	WM9-D P1/DP2 /DP3	<p><u>General Waste</u></p> <ul style="list-style-type: none"> <li>General refuse should be stored in enclosed bins separately from construction and chemical wastes. Recycling bins should also be placed to encourage recycling.</li> <li>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.</li> <li>A reputable waste collector should be employed to remove</li> </ul>	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
		general refuse on a daily basis.					
S7.6	WM10-DP1/D P2	<u>Sewage</u> <ul style="list-style-type: none"> <li>The WMP should document the locations and number of portable chemical toilets depending on the number of workers, land availability, site condition and activities.</li> <li>Regularly collection by licensed collectors should be arranged to minimize potential environmental impacts.</li> </ul>	Minimize production of sewage impacts	Contractor	All construction sites	Construction phase	^  ^
S7.6	WM11-DP2	<u>Sediment</u> The following mitigation measures are recommended during transportation and stockpiling: <ul style="list-style-type: none"> <li>stockpiling area(s) must be properly designed and closed to the dredging locations as far as possible;</li> <li>Stockpiling area(s) should be lined with impermeable sheeting and bunded;</li> <li>stockpiles should be properly covered by impermeable sheeting;</li> <li>vehicles delivering the sediments should be covered, and truck bodies and tailgates should be sealed to prevent any discharge during transportation;</li> <li>bulk earth moving equipments should be utilized as much as possible to minimize workers' handling and contact of the excavated materials; and</li> <li>personal protective clothing should be provided to site workers.</li> </ul>	Minimize waste impacts from sediment	Contractor	All construction sites	Construction phase	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
		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.					
<b>Land Contamination</b>							
S8.7	LC1-D P2/DP3	<u>Remediation of arsenic-contaminated soil</u> <ul style="list-style-type: none"> <li>“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.</li> </ul>	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> <ul style="list-style-type: none"> <li>Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety;</li> <li>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;</li> </ul>	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
		<ul style="list-style-type: none"> <li>• Excavation should be carried out during dry season as far as possible to minimise contaminated runoff from contaminated soils;</li> <li>• 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;</li> <li>• Supply of suitable clean backfill material after excavation, if required;</li> <li>• 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;</li> <li>• Speed control for the trucks carrying contaminated materials should be enforced; and</li> <li>• Vehicle wheel washing facilities at the site's exit points should be established and used.</li> </ul>					<p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>
S8.7	LC3-D P1/DP2 /DP3	<p><u>Solidification/Stabilization</u></p> <ul style="list-style-type: none"> <li>• The loading, unloading, handling, transfer or storage of cement should be carried out in an enclosed system;</li> <li>• Mixing process and other associated material handling</li> </ul>	To minimize the potential environmental impacts arising from the handling of contaminated materials	Contractor	Contaminated area	The course of remediation	<p>N/A</p> <p>N/A</p>

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
		<p>activities should be properly scheduled to minimise potential noise impact and dust emission;</p> <ul style="list-style-type: none"> <li>• The mixing facilities should be sited as far apart as practicable from the nearby noise sensitive receivers;</li> <li>• Mixing of contaminated soil and cement / water / other additive(s) should be undertaken at a solidification plant to minimise the potential for leaching;</li> <li>• Runoff from the solidification / stabilization area should be prevented by constructing a concrete bund along the perimeter of the solidification / stabilization area;</li> <li>• 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;</li> <li>• If stockpile of treated soil is required, the stockpiling site(s) should be lined with impermeable sheeting and bunded.</li> <li>• Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or site run-off during rainy season; and If necessary, there should be clear and separated areas for stockpiling of untreated and treated materials.</li> </ul>					<p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>
S8.7	LC4-D P3	<p><u>Safety Measures</u></p> <ul style="list-style-type: none"> <li>• Set up a list of safety measures for site workers;</li> <li>• Provide written information and training on safety for site</li> </ul>	To minimize the potential adverse effects on health and safety of construction	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
		<p>workers;</p> <ul style="list-style-type: none"> <li>• Keep a log-book and plan showing the contaminated zones and clean zones;</li> <li>• Maintain a hygienic working environment;</li> <li>• Avoid dust generation;</li> <li>• Provide face and respiratory protection gear to site workers if necessary;</li> <li>• Provide personal protective clothing (e.g. chemical resistant jackboot, liquid tight gloves) to site workers, if necessary;</li> <li>• Provide first aid training and materials to site worker;</li> <li>• Bulk earth moving equipment should be utilized as much as possible to minimize workers' handling and contact of the contaminated materials; and</li> <li>• Eating, drinking and smoking should not be allowed in contaminated areas to avoid inadvertent ingestion of contaminant.</li> </ul>	workers				
S8.8	LC5-D P3	<u>Re-appraisal on the entire contamination assessment area for associated infrastructure in the adjacent areas in Hong Kong outside LMC Loop.</u>	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 the adjacent	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
					areas in Hong Kong outside LMC Loop		
<b>Landscape and Visual Impact (Construction Phase)</b>							
S11.5.4 Table 11.5.9	L-CP1-DP1/D P3	<p><u>Preservation and Protection of Existing Trees (Good Site Practice)</u></p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>Trees which are not in conflict with the proposals would be retained and shall be protected by means of fencing during construction phase to prevent damage to tree canopies</li> </ul>	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
		<p>and root zones from vehicles and storage of materials.</p> <ul style="list-style-type: none"> <li>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.</li> </ul>					^
S11.5.4 Table 11.5.9	L-CP2- DP1/D P2/DP3	<p><u>Works Area and Temporary Works Areas (Good Site Practice)</u></p> <ul style="list-style-type: none"> <li>The construction sequence and construction programme shall be optimized in order to minimize the duration of impact.</li> <li>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.</li> <li>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.</li> </ul>	Minimize landscape impacts	Contractor	The whole project area where applicable	Construction phase	^  ^  ^
	L-CP3- DP1/D P2/DP3	<p><u>Advance Implementation of Mitigation Planting</u></p> <ul style="list-style-type: none"> <li>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.</li> </ul>	Minimize landscape impacts	Contractor	The whole project area where applicable	Construction phase	^
	L-CP4-	<p><u>Transplantation of Existing Trees</u></p>	Minimize landscape impacts	Contractor	The whole	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
	DP1/D P2/DP3	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ul>	impacts		project area where applicable	phase	^
	L-CP6- DP1/D P2	<u>Creation of Wetland and Landscape Buffer</u> <ul style="list-style-type: none"> <li>The existing reedbed acquired for development areas for the project will be reinstated as part of the Ecological Area.</li> </ul>	Compensation of the loss of landscape resources	Project Proponent/ Detailed	The whole project area where	Detailed design, construction and operational	^

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
		<p>The reinstatement shall be undertaken at the earliest possible stage during the construction phase of the project.</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ul>		design consultant/ Contractor/ Operator	applicable	phases	^
	V-CP5-DP1/D P2/DP3	<p><u>Coordination with Concurrent Projects</u></p> <ul style="list-style-type: none"> <li>Coordinated implementation programme with concurrent projects to minimise impacts and where possible reduce the period of disturbance.</li> </ul>	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
S11.6.5 Table 11.6.3	V-CP1- DP3	<p><u>Preservation and Protection of Existing Trees (Good Site Practice)</u></p> <ul style="list-style-type: none"> <li>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.</li> <li>The preservation of existing tree shall provide instant greening and screening effect for proposed works.</li> </ul>	Minimise visual impact	Detailed design consultant / Contractor	The whole project area where applicable	Detailed design and construction phase	^
	V-CP2- DP3	<p><u>Works Area and Temporary Works Areas (Good Site Practice)</u></p> <ul style="list-style-type: none"> <li>The construction sequence and construction programme shall be optimized in order to minimize the duration of impact.</li> <li>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.</li> <li>Hoarding designed with recessive colour shall be set up around the construction site providing screening effect for the construction works.</li> <li>The site office or temporary above-ground structures shall be sited at less visual prominent locations.</li> </ul>	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
	V-CP3-DP3	<u>Advance Implementation of Mitigation Planting</u> <ul style="list-style-type: none"> <li>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.</li> </ul>	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	<u>Coordination with Concurrent Projects</u> <ul style="list-style-type: none"> <li>Coordinated implementation programme with concurrent projects to minimise impacts and where possible reduce the period of disturbance.</li> </ul>	Minimize visual impacts	Contractor	The whole project area where applicable	Construction phase	^
<b>Ecology (Construction Phase)</b>							
S12.7	E1-DP1	<u>Disturbance to Fish Ponds at HHW</u> <ul style="list-style-type: none"> <li>Development set back a minimum of 23m from the edge Meander.</li> <li>Management of fish pond habitat to enhance ecological value to twice existing value, in order to compensate for disturbance to large waterbirds.</li> <li>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.</li> </ul> <u>Construction phase</u> <ul style="list-style-type: none"> <li>Erection of a 3m high, dull green site boundary fence to</li> </ul>	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
		minimise disturbance to wetland habitats caused by human activity in LMC Loop.					
S12.7	E2-DP1 /DP3	<p><u>Construction run-off</u></p> <ul style="list-style-type: none"> <li>Temporary sewerage and drainage will be designed and installed to collect wastewater and prevent it from entering nearby water bodies;</li> <li>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;</li> <li>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;</li> <li>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;</li> <li>Stockpiling of construction materials, if necessary, will be properly covered and located away from nearby water</li> </ul>	Minimise the indirect impact from the increasing suspended solids and pollutants in LMC Meander	Contractor	Seawall,	During construction	<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>



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
S12.7	E3-DP1 /DP2/D P3	<p><u>Pollutant Runoff to Downstream areas from Accidental Spillage</u></p> <ul style="list-style-type: none"> <li>Prepare an emergency contingency plan The plan will include, but not be limited to, the following:               <ul style="list-style-type: none"> <li>- Potential emergency situations;</li> <li>- Chemicals or hazardous materials used on-site (and their location);</li> <li>- Emergency response team;</li> <li>- Emergency response procedures;</li> <li>- List of emergency telephone hotlines;</li> <li>- Locations and types of emergency response equipment;</li> <li>- Training plan and testing for effectiveness.</li> </ul> </li> </ul>	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	<ul style="list-style-type: none"> <li>Use opaque, non-transparent, non-reflective noise barriers for all developments associated with the Project.</li> <li>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.</li> </ul> <p>These include the following:</p> <ul style="list-style-type: none"> <li>Fritting, or the placement of ceramic lines or dots on glass,</li> </ul>	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
		<p>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.</p> <ul style="list-style-type: none"> <li>• Angled glass may be used only for smaller panes in buildings with a limited amount of glass.</li> <li>• The use of glass that reflects UV light (primarily visible to birds, but not to humans) acts to reduce collision.</li> <li>• 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.</li> <li>• 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.</li> </ul> <p>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 lighting at or near the top of buildings or other structures. In</p>					<p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p>



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
		<p>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.</p>					
S12.7	E5-DP1 /DP2/D P3	<ul style="list-style-type: none"> <li>• 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.</li> <li>• No significant change to velocity of water flow, water level or water quality.</li> <li>• No direct lighting on Meander.</li> <li>• 3m high, dull green site boundary fence for all developments associated with the project.</li> <li>• 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.</li> <li>• No construction activities within 100m of LMC Meander between one hour prior to sunset and one hour after</li> </ul>	Minimize impacts on Eurasian Otter	Detailed design consultant/ Contractor	Construction site within the project	Detailed design, construction phase	<p>^</p> <p>^</p> <p>^</p> <p>#</p> <p>^</p> <p>^</p>

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
		<p>sunrise.</p> <ul style="list-style-type: none"> <li>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.</li> </ul>					^
S12.7	E8-DP2	<ul style="list-style-type: none"> <li>Refer to E2 and E3</li> </ul>	Prevent impacts on Rose Bitterling, small snakehead and <i>Somanniathelphus zanklon</i>	Contractor	Within project site	Construction phase	^
S12.7	E10-DP 1	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>At Ha Wan Tsuen entry point for many birds to LMC Loop area provide a wider Ecological Area to minimize disturbance from nearby buildings.</li> <li>Further minimisation of impact by maintaining a lower</li> </ul>	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	^  ^  N/A

<b>EIA Ref.</b>	<b>EM&amp;A Log Ref</b>	<b>Recommended Mitigation Measures</b>	<b>Objectives of the recommended Measures &amp; Main Concerns to address</b>	<b>Who to implement the measures?</b>	<b>Location of the measures</b>	<b>When to Implement the measures?</b>	<b>Implementation Status</b>
		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.					
S12.7	E11-DP 1	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	Minimize disturbance impacts of mitigation provisions	Contractor	Within project site	Construction phase	^
S12.7	E12-DP 1/DP2/ DP3	<ul style="list-style-type: none"> <li>Minimal night-time lighting</li> <li>No direct light on Meander</li> </ul>	Minimize impacts on LMC Meander	Contractor/ Operator	All	Construction and operation phases	^
S12.7	E13-DP 2	<ul style="list-style-type: none"> <li>Construction limited to wet season between the hours of 9am and 5pm.</li> <li>Use of opaque visual/noise barriers and planting of trees shrubs along length of road adjacent to fish ponds.</li> <li>Compensatory habitat management elsewhere to mitigate wetland loss.</li> </ul>	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 3	<ul style="list-style-type: none"> <li>Use of viaduct alignment to minimize wetland loss. Compensatory wetland habitat elsewhere.</li> </ul>	Minimize wetland loss	Project Proponent /	Within project site	Detailed design 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
				Detailed design consultant / Contractor /		construction phases	
S12.7	E16-DP 1	<ul style="list-style-type: none"> <li>Provision of compensatory reed marsh in the Ecological Area will provide habitat suitable for Common Evening Hawker.</li> <li>Measures designed to protect other fauna and water quality will generally benefit odonata.</li> </ul>	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	<ul style="list-style-type: none"> <li>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</li> </ul>	Minimize the ecological impacts	Contractor	Woodland and shrubland habitat along Ha Wan Tsuen Road	Construction phase	^
S12.7	E15-DP 2	<ul style="list-style-type: none"> <li>Use noise/visual barriers to minimise disturbance.</li> <li>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).</li> </ul>	Minimize impacts on flight line corridor from Western Connection Road	Contractor	Construction site from Western Connection Road	Construction phase	^ ^
S12.7	E16-DP 2	<ul style="list-style-type: none"> <li>Use of opaque visual/noise barriers and roadside planting of trees and shrubs to minimize disturbance impacts.</li> </ul>	Minimize impacts on flight line corridor from Western Connection	Project Proponent/ Detailed	Construction site from Western	Detailed design, construction and operation	^

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
			Road	design consultant/ Contractor Operator	Connection Road	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	^
<b>Fisheries (Construction Phase)</b>							
S13.7	F4-	<ul style="list-style-type: none"> <li>Reprovision of replacement Artificial Reefs(of the same volume as the existing ARs inside Marine Exclusion Zone)</li> </ul>	Mitigate water quality impacts on the existing ARs	Project proponent	To be determined	Construction phase or operation phase	N/A
S11.7	F2	<ul style="list-style-type: none"> <li>Reduce re-suspension of sediments</li> <li>Limit dredging and works fronts.</li> <li>Good site practices</li> <li>Strict enforcement of no marine dumping</li> <li>Spill response plan</li> </ul>	Minimise marine water quality impacts	Contractor	Seawall	During construction	N/A N/A N/A N/A
S13.7	F4-DP3	During the construction phase, a layer of sheet pile wall will be	Bund stability	Contractor	Fish ponds	Construction	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
		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.				phase	
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	<p><u>Dust Minimization</u></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with</li> </ul>	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
		<p>water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading;</p> <ul style="list-style-type: none"> <li>• Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;</li> <li>• Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies;</li> <li>• Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety;</li> <li>• 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;</li> <li>• Supply of suitable clean backfill material after excavation, if required;</li> <li>• Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or contaminated run-off, and truck bodies and tailgates should</li> </ul>					

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
		<p>be sealed to prevent any discharge during transport or during wet season;</p> <ul style="list-style-type: none"> <li>• Speed control for the trucks carrying contaminated materials should be enforced; and</li> <li>• Vehicle wheel washing facilities at the site's exit points should be established and used.</li> </ul>					
S13.7	F8-DP3	<p><u>Contingency plan</u> 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:</p> <ul style="list-style-type: none"> <li>• Potential emergency situations;</li> <li>• Chemicals or hazardous materials used on-site (and their location);</li> <li>• Emergency response team;</li> <li>• Emergency response procedures;</li> <li>• List of emergency telephone hotlines;</li> <li>• Locations and types of emergency response equipment;</li> <li>• Training plan and testing for effectiveness.</li> </ul>	Deal with any accidental spillage event	Contractor / Operator	Fish ponds	Construction and operational 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
<b>Food Safety (Construction Phase)</b>							
S15	F1-DP3	<p><u>Contingency plan</u></p> <p>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 (<a href="http://www.cfs.gov.hk/english/programme/programme_fs/programme_fs.html">http://www.cfs.gov.hk/english/programme/programme_fs/programme_fs.html</a>). 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.</p>	Minimize significant impacts on fish ponds	Contractor	Fish pond within project site	Construction phase	N/A
S15	F2-DP3	<p><u>Dust Minimization</u></p> <ul style="list-style-type: none"> <li>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.</li> <li>Any excavated or stockpile of dusty material should be</li> </ul>	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
		<p>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;</p> <ul style="list-style-type: none"> <li>• Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;</li> <li>• Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies;</li> <li>• Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety;</li> <li>• 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;</li> <li>• Supply of suitable clean backfill material after excavation, if required;</li> <li>• Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or</li> </ul>					

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
		<p>contaminated run-off, and truck bodies and tailgates should be sealed to prevent any discharge during transport or during wet season;</p> <ul style="list-style-type: none"> <li>• Speed control for the trucks carrying contaminated materials should be enforced; and</li> <li>• Vehicle wheel washing facilities at the site's exit points should be established and used.</li> </ul>					

- 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)

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**APPENDIX K  
SITE AUDIT SUMMARY**

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**Appendix K: Site Audit Summary****Table K-1: Observations and Recommendations of Site Audit in April 2024**

<b>Parameters</b>	<b>Date</b>	<b>Observations and Recommendations</b>	<b>Follow-up</b>
<b>Contract No. YL/2020/01</b>			
<i>Air Quality</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Noise</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Water Quality</i>	22/04/2024	The cut-off drain at the site exit near Pai Lau should be cleared and ensure all site vehicles were washed before leaving the site.	The cut-off drain was cleaned and vehicles were washed before leaving the site by the Contractor as observed during follow-up audit session on 29/04/2024.
	22/04/2024	The collected muddy surface runoff should be pumped to the wetsep for treatment and ensure the wetsep is functioning properly near DCM works site.	The wetsep is functioning properly as observed during follow-up audit session on 29/04/2024.
<i>Waste / Chemical Management</i>	12/04/2024	The foam wastes after the demolition of the site office should be properly cleared.	Foam wastes were tidied and cleared by the Contractor as observed during follow-up audit session on 17/04/2024.
	29/04/2024	The content in the drip tray should be cleared to ensure its proper functioning. (Works area near Box Culvert C)	The concerned drip tray was removed by the Contractor as observed during follow-up audit session on 08/05/2024.
<i>Land Contamination</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Landscape and Visual</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Ecology</i>	12/04/2024	The green fences should be properly deployed along the works area near meander.	Green hoarding were deployed along the work site by the Contractor as observed during follow-up audit session on 17/04/2024.
<i>Fisheries</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Permits/Licences</i>	--	No major environmental deficiency was identified during the reporting month.	--
<b>Contract No. YL/2020/02</b>			
<i>Air Quality</i>	17/04/2024	Dust suppression measures should be further enhanced at work site at TAR1.	Regular water spraying has been provided for the exposed work site by the Contractor as observed during follow-up audit session on 24/04/2024.
	29/04/2024	NRMM label should be provided and displayed for the generator at Fu Tai site.	NRMM label has been displayed on the generator by the Contractor as observed during

Parameters	Date	Observations and Recommendations	Follow-up
			follow-up audit session on 08/05/2024.
<i>Noise</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Water Quality</i>	10/04/2024	Provide water mitigation measure to avoid surface runoff leaving the site boundary. (LMC Road)	Exposed dusty stockpile at the works area was covered to prevent dust and potential muddy runoff, whilst exposed work area were all paved and cleared of any dusty debris by the Contractor as observed during follow-up audit session on 17/04/2024.
	10/04/2024	Muddy water was observed near to the existing river at TAR1. Contractor was reminded to provided complete drainage system, ensure waste water was trapped and collected.	Muddy water was no longer found. Earth bund and sandbag bund were provided to prevent further runoff discharge as observed during follow-up audit session on 17/04/2024.
	24/04/2024	Mud trails were observed at LMC Road. The Contractor was reminded to ensure all site vehicles should be cleaned before being let onto public road.	Mud trails were cleaned. Site vehicles were being cleaned before exiting the site by the Contractor as observed during follow-up audit session on 29/04/2024.
	24/04/2024 29/04/2024	Site drainage system should be properly established including water pump to pump the muddy surface runoff to the wetsep at P07.	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
	24/04/2024 29/04/2024	The exposed slope at P08 should be properly covered to minimize the muddy surface runoff.	The exposed slope has been paved by the Contractor as observed during follow-up audit session on 08/05/2024.
	24/04/2024	Water quality mitigation measures (e.g., sand bag bund) should be implemented / enhanced to avoid the surface runoff discharging to the nullah (Fu Tai Site).	Sand bag bund was in placed by to avoid surface runoff discharge as observed during follow-up audit session on 29/04/2024.
	24/04/2024	The construction materials / wastes should be cleared at the nullah under safe condition (Fu Tai Site).	Construction materials in the nullah were cleared by the Contractor as observed during follow-up audit session on 29/04/2024.
	29/04/2024	Groundwater within Fu Tai site should be redirected to wastewater treatment facilities before discharging.	The hose to pump out the groundwater outside the site was removed by the Contractor as observed during the follow-up audit session on 8/05/2024.
	<i>Waste / Chemical Management</i>	--	No major environmental deficiency was identified during the reporting month.
<i>Land Contamination</i>	--	No major environmental deficiency was identified during the reporting month.	--

<b>Parameters</b>	<b>Date</b>	<b>Observations and Recommendations</b>	<b>Follow-up</b>
<i>Landscape and Visual</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Ecology</i>	24/04/2024	The damaged green fences should be replaced at P07.	The damaged green fences were replaced by the Contractor as observed during follow-up audit on 29/04/2024.
<i>Fisheries</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Permits/Licences</i>	--	No major environmental deficiency was identified during the reporting month.	--
<b>Contract No. YL/2021/01</b>			
<i>Air Quality</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Noise</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Water Quality</i>	22/04/2024	The sand bag bund should be deployed along the boundary of water-filled barriers to avoid the discharge of muddy surface runoff (EPTI).	Sand bag bund was deployed along the boundary of water-filled barriers by the Contractor as observed during follow-up audit on 29/04/2024.
<i>Waste / Chemical Management</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Land Contamination</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Landscape and Visual</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Ecology</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Fisheries</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Permits/Licences</i>	--	No major environmental deficiency was identified during the reporting month.	--

**Table K-2: Observations and Recommendations of Site Audit in May 2024**

Parameters	Date	Observations and Recommendations	Follow-up
<b>Contract No. YL/2020/01</b>			
<i>Air Quality</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Noise</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Water Quality</i>	08/05/2024	The sand bag bund should be further enhanced to avoid the muddy surface runoff discharging out.	Sand bag bund has been enhanced along the earth works by the Contractor as observed during follow-up audit session on 13/05/2024.
	08/05/2024 13/05/2024 22/05/2024 29/05/2024	The design of the sump pit should be further reviewed at LMC Loop which currently used to collect the rainwater instead.	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
	13/05/2024 22/05/2024 29/05/2024	Muddy water discharge should be directed to the wetsep for treatment before discharging out (near Pai Lau). Untreated muddy surface runoff was observed discharging to the gullies. The Contractor was reminded to direct the site surface runoff to the wastewater treatment facilities for treatment before discharging out (Pai Lau).	Untreated muddy surface runoff was trapped in the surrounding sump pit, but have not connect to water treatment section as observed during follow-up audit session on 29/05/2024. The site drainage system at the site area near Pai Lau was observed not satisfactory during follow-up audit session on 03/06/2024. The Contractor was reminded to review and demonstrate the effectiveness of the drainage system with immediate effect. Follow up action is needed in the next audit session.
	13/05/2024	The silt curtain along the slope at WCR (RW1) should be checked to avoid any gap for leakage of sediment plume.	The silt curtain has been properly deployed without gap by the Contractor as observed during follow-up audit session on 22/05/2024.
	22/05/2024	Water mitigation measures (e.g., sand bag bund, water pump etc.) should be enhanced around the earth works near EA zone and stockpiling site.	Excavated area was hard paved to avoid muddy runoff. (Stockpile Site) Sand bags were provided along the boundary to avoid surface runoff. (EA zone) by the Contractor as observed during follow-up audit session on 29/05/2024.
	<i>Waste / Chemical Management</i>	08/05/2024	Appropriate receptacles should be provided at re-bar fixing area to ensure the disposal of wastes on site properly.
<i>Land Contamination</i>	--	No major environmental deficiency was identified during the reporting month.	--



<b>Parameters</b>	<b>Date</b>	<b>Observations and Recommendations</b>	<b>Follow-up</b>
<i>Landscape and Visual</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Ecology</i>	08/05/2024	The green fence around Pond 13 and near Pai Lau should be properly erected.	The green fences have been properly erected by the Contractor as observed during follow-up audit session on 13/05/2024.
	13/05/2024	The damage green fences along Pond 12 should be replaced.	The green fences have been properly erected by the Contractor as observed during follow-up audit session on 22/05/2024.
	22/05/2024	The green fences along the EA zone should be maintained properly.	Green fences were maintained along the EA zone by the Contractor as observed during follow-up audit session on 29/05/2024.
	29/05/2024	The green fences should be installed along Pond 12.	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
<i>Fisheries</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Permits/Licences</i>	--	No major environmental deficiency was identified during the reporting month.	--
<b>Contract No. YL/2020/02</b>			
<i>Air Quality</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Noise</i>	20/05/2024 29/05/2024	Noise mitigation measures should be provided for the breaking works at LCS.	The breaker has been enclosed with noise insulation blanket by the Contractor as observed during follow-up audit session on 05/06/2024.
<i>Water Quality</i>	08/05/2024	Site drainage system should be properly established including water pump to pump the muddy surface runoff to the wetsep at P07.	A site drainage system was established which include pumping the muddy surface runoff to the wetsep as observed during follow-up audit session on 16/05/2024.
	08/05/2024	The collected site runoff at LCS should be redirected to wastewater treatment facilities.	The water pipe was removed as observed during follow-up audit session on 16/05/2024.
	16/05/2024	Exposed slope should be covered by impervious sheeting. (P08)	Exposed slope has been paved or covered properly by the Contractor as observed during follow-up audit session on 20/05/2024.
	16/05/2024 20/05/2024 29/05/2024	Enhance the water mitigation measure to avoid muddy water runoff into nullah. (Fu Tai Site)	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting

Parameters	Date	Observations and Recommendations	Follow-up
			period. Follow up action is needed in the next audit session.
	29/05/2024	Provide water mitigation measure (e.g. sandbag or geotextile) to avoid muddy water runoff into the gully. (LMC Road)	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
	29/05/2024	Enhance the wheel washing system to ensure it is adequate for the capacity. (LMC Road)	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
	29/05/2024	Hard pave the exposed area to avoid runoff. (LMC Road)	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
	29/05/2024	Muddy water should be discharged to appropriate drainage system instead of direct discharge. (Fu Tai Site)	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
	29/05/2024	To effectively treat muddy water, the sump pit should be connected to a wetsep. (LMC Road)	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
<b>Waste / Chemical Management</b>	08/05/2024	Appropriate waste receptacles should be provided at P07 and P08 to ensure the disposal of wastes on site properly.	Rubbish bins were provided for P07 & P08 by the Contractor as observed during the follow-up audit session on 16/05/2024.
	16/05/2024	Keep site clean and tidy. (P08)	The rubbish which was not disposed properly has been cleared the Contractor as observed during the follow-up audit session on 20/05/2024.
	29/05/2024	Avoid disposal of construction waste into the stream (Fu Tai Site).	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
<b>Land Contamination</b>	--	No major environmental deficiency was identified during the reporting month.	--
<b>Landscape and Visual</b>	--	No major environmental deficiency was identified during the reporting month.	--
<b>Ecology</b>	08/05/2024 16/05/2024 20/05/2024 29/05/2024	Green fence in 3m high should be erected completely around the works area at P08 adjacent wetland areas.	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
<b>Fisheries</b>	--	No major environmental deficiency was identified during the reporting month.	--

<b>Parameters</b>	<b>Date</b>	<b>Observations and Recommendations</b>	<b>Follow-up</b>
<i>Permits/Licences</i>	--	No major environmental deficiency was identified during the reporting month.	--
<b>Contract No. YL/2021/01</b>			
<i>Air Quality</i>	16/05/2024	Provide mitigation measure to keep vehicle entrance clean and free from dust.	The exposed site area has been covered with tarpaulin sheet by the Contractor as observed during follow-up audit on 20/05/2024.
<i>Noise</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Water Quality</i>	06/05/2024	Enhance the number of sandbags to avoid surface runoff.	Sandbags were placed at the site exit to avoid surface runoff by the Contractor as observed during follow-up audit on 16/05/2024.
	06/05/2024	Keep clean for the discharge point.	The discharge point was covered by tarpaulin to avoid muddy runoff by the Contractor as observed during follow-up audit on 16/05/2024.
	20/05/2024	Sand bag bund should be provided to direct the muddy surface runoff to the appropriate wastewater treatment facilities at Line AB.	Sand bag bund was provided to direct the muddy water to the appropriate wastewater treatment facilities at Line AB by the Contractor as observed during follow-up audit on 27/05/2024.
	27/05/2024	Wheel washing water should be directed into appropriate water path.	Sand bag bund has been deployed to direct the wheel washing water into appropriate ditches by the Contractor as observed during follow-up audit on 03/06/2024.
	27/05/2024	Enhance the mitigation measure to avoid direct runoff into discharge point.	Sand bag bund has been deployed around the discharging point to avoid the directly discharge by the Contractor as observed during follow-up audit on 03/06/2024.
<i>Waste / Chemical Management</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Land Contamination</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Landscape and Visual</i>	16/05/2024	Provide maintenance for the screen hoarding.	The water-filled barrier hoarding has been maintained and erected properly by the Contractor as observed during follow-up audit on 20/05/2024.
<i>Ecology</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Fisheries</i>	--	No major environmental deficiency was identified during the reporting month.	--

<b>Parameters</b>	<b>Date</b>	<b>Observations and Recommendations</b>	<b>Follow-up</b>
		month.	
<i>Permits/Licences</i>	--	No major environmental deficiency was identified during the reporting month.	--

**Table K-3: Observations and Recommendations of Site Audit in June 2024**

Parameters	Date	Observations and Recommendations	Follow-up
<b>Contract No. YL/2020/01</b>			
<i>Air Quality</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Noise</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Water Quality</i>	03/06/2024 12/06/2024 19/06/2024 26/06/2024	The design of the sump pit should be further reviewed at LMC Loop which currently used to collect the rainwater instead.	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
	03/06/2024 12/06/2024 19/06/2024 26/06/2024	The site drainage system at the site area near Pai Lau was observed not satisfactory. The Contractor was reminded to review and demonstrate the effectiveness of the drainage system with immediate effect.	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
	03/06/2024 12/06/2024 19/06/2024	Muddy water was observed discharging to the meander and outside the site boundary. The Contractor was reminded to rectify it and direct all site discharge to the appropriate wastewater treatment facilities before discharging out.	The flow of muddy water was redirected to wastewater treatment facilities before discharging out by the Contractor as observed during follow-up audit session on 26/06/2024.
	03/06/2024 12/06/2024 19/06/2024	The water quality mitigation measures at the stockpiling site should be further enhanced.	Pit was excavated along the stockpile site to provide a buffer zone by the Contractor as observed during follow-up audit session on 26/06/2024. The effectiveness will be further monitored in upcoming site inspection.
	12/06/2024 19/06/2024	The concrete bunding at the interface boundary should be enhanced to avoid the influx of muddy water from interface contract (LMP Loop).	Sandbags were provided to avoid the influx of muddy water from interface contract (LMP Loop) by the Contractor as observed during follow-up audit session on 26/06/2024.
	12/06/2024 19/06/2024	The collected site surface runoff under the meander bridge should be properly pumped to the wetsep for treatment before discharging out.	The collected site surface runoff under the meander bridge was pumped into the wetsep through underground pipe by the Contractor as observed during follow-up audit session on 26/06/2024.
	19/06/2024	The capacity of the sedimentation tank and wetsep seem not enough for muddy water treatment near Pai Lau. The Contractor was reminded to review the overall system to ensure the treated site discharge comply with the approved effluent discharge licence.	No overflow situation was observed inside the sedimentation tank. Sand bags were provided around the discharge point by the Contractor as observed during follow-up audit session on 26/06/2024.

<b>Parameters</b>	<b>Date</b>	<b>Observations and Recommendations</b>	<b>Follow-up</b>
	26/06/2024	Provide complete collection system for another water collection point (under the meander bridge which close to the meander side).	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
<b>Waste / Chemical Management</b>	19/06/2024	The chemical containers without drip tray near the meander should be removed.	The chemical containers were removed by the Contractor as observed during follow-up audit session on 26/06/2024.
	19/06/2024	The chemical containers should be placed with the drip tray (near basketball court).	The chemical containers were removed (near basketball court) by the Contractor as observed during follow-up audit session on 26/06/2024.
<b>Land Contamination</b>	--	No major environmental deficiency was identified during the reporting month.	--
<b>Landscape and Visual</b>	19/06/2024	The construction materials / wastes should not be placed within the tree protection zone (near basketball court).	The construction materials / wastes were moved away and provide a tree protection zone by the Contractor as observed during follow-up audit session on 26/06/2024.
<b>Ecology</b>	03/06/2024 12/06/2024 19/06/2024 26/06/2024	The green fences should be installed along Pond 12.	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
	19/06/2024 26/06/2024	The damage green fences along the meander and EA Zone should be replaced.	The damage green fences along the EA zone were maintained, but not including the meander section and part of EA zone as observed during follow-up audit session on 26/06/2024. Follow up action is needed in the next audit session
	19/06/2024	The deposited silt and sand as well as the construction wastes should be cleared / removed away from the EA Zone.	The deposited silt, sand, and construction wastes were cleared / removed away from the EA Zone by the Contractor as observed during follow-up audit session on 26/06/2024.
<b>Fisheries</b>	--	No major environmental deficiency was identified during the reporting month.	--
<b>Permits/Licences</b>	--	No major environmental deficiency was identified during the reporting month.	--
<b>Contract No. YL/2020/02</b>			
<b>Air Quality</b>	13/06/2024	Dust suppression measures should be provided along the site boundary of earth works where adjoining a road / public area near Puk Uk Tsuen.	The exposed stockpile of dusty materials has been covered with tarpaulin sheet by the Contractor as observed during follow-up audit session on 19/06/2024.
	26/06/2024	The excavator emitted heavy smoke should be repaired and maintained to	The excavator emitted heavy smoke has been removed off site

Parameters	Date	Observations and Recommendations	Follow-up
		avoid dark smoke emission (Chau Tau West Road).	by the Contractor as observed during follow-up audit session on 03/07/2024.
<i>Noise</i>	05/06/2024 13/06/2024	Noise barrier should be provided for the noisy works at DRL-P08 according to ERR. The Contractor was reminded to provide it without further delay.	Noise barrier has been erected facing the mitigation pond by the Contractor as observed during follow-up audit session on 19/06/2024.
<i>Water Quality</i>	05/06/2024 13/06/2024 19/06/2024	Enhance the water mitigation measure to avoid muddy water runoff into nullah.	The exposed slope in the vicinity of the nullah has been covered properly to avoid muddy surface runoff by the Contractor as observed during follow-up audit session on 26/06/2024.
	05/06/2024 13/06/2024	Provide water mitigation measure (e.g. sandbag or geotextile) to avoid muddy water runoff into the gully. (LMC Road)	The gullies have been protected to avoid muddy water runoff into it as observed during follow-up audit session on 19/06/2024.
	05/06/2024 13/06/2024 19/06/2024 26/06/2024	The wheel washing water should be properly collected for treatment at the site exit at Chau Tau West Road.	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
	05/06/2024 13/06/2024	Hard pave the exposed area to avoid runoff (LMC Road).	The exposed site area has been covered properly by the Contractor as observed during follow-up audit session on 19/06/2024.
	05/06/2024 13/06/2024	The muddy water was observed pumping / discharging to the nearby wetland directly. The Contractor was reminded to avoid the directly discharge and direct all site discharge to the appropriate wastewater treatment facilities (Chau Tau West Road).	No directly discharge / leakage of muddy water outside the site boundary was observed during follow-up audit session on 19/06/2024.
	05/06/2024 13/06/2024 19/06/2024 26/06/2024	To effectively treat muddy water, the sump pit should be connected to a wetsep (LMC Road).	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
	05/06/2024 13/06/2024	The bypass system for the drainage works at Chau Tau West Road should be further reviewed and enhanced.	Triple layer of sandbags was provided for flood protection of upstream water as well as diverting the unaffected upstream water to the downstream using water pump with greater power by the Contractor as observed during follow-up audit session on 19/06/2024.
	13/06/2024	The collected site surface runoff should be properly directed to the wetsep for treatment and maintenance records of wetsep should be provided at P-08.	The collected site surface runoff has been properly directed to the wetsep for treatment and discharge by the Contractor as observed during follow-up audit

Parameters	Date	Observations and Recommendations	Follow-up
			session on 19/06/2024.
	19/06/2024	The bypass system for the nullah works at near Fu Tai car park was observed unsatisfactory that the bypass pipe discharging the unaffected upstream water to the works site and the to the downstream. The Contractor was reminded to re-establish the bypass system for the nullah works so that the unaffected upstream water can be diverted to the downstream completely to prevent going through site surface.	The bypass water pipe has been extended to discharge the unaffected upstream water to the downstream and the exposed soil areas have been concreting by the Contractor to avoid muddy surface runoff as observed during the follow-up audit session on 26/06/2024.
	19/06/2024	The exposed slope and stockpiles of soil at near the nullah should be covered properly and the sand bag bund should also need to enhance to avoid the leakage of muddy surface runoff (Fu Tai Site).	The exposed slope in the vicinity of the nullah has been covered properly and the stockpiles of soil has been removed to avoid muddy surface runoff by the Contractor as observed during follow-up audit session on 26/06/2024.
	19/06/2024	The maintenance records for the wetsep should be updated regularly and ensure the wetsep can function properly (Fu Tai Site).	The maintenance records for the wetsep have been updated and the wetsep has been checked functioning properly by the Contractor as observed during follow-up audit session on 26/06/2024.
	26/06/2024	The rubbish blocking the bypass system at the nullah should be cleared (Chau Tau West Road).	Environmental deficiencies were observed not improved/ rectified by the Contractor in the reporting period. Follow up action is needed in the next audit session.
	26/06/2024	The temporary storage of soil and sediment at the nullah is not allowed and should be removed as soon as possible.	The stockpiles of soil and sediment at the nullah have been cleared by the Contractor as observed during follow-up audit session on 03/07/2024.
<b>Waste / Chemical Management</b>	05/06/2024 13/06/2024 19/06/2024	Avoid disposal of construction waste into the stream (Fu Tai Site).	The construction waste at the stream next to the works area has been cleared by the Contractor as observed during the follow-up audit session on 26/06/2024.
<b>Land Contamination</b>	--	No major environmental deficiency was identified during the reporting month.	--
<b>Landscape and Visual</b>	--	No major environmental deficiency was identified during the reporting month.	--
<b>Ecology</b>	05/06/2024 13/06/2024 19/06/2024	Green fence in 3m high should be erected at DRL-P08 adjacent to the wetland areas and the damage green fence should be replaced.	The green fence in 3m high has been properly erected and the damage green fence has been replaced by the Contractor as observed during the follow-up



<b>Parameters</b>	<b>Date</b>	<b>Observations and Recommendations</b>	<b>Follow-up</b>
			audit session on 26/06/2024.
	05/06/2024 13/06/2024 19/06/2024	The rubbish at the mitigation pond at DRL-P08 should be cleared.	The rubbish at the mitigation pond at DRL-P08 has been cleared by the Contractor as observed during the follow-up audit session on 26/06/2024.
	19/06/2024	The green fence surrounding the works area next to the Reedbed should be deployed and erected properly.	The green fence surrounding the works area next to the Reedbed has been deployed and erected properly by the Contractor as observed during the follow-up audit session on 26/06/2024.
<b>Fisheries</b>	--	No major environmental deficiency was identified during the reporting month.	--
<b>Permits/Licences</b>	26/06/2024	The construction noise permit should be displayed at the site entrance at Fu Tai Site.	The construction noise permit has been displayed at the site entrance by the Contractor as observed during the follow-up audit session on 03/07/2024.
<b>Contract No. YL/2021/01</b>			
<b>Air Quality</b>	--	No major environmental deficiency was identified during the reporting month.	--
<b>Noise</b>	3/06/2024	Noise mitigation measures should be provided for the breaking works at Line FG.	Noise insulation fabric has been provided to enclose the breaker by the Contractor as observed during follow-up audit on 12/06/2024.
	12/06/2024	Noise mitigation measures should be provided for the breaker at EEAA.	Noise insulation fabric has been provided to enclose the breaker by the Contractor as observed during follow-up audit on 17/06/2024.
<b>Water Quality</b>	24/06/2024	The maintenance records of the wetsep should be updated regularly to ensure the wetsep can function properly.	The maintenance records of the wetsep have been updated by the Contractor as observed during follow-up audit on 03/07/2024.
<b>Waste / Chemical Management</b>	12/06/2024	The empty chemical containers should be stored temporarily as chemical wastes before disposal (EEAA).	Drip tray was provided for the chemical containers before disposal by the Contractor as observed during follow-up audit on 17/06/2024.
	17/06/2024	Keep site clean and tidy.	The construction wastes which were not disposed properly have been cleared by the Contractor as observed during follow-up audit on 24/06/2024
<b>Land Contamination</b>	--	No major environmental deficiency was identified during the reporting month.	--
<b>Landscape and Visual</b>	--	No major environmental deficiency was identified during the reporting month.	--
<b>Ecology</b>	--	No major environmental deficiency	--

<b>Parameters</b>	<b>Date</b>	<b>Observations and Recommendations</b>	<b>Follow-up</b>
		was identified during the reporting month.	
<i>Fisheries</i>	--	No major environmental deficiency was identified during the reporting month.	--
<i>Permits/Licences</i>	--	No major environmental deficiency was identified during the reporting month.	--

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**APPENDIX L  
WASTE GENERATION IN THE  
REPORTING PERIOD**

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## Monthly Summary Waste Flow Table for 2024 (year)

Name of Person completing the record:

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 <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Jan-24	0.640	0.000	0.000	0.000	0.640	0.244	0.000	0.000	0.000	0.000	0.000	0.246
Feb-24	2.816	0.625	0.000	0.000	2.191	0.787	0.000	0.157	0.000	0.000	0.000	0.153
Mar-24	7.378	4.644	0.000	0.000	2.734	0.000	0.003	0.012	0.015	0.000	0.000	0.229
Apr-24	1.369	0.287	0.000	0.000	1.081	0.000	0.000	0.000	0.000	0.000	0.000	0.100
May-24	1.633	0.000	0.000	0.000	1.633	0.000	0.003	0.000	0.011	0.000	0.000	0.077
Jun-24	0.586	0.000	0.000	0.000	0.586	0.000	0.000	0.000	0.000	0.000	0.000	0.038
Sub-total	14.423	5.556	0.000	0.000	8.866	1.031	0.006	0.169	0.026	0.000	0.000	0.843
Jul-24												
Aug-24												
Sep-24												
Oct-24												
Nov-24												
Dec-24												
Total	14.423	5.556	0.000	0.000	8.866	1.031	0.006	0.169	0.026	0.000	0.000	0.843

Remarks:

1. Assume the density of soil fill=2.0 tonnes/m<sup>3</sup>
2. Assume the density of rock and broken concrete=2.5 tonnes/m<sup>3</sup>
3. Assume the density of refuse = 1.5 tonnes/m<sup>3</sup>
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

## Monthly Summary Waste Flow Table for 2024 (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 <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 m <sup>3</sup> )
Jan	1.863	0.000	0.000	0.000	1.863	1.332	0.000	0.000	0.000	0.000	0.274
Feb	0.702	0.000	0.000	0.000	0.702	0.419	0.000	0.000	0.000	0.000	0.226
Mar	2.750	0.000	0.000	0.000	2.750	1.530	0.000	0.000	0.000	0.000	0.194
Apr	1.647	0.000	0.000	0.000	1.647	1.824	0.000	0.000	0.000	0.000	0.397
May	1.962	0.000	0.000	0.000	1.962	0.990	0.000	0.000	0.000	0.000	0.302
Jun	3.231	0.000	0.000	0.000	3.231	1.290	0.000	0.000	0.000	0.000	0.187
Sub-total	12.155	0.000	0.000	0.000	12.155	7.385	0.000	0.000	0.000	0.000	1.580
Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aug	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sep	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oct	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dec	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	12.155	0.000	0.000	0.000	12.155	7.385	0.000	0.000	0.000	0.000	1.580

Note:

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

## Monthly Summary Waste Flow Table for 2024 (year)

Name of Person completing the record: Tino Law

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 <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Jan-24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.000	0.000	0.003
Feb-24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
Mar-24	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.012	0.015	0.000	0.000	0.006
Apr-24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013
May-24	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.010	0.000	0.000	0.024
Jun-24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Sub-total	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.027	0.025	0.000	0.000	0.049
Jul-24	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-24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sep-24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oct-24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nov-24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dec-24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.027	0.025	0.000	0.000	0.049

### Remarks:

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

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**APPENDIX M  
COMPLAINT LOG**

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**Appendix M - Complaint Log**Contract No. YL/2017/03 – Development of Lok Ma Chau Loop: Land Decontamination and Advance Engineering Works

<b>Log Ref.</b>	<b>Date of Complaint</b>	<b>Complaint Route</b>	<b>Reference No.</b>	<b>Complaint Nature</b>	<b>Investigation Finding</b>	<b>Status</b>
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/00 024120-21	<p>EPD received a public complaint on 11 October 2021. The complainant alleged the following:</p> <p>(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,</p> <p>(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.</p>	<p>(a) <u>Water Quality</u> 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.</p> <p>(b) <u>Noise</u> 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</p>	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
					<p>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&amp;A manual recommendation and requirements are complied with.</p> <p>In addition, the Contractor was also reminded to prepare a contingency plan for emergency environmental incidents.</p>	
COM-2021-11-01	15 November 2021	EPD	EPD File Ref.: N06/RN/00 027302-21	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.	<p>According to the interim report, dust mitigation measures have been properly implemented on site:</p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- 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.</li> <li>- 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.</li> <li>- 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.</li> <li>- Induction training and tool box talk have been provided to the site staff and workers regarding the dust suppression measure.</li> <li>- Temporary covers have been provided to stockpile of the dusty materials and the exposed slope.</li> </ul>	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/00000184-22	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).	<p>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:-</p> <p><u>Contract No.: YL/2020/01</u></p> <p>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.</p> <p>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.</p> <p>Based on the above information and investigation findings, the noise complaint is not related to the</p>	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
					<p>construction works of the Contract YL/2020/01.</p> <p><u>Contract No.: YL/2020/02</u> 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.</p> <p>Based on the above information and investigation findings, the noise complaint is not related to the construction works of the Contract YL/2020/02.</p>	
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.	<p>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.</p> <p>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.</p>	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/00 015561-22	The complainant concerned about the muddy water discharged by a piling contractor “德運建築鑽探有限公司” on 20 <sup>th</sup> July 2022	<u>Contract No.: YL/2020/01</u> 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/00 015953-22	The complainant concerned about the muddy water discharging to the public area from a construction site near Fu Tai Car Park.	<u>Contract No.: YL/2020/02</u> 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
COM-2022-10-01	14 October 2022	EPD	EPD File Ref.: N06/RN/00 022308-22	The complainant concerned about the noise arising from piling works carried out at 6am in the morning and around 11pm at night at the construction site adjacent to the existing Lok Ma Chau MTR Station.	<u>Contract No.: YL/2021/01</u> According to the interim report, the piling works were carried out with valid construction noise permit from 08:00 to 23:00 under Contract YL/2021/01 nearby Lok Ma Chau Station. Noise control measures (e.g., permit-to-work system) have been implemented on site.  Further noise mitigation measure, such as set up the acoustic canvas to enclose the engine of the used powered mechanical equipment to minimize the noise generated from works and the impact to the nearby resident.	Interim report was submitted to EPD on 17 Nov 2022
COM-2022-10-02	14 October 2022	EPD	EPD File Ref.: N06/RN/00 022342-22	The complainant concerned about the noise arising from piling works carried out before 7am and at around 11pm at the construction site adjacent to the existing Lok Ma Chau MTR Station.	<u>Contract No.: YL/2021/01</u>  According to the interim report, the piling works were carried out with valid construction noise permit from 08:00 to 23:00 under Contract YL/2021/01 nearby Lok Ma Chau Station. Noise control measures (e.g., permit-to-work system) have been implemented on site.	Interim report was submitted to EPD on 17 Nov 2022

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
					Further noise mitigation measure, such as set up the acoustic canvas to enclose the engine of the used powered mechanical equipment to minimize the noise generated from works and the impact to the nearby resident.	
COM-2022-10-03	28 October 2022	EPD	EPD File Ref.: N06/RN/00 023772-22	The complainant concerned about the noise arising from percussive piling works carried out on 27 & 28 Oct 2022 in Lok Ma Chau Loop (at a work site near “落馬州河套區創科園地盤”)	<u>Contract No.: YL/2020/01</u>  According to the interim report, no percussive piling works were carried out under Contract No. YL/2020/01 inside Lok Ma Chau Loop on 27 <sup>th</sup> and 28 <sup>th</sup> October 2022 according to per Condition 2.9 (d) of EP 477/2013/A.	Interim report was submitted to EPD on 22 Nov 2022
COM-2022-11-01	20 November 2022	EPD	EPD File Ref.: N07/RN/00 026174-22	The complainant concerned about the noise arising from piling works carried out at around 7am to around 10pm at the construction site adjacent to the Lok Ma Chau minibuss station (落馬州關口小巴士站旁地盤).	<u>Contract No.: YL/2021/01</u>  According to the interim report, the piling works were carried out with valid construction noise permit from 09:00 to 23:00 under Contract YL/2021/01 nearby Lok Ma Chau Station. Noise control measures (e.g., permit-to-work system) have been implemented on site.  Further noise mitigation measure, such as set up the acoustic canvas to enclose the engine of the used powered mechanical equipment and along the site boundary facing the resident of Shenzhen City to minimize the noise generated from works and the impact to the nearby resident.  In addition, the duration of potential noisy construction activities (e.g., core demouling and casing extraction)	Interim report was submitted to EPD on 5 Dec 2022

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
					were also minimized.	
COM-2022-12-01	4 December 2022	EPD	EPD File Ref.: N06/RN/00 027607-22)	The complainant alleged that: "... 打樁噪音造成困擾,情況已維持幾個星期,最初只係星期六下午,近兩星期日日朝早點前後就開始,到黃昏點幾6點先至停". The complainant provided co-ordinate information (x=826305.0; y=842363.0) for reference.	<u>Contract No.: YL/2020/01</u> According to the interim report, no percussive piling works were carried out since the commencement of the Contract with reference to the site diary records.  Refer to the coordinate information (x=826305.0; y=842363.0) provided by the complainant, the location of concerned is not within the works area under the Contract.  Based on the above information and investigation findings, the noise complaint is not related to the construction works of the Contract.	Interim report was submitted to EPD on 22 Dec 2022
COM-2022-12-01	8 December 2022	EPD	EPD File Ref.: N06/RN/00 028165-22)	The complainant alleged that there was percussive piling works carried out within the work site of Lok Ma Chau Loop, and commented that "落馬洲河套地盤打樁噪音問題,到目前仍然如是". The complainant provided a video record of 7 Dec 2022 (taken at around 1500 hours) showing the suspected percussive piling work. The complainant provided co-ordinate information (x=826305.0; y=842363.0)	<u>Contract No.: YL/2020/01</u> According to the interim report, no percussive piling works were carried out since the commencement of the Contract with reference to the site diary records.  Refer to the coordinate information (x=826305.0; y=842363.0) provided by the complainant, the location of concerned is not within the works area under the Contract.  Based on the above information and investigation findings, the noise complaint is not related to the construction works of the Contract.	Interim report was submitted to EPD on 22 Dec 2022

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
				for reference, and did not indicate where he/she was affected by the construction noise.		
COM-2023-02-01	15 February 2023	EPD	EPD File Ref.: N06/RN/0004267-23)	The complaint was lodged by a resident of Shenzhen City ‘...''附上落马洲工程夜间持续到现在还在工作的视频，轰隆声非常影响我们住在对面深圳居民的休息！希望能得到改善！不要在夜间扰民！谢谢！''. Two short videos were attached in EPD’s email dated 15 February 2023.	<p><u>Contract No.: YL/2021/01</u></p> <p>According to the interim report, piling works were carried out by the Contractor from 09:00 to 23:00 with valid construction noise permit under Contract YL/2021/01 of the Public Transport Interchange of Lok Ma Chau MTR Station.</p> <p>Noise monitoring was conducted for works during the restricted hours and no exceedance was recorded. The duration of working time for core demoulding and casting extraction were also minimized in order to reduce noise levels. Acoustic canvas sheets were installed to enclose the engine of used PME and deployed along the site boundary facing the resident of Shenzhen City to minimize the noise generated from works and the impact to the nearby resident.</p> <p>For enhancement, a 3m high noise barrier was installed next the rotary drilling rig on 15 February 2023. All night works were reviewed and suspended until 19 February 2023.</p>	Interim report was submitted to EPD on 24 Feb 2023
COM-2023-03-01	3 March 2023	EPD	EPD File Ref.: N06/RN/00	The complaint was lodged by a resident of Shenzhen City “附件有视频，拍不到做工	<p><u>Contract No.: YL/2021/01</u></p> <p>According to the interim report, the piling works were</p>	Interim report was submitted to EPD on 17



Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
			006284 23	程，但机器的轰隆声从早到晚，即使现在 22:24 分还在热火朝天的工作中！孩子和老人都需要休息，特别是老人，这种声音让他们已经很久没能早点休息！！！望能解决！或者可否告知什么时候工程能结束？ A short video was attached in EPD's email on 8 <sup>th</sup> March 2023.	<p>carried out from 09:00 to 23:00 with valid construction noise permit under Contract YL/2021/01 at the Public Transport Interchange of Lok Ma Chau MTR Station. Other than the piling works, there were no construction works undertaken by Contract YL/2021/01 on that night. Noise source was recorded in the short video provided by the complaint. However, the noise source had yet to be ascertained.</p> <p>Since the commencement of the contract, Permit to Work (PTW) System for construction works undertaking during restricted hours has been implemented. PMEs used were followed the granted CNP as well as the condition(s) stipulated in CNP were fulfilled.</p> <p>In addition, noise monitoring was conducted for works during the restricted hours, and no exceedance was recorded.</p> <p>Acoustic canvas sheets were installed to enclose the engine of used powered mechanical equipment. A 3m high noise barrier was installed next to the rotary drilling rig. For enhancement, another 3m high noise barrier was erected facing the residential blocks of Shenzhen City on 7 March 2023. The piling works at the site area near Lok Ma Chau MTR Station are tentatively scheduled to be completed in the first quarter of 2024.</p>	Mar 2023
COM-2023-04-01	3 April 2023	EPD	EPD File Ref.: N06/RN/00	The complaint was lodged by a resident of Shenzhen City "this site is still operating at	<p><u>Contract No.: YL/2021/01</u></p> <p>According to the interim report, the piling works were</p>	Interim report was submitted to EPD on 27

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
			009011-23	this time (10:15pm). It is not the first time it operates until this late but every single night since the work began. Last Sunday, it operated until 4pm”. A sound recording and phot were attached to the email.	<p>carried out from 08:00 to 19:00 on 2 April (Sunday) and 08:00 to 23:00 on 3 April with valid construction noise permit under Contract YL/2021/01 at the Public Transport Interchange of Lok Ma Chau MTR Station. Other than the piling works, there were no construction works undertaken for Contract YL/2021/01 during the aforementioned periods. The complaint included a sound recording that captured noise, but the source of the noise has not yet been determined.</p> <p>Since the commencement of the contract, Permit to Work (PTW) System for construction works undertaking during restricted hours has been implemented. Frontline supervisor and sub-contractors have to apply a PTW one working day in advance of the construction works during restricted hours and attend the pre-work briefing prior to commencing works on site to ensure strict compliance with the conditions of construction noise permit. No works and PME were allowed without the approved PTW form.</p> <p>Based on the Contractor’s record, two rotary drill rigs were operated as listed in Group L of granted CNP at 08:00 – 19:00 on 2 April (Sunday) and 19:00 – 23:00 on 3 April, and only one group (L) of the PME was used for carrying out construction work at the same time. PMEs used were followed the granted CNP as well as the condition(s) stipulated in CNP were fulfilled. The power generating part of the rotary drilling rigs was screened by</p>	Apr 2023

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status																
					<p>acoustic barrier. In addition, noise monitoring was conducted for works during the restricted hours, and no exceedance was recorded. The duration of working time for core demoulding and casing extraction were also minimized in order to reduce noise levels. 3m high noise barriers were installed next to the rotary drilling rigs. Another noise barriers were erected facing the residential blocks of Shenzhen City.</p> <p>All construction works performed during the restricted hours were reviewed and no non-compliance was identified. A refresher training on a CNP compliance was provided to relevant frontline staff and workers on 20<sup>th</sup> April 2023.</p>																	
COM-2023-05-01	8 May 2023	EPD	EPD File Ref.: N06/RN/00 011649 23	<p>A public complaint was received by EPD on 8 May 2023 and supplemented a video taken by complainant on 14 May 2023. The complaint was lodged by a resident of Shenzhen City "地點，港鐵落馬洲站，樓下近巴士總站，福田口岸建築地盤，經常發出噪音，剛才星期六五月六號約15點40分，估計噪音超過100分配，另外經常在18:00後，及於星期日公眾假期等日子進行施工及發出噪音造成滋擾。"</p>	<p>Contract No.: YL/2021/01</p> <p>According to the interim report, construction activities being undertaken nearby Lok Ma Chau MTR Station on 6 May (Saturday) and 14 May (Sunday) 2023 were:</p> <table border="1"> <thead> <tr> <th>Date</th> <th colspan="2">6 May (Saturday)</th> <th>14 May (Saturday)</th> </tr> </thead> <tbody> <tr> <td>Working Time:</td> <td>08:00 to 19:00 (Normal working hours)</td> <td>19:00 to 23:00 (Restricted hours)</td> <td>08:00 to 19:00 (Restricted hours)</td> </tr> <tr> <td>Location:</td> <td colspan="3">The Public Transport Interchange of Lok Ma Chau MTR Station</td> </tr> <tr> <td>Construction</td> <td colspan="2">Piling works</td> <td>Air lifting works</td> </tr> </tbody> </table>	Date	6 May (Saturday)		14 May (Saturday)	Working Time:	08:00 to 19:00 (Normal working hours)	19:00 to 23:00 (Restricted hours)	08:00 to 19:00 (Restricted hours)	Location:	The Public Transport Interchange of Lok Ma Chau MTR Station			Construction	Piling works		Air lifting works	Interim report was submitted to EPD on 17 May 2023
Date	6 May (Saturday)		14 May (Saturday)																			
Working Time:	08:00 to 19:00 (Normal working hours)	19:00 to 23:00 (Restricted hours)	08:00 to 19:00 (Restricted hours)																			
Location:	The Public Transport Interchange of Lok Ma Chau MTR Station																					
Construction	Piling works		Air lifting works																			

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status														
					<p>activities: <table border="1" style="display: inline-table; vertical-align: top;"><tr><td style="width: 150px; height: 15px;"></td><td style="width: 150px; height: 15px;"></td></tr></table></p> <p>The noise recorded in the video was considered not arising from Contract YL/2021/01.</p> <p>Since the commencement of the contract, Permit to Work (PTW) System for construction works undertaking during restricted hours has been implemented. No works and PMEs were allowed without the approved PTW form.</p> <p>PMEs used record</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Date:</td> <td style="width: 40%;">6 May (Saturday)</td> <td style="width: 40%;">14 May (Saturday)</td> </tr> <tr> <td>Time (restricted hours)</td> <td>19:00 to 23:00</td> <td>08:00 to 19:00</td> </tr> <tr> <td>Group of granted CNP:</td> <td>L</td> <td>M</td> </tr> <tr> <td>PMEs used:</td> <td>1 x Rotary drilling rig</td> <td>2 x De-senders 2 x Mobile cranes 2 x Air compressors</td> </tr> </table> <p>PMEs used were followed the granted CNP as well as the condition(s) stipulated in CNP were fulfilled. The power generating part of the rotary drilling rigs was screened by acoustic barrier. In addition, noise monitoring was conducted for works during the restricted hours, and no exceedance was recorded. The duration of working time for core demoulding and casing extraction were also minimized in order to reduce noise levels. A 3m high noise barrier were installed next to the rotary drilling rig. Another noise barriers were erected facing the residential</p>			Date:	6 May (Saturday)	14 May (Saturday)	Time (restricted hours)	19:00 to 23:00	08:00 to 19:00	Group of granted CNP:	L	M	PMEs used:	1 x Rotary drilling rig	2 x De-senders 2 x Mobile cranes 2 x Air compressors	
Date:	6 May (Saturday)	14 May (Saturday)																		
Time (restricted hours)	19:00 to 23:00	08:00 to 19:00																		
Group of granted CNP:	L	M																		
PMEs used:	1 x Rotary drilling rig	2 x De-senders 2 x Mobile cranes 2 x Air compressors																		

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
					<p>blocks of Shenzhen City. The generators used on site were Quality Powered Mechanical Equipment (QPME).</p> <p>According to the calculation by the Contractor during the non-restricted hour on 6 May (Saturday), the mitigated noise level at the nearest residential building in Shenzhen based on the SWL of PMEs used were below 75dB(A).</p> <p>All construction works performed during the restricted hours were reviewed and no non-compliance was identified. A refresher training on a CNP compliance was provided to relevant frontline staff and workers on 12 May 2023. The deployment of the temporary noise barriers would be reviewed from time to time to cater for the changing site conditions.</p>	
COM-2023-10-01	2 October 2023	EPD	EPD File Ref.: N07/RN/00 023409-23	EPD received a public complaint on 2 October 2023 regarding flytipping of C&D wastes from a construction site. “街燈 BD1944、BD1308附近有地盤非法傾倒建築物料(紅毛泥)到河流中，導致河中魚類死亡”。	<p><u>Contract No.: YL/2020/02</u></p> <p>According to the interim report, the following investigation was conducted:</p> <ol style="list-style-type: none"> <li>1. EPD SEPI Mr. Arthur Lau and his team, accompanied by CRBC Environmental Officer, Mr. Calvin So, carried out site inspection at Lok Ma Chau works area on 4 October 2023. During the inspection, no dead fish and construction waste was found in the nullah. Three water samples were taken by EPD (two from the nullah near street lamp post nos. BD1944 and BD1308 respectively, one from the wastewater treatment facility at Fu Tai works area)</li> </ol>	Interim report was submitted to EPD on 6 Nov 2023

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
					<p>during the inspection. No adverse comment was received from EPD during the inspection regarding the captioned.</p> <ol style="list-style-type: none"> <li>2. A joint site investigation amongst ET, IEC, AECOM and CRBC was carried out on 4 October 2023. No dead fish and deposition of construction waste (e.g. cement) was identified at the nullahs on both sides of Lok Ma Chau Road. Wastewater generated near Fu Tai works area was properly treated prior to discharge to the designated discharge point in accordance with the Discharge Licence (Licence Number: WT10001592-2023). No inert material was placed near the nullah in Fu Tai works area. No chemical is discharged to the existing Chau Tau nullah.</li> <li>3. The construction waste in Fu Tai works area was free from the nullah, sandbags were provided at the working area near the nullah. The inert construction waste (e.g. soil) generated in Fu Tai works area was transported to Reedbed works area for further arrangement, such as temporary storage for future use and disposal at designated Public Fill Bank.</li> <li>4. The construction activities conducted from 25 September 2023 to 6 October 2023 in Fu Tai works area are the following:                         <ol style="list-style-type: none"> <li>(a) RCD drilling (Involving driven of steel casing into rock head level instead of applying bentonite, wastewater was collected and recycled by set of sedimentation tanks,</li> </ol> </li> </ol>	

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
					<p>therefore no wastewater was leaked to nearby nullah.)</p> <ul style="list-style-type: none"> <li>(b) RCD airlifting (Wastewater was collected by set of sedimentation tanks and discharged after treatment of Wetsep to discharge point)</li> <li>(c) Concreting by tremie pipe without applying of curing compound (Wastewater was displaced by concrete within the steel casing and discharged after treatment of Wetsep to discharge point without any overflow)</li> </ul> <p>The construction waste generated was transported to Reedbed works area for further arrangement. The construction activities conducted at the works area opposite to street lamp post no. BD1308 is unlikely to cause any effect to the nullah next to street lamp post no. BD1944 as nullah system is already diverted to different stream next to Chau Tau Ventilation Building. Therefore, the construction activities adjacent to the existing Chau Tau nullah were discrete from the downstream nullah.</p> <p>5. Mitigation measures taken on wastewater pollution control and waste management:</p> <ul style="list-style-type: none"> <li>(a) Wastewaste treatment facilities were employed in Fu Tai Area. Wastewater generated in the area was treated properly in accordance with the Discharge Licence (Licence Number: WT10001592-2023)</li> </ul>	

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
					<p>before discharge to the designated discharge point since the Discharge Licence (Licence Number: WT10001592-2023) was granted (early September 2023).</p> <p>(b) The nullah near Fu Tai works area is free from construction material, sandbags were provided at the working area near the nullah since the commencement of works in Fu Tai works area.</p> <p>(c) CCTVs were installed along the nullah in Lok Ma Chau Road for monitoring since August 2023. The site condition of the nullah in Lok Ma Chau Road can be seen at real time and recorded through the CCTVs. No dead fish and construction waste was found in the nullah during the period of 25 September 2023 to 4 October 2023. No incident of oil / chemical spillage at Fu Tai Site area.</p> <p>6. Nevertheless, CRBC will continue to comply with the Water Pollution Control Ordinance and Waste Disposal Ordinance. Based on the investigation result, it is considered that the complaint was not related to Contract No. YL/2020/02.</p>	
COM-2023-12-01	4 December 2023	EPD	N/A	EPD received a public complaint on 4 December 2023 regarding to muddy	<p><u>Contract No.: YL/2020/02</u></p> <p>According to the interim report, the following</p>	Interim report was submitted to EPD on 19



Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
				<p>water and dust nuisance from a construction site. "落馬洲潘屋村口有一個地盤排放出泥水及造成大塵滋擾。這地盤是鄰近村民等車的地方，可以影響到出入的老人。" The complainant made a request that "dust screens" should be set up at the construction area near "the public light bus stand" alleged as temporary nature for Pun Uk Tsuen.</p>	<p>investigation was conducted:</p> <ol style="list-style-type: none"> <li>1. Excavation and site clearance was conducted at the concerned site area.</li> <li>2. EPD SEPI Mr. Arthur Lau and his team, accompanied by CRBC Environmental Officer, Mr. Calvin So and RSS, carried out site inspection at Pun Uk Tsuen works area on 5 December 2023. During the inspection, no muddy water and dust nuisance were found at the concerned site area. No adverse comment was received from EPD during the inspection under the subject complaint.</li> <li>3. Mitigation measures took on site for wastewater pollution control and dust nuisance before receiving the complaint: <ol style="list-style-type: none"> <li>(a) Sandbags have been placed along the boundary of the works area to prevent wastewater to be ran-off from the site.</li> <li>(b) Tarpaulin sheet has been provided for the exposed slopes to minimize the dust nuisance to nearby pedestrians.</li> </ol> </li> <li>4. Additional mitigation measures took on site to further strengthen the wastewater pollution control and dust nuisance after the complaint:</li> </ol>	Dec 2023

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
					<p>(a) Double layer of sandbags have been placed along the work area to prevent wastewater to be ran-off from the site.</p> <p>(b) Dust screen has been erected to minimize dust nuisance to nearby pedestrians.</p> <p>5. Nevertheless, CRBC will continue to comply with the Water Pollution Control Ordinance and Air Pollution Control Ordinance. Base on the investigation result, it is considered that the complaint was not related to Contract No. YL/2020/02.</p>	
COM-2024-1-01	14 January 2024	EPD	EPD File Ref.: N06/RN/00 001389-24)	An environmental complaint has been received by EPD regarding construction works of the Lok Ma Chau Loop Project (Environmental Permit No. EP-477/2013/B). The complainant alleged that there was a construction noise generated from percussive piling works around the work site of Central Government – Aided Emergency Hospital. The details of the complaint according to EPD email dated 16 January 2024 is a	<p><u>Contract No.: YL/2020/01</u></p> <p>According to the interim report, the following investigation was conducted:</p> <ol style="list-style-type: none"> <li>1. Percussive piling works is not required under YL/2020/01, no percussive piling works were carried out since the commencement of the Contract and no site activities after 20:00 on 12 January 2024.</li> <li>2. A site inspection conducted on 18 January 2024, by EPD SEPI, Mr Arthur Lau and his team, accompanied by representatives from JV at works area of Contract YL/2020/01. During the</li> </ol>	Interim report was submitted to EPD on 7 February 2024

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
				follows, “投訴人投訴落馬洲福田口岸中央援港醫院附近有工程噪音滋擾事宜，投訴人表示在1月12日晚上九點半依然有打樁的聲音，嚴重滋擾投訴人休息。要求部問跟進和處理個案”。	inspection, no piling works was observed. No adverse comment was received from EPD during the inspection regarding the caption.  3. Based on above information and investigation findings, the noise complaint is not related to the construction works of the Contract YL/2020/01.	
COM-2024-2-01	2 February 2024	EPD	EPD File Ref.: N06/RN/0003501-24)	EPD received a public complaint on 2 February 2024 " 2024年1月30經過，發現比以往更多白泥滲入渠道，應該由附近地盤排水導致，之前已有少量白泥滲入，當日經過直頭全白，此地盤公司已多次非法排污。"	<u>Contract No.: YL/2020/02</u>  According to the interim report, the following investigation was conducted:  1. Bored piling works has been conducted at the concerned site area since 30 Dec 2023.  2. Mitigation measures taken on wastewater pollution control:  • Wastewater treatment facilities were employed in Fu Tai Area. Wastewater generated in the area was treated properly in accordance with Discharge Licence (Licence Number: WT10001592-2023) before discharge to the designated discharge point since the Discharge Licence (Licence Number: WT10001592-2023) was granted (early September 2023).	Interim report was submitted to EPD on 27 February 2024

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
					<ul style="list-style-type: none"> <li>• Designated personnel has been assigned to carry out regular maintenance for Wastewater treatment facilities at all time to ensure wastewater is treated properly prior to discharge.</li> <li>• Provision of wheel-washing bay for vehicles leaving site and sump pit has been constructed for collection of wastewater.</li> <li>• Wastewater treatment facilities including sump pits, sedimentation tanks and Wetsep have been provided on site to treat, reuse and discharge any wastewater generated.</li> <li>• Provision of sandbags to prevent surface run-off from entering nullah and public drainage system.</li> </ul> <p>3. A site inspection of the nullah and the concerned works area between RSS and CRBC was carried out on 3 February 2024. No discharge of water, disposal of materials and overflow into the nullah from the works area was observed. Temporary wastewater treatment facilities such as WetSep and connecting pipes were observed to be functioned properly.</p> <p>4. EPD SEPI Mr. Arthur Lau and his team, accompanied by CRBC Environmental Officer, Mr. Calvin So and RSS, carried out site</p>	

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
					<p>inspection at Fu Tai Carpark works area on 8 February 2024. During the inspection, no untreated wastewater was found discharging to public drain at the concerned site area. No adverse comment was received from EPD during the inspection under the subject complaint.</p> <p>5. Nevertheless, the contractor will continue to comply with the Water Pollution Control Ordinance. Holistic review of temporary drainage system including sedimentation tanks, cut-off drain, bunding and sump pits has been conducted to enhance the treatment capability of wastewater on site.</p>	
COM-2024-5-01	24 May 2024	EPD	EPD File Ref.: N06/RN/00 014224-24)	EPD received a public complaint on 24 May 2024 "投訴燈柱 BD0942 附近的馬路工程將污水直接排放到河道，要求環保署跟進及回覆。	<p><u>Contract No.: YL/2020/02</u></p> <p>The complaint was received by the Contractor on 4 June 2024. According to the interim report, the following investigation was conducted:</p> <ol style="list-style-type: none"> <li>1. Drainage works and road works has been conducted at the concerned site area since April 2024.</li> <li>2. Mitigation measures taken on wastewater pollution control: <ul style="list-style-type: none"> <li>• Wastewater treatment facilities were employed in Fu Tai Area (Next to Chau Tau West Road).</li> </ul> </li> </ol>	Interim report was submitted to EPD on 24 June 2024

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
					<p>Wastewater generated in the area was treated properly in accordance with the Discharge Licence (Licence Number: WT10001592-2023) before discharge to the designated discharge point since the Discharge Licence (Licence Number: WT10001592-2023) was granted (early September 2023). Routine self-monitoring of the effluent discharge has been carried out. According to the latest lab test result of effluent discharge at the wastewater treatment facility as attached, the effluent discharge did not exceed the limits as stated in the Licence.</p> <ul style="list-style-type: none"> <li>• Designated personnel has been assigned to carry out regular maintenance for Wastewater treatment facilities at all time to ensure wastewater is treated properly prior to discharge.</li> <li>• Concrete bund had been constructed to prevent the unaffected upstream water from flowing into the site area and water pipe had been placed to bypass the unaffected upstream water.</li> <li>• Wastewater treatment facilities including sump pits, sedimentation tanks and Wetsep have been provided on site to treat, reuse and discharge any wastewater generated. The wastewater treatment facilities has been indicated in the temporary site drainage plan which is</li> </ul>	

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
					<p>incorporated in the Layout Plan.</p> <p>3. A site inspection of the nullah and the concerned works area between ET, IEC, RSS and CRBC was carried out on 5 June 2024. As observed, most of the works areas were hard-paved. No discharge of wastewater and overflow into the nullah from the works area was observed.</p> <p>4. EPD Ms. Leung and her team, accompanied by CRBC Environmental Officer, Mr. Calvin So and RSS, carried out site inspection at Lok Ma Chau Road works area on 12 June 2024. During the inspection, no untreated wastewater was found discharging to public drain at the concerned site area. No adverse comment was received from EPD during the inspection under the subject complaint.</p> <p>5. Base on the investigation result, it is considered that the complaint was not related to Contract No. YL/2020/02.</p> <p>6. Nevertheless, CRBC will continue to comply with the Water Pollution Control Ordinance.</p>	
COM-2024-6-01	2 June 2024	EPD	EPD File Ref.: N06/RN/00 014984-24)	EPD received a public complaint on 2 June 2024 " 投訴人於 2024 年 5 月 31 日晚上 10 時在落馬州巴	<p><u>Contract No.: YL/2021/01</u></p> <p>The complaint was received by the Contractor on 28 June 2024. The Contractor took immediately action with findings shown below:</p>	Interim report was submitted to EPD on 19 July 2024

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status																																																																														
				<p>士站乘搭的士，途徑新界的士站及九巴 B1 線巴士站中間的一個地盤有黃泥水湧出街道，投訴人表示已經向警方報案，並已拍攝照片及相片，要求部門跟進。”</p>	<p><b>Weather:</b> Based on HKO’s record, Typhoon No. 3 (Typhoon - Maliksi) was issued on 31 May 2024 from 1640 hrs to 1640 hrs on 1 June 2024, and Amber Rainstorm Warning was issued on 31 May 2024 from 1530 hrs to 1700 hrs. The daily rainfall distribution records at Lok Ma Chau were listed below.</p> <p>Daily Total Rainfall (mm) at Lok Ma Chau 2024</p> <div style="text-align: center;"> <span>Back</span> Year 2024 <span>Go</span> </div> <table border="1" data-bbox="1249 699 1917 842"> <thead> <tr> <th></th> <th>Jan</th> <th>Feb</th> <th>Mar</th> <th>Apr</th> <th>May</th> <th>Jun</th> <th>Jul</th> <th>Aug</th> <th>Sep</th> <th>Oct</th> <th>Nov</th> <th>Dec</th> </tr> </thead> <tbody> <tr> <td>27</td> <td>9.5</td> <td>0.0</td> <td>0.0</td> <td>2.0</td> <td>12.5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>28</td> <td>0.5#</td> <td>0.0</td> <td>0.0</td> <td>9.0</td> <td>14.5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>29</td> <td>**</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>30</td> <td>0.6#</td> <td></td> <td>0.0</td> <td>10.0</td> <td>1.0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>31</td> <td>0.0</td> <td></td> <td>0.0</td> <td></td> <td>46.5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>JV carried out site investigation, there was no construction works carried out at the time of complaint. The source of leaking muddy water was considered as the heavy rainfall.</p> <p><b>Site condition:</b> At the boundary of construction site, sandbags were placed along the plastic traffic barrier. The site entrance has been hard-paved. Water pumps were installed and connected to the wastewater treatment facilities to ensure all the surface runoff is properly being diverted and collected to the wastewater treatment facilities. Wastewater treatment facility have</p>		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	27	9.5	0.0	0.0	2.0	12.5								28	0.5#	0.0	0.0	9.0	14.5								29	**	0.0	0.0	0.0	0.0								30	0.6#		0.0	10.0	1.0								31	0.0		0.0		46.5								
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec																																																																								
27	9.5	0.0	0.0	2.0	12.5																																																																															
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31	0.0		0.0		46.5																																																																															



Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
					<p>been provided onsite and operated normally.</p> <ul style="list-style-type: none"> <li>• EPD visited on 25 June 2024 to follow up the complaint and wastewater treatment facilities were checked with no comment.</li> <li>• Onsite investigation carried out among AECOM and JV on 28 June 2024. Observed that the additional sump pit and geotextiles should be provided and installed at the gully.</li> <li>• Hard-paving of the site entrances and installation of geotextile at the gully near the public area.</li> <li>• Review site drainage and additional sump pit location for wastewater collection. The location of sedimentation tank was changed nearby the additional sump pit.</li> <li>• Additional sump pit was provided with automatic water pump connected to waste water treatment facility was applied on site.</li> <li>• Check all water pipes were closed before leaving to ensure no leakage during the night time.</li> <li>• Sandbags were placed to direct wastewater to additional sump pit.</li> <li>• Sandbags were placed along the water barrier.</li> <li>• Check and clean the drainage system regularly.</li> <li>• Review the temporary drainage plan on a regular basis.</li> <li>• Ensure the lab test result of the effluent discharge at the wastewater treatment facility shows</li> </ul>	

Log Ref.	Date of Complaint	Complaint Route	Reference No.	Details of Complaint	Investigation Finding	Status
					compliance with the approved discharge license <ul style="list-style-type: none"> <li>• Conduct a toolbox training of waste water discharge to workers.</li> <li>• The exposed site area has been covered with tarpaulin sheet.</li> </ul>	

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**APPENDIX N  
SUMMARY OF SUCCESSFUL  
PROSECUTION**

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**Appendix N - Summary of Successful Prosecution**

<b>Date of Successful Prosecution</b>	<b>Details of the Successful Prosecution</b>	<b>Status</b>	<b>Follow Up</b>
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**APPENDIX O  
MONITORING SCHEDULE FOR THE  
PRESENT AND NEXT REPORTING  
QUARTER**

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**Service Contract No. WD/04/2020**  
**Development of Lok Ma Chau Loop: Main Works Package 1 – Environmental Team**  
**Impact Monitoring Schedule (April 2024)**

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

**Air Quality Monitoring Station**

DMS-1a - Village House along Ha Wan Tsuen East Road  
DMS-2B - Site boundary near Village House along Lok Ma Chau  
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**  
**Impact Monitoring Schedule (May 2024)**

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

**Air Quality Monitoring Station**

DMS-1a - Village House along Ha Wan Tsuen East Road  
DMS-2B - Site boundary near Village House along Lok Ma Chau  
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**  
**Impact Monitoring Schedule (June 2024)**

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

**Air Quality Monitoring Station**

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**Noise Monitoring Station**

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(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 (July 2024)**

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

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

**Air Quality Monitoring Station**

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DMS-2B - Site boundary near Village House along Lok Ma Chau  
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**Noise Monitoring Station**

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