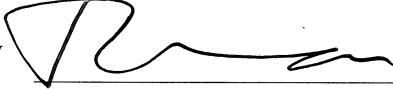


**Civil Engineering and Development Department**

**Agreement No. CE 59/2015 (EP)  
Environmental Team for  
Tseung Kwan O – Lam Tin Tunnel  
Design and Construction**

**Monthly Environmental Monitoring and  
Audit Report for  
June 2025  
(Version 1.0)**

Approved By   
(Dr. HF Chan,  
Environmental Team Leader)

REMARKS:

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

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

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Your reference:

Our reference: HKCEDD08/50/110637

Date: 9 July 2025

Attention: Mr Arnold Wong

**BY FAX & POST**  
**(Fax no.: 2739 0076)**

Dear Sirs

Agreement No.: NTE 06/2016  
Independent Environmental Checker for Tseung Kwan O – Lam Tin Tunnel  
Monthly Environmental Monitoring and Audit Report for June 2025

We refer to the email of 9 July 2025 from Cinotech Consultants Limited attaching the Monthly Environmental Monitoring and Audit Report for June 2025.

We have no comment and hereby verify the captioned report in accordance with Clause 4.4 of the Environmental Permit no. EP-458/2013/C.

Should you have any queries, please do not hesitate to contact the undersigned or our Mr Alex Chan on 2618 2831.

Yours faithfully  
ANEWR CONSULTING LIMITED

James Choi  
Independent Environmental Checker

CPSJ/LCCR/CYCA/thy

cc CEDD – Mr Arnold Wong (email: [aclwong@cedd.gov.hk](mailto:aclwong@cedd.gov.hk))  
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## EXECUTIVE SUMMARY

### Introduction

1. This is the 104<sup>th</sup> Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for the “Agreement No. CE 59/2015 (EP) Environmental Team for Tseung Kwan O – Lam Tin Tunnel – Design and Construction” (hereinafter called “the Project”). This report documents the findings of EM&A Works conducted in June 2025.
2. During the reporting month, the following works contracts were undertaken:
  - Contract No. NE/2015/01 – Tseung Kwan O – Lam Tin Tunnel – Main Tunnel and Associated Works;
  - Contract No. NE/2015/02 – Tseung Kwan O – Lam Tin Tunnel – Road P2 and Associated Works;
  - Contract No. NE/2017/01 – Tseung Kwan O – Lam Tin Tunnel – Tseung Kwan O Interchange and Associated Works
  - Contract No. NE/2017/02 – Tseung Kwan O – Lam Tin Tunnel – Road P2/D4 and Associated Works.
  - Contract No. NE/2017/06 – Tseung Kwan O – Lam Tin Tunnel – Traffic Control and Surveillance System (TCSS) and Associated Works
  - Contract No. NE/2017/07 – Cross Bay Link, Tseung Kwan O – Main Bridge and Associated Works.

### Environmental Monitoring 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. The implementation of mitigation measures in operation phase is presented in **Appendix X**.
4. Operation phase traffic noise monitoring for four representative NSRs (OM1, OM2, OM3 & OM4) at YauTong side and 4 representative NSRs (OM5, OM7, OM8 & OM9) at TKO side was carried out on 29 May 2023, 21 September 2023, 28 September 2023, 3 November 2023, 10 November 2023 and 20 November 2023 respectively.
5. Summary of the non-compliance (exceedance) in the reporting month for the Project is tabulated in **Table I**.
6. As all the works contracts under the Project have been substantially completed in 2024 according to the completion certificates supplied by CEDD and the Engineer, termination of the EM&A programme including environmental monitoring, site inspection and reporting was proposed accordingly. The termination proposal was submitted to EPD on 12 July 2024 to seek approval of the termination of EM&A programme.

**Table I Non-compliance (exceedance) Record for the Project in the Reporting Month**

| Environmental Monitoring                             | No. of Non-compliance (Exceedance) |                  | No. of Non-compliance (Exceedance) due to Construction Activities of this Project |                  | Action Taken |
|--|------------------------------------|------------------|---|------------------|--------------|
|  | Action Level                       | Limit Level      | Action Level  | Limit Level      |              |
| Air Quality  | 0                                  | 0                | 0   | 0                | N/A          |
| Noise  | 0                                  | 0                | 0   | 0                | N/A          |
| Impact Marine Water Quality *                        | N/A                                | N/A              | N/A   | N/A              | N/A          |
| Groundwater Level Monitoring (Piezometer Monitoring) | 0                                  | N/A <sup>1</sup> | 0   | N/A <sup>1</sup> | N/A          |
| Ecological   | N/A                                | N/A              | N/A   | N/A              | N/A          |
| Cultural Heritage                                    | 0                                  | 0                | 0   | 0                | N/A          |
| Landfill Gas   | 0                                  | 0                | 0   | 0                | N/A          |

Note:(1) No Limit Level for Groundwater Level Monitoring (Piezometer Monitoring).

\*No impact marine water quality monitoring was conducted as all marine works completed on 17 May 2023.

#### *Air Quality Monitoring*

7. No Action/Limit Level exceedance for 1-hour TSP monitoring was recorded.
8. No Action Level exceedance for 24-hour TSP monitoring was recorded.
9. No Limit Level exceedances for 24-hour TSP monitoring was recorded.

#### *Construction Noise Monitoring*

10. No Action Level exceedance was recorded due to documented complaints in the reporting month. The Summary of Documented Complaints in Reporting Month is tabulated in **Table III**.
11. No project-related Limit Level exceedance was recorded due to monitoring results in this reporting month.

#### *Water Quality Monitoring*

12. Groundwater quality monitoring had been suspended since October 2019 upon the agreement by EPD. Further details should be founded at **Section 5.1**.
13. No marine water quality monitoring was conducted in the reporting month as all the marine works under the Environmental Permit No. EP-458/2013/C have been completed on 17 May 2023 and the 4 weeks post-marine water quality monitoring was initiated afterwards. The post-marine water quality monitoring was commenced on 18 May 2023 and completed on 14 June 2023 (both days inclusive). The monitoring location is presented in **Figure 5**, no further monitoring is required in the reporting month. Details of this investigation are presented in **Section 5**.

14. Since all reclamation works for Road P2 are completed in November 2021, the post-reclamation marine water quality monitoring was initiated in December 2021. In accordance to EP condition No. 3.4, upon the completion of the year-round monitoring, the marine water quality in the embayment area shall be summarised and reported with suggestions for improvements, if applicable. The monitoring location is presented in **Figure 9** and the last monitoring was carried out in November 2022, no further monitoring is required.
15. Construction phase daily piezometer monitoring by the Contractor commenced in June 2018. It has switched to monthly basis on 3 October 2018 as the construction activity was 120m away from the piezometer gate. No monitoring was conducted in the reporting month.

#### *Ecological Monitoring*

16. Post-translation coral monitoring survey shall be conducted once every 3 months for a period of 12 months after completion of coral translocation. The post-translocation coral monitoring surveys were completed in November 2017.

#### *Monitoring on Cultural Heritage*

17. Monitoring of impacts on Cultural Heritage at Cha Kwo Ling Tin Hau Temple commenced in May 2017. No Alert, Alarm, and Action (AAA) Level exceedance was recorded in the reporting month.

#### *Landscape and Visual Monitoring and Audit*

18. The implementation of landscape and visual mitigation measures was checked during the environmental site inspections. Recommended follow-up actions have been discharged by the Contractor. Details of the audit findings and implementation status are presented in **Section 10**.

#### *Landfill Gas Monitoring*

19. Monitoring of landfill gases commenced in December 2016 and was carried out by the Contractor at excavation location, Portion III. Upon the completion of construction within the concerned area, landfill gas monitoring for operation phase was commenced from the end of December 2022 and the monitoring was completed in November 2024.

*Environmental Site Inspection*

20. Joint weekly site inspections were conducted by representatives of the Contractor, Engineer, and Environmental Team. The representative of the IEC joined the site inspection for NE2015/01, NE/2017/07, NE/2015/02, NE/2017/01, NE/2017/02, and NE/2017/06 on 18 June 2025 respectively. Details of the audit findings and implementation status are presented in **Section 10**.

*Waste Management*

21. Wastes generated from this Project include inert construction and demolition (C&D) materials, non-inert C&D materials, and marine sediment. Details of waste management data are presented in **Section 11** and **Appendix P**.

## Key Information in the Reporting Month

22. Summary of key information in the reporting month is tabulated in **Table II**

**Table II Key Information in the Reporting Month**

| Monthly Complaints                                   | Event Details |        | Action Taken           | Status |
|--|---------------|--------|------------------------|--------|
|  | Number        | Nature |                        |        |
| June 2025  | 0             | ---    | N/A                    | N/A    |
| May 2025   | 0             | ---    | N/A                    | N/A    |
| April 2025   | 0             | ---    | N/A                    | N/A    |
| March 2025   | 0             | ---    | N/A                    | N/A    |
| February 2025  | 0             | ---    | N/A                    | N/A    |
| January 2025   | 0             | ---    | N/A                    | N/A    |
| December 2024  | 0             | ---    | N/A                    | N/A    |
| November 2024  | 0             | ---    | N/A                    | N/A    |
| October 2024   | 0             | ---    | N/A                    | N/A    |
| September 2024                                       | 0             | ---    | N/A                    | N/A    |
| August 2024  | 0             | ---    | N/A                    | N/A    |
| July 2024  | 0             | ---    | N/A                    | N/A    |
| June 2024  | 0             | ---    | N/A                    | N/A    |
| May 2024   | 0             | ---    | N/A                    | N/A    |
| April 2024   | 1             | Water  | Details refer to App O | Closed |
| March 2024   | 0             | ---    | N/A                    | N/A    |
| February 2024  | 0             | ---    | N/A                    | N/A    |
| Notifications of any summons & prosecutions received | 0             | ---    | N/A                    | N/A    |

23. Summary of complaints received in the reporting month is tabulated in **Table III**.

**Table III Summary of Complaints Details in Reporting Month**

| <b>Complaint No.</b>      | <b>Complaint</b> | <b>Investigation Findings</b> | <b>Follow-up Action / Mitigation Measure</b> |
|---------------------------|------------------|-------------------------------|--|
| <b>Lam Tin Side</b>       |                  |                               |  |
| ---                       | ---              | ---                           | ---  |
| <b>Tseung Kwan O Side</b> |                  |                               |  |
| ---                       | ---              | ---                           | ---  |

**Key Construction Work in the reporting month & the next reporting month**

24. Summary of key construction work in the reporting month is tabulated in **Table IV**.

**Table IV Summary Table for Key Construction Work in the Reporting Month**

| <b>Contract No.</b> | <b>Project Title</b>   | <b>Site Activities (June 2025)</b>  |   |
|---------------------|--|---|---|
| NE/2015/01          | Tseung Kwan O – Lam Tin Tunnel – Main Tunnel and Associated Works                                    | Lam Tin Interchange   | 1) Slope Stabilization at Area 1G1, 1G2 & 5<br>2) Soft Landscape<br>3) LTI Drainage<br>4) Stage 1 Commissioning Outstanding Works |
|                     |  | Main Tunnel   | 5) N/A  |
|                     |  | TKO Interchange   | 6) N/A  |
| NE/2015/02          | Tseung Kwan O – Lam Tin Tunnel – Road P2 and Associated Works  | 1) N/A  |   |
| NE/2015/03          | Tseung Kwan O – Lam Tin Tunnel – Northern Footbridge   | The construction works under the contract had been completed in December 2019. The EM&A works were terminated in late April 2020.           |   |
| NE/2017/01          | Tseung Kwan O – Lam Tin Tunnel – Tseung Kwan O Interchange and Associated Works                      | The construction works under the contract had been completed in January 2022. The EM&A works will be terminated after the approval by EPD.  |   |
| NE/2017/02          | Tseung Kwan O – Lam Tin Tunnel – Road P2/D4 and Associated Works                                     | The construction works under the contract had been completed in December 2022. The EM&A works will be terminated after the approval by EPD. |   |
| NE/2017/06          | Tseung Kwan O – Lam Tin Tunnel – Traffic Control and Surveillance System (TCSS) and Associated Works | The construction works under the contract had been completed in August 2023. The EM&A works will be terminated after the approval by EPD.   |   |
| NE/2017/07          | Cross Bay Link, Tseung Kwan O – Main Bridge and Associated Works                                     | The construction works under the contract had been completed in December 2022. The EM&A works will be terminated after the approval by EPD. |   |

**Future Key Issues**

25. The future key environmental issues in the coming month include:

**Table V Summary Table for Site Activities in the next Reporting Period**

| <b>Contract No. and Project Title</b>   | <b>Site Activities (July 2025)</b>  |   | <b>Key Environmental Issues *</b> |
|---|---|---|-----------------------------------|
| NE/2015/01 - Tseung Kwan O – Lam Tin Tunnel – Main Tunnel and Associated Works                                    | Lam Tin Interchange   | 1) Soft Landscape<br>2) Stage 1 Commissioning Outstanding Works | (A) / (C) / (D) / (E) / (G) / (H) |
|   | Main Tunnel   | 3) N/A  | N/A                               |
|   | TKO Interchange   | 4) N/A  | N/A                               |
| NE/2015/02 - Tseung Kwan O – Lam Tin Tunnel – Road P2 and Associated Works  | 1) N/A  |   | N/A                               |
| NE/2015/03 - Tseung Kwan O – Lam Tin Tunnel – Northern Footbridge   | The construction works under the contract had been completed in December 2019. Materials are being removed from works area.                 |   | N/A                               |
| NE/2017/01 – Tseung Kwan O Interchange and Associated Works   | The construction works under the contract had been completed in January 2022. The EM&A works will be terminated after the approval by EPD.  |   | N/A                               |
| NE/2017/02 – Tseung Kwan O - Lam Tin Tunnel - Road P2/D4 and Associated Works                                     | The construction works under the contract had been completed in December 2022. The EM&A works will be terminated after the approval by EPD. |   | N/A                               |
| NE/2017/06 – Tseung Kwan O – Lam Tin Tunnel – Traffic Control and Surveillance System (TCSS) and Associated Works | The construction works under the contract had been completed in December 2022. The EM&A works will be terminated after the approval by EPD. |   | N/A                               |
| NE/2017/07 - Cross Bay Link, Tseung Kwan O – Main Bridge and Associated Works                                     | The construction works under the contract had been completed in December 2022. The EM&A works will be terminated after the approval by EPD. |   | N/A                               |

Note:

- (A) Watering for dust generation from haul road, stockpiles of dusty materials, exposed site area, excavation works and rock breaking activities;
- (B) Noisy construction activity such as rock-breaking activities and piling works;
- (C) Runoff from exposed slope or site area;
- (D) Wastewater and runoff discharge from site;
- (E) Accumulation of silt, mud and sand along U-channels and sedimentation tanks;
- (F) Set up and implementation of temporary drainage system for the surface runoff;
- (G) Storage of chemicals/fuel and chemical waste/waste oil on site;
- (H) Accumulation and storage of general and construction waste on site; and
- (I) Marine water quality impact and indirect impact to coral communities due to marine construction for TKO-LTT reclamation

## 1. INTRODUCTION

- 1.1 Cinotech Consultants Limited (Cinotech) was commissioned by Civil Engineering and Development Department (CEDD) as the Environmental Team (ET) to undertake environmental monitoring and auditing services for the Works Contracts involved in the implementation of Tseung Kwan O – Lam Tin Tunnel (TKO-LTT) project 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 TKO-LTT project and other relevant statutory requirements. This is the 104<sup>th</sup> Monthly EM&A report summarizing the EM&A works for the Project in June 2025.

### **Purpose of the Report**

- 1.2 This is the 104<sup>th</sup> Monthly EM&A Report which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period in June 2025.

### **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: **Contract Information** – summarises background and scope of the Contract, site description, project organization and contact details, construction programme, the construction works undertaken and the status of Environmental Permits/Licenses during the reporting month.

Section 3: **Air Quality Monitoring** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.

Section 4: **Noise Monitoring** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.

Section 5: **Water Quality Monitoring** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, monitoring results and Event / Action Plans.

Section 6: **Ecological Monitoring** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations and Action and Limit Levels, monitoring results and Event / Action Plans.

Section 7: **Cultural Heritage** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations and monitoring results.

Section 8: **Landscape and Visual Monitoring Requirements** – summarises the requirements of landscape and visual monitoring

Section 9: **Landfill Gas Monitoring** – summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, monitoring results and Limit Levels and Action Plan

Section 10: **Environmental Site Inspection** – summarises the audit findings of the weekly site inspections undertaken within the reporting month.

Section 11: **Waste Management** – summarises the waste management data in the reporting month.

Section 12: **Environmental Non-conformance** – summarises any monitoring exceedance, environmental complaints, environmental summons and successful prosecutions within the reporting month.

Section 13: **Future Key Issues** – summarises the impact forecast and monitoring schedule for the next three months.

Section 14: **Conclusions and Recommendation**

## 2. PROJECT INFORMATION

### Background

- 2.1 In 2002, Civil Engineering and Development Department (CEDD) commissioned an integrated planning and engineering study under Agreement No. CE 87/2001 (CE) “Further Development of Tseung Kwan O – Feasibility Study” (the “TKO Study”) to formulate a comprehensive plan for further development of TKO New Town. It recommended to further develop TKO to house a total population of 450,000 besides the district’s continuous commercial and industrial developments.
- 2.2 At present, the Tseung Kwan O Tunnel is the main connection between Tseung Kwan O (TKO) and other areas in the territory. To cope with the anticipated transport need, the TKO Study recommended the provision of Tseung Kwan O – Lam Tin Tunnel (TKO-LTT) (hereinafter referred to as “the Project”) and Cross Bay Link (CBL) to meet the long-term traffic demand between TKO and the external areas. The site layout plan for the Project is shown in **Figure 1**. CBL was also entrusted with part of the marine viaducts near Tseung Kwan O Interchange since the commencement of the CBL project the December 2018.
- 2.3 The Environmental Impact Assessment (EIA) Report for the TKO-LTT project was approved under the Environmental Impact Assessment Ordinance (EIAO) in July 2013. The corresponding Environmental Permit (EP) was issued in August 2013 (EP no.: EP-458/2013). Variations to the EP was applied and the latest EP (EP no.: EP-458/2013/C) was issued by the Director of Environmental Protection (DEP) in January 2017.
- 2.4 The commencement dates of construction of this Project are:
- Contract No. NE/2015/01 and Contract No. NE/2015/02: 7 November 2016.
  - Contract No. NE/2015/03: 29 May 2017.
  - Contract No. NE/2017/02: 15 March 2018.
  - Contract No. NE/2017/01: 23 May 2018.
  - Contract No. NE/2017/06: 09 November 2018.
  - Contract No. NE/2017/07: 22 February 2021
- 2.5 The implementation of mitigation measures in operation phase of NE/2015/02 and NE/2017/02 is presented in **Appendix X**.

### Project Organizations

- 2.6 Different parties with different levels of involvement in the project organization include:
- Project Proponent – Civil Engineering and Development Department (CEDD)
  - The Engineer and the Engineer’s Representative (ER) – AECOM
  - Environmental Team (ET) – Cinotech Consultants Limited (Cinotech)
  - Independent Environmental Checker (IEC) – AnewR Consulting Limited (AnewR)

2.7 The key contacts of the Project are shown in **Table 2.1**.

**Table 2.1 Key Project Contacts**

| Party    | Role                                 | Contact Person              | Phone No. | Fax No.   |
|----------|--------------------------------------|-----------------------------|-----------|-----------|
| CEDD     | Project Proponent                    | Mr. Ng Chou Keen,<br>Horace | 3842 7091 | 2739 0076 |
| AECOM    | Engineer's<br>Representative         | Mr. Jackie CW, Ng           | 3910 1601 | 3910 1600 |
| Cinotech | Environmental Team                   | Dr. HF Chan                 | 2151 2088 | 3107 1388 |
|          |                                      | Mr. KS Lee                  | 2151 2091 |           |
| AnewR    | Independent<br>Environmental Checker | Mr. James Choi              | 2618 2836 | 3007 8648 |

### Construction Activities undertaken during the Reporting Month

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

**Table 2.2 Summary Table for Major Site Activities in the Reporting Month**

| Contract No. | Project Title   | Site Activities (June 2025)   |   |
|--------------|---|---|---|
| NE/2015/01   | Tseung Kwan O –<br>Lam Tin Tunnel –<br>Main Tunnel and<br>Associated Works  | Lam Tin<br>Interchange  | 1) Slope Stabilization at Area 1G1, 1G2 &<br>5<br>2) Soft Landscape<br>3) LTI Drainage<br>4) Stage 1 Commissioning Outstanding<br>Works |
|              |   | Main Tunnel   | 5) N/A  |
|              |   | TKO<br>Interchange  | 6) N/A  |
| NE/2015/02   | Tseung Kwan O –<br>Lam Tin Tunnel –<br>Road P2 and<br>Associated Works  | 1) N/A  |   |
| NE/2015/03   | Tseung Kwan O –<br>Lam Tin Tunnel –<br>Northern Footbridge  | The construction works under the contract had been completed in December 2019. The EM&A works were terminated in late April 2020.           |   |
| NE/2017/01   | Tseung Kwan O –<br>Lam Tin Tunnel –<br>Tseung Kwan O<br>Interchange and<br>Associated Works                         | The construction works under the contract had been completed in January 2022. The EM&A works will be terminated after the approval by EPD.  |   |
| NE/2017/02   | Tseung Kwan O –<br>Lam Tin Tunnel –<br>Road P2/D4 and<br>Associated Works   | The construction works under the contract had been completed in December 2022. The EM&A works will be terminated after the approval by EPD. |   |
| NE/2017/06   | Tseung Kwan O –<br>Lam Tin Tunnel –<br>Traffic Control and<br>Surveillance System<br>(TCSS) and<br>Associated Works | The construction works under the contract had been completed in August 2023. The EM&A works will be terminated after the approval by EPD.   |   |
| NE/2017/07   | Cross Bay Link,<br>Tseung Kwan O –<br>Main Bridge and<br>Associated Works   | The construction works under the contract had been completed in December 2022. The EM&A works will be terminated after the approval by EPD. |   |

2.9 The construction programme showing the inter-relationship with environmental protection/mitigation measures are presented in **Table 2.3**.

**Table 2.3 Construction Programme Showing the Inter-Relationship with Environmental Protection/Mitigation Measures**

| Construction Works               | Major Environmental Impact                      | Control Measures   |
|----------------------------------|---|--|
| As mentioned in <b>Table 2.2</b> | Dust impact, water quality and waste generation | <ul style="list-style-type: none"> <li>• Sufficient watering of the works site with active dust emitting activities</li> <li>• Properly cover the stockpiles</li> <li>• On-site waste sorting and implementation of trip ticket system</li> <li>• Appropriate desilting/sedimentation devices provided on site for treatment before discharge</li> </ul> |

**Status of Environmental Licences, Notification and Permits**

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

**Table 2.4 Summary of the Status of Environmental Licences, Notification and Permits**

| Contract No.   | Permit / License No.                 | Valid Period |            | Status |
|--|--------------------------------------|--------------|------------|--------|
|  |                                      | From         | To         |        |
| <b>Environmental Permit (EP)</b>   |                                      |              |            |        |
| N/A  | EP-458/2013/C                        | 20/1/2017    | N/A        | Valid  |
| <b>Notification pursuant to Air Pollution Control (Construction Dust) Regulation</b> |                                      |              |            |        |
| NE/2015/01   | EPD Ref no.: 405305                  | 21/07/2016   | N/A        | Valid  |
|  | EPD Ref no.: 405582                  | 28/07/2016   | N/A        | Valid  |
| NE/2015/02   | EPD Ref no.: 406100                  | 12/08/2016   | N/A        | Valid  |
| NE/2015/03   | EPD Ref no.: 416072                  | 26/04/2017   | N/A        | Valid  |
| NE/2017/02   | EPD Ref no.: 429867                  | 19/01/2018   | N/A        | Valid  |
| NE/2017/01   | EPD Ref no.: 430070                  | 25/01/2018   | N/A        | Valid  |
| NE/2017/06   | EPD Ref no.: 461507                  | 03/11/2020   | N/A        | Valid  |
| <b>Billing Account for Construction Waste Disposal</b>                               |                                      |              |            |        |
| NE/2015/01   | Account No. 7025431                  | 11/07/2016   | N/A        | Valid  |
| NE/2015/02   | Account No. 7025654                  | 16/08/2016   | N/A        | Valid  |
| NE/2015/03   | Account No. 7026805                  | 30/12/2016   | N/A        | Valid  |
| NE/2017/02   | Account No. 7029651                  | 22/12/2017   | N/A        | Valid  |
| NE/2017/01   | Account No. 7029994                  | 01/02/2018   | N/A        | Valid  |
| NE/2017/06   | Account No. 7032520                  | 22/11/2018   | N/A        | Valid  |
| NE/2017/07   | Account No. 7031412                  | 24/07/2018   | N/A        | Valid  |
| <b>Billing Account for Vessel Disposal</b>   |                                      |              |            |        |
| N/A  | N/A                                  | N/A          | N/A        | N/A    |
| <b>Registration of Chemical Waste Producer</b>                                       |                                      |              |            |        |
| NE/2015/01   | Waste Producer No. 5218-290-L2881-02 | 22/08/2016   | N/A        | Valid  |
|  | Waste Producer No. 5213-833-L2532-03 | 22/08/2016   | N/A        | Valid  |
| NE/2015/02   | Waste Producer No. 5213-838-C4094-01 | 23/08/2016   | N/A        | Valid  |
| NE/2015/03   | Waste Producer No. 5213-265-W3435-04 | 19/07/2017   | N/A        | Valid  |
| NE/2017/02   | Waste Producer No. 5213-833-Z4004-04 | 01/02/2018   | N/A        | Valid  |
| NE/2017/01   | Waste Producer No. 5213-833-C4262-01 | 12/02/2018   | N/A        | Valid  |
| NE/2017/07   | Waste Producer No. 5213-839-C1232-19 | 28/08/2018   | N/A        | Valid  |
| <b>Effluent Discharge License under Water Pollution Control Ordinance</b>            |                                      |              |            |        |
| NE/2015/01   | WT00039948-2021                      | 28/02/2022   | 30/11/2026 | Valid  |

| Contract No.                           | Permit / License No. | Valid Period |            | Status              |
|--|----------------------|--------------|------------|---------------------|
|  |                      | From         | To         |                     |
|  | WT00040291-2022      | 13/01/2022   | 30/11/2026 | Valid               |
|  | WT00041172-2022      | 09/06/2022   | 31/03/2027 | Valid               |
|  | WT00041237-2022      | 09/06/2022   | 31/03/2027 | Valid               |
|  | WT00041840-2022      | 17/08/2022   | 31/08/2027 | Valid               |
| <b>Construction Noise Permit (CNP)</b> |                      |              |            |                     |
| NE/2015/01                             | GW-RE0127-25         | 01/03/2025   | 30/06/2025 | Valid Until 30 June |
| <b>Marine Dumping Permit</b>           |                      |              |            |                     |
| NE/2017/01                             | EP/MD/21-011         | N/A          | N/A        | N/A                 |

### Summary of EM&A Requirements

- 2.11 The EM&A programme requires construction noise monitoring, air quality monitoring, water quality monitoring, environmental site audit, etc. The EM&A requirements for each parameter 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 Report.
- 2.12 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in **Section 10** of this report.
- 2.13 This report presents the monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the monitoring parameters of the required environmental monitoring works and audit works for the Project in the reporting month.

### 3. AIR QUALITY

#### Monitoring Requirements

- 3.1 According to EM&A Manual of the Project, 1-hour and 24-hour TSP monitoring are required to monitor the air quality. For regular impact monitoring, a sampling frequency of at least once in every six days shall be undertaken at all of the monitoring stations for 24-hour TSP monitoring. For 1-hour TSP monitoring, the sampling frequency of at least three times in every six days shall be undertaken when the highest dust impact occurs. **Appendix A** shows the established Action/Limit Levels for the environmental monitoring works.

#### Monitoring Locations

- 3.2 Six designated monitoring stations were selected for air quality monitoring programme. **Table 3.1** describes the air quality monitoring locations, which are also depicted in **Figure 2**.

**Table 3.1 Locations for Air Quality Monitoring**

| Monitoring Stations           | Location                                 | Location of Measurement |
|-------------------------------|--|-------------------------|
| AM1                           | Tin Hau Temple                           | Ground Level            |
| AM2                           | Sai Tso Wan Recreation Ground            | Ground Level            |
| AM3                           | Yau Lai Estate Bik Lai House             | Rooftop (41/F)          |
| AM4 <sup>(1)</sup>            | Sitting-out Area at Cha Kwo Ling Village | Ground Level            |
| AM4(B) <sup>(2) (*) (c)</sup> | Flat 103 Cha Kwo Ling Village            | Ground Level            |
| AM5(A) <sup>(*)</sup>         | Tseung Kwan O DSD Desilting Compound     | Ground Level            |
| AM6(A) <sup>(*)</sup>         | Park Central, L1/F Open Space Area       | 1/F                     |

Remarks: (1) For 1-hour TSP monitoring; (2) For 24-hour TSP monitoring

(\*) Air quality monitoring at designated station AM4(24hr TSP), AM5 and AM6 was rejected by the premise owners. Therefore, baseline and impact air quality monitoring works were carried out at alternative air quality monitoring stations AM4(A) (24hr TSP only), AM5(A) and AM6(A) respectively.

(c) In June 2022, the 24 TSP Monitoring at AM4(A) is suspended and under application for relocation, as the office had to be demolished. Once the proposal for relocation is approved, the monitoring at AM4(A) will be conducted at AM4(B). For the time being, as the station CKL2 for the 24 hr TSP monitoring, carried out under EM&A works for Trunk Road T2 Project (EP-451/2013), is located in close proximity to AM4(A); the results from CKL2 are adopted as reference for the 24 TSP monitoring at AM4(A), which has similar environment when compared with that for CKL2.

#### Monitoring Equipment

- 3.3 High Volume Samplers (HVS) were used to carry out 24-hour TSP monitoring. Direct reading dust meter were also used to measure 1-hour average TSP levels. The 1-hour sampling was determined periodically by HVS to check the validity and accuracy of the results measured by direct reading method.
- 3.4 Wind data monitoring equipment was set at rooftop (about 41/F) of Yau Lai Estate Bik Lai House for logging wind speed and wind direction such that the wind sensors are clear of obstructions or turbulence caused by building. The wind data monitoring equipment is re-calibrated at least once every six months and the wind directions are divided into 16 sectors of 22.5 degrees each. The location is shown in **Figure 2**.

- 3.5 **Table 3.2** summarizes the equipment to be used in the air quality monitoring. Copies of calibration certificates are attached in **Appendix B**.

**Table 3.2 Air Quality Monitoring Equipment**

| Equipment             | Model and Make   | Quantity |
|-----------------------|--|----------|
| Calibrator            | TISCH Model: TE-5025A                                    | 1        |
| 1-hour TSP Dust Meter | Sibata Model No.: LD-3B / LD-5R                          | 7        |
|                       | Met One Instruments Model No.: AEROCET-831               | 0        |
|                       | Handheld Particle Counter Hal-HPC300 / Hal-HPC301        | 0        |
| HVS Sampler           | TISCH Model: TE-5170                                     | 1        |
|                       | GMW Model: GS2310  | 5        |
| Wind Anemometer       | Davis Weather Monitor II, Model no. 7440                 | 1        |
|                       | Davis Weather Stations, Vantage Pro 2, Model No. 6152CUK | 0        |

### Monitoring Parameters and Frequency

- 3.6 **Table 3.3** summarizes the monitoring parameters, monitoring period and frequencies of air quality monitoring.

**Table 3.3 Frequency and Parameters of Air Quality Monitoring**

| Monitoring Stations                      | Parameter   | Frequency          |
|--|-------------|--------------------|
| AM1, AM2, AM3, AM4, AM5(A) and AM6(A)    | 1-hour TSP  | 3 times per 6 days |
| AM1, AM2, AM3, AM4(B), AM5(A) and AM6(A) | 24-hour TSP | Once per 6 days    |

### Monitoring Methodology

#### *1-hour TSP Monitoring*

##### Measuring Procedures

- 3.7 The measuring procedures of the 1-hour dust meter are in accordance with the Manufacturer's Instruction Manual as follows:

(Model LD3 / LD3B / LD5R)

- The 1-hour dust meter is placed at least 1.3 meters above ground.
- Set POWER to "ON" and make sure that the battery level was not flash or in low level.
- Allow the instrument to stand for about 3 minutes and then the cap of the air sampling inlet has been released.
- Push the knob at MEASURE position.
- Set time/mode setting to [BG] by pushing the time setting switch. Then, start the background measurement by pushing the start/stop switch once. It will take 6 sec. to complete the background measurement.
- Push the time setting switch to change the time setting display to [MANUAL] at the bottom left of the liquid crystal display. Finally, push the start/stop switch to stop the measuring after 1 hour sampling.
- Information such as sampling date, time, count value and site condition were recorded during the monitoring period.

(AEROCET-531)

- The 1-hour dust meter is placed at least 1.3 meters above ground.
- Remove the red rubber cap from the AEROCET-531 inlet nozzle.
- Turn on the power switch that is located on the right side of the AEROCET-531.
- On power up the product intro screen is displayed for 3 seconds. The intro screen displays the product name and firmware version.
- Then the main counter screen will be displayed.
- Press the START button. Internal vacuum pump start running. After 1 minute the pump will stop and the 0.5 $\mu$ m and 5 $\mu$ m channels will show the cumulative counts of particles larger than 0.5 $\mu$ m and 5 $\mu$ m per cubic foot.
- The AEROCET-531 is now checked out and ready for use.
- To switch off the AEROCET-531 power to stop the measuring after 1 hour sampling.
- Information such as sampling date, time, and display value and site condition were recorded during the monitoring period.
- 
- (Equipment: Hal Technology; Model no. Hal-HPC300 / Hal-HPC301)
- The 1-hour dust meter is placed at least 1.3 meters above ground.
- Set POWER to “ON” and make sure that the battery level was not flash or in low level.
- Allow the instrument to stand for about 3 minutes and then the cap of the air sampling inlet has been released.
- Push the knob at MEASURE position.
- Set time/mode setting to [BG] by pushing the time setting switch. Then, start the background measurement by pushing the start/stop switch once. It will take 6 sec. to complete the background measurement.
- Push the time setting switch to change the time setting display to [MANUAL] at the bottom left of the liquid crystal display. Finally, push the start/stop switch to stop the measuring after 1 hour sampling.
- Information such as sampling date, time, count value and site condition were recorded during the monitoring period.

Maintenance/Calibration

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

***24-hour TSP Monitoring***Instrumentation

- 3.9 High volume samplers (HVS) (TISCH Model: TE-5170 and GMW Model: GS2310) completed with appropriate sampling inlets were employed for 24-hour TSP monitoring. The sampler is composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complied with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50).
- 3.10 The positioning of the HVS samplers are as follows:
- a horizontal platform with appropriate support to secure the samplers against gusty wind shall be provided;
  - no two samplers shall be placed less than 2 meters apart

- the distance between the sampler and an obstacle, such as buildings, must be at least twice the height that the obstacle protrudes above the sampler;
- a minimum of 2 metres of separation from walls, parapets and penthouses is required for rooftop samplers;
- a minimum of 2 metres of separation from any supporting structure, measured horizontally is required;
- no furnace or incinerator flue is nearby;
- airflow around the sampler is unrestricted;
- the sampler is more than 20 metres from the dripline;
- any wire fence and gate, to protect the sampler, shall not cause any obstruction during monitoring;
- permission must be obtained to set up the samplers and to obtain access to the monitoring stations; and
- a secured supply of electricity is needed to operate the samplers.

#### Operating/analytical procedures for the operation of HVS

- 3.11 Prior to the commencement of the dust sampling, the flow rate of the high-volume sampler was properly set (between 1.1 m<sup>3</sup>/min. and 1.4 m<sup>3</sup>/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.
- 3.12 For TSP sampling, fiberglass filters with a collection efficiency of > 99% for particles of 0.3µm diameter were used.
- 3.13 The power supply was checked to ensure the sampler worked properly. On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.
- 3.14 The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter was carefully centred with the stamped number upwards, on a supporting screen.
- 3.15 The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges.
- 3.16 The shelter lid was closed and secured with the aluminium strip.
- 3.17 The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).
- 3.18 After sampling, the filter was removed and sent to the HOKLAS laboratory (ALS Hong Kong) for weighing. The elapsed time will be also recorded.
- 3.19 Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature should be between 25°C and 30°C and not vary by more than ±3°C; the relative humidity (RH) should be < 50% and not vary by more than ±5%. A convenient working RH is 40%.

Maintenance/Calibration

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

**Results and Observations**

- 3.21 No Action/Limit Level exceedance was recorded for 1-hour TSP monitoring.
- 3.22 No Action Level and No Limit Level exceedance was recorded for 24-hour TSP monitoring.
- 3.23 The air temperature, precipitation and the relative humidity data was obtained from Hong Kong Observatory where the wind speed and wind direction were recorded by the installed Wind Anemometer at rooftop of Yau Lai Estate Bik Lai House (41/F). The location is shown in **Figure 2**. This weather information for the reporting month is summarized in **Appendix C**.
- 3.24 The monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendix E** and **Appendix F** respectively.
- 3.25 According to our field observations, the major dust source identified at the designated air quality monitoring stations are as follows:

**Table 3.4 Major Dust Source during Air Quality Monitoring**

| Station  | Major Dust Source   |
|--|---|
| AM1 – Tin Hau Temple                           | Road Traffic at Cha Kwo Ling Road                         |
| AM2 – Sai Tso Wan Recreation Ground            | N/A   |
| AM3 – Yau Lai Estate Bik Lai House             | Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza |
| AM4 - Sitting-out Area at Cha Kwo Ling Village | Road Traffic at Cha Kwo Ling Road                         |
| AM4(B) – Flat 103 Cha Kwo Ling Village*        | Road Traffic at Cha Kwo Ling Road                         |
| AM5(A) - Tseung Kwan O DSD Desilting Compound  | Vehicle Movement within the Desilting Compound            |
| AM6(A) - Park Central, L1/F Open Space Area    | Road Traffic at Po Yap Road                               |

\* In June 2022, the 24 TSP Monitoring at AM4(A) is suspended and under application for relocation, as the office had to be demolished. Once the proposal for relocation is approved, the monitoring at AM4(A) will be conducted at AM4(B). For the time being, as the station CKL2 for the 24hr TSP monitoring, carried out under EM&A works for Trunk Road T2 Project (EP-451/2013), is located in close proximity to AM4(A); the results from CKL2 are adopted as reference for the 24 TSP monitoring at AM4(A), which has similar environment when compared with that for CKL2.

## 4. NOISE

### Monitoring Requirements

- 4.1 According to EM&A Manual of the Project, construction noise monitoring was conducted to monitor the construction noise arising from the construction activities. The regular monitoring frequency for each monitoring station shall be on a weekly basis and conduct one set of measurements between 0700 and 1900 hours on normal weekdays. **Appendix A** shows the established Action and Limit Levels for the environmental monitoring works.
- 4.2 According to Section 3.6.1 of the EM&A Manual, impact noise monitoring during the construction phase at three monitoring stations in Tseung Kwan O was completed in April 2025, as no further works under the TKO-LTT portion of the Project will be conducted within a 300 m radius of these stations.

### Monitoring Locations

- 4.3 Noise monitoring was conducted at 8 designated monitoring stations (CM1, CM2, CM3, CM4, CM5, CM6 (A), CM7 (A), and CM8 (A)) in the reporting period. **Table 4.1** and **Figure 3** show the locations of these stations.

**Table 4.1 Noise Monitoring Stations**

| Monitoring Stations | Locations   | Location of Measurement |
|---------------------|---|-------------------------|
| CM1                 | Nga Lai House, Yau Lai Estate Phase 1, Yau Tong                     | Rooftop (41/F)          |
| CM2                 | Bik Lai House, Yau Lai Estate Phase 1, Yau Tong                     | Rooftop (41/F)          |
| CM3                 | Block S, Yau Lai Estate Phase 5, Yau Tong                           | Rooftop (40/F)          |
| CM4                 | Tin Hau Temple, Cha Kwo Ling  | Ground Level            |
| CM5                 | CCC Kei Faat Primary School, Yau Tong                               | Rooftop (6/F)           |
| CM6(A)*             | Site Boundary of Contract No. NE/2015/02 near Tower 1, Ocean Shores | Ground Level            |
| CM7(A)*             | Site Boundary of Contract No. NE/2015/02 near Tower 7, Ocean Shores | Ground Level            |
| CM8(A)*             | Park Central, L1/F Open Space Area                                  | 1/F                     |

Remarks:

\* Noise monitoring at designated station CM6, CM7 & CM8 was rejected by the premise owners. Therefore, baseline and impact noise monitoring works were carried out at alternative noise monitoring stations CM6(A), CM7(A) and CM8(A) respectively.

### Monitoring Equipment

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

**Table 4.2 Noise Monitoring Equipment**

| Equipment                     | Model and Make      | Quantity |
|-------------------------------|---------------------|----------|
| Integrating Sound Level Meter | SVAN 957/ 959 / 979 | 0        |
|                               | BSWA308 SLM         | 4        |
| Calibrator                    | SV30A               | 0        |
|                               | AWA6021A            | 1        |
|                               | ST-120              | 1        |

- 4.5 **Table 4.3** summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is shown in **Appendix D**. Additional weekly impact monitoring are carried out for evening time (1900 – 2300 hours) for monitoring stations CM1, CM2, CM3 & CM6(A) and night-time (2300 – 0700 hours) for monitoring stations CM1, CM2 & CM3.

**Table 4.3 Frequency and Parameters of Noise Monitoring**

| Monitoring Stations | Parameter   | Period   | Frequency        | Measurement |
|---------------------|---|--|------------------|-------------|
| CM1                 | L <sub>10</sub> (30 min)<br>dB(A)<br>L <sub>90</sub> (30 min)<br>dB(A)<br>L <sub>eq</sub> (30 min)<br>dB(A) | 0700-1900 hrs on<br>normal weekdays                | Once per<br>week | Façade      |
| CM2                 |   |  |                  | Façade      |
| CM3                 |   |  |                  | Façade      |
| CM4                 |   |  |                  | Façade      |
| CM5                 |   |  |                  | Façade      |
| CM6(A)              |   |  |                  | Free Field  |
| CM7(A)              |   |  |                  | Free Field  |
| CM8(A)              |   |  |                  | Façade      |
| CM1                 | L <sub>10</sub> (5 min)<br>dB(A)<br>L <sub>90</sub> (5 min)<br>dB(A)<br>L <sub>eq</sub> (5 min)<br>dB(A)    | 1900 – 0700 hrs on<br>normal weekdays <sup>^</sup> |                  | Façade      |
| CM2                 |   |  |                  | Façade      |
| CM3                 |   |  |                  | Façade      |
| CM6(A)              |   | 1900 – 2300 hrs on<br>normal weekdays <sup>^</sup> |                  | Free Field  |

<sup>^</sup>As the construction activities in restricted hours have been completed, no noise monitoring for evening-time and nighttime at CM1, CM2, CM3 & CM6(A) is needed in the reporting month.

### Monitoring Methodology and QA/QC Procedure

- 4.6 The monitoring procedures are as follows:
- The monitoring station was normally be at a point 1m from the exterior of the sensitive receivers building façade and be at a position 1.2m above the ground.
  - For free field measurement, the meter was positioned away from any nearby reflective surfaces. All records for free field noise levels were adjusted with a correction of +3 dB(A).
  - The battery condition was checked to ensure the correct functioning of the meter.
  - Parameters such as frequency weighting, the time weighting and the measurement time was set as follows:
    - frequency weighting: A
    - time weighting : Fast
    - measurement time : 30 minutes
  - Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after

measurement will be more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.

- At the end of the monitoring period, the  $L_{eq}$ ,  $L_{90}$  and  $L_{10}$  was recorded. In addition, noise sources were recorded on a standard record sheet.
- Noise monitoring will be cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s. Supplementary monitoring was provided to ensure sufficient data would be obtained.

#### Maintenance and Calibration

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

#### **Results and Observations**

- 4.10 No Action Level exceedance was recorded due to documented complaints in the reporting month. No project-related Limit Level exceedance during daytime was recorded due to monitoring results in this reporting month. No project-related Limit level exceedances for evening/night-time construction noise monitoring was recorded.
- 4.11 Noise monitoring results and graphical presentations are shown in **Appendix G**.
- 4.12 The major noise source identified at the noise monitoring stations are shown in **Table 4.4**.

**Table 4.4 Major Noise Source during Noise Monitoring**

| <b>Monitoring Stations</b> | <b>Locations</b>  | <b>Major Noise Source</b>                                 |
|----------------------------|---|---|
| CM1                        | Nga Lai House, Yau Lai Estate Phase 1, Yau Tong                     | Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza |
| CM2                        | Bik Lai House, Yau Lai Estate Phase 1, Yau Tong                     | Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza |
| CM3                        | Block S, Yau Lai Estate Phase 5, Yau Tong                           | Road Traffic near Eastern Cross Harbour Tunnel Toll Plaza |
| CM4                        | Tin Hau Temple, Cha Kwo Ling  | Road Traffic at Cha Kwo Ling Road                         |
| CM5                        | CCC Kei Faat Primary School, Yau Tong                               | Road Traffic at Yau Tong Road                             |
| CM6(A)                     | Site Boundary of Contract No. NE/2015/02 near Tower 1, Ocean Shores | Road Traffic at O King Road near Ocean Shores             |
| CM7(A)                     | Site Boundary of Contract No. NE/2015/02 near Tower 7, Ocean Shores | Road Traffic at Tong Yin Street                           |
| CM8(A)                     | Park Central, L1/F Open Space Area                                  | Road Traffic at Po Yap Road                               |

- 4.13 All the Construction Noise Levels (CNLs) reported in this report were adjusted with the corresponding baseline level (i.e. Measured Leq – Baseline Leq = CNL), in order to facilitate the interpretation of the noise exceedance. The baseline noise level and the Noise Limit Level at each designated noise monitoring station are presented in **Table 4.5, 4.6 and 4.7.**

**Table 4.5 Baseline Noise Level and Noise Limit Level for Monitoring Stations**

| Station | Baseline Noise Level, dB (A)<br>(at 0700 – 1900 hrs on normal weekdays) | Noise Limit Level, dB (A)<br>(at 0700 – 1900 hrs on normal weekdays) |
|---------|---|--|
| CM1     | 65.5  | 75   |
| CM2     | 63.6  |  |
| CM3     | 65.6  |  |
| CM4     | 62.0  |  |
| CM5     | 68.2  | 70*  |
| CM6(A)  | 61.9  | 75   |
| CM7(A)  | 58.3  |  |
| CM8(A)  | 69.1  |  |

(\*) Noise Limit Level is 65 dB(A) during school examination periods.

**Table 4.6 Baseline Noise Level and Noise Limit Level for Monitoring Stations (Evening-time & Daytime (Holiday))**

| Station | Baseline Noise Level, dB (A)<br>(Evening time on all days (1900-2300 hrs) and Holidays (including Sundays) during daytime (0700-1900 hrs)) | Noise Limit Level, dB (A)<br>(Evening time on all days (1900-2300 hrs) and Holidays (including Sundays) during daytime (0700-1900 hrs)) |
|---------|--|---|
| CM1     | 64.4   | 70  |
| CM2     | 62.2   |   |
| CM3     | 64.7   |   |
| CM6(A)  | 60.2   | 65 <sup>1</sup>   |

1. ASR B was adopted according to the EIA as traffic in the surrounding area has not been changed.

**Table 4.7 Baseline Noise Level and Noise Limit Level for Monitoring Stations (Night-time)**

| Station | Baseline Noise Level, dB (A)<br>(Night-time (2300 – 0700 hrs))  | Noise Limit Level, dB (A)<br>(Night-time (2300 – 0700 hrs)) |
|---------|---|---|
| CM1     | 14-day baseline monitoring results for the time period of impact measurement at each station would be adopted | 55  |
| CM2     |   |   |
| CM3     |   |   |

## 5. WATER QUALITY

### Monitoring Requirements

#### Groundwater Quality

- 5.1 The existing groundwater quality monitoring programme has been suspended as the monitoring results had been deemed non-representative of the impact from the project justified by two major factors: (1) influence on the monitoring results from non-project related factors, such as anthropogenic activities and natural phenomenon; and (2) large separation between the monitoring stations and works area. In addition, as no alternative locations for the groundwater quality monitoring were available, the groundwater quality monitoring has been suspended since October 2019 upon the agreement by EPD.

#### Marine Water Quality

- 5.2 Marine water quality monitoring was conducted three times per week at the designated monitoring stations. Monitoring took place two times per monitoring day during mid ebb and mid flood tides at three depths (1 meter from surface, mid depth and 1 meter from the bottom). For Tseung Kwan O Salt Water Intake (i.e. Station M6), water sampling and in-situ measurements was taken at the vertical level where the water abstraction point of the intake is located (i.e. approximately mid-depth level). If the water depth is less than 6m, the mid-depth measurement may be omitted. If the depth is less than 3m, only the mid-depth measurements need to be taken.
- 5.3 Duplicate in-situ measurements (Dissolved oxygen (DO) concentration, DO saturation, turbidity, pH, temperature and salinity) and water samples (suspended solids (SS)) at each depth were monitored in accordance with the requirements in the EM&A Manual. For selection of tides for in-situ measurement and water sampling, tidal range of individual flood and ebb tides were not less than 0.5m.
- 5.4 According to the Environmental Review Report (ERR) for Variations of Environmental Permit (Ref: C45-03), water quality monitoring and audit programme was implemented for monitoring of oxygen depletion (e.g. Dissolved Oxygen (DO) level) in these embayed waters during the period when the fully enclosed barrier is installed. A “Proposal for Water Quality Monitoring in Temporary Marine Embayment” has been submitted to EPD in July 2017 to propose the monitoring frequency, parameter, location, etc. EPD has no further comment on the Proposal. Since January 2020, the cofferdam has been partially removed and the seawater is no longer enclosed. Therefore, no embayment water quality monitoring is required.
- 5.5 In accordance to EM&A Manual Section 4.4.9, upon completion of all marine works, a post-project monitoring should be carried out for 4 weeks in the same manner as the impact monitoring. As all the marine works have been completed on 17 May 2023, the 4 weeks post project monitoring was commenced from 18 May 2023 and completed on 14 June 2023 (both days inclusive).

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### Groundwater Level Monitoring (Piezometer Monitoring)

- 5.6 Daily piezometer monitoring at any time of the day shall be carried throughout the whole period when any tunnel construction activities are carried out within +/- 50m of the piezometer gate in plan. The monitoring commenced in June 2018. It has switched to monthly basis since 3 October 2018 as the construction activity was 120m away from the piezometer gate. No monitoring was conducted in the reporting month.
- 5.7 Referring to EM&A Manual Section 4.2.5, after completion of the tunnel construction, a 1- year post-monitoring on the groundwater levels (piezometer monitoring) above the tunnel is needed to be carried out by contractor responsible for tunnel construction. The frequency of groundwater level monitoring is recommended to conduct on a monthly basis by the Engineer.
- 5.8 Alternative groundwater level monitoring locations, namely TKO-LBH403(P) and TKO-LBH434(P), are proposed for the post-construction monitoring since most of the previously adopted monitoring locations became obsolete for the following reasons:
- 1) recorded dry since baseline monitoring
  - 2) destroyed due to tunnel excavations work
  - 3) inaccessible due to obstruction by fallen trees.

### **Results and Observations**

#### Groundwater Quality Monitoring

- 5.9 Monitoring of groundwater quality had been suspended since October 2019. (Details refer to **Section 5.1**)

#### Marine Water Quality Monitoring

- 5.10 Monitoring of marine water quality had been completed since June 2023. (Details refer to **Section 5.2-5.5**)

#### Groundwater Level Monitoring (Piezometer Monitoring)

- 5.12 Daily piezometer monitoring at any time of the day shall be carried throughout the whole period when any tunnel construction activities are carried out within +/- 50m of the piezometer gate in plan.
- 5.13 Construction phase daily piezometer monitoring by the Contractor commenced in June 2018. As the construction activity was 120m away from the piezometer gate, no monitoring was conducted in this reporting month.
- 5.14 A 1- year post-monitoring in operation phase conducted by the Contractor was commenced in December 2022 due to the completion of the tunnel construction. The monitoring was completed in November 2023.

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Mitigation Measures Adopted by Contractors for Surface runoff Prevention

- 5.15 During dry season, the Contractors have maintained the mitigation measures adopted on Site, in order to prevent surface run-off and muddy water from discharging to the public areas. The mitigation measures adopted by each Contract are summarised below:

NE2015/01

- 5.16 At Lam Tin Side, the Site drainage systems are divided into two parts, namely the site formation and tunnel site drainage which includes:
1. Site formation drainage system collects surface run-off from open excavation areas including slope works and flows naturally to the lowest point in the Site, where they are pumped to the wetseps and sedimentation tank for treatment near LTI site entrance before they are discharged to the designated discharge point.
  2. Tunnel drainage system collects surface run-off from the tunnel which are then pumped to the sedimentation tanks near tunnel adit, where three sets of wetseps and sedimentation tanks were set up. The treated water will be discharged to designated discharge point near the Eastern Harbour Crossing (EHC) area.
- 5.17 At Eastern Harbour Crossing (EHC), two sets of wetseps and sedimentation tanks are set up on site. The wastewater will flow to the lowest catchpit by gravity, which are then pumped to wetseps for wastewater treatment. The sandbags/bunds are also set up at the vehicle entrance to surface run-off from the Site.
- 5.18 At Tseung Kwan O (TKO), the surface run-off from the slope are directed to the lowest point at cavern via the permanent drainage, which are then pumped to the sedimentation tanks for wastewater treatment via temporary pipes. The treated water will be discharged at designated discharge points. The wetseps and sedimentation tanks are provided under the BMCPC bridge and at the two sides of marine working platform. Water from natural stream will also be diverted to existing drainage to avoid overloading the capacity of the wastewater treatment system. The reservoir on the right side of marine working platform will be enlarged to cater for higher water storage demands. During heavy rainfall, the water stored at the exit of the tunnel shall be pumped into the sedimentation tanks on the right.

NE2015/02

- 5.19 The exposed sloped area at Portion 9 has been covered with geotextile or tarpaulin to avoid surface run-off. Since March 2021, the stormwater at Portion IX, VIII, VII, VI, II and I will be collected towards to the sedimentation tanks at the edge of site boundary.
- 5.20 Certain amount of stormwater received in Portion 9 will be directed and pumped via the flex tube and sump towards the water treatment system and the approved discharge points (as shown in **Appendix V**). Water generated from Portion VI and V and some water in Portion IX are treated via storage tanks and sedimentation tanks and discharged into approved discharge points (manholes of DN2100 Drain and Area Z).
- 5.21 The peripheral open U-channel are also provided along the site boundary, which shall be directed to the storage tank and WetSep for treatment in Area A.

- 5.22 Regular cleaning depending on site conditions are provided for the WetSep at Area A and Z; and the storage tanks and sedimentation tanks at Area A. The water treated by the sedimentation tank and the wetsep shall be discharged towards the designated discharge point. Quality of the effluent are also monitored regularly.

NE2017/02

- 5.23 Existing manholes are covered with sandbags and geotextiles to avoid surface run-off from entering the channels.
- 5.24 Stockpiles are covered with tarpaulin to avoid surface run-off.
- 5.25 Concrete blocks and sandbags are placed along the periphery of the site boundary to avoid surface run-off.
- 5.26 Stormwater within the site enters the excavated area and flow naturally into the sump due height difference. The stormwater collected in the sump shall be pumped into the sedimentation tank where the run-off is treated before discharging into the designated discharge point.

NE2015/03

- 5.27 The existing manhole cover are covered with geotextile to prevent muddy water from entering the existing U-channels along the side of Po Shun Road. Manhole inspection is carried out by taking silt measurement regularly in case if silt enters the channel, and silt shall be removed from the manhole if silt were found.
- 5.28 Sandbags were placed at the periphery of the site along the hoarding to prevent surface runoff from escaping the site.
- 5.29 Exposed slopes are covered with tarpaulin to prevent surface run-off.
- 5.30 The surface run-off shall be pumped into the sedimentation tank where they are treated before entering the designated discharge points.

NE2017/01

- 5.31 Temporary peripheral open U-channels and sumps are provided for collecting the stormwater, which are pumped and directed towards the sedimentation tank for treatment. The treated water shall be directed to the designated discharge point.

## 6. ECOLOGY

### Post-Translocation Coral Monitoring

- 6.1 Post-translocation monitoring survey is recommended in the EM&A Manual to audit the success of coral translocation. Information gathered during each post-translocation monitoring survey should include observations on the presence, survival, health condition and growth of the translocated coral colonies. These parameters should then be compared with the baseline results collected from the pre-translocation survey.
- 6.2 Under Contract No. NE/2015/01 and NE/2015/02, a total of 14 and 29 coral colonies were tagged and translocated respectively from the Donor Site to the Recipient Site in November 2016. Ten (10) corals at the Recipient Site were also tagged by each Contract as reference for post-translocation monitoring.
- 6.3 The post-translocation coral monitoring shall be conducted once every 3 months after completion for a period of 12 months. Location of post-translocation coral monitoring is shown in **Figure 7**. The fourth post-translocation coral monitoring was carried out on 07 November 2017. No further monitoring is required.

## 7. CULTURAL HERITAGE

### Monitoring Requirement

- 7.1 According to the EP Conditions and EM&A Manual, monitoring of vibration impacts was conducted when the construction works are less than 100m from the Built Heritage in close proximity of the worksite, namely the Cha Kwo Ling Tin Hau temple. Tilting and settlement monitoring should be applied on the Cha Kwo Ling Tin Hau Temple. Construction works less than 100m from the Cha Kwo Ling Tin Hau temple commenced on 8 May 2017.
- 7.2 As stated in the “*Built Heritage Mitigation Plan*” for this Project, during the period of the construction works conducted within 100m from the Cha Kwo Ling Tin Hau Temple, monitoring on settlement and tilting will be conducted once a day for the Cha Kwo Ling. Monitoring of vibration will be conducted during blasting at Cha Kwo Ling area once a day. When there is no blasting to be conducted at the area, vibration monitoring at the Cha Kwo Ling Tin Hau Temple will be conducted once per day when there are piling works or rock breaking works within the 100m from the Cha Kwo Ling Tin Hau Temple.

### Monitoring Locations

- 7.3 One vibration monitoring point and three building settlement monitoring points were proposed for monitoring of the cultural heritage. The building settlement markers were placed on the wall on three sides of the Temple, except the front, of the Cha Kwo Ling Tin Hau Temple and the vibration monitoring point is located within the Cha Kwo Ling Tin Hau Temple. Monitoring Location is shown in **Figure 8**.

### Monitoring Equipment

- 7.4 Building settlement is measured via a settlement marker attached to the wall of Cha Kwo Ling Tin Hau Temple by adhesive tape.
- 7.5 Vibration monitoring was conducted by using vibrographs: MicroMate manufactured by Instantel. These vibrographs will be calibrated annually and its performance follows the requirements given in the “*Guidance Note on Vibration Monitoring*” (GN-VM) issued by the Civil Engineering and Development Department, which is based on the Performance Specification for Blasting Seismographs by International Society of Explosive Engineers (ISEE (2000)).
- 7.6 **Table 7.1** summarizes the equipment employed by the Contractor for cultural heritage monitoring. Copies of calibration certificates are attached in **Appendix B**.

**Table 7.1 Cultural Heritage Monitoring Equipment**

| Equipment  | Manufacturer and Model   | Quantity |
|--|--|----------|
| Digital Level for tilting                        | Leica LS15<br>Serial No.: 701141   | 1        |
| Digital Caliper for tilting                      | Mitutoyo CD-6” ASX<br>Serial No.: A17047921  | 1        |
| iCivil-1011 Inclinometer for building settlement | iCivil-1011 Inclinometer<br>Serial No.: HK110118 / HK110120                          | 2        |
| Vibrographs for vibration monitoring             | MicroMate manufactured by Instantel<br>Serial No.: UM13704 (Main unit with Geophone) | 0        |

## Monitoring Methodology

- 7.7 Vibrograph (velocity seismograph) was deployed at each monitoring station to measure and record the PPV and amplitude of ground motion in three mutually perpendicular directions. Vibration monitoring equipment fulfils the requirements stated in the Government guidelines and is calibrated to HOKLAS standards. Each monitoring would not be more than 10 minutes. Settlement monitoring should be conducted by surveyors manually.

### Alert, Alarm and Action Levels

- 7.8 The Alert, Alarm and Action (AAA) Levels are given in **Table 7.2**.

**Table 7.2 AAA Levels for Monitoring for Cultural Heritage**

| Parameter                       | Alert Level   | Alarm Level   | Action Level  |
|---------------------------------|---------------|---------------|---|
| Vibration                       | ppv: 4.5 mm/s | ppv: 4.8 mm/s | ppv: 5mm/s Maximum Allowable Vibration Amplitude: 0.1mm |
| Building Settlement Markers     | 6mm           | 8mm           | 10mm  |
| Building Tilting <sup>(1)</sup> | 1:2000        | 1:1500        | 1:1000  |

Remarks:

- (1) Building tilting measurement was replaced by building settlement point measurement. The tilting can be calculated by the ratio of the maximum settlement difference between 2 points and the distance between the 2 points.

## Results

- 7.9 In the reporting month, cultural heritage monitoring was carried out by the Contractor at the aforesaid location on 26 occasions. No AAA Level exceedance was recorded in the reporting month. The monitoring results are presented in **Appendix T**.

### Mitigation Measures for Cultural Heritage

- 7.10 According to Condition 3.6 of the EP (EP No.: EP-458/2013/C), to prevent damage to Cha Kwo Ling Tin Hau Temple and its Fung Shui rocks (Child-given rocks) during the construction phase, a temporarily fenced-off buffer zone (Rocks buffer zone is 5 m from the edge of Rocks and 15m from the edge of Rocks alter) with allowance for public access (minimum 1 m) around the temple and the Fung Shui rocks shall be provided. The open yard in front of the temple should be kept as usual for annual Tin Hau festival.
- 7.11 As there is a large buffer distance from the current works to Cha Kwo Ling Tin Hau Temple and the Fung Shui rocks (Child-given rocks), the temporarily fenced-off rocks buffer zone and from the edge of Rocks alter is not required. The fenced-off rocks buffer zone would be implemented when there are construction activities in vicinity of the cultural heritage.

## **8. LANDSCAPE AND VISUAL IMPACT REQUIREMENTS**

- 8.1 Landscape and visual mitigation measures during the construction phase shall be checked to ensure that they are fully realized and implemented on site.
- 8.2 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of landscape and visual mitigation measures listed in “Implementation Schedule and Recommended Mitigation Measures” (shown in **Appendix N**). The summaries of observations and recommendations related to landscape and visual impacts, if any, are shown in **Appendix L**.
- 8.3 No non-compliance of the landscape and visual impact was recorded in the reporting month.

## 9. LANDFILL GAS MONITORING

### Monitoring Requirement

- 9.1 In accordance with the EM&A Manual, monitoring of landfill gas is required for construction works within the Sai Tso Wan Landfill Consultation Zone during the construction phase & within buildings and enclosures during the operation phase. This section presents the results of landfill gas measurements performed by the Contractor. **Appendix A** shows the Limit Levels for the monitoring works.
- 9.2 The “Landfill Gas Monitoring Proposal”, including the monitoring programme and detailed actions, is submitted to the EPD for approval. Details of monitoring in this Proposal is in line with the monitoring requirements stipulated in the EM&A Manual.
- 9.3 Inspection and landfill gas monitoring should be carried out at buildings and enclosures (e.g. administration building, ventilation building, workshop, tunnel, etc.) prior to the operation as preventive measures. The monitoring should be continued through the operation of the Project.
- 9.4 As the completion date of construction within the concerned areas was 11 December 2022. A prior measure was conducted on 09 December 2022. Upon the completion of construction within the concerned area, landfill gas monitoring for operation phase was commenced from the end of December 2022 and the monitoring was completed in November 2024.

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## 10. ENVIRONMENTAL AUDIT

### Site Audits

- 10.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summaries of site audits are attached in **Appendix L**.
- 10.2 Joint weekly site audits by the representatives of the Engineer, Contractor and the ET were conducted in the reporting month as shown in below:
- Contract No. NE/2015/01: 4, 12, 18, 25
  - Contract No. NE/2015/02: 4, 12, 18, 25
  - Contract No. NE/2017/01: 4, 12, 18, 25
  - Contract No. NE/2017/02: 4, 12, 18, 25
  - Contract No. NE/2017/06: 4, 12, 18, 25
  - Contract No. NE/2017/07: 4, 12, 18, 25
- 10.3 Monthly joint site inspection with the representative of IEC were conducted for NE/2015/01, NE/2017/07, NE/2015/02, NE/2017/01, NE/2017/02 and NE/2017/06 on 18 Jun 2025.
- 10.4 The EM&A programme of Contract No. NE/2015/03 had been terminated on 21 April 2020 under the approval of EPD.

### Implementation Status of Environmental Mitigation Measures

- 10.5 According to the EIA Study 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 Implementation Schedule and Recommended Mitigation Measures is provided in **Appendix N**.
- 10.6 During site inspections in the reporting month, no non-compliance was recorded on reporting month. The observations and recommendations made during the audit sessions are summarized in **Appendix L**.

## 11. WASTE MANAGEMENT

- 11.1 Waste generated from this Project includes inert construction and demolition (C&D) materials, non-inert C&D materials and marine sediments. Inert C&D waste includes soil, broken rock, broken concrete and building debris, while non-inert C&D materials are made up of C&D waste which cannot be reused or recycled and has to be disposed of at the designated landfill sites. Marine sediment shall be expected from excavation and dredging works of this Project.
- 11.2 With reference to relevant handling records of this Project, the quantities of different types of waste generated in the reporting month are summarised and presented in **Appendix P**.
- 11.3 The Contractors are advised to minimize the wastes generated through the recycling or reusing. All mitigation measures stipulated in the approved EM&A Manual and waste management plans shall be fully implemented. The status of implementation of waste management and reduction measures are summited in **Appendix N**.

## 12. ENVIRONMENTAL NON-CONFORMANCE

### Summary of Exceedances

- 12.1 No project-related Limit Level exceedance of noise was recorded due to the monitoring results in the reporting month. No Action Level exceedances of construction noise were recorded in the reporting month.
- 12.2 No Limit Level exceedance of air quality was recorded in the reporting month. No Action Level exceedance of air quality monitoring was recorded in the reporting month.
- 12.3 Marine water quality monitoring was completed in May 2023 and the post-marine water quality monitoring was completed in June 2023.
- 12.4 Post-reclamation marine water quality monitoring was completed in November 2022.
- 12.5 Actions carried out in accordance with the Event and Action Plans in **Appendix M** are presented in **Appendix K** – Summary of Exceedance.

### Summary of Environmental Complaint

- 12.6 No environmental complaint was received in the reporting month. The Cumulative Complaint Log is presented in **Appendix O**. The investigation status and result are also reported in **Appendix O**.

### Summary of Environmental Summon and Successful Prosecution

- 12.7 No notification of summon or successful environmental prosecution was received in this reporting period. The Cumulative Log for environmental summon and successful prosecution since the commencement of the Project is presented in **Appendix O**.

**13. FUTURE KEY ISSUES**

13.1 Tentative construction programmes for the next three months are provided in **Appendix Q**.

13.2 Major site activities to be undertaken for the next reporting period are summarized in **Table 13.1**.

**Table 13.1 Summary Table for Site Activities in the next Reporting Period**

| <b>Contract No. and Project Title</b>   | <b>Site Activities (July 2025)</b>  |   | <b>Key Environmental Issues *</b> |
|---|---|---|-----------------------------------|
| NE/2015/01 - Tseung Kwan O – Lam Tin Tunnel – Main Tunnel and Associated Works                                    | Lam Tin Interchange   | 1) Soft Landscape<br>2) Stage 1 Commissioning Outstanding Works | (A) / (C) / (D) / (E) / (G) / (H) |
|   | Main Tunnel   | 3) N/A  | N/A                               |
|   | TKO Interchange   | 4) N/A  | N/A                               |
| NE/2015/02 - Tseung Kwan O – Lam Tin Tunnel – Road P2 and Associated Works  | 1) N/A  |   | N/A                               |
| NE/2015/03 - Tseung Kwan O – Lam Tin Tunnel – Northern Footbridge   | The construction works under the contract had been completed in December 2019. Materials are being removed from works area.                 |   | N/A                               |
| NE/2017/01 – Tseung Kwan O Interchange and Associated Works   | The construction works under the contract had been completed in January 2022. The EM&A works will be terminated after the approval by EPD.  |   | N/A                               |
| NE/2017/02 – Tseung Kwan O - Lam Tin Tunnel - Road P2/D4 and Associated Works                                     | The construction works under the contract had been completed in December 2022. The EM&A works will be terminated after the approval by EPD. |   | N/A                               |
| NE/2017/06 – Tseung Kwan O – Lam Tin Tunnel – Traffic Control and Surveillance System (TCSS) and Associated Works | The construction works under the contract had been completed in December 2022. The EM&A works will be terminated after the approval by EPD. |   | N/A                               |
| NE/2017/07 - Cross Bay Link, Tseung Kwan O – Main Bridge and Associated Works                                     | The construction works under the contract had been completed in December 2022. The EM&A works will be terminated after the approval by EPD. |   | N/A                               |

**Note:**

- (A) Watering for dust generation from haul road, stockpiles of dusty materials, exposed site area, excavation works and rock breaking activities;
- (B) Noisy construction activity such as rock-breaking activities and piling works;
- (C) Runoff from exposed slope or site area;
- (D) Wastewater and runoff discharge from site;
- (E) Accumulation of silt, mud and sand along U-channels and sedimentation tanks;

- (F) Set up and implementation of temporary drainage system for the surface runoff;
- (G) Storage of chemicals/fuel and chemical waste/waste oil on site;
- (H) Accumulation and storage of general and construction waste on site; and
- (I) Marine water quality impact and indirect impact to coral communities due to marine construction for TKO-LTT reclamation.

### **Key Issues for the Coming Month**

13.3 Key environmental issues in the coming month include:

- Noisy construction activity such as use of hand tools;
- Runoff from exposed slope or site area;
- Wastewater and runoff discharge from site;
- Accumulation and storage of general and construction waste on site

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## 14. CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

- 14.1 This is the 104<sup>th</sup> Environmental Monitoring and Audit (EM&A) Report which presents the EM&A works undertaken during the period in June 2025 in accordance with EM&A Manual and the requirement under EP.

#### Air Quality Monitoring

- 14.2 No Action/Limit Level exceedance for 1-hour TSP monitoring was recorded.
- 14.3 No Limit Level exceedance for 24-hour TSP monitoring was recorded.
- 14.4 No Action Level exceedance for 24-hour TSP monitoring was recorded.

#### Construction Noise Monitoring

- 14.5 No project-related Limit Level exceedance was recorded due to the monitoring results recorded in this reporting month.
- 14.6 No Action Level exceedance was recorded for documented complaints. The details of complaint shall be referred to **Appendix O**.

#### Water Quality Monitoring

- 14.7 Groundwater quality monitoring had been suspended since October 2019. Details shall be referred to **Section 5.1**.
- 14.8 Monitoring of marine water quality had been completed since June 2023. (Details refer to **Section 5.2-5.5**).
- 14.9 Post-reclamation marine water quality monitoring was completed in November 2022.
- 14.10 Tunnel construction activities are within +/- 50m of the piezometer gate in plan. Construction phase daily piezometer monitoring by the Contractor commenced in June 2018. It has switched to monthly basis since 3 October 2018 as the construction activity was 120m away from the piezometer gate. No monitoring was conducted in the reporting month.
- 14.11 Upon completion of the tunnel construction, a 1- year post-monitoring on the groundwater levels (piezometer monitoring) above the tunnel was carried out by contractor responsible for tunnel construction.

#### Ecological Monitoring

- 14.12 The post-translocation coral monitoring surveys were completed in November 2017.

#### Monitoring on Cultural Heritage

- 14.13 No Alert Alarm and Action (AAA) Level exceedance of cultural heritage monitoring on cultural heritage was recorded in the reporting month.

#### Landscape and Visual Monitoring and Audit

- 14.14 No non-compliance of the landscape and visual impact was recorded in the reporting month.

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### Landfill Gas Monitoring

- 14.15 As the excavation works at Portion III was completed on 11 December 2022, a prior measure was conducted on 09 December 2022 and the landfill gas monitoring for operation phase was commenced from the end of December 2022 and the monitoring was completed in November 2024.

### Environmental Site Inspection

- 14.16 Joint weekly site inspections were conducted by representatives of the Contractor, Engineer and Environmental Team. During site inspections in the reporting month, no non-compliance was identified. The environmental deficiency observed during the reporting month are shown in **Appendix L**.

### Complaint, Prosecution and Notification of Summons

- 14.17 No environmental complaint, no successful prosecution and notification of summon were received during the reporting period.

### **Recommendations**

- 14.18 The following recommendations were made to the Contractor for the reporting month:
- Air Quality Impact*
- To regularly apply watering on dry surface should be applied to minimize erosion.
  - To aim the water spray at the dusty point for effective dust suppression.

*Construction Noise*

- To ensure no noise generated from hand tools.
- Apply noise acoustic sheet to site boundary.

*Waste/Chemical Management*

- To bund or lock the chemical storage area.
- To clear oil stains on the floor.
- Provide drip trays to fuel drums or chemical containers

*Landscape and Visual*

- To avoid placing any construction materials in the tree protection zone.

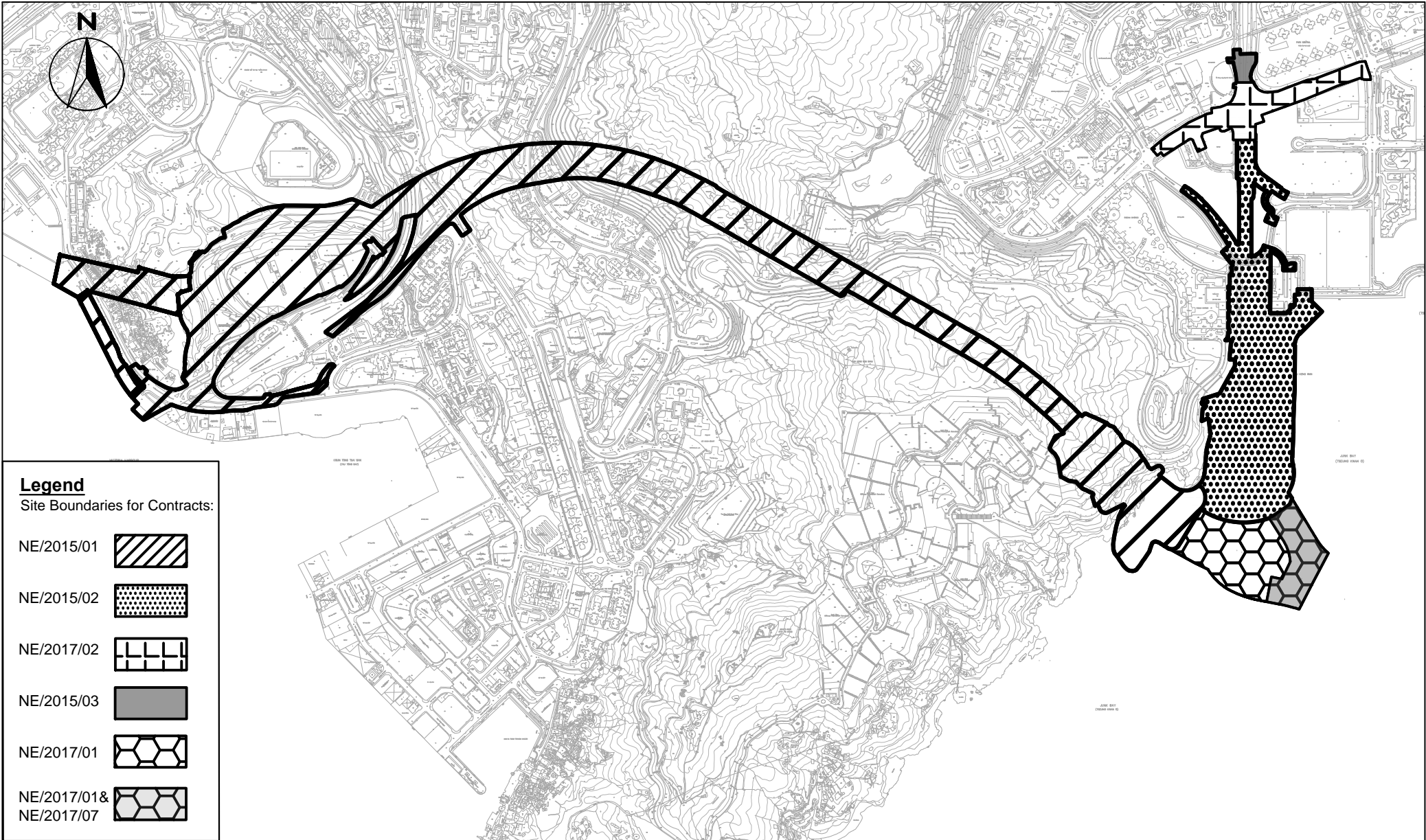
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## FIGURES

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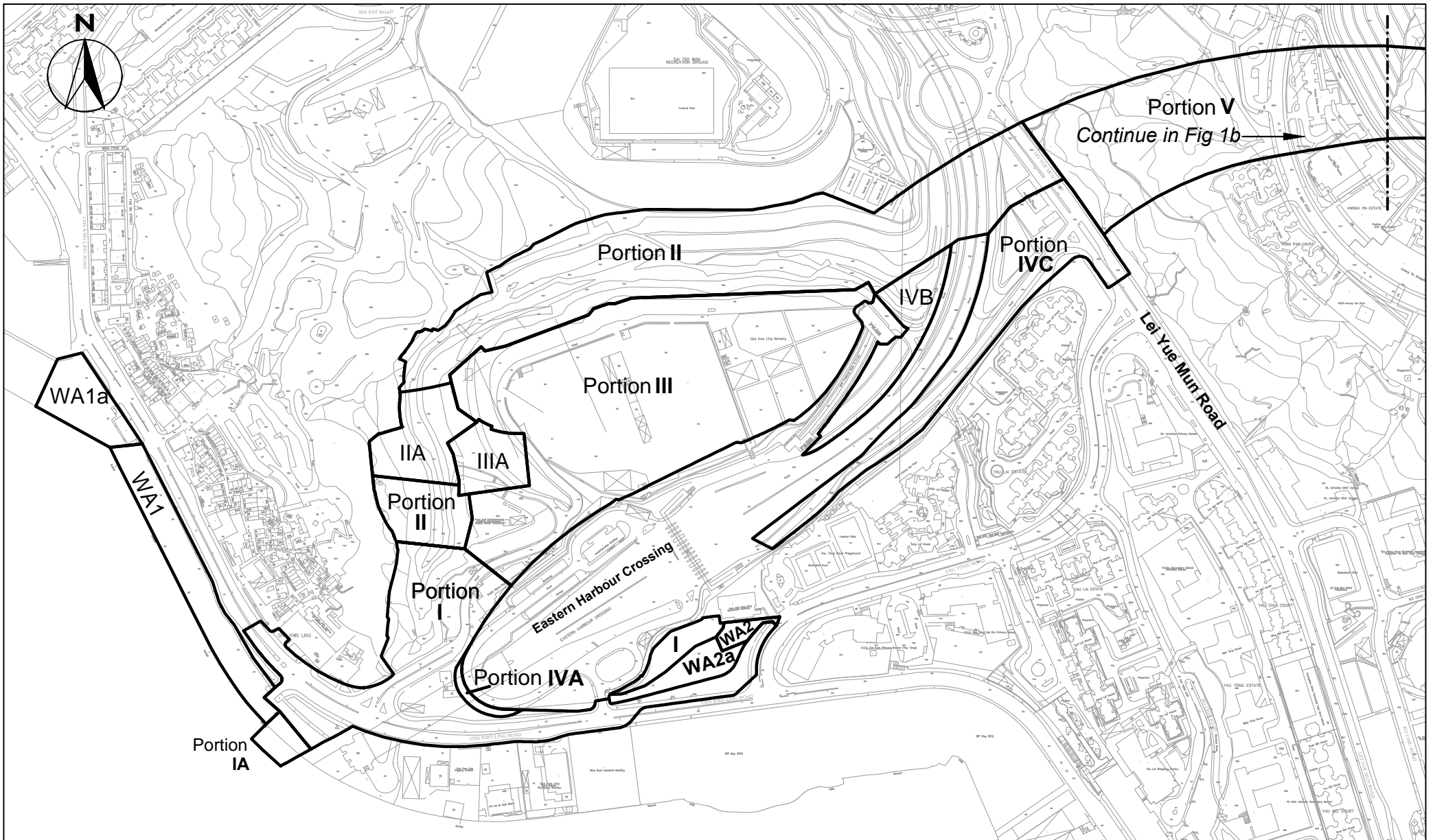
**Legend**  
Site Boundaries for Contracts:

|                         |  |
|-------------------------|--|
| NE/2015/01              |  |
| NE/2015/02              |  |
| NE/2017/02              |  |
| NE/2015/03              |  |
| NE/2017/01              |  |
| NE/2017/01 & NE/2017/07 |  |

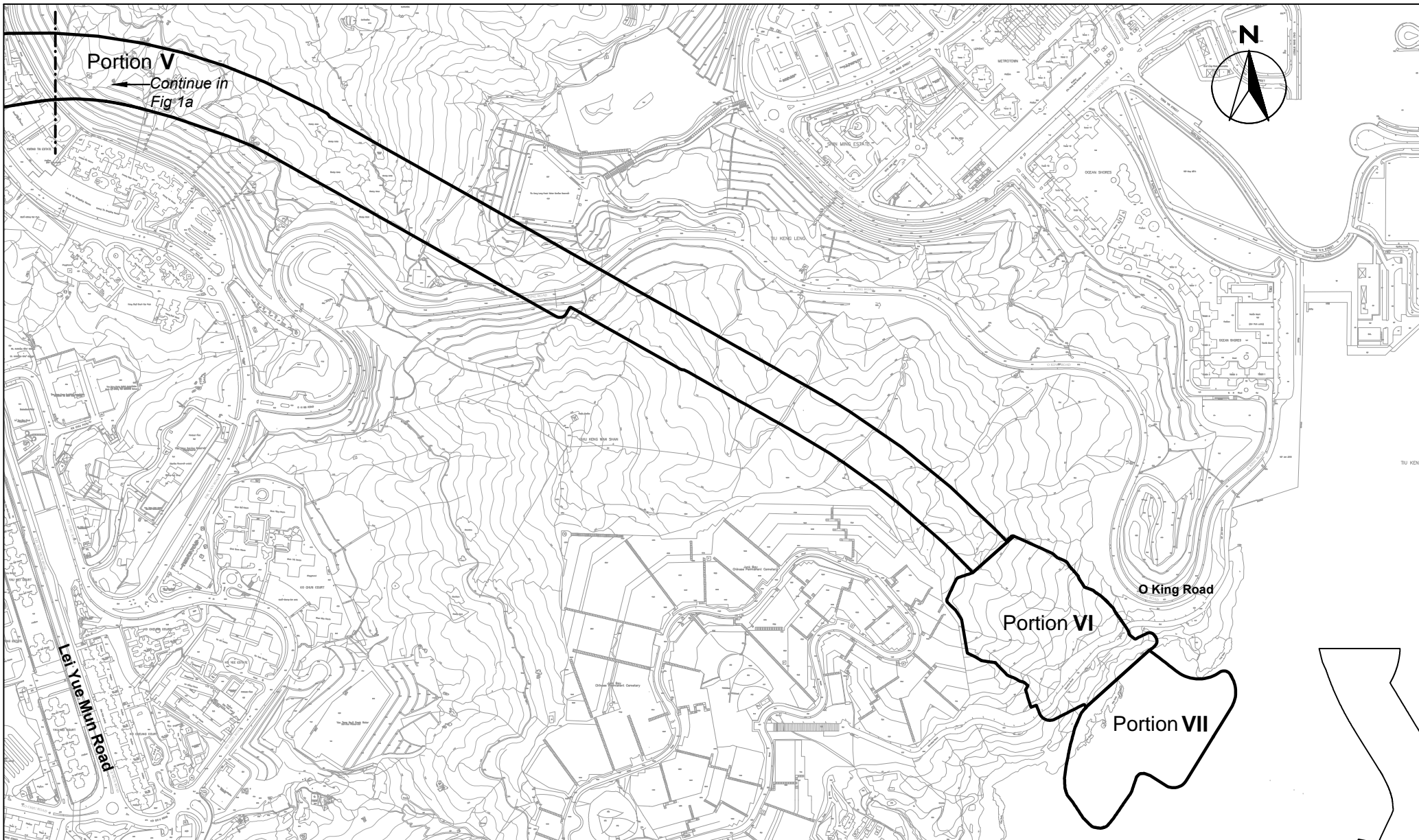


Agreement No. CE 59/2015 (EP)  
 Environmental Team for Tseung Kwan O – Lam Tin Tunnel– Design and Construction  
**Site Layout Plan**

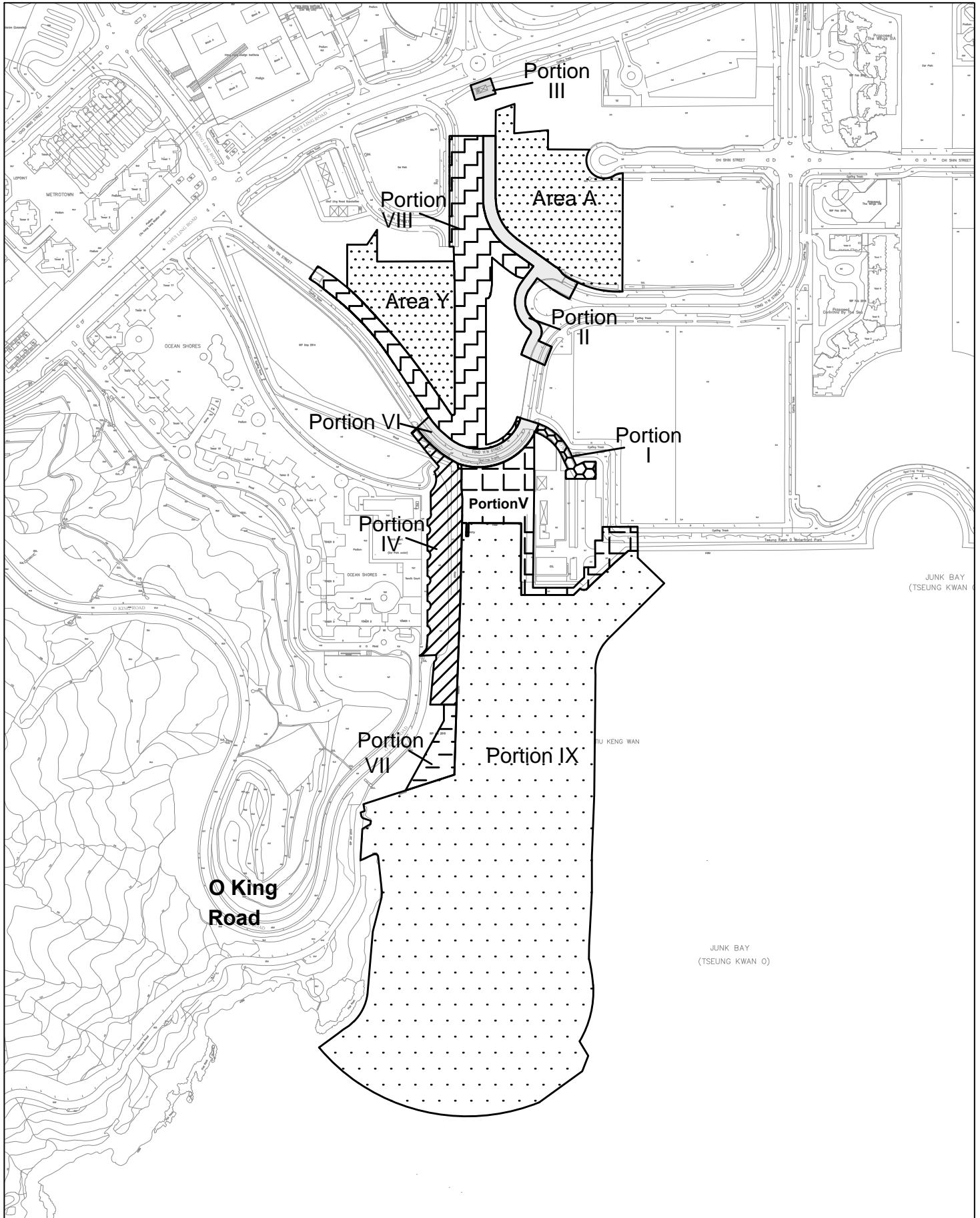
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|---------|------------|------------|---------------|
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|         |            | REV        | -             |




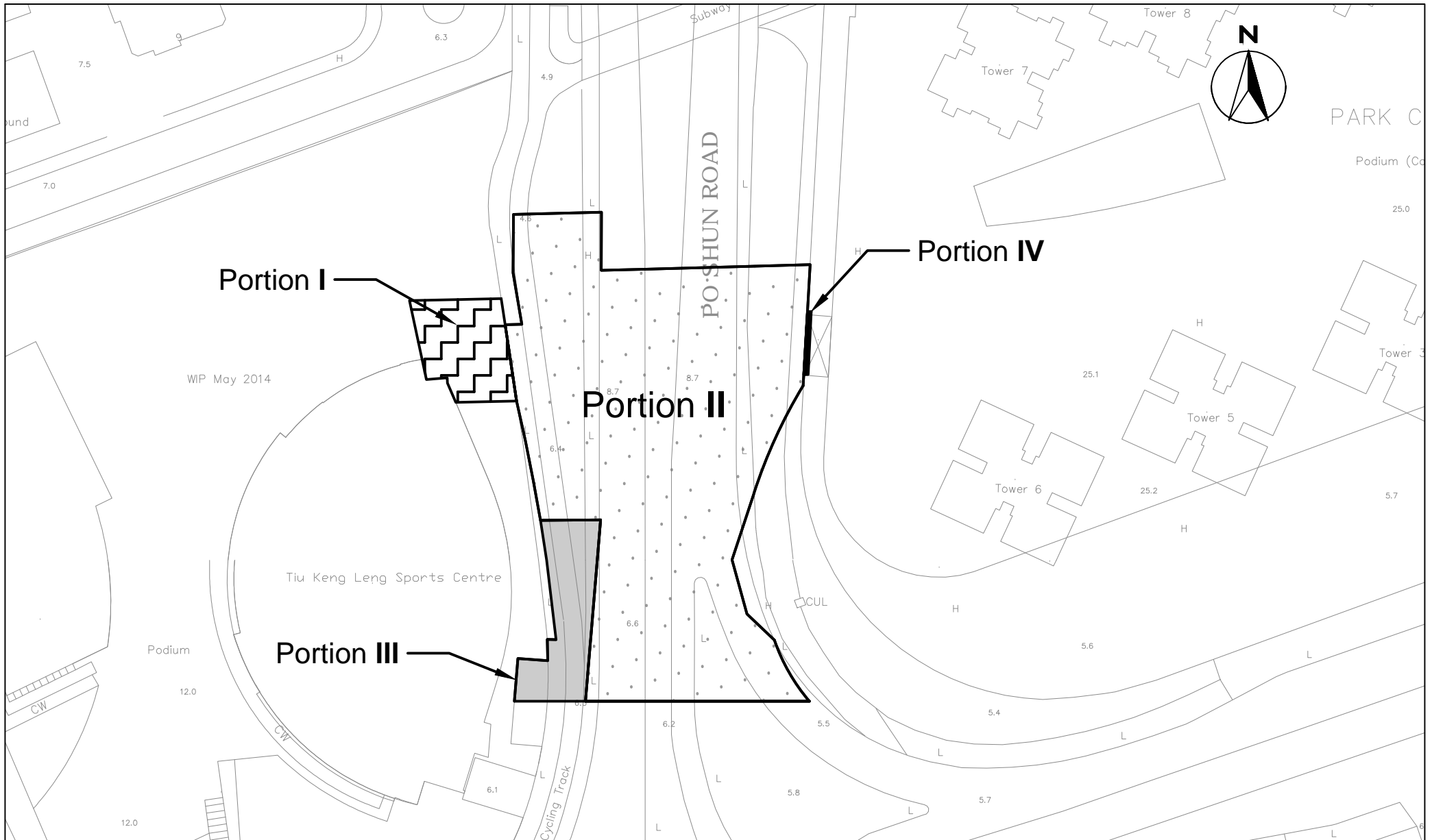
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|         |           | REV        | -             |



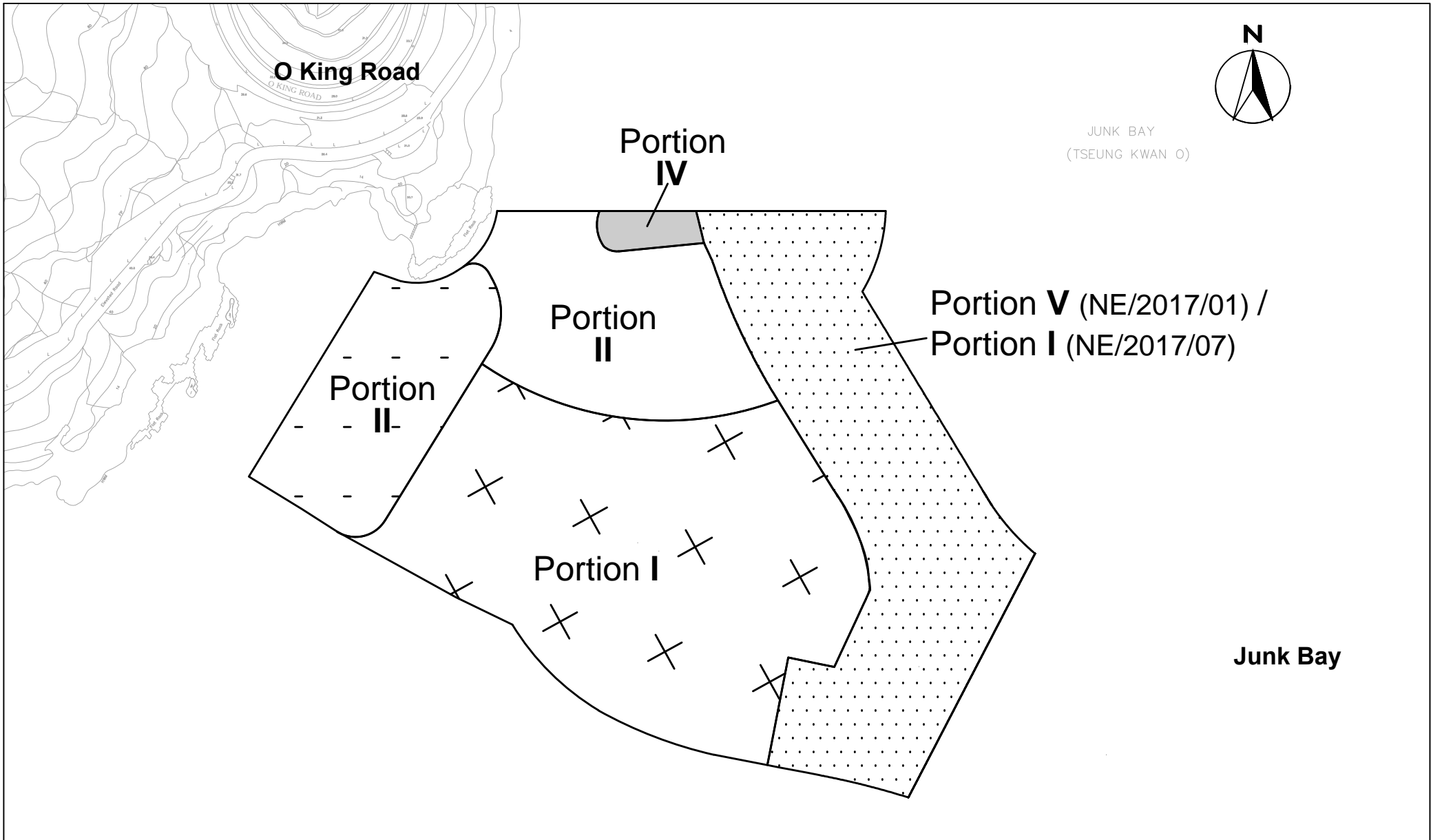
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| JOB No. | MA16034   | FIGURE NO. | 1b            |
|         |           | REV        | -             |




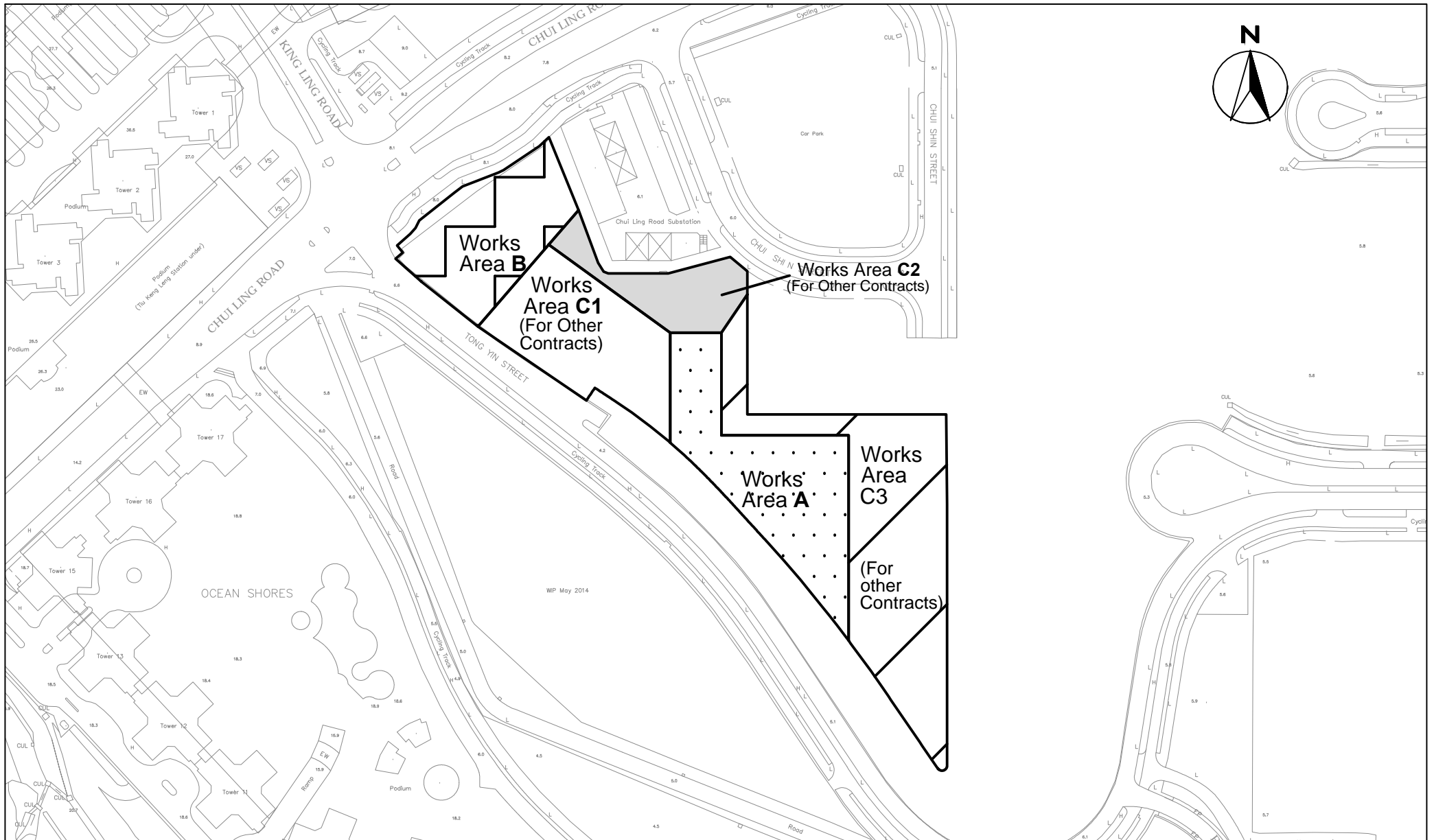
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|---|--|--|--|-------|
| <br><b>Cinotech Consultants Limited</b> | Agreement No. CE 59/2015 (EP)<br>Environmental Team for Tseung Kwan O – Lam Tin<br>Tunnel– Design and Construction<br><b>Site Portions under Works Contract No. NE/2015/02</b> | SCALE 1:5000@A4<br>CHECK CC<br>JOB No. MA16034 | DATE 25 July 2021<br>DRAWN KC<br>FIGURE NO. 1C | REV - |
|   |  |  |  |       |
|   |  |  |  |       |
|   |  |  |  |       |



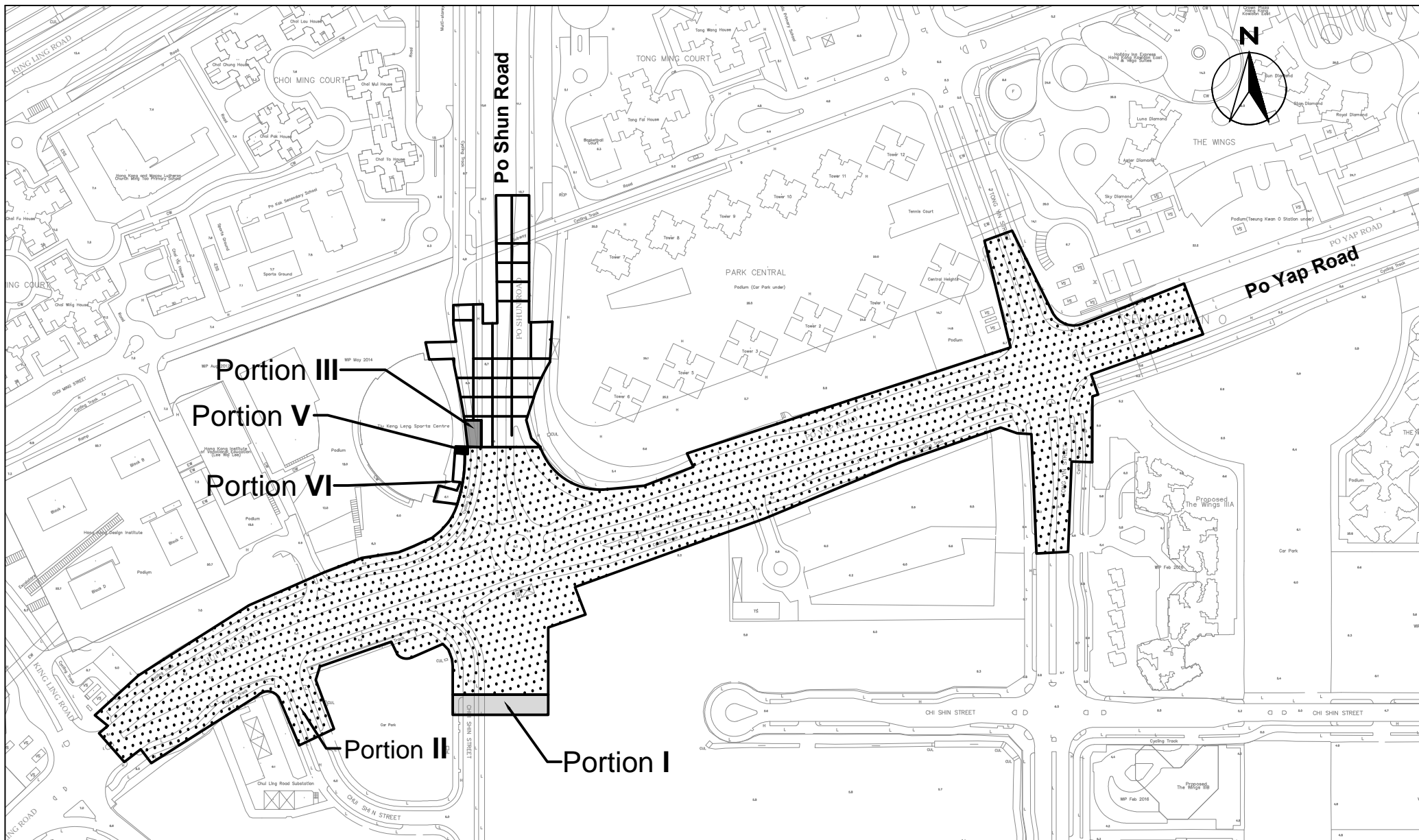
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| JOB No. | MA16034   | FIGURE NO. | 1d            |
|         |           | REV        | -             |



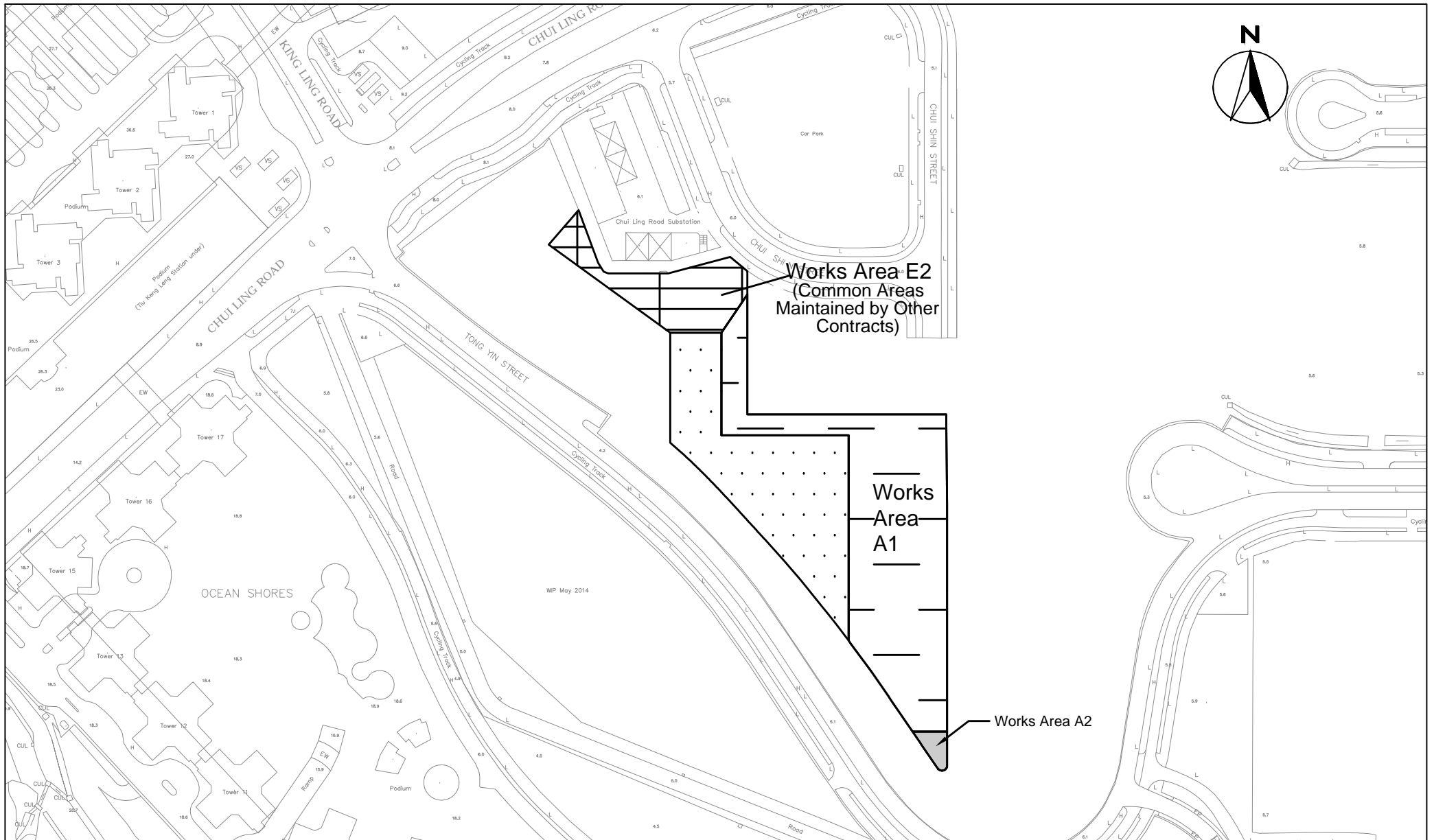
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| <br><b>Cinotech Consultants Limited</b> | Agreement No. CE 59/2015 (EP)<br>Environmental Team for Tseung Kwan O – Lam Tin Tunnel– Design and Construction<br><b>Site Portions in Tseung Kwan O under Works Contract No. <u>NE/2017/01</u></b> | SCALE   | 1:3000@A4 | DATE       | 11 March 2021 |
|  |   | CHECK   | CC        | DRAWN      | KC            |
|  |   | JOB No. | MA16034   | FIGURE NO. | 1e            |



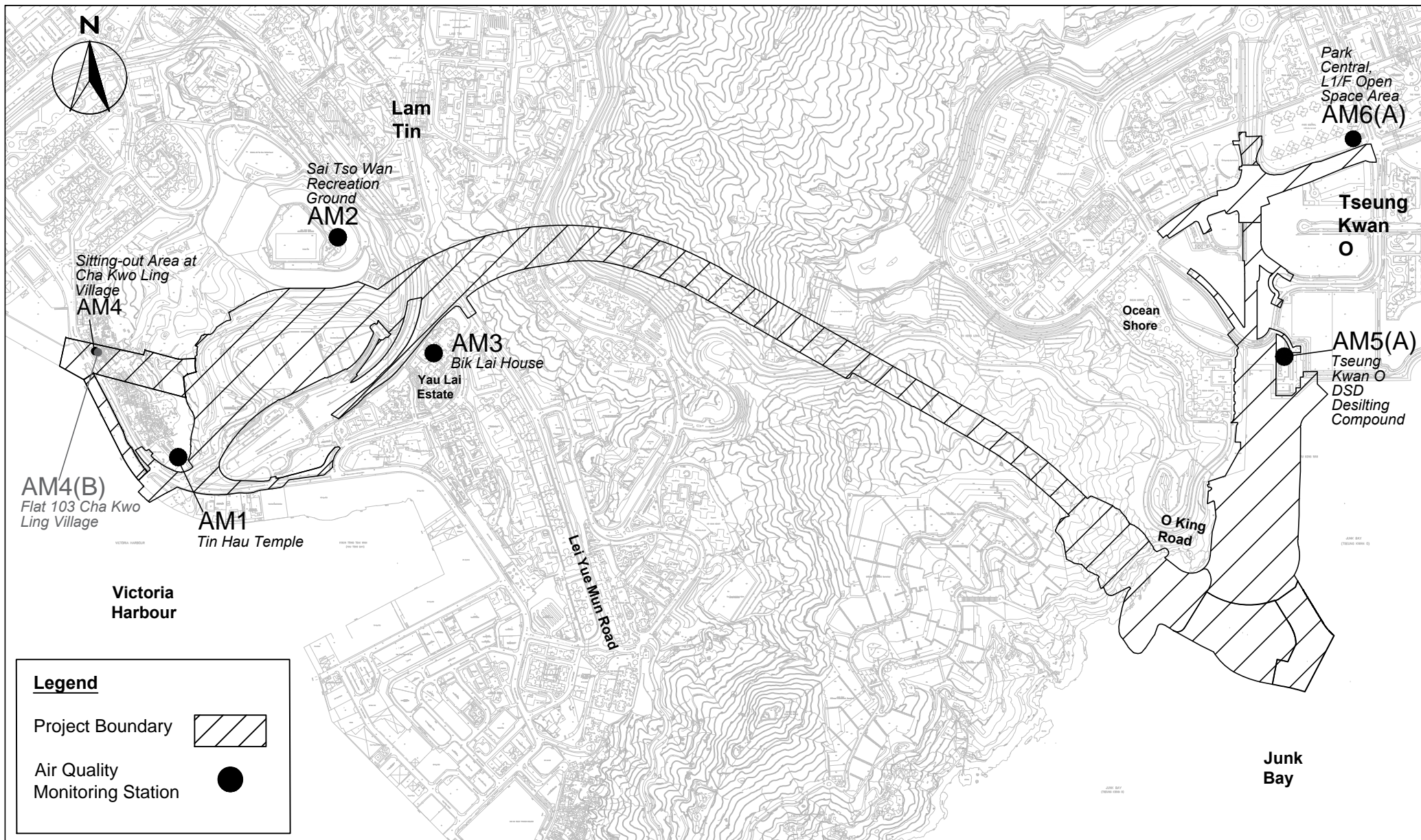
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|---------|-----------|------------|---------------|----------|
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| CHECK   | CC        | DRAWN      | KC            |          |
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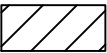
|         |           |            |               |
|---------|-----------|------------|---------------|
| SCALE   | 1:3000@A4 | DATE       | 15 April 2021 |
| CHECK   | CC        | DRAWN      | KC            |
| JOB No. | MA16034   | FIGURE NO. | 1g            |
|         |           | REV        | -             |




|         |           |            |               |          |
|---------|-----------|------------|---------------|----------|
| SCALE   | 1:2000@A4 | DATE       | 15 April 2021 |          |
| CHECK   | CC        | DRAWN      | KC            |          |
| JOB No. | MA16034   | FIGURE NO. | 1h            | REV<br>- |



**Legend**

Project Boundary 

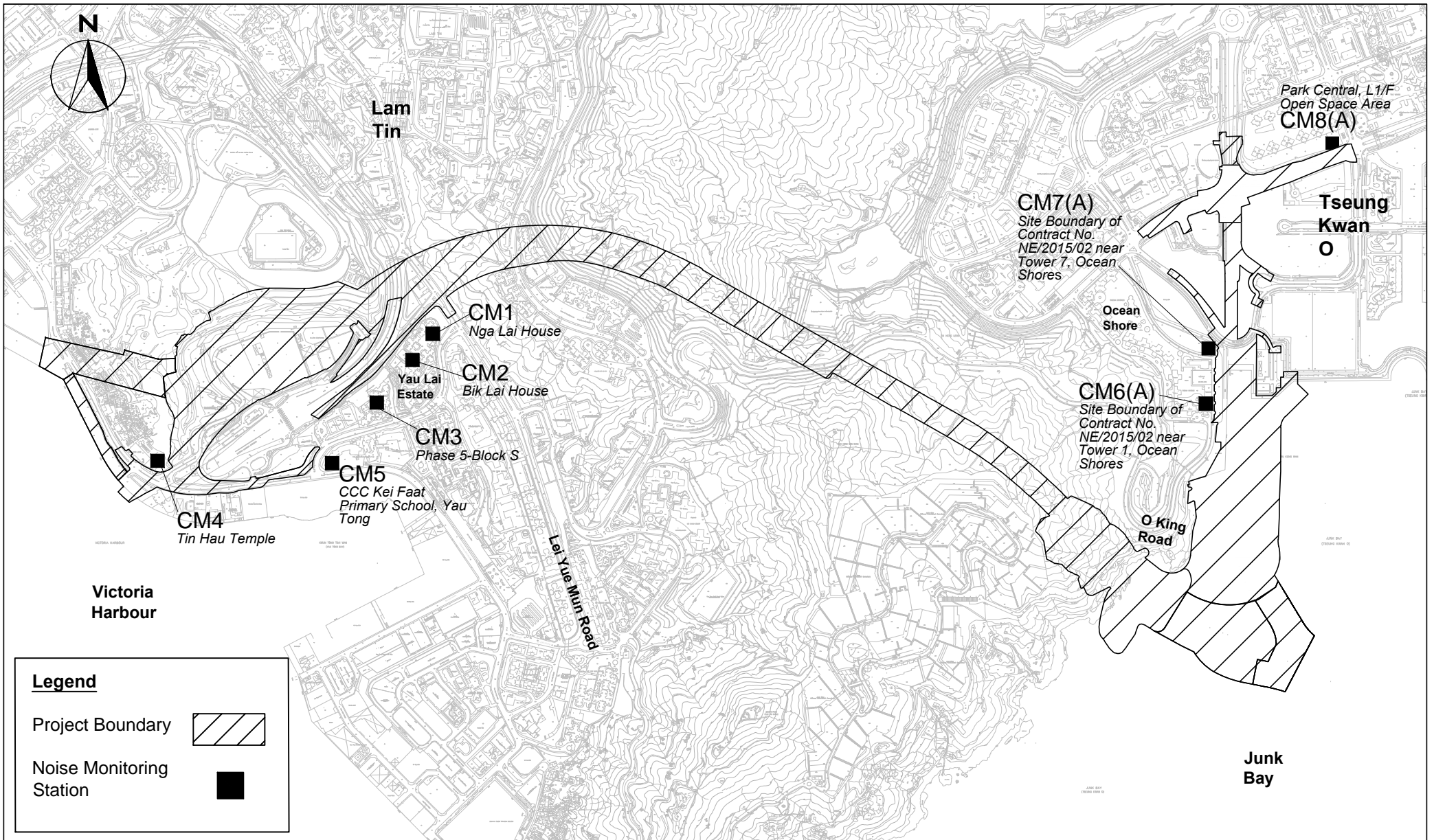
Air Quality Monitoring Station 



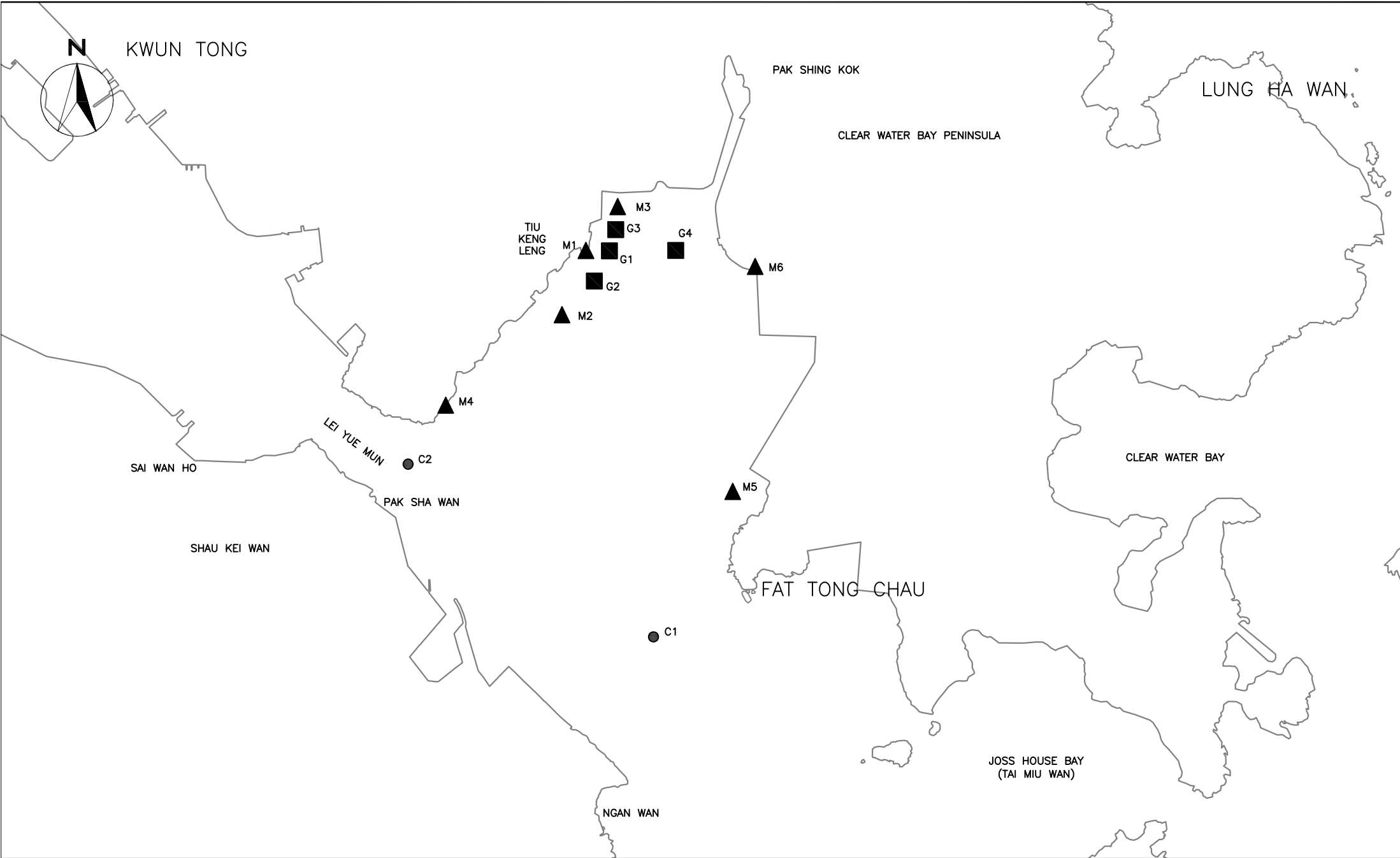
Agreement No. CE 59/2015 (EP)  
 Environmental Team for Tseung Kwan O – Lam Tin Tunnel– Design and Construction

**Air Quality Monitoring Station**

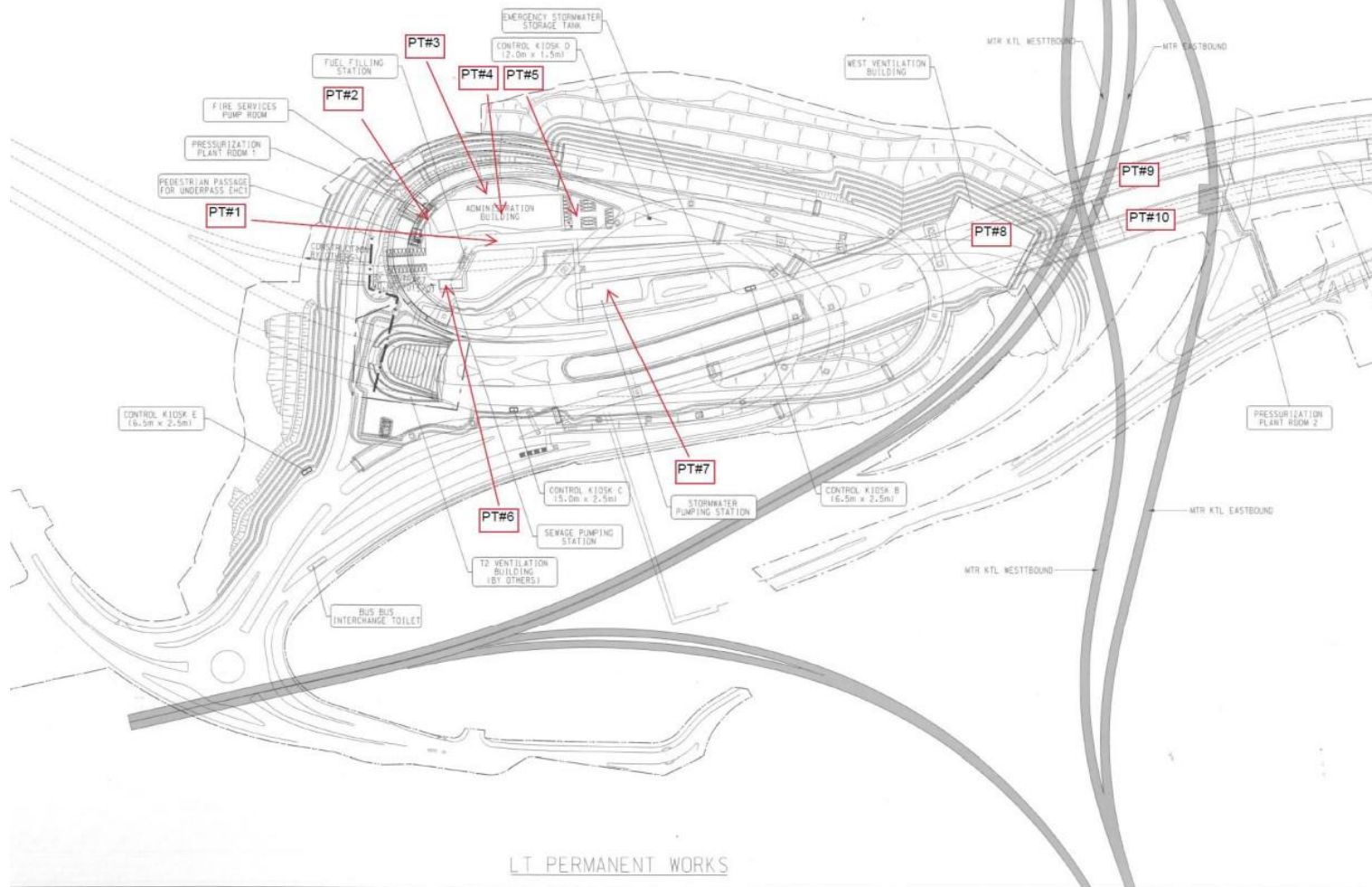
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|---------|------------|------------|----------------|----------|
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| JOB No. | MA16034    | FIGURE NO. | 2              | REV<br>- |



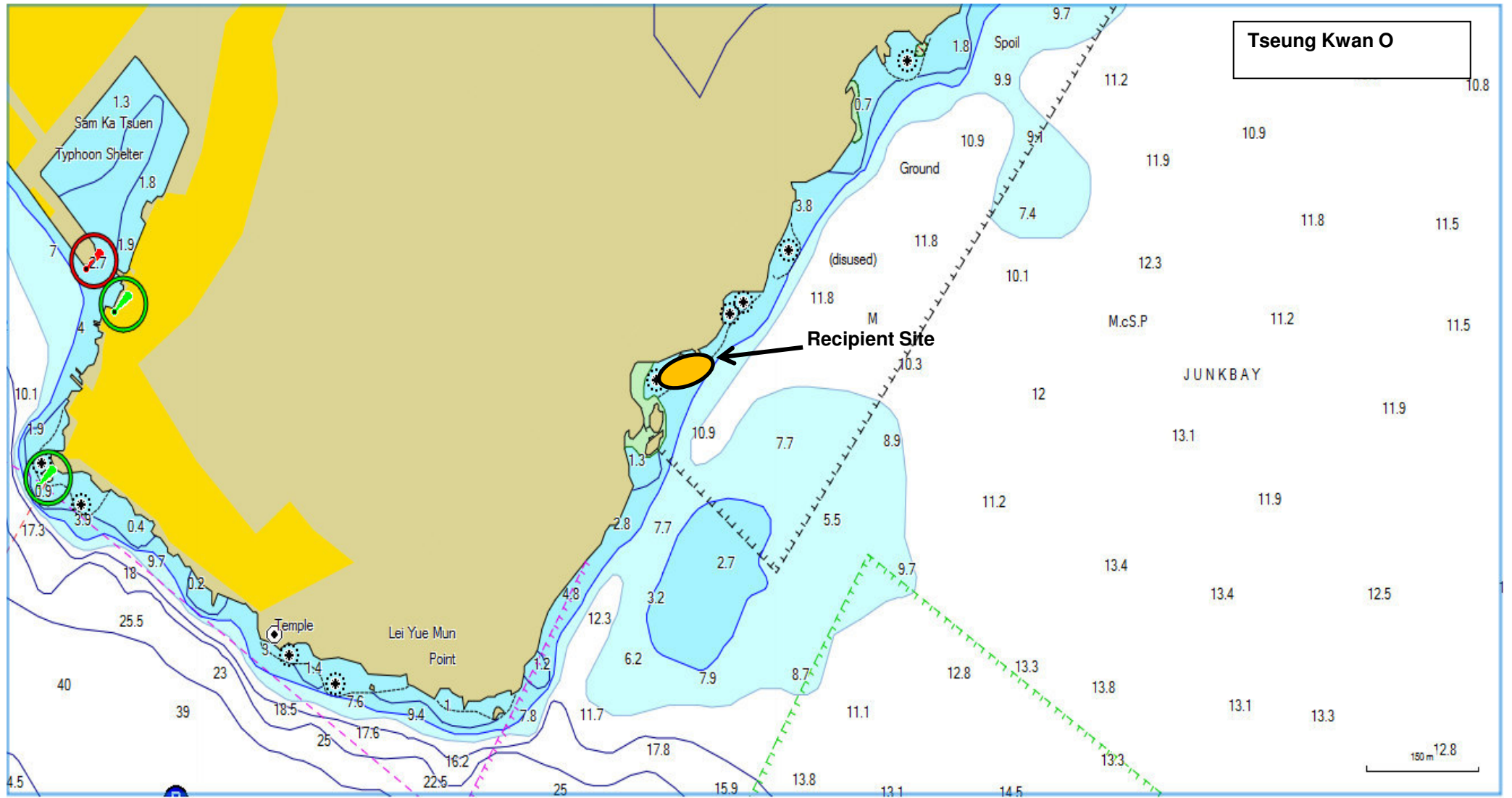
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|---------|------------|------------|---------------|----------|
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| CHECK   | CC         | DRAWN      | KC            |          |
| JOB No. | MA16034    | FIGURE NO. | 3             | REV<br>- |



|             |         |            |          |          |
|-------------|---------|------------|----------|----------|
| SCALE       | N.T.S   | DATE       | AUG 2016 |          |
| CHECK       | JF      | DRAWN      | JW       |          |
| PROJECT NO. | MA16034 | FIGURE NO. | 5        | REV<br>— |



|       |   |  |          |             |         |          |
|-------|---|--|----------|-------------|---------|----------|
| Title | Agreement No. CE/59/2015 (EP)   |  | Scale    | Project No. | MA16034 | CINOTECH |
|       | Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction |  |          |             |         |          |
|       | Locations of Operational Phase Landfill Gas Monitoring                          |  | Date     | Figure      | 6       |          |
|       |   |  | Dec-2022 |             |         |          |

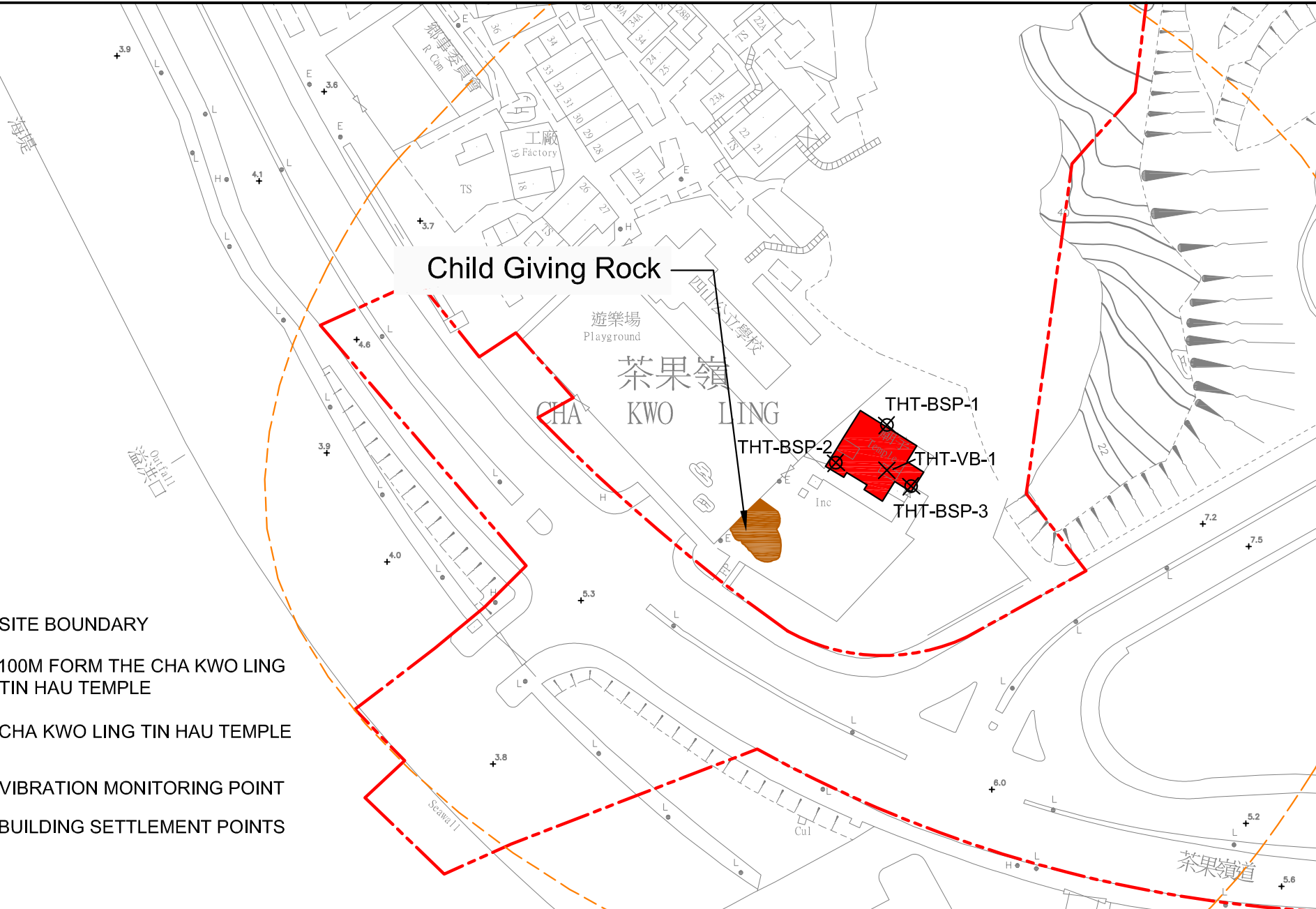
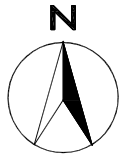


Title Agreement No. CE/59/2015 (EP)  
 Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction  
 Location of Post-translocation Coral Monitoring

Scale N.T.S  
 Date Mar-17

Project No. MA16034  
 Figure 7





**LEGEND**

- - - SITE BOUNDARY
- - - 100M FORM THE CHA KWO LING TIN HAU TEMPLE
- CHA KWO LING TIN HAU TEMPLE
- X VIBRATION MONITORING POINT
- ⊗ BUILDING SETTLEMENT POINTS



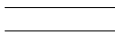


|         |         |            |          |     |
|---------|---------|------------|----------|-----|
| SCALE   | N.T.S.  | DATE       | FEB 2018 |     |
| CHECK   | JF      | DRAWN      | AC       |     |
| JOB No. | MA16034 | FIGURE NO. | 8        | REV |
|         |         |            |          | -   |



Ocean Shore

TIU KENG  
LENG

### Legend

-  MARINE AREA EMBAYED BY RECLAMATION
-  RECLAMATION FOOTPRINT
-  O KING ROAD
-  LOCATION OF OUTFALL
-  MONITORING STATION W2

|             |           |            |          |          |
|-------------|-----------|------------|----------|----------|
| SCALE       | 1:4000@A4 | DATE       | NOV 2019 |          |
| CHECK       | BC        | DRAWN      | KC       |          |
| PROJECT NO. | MA16034   | FIGURE NO. | 9        | REV<br>— |

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**APPENDIX A  
ACTION AND LIMIT LEVELS**

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## APPENDIX A – Action and Limit Levels

### Air Quality

#### *1-hr TSP*

| Monitoring Stations | Location                                 | Action Level, $\mu\text{g}/\text{m}^3$ | Limit Level, $\mu\text{g}/\text{m}^3$ |
|---------------------|--|--|---------------------------------------|
| AM1                 | Tin Hau Temple                           | 275                                    | 500                                   |
| AM2                 | Sai Tso Wan Recreation Ground            | 273                                    |                                       |
| AM3                 | Yau Lai Estate Bik Lai House             | 271                                    |                                       |
| AM4                 | Sitting-out Area at Cha Kwo Ling Village | 278                                    |                                       |
| AM5(A)              | Tseung Kwan O DSD Desilting Compound     | 273                                    |                                       |
| AM6(A)              | Park Central, L1/F Open Space Area       | 285                                    |                                       |

#### *24-hr TSP*

| Monitoring Stations | Location                             | Action Level, $\mu\text{g}/\text{m}^3$ | Limit Level, $\mu\text{g}/\text{m}^3$ |
|---------------------|--------------------------------------|--|---------------------------------------|
| AM1                 | Tin Hau Temple                       | 173                                    | 260                                   |
| AM2                 | Sai Tso Wan Recreation Ground        | 192                                    |                                       |
| AM3                 | Yau Lai Estate Bik Lai House         | 167                                    |                                       |
| AM4(B)              | Flat 103 Cha Kwo Ling Village        | 210                                    |                                       |
| AM5(A)              | Tseung Kwan O DSD Desilting Compound | 175                                    |                                       |
| AM6(A)              | Park Central, L1/F Open Space Area   | 165                                    |                                       |

### Noise

| Time Period   | Action Level                              | Limit Level                      |
|---|---|----------------------------------|
| 0700-1900 hrs on normal weekdays  | When one documented complaint is received | 75 dB(A) <sup>(1)</sup>          |
| 1900-2300 on all days and 0700-2300 on general holidays (including Sundays) |   | 60/65/70 dB(A) <sup>(2)(3)</sup> |
| 2300-0700 on all days   |   | 45/50/55 dB(A) <sup>(2)(3)</sup> |

<sup>1</sup> 70 dB(A) for schools and 65 dB(A) for schools during examination period.

<sup>2</sup> Acceptable Noise Levels for Area Sensitivity Rating of A/B/C

<sup>3</sup> 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**

### ***Groundwater***

| <b>Parameters</b>                      | <b>Action</b>            | <b>Limit</b>             |
|--|--------------------------|--------------------------|
| DO in mg L <sup>-1</sup>               | 7.6                      | 7.6                      |
| pH                                     | 6.0 – 8.9                | 6.0 – 9.0                |
| BOD <sub>5</sub> in mg L <sup>-1</sup> | 2.0                      | 2.0                      |
| TOC in mg L <sup>-1</sup>              | Stream 1 and Stream 2: 9 | Stream 1 and Stream 2: 9 |
|  | Stream 3: 6              | Stream 3: 6              |
| Total Nitrogen in mg L <sup>-1</sup>   | 2.0                      | 2.1                      |
| Ammonia-N in mg L <sup>-1</sup>        | 0.15                     | 0.20                     |
| Total Phosphate in mg L <sup>-1</sup>  | 0.05                     | 0.05                     |
| SS in mg L <sup>-1</sup>               | 7.6                      | 12.1                     |
| Turbidity in NTU                       | 2.1                      | 2.3                      |

Notes:

1. For pH, non-compliance of the water quality limits occurs when monitoring result is out of the range of the limits.
2. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
3. For turbidity, SS, 5-day biochemical oxygen demand (BOD<sub>5</sub>), Total organic carbon (TOC), Total Nitrogen, Ammonia-N and Total Phosphate, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
4. All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary.

### ***Groundwater Level Monitoring***

| <b>Drill Hole No.</b> | <b>38568-LDH1</b> | <b>TKO-LBH907</b> |
|-----------------------|-------------------|-------------------|
| Action Level (mPD)    | +74.65            | +17.59            |

*Marine Water Quality*

| <b><u>Parameter (unit)</u></b>            | <b><u>Depth</u></b>                 | <b><u>Action Level</u></b>  | <b><u>Limit Level</u></b>   |
|---|-------------------------------------|---|---|
| DO in mg/L<br>(See Note 1 and 4)          | <b><u>Stations G1-G4, M1-M5</u></b> |   |   |
|   | Depth Average                       | <u>4.9 mg/L</u>   | <u>4.6 mg/L</u>   |
|   | Bottom                              | <u>4.2 mg/L</u>   | <u>3.6 mg/L</u>   |
|   | <b><u>Station M6</u></b>            |   |   |
|   | Intake Level                        | <u>5.0 mg/L</u>   | <u>4.7 mg/L</u>   |
| Turbidity in NTU<br>(See Note 2, 4 and 5) | <b><u>Stations G1-G4, M1-M5</u></b> |   |   |
|   | Bottom                              | <u>19.3 NTU</u><br>or 120% of upstream control station's Turbidity at the same tide of the same day | <u>22.2 NTU</u><br>or 130% of upstream control station's Turbidity at the same tide of the same day |
|   | <b><u>Station M6</u></b>            |   |   |
|   | Intake Level                        | <u>19.0 NTU</u>   | <u>19.4 NTU</u>   |
| SS in mg/L<br>(See Note 2, 4 and 5)       | <b><u>Stations G1-G4</u></b>        |   |   |
|   | Surface                             | <u>6.0 mg/L</u><br>or 120% of upstream control station's SS at the same tide of the same day        | <u>6.9mg/L</u><br>or 130% of upstream control station's SS at the same tide of the same day         |
|   | <b><u>Stations M1-M5</u></b>        |   |   |
|   | Surface                             | <u>6.2 mg/L</u><br>or 120% of upstream control station's SS at the same tide of the same day        | <u>7.4 mg/L</u><br>or 130% of upstream control station's SS at the same tide of the same day        |
|   | <b><u>Stations G1-G4, M1-M5</u></b> |   |   |
|   | Bottom                              | <u>6.9 mg/L</u><br>or 120% of upstream control station's SS at the same tide of the same day        | <u>7.9 mg/L</u><br>or 130% of upstream control station's SS at the same tide of the same day        |
|   | <b><u>Station M6</u></b>            |   |   |
| Intake Level                              | <u>8.3 mg/L</u>                     | <u>8.6 mg/L</u>   |   |

Notes:

1. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
2. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
3. All the figures given in the table are used for reference only and EPD may amend the figures whenever it is considered as necessary.
4. Action and limit values are derived based on baseline water quality monitoring results to show the actual baseline water quality condition.
5. Refer to Appendix I – Marine Water Quality Monitoring Results and Graphical Presentations for results of upstream control stations at each tide on each day.

### *Water Quality Monitoring in Temporary Marine Embayment*

| <b>Parameter (unit)</b>          | <b>Depth</b>  | <b>Action Level</b>            | <b>Limit Level</b>           |
|----------------------------------|---------------|--------------------------------|------------------------------|
| DO in mg/L<br>(See Note 1 and 2) | Depth Average | <u>4.8 mg/L</u> <sup>(4)</sup> | <u>4 mg/L</u> <sup>(3)</sup> |
|                                  | Bottom        | <u>2.4 mg/L</u> <sup>(4)</sup> | <u>2 mg/L</u> <sup>(3)</sup> |

Notes:

1. "depth-averaged" is calculated by taking the arithmetic means of reading of all sampling depths.
2. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
3. Current Water Quality Objectives (WQOs) for marine waters of Hong Kong
4. As an alert for adverse water quality impact, the Action Level is set as 120% of the Current WQOs for marine waters of Hong Kong.

### **Ecology**

#### *Post-translocation Coral Monitoring*

| <b>Parameter</b> | <b>Action Level Definition</b>  | <b>Limit Level Definition</b>   |
|------------------|---|---|
| <b>Mortality</b> | If during Impact Monitoring a 15% increase in the percentage of partial mortality on hard corals occurs at more than 20% of the tagged coral at any one Impact Monitoring Site that is not recorded at the Control Site, then the Action Level is exceeded. | If during the Impact Monitoring a 25% increase in the percentage of partial mortality occurs at more than 20% of the tagged coral at any one Impact Monitoring Site that is not recorded at the Control Site, then the Limit Level is exceeded. |

### **Landfill Gas Monitoring**

| <b>Parameter</b> | <b>Limit Level</b>               |
|------------------|----------------------------------|
| Oxygen           | <19%                             |
|                  | <18%                             |
| Methane          | >10% LEL (i.e. > 0.5% by volume) |
|                  | >20% LEL (i.e. > 1% by volume)   |
| Carbon Dioxide   | >0.5%                            |
|                  | >1.5%                            |

### **Alert, Alarm, Action Levels for Built Heritage Monitoring**

| <b>Parameter</b>          | <b>Alert Level</b> | <b>Alarm Level</b> | <b>Action Level</b>  |
|---------------------------|--------------------|--------------------|--|
| Vibration                 | ppv:4.5mm/s        | ppv: 4.8mm/s       | ppv: 5mm/s<br>Maximum Allowable<br>Vibration Amplitude:<br>0.1mm |
| Building Settlement Point | 6mm                | 8mm                | 10mm   |
| Building Tilting          | 1:2000             | 1:1500             | 1:1000   |

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**APPENDIX B  
COPIES OF CALIBRATION  
CERTIFICATES**

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## Certificate of Calibration - Wind Monitoring Station

Description: Yau Lai Estate, Bik Lai House  
 Manufacturer: Davis Instruments  
 Model No.: Davis7440  
 Serial No.: MC01010A44  
 Equipment No.: SA-03-04  
 Date of Calibration: 17-Feb-2025  
 Next Due Date: 17-Aug-2025

### 1. Performance check of Wind Speed

| Wind Speed, m/s         |                       | Difference D (m/s) |
|-------------------------|-----------------------|--------------------|
| Wind Speed Reading (V1) | Anemometer Value (V2) | $D = V1 - V2$      |
| 0.0                     | 0.0                   | 0.0                |
| 1.5                     | 1.4                   | 0.1                |
| 2.5                     | 2.4                   | 0.1                |
| 4.0                     | 3.8                   | 0.2                |

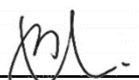
### 2. Performance check of Wind Direction

| Wind Direction (°)          |                           | Difference D (°) |
|-----------------------------|---------------------------|------------------|
| Wind Direction Reading (W1) | Marine Compass Value (W2) | $D = W1 - W2$    |
| 0                           | 0                         | 0.0              |
| 90                          | 90                        | 0.0              |
| 180                         | 180                       | 0.0              |
| 270                         | 270                       | 0.0              |

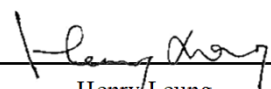
### Test Specification:

1. Performance Wind Speed Test - The wind meter was on-site calibrated against the anemometer
2. Performance Wind Direction Test - The wind meter was on-site calibrated against the marine compass at four direction

Calibrated by:

  
 \_\_\_\_\_  
 Wong Shing Kwai

Approved by:

  
 \_\_\_\_\_  
 Henry Leung



|                                    |
|------------------------------------|
| <b>RECALIBRATION<br/>DUE DATE:</b> |
| <b>January 7, 2026</b>             |

# Certificate of Calibration

| Calibration Certification Information |                             |           |       |
|---------------------------------------|-----------------------------|-----------|-------|
| Cal. Date: January 7, 2025            | Rootsmeter S/N: 438320      | Ta: 293   | °K    |
| Operator: Jim Tisch                   |                             | Pa: 759.0 | mm Hg |
| Calibration Model #: TE-5025A         | Calibrator S/N: <b>3864</b> |           |       |

| Run | Vol. Init (m3) | Vol. Final (m3) | ΔVol. (m3) | ΔTime (min) | ΔP (mm Hg) | ΔH (in H2O) |
|-----|----------------|-----------------|------------|-------------|------------|-------------|
| 1   | 1              | 2               | 1          | 1.4590      | 3.2        | 2.00        |
| 2   | 3              | 4               | 1          | 1.0360      | 6.4        | 4.00        |
| 3   | 5              | 6               | 1          | 0.9160      | 8.0        | 5.00        |
| 4   | 7              | 8               | 1          | 0.8800      | 8.8        | 5.50        |
| 5   | 9              | 10              | 1          | 0.7270      | 12.7       | 8.00        |

| Data Tabulation |               |  |           |             |   |
|-----------------|---------------|--|-----------|-------------|---|
| Vstd (m3)       | Qstd (x-axis) | $\sqrt{\Delta H \left( \frac{Pa}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)}$ (y-axis) | Va        | Qa (x-axis) | $\sqrt{\Delta H \left( \frac{Ta}{Pa} \right)}$ (y-axis) |
| 1.0114          | 0.6932        | 1.4252   | 0.9958    | 0.6825      | 0.8787  |
| 1.0071          | 0.9721        | 2.0156   | 0.9916    | 0.9571      | 1.2427  |
| 1.0050          | 1.0971        | 2.2535   | 0.9895    | 1.0802      | 1.3893  |
| 1.0039          | 1.1408        | 2.3635   | 0.9884    | 1.1232      | 1.4572  |
| 0.9987          | 1.3737        | 2.8505   | 0.9833    | 1.3525      | 1.7574  |
| <b>QSTD</b>     | m=            | <b>2.08969</b>   | <b>QA</b> | m=          | <b>1.30853</b>  |
|                 | b=            | <b>-0.02374</b>  |           | b=          | <b>-0.01464</b>   |
|                 | r=            | <b>0.99985</b>   |           | r=          | <b>0.99985</b>  |

| Calculations                           |   |     |  |
|--|---|-----|--|
| Vstd=                                  | $\Delta Vol \left( \frac{Pa - \Delta P}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)$                                 | Va= | $\Delta Vol \left( \frac{Pa - \Delta P}{Pa} \right)$                                 |
| Qstd=                                  | Vstd/ΔTime  | Qa= | Va/ΔTime   |
| For subsequent flow rate calculations: |   |     |  |
| Qstd=                                  | $1/m \left( \left( \sqrt{\Delta H \left( \frac{Pa}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)} \right) - b \right)$ | Qa= | $1/m \left( \left( \sqrt{\Delta H \left( \frac{Ta}{Pa} \right)} \right) - b \right)$ |

| Standard Conditions |                                       |
|---------------------|---------------------------------------|
| Tstd:               | 298.15 °K                             |
| Pstd:               | 760 mm Hg                             |
| Key                 |                                       |
| ΔH:                 | calibrator manometer reading (in H2O) |
| ΔP:                 | rootsmeter manometer reading (mm Hg)  |
| Ta:                 | actual absolute temperature (°K)      |
| Pa:                 | actual barometric pressure (mm Hg)    |
| b:                  | intercept                             |
| m:                  | slope                                 |

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

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA16034/05/0053

Project No. AM1 - Tin Hau Temple  
 Date: 14-Apr-25 Next Due Date: 14-Jun-25 Operator: SK  
 Equipment No.: A-01-05 Model No.: GS2310 Serial No. 10599

| Ambient Condition   |              |                     |              |
|---------------------|--------------|---------------------|--------------|
| Temperature, Ta (K) | <u>295.6</u> | Pressure, Pa (mmHg) | <u>759.7</u> |

| Orifice Transfer Standard Information |                 |  |                |               |                 |
|---------------------------------------|-----------------|--|----------------|---------------|-----------------|
| Serial No.                            | <u>3864</u>     | Slope, mc  | <u>0.05914</u> | Intercept, bc | <u>-0.02377</u> |
| Last Calibration Date:                | <u>7-Jan-25</u> | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ |                |               |                 |
| Next Calibration Date:                | <u>7-Jan-26</u> | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$  |                |               |                 |

| Calibration of TSP Sampler |                                    |  |                   |                                |   |
|----------------------------|------------------------------------|--|-------------------|--------------------------------|---|
| Calibration Point          | Orifice                            |  |                   | HVS                            |   |
|                            | $\Delta H$ (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM) X-axis | $\Delta W$ (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis |
| 1                          | <u>13.2</u>                        | 3.65   | 62.07             | <u>8.5</u>                     | 2.93  |
| 2                          | <u>10.1</u>                        | 3.19   | 54.35             | <u>6.3</u>                     | 2.52  |
| 3                          | <u>7.2</u>                         | 2.69   | 45.95             | <u>4.1</u>                     | 2.03  |
| 4                          | <u>5.0</u>                         | 2.24   | 38.36             | <u>2.7</u>                     | 1.65  |
| 5                          | <u>2.8</u>                         | 1.68   | 28.81             | <u>1.0</u>                     | 1.00  |

**By Linear Regression of Y on X**

Slope, mw = 0.0573 Intercept, bw : -0.6019  
 Correlation coefficient\* = 0.9987

\*If Correlation Coefficient < 0.990, check and recalibrate.

| Set Point Calculation   |             |
|---|-------------|
| From the TSP Field Calibration Curve, take Qstd = 43 CFM                            |             |
| From the Regression Equation, the "Y" value according to                            |             |
| $mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$            |             |
| Therefore, Set Point; W = (mw x Qstd + bw) <sup>2</sup> x (760 / Pa) x (Ta / 298) = | <u>3.43</u> |

Remarks: \_\_\_\_\_

Conducted by: Wong Shing Kwai Signature: [Signature] Date: 14-Apr-25  
 Checked by: Henry Leung Signature: [Signature] Date: 14-Apr-25

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA16034/05/0054

Project No. AM1 - Tin Hau Temple  
 Date: 13-Jun-25 Next Due Date: 13-Aug-25 Operator: SK  
 Equipment No.: A-01-05 Model No.: GS2310 Serial No. 10599

| Ambient Condition   |              |                     |              |
|---------------------|--------------|---------------------|--------------|
| Temperature, Ta (K) | <b>300.5</b> | Pressure, Pa (mmHg) | <b>754.4</b> |

| Orifice Transfer Standard Information |          |  |         |               |          |
|---------------------------------------|----------|--|---------|---------------|----------|
| Serial No.                            | 3864     | Slope, mc  | 0.05914 | Intercept, bc | -0.02377 |
| Last Calibration Date:                | 7-Jan-25 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ |         |               |          |
| Next Calibration Date:                | 7-Jan-26 | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$  |         |               |          |

| Calibration of TSP Sampler |                                    |  |                   |                                |   |
|----------------------------|------------------------------------|--|-------------------|--------------------------------|---|
| Calibration Point          | Orifice                            |  |                   | HVS                            |   |
|                            | $\Delta H$ (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM) X-axis | $\Delta W$ (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis |
| 1                          | <b>13.1</b>                        | 3.59   | 61.12             | <b>8.4</b>                     | 2.88  |
| 2                          | <b>10.2</b>                        | 3.17   | 53.98             | <b>6.2</b>                     | 2.47  |
| 3                          | <b>7.1</b>                         | 2.64   | 45.10             | <b>4.0</b>                     | 1.98  |
| 4                          | <b>5.1</b>                         | 2.24   | 38.29             | <b>2.6</b>                     | 1.60  |
| 5                          | <b>2.7</b>                         | 1.63   | 27.97             | <b>1.3</b>                     | 1.13  |

**By Linear Regression of Y on X**

Slope, mw = 0.0530 Intercept, bw = -0.3891  
 Correlation coefficient\* = 0.9989

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

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

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

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

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.63

Remarks: \_\_\_\_\_

Conducted by: Wong Shing Kwai Signature:  Date: 13-Jun-25

Checked by: Henry Leung Signature:  Date: 13-Jun-25

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA16034/08/0053

Project No. AM2 - Sai Tso Wan Recreation Ground  
 Date: 14-Apr-25 Next Due Date: 14-Jun-25 Operator: SK  
 Equipment No.: A-01-08 Model No.: GS2310 Serial No. 1287

| Ambient Condition   |              |                     |              |
|---------------------|--------------|---------------------|--------------|
| Temperature, Ta (K) | <u>295.6</u> | Pressure, Pa (mmHg) | <u>759.7</u> |

| Orifice Transfer Standard Information |                 |  |                |               |                 |
|---------------------------------------|-----------------|--|----------------|---------------|-----------------|
| Serial No.                            | <u>3864</u>     | Slope, mc  | <u>0.05914</u> | Intercept, bc | <u>-0.02377</u> |
| Last Calibration Date:                | <u>7-Jan-25</u> | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ |                |               |                 |
| Next Calibration Date:                | <u>7-Jan-26</u> | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$  |                |               |                 |

| Calibration of TSP Sampler |                                    |  |                        |                                |  |
|----------------------------|------------------------------------|--|------------------------|--------------------------------|--|
| Calibration Point          | Orifice                            |  |                        | HVS                            |  |
|                            | $\Delta H$ (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM)<br>X - axis | $\Delta W$ (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$<br>Y-axis |
| 1                          | <u>13.2</u>                        | 3.65   | 62.07                  | <u>8.5</u>                     | 2.93   |
| 2                          | <u>10.1</u>                        | 3.19   | 54.35                  | <u>6.1</u>                     | 2.48   |
| 3                          | <u>7.5</u>                         | 2.75   | 46.89                  | <u>4.0</u>                     | 2.01   |
| 4                          | <u>5.2</u>                         | 2.29   | 39.11                  | <u>2.5</u>                     | 1.59   |
| 5                          | <u>3.1</u>                         | 1.77   | 30.29                  | <u>1.5</u>                     | 1.23   |

**By Linear Regression of Y on X**

Slope, mw = 0.0543 Intercept, bw : -0.4790  
 Correlation coefficient\* = 0.9967

\*If Correlation Coefficient < 0.990, check and recalibrate.

| Set Point Calculation   |  |
|---|--|
| From the TSP Field Calibration Curve, take Qstd = 43 CFM                            | From the Regression Equation, the "Y" value according to |
| $mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$            |  |
| Therefore, Set Point; W = (mw x Qstd + bw) <sup>2</sup> x (760 / Pa) x (Ta / 298) = | <u>3.41</u>  |

Remarks: \_\_\_\_\_  
 \_\_\_\_\_

Conducted by: Wong Shing Kwai Signature:  Date: 14-Apr-25  
 Checked by: Henry Leung Signature:  Date: 14-Apr-25

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA16034/08/0054

Project No. AM2 - Sai Tso Wan Recreation Ground  
 Date: 13-Jun-25 Next Due Date: 13-Aug-25 Operator: SK  
 Equipment No.: A-01-08 Model No.: GS2310 Serial No. 1287

| Ambient Condition   |              |                     |              |
|---------------------|--------------|---------------------|--------------|
| Temperature, Ta (K) | <b>300.5</b> | Pressure, Pa (mmHg) | <b>754.4</b> |

| Orifice Transfer Standard Information |          |  |         |               |          |
|---------------------------------------|----------|--|---------|---------------|----------|
| Serial No.                            | 3864     | Slope, mc  | 0.05914 | Intercept, bc | -0.02377 |
| Last Calibration Date:                | 7-Jan-25 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ |         |               |          |
| Next Calibration Date:                | 7-Jan-26 | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$  |         |               |          |

| Calibration of TSP Sampler |                                    |  |                   |                                |   |
|----------------------------|------------------------------------|--|-------------------|--------------------------------|---|
| Calibration Point          | Orifice                            |  |                   | HVS                            |   |
|                            | $\Delta H$ (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM) X-axis | $\Delta W$ (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis |
| 1                          | <b>13.3</b>                        | 3.62   | 61.58             | <b>8.3</b>                     | 2.86  |
| 2                          | <b>10.3</b>                        | 3.18   | 54.24             | <b>6.4</b>                     | 2.51  |
| 3                          | <b>7.7</b>                         | 2.75   | 46.95             | <b>4.2</b>                     | 2.03  |
| 4                          | <b>5.0</b>                         | 2.22   | 37.92             | <b>2.4</b>                     | 1.54  |
| 5                          | <b>3.4</b>                         | 1.83   | 31.34             | <b>1.2</b>                     | 1.09  |

**By Linear Regression of Y on X**

Slope, mw = 0.0587 Intercept, bw = -0.7210  
 Correlation coefficient\* = 0.9987

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

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

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

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

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.31

Remarks: \_\_\_\_\_

Conducted by: Wong Shing Kwai Signature:  Date: 13-Jun-25

Checked by: Henry Leung Signature:  Date: 13-Jun-25

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA16034/03/0053

Project No. AM3 - Yau Lai Estate, Bik Lai House  
 Date: 14-Apr-25 Next Due Date: 14-Jun-25 Operator: SK  
 Equipment No.: A-01-03 Model No.: GS2310 Serial No. 10379

| Ambient Condition   |              |                     |              |
|---------------------|--------------|---------------------|--------------|
| Temperature, Ta (K) | <u>295.6</u> | Pressure, Pa (mmHg) | <u>759.7</u> |

| Orifice Transfer Standard Information |                 |   |                |               |                 |
|---------------------------------------|-----------------|---|----------------|---------------|-----------------|
| Serial No.                            | <u>3864</u>     | Slope, mc   | <u>0.05914</u> | Intercept, bc | <u>-0.02377</u> |
| Last Calibration Date:                | <u>7-Jan-25</u> | $mc \times Q_{std} + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$<br>$Q_{std} = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$ |                |               |                 |
| Next Calibration Date:                | <u>7-Jan-26</u> |   |                |               |                 |

| Calibration of TSP Sampler |                                    |  |                   |                                |   |
|----------------------------|------------------------------------|--|-------------------|--------------------------------|---|
| Calibration Point          | Orifice                            |  |                   | HVS                            |   |
|                            | $\Delta H$ (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM) X-axis | $\Delta W$ (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis |
| 1                          | <u>13.1</u>                        | 3.63   | 61.84             | <u>8.3</u>                     | 2.89  |
| 2                          | <u>10.0</u>                        | 3.17   | 54.08             | <u>6.3</u>                     | 2.52  |
| 3                          | <u>7.4</u>                         | 2.73   | 46.58             | <u>4.1</u>                     | 2.03  |
| 4                          | <u>5.0</u>                         | 2.24   | 38.36             | <u>2.4</u>                     | 1.56  |
| 5                          | <u>3.2</u>                         | 1.80   | 30.77             | <u>1.4</u>                     | 1.19  |

**By Linear Regression of Y on X**

Slope,  $m_w =$  0.0562 Intercept,  $b_w =$  -0.5643  
 Correlation coefficient\* = 0.9988

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**


From the TSP Field Calibration Curve, take  $Q_{std} = 43$  CFM

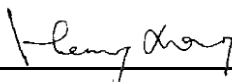
From the Regression Equation, the "Y" value according to

$$m_w \times Q_{std} + b_w = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point;  $W = (m_w \times Q_{std} + b_w)^2 \times (760 / Pa) \times (Ta / 298) =$  3.40

Remarks: \_\_\_\_\_  
 \_\_\_\_\_

Conducted by: Wong Shing Kwai Signature:  Date: 14-Apr-25

Checked by: Henry Leung Signature:  Date: 14-Apr-25

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA16034/03/0054

Project No. AM3 - Yau Lai Estate, Bik Lai House  
 Date: 13-Jun-25 Next Due Date: 13-Aug-25 Operator: SK  
 Equipment No.: A-01-03 Model No.: GS2310 Serial No. 10379

| Ambient Condition   |              |                     |              |
|---------------------|--------------|---------------------|--------------|
| Temperature, Ta (K) | <b>300.5</b> | Pressure, Pa (mmHg) | <b>754.4</b> |

| Orifice Transfer Standard Information |          |   |         |               |          |
|---------------------------------------|----------|---|---------|---------------|----------|
| Serial No.                            | 3864     | Slope, mc   | 0.05914 | Intercept, bc | -0.02377 |
| Last Calibration Date:                | 7-Jan-25 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$<br>$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$ |         |               |          |
| Next Calibration Date:                | 7-Jan-26 |   |         |               |          |

| Calibration of TSP Sampler |                                    |  |                   |                                |   |
|----------------------------|------------------------------------|--|-------------------|--------------------------------|---|
| Calibration Point          | Orifice                            |  |                   | HVS                            |   |
|                            | $\Delta H$ (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM) X-axis | $\Delta W$ (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis |
| 1                          | <b>13.0</b>                        | 3.58   | 60.89             | <b>8.4</b>                     | 2.88  |
| 2                          | <b>10.1</b>                        | 3.15   | 53.72             | <b>6.1</b>                     | 2.45  |
| 3                          | <b>7.3</b>                         | 2.68   | 45.73             | <b>4.2</b>                     | 2.03  |
| 4                          | <b>5.2</b>                         | 2.26   | 38.66             | <b>2.3</b>                     | 1.50  |
| 5                          | <b>3.1</b>                         | 1.75   | 29.94             | <b>1.3</b>                     | 1.13  |

**By Linear Regression of Y on X**

Slope, mw = 0.0575 Intercept, bw = -0.6335  
 Correlation coefficient\* = 0.9973

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

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

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

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

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.43

Remarks: \_\_\_\_\_

Conducted by: Wong Shing Kwai Signature:  Date: 13-Jun-25

Checked by: Henry Leung Signature:  Date: 13-Jun-25

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA16034/37/0053

Project No. AM5(A) - Tseung Kwan O DSD Desilting Compound  
 Date: 14-Apr-25 Next Due Date: 14-Jun-25 Operator: SK  
 Equipment No.: A-01-37 Model No.: GS2310 Serial No. 1704

| Ambient Condition   |              |                     |              |
|---------------------|--------------|---------------------|--------------|
| Temperature, Ta (K) | <b>295.6</b> | Pressure, Pa (mmHg) | <b>759.7</b> |

| Orifice Transfer Standard Information |          |   |         |               |          |
|---------------------------------------|----------|---|---------|---------------|----------|
| Serial No.                            | 3864     | Slope, mc   | 0.05914 | Intercept, bc | -0.02377 |
| Last Calibration Date:                | 7-Jan-25 | $mc \times Q_{std} + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$<br>$Q_{std} = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$ |         |               |          |
| Next Calibration Date:                | 7-Jan-26 |   |         |               |          |

| Calibration of TSP Sampler |                                    |  |                        |                                |  |
|----------------------------|------------------------------------|--|------------------------|--------------------------------|--|
| Calibration Point          | Orifice                            |  |                        | HVS                            |  |
|                            | $\Delta H$ (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM)<br>X - axis | $\Delta W$ (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$<br>Y-axis |
| 1                          | <b>12.7</b>                        | 3.58   | 60.89                  | <b>8.5</b>                     | 2.93   |
| 2                          | <b>10.4</b>                        | 3.24   | 55.14                  | <b>6.1</b>                     | 2.48   |
| 3                          | <b>7.7</b>                         | 2.79   | 47.50                  | <b>4.4</b>                     | 2.11   |
| 4                          | <b>4.7</b>                         | 2.18   | 37.20                  | <b>2.6</b>                     | 1.62   |
| 5                          | <b>3.4</b>                         | 1.85   | 31.70                  | <b>1.7</b>                     | 1.31   |

**By Linear Regression of Y on X**

Slope,  $m_w =$  0.0533 Intercept,  $b_w =$  -0.3906  
 Correlation coefficient\* = 0.9964

\*If Correlation Coefficient < 0.990, check and recalibrate.

| Set Point Calculation  |  |
|--|--|
| From the TSP Field Calibration Curve, take $Q_{std} = 43$ CFM  |  |
| From the Regression Equation, the "Y" value according to   |  |
| $m_w \times Q_{std} + b_w = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$                              |  |
| Therefore, Set Point; $W = (m_w \times Q_{std} + b_w)^2 \times (760 / Pa) \times (Ta / 298) =$ <u>3.59</u> |  |

Remarks: \_\_\_\_\_  
 \_\_\_\_\_

Conducted by: Wong Shing Kwai Signature:  Date: 14-Apr-25  
 Checked by: Henry Leung Signature:  Date: 14-Apr-25

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA16034/37/0054

Project No. AM5(A) - Tseung Kwan O DSD Desilting Compound  
 Date: 13-Jun-25 Next Due Date: 13-Aug-25 Operator: SK  
 Equipment No.: A-01-37 Model No.: GS2310 Serial No. 1704

| Ambient Condition   |              |                     |              |
|---------------------|--------------|---------------------|--------------|
| Temperature, Ta (K) | <u>300.5</u> | Pressure, Pa (mmHg) | <u>754.4</u> |

| Orifice Transfer Standard Information |                 |  |                |               |                 |
|---------------------------------------|-----------------|--|----------------|---------------|-----------------|
| Serial No.                            | <u>3864</u>     | Slope, mc  | <u>0.05914</u> | Intercept, bc | <u>-0.02377</u> |
| Last Calibration Date:                | <u>7-Jan-25</u> | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ |                |               |                 |
| Next Calibration Date:                | <u>7-Jan-26</u> | $Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$  |                |               |                 |

| Calibration of TSP Sampler |                                    |  |                        |                                |  |
|----------------------------|------------------------------------|--|------------------------|--------------------------------|--|
| Calibration Point          | Orifice                            |  |                        | HVS                            |  |
|                            | $\Delta H$ (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM)<br>X - axis | $\Delta W$ (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$<br>Y-axis |
| 1                          | <u>12.8</u>                        | 3.55   | 60.42                  | <u>8.4</u>                     | 2.88   |
| 2                          | <u>10.3</u>                        | 3.18   | 54.24                  | <u>6.0</u>                     | 2.43   |
| 3                          | <u>7.6</u>                         | 2.74   | 46.65                  | <u>4.3</u>                     | 2.06   |
| 4                          | <u>4.5</u>                         | 2.10   | 35.99                  | <u>2.5</u>                     | 1.57   |
| 5                          | <u>3.3</u>                         | 1.80   | 30.88                  | <u>1.6</u>                     | 1.25   |

**By Linear Regression of Y on X**

Slope, mw = 0.0527 Intercept, bw = -0.3677  
 Correlation coefficient\* = 0.9971

\*If Correlation Coefficient < 0.990, check and recalibrate.

**Set Point Calculation**

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

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

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

Therefore, Set Point; W =  $(mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  3.66

Remarks: \_\_\_\_\_  
 \_\_\_\_\_

Conducted by: Wong Shing Kwai Signature:  Date: 13-Jun-25

Checked by: Henry Leung Signature:  Date: 13-Jun-25

# High-Volume TSP Sampler

## 5-POINT CALIBRATION DATA SHEET



File No. MA20003/55/032

Project No. CKL 2 - Flat 103 Cha Kwo Ling Village  
 Date: 6-May-25 Next Due Date: 6-Jul-25 Operator: SK  
 Equipment No.: A-01-55 Model No.: TE 5170 Serial No. 1956

| Ambient Condition   |              |                     |              |
|---------------------|--------------|---------------------|--------------|
| Temperature, Ta (K) | <b>300.7</b> | Pressure, Pa (mmHg) | <b>759.1</b> |

| Orifice Transfer Standard Information |          |   |         |               |          |
|---------------------------------------|----------|---|---------|---------------|----------|
| Serial No.                            | 3864     | Slope, mc   | 0.05914 | Intercept, bc | -0.02377 |
| Last Calibration Date:                | 7-Jan-25 | $mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$<br>$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$ |         |               |          |
| Next Calibration Date:                | 7-Jan-26 |   |         |               |          |

| Calibration of TSP Sampler |                                    |  |                        |                                |  |
|----------------------------|------------------------------------|--|------------------------|--------------------------------|--|
| Calibration Point          | Orifice                            |  |                        | HVS                            |  |
|                            | $\Delta H$ (orifice), in. of water | $[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$ | Qstd (CFM)<br>X - axis | $\Delta W$ (HVS), in. of water | $[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$<br>Y-axis |
| 1                          | <b>13.6</b>                        | 3.67   | 62.44                  | <b>9.0</b>                     | 2.98   |
| 2                          | <b>11.1</b>                        | 3.31   | 56.45                  | <b>7.0</b>                     | 2.63   |
| 3                          | <b>9.2</b>                         | 3.02   | 51.43                  | <b>5.8</b>                     | 2.40   |
| 4                          | <b>5.2</b>                         | 2.27   | 38.76                  | <b>2.8</b>                     | 1.66   |
| 5                          | <b>3.8</b>                         | 1.94   | 33.20                  | <b>2.0</b>                     | 1.41   |

**By Linear Regression of Y on X**

Slope, mw = 0.0543 Intercept, bw : -0.4130  
 Correlation coefficient\* = 0.9995

\*If Correlation Coefficient < 0.990, check and recalibrate.

| Set Point Calculation   |  |
|---|--|
| From the TSP Field Calibration Curve, take Qstd = 43 CFM  |  |
| From the Regression Equation, the "Y" value according to  |  |
| $mw \times Qstd + bw = [\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$                              |  |
| Therefore, Set Point; $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$ <u>3.73</u> |  |

Remarks: \_\_\_\_\_

Conducted by: Wong Shing Kwai Signature:  Date: 6-May-25  
 Checked by: Henry Leung Signature:  Date: 6-May-25

**Certificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler


Description: Laser Dust Monitor Date of Calibration 30-May-25  
 Manufacturer: Sibata Scientific Technology LTD. Validity of Calibration Record 30-Jul-25  
 Model No.: LD-3B  
 Serial No.: 2Y6194  
 Equipment No.: SA-01-02 Sensitivity 0.001 mg/m3  
 High Volume Sampler No.: A-01-03 Before Sensitivity Adjustment 578  
 Tisch Calibration Orifice No.: 3864 After Sensitivity Adjustment 578

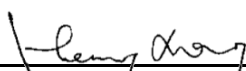
| Calibration of 1 hr TSP  |                    |                          |   |
|--|--------------------|--------------------------|---|
| Calibration Point  | Laser Dust Monitor |                          | HVS   |
|  | Total Count        | Count / Minute<br>X-axis | Mass concentration ( $\mu\text{g}/\text{m}^3$ )<br>Y-axis |
| 1  | 4000               | 75.0                     | 142.0   |
| 2  | 3600               | 63.0                     | 116.0   |
| 3  | 3000               | 55.0                     | 102.0   |
| <b>Average</b>   |                    | <b>64.3</b>              | <b>120.0</b>  |
| <p>By Linear Regression of Y on X</p> <p>Slope , mw = <u>2.0132</u> Intercept, bw = <u>-9.5132</u></p> <p>Correlation coefficient* = <u>0.9984</u></p> <p>Set Correlation Factor , SCF</p> <p>SCF = [ K=High Volume Sampler / Dust Meter, (<math>\mu\text{g}/\text{m}^3</math>) ] <u>1.9</u></p> |                    |                          |   |

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Those filter papers are weighted by HOKLAS laboratory (HPCT Limited)**

Calibrated by:   
 Technical Officer (Wong Shing Kwai)

Approved by:   
 Project Manager (Henry Leung)

**Certificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler


Description: Digital Dust Indicator Date of Calibration 30-May-25  
 Manufacturer: Sibata Scientific Technology LTD. Validity of Calibration Record 30-Jul-25  
 Model No.: LD-5R  
 Serial No.: 8Y2374  
 Equipment No.: SA-01-04 Sensitivity 0.001 mg/m3  
 High Volume Sampler No.: A-01-03 Before Sensitivity Adjustment 652  
 Tisch Calibration Orifice No.: 3864 After Sensitivity Adjustment 652

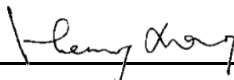
| Calibration of 1 hr TSP  |   |   |
|--|---|---|
| Calibration Point  | Laser Dust Monitor                                | HVS   |
|  | Mass Concentration (µg/m <sup>3</sup> )<br>X-axis | Mass concentration (µg/m <sup>3</sup> )<br>Y-axis |
| 1  | 77.0  | 133.0   |
| 2  | 65.0  | 120.0   |
| 3  | 53.0  | 104.0   |
| <b>Average</b>   | <b>65.0</b>                                       | <b>119.0</b>                                      |
| <b>By Linear Regression of Y on X</b><br>Slope , mw = <u>1.2083</u> Intercept, bw = <u>40.4583</u><br>Correlation coefficient* = <u>0.9982</u> |   |   |
| Set Correlation Factor   |   |   |
| Particulate Concentration by High Volume Sampler (µg/m <sup>3</sup> )  |   | 119.0   |
| Particulate Concentration by Dust Meter (µg/m <sup>3</sup> )   |   | 65.0  |
| Measureing time, (min)   |   | 60.0  |
| Set Correlation Factor , SCF   |   |   |
| SCF = [ K=High Volume Sampler / Dust Meter, (µg/m <sup>3</sup> ) ]   |   | <u>1.8</u>  |

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Those filter papers are weighted by HOKLAS laboratory (HPCT Litimed)**

Calibrated by:   
 Technical Officer (Wong Shing Kwai)

Approved by:   
 Project Manager (Henry Leung)

**Certificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler


Description: Digital Dust Indicator Date of Calibration 30-May-25  
 Manufacturer: Sibata Scientific Technology LTD. Validity of Calibration Record 30-Jul-25  
 Model No.: LD-5R  
 Serial No.: 8Y2373  
 Equipment No.: SA-01-05 Sensitivity 0.001 mg/m3  
 High Volume Sampler No.: A-01-03 Before Sensitivity Adjustment 657  
 Tisch Calibration Orifice No.: 3864 After Sensitivity Adjustment 657

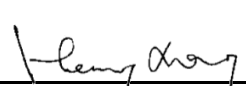
| Calibration of 1 hr TSP  |   |   |
|--|---|---|
| Calibration Point  | Laser Dust Monitor                                | HVS   |
|  | Mass Concentration (µg/m <sup>3</sup> )<br>X-axis | Mass concentration (µg/m <sup>3</sup> )<br>Y-axis |
| 1  | 73.0  | 132.0   |
| 2  | 63.0  | 114.0   |
| 3  | 55.0  | 103.0   |
| <b>Average</b>   | <b>63.7</b>                                       | <b>116.3</b>                                      |
| <b>By Linear Regression of Y on X</b><br>Slope , mw = <u>1.6189</u> Intercept, bw = <u>13.2664</u><br>Correlation coefficient* = <u>0.9972</u> |   |   |
| Set Correlation Factor   |   |   |
| Particulate Concentration by High Volume Sampler (µg/m <sup>3</sup> )  |   | 116.3   |
| Particulate Concentration by Dust Meter (µg/m <sup>3</sup> )   |   | 63.7  |
| Measureing time, (min)   |   | 60.0  |
| Set Correlation Factor , SCF   |   |   |
| SCF = [ K=High Volume Sampler / Dust Meter, (µg/m <sup>3</sup> ) ]   |   | <u>1.8</u>  |

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Those filter papers are weighted by HOKLAS laboratory (HPCT Litimed)**

Calibrated by:   
 Technical Officer (Wong Shing Kwai)

Approved by:   
 Project Manager (Henry Leung)

**Certificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler


Description: Digital Dust Indicator Date of Calibration 30-May-25  
 Manufacturer: Sibata Scientific Technology LTD. Validity of Calibration Record 30-Jul-25  
 Model No.: LD-5R  
 Serial No.: 972777  
 Equipment No.: SA-01-06 Sensitivity 0.001 mg/m3  
 High Volume Sampler No.: A-01-03 Before Sensitivity Adjustment 645  
 Tisch Calibration Orifice No.: 3864 After Sensitivity Adjustment 645

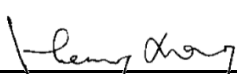
| Calibration of 1 hr TSP  |   |   |
|--|---|---|
| Calibration Point  | Laser Dust Monitor  | HVS   |
|  | Mass Concentration ( $\mu\text{g}/\text{m}^3$ )<br>X-axis | Mass concentration ( $\mu\text{g}/\text{m}^3$ )<br>Y-axis |
| 1  | 75.0  | 133.0   |
| 2  | 61.0  | 117.0   |
| 3  | 53.0  | 105.0   |
| <b>Average</b>   | <b>63.0</b>   | <b>118.3</b>  |
| <b>By Linear Regression of Y on X</b><br>Slope , mw = <u>1.2581</u> Intercept, bw = <u>39.0753</u><br>Correlation coefficient* = <u>0.9973</u> |   |   |
| Set Correlation Factor   |   |   |
| Particulate Concentration by High Volume Sampler ( $\mu\text{g}/\text{m}^3$ )  |   | 118.3   |
| Particulate Concentration by Dust Meter ( $\mu\text{g}/\text{m}^3$ )   |   | 63.0  |
| Measureing time, (min)   |   | 60.0  |
| Set Correlation Factor , SCF   |   |   |
| SCF = [ K=High Volume Sampler / Dust Meter, ( $\mu\text{g}/\text{m}^3$ ) ]   |   | <u>1.9</u>  |

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Those filter papers are weighted by HOKLAS laboratory (HPCT Litimed)**

Calibrated by:   
 Technical Officer (Wong Shing Kwai)

Approved by:   
 Project Manager (Henry Leung)

**Certificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler


Description: Digital Dust Indicator Date of Calibration 30-May-25  
 Manufacturer: Sibata Scientific Technology LTD. Validity of Calibration Record 30-Jul-25  
 Model No.: LD-5R  
 Serial No.: 972778  
 Equipment No.: SA-01-07 Sensitivity 0.001 mg/m3  
 High Volume Sampler No.: A-01-03 Before Sensitivity Adjustment 735 CPM  
 Tisch Calibration Orifice No.: 3864 After Sensitivity Adjustment 735 CPM

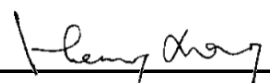
| Calibration of 1 hr TSP  |   |   |
|--|---|---|
| Calibration Point  | Laser Dust Monitor                                | HVS   |
|  | Mass Concentration (µg/m <sup>3</sup> )<br>X-axis | Mass concentration (µg/m <sup>3</sup> )<br>Y-axis |
| 1  | 77.0  | 142.0   |
| 2  | 64.0  | 119.0   |
| 3  | 53.0  | 104.0   |
| <b>Average</b>   | <b>64.7</b>                                       | <b>121.7</b>                                      |
| <b>By Linear Regression of Y on X</b><br>Slope , mw = <u>1.5889</u> Intercept, bw = <u>18.9169</u><br>Correlation coefficient* = <u>0.9973</u> |   |   |
| Set Correlation Factor   |   |   |
| Particulate Concentration by High Volume Sampler (µg/m <sup>3</sup> )  |   | 121.7   |
| Particulate Concentration by Dust Meter (µg/m <sup>3</sup> )   |   | 64.7  |
| Measuring time, (min)  |   | 60.0  |
| Set Correlation Factor , SCF<br>SCF = [ K=High Volume Sampler / Dust Meter, (µg/m <sup>3</sup> ) ] <u>1.9</u>                                  |   |   |

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Those filter papers are weighted by HOKLAS laboratory (HPCT Limited)**

Calibrated by:   
 Technical Officer (Wong Shing Kwai)

Approved by:   
 Project Manager (Henry Leung)

**Certificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler


Description: Digital Dust Indicator Date of Calibration 30-May-25  
 Manufacturer: Sibata Scientific Technology LTD. Validity of Calibration Record 30-Jul-25  
 Model No.: LD-5R  
 Serial No.: 972780  
 Equipment No.: SA-01-09 Sensitivity 0.001 mg/m3  
 High Volume Sampler No.: A-01-03 Before Sensitivity Adjustment 739 CPM  
 Tisch Calibration Orifice No.: 3864 After Sensitivity Adjustment 739 CPM

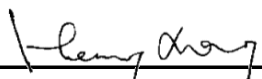
| Calibration of 1 hr TSP   |   |   |
|---|---|---|
| Calibration Point   | Laser Dust Monitor                                | HVS   |
|   | Mass Concentration (µg/m <sup>3</sup> )<br>X-axis | Mass concentration (µg/m <sup>3</sup> )<br>Y-axis |
| 1   | 75.0  | 137.0   |
| 2   | 61.0  | 114.0   |
| 3   | 55.0  | 101.0   |
| <b>Average</b>  | <b>63.7</b>                                       | <b>117.3</b>                                      |
| <b>By Linear Regression of Y on X</b><br>Slope , mw = <u>1.7722</u> Intercept, bw = <u>4.5063</u><br>Correlation coefficient* = <u>0.9977</u> |   |   |
| Set Correlation Factor  |   |   |
| Particulate Concentration by High Volume Sampler (µg/m <sup>3</sup> )   |   | 117.3   |
| Particulate Concentration by Dust Meter (µg/m <sup>3</sup> )  |   | 63.7  |
| Measuring time, (min)   |   | 60.0  |
| Set Correlation Factor , SCF<br>SCF = [ K=High Volume Sampler / Dust Meter, (µg/m <sup>3</sup> ) ] <u>1.8</u>                                 |   |   |

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Those filter papers are weighted by HOKLAS laboratory (HPCT Limited)**

Calibrated by:   
 Technical Officer (Wong Shing Kwai)

Approved by:   
 Project Manager (Henry Leung)

**Certificate of Calibration**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler


Description: Digital Dust Indicator Date of Calibration 30-May-25  
 Manufacturer: Sibata Scientific Technology LTD. Validity of Calibration Record 30-Jul-25  
 Model No.: LD-5R  
 Serial No.: 972781  
 Equipment No.: SA-01-10 Sensitivity 0.001 mg/m3  
 High Volume Sampler No.: A-01-03 Before Sensitivity Adjustment 734 CPM  
 Tisch Calibration Orifice No.: 3864 After Sensitivity Adjustment 734 CPM

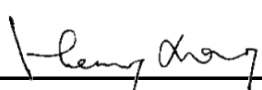
| Calibration of 1 hr TSP   |   |   |
|---|---|---|
| Calibration Point   | Laser Dust Monitor                                | HVS   |
|   | Mass Concentration (µg/m <sup>3</sup> )<br>X-axis | Mass concentration (µg/m <sup>3</sup> )<br>Y-axis |
| 1   | 76.0  | 133.0   |
| 2   | 67.0  | 116.0   |
| 3   | 57.0  | 102.0   |
| <b>Average</b>  | <b>66.7</b>                                       | <b>117.0</b>                                      |
| <b>By Linear Regression of Y on X</b><br>Slope , mw = <u>1.6273</u> Intercept, bw = <u>8.5129</u><br>Correlation coefficient* = <u>0.9963</u> |   |   |
| Set Correlation Factor  |   |   |
| Particulate Concentration by High Volume Sampler (µg/m <sup>3</sup> )   |   | 117.0   |
| Particulate Concentration by Dust Meter (µg/m <sup>3</sup> )  |   | 66.7  |
| Measuring time, (min)   |   | 60.0  |
| Set Correlation Factor , SCF<br>SCF = [ K=High Volume Sampler / Dust Meter, (µg/m <sup>3</sup> ) ] <u>1.8</u>                                 |   |   |

In-house method in according to the instruction manual:

The Dust Monitor was compared with a calibrated High Volume Sampler and The result was used to generate the Correlation Factor (CF) between the Dust Monitor and High Volume Sampler.

**Those filter papers are weighted by HOKLAS laboratory (HPCT Limited)**

Calibrated by:   
 Technical Officer (Wong Shing Kwai)

Approved by:   
 Project Manager (Henry Leung)

## High Precision Chemical Testing Ltd.

Rm 1904, Technology Park  
18 On Lai Street, Shatin  
NT, Hong Kong  
Tel: +852 3841 4388 Website: <https://www.hpct.com.hk>



Report No. : 00872  
Application No. : HP00733

Issue Date : 14 Oct 2024

### Certificate of Calibration

Applicant : Cinotech Consultants Limited  
RM 1710, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Sample Description : Submitted equipment stated to be Integrating Sound Level Meter.

Equipment No.: : N-12-01

Manufacturer: : BSWA Technology

Other information :

|                |          |
|----------------|----------|
| Model No.      | BSWA 308 |
| Serial No.     | 570183   |
| Microphone No. | 590073   |

Date Received : 09 Oct 2024

Test Period : 09 Oct 2024 to 09 Oct 2024

Test Requested : Performance checking for Sound Level Meter

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

Test conditions : Room Temperature: 22-25 degree Celsius  
Relative Humidity: 35-70%

Test Result : Refer to the test result(s) on page 2.

Remark : **1. Information of the sample description provided by the Applicant.**  
**2. The result(s) relate only to the items tested or calibrated.**

*For and on behalf of*  
**HIGH PRECISION CHEMICAL TESTING LIMITED**

A handwritten signature in black ink, appearing to read 'Lee Wai Kit', is written over a horizontal line.

Lee Wai Kit  
Laboratory Manager

**High Precision Chemical Testing Ltd.**

Rm 1904, Technology Park  
18 On Lai Street, Shatin  
NT, Hong Kong  
Tel: +852 3841 4388 Website: <https://www.hpct.com.hk>



Report No. : 00872  
Application No. : HP00733

Issue Date : 14 Oct 2024

**Certificate of Calibration**

Measuring equipment :

|               |                  |
|---------------|------------------|
| Description   | Sound Calibrator |
| Manufacturer  | Brüel & Kjær     |
| Model No.     | TYPE 4231        |
| Serial No.    | 2326353          |
| Equipment No. | N-02-01          |

Test Result :

| Reference value, dB | Indication value, dB | Deviation, dB | Allowed deviation, dB |
|---------------------|----------------------|---------------|-----------------------|
| 94.0                | 94.0                 | ± 0.0         | ± 1.5                 |
| 114.0               | 114.1                | + 0.1         | ± 1.5                 |

- Note** : 1. "Instrument Readings" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.  
2. The indication value was obtained from the average of ten replicated measurement.

- End of report -

## High Precision Chemical Testing Ltd.

Rm 1904, Technology Park  
18 On Lai Street, Shatin  
NT, Hong Kong  
Tel: +852 3841 4388 Website: <https://www.hpct.com.hk>



Report No. : 00845  
Application No. : HP00700

Issue Date : 24 Sep 2024

### Certificate of Calibration

Applicant : Cinotech Consultants Limited  
RM 1710, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Sample Description : Submitted equipment stated to be Integrating Sound Level Meter.

Equipment No.: : N-12-03

Manufacturer: : BSWA Technology

Other information :

|                |          |
|----------------|----------|
| Model No.      | BSWA 308 |
| Serial No.     | 570188   |
| Microphone No. | 570608   |

Date Received : 16 Sep 2024

Test Period : 23 Sep 2024 to 23 Sep 2024

Test Requested : Performance checking for Sound Level Meter

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

Test conditions : Room Temperature: 22-25 degree Celsius  
Relative Humidity: 35-70%

Test Result : Refer to the test result(s) on page 2.

Remark : **1. Information of the sample description provided by the Applicant.**  
**2. The result(s) relate only to the items tested or calibrated.**

*For and on behalf of*  
**HIGH PRECISION CHEMICAL TESTING LIMITED**

A handwritten signature in black ink, appearing to be 'Lee Wai Kit', written over a horizontal line.

Lee Wai Kit  
Laboratory Manager

## High Precision Chemical Testing Ltd.

Rm 1904, Technology Park  
18 On Lai Street, Shatin  
NT, Hong Kong  
Tel: +852 3841 4388 Website: <https://www.hpct.com.hk>



Report No. : 00845

Issue Date : 24 Sep 2024

Application No. : HP00700

### Certificate of Calibration

|                       |               |                  |
|-----------------------|---------------|------------------|
| Measuring equipment : | Description   | Sound Calibrator |
|                       | Manufacturer  | Brüel & Kjær     |
|                       | Model No.     | TYPE 4231        |
|                       | Serial No.    | 2326353          |
|                       | Equipment No. | N-02-01          |

Test Result :

| Reference value, dB | Indication value, dB | Deviation, dB | Allowed deviation, dB |
|---------------------|----------------------|---------------|-----------------------|
| 94.0                | 94.0                 | ± 0.0         | ± 1.5                 |
| 114.0               | 113.8                | - 0.2         | ± 1.5                 |

- Note** : 1. "Instrument Readings" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.  
2. The indication value was obtained from the average of ten replicated measurement.

- End of report -

## High Precision Chemical Testing Ltd.

Rm 1904, Technology Park  
18 On Lai Street, Shatin  
NT, Hong Kong  
Tel: +852 3841 4388 Website: <https://www.hpct.com.hk>



Report No. : 00873  
Application No. : HP00734

Issue Date : 14 Oct 2024

### Certificate of Calibration

Applicant : Cinotech Consultants Limited  
RM 1710, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Sample Description : Submitted equipment stated to be Integrating Sound Level Meter.

Equipment No.: : N-12-05

Manufacturer: : BSWA Technology

Other information :

|                |          |
|----------------|----------|
| Model No.      | BSWA 308 |
| Serial No.     | 580287   |
| Microphone No. | 570610   |

Date Received : 09 Oct 2024

Test Period : 09 Oct 2024 to 09 Oct 2024

Test Requested : Performance checking for Sound Level Meter

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

Test conditions : Room Temperature: 22-25 degree Celsius  
Relative Humidity: 35-70%

Test Result : Refer to the test result(s) on page 2.

Remark : **1. Information of the sample description provided by the Applicant.**  
**2. The result(s) relate only to the items tested or calibrated.**

*For and on behalf of*  
**HIGH PRECISION CHEMICAL TESTING LIMITED**

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Lee Wai Kit  
Laboratory Manager

## High Precision Chemical Testing Ltd.

Rm 1904, Technology Park  
18 On Lai Street, Shatin  
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Tel: +852 3841 4388 Website: <https://www.hpct.com.hk>



Report No. : 00873

Issue Date : 14 Oct 2024

Application No. : HP00734

### Certificate of Calibration

|                       |               |                  |
|-----------------------|---------------|------------------|
| Measuring equipment : | Description   | Sound Calibrator |
|                       | Manufacturer  | Brüel & Kjær     |
|                       | Model No.     | TYPE 4231        |
|                       | Serial No.    | 2326353          |
|                       | Equipment No. | N-02-01          |

Test Result :

| Reference value, dB | Indication value, dB | Deviation, dB | Allowed deviation, dB |
|---------------------|----------------------|---------------|-----------------------|
| 94.0                | 94.2                 | + 0.2         | ± 1.5                 |
| 114.0               | 114.0                | ± 0.0         | ± 1.5                 |

- Note** : 1. "Instrument Readings" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.  
2. The indication value was obtained from the average of ten replicated measurement.

- End of report -

## High Precision Chemical Testing Ltd.

Rm 1904, Technology Park  
18 On Lai Street, Shatin  
NT, Hong Kong  
Tel: +852 3841 4388 Website: <https://www.hpct.com.hk>



Report No. : 00803  
Application No. : HP00654

Issue Date : 20 Aug 2024

### Certificate of Calibration

Applicant : Cinotech Consultants Limited  
RM 1710, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Sample Description : Submitted equipment stated to be Integrating Sound Level Meter.

Equipment No.: : N-12-07

Manufacturer: : BSWA Technology

Other information :

|                |          |
|----------------|----------|
| Model No.      | BSWA 308 |
| Serial No.     | 620091   |
| Microphone No. | 620230   |

Date Received : 09 Aug 2024

Test Period : 16 Aug 2024 to 16 Aug 2024

Test Requested : Performance checking for Sound Level Meter

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

Test conditions : Room Temperature: 22-25 degree Celsius  
Relative Humidity: 35-70%

Test Result : Refer to the test result(s) on page 2.

Remark : **1. Information of the sample description provided by the Applicant.**  
**2. The result(s) relate only to the items tested or calibrated.**

*For and on behalf of*  
**HIGH PRECISION CHEMICAL TESTING LIMITED**

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Laboratory Manager

**High Precision Chemical Testing Ltd.**

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NT, Hong Kong  
Tel: +852 3841 4388 Website: <https://www.hpct.com.hk>



Report No. : 00803  
Application No. : HP00654

Issue Date : 20 Aug 2024

**Certificate of Calibration**

Measuring equipment :

|               |                  |
|---------------|------------------|
| Description   | Sound Calibrator |
| Manufacturer  | Brüel & Kjær     |
| Model No.     | TYPE 4231        |
| Serial No.    | 2326353          |
| Equipment No. | N-02-01          |

Test Result :

| Reference value, dB | Indication value, dB | Deviation, dB | Allowed deviation, dB |
|---------------------|----------------------|---------------|-----------------------|
| 94.0                | 94.0                 | ± 0.0         | ± 1.5                 |
| 114.0               | 114.1                | + 0.1         | ± 1.5                 |

- Note** : 1. “Instrument Readings” presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.  
2. The indication value was obtained from the average of ten replicated measurement.

- End of report -

## High Precision Chemical Testing Ltd.

Rm 1904, Technology Park  
18 On Lai Street, Shatin  
NT, Hong Kong  
Tel: +852 3841 4388 Website: <https://www.hpct.com.hk>



Report No. : 01016  
Application No. : HP00869

Issue Date : 04 Feb 2025

### Certificate of Calibration

Applicant : Cinotech Consultants Limited  
RM 1710, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Sample Description : Submitted equipment stated to be Sound Level Calibrator.

Equipment No.: : N-13-02

Manufacturer: : SOUNDTEK

Other information :

|            |           |
|------------|-----------|
| Model No.  | ST-120    |
| Serial No. | 181001636 |

Date Received : 28 Jan 2025

Test Period : 03 Feb 2025 to 04 Feb 2025

Test Requested : Performance checking for Sound Level Calibrator

Test Method : The Sound Level Meter and Calibrator has been calibrated in accordance with the documented procedures and using standard and instrument which are recommended by the manufacturer, or equivalent.

Test conditions : Room Temperature: 22-25 degree Celsius  
Relative Humidity: 35-70%

Test Result : Refer to the test result(s) on page 2.

Remark : **1. Information of the sample description provided by the Applicant.**  
**2. The result(s) relate only to the items tested or calibrated.**

*For and on behalf of*  
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Tel: +852 3841 4388 Website: <https://www.hpct.com.hk>



Report No. : 01016  
Application No. : HP00869

Issue Date : 04 Feb 2025

### Certificate of Calibration

|                       |                |                  |
|-----------------------|----------------|------------------|
| Measuring equipment : | Description    | Sound Calibrator |
|                       | Manufacturer   | Brüel & Kjær     |
|                       | Model No.      | TYPE 4231        |
|                       | Serial No.     | 2326353          |
|                       | Equipment No.  | N-02-01          |
|                       | Description    | Sound Meter      |
|                       | Manufacturer   | SVANTEK          |
|                       | Model No.      | SVAN 977         |
|                       | Serial No.     | 92677            |
|                       | Microphone No. | 10352            |
|                       | Equipment No.  | N-14-01          |

Test Result :

| Reference value, dB | Indication value, dB | Deviation, dB | Allowed deviation, dB |
|---------------------|----------------------|---------------|-----------------------|
| 94.0                | 94.1                 | + 0.1         | ± 0.3                 |
| 114.0               | 114.2                | + 0.2         | ± 0.5                 |

**Note** : 1. "Instrument Readings" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.  
2. The indication value was obtained from the average of ten replicated measurement.

- End of report -

## High Precision Chemical Testing Ltd.

Rm 1904, Technology Park  
18 On Lai Street, Shatin  
NT, Hong Kong  
Tel: +852 3841 4388 Website: <https://www.hpct.com.hk>



Report No. : 01015  
Application No. : HP00868

Issue Date : 04 Feb 2025

### Certificate of Calibration

Applicant : Cinotech Consultants Limited  
RM 1710, Technology Park,  
18 On Lai Street,  
Shatin, N.T., Hong Kong

Sample Description : Submitted equipment stated to be Sound Level Calibrator.

Equipment No.: : N-16-02

Manufacturer: : Hangzhou Aihua Instruments Co., Ltd.

Other information :

|            |          |
|------------|----------|
| Model No.  | AWA6021A |
| Serial No. | 1023064  |

Date Received : 28 Jan 2025

Test Period : 03 Feb 2025 to 04 Feb 2025

Test Requested : Performance checking for Sound Level Calibrator

Test Method : The Sound Level Meter and Calibrator has been calibrated in accordance with the documented procedures and using standard and instrument which are recommended by the manufacturer, or equivalent.

Test conditions : Room Temperature: 22-25 degree Celsius  
Relative Humidity: 35-70%

Test Result : Refer to the test result(s) on page 2.

Remark : **1. Information of the sample description provided by the Applicant.**  
**2. The result(s) relate only to the items tested or calibrated.**

*For and on behalf of*  
**HIGH PRECISION CHEMICAL TESTING LIMITED**

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Lee Wai Kit  
Laboratory Manager

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NT, Hong Kong  
Tel: +852 3841 4388 Website: <https://www.hpct.com.hk>



Report No. : 01015  
Application No. : HP00868

Issue Date : 04 Feb 2025

### Certificate of Calibration

Measuring equipment :

|               |                  |
|---------------|------------------|
| Description   | Sound Calibrator |
| Manufacturer  | Brüel & Kjær     |
| Model No.     | TYPE 4231        |
| Serial No.    | 2326353          |
| Equipment No. | N-02-01          |

|                |             |
|----------------|-------------|
| Description    | Sound Meter |
| Manufacturer   | SVANTEK     |
| Model No.      | SVAN 977    |
| Serial No.     | 92677       |
| Microphone No. | 10352       |
| Equipment No.  | N-14-01     |

Test Result :

| Reference value, dB | Indication value, dB | Deviation, dB | Allowed deviation, dB |
|---------------------|----------------------|---------------|-----------------------|
| 94.0                | 94.2                 | + 0.2         | ± 0.3                 |
| 114.0               | 114.3                | + 0.3         | ± 0.5                 |

**Note** : 1. "Instrument Readings" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.  
2. The indication value was obtained from the average of ten replicated measurement.

- End of report -

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**APPENDIX C**  
**WEATHER INFORMATION**

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Table I: Weather over the Reporting Month

| June 2025 |                     |                 |                            |                     |
|-----------|---------------------|-----------------|----------------------------|---------------------|
| Table I   |                     |                 |                            |                     |
| Day       | Mean Pressure (hPa) | Air Temperature | Mean Relative Humidity (%) | Total Rainfall (mm) |
|           |                     | Mean (°C)       |                            |                     |
| 1         | 1003.9              | 27.5            | 83.0                       | 0.1                 |
| 2         | 1002.2              | 29.4            | 83.0                       | 0.1                 |
| 3         | 1003.2              | 28.8            | 81.0                       | Trace               |
| 4         | 1007.3              | 26.4            | 86.0                       | 3.8                 |
| 5         | 1009.2              | 26.4            | 78.0                       | Trace               |
| 6         | 1008.3              | 28.1            | 79.0                       | 0.0                 |
| 7         | 1007.2              | 29.6            | 76.0                       | 0.0                 |
| 8         | 1005.9              | 30.1            | 76.0                       | 0.0                 |
| 9         | 1004.5              | 30.7            | 73.0                       | 0.0                 |
| 10        | 1004.2              | 31.0            | 72.0                       | 0.0                 |
| 11        | 1004.3              | 29.4            | 80.0                       | 4.7                 |
| 12        | 1004.6              | 28.5            | 83.0                       | 14.6                |
| 13        | 1005.8              | 27.5            | 88.0                       | 46.1                |
| 14        | 1005.5              | 29.1            | 81.0                       | 1.6                 |
| 15        | 1005.2              | 29.3            | 79.0                       | 0.9                 |
| 16        | 1007.7              | 29.4            | 80.0                       | 1.0                 |
| 17        | 1009.8              | 27.7            | 88.0                       | 46.3                |
| 18        | 1009.7              | 29.2            | 80.0                       | 0.5                 |
| 19        | 1009.0              | 28.7            | 83.0                       | 11.1                |
| 20        | 1008.7              | 28.4            | 82.0                       | 6.3                 |
| 21        | 1009.1              | 29.1            | 80.0                       | 10.6                |
| 22        | 1009.0              | 29.2            | 80.0                       | 2.9                 |
| 23        | 1007.3              | 29.6            | 76.0                       | 7.6                 |
| 24        | 1007.7              | 30.1            | 73.0                       | 0.0                 |
| 25        | 1008.6              | 30.7            | 72.0                       | 0.2                 |
| 26        | 1008.1              | 28.9            | 84.0                       | 48.9                |
| 27        | 1007.7              | 28.4            | 86.0                       | 5.6                 |
| 28        | 1006.4              | 28.6            | 84.0                       | 3.1                 |
| 29        | 1005.0              | 28.8            | 83.0                       | 3.7                 |
| 30        | 1005.8              | 28.5            | 84.0                       | 17.6                |

## Appendix C - Weather Conditions during Monitoring Period

| June 2025                           |          |           |                           |
|-------------------------------------|----------|-----------|---------------------------|
| Table II: Wind Speed and Directions |          |           |                           |
| Date                                | Time     | Direction | Wind Speed m <sup>s</sup> |
| 1 Jun 2025                          | 12:00 AM | W         | 0.2                       |
| 1 Jun 2025                          | 1:00 AM  | WSW       | 0.0                       |
| 1 Jun 2025                          | 2:00 AM  | SSW       | 0.1                       |
| 1 Jun 2025                          | 3:00 AM  | S         | 0.3                       |
| 1 Jun 2025                          | 4:00 AM  | SSW       | 0.2                       |
| 1 Jun 2025                          | 5:00 AM  | WNW       | 0.1                       |
| 1 Jun 2025                          | 6:00 AM  | W         | 0.1                       |
| 1 Jun 2025                          | 7:00 AM  | W         | 0.0                       |
| 1 Jun 2025                          | 8:00 AM  | SSE       | 0.1                       |
| 1 Jun 2025                          | 9:00 AM  | WNW       | 0.5                       |
| 1 Jun 2025                          | 10:00 AM | NW        | 0.9                       |
| 1 Jun 2025                          | 11:00 AM | W         | 0.8                       |
| 1 Jun 2025                          | 12:00 PM | WNW       | 0.7                       |
| 1 Jun 2025                          | 1:00 PM  | WNW       | 0.9                       |
| 1 Jun 2025                          | 2:00 PM  | WSW       | 0.7                       |
| 1 Jun 2025                          | 3:00 PM  | SW        | 0.9                       |
| 1 Jun 2025                          | 4:00 PM  | SW        | 0.8                       |
| 1 Jun 2025                          | 5:00 PM  | WSW       | 0.7                       |
| 1 Jun 2025                          | 6:00 PM  | WSW       | 0.5                       |
| 1 Jun 2025                          | 7:00 PM  | WSW       | 0.3                       |
| 1 Jun 2025                          | 8:00 PM  | WSW       | 0.4                       |
| 1 Jun 2025                          | 9:00 PM  | SE        | 0.2                       |
| 1 Jun 2025                          | 10:00 PM | S         | 0.1                       |
| 1 Jun 2025                          | 11:00 PM | W         | 0.0                       |
| 2 Jun 2025                          | 12:00 AM | NW        | 0.0                       |
| 2 Jun 2025                          | 1:00 AM  | NW        | 0.0                       |
| 2 Jun 2025                          | 2:00 AM  | N         | 0.0                       |
| 2 Jun 2025                          | 3:00 AM  | NW        | 0.0                       |
| 2 Jun 2025                          | 4:00 AM  | W         | 0.0                       |
| 2 Jun 2025                          | 5:00 AM  | WNW       | 0.0                       |
| 2 Jun 2025                          | 6:00 AM  | W         | 0.0                       |
| 2 Jun 2025                          | 7:00 AM  | W         | 0.0                       |
| 2 Jun 2025                          | 8:00 AM  | W         | 0.1                       |
| 2 Jun 2025                          | 9:00 AM  | WNW       | 0.1                       |
| 2 Jun 2025                          | 10:00 AM | W         | 0.0                       |
| 2 Jun 2025                          | 11:00 AM | S         | 0.3                       |
| 2 Jun 2025                          | 12:00 PM | SSW       | 0.5                       |
| 2 Jun 2025                          | 1:00 PM  | SW        | 0.7                       |
| 2 Jun 2025                          | 2:00 PM  | SSW       | 0.6                       |
| 2 Jun 2025                          | 3:00 PM  | SSW       | 0.3                       |
| 2 Jun 2025                          | 4:00 PM  | SW        | 0.3                       |
| 2 Jun 2025                          | 5:00 PM  | SW        | 0.1                       |
| 2 Jun 2025                          | 6:00 PM  | SSW       | 0.1                       |
| 2 Jun 2025                          | 7:00 PM  | SSE       | 0.2                       |
| 2 Jun 2025                          | 8:00 PM  | SW        | 0.2                       |
| 2 Jun 2025                          | 9:00 PM  | WSW       | 0.2                       |

## Appendix C - Weather Conditions during Monitoring Period

| June 2025                           |          |           |                           |
|-------------------------------------|----------|-----------|---------------------------|
| Table II: Wind Speed and Directions |          |           |                           |
| Date                                | Time     | Direction | Wind Speed m <sup>s</sup> |
| 2 Jun 2025                          | 10:00 PM | WSW       | 0.2                       |
| 2 Jun 2025                          | 11:00 PM | SSW       | 0.2                       |
| 3 Jun 2025                          | 12:00 AM | SW        | 0.1                       |
| 3 Jun 2025                          | 1:00 AM  | WSW       | 0.1                       |
| 3 Jun 2025                          | 2:00 AM  | W         | 0.1                       |
| 3 Jun 2025                          | 3:00 AM  | SW        | 0.1                       |
| 3 Jun 2025                          | 4:00 AM  | W         | 0.2                       |
| 3 Jun 2025                          | 5:00 AM  | SSW       | 0.1                       |
| 3 Jun 2025                          | 6:00 AM  | SW        | 0.2                       |
| 3 Jun 2025                          | 7:00 AM  | SSW       | 0.3                       |
| 3 Jun 2025                          | 8:00 AM  | SW        | 0.2                       |
| 3 Jun 2025                          | 9:00 AM  | SW        | 0.1                       |
| 3 Jun 2025                          | 10:00 AM | SW        | 0.3                       |
| 3 Jun 2025                          | 11:00 AM | SW        | 0.3                       |
| 3 Jun 2025                          | 12:00 PM | SSW       | 0.5                       |
| 3 Jun 2025                          | 1:00 PM  | SSE       | 0.8                       |
| 3 Jun 2025                          | 2:00 PM  | S         | 0.6                       |
| 3 Jun 2025                          | 3:00 PM  | WSW       | 0.3                       |
| 3 Jun 2025                          | 4:00 PM  | SW        | 0.2                       |
| 3 Jun 2025                          | 5:00 PM  | S         | 0.3                       |
| 3 Jun 2025                          | 6:00 PM  | SW        | 0.3                       |
| 3 Jun 2025                          | 7:00 PM  | SSW       | 0.2                       |
| 3 Jun 2025                          | 8:00 PM  | SW        | 0.1                       |
| 3 Jun 2025                          | 9:00 PM  | WNW       | 0.1                       |
| 3 Jun 2025                          | 10:00 PM | S         | 0.3                       |
| 3 Jun 2025                          | 11:00 PM | WSW       | 0.2                       |
| 4 Jun 2025                          | 12:00 AM | SW        | 0.1                       |
| 4 Jun 2025                          | 1:00 AM  | SW        | 0.2                       |
| 4 Jun 2025                          | 2:00 AM  | S         | 0.2                       |
| 4 Jun 2025                          | 3:00 AM  | SW        | 0.1                       |
| 4 Jun 2025                          | 4:00 AM  | WSW       | 0.2                       |
| 4 Jun 2025                          | 5:00 AM  | SW        | 0.1                       |
| 4 Jun 2025                          | 6:00 AM  | WSW       | 0.3                       |
| 4 Jun 2025                          | 7:00 AM  | WSW       | 0.3                       |
| 4 Jun 2025                          | 8:00 AM  | SW        | 0.5                       |
| 4 Jun 2025                          | 9:00 AM  | SSW       | 0.5                       |
| 4 Jun 2025                          | 10:00 AM | SW        | 0.4                       |
| 4 Jun 2025                          | 11:00 AM | SSW       | 0.4                       |
| 4 Jun 2025                          | 12:00 PM | SW        | 0.2                       |
| 4 Jun 2025                          | 1:00 PM  | SW        | 0.3                       |
| 4 Jun 2025                          | 2:00 PM  | SW        | 0.2                       |
| 4 Jun 2025                          | 3:00 PM  | SSW       | 0.2                       |
| 4 Jun 2025                          | 4:00 PM  | W         | 0.2                       |
| 4 Jun 2025                          | 5:00 PM  | SSW       | 0.2                       |
| 4 Jun 2025                          | 6:00 PM  | WSW       | 0.2                       |
| 4 Jun 2025                          | 7:00 PM  | W         | 0.4                       |

## Appendix C - Weather Conditions during Monitoring Period

| June 2025                           |          |           |                           |
|-------------------------------------|----------|-----------|---------------------------|
| Table II: Wind Speed and Directions |          |           |                           |
| Date                                | Time     | Direction | Wind Speed m <sup>s</sup> |
| 4 Jun 2025                          | 8:00 PM  | WSW       | 0.5                       |
| 4 Jun 2025                          | 9:00 PM  | SW        | 0.4                       |
| 4 Jun 2025                          | 10:00 PM | WSW       | 0.2                       |
| 4 Jun 2025                          | 11:00 PM | SSE       | 0.3                       |
| 5 Jun 2025                          | 12:00 AM | SSW       | 0.1                       |
| 5 Jun 2025                          | 1:00 AM  | W         | 0.1                       |
| 5 Jun 2025                          | 2:00 AM  | WSW       | 0.3                       |
| 5 Jun 2025                          | 3:00 AM  | SW        | 0.3                       |
| 5 Jun 2025                          | 4:00 AM  | ESE       | 0.2                       |
| 5 Jun 2025                          | 5:00 AM  | SW        | 0.2                       |
| 5 Jun 2025                          | 6:00 AM  | SE        | 0.1                       |
| 5 Jun 2025                          | 7:00 AM  | SW        | 0.3                       |
| 5 Jun 2025                          | 8:00 AM  | S         | 0.4                       |
| 5 Jun 2025                          | 9:00 AM  | SSW       | 0.4                       |
| 5 Jun 2025                          | 10:00 AM | SW        | 0.6                       |
| 5 Jun 2025                          | 11:00 AM | SSW       | 0.6                       |
| 5 Jun 2025                          | 12:00 PM | SW        | 0.5                       |
| 5 Jun 2025                          | 1:00 PM  | SW        | 0.7                       |
| 5 Jun 2025                          | 2:00 PM  | WSW       | 0.5                       |
| 5 Jun 2025                          | 3:00 PM  | SW        | 0.5                       |
| 5 Jun 2025                          | 4:00 PM  | SSW       | 0.5                       |
| 5 Jun 2025                          | 5:00 PM  | SSW       | 0.5                       |
| 5 Jun 2025                          | 6:00 PM  | SW        | 0.7                       |
| 5 Jun 2025                          | 7:00 PM  | SW        | 0.5                       |
| 5 Jun 2025                          | 8:00 PM  | SW        | 0.4                       |
| 5 Jun 2025                          | 9:00 PM  | W         | 0.3                       |
| 5 Jun 2025                          | 10:00 PM | SSW       | 0.2                       |
| 5 Jun 2025                          | 11:00 PM | WSW       | 0.2                       |
| 6 Jun 2025                          | 12:00 AM | WSW       | 0.2                       |
| 6 Jun 2025                          | 1:00 AM  | SW        | 0.2                       |
| 6 Jun 2025                          | 2:00 AM  | W         | 0.1                       |
| 6 Jun 2025                          | 3:00 AM  | S         | 0.1                       |
| 6 Jun 2025                          | 4:00 AM  | E         | 0.0                       |
| 6 Jun 2025                          | 5:00 AM  | NNE       | 0.0                       |
| 6 Jun 2025                          | 6:00 AM  | NE        | 0.1                       |
| 6 Jun 2025                          | 7:00 AM  | SW        | 0.4                       |
| 6 Jun 2025                          | 8:00 AM  | S         | 0.4                       |
| 6 Jun 2025                          | 9:00 AM  | WSW       | 0.6                       |
| 6 Jun 2025                          | 10:00 AM | SSW       | 0.6                       |
| 6 Jun 2025                          | 11:00 AM | SSW       | 0.5                       |
| 6 Jun 2025                          | 12:00 PM | SSW       | 0.7                       |
| 6 Jun 2025                          | 1:00 PM  | SW        | 0.3                       |
| 6 Jun 2025                          | 2:00 PM  | SW        | 0.4                       |
| 6 Jun 2025                          | 3:00 PM  | SSW       | 0.6                       |
| 6 Jun 2025                          | 4:00 PM  | SW        | 0.8                       |
| 6 Jun 2025                          | 5:00 PM  | SSW       | 0.2                       |

## Appendix C - Weather Conditions during Monitoring Period

| June 2025                           |          |           |                           |
|-------------------------------------|----------|-----------|---------------------------|
| Table II: Wind Speed and Directions |          |           |                           |
| Date                                | Time     | Direction | Wind Speed m <sup>s</sup> |
| 6 Jun 2025                          | 6:00 PM  | SW        | 0.2                       |
| 6 Jun 2025                          | 7:00 PM  | SW        | 0.3                       |
| 6 Jun 2025                          | 8:00 PM  | WSW       | 0.2                       |
| 6 Jun 2025                          | 9:00 PM  | W         | 0.2                       |
| 6 Jun 2025                          | 10:00 PM | W         | 0.1                       |
| 6 Jun 2025                          | 11:00 PM | W         | 0.1                       |
| 7 Jun 2025                          | 12:00 AM | SSW       | 0.0                       |
| 7 Jun 2025                          | 1:00 AM  | SSW       | 0.0                       |
| 7 Jun 2025                          | 2:00 AM  | NW        | 0.0                       |
| 7 Jun 2025                          | 3:00 AM  | SW        | 0.0                       |
| 7 Jun 2025                          | 4:00 AM  | WSW       | 0.0                       |
| 7 Jun 2025                          | 5:00 AM  | WSW       | 0.1                       |
| 7 Jun 2025                          | 6:00 AM  | SW        | 0.1                       |
| 7 Jun 2025                          | 7:00 AM  | SW        | 0.1                       |
| 7 Jun 2025                          | 8:00 AM  | WSW       | 0.1                       |
| 7 Jun 2025                          | 9:00 AM  | S         | 0.3                       |
| 7 Jun 2025                          | 10:00 AM | SSW       | 0.4                       |
| 7 Jun 2025                          | 11:00 AM | SW        | 0.3                       |
| 7 Jun 2025                          | 12:00 PM | SW        | 0.5                       |
| 7 Jun 2025                          | 1:00 PM  | SW        | 0.3                       |
| 7 Jun 2025                          | 2:00 PM  | SSW       | 0.6                       |
| 7 Jun 2025                          | 3:00 PM  | SSW       | 0.5                       |
| 7 Jun 2025                          | 4:00 PM  | S         | 0.2                       |
| 7 Jun 2025                          | 5:00 PM  | SSW       | 0.3                       |
| 7 Jun 2025                          | 6:00 PM  | NW        | 0.1                       |
| 7 Jun 2025                          | 7:00 PM  | NW        | 0.0                       |
| 7 Jun 2025                          | 8:00 PM  | WSW       | 0.0                       |
| 7 Jun 2025                          | 9:00 PM  | WNW       | 0.1                       |
| 7 Jun 2025                          | 10:00 PM | WSW       | 0.0                       |
| 7 Jun 2025                          | 11:00 PM | SW        | 0.0                       |
| 8 Jun 2025                          | 12:00 AM | WNW       | 0.0                       |
| 8 Jun 2025                          | 1:00 AM  | WSW       | 0.1                       |
| 8 Jun 2025                          | 2:00 AM  | WNW       | 0.0                       |
| 8 Jun 2025                          | 3:00 AM  | SW        | 0.0                       |
| 8 Jun 2025                          | 4:00 AM  | NW        | 0.0                       |
| 8 Jun 2025                          | 5:00 AM  | WNW       | 0.1                       |
| 8 Jun 2025                          | 6:00 AM  | WSW       | 0.1                       |
| 8 Jun 2025                          | 7:00 AM  | SSW       | 0.3                       |
| 8 Jun 2025                          | 8:00 AM  | SSW       | 0.4                       |
| 8 Jun 2025                          | 9:00 AM  | SSW       | 0.5                       |
| 8 Jun 2025                          | 10:00 AM | SSW       | 0.6                       |
| 8 Jun 2025                          | 11:00 AM | S         | 0.7                       |
| 8 Jun 2025                          | 12:00 PM | SSW       | 0.9                       |
| 8 Jun 2025                          | 1:00 PM  | S         | 0.8                       |
| 8 Jun 2025                          | 2:00 PM  | S         | 0.8                       |
| 8 Jun 2025                          | 3:00 PM  | S         | 0.8                       |

## Appendix C - Weather Conditions during Monitoring Period

| June 2025                           |          |           |                           |
|-------------------------------------|----------|-----------|---------------------------|
| Table II: Wind Speed and Directions |          |           |                           |
| Date                                | Time     | Direction | Wind Speed m <sup>s</sup> |
| 8 Jun 2025                          | 4:00 PM  | S         | 0.7                       |
| 8 Jun 2025                          | 5:00 PM  | SW        | 0.4                       |
| 8 Jun 2025                          | 6:00 PM  | SSW       | 0.3                       |
| 8 Jun 2025                          | 7:00 PM  | WSW       | 0.3                       |
| 8 Jun 2025                          | 8:00 PM  | SSW       | 0.3                       |
| 8 Jun 2025                          | 9:00 PM  | SW        | 0.1                       |
| 8 Jun 2025                          | 10:00 PM | SW        | 0.0                       |
| 8 Jun 2025                          | 11:00 PM | W         | 0.1                       |
| 9 Jun 2025                          | 12:00 AM | WSW       | 0.0                       |
| 9 Jun 2025                          | 1:00 AM  | SW        | 0.2                       |
| 9 Jun 2025                          | 2:00 AM  | SSW       | 0.3                       |
| 9 Jun 2025                          | 3:00 AM  | W         | 0.1                       |
| 9 Jun 2025                          | 4:00 AM  | NW        | 0.0                       |
| 9 Jun 2025                          | 5:00 AM  | WSW       | 0.1                       |
| 9 Jun 2025                          | 6:00 AM  | SSW       | 0.3                       |
| 9 Jun 2025                          | 7:00 AM  | S         | 0.4                       |
| 9 Jun 2025                          | 8:00 AM  | SSW       | 0.4                       |
| 9 Jun 2025                          | 9:00 AM  | SSE       | 0.5                       |
| 9 Jun 2025                          | 10:00 AM | SSW       | 0.6                       |
| 9 Jun 2025                          | 11:00 AM | S         | 0.7                       |
| 9 Jun 2025                          | 12:00 PM | S         | 0.6                       |
| 9 Jun 2025                          | 1:00 PM  | SSW       | 0.7                       |
| 9 Jun 2025                          | 2:00 PM  | SSW       | 0.8                       |
| 9 Jun 2025                          | 3:00 PM  | S         | 0.6                       |
| 9 Jun 2025                          | 4:00 PM  | SSE       | 0.6                       |
| 9 Jun 2025                          | 5:00 PM  | SSW       | 0.2                       |
| 9 Jun 2025                          | 6:00 PM  | SW        | 0.3                       |
| 9 Jun 2025                          | 7:00 PM  | WSW       | 0.4                       |
| 9 Jun 2025                          | 8:00 PM  | WSW       | 0.2                       |
| 9 Jun 2025                          | 9:00 PM  | W         | 0.4                       |
| 9 Jun 2025                          | 10:00 PM | WSW       | 0.3                       |
| 9 Jun 2025                          | 11:00 PM | WSW       | 0.4                       |
| 10 Jun 2025                         | 12:00 AM | SW        | 0.1                       |
| 10 Jun 2025                         | 1:00 AM  | SSW       | 0.1                       |
| 10 Jun 2025                         | 2:00 AM  | W         | 0.1                       |
| 10 Jun 2025                         | 3:00 AM  | WSW       | 0.1                       |
| 10 Jun 2025                         | 4:00 AM  | WNW       | 0.0                       |
| 10 Jun 2025                         | 5:00 AM  | SSW       | 0.1                       |
| 10 Jun 2025                         | 6:00 AM  | WSW       | 0.2                       |
| 10 Jun 2025                         | 7:00 AM  | SW        | 0.4                       |
| 10 Jun 2025                         | 8:00 AM  | SSW       | 0.3                       |
| 10 Jun 2025                         | 9:00 AM  | SW        | 0.5                       |
| 10 Jun 2025                         | 10:00 AM | SSW       | 0.6                       |
| 10 Jun 2025                         | 11:00 AM | SW        | 0.7                       |
| 10 Jun 2025                         | 12:00 PM | SW        | 0.8                       |
| 10 Jun 2025                         | 1:00 PM  | SSW       | 1.0                       |

## Appendix C - Weather Conditions during Monitoring Period

| June 2025                           |          |           |                           |
|-------------------------------------|----------|-----------|---------------------------|
| Table II: Wind Speed and Directions |          |           |                           |
| Date                                | Time     | Direction | Wind Speed m <sup>s</sup> |
| 10 Jun 2025                         | 2:00 PM  | WSW       | 1.0                       |
| 10 Jun 2025                         | 3:00 PM  | WSW       | 0.9                       |
| 10 Jun 2025                         | 4:00 PM  | SSW       | 0.7                       |
| 10 Jun 2025                         | 5:00 PM  | SSW       | 0.7                       |
| 10 Jun 2025                         | 6:00 PM  | SSW       | 0.5                       |
| 10 Jun 2025                         | 7:00 PM  | SW        | 0.4                       |
| 10 Jun 2025                         | 8:00 PM  | SSW       | 0.5                       |
| 10 Jun 2025                         | 9:00 PM  | SSW       | 0.6                       |
| 10 Jun 2025                         | 10:00 PM | SSW       | 0.8                       |
| 10 Jun 2025                         | 11:00 PM | SW        | 0.7                       |
| 11 Jun 2025                         | 12:00 AM | SSW       | 0.6                       |
| 11 Jun 2025                         | 1:00 AM  | SSW       | 0.6                       |
| 11 Jun 2025                         | 2:00 AM  | SSW       | 0.5                       |
| 11 Jun 2025                         | 3:00 AM  | WSW       | 0.5                       |
| 11 Jun 2025                         | 4:00 AM  | SW        | 0.5                       |
| 11 Jun 2025                         | 5:00 AM  | SSW       | 0.6                       |
| 11 Jun 2025                         | 6:00 AM  | SW        | 0.4                       |
| 11 Jun 2025                         | 7:00 AM  | SSW       | 0.6                       |
| 11 Jun 2025                         | 8:00 AM  | SSW       | 0.6                       |
| 11 Jun 2025                         | 9:00 AM  | S         | 0.6                       |
| 11 Jun 2025                         | 10:00 AM | SW        | 0.9                       |
| 11 Jun 2025                         | 11:00 AM | S         | 0.8                       |
| 11 Jun 2025                         | 12:00 PM | S         | 0.8                       |
| 11 Jun 2025                         | 1:00 PM  | SSW       | 0.9                       |
| 11 Jun 2025                         | 2:00 PM  | SW        | 0.6                       |
| 11 Jun 2025                         | 3:00 PM  | SSW       | 0.6                       |
| 11 Jun 2025                         | 4:00 PM  | SSW       | 0.8                       |
| 11 Jun 2025                         | 5:00 PM  | S         | 0.8                       |
| 11 Jun 2025                         | 6:00 PM  | SSW       | 0.7                       |
| 11 Jun 2025                         | 7:00 PM  | SSW       | 0.8                       |
| 11 Jun 2025                         | 8:00 PM  | SW        | 0.6                       |
| 11 Jun 2025                         | 9:00 PM  | SW        | 0.6                       |
| 11 Jun 2025                         | 10:00 PM | S         | 0.6                       |
| 11 Jun 2025                         | 11:00 PM | SSW       | 0.7                       |
| 12 Jun 2025                         | 12:00 AM | SW        | 0.7                       |
| 12 Jun 2025                         | 1:00 AM  | SW        | 1.0                       |
| 12 Jun 2025                         | 2:00 AM  | SSW       | 0.8                       |
| 12 Jun 2025                         | 3:00 AM  | SW        | 0.8                       |
| 12 Jun 2025                         | 4:00 AM  | S         | 0.8                       |
| 12 Jun 2025                         | 5:00 AM  | SSW       | 0.7                       |
| 12 Jun 2025                         | 6:00 AM  | S         | 0.6                       |
| 12 Jun 2025                         | 7:00 AM  | SSW       | 0.4                       |
| 12 Jun 2025                         | 8:00 AM  | SSW       | 0.5                       |
| 12 Jun 2025                         | 9:00 AM  | SW        | 0.7                       |
| 12 Jun 2025                         | 10:00 AM | SSW       | 0.9                       |
| 12 Jun 2025                         | 11:00 AM | S         | 0.8                       |

## Appendix C - Weather Conditions during Monitoring Period

| June 2025                           |          |           |                           |
|-------------------------------------|----------|-----------|---------------------------|
| Table II: Wind Speed and Directions |          |           |                           |
| Date                                | Time     | Direction | Wind Speed m <sup>s</sup> |
| 12 Jun 2025                         | 12:00 PM | SSW       | 0.8                       |
| 12 Jun 2025                         | 1:00 PM  | SW        | 0.8                       |
| 12 Jun 2025                         | 2:00 PM  | SW        | 0.8                       |
| 12 Jun 2025                         | 3:00 PM  | SW        | 0.9                       |
| 12 Jun 2025                         | 4:00 PM  | SW        | 0.7                       |
| 12 Jun 2025                         | 5:00 PM  | SW        | 0.6                       |
| 12 Jun 2025                         | 6:00 PM  | W         | 0.5                       |
| 12 Jun 2025                         | 7:00 PM  | SSW       | 0.4                       |
| 12 Jun 2025                         | 8:00 PM  | WSW       | 0.3                       |
| 12 Jun 2025                         | 9:00 PM  | WSW       | 0.4                       |
| 12 Jun 2025                         | 10:00 PM | SW        | 0.2                       |
| 12 Jun 2025                         | 11:00 PM | W         | 0.2                       |
| 13 Jun 2025                         | 12:00 AM | WSW       | 0.1                       |
| 13 Jun 2025                         | 1:00 AM  | WSW       | 0.2                       |
| 13 Jun 2025                         | 2:00 AM  | W         | 0.1                       |
| 13 Jun 2025                         | 3:00 AM  | W         | 0.1                       |
| 13 Jun 2025                         | 4:00 AM  | WNW       | 0.1                       |
| 13 Jun 2025                         | 5:00 AM  | NNW       | 0.0                       |
| 13 Jun 2025                         | 6:00 AM  | NW        | 0.1                       |
| 13 Jun 2025                         | 7:00 AM  | WSW       | 0.1                       |
| 13 Jun 2025                         | 8:00 AM  | SSW       | 0.3                       |
| 13 Jun 2025                         | 9:00 AM  | S         | 0.3                       |
| 13 Jun 2025                         | 10:00 AM | WSW       | 0.3                       |
| 13 Jun 2025                         | 11:00 AM | WSW       | 0.5                       |
| 13 Jun 2025                         | 12:00 PM | WSW       | 0.9                       |
| 13 Jun 2025                         | 1:00 PM  | SSW       | 0.8                       |
| 13 Jun 2025                         | 2:00 PM  | SSW       | 0.9                       |
| 13 Jun 2025                         | 3:00 PM  | SW        | 0.1                       |
| 13 Jun 2025                         | 4:00 PM  | SW        | 0.3                       |
| 13 Jun 2025                         | 5:00 PM  | SW        | 0.5                       |
| 13 Jun 2025                         | 6:00 PM  | WSW       | 0.4                       |
| 13 Jun 2025                         | 7:00 PM  | SW        | 0.5                       |
| 13 Jun 2025                         | 8:00 PM  | WSW       | 0.2                       |
| 13 Jun 2025                         | 9:00 PM  | SW        | 0.1                       |
| 13 Jun 2025                         | 10:00 PM | S         | 0.0                       |
| 13 Jun 2025                         | 11:00 PM | WSW       | 0.0                       |
| 14 Jun 2025                         | 12:00 AM | SSW       | 0.3                       |
| 14 Jun 2025                         | 1:00 AM  | S         | 0.5                       |
| 14 Jun 2025                         | 2:00 AM  | SSW       | 0.3                       |
| 14 Jun 2025                         | 3:00 AM  | SSW       | 0.2                       |
| 14 Jun 2025                         | 4:00 AM  | SSW       | 0.4                       |
| 14 Jun 2025                         | 5:00 AM  | SW        | 0.4                       |
| 14 Jun 2025                         | 6:00 AM  | SSW       | 0.5                       |
| 14 Jun 2025                         | 7:00 AM  | S         | 0.9                       |
| 14 Jun 2025                         | 8:00 AM  | SSE       | 0.7                       |
| 14 Jun 2025                         | 9:00 AM  | WSW       | 0.5                       |

## Appendix C - Weather Conditions during Monitoring Period

| June 2025                           |          |           |                           |
|-------------------------------------|----------|-----------|---------------------------|
| Table II: Wind Speed and Directions |          |           |                           |
| Date                                | Time     | Direction | Wind Speed m <sup>s</sup> |
| 14 Jun 2025                         | 10:00 AM | S         | 0.8                       |
| 14 Jun 2025                         | 11:00 AM | SSW       | 0.7                       |
| 14 Jun 2025                         | 12:00 PM | SSW       | 0.8                       |
| 14 Jun 2025                         | 1:00 PM  | SSW       | 0.7                       |
| 14 Jun 2025                         | 2:00 PM  | SSW       | 0.8                       |
| 14 Jun 2025                         | 3:00 PM  | SW        | 0.8                       |
| 14 Jun 2025                         | 4:00 PM  | SSW       | 0.8                       |
| 14 Jun 2025                         | 5:00 PM  | S         | 0.6                       |
| 14 Jun 2025                         | 6:00 PM  | S         | 0.9                       |
| 14 Jun 2025                         | 7:00 PM  | S         | 0.7                       |
| 14 Jun 2025                         | 8:00 PM  | SSW       | 0.5                       |
| 14 Jun 2025                         | 9:00 PM  | WSW       | 0.6                       |
| 14 Jun 2025                         | 10:00 PM | S         | 0.5                       |
| 14 Jun 2025                         | 11:00 PM | S         | 0.8                       |
| 15 Jun 2025                         | 12:00 AM | SW        | 0.6                       |
| 15 Jun 2025                         | 1:00 AM  | S         | 0.7                       |
| 15 Jun 2025                         | 2:00 AM  | SSW       | 0.9                       |
| 15 Jun 2025                         | 3:00 AM  | SW        | 0.8                       |
| 15 Jun 2025                         | 4:00 AM  | S         | 1.1                       |
| 15 Jun 2025                         | 5:00 AM  | SSW       | 0.7                       |
| 15 Jun 2025                         | 6:00 AM  | SW        | 0.8                       |
| 15 Jun 2025                         | 7:00 AM  | S         | 0.8                       |
| 15 Jun 2025                         | 8:00 AM  | SW        | 0.9                       |
| 15 Jun 2025                         | 9:00 AM  | SSW       | 1.0                       |
| 15 Jun 2025                         | 10:00 AM | S         | 1.1                       |
| 15 Jun 2025                         | 11:00 AM | S         | 1.0                       |
| 15 Jun 2025                         | 12:00 PM | SSW       | 1.0                       |
| 15 Jun 2025                         | 1:00 PM  | SSW       | 1.3                       |
| 15 Jun 2025                         | 2:00 PM  | S         | 0.9                       |
| 15 Jun 2025                         | 3:00 PM  | SSW       | 0.7                       |
| 15 Jun 2025                         | 4:00 PM  | SSW       | 0.7                       |
| 15 Jun 2025                         | 5:00 PM  | SSW       | 0.4                       |
| 15 Jun 2025                         | 6:00 PM  | SSW       | 0.5                       |
| 15 Jun 2025                         | 7:00 PM  | SW        | 0.3                       |
| 15 Jun 2025                         | 8:00 PM  | SW        | 0.1                       |
| 15 Jun 2025                         | 9:00 PM  | SSW       | 0.1                       |
| 15 Jun 2025                         | 10:00 PM | SW        | 0.1                       |
| 15 Jun 2025                         | 11:00 PM | S         | 0.0                       |
| 16 Jun 2025                         | 12:00 AM | WNW       | 0.1                       |
| 16 Jun 2025                         | 1:00 AM  | SE        | 0.1                       |
| 16 Jun 2025                         | 2:00 AM  | WSW       | 0.1                       |
| 16 Jun 2025                         | 3:00 AM  | SW        | 0.2                       |
| 16 Jun 2025                         | 4:00 AM  | WNW       | 0.2                       |
| 16 Jun 2025                         | 5:00 AM  | SSW       | 0.1                       |
| 16 Jun 2025                         | 6:00 AM  | NNE       | 0.0                       |
| 16 Jun 2025                         | 7:00 AM  | SSW       | 0.2                       |

## Appendix C - Weather Conditions during Monitoring Period

| June 2025                           |          |           |                           |
|-------------------------------------|----------|-----------|---------------------------|
| Table II: Wind Speed and Directions |          |           |                           |
| Date                                | Time     | Direction | Wind Speed m <sup>s</sup> |
| 16 Jun 2025                         | 8:00 AM  | SSW       | 0.4                       |
| 16 Jun 2025                         | 9:00 AM  | SW        | 0.4                       |
| 16 Jun 2025                         | 10:00 AM | SW        | 0.4                       |
| 16 Jun 2025                         | 11:00 AM | SSW       | 0.4                       |
| 16 Jun 2025                         | 12:00 PM | SSW       | 0.6                       |
| 16 Jun 2025                         | 1:00 PM  | SSW       | 0.7                       |
| 16 Jun 2025                         | 2:00 PM  | SW        | 0.6                       |
| 16 Jun 2025                         | 3:00 PM  | SSW       | 0.6                       |
| 16 Jun 2025                         | 4:00 PM  | S         | 0.4                       |
| 16 Jun 2025                         | 5:00 PM  | SW        | 0.3                       |
| 16 Jun 2025                         | 6:00 PM  | S         | 0.3                       |
| 16 Jun 2025                         | 7:00 PM  | SW        | 0.2                       |
| 16 Jun 2025                         | 8:00 PM  | SW        | 0.1                       |
| 16 Jun 2025                         | 9:00 PM  | WNW       | 0.1                       |
| 16 Jun 2025                         | 10:00 PM | WNW       | 0.0                       |
| 16 Jun 2025                         | 11:00 PM | WSW       | 0.0                       |
| 17 Jun 2025                         | 12:00 AM | WSW       | 0.0                       |
| 17 Jun 2025                         | 1:00 AM  | SSW       | 0.2                       |
| 17 Jun 2025                         | 2:00 AM  | SSW       | 0.1                       |
| 17 Jun 2025                         | 3:00 AM  | S         | 0.2                       |
| 17 Jun 2025                         | 4:00 AM  | SSW       | 0.1                       |
| 17 Jun 2025                         | 5:00 AM  | SW        | 0.0                       |
| 17 Jun 2025                         | 6:00 AM  | S         | 0.1                       |
| 17 Jun 2025                         | 7:00 AM  | WSW       | 0.0                       |
| 17 Jun 2025                         | 8:00 AM  | S         | 0.1                       |
| 17 Jun 2025                         | 9:00 AM  | SSE       | 0.3                       |
| 17 Jun 2025                         | 10:00 AM | W         | 0.1                       |
| 17 Jun 2025                         | 11:00 AM | SSE       | 0.1                       |
| 17 Jun 2025                         | 12:00 PM | W         | 0.1                       |
| 17 Jun 2025                         | 1:00 PM  | S         | 0.2                       |
| 17 Jun 2025                         | 2:00 PM  | SW        | 0.2                       |
| 17 Jun 2025                         | 3:00 PM  | SSW       | 0.1                       |
| 17 Jun 2025                         | 4:00 PM  | S         | 0.1                       |
| 17 Jun 2025                         | 5:00 PM  | E         | 0.0                       |
| 17 Jun 2025                         | 6:00 PM  | SW        | 0.2                       |
| 17 Jun 2025                         | 7:00 PM  | S         | 0.1                       |
| 17 Jun 2025                         | 8:00 PM  | SW        | 0.2                       |
| 17 Jun 2025                         | 9:00 PM  | WSW       | 0.4                       |
| 17 Jun 2025                         | 10:00 PM | SSW       | 0.1                       |
| 17 Jun 2025                         | 11:00 PM | WSW       | 0.0                       |
| 18 Jun 2025                         | 12:00 AM | W         | 0.0                       |
| 18 Jun 2025                         | 1:00 AM  | SE        | 0.0                       |
| 18 Jun 2025                         | 2:00 AM  | ESE       | 0.1                       |
| 18 Jun 2025                         | 3:00 AM  | WNW       | 0.2                       |
| 18 Jun 2025                         | 4:00 AM  | SSW       | 0.1                       |
| 18 Jun 2025                         | 5:00 AM  | W         | 0.1                       |

## Appendix C - Weather Conditions during Monitoring Period

| June 2025                           |          |           |                           |
|-------------------------------------|----------|-----------|---------------------------|
| Table II: Wind Speed and Directions |          |           |                           |
| Date                                | Time     | Direction | Wind Speed m <sup>s</sup> |
| 18 Jun 2025                         | 6:00 AM  | NNW       | 0.1                       |
| 18 Jun 2025                         | 7:00 AM  | WNW       | 0.3                       |
| 18 Jun 2025                         | 8:00 AM  | WSW       | 0.3                       |
| 18 Jun 2025                         | 9:00 AM  | SW        | 0.3                       |
| 18 Jun 2025                         | 10:00 AM | SW        | 0.3                       |
| 18 Jun 2025                         | 11:00 AM | SSW       | 0.3                       |
| 18 Jun 2025                         | 12:00 PM | WNW       | 0.3                       |
| 18 Jun 2025                         | 1:00 PM  | W         | 0.3                       |
| 18 Jun 2025                         | 2:00 PM  | SSW       | 0.3                       |
| 18 Jun 2025                         | 3:00 PM  | SW        | 0.5                       |
| 18 Jun 2025                         | 4:00 PM  | SSW       | 0.4                       |
| 18 Jun 2025                         | 5:00 PM  | SW        | 0.3                       |
| 18 Jun 2025                         | 6:00 PM  | SW        | 0.2                       |
| 18 Jun 2025                         | 7:00 PM  | WSW       | 0.4                       |
| 18 Jun 2025                         | 8:00 PM  | S         | 0.4                       |
| 18 Jun 2025                         | 9:00 PM  | WSW       | 0.4                       |
| 18 Jun 2025                         | 10:00 PM | WSW       | 0.3                       |
| 18 Jun 2025                         | 11:00 PM | SSW       | 0.1                       |
| 19 Jun 2025                         | 12:00 AM | SSE       | 0.2                       |
| 19 Jun 2025                         | 1:00 AM  | S         | 0.1                       |
| 19 Jun 2025                         | 2:00 AM  | SW        | 0.1                       |
| 19 Jun 2025                         | 3:00 AM  | WSW       | 0.0                       |
| 19 Jun 2025                         | 4:00 AM  | W         | 0.0                       |
| 19 Jun 2025                         | 5:00 AM  | SSW       | 0.0                       |
| 19 Jun 2025                         | 6:00 AM  | ENE       | 0.1                       |
| 19 Jun 2025                         | 7:00 AM  | WSW       | 0.2                       |
| 19 Jun 2025                         | 8:00 AM  | SW        | 0.1                       |
| 19 Jun 2025                         | 9:00 AM  | SSW       | 0.2                       |
| 19 Jun 2025                         | 10:00 AM | SW        | 0.2                       |
| 19 Jun 2025                         | 11:00 AM | SSW       | 0.7                       |
| 19 Jun 2025                         | 12:00 PM | SW        | 0.8                       |
| 19 Jun 2025                         | 1:00 PM  | SW        | 0.8                       |
| 19 Jun 2025                         | 2:00 PM  | SSW       | 0.9                       |
| 19 Jun 2025                         | 3:00 PM  | WSW       | 0.9                       |
| 19 Jun 2025                         | 4:00 PM  | SSW       | 0.9                       |
| 19 Jun 2025                         | 5:00 PM  | WSW       | 0.4                       |
| 19 Jun 2025                         | 6:00 PM  | SSW       | 0.2                       |
| 19 Jun 2025                         | 7:00 PM  | S         | 0.2                       |
| 19 Jun 2025                         | 8:00 PM  | SSW       | 0.2                       |
| 19 Jun 2025                         | 9:00 PM  | W         | 0.2                       |
| 19 Jun 2025                         | 10:00 PM | SW        | 0.3                       |
| 19 Jun 2025                         | 11:00 PM | WSW       | 0.1                       |
| 20 Jun 2025                         | 12:00 AM | SW        | 0.2                       |
| 20 Jun 2025                         | 1:00 AM  | SSW       | 0.1                       |
| 20 Jun 2025                         | 2:00 AM  | SSW       | 0.0                       |
| 20 Jun 2025                         | 3:00 AM  | WSW       | 0.1                       |

## Appendix C - Weather Conditions during Monitoring Period

| June 2025                           |          |           |                           |
|-------------------------------------|----------|-----------|---------------------------|
| Table II: Wind Speed and Directions |          |           |                           |
| Date                                | Time     | Direction | Wind Speed m <sup>s</sup> |
| 20 Jun 2025                         | 4:00 AM  | S         | 0.0                       |
| 20 Jun 2025                         | 5:00 AM  | SSE       | 0.0                       |
| 20 Jun 2025                         | 6:00 AM  | WSW       | 0.0                       |
| 20 Jun 2025                         | 7:00 AM  | WSW       | 0.0                       |
| 20 Jun 2025                         | 8:00 AM  | ENE       | 0.0                       |
| 20 Jun 2025                         | 9:00 AM  | ESE       | 0.1                       |
| 20 Jun 2025                         | 10:00 AM | SW        | 0.3                       |
| 20 Jun 2025                         | 11:00 AM | SW        | 0.2                       |
| 20 Jun 2025                         | 12:00 PM | S         | 0.5                       |
| 20 Jun 2025                         | 1:00 PM  | SSW       | 0.5                       |
| 20 Jun 2025                         | 2:00 PM  | S         | 0.4                       |
| 20 Jun 2025                         | 3:00 PM  | SW        | 0.4                       |
| 20 Jun 2025                         | 4:00 PM  | SSW       | 0.1                       |
| 20 Jun 2025                         | 5:00 PM  | SW        | 0.0                       |
| 20 Jun 2025                         | 6:00 PM  | W         | 0.0                       |
| 20 Jun 2025                         | 7:00 PM  | SSW       | 0.0                       |
| 20 Jun 2025                         | 8:00 PM  | WSW       | 0.1                       |
| 20 Jun 2025                         | 9:00 PM  | W         | 0.1                       |
| 20 Jun 2025                         | 10:00 PM | WNW       | 0.0                       |
| 20 Jun 2025                         | 11:00 PM | W         | 0.0                       |
| 21 Jun 2025                         | 12:00 AM | SW        | 0.1                       |
| 21 Jun 2025                         | 1:00 AM  | W         | 0.0                       |
| 21 Jun 2025                         | 2:00 AM  | SW        | 0.0                       |
| 21 Jun 2025                         | 3:00 AM  | WNW       | 0.1                       |
| 21 Jun 2025                         | 4:00 AM  | S         | 0.0                       |
| 21 Jun 2025                         | 5:00 AM  | S         | 0.0                       |
| 21 Jun 2025                         | 6:00 AM  | S         | 0.0                       |
| 21 Jun 2025                         | 7:00 AM  | S         | 0.2                       |
| 21 Jun 2025                         | 8:00 AM  | SSW       | 0.3                       |
| 21 Jun 2025                         | 9:00 AM  | SW        | 0.3                       |
| 21 Jun 2025                         | 10:00 AM | SW        | 0.4                       |
| 21 Jun 2025                         | 11:00 AM | SSW       | 0.4                       |
| 21 Jun 2025                         | 12:00 PM | SSW       | 0.6                       |
| 21 Jun 2025                         | 1:00 PM  | SSW       | 0.7                       |
| 21 Jun 2025                         | 2:00 PM  | SSW       | 0.4                       |
| 21 Jun 2025                         | 3:00 PM  | SW        | 0.5                       |
| 21 Jun 2025                         | 4:00 PM  | SW        | 0.3                       |
| 21 Jun 2025                         | 5:00 PM  | WSW       | 0.0                       |
| 21 Jun 2025                         | 6:00 PM  | WSW       | 0.1                       |
| 21 Jun 2025                         | 7:00 PM  | W         | 0.1                       |
| 21 Jun 2025                         | 8:00 PM  | SSW       | 0.2                       |
| 21 Jun 2025                         | 9:00 PM  | W         | 0.0                       |
| 21 Jun 2025                         | 10:00 PM | W         | 0.1                       |
| 21 Jun 2025                         | 11:00 PM | SW        | 0.1                       |
| 22 Jun 2025                         | 12:00 AM | W         | 0.1                       |
| 22 Jun 2025                         | 1:00 AM  | SW        | 0.2                       |

## Appendix C - Weather Conditions during Monitoring Period

| June 2025                           |          |           |                           |
|-------------------------------------|----------|-----------|---------------------------|
| Table II: Wind Speed and Directions |          |           |                           |
| Date                                | Time     | Direction | Wind Speed m <sup>s</sup> |
| 22 Jun 2025                         | 2:00 AM  | W         | 0.0                       |
| 22 Jun 2025                         | 3:00 AM  | WSW       | 0.0                       |
| 22 Jun 2025                         | 4:00 AM  | W         | 0.0                       |
| 22 Jun 2025                         | 5:00 AM  | SW        | 0.0                       |
| 22 Jun 2025                         | 6:00 AM  | WNW       | 0.0                       |
| 22 Jun 2025                         | 7:00 AM  | WSW       | 0.1                       |
| 22 Jun 2025                         | 8:00 AM  | SW        | 0.2                       |
| 22 Jun 2025                         | 9:00 AM  | SSW       | 0.2                       |
| 22 Jun 2025                         | 10:00 AM | SSW       | 0.3                       |
| 22 Jun 2025                         | 11:00 AM | W         | 0.1                       |
| 22 Jun 2025                         | 12:00 PM | WSW       | 0.1                       |
| 22 Jun 2025                         | 1:00 PM  | SSW       | 0.2                       |
| 22 Jun 2025                         | 2:00 PM  | SW        | 0.3                       |
| 22 Jun 2025                         | 3:00 PM  | SW        | 0.2                       |
| 22 Jun 2025                         | 4:00 PM  | WSW       | 0.2                       |
| 22 Jun 2025                         | 5:00 PM  | SSW       | 0.2                       |
| 22 Jun 2025                         | 6:00 PM  | WSW       | 0.1                       |
| 22 Jun 2025                         | 7:00 PM  | SE        | 0.0                       |
| 22 Jun 2025                         | 8:00 PM  | W         | 0.0                       |
| 22 Jun 2025                         | 9:00 PM  | WSW       | 0.1                       |
| 22 Jun 2025                         | 10:00 PM | W         | 0.0                       |
| 22 Jun 2025                         | 11:00 PM | WSW       | 0.1                       |
| 23 Jun 2025                         | 12:00 AM | SSW       | 0.0                       |
| 23 Jun 2025                         | 1:00 AM  | W         | 0.0                       |
| 23 Jun 2025                         | 2:00 AM  | SW        | 0.1                       |
| 23 Jun 2025                         | 3:00 AM  | SE        | 0.1                       |
| 23 Jun 2025                         | 4:00 AM  | SW        | 0.1                       |
| 23 Jun 2025                         | 5:00 AM  | SW        | 0.0                       |
| 23 Jun 2025                         | 6:00 AM  | W         | 0.0                       |
| 23 Jun 2025                         | 7:00 AM  | W         | 0.0                       |
| 23 Jun 2025                         | 8:00 AM  | W         | 0.1                       |
| 23 Jun 2025                         | 9:00 AM  | SSE       | 0.4                       |
| 23 Jun 2025                         | 10:00 AM | SSW       | 0.4                       |
| 23 Jun 2025                         | 11:00 AM | SSW       | 0.5                       |
| 23 Jun 2025                         | 12:00 PM | S         | 0.6                       |
| 23 Jun 2025                         | 1:00 PM  | SW        | 0.7                       |
| 23 Jun 2025                         | 2:00 PM  | SSW       | 0.7                       |
| 23 Jun 2025                         | 3:00 PM  | SSW       | 0.7                       |
| 23 Jun 2025                         | 4:00 PM  | S         | 0.5                       |
| 23 Jun 2025                         | 5:00 PM  | SSW       | 0.6                       |
| 23 Jun 2025                         | 6:00 PM  | SSW       | 0.4                       |
| 23 Jun 2025                         | 7:00 PM  | WSW       | 0.2                       |
| 23 Jun 2025                         | 8:00 PM  | W         | 0.1                       |
| 23 Jun 2025                         | 9:00 PM  | SW        | 0.1                       |
| 23 Jun 2025                         | 10:00 PM | SSW       | 0.2                       |
| 23 Jun 2025                         | 11:00 PM | SW        | 0.2                       |

## Appendix C - Weather Conditions during Monitoring Period

| June 2025                           |          |           |                           |
|-------------------------------------|----------|-----------|---------------------------|
| Table II: Wind Speed and Directions |          |           |                           |
| Date                                | Time     | Direction | Wind Speed m <sup>s</sup> |
| 24 Jun 2025                         | 12:00 AM | SSW       | 0.2                       |
| 24 Jun 2025                         | 1:00 AM  | WSW       | 0.2                       |
| 24 Jun 2025                         | 2:00 AM  | WSW       | 0.2                       |
| 24 Jun 2025                         | 3:00 AM  | WSW       | 0.1                       |
| 24 Jun 2025                         | 4:00 AM  | WSW       | 0.1                       |
| 24 Jun 2025                         | 5:00 AM  | W         | 0.1                       |
| 24 Jun 2025                         | 6:00 AM  | W         | 0.1                       |
| 24 Jun 2025                         | 7:00 AM  | SW        | 0.2                       |
| 24 Jun 2025                         | 8:00 AM  | S         | 0.6                       |
| 24 Jun 2025                         | 9:00 AM  | SSW       | 0.7                       |
| 24 Jun 2025                         | 10:00 AM | SSW       | 0.6                       |
| 24 Jun 2025                         | 11:00 AM | S         | 0.7                       |
| 24 Jun 2025                         | 12:00 PM | S         | 0.9                       |
| 24 Jun 2025                         | 1:00 PM  | S         | 0.9                       |
| 24 Jun 2025                         | 2:00 PM  | SSW       | 0.8                       |
| 24 Jun 2025                         | 3:00 PM  | S         | 0.6                       |
| 24 Jun 2025                         | 4:00 PM  | SSW       | 0.4                       |
| 24 Jun 2025                         | 5:00 PM  | S         | 0.2                       |
| 24 Jun 2025                         | 6:00 PM  | SSW       | 0.2                       |
| 24 Jun 2025                         | 7:00 PM  | SW        | 0.1                       |
| 24 Jun 2025                         | 8:00 PM  | WSW       | 0.1                       |
| 24 Jun 2025                         | 9:00 PM  | WSW       | 0.0                       |
| 24 Jun 2025                         | 10:00 PM | W         | 0.1                       |
| 24 Jun 2025                         | 11:00 PM | WSW       | 0.1                       |
| 25 Jun 2025                         | 12:00 AM | WNW       | 0.0                       |
| 25 Jun 2025                         | 1:00 AM  | W         | 0.0                       |
| 25 Jun 2025                         | 2:00 AM  | W         | 0.0                       |
| 25 Jun 2025                         | 3:00 AM  | NNW       | 0.0                       |
| 25 Jun 2025                         | 4:00 AM  | NNW       | 0.0                       |
| 25 Jun 2025                         | 5:00 AM  | WNW       | 0.0                       |
| 25 Jun 2025                         | 6:00 AM  | WSW       | 0.0                       |
| 25 Jun 2025                         | 7:00 AM  | WSW       | 0.1                       |
| 25 Jun 2025                         | 8:00 AM  | SSW       | 0.4                       |
| 25 Jun 2025                         | 9:00 AM  | S         | 0.5                       |
| 25 Jun 2025                         | 10:00 AM | SW        | 0.6                       |
| 25 Jun 2025                         | 11:00 AM | WSW       | 0.8                       |
| 25 Jun 2025                         | 12:00 PM | SSW       | 0.7                       |
| 25 Jun 2025                         | 1:00 PM  | SW        | 0.8                       |
| 25 Jun 2025                         | 2:00 PM  | SSW       | 0.7                       |
| 25 Jun 2025                         | 3:00 PM  | SW        | 0.6                       |
| 25 Jun 2025                         | 4:00 PM  | SW        | 0.6                       |
| 25 Jun 2025                         | 5:00 PM  | SSW       | 0.6                       |
| 25 Jun 2025                         | 6:00 PM  | SW        | 0.5                       |
| 25 Jun 2025                         | 7:00 PM  | SW        | 0.4                       |
| 25 Jun 2025                         | 8:00 PM  | WSW       | 0.6                       |
| 25 Jun 2025                         | 9:00 PM  | SSW       | 0.4                       |

## Appendix C - Weather Conditions during Monitoring Period

| June 2025                           |          |           |                           |
|-------------------------------------|----------|-----------|---------------------------|
| Table II: Wind Speed and Directions |          |           |                           |
| Date                                | Time     | Direction | Wind Speed m <sup>s</sup> |
| 25 Jun 2025                         | 10:00 PM | SW        | 0.5                       |
| 25 Jun 2025                         | 11:00 PM | WSW       | 0.5                       |
| 26 Jun 2025                         | 12:00 AM | SW        | 0.4                       |
| 26 Jun 2025                         | 1:00 AM  | WSW       | 0.4                       |
| 26 Jun 2025                         | 2:00 AM  | SW        | 0.3                       |
| 26 Jun 2025                         | 3:00 AM  | SW        | 0.4                       |
| 26 Jun 2025                         | 4:00 AM  | SW        | 0.2                       |
| 26 Jun 2025                         | 5:00 AM  | SW        | 0.5                       |
| 26 Jun 2025                         | 6:00 AM  | SSW       | 0.2                       |
| 26 Jun 2025                         | 7:00 AM  | S         | 0.3                       |
| 26 Jun 2025                         | 8:00 AM  | SSW       | 0.7                       |
| 26 Jun 2025                         | 9:00 AM  | SSW       | 0.8                       |
| 26 Jun 2025                         | 10:00 AM | SW        | 0.3                       |
| 26 Jun 2025                         | 11:00 AM | SW        | 0.5                       |
| 26 Jun 2025                         | 12:00 PM | WSW       | 0.6                       |
| 26 Jun 2025                         | 1:00 PM  | WSW       | 0.6                       |
| 26 Jun 2025                         | 2:00 PM  | SW        | 0.5                       |
| 26 Jun 2025                         | 3:00 PM  | WSW       | 0.3                       |
| 26 Jun 2025                         | 4:00 PM  | SSW       | 0.4                       |
| 26 Jun 2025                         | 5:00 PM  | WNW       | 0.2                       |
| 26 Jun 2025                         | 6:00 PM  | WSW       | 0.1                       |
| 26 Jun 2025                         | 7:00 PM  | WSW       | 0.1                       |
| 26 Jun 2025                         | 8:00 PM  | WSW       | 0.1                       |
| 26 Jun 2025                         | 9:00 PM  | SW        | 0.3                       |
| 26 Jun 2025                         | 10:00 PM | SW        | 0.2                       |
| 26 Jun 2025                         | 11:00 PM | W         | 0.2                       |
| 27 Jun 2025                         | 12:00 AM | SW        | 0.3                       |
| 27 Jun 2025                         | 1:00 AM  | W         | 0.3                       |
| 27 Jun 2025                         | 2:00 AM  | WSW       | 0.1                       |
| 27 Jun 2025                         | 3:00 AM  | SW        | 0.1                       |
| 27 Jun 2025                         | 4:00 AM  | WSW       | 0.1                       |
| 27 Jun 2025                         | 5:00 AM  | WNW       | 0.0                       |
| 27 Jun 2025                         | 6:00 AM  | W         | 0.0                       |
| 27 Jun 2025                         | 7:00 AM  | W         | 0.1                       |
| 27 Jun 2025                         | 8:00 AM  | SSW       | 0.1                       |
| 27 Jun 2025                         | 9:00 AM  | WSW       | 0.2                       |
| 27 Jun 2025                         | 10:00 AM | SSW       | 0.3                       |
| 27 Jun 2025                         | 11:00 AM | SW        | 0.1                       |
| 27 Jun 2025                         | 12:00 PM | SW        | 0.2                       |
| 27 Jun 2025                         | 1:00 PM  | SSE       | 0.3                       |
| 27 Jun 2025                         | 2:00 PM  | SW        | 0.6                       |
| 27 Jun 2025                         | 3:00 PM  | SW        | 0.7                       |
| 27 Jun 2025                         | 4:00 PM  | SW        | 0.4                       |
| 27 Jun 2025                         | 5:00 PM  | SSW       | 0.2                       |
| 27 Jun 2025                         | 6:00 PM  | W         | 0.3                       |
| 27 Jun 2025                         | 7:00 PM  | SW        | 0.4                       |

## Appendix C - Weather Conditions during Monitoring Period

| June 2025                           |          |           |                           |
|-------------------------------------|----------|-----------|---------------------------|
| Table II: Wind Speed and Directions |          |           |                           |
| Date                                | Time     | Direction | Wind Speed m <sup>s</sup> |
| 27 Jun 2025                         | 8:00 PM  | WSW       | 0.1                       |
| 27 Jun 2025                         | 9:00 PM  | W         | 0.1                       |
| 27 Jun 2025                         | 10:00 PM | WSW       | 0.2                       |
| 27 Jun 2025                         | 11:00 PM | SSW       | 0.3                       |
| 28 Jun 2025                         | 12:00 AM | WSW       | 0.2                       |
| 28 Jun 2025                         | 1:00 AM  | W         | 0.2                       |
| 28 Jun 2025                         | 2:00 AM  | WSW       | 0.1                       |
| 28 Jun 2025                         | 3:00 AM  | W         | 0.2                       |
| 28 Jun 2025                         | 4:00 AM  | WSW       | 0.1                       |
| 28 Jun 2025                         | 5:00 AM  | WNW       | 0.0                       |
| 28 Jun 2025                         | 6:00 AM  | NW        | 0.2                       |
| 28 Jun 2025                         | 7:00 AM  | SSW       | 0.1                       |
| 28 Jun 2025                         | 8:00 AM  | NW        | 0.4                       |
| 28 Jun 2025                         | 9:00 AM  | NW        | 0.3                       |
| 28 Jun 2025                         | 10:00 AM | SW        | 0.4                       |
| 28 Jun 2025                         | 11:00 AM | SSW       | 0.5                       |
| 28 Jun 2025                         | 12:00 PM | WSW       | 0.5                       |
| 28 Jun 2025                         | 1:00 PM  | SW        | 0.4                       |
| 28 Jun 2025                         | 2:00 PM  | WSW       | 0.5                       |
| 28 Jun 2025                         | 3:00 PM  | SW        | 0.6                       |
| 28 Jun 2025                         | 4:00 PM  | WSW       | 0.7                       |
| 28 Jun 2025                         | 5:00 PM  | W         | 0.5                       |
| 28 Jun 2025                         | 6:00 PM  | WSW       | 0.5                       |
| 28 Jun 2025                         | 7:00 PM  | SW        | 0.4                       |
| 28 Jun 2025                         | 8:00 PM  | WSW       | 0.2                       |
| 28 Jun 2025                         | 9:00 PM  | SW        | 0.2                       |
| 28 Jun 2025                         | 10:00 PM | SW        | 0.2                       |
| 28 Jun 2025                         | 11:00 PM | SW        | 0.1                       |
| 29 Jun 2025                         | 12:00 AM | SW        | 0.2                       |
| 29 Jun 2025                         | 1:00 AM  | SW        | 0.1                       |
| 29 Jun 2025                         | 2:00 AM  | S         | 0.0                       |
| 29 Jun 2025                         | 3:00 AM  | NNW       | 0.1                       |
| 29 Jun 2025                         | 4:00 AM  | SW        | 0.0                       |
| 29 Jun 2025                         | 5:00 AM  | W         | 0.0                       |
| 29 Jun 2025                         | 6:00 AM  | SW        | 0.1                       |
| 29 Jun 2025                         | 7:00 AM  | SW        | 0.1                       |
| 29 Jun 2025                         | 8:00 AM  | WNW       | 0.1                       |
| 29 Jun 2025                         | 9:00 AM  | W         | 0.3                       |
| 29 Jun 2025                         | 10:00 AM | SW        | 0.6                       |
| 29 Jun 2025                         | 11:00 AM | SW        | 0.7                       |
| 29 Jun 2025                         | 12:00 PM | SW        | 0.6                       |
| 29 Jun 2025                         | 1:00 PM  | SSW       | 0.3                       |
| 29 Jun 2025                         | 2:00 PM  | WSW       | 0.3                       |
| 29 Jun 2025                         | 3:00 PM  | SSW       | 0.6                       |
| 29 Jun 2025                         | 4:00 PM  | SSW       | 0.5                       |
| 29 Jun 2025                         | 5:00 PM  | WSW       | 0.4                       |

## Appendix C - Weather Conditions during Monitoring Period

| June 2025                           |          |           |                           |
|-------------------------------------|----------|-----------|---------------------------|
| Table II: Wind Speed and Directions |          |           |                           |
| Date                                | Time     | Direction | Wind Speed m <sup>s</sup> |
| 29 Jun 2025                         | 6:00 PM  | WSW       | 0.5                       |
| 29 Jun 2025                         | 7:00 PM  | SW        | 0.4                       |
| 29 Jun 2025                         | 8:00 PM  | WSW       | 0.2                       |
| 29 Jun 2025                         | 9:00 PM  | WSW       | 0.1                       |
| 29 Jun 2025                         | 10:00 PM | SW        | 0.2                       |
| 29 Jun 2025                         | 11:00 PM | SSE       | 0.2                       |
| 30 Jun 2025                         | 12:00 AM | SW        | 0.2                       |
| 30 Jun 2025                         | 1:00 AM  | SW        | 0.3                       |
| 30 Jun 2025                         | 2:00 AM  | WSW       | 0.2                       |
| 30 Jun 2025                         | 3:00 AM  | WSW       | 0.2                       |
| 30 Jun 2025                         | 4:00 AM  | SSW       | 0.1                       |
| 30 Jun 2025                         | 5:00 AM  | W         | 0.1                       |
| 30 Jun 2025                         | 6:00 AM  | W         | 0.2                       |
| 30 Jun 2025                         | 7:00 AM  | W         | 0.2                       |
| 30 Jun 2025                         | 8:00 AM  | SW        | 0.4                       |
| 30 Jun 2025                         | 9:00 AM  | SSW       | 0.3                       |
| 30 Jun 2025                         | 10:00 AM | SW        | 0.4                       |
| 30 Jun 2025                         | 11:00 AM | WSW       | 0.5                       |
| 30 Jun 2025                         | 12:00 PM | W         | 0.7                       |
| 30 Jun 2025                         | 1:00 PM  | SW        | 0.4                       |
| 30 Jun 2025                         | 2:00 PM  | SW        | 0.6                       |
| 30 Jun 2025                         | 3:00 PM  | SW        | 0.6                       |
| 30 Jun 2025                         | 4:00 PM  | SW        | 0.5                       |
| 30 Jun 2025                         | 5:00 PM  | WSW       | 0.6                       |
| 30 Jun 2025                         | 6:00 PM  | SW        | 0.6                       |
| 30 Jun 2025                         | 7:00 PM  | WSW       | 0.4                       |
| 30 Jun 2025                         | 8:00 PM  | SW        | 0.3                       |
| 30 Jun 2025                         | 9:00 PM  | SW        | 0.5                       |
| 30 Jun 2025                         | 10:00 PM | W         | 0.1                       |
| 30 Jun 2025                         | 11:00 PM | W         | 0.2                       |

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**APPENDIX D  
ENVIRONMENTAL MONITORING  
SCHEDULES**

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**Agreement No. CE/59/2015 (EP)**  
**Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction**  
**Impact Air Quality and Noise Monitoring Schedule (June 2025)**

| Sunday        | Monday   | Tuesday          | Wednesday        | Thursday   | Friday           | Saturday  |
|---------------|--|------------------|------------------|--|------------------|---|
| 1-Jun         | 2-Jun  | 3-Jun            | 4-Jun            | 5-Jun  | 6-Jun            | 7-Jun   |
|               |  |                  | <b>24 hr TSP</b> | <b>1 hr TSP X3</b><br>[AM1, AM2, AM3]<br>[AM4,AM5(A), AM6(A)]<br><br><b>Noise [Daytime (07:00-19:00)]</b><br>[CM1, CM2, CM3, CM4, CM5]<br>[CM6(A), CM7(A), CM8(A)] |                  |   |
| <b>8-Jun</b>  |  |                  | <b>24 hr TSP</b> | <b>1 hr TSP X3</b><br>[AM1, AM2, AM3]<br>[AM4,AM5(A), AM6(A)]<br><br><b>Noise [Daytime (07:00-19:00)]</b><br>[CM1, CM2, CM3, CM4, CM5]<br>[CM6(A), CM7(A), CM8(A)] |                  |   |
| <b>15-Jun</b> |  |                  |                  |  |                  |   |
|               |  | <b>24 hr TSP</b> |                  |  |                  | <b>24 hr TSP</b>  |
| <b>22-Jun</b> | <b>1 hr TSP X3</b><br>[AM1, AM2, AM3]<br>[AM4,AM5(A), AM6(A)]<br><br><b>Noise [Daytime (07:00-19:00)]</b><br>[CM1, CM2, CM3, CM4, CM5]<br>[CM6(A), CM7(A), CM8(A)] |                  |                  |  | <b>24 hr TSP</b> | <b>1 hr TSP X3</b><br>[AM1, AM2, AM3]<br>[AM4,AM5(A), AM6(A)] |
| <b>29-Jun</b> |  |                  |                  |  |                  |   |
|               |  |                  |                  |  |                  |   |

**Air Quality Monitoring Station**

AM1 - Tin Hau Temple  
 AM2 - Sai Tso Wan Recreation Ground  
 AM3 - Yau Lai Estate Bik Lai House  
 AM4<sup>(1)</sup> - Sitting-out Area at Cha Kwo Ling Village  
 AM4(B)<sup>(2)</sup> - Flat 103 Cha Kwo Ling Village  
 AM5(A) - Tseung Kwan O DSD Desilting Compound  
 AM6(A) - Park Central, L1/F Open Space Area

**Noise Monitoring Station**

CM1 - Nga Lai House, Yau Lai Estate Phase 1, Yau Tong  
 CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong  
 CM3 - Block S, Yau Lai Estate Phase 5, Yau Tong  
 CM4 - Tin Hau Temple, Cha Kwo Ling  
 CM5 - CCC Kei Faat Primary School, Yau Tong  
 CM6(A) - Site Boundary of Contract No. NE/2015/02 near Tower 1, Ocean Shores  
 CM7(A) - Site Boundary of Contract No. NE/2015/02 near Tower 7, Ocean Shores  
 CM8(A) - Park Central, L1/F Open Space Area

Note (1) For 1-hour TSP monitoring; (2) For 24-hour TSP monitoring

**Agreement No. CE/59/2015 (EP)**  
**Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction**  
**Tentative Impact Air Quality and Noise Monitoring Schedule (July 2025)**

| Sunday        | Monday   | Tuesday  | Wednesday  | Thursday         | Friday   | Saturday         |
|---------------|--|--|--|------------------|--|------------------|
|               |  | 1-Jul  | 2-Jul  | 3-Jul            | 4-Jul  | 5-Jul            |
|               |  |  |  | <b>24 hr TSP</b> | <b>1 hr TSP X3</b><br>[AM1, AM2, AM3]<br>[AM4,AM5(A), AM6(A)]<br><br><b>Noise [Daytime (07:00-19:00)]</b><br>[CM1, CM2, CM3, CM4, CM5]<br>[CM6(A), CM7(A), CM8(A)] |                  |
| <b>6-Jul</b>  |  |  |  |                  |  |                  |
|               |  |  | <b>1 hr TSP X3</b><br>[AM1, AM2, AM3]<br>[AM4,AM5(A), AM6(A)]<br><br><b>Noise [Daytime (07:00-19:00)]</b><br>[CM1, CM2, CM3, CM4, CM5]<br>[CM6(A), CM7(A), CM8(A)] |                  |  |                  |
|               |  | <b>24 hr TSP</b>   |  |                  |  |                  |
| <b>13-Jul</b> |  |  |  |                  |  |                  |
|               |  | <b>1 hr TSP X3</b><br>[AM1, AM2, AM3]<br>[AM4,AM5(A), AM6(A)]<br><br><b>Noise [Daytime (07:00-19:00)]</b><br>[CM1, CM2, CM3, CM4, CM5]<br>[CM6(A), CM7(A), CM8(A)] |  |                  |  |                  |
|               | <b>24 hr TSP</b>   |  |  |                  |  | <b>24 hr TSP</b> |
| <b>20-Jul</b> |  |  |  |                  |  |                  |
|               | <b>1 hr TSP X3</b><br>[AM1, AM2, AM3]<br>[AM4,AM5(A), AM6(A)]<br><br><b>Noise [Daytime (07:00-19:00)]</b><br>[CM1, CM2, CM3, CM4, CM5]<br>[CM6(A), CM7(A), CM8(A)] |  |  |                  | <b>1 hr TSP X3</b><br>[AM1, AM2, AM3]<br>[AM4,AM5(A), AM6(A)]  |                  |
|               |  |  |  | <b>24 hr TSP</b> |  |                  |
| <b>27-Jul</b> |  |  |  |                  |  |                  |
|               |  |  |  |                  | <b>1 hr TSP X3</b><br>[AM1, AM2, AM3]<br>[AM4,AM5(A), AM6(A)]<br><br><b>Noise [Daytime (07:00-19:00)]</b><br>[CM1, CM2, CM3, CM4, CM5]<br>[CM6(A), CM7(A), CM8(A)] |                  |
|               |  |  | <b>24 hr TSP</b>   |                  |  |                  |

**Air Quality Monitoring Station**

AM1 - Tin Hau Temple  
 AM2 - Sai Tso Wan Recreation Ground  
 AM3 - Yau Lai Estate Bik Lai House  
 AM4<sup>(1)</sup> - Sitting-out Area at Cha Kwo Ling Village  
 AM4(B)<sup>(2)</sup> - Flat 103 Cha Kwo Ling Village  
 AM5(A) - Tseung Kwan O DSD Desilting Compound  
 AM6(A) - Park Central, L1/F Open Space Area

**Noise Monitoring Station**

CM1 - Nga Lai House, Yau Lai Estate Phase 1, Yau Tong  
 CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong  
 CM3 - Block S, Yau Lai Estate Phase 5, Yau Tong  
 CM4 - Tin Hau Temple, Cha Kwo Ling  
 CM5 - CCC Kei Faat Primary School, Yau Tong  
 CM6(A) - Site Boundary of Contract No. NE/2015/02 near Tower 1, Ocean Shores  
 CM7(A) - Site Boundary of Contract No. NE/2015/02 near Tower 7, Ocean Shores  
 CM8(A) - Park Central, L1/F Open Space Area

Note (1) For 1-hour TSP monitoring; (2) For 24-hour TSP monitoring

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**APPENDIX E  
1-HOUR TSP MONITORING RESULTS  
AND GRAPHICAL PRESENTATIONS**

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## APPENDIX E - 1-HOUR TSP MONITORING RESULTS

| <b>Location AM1 - Tin Hau Temple</b> |       |         |  |
|--------------------------------------|-------|---------|--|
| Date                                 | Time  | Weather | Particulate Concentration ( $\mu\text{g}/\text{m}^3$ ) |
| 5-Jun-25                             | 10:10 | Cloudy  | 138.7  |
| 5-Jun-25                             | 11:10 | Cloudy  | 134.9  |
| 5-Jun-25                             | 12:10 | Cloudy  | 129.2  |
| 11-Jun-25                            | 10:30 | Cloudy  | 24.7   |
| 11-Jun-25                            | 11:30 | Cloudy  | 28.5   |
| 11-Jun-25                            | 12:30 | Cloudy  | 34.2   |
| 17-Jun-25                            | 12:28 | Cloudy  | 20.9   |
| 17-Jun-25                            | 13:28 | Cloudy  | 24.7   |
| 17-Jun-25                            | 14:28 | Cloudy  | 11.4   |
| 23-Jun-25                            | 13:00 | Sunny   | 45.0   |
| 23-Jun-25                            | 14:00 | Sunny   | 48.6   |
| 23-Jun-25                            | 15:00 | Sunny   | 46.8   |
| 28-Jun-25                            | 10:25 | Fine    | 41.4   |
| 28-Jun-25                            | 11:25 | Fine    | 32.4   |
| 28-Jun-25                            | 12:25 | Fine    | 25.2   |
|                                      |       | Average | 52.4   |
|                                      |       | Maximum | 138.7  |
|                                      |       | Minimum | 11.4   |

| <b>Location AM2 - Sai Tso Wan Recreation Ground</b> |       |         |  |
|---|-------|---------|--|
| Date  | Time  | Weather | <i>Particulate Concentration ( <math>\mu\text{g}/\text{m}^3</math> )</i> |
| 5-Jun-25  | 14:11 | Cloudy  | 21.6   |
| 5-Jun-25  | 15:11 | Cloudy  | 19.8   |
| 5-Jun-25  | 16:11 | Cloudy  | 30.6   |
| 11-Jun-25   | 10:28 | Cloudy  | 26.6   |
| 11-Jun-25   | 11:28 | Cloudy  | 57.0   |
| 11-Jun-25   | 12:28 | Cloudy  | 49.4   |
| 17-Jun-25   | 10:15 | Cloudy  | 31.5   |
| 17-Jun-25   | 11:15 | Cloudy  | 37.8   |
| 17-Jun-25   | 12:15 | Cloudy  | 44.1   |
| 23-Jun-25   | 9:45  | Sunny   | 11.4   |
| 23-Jun-25   | 10:45 | Sunny   | 7.6  |
| 23-Jun-25   | 11:45 | Sunny   | 13.3   |
| 28-Jun-25   | 9:35  | Fine    | 33.6   |
| 28-Jun-25   | 10:35 | Fine    | 37.8   |
| 28-Jun-25   | 11:35 | Fine    | 50.4   |
|   |       | Average | 31.5   |
|   |       | Maximum | 57.0   |
|   |       | Minimum | 7.6  |

## APPENDIX E - 1-HOUR TSP MONITORING RESULTS

| <b>Location AM3 - Yau Lai Estate Bik Lai House</b> |       |         |  |
|--|-------|---------|--|
| Date   | Time  | Weather | <i>Particulate Concentration ( <math>\mu\text{g}/\text{m}^3</math> )</i> |
| 5-Jun-25   | 12:01 | Cloudy  | 5.7  |
| 5-Jun-25   | 13:01 | Cloudy  | 5.7  |
| 5-Jun-25   | 14:01 | Cloudy  | 11.4   |
| 11-Jun-25  | 11:40 | Cloudy  | 34.2   |
| 11-Jun-25  | 12:40 | Cloudy  | 26.6   |
| 11-Jun-25  | 13:40 | Cloudy  | 36.1   |
| 17-Jun-25  | 14:50 | Cloudy  | 7.6  |
| 17-Jun-25  | 15:50 | Cloudy  | 13.3   |
| 17-Jun-25  | 16:50 | Cloudy  | 20.9   |
| 23-Jun-25  | 9:00  | Sunny   | 27.0   |
| 23-Jun-25  | 10:00 | Sunny   | 32.4   |
| 23-Jun-25  | 11:00 | Sunny   | 34.2   |
| 28-Jun-25  | 13:35 | Fine    | 39.9   |
| 28-Jun-25  | 14:35 | Fine    | 56.7   |
| 28-Jun-25  | 15:35 | Fine    | 60.9   |
|  |       | Average | 27.5   |
|  |       | Maximum | 60.9   |
|  |       | Minimum | 5.7  |

| <b>Location AM4 - Sitting-out Area at Cha Kwo Ling Village</b> |       |         |  |
|--|-------|---------|--|
| Date   | Time  | Weather | <i>Particulate Concentration ( <math>\mu\text{g}/\text{m}^3</math> )</i> |
| 5-Jun-25   | 9:15  | Cloudy  | 138.7  |
| 5-Jun-25   | 10:15 | Cloudy  | 134.9  |
| 5-Jun-25   | 11:15 | Cloudy  | 142.5  |
| 11-Jun-25  | 10:50 | Cloudy  | 27.3   |
| 11-Jun-25  | 11:50 | Cloudy  | 37.8   |
| 11-Jun-25  | 12:50 | Cloudy  | 39.9   |
| 17-Jun-25  | 9:00  | Cloudy  | 9.5  |
| 17-Jun-25  | 10:00 | Cloudy  | 13.3   |
| 17-Jun-25  | 11:00 | Cloudy  | 19.0   |
| 23-Jun-25  | 16:00 | Sunny   | 45.0   |
| 23-Jun-25  | 17:00 | Sunny   | 41.4   |
| 23-Jun-25  | 18:00 | Sunny   | 48.6   |
| 28-Jun-25  | 10:05 | Fine    | 30.6   |
| 28-Jun-25  | 11:05 | Fine    | 37.8   |
| 28-Jun-25  | 12:05 | Fine    | 46.8   |
|  |       | Average | 54.2   |
|  |       | Maximum | 142.5  |
|  |       | Minimum | 9.5  |

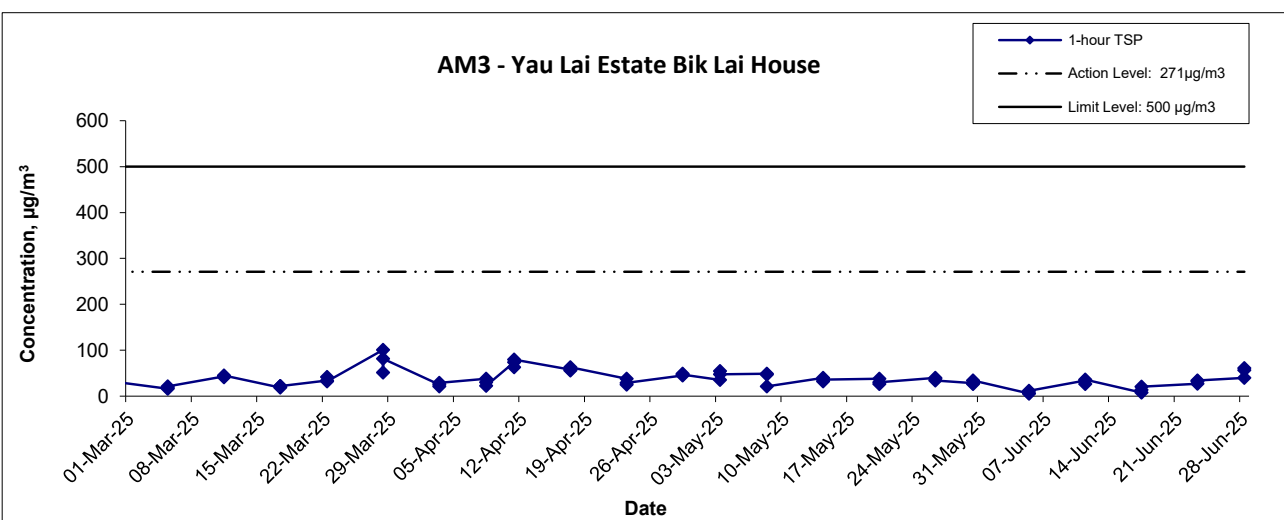
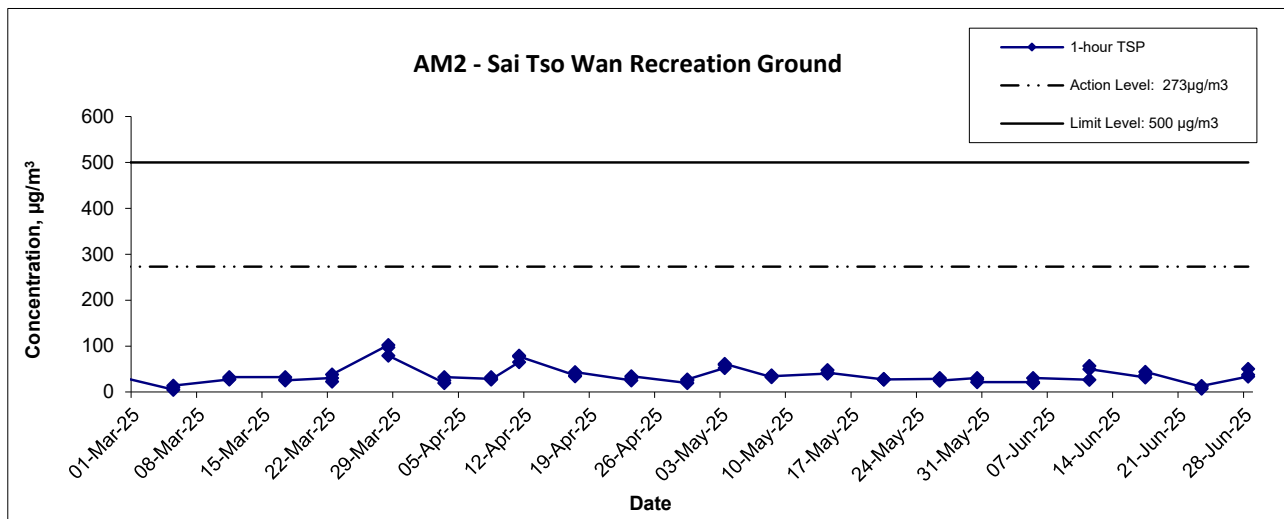
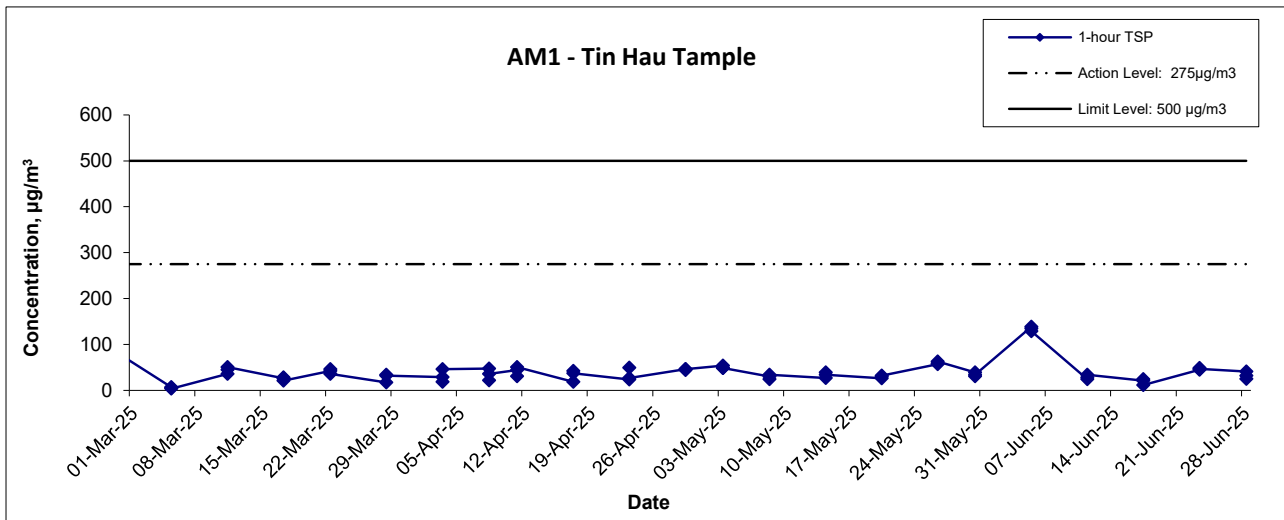
## APPENDIX E - 1-HOUR TSP MONITORING RESULTS

| <b>Location AM5(A) - Tseung Kwan O DSD Desilting Compound</b> |       |         |  |
|---|-------|---------|--|
| Date  | Time  | Weather | <i>Particulate Concentration ( <math>\mu\text{g}/\text{m}^3</math> )</i> |
| 5-Jun-25  | 12:06 | Cloudy  | 28.8   |
| 5-Jun-25  | 13:06 | Cloudy  | 10.8   |
| 5-Jun-25  | 14:06 | Cloudy  | 14.4   |
| 11-Jun-25   | 14:50 | Cloudy  | 55.1   |
| 11-Jun-25   | 15:50 | Cloudy  | 62.7   |
| 11-Jun-25   | 16:50 | Cloudy  | 58.9   |
| 17-Jun-25   | 11:20 | Cloudy  | 25.2   |
| 17-Jun-25   | 12:20 | Cloudy  | 27.0   |
| 17-Jun-25   | 13:20 | Cloudy  | 30.6   |
| 23-Jun-25   | 11:50 | Sunny   | 13.3   |
| 23-Jun-25   | 12:50 | Sunny   | 9.5  |
| 23-Jun-25   | 13:50 | Sunny   | 17.1   |
| 28-Jun-25   | 14:50 | Fine    | 34.2   |
| 28-Jun-25   | 15:50 | Fine    | 30.6   |
| 28-Jun-25   | 16:50 | Fine    | 39.6   |
|   |       | Average | 30.5   |
|   |       | Maximum | 62.7   |
|   |       | Minimum | 9.5  |

| <b>Location AM6(A) - Park Central, L1/F Open Space Area</b> |       |         |  |
|---|-------|---------|--|
| Date  | Time  | Weather | Particulate Concentration ( $\mu\text{g}/\text{m}^3$ ) |
| 5-Jun-25  | 9:15  | Cloudy  | 24.7   |
| 5-Jun-25  | 10:15 | Cloudy  | 28.5   |
| 5-Jun-25  | 11:15 | Cloudy  | 36.1   |
| 11-Jun-25   | 13:48 | Cloudy  | 62.7   |
| 11-Jun-25   | 14:48 | Cloudy  | 87.4   |
| 11-Jun-25   | 15:48 | Cloudy  | 76.0   |
| 17-Jun-25   | 11:40 | Cloudy  | 34.2   |
| 17-Jun-25   | 12:40 | Cloudy  | 30.6   |
| 17-Jun-25   | 13:40 | Cloudy  | 41.4   |
| 23-Jun-25   | 12:55 | Sunny   | 20.9   |
| 23-Jun-25   | 13:55 | Sunny   | 9.5  |
| 23-Jun-25   | 14:55 | Sunny   | 15.2   |
| 28-Jun-25   | 14:15 | Fine    | 30.6   |
| 28-Jun-25   | 15:15 | Fine    | 45.0   |
| 28-Jun-25   | 16:15 | Fine    | 45.0   |
|   |       | Average | 39.2   |
|   |       | Maximum | 87.4   |
|   |       | Minimum | 9.5  |

# APPENDIX E - 1-HOUR TSP MONITORING RESULTS

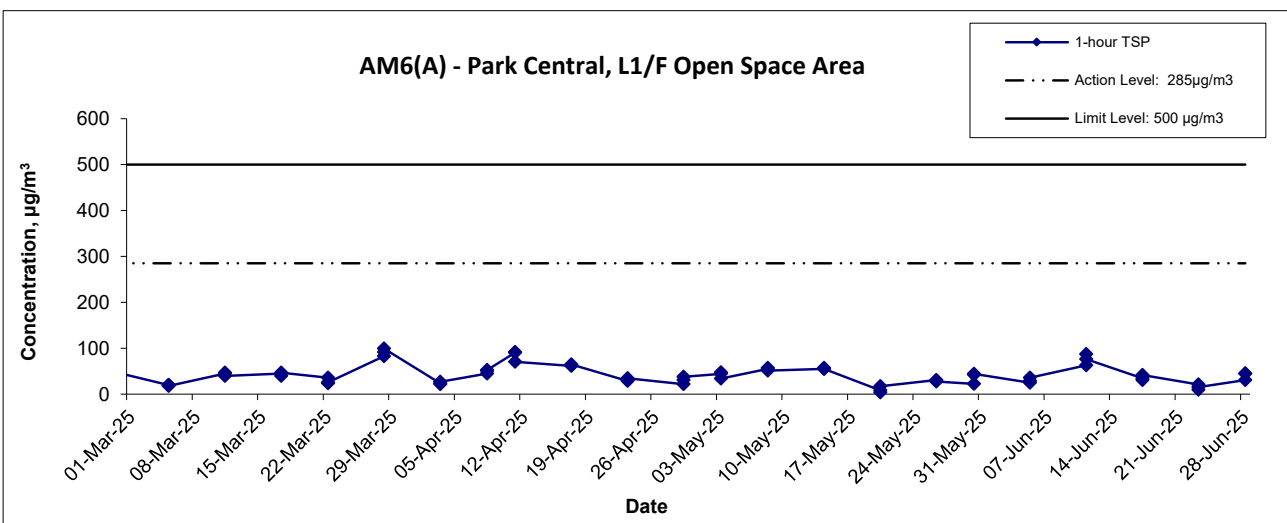
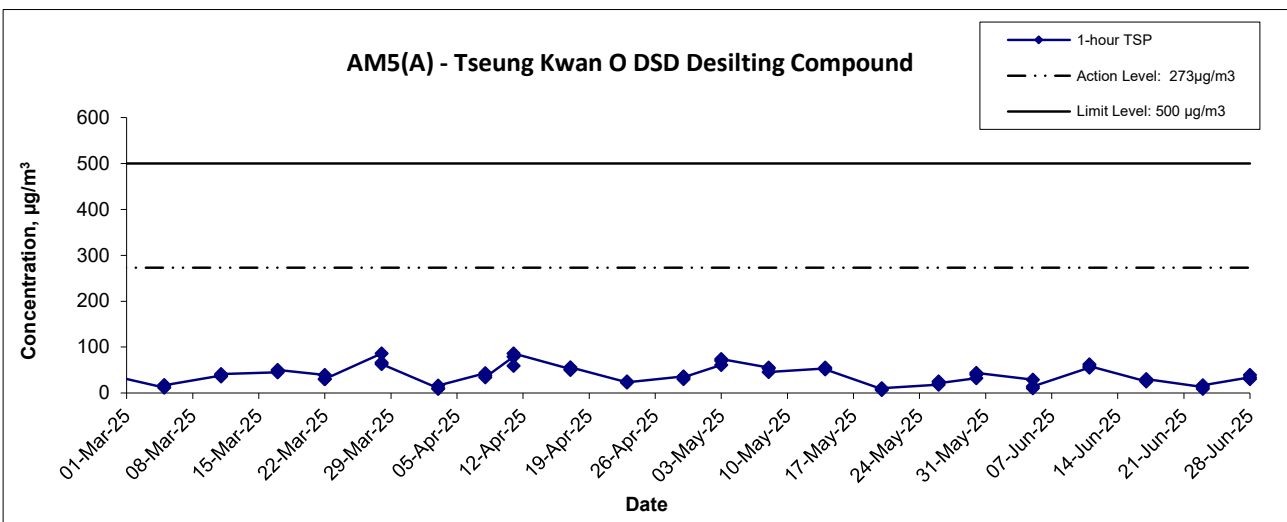
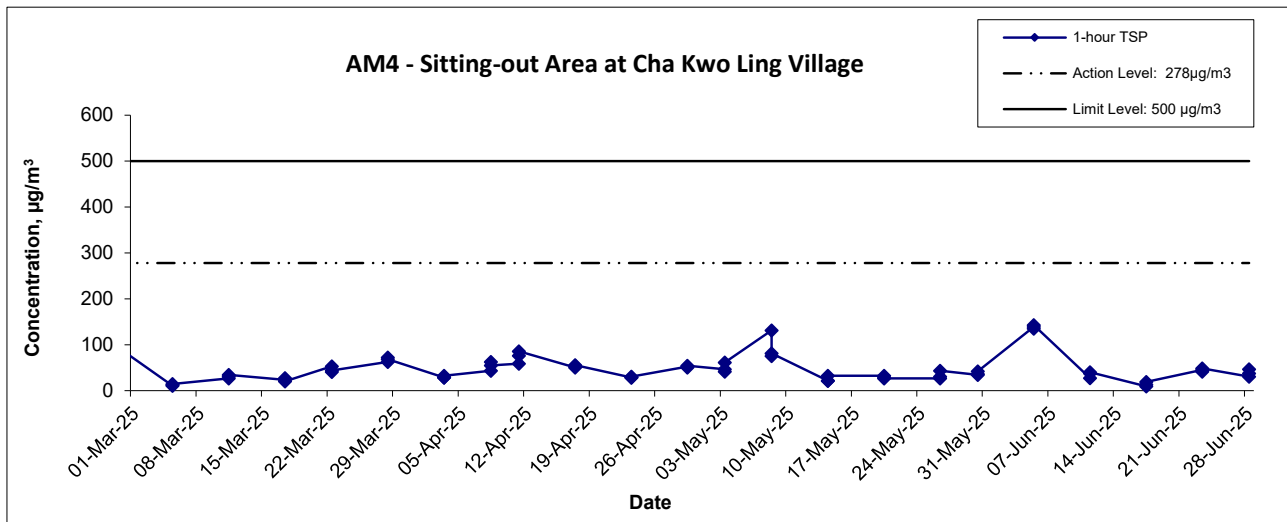
## 1-hr TSP Concentration Levels



|  |        |             |  |
|--|--------|-------------|--|
| Agreement No. CE/59/2015 (EP)<br>Environmental Team for Tseung Kwan O - Lam Tin Tunnel -<br>Design and Construction<br><br>Graphical Presentation of 1-hour TSP Monitoring Results | Scale  | Project No. |  |
|  | Date   | Appendix    |  |
|  | N.T.S  | MA16034     |  |
|  | Jun-25 | E           |  |

# APPENDIX E - 1-HOUR TSP MONITORING RESULTS

## 1-hr TSP Concentration Levels



|   |       |        |             |         |
|---|-------|--------|-------------|---------|
| Agreement No. CE/59/2015 (EP)<br>Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction<br><br>Graphical Presentation of 1-hour TSP Monitoring Results | Scale | N.T.S  | Project No. | MA16034 |
|   | Date  | Jun-25 | Appendix    | E       |



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**APPENDIX F  
24-HOUR TSP MONITORING RESULTS  
AND GRAPHICAL PRESENTATIONS**

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**Appendix F - 24-hour TSP Monitoring Results**

**Location AM1 - Tin Hau Temple**

| Start Date | Weather   | Filter Weight (g) |        | Particulate | Elapse Time |         | Sampling   | Flow Rate (m <sup>3</sup> /min.) |       | Av. flow              | Total vol.        | Conc.                |      |
|------------|-----------|-------------------|--------|-------------|-------------|---------|------------|----------------------------------|-------|-----------------------|-------------------|----------------------|------|
|            | Condition | Initial           | Final  | Weight (g)  | Initial     | Final   | Time(hrs.) | Initial                          | Final | (m <sup>3</sup> /min) | (m <sup>3</sup> ) | (µg/m <sup>3</sup> ) |      |
| 4-Jun-25   | Cloudy    | 2.8151            | 2.8486 | 0.0335      | 15042.6     | 15066.6 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1758.0            | 19.0                 |      |
| 10-Jun-25  | Cloudy    | 2.8220            | 2.8344 | 0.0124      | 15066.6     | 15090.6 | 24.0       | 1.21                             | 1.21  | 1.21                  | 1746.0            | 7.1                  |      |
| 16-Jun-25  | Fine      | 2.8164            | 2.8326 | 0.0162      | 15090.6     | 15114.6 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1753.2            | 9.3                  |      |
| 21-Jun-25  | Sunny     | 2.8435            | 2.8774 | 0.0339      | 15114.6     | 15138.6 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1751.9            | 19.4                 |      |
| 27-Jun-25  | Fine      | 2.8424            | 2.8823 | 0.0399      | 15138.6     | 15162.6 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1752.0            | 22.8                 |      |
|            |           |                   |        |             |             |         |            |                                  |       |                       |                   | Min                  | 7.1  |
|            |           |                   |        |             |             |         |            |                                  |       |                       |                   | Max                  | 22.8 |
|            |           |                   |        |             |             |         |            |                                  |       |                       |                   | Average              | 15.5 |

**Location AM2 - Sai Tso Wan Recreation Ground**

| Start Date | Weather   | Filter Weight (g) |        | Particulate | Elapse Time |         | Sampling   | Flow Rate (m <sup>3</sup> /min.) |       | Av. flow              | Total vol.        | Conc.                |      |
|------------|-----------|-------------------|--------|-------------|-------------|---------|------------|----------------------------------|-------|-----------------------|-------------------|----------------------|------|
|            | Condition | Initial           | Final  | Weight (g)  | Initial     | Final   | Time(hrs.) | Initial                          | Final | (m <sup>3</sup> /min) | (m <sup>3</sup> ) | (µg/m <sup>3</sup> ) |      |
| 4-Jun-25   | Cloudy    | 2.8441            | 2.8543 | 0.0102      | 36132.6     | 36156.6 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1758.3            | 5.8                  |      |
| 10-Jun-25  | Cloudy    | 2.8121            | 2.8255 | 0.0133      | 36156.6     | 36180.6 | 24.0       | 1.21                             | 1.22  | 1.21                  | 1748.7            | 7.6                  |      |
| 16-Jun-25  | Cloudy    | 2.8423            | 2.8700 | 0.0278      | 36180.6     | 36204.6 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1754.1            | 15.8                 |      |
| 21-Jun-25  | Sunny     | 2.8051            | 2.8185 | 0.0134      | 36204.6     | 36228.6 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1753.1            | 7.6                  |      |
| 27-Jun-25  | Fine      | 2.8439            | 2.8550 | 0.0111      | 36228.6     | 36252.6 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1753.2            | 6.3                  |      |
|            |           |                   |        |             |             |         |            |                                  |       |                       |                   | Min                  | 5.8  |
|            |           |                   |        |             |             |         |            |                                  |       |                       |                   | Max                  | 15.8 |
|            |           |                   |        |             |             |         |            |                                  |       |                       |                   | Average              | 8.6  |

**Location AM3 - Yau Lai Estate, Bik Lai House**

| Start Date | Weather   | Filter Weight (g) |        | Particulate | Elapse Time |         | Sampling   | Flow Rate (m <sup>3</sup> /min.) |       | Av. flow              | Total vol.        | Conc.                |      |
|------------|-----------|-------------------|--------|-------------|-------------|---------|------------|----------------------------------|-------|-----------------------|-------------------|----------------------|------|
|            | Condition | Initial           | Final  | Weight (g)  | Initial     | Final   | Time(hrs.) | Initial                          | Final | (m <sup>3</sup> /min) | (m <sup>3</sup> ) | (µg/m <sup>3</sup> ) |      |
| 4-Jun-25   | Cloudy    | 2.8432            | 2.8722 | 0.0290      | 10430.2     | 10454.2 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1756.1            | 16.5                 |      |
| 10-Jun-25  | Cloudy    | 2.8153            | 2.8414 | 0.0261      | 10454.2     | 10478.2 | 24.0       | 1.21                             | 1.21  | 1.21                  | 1745.3            | 14.9                 |      |
| 16-Jun-25  | Fine      | 2.8589            | 2.8969 | 0.0380      | 10478.2     | 10502.2 | 24.0       | 1.21                             | 1.22  | 1.22                  | 1751.7            | 21.7                 |      |
| 21-Jun-25  | Fine      | 2.8337            | 2.8457 | 0.0120      | 10502.2     | 10526.2 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1750.6            | 6.9                  |      |
| 27-Jun-25  | Fine      | 2.8257            | 2.8451 | 0.0194      | 10526.2     | 10550.2 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1750.7            | 11.1                 |      |
|            |           |                   |        |             |             |         |            |                                  |       |                       |                   | Min                  | 6.9  |
|            |           |                   |        |             |             |         |            |                                  |       |                       |                   | Max                  | 21.7 |
|            |           |                   |        |             |             |         |            |                                  |       |                       |                   | Average              | 14.2 |

**Location AM4(B) - Flat 103 Cha Kwo Ling Village**

| Start Date | Weather   | Filter Weight (g) |        | Particulate | Elapse Time |         | Sampling   | Flow Rate (m <sup>3</sup> /min.) |       | Av. flow              | Total vol.        | Conc.                |      |
|------------|-----------|-------------------|--------|-------------|-------------|---------|------------|----------------------------------|-------|-----------------------|-------------------|----------------------|------|
|            | Condition | Initial           | Final  | Weight (g)  | Initial     | Final   | Time(hrs.) | Initial                          | Final | (m <sup>3</sup> /min) | (m <sup>3</sup> ) | (µg/m <sup>3</sup> ) |      |
| 4-Jun-25   | Fine      | 2.8243            | 2.9038 | 0.0795      | 21938.3     | 21962.3 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1753.3            | 45.3                 |      |
| 10-Jun-25  | Cloudy    | 2.8289            | 2.9687 | 0.1398      | 21962.3     | 21986.3 | 24.0       | 1.21                             | 1.21  | 1.21                  | 1742.1            | 80.2                 |      |
| 16-Jun-25  | Rainy     | 2.8275            | 2.9580 | 0.1305      | 21986.3     | 22010.3 | 24.0       | 1.21                             | 1.22  | 1.21                  | 1748.5            | 74.7                 |      |
| 21-Jun-25  | Fine      | 2.8308            | 2.9200 | 0.0892      | 22010.3     | 22034.3 | 24.0       | 1.21                             | 1.21  | 1.21                  | 1747.3            | 51.1                 |      |
| 27-Jun-25  | Fine      | 2.7692            | 2.8222 | 0.0530      | 22034.3     | 22058.3 | 24.0       | 1.21                             | 1.21  | 1.21                  | 1747.4            | 30.3                 |      |
|            |           |                   |        |             |             |         |            |                                  |       |                       |                   | Min                  | 30.3 |
|            |           |                   |        |             |             |         |            |                                  |       |                       |                   | Max                  | 80.2 |
|            |           |                   |        |             |             |         |            |                                  |       |                       |                   | Average              | 56.3 |

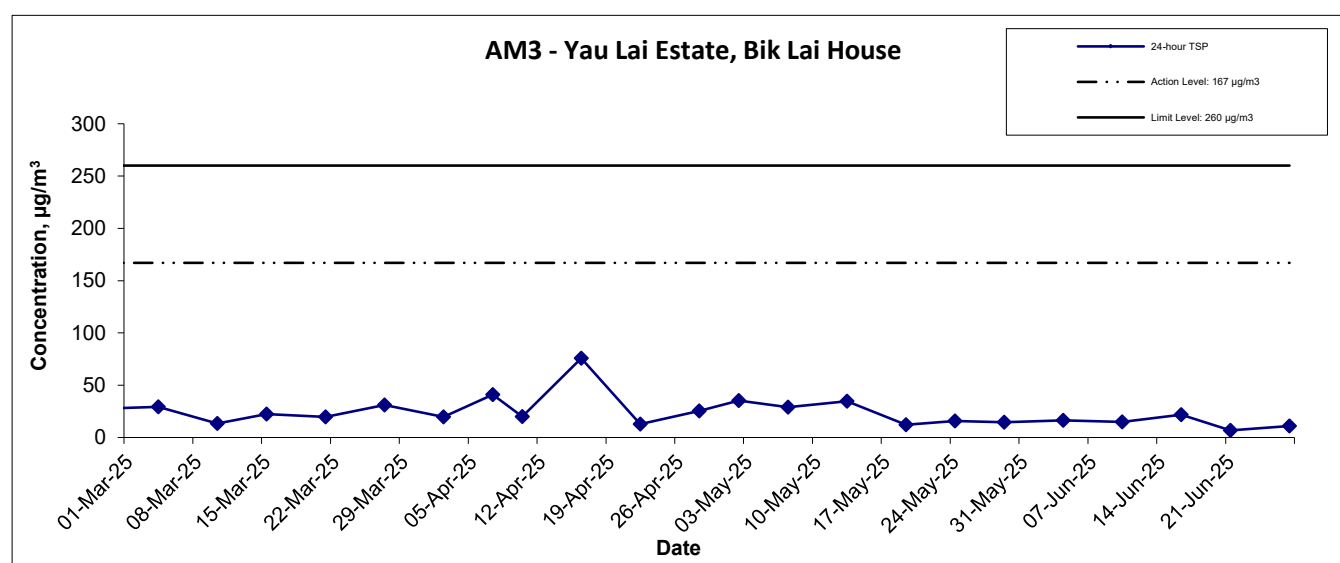
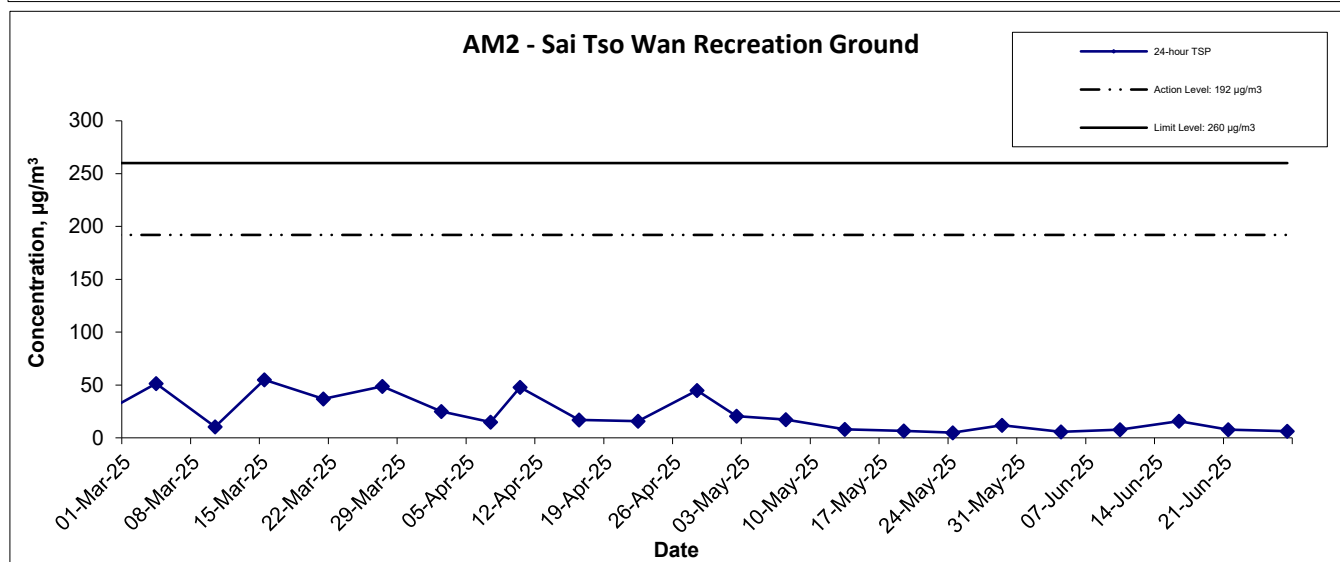
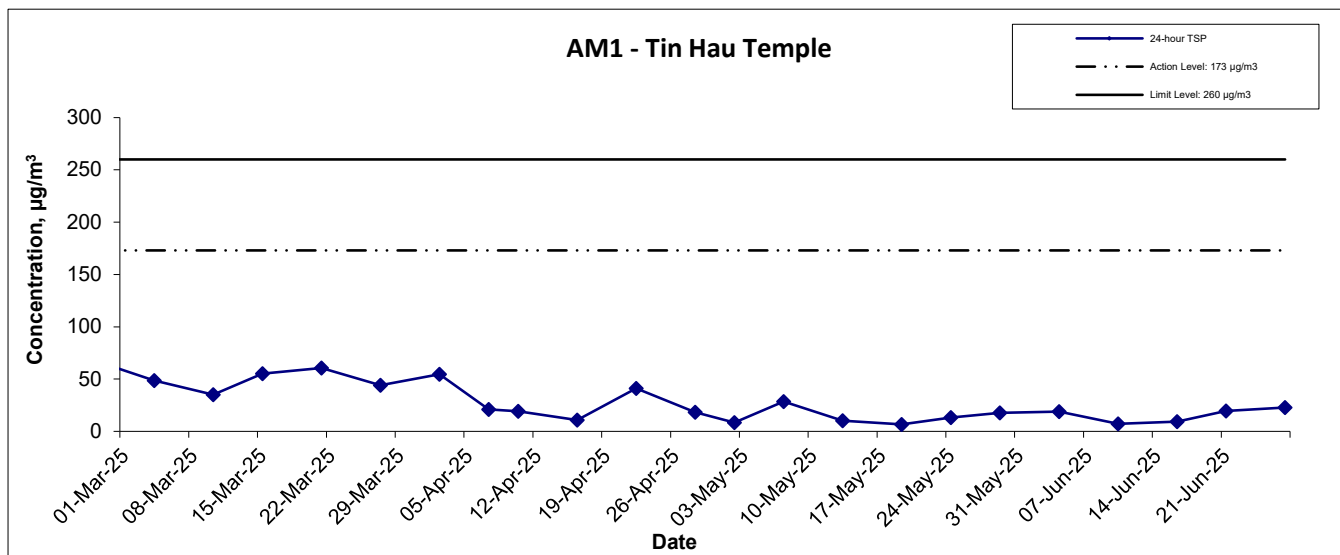
**Location AM5(A) - Tseung Kwan O DSD Desilting Compound**

| Start Date | Weather   | Filter Weight (g) |        | Particulate | Elapse Time |         | Sampling   | Flow Rate (m <sup>3</sup> /min.) |       | Av. flow              | Total vol.        | Conc.                |      |
|------------|-----------|-------------------|--------|-------------|-------------|---------|------------|----------------------------------|-------|-----------------------|-------------------|----------------------|------|
|            | Condition | Initial           | Final  | Weight (g)  | Initial     | Final   | Time(hrs.) | Initial                          | Final | (m <sup>3</sup> /min) | (m <sup>3</sup> ) | (µg/m <sup>3</sup> ) |      |
| 4-Jun-25   | Cloudy    | 2.8630            | 2.8741 | 0.0111      | 37579.6     | 37603.6 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1757.5            | 6.3                  |      |
| 10-Jun-25  | Cloudy    | 2.8254            | 2.8418 | 0.0163      | 37603.6     | 37627.6 | 24.0       | 1.21                             | 1.21  | 1.21                  | 1745.3            | 9.4                  |      |
| 16-Jun-25  | Cloudy    | 2.8058            | 2.8465 | 0.0407      | 37627.6     | 37651.6 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1752.6            | 23.2                 |      |
| 21-Jun-25  | Sunny     | 2.8290            | 2.8428 | 0.0137      | 37651.6     | 37675.6 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1751.4            | 7.8                  |      |
| 27-Jun-25  | Fine      | 2.8029            | 2.8162 | 0.0134      | 37675.6     | 37699.6 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1751.5            | 7.6                  |      |
|            |           |                   |        |             |             |         |            |                                  |       |                       |                   | Min                  | 6.3  |
|            |           |                   |        |             |             |         |            |                                  |       |                       |                   | Max                  | 23.2 |
|            |           |                   |        |             |             |         |            |                                  |       |                       |                   | Average              | 10.9 |

**Location AM6(A) - Park Central, L1/F Open Space Area**

| Start Date | Weather   | Filter Weight (g) |        | Particulate | Elapse Time |        | Sampling   | Flow Rate (m <sup>3</sup> /min.) |       | Av. flow              | Total vol.        | Conc.                |      |
|------------|-----------|-------------------|--------|-------------|-------------|--------|------------|----------------------------------|-------|-----------------------|-------------------|----------------------|------|
|            | Condition | Initial           | Final  | Weight (g)  | Initial     | Final  | Time(hrs.) | Initial                          | Final | (m <sup>3</sup> /min) | (m <sup>3</sup> ) | (µg/m <sup>3</sup> ) |      |
| 4-Jun-25   | Cloudy    | 2.8493            | 2.9078 | 0.0585      | 9433.8      | 9457.8 | 24.0       | 1.22                             | 1.22  | 1.22                  | 1756.0            | 33.3                 |      |
| 10-Jun-25  | Cloudy    | 2.8336            | 2.8735 | 0.0399      | 9457.8      | 9481.8 | 24.0       | 1.21                             | 1.21  | 1.21                  | 1741.5            | 22.9                 |      |
| 16-Jun-25  | Cloudy    | 2.8245            | 2.8983 | 0.0738      | 9505.8      | 9529.8 | 24.0       | 1.21                             | 1.22  | 1.22                  | 1750.1            | 42.2                 |      |
| 21-Jun-25  | Sunny     | 2.8409            | 2.8714 | 0.0306      | 9529.8      | 9553.8 | 24.0       | 1.21                             | 1.21  | 1.21                  | 1748.7            | 17.5                 |      |
| 27-Jun-25  | Fine      | 2.8246            | 2.8776 | 0.0530      | 9553.8      | 9577.8 | 24.0       | 1.22                             | 1.21  | 1.21                  | 1748.8            | 30.3                 |      |
|            |           |                   |        |             |             |        |            |                                  |       |                       |                   | Min                  | 17.5 |
|            |           |                   |        |             |             |        |            |                                  |       |                       |                   | Max                  | 42.2 |
|            |           |                   |        |             |             |        |            |                                  |       |                       |                   | Average              | 29.2 |

### 24-hr TSP Concentration Levels

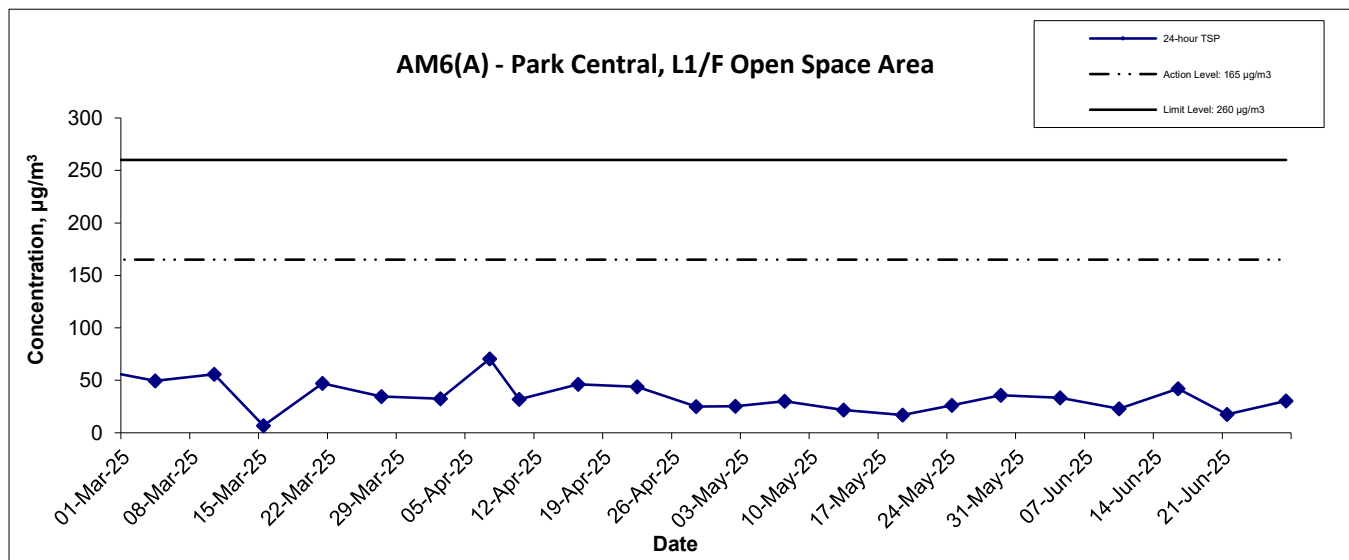
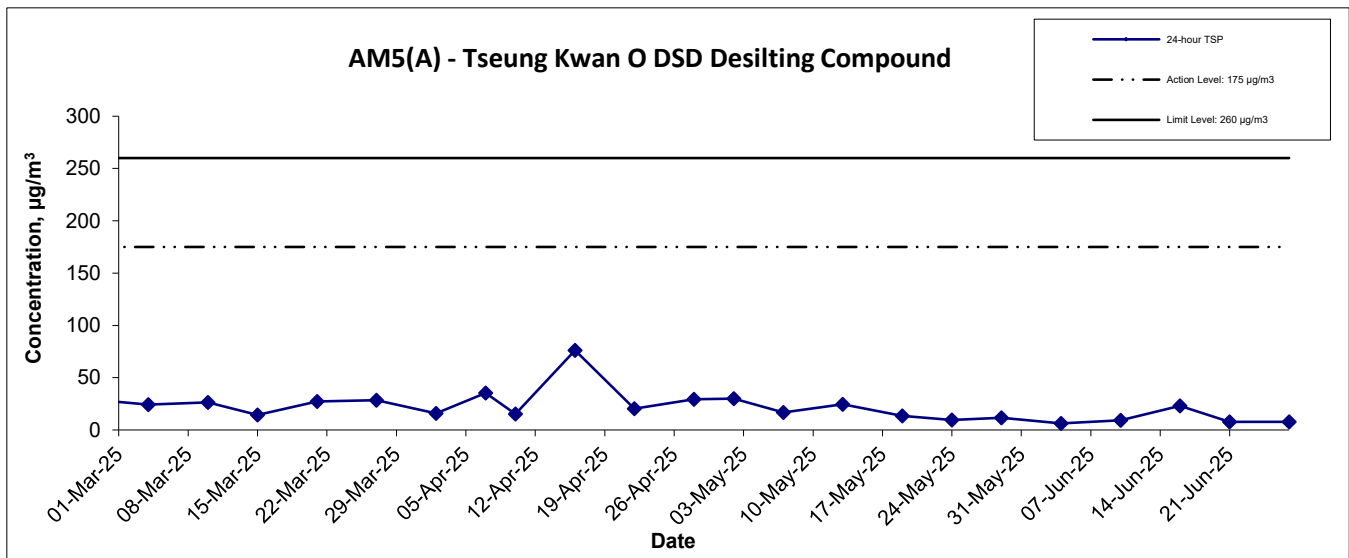
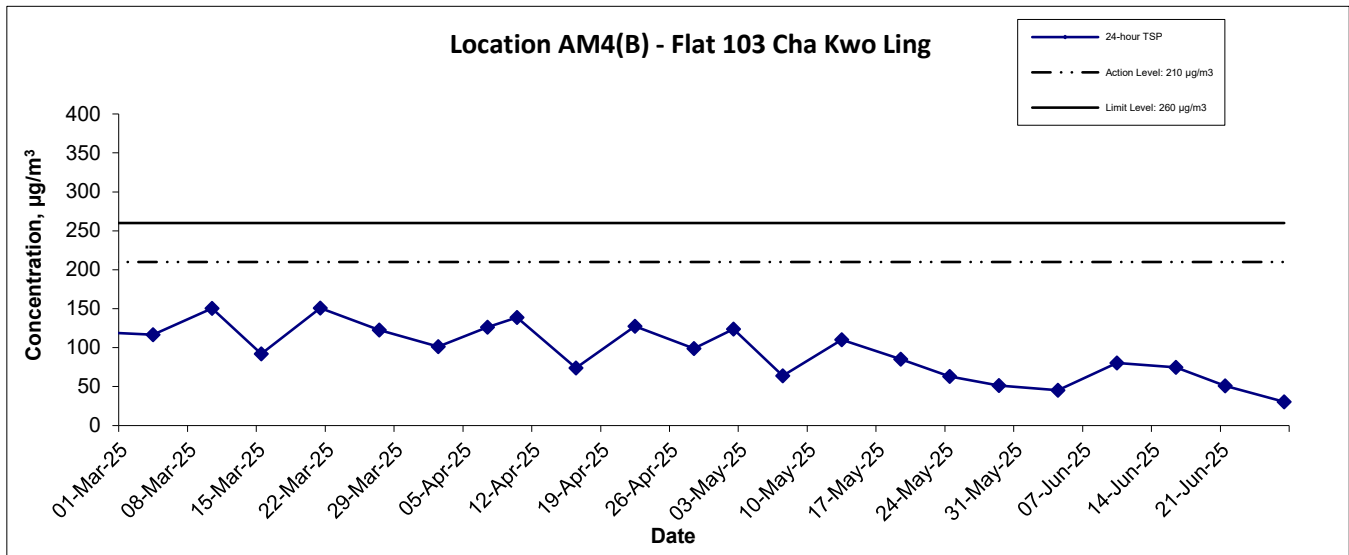


Agreement No. CE/59/2015 (EP)  
 Environmental Team for Tseung Kwan O - Lam Tin Tunnel -  
 Design and Construction  
 Graphical Presentation of 24-hour TSP Monitoring Results

|       |        |             |         |
|-------|--------|-------------|---------|
| Scale | N.T.S  | Project No. | MA16034 |
| Date  | Jun-25 | Appendix    | F       |



24-hr TSP Concentration Levels



|   |       |        |             |         |          |
|---|-------|--------|-------------|---------|----------|
| Agreement No. CE/59/2015 (EP)<br>Environmental Team for Tseung Kwan O - Lam Tin Tunnel -<br>Design and Construction<br><br>Graphical Presentation of 24-hour TSP Monitoring Results | Scale | N.T.S  | Project No. | MA16034 | CINOTECH |
|   | Date  | Jun-25 | Appendix    | F       |          |

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**APPENDIX G  
NOISE MONITORING RESULTS AND  
GRAPHICAL PRESENTATIONS**

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## Appendix G - Noise Monitoring Results

(0700-1900 hrs on Normal Weekdays)

| Location CM1 - Nga Lai House, Yau Lai Estate Phase 1, Yau Tong |       |         |                       |                 |                 |                 |                          |
|--|-------|---------|-----------------------|-----------------|-----------------|-----------------|--------------------------|
| Date   | Time  | Weather | Unit: dB (A) (30-min) |                 |                 |                 |                          |
|  |       |         | Measured Noise Level  |                 |                 | Baseline Level  | Construction Noise Level |
|  |       |         | L <sub>eq</sub>       | L <sub>10</sub> | L <sub>90</sub> | L <sub>eq</sub> | L <sub>eq</sub>          |
| 05-Jun-25  | 15:00 | Cloudy  | 69.5                  | 70.7            | 67.9            | 65.5            | 67                       |
| 11-Jun-25  | 11:30 | Cloudy  | 68.5                  | 69.7            | 67.0            | 65.5            | 65                       |
| 17-Jun-25  | 15:50 | Cloudy  | 68.4                  | 69.7            | 66.9            | 65.5            | 65                       |
| 23-Jun-25  | 9:00  | Sunny   | 67.9                  | 70.8            | 63.7            | 65.5            | 64                       |

| Location CM2 - Bik Lai House, Yau Lai Estate Phase 1, Yau Tong |       |         |                       |                 |                 |                 |                          |
|--|-------|---------|-----------------------|-----------------|-----------------|-----------------|--------------------------|
| Date   | Time  | Weather | Unit: dB (A) (30-min) |                 |                 |                 |                          |
|  |       |         | Measured Noise Level  |                 |                 | Baseline Level  | Construction Noise Level |
|  |       |         | L <sub>eq</sub>       | L <sub>10</sub> | L <sub>90</sub> | L <sub>eq</sub> | L <sub>eq</sub>          |
| 05-Jun-25  | 14:00 | Cloudy  | 69.7                  | 70.9            | 68.4            | 63.6            | 68                       |
| 11-Jun-25  | 11:00 | Cloudy  | 67.1                  | 68.4            | 65.4            | 63.6            | 65                       |
| 17-Jun-25  | 15:05 | Cloudy  | 60.8                  | 61.9            | 59.5            | 63.6            | 61 Measured ≤ Baseline   |
| 23-Jun-25  | 10:00 | Sunny   | 68.8                  | 71.3            | 65.7            | 63.6            | 67                       |

| Location CM3 - Block S, Yau Lai Estate Phase 5, Yau Tong |       |         |                       |                 |                 |                 |                          |
|--|-------|---------|-----------------------|-----------------|-----------------|-----------------|--------------------------|
| Date   | Time  | Weather | Unit: dB (A) (30-min) |                 |                 |                 |                          |
|  |       |         | Measured Noise Level  |                 |                 | Baseline Level  | Construction Noise Level |
|  |       |         | L <sub>eq</sub>       | L <sub>10</sub> | L <sub>90</sub> | L <sub>eq</sub> | L <sub>eq</sub>          |
| 05-Jun-25  | 13:30 | Cloudy  | 67.8                  | 69.5            | 59.8            | 65.6            | 64                       |
| 11-Jun-25  | 14:18 | Cloudy  | 65.3                  | 67.3            | 58.6            | 65.6            | 65 Measured ≤ Baseline   |
| 17-Jun-25  | 13:50 | Cloudy  | 66.0                  | 67.2            | 64.7            | 65.6            | 55                       |
| 23-Jun-25  | 11:00 | Sunny   | 67.4                  | 70.2            | 61.7            | 65.6            | 63                       |

| Location CM4 - Tin Hau Temple, Cha Kwo Ling |       |         |                       |                 |                 |                 |                          |
|---|-------|---------|-----------------------|-----------------|-----------------|-----------------|--------------------------|
| Date  | Time  | Weather | Unit: dB (A) (30-min) |                 |                 |                 |                          |
|   |       |         | Measured Noise Level  |                 |                 | Baseline Level  | Construction Noise Level |
|   |       |         | L <sub>eq</sub>       | L <sub>10</sub> | L <sub>90</sub> | L <sub>eq</sub> | L <sub>eq</sub>          |
| 05-Jun-25                                   | 10:10 | Cloudy  | 62.2                  | 64.6            | 55.1            | 62.0            | 49                       |
| 11-Jun-25                                   | 10:00 | Cloudy  | 59.2                  | 63.0            | 53.4            | 62.0            | 59 Measured ≤ Baseline   |
| 17-Jun-25                                   | 10:00 | Cloudy  | 62.6                  | 65.2            | 58.3            | 62.0            | 54                       |
| 23-Jun-25                                   | 14:00 | Sunny   | 63.7                  | 66.4            | 58.9            | 62.0            | 59                       |

| Location CM5 - CCC Kei Faat Primary School, Yau Tong |       |         |                       |                 |                 |                 |                          |
|--|-------|---------|-----------------------|-----------------|-----------------|-----------------|--------------------------|
| Date   | Time  | Weather | Unit: dB (A) (30-min) |                 |                 |                 |                          |
|  |       |         | Measured Noise Level  |                 |                 | Baseline Level  | Construction Noise Level |
|  |       |         | L <sub>eq</sub>       | L <sub>10</sub> | L <sub>90</sub> | L <sub>eq</sub> | L <sub>eq</sub>          |
| 05-Jun-25  | 9:15  | Cloudy  | 68.2                  | 70.4            | 64.5            | 68.2            | 68 Measured ≤ Baseline   |
| 11-Jun-25  | 13:36 | Cloudy  | 66.6                  | 68.8            | 62.9            | 68.2            | 67 Measured ≤ Baseline   |
| 17-Jun-25  | 12:30 | Cloudy  | 60.3                  | 61.3            | 57.0            | 68.2            | 60 Measured ≤ Baseline   |
| 23-Jun-25  | 13:00 | Sunny   | 66.2                  | 69.7            | 62.1            | 68.2            | 66 Measured ≤ Baseline   |

## Appendix G - Noise Monitoring Results

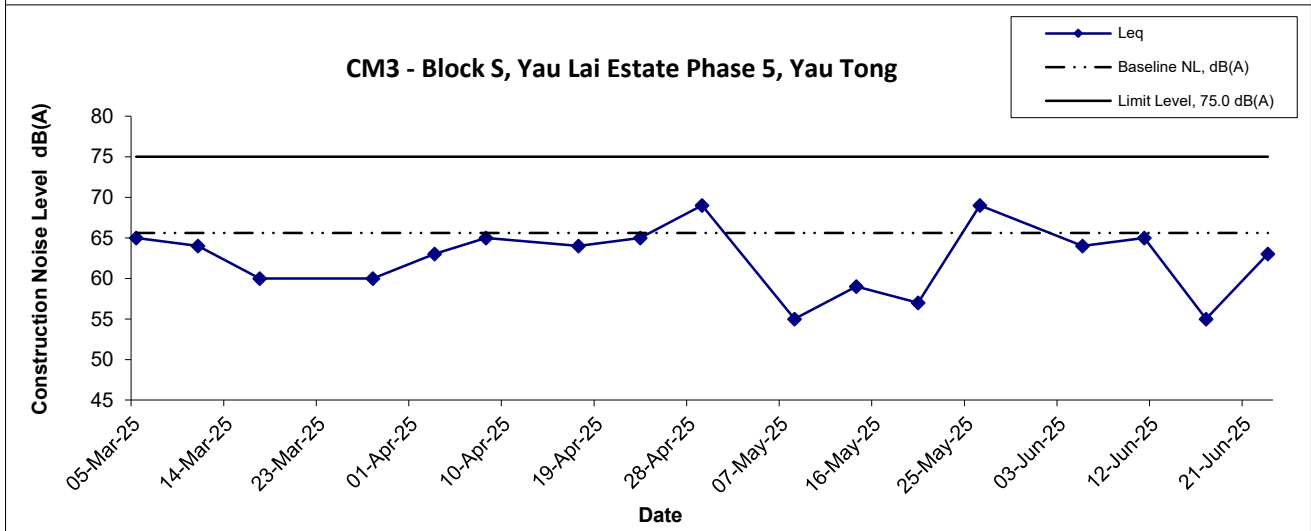
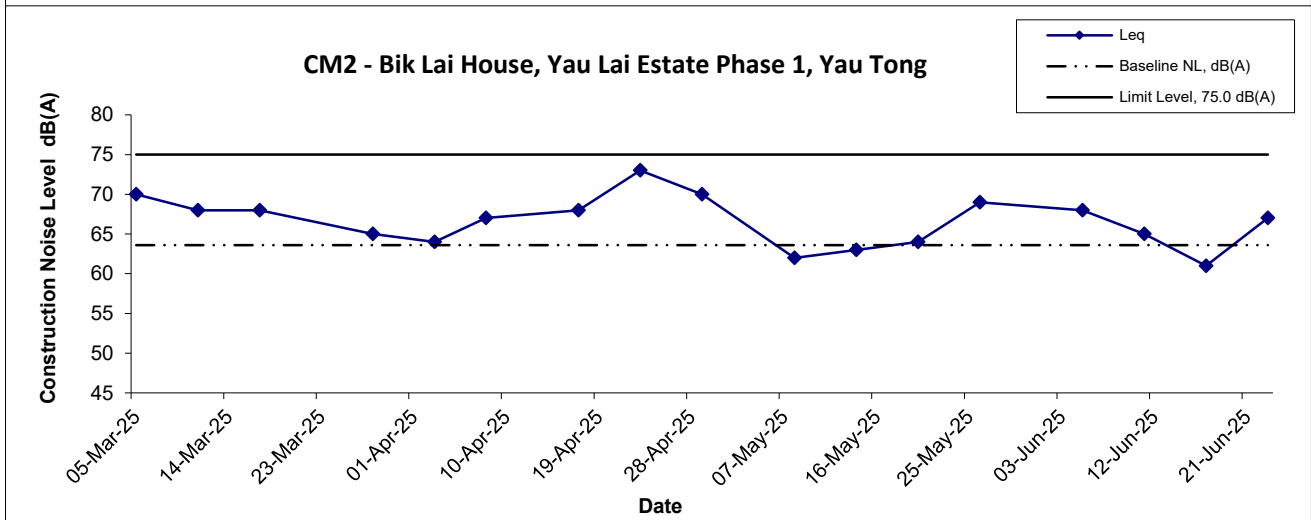
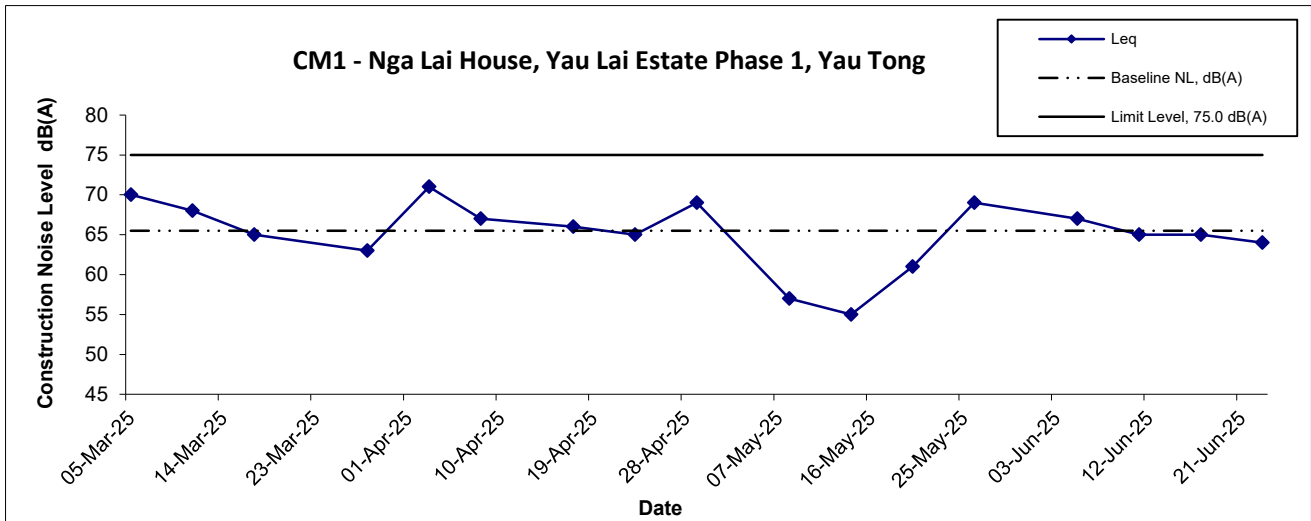
(0700-1900 hrs on Normal Weekdays)

| Location CM6(A) - Site Boundary of Contract No. NE/2015/02 near Tower 1, Ocean Shores |       |         |                       |                 |                 |                 |                          |
|---|-------|---------|-----------------------|-----------------|-----------------|-----------------|--------------------------|
| Date  | Time  | Weather | Unit: dB (A) (30-min) |                 |                 |                 |                          |
|   |       |         | Measured Noise Level  |                 |                 | Baseline Level  | Construction Noise Level |
|   |       |         | L <sub>eq</sub>       | L <sub>10</sub> | L <sub>90</sub> | L <sub>eq</sub> | L <sub>eq</sub>          |
| 05-Jun-25   | 12:54 | Cloudy  | 51.8                  | 53.3            | 49.7            | 61.9            | 52 Measured ≤ Baseline   |
| 11-Jun-25   | 14:50 | Cloudy  | 61.0                  | 62.7            | 58.5            | 61.9            | 61 Measured ≤ Baseline   |
| 17-Jun-25   | 11:40 | Cloudy  | 57.2                  | 58.0            | 55.7            | 61.9            | 57 Measured ≤ Baseline   |
| 23-Jun-25   | 11:00 | Sunny   | 58.7                  | 59.5            | 57.3            | 61.9            | 59 Measured ≤ Baseline   |

| Location CM7(A) - Site Boundary of Contract No. NE/2015/02 near Tower 7, Ocean Shores |       |         |                       |                 |                 |                 |                          |
|---|-------|---------|-----------------------|-----------------|-----------------|-----------------|--------------------------|
| Date  | Time  | Weather | Unit: dB (A) (30-min) |                 |                 |                 |                          |
|   |       |         | Measured Noise Level  |                 |                 | Baseline Level  | Construction Noise Level |
|   |       |         | L <sub>eq</sub>       | L <sub>10</sub> | L <sub>90</sub> | L <sub>eq</sub> | L <sub>eq</sub>          |
| 05-Jun-25   | 13:26 | Cloudy  | 59.0                  | 60.3            | 57.4            | 58.3            | 51                       |
| 11-Jun-25   | 14:20 | Cloudy  | 63.0                  | 68.4            | 52.4            | 58.3            | 61                       |
| 17-Jun-25   | 13:10 | Cloudy  | 60.7                  | 61.2            | 59.9            | 58.3            | 57                       |
| 23-Jun-25   | 11:30 | Sunny   | 60.1                  | 60.5            | 53.8            | 58.3            | 55                       |

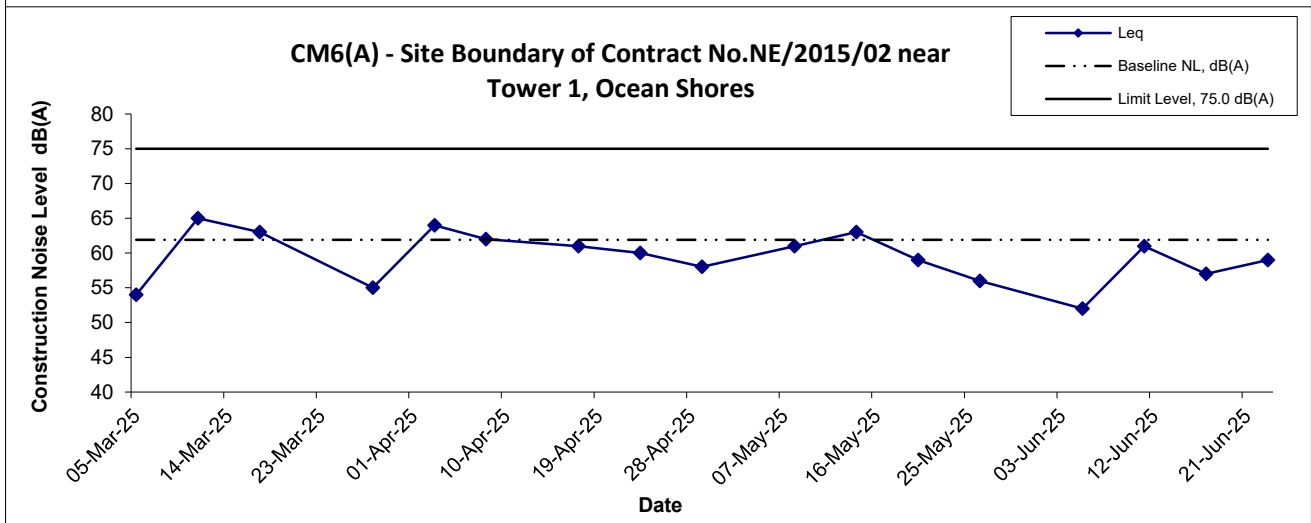
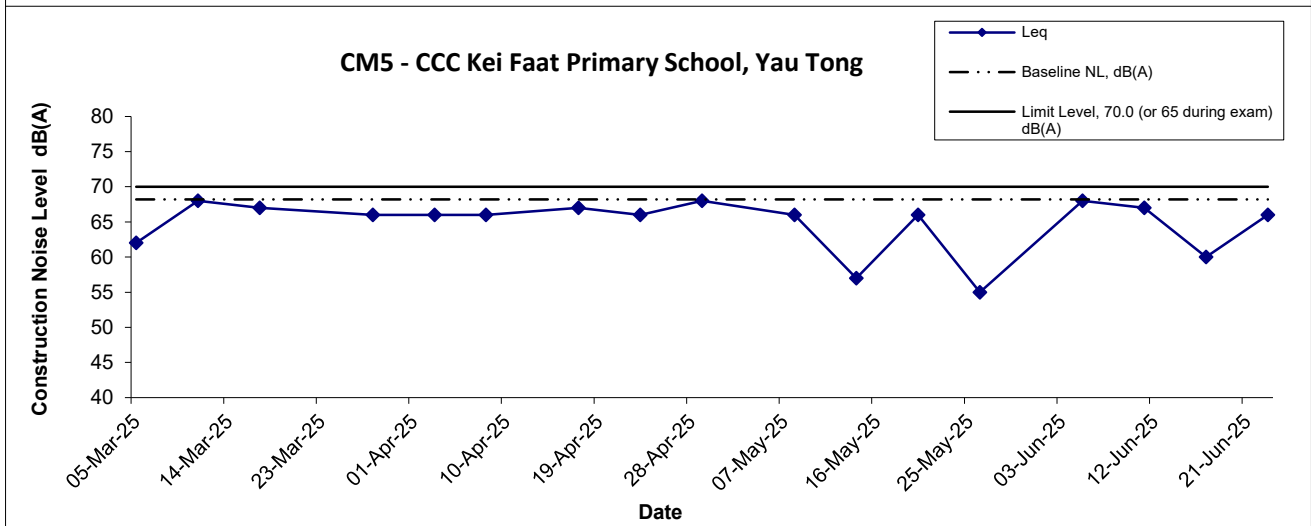
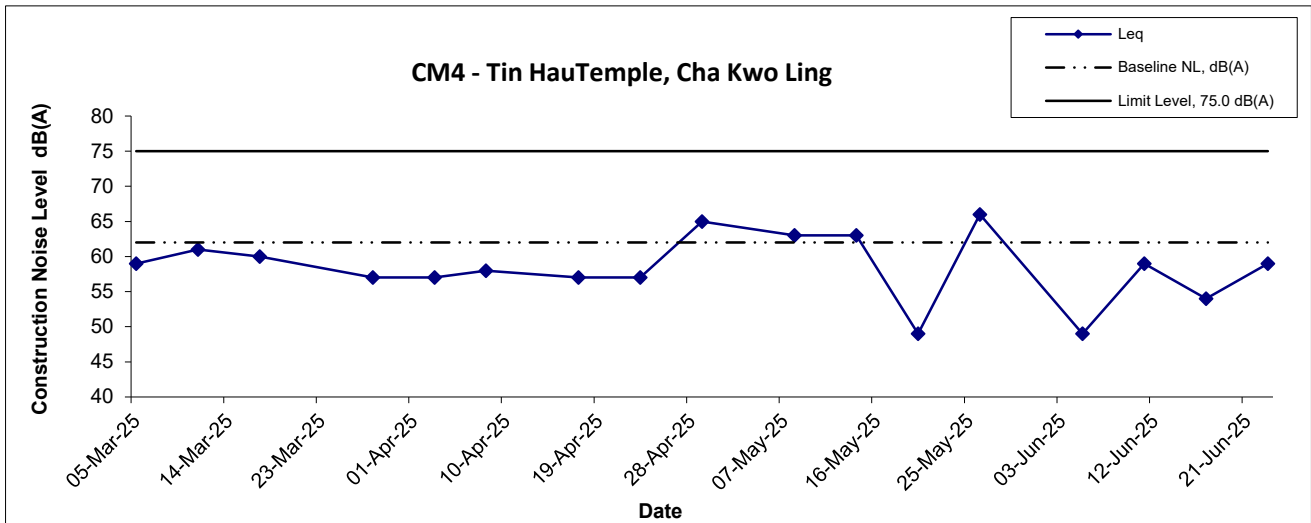
| Location CM8(A) - Park Central, L1/F Open Space Area |       |         |                       |                 |                 |                 |                          |
|--|-------|---------|-----------------------|-----------------|-----------------|-----------------|--------------------------|
| Date   | Time  | Weather | Unit: dB (A) (30-min) |                 |                 |                 |                          |
|  |       |         | Measured Noise Level  |                 |                 | Baseline Level  | Construction Noise Level |
|  |       |         | L <sub>eq</sub>       | L <sub>10</sub> | L <sub>90</sub> | L <sub>eq</sub> | L <sub>eq</sub>          |
| 05-Jun-25  | 11:47 | Cloudy  | 68.8                  | 71.0            | 64.7            | 69.1            | 69 Measured ≤ Baseline   |
| 11-Jun-25  | 12:35 | Cloudy  | 69.2                  | 70.0            | 65.5            | 69.1            | 53                       |
| 17-Jun-25  | 10:50 | Cloudy  | 65.2                  | 68.7            | 61.3            | 69.1            | 65 Measured ≤ Baseline   |
| 23-Jun-25  | 12:55 | Sunny   | 70.0                  | 72.2            | 66.5            | 69.1            | 63                       |

## Noise Levels



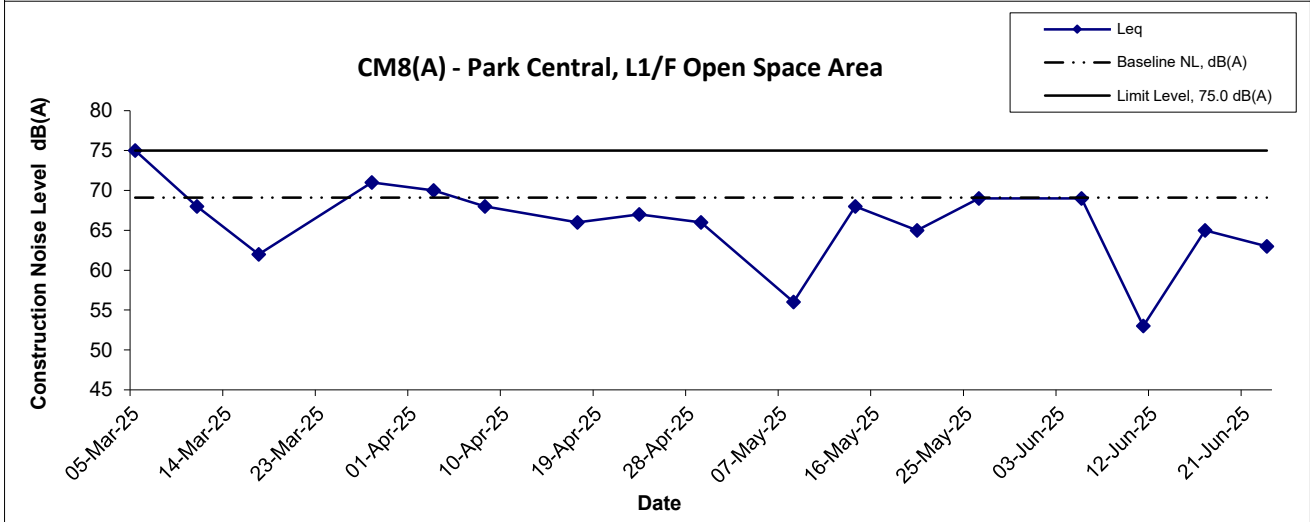
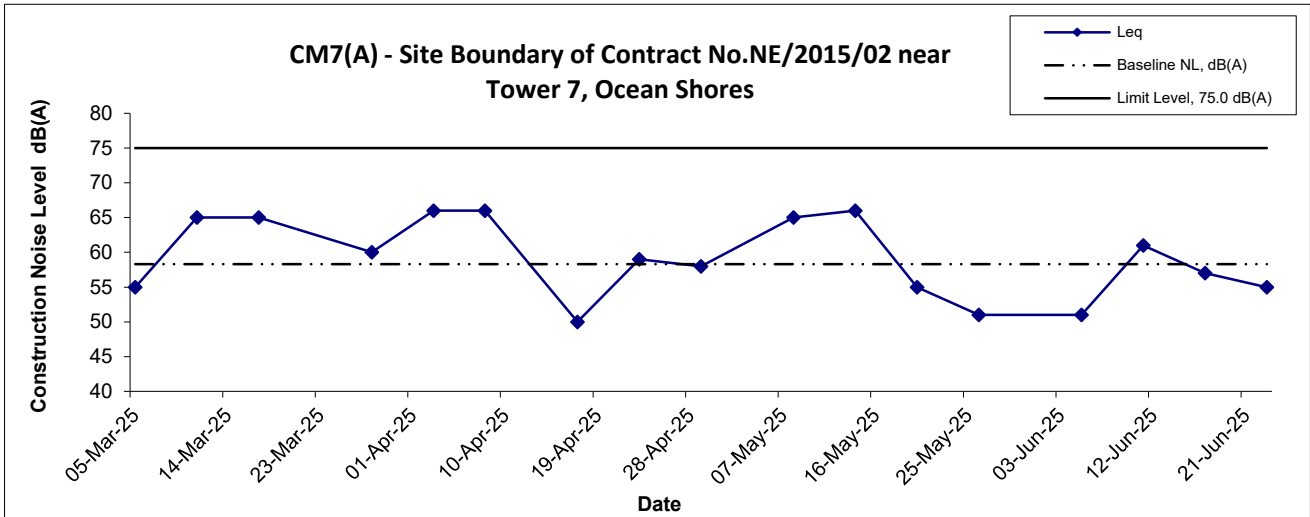
|  |                |                        |  |
|--|----------------|------------------------|--|
| Title<br>Agreement No. CE/59/2015 (EP)<br>Environmental Team for Tseung Kwan O - Lam Tin Tunnel -<br>Design and Construction<br><br>Graphical Presentation of<br>Construction Noise Monitoring Results | Scale<br>N.T.S | Project<br>No. MA16034 |  |
|  | Date<br>Jun-25 | Appendix<br>G          |  |
|  |                |                        |  |

## Noise Levels



|  |        |             |  |
|--|--------|-------------|--|
| Title<br>Agreement No. CE/59/2015 (EP)<br>Environmental Team for Tseung Kwan O - Lam Tin Tunnel -<br>Design and Construction<br><br>Graphical Presentation of<br>Construction Noise Monitoring Results | Scale  | Project     |  |
|  | N.T.S  | No. MA16034 |  |
|  | Date   | Appendix    |  |
|  | Jun-25 | G           |  |

## Noise Levels



|  |                |               |          |
|--|----------------|---------------|----------|
| Title<br>Agreement No. CE/59/2015 (EP)<br>Environmental Team for Tseung Kwan O - Lam Tin Tunnel -<br>Design and Construction<br><br>Graphical Presentation of<br>Construction Noise Monitoring Results | Scale          | Project       | CINOTECH |
|  | N.T.S          | No. MA16034   |          |
|  | Date<br>Jun-25 | Appendix<br>G |          |

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**APPENDIX K  
SUMMARY OF EXCEEDANCE**

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**Agreement No. CE 59/2015 (EP)**  
**Environmental Team for Tseung Kwan O - Lam Tin Tunnel –**  
**Design and Construction**

**Appendix K – Summary of Exceedance**

**Reporting Period: June 2025**

**(A) Exceedance Report for Air Quality**

No limit level exceedance for air quality monitoring of 24-hr TSP was recorded in the reporting month.

No action level exceedance for air quality monitoring of 24-hr TSP was recorded in the reporting month.

No exceedance for air quality monitoring of 1-hr TSP was recorded in the reporting month.

**(B) Exceedance Report for Construction Noise**

**Action Level for Construction Noise**

No action level exceedances were recorded due to the documented complaints received in this reporting month.

**Limit Level for Construction Noise**

No limit level exceedance for daytime construction noise monitoring was recorded in the reporting month.

No exceedance for evening-time construction noise monitoring was recorded in the reporting month.

No exceedance for nighttime construction noise monitoring was recorded in the reporting month.

**(C) Exceedance Report for Water Quality**

(NIL in the reporting month)

Since October 2019, groundwater monitoring had been suspended.

Since June 2023, marine water quality monitoring had been completed.

**(D) Exceedance Report for Ecology**

(NIL in the reporting month)

**(E) Exceedance Report for Cultural Heritage**

(NIL in the reporting month)

**(F) Exceedance Report for Landfill Gas**

(NIL in the reporting month)

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**APPENDIX L  
SITE AUDIT SUMMARY**

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**Agreement No. CE 59/2015 (EP)**  
**Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction**  
**Monthly EM&A Report**

**Appendix L - Site Audit Summary**

Contract No. — NE2015/01

Tseung Kwan O - Lam Tin Tunnel — Main Tunnel and Associated Works

Jun-2025

| Items   | Date      | Status* | Follow up Action   |
|---|-----------|---------|--|
| <i>Water Quality</i>  |           |         |  |
| The Contractor is reminded to remove the ponding water under EHC4.1 next to slope D       | 18-Jun-25 | ✓       | 25-June-25:<br>Ponding water was cleaned.  |
| <i>Ecology</i>  |           |         |  |
| --  | --        | --      | --   |
| <i>Noise</i>  |           |         |  |
| --  | --        | --      | --   |
| <i>Landscape and Visual</i>   |           |         |  |
| --  | --        | --      | --   |
| <i>Air Quality</i>  |           |         |  |
| --  | --        | --      | --   |
| <i>Waste/Chemical Management</i>  |           |         |  |
| The used fuel drum/chemical contarnical should be labeled and stored in proper locations. | 25-Jun-25 | ✓       | 25-June-25:<br>The used fuel drum/chemical contarnical was labeled and stored in proper locations. |
| <i>Impact on Cultural Heritage</i>  |           |         |  |
| --  | --        | --      | --   |
| <i>Permit/Licenses</i>  |           |         |  |
| --  | --        | --      | --   |

✓ Observation/reminder was made during site audit but improved/rectified by the contractor in the next site audit

✗ Observation/reminder was made during site audit but not yet improved/rectified by the contractor in the next site audit

# Follow up action will be reported in next reporting month

\* Non-compliance of mitigation measure

• Non-compliance but improved by the contractor

Agreement No. CE 59/2015 (EP)  
 Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction  
 Monthly EM&A Report

Appendix L - Site Audit Summary

Contract No. — NE2015/02

Tseung Kwan O - Lam Tin Tunnel — Road P2 and Associated Works

Jun-2025

| Items                              | Date | Status* | Follow up Action |
|------------------------------------|------|---------|------------------|
| <i>Water Quality</i>               |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Ecology</i>                     |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Noise</i>                       |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Landscape and Visual</i>        |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Air Quality</i>                 |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Waste/Chemical Management</i>   |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Impact on Cultural Heritage</i> |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Permit/Licenses</i>             |      |         |                  |
| --                                 | --   | --      | --               |

- ✓ Observation/reminder was made during site audit but improved/rectified by the contractor in the next site audit
- ✗ Observation/reminder was made during site audit but not yet improved/rectified by the contractor in the next site audit
- # Follow up action will be reported in next reporting month
- \* Non-compliance of mitigation measure
  - Non-compliance but improved by the contractor

Agreement No. CE 59/2015 (EP)  
 Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction  
 Monthly EM&A Report

Appendix L - Site Audit Summary

Contract No. — NE2017/02  
 Tseung Kwan O - Lam Tin Tunnel — Road P2/D4 and Associated Works

Jun-2025

| Items                              | Date | Status* | Follow up Action |
|------------------------------------|------|---------|------------------|
| <i>Water Quality</i>               |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Ecology</i>                     |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Noise</i>                       |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Landscape and Visual</i>        |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Air Quality</i>                 |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Waste/Chemical Management</i>   |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Impact on Cultural Heritage</i> |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Permit/Licenses</i>             |      |         |                  |
| --                                 | --   | --      | --               |

- ✓ Observation/reminder was made during site audit but improved/rectified by the contractor in the next site audit
- ✗ Observation/reminder was made during site audit but not yet improved/rectified by the contractor in the next site audit
- # Follow up action will be reported in next reporting month
- \* Non-compliance of mitigation measure
  - Non-compliance but improved by the contractor

Agreement No. CE 59/2015 (EP)  
 Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction  
 Monthly EM&A Report

Appendix L - Site Audit Summary

Contract No. — NE2017/06

Tseung Kwan O - Lam Tin Tunnel — Traffic Control and Surveillance System (TCSS) and Associated Works

Jun-2025

| Items                              | Date | Status* | Follow up Action |
|------------------------------------|------|---------|------------------|
| <i>Water Quality</i>               |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Ecology</i>                     |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Noise</i>                       |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Landscape and Visual</i>        |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Air Quality</i>                 |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Waste/Chemical Management</i>   |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Impact on Cultural Heritage</i> |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Permit/Licenses</i>             |      |         |                  |
| --                                 | --   | --      | --               |

- ✓ Observation/reminder was made during site audit but improved/rectified by the contractor in the next site audit
- ✗ Observation/reminder was made during site audit but not yet improved/rectified by the contractor in the next site audit
- # Follow up action will be reported in next reporting month
- \* Non-compliance of mitigation measure
  - Non-compliance but improved by the contractor

Agreement No. CE 59/2015 (EP)  
 Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction  
 Monthly EM&A Report

Appendix L - Site Audit Summary

Contract No. — NE2017/01

Tseung Kwan O - Lam Tin Tunnel — Tseung Kwan O Interchange and Associated Works

Jun-2025

| Items                              | Date | Status* | Follow up Action |
|------------------------------------|------|---------|------------------|
| <i>Water Quality</i>               |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Ecology</i>                     |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Noise</i>                       |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Landscape and Visual</i>        |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Air Quality</i>                 |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Waste/Chemical Management</i>   |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Impact on Cultural Heritage</i> |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Permit/Licenses</i>             |      |         |                  |
| --                                 | --   | --      | --               |

- ✓ Observation/reminder was made during site audit but improved/rectified by the contractor in the next site audit
- ✗ Observation/reminder was made during site audit but not yet improved/rectified by the contractor in the next site audit
- # Follow up action will be reported in next reporting month
- \* Non-compliance of mitigation measure
  - Non-compliance but improved by the contractor

Agreement No. CE 59/2015 (EP)  
 Environmental Team for Tseung Kwan O - Lam Tin Tunnel - Design and Construction  
 Monthly EM&A Report

Appendix L - Site Audit Summary

Contract No. — NE2017/07

Tseung Kwan O - Lam Tin Tunnel — Cross Bay Link Main Bridge and Associated Works

Jun-2025

| Items                              | Date | Status* | Follow up Action |
|------------------------------------|------|---------|------------------|
| <i>Water Quality</i>               |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Ecology</i>                     |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Noise</i>                       |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Landscape and Visual</i>        |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Air Quality</i>                 |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Waste/Chemical Management</i>   |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Impact on Cultural Heritage</i> |      |         |                  |
| --                                 | --   | --      | --               |
| <i>Permit/Licenses</i>             |      |         |                  |
| --                                 | --   | --      | --               |

- ✓ Observation/reminder was made during site audit but improved/rectified by the contractor in the next site audit
- ✗ Observation/reminder was made during site audit but not yet improved/rectified by the contractor in the next site audit
- # Follow up action will be reported in next reporting month
- \* Non-compliance of mitigation measure
  - Non-compliance but improved by the contractor

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**APPENDIX M**  
**EVENT AND ACTION PLANS**

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**Event and Action Plan for Air Quality (Dust)**

| EVENT   | ACTION  |   |  |   |
|---|---|---|--|---|
|   | ET  | IEC   | ER   | CONTRACTOR  |
| Action level being exceeded by one sampling                     | <ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of complaint and propose remedial measures;</li> <li>2. Inform IEC and ER;</li> <li>3. Repeat measurement to confirm finding;</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.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Notify Contractor.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Rectify any unacceptable practice;</li> <li>2. Amend working methods if appropriate.</li> </ol>   |
| Action level being exceeded by two or more consecutive sampling | <ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC and ER;</li> <li>3. Advise the ER 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 and Contractor on remedial actions required;</li> <li>7. If exceedance continues, arrange meeting with IEC and ER;</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 on the effectiveness of the proposed remedial measures;</li> <li>5. Supervise Implementation of remedial measures.</li> </ol> | <ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures properly implemented.</li> </ol> | <ol style="list-style-type: none"> <li>1. Submit proposals for remedial actions to IEC within three working days of notification;</li> <li>2. Implement the agreed proposals;</li> <li>3. Amend proposal if appropriate.</li> </ol> |

| EVENT  | ACTION  |   |  |  |
|--|---|---|--|--|
|  | ET  | IEC   | ER   | CONTRACTOR   |
|  | 8. If exceedance stops, cease additional monitoring.  |   |  |  |
| Limit level being exceeded by one sampling                     | <ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>2. Inform Contractor, IEC, ER, and EPD;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</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 ER on the effectiveness of the proposed remedial measures;</li> <li>5. Supervise implementation of remedial measures.</li> </ol> | <ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures properly implemented.</li> </ol>   | <ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within three working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Amend proposal if appropriate.</li> </ol> |
| Limit level being exceeded by two or more consecutive sampling | <ol style="list-style-type: none"> <li>1. Notify IEC, ER, Contractor and EPD;</li> <li>2. Identify source;</li> <li>3. Repeat measurement to confirm findings;</li> <li>4. Increase monitoring frequency to daily;</li> </ol>   | <ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;</li> </ol>   | <ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> </ol> | <ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within three working days of notification;</li> <li>3. Implement the agreed proposals;</li> </ol>  |

| EVENT | ACTION  |   |  |  |
|-------|---|---|--|--|
|       | ET  | IEC   | ER   | CONTRACTOR   |
|       | 5. Carry out analysis of Contractor’s working procedures to determine possible mitigation to be implemented;<br>6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken;<br>7. Assess effectiveness of Contractor’s remedial actions and keep IEC, EPD and ER informed of the results;<br>8. If exceedance stops, cease additional monitoring. | 3. Supervise the implementation of remedial measures. | 4. Ensure remedial measures properly implemented;<br>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. | 4. Resubmit proposals if problem still not under control;<br>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated. |

### Event and Action Plan for Construction Noise

| EVENT        | ACTION   |   |  |   |
|--------------|--|---|--|---|
|              | ET   | IEC   | ER   | CONTRACTOR  |
| Action Level | <ol style="list-style-type: none"> <li>1. Notify IEC and Contractor;</li> <li>2. Carry out investigation;</li> <li>3. Report the results of investigation to the IEC, ER and Contractor;</li> <li>4. Discuss with the Contractor and formulate remedial measures;</li> <li>5. Increase monitoring frequency to check mitigation effectiveness.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Review the analysed results submitted by the ET;</li> <li>2. Review the proposed remedial measures by the Contractor and advise the ER accordingly;</li> <li>3. Supervise the 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;</li> <li>3. Require Contractor to propose remedial measures for the analysed noise problem;</li> <li>4. Ensure remedial measures are properly implemented.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IEC;</li> <li>2. Implement noise mitigation proposals.</li> </ol>  |
| Limit Level  | <ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC, ER, EPD and Contractor;</li> <li>3. Repeat measurements to confirm findings;</li> <li>4. Increase monitoring frequency;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Inform IEC, ER and EPD the causes and actions taken for the exceedances;</li> </ol> | <ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;</li> <li>3. Supervise the 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;</li> <li>3. Require Contractor to propose remedial measures for the analysed noise problem;</li> <li>4. Ensure remedial measures properly implemented;</li> <li>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.</li> </ol> | <ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Resubmit proposals if problem still not under control;</li> <li>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol> |

| EVENT | ACTION   |     |    |            |
|-------|--|-----|----|------------|
|       | ET   | IEC | ER | CONTRACTOR |
|       | 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;<br>8. If exceedance stops, cease additional monitoring. |     |    |            |

**Event and Action Plan for Marine Water Quality**

| <b>Event</b>   | <b>Action</b>   |   |   |   |
|--|---|---|---|---|
|  | <b>ET</b>   | <b>IEC</b>  | <b>ER</b>   | <b>CONTRACTOR</b>   |
| Action level being exceeded by one sampling day at water sensitive receiver(s) | <ul style="list-style-type: none"> <li>Identify the source(s) of impact by comparing the results with those collected at the control stations as appropriate;</li> <li>If exceedance is found to be caused by the reclamation activities, repeat <i>in-situ</i> measurement to confirm findings;</li> <li>Inform IEC and contractor;</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>If exceedance occurs at WSD salt water intake, inform WSD;</li> <li>Discuss mitigation measures with IEC and Contractor;</li> <li>Repeat measurement on next day of exceedance.</li> </ul> | <ul style="list-style-type: none"> <li>Discuss with ET and Contractor on the mitigation measures;</li> <li>Review proposal on mitigation measures submitted by Contractor and advise the ER accordingly;</li> <li>Assess the effectiveness of the implemented mitigation measures.</li> </ul> | <ul style="list-style-type: none"> <li>Discuss with IEC on the proposed mitigation measures;</li> <li>Make agreement on the mitigation proposal.</li> </ul> | <ul style="list-style-type: none"> <li>Inform the ER and confirm notification of the non-compliance in writing;</li> <li>Rectify unacceptable practice;</li> <li>Check all plant and equipment;</li> <li>Amend working methods if appropriate;</li> <li>Discuss with ET and IEC and propose mitigation measures to IEC and ER;</li> <li>Implement the agree mitigation measures.</li> </ul> |
| Action level being exceeded by two or more consecutive                         | <ul style="list-style-type: none"> <li>Identify the source(s) of impact by comparing the results with those collected at the control stations as appropriate;</li> </ul>  | <ul style="list-style-type: none"> <li>Discuss with ET and Contractor on the mitigation measures;</li> </ul>  | <ul style="list-style-type: none"> <li>Discuss with IEC on the proposed mitigation measures;</li> <li>Make agreement on the mitigation proposal;</li> </ul> | <ul style="list-style-type: none"> <li>Inform the Engineer and confirm notification of the non-compliance in writing;</li> <li>Rectify unacceptable practice;</li> </ul>  |

| Event  | Action  |   |  |   |
|--|---|---|--|---|
|  | ET  | IEC   | ER   | CONTRACTOR  |
| <p>sampling days at water sensitive receiver(s)</p>                                  | <ul style="list-style-type: none"> <li>• If exceedance is found to be caused by the reclamation activities, repeat in-situ measurement to confirm findings;</li> <li>• Inform IEC and contractor;</li> <li>• Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>• Discuss mitigation measures with IEC and Contractor;</li> <li>• Ensure mitigation measures are implemented;</li> <li>• Prepare to increase the monitoring frequency to daily;</li> <li>• If exceedance occurs at WSD salt water intake, inform WSD;</li> <li>• Repeat measurement on next day of exceedance.</li> </ul> | <ul style="list-style-type: none"> <li>• Review proposal on mitigation measures submitted by Contractor and advise the ER accordingly;</li> <li>• Assess the effectiveness of the implemented mitigation measures.</li> </ul> | <ul style="list-style-type: none"> <li>• Assess the effectiveness of the implemented mitigation measures.</li> </ul>   | <ul style="list-style-type: none"> <li>• Check all plant and equipment and consider changes of working methods;</li> <li>• Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days;</li> <li>• Implement the agreed mitigation measures.</li> </ul> |
| <p>Limit level being exceeded by one sampling day at water sensitive receiver(s)</p> | <ul style="list-style-type: none"> <li>• Identify the source(s) of impact by comparing the results with those collected at the control stations as appropriate;</li> </ul>  | <ul style="list-style-type: none"> <li>• Discuss with ET and Contractor on the mitigation measures;</li> <li>• Review proposal on mitigation measures submitted by Contractor and advise the ER accordingly;</li> </ul>       | <ul style="list-style-type: none"> <li>• Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>• Request Contractor to critically review the working methods;</li> </ul> | <ul style="list-style-type: none"> <li>• Inform the ER and confirm notification of the non-compliance in writing;</li> <li>• Rectify unacceptable practice;</li> </ul>  |

| Event  | Action  |   |  |  |
|--|---|---|--|--|
|  | ET  | IEC   | ER   | CONTRACTOR   |
|  | <ul style="list-style-type: none"> <li>• If exceedance is found to be caused by the reclamation activities, repeat <i>in-situ</i> measurement to confirm findings;</li> <li>• Inform IEC, contractor, AFCD and EPD</li> <li>• Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>• Discuss mitigation measures with IEC, ER and Contractor;</li> <li>• Ensure mitigation measures are implemented;</li> <li>• Increase the monitoring frequency to daily until no exceedance of Limit level;</li> <li>• If exceedance occurs at WSD salt water intake, inform WSD.</li> </ul> | <ul style="list-style-type: none"> <li>• Assess the effectiveness of the implemented mitigation measures.</li> </ul>  | <ul style="list-style-type: none"> <li>• Make agreement on the mitigation measures to be implemented;</li> <li>• Assess the effectiveness of the implemented mitigation measures.</li> </ul>           | <ul style="list-style-type: none"> <li>• Check all plant and equipment and consider changes of working methods;</li> <li>• Discuss with ET, IEC and ER and submit proposal of mitigation measures to IEC and ER within 3 working days of notification;</li> <li>• Implement the agreed mitigation measures.</li> </ul> |
| Limit level being exceeded by two or more consecutive sampling days at | <ul style="list-style-type: none"> <li>• Identify the source(s) of impact by comparing the results with those collected at the control stations as appropriate;</li> </ul>  | <ul style="list-style-type: none"> <li>• Discuss with ET and Contractor on the mitigation measures;</li> <li>• Review proposal on mitigation measures submitted by Contractor and advise the ER accordingly;</li> </ul> | <ul style="list-style-type: none"> <li>• Discuss with IC(E), ET and Contractor on the proposed mitigation measures;</li> <li>• Request Contractor to critically review the working methods;</li> </ul> | <ul style="list-style-type: none"> <li>• Inform the ER and confirm notification of the non-compliance in writing;</li> <li>• Rectify unacceptable practice;</li> </ul>   |

| Event                       | Action   |  |  |  |
|-----------------------------|--|--|--|--|
|                             | ET   | IEC  | ER   | CONTRACTOR   |
| water sensitive receiver(s) | <ul style="list-style-type: none"> <li>• If exceedance is found to be caused by the reclamation activities, repeat in-situ measurement to confirm findings;</li> <li>• Inform IC(E), AFCD, contractor and EPD;</li> <li>• Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>• Discuss mitigation measures with IC(E), ER and Contractor;</li> <li>• Ensure mitigation measures are implemented;</li> <li>• Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days;</li> <li>• If exceedance occurs at WSD salt water intake, inform WSD.</li> </ul> | <ul style="list-style-type: none"> <li>• Assess the effectiveness of the implemented mitigation measures.</li> </ul> | <ul style="list-style-type: none"> <li>• Make agreement on the mitigation measures to be implemented;</li> <li>• Assess the effectiveness of the implemented mitigation measures;</li> <li>• Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine work until no exceedance of Limit level.</li> </ul> | <ul style="list-style-type: none"> <li>• Check all plant and equipment and consider changes of working methods;</li> <li>• Discuss with ET, IC(E) and ER and submit proposal of mitigation measures to IC(E) and ER within 3 working days of notification;</li> <li>• Implement the agreed mitigation measures;</li> <li>• As directed by the Engineer, to slow down or to stop all or part of the construction activities.</li> </ul> |

**Limit Levels and Action Plan for Landfill Gas**

| Parameter      | Limit Level                      | Action   |
|----------------|----------------------------------|--|
| Oxygen         | <19%                             | <ul style="list-style-type: none"> <li>• Ventilate to restore oxygen to &gt;19%</li> </ul>   |
|                | <18%                             | <ul style="list-style-type: none"> <li>• Stop works</li> <li>• Evacuate personnel/prohibit entry</li> <li>• Increase ventilation to restore oxygen to &gt;19%</li> </ul>             |
| Methane        | >10% LEL (i.e. > 0.5% by volume) | <ul style="list-style-type: none"> <li>• Prohibit hot works</li> <li>• Ventilate to restore methane to &lt;10% LEL</li> </ul>  |
|                | >20% LEL (i.e. > 1% by volume)   | <ul style="list-style-type: none"> <li>• Stop works</li> <li>• Evacuate personnel / prohibit entry</li> <li>• Increase ventilation to restore methane to &lt;10% LEL</li> </ul>      |
| Carbon Dioxide | >0.5%                            | <ul style="list-style-type: none"> <li>• Ventilate to restore carbon dioxide to &lt; 0.5%</li> </ul>   |
|                | >1.5%                            | <ul style="list-style-type: none"> <li>• Stop works</li> <li>• Evacuate personnel / prohibit entry</li> <li>• Increase ventilation to restore carbon dioxide to &lt; 0.5%</li> </ul> |

**Event and Action Plan for Coral Post-Translocation Monitoring**

| <b>Event</b>                   | <b>Action</b>  |  |   |  |
|--------------------------------|--|--|---|--|
|                                | <b>ET Leader</b>   | <b>IEC</b>   | <b>ER</b>   | <b>Contractor</b>  |
| <b>Action Level Exceedance</b> | 1. Check monitoring data;<br>2. Inform the IEC, ER and Contractor of the findings;<br>3. Increase the monitoring to at least once a month to confirm findings;<br>4. Propose mitigation measures for consideration | 1. Discuss monitoring with the ET and the Contractor;<br>2. Review proposals for additional Monitoring and any other measures submitted by the Contractor and advise the ER accordingly. | 1. Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET;<br>2. Make agreement on the measures to be implemented. | 1. Inform the ER and confirm notification of the non-compliance in writing;<br>2. Discuss with the ET and the IEC and propose measures to the IEC and the ER;<br>3. Implement the agreed measures. |
| <b>Limit Level Exceedance</b>  | Undertake Steps 1-4 as in the Action Level Exceedance. If further exceedance of Limit Level, suspend construction works until an effective solution is identified.   | 1. Discuss monitoring with the ET and the Contractor;<br>2. Review proposals for additional Monitoring and any other measures submitted by the Contractor and advise the ER accordingly. | 1. Discuss with the IEC additional monitoring requirements and any other measures proposed by the ET;<br>2. Make agreement on the measures to be implemented. | 1. Inform the ER and confirm notification of the non-compliance in writing;<br>2. Discuss with the ET and the IEC and propose measures to the IEC and the ER;<br>3. Implement the agreed measures. |

### Mitigation Measures for Vibration Monitoring

| Level       | Contingency Action   |
|-------------|--|
| Alert Level | <ul style="list-style-type: none"> <li>● The Engineer shall be informed immediately.</li> <li>● The Contractor shall submit an investigation report to describe works being undertaken. To review the instrument responses and to study the cause of undue response.</li> <li>● The Contractor shall review and increase the instrumentation monitoring and reporting frequency, if applicable.</li> <li>● The Contractor shall submit a detailed plan of action describing the measures to be taken should the concerned instrument reach the action level to the Engineer for approval.</li> </ul>   |
| Alarm Level | <ul style="list-style-type: none"> <li>● The Engineer shall be informed immediately.</li> <li>● The active construction works may require to be suspended subject to the Engineer's review of monitoring data.</li> <li>● The Contractor shall immediately implement the measures as defined in the detailed plan of action to prevent further ground movement and groundwater drawdown etc.</li> <li>● The Contractor shall prepare a detailed investigation report to study the cause of the exceedance</li> <li>● The Contractor shall propose a contingency plan for the Engineer's approval in the event that alarm value is reached or exceeded</li> <li>● The Contractor shall develop an emergency plan for the Engineer's approval in the event the applied contingency measures cannot control the situation.</li> <li>● The Contractor shall meet the Engineer to discuss the instrument response and review the effectiveness of the implemented measures.</li> <li>● The Contractor shall carry out design review of the works</li> </ul> |

|              |  |
|--------------|--|
| Action Level | <ul style="list-style-type: none"><li>● Consideration shall be given to suspend all active construction works and the Engineer shall be informed immediately</li><li>● The Contractor shall immediately implement the measures defined in the contingency plan</li><li>● The Contractor shall implement the measures defined in the emergency plan in the event that the applied contingency measures are found inadequate</li><li>● The Contractor shall provide a complete report to examine the construction method and review the response of the instruments with full history of the monitoring data and construction activities and necessary design update</li><li>● To resume the suspended activities, the Contractor shall demonstrate to the Engineer's satisfaction that it is safe to do so with approval from the Engineer.</li></ul> |
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**APPENDIX N  
ENVIRONMENTAL MITIGATION  
IMPLEMENTATION SCHEDULE (EMIS)**

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## App N1 - IMPLEMENTATION SCHEDULE AND RECOMMENDED MITIGATION MEASURES

**Table I - Recommended Mitigation Measures stipulated in EM&A Manual for the Project**

| EIA Ref. / EP Submission | 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? | What requirements or standards for the measures to achieve?   |
|--------------------------|--|---|--------------------------------|-----------------------------|---------------------------------|---|
| <b>Air Quality</b>       |  |   |                                |                             |                                 |   |
| S3.8.1                   | Watering eight times a day on active works areas, exposed areas and paved haul roads   | To minimize the dust impact   | Contractor                     | All Active Work Sites       | Construction phase              | APCO  |
| S3.8.1                   | Enclosing the unloading process at barging point by a 3-sided screen with top tipping hall / mixing area in Work Area A, provision of water spraying and flexible dust curtains  | To minimize the dust impact   | Contractor                     | Barging Points              | Construction phase              | APCO  |
| S3.8.7                   | Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides.   | To minimize the dust impact   | Contractor                     | All Construction Work Sites | Construction phase              | APCO and Air Pollution Control (Construction Dust) Regulation |
| S3.8.7                   | <ul style="list-style-type: none"> <li>Use of frequent watering for particularly dusty construction areas and areas close to ASRs..</li> </ul>   |   |                                |                             |                                 |   |
| S3.8.7                   | <ul style="list-style-type: none"> <li>Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.</li> </ul>   |   |                                |                             |                                 |   |
| S3.8.7                   | <ul style="list-style-type: none"> <li>Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.</li> </ul>   |   |                                |                             |                                 |   |
| S3.8.7                   | <ul style="list-style-type: none"> <li>Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.</li> </ul>   |   |                                |                             |                                 |   |
| S3.8.7                   | <ul style="list-style-type: none"> <li>Establishment and use of vehicle wheel and body washing facilities at the exit points of the site.</li> </ul>   |   |                                |                             |                                 |   |
| S3.8.7                   | <ul style="list-style-type: none"> <li>Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading area of barging point, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods.</li> </ul>   |   |                                |                             |                                 |   |
| S3.8.7                   | <ul style="list-style-type: none"> <li>Provision of not less than 2.4m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit.</li> </ul>  |   |                                |                             |                                 |   |
| S3.8.7                   | <ul style="list-style-type: none"> <li>Imposition of speed controls for vehicles on site haul roads.</li> </ul>  |   |                                |                             |                                 |   |
| S3.8.7                   | <ul style="list-style-type: none"> <li>Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs</li> </ul>   |   |                                |                             |                                 |   |
| S3.8.7                   | <ul style="list-style-type: none"> <li>Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides.</li> </ul>   |   |                                |                             |                                 |   |
| S3.8.7                   | <ul style="list-style-type: none"> <li>Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.</li> </ul>  |   |                                |                             |                                 |   |
| /                        | <p>Emission from Vehicles and Plants</p> <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 and plant should be serviced regularly to avoid emission of black smoke.</li> <li>All diesel fuelled construction plant within the works areas shall be powered by ultra low sulphur diesel fuel (ULSD)</li> </ul> | Reduce air pollution emission from construction vehicles and plants | Contractor                     | All construction sites      | Construction stage              | APCO  |

| EIA Ref. / EP Submission                         | 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? | What requirements or standards for the measures to achieve? |
|--|--|---|--------------------------------|--------------------------|---------------------------------|---|
| /  | Valid No-road Mobile Machinery (NRMM) labels should be provided to regulated machines  | Reduce air pollution emission from construction vehicles and plants                 | Contractor                     | All construction sites   | Construction stage              | APCO  |
| <b>Noise Impact (Construction Phase)</b>         |  |   |                                |                          |                                 |   |
| S4.8   | <ul style="list-style-type: none"> <li>Use of quiet PME. Use of movable noise barriers for Excavator, Lorry, Dump Truck, Mobile Crane, Compactor, Concrete Mixer Truck, Concrete Lorry Mixer, Breaker, Mobile Crusher, Backhoe, Vibratory Poker, Saw, Asphalt Paver, Vibratory Roller, Vibrolance, Hydraulic Vibratory Lance and Piling (Vibration Hammer). Use of full enclosure for Air Compressor, Compressor, Bar Bender, Generator, Drilling Rig, Chisel, Large Diameter Bore Piling, Grout Mixer &amp; Pump and Concrete Pump.</li> </ul>  | To minimize construction noise impact arising from the Project at the affected NSRs | Contractor                     | Work Sites               | Construction phase              | EIAO-TM, NCO  |
| Noise Mitigation Plan                            | Use of Temporary Noise Barriers (i.e Acoustic box, SilentUp and etc.) or Full Enclosure for PME according to the approved Noise Mitigation Plan  | To minimize construction noise impact arising from the Project at the affected NSRs | Contractor                     | Work Sites               | Construction phase              | EIAO-TM, NCO  |
| S4.9   | <b>Good Site Practice</b> <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 program</li> <li>Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program.</li> <li>Mobile plant, if any, should be sited as far away from NSRs as possible.</li> <li>Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum.</li> <li>Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.</li> <li>Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities.</li> </ul> | To minimize construction noise impact arising from the Project at the affected NSRs | Project Proponent              | Work sites               | Construction Period             | EIAO-TM, NCO  |
| S4.9   |  |   |                                |                          |                                 |   |
| S4.9   |  |   |                                |                          |                                 |   |
| S4.9   |  |   |                                |                          |                                 |   |
| S4.9   |  |   |                                |                          |                                 |   |
| S4.9   |  |   |                                |                          |                                 |   |
| S4.9   |  |   |                                |                          |                                 |   |
| S4.9   | Scheduling of Construction Works during School Examination Period  | To minimize construction noise impact arising from the Project at the affected NSRs | Contractor                     | Work site near school    | Construction phase              | EIAO-TM, NCO  |
| <b>Water Quality Impact (Construction Phase)</b> |  |   |                                |                          |                                 |   |
| S5.6.24  | The dry density of filling material for the TKO-LT Tunnel reclamation should be 1,900kg/m <sup>3</sup> , with fine content of 25% or less  | Control potential impacts from filling activities                                   | CEDD's Contractors             | Work site                | Construction Phase              | EIAO-TM, WPCO   |
| S5.8.1   | Non-dredged method by constructing steel cellular caisson structure with stone column shall be adopted for construction of seawall foundation. During the stone column installation (also including the installation of steel cellular caisson), silt curtain shall be employed around the active stone column installation points.  | Control potential impacts from filling activities                                   | CEDD's Contractors             | Work site                | Construction Phase              | EIAO-TM, WPCO   |
| S5.8.2   | Formation of seawall enclosing the reclamation for Road P2 (notwithstanding an opening of about 50m for marine access) shall be completed prior to the filling activities. The seawall opening of about 50m wide for marine access shall be selected at a location as indicatively shown in Appendix 5.10. No more than 3 filling barge trips per day shall be made with a maximum daily rate of 3,000m <sup>3</sup> (i.e. 1,000 m <sup>3</sup> per trip) for the filling operation at the reclamation area for Road P2. All filling works shall be carried out behind the seawall with the use of single silt curtain at the marine access.   | Control potential impacts from filling activities                                   | CEDD's Contractors             | Work site                | Construction Phase              | EIAO-TM, WPCO   |

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|------------------------------|---|---|--------------------------------|--------------------------|---------------------------------|---|
| Silt Curtain Deployment Plan | <ul style="list-style-type: none"> <li>Silt curtains should be deployed properly to surround the works area.</li> </ul>   | Control potential impacts from marine works                                     | Contractor                     | NE/2015/01               | Construction stage              | EIAO  |
| Silt Curtain Deployment Plan | <ul style="list-style-type: none"> <li>Maintenance of silt curtain should be provided.</li> </ul>   |   |                                |                          |                                 |   |
| Silt Curtain Deployment Plan | <ul style="list-style-type: none"> <li>Sufficient stock of silt curtain should be provided on site.</li> </ul>  |   |                                |                          |                                 |   |
| S5.8.3                       | Other good site practices should be undertaken during filling operations include:   | Control potential impacts from filling activities and marine-based construction | CEDD's Contractors             | Work site                | Construction Phase              | EIAO-TM, WPCO, Waste Disposal Ordinance (WDO)               |
| S5.8.3                       | <ul style="list-style-type: none"> <li>all marine works should adopt the environmental friendly construction methods as far as practically possible including the use of cofferdams to cover the construction area to separate the construction works from the sea;</li> </ul>  |   |                                |                          |                                 |   |
| S5.8.3                       | <ul style="list-style-type: none"> <li>floating single silt curtain shall be employed for all marine works;</li> </ul>  |   |                                |                          |                                 |   |
| S5.8.3                       | <ul style="list-style-type: none"> <li>all vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash;</li> </ul>                                       |   |                                |                          |                                 |   |
| S5.8.3                       | <ul style="list-style-type: none"> <li>all hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material;</li> </ul>  |   |                                |                          |                                 |   |
| S5.8.3                       | <ul style="list-style-type: none"> <li>excess material shall be cleaned from the decks and exposed fittings of barges before the vessel is moved;</li> </ul>  |   |                                |                          |                                 |   |
| S5.8.3                       | <ul style="list-style-type: none"> <li>adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action;</li> </ul>   |   |                                |                          |                                 |   |
| S5.8.3                       | <ul style="list-style-type: none"> <li>loading of barges and hoppers should be controlled to prevent splashing of filling material into the surrounding water. Barges or hoppers should not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation;</li> </ul> |   |                                |                          |                                 |   |
| S5.8.3                       | <ul style="list-style-type: none"> <li>any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes;</li> </ul>   |   |                                |                          |                                 |   |
| S5.8.3                       | <ul style="list-style-type: none"> <li>construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site or dumping grounds; and</li> </ul>   |   |                                |                          |                                 |   |
| S5.8.3                       | <ul style="list-style-type: none"> <li>before commencement of the reclamation works, the holder of Environmental Permit has to submit plans showing the phased construction of the reclamation, design and operation of the silt curtain.</li> </ul>  |   |                                |                          |                                 |   |
| S5.8.4                       | Site specific mitigation plan for reclamation areas using public fill materials should be submitted for EPD agreement before commencement of construction phase with due consideration of good site practices.  | Control potential impacts from filling activities and marine based construction | CEDD's Contractors             | Work site                | Construction Phase              | ProPECC PN 1/94, EIAOTM, WPCO                               |

| EIA Ref. / EP Submission | 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?     | What requirements or standards for the measures to achieve? |
|--------------------------|--|---|--------------------------------|--------------------------|-------------------------------------|---|
| ERR S5.6.1               | <p>To minimize water quality impact arising from the dredging and filling works for Reclamation for Road P2, the following mitigation measures shall be implemented:</p> <ul style="list-style-type: none"> <li>- Before carrying out any dredging and underwater filling works, a temporary barrier shall first be constructed to a height above the high water mark to completely enclose the works site (without any opening at the barrier wall)</li> <li>- The temporary barrier fully enclosing the dredging and underwater filling works site shall not be removed before completion of all dredging and underwater filling works.</li> <li>- Water quality sampling and testing shall be carried out to demonstrate that the water quality inside the enclosed barrier is comparable to the ambient or baseline levels prior to the removal of the fully enclosed barrier.</li> <li>- Silt curtains shall be deployed for the installation and removal of the temporary barrier and at the double water gates marine access opening during its operation.</li> </ul> | Control potential impacts from dredging and filling works for Reclamation for Road P2 | CEDD's Contractors             | Work site                | Construction Phase                  | ProPECC PN 1/94, EIAOTM, WPCO                               |
| ERR S5.6.1               |  |   |                                |                          |                                     |   |
| ERR S5.6.1               |  |   |                                |                          |                                     |   |
| ERR S5.6.1               |  |   |                                |                          |                                     |   |
| ERR S5.6.1               |  |   |                                |                          |                                     |   |
| S5.8.5                   | It is important that appropriate measures are implemented to control runoff and drainage and prevent high loading of SS from entering the marine environment. Proper site management is essential to minimise surface water runoff, soil erosion and sewage effluents.   | Control potential impacts from construction site runoff and land-based construction   | CEDD's Contractors             | Work site                | Construction Phase                  | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.6                   | Any practical options for the diversion and realignment of drainage should comply with both engineering and environmental requirements in order to ensure adequate hydraulic capacity of all drains.   | Control potential impacts from construction site runoff and land-based construction   | CEDD's Contractors             | Work site                | Design Stage and Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO, TM-DSS                       |
| S5.8.7                   | Construction site runoff and drainage should be prevented or minimised in accordance with the guidelines stipulated in the EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 1/94). Good housekeeping and stormwater best management practices, as detailed in below, should be implemented to ensure that all construction runoff complies with WPCO standards and no unacceptable impact on the WSRs arises due to construction of the TKO-LT Tunnel. All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the corresponding WCZ under the TM-DSS.   | Control potential impacts from construction site runoff and land-based construction   | CEDD's Contractors             | Work site                | Construction Phase                  | ProPECC PN 1/94, EIAOTM, WPCO, TM-DSS                       |
| S5.8.8                   | <p>Exposed soil areas should be minimised to reduce the potential for increased siltation, contamination of runoff, and erosion. Construction runoff related impacts associated with the above ground construction activities can be readily controlled through the use of appropriate mitigation measures which include:</p> <ul style="list-style-type: none"> <li>• use of sediment traps; and</li> <li>• adequate maintenance of drainage systems to prevent flooding and overflow.</li> </ul>   | Control potential impacts from construction site runoff and land-based construction   | CEDD's Contractors             | Work site                | Construction Phase                  | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.8                   |  |   |                                |                          |                                     |   |
| S5.8.8                   |  |   |                                |                          |                                     |   |
| S5.8.9                   | Construction site should be provided with adequately designed perimeter channel and pretreatment facilities and proper maintenance. The boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilitate runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94.   | Control potential impacts from construction site runoff and land-based construction   | CEDD's Contractors             | Work site                | Construction Phase                  | ProPECC PN 1/94, EIAOTM, WPCO                               |

| EIA Ref. / EP Submission | 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? | What requirements or standards for the measures to achieve? |
|--------------------------|--|---|--------------------------------|--------------------------|---------------------------------|---|
| S5.8.10                  | Ideally, construction works should be programmed to minimise surface excavation works during the rainy season (April to September). All exposed earth areas should be completed as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means.   | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase              | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.11                  | Sedimentation tanks of sufficient capacity, constructed from pre-formed individual cells of approximately 6 to 8m <sup>3</sup> capacity, are recommended as a general mitigation measure which can be used for settling surface runoff prior to disposal. The system capacity is flexible and able to handle multiple inputs from a variety of sources and particularly suited to applications where the influent is pumped.   | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase              | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.12                  | Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary.  | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase              | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.13                  | Measures should be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.  | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase              | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.14                  | Open stockpiles of construction materials (for examples, aggregates, sand and fill material) of more than 50m <sup>3</sup> 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.  | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase              | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.15                  | 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. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.  | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase              | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.16                  | Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes.   | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase              | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.17                  | Oil interceptors should be provided in the drainage system and regularly cleaned to prevent the release of oils and grease into the storm water drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain.   | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase              | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.18                  | 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 located wheel washing bay should be provided at every site exit, and washwater 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 wheelwash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase              | ProPECC PN 1/94, EIAOTM, WPCO                               |

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|--------------------------------|--|---|--------------------------------|--------------------------|------------------------------------|---|
| S5.8.19                        | Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.   | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                 | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.20                        | It is recommended that on-site drainage system should be installed prior to the commencement of other construction activities. Sediment traps should be installed in order to minimise the sediment loading of the effluent prior to discharge into foul sewers. There shall be no direct discharge of effluent from the site into the sea.  | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                 | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.21                        | All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment control measures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rain storms. The temporarily diverted drainage should be reinstated to its original condition when the construction work has finished or the temporary diversion is no longer required.   | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                 | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.22                        | All fuel tanks and storage areas should be provided with locks and be located 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 the coastal waters.  | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                 | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.23                        | Minimum distances of 100m shall be maintained between the existing or planned stormwater discharges and the existing or planned seawater intakes during construction and operational phases  | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                 | EIAO-TM, WPCO, TMDSS  |
| S5.8.24                        | Under normal circumstances, groundwater pumped out of wells, etc. for the lowering of ground water level in basement or foundation construction, and groundwater seepage pumped out of tunnels or caverns under construction should be discharged into storm drains after the removal of silt in silt removal facilities.  | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                 | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.25 - S5.8.27 & Table 5.18 | Grouting would be adopted as measure to reduce the groundwater inflow into the tunnel. During the tunnel excavation, the inflow rate of groundwater into the tunnel will be measured during the excavation. The groundwater levels above the tunnel will also be monitored by piezometers. If the inflow rate exceeds the pre-determined groundwater control criteria or the groundwater drawdown exceeds the required limit, pre-excavation grouting will be required to reduce the groundwater inflow. No significant change of groundwater levels would therefore be expected. Any chemicals/foaming agents which would be entrained to the groundwater should be biodegradable and non-toxic throughout the tunnel construction. Potential groundwater quality impact would be minimal as the used material is non-toxic and biodegradable. No adverse groundwater quality would therefore be expected. Prescriptive measures in the form of an Action Plan with pre-emptive and re-active to preserve the groundwater levels at all times during the tunnel construction are set out in Table 5.18. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                 | ProPECC PN 1/94, EIAOTM, WPCO, Buildings Ordinance          |
| S5.8.28                        | Water used in ground boring and drilling for site investigation or rock / soil anchoring should as far as practicable be recirculated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities.   | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Design Stage and Construction Phas | ProPECC PN 1/94, EIAOTM, WPCO                               |

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|--------------------------|--|---|--------------------------------|--------------------------|-------------------------------------|---|
| S5.8.29 - S5.8.31        | Wastewater generated from the washing down of mixing trucks and drum mixers and similar equipment should whenever practicable be recycled. The discharge of wastewater should be kept to a minimum. To prevent pollution from wastewater overflow, the pump sump of any water recycling system should be provided with an online standby pump of adequate capacity and with automatic alternating devices. Under normal circumstances, surplus wastewater may be discharged into foul sewers after treatment in silt removal and pH adjustment facilities (to within the pH range of 6 to 10). Disposal of wastewater into storm drains will require more elaborate treatment. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                  | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.32                  | All vehicles and plant should be cleaned before they leave a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road should be paved with backfall to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.  | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                  | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.33                  | Bentonite slurries used in diaphragm wall and borepile construction should be reconditioned and reused wherever practicable. If the disposal of a certain residual quantity cannot be avoided, the used slurry may be disposed of at the marine spoil grounds subject to obtaining a marine dumping licence from EPD on a case-by-case basis.  | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                  | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.34                  | If the used bentonite slurry is intended to be disposed of through the public drainage system, it should be treated to the respective effluent standards applicable to foul sewer, storm drains or the receiving waters as set out in the WPCO Technical Memorandum on Effluent Standards.   | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                  | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.35                  | Water used in water testing to check leakage of structures and pipes should be reused for other purposes as far as practicable. Surplus unpolluted water could be discharged into storm drains.  | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                  | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.36                  | Sterilization is commonly accomplished by chlorination. Specific advice from EPD should be sought during the design stage of the works with regard to the disposal of the sterilizing water. The sterilizing water should be reused wherever practicable.  | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Design Stage and Construction Phase | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.37                  | Before commencing any demolition works, all sewer and drainage connections should be sealed to prevent building debris, soil, sand etc. from entering public sewers/drains.  | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                  | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.38                  | Wastewater generated from building construction activities including concreting, plastering, internal decoration, cleaning of works and similar activities should not be discharged into the stormwater drainage system. If the wastewater is to be discharged into foul sewers, it should undergo the removal of settleable solids in a silt removal facility, and pH adjustment as necessary   | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                  | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.39                  | Acidic wastewater generated from acid cleaning, etching, pickling and similar activities should be neutralized to within the pH range of 6 to 10 before discharging into foul sewers. If there is no public foul sewer in the vicinity, the neutralized wastewater should be tinkered off site for disposal into foul sewers or treated to a standard acceptable to storm drains and the receiving waters  | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                  | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.40                  | Wastewater collected from canteen kitchens, including that from basins, sinks and floor drains, should be discharged into foul sewer via grease traps capable of providing at least 20 minutes retention during peak flow.   | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                  | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.41                  | Drainage serving an open oil filling point should be connected to storm drains via a petrol interceptor with peak storm bypass.  | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase                  | ProPECC PN 1/94, EIAOTM, WPCO                               |

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| S5.8.42                  | Vehicle and plant servicing areas, vehicle wash bays and lubrication bays should as far as possible be located within roofed areas. The drainage in these covered areas should be connected to foul sewers via a petrol interceptor. Oil leakage or spillage should be contained and cleaned up immediately. Waste oil should be collected and stored for recycling or disposal in accordance with the Waste Disposal Ordinance.  | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase              | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.43                  | Construction work force sewage discharges on site are expected to be connected to the existing trunk sewer or sewage treatment facilities. The construction sewage may need to be handled by portable chemical toilets prior to the commission of the on-site sewer system. Appropriate numbers of portable toilets shall be provided by a licensed contractor to serve the large number of construction workers over the construction site. The Contractor shall also be responsible for waste disposal and maintenance practices. | Control potential impacts from construction site runoff and land-based construction | CEDD's Contractors             | Work site                | Construction Phase              | ProPECC PN 1/94, EIAOTM, WPCO                               |
| S5.8.44                  | Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.  | Control potential impacts from accidental spillage of chemicals                     | CEDD's Contractors             | Work site                | Construction Phase              | EIAO-TM, WPCO, WDO  |
| S5.8.45                  | Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.  | Control potential impacts from accidental spillage of chemicals                     | CEDD's Contractors             | Work site                | Construction Phase              | EIAO-TM, WPCO   |
| S5.8.46                  | Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The "Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes" published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows:   | Control potential impacts from accidental spillage of chemicals                     | CEDD's Contractors             | Work site                | Construction Phase              | EIAO-TM, WPCO, WDO  |
| S5.8.46                  | <ul style="list-style-type: none"> <li>suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport;</li> </ul>   |   |                                |                          |                                 |   |
| S5.8.46                  | <ul style="list-style-type: none"> <li>chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents; and</li> </ul>  |   |                                |                          |                                 |   |
| S5.8.46                  | <ul style="list-style-type: none"> <li>storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.</li> </ul>  |   |                                |                          |                                 |   |
| S5.8.47                  | Collection and removal of floating refuse should be performed at regular intervals on a daily basis. The contractor should be responsible for keeping the water within the site boundary and the neighbouring water free from rubbish.  | Control potential impacts from floating refuse and debris                           | CEDD's Contractors             | Work site                | Construction Phase              | EIAO-TM, WPCO,  |

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| <b>Ecological Impact</b> |   |   |                                |                          |                                 |   |
| S6.8.4                   | <b>Measures to Minimize Disturbance</b>   |   |                                |                          |                                 |   |
| S6.8.4                   | <ul style="list-style-type: none"> <li>Use of Quiet Mechanical Plant during the construction phase should be adopted wherever possible.</li> </ul>  | Minimize noise, human and traffic disturbance to terrestrial habitat and wildlife; and reduce dust generation | Design Team / Contractor       | Land-based works are     | Construction Phase              | N/A   |
| S6.8.4                   | <ul style="list-style-type: none"> <li>Hoarding or fencing should be erected around the works area boundaries during the construction phase. The hoarding would screen adjacent habitats from construction phase activities, reduce noise disturbance to these habitats and also to restrict access to habitats adjacent to works areas by site workers;</li> </ul> |   |                                |                          |                                 |   |
| S6.8.4                   | <ul style="list-style-type: none"> <li>Regular spraying of haul roads to minimize impacts of dust deposition on adjacent vegetation and habitats during the construction activities</li> </ul>  |   |                                |                          |                                 |   |
| S6.8.5                   | <b>Standard Good Site Practice</b>  |   |                                |                          |                                 |   |
| S6.8.5                   | <ul style="list-style-type: none"> <li>Placement of equipment or stockpile in designated works areas and access routes selected on existing disturbed land to minimise disturbance to natural habitats.</li> </ul>  |   |                                |                          |                                 |   |
| S6.8.5                   | <ul style="list-style-type: none"> <li>Construction activities should be restricted to works areas that should be clearly demarcated. The works areas should be reinstated after completion of the works.</li> </ul>  |   |                                |                          |                                 |   |
| S6.8.5                   | <ul style="list-style-type: none"> <li>Waste skips should be provided to collect general refuse and construction wastes. The wastes should be properly disposed off-site in a timely manner.</li> </ul>   |   |                                |                          |                                 |   |
| S6.8.5                   | <ul style="list-style-type: none"> <li>General drainage arrangements should include sediment and oil traps to collect and control construction site run-off.</li> </ul>   |   |                                |                          |                                 |   |
| S6.8.5                   | <ul style="list-style-type: none"> <li>Open burning on works sites is illegal, and should be strictly prohibited.</li> </ul>  |   |                                |                          |                                 |   |
| S6.8.5                   | <ul style="list-style-type: none"> <li>Measures should also be put into place so that litter, fuel and solvents do not enter the nearby watercourses.</li> </ul>  |   |                                |                          |                                 |   |
| S6.8.6                   | <b>Measure to Minimize Groundwater Inflow</b>   | Minimize groundwater inflow   | Contractor                     | Tunnel                   | Construction Phase              | N/A   |
| S6.8.6                   | <ul style="list-style-type: none"> <li>The drained tunnel construction method with groundwater inflow control measures would generally be adopted.</li> </ul>   |   |                                |                          |                                 |   |
| S6.8.6                   | <ul style="list-style-type: none"> <li>During the tunnel excavation, pre-excavation grouting could be adopted to reduce the groundwater inflow and ensure that the tunnel would meet the long term water tightness requirements.</li> </ul>   |   |                                |                          |                                 |   |

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| S6.8.8                   | <b>Measure to Minimize Impact on Corals</b>  | Minimize loss of coral  | Design team, contractor, project operator | Within reclamation areas and pier footprint | Prior construction              | N/A   |
| S6.8.8                   | <u>Coral translocation</u>   |   |   |   |                                 |   |
| S6.8.8                   | <ul style="list-style-type: none"> <li>It is recommended to translocate the affected coral colonies, except the locally common <i>Oulastrea crispata</i>, within the reclamation area and bridge footprint to the other suitable locations as far as practicable.</li> </ul>   |   |   |   |                                 |   |
| S6.8.8                   | <ul style="list-style-type: none"> <li>The coral translocation should be conducted during the winter months (November-March) in order to avoid disturbance during their spawning period (i.e. July to October).</li> </ul>   |   |   |   |                                 |   |
| S6.8.8                   | <ul style="list-style-type: none"> <li>A detailed coral translocation plan with a description on the methodology for pretranslocation coral survey, translocation methodology, identification/proposal of coral recipient site, monitoring methodology for posttranslocation should be prepared during the detailed design stage.</li> </ul>   |   |   |   |                                 |   |
| S6.8.8                   | <ul style="list-style-type: none"> <li>The coral translocation plan should be subject to approval by relevant authorities (e.g. EPD and AFCDD) before commencement of the coral translocation. All the translocation exercises should be conducted by experienced marine ecologist(s) who is/are approved by AFCDD prior to commencement of coral translocation.</li> </ul>  |   |   |   |                                 |   |
| S6.8.8                   | <u>Post translocation Monitoring</u>   |   |   |   |                                 |   |
| S6.8.8                   | <ul style="list-style-type: none"> <li>A coral monitoring programme is recommended to assess any adverse and unacceptable impacts to the translocated coral communities</li> </ul>   |   |   |   |                                 |   |
| S6.8.8                   | <ul style="list-style-type: none"> <li>Information gathered during each posttranslocation monitoring survey should include observations on the presence, survival, health condition and growth of the translocated coral colonies. These parameters should then be compared with the baseline results collected from the pre-translocation survey.</li> </ul>  |   |   |   |                                 |   |
| S6.8.9 S6.8.10           | <b>Measure to Control Water Quality Impact</b> <ul style="list-style-type: none"> <li>Deployment of silt curtains around the active stone column installation points, opening of newly installed seawall and marine works area.</li> <li>Diverting of the site runoff to silt trap facilities before discharging into storm drain;</li> <li>Proper waste and dumping management; and</li> <li>Standard good-site practice for land-based construction.</li> </ul>          |   |   |   |                                 |   |
| S6.8.11                  | <b>Compensation for Vegetation Loss</b> <ul style="list-style-type: none"> <li>Felling of mature trees should be compensated by planting of standard or heavy standard trees within or in vicinity of the affected area as far as practicable. Such compensatory planting for trees should be provided with at least a 1:1 ratio. In addition, vegetation at the temporarily affected area should be reinstated with species similar to the existing condition.</li> </ul> | Compensate for the vegetation loss                                | Design Team, contractor                   | Land-based works area                       | Construction phase              | N/A   |

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| <b>Fisheries Impact</b>                      |  |   |                                |                          |                                 |  |
| S7.7.3                                       | <b>Measure to Control Water Quality Impact</b> <ul style="list-style-type: none"> <li>Deployment of silt curtains around the active stone column installation points, opening of newly installed seawall and marine works area.</li> </ul>   | Control water quality impact, especially on suspended solid level | Design Team / Contractor       | Marine work area         | Construction phase              | WQO  |
| <b>Waste Management (Construction Phase)</b> |  |   |                                |                          |                                 |  |
| S8.6.3                                       | <b>Good Site Practices and Waste Reduction Measures</b> <ul style="list-style-type: none"> <li>Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site;</li> <li>Training of site personnel in site cleanliness, proper waste management and chemical handling procedures;</li> <li>Provision of sufficient waste disposal points and regular collection of waste;</li> <li>Appropriate measures to minimize windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; and</li> <li>Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.</li> </ul> | To reduce waste management impacts                                | Contractor                     | All work sites           | Construction Phase              | Waste Disposal Ordinance (Cap. 354)<br><br>Land (Miscellaneous Provisions) Ordinance (Cap. 28) |
| S8.6.4                                       | <b>Good Site Practices and Waste Reduction Measures (con't)</b> <ul style="list-style-type: none"> <li>Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;</li> <li>Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the workforce;</li> <li>Proper storage and site practices to minimize the potential for damage or contamination of construction materials; and</li> <li>Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste.</li> </ul>   | To achieve waste reduction  | Contractor                     | All work sites           | Construction Phase              | Waste Disposal Ordinance (Cap. 354)<br><br>Land (Miscellaneous Provisions) Ordinance (Cap. 28) |
| S8.6.5                                       | <b>Good Site Practices and Waste Reduction Measures (con't)</b><br><br>The Contractor shall prepare and implement a WMP as part of the EMP in accordance with ETWB TCW No. 19/2005 which describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from the construction activities. Such a management plan should incorporate site specific factors, such as the designation of areas for segregation and temporary storage of reusable and recyclable materials. The EMP should be submitted to the Engineer for approval. The Contractor should implement the waste management practices in the EMP throughout the construction stage of the Project. The EMP should be reviewed regularly and updated by the Contractor.  | To achieve waste reduction  | Contractor                     | All work sites           | Construction Phase              | ETWB TCW No. 19/2005   |
| S8.6.6                                       | <b>Good Site Practices and Waste Reduction Measures (con't)</b> <ul style="list-style-type: none"> <li>C&amp;D materials would be reused in the project and other local concurrent projects as far as possible.</li> </ul>   | To achieve waste reduction  | Contractor                     | All work sites           | Construction Phase              | ETWB TCW No. 19/2005   |

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| S8.6.7                                   | <b>Storage, Collection and Transportation of Waste</b>  |  |                                |                          |                                 |   |
| S8.6.7                                   | Should any temporary storage or stockpiling of waste is required, recommendations to minimize the impacts include:  | To minimize potential adverse environmental impacts arising from waste storage                 | Contractor                     | All work sites           | Construction Phase              | ETWB TCW No. 19/2005  |
| S8.6.7                                   | <ul style="list-style-type: none"> <li>Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimizing the potential of pollution;</li> </ul>  |  |                                |                          |                                 |   |
| S8.6.7                                   | <ul style="list-style-type: none"> <li>Maintain and clean storage areas routinely;</li> </ul>   |  |                                |                          |                                 |   |
| S8.6.7                                   | <ul style="list-style-type: none"> <li>Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and</li> </ul>  |  |                                |                          |                                 |   |
| S8.6.7                                   | <ul style="list-style-type: none"> <li>Different locations should be designated to stockpile each material to enhance reuse.</li> </ul>   |  |                                |                          |                                 |   |
| S8.6.7                                   |   |  |                                |                          |                                 |   |
| S8.6.8/ Waste Management Plan            | <b>Storage, Collection and Transportation of Waste (con't)</b>  |  |                                |                          |                                 |   |
| S8.6.8/ Waste Management Plan            | <ul style="list-style-type: none"> <li>Remove waste in timely manner;</li> </ul>  | To minimize potential adverse environmental impacts arising from waste collection and disposal | Contractor                     | All work sites           | Construction Phase              | ETWB TCW No. 19/2005  |
| S8.6.8/ Waste Management Plan            | <ul style="list-style-type: none"> <li>Waste collectors should only collect wastes prescribed by their permits;</li> </ul>  |  |                                |                          |                                 |   |
| S8.6.8/ Waste Management Plan            | <ul style="list-style-type: none"> <li>Impacts during transportation, such as dust and odour, should be mitigated by the use of covered trucks or in enclosed containers;</li> </ul>  |  |                                |                          |                                 |   |
| S8.6.8/ Waste Management Plan            | <ul style="list-style-type: none"> <li>Obtain relevant waste disposal permits from the appropriate authorities, in accordance with the Waste Disposal Ordinance (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28);</li> </ul>   |  |                                |                          |                                 |   |
| S8.6.8/ Waste Management Plan            | <ul style="list-style-type: none"> <li>Waste should be disposed of at licensed waste disposal facilities/ alternative disposal ground approved by RE and DEP; and</li> </ul>  |  |                                |                          |                                 |   |
| S8.6.8/ Waste Management Plan            | <ul style="list-style-type: none"> <li>Maintain records of quantities of waste generated, recycled and disposed.</li> </ul>   |  |                                |                          |                                 |   |
| S8.6.9/ Waste Management Plan            | <b>Storage, Collection and Transportation of Waste (con't)</b>  |  |                                |                          |                                 |   |
| S8.6.9/ Waste Management Plan            | <ul style="list-style-type: none"> <li>Implementation of trip ticket system with reference to DEVB TC(W) No. 6/2010, Trip Ticket System for Disposal of Construction &amp; Demolition Materials, to monitor disposal of waste and to control fly-tipping at PFRFs or landfills. A recording system for the amount of waste generated, recycled and disposed (including disposal sites) should be proposed.</li> </ul> | To minimize potential adverse environmental impacts arising from waste collection and disposal | Contractor                     | All work sites           | Construction Phase              | DEVB TCW No. 6/2010   |
| S8.6.11 - S8.6.13/ Waste Management Plan | <b>Sorting of C&amp;D Materials</b>   |  |                                |                          |                                 |   |
| S8.6.11 - S8.6.13/ Waste Management Plan | <ul style="list-style-type: none"> <li>Sorting to be performed to recover the inert materials, reusable and recyclable materials before disposal off-site.</li> </ul>   | To minimize potential adverse environmental  | Contractor                     | All work sites           | Construction Phase              | DEVB TCW No. 6/2010   |
| S8.6.11 - S8.6.13/ Waste Management Plan | <ul style="list-style-type: none"> <li>Specific areas shall be provided by the Contractors for sorting and to provide temporary storage areas for the sorted materials.</li> </ul>  |  |                                |                          |                                 | ETWB TCW No. 33/2002  |
| S8.6.11 - S8.6.13/ Waste Management Plan | <ul style="list-style-type: none"> <li>The C&amp;D materials should at least be segregated into inert and non-inert materials, in which the inert portion could be reused and recycled in the reclamation as far as practicable before delivery to PFRFs. While opportunities for reusing the non-inert portion should be investigated before disposal of at designated landfills</li> </ul>                          |  |                                |                          |                                 | ETWB TCW No. 19/2005  |

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| S8.6.17 – S8.6.20                        | <p><b>Sediments (con't)</b></p> <ul style="list-style-type: none"> <li>Requirements of the Air Pollution Control (Construction Dust) Regulation, where relevant, shall be adhered to during boring, excavation, transportation and disposal of sediments or cement stabilization of sediment.</li> <li>A treatment area should be confined for carrying out the cement stabilization mixing and temporary stockpile. The area should be designed to prevent leachate from entering the ground. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO).</li> <li>In order to minimise the potential odour / dust emissions during boring, excavation and transportation of the sediment, the excavated sediments should be kept wet during excavation/boring and should be properly covered when placed on barges/trucks. Loading of the excavated sediment to the barge should be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water.</li> <li>In order to minimise the exposure to contaminated materials, workers should, when necessary, wear appropriate personal protective equipments (PPE) when handling contaminated sediments. Adequate washing and cleaning facilities should also be provided on site.</li> </ul>   | To determine the best handling and treatment of sediment                    | Contractor                     | All works areas with sediments concern | Construction Phase              | ETWB TCW No. 19/2005  |
| S8.6.17 – S8.6.20                        |   |   |                                |  |                                 |   |
| S8.6.17 – S8.6.20                        |   |   |                                |  |                                 |   |
| S8.6.17 – S8.6.20                        |   |   |                                |  |                                 |   |
| S8.6.17 – S8.6.20                        |   |   |                                |  |                                 |   |
| S8.6.24 - S8.6.28/ Waste Management Plan | <p><b>Sediments (con't)</b></p> <ul style="list-style-type: none"> <li>The excavated sediments is expected to be loaded onto the barge and transported to the designated disposal sites allocated by the MFC. The excavated sediment would be disposed of according to its determined disposal options and ETWB TC(W) No. 34/2002.</li> <li>Stockpiling of contaminated sediments should be avoided as far as possible. If temporary stockpiling of contaminated sediments is necessary, the excavated sediment should be covered by tarpaulin and the area should be placed within earth bunds or sand bags to prevent leachate from entering the ground, nearby drains and surrounding water bodies. The stockpiling areas should be completely paved or covered by linings in order to avoid contamination to underlying soil or groundwater. Separate and clearly defined areas should be provided for stockpiling of contaminated and uncontaminated materials. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO).</li> <li>In order to minimise the potential odour / dust emissions during boring and transportation of the sediment, the excavated sediments should be kept wet during excavation/boring and should be properly covered when placed on barges. Loading of the excavated sediment to the barge should be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water.</li> <li>The barge transporting the sediments to the designated disposal sites should be equipped with tight fitting seals to prevent leakage and should not be filled to a level that would cause overflow of materials or laden water during loading or transportation. In addition, monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the DEP.</li> </ul> | To ensure handling of sediments are in accordance to statutory requirements | Contractor                     | All works areas with sediments concern | Construction Phase              | ETWB TC(W) No. 34/2002 & Dumping at Sea Ordinance           |
| S8.6.24 - S8.6.28/ Waste Management Plan |   |   |                                |  |                                 |   |
| S8.6.24 - S8.6.28/ Waste Management Plan |   |   |                                |  |                                 |   |
| S8.6.24 - S8.6.28/ Waste Management Plan |   |   |                                |  |                                 |   |

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|---|--|---|--------------------------------|--|---------------------------------|---|
| S8.6.24 - S8.6.28/ Waste Management Plan                | <ul style="list-style-type: none"> <li>In order to minimise the exposure to contaminated materials, workers should, when necessary, wear appropriate personal protective equipments (PPE) when handling contaminated sediments. Adequate washing and cleaning facilities should also be provided on site.</li> </ul>   |   |                                |  |                                 |   |
| S8.6.24 - S8.6.28/ Waste Management Plan                | <ul style="list-style-type: none"> <li>Another possible arrangement for Type 3 disposal is by geosynthetic containment. A geosynthetic containment method is a method whereby the sediments are sealed in geosynthetic containers and, at the disposal site, the containers would be dropped into the designated contaminated mud pit where they would be covered by further mud disposal and later by the mud pit capping, thereby meeting the requirements for fully confined mud disposal.</li> </ul>   | To ensure handling of sediments are in accordance to statutory requirements | Contractor                     | All works areas with sediments concern | Construction Phase              | ETWB TC(W) No. 34/2002 & Dumping at Sea Ordinance   |
| S8.6.26/ Waste Management Plan                          | <p><b>Chemical Wastes.</b></p> <ul style="list-style-type: none"> <li>If chemical wastes are produced at the construction site, the Contractor would be required to register with the EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes, to either the Chemical Waste Treatment Centre at Tsing Yi, or other licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.</li> </ul> | To ensure proper management of chemical waste                               | Contractor                     | All works sites                        | Construction Phase              | Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes<br><br>Waste Disposal (Chemical Waste) (General) Regulation |
| S8.6.27/ Waste Management Plan                          | <p><b>General Refuse</b></p> <ul style="list-style-type: none"> <li>General refuse should be stored in enclosed bins or compaction units separate from C&amp;D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&amp;D material. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.</li> </ul>   | To ensure proper management of general refuse                               | Contractor                     | All works sites                        | Construction Phase              | Public Health and Municipal Services Ordinance (Cap. 132)   |
| <b>Impact on Cultural Heritage (Construction Phase)</b> |  |   |                                |  |                                 |   |
| S9.6.4  | <p><b>Dust and visual impacts</b></p> <ul style="list-style-type: none"> <li>Temporarily fenced off buffer zone with allowance for public access (minimum 1 m) should be provided;</li> <li>The open yard in front of the temple should be kept as usual for annual Tin Hau festival;</li> <li>Monitoring of vibration impacts should be conducted when the construction works are less than 100m from the temple.</li> </ul>  | To prevent dust and visual impacts  | Contractors                    | Work areas                             | Construction Phase              | EIAO; GCHIA; AMO  |

| EIA Ref. / EP Submission                                | 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?                      | What requirements or standards for the measures to achieve?                    |
|---|---|---|--------------------------------|--|--|--|
| S9.6.4  | <p><b>Indirect vibration impact</b></p> <ul style="list-style-type: none"> <li>Vibration level is suggest to be controlled within a peak particle velocity (ppv) limit of 5mm/s measured inside the historical buildings;</li> <li>Monitoring of vibration should be carried out during construction phase.</li> <li>Tilting and settlement monitoring should will be applied on the Cha Kwo Ling Tin Hau Temple as well.</li> <li>A proposal with details for the mitigation measures and monitoring of impacts on built heritage shall be submitted to AMO for comments before commencement of work.</li> </ul> | To prevent indirect vibration impact                              | Contractors                    | Work areas   | Construction Phase                                   | Vibration Limits on Heritage Buildings by CEDD; GCHIA; AMO.                    |
| Built Heritage Mitigation Plan                          | <ul style="list-style-type: none"> <li>Established Alert, Alarm and Action Level for the monitoring parameters.</li> <li>To increase the instrumentation monitoring and reporting frequency.</li> <li>To propose detailed action plan or contingency plan for the Engineer's approval when AAA Level is reached or exceeded.</li> </ul>   | To prevent vibration impacts                                      | NE/2015/01                     | Tin Hau Temple   | Construction Phase                                   | Vibration Limits on Heritage Buildings by CEDD; GCHIA; AMO.                    |
| <b>Landscape and Visual Impact (Construction Phase)</b> |   |   |                                |  |  |  |
| Table 10.8.1/ Landscape Mitigation Plan                 | CM1 - Construction area and contractor's temporary works areas to be minimised to avoid impacts on adjacent landscape.  | Avoid impact on adjacent landscape areas                          | CEDD (via Contractor)          | General  | Construction planning and during construction period | N/A  |
| Table 10.8.1/ Landscape Mitigation Plan                 | CM2 - Reduction of construction period to practical minimum.  | Minimise duration of impact                                       | CEDD (via Contractor)          | N/A  | Construction planning                                | N/A  |
| Table 10.8.1/ Landscape Mitigation Plan                 | CM3 - Topsoil, where the soil material meets acceptable criteria and where practical, to be stripped and stored for re-use in the construction of the soft landscape works. The Contract Specification shall include storage and reuse of topsoil as appropriate.   | To allow re-use of topsoil  | CEDD (via Contractor)          | General  | Site clearance                                       | As per the Particular Specification  |
| Table 10.8.1/ Landscape Mitigation Plan                 | CM4 - Existing trees at boundary of site and retained trees within site boundary to be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification, under which the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in contractor's works areas. (Tree protection measures will be detailed at Tree Removal Application stage).  | To minimize tree loss   | CEDD (via Contractor)          | As per approved Tree Removal Application(s)                    | Site clearance and throughout construction period    | ETWB TC 3/2006 and as per tree protection measures in Particular Specification |
| Table 10.8.1/ Landscape Mitigation Plan                 | CM5 - Trees unavoidably affected by the works shall be transplanted where practicable. Where possible, trees should be transplanted direct to permanent locations rather than temporary holding nurseries. A detailed tree transplanting specification shall be provided in the Contract Specification and sufficient time for preparation shall be allowed in the construction programme.  | To maximize preservation of existing trees                        | CEDD (via Contractor)          | As per approved Tree Removal Application(s)                    | Site clearance                                       | ETWB TC 3/2006 and as per tree protection measures in Particular Specification |
| Table 10.8.1/ Landscape Mitigation Plan                 | CM6 - Advance screen planting of fast growing tree and shrub species to noise barriers and hoardings. Trees shall be capable of reaching a height >10m within 10 years.   | To maximize screening of the works                                | CEDD (via Contractor)          | At Lam Tin Interchange and edge of Road P2 landscape deck, TKO | Beginning of construction period                     | N/A  |
| Table 10.8.1/ Landscape Mitigation Plan                 | CM7 - Hydros seeding or sheeting of soil stockpiles with visually unobtrusive material  | To reduce visual intrusion  | CEDD (via Contractor)          | General  | Throughout construction period                       | As per Particular Specification  |

| EIA Ref. / EP Submission                | 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?              | What requirements or standards for the measures to achieve? |
|---|---|---|--------------------------------|--|--|---|
| Table 10.8.1/ Landscape Mitigation Plan | CM8 - Control of night-time lighting by hooding all lights and through minimisation of night working periods.   | To reduce visual intrusion  | CEDD (via Contractor)          | General  | Throughout construction period               | N/A   |
| Table 10.8.1/ Landscape Mitigation Plan | CM9 - Screening of works areas with hoardings with appropriate colours compatible with the surrounding area     | Reduction of visual intrusion                                     | CEDD (via Contractor)          | Project site Boundary  | Excretion of site hoarding                   | N/A   |
| Table 10.8.1/ Landscape Mitigation Plan | CM10 - Avoidance of excessive height and bulk of site buildings and structure                                   | Reduction of visual intrusion and integration with environment    | CEDD (via Contractor)          | Built structures   | Design and construction stage                | N/A   |
| Table 10.8.1/ Landscape Mitigation Plan | CM11 - Limitation of run-off into freshwater streams, ponds and sea areas                                       | Avoidance of contamination of water courses and water bodie       | CEDD (via Contractor)          | TKO reclamation, TKO tunnel portal, Cha Kwo Ling roadworks   | Throughout construction period               | N/A   |
| Table 10.8.1                            | CM12 - Minimise area of reclamation and design the edges sensitively to tie in with adjacent coastline characte | Minimise loss of Junk Bay and integration with existing coastlin  | CEDD (via Contractor)          | Temporary reclamation for barging points at TKO and Lam Tin and permanent reclamation for TKO Interchange slip roads and Road P2 | Construction planning and reclamation stages | N/A   |

#### Landfill Gas Hazard (Design and Construction Phase)

|                   |   |   |            |   |                    |   |
|-------------------|---|---|------------|---|--------------------|---|
| S11.5.9           | A Safety Officer, trained in the use of gas detection equipment and landfill gas-related hazards, should be present on site throughout the groundworks phase. The Safety Officer should be provided with an intrinsically safe portable instrument, which is appropriately calibrated and able to measure the following gases in the ranges indicated below:<br><br>Methane 0-100% LEL and 0100% v/v<br>Carbon dioxide 0-100%<br>Oxygen 0-21% | Protect the workers from landfill gas hazards | Contractor | Project sites within the Sai Tso Wan Landfill Consultation Zone | Construction phase | EPD's Landfill Gas Hazard Assessment Guidance Note  |
| S11.5.10 S11.5.25 | <b>Safety Measures</b>  | Protect the workers from landfill gas hazards | Contractor | Project sites within the Sai Tso Wan Landfill Consultation Zone | Construction phase | EPD's Landfill Gas Hazard Assessment Guidance Note Labour Department's Code of Practice for Safety and Health at Work in Confined Space |
| S11.5.10 S11.5.25 | <ul style="list-style-type: none"> <li>For staff who work in, or have responsibility for "at risk" area, such as all excavation workers, supervisors and engineers working within the Consultation Zone, should receive appropriate training on working in areas susceptible to landfill gas, fire and explosion hazards.</li> </ul>  |   |            |   |                    |   |
| S11.5.10 S11.5.25 | <ul style="list-style-type: none"> <li>An excavation procedure or code of practice to minimize landfill gas related risk should be devised and carried out.</li> </ul>  |   |            |   |                    |   |
| S11.5.10 S11.5.25 | <ul style="list-style-type: none"> <li>No worker should be allowed to work alone at any time in or near to any excavation. At least one other worker should be available to assist with a rescue if needed.</li> </ul>  |   |            |   |                    |   |
| S11.5.10 S11.5.25 | <ul style="list-style-type: none"> <li>Smoking, naked flames and all other sources of ignition should be prohibited within 15m of any excavation or ground-level confined space. "No smoking" and "No naked flame" notices should be posted prominently on the construction site and, if necessary, special areas should be designed for smoking.</li> </ul>  |   |            |   |                    |   |
| S11.5.10 S11.5.25 | <ul style="list-style-type: none"> <li>Welding, flame-cutting or other hot works should be confined to open areas at least 15m from any trench or excavation.</li> </ul>  |   |            |   |                    |   |

| EIA Ref. / EP Submission | 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? | What requirements or standards for the measures to achieve?   |
|--------------------------|---|---|--------------------------------|---|---------------------------------|---|
| S11.5.10 S11.5.25        | <ul style="list-style-type: none"> <li>Welding, flame-cutting or other hot works may only be carried out in trenches or confined spaces when controlled by a "permit to work" procedure, properly authorized by the Safety Officer (or, in the case of small developments, other appropriately qualified person).</li> </ul>  | Protect the workers from landfill gas hazards                     | Contractor                     | Project sites within the Sai Tso Wan Landfill Consultation Zone | Construction phase              | EPD's Landfill Gas Hazard Assessment Guidance Note Labour Department's Code of Practice for Safety and Health at Work in Confined Space |
| S11.5.10 S11.5.25        | <ul style="list-style-type: none"> <li>The permit to work procedure should set down clearly the requirements for continuous monitoring for methane, carbon dioxide and oxygen throughout the period during which the hot works are in progress. The procedure should also require the presence of an appropriately qualified person, in attendance outside the 'confined area', who should be responsible for reviewing the gas measurements as they are made, and who should have executive responsibility for suspending the work in the event of unacceptable or hazardous conditions. Only those workers who are appropriately trained and fully aware of the potentially hazardous conditions which may arise should be permitted to carry out hot works in confined areas.</li> </ul> |   |                                |   |                                 |   |
| S11.5.10 S11.5.25        | <ul style="list-style-type: none"> <li>Where there are any temporary site offices, or any other buildings located within the Sai Tso Wan Landfill Consultation Zone which have enclosed spaces with the capacity to accumulate landfill gas, then they should either be located in an area which has been proven to be free of landfill gas (by survey using portable gas detectors); or be raised clear of the ground by a minimum of 500mm. This aims to create a clear void under the structure which is ventilated by natural air movement such that emission of gas from the ground are mixed and diluted by air.</li> </ul>   |   |                                |   |                                 |   |
| S11.5.10 S11.5.25        | <ul style="list-style-type: none"> <li>Any electrical equipment, such as motors and extension cords, should be intrinsically safe. During piping assembly or conduiting construction, all valves/seals should be closed immediately after installation. As construction progresses, all valves/seals should be closed to prevent the migration of gases through the pipeline/conduit. All piping /conduiting should be capped at the end of each working day.</li> </ul>  | Protect the workers from landfill gas hazards                     | Contractor                     | Project sites within the Sai Tso Wan Landfill Consultation Zone | Construction phase              | EPD's Landfill Gas Hazard Assessment Guidance Note Labour Department's Code of Practice for Safety and Health at Work in Confined Space |
| S11.5.10 S11.5.25        | <ul style="list-style-type: none"> <li>During construction, adequate fire extinguishing equipment, fire-resistant clothing and breathing apparatus (BA) sets should be made available on site.</li> </ul>   |   |                                |   |                                 |   |
| S11.5.10 S11.5.25        | <ul style="list-style-type: none"> <li>Fire drills should be organized at not less than six monthly intervals.</li> </ul>   |   |                                |   |                                 |   |
| S11.5.10 S11.5.25        | <ul style="list-style-type: none"> <li>The contractor should formulate a health and safety policy, standards and instructions for site personnel to follow.</li> </ul>  |   |                                |   |                                 |   |
| S11.5.10 S11.5.25        | <ul style="list-style-type: none"> <li>All personnel who work on the site and all visitors to the site should be made aware of the possibility of ignition of gas in the vicinity of excavations. Safety notices (in Chinese and English) should be posted at prominent position around the site warning danger of the potential hazards.</li> </ul>  |   |                                |   |                                 |   |
| S11.5.10 S11.5.25        | <ul style="list-style-type: none"> <li>Service runs within the Consultation Zone should be designated as "special routes"; utilities companies should be informed of this and precautionary measures should be implemented. Precautionary measures should include ensuring that staff members are aware of the potential hazards of working in confined spaces such as manholes and service chambers, and that appropriate monitoring procedures are in place to prevent hazards due to asphyxiating atmospheres in confined spaces. Detailed guidance on entry into confined spaces is given in Code of Practice on Safety and Health at Work in Confined Spaces (Labour Department, Hong Kong).</li> </ul>  |   |                                |   |                                 |   |

| EIA Ref. / EP Submission  | 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? | What requirements or standards for the measures to achieve?   |
|---|---|---|--------------------------------|---|---------------------------------|---|
| S11.5.10 S11.5.25   | <ul style="list-style-type: none"> <li>Periodically during ground-works construction within the 250m Consultation Zone, the works area should be monitored for methane, carbon dioxide and oxygen using appropriately calibrated portable gas detection equipment. The monitoring frequency and areas to be monitored should be set down prior to commencement of ground-works either by the Safety Officer or an approved and appropriately qualified person.</li> </ul>   | Protect the workers from landfill gas hazards   | Contractor                     | Project sites within the Sai Tso Wan Landfill Consultation Zone | Construction phase              | EPD's Landfill Gas Hazard Assessment Guidance Note Labour Department's Code of Practice for Safety and Health at Work in Confined Space |
| <p>S11.5.26 - S11.5.31</p> <p>S11.5.26 - S11.5.31</p> <p>S11.5.26 - S11.5.31</p> <p>S11.5.26 - S11.5.31</p> <p>S11.5.26 - S11.5.31</p> <p>S11.5.26 - S11.5.31</p> <p>S11.5.26 - S11.5.31</p> <p>S11.5.26 - S11.5.31</p> <p>S11.5.26 - S11.5.31</p> <p>S11.5.26 - S11.5.31</p> <p>S11.5.26 - S11.5.31</p> <p>S11.5.26 - S11.5.31</p> <p>S11.5.26 - S11.5.31</p> <p>S11.5.26 - S11.5.31</p> <p>S11.5.26 - S11.5.31</p> <p>S11.5.26 - S11.5.31</p> | <p><b>Monitoring</b></p> <ul style="list-style-type: none"> <li>Routine monitoring should be carried out in all excavations, manholes, chambers, relocation of monitoring wells and any other confined spaces that may have been created. All measurements in excavations should be made with the extended monitoring tube located not more than 10 mm from the exposed ground surface. Monitoring should be performed properly to make sure that the area is free of landfill gas before any man enters into the area.</li> <li>For excavations <b>deeper than 1m</b>, measurements should be carried out: <ul style="list-style-type: none"> <li>at the ground surface before excavation commences;-</li> <li>immediately before any worker enters the excavation;</li> <li>at the beginning of each working day for the entire period the excavation remains open; and</li> <li>periodically throughout the working day whilst workers are in the excavation.</li> </ul> </li> <li>For excavations <b>between 300mm and 1m deep</b>, measurements should be carried out: <ul style="list-style-type: none"> <li>directly after the excavation has been completed; and</li> <li>periodically whilst the excavation remains open.</li> </ul> </li> <li>For excavations less than 300mm deep, monitoring may be omitted, at the discretion of the Safety Officer or other appropriately qualified person.</li> <li>Depending on the results of the measurements, actions required will vary and should be set down by the Safety Officer or other appropriately qualified person.</li> <li>The exact frequency of monitoring should be determined prior to the commencement of works, but should be at least once per day, and be carried out by a suitably qualified or qualified person before starting the work of the day. Measurements shall be recorded and kept as a record of safe working conditions with copies of the site diary and submitted to the Engineer for approval. The Contractor may elect to carry out monitoring via an automated monitoring system.</li> </ul> | Protect the workers from landfill gas hazards   | Contractor                     | Project sites within the Sai Tso Wan Landfill Consultation Zone | Construction phase              | EPD's Landfill Gas Hazard Assessment Guidance Note  |
| S11.5.32  | The hazards from landfill gas during the construction stage within the Sai Tso Wan Landfill Consultation Zone should be minimized by suitable precautionary measures recommended in Chapter 8 of the Landfill Gas Hazard Assessment Guidance Note.  | <p>construction stage within the Sai Tso Wan</p> <p>Protect the workers from landfill gas hazards</p> | Contractor                     | Project sites within the Sai Tso Wan Landfill Consultation Zone | Construction phase              | EPD's Landfill Gas Hazard Assessment Guidance Note  |

**Table II - Observation / Reminder / Non-compliance made during Site Audit**

Key:            ✓ Observation/reminder was made during site audit but improved/rectified by the contractor in the next site audit  
 ✗ Observation/reminder was made during site audit but not yet improved/rectified by the contractor in the next site audit  
 # Follow up action will be reported in next reporting month  
 \* Non-compliance of mitigation measure  
 · Non-compliance but improved by the contractor

| EIA Ref                            | Recommended Mitigation Measures   | Contract No. | Work Sites         | Details of Reminder/Observation   | Recorded Date | Status |
|------------------------------------|---|--------------|--------------------|---|---------------|--------|
| <b>Water Quality Impact</b>        |   |              |                    |   |               |        |
| S5.8.7                             | Construction site runoff and drainage should be prevented or minimised in accordance with the guidelines stipulated in the EPD's Practice Note for Professional Persons, Construction Site Drainage (ProPECC PN 1/94). Good housekeeping and stormwater best management practices, as detailed in below, should be implemented to ensure that all construction runoff complies with WPCO standards and no unacceptable impact on the WSRs arises due to construction of the TKO-LT Tunnel. All discharges from the construction site should be controlled to comply with the standards for effluents discharged into the corresponding WCZ under the TM-DSS.  | NE2015/01    | Slope D            | The Contractor is reminded to remove the ponding water under EHC4.1 next to slope D     | 18-Jun-25     | ✓      |
| <b>Ecological Impact</b>           |   |              |                    |   |               |        |
| --                                 | --  | --           | --                 | --  | --            | --     |
| <b>Construction Noise Impact</b>   |   |              |                    |   |               |        |
| --                                 | --  | --           | --                 | --  | --            | --     |
| <b>Landscape and Visual Impact</b> |   |              |                    |   |               |        |
| --                                 | --  | --           | --                 | --  | --            | --     |
| <b>Air Quality Impact</b>          |   |              |                    |   |               |        |
| --                                 | --  | --           | --                 | --  | --            | --     |
| <b>Fisheries Impact</b>            |   |              |                    |   |               |        |
| --                                 | --  | --           | --                 | --  | --            | --     |
| <b>Waste Management</b>            |   |              |                    |   |               |        |
| S8.6.26/ Waste Management Plan     | If chemical wastes are produced at the construction site, the Contractor would be required to register with the EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes to either the Chemical Waste Treatment Centre at Tsing Yi or | NE2015/01    | S02 Road Enclosure | The used fuel drum/chemical container should be labeled and stored in proper locations. | 25-Jun-25     | ✓      |
| <b>Landfill Gas Hazards</b>        |   |              |                    |   |               |        |
| --                                 | --  | --           | --                 | --  | --            | --     |

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**APPENDIX O  
SUMMARIES OF ENVIRONMENTAL  
COMPLAINT, WARNING, SUMMON  
AND NOTIFICATION OF SUCCESSFUL  
PROSECUTION**

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**Appendix O - Cumulative Log for Complaints, Notifications of Summons and Successful Prosecutions**  
**Table O2 - Summary of Cumulative Complaint Log for Tseung Kwan O - Lam Tin Tunnel**

| Reporting Month/Year | Number of Complaints in Reporting Month | Number of Summons in Reporting Month | Number of Prosecutions in Reporting Month |
|----------------------|---|--------------------------------------|---|
| 2016                 | 11                                      | 0                                    | 0   |
| 2017                 | 99                                      | 1                                    | 0   |
| 2018                 | 150                                     | 0                                    | 1   |
| 2019                 | 156                                     | 0                                    | 0   |
| 2020                 | 88                                      | 0                                    | 0   |
| 2021                 | 87                                      | 0                                    | 0   |
| 2022                 | 54                                      | 0                                    | 0   |
| 2023                 | 7                                       | 0                                    | 0   |
| 2024                 | 1                                       | 0                                    | 0   |
| Jan-25               | 0                                       | 0                                    | 0   |
| Feb-25               | 0                                       | 0                                    | 0   |
| Mar-25               | 0                                       | 0                                    | 0   |
| Apr-25               | 0                                       | 0                                    | 0   |
| May-25               | 0                                       | 0                                    | 0   |
| Jun-25               | 0                                       | 0                                    | 0   |
| <b>Total</b>         | <b>653</b>                              | <b>1</b>                             | <b>1</b>                                  |

**Table O3 - Cumulative Log for Notifications of Summons**

| Contract No. | Log Ref.      | Date/Location                                      | Subject   | Status   | Total no. Received in this Reporting Month | Total no. Received since project commencement |
|--------------|---------------|--|---|--|--|---|
| NE/2015/01   | --            | --   | --  | --   | --   | --  |
| NE/2015/02   | KTS24138/2017 | 25 June 2017/ Marine construction site at Junk Bay | Contrary to: Sections 6 (1) (b) and 6 (5), Noise Control Ordinance, Cap.400 | The Summon was issued on 22 Dec 2017<br>First hearing on 29/3/2018 | 1  | 1   |
| NE/2015/03   | --            | --   | --  | --   | --   | --  |
| NE/2017/01   | --            | --   | --  | --   | --   | --  |
| NE/2017/02   | --            | --   | --  | --   | --   | --  |
| NE/2017/06   | --            | --   | --  | --   | --   | --  |
| NE/2017/07   | --            | --   | --  | --   | --   | --  |

**Table O4 - Cumulative Log for Successful Prosecutions**

| Contract No. | Log Ref.      | Date/Location                                      | Subject   | Status  | Total no. Received in this reporting month | Total no. Received since project commencement |
|--------------|---------------|--|---|---|--|---|
| NE/2015/01   | --            | --   | --  | --  | --   | --  |
| NE/2015/02   | KTS24138/2017 | 25 June 2017/ Marine construction site at Junk Bay | Contrary to: Sections 6 (1) (b) and 6 (5), Noise Control Ordinance, Cap.400 | Successful prosecution to the subcontractor on 27 June 2018 | 1  | 1   |
| NE/2015/03   | --            | --   | --  | --  | --   | --  |
| NE/2017/01   | --            | --   | --  | --  | --   | --  |
| NE/2017/02   | --            | --   | --  | --  | --   | --  |
| NE/2017/06   | --            | --   | --  | --  | --   | --  |
| NE/2017/07   | --            | --   | --  | --  | --   | --  |

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**APPENDIX P  
WASTE GENERATION IN THE  
REPORTING MONTH**

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Monthly Summary Waste Flow Table for June 2025



| Month     | Actual Quantities of Inert C&D Materials Generated Monthly |  |                           |                             |                            |                          | Actual Quantities of C&D Wastes Generated Monthly |  |   |                   |                                |
|-----------|--|--|---------------------------|-----------------------------|----------------------------|--------------------------|---|--|---|-------------------|--------------------------------|
|           | a.Total Quantity Generated<br>(see Note 8)                 | b. Hard Rock and Large Broken Concrete | c. Reused in the Contract | d. Reused in Other Projects | e. Disposed as Public Fill | f. Imported Fill         | g. Metals<br>(see Note 5)                         | h. Paper / Cardboard Packaging<br>(see Note 5) | i. Plastics<br>(see Note 3)<br>(see Note 5) | j. Chemical Waste | k. 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 '000kg)                                       | (in '000kg)                                    | (in '000kg)                                 | (in '000kg)       | (in '000m <sup>3</sup> )       |
| January   | 0.324  | 0.025                                  | 0.000                     | 0.000                       | 0.324                      | 0.000                    | 0.000   | 0.000  | 0.000                                       | 0.000             | 0.407                          |
| February  | 0.754  | 0.100                                  | 0.000                     | 0.000                       | 0.754                      | 0.000                    | 0.000   | 0.000  | 0.000                                       | 0.000             | 0.240                          |
| March     | 0.836  | 0.130                                  | 0.000                     | 0.00                        | 0.836                      | 0.000                    | 0.000   | 0.000  | 0.000                                       | 0.000             | 0.469                          |
| April     | 0.226  | 0.061                                  | 0.000                     | 0.000                       | 0.226                      | 0.000                    | 0.000   | 0.000  | 0.000                                       | 0.000             | 0.263                          |
| May       | 0.125  | 0.025                                  | 0.000                     | 0.000                       | 0.125                      | 0.000                    | 0.000   | 0.000  | 0.000                                       | 0.000             | 0.263                          |
| June      | 0.262  | 0.030                                  | 0.000                     | 0.000                       | 0.262                      | 0.000                    | 0.000   | 0.000  | 0.000                                       | 0.000             | 0.243                          |
| Sub-total | 2.527  | 0.371                                  | 0.000                     | 0.000                       | 2.527                      | 0.000                    | 0.000   | 0.000  | 0.000                                       | 0.000             | 1.885                          |
| July      | 0.000  |  |                           |                             |                            |                          |   |  |   |                   |                                |
| August    | 0.000  |  |                           |                             |                            |                          |   |  |   |                   |                                |
| September | 0.000  |  |                           |                             |                            |                          |   |  |   |                   |                                |
| October   | 0.000  |  |                           |                             |                            |                          |   |  |   |                   |                                |
| November  | 0.000  |  |                           |                             |                            |                          |   |  |   |                   |                                |
| December  | 0.000  |  |                           |                             |                            |                          |   |  |   |                   |                                |
| Total     | 2.527  | 0.371                                  | 0.000                     | 0.000                       | 2.527                      | 0.000                    | 0.000   | 0.000  | 0.000                                       | 0.000             | 1.885                          |

Total inert C&D waste generated = c+d+e

Total inert C&D waste recycled = c+d

% of recycled inert C&D waste = Total C&D waste recycled / Total C&D waste generated

Name of Department: Civil Engineering Development Department

Contract No.: NE/2015/01



- Notes:
- (1) The performance target are given in PS Clause 6(14)
  - (2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site
  - (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
  - (4) The Contractor shall also submit the latest forecast of the amount of C&D materials expected to be generated from the Works, together with a break down of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m<sup>3</sup>. (PS Clause 1.105(4) refers)
  - (5) All recyclable materials, including metals, paper / cardboard packaging, plastics, etc. will be collected by registered collector for recycling.
  - (6) Conversion factors for reporting purpose:
    - in-situ: rock = 2.5 tonnes/m<sup>3</sup>; soil = 2.0 tonnes/m<sup>3</sup>
  - (7) excavated: rock = 2.0 tonnes/m<sup>3</sup>; soil = 1.8 tonnes/m<sup>3</sup>; broken concrete and bitumen = 2.4 tonnes/m<sup>3</sup>, soil and rock = 1.9 tonnes/m<sup>3</sup>
  - (8) C&D Waste = 0.9 tonnes/m<sup>3</sup>; bentonite slurry = 2.8 tonnes/m<sup>3</sup>
    - Diesel density: 0.8kg/l
    - Numbers are rounded off to the nearest three decimal places
    - The "Total Quantity Generated" equals to the sum of "Reuse in the Contract", "Reuse in Other Projects" and "Disposed as Public Fill"

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**APPENDIX Q  
TENTATIVE CONSTRUCTION  
PROGRAMME**

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**APPENDIX T  
CULTURAL HERITAGE MONITORING  
RESULTS**

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**Appendix T – Cultural Heritage Monitoring Results**

| Date      | Tilting    |            |            |                                     | Settlement (mm) |           |                 | Vibration (mm/s)      |          |              |
|-----------|------------|------------|------------|-------------------------------------|-----------------|-----------|-----------------|-----------------------|----------|--------------|
|           | THT-TM-01A | THT-TM-02A | THT-TM-03A | THT-TM-04A                          | THT-BSP-1A      | THT-BSP-2 | THT-BSP-3       | Measurement Direction |          |              |
|           |            |            |            |                                     |                 |           |                 | Tran                  | Vertical | Longitudinal |
| 02-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 03-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 04-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 05-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 06-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 07-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 09-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 10-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 11-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |

**Appendix T – Cultural Heritage Monitoring Results**

| Date      | Tilting    |            |            |                                     | Settlement (mm) |           |                 | Vibration (mm/s)      |          |              |
|-----------|------------|------------|------------|-------------------------------------|-----------------|-----------|-----------------|-----------------------|----------|--------------|
|           | THT-TM-01A | THT-TM-02A | THT-TM-03A | THT-TM-04A                          | THT-BSP-1A      | THT-BSP-2 | THT-BSP-3       | Measurement Direction |          |              |
|           |            |            |            |                                     |                 |           |                 | Tran                  | Vertical | Longitudinal |
| 12-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 13-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 14-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 16-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 17-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 18-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 19-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 20-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 21-Jun-25 | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |

**Appendix T – Cultural Heritage Monitoring Results**

| Date         | Tilting    |            |            |                                     | Settlement (mm) |           |                 | Vibration (mm/s)      |          |              |
|--------------|------------|------------|------------|-------------------------------------|-----------------|-----------|-----------------|-----------------------|----------|--------------|
|              | THT-TM-01A | THT-TM-02A | THT-TM-03A | THT-TM-04A                          | THT-BSP-1A      | THT-BSP-2 | THT-BSP-3       | Measurement Direction |          |              |
|              |            |            |            |                                     |                 |           |                 | Tran                  | Vertical | Longitudinal |
| 23-Jun-25    | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 24-Jun-25    | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 25-Jun-25    | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 26-Jun-25    | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 27-Jun-25    | 1 : 9782   | 1 : 4628   | -1 : 10465 | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| 28-Jun-25    | ---        | ---        | ---        | Obstructed by work from stakeholder | +1              | -2        | Stop Monitoring | ---                   | ---      | ---          |
| 30-Jun-25    | ---        | ---        | ---        | Obstructed by work from stakeholder | ---             | ---       | Stop Monitoring | ---                   | ---      | ---          |
| Alert Level  | 1:2000     |            |            |                                     | 6               |           |                 | 4.5                   |          |              |
| Alarm Level  | 1:1500     |            |            |                                     | 8               |           |                 | 4.8                   |          |              |
| Action Level | 1:1000     |            |            |                                     | 10              |           |                 | 5                     |          |              |

## Appendix T – Cultural Heritage Monitoring Results

Note:

**Bold** means Alert Level exceedance

***Bold Italic*** means Alarm Level exceedance

***Bold Italic with underline*** means Action Level exceedance

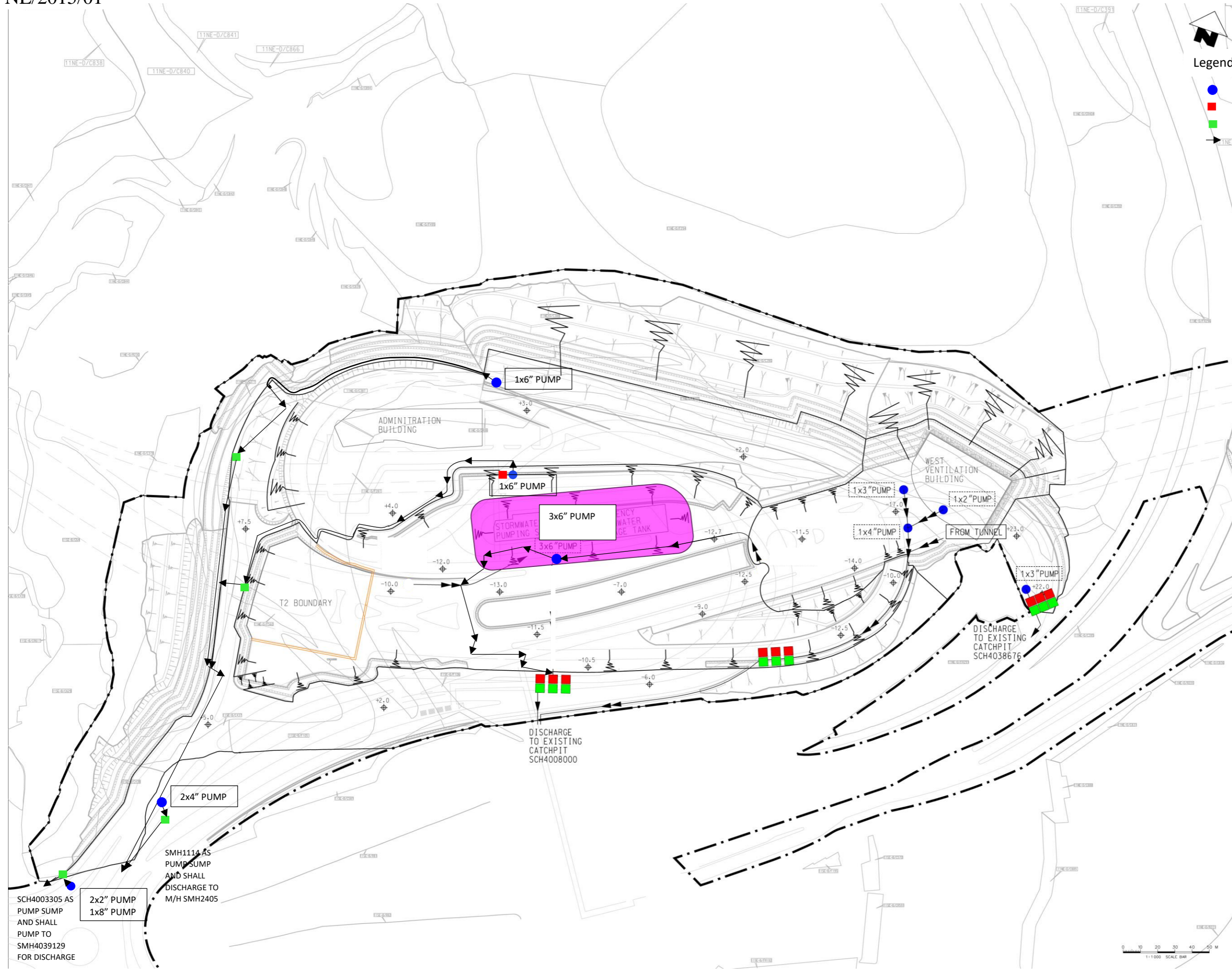
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**APPENDIX V  
SURFACE RUNOFF MANAGEMENT  
PLAN**

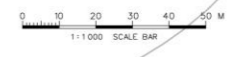
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Legend:

-  Pump
-  Sedimentation Tank
-  Wastewater Treatment Plant
-  Flow Path



**FOR CONSTRUCTION**

**ISSUE/REVISION**

| NO. | DATE   | DESCRIPTION          | CHKD BY |
|-----|--------|----------------------|---------|
| B   | JUL 16 | WORKING DRAWING      | ALC     |
| A   | OCT 15 | TENDER ADDENDUM NO.1 | CYKC    |
| -   | AUG 15 | TENDER DRAWING       | CYKC    |

**STATUS**  
WORKING DRAWING

**SCALE**  
1:500  
**DIMENSION UNIT**  
METRES

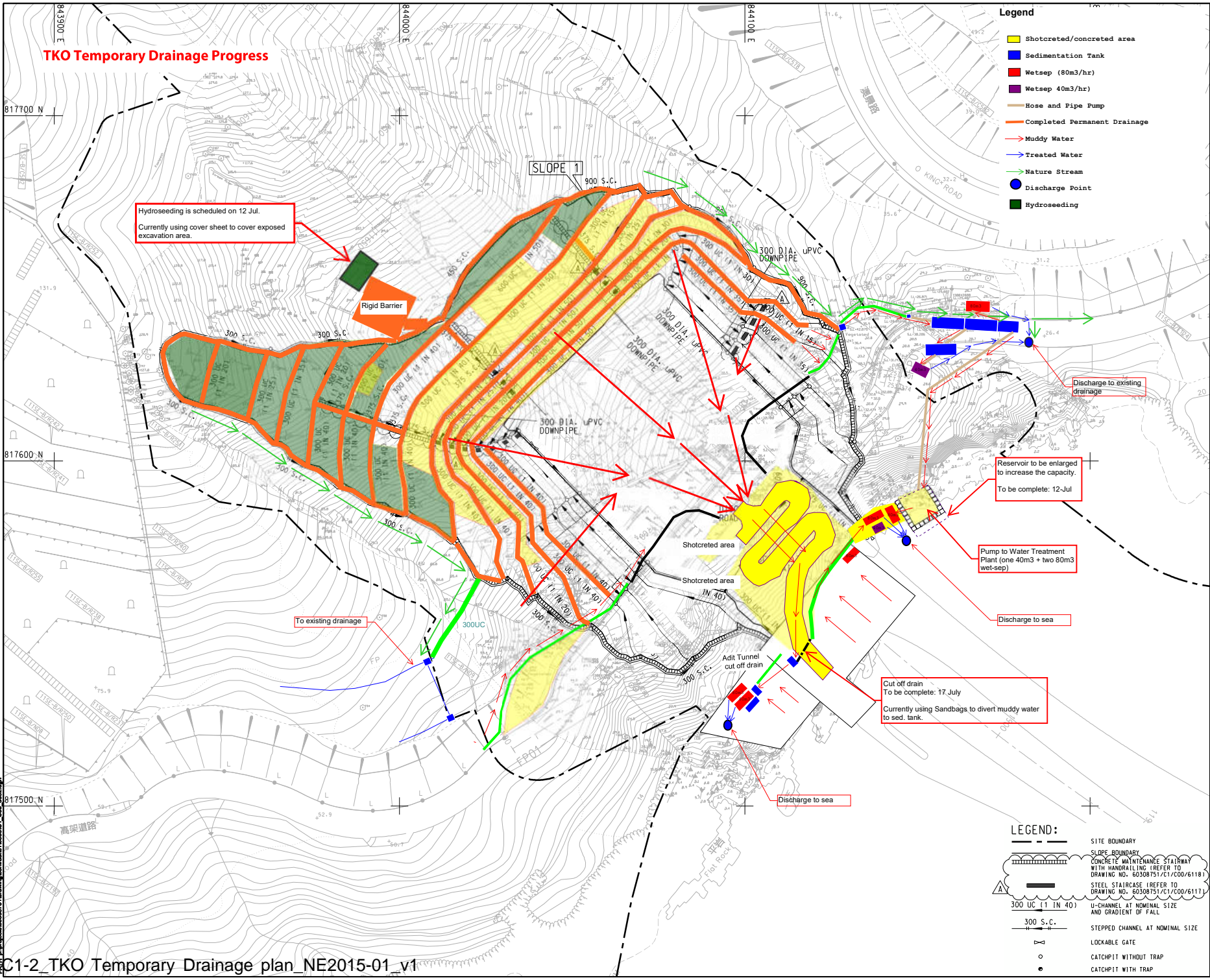
**KEY PLAN**

**PROJECT NO.** 60308751  
**CONTRACT NO.** NE/2015/01

**SHEET TITLE**  
TSEUNG KWAN O PORTAL SITE FORMATION DRAINAGE LAYOUT PLAN

**SHEET NUMBER**  
60308751/C1/C00/6092B 3

Project Management Initials: Designer: BMS Checked: CHC Approved: CHN  
 ISO 9001:2015 Approved: CHN  
 Date: 15/07/2015  
 Drawing No: 60308751/C1/C00/6092B



- Legend**
- Shotcreted/concreted area
  - Sedimentation Tank
  - Wetsep (80m<sup>3</sup>/hr)
  - Wetsep 40m<sup>3</sup>/hr
  - Hose and Pipe Pump
  - Completed Permanent Drainage
  - Muddy Water
  - Treated Water
  - Nature Stream
  - Discharge Point
  - Hydroseeding

- LEGEND:**
- SITE BOUNDARY
  - SLOPE BOUNDARY
  - CONCRETE MAINTENANCE STAIRWAY WITH HANDRAILING (REFER TO DRAWING NO. 60308751/C1/C00/6118)
  - STEEL STAIRCASE (REFER TO DRAWING NO. 60308751/C1/C00/6117)
  - U-CHANNEL AT NOMINAL SIZE AND GRADIENT OF FALL
  - 300 S.C.
  - STEPPED CHANNEL AT NOMINAL SIZE
  - LOCKABLE GATE
  - CATCHPIT WITHOUT TRAP
  - CATCHPIT WITH TRAP



**Maintenance Schedule**  
Wetsep ,Sed tanks and drainage will be clean once or twice per week.  
(Depends on the weather condition)

Sed tanks

Site Clearance & provide cover to exposed excavation area

Wetsep

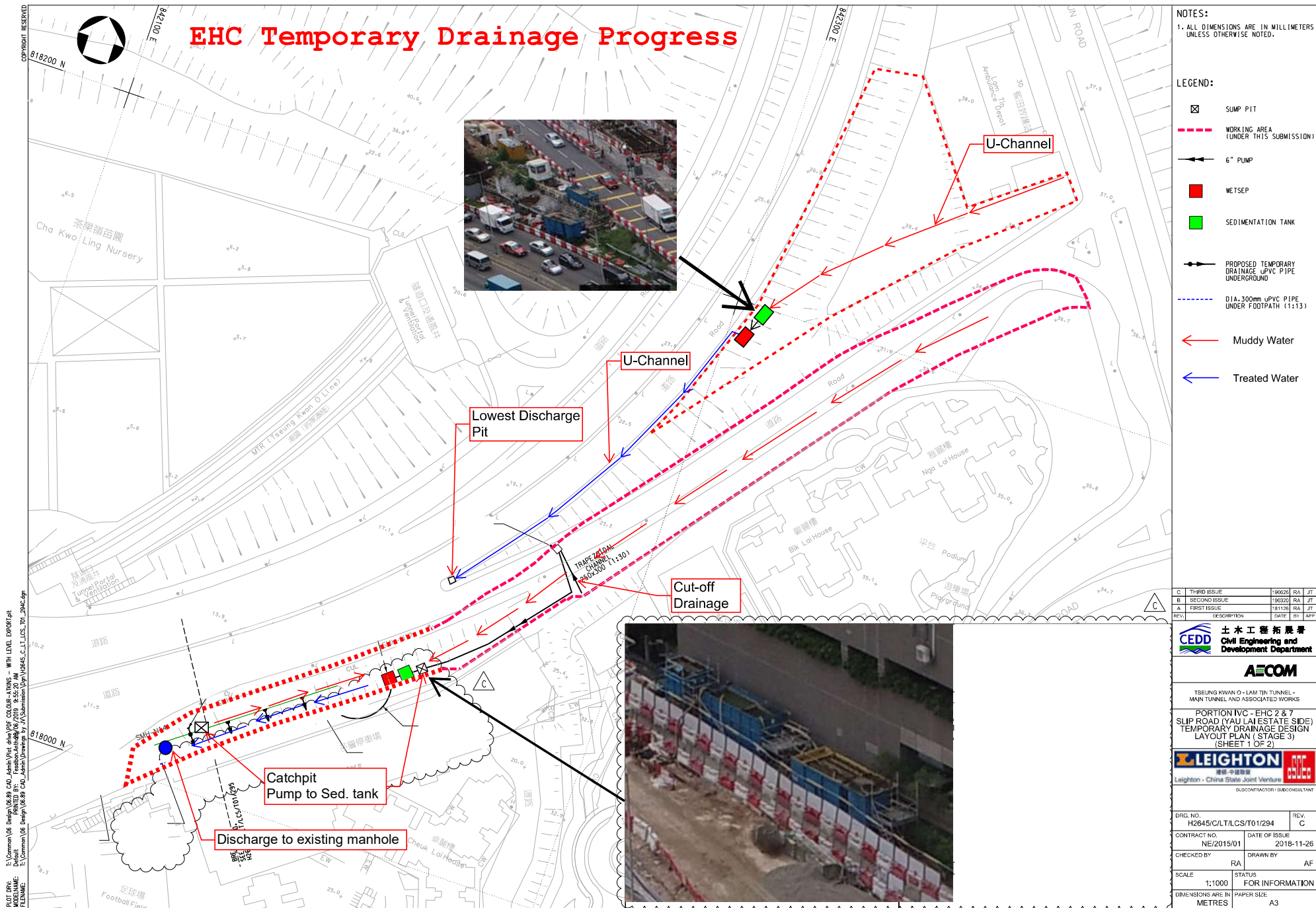
Effluent

Extension of Sed tanks

Contract Number NE/2015/01

2019年6月28日  
新界

The image is an aerial photograph of a large-scale construction project. A central road or bridge structure is under development, surrounded by various infrastructure components. Several callout boxes with yellow borders and red arrows point to specific areas: 'Maintenance Schedule' points to the overall site; 'Sed tanks' points to a large rectangular structure; 'Site Clearance & provide cover to exposed excavation area' points to a worker in a yellow vest; 'Wetsep' points to a blue truck; 'Effluent' points to a pipe discharging water; and 'Extension of Sed tanks' points to a concrete structure near a river. A date stamp '2019年6月28日 新界' is visible in the top-left callout box. The text 'Contract Number NE/2015/01' is overlaid in large black font across the center-right of the image.



|      |              |        |    |     |
|------|--------------|--------|----|-----|
| C    | THIRD ISSUE  | 190226 | RA | JT  |
| B    | SECOND ISSUE | 190320 | RA | JT  |
| A    | FIRST ISSUE  | 181126 | RA | JT  |
| REV. | DESCRIPTION  | DATE   | BY | APP |

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

**AECOM**

TSEUNG KWAN O - LAM TIN TUNNEL - MAIN TUNNEL AND ASSOCIATED WORKS

PORTION IVC - EHC 2 & 7  
SLIP ROAD (YAU LAI ESTATE SIDE)  
TEMPORARY DRAINAGE DESIGN LAYOUT PLAN (STAGE 3)  
(SHEET 1 OF 2)

**LEIGHTON** 中國建築  
Leighton - China State Joint Venture

DRG. NO. H2645/C/LT/LCS/T01/294

CONTRACT NO. NE/2015/01 DATE OF ISSUE 2018-11-26

CHECKED BY RA DRAWN BY AF

SCALE 1:1000 STATUS FOR INFORMATION  
DIMENSIONS ARE IN METRES PAPER SIZE A3

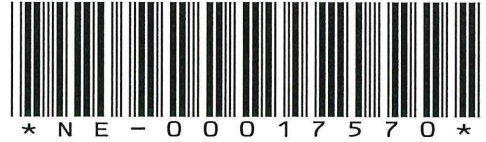


中國路橋  
C R B C



## CRBC-Build King Joint Venture

Our Ref.:JV/TKO-P2/NE201502/19.00.00.00/017621/L  
Your Ref.: TLT/(NE/2015/02)/C30/650/(0205)



29 March 2021

**AECOM Asia Company Limited**  
8/F, Tower 2, Grand Central Plaza  
138 Shatin Rural Committee Road  
Shatin, Hong Kong

**By Hand**

**Attn.: Mr C. W. Lam, Dominic (CRE)**

Dear Sir,

**Contract No.: NE/2015/02**

**Tseung Kwan O – Lam Tin Tunnel – Road P2 and Associated Works**  
**Submission of Layout Plan for Site Surface Run-off Control**

We would like to submit herewith a Layout Plan for Site Surface Run-off Control so as to illustrate our site preparedness for the coming typhoon and wet season as per PS Clause 25.08.

Yours faithfully,  
For and on behalf of  
CRBC-Build King Joint Venture

  
\_\_\_\_\_  
**YU Man Kit, Andy**  
**Site Agent**

Encl.

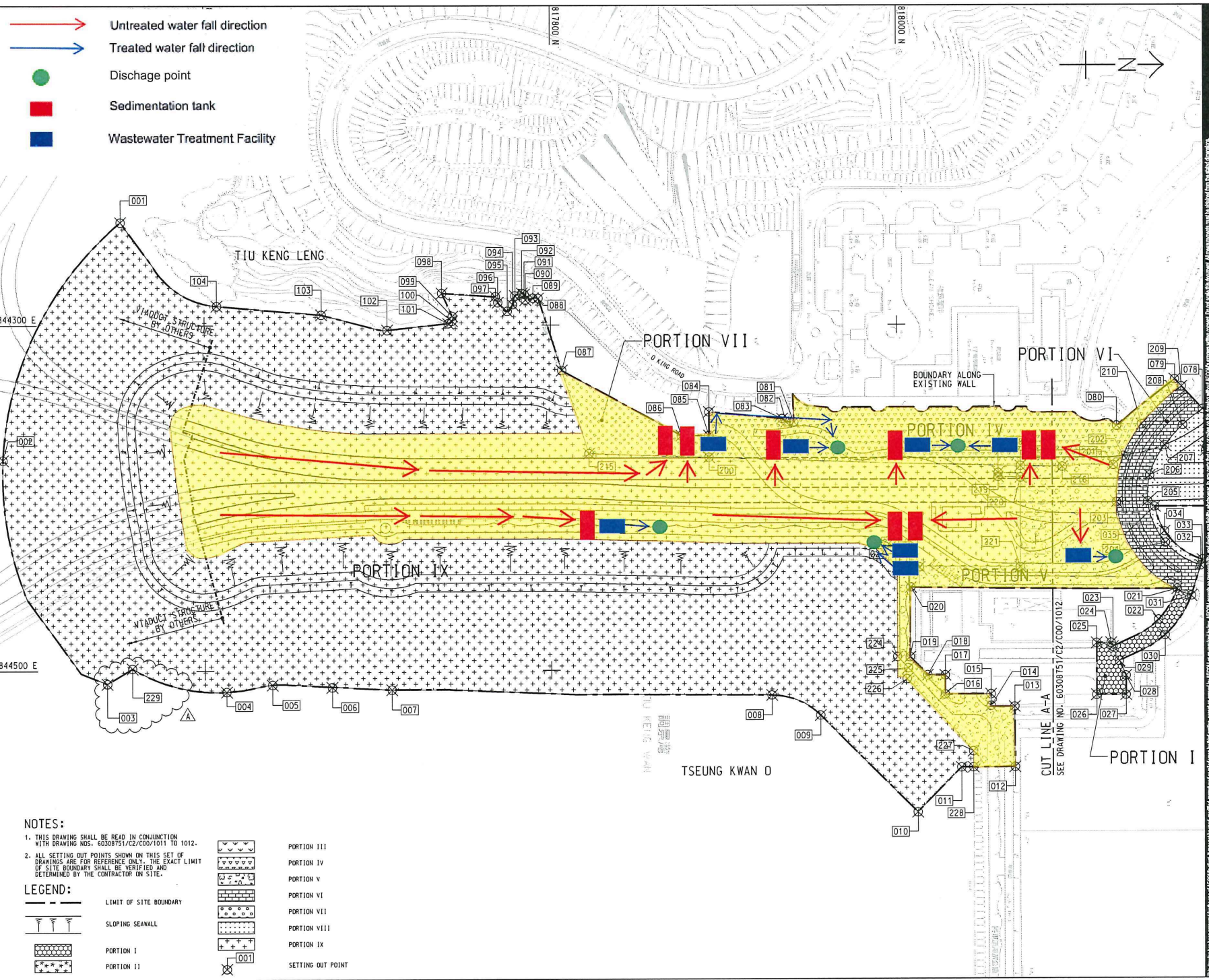
c.c.:

The Project Manager for the contract, (CE/E1, CEDD) – Attn.: Mr. Sunny SP LO  
The Project Manager's Delegate, AECOM (HO) - Attn: Mr. Ivan Tsang

Fax: 2739 0076  
Fax: 3922 9797

AY/GN/WW/RP/KC

Page 1 of 1



- Untreated water fall direction
- Treated water fall direction
- Discharge point
- Sedimentation tank
- Wastewater Treatment Facility

**NOTES:**

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. 60308751/C2/C00/1011 TO 1012.
2. ALL SETTING OUT POINTS SHOWN ON THIS SET OF DRAWINGS ARE FOR REFERENCE ONLY. THE EXACT LIMIT OF SITE BOUNDARY SHALL BE VERIFIED AND DETERMINED BY THE CONTRACTOR ON SITE.

**LEGEND:**

- LIMIT OF SITE BOUNDARY
- SLOPING SEAWALL
- PORTION I
- PORTION II

- PORTION III
- PORTION IV
- PORTION V
- PORTION VI
- PORTION VII
- PORTION VIII
- PORTION IX
- SETTING OUT POINT

**AECOM**

**PROJECT**  
 TSEUNG KWAN O - LAM TIN TUNNEL

**CONTRACT TITLE**  
 TSEUNG KWAN O - LAM TIN TUNNEL ROAD P2 AND ASSOCIATED WORKS

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

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

**SUB-CONSULTANTS**  
 分包工程顧問

**ISSUE/REVISION**

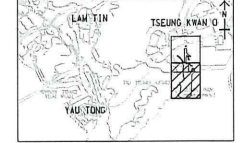
| NO. | DATE    | DESCRIPTION           | CHK. |
|-----|---------|-----------------------|------|
| B   | SEP. 16 | WORKING DRAWING       | RPCM |
| A   | FEB. 16 | TENDER ADDENDUM NO. 1 | RPCM |
| -   | JAN. 16 | TENDER DRAWING        | RPCM |

**STATUS**

WORKING DRAWING

**SCALE**  
 1:1000 METRES

**KEY PLAN** A1:50000



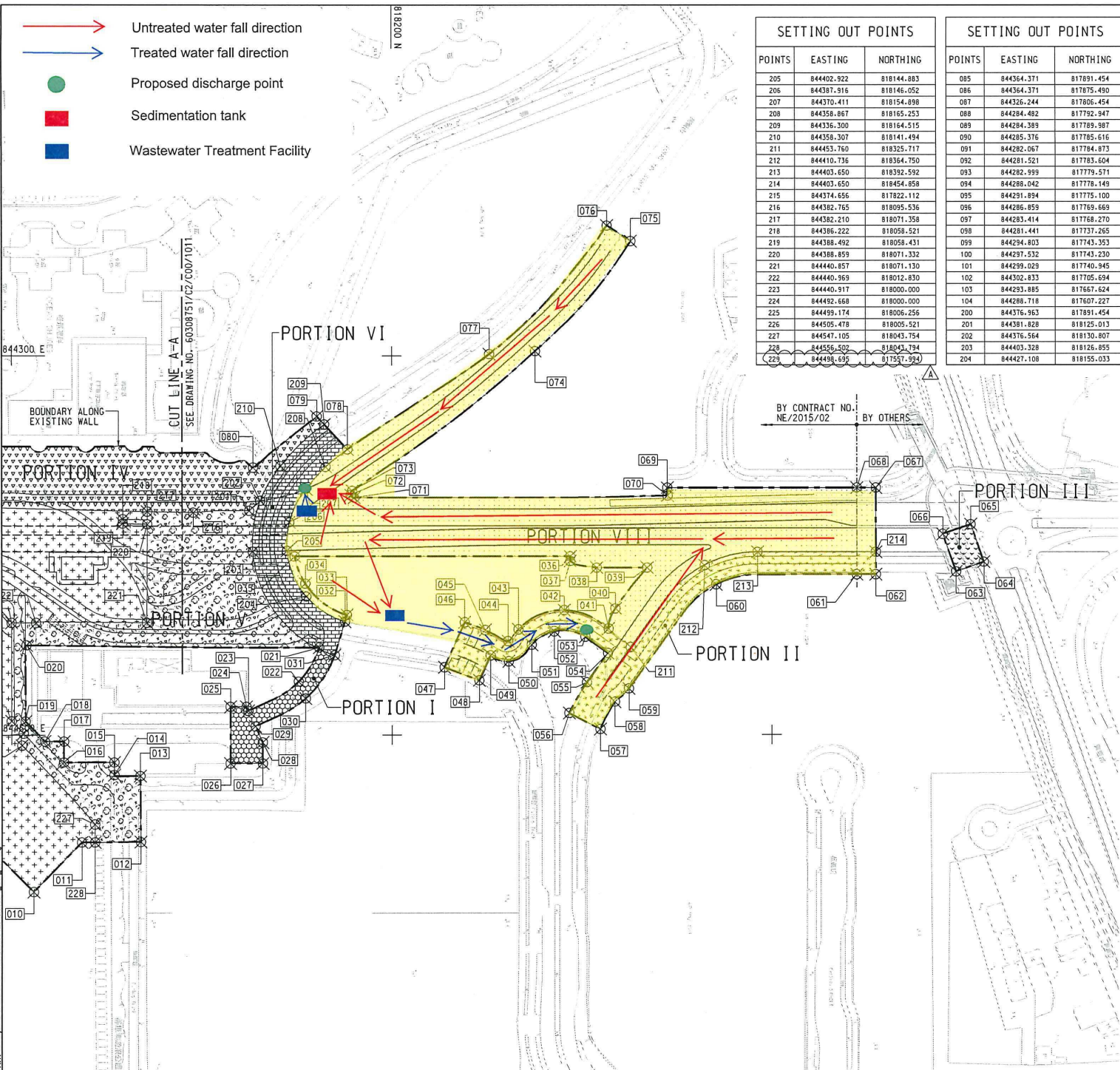
**PROJECT NO.** 60308751  
**CONTRACT NO.** NE/2015/02

**SHEET TITLE**  
 PORTION OF SITE

**SHEET NUMBER**  
 60308751/C2/C00/1011B

Project Management Table: Designer: AT/HI, Checker: PC/CA, Approved: CHN  
 City: ISO A1 (60mm x 84mm)  
 Path: P:\Projects\60308751\URBAN\GIS\DWG\C2\001012.dwg, Date: 21/02/2018, 09:10:23am  
 Scale: 1:60000

- Untreated water fall direction
- Treated water fall direction
- Proposed discharge point
- Sedimentation tank
- Wastewater Treatment Facility



| SETTING OUT POINTS |            |            |
|--------------------|------------|------------|
| POINTS             | EASTING    | NORTHING   |
| 205                | 84402.922  | 818144.883 |
| 206                | 844387.916 | 818146.052 |
| 207                | 844370.411 | 818154.898 |
| 208                | 844356.867 | 818165.253 |
| 209                | 844356.300 | 818164.515 |
| 210                | 844358.307 | 818141.494 |
| 211                | 844453.760 | 818325.717 |
| 212                | 844410.736 | 818364.750 |
| 213                | 844403.650 | 818392.592 |
| 214                | 844403.650 | 818454.858 |
| 215                | 844374.656 | 817822.112 |
| 216                | 844382.765 | 818095.536 |
| 217                | 844382.210 | 818071.358 |
| 218                | 844386.222 | 818058.521 |
| 219                | 844388.492 | 818058.431 |
| 220                | 844388.859 | 818071.332 |
| 221                | 844440.357 | 818071.130 |
| 222                | 844440.369 | 818020.830 |
| 223                | 844440.917 | 818000.000 |
| 224                | 844452.668 | 818000.000 |
| 225                | 844459.174 | 818006.256 |
| 226                | 844505.478 | 818055.521 |
| 227                | 844547.105 | 818043.754 |
| 228                | 844556.502 | 818042.194 |
| 229                | 844458.859 | 817571.520 |

| SETTING OUT POINTS |            |            |
|--------------------|------------|------------|
| POINTS             | EASTING    | NORTHING   |
| 085                | 844364.371 | 817891.454 |
| 086                | 844364.371 | 817875.490 |
| 087                | 844326.244 | 817806.454 |
| 088                | 844284.482 | 817792.947 |
| 089                | 844284.389 | 817789.387 |
| 090                | 844285.376 | 817785.616 |
| 091                | 844282.067 | 817784.873 |
| 092                | 844281.521 | 817783.604 |
| 093                | 844282.999 | 817779.571 |
| 094                | 844286.042 | 817778.148 |
| 095                | 844281.894 | 817775.100 |
| 096                | 844286.359 | 817769.669 |
| 097                | 844283.414 | 817768.270 |
| 098                | 844281.441 | 817737.265 |
| 099                | 844294.803 | 817743.353 |
| 100                | 844297.532 | 817743.230 |
| 101                | 844299.028 | 817740.345 |
| 102                | 844302.833 | 817705.634 |
| 103                | 844293.885 | 817667.624 |
| 104                | 844288.718 | 817607.227 |
| 200                | 844376.363 | 817891.454 |
| 201                | 84381.828  | 818125.013 |
| 202                | 844376.564 | 818130.807 |
| 203                | 844403.328 | 818126.855 |
| 204                | 844427.108 | 818155.033 |

| SETTING OUT POINTS |            |            |
|--------------------|------------|------------|
| POINTS             | EASTING    | NORTHING   |
| 001                | 844240.443 | 817551.753 |
| 002                | 844378.242 | 817483.648 |
| 003                | 844507.431 | 817651.547 |
| 004                | 844572.090 | 817627.455 |
| 005                | 844508.100 | 817638.302 |
| 006                | 844510.396 | 817707.874 |
| 007                | 844512.113 | 817769.940 |
| 008                | 844514.507 | 817827.403 |
| 009                | 844526.234 | 817851.500 |
| 010                | 844532.662 | 818011.583 |
| 011                | 844556.546 | 818036.852 |
| 012                | 844556.348 | 818067.859 |
| 013                | 844521.461 | 818067.035 |
| 014                | 844520.974 | 818054.006 |
| 015                | 844514.184 | 818053.562 |
| 016                | 844514.184 | 818027.500 |
| 017                | 844503.341 | 818027.533 |
| 018                | 844503.310 | 818017.436 |
| 019                | 844402.751 | 818007.313 |
| 020                | 844452.548 | 818007.806 |
| 021                | 844533.846 | 818161.851 |
| 022                | 844471.734 | 818150.993 |
| 023                | 844487.228 | 818124.474 |
| 024                | 844405.040 | 818123.474 |
| 025                | 844405.066 | 818115.080 |
| 026                | 844514.812 | 818115.080 |
| 027                | 844514.780 | 818132.072 |
| 028                | 844503.831 | 818132.066 |
| 029                | 844495.412 | 818128.216 |
| 030                | 844480.656 | 818154.679 |
| 031                | 844457.878 | 818169.920 |
| 032                | 844440.338 | 818175.353 |
| 033                | 844436.898 | 818176.414 |
| 034                | 844420.348 | 818154.523 |
| 035                | 844405.950 | 818148.828 |
| 036                | 844405.950 | 818253.952 |
| 037                | 844408.358 | 818253.952 |
| 038                | 844411.950 | 818307.882 |
| 039                | 844411.950 | 818334.450 |
| 040                | 844433.544 | 818317.697 |
| 041                | 844444.122 | 818314.082 |
| 042                | 844434.450 | 818290.757 |
| 043                | 844444.533 | 818266.647 |
| 044                | 844450.595 | 818261.204 |
| 045                | 844444.836 | 818249.176 |
| 046                | 844440.809 | 818238.366 |
| 047                | 844464.244 | 818227.720 |
| 048                | 844471.151 | 818246.011 |
| 049                | 844458.057 | 818251.971 |
| 050                | 844461.122 | 818261.598 |
| 051                | 844452.437 | 818273.632 |
| 052                | 844445.444 | 818285.889 |
| 053                | 844448.276 | 818301.825 |
| 054                | 844456.901 | 818313.763 |
| 055                | 844472.263 | 818302.664 |
| 056                | 844488.541 | 818293.366 |
| 057                | 844497.009 | 818309.725 |
| 058                | 844482.600 | 818317.345 |
| 059                | 844475.566 | 818324.746 |
| 060                | 844420.811 | 818370.795 |
| 061                | 844415.550 | 818444.858 |
| 062                | 844415.550 | 818454.858 |
| 063                | 844414.101 | 818497.107 |
| 064                | 844408.909 | 818511.699 |
| 065                | 844389.112 | 818504.792 |
| 066                | 844394.208 | 818490.092 |
| 067                | 844369.750 | 818454.858 |
| 068                | 844369.750 | 818444.858 |
| 069                | 844369.750 | 818345.114 |
| 070                | 844373.946 | 818345.217 |
| 071                | 844375.033 | 818180.335 |
| 072                | 844373.624 | 818178.424 |
| 073                | 844371.382 | 818179.206 |
| 074                | 844297.397 | 818275.538 |
| 075                | 844239.314 | 818325.845 |
| 076                | 844231.051 | 818313.326 |
| 077                | 844298.964 | 818251.396 |
| 078                | 844349.536 | 818176.741 |
| 079                | 844332.057 | 818160.618 |
| 080                | 844359.085 | 818127.054 |
| 081                | 844356.683 | 817940.562 |
| 082                | 844356.683 | 817936.032 |
| 083                | 844354.618 | 817933.769 |
| 084                | 844350.647 | 817891.454 |

**PROJECT**  
TSEUNG KWAN O - LAM TIN TUNNEL

**CONTRACT TITLE**  
TSEUNG KWAN O - LAM TIN TUNNEL ROAD P2 AND ASSOCIATED WORKS

**CLIENT**  
CEDD  
土木工務拓展署  
Civil Engineering and Development Department

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

**SUB-CONSULTANTS**  
中環工程顧問有限公司

| NO. | DATE   | DESCRIPTION          | CHK. |
|-----|--------|----------------------|------|
| B   | SEP.16 | WORKING DRAWING      | RPCM |
| A   | FEB.16 | TENDER ADDENDUM NO.1 | RPCM |
| -   | JAN.16 | TENDER DRAWING       | RPCM |

**STATUS**  
WORKING DRAWING

**SCALE**  
A1 1:1000 METRES

**KEY PLAN**  
A1 1:60000

**PROJECT NO.** 60308751  
**CONTRACT NO.** NE/2015/02

**SHEET TITLE** PORTION OF SITE  
**SHEET NUMBER** SHEET 2 OF 2

60308751/C2/C00/1012B

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**Contract No.: NE/2017/02**

**Contract Title: Tseung Kwan O – Lam Tin Tunnel – Road P2/D4 and  
Associated Works**

## **Flooding Mitigation Plan**

### **Treatment facility**







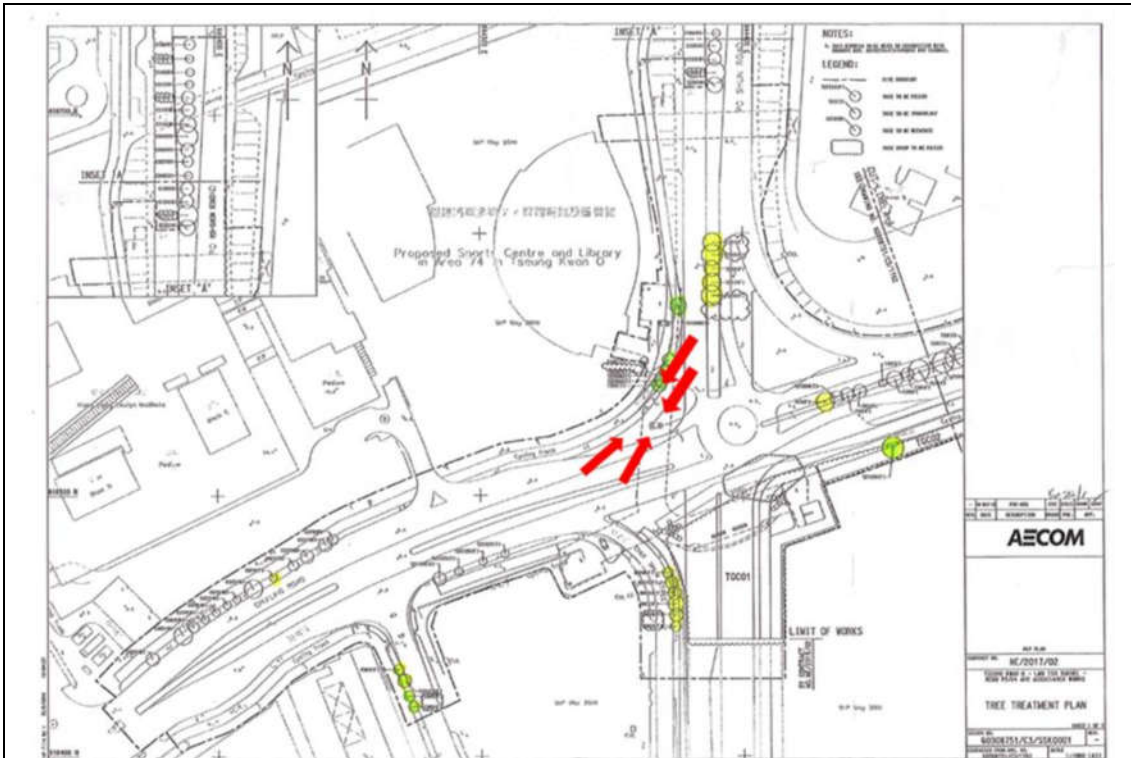
### Bunding





### Surface runoff collection





**Height difference between the road and site area to form a natural flow. Sump pit was provided for wastewater collection.**



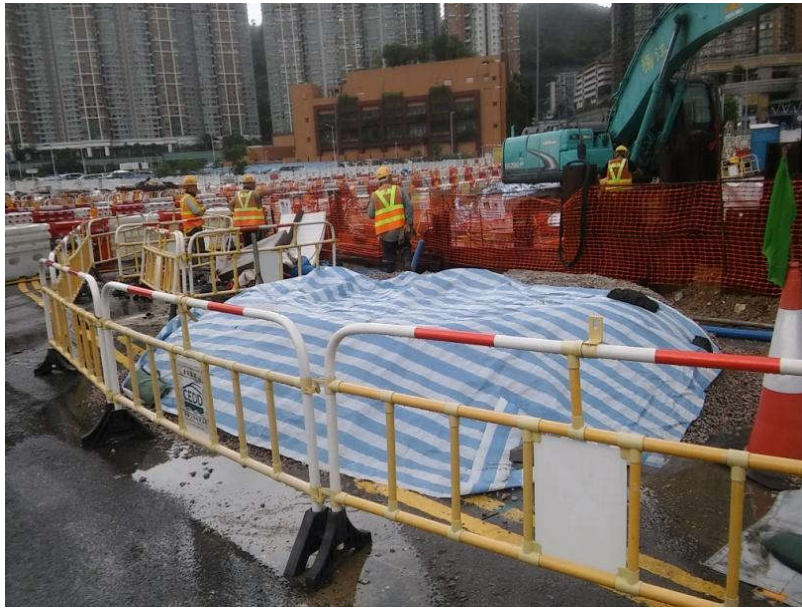
### Gully Protection

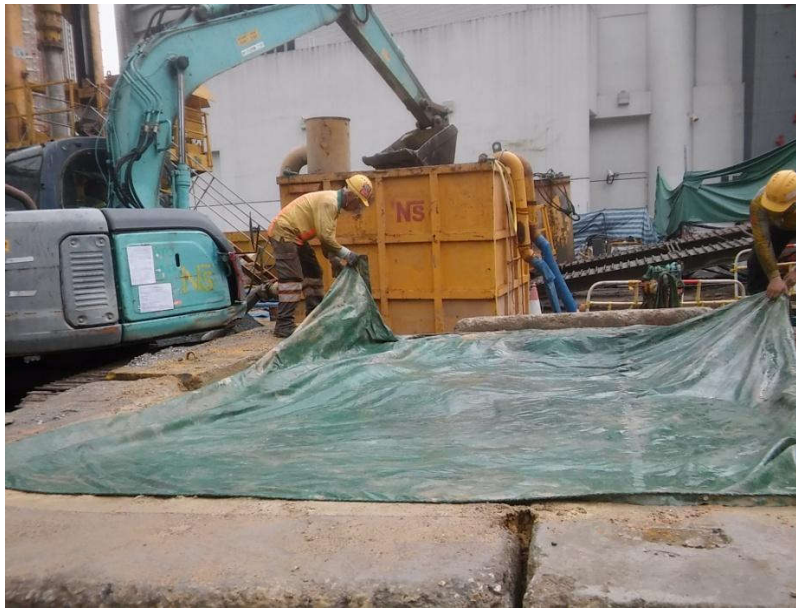


**Gully were protected and covered by geotextile.**



### Stockpile Cover

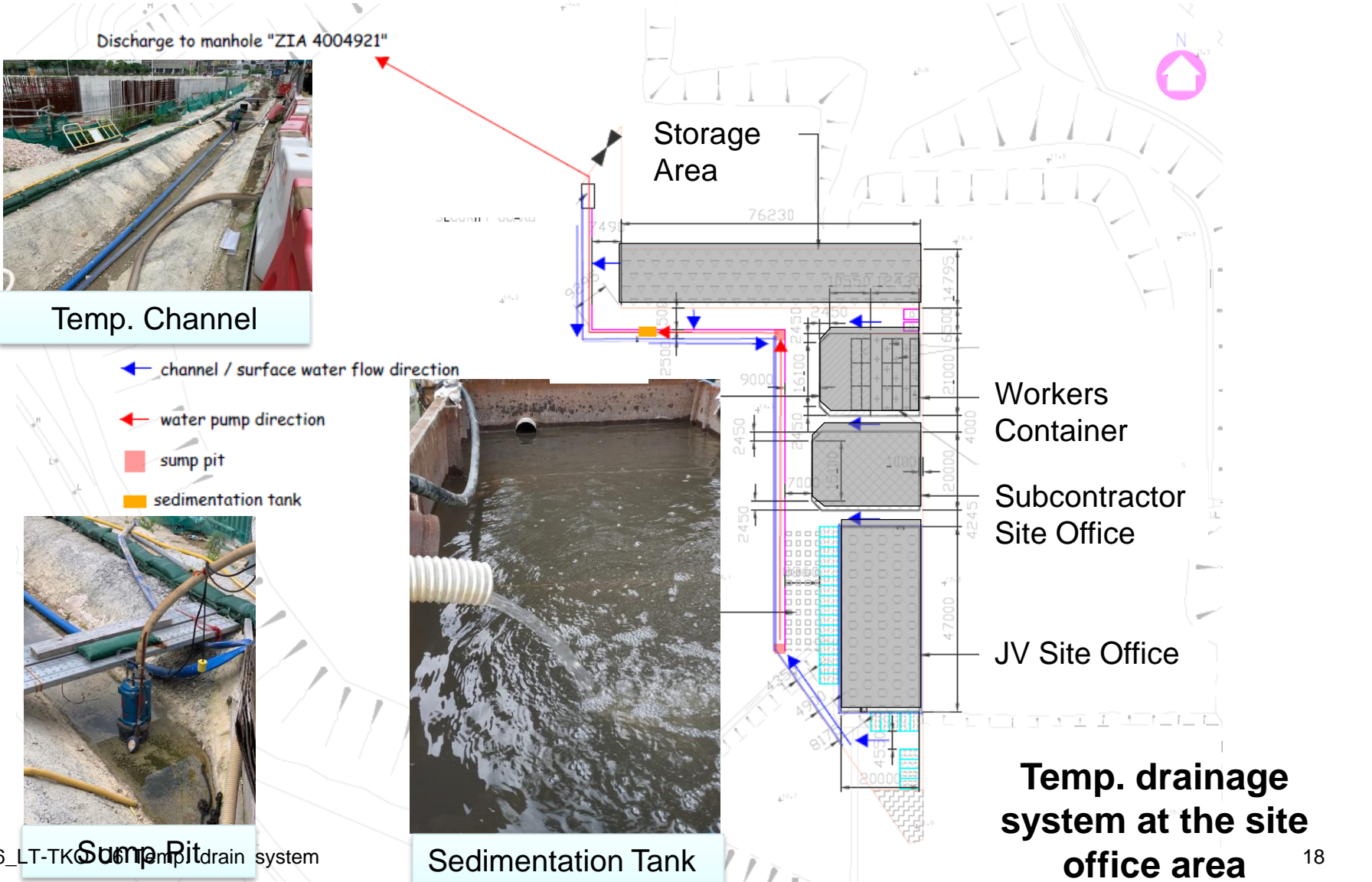




**Stockpile Should be proper cover with tarpaulin.**

# Site Surface Runoff Measures

俊和-上隧-中冶聯營  
CW - STEC - CMGC JV



Temp. Channel



Sump Pit



Sedimentation Tank

---

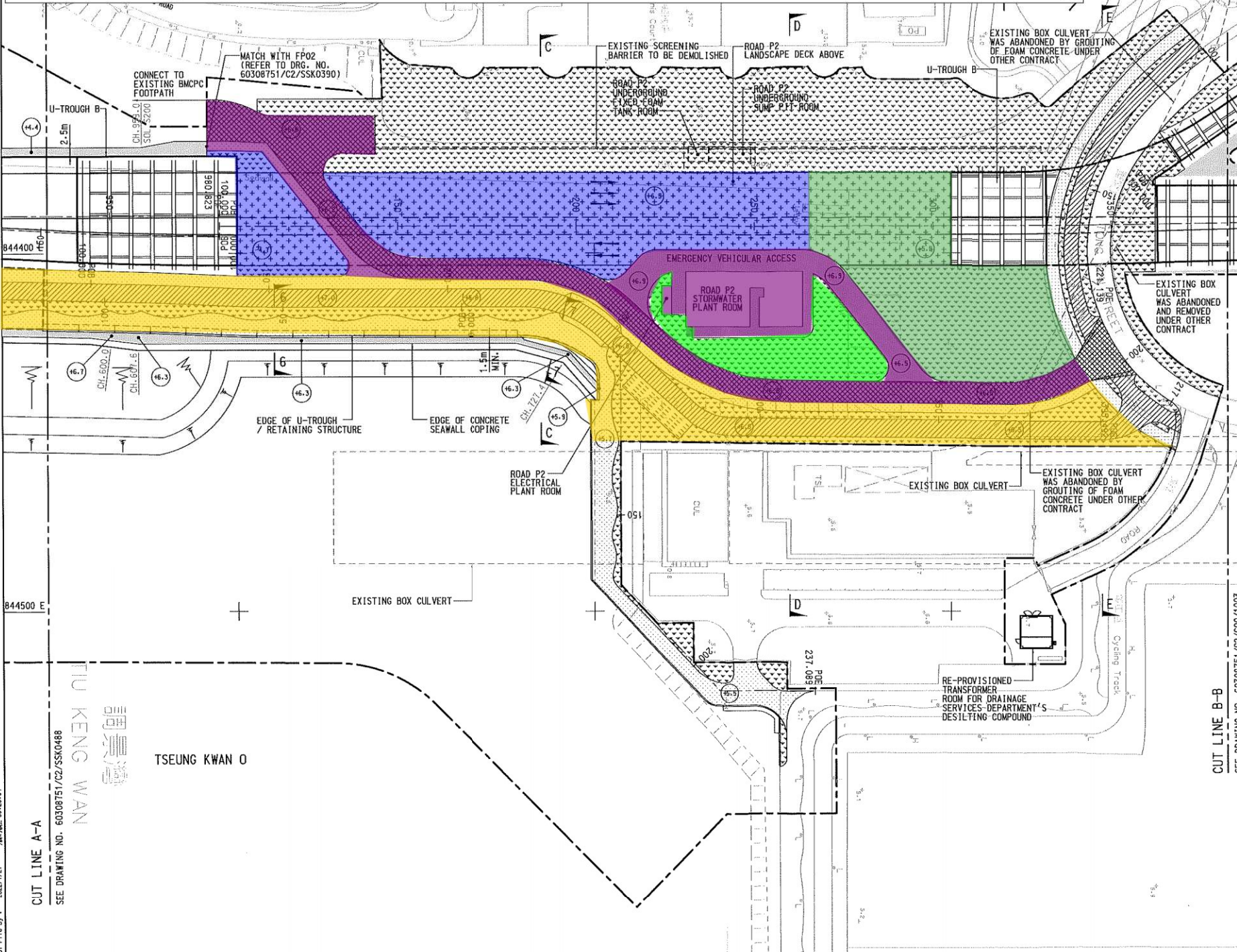
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**APPENDIX X  
IMPLEMENTATION OF MITIGATION  
MEASURES IN OPERATION PHASE**

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# Landscape Deck Status After Road Commissioning

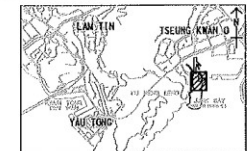


- NOTES:**
- FOR NOTES AND LEGEND REFER TO DRAWING NO. 60308751/C2/SSK0488.
  - THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60308751/C2/000/SSK488 & SSK0510.

- Landscape Deck Upgrading Works
- Material Storage Area with Artificial Lawn
- Material Storage Area
- Hard Landscaping Works
- All Soft and Hard Landscape Completed

| REV. | DATE      | DESCRIPTION | DRAWN | PRE. | APP.      |
|------|-----------|-------------|-------|------|-----------|
| D    | 06-JAN-22 | RFI 00518   | KMC1  | DHRT | JCPJ FWYL |
| C    | 29-APR-21 | -           | KMC1  | MKTC | JCPJ FWYL |
| B    | 11-NOV-20 | PNI 239     | DKSS  | JCKL | JCPJ FWYL |
| A    | 09-JAN-20 | PNI 197     | DKSS  | -    | YYL SHNY  |
| -    | 04-MAR-19 | RFI 00226   | DKSS  | FKCS | YYL SHNY  |

**AECOM**

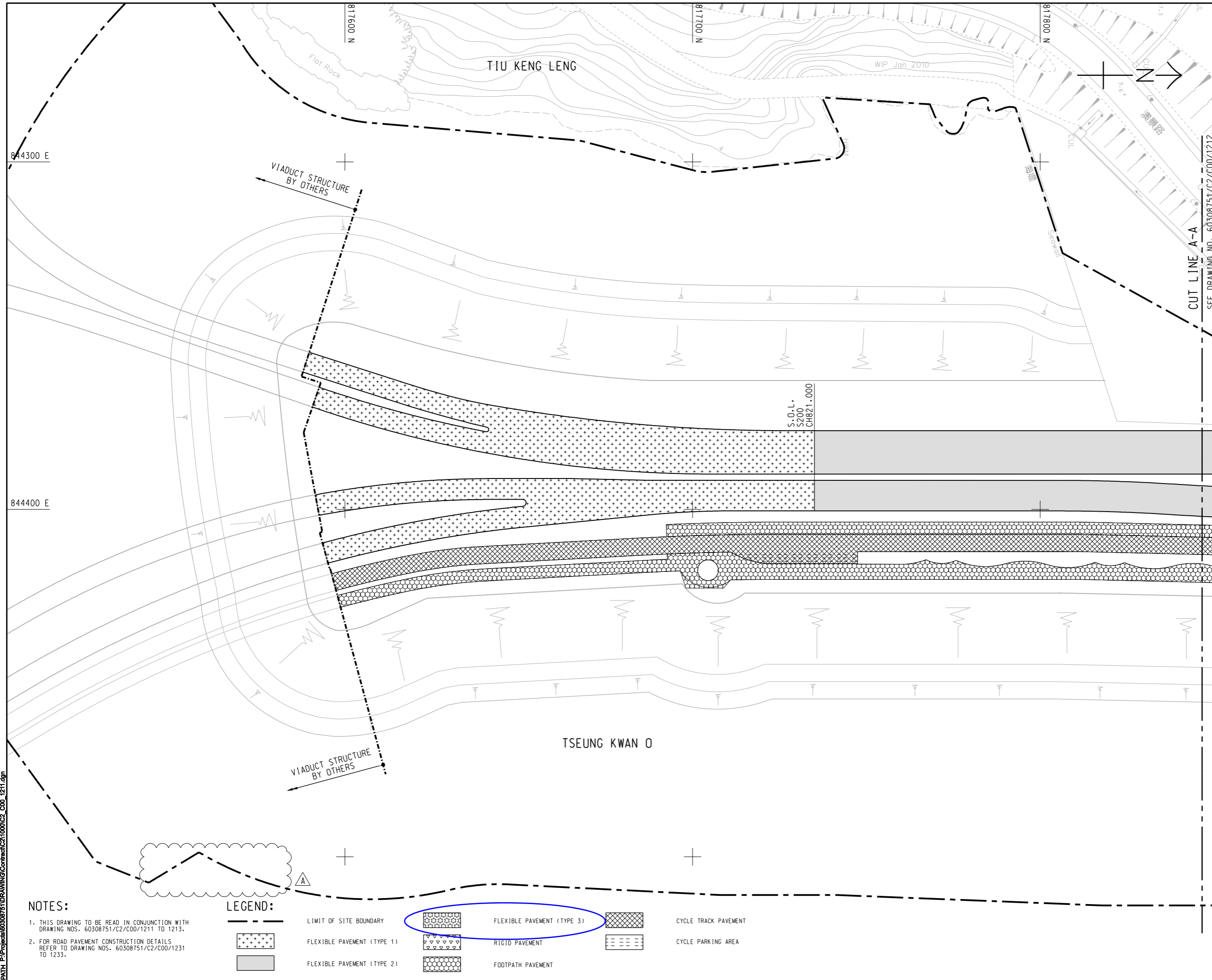


|   |  |             |  |
|---|--|-------------|--|
| CONTRACT NO.  |  | NE/2015/02  |  |
| TSEUNG KWAN O - LAM TIN TUNNEL - ROAD P2 AND ASSOCIATED WORKS |  |             |  |
| <b>GENERAL ARRANGEMENT</b>                                    |  |             |  |
| SKETCH NO.  |  | REV.        |  |
| 60308751/C2/SSK0517   |  | D           |  |
| EXTRACTED FROM DRG. NO.                                       |  | SCALE       |  |
| 60308751/C2/000/1002  |  | 1:1000 (A3) |  |

Plot File by : 2022/1/27 3:46:42 PM 08-20194

CUT LINE A-A  
SEE DRAWING NO. 60308751/C2/SSK0488  
TSEUNG KWAN O  
TUN KENG WAN

CUT LINE B-B  
SEE DRAWING NO. 60308751/C2/000/1003



**NOTES:**

- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60308751/C2/C00/1211 TO 1213.
- FOR ROAD PAVEMENT CONSTRUCTION DETAILS REFER TO DRAWING NOS. 60308751/C2/C00/1231 TO 1233.

**LEGEND:**

|  |                            |  |                            |  |                      |
|--|----------------------------|--|----------------------------|--|----------------------|
|  | LIMIT OF SITE BOUNDARY     |  | FLEXIBLE PAVEMENT (TYPE 1) |  | CYCLE TRACK PAVEMENT |
|  | FLEXIBLE PAVEMENT (TYPE 2) |  | RIGID PAVEMENT             |  | CYCLE PARKING AREA   |
|  | FLEXIBLE PAVEMENT (TYPE 3) |  | FOOTPATH PAVEMENT          |  |                      |

**AECOM**

**PROJECT**  
 TSEUNG KWAN O - LAM TIN TUNNEL

**CONTRACT TITLE**  
 TSEUNG KWAN O - LAM TIN TUNNEL ROAD P2 AND ASSOCIATED WORKS

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

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

**SUB-CONSULTANTS**  
 分判工程師有限公司

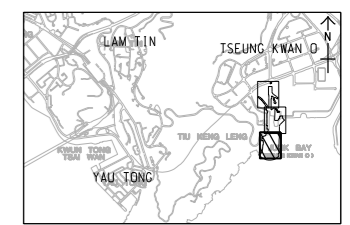
**ISSUE/REVISION**

| REV | DATE   | DESCRIPTION           | CHK  |
|-----|--------|-----------------------|------|
| B   | SEP.16 | WORKING DRAWING       | RPCM |
| A   | FEB.16 | TENDER ADDENDUM NO. 1 | RPCM |
| -   | JAN.16 | TENDER DRAWING        | RPCM |

**STATUS**  
 WORKING DRAWING

**SCALE**  
 A1 1:500

**KEY PLAN** A1 1:50000



**PROJECT NO.**  
 60308751

**CONTRACT NO.**  
 NE/2015/02

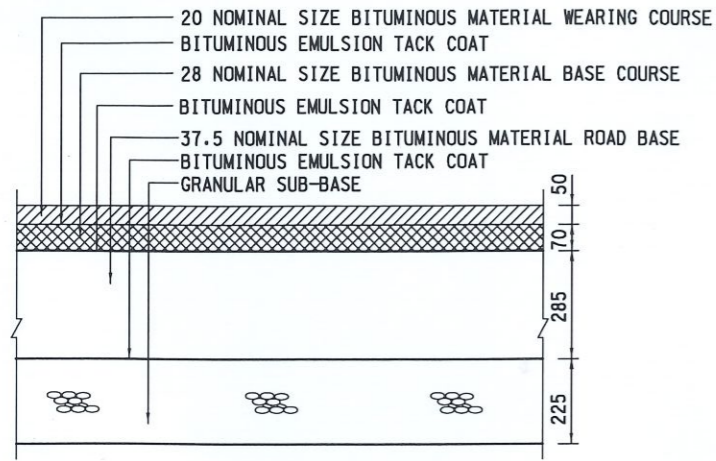
**SHEET TITLE**  
 ROAD PAVEMENT LAYOUT

**SHEET NUMBER**  
 60308751/C2/C00/1211B

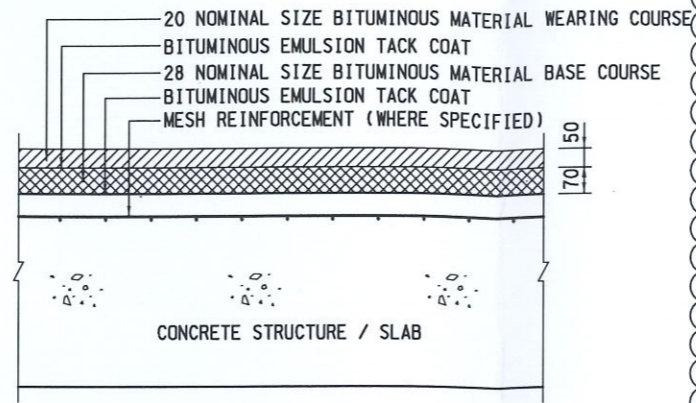
SHEET 1 OF 3

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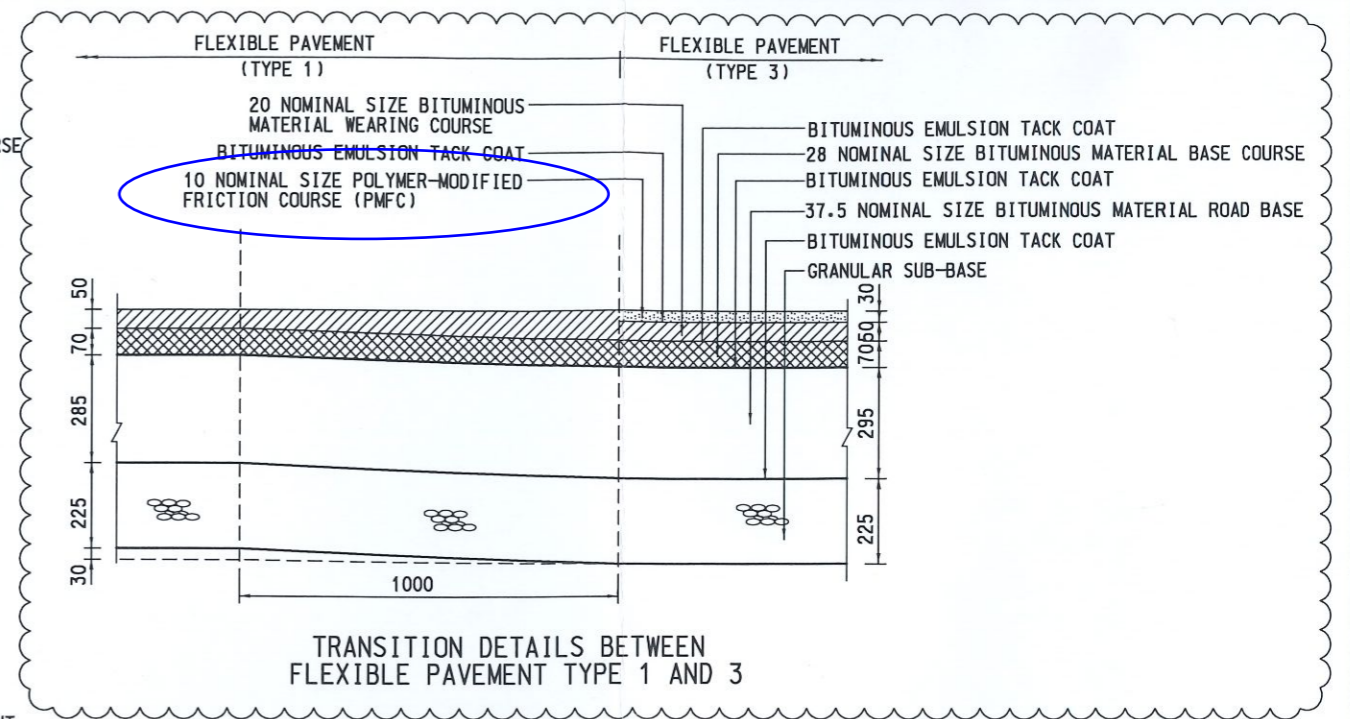




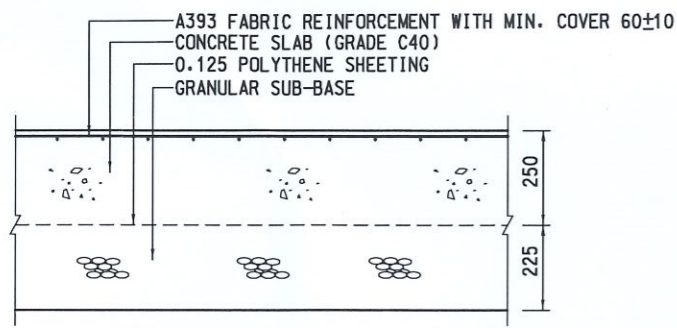
TYPICAL DETAILS FOR FLEXIBLE PAVEMENT (TYPE 1)



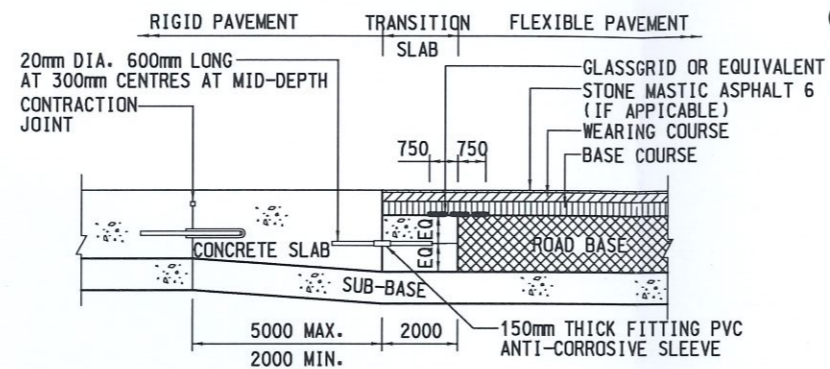
TYPICAL DETAILS FOR FLEXIBLE PAVEMENT (TYPE 2)



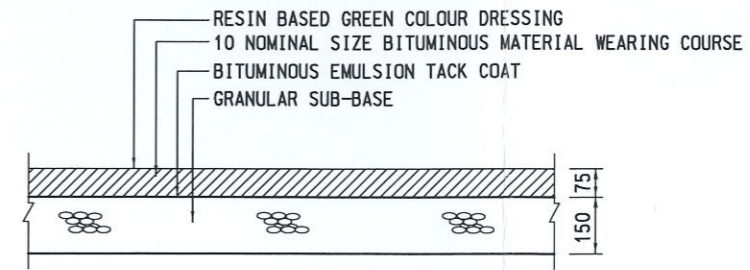
TRANSITION DETAILS BETWEEN FLEXIBLE PAVEMENT TYPE 1 AND 3



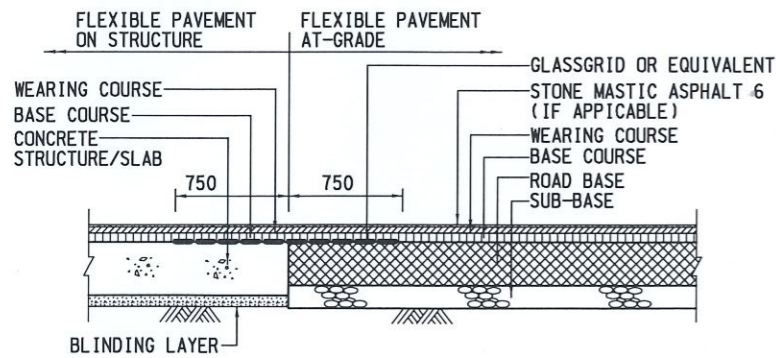
TYPICAL DETAILS FOR RIGID PAVEMENT



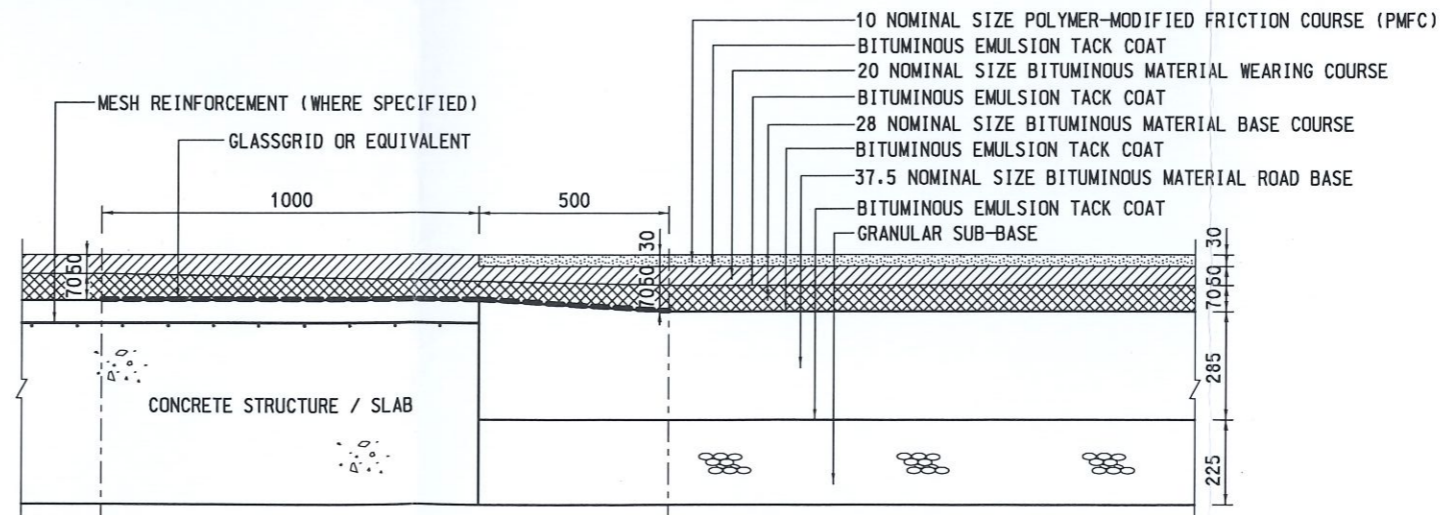
TRANSITION DETAILS BETWEEN RIGID PAVEMENT AND FLEXIBLE PAVEMENT  
N.T.S.



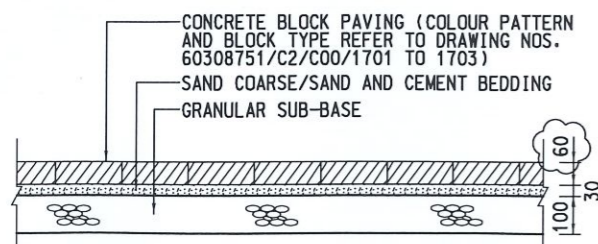
TYPICAL DETAILS FOR CYCLE TRACK PAVEMENT



TRANSITION DETAILS BETWEEN FLEXIBLE PAVEMENT ON STRUCTURE AND FLEXIBLE PAVEMENT AT-GRADE  
N.T.S.



TRANSITION DETAILS BETWEEN TYPE 2 AND TYPE 3 FLEXIBLE PAVEMENT



TYPICAL DETAILS FOR FOOTPATH PAVEMENT

NOTES:

- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60308751/C2/C00/1231 TO 1233.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH THE LATEST REVISION OF HIGHWAYS DEPARTMENT STANDARD DRAWINGS INCLUDING BUT NOT LIMITED TO DRAWING NOS. H1101 TO H1134.
- FOR MESH REINFORCEMENT DETAILS REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NO. H1102.
- WHERE A CAPPING LAYER IS REQUIRED, IT SHALL BE CONSTRUCTED TO GIVE A MINIMUM CBR VALUE OF 15%.
- AT JOINTS, THE FIRST SLAB SHALL BE CAST BEFORE THE SECOND SLAB.
- RESIN BASED COLOUR DRESSING APPROVED BY THE SUPERVISOR IN ACCORDANCE WITH PS SECTION 11 SHALL BE APPLIED ON CYCLE TRACK.
- THE CONTRACTOR MAY SUBMIT ALTERNATIVE SUPPORT DETAILS FOR DOWEL AND TIE BARS FOR THE SUPERVISOR'S ACCEPTANCE.
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

| REV. | DATE      | DESCRIPTION | DRAWN | PRE. | APP.      |
|------|-----------|-------------|-------|------|-----------|
| C    | 05-MAR-20 | -           | DKSS  | JCWL | JEDL SHMY |
| B    | 21-JAN-20 | -           | DKSS  | JCWL | JPCL SHMY |
| A    | 27-DEC-19 | -           | DKSS  | -    | JPCL SHMY |
| -    | 10-OCT-17 | -           | DKSS  | JJL  | YYL SHMY  |

**AECOM**

KEY PLAN

CONTRACT NO. NE/2015/02

TSEUNG KWAN O - LAM TIN TUNNEL - ROAD P2 AND ASSOCIATED WORKS

ROAD WORKS DETAILS







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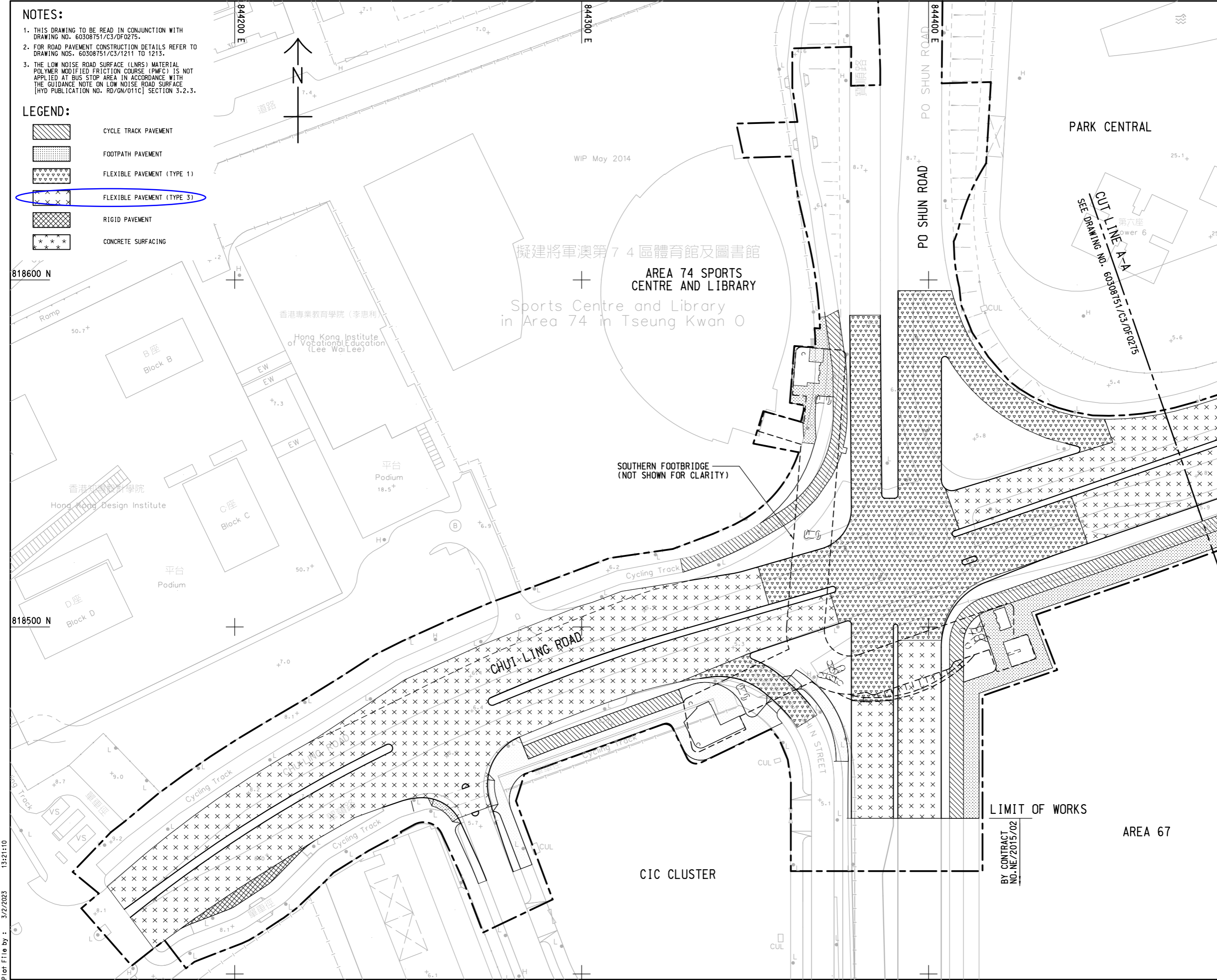
EXTRACTED FROM DRG. NO. 60308751/C2/C00/1231 SCALE 1:20 (A3)

**NOTES:**

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NO. 60308751/C3/DF0275.
2. FOR ROAD PAVEMENT CONSTRUCTION DETAILS REFER TO DRAWING NOS. 60308751/C3/1211 TO 1213.
3. THE LOW NOISE ROAD SURFACE (LNRS) MATERIAL POLYMER MODIFIED FRICTION COURSE (PMFC) IS NOT APPLIED AT BUS STOP AREA IN ACCORDANCE WITH THE GUIDANCE NOTE ON LOW NOISE ROAD SURFACE [HYD PUBLICATION NO. RD/GN/011C] SECTION 3.2.3.

**LEGEND:**

-  CYCLE TRACK PAVEMENT
-  FOOTPATH PAVEMENT
-  FLEXIBLE PAVEMENT (TYPE 1)
-  FLEXIBLE PAVEMENT (TYPE 3)
-  RIGID PAVEMENT
-  CONCRETE SURFACING



| REV. | DATE      | DESCRIPTION | DRAWN | PRE. | APP. |
|------|-----------|-------------|-------|------|------|
| -    | 02-FEB-23 | -           | -     | -    | -    |

**AECOM**

KEY PLAN

CONTRACT NO. **NE/2017/02**

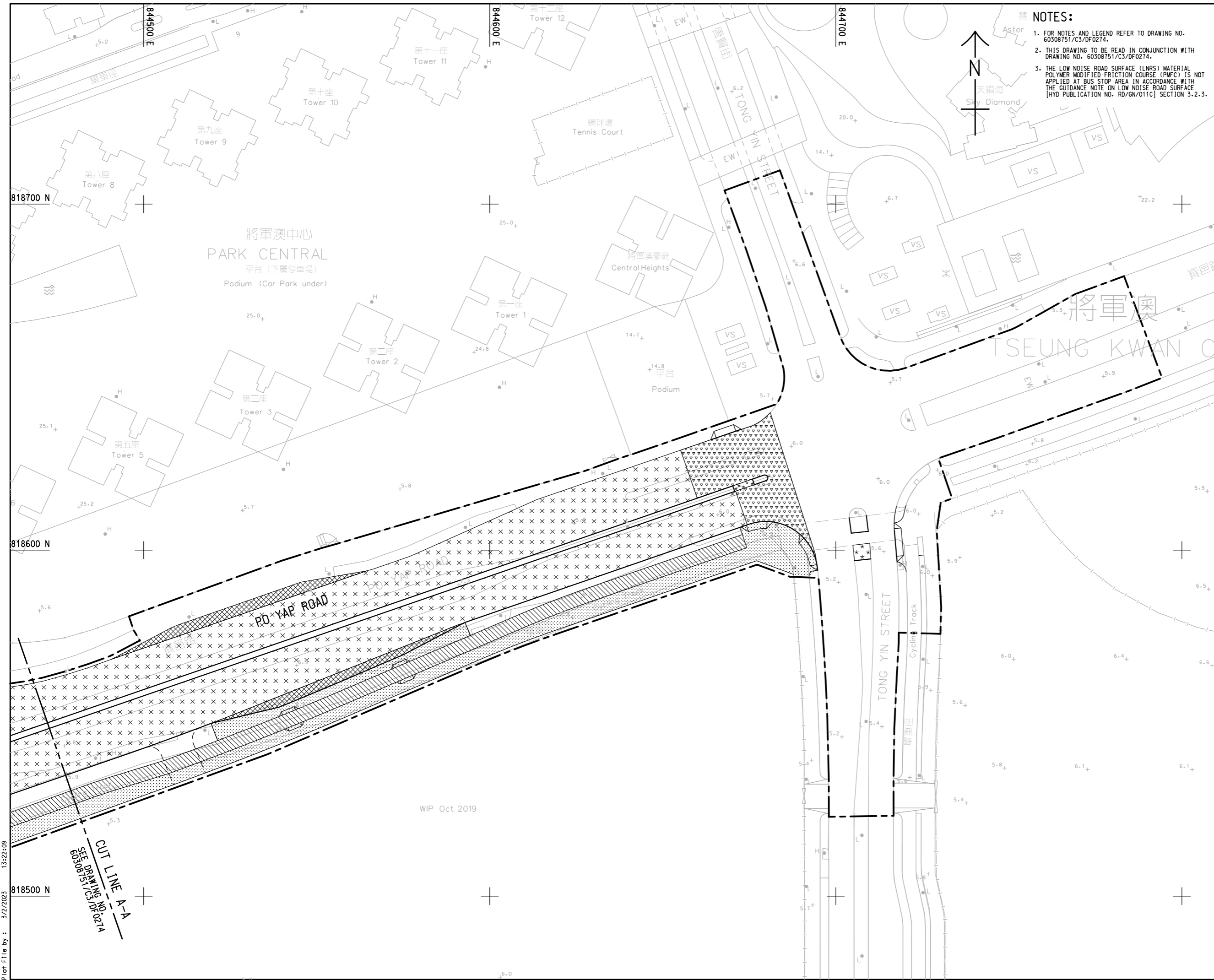
TSEUNG KWAN O - LAM TIN TUNNEL - ROAD P2/D4 AND ASSOCIATED WORKS

**ROAD PAVEMENT LAYOUT**

SKETCH NO. **60308751/C3/DF0274**

EXTRACTED FROM DRG. NO. **60308751/C3/1201** SCALE **1:1000(A3)**

Plot File by : 3/2/2023 13:21:10



- NOTES:**
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60308751/C3/DF0274.
  2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NO. 60308751/C3/DF0274.
  3. THE LOW NOISE ROAD SURFACE (LNRS) MATERIAL POLYMER MODIFIED FRICTION COURSE (PMFC) IS NOT APPLIED AT BUS STOP AREA IN ACCORDANCE WITH THE GUIDANCE NOTE ON LOW NOISE ROAD SURFACE [HYD PUBLICATION NO. RD/GN/011C] SECTION 3.2.3.

| REV. | DATE      | DESCRIPTION | DRAWN | PRE. | APP. |
|------|-----------|-------------|-------|------|------|
| -    | 02-FEB-23 | -           | -     | -    | -    |



|  |             |
|--|-------------|
| KEY PLAN   |             |
| CONTRACT NO.   | NE/2017/02  |
| TSEUNG KWAN O - LAM TIN TUNNEL - ROAD P2/D4 AND ASSOCIATED WORKS |             |
| ROAD PAVEMENT LAYOUT   |             |
| SKETCH NO.   | REV.        |
| 60308751/C3/DF0275   | -           |
| EXTRACTED FROM DRG. NO.  | SCALE       |
| 60308751/C3/1202   | 1:1000 (A3) |

CUT LINE A-A  
 SEE DRAWING NO. 0274  
 60308751/C3/DF0274

Plot File by : 3/2/2023 13:22:09

