

Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2

Monthly EM&A Report January 2019

Submitted to

Prepared By

Environmental Protection Department

Meinhardt Infrastructure and Environment Ltd

Meinhardt Infrastructure and Environment Limited

Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2

Monthly EM&A Report

(January 2019)

Certified by: Fredrick Leong

Position: Environmental Team Leader

Date: <u>11 February 2019</u>



Hyder-Arup-Black & Veatch Joint Venture c/o Arcadis 17/F, Two Harbour Square, 180 Wai Yip Street, Kwun Tong, Hong Kong Attn: Mr. James Penny

Your Reference

Our Reference JFP/EC/ST/cy/T329380/2 2.05/L-0249

3/F Mapletree Bay Point 348 Kwun Tong Road Kowloon Hong Kong

T +852 2828 5757 F +852 2827 1823 mottmac.hk Environmental Monitoring and Audit (EM&A) for Widening of Tolo Highway/Fanling Highway between Island House Interchange and Fanling Stage 2 (between Tai Hang to Wo Hop Shek Interchange) – Entrusted Works Environmental Permit No. EP-324/2008/E Condition 3.3 – Submission of Monthly EM&A Report – January 2019 for the portion of Stage 2 works entrusted to Civil Engineering and Development Department (CEDD) under Contract No. CV/2012/09

11 February 2019 By Fax (2805 5028) & Hand

We refer to the revised Monthly EM&A Report – January 2019 received on 08 February 2019 submitted by the Environmental Team via email. Pursuant to Environmental Permit Condition 3.3, I hereby verify the Monthly EM&A Report – January 2018 (Rev. 0) for the portion of works under Stage 2 of the captioned Project which is entrusted to CEDD under Contract No. CV/2012/09.

Yours faithfully for MOTT MACDONALD HONG KONG LIMITED

Steven Tang Independent Environmental Checker

c.c. HyD CEDD/BCP AECOM Meinhardt

Mr. Chung Lok Chin Mr. Lu Pei Yu Mr. Alan Lee Mr. Fredrick Leong By Fax (2714 5198) By Fax (3547 1659) By Fax (3922 9797) By Fax (2559 1613)



| Date | Revision | Prepared By | Checked By | Approved By |
|-------------|----------|---------------------|----------------|----------------|
| 11 Feb 2019 | 0 | WK CHIU BoBo HUI | Fredrick LEONG | Helen COCHRANE |



Contents

| | | | Page |
|-----|--------|---|------|
| EXE | CUTIVE | SUMMARY | i |
| 1 | INTRO | DUCTION | 1 |
| | 1.2 | Purpose of the Report | 1 |
| | 1.3 | Report Structure | 1 |
| 2 | PROJE | CT INFORMATION | 2 |
| | 2.1 | Background | 2 |
| | 2.2 | Site Description | 3 |
| | 2.3 | Construction Programme and Activities | 3 |
| | 2.4 | Project Organisation | 3 |
| 3 | STATU | S OF ENVIRONMENTAL LICENSES, NOTIFICATION AND PERMITS | 5 |
| 4 | AIR QU | JALITY MONITORING | 7 |
| | 4.1 | Monitoring Requirement | 7 |
| | 4.2 | Monitoring Equipment | 7 |
| | 4.3 | Monitoring Location | 7 |
| | 4.4 | Monitoring Parameters, Frequency and Duration | 7 |
| | 4.5 | Monitoring Methodology | 8 |
| | 4.6 | Monitoring Schedule for the Reporting month | 8 |
| | 4.7 | Monitoring Results | 9 |
| 5 | NOISE | MONITORING | 10 |
| | 5.1 | Monitoring Requirements | 10 |
| | 5.2 | Monitoring Equipment | 10 |
| | 5.3 | Monitoring Locations | 10 |
| | 5.4 | Monitoring Parameters, Frequency and Duration | 10 |
| | 5.5 | Monitoring Methodology | 11 |
| | 5.6 | Monitoring Schedule for the Reporting Month | 11 |
| | 5.7 | Monitoring Results | 11 |
| 6 | WATE | R MONITORING | 13 |
| 7 | WASTE | EMANAGEMENT | 14 |
| 8 | ENVIR | ONMENTAL SITE INSPECTION AND AUDIT | 15 |
| | 8.1 | Site Inspection | 15 |
| 9 | IMPLE | MENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES | 16 |
| 10 | SUMM | ARY OF EP SUBMISSION IN THE REPORTING MONTH | 17 |
| 11 | ENVIR | ONMENTAL NON-CONFORMANCE | 18 |
| | 11.1 | Summary of Monitoring Exceedances | 18 |



| | 11.2 | Summary of Environmental Non-Compliance | 18 |
|---|-------|---|----|
| | 11.3 | Summary of Environmental Complaints | 18 |
| | 11.4 | Summary of Environmental Summon and Successful Prosecutions | 18 |
| 2 | FUTUR | E KEY ISSUES | 19 |
| | 12.1 | Construction Programme for the Next Month | 19 |
| | 12.2 | Key Issues for the Coming Month | 19 |
| | 12.3 | Monitoring Schedule for the Next Month | 19 |
| 3 | CONCL | USIONS AND RECOMMENDATIONS | 20 |
| | 13.1 | Conclusions | 20 |
| | 13.2 | Recommendations | 20 |

List of Tables

1

1

- Table 2.1
 Contact Information of Key Personnel
- Table 3.1 Status of Environmental Licenses, Notifications and Permits
- Table 4.1 Air Quality Monitoring Equipment
- Table 4.2
 Location of Air Quality Monitoring
- Table 4.3
 Air Quality Monitoring Parameters, Frequency and Duration
- Table 4.4 Summary of 1-hr TSP Monitoring Results
- Table 4.5 Summary of 24-hr TSP Monitoring Results
- Table 5.1 Noise Monitoring Equipment
- Table 5.2 Location of Noise Monitoring
- Table 5.3 Noise Monitoring Parameters, Frequency and Duration
- Table 5.4 Summary of Noise Monitoring Results
- Table 8.1 Observations and Recommendations of Site Audit
- Table 10.1 Status of Required Submission under Environmental Permit

List of Figures

- Figure 1 Demarcation of Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2
- Figure 2 Air and Noise Monitoring Locations

List of Appendices

Appendix A Construction Programme

- Appendix B Project Organization Structure
- Appendix C Calibration Certificates of Monitoring Equipment
- Appendix D EM&A Monitoring Schedules
- Appendix E Meteorological Data Extracted from Hong Kong Observatory
- Appendix F Air Quality Monitoring Results and their Graphical Presentation
- Appendix G Summary of Event and Action Plan
- Appendix H Noise Monitoring Results and their Graphical Presentation
- Appendix I Not Used
- Appendix J Not Used
- Appendix K Waste Flow Table
- Appendix L Implementation Schedule of Environmental Mitigation Measures (EMIS)
- Appendix M Not Used
- Appendix N Statistics on Complaints, Notifications of Summons and Successful Prosecutions



EXECUTIVE SUMMARY

The Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2 (hereafter called "the Project") covers part of the construction of the widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling which aimed to widen Tolo Highway and Fanling Highway to dual 4-lane carriageway in order to alleviate the current traffic congestion problems and to cope with the increasing transport demands to and from the urban areas and also cross boundary traffic. The Project covers construction activities at Yuen Leng along the existing Fanling Highway.

The impact EM&A for the Project includes air quality, noise and water quality monitoring. The EM&A programme commenced on 5 November 2013.

This report documents the findings of EM&A works conducted in January 2019. As informed by the Contractor, the major activities in the reporting month were:

- Road Pavement Works;
- Water Main Laying Works;
- Road Drainage Works;
- Construction of Police Observation Platform on the Northbound Fanling Highway; and
- Remaining Works of Kiu Tau Footbridge.

Breach of Action and Limit Levels for Air Quality

No exceedance of Action and Limit Level was recorded for 24-hour TSP monitoring at the monitoring location AM1(SR77) in the reporting month.

No exceedance of Action and Limit Level was recorded for 1-hour TSP monitoring at the monitoring location AM1(SR77) in the reporting month.

Breach of Action and Limit Levels for Noise

No noise complaint was received in the reporting month, so no Action Level exceedance was recorded. Also, no Limit Level exceedance of noise monitoring was recorded in the reporting month.

Breach of Action and Limit Levels for Water Quality

The box culvert works have been completed in the end of March 2017. The 4-week post construction water quality monitoring has been completed in the end of April 2017 in the same manner as the impact monitoring.

Complaint, Notification of Summons and Successful Prosecution

No complaint, notification of summons and successful prosecution was received in the reporting month.

Future Key Issues

The remaining construction works in the coming reporting month are anticipated to include:



- Road pavement works;
- Water main laying works;
- Road Drainage Works;
- Construction of Police Observation Platform on the Northbound Fanling Highway; and
- Remaining works of Kiu Tau footbridge.

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



1 INTRODUCTION

1.1.1 Chun Wo Construction & Engineering Co Ltd (Chun Wo) was commissioned by the Civil Engineering and Development Department (CEDD) as the Civil Contractor for the Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2. Meinhardt Infrastructure & Environment Ltd (MIEL) has been appointed by Chun Wo as the Environmental Team (ET) to fulfill the corresponding EM&A requirements pursuant to Environmental Permit No. EP-324/2008/E in accordance with the Updated EM&A Manual (dated October 2013) for Widening of Tolo Highway/Fanling Highway between Island House Interchange and Fanling Stage 2. The EM&A programme commenced on 5 November 2013.

1.2 Purpose of the Report

1.2.1 This is the monthly EM&A Report which summaries the impact monitoring results and audit findings for the Project during the reporting month of February 2019.

1.3 Report Structure

1.3.1 This monthly EM&A Report comprises the following sections:

Section 1: Introduction

Section 2: Project Information

Section 3: Status of Environmental Licenses, Notifications and Permits

Section 4: Air Quality Monitoring

Section 5: Noise Monitoring

Section 6: Water Monitoring

- Section 7: Waste Management
- Section 8: Environmental Site Inspection and Audit
- Section 9: Implementation Status of Environmental Mitigation Measures

Section 10: Summary of EP Submission in the Reporting Month

Section 11: Environmental Non-Conformance

Section 12: Future Key Issues

Section 13: Conclusions and Recommendations



2 **PROJECT INFORMATION**

2.1 Background

- 2.1.1 Tolo Highway and Fanling Highway are expressways in the North East New Territories connecting Sha Tin, Tai Po and Fanling. These highways form a vital part of the strategic Route 1, which links Hong Kong Island to Shenzhen. At present, this section of Route 1 is a dual 3-lane carriageway. However, at several major interchanges along this section of Route 1, the highway is only dual-2 lane. Severe congestion is a frequent occurrence during peak periods, particularly in the Kowloon bound direction.
- 2.1.2 The objective of the Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling is to widen Tolo Highway and Fanling Highway to dual 4-lane carriageway in order to alleviate the current traffic congestion problems and to cope with the increasing transport demands to and from the urban areas and also cross boundary traffic.
- 2.1.3 The construction works for the Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling are to be delivered in 2 stages:

Stage 1 – Construction works between Island House Interchange and Tai Hang; and

Stage 2 – Construction works between Tai Hang and Wo Hop Shek Interchange.

- 2.1.4 The construction works of Stage 1 under the EP commenced in November 2009 and was planned to be completed in December 2013 tentatively. The works of Stage 2 was planned to commence in November 2013 and complete by end of 2016. Hyder-Arup-Black and Veatch Joint Venture (HABVJV) was appointed by the Highways Department (HyD) as the consultants for the design and construction assignment for the Project. Mott MacDonald Hong Kong Ltd is the Independent Environmental Checker (IEC) of both Stage 1 and Stage 2 works.
- 2.1.5 A portion of Stage 2 works of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling (hereafter called "the Project") is entrusted to the contractor of Contract No. CV/2012/09 Liantang / Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works Contract 3, i.e. Chun Wo. AECOM Asia Co Ltd was appointed by the CEDD as the consultant for the design and construction assignment for the Liantang development.
- 2.1.6 The Project is a Designated Project under the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499). An Environmental Impact Assessment (EIA) Report together with an Environmental Monitoring and Audit (EM&A) Manual were approved on 14 July 2000 (Register Number: EIA-043/2000). The Project is governed by an Environmental Permit (EP) (EP-324/2008) which was granted on 23 December 2008. A variation of EP (VEP) was applied and the VEP (EP-324/2008/A) was subsequently granted on 31 January 2012. An additional VEP has been applied on 24 February 2014 and the VEP (EP-324/2008/B) was subsequently granted on 17 March 2014. Furthermore, an additional VEP has been applied on 9 March 2015 and the VEP (EP-324/2008/C) was subsequently granted on 27 March 2015. The previous VEP (EP-324/2008/D) was granted on 27 August 2015. The current VEP (EP-324/2008/E) was granted on 26 January 2017.



2.2 Site Description

2.2.1 The major construction activities under the Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2 include:

At-Grade Road Works – Temporary and permanent road formation, pipe laying, road drainage, footpath and noise barrier construction;

Demolition of existing Kiu Tau Footbridge and Footbridge Reprovision; and

Box Culvert Extension – Flow diversion of existing stream, excavation, sub-base and blinding, base, wall and top slab construction.

2.2.2 **Figure 1** shows the works areas for the Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2.

2.3 Construction Programme and Activities

- 2.3.1 The major construction activities undertaken in the reporting month are summarized below:
 - Road Pavement Works;
 - Water Main Laying Works ;
 - Road Drainage Works;
 - Construction of the Police Observation Platform on the Northbound Fanling Highway; and
 - Remaining Works of Kiu Tau Footbridge.
- 2.3.2 The construction programme is presented in **Appendix A**.

2.4 **Project Organisation**

2.4.1 The project organization structure is shown in **Appendix B**. The key personnel contact names and numbers for the Project are summarised in **Table 2.1**.



| Party | Role | Position | Name | Telephone | Fax | |
|-------------------|---|---|--------------------|-----------|-----------|--|
| A 500M | Engineer's | Senior Resident Engineer | Mr. Alan Lee | 2171 3303 | 0474 0400 | |
| Representative | | Resident Engineer (Environmental)Mr. Perry Yam2171 | | 2171 3350 | 2171 3498 | |
| Mott MacDonald | Independent Environmental Checker (IEC) | IEC | Mr. Steven Tang | 2828 5920 | 2827 1823 | |
| | | Site Agent | Mr. Daniel Ho | 2638 6144 | | |
| Chun Wo C | Contractor | Environmental Officer | Mr. Yang Ran | 2638 6147 | 2638 7077 | |
| | | Environmental Supervisor | Mr. Franki Leung | 2638 7005 | | |
| Meinhardt | Environmental Team (ET) | ET Leader | Mr. Fredrick Leong | 2859 1739 | 2540 1580 | |

Table 2.1 Contact Information of Key Personnel

3 STATUS OF ENVIRONMENTAL LICENSES, NOTIFICATION AND PERMITS

3.1.1 The relevant environmental licenses, permits and/or notifications on environmental protection for this Project and valid in the reporting month are summarized in **Table 3.1**.

| Permit / License | Valid Period | | Status | Demente | |
|---------------------------------------|--------------|-------------|---------------------------|---|--|
| No. / Notification / Reference No. | From | То | Status | Remarks | |
| Environmental Perr | nit | 1 | | | |
| EP-324/2008/E | 26 Jan 2017 | | Granted on 26 Jan 2017 | | |
| Construction Noise | Permit | 1 | | 1 | |
| GW-RN0388-18 | 25 Aug 2018 | 24 Feb 2019 | Valid | For general works at the northward of site office | |
| GW-RN0424-18 | 01 Sep 2018 | 21 Feb 2019 | Valid | Parapet installation works and remedial works on Tai Wo Service Road East, Fanling Highway. | |
| GW-RN0425-18 | 22 Aug 2018 | 21 Feb 2019 | Valid | For traverse stitch joints and installation of longitudinal stitch panel over Fanling Highway and MTRC's East Rail line. | |
| GW-RN0454-18 | 06 Sep 2018 | 05 Mar 2019 | Valid | For general works at the southward of site office. | |
| GW-RN0566-18 | 29 Oct 2018 | 4 Apr 2019 | Valid | For sampling works Fanling Highway bothbound. | |
| GW-RN0693-18 | 18 Dec 2018 | 25 May 2019 | Valid | For lane shifting work of Fanling Highway bothbound. | |
| GW-RN0694-18 | 19 Dec 2018 | 25 May 2019 | Valid | For loading and unloading along Fanling Highway both bounds. | |
| GW-RN0696-18 | 19 Dec 2018 | 25 May 2019 | Valid | For connection of DN600 Watermain near Kau Lung Hang. | |

 Table 3.1
 Status of Environmental Licenses, Notifications and Permits



| Permit / License No. / Notification / | Valid Period | | Status | Remarks | | |
|--|---|---------------|-------------------|--|--|--|
| Reference No. | From | То | Sidius | Reinarks | | |
| GW-RN0699-18 | 18 Dec 2018 | 25 May 2019 | Valid | For road diversion and maintenance of Fanling Highway bothbound. | | |
| Wastewater Discha | rge License | | | | | |
| WT00032188-2018 | 20 Sep 2018 | 31 Aug 2023 | Valid | | | |
| Chemical Waste Pro | oducer Registra | tion | | | | |
| 5113-634-C3817- 01 | 7 Oct 2013 | | Valid | | | |
| Billing Account for | Construction W | aste Disposal | - | | | |
| 7017914 | 2 Aug 2013 | | Account Active | | | |
| Notification Under | Notification Under Air Pollution Control (Construction Dust) Regulation | | | | | |
| | 31 Jul 2013 | 30 Jul 2019 | Notified | | | |



4 AIR QUALITY MONITORING

4.1 Monitoring Requirement

4.1.1 In accordance with the Updated EM&A Manual, 1-hr and 24-hr total suspended particulate (TSP) levels at the designated air quality monitoring station are required. Impact 24-hour TSP monitoring should be carried out for at least once every 6 days. For the 1-hr TSP impact monitoring, the sampling frequency of at least three times in every 6 days should be undertaken when the highest dust impact occurs.

4.2 Monitoring Equipment

4.2.1 The 1hr- TSP and 24-hr TSP air quality monitoring were performed using a High Volume Sampler (HVS), of which its location and operation satisfy, as far as practicable, all the requirements as specified in the Updated EM&A Manual. The brand and model of the equipment are given in **Table 4.1**.

 Table 4.1
 Air Quality Monitoring Equipment

| Equipment | Brand and Model | Quantity | Serial Number |
|---------------|-----------------------------------|----------|---------------|
| High Volume | Tisch Total Suspended Particulate | | |
| Sampler | Mass Flow Controlled High Volume | 1 | 2359 |
| (1-hr TSP and | Air Sampler (Model No. TE-5170 | I | 2009 |
| 24-hr TSP) | MFC) | | |

- 4.2.2 The HVS and its accessories were maintained in good working condition, such as replacing motor brushes routinely and checking electrical wiring to ensure a continuous power supply.
- 4.2.3 Calibration of the HVS (five point calibration) using Calibration Kit was carried out every two months. The HVS calibration orifice will be calibrated annually. Calibration certificate of the TE-5025A Calibration Kit and the HVS are provided in **Appendix C**.

4.3 Monitoring Location

4.3.1 Air quality monitoring was conducted at the location specified in the Updated EM&A Manual. **Table 4.2** describes the details of the air quality monitoring station with its location as shown in **Figure 2**.

 Table 4.2
 Location of Air Quality Monitoring

| Air Monitoring Station ID | Monitoring Location | Description |
|---------------------------|---------------------|---------------------------|
| AM1(SR77) * | Yuen Leng 2 * | Residential, Ground floor |

Remark:

Location and Station / ASR ID as identified in Updated EM&A Manual / EIA Report for Widening of Tolo Highway/Fanling Highway between Island House Interchange and Fanling

4.4 Monitoring Parameters, Frequency and Duration

4.4.1 **Table 4.3** summarizes the monitoring parameters, frequency and duration of impact TSP monitoring.



| Parameter | Frequency and Duration |
|-------------|--|
| 1-hour TSP | At least three times in every 6 days should be undertaken when the highest dust impact occur |
| 24-hour TSP | Once every 6 days |

4.5 Monitoring Methodology

1-hr and 24-hr TSP Monitoring

- 4.5.1 With the consideration of criteria stated in the Updated EM&A Manual, the HVS was installed in the vicinity of the air sensitive receivers.
- 4.5.2 The relevant data including temperature, pressure, weather conditions, elapsed-time meter reading for the start and stop of the sampler, identification and weight of the filter paper, and any special phenomena observed were recorded. The weather information was referenced from Hong Kong Observatory (http://www.weather.gov.hk/wxinfo/pastwx/extractc.htm).
- 4.5.3 A HOKLAS accredited laboratory with constant temperature and humidity control, and equipped with necessary measuring and conditioning instruments, to handle the 24-hr TSP samples, was employed for sample analysis.
- 4.5.4 Filter papers of size 8"x10" were labelled before sampling. They were inspected to be clean with no pin holes and conditioned in a humidity controlled chamber for over 24-hr and were pre-weighed before use for the sampling.
- 4.5.5 The 24-hr TSP levels were measured by following the standard high volume sampling method for TSP as set out in the Title 40 of the United States Code of Federal Regulations, Chapter 1 (Part 50), Appendix B. TSP was sampled by drawing air through a conditioned, pre-weighted filter paper inside the HVS at a controlled air flow rate. After 24-hr sampling, the filter papers loaded with dust were kept in a clean and tightly sealed plastic bag, and then returned to the laboratory for reconditioning in the humidity controlled chamber followed by accurate weighing by an electronic balance with a readout down to 0.1 mg.
- 4.5.6 All the collected samples were kept in a good condition for 6 months before disposal.
- 4.5.7 For 1-hr TSP monitoring, monitoring methodology is the same as 24-hr TSP monitoring which has been presented in **Section 4.5.1** to **Section 4.5.6**, but with sampling period changed to 1 hour.

4.6 Monitoring Schedule for the Reporting month

4.6.1 As informed by the contractor, all major construction activities of the Entrusted Portion Project of Section 1A and 1B were substantially completed on 28 September 2018 and 3 October 2018 respectively. In such regard, the EM&A Programme of the captioned project, including monthly EM&A reporting and the corresponding environmental monitoring and audit works, is no longer required and we proposed to cease it by the end of December 2018 and we have submitted the termination proposal to EPD on 24 December 2018. The EM&A monitoring and audit works will be carried until the termination proposal is approved. The tentative schedule for environmental monitoring for the reporting month is provided in **Appendix D**. Meteorological data extracted from Hong Kong Observatory for the reporting month is provided in **Appendix E**.

4.7 Monitoring Results

4.7.1 The monitoring results for 1-hr and 24-hr TSP are summarised in **Table 4.4** and **Table 4.5** respectively. Detailed air quality monitoring results and the graphical presentation of air quality monitoring data for the current and past three reporting months are presented in **Appendix F**.

| Table 4.4 | Summary of 1-hr TSP Monitoring Results |
|-----------|--|
|-----------|--|

| ASR ID | Average (μg/m³) | Range (µg/m³) | Action Level (μg/m³) | Limit Level (µg/m³) |
|-------------|--------------------|---------------|-------------------------|------------------------|
| AM1(SR77) * | 154.9 | 96.9-202.0 | 292.7 | 500 |

Remark:

Station / ASR ID as identified in Updated EM&A Manual / EIA Report for Widening of Tolo Highway/Fanling Highway between Island House Interchange and Fanling

Table 4.5 Summary of 24-hr TSP Monitoring Results

| ASR ID | Average (μg/m³) | Range (µg/m³) | Action Level (μg/m³) | Limit Level (µg/m³) |
|-------------|--------------------|---------------|-------------------------|------------------------|
| AM1(SR77) * | 68.3 | 46.9-94.4 | 170.3 | 260 |

Remark:

Station / ASR ID as identified in Updated EM&A Manual / EIA Report for Widening of Tolo Highway/Fanling Highway between Island House Interchange and Fanling

- 4.7.2 No exceedance of Action and Limit Level was recorded for 24-hour TSP monitoring at the monitoring location AM1(SR77) in the reporting month.
- 4.7.3 No exceedance of Action and Limit Level was recorded for 1-hour TSP monitoring at the monitoring location AM1(SR77) in the reporting month.
- 4.7.4 The Event and Action Plan for the occurrence of non-compliance of the air quality criteria is annexed in **Appendix G**.
- 4.7.5 No exceedance of Action and Limit Level was recorded for 1-hour TSP monitoring the monitoring location AM1(SR77) in the reporting month.

Feb 2019



5 NOISE MONITORING

5.1 Monitoring Requirements

5.1.1 In accordance with the Updated EM&A Manual, the impact noise monitoring frequency shall depend on the scale of the construction activities. An initial guide on the regular monitoring frequency should be at least once per week when noise generating activities are underway.

5.2 Monitoring Equipment

5.2.1 Noise monitoring was performed using a sound level meter at the monitoring station. The sound level meter deployed complies with the International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications. An acoustic calibrator was deployed to check the sound level meter at a known sound pressure level. The brand and model of the equipment is given in **Table 5.1**.

 Table 5.1
 Noise Monitoring Equipment

| Equipment | Brand and Model | Quantity | Serial Number |
|---------------------------|------------------------|----------|---------------|
| Sound Level Calibrator | Rion (Model No. NC-74) | 1 | 34678506 |
| Sound Level Meter | Rion (Model No. NL-52) | 1 | 01143484 |

5.2.2 The sound level calibrator and sound level meter were verified by a certified laboratory every year. Calibration certificates of the sound level meter and acoustic calibrator are provided in **Appendix C**.

5.3 Monitoring Locations

5.3.1 Impact noise monitoring was conducted at the location specified in the Updated EM&A Manual. **Table 5.2** describes the details of the noise monitoring station with its location as shown in **Figure 2**.

| J |
|---|
| j |

| NSR ID | Monitoring Location | Description |
|------------|---------------------|---------------------------|
| M1(SR77) * | Yuen Leng 2 * | Residential, Ground floor |

Remark:

Location and Station / NSR ID as identified in Updated EM&A Manual / EIA Report for Widening of Tolo Highway/Fanling Highway between Island House Interchange and Fanling

5.4 Monitoring Parameters, Frequency and Duration

5.4.1 **Table 5.3** summarizes the monitoring parameters, frequency and duration of impact noise monitoring.



Table 5.3 Noise Monitoring Parameters, Frequency and Duration

| Parameter and Duration | Frequency |
|--|------------------------|
| 30-mins measurement at between 0700 and 1900 on normal weekdays. Leq, L10 and L90 would be recorded. | At least once per week |

5.5 Monitoring Methodology

- 5.5.1 The monitoring procedures are summarised as follows:
 - The sound level meter was set on a tripod at a height of 1.2 m above the ground for free-field measurements at monitoring station SR77;
 - The battery condition was checked to ensure good functioning of the meter;
 - Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - Frequency weighting: A
 - Time weighting: Fast
 - Parameters: Leq, L10 and L90
 - Time measurement: Leq(30-minutes) during non-restricted hours i.e. 07:00 19:00 hrs on normal weekdays
 - Prior to and after each noise measurement, the meter was calibrated using the acoustic calibrator for 94dB(A) at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1dB(A), the measurement would be considered invalid and repeat of noise measurement would be required after recalibration or repair of the equipment.
 - At the end of the monitoring period, the Leq, L10 and L90 were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
 - A façade correction of +3dB (A) shall be made to the noise parameter obtained by free field measurement.

5.6 Monitoring Schedule for the Reporting Month

5.6.1 The schedule for environmental monitoring for the reporting month is provided in **Appendix D**. Meteorological data extracted from Hong Kong Observatory for the reporting month is provided in **Appendix E**.

5.7 Monitoring Results

5.7.1 The monitoring results for noise are summarized in **Table 5.4** and the monitoring results and the graphical presentation of noise level for the current and past three reporting months are presented in **Appendix H**.



| Table 5.4 | Summary of Noise | Monitoring Results |
|-----------|------------------|---------------------------|
|-----------|------------------|---------------------------|

| Noise Monitoring Station ID | Average, dB(A), Leq (30min) ⁽²⁾ | Range, dB(A), Leq (30min) ⁽²⁾ | Action Level | Limit Level, dB(A) |
|-----------------------------------|--|---|---|--------------------------|
| M1(SR77) ⁽¹⁾ | 67.0 | 64.5 – 70.1 | When one documented valid complaint is received | 75 |

Remark:

(1) Station / NSR ID as identified in Updated EM&A Manual / EIA Report for Widening of Tolo Highway/Fanling Highway between Island House Interchange and Fanling

(2) +3dB(A) façade correction included

- 5.7.2 Major noise sources during the noise monitoring included construction activities of the Project and that along Tai Wo Service Road East, and nearby traffic noise.
- 5.7.3 No noise complaint was received in the reporting month, so no Action Level exceedance was recorded. Also, no Limit Level exceedance of noise monitoring was recorded in the reporting month.
- 5.7.4 The Event and Action Plan for the occurrence of non-compliance of the noise criteria is annexed in **Appendix G**.



6 WATER MONITORING

6.1.1 The box culvert works had been completed in March 2017. The 4-week postconstruction water quality monitoring at I5 was completed in 28 April 2017.



7 WASTE MANAGEMENT

- 7.1.1 The Contractor has registered as a chemical waste producer of the Project. The C&D materials and waste sorting were carried out on-site. Receptacles were provided for general refuse collection.
- 7.1.2 As advised by the Contractor, a total of 2937m³ of excavated material has been generated. 2010m³ of inert C&D materials was disposed of at public fill to Tuen Mun Area 38. 0m³ of inert C&D materials were reused on site. 145m³ of general refuse was disposed of at North East New Territories (NENT) Landfill. No plastic was collected by recycling contractor in the reporting month. No paper/cardboard packaging was collected by recycling contractor in the reporting month. No metal was collected by recycling contractor in the reporting month. No metal was collected by licensed contractor in the reporting period. Details of the waste management data are presented in **Appendix K**.



8 ENVIRONMENTAL SITE INSPECTION AND AUDIT

8.1 Site Inspection

- 8.1.1 Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures for the Project. A summary of the site inspection is provided in **Appendix L**.
- 8.1.2 In the reporting month, 5 site inspections were carried out on 2, 8, 16, 24 and 28 January 2019. The one held on 28 January 2019 was a joint inspection with the IEC, ER, ET and Contractor. No site inspection was conducted by the EPD during the reporting month. No non-compliance was recorded during the site inspection. A summary of the reminders and observations recorded during the site inspections are presented in **Table 8.1**.

| Parameters | Date | Observations and Recommendations | Follow-up |
|----------------------------------|------------|--|-----------|
| Air Quality | N/A | N/A | N/A |
| Noise | N/A | N/A | N/A |
| Water Quality | N/A | N/A | N/A |
| Waste/ Chemical Management | 2 Jan 2019 | Chemicals were observed without secondary containment at TWSRE. The contactor was advised to provide secondary containment for all chemicals to prevent any potential spillage. | N/A |
| Landscape & Visual | N/A | N/A | N/A |
| Permits / Licenses | N/A | N/A | N/A |

Table 8.1 Observations and Recommendations of Site Audit



9 IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

9.1.1 The Contractor has implemented the relevant environmental mitigation measures as specified in the EIA Reports, EPs and updated EM&A Manual. The implementation status of environmental mitigation measures during the reporting period is summarized in **Appendix L**.



10 SUMMARY OF EP SUBMISSION IN THE REPORTING MONTH

10.1.1 The status of the required submission under the EP during the reporting period is summarized in **Table 10.1**.

Table 10.1 Status of Required Submission under Environmental Permit

| EP Condition | Submission | Submission Date |
|---------------|----------------------------------|--------------------|
| Condition 3.3 | Monthly EM&A Report for Dec 2018 | 9 Jan 2019 |

- 17 -



11 ENVIRONMENTAL NON-CONFORMANCE

11.1 Summary of Monitoring Exceedances

- 11.1.1 No exceedance of Action and Limit Level were recorded for 24-hour TSP monitoring at the monitoring location AM1(SR77) in the reporting month.
- 11.1.2 No exceedance of Action and Limit Level was recorded for 1-hour TSP monitoring at the monitoring location AM1(SR77) in the reporting month.
- 11.1.3 No noise complaint was received in the reporting month, so no Action Level exceedance was recorded. Also, no Limit Level exceedance of noise monitoring was recorded in the reporting month.
- 11.1.4 The 4-week post-construction water quality monitoring at I5 was completed in April 2017.

11.2 Summary of Environmental Non-Compliance

11.2.1 No environmental non-compliance was recorded in the reporting month. The cumulative statistics are provided in **Appendix N**.

11.3 Summary of Environmental Complaints

11.3.1 No environmental complaints were received in the reporting month. The cumulative statistics are provided in **Appendix N**.

11.4 Summary of Environmental Summon and Successful Prosecutions

11.4.1 No environmental related prosecution or notification of summons was received in the reporting month. The cumulative statistics are provided in **Appendix N**.



12 FUTURE KEY ISSUES

12.1 Construction Programme for the Next Month

- 12.1.1 The remaining construction works in the coming reporting month are anticipated to include:
 - Road Pavement Works;
 - Water Main Laying Works;
 - Road Drainage Works;
 - Construction of the Police Observation Platform on the Northbound Fanling Highway;and
 - Remaining works of Kiu Tau Footbridge.

12.2 Key Issues for the Coming Month

- 12.2.1 Key issues to be considered in the coming month are anticipated to include:
 - Properly maintain all drainage facilities and wheel washing facilities on site;
 - Expose slopes and dusty stockpile should be covered up properly if no work will be conducted;
 - Good housekeeping should be maintained and general refuse should be removed regularly; and
 - Watering shall be enhanced over the construction site.

12.3 Monitoring Schedule for the Next Month

12.3.1 The tentative schedule for environmental monitoring for the coming month is provided in **Appendix D**.



13 CONCLUSIONS AND RECOMMENDATIONS

13.1 Conclusions

- 13.1.1 The construction phase EM&A programme of the Project commenced on 5 November 2013.
- 13.1.2 The 1-hr TSP, 24-hr TSP, noise and water quality monitoring were carried out in the reporting period.
- 13.1.3 No exceedance of Action and Limit Level was recorded for 24-hour TSP monitoring at the monitoring location AM1(SR77) in the reporting month.
- 13.1.4 No exceedance of Action and Limit Level was recorded for 1-hour TSP monitoring at the monitoring location AM1(SR77) in the reporting month.
- 13.1.5 No noise complaint was received in the reporting month, so no Action Level exceedance was recorded. Also, no Limit Level exceedance of noise monitoring was recorded in the reporting month.
- 13.1.6 The 4-week post-construction water quality monitoring at I5 was completed in April 2017.
- 13.1.7 Five (5) environmental site inspections were carried out in the reporting month. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site audit.

13.2 Recommendations

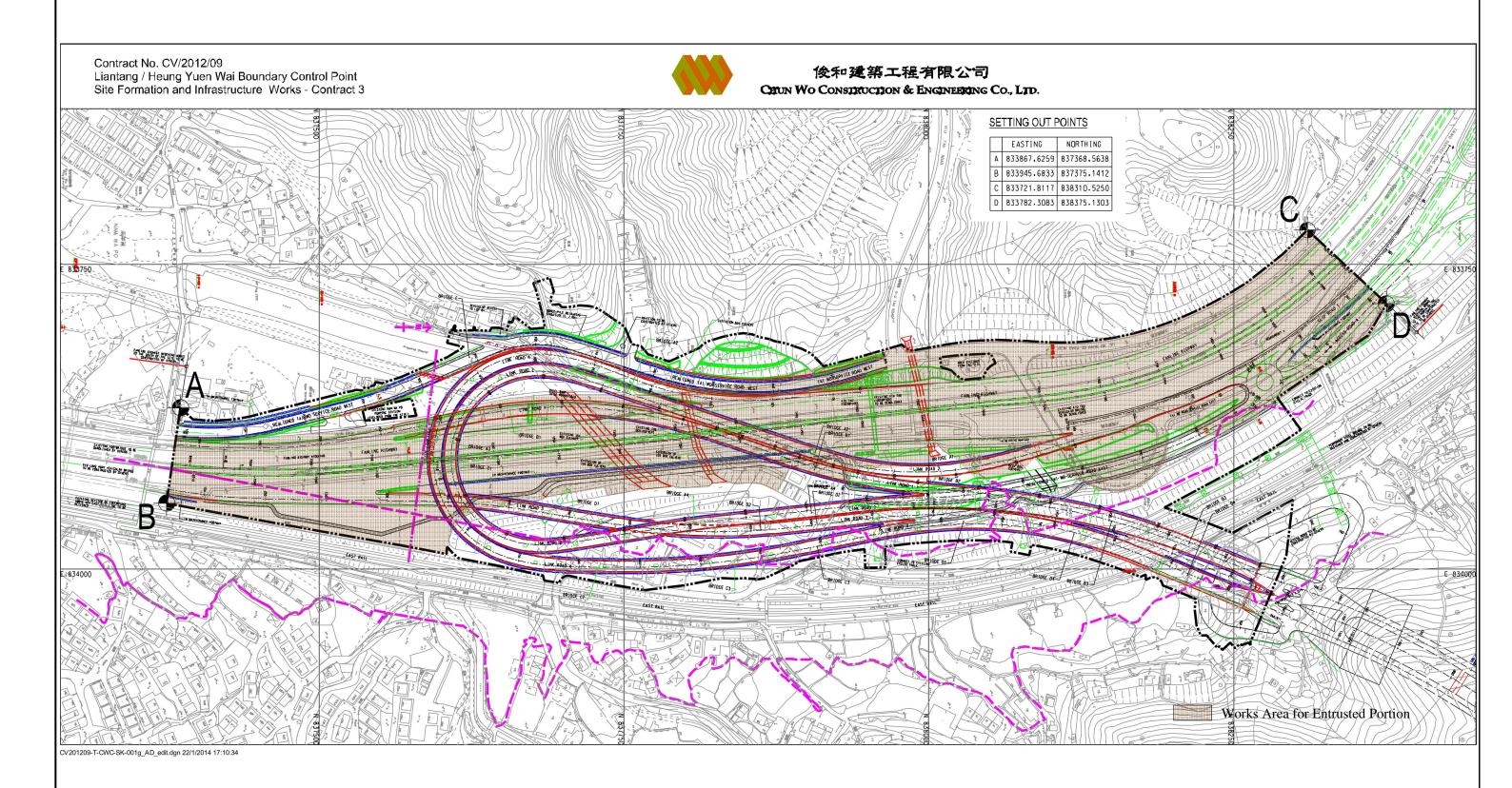
13.2.1 According to the environmental site inspections performed in the reporting month, the following recommendation was provided:

Waste/ Chemical Management

• Secondary containment shall be provided for chemical to prevent potential leakage.



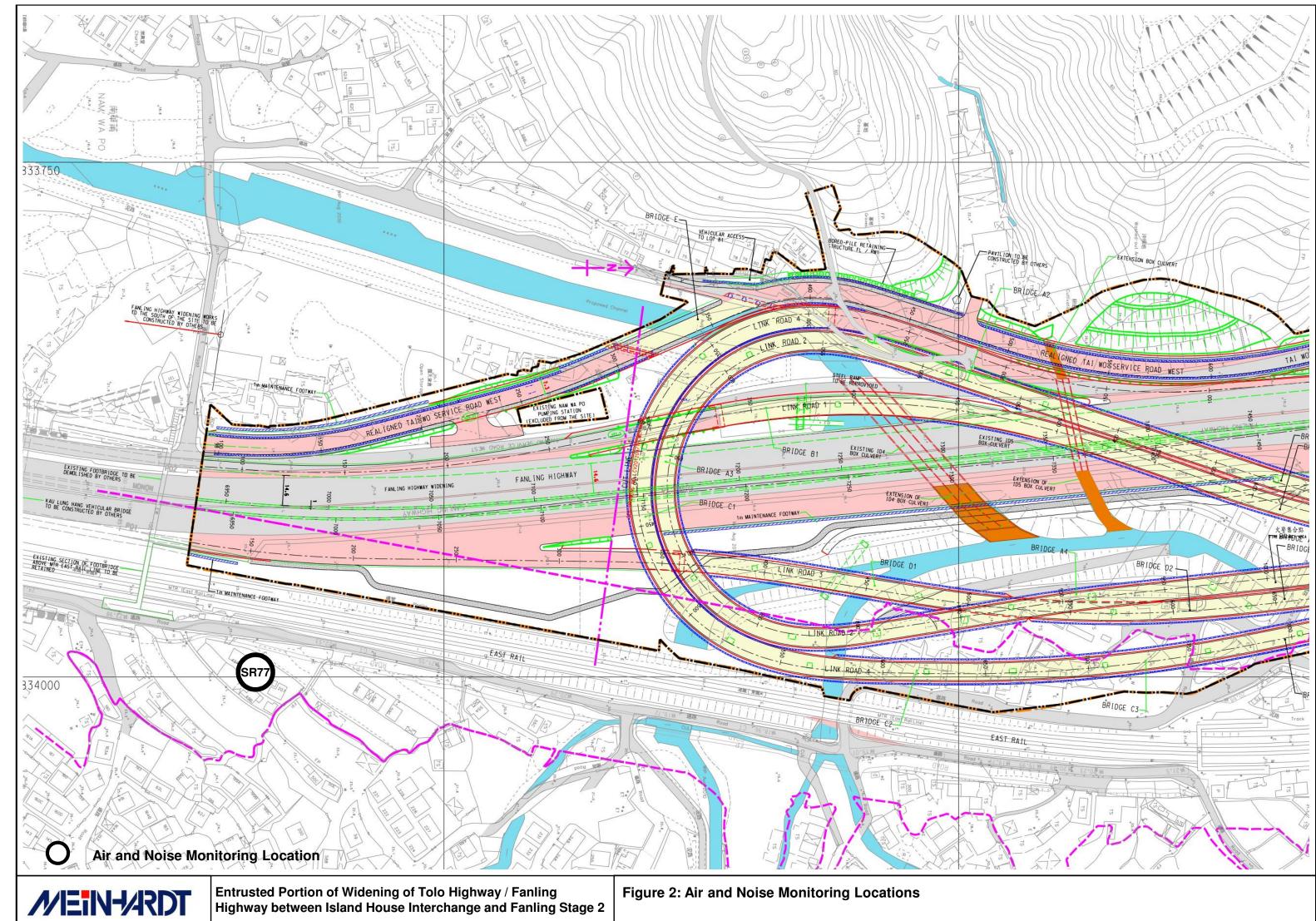
Figure





Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2

Figure 1: Demarcation of Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling – Stage 2





Appendix A Construction Programme

| ctivity ID | Activity Name | OD | RD | Start | Finish | TF | 2 | 018 | | | 2019 | | |
|-----------------|---|-----|------------|------------------|-------------|------|---|--------------------------|-----------------|--|---|---------------------------------------|----------------------|
| 0.11-1 0.11 | | | | | | | Nov | Dec | | Jan | Feb | Mar | Apr |
| | ng Programme 2018-11-21 (Based on (UMP06C) | | | | | | | | | | | | |
| Key Dates (Co | ontractual) | | | | | | | | | | | | |
| KD-0100b | KD1: Section 1A - all HyD's works in Zone3 & SBZ2 excl. Landscape Works (Potential EOT by Claim 63 & Inclement Weath e) | 0 | 0 | | 20-Dec-18* | -63 | | | KD1: Section | A - all HyD's works in Zone3 & SBZ2 excl. La | indscape Works (Potential EOT by Claim | 63 & Inclement Weather) | |
| KD-0300a | KD3: Section 2 - the remainder of the Works (Preliminary EOT by Claim No.56 & 58, Inclement Weather) | 0 | 0 | | 22-Oct-18 A | | n 2 - the remainder of the Works (Prelimina | y EOT by Claim No.56 & 5 | 8, Indement Wea | ther) | | | |
| KD-0400a | KD4: Section 3 - Remainder of Landscape Softworks not included in Section 3A (Piel. EOT by Claim 56, 58) | 0 | 0 | | 20-Dec-18* | -62 | | | KD4: Section | 3 - Remainder of Landscape Softworks not in | duded in Section 3A (Prel. EOT by Claim | 56, 58) | |
| KD-0500 | KD4A: Section 3A - Landscape Softworks in NBZ1 (Potential EOT by Inclement | 0 | 0 | | 20-Dec-18* | -62 | | | KD4A: Section | 3A - Landscape Softworks in NB21 (Potenti | al EOT by Inclement Weather) | | |
| Section IA & II | Weather) 3 - Fanling Highway Widening (KD-1 & KD-2) | | | | | | | | | | | | |
| | av South Portion between CH6935 and CH7470 | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | vay Zone 1 between CH6935 and CH7130 (within SBZ2) | | | | | | | | | | | | |
| Noise Barrie | r | | | | | | | | | | | | |
| FHW-1110 | Noise Barrier NB6 and NB7 - Remaining Stem Wall (28m, maintain access for extensioin of NB 70, VO199) | 30 | 34 | 16-Aug-18 A | 31-Jan-19 | -88 | | | | | Noise Barrier NB6 and NB7 - Remaining | Stem Wall (28m, maintain access fo | or extensioin of NB |
| FHW-1140 | Noise Barrier NB70 - Footing (extended 10m under VO199) | 60 | 60 | 20-Dec-18* | 09-Mar-19 | -120 | | | | | | Noise Barrier NB70 - F | ooting (extended 10 |
| At-Grade Ro | adworks (195m) | | | | | | | | | | | | |
| | Road Pavement (FLH NB 1st lane and Hard Shoulder) | 14 | 14 | 20-Dec-18* | 08-Jan-19 | -68 | | | | Road Pavement (FLH NB 1st la | abe and Hard Shoulder) | | |
| | | | | 20 200 10 | 000001110 | | | | | | | | |
| | vay Zone 2 between CH7130 and CH7290 | | | | | | | | | | | | |
| Noise Barrie | r | | | | | | | | | | | | |
| FHW-2340 | Noise Barrier NB67-2 - Cap ID4-1A_1 and Cap ID4-1A_2 head beam (affected by Tau Pass, VO 191) | 103 | 103 | 31-Dec-18* | 14-May-19 | -210 | | | | | | | |
| FHW-2370 | c Access Ramp at Tau Pass - Additional Mini-Piling (3 nos.) (under VO191) | 61 | 61 | 20-Dec-18* | 11-Mar-19 | -220 | | | | | | Access Ramp at Ta | u Pass Additional |
| At-Grade Ro | adworks (160m) | | | | | | | | | | | | |
| FHW-2240 | Permanent Street Light Installation (due to Claim No. 63) | 21 | 21 | 20-Jun-18 A | 16-Jan-19 | -86 | | | | Permanent Street I | ight Installation (due to Claim No. 63), Pe | manent Street Light Installation (due | to Claim No. 63) |
| | Road Pavement on FLH SB 4th lane after Removal of Temp. Street Light (due to Claim | | 11 | | 29-Jan-19 | -86 | | | | | Road Pavement on FLH SB 4th lane after | | |
| | No. 63) | | | | | | | | | | | | |
| FHW-2350 | a Road Drainage and Pavement (near NB67-2, MN7.9 to MN7.11) | 58 | 33 | 29-Mar-18 A | 30-Jan-19 | -87 | | | | | Road Drainage and Pavement (near NB6 | 37-2, MN7.9 to MN7.11), Road Draina | age and Pavement (|
| FHW-2350 | Installation of Drain pipe and Manholes (MN7.12 & MN7.12A) (affected by Tau Pass under VO191) | 29 | 157 | 26-Nov-18 A | 10-Jul-19 | -211 | | | | | | | |
| Fanling High | vay Zone 3 between CH7290 and CH7380 | | | | | | | | | | | | |
| Noise Barrie | r | | | | | | | | | | | | |
| FHW-3340 | Noise Barrier NB69 - Pile cap/ Footing and Stem Wall adjacent to NB lane (108m) | 77 | 35 | 16-Oct-17 A | 01-Feb-19 | -107 | | | | | Noise Barrier NB69 - Pile cap/ Footing | and Stem Wall adjacent to NB lane (| 108m), Noise Barri |
| At-Grade Br | adworks (130m) | | | | | | | | | | | | |
| | | 10 | 40 | 01 4 | 00 lan 40 | -64 | | | | | | | |
| | Road Pavement on FLH SB 4th lane after Removal of Temp. Street Light (due to Claim No. 63) | | 10 | | 03-Jan-19 | | | | | Road Pavement on FLH SB 4th lane a | tter Removal of Temp. Street Light (due to | | |
| FHW-3350 | a Road Drainage (FLH NB hard shoulder, next to NB69) | 61 | 50 | 26-Feb-18 A | 26-Feb-19 | -129 | | | | | F | oad Drainage (FLH NB hard shoulde | r, next to NB69), Ro |
| FHW-3350 | Road Formation and Pavement (FLH NB 1st lane and HS next to NB69, due to Tau Pass under VO191) | 25 | 25 | 27-Feb-19* | 27-Mar-19 | -129 | | | | | = | | Road Formatio |
| Fanling Highw | ay North Portion between CH7470 and CH7925 | | | | | | | | | | | | |
| Fanling High | vay Zone 4 between CH7380 and CH7470 | | | | | | | | | | | | |
| At-Grade Ro | adworks (90m) | | | | | | | | | | | | |
| | Road Pavement (FLH SB 1st lane) by re-surfacing (due to Claim No. 63) | 15 | 33 | 10-Sep-18 A | 30-Jan-19 | -87 | | | | | Road Pavement (FLH SB 1st lane) by re- | surfacing (due to Claim No. 63). Dec. | d Pavament /ELLIC |
| 11100-4150 | noas ravenent (r Ei i ob i ist iane) by resultating (due to Galin No. 65) | 15 | 33 | 10-300-10 M | 30-Jan-19 | -0/ | | | | | HOAU PAVEITIENT (FLH SB ISTIANE) by re | isunading (due to Ulaim No. 63), Hoai | u ravement (FLH SI |
| | | | . . | | | | | | | | 3-Month Bolling F | Programme updated to 2018-12 | 2-20 |
| | | | | tual Work | | | CEDD C | Contract No. | CV/201 | 2/09 | Date Revisi | | Approved |
| | | | | emaining Work | | | Liantang / Heung ' | Yuen Wai B | CP - Site | e Formation & | | | |
| | 📼 | | | ummary Bar | | | | cture Work | | | | | |
| | | | Cr | itical Remaininç | g Work | | | th Rolling P | | | | | |
| | · · · · · · · · · · · · · · · · · · · | • | 🔶 Mi | ilestone | | | 3MPR065 | Page 1 | - | 20-Dec-18 | | | |
| | | | Pr | oject Baseline B | Bar | | JIVIF NU03 | Page I | 010 | 20-Dec-10 | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | · | • | |

| Activity ID | Activity Name | OD | RD | Start | Finish | TF | | 2018 | | | 2019 | | |
|---------------|---|-----|------|-------------------|------------|------|------------------|--------------|--------------|---|--|--|---------------------------|
| ELW 41500 | Road Drainage and Road Pavement (FLH H.S., Merging Lane)(due to Claim No. 63) | 48 | 48 | 10-Sep-18 A | 23-Feb-19 | -102 | Nov | Dec | | Jan | Feb | Mar (Filling | Apr |
| | | | | | | | | | | | | Drainage and Road Pavement (FLH H. | |
| FHW-4330c | Construction of FL/RW2 (mass concrete wall, VO not yet received) | 38 | 38 | 27-Aug-18 A | 12-Feb-19 | -97 | | | | | Construction of FL/RV | W2 (mass concrete wall, VO not yet rece | eived), Construction of |
| FHW-4330d | Remaining Gullies and Road Pavement after Construction of FL/RW2 (VO not yet received) | 25 | 25 | 14-Jan-19* | 18-Feb-19 | -97 | 7 | | | | Remaining G | Bullies and Road Pavement after Constru | ruction of FL/RW2 (V |
| FHW-4330e | Road Drainage MN9.1 - MN9.3 | 24 | 0 | 23-Aug-18 A | 20-Dec-18 | -54 | 1 | | Road Drainag | e MN9.1 - MN9.3, Road Drainage MN9.1 - N | N9.3 | | |
| Fanling Highw | ay Zone 5 between CH7470 and CH7600 (Provision of Kiu Tau Footbridge) | | | | | | | | | | | | |
| Kiu Tau Foot | ridge Reprovision (East) | | | | | | | | | | | | |
| FHW-5070 | Installation of Lighting Facilities (affect by design change which is under VO) | 21 | 46 | 20-Jun-18 A | 21-Feb-19 | -100 |) | | | | Installati | ion of Lighting Facilities (affect by design | n change which is ur |
| | Fabrication of Pillar Box (affect by design change which is under VO) | 32 | 8 | 15-Jun-18 A | 31-Dec-18 | 337 | | | | Fabrication of Pillar Box (affect by design | | | - |
| | | | | | | | | | | Fabrication of Philar Box (arrest by design | | | |
| | Erection of Pillar Box (affect by design change which is under VO) | 30 | 30 | 02-Jan-19* | 12-Feb-19 | 337 | | | | | Erection of Pillar Box | (affect by design change which is under | er VO) |
| FHW-5100 | Power Cable Laying Works (affect by design change which is under VO) | 36 | 36 | 20-Dec-18* | 02-Feb-19 | -111 | | | | | Power Cable Laying Works (affect b | ay design change which is under VO) | |
| FHW-5110 | Permanent Power Supply Connection (affect by design change which is under VO) | 10 | 10 | 04-Feb-19 | 21-Feb-19 | -100 | | | | | Perman | ent Power Supply Connection (affect by | y design change whic |
| FHW-5110a | Installation of Drainage Pipe | 32 | 38 | 10-Sep-18 A | 12-Feb-19 | -92 | 2 | | | | | ge Pipe, Installation of Drainage Pipe | |
| FHW-5110b | Laying of Floor Tiles (affect by design change which is under VO) | 72 | 62 | 28-Jun-18 A | 12-Mar-19 | -116 | 6 | | | | | Laying of Floor Tiles | s (affect by design cf |
| FHW-5110c | Installation of Suspended Ceiling (affect by design change which is under VO) | 104 | 55 | 21-May-18 A | 04-Mar-19 | -109 |) | | | | | Installation of Suspended Ceilin | ng (affect by design o |
| | BFA Facilities (Lift) | | | | | | | | | | | | .g (a |
| | | 40 | 10 | 04 E-h 40t | 01 E-th 40 | | | | | | | | |
| | Permanent Power Supply (affect by design change which is under VO) | 10 | 10 | 04-Feb-19* | 21-Feb-19 | | | | | | Perman | ent Power Supply (affect by design char | |
| FHW-L-106 | Testing & Commissioning (affect by design change which is under VO) | 11 | 11 | 22-Feb-19* | 06-Mar-19 | -111 | | | | | | Testing & Commissioning (at | uffect by design chan |
| Works at exi | ting TWSRE | | | | | | | | | | | | |
| FHW-5481 | Noise Barrier NB72 Bay 5 - 9 (after water shutdown for twin DN1400 WM, due to claim) | 73 | 51 | 26-Feb-18 A | 27-Feb-19 | -121 | | | | | | Noise Barrier NB72 Bay 5 - 9 (after wate | er shutdown for twin |
| FHW-5490 | Road Drainage, Pavement and TCSS duct laying (Merging lane next to NB72)(due to | 2 | 2 | 28-Feb-19* | 01-Mar-19 | -107 | 7 | | | | | Road Drainage, Pavement and TCS | SS duct laying (Mergi |
| FHW-5500 | claim) Road Drainage (MS10.1-10.3A), Road Pavement and TCSS duct laying (Merging lane | 31 | 44 | 21-Apr-18 A | 19-Feb-19 | -98 | 3 | | | | Road Drain | age (MS10.1-10.3A), Road Pavement a | and TCSS duct layin |
| At-Grade Roa | next to NB73) d Works (130m) | | | | | | | | | | | | |
| | Road Pavement (FLH SB 1st lane) by re-surfacing (due to claim 63) | 15 | 18 | 10-Sep-18 A | 12-Jan-19 | 70 | | | | Dead Devement (ELLI SE | Hatlana) ku maufasina (duata slaim CO | Deed Devement (ELLCD 1st lens) by | una austra aine a (dua ta |
| | | | | | | -12 | | | | | 3 1st lane) by re-surfacing (due to claim 63 | | |
| FHW-5330a | Road Drainage (MN10.1-10.3A, gullies affected by Slope F18) | 60 | 15 | 16-Dec-17 A | 09-Jan-19 | -69 |) | | | Road Drainage (MN10.1-10.3 | A, gullies affected by Slope F18), Road D | ainage (MN10.1-10.3A, gullies affected | by Slope F18) |
| FHW-5330c | Fill Replacement Works 3SW-D/F18 next to FLH NB (further modified by VO not yet received) | 73 | 24 | 01-Aug-18 A | 19-Jan-19 | -117 | 7 | | | Fill Replaceme | nt Works 3SW-D/F18 next to FLH NB (furt | her modified by VO not yet received), Fil | Il Replacement Work |
| FHW-5330d | Remaining Gullies, road formation and TCSS duct laying (log on effect by Slope F18 under VO) | 25 | 25 | 21-Jan-19 | 25-Feb-19 | -117 | 7 | | | | Re | maining Gullies, road formation and TC | CSS duct laying (log |
| FHW-5330e | Road Pavement (log on effect by Slope F18 under VO) | 14 | 14 | 26-Feb-19* | 13-Mar-19 | -117 | 7 | | | | | Road Pavement (lo | og on effect by Slope |
| Fanling Highw | y Zone 6 between CH7600 and CH7660 (Existing Vehicular Bridge) | | | | | | | | | | | | |
| At-Grade Roa | dworks (60m) | | | | | | | | | | | | |
| EHW-6330a | Road Drainage and Road Formation (FLH NB hard shoulder) | 60 | 18 | 16-Dec-17 A | 12-Jan-19 | -72 | | | | Boad Drainage and Boa | d:Formation (FLH NB hard shoulder), Road | d Drainage and Boad Formation (FI H I | VB hard shoulder) |
| | ay Zone 7 between CH7660 and CH7925 at NBZ (Section 1 B) | | | | | | | | | rioda Bidanago ano rioda | | i brainage and ribad ronnation (i 2111 | |
| | | | | | | | | | | | | | |
| | dworks (265m) | | | | | | | | | | | | |
| FHW-7330 | Road Pavement (FLH NB 3rd lane at NBZ joint with CSHK) by re-surfacing | 24 | 35 | 20-Aug-18 A | 01-Feb-19 | 340 | | | | | Road Pavement (FLH NB 3rd lane at | NBZ joint with CSHK) by re-surfacing, R | Road Pavement (FLH |
| FHW-7340 | Road Pavement, Central Barrier (FLH NB 4th lane) by re-surfacing | 24 | 24 | 20-Aug-18 A | 19-Jan-19 | 351 | | | | Road Paveme | nt, Central Barrier (FLH NB 4th lane) by re- | surfacing, Road Pavement, Central Barr | rier (FLH NB 4th lane |
| | | | | | | | | 1 | | 1 | | | |
| | | | Act | tual Work | | | CEDD | Contract No. | . CV/201 | 12/09 | | Programme updated to 2018-12-2 | |
| | | | Re | maining Work | | | Liantang / Heung | | | | Date Revisi | ion Checked | Approved |
| | | | Sur | mmary Bar | | | | cture Work | | | | | |
| | | | Crit | tical Remaining | g Work | | | | | | | | |
| | | • • | | estone | | | | th Rolling P | | | | | |
| | | | | ject Baseline B | Bar | | 3MPR065 | Page 2 | of 6 | 20-Dec-18 | | | |
| | | | | , - 51 20001110 2 | | | | | | | | | |
| 1 | | | | | | | | | | | | | |

| ty ID Activity Name | OD | RD | Start | Finish | TF | 2 | 018 | | 2019 | | |
|--|----|-------|-----------------|-------------|------|--|---------------------------|--|---|---|-------------------------|
| Remaining Works for Noise Barrier along widened Fanling Highway | | | | | | Nov | Dec | Jan | Feb | Mar | Apr |
| | | | | | | | | | | | |
| FHW-NB-110a Installation of Steelworks & Panel for NB70 (25m, and extended 10m under VO199), adjacent to FLH SB lanes at Zone 1 | 6 | 6 | 11-Mar-19* | 16-Mar-19 | -120 | | | | | Installation | of Steelworks & Par |
| FHW-NB-150 Installation of Steelworks & Panel for NB72 & NB73 (248m), adjacent to FLH SB lanes at Zones 4, 5 & 6 | 16 | 16 | 28-Feb-19 | 18-Mar-19 | -121 | | | | | Installati | on of Steelworks & |
| FHW-NB-220 Installation of Steelworks & Panel for NB68 (63m), FLH central median at Zones 1 | 36 | 0 | 10-Sep-18 A | 24-Oct-18 A | | on of Steelworks & Panel for NB68 (63m), | LH central median at Zone | s 1 | | | |
| FHW-NB-320 Installation of Steelworks & Panel for NB67-2 (85m), adjacent to FLH NB lanes at Zones 2 & 3 | 14 | 14 | 20-Dec-18* | 08-Jan-19 | -86 | i | | Installation of Steelworks & P | anel for NB67-2 (85m), adjacent to FLH NE | lanes at Zones 2 & 3 | |
| FHW-NB-330 Installation of Steelworks & Panel for NB69 (109m), adjacent to FLH NB lanes near | 18 | 18 | 02-Feb-19* | 01-Mar-19 | -107 | - | | | | Installation of Steelworks & Pane | for NB69 (109m), |
| LR1 at Zone 3 Section I - Remainder of the Works (KD-3) | | | | | | | | | | | |
| At Grade Link Road at Fanling Highway Interchange | | | | | | | | | | | |
| Link Road 1 (near Abutment AB1) | | | | | | | | | | | |
| FHI-LR1-1010 Allow Contractor of Contract 4 for Installation of TCSS Cable at Abutment AB1 | 0 | 0 | | 26-Oct-18 A | | Contractor of Contract 4 for Installation of T | CSS Cable at Abutment AB | | | | |
| | | 34 | 00 May 10 A | | 341 | - | | | | Der file Deurise et Alexterent AD4 De | d ciller a change a fra |
| FHI-LR1-1020 Backfilling works of abutment, Gully and Profile Barrier at Abutment AB1 | 20 | | 28-May-18 A | 31-Jan-19 | _ | | | | Backfilling works of abutment, Gully an | | - |
| FHI-LR1-1110 Road Formation and Pavement (CH 240 - CH 340, nr AB1) | 15 | 15 | 19-Sep-18 A | 09-Jan-19 | 360 | | | Road Formation and Paver | enit (CH 240 - CH 340, nr AB1), Road Forn | ation and Pavement (CH 240 - CH 3 | 40, nr AB1) |
| FHI-LR1-1120 Road Formation, Road Drainage, TCSS ducting, Profile Barrier and Pavement (CH 80 - CH 240, nr NB66 & 67-1) | 70 | 49 | 07-Feb-18 A | 25-Feb-19 | 326 | | | | Ro | ad Formation, Road Drainage, TCS | S ducting, Profile B |
| Noise Barrier | | | | | | | | | | | |
| FHI-LR1-109 Noise Barrier NB67-1 - Remaining ground beam of Bay 3 (allow access from TWSRW) | 7 | 7 | 20-Dec-18* | 29-Dec-18 | 368 | | | Noise Barrier NB67-1 - Remaining ground be | arh of Bay 3 (allow access from TWSRW) | | |
| Link Road 2 (near Abutment AA1) | | | | | | | | | | | |
| FHI-LR2-2020 Construction of Fill slope FL/F10 and Road Formation of Link Road nr Abutment AA1 | 78 | 55 | 25-Apr-18 A | 04-Mar-19 | 320 | | | | | Construction of Fill slope FL/ | -10 and Road For |
| FHI-LR2-2020 TCSS Duct Laying along Link Road next to FL/F10 | 52 | 52 | 28-Jul-18 A | 28-Feb-19 | 323 | | | | | TCSS Duct Laying along Link Roa | d next to FL/F10, |
| FHI-LR2-2030 3SW-D/FR32 Bay 3207 (including temporary works) | 43 | 37 | 19-Jul-18 A | 04-Feb-19 | 338 | | | | 3SW-D/FR32 Bay 3207 (includin | | |
| FHI-LR2-2030 3SW-D/FR32 Bay 3208 (including temporary works) | 46 | 46 | 27-Aug-18 A | 21-Feb-19 | 329 | | | | | | |
| | | | - | | | | | | | FR32 Bay 3208 (including temporary | |
| FHI-LR2-2030 3SW-D/FR32 Bay 3209 (including temporary works) | 46 | 20 | 15-Aug-18 A | 15-Jan-19 | 355 | | | 3SW-D/FR32 Bay 3 | 3209 (including temporary works), 3SW-D/F | R32 Bay 3209 (including temporary | works) |
| FHI-LR2-2030 3SW-D/FR32 Bay 3210 (including temporary works) | 45 | 45 | 30-Jun-18 A | 20-Feb-19 | 294 | | | | 3SW-D/F | R32 Bay 3210 (including temporary v | vorks), 3\$W-D/FR3 |
| FHI-LR2-2040 3SW-D/FR32 Bay 3212 (including temporary works) | 37 | 37 | 20-Dec-18* | 04-Feb-19 | 338 | | | | 3SW-D/FR32 Bay 3212 (includin | g temporary works) | |
| FHI-LR2-2040 3SW-D/FR32 Bay 3213 (including temporary works) | 35 | 35 | 14-Feb-19 | 26-Mar-19 | 294 | - | | | | | 3SW-D/FR32 E |
| FHI-LR2-2040 3SW-D/FR32 Bay 3214 (including temporary works) | 36 | 36 | 21-Feb-19 | 03-Apr-19 | 294 | | | | | | 351 |
| FHI-LR2-2050 Road Pavement and Drainage next to Abutment (after completion of NB73 Bay 12&13 | 20 | 20 | 20-Dec-18 | 15-Jan-19 | 355 | - | | Road Pavement an | d Drainage next to Abutment (after com plet | on of NB73 Bay 12 & 13 Stem Wall) | |
| Stern Wall) FHI-LR2-2050 Road Formation, Road Drainage and Pavement (SMH1302 - 1303 & MY2.4 - 2.5) at | 72 | 72 | 01-Mar-18 A | 23-Mar-19 | 303 | | 1 | | | F | load Formation, Ro |
| grade FHW-SG-103(Fabrication and Delivery of Sign Gantry DS11 | 99 | 26 | 28-Dec-17 A | 22-Jan-19 | 334 | | | Fabricatio | n and Delivery of Sign Gantry DS11, Fabric | ation and Delivery of Sign Gantry DS | |
| FHW-SG-103(Erection of Sign Gantry DS11 (include On-site Fabrication) | 15 | 15 | 23-Jan-19 | 15-Feb-19 | 334 | - | | | | Santry DS11 (include On-site Fabrica | |
| | | 34 | | | | _ | | | | | |
| FHW-SG-104(Fabrication and Delivery of Sign Gantry FADS11 and DS64 | 99 | | 02-Feb-18 A | 31-Jan-19 | 326 | | | | Fabrication and Delivery of Sign Gantry | | |
| FHW-SG-104(Erection of Sign Gantry FADS11 and DS64 (include On-site Fabrication) | 15 | 15 | 01-Feb-19 | 25-Feb-19 | 326 | | | | En | action of Sign Gantry FADS11 and D | S64 (include On-si |
| Link Road 3 (near Abutment AD1) | | | | | | | | | | | |
| FHI-LR3-3020 Permanent Fill Slope, Construction of Guilies and Profile Barriers | 48 | 35 | 25-Apr-18 A | 01-Feb-19 | 315 | | | | Permanent Fill Slope, Construction of | Gullies and Profile Barriers, Permane | nt Fill Slope, Const |
| FHI-LR3-3030 Road Pavement | 1 | 1 | 02-Feb-19* | 02-Feb-19 | 315 | | | | Road Pavement | | |
| | | | | | | | | ₽ / | OMarth Dallian D | | |
| | | Act | ual Work | | | CEDD (| Contract No. | CV/2012/09 | Date Revisi | Programme updated to 2018-1 on Checked | 2-20 Approved |
| | | | maining Work | | | Liantang / Heung ' | Yuen Wai B | CP - Site Formation & | Date | | Αφισια |
| | | Sur | mmary Bar | | | Infrastru | cture Work | s, Contract 3 | | | |
| | | Crit | tical Remainin | g Work | | | th Rolling P | | | | |
| | • | 🔶 Mil | estone | | | 3MPR065 | Page 3 | - | | | |
| | | Pro | ject Baseline E | Bar | | | raye s | 20-Dec-10 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

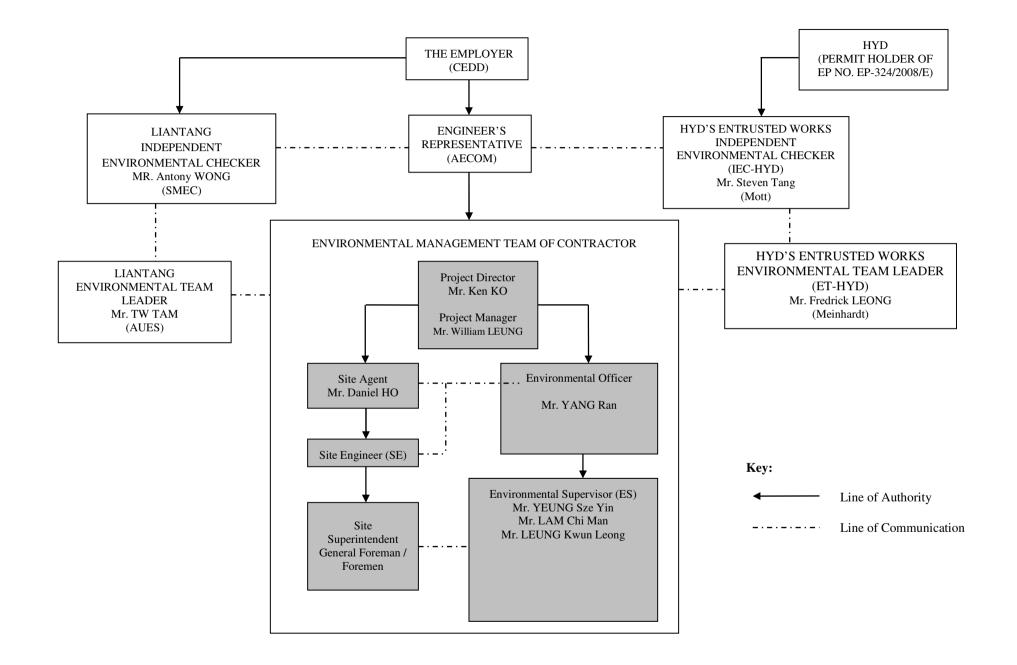
| Activity ID | Activity Name | OD | RD | Start | Finish | T | 2 | 018 | | | 2019 | | | | |
|----------------|---|-----|------|-----------------|--|------|--|---------------------------------------|-----------------------|------------------------------------|--|---|----------------------------------|-------------------|--|
| | | | | | | | Nov | Dec | | Jan | Feb | | Mar | Apr | |
| FHI-LR3-304 | Other Civil Works for TCSS duct laying - along Link Road 3 | 25 | 25 | 02-Feb-19 | 09-Mar-19 | 315 | | | | | | 1 | Other Civil Works for TCSS | duct laying - ald | |
| Link Road 4 (I | near Abutment AC1) | | | | | | | | | | | | | | |
| FHI-LR4-403 | Road Formation, Road Drainage, TCSS ducting and Pavement | 55 | 35 | 27-Nov-17 A | 01-Feb-19 | 296 | | | | | Road Formation, Road Drainage, | TC\$S ducting a | nd Pavement, Road Formatio | n, Road Draina | |
| FHI-LR4-404 | Remaining Section of Carriageway connect to FLH | 44 | 44 | 02-Feb-19* | 01-Apr-19 | 296 | | | | | | | | Remainin | |
| Viaduct - Pave | ment, Street Furnitures, Lighting inside Internal Voids and Others | | | | | | | | | | | | | | |
| RS-1000a | MJ Installation for Pier AD5, AB6, AB12, AD1 and AC5 | 72 | 0 | 15-Mar-18 A | 25-Oct-18 A | | llation for Pier AD5, AB6, AB12, AD1 and A | 5 | | | | | | | |
| RS-1000b | MJ Installation for AC1, AC11, AA18, AA13 and AA9 | 33 | 0 | 28-May-18 A | 31-Oct-18 A | | MJ Installation for AC1, AC11, AA18, AA13 | and AA9 | | | | | | | |
| RS-1010d | Installation of Lighting | 96 | 49 | 09-Mar-18 A | 25-Feb-19 | 326 | | | | | | Installation of L | ighting, Installation of Lightin | g | |
| RS-1010e | Cable Connection | 31 | 23 | 22-Oct-18 A | 18-Jan-19 | 352 | | | | Cable Connectio | rt, Cable Connection | | | | |
| RS-1020a | Allow Access for Street Lighting Installation | 132 | 23 | 11-Jan-18 A | 18-Jan-19 | 35/ | | | | | Street Lighting Installation, Allow Acce | es for Street Link | ating Installation | | |
| | | | | | | | | | | AllowAccess for | | | | | |
| RS-1020b | Other Street Fumiture including Sign Gantry, NB, Handrail, traffic signs, etc, for Bridge A, B, C and D | | 49 | 26-Feb-18 A | 25-Feb-19 | 326 | | | | | | | miture including Sign Gantry, | | |
| RS-1040b | Watermains Laying at PierAC4 on Viaduct (under VO171) | 45 | 42 | 21-May-18 A | 16-Feb-19 | 290 | | | | | Watermains | Laying at Pier A | C4 on Viaduct (under VO171 |), Watemains I | |
| RS-1040c | Watermains Laying at Pier AD9 on Viaduct (under VO171) | 36 | 36 | 18-Feb-19* | 30-Mar-19 | 297 | | | | | | | | - Watermains | |
| RS-1040d | Watermains Laying at PierAB7 on Viaduct (under VO171) | 43 | 43 | 18-Feb-19* | 09-Apr-19 | 290 | | | | | | | | | |
| RS-1040e | Watermains Laying at Pier AA12 on Viaduct (under VO171) | 52 | 42 | 21-May-18 A | 16-Feb-19 | 297 | | | | | Watermains | Laying at Pier A | A12 on Viaduct (under VO17 | 1), Watermains | |
| RS-1040f | Watermains Laying at Pier AA7 on Viaduct (under VO171) | 36 | 36 | 18-Feb-19* | 30-Mar-19 | 297 | | | | | | - | | Watermains | |
| RS-1070c | Road Pavement AA1 - AA18 (base coarse only) | 6 | 10 | 28-May-18 A | 03-Jan-19 | 365 | | | | Road Pavement AA1 - AA18 (base coa | atse only), Road Pavement AA1 - AA1 | 3 (base coarse o | only) | | |
| RS-1080e | Waterproofing on Walkway AB6 - AB12 | 18 | 18 | 20-Dec-18* | 12-Jan-19 | 357 | | E | | Waterproofing on Walkw | ay AB6 - AB12 | | | | |
| RS-1090a2 | Road Pavement AD8 - AD14 West (base coarse only) | 3 | 0 | 27-Sep-18 A | 20-Oct-18 A | | ement AD8 - AD14 West (base coarse on ly) | | | | | | | | |
| RS-1090b2 | Road Pavement AD8 - AD14 East (base coarse only) | 3 | 0 | 27-Sep-18 A | 20-Oct-18 A | | ement AD8 - AD14 East (base coarse only) | | | | | | | | |
| RS-1090c | Waterproofing on Walkway (AD8-AD1 4 West and East Sides) | 20 | 20 | 20-Dec-18* | 15-Jan-19 | 355 | | c | | Waterproofing on Wa | alkway (AD8-AD1 4 West and East Sid | es) | | | |
| RS-1110 | Final Pavement and Road Marking | 12 | 12 | 20-Dec-18* | 05-Jan-19 | 363 | | | | Final Pavement and Road Marking | | | | | |
| | n inai r aventeni, anu muau iviaining | 12 | 12 | 20-080-10 | 05041115 | 300 | | • | | | | | | | |
| WSD Works | | | | | | | | | | | | | | | |
| DN450 Fire M | | | | | | | | | | | | | | | |
| WA-1010c | Pipe Laying - CHA 38 - 113 (DN450) near Ext. TWSRW, 20m | 11 | 102 | 16-Apr-18 A | 03-May-19 | -254 | | | | | | | | | |
| WA-1020 | Pipe Laying - CHA 113 - 135 (DN450) near Ext. TW SRW, 20m | 102 | 102 | 20-Dec-18* | 03-May-19 | -169 | | l l l l l l l l l l l l l l l l l l l | | | | | | | |
| WA-1030 | Pipe Laying - CHA 135 - 160 (DN450) near Ext. TW SRW, 25m | 19 | 102 | 18-Apr-18 A | 03-May-19* | -156 | | | | | | | | | |
| WA-1110a | Pipe Laying - CHA 185 - 228 (DN450) near Ext. TWSRW, 43m | 24 | 24 | 20-Dec-18* | 19-Jan-19 | -78 | | | | Pipe Laying - C | CHA 185 - 228 (DN450) near Ext. TWS | RW, 43m | | | |
| WA-1130b | Pipe Laying - CHA 373 - 380 (DN450) near Ext. TW SRW, 7m | 18 | 18 | 20-Dec-18* | 12-Jan-19 | -85 | | • | | Pipe Laying - CHA 373 - 3 | 380 (DN450) near Ext. TWSRW, 7m | | | | |
| WA-1130c | Pipe Laying - CHA 380 - 388 (DN450) near Ext. TWSRW, 8m | 12 | 12 | 20-Dec-18* | 05-Jan-19 | -79 | | e e e e e e e e e e e e e e e e e e e | | Pipe Laying - CHA 380 - 388 (DN45 | 50) near Ext. TWSRW, 8m | | | | |
| WA-2080 | Pipe Laying - CHA 624 - 663 (DN450) along Ext. TWSRW SB, 39m | 75 | 75 | 16-Jan-19* | 24-Apr-19 | -162 | | | | | | - | | | |
| DN1200 Wate | r Mains (CHC) | | | | | | | | | | | | | | |
| WC-1030 | Construction of IT inspection tee chamber(s) near the Jacking Pits | 47 | 47 | 10-May-18 A | 22-Feb-19 | 328 | | | | | Co | struction of IT in | nspection tee chamber(s) near | the Jacking Pits | |
| DN2200 Wate | r Mains (CHF) | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | Act | ual Work | | | | | | | | 3-Month Rolling Programme updated to 2018-12-20 | | | |
| | | | | | CEDD Contract No. CV/2012/09 | | | | Date Revision Checked | | | Approved | | | |
| | Summary Bar Critical Remaining Work | | | | Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3 | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | IY VVUK | | 3-Mon | h Rolling Pr | | me | | | | | |
| | | · | | estone | | | 3MPR065 | Page 4 o | of 6 | 20-Dec-18 | | | + | | |
| | | | Proj | ject Baseline E | ∃ar | | | | | | | | + | | |
| | | | | | | | | | | | l | | 1 | | |

| /ity ID | Activity Name | OD | RD | Start | Finish | TF | 2018 | | | | 2019 | | | |
|------------------|---|----------|-------|-----------------|-------------|------|------------------------------|---------|--|-------------------|---------------------------|-------------------------|-------------------------|--------------------|
| ME 1000 | | | | 00 D. 101 | 0151.05 | | Nov Dec | 1 | Jan | | Feb | | Mar | Apr |
| WF-4000 | Modification of Existing DN2200 DAV Chamber at FLH NB near Kiu Tau Footbridge (covered by VO no.50) | 35 | 35 | 20-Dec-18* | 01-Feb-19 | 340 | | | | Modification c | of Existing DN2200 DAV | Chamber at FLH N | NB near Kiu Tau Foott | oridge (covered b |
| Existing Nam V | /a Po Trunk Sewage Pumping Station (PST3) | | | | | | | | | | | | | |
| PS-1010 | Construction of New Boundary Wall for Pumping Station (PST3) | 80 | 74 | 25-Nov-16 A | 26-Mar-19 | 301 | | | | | | | | Construction of |
| Stage 1A - Rea | ignment of Tai Wo Service Road West (KD-7) | | | | | | | | | | | | | |
| TWSRW Zone | 5 betweeen CH376 and CH520 | | | | | | | | | | | | | |
| Construction | of Retaining Structures | | | | | | | | | | | | | |
| TWSRW-512 | Remaining works incl. railing, u-channel on top of Bored Pile Wall (wait for VO) | 22 | 22 | 25-Jun-18 A | 17-Jan-19 | -76 | | | | | | ks incl. railing, u-cha | annel on top of Bored | Pile Wall (wait |
| TWSRW-515 | (Slope Works and Retaining Wall of FL-C2 (covered by VO183) | 60 | 25 | 01-Dec-17 A | 21-Jan-19 | -79 | | | Slope Work | s and Retaining V | Vall of FL-C2 (covered by | v VO183), Slope W | orks and Retaining V | all of FL-C2 (c |
| At-Grade Roa | dworks | | | | | | | | | | | | | |
| TWSBW-511 | Retaining Wall RW9 - Bay 9002 & 9003 (covered by VO No.116) | 45 | 26 | 05-Feb-16 A | 22-Jan-19 | -80 | | | Betaining | Mall RW9 - Bay 9 | 002 & 9003 (covered by | (VONb 116) Reta | ining Wall RWQ - Bay | 9002 8 9003 |
| | (Filling Works between Retaining Wall RW7 and RW8 | 192 | 39 | 07-Jun-16 A | 13-Feb-19 | -93 | | | - Tiotaining | an nivo - Bay o | _ `` | | | |
| | | | | | | | | | | | Filling Works betwee | | - | |
| TWSRW-512 | (Road Pavement and remaining works of Vehicular Access to Lot 81 | 27 | 27 | 12-Jul-18 A | 23-Jan-19 | -96 | | | Road Pa | Vernent and remai | ining works of Vehicular | Access to Lot 81, F | Road Pavement and r | emaining works |
| TWSRW-516 | Construction of Extended Podium near RW7 incl. filling works & slope protection (covered by VO No.100) | 85 | 48 | 27-Oct-16 A | 23-Feb-19 | -102 | | | | | Cons | truction of Extende | d Podium near RW7 | incl. filling work |
| TWSRW-517 | (Construction of Pavilion (covered by VO No.137) | 49 | 49 | 10-Aug-18 A | 25-Feb-19 | -103 | | | | | Co | instruction of Pavili | on (covered by VO No | .137), Constru |
| WSRW Zone | betweeen CH530 and CH640 | | | | | | | | | | | | | |
| At-Grade Roa | dworks | | | | | | | | | | | | | |
| TWSRW-719 | Remaining Road Drainage, Road Formation, Road Pavement and Footpath (incl. Zone | 44 | 44 | 20-Dec-18* | 19-Feb-19 | -98 | | | | | Remaining | Road Drainage, Ro | oad Formation, Road | Pavement and |
| TWSRW Zone | 6 & Zone 7) 8 betweeen CH640 and CH695 | | | | | | | | | | | | | |
| At-Grade Roa | | | | | | | | | | | | | | |
| | Remaining Road Drainage, Road Formation, Road Pavement and Footpath | 60 | 60 | 20-Dec-18* | 09-Mar-19 | 315 | | | | | | | | |
| | | 60 | 60 | 20-Dec-16 | 09-10121-19 | 315 | | L | | | | Hen | naining Road Drainag | e, Hoad Forma |
| Remainder of t | | | | | | | | | | | | | | |
| TWSRW-9020 | Filling Works to the abandoned section of TWSRW and modify existing sewerage manhole | 75 | 75 | 20-Dec-18* | 27-Mar-19 | 300 | | | | | | | | Filling Works t |
| Utilities Laying | Works | | | | | | | | | | | | | |
| UU-1010A | Utilities Duct Laying in Area 1, Phase 2, CLP - 132kV(150mVA), approx.30m at interface section | e 16 | 12 | 10-Jan-18 A | 05-Jan-19 | -164 | | | Utilities Duct Laying in Area 1, Phas | e2, CLP - 132kV | (150mVA), approx.30m | at interface section | , Utilities Duct Laying | in Area 1, Pha |
| UU-1010B | Utilities Duct Laying in Area 1, Phase 2, Towngas - DN600, approx.20m at interface | 58 | 58 | 01-Mar-19 | 14-May-19 | -164 | | | | | | | | |
| UU-1030 | section Utilities Duct Laying in Area 3, Phase 1 (along existing TWSRW, Approx. 150m) (by | 7 | 7 | 20-Dec-18* | 26-Dec-18 | -70 | | Utilit | ies Duct Laying in Area 3, Phase 1 (along exis | thg TWSRW, Ap | prox. 150m) (by utilities | undertakers) | | |
| UU-1030A | utilities undertakers) Utilities Duct Laying in Area 3, Phase 2, CLP - 132kV(150mVA), approx. 30m | 27 | 49 | 10-Jan-18 A | 25-Feb-19 | -103 | | | | - | | | n Area 3, Phase 2, CL | P - 132kV(150r |
| UU-1040A | Utilities Duct Laying in Area 4, Phase 2, Towngas - DN600 & DN400, approx. 50m (by | 121 | 50 | 15-Sep-16 A | 26-Feb-19 | -137 | | | | | | | in Area 4, Phase 2, T | |
| | their own TTA) | | | | | | | | | | | Dunities Duct Laying | ITAIea 4, Pilase 2, 1 | Jwilgas - Divou |
| UU-1040B | Utilities Duct Laying in Area 4, Phase 2, CLP - 132kV(150mVA), approx. 50m (by their own TTA) | 33 | 33 | 27-Feb-19 | 06-Apr-19 | -137 | | | | ļ | | | | |
| | f Existing Utilitiess | | | | | | | | | | | | | |
| UU-SO-2520 | Switch-over Works (CLP 11 kV) | 16 | 16 | 20-Dec-18* | 04-Jan-19 | 447 | | | Switch-over Works (CLP 11 kV) | | | | | |
| UU-SO-3500 | Switch-over Works (Towngas, DN400) | 30 | 30 | 27-Feb-19* | 28-Mar-19 | 364 | | | | | | | | Switch-over |
| Remaining Wo | ks for Noise Barrier along realigned TWSRW | | | | | | | | | | | | | |
| TWSRW-NB-1 | Noise Barrier Steelworks & Panel for NB2 at Zone 5 | 15 | 15 | 24-Jan-19* | 16-Feb-19 | -96 | | | | 1 | Noise Barrier St | eelworks & Panel fo | or NB2 at Zone 5 | |
| | | | | | | | | L | | : | | : | | |
| | | | Act | ual Work | | | CEDD Contract No. | CV/20- | 12/09 | | 3-Month Rolling F | Programme upd | lated to 2018-12-2 | 0 |
| | | | Re | maining Work | | | | | | Date | Revisi | ion | Checked | Approved |
| | | | | mmary Bar | | | Liantang / Heung Yuen Wai Bo | | | | | | | |
| | | | | - | | | Infrastructure Work | s, Cont | ract 3 | | | | | |
| | | | | tical Remainin | iy vvork | | 3-Month Rolling P | rogram | me | | | | | |
| | | ب | 🔶 Mil | estone | | | 3MPR065Page 5 | - | 20-Dec-18 | | | | | |
| | | | Pro | ject Baseline E | Bar | | Page 5 | 0.0 | 20-Det-10 | | | | | |
| | | | | - | | | | | | | | | | |
| | | | | | | | | | | | | | | |

| TWSRE Zone 1 L | | OD | RD | Start | Finish | TF | Dr - | | 2019 | | A |
|------------------|--|-----|-----|-------------|------------|------|------|----------------------|--|--------------------------------------|----------------------|
| | B - Realignment of Tai Wo Service Road East (KD-13 & KD-14) | | | | | No | Dec | Jan | Feb | Mar | Apr |
| | between CH100 and CH270 | | | | | | | | | | |
| At-Grade Roady | Works | | | | | | | | | | |
| | Road Formation, Kerb and Pavement (Incl. FL/F8A, FL/F9) | 24 | 42 | 11-Oct-17 A | 16-Feb-19 | 333 | | | Poord Formati | on, Kerb and Pavement (Incl. FL/F8A, | EL (EQ) Bood Form |
| | | | | | | | | | noau ronnau | | |
| | Drainage Works on Permanent Cycle Track (under VO159) | 80 | 56 | 15-Jan-18 A | 05-Mar-19 | 287 | | | | Drainage Works on Perman | ient Cycle Track (ui |
| | Road Pavement on Permanent Cycle Track | 32 | 32 | 06-Mar-19 | 12-Apr-19 | 287 | | | | | |
| WSRE Zone 2 I | between CH270 and CH380 | | | | | | | | | | |
| At-Grade Road | Works | | | | | | | | | | |
| TWSRE-2100 | Road Formation, Kerb and Pavement | 20 | 22 | 23-Oct-17 A | 16-Feb-19 | 333 | | | Road Formation | on, Kerb and Pavement, Road Formati | on, Kerb and Pav |
| TWSRE-2110 | Drainage Works on Permanent Cycle Track (under VO159) | 80 | 55 | 26-Mar-18 A | 04-Mar-19 | 287 | | | | Drainage Works on Permane | nt Cycle Track (unr |
| TWSRE-2120 | Road Pavement on Permanent Cycle Track | 33 | 33 | 05-Mar-19 | 12-Apr-19 | 287 | | | | | |
| WSRE Zone 3 | between CH380 and CH456 | | | | | | | | | | |
| At-Grade Road | Works | | | | | | | | | | |
| TWSRE-3050 | Drainage Works on Permanent Cycle Track (under VO159) | 45 | 45 | 03-Apr-18 A | 20-Feb-19 | 290 | | | Drainage | e Works on Permanent Cycle Track (un | der VO159), Drain |
| | Road Pavement on Permanent Cycle Track | 40 | 40 | 21-Feb-19 | 09-Apr-19 | 290 | | | | | |
| | ks for Noise Barrier along realigned TWSR East | | | | | | | | | | |
| | Installation of Steelwork & Transparent Panel - Noise Barrier NB3 (254m) | 05 | 70 | 00 km 47 A | 00 Mar 40 | 297 | | | | | |
| | | 35 | 78 | 09-Jun-17 A | 30-Mar-19 | 297 | | | | | Installatio |
| - | uct Structure & TCSS Civil Provisions (KD-9) | | | | | | | | | | |
| liaduct Bridge S | Segement Erection | | | | | | | | | | |
| Key Segment E | Erection and Stitch Casting (Narrow-box Section) | | | | | | | | | | |
| KD-D-2000 | Construction of longitudinal stitch at Bridge D3 | 35 | 19 | 11-May-18 A | 14-Jan-19 | 356 | | Construction of long | itudinal stitch at Bridge D3, Construction o | f longitudinal stitch at Bridge D3 | |
| andscaping & | Establishment Works (KD-4, 4A, 5, 5A, 6) | | | | | | | | | | |
| Secton 3A - Lan | dscaping Softworks in NBZ1 | | | | | | | | | | |
| S3A-1000 | Transplant and Landscaping Softworks in NBZ1 | 50 | 50 | 20-Dec-18* | 26-Feb-19 | -140 | | | | Transplant and Landscaping Softwork | us in NBZ1 |
| Secton 3 - Rema | ainder of Landscaping Softworks Not Included in Secton 3A | | | | | | | | | | |
| S3-1000 | Transplant and Landscaping Softworks on At grade Road | 131 | 75 | 26-Mar-18 A | 27-Mar-19 | -164 | | | - | | Transplant ar |
| S3-1010 | Transplant and Landscaping Softworks on Viaduct or other remaining area | 48 | 48 | 20-Dec-18* | 23-Feb-19 | -101 | | | Trar | splant and Landscaping Softworks or | Viaductorother |
| | ablishment Works for Landscape Softworks under Section 3A | | | | | | | | | | |
| | Establishment Works at NBZ1 | 005 | 005 | 07 Eeb 10 | 06 Eath 00 | 170 | | | | | |
| S4A-1000 | Establishment works at NB21 | 365 | 365 | 27-Feb-19 | 26-Feb-20 | -178 | | | | | |



Appendix B Project Organization Structure





Appendix C Calibration Certificates of Monitoring Equipment



RECALIBRATION DUE DATE: February 13, 2019

Environmental Certificate of Calibration

| | | | Calibration | Certificatio | on Informat | ion | | | |
|--------------|--|--|-----------------------|---|----------------|-----------------------------------|--------------------------|-------------|--|
| Cal. Date: | February 1 | 3, 2018 | Roots | meter S/N: | 438320 | Ta: | 293 | °К | |
| Operator: | Jim Tisch | | | | | Pa: | 763.3 | mm Hg | |
| Calibration | Model #: | TE-5025A | Calil | prator S/N: | 1612 | | | | |
| | | | Mal Plant | A) (- 1 | ATI | AD | A11 | | |
| | Run | Vol. Init (m3) | Vol. Final (m3) | ΔVol. (m3) | ΔTime (min) | ΔP (mm Hg) | ∆H (in H2O) | | |
| | 1 | 1 | 2 | (113) | 1.3970 | 3.2 | 2.00 | | |
| | 2 | 3 | 4 | - 1 | 1.0000 | 6.3 | 4.00 | | |
| | 3 | 5 | 6 | 1 | 0.8900 | 7.9 | 5.00 | | |
| | 4 | 7 | 8 | 1 | 0.8440 | 8.7 | 5.50 | | |
| | 5 | 9 | 10 | 1 | 0.7010 | 12.6 | 8.00 | | |
| | | | | Data Tabula | tion | | | | |
| | Vstd Qstd $\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right)}$ | |)(<u>Tstd</u>) | | Qa | $\sqrt{\Delta H(Ta/Pa)}$ | | | |
| | (m3) | (x-axis) | (y-ax | (is) | Va | (x-axis) | (y-axis) | | |
| | 1.0172 | 0.7281 | 1.42 | 93 | 0.9958 | 0.7128 | 0.8762 | | |
| | 1.0130 | 1.0130 | 2.02 | and the second se | 0.9917 | 0.9917 | 1.2392 | | |
| | | 1.0109 1.1358 2.259 | | | 0.9896 | 1.1120 | 1.3854 | | |
| | 1.0098 | 1.1964 | 2.37 | A PERSON NEW YORK OF THE PARTY | 0.9886 | 1.1713 | 1.4530 | | |
| | 1.0046 | 1.4331 | 2.85 2.02 (| | 0.9835 | 1.4030 m= | 1.7524 1.26500 | 4 | |
| | QSTD | m= b= | -0.03 | | QA | b= -0.02263 | | 1 | |
| | QSID | r= | 0.999 | 988 | | r= 0.99988 | | | |
| | | | | Calculatio | ns | 1 | | | |
| | Vstd= | ∆Vol((Pa-∆P |)/Pstd)(Tstd/T | | | | | | |
| | Qstd= | Vstd/∆Time | | | Qa= | Va/∆Time | |] | |
| | | | For subsequ | uent flow ra | te calculatio | ns: | | - | |
| | Qstd= | 1/m ((| Pa <u>Tstd</u> | -))-b) | Qa= | $1/m\left(\sqrt{\Delta H}\right)$ | H(Ta/Pa))-b) | | |
| | Standard | Conditions | | | | | | | |
| Tstd | | CONTRACTOR AND A CONTRACTOR OF A DATA OF | | | | RECA | LIBRATION | | |
| Pstd | 1 | mm Hg | | | LIS FPA rec | ommends a | nnual recalibrati | on per 1999 | |
| AH: calibrat | | Key ter reading (| in H2O) | | | | Regulations Part | | |
| | | eter reading | | | 1 | |), Reference Metl | | |
| Ta: actual a | bsolute tem | perature (°K |) | | | | ended Particulat | | |
| | | ressure (mm | Hg) | | 1 | | ere, 9.2.17, page | | |
| b: intercept | t | | | | | | | | |
| m: slope | | | | | | | | | |

Tisch Environmental, Inc.

145 South Miami Avenue

Village of Cleves, OH 45002

www.tisch-env.cor TOLL FREE: (877)263-761(FAX: (513)467-900

TSP Sampler Calibration

| | | SI | ſE | | |
|----------------|-----------------|---------------|-----------|------------|------|
| Location: Lian | 2 | | | January 5, | 2019 |
| Sampler: TE-5 | 170 MFC (Serial | ₩ : 23 | Jy) Tech: | Sam Wong | |

| | CONDITIONS | | | | | | | |
|---------------------|------------|-------|--------------------|----------|------|--|--|--|
| | | | | | | | | |
| Barometric Pressure | (in Hg): | 40.15 | Corrected Pressure | (mm Hg): | 1020 | | | |
| Temperature | (deg F): | 66 | Temperature | (deg K): | 292 | | | |
| Average Press. | (in Hg): | 40.15 | Corrected Average | (mm Hg): | 1020 | | | |
| Average Temp. | (deg F): | 66 | Average Temp. | (deg K): | 292 | | | |

| | | CALIBRATION ORIFICE | |
|----------|----------|---------------------|-------------------|
| Make: | Tisch | Qstd Slope: | 2.02017 |
| Model: | TE-5025A | Qstd Intercept: | -0.03691 |
| Serial#: | 1612 | Date Certified: | February 13, 2018 |

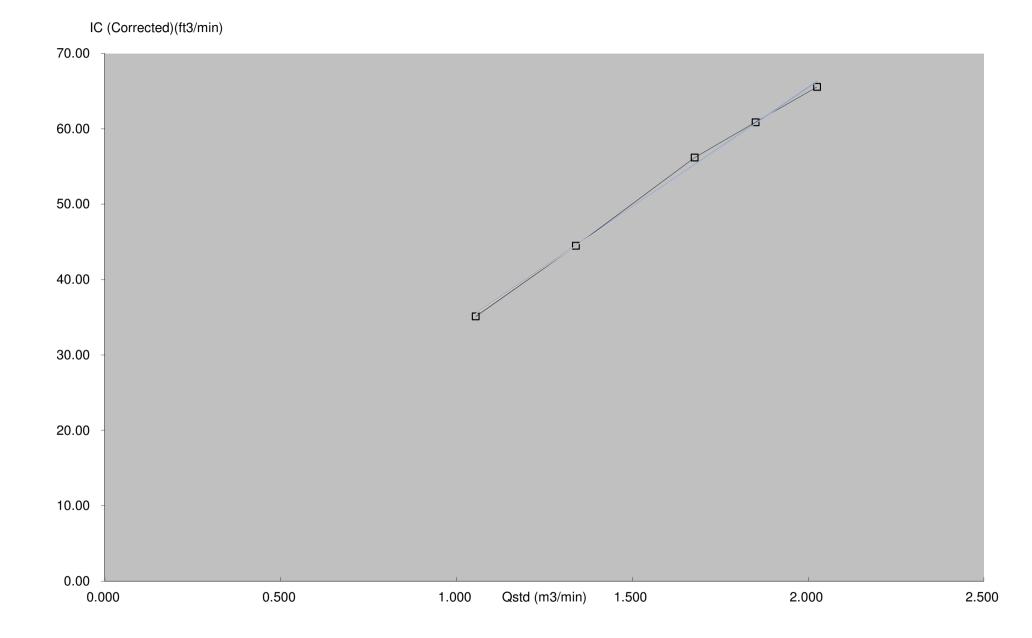
| CALIBRATIONS | | | | | | | | | | |
|--------------------|-------------|------------------|--------------|-------------------|-------------------------------|---------|--|--|--|--|
| Plate or Test # | H2O (in) | Qstd (m3/min) | I (chart) | IC (corrected) | LINEAR REGRESSION | | | | | |
| 1 | 12.00 | 2.025 | 56.0 | 65.55 | Slope = | 31.7376 | | | | |
| 2 | 10.00 | 1.850 | 52.0 | 60.86 | Intercept = | 1.9907 | | | | |
| 3 | 8.20 | 1.677 | 48.0 | 56.18 | Corr. coeff.= | 0.9987 | | | | |
| 4 | 5.20 | 1.339 | 38.0 | 44.48 | | | | | | |
| 5 | 3.20 | 1.055 | 30.0 | 35.11 | <pre># of Observations:</pre> | 5 | | | | |

Calculations

IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]
Qstd = standard flow rate
IC = corrected chart response
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]

m = sampler slope b = sampler intercept I = chart response Tav = daily average temperature Pav = daily average pressure





| Certificate No | . 803615 | | Pa | ge 1 of 2 Pages |
|--|---|--|--------------------------|---|
| Customer : | Enovative Environmental Se | ervice Limited | | |
| Address : | Flat 6, 3/F, Block E, Wah Lok I | Industrial Centre, 31-35 | 5 Shan Mei Street, S | Shatin, N.T., Hong Kong |
| Order No. : | Q81437 | | Date of rece | ipt : 13-Apr-18 |
| Item Tested | | | | |
| Description | : Sound Level Calibrator | | | |
| Manufacturer | | | I.D. | : 217656 |
| Model | : NC-74 | | Serial No. | : 34678506 |
| Test Condit | ions | | | |
| Date of Test : | 20-Apr-18 | | Supply Volta | age : |
| Ambient Temp | | | | midity: (50 ± 25) % |
| Test Specifi | | | | |
| Calibration che | ck | | | |
| | /Procedure : F21, Z02. | | | |
| rton. D'obuintoni | 111000daro : 1 2 1, 202. | | | |
| Test Result | S | | | |
| All | | | | |
| | within the IEC 60942 Class 1 | | | |
| The results are | shown in the attached page(| S). | | |
| Main Test equi | nment used: | | | |
| Equipment No. | | Cert. No. | | Traceable to |
| S014 | Spectrum Analyzer | 707126 | | NIM-PRC & SCL-HKSAR |
| S240 | Sound Level Calibrator | 703741 | | NIM-PRC & SCL-HKSAR |
| S041 | Universal Counter | 802061 | | SCL-HKSAR |
| S206 | Sound Level Meter | 707129 | | SCL-HKSAR |
| 0200 | | 101123 | | JUL-INJAN |
| | | | | |
| | | | | |
| will not include allo overloading, mis-ha | n this Calibration Certificate only related wance for the equipment long term of andling, or the capability of any other hage resulting from the use of the equi | frift, variations with environ r laboratory to repeat the r | nmental changes, vibi | it and any uncertainties quoted ration and shock during transportation, Kong Calibration Ltd. shall not be liable |
| The test equipmen The test results ap | t used for calibration are traceable to ply to the above Unit-Under-Test only | o International System of U y | Jnits (SI), or by refere | nce to a natural constant. |
| | MAN | | | 0 |
| Calibrated ku | . X | | | (day |
| Calibrated by | Elva Chong | A | pproved by : _ | Kin Wong |
| This Certificate is issued | | D | ate: 20-Apr-18 | NIT WONG |
| Hong Kong Calibration Lt | d. | | a.o. 20-Api-10 | |
| Jnit 8B, 24/F , Well Fung Fel: 2425 8801 - Fax: 242 | Industrial Centre, No. 58-76, Ta Chuen Ping Str 25 8646 | eet,Kwai Chung, NT,Hong Kong. | | |



Certificate No. 803615

Page 2 of 2 Pages

Results :

1. Generated Sound Pressure Level

| UUT Nominal Value (dB) | Measured Value (dB) | IEC 60942 Class 1 Spec. |
|------------------------|---------------------|-------------------------|
| 94.0 | 94.2 | ± 0.4 dB |

Uncertainty : $\pm 0.2 \text{ dB}$

 Short-term Level Fluctuation : 0.0 dB IEC 60942 Class 1 Spec. : ± 0.1 dB Uncertainty : ± 0.01 dB

3. Frequency

| UUT Nominal Value (kHz) | Measured Value (kHz) | IEC 60942 Class 1 Spec. |
|-------------------------|----------------------|-------------------------|
| 1 | 0.999 | ± 1 % |

Uncertainty : \pm 3.6 x 10 ⁻⁶

4. Total Distortion : < 1.1 % IEC 60942 Class 1 Spec. : < 4 % Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. Atmospheric Pressure : 1 016 hPa.

----- END -----

The copyright of this certificate is owned by Hong Kong Calibration Ltd., It may not be reproduced except in full.



| Certificate No. | 804605 | | Page | 1 of | 3 | Pages |
|--|--|--|-------------------------|-----------------|---------|---------------------|
| Customer : | Enovative Environmental Servic | e Limited | | | | |
| Address : | Flat 6, 3/F, Block E, Wah Lok Indus | strial Centre, 31-35 Sha | an Mei Street, Shati | n, N.T., | Hong | Kong. |
| Order No. : | Q81807 | | Date of receipt | : | | 9-May-18 |
| Item Tested | | | | | | |
| Description : | Sound Level Meter | | | | | |
| Manufacturer : | | | I.D. | : | | |
| | NL-52 | | Serial No. | : 01 | 14348 | 34 |
| Test Conditi | ons | | | | | |
| Date of Test : | 15-May-18 | | Supply Voltage | : | | |
| Ambient Temp | erature : (23 ± 3)°C | | Relative Humidi | ty : (50 | ± 25 |) % |
| Test Specifi | cations | | | | | |
| Calibration chec Ref. Document/ | k. Procedure: Z01, IEC 61672. | | | | | |
| Test Results | • | | | | | |
| | within the IEC 61672 Type1 or n shown in the attached page(s). | nanufacturer's specif | ication. | | | |
| Main Test equip | ment used: | | | | | |
| Equipment No. | | <u>Cert. No.</u> | - | Traceat | ole to | |
| S017 | Multi-Function Generator | C170120 | | SCL-HK | SAR | |
| S240 | Sound Level Calibrator | 803357 | 1 | NIM-PR | C & S | SCL-HKSAR |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| will not include allow overloading, mis-ha | this Calibration Certificate only relate to vance for the equipment long term drift, v ndling, or the capability of any other labc age resulting from the use of the equipm | variations with environmen pratory to repeat the meas | ntal changes, vibration | n and sho | ck duri | ing transportation, |
| | used for calibration are traceable to Inte ly to the above Unit-Under-Test only | rnational System of Units | (SI), or by reference t | to a natur | al cons | stant. |

| Calibrated by : | Appro | oved by : | Chri |
|--|-------|-----------|----------|
| Elva Chong | | | Kin Wong |
| This Certificate is issued by: | Date: | 15-May-18 | |
| Hong Kong Calibration Ltd. | | | |
| Holt OD 24/E Molt Euro Industrial Castra No 50 76 To Church Disc Obert Musi Church MT Hans M | | | |



Certificate No. 804605

Page 2 of 3 Pages

Results :

1. Self-generated noise: 16.0 dBA (Mfr's Spec \leq 17 dBA)

2. Acoustical signal test

| | UUT S | Setting | | | |
|------------|-----------|-----------|--------|------------|--------------|
| | Frequency | Time | Octave | Applied | UUT |
| Range (dB) | Weighting | Weighting | Filter | Value (dB) | Reading (dB) |
| 20-130 | A | F | OFF | 94.0 | 94.0 |
| | | S | OFF | | 94.0 |
| | С | F | OFF | | 94.0 |
| | Z | F | OFF | | 94.0 |
| | А | F | OFF | 114.0 | 114.1 |
| | | S | OFF | : | 114.1 |
| | С | F | OFF | | 114.1 |
| | Z | F | OFF | | 114.1 |

IEC 61672 Type 1 Spec. : \pm 1.1 dB Uncertainty : \pm 0.1 dB

Attenuation (dB) IEC 61672 Type 1 Spec. Frequency 31.5 Hz -39.6 - 39.4 dB, ± 2 dB -26.2 - 26.2 dB, ± 1.5 dB 63 Hz -16.2 125 Hz - 16.1 dB, ± 1.5 dB -8.7 - 8.6 dB, ± 1 dB 250 Hz -3.2 500 Hz - $3.2 \text{ dB}, \pm 1.4 \text{ dB}$ 1 kHz 0.0 (Ref) $0 \, dB, \pm 1.1$ dB 2 kHz +1.0+ 1.2 dB, ± 1.6 dB +0.7+ $1.0 \text{ dB}, \pm 1.6 \text{ dB}$ 4 kHz - 1.1 dB, + $2.1 \text{ dB} \sim -3.1 \text{ dB}$ 8 kHz -1.26.6 dB, + 3.5 dB ~ - 17.0 dB 16 kHz -8.6 -

3 Electrical signal tests of frequency weightings (A weighting)

Uncertainty : $\pm 0.1 \text{ dB}$



Certificate No. 804605

Page 3 of 3 Pages

4. Frequency & Time weightings at 1 kHz

4.1 Frequency Weighting (Fast)

| UUT | Applied | UUT | Difference | IEC 61672 |
|---------|------------|--------------|------------|----------------------|
| Setting | Value (dB) | Reading (dB) | (dB) | Type 1 Spec. |
| Setting | | | (uD) | |
| A | 94.0 | 94.0 (Ref.) | | $\pm 0.4 \text{ dB}$ |
| C | 94.0 | 94.0 | 0.0 | |
| Z | 94.0 | 94.0 | 0.0 | |

4.2 Time Weighting (A-weighted)

| UUT | Applied | UUT | Difference | IEC 61672 |
|----------------|------------|--------------|------------|----------------------|
| Setting | Value (dB) | Reading (dB) | (dB) | Type 1 Spec. |
| Fast | 94.0 | 94.0 (Ref.) | · | $\pm 0.3 \text{ dB}$ |
| Slow | 94.0 | 94.0 | 0.0 | |
| Time-averaging | 94.0 | 94.0 | 0.0 | |

Uncertainty : $\pm 0.1 \text{ dB}$

Remarks : 1. UUT : Unit-Under-Test

- 2. The uncertainty claimed is for a confidence probability of not less than 95%.
- 3. Atmospheric Pressure : 1 009 hPa.
- 4. Preamplifier model : NH-25, S/N : 21113
- 5. Firmware Version: 1.8
- 6. Power Supply Check: OK
- 7. The UUT was adjusted with the laboratory's sound calibrator at the reference sound pressure level before the calibration.

----- END ------



Appendix D EM&A Monitoring Schedules

Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2 Impact Monitoring & Site Auditing Schedule for January 2019

| | | | January 2019 | ne for January 2019 | | |
|--------|---|--|---|---|---|----------|
| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
| | | 1 The First Day of January | 2 24-hour TSP + 3 x 1-hour TSP, Noise (SR77) ET Site Walk(14:00pm – 18:00pm) | 3 | 4 | 5 |
| 6 | 7 | 8 24-hour TSP + 3 x 1- hour TSP, Noise (SR77) ET Site Walk(14:00am – 18:00pm | 9 | 10 | 11 | 12 |
| 13 | 14 24-hour TSP + 3 x 1-hour TSP, Noise (SR77) | 15 | 16 ET Site Walk(09:30 am – 11:00 am) with Liantang Project-wide ET and IEC + SSEMC | 17 | 18 24-hour TSP + 3 x 1-hour TSP (SR77) | 19 |
| 20 | 21 | 22 | 23 | 24 24-hour TSP + 3 x 1-hour TSP, Noise (SR77) ET Site Walk(09:30am – 11:00am) | 25 | 26 |
| 27 | 28 ET Site Walk(14:30am – 18:00 am) with Fanling Stage 2 IEC & Liantang Project-wide ET and IEC | 29 | 30 24-hour TSP + 3 x 1-hour TSP, Noise (SR77) | 31 | | |

Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2 Impact Monitoring & Site Auditing Schedule for February 2019

| | | | February 2019 | 9 | | |
|-----|---|--|--|--|--|-----|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | | | | | 1 | 2 |
| 3 | 4 24-hour TSP + 3 x 1-hour TSP, Noise (SR77) | 5 Lunar New Year's Day | 6 The second day of Lunar New Year | The third day of Lunar New Year | 8 24-hour TSP + 3 x 1-hour TSP ET Site Walk(09:30am – 11:00am) | 9 |
| 10 | 11 | 12 | 13 | 14 24-hour TSP + 3 x 1-hour TSP, Noise (SR77) ET Site Walk(09:30am – 11:00am) (To be confirmed) | 15 | 16 |
| 17 | 18 | 19 | 20 24-hour TSP + 3 x 1-hour TSP, Noise (SR77) ET Site Walk(09:30 am – 11:00 am) with Liantang Project- wide ET and IEC + SSEMC (To be confirmed) | 21 | 22 | 23 |
| 24 | 25 | 26 24-hour TSP + 3 x 1-hour TSP, Noise (SR77) | | 28 ET Site Walk(09:30am – 11:00 am) with Fanling Stage 2 IEC & Liantang Project-wide ET and IEC (To be confirmed) | | |



Appendix E Meteorological Data Extracted from Hong Kong Observatory

| | | | Но | ng Kong O | bserva | atory | | | King's Park | Waglan Is | iland^ |
|------------|---------------------------|----------|-------------------------------|--------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|---------------------------|--|--|---------------------------------|
| Day | Mean Pressure (hPa) | Absolute | empera Mean (deg. C) | Absolute Daily Min (deg. C) | Mean Dew Point (deg. C) | Mean Relative Humidity (%) | Mean Amount of Cloud (%) | Total Rainfall (mm) | Total Bright Sunshine (hours) | Prevailing Wind Direction (degrees) | Mean Wind Speed (km/h) |
| 01 | 1026.5 | 15.9 | 13.8 | 11.4 | 8.0 | 68 | 84 | Trace | 4.6 | | |
| 02 | 1025.4 | 16.4 | 14.8 | 13.5 | 8.9 | 68 | 87 | Trace | 0.1 | | |
| 03 | 1024.3 | 17.3 | 16.2 | 14.9 | 13.4 | 84 | 91 | 0.1 | 0.0 | | |
| 04 | 1022.8 | 20.9 | 18.8 | 16.8 | 15.8 | 83 | 87 | 0.1 | 1.3 | | |
| 05 | 1020.5 | 22.7 | 19.8 | 18.9 | 17.6 | 87 | 88 | 0.0 | 0.5 | | |
| 06 | 1021.5 | 20.0 | 18.6 | 17.6 | 15.7 | 83 | 92 | Trace | 0.0 | | |
| 07 | 1021.4 | 20.0 | 18.5 | 17.4 | 15.6 | 83 | 89 | 0.0 | 0.0 | | |
| 08 | 1021.3 | 20.7 | 19.2 | 17.2 | 16.5 | 84 | 94 | 0.2 | 0.0 | | |
| 09 | 1022.3 | 18.7 | 17.8 | 17.2 | 15.1 | 84 | 89 | 0.0 | 2.7 | | |
| 10 | 1020.2 | 20.8 | 19.2 | 17.4 | 16.0 | 82 | 88 | 0.0 | 2.6 | | |
| 11 | 1018.6 | 23.3 | 20.6 | 18.2 | 17.7 | 84 | 55 | 0.0 | 6.5 | | |
| 12 | 1018.3 | 22.8 | 20.9 | 19.3 | 17.9 | 83 | 64 | Trace | 8.6 | | |
| 13 | 1019.3 | 19.8 | 18.5 | 17.7 | 16.8 | 89 | 91 | Trace | 0.0 | | |
| 14 | 1018.8 | 19.7 | 18.5 | 17.6 | 16.2 | 86 | 94 | Trace | 0.1 | | |
| 15 | 1018.8 | 21.1 | 19.0 | 17.0 | 16.9 | 88 | 88 | 4.0 | 1.2 | | |
| 16 | 1020.5 | 19.9 | 17.3 | 15.9 | 12.2 | 72 | 87 | 0.0 | 0.8 | | |
| 17 | 1022.2 | 19.5 | 16.7 | 14.6 | 11.3 | 70 | 55 | 0.0 | 8.1 | | |
| 18 | 1022.1 | 18.5 | 17.1 | 15.8 | 12.6 | 75 | 79 | 0.0 | 2.0 | | |
| 19 | 1019.6 | 21.9 | 18.8 | 17.1 | 14.2 | 75 | 85 | 0.2 | 1.7 | | |
| 20 | 1018.9 | 23.4 | 20.4 | 18.1 | 15.3 | 73 | 76 | 0.1 | 5.2 | | |
| 21 | 1021.8 | 20.0 | 17.8 | 15.8 | 11.0 | 64 | 66 | 0.0 | 4.2 | | |
| 22 | 1022.3 | 19.1 | 16.0 | 13.1 | 6.2 | 53 | 21 | 0.0 | 10.0 | | |
| 23 | 1021.0 | 19.2 | 16.2 | 13.7 | 8.8 | 62 | 3 | 0.0 | 9.8 | | |
| 24 | 1020.6 | 19.6 | 16.9 | 15.0 | 11.5 | 71 | 10 | 0.0 | 10.0 | | |
| 25 | 1021.2 | 22.2 | 18.7 | 16.1 | 12.3 | 67 | 13 | 0.0 | 10.2 | | |
| 26 | 1023.1 | 21.2 | 18.2 | 16.7 | 13.3 | 73 | 17 | 0.0 | 8.6 | | |
| 27 | 1023.6 | 19.4 | 16.9 | 15.6 | 11.5 | 71 | 80 | 0.0 | 7.0 | | |
| 28 | 1021.6 | 20.3 | 17.5 | 15.7 | 11.4 | 68 | 63 | 0.0 | 3.3 | *** | |
| 29 | 1021.4 | 20.5 | 18.5 | 16.9 | 13.7 | 74 | 39 | 0.0 | 9.8 | | |
| 30 | 1020.8 | 21.6 | 19.3 | 17.2 | 14.4 | 73 | 69 | 0.0 | 6.7 | | |
| 31 | 1018.9 | 24.5 | 21.7 | 18.9 | 17.2 | 76 | 67 | 0.0 | 7.7 | | |
| Mean/Total | 1021.3 | 20.4 | 18.1 | 16.4 | 13.7 | 76 | 68 | 4.7 | 133.3 | | |
| Normal§ | 1020.3 | 18.6 | 16.3 | 14.5 | 11.4 | 74 | 61 | 24.7 | 143.0 | 060 | 25.3 |

Daily Extract of Meteorological Observations , January 2019

*** unavailable

^ Information of wind direction and wind speed for Waglan Island are based on automatic weather station data since January 1989

Trace means rainfall less than 0.05 mm

§ 1981-2010 Climatological Normal, unless otherwise specified

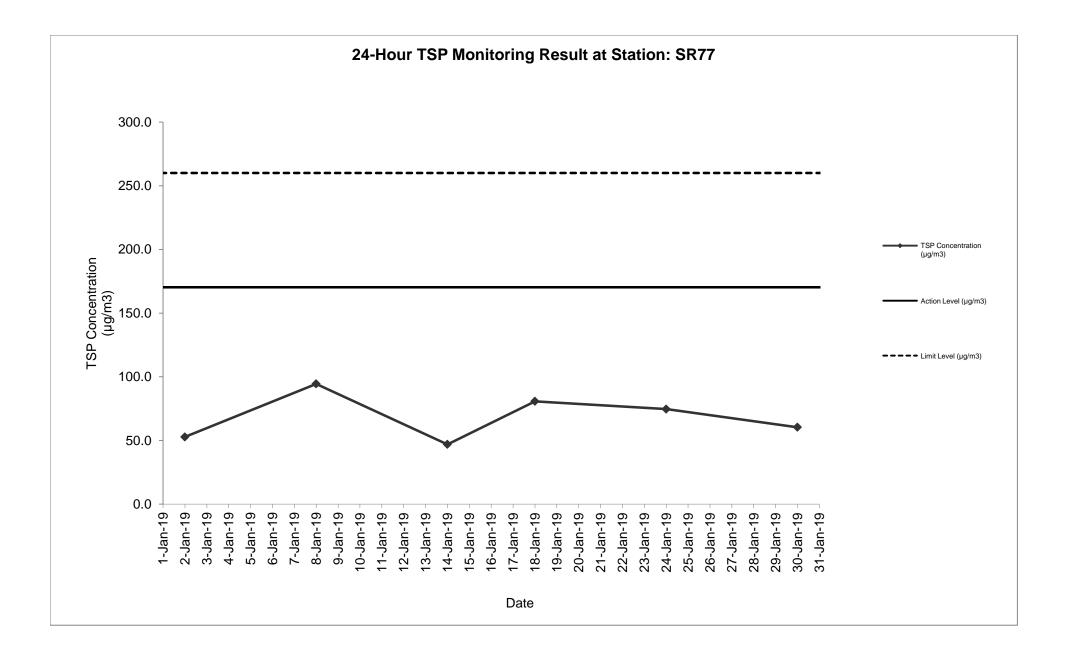


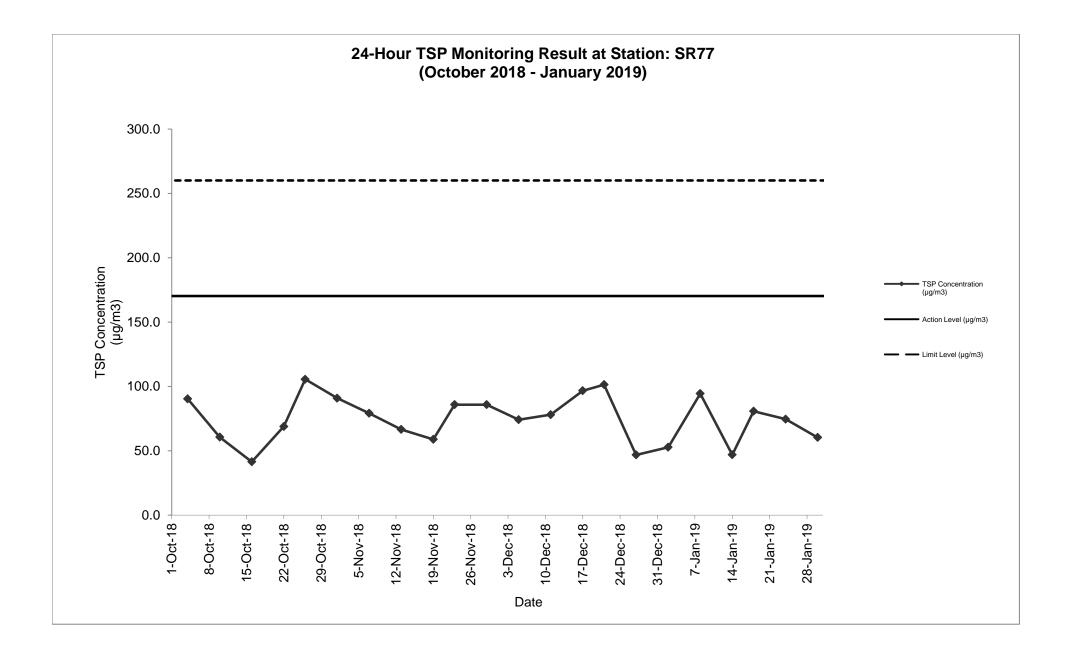
Appendix F Air Quality Monitoring Results and their Graphical Presentation

| Sampling Date | Weather Condition | Starting Time | Paper No. | w | /t. of paper | (g) | E | Elapse Tim | ne | Flo | ow Rate (C | CFM) | Flow | v Rate (m ³ | /min) | Total Volume | TSP Concentration | Action Level | Limit Level | Wind speed | Wind direction | NOE | IR |
|------------------|----------------------|------------------|-----------|-------------|--------------|-------------|---------|------------|------------------|---------|------------|------------------|---------|------------------------|------------------|-----------------|----------------------|-----------------|----------------|---------------|----------------|-----|----|
| Date | Condition | Time | | Initial Wt. | Final Wt. | Wt. of Dust | Initial | Final | Sampling Hour | Initial | Final | Avg Flow Rate | Initial | Final | Avg Flow Rate | (m³) | (µg/m³) | (µg/m3) | (µg/m3) | m/s | unection | | |
| 2-Jan-19 | Cloudy | 12:11 | C214 | 2.6835 | 2.7933 | 0.1098 | 9414.67 | 9438.67 | 24.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 2079.59 | 52.8 | 170.3 | 260.0 | <5 | N | | |
| 8-Jan-19 | Cloudy | 12:14 | C216 | 2.6663 | 2.8627 | 0.1964 | 9441.67 | 9465.67 | 24.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 2079.59 | 94.4 | 170.3 | 260.0 | <5 | N | | |
| 14-Jan-19 | Cloudy | 12:12 | C218 | 2.6676 | 2.7652 | 0.0976 | 9468.67 | 9492.67 | 24.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 2079.59 | 46.9 | 170.3 | 260.0 | <5 | N | | |
| 18-Jan-19 | Cloudy | 12:14 | C220 | 2.6710 | 2.8389 | 0.1679 | 9495.67 | 9519.67 | 24.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 2079.59 | 80.7 | 170.3 | 260.0 | <5 | N | | |
| 24-Jan-19 | Sunny | 12:11 | C222 | 2.6666 | 2.8218 | 0.1552 | 9522.67 | 9546.67 | 24.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 2079.59 | 74.6 | 170.3 | 260.0 | <5 | N | | |
| 30-Jan-19 | Fine | 12:14 | C224 | 2.6755 | 2.8012 | 0.1257 | 9549.67 | 9573.67 | 24.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 2079.59 | 60.4 | 170.3 | 260.0 | <5 | N | | |
| | | | | | | | | | | | | | | | | Average | 68.3 | | | | | | |
| | | | | | | | | | | | | | | | ſ | Min | 46.9 | | | | | | |
| | | | | | | | | | | | | | | | | Max | 94.4 | | | | | | |

24-Hour TSP Monitoring Result at Station: SR77

Note:No major dust source observed during the monitoring periodData in Bold denotes exceedanece of respective Action LevelData in Bold Underline denotes exceedance of respective Limit Level



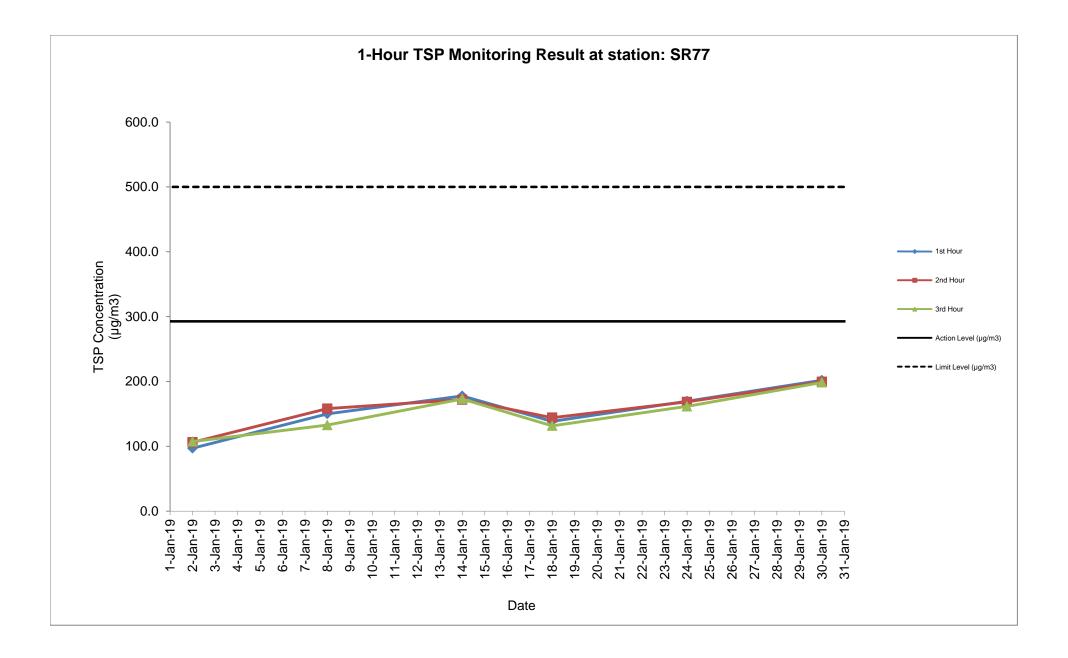


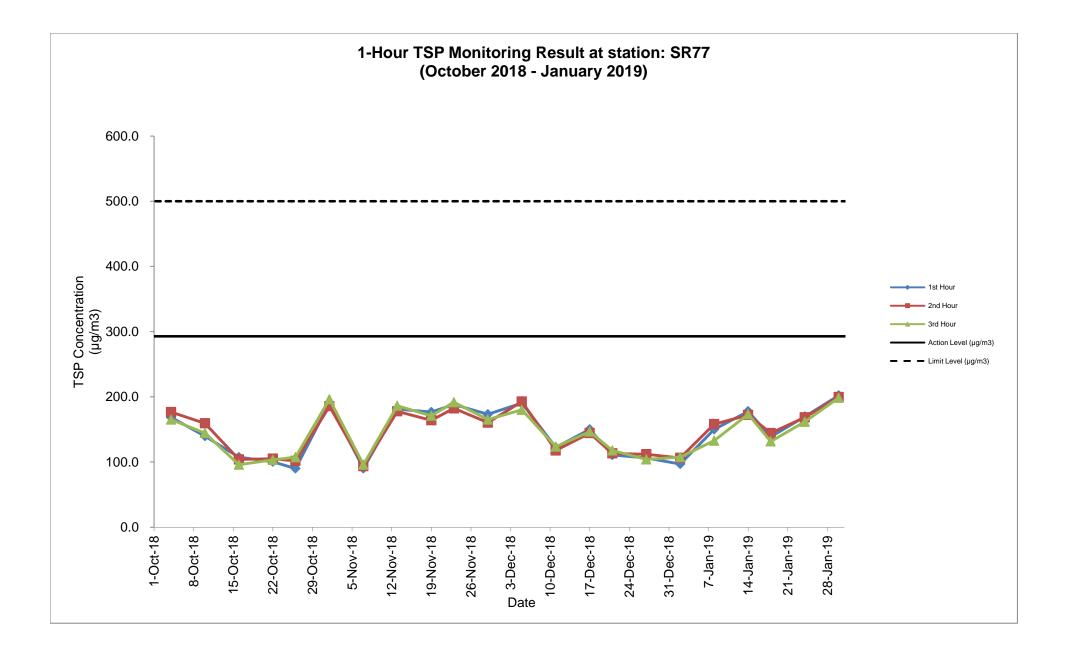
| Sampling Date | Weather Condition | Starting Time | Paper No. | | Vt. of pape | r (g) | EI | apse Time | | Flo | w Rate (C | FM) | Flov | v Rate (m³/ | /min) | Total Volume | TSP Concentration | Action Level | Limit Level | Wind speed | Wind direction | NOE | IR |
|------------------|----------------------|------------------|-----------|-------------|-------------|-------------|---------|-----------|------------------|---------|-----------|------------------|---------|-------------|------------------|-----------------|----------------------|-----------------|----------------|---------------|----------------|---|----|
| Date | Condition | Time | | Initial Wt. | Final Wt. | Wt. of Dust | Initial | Final | Sampling Hour | Initial | Final | Avg Flow Rate | Initial | Final | Avg Flow Rate | (m³) | (µg/m³) | (µg/m3) | (µg/m3) | m/s | direction | | |
| 2-Jan-19 | Cloudy | 09:00 | C215A | 2.6657 | 2.6741 | 0.0084 | 9411.67 | 9412.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 96.9 | 292.7 | 500.0 | <5 | N | | |
| | Cloudy | 10:04 | C215B | 2.6491 | 2.6583 | 0.0092 | 9412.67 | 9413.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 106.2 | 292.7 | 500.0 | <5 | N | | |
| | Cloudy | 11:08 | C215C | 2.6708 | 2.6801 | 0.0093 | 9413.67 | 9414.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 107.3 | 292.7 | 500.0 | <5 | N | | |
| 8-Jan-19 | Cloudy | 09:00 | C217A | 2.6714 | 2.6844 | 0.0130 | 9438.67 | 9439.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 150.0 | 292.7 | 500.0 | <5 | N | لـــــــــــــــــــــــــــــــــــــ | |
| | Cloudy | 10:04 | C217B | 2.6551 | 2.6688 | 0.0137 | 9439.67 | 9440.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 158.1 | 292.7 | 500.0 | <5 | N | <u>الـــــــا</u> | |
| | Cloudy | 11:09 | C217C | 2.6646 | 2.6761 | 0.0115 | 9440.67 | 9441.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 132.7 | 292.7 | 500.0 | <5 | N | لـــــــــــــــــــــــــــــــــــــ | |
| 14-Jan-19 | Cloudy | 09:00 | C219A | 2.6647 | 2.6801 | 0.0154 | 9465.67 | 9466.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 177.7 | 292.7 | 500.0 | <5 | N | <u>ا</u> ــــــــــــــــــــــــــــــــــــ | |
| | Cloudy | 10:04 | C219B | 2.6613 | 2.6762 | 0.0149 | 9466.67 | 9467.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 172.0 | 292.7 | 500.0 | <5 | N | <u>ا</u> ــــــــــــــــــــــــــــــــــــ | |
| | Cloudy | 11:08 | C219C | 2.6391 | 2.6541 | 0.0150 | 9467.67 | 9468.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 173.1 | 292.7 | 500.0 | <5 | N | لـــــــــــــــــــــــــــــــــــــ | |
| 18-Jan-19 | Cloudy | 09:00 | C221A | 2.6604 | 2.6724 | 0.0120 | 9492.67 | 9493.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 138.5 | 292.7 | 500.0 | <5 | N | <u>ا</u> ــــــــــــــــــــــــــــــــــــ | |
| | Cloudy | 10:04 | C221B | 2.6542 | 2.6667 | 0.0125 | 9493.67 | 9494.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 144.3 | 292.7 | 500.0 | <5 | N | <u>الــــــا</u> | |
| | Cloudy | 11:09 | C221C | 2.6677 | 2.6791 | 0.0114 | 9494.67 | 9495.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 131.6 | 292.7 | 500.0 | <5 | N | <u>ا</u> ــــــــــــــــــــــــــــــــــــ | |
| 24-Jan-19 | Sunny | 09:00 | C223A | 2.6647 | 2.6794 | 0.0147 | 9519.67 | 9520.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 169.6 | 292.7 | 500.0 | <5 | N | <u>ا</u> ــــــــــــــــــــــــــــــــــــ | |
| | Sunny | 10:04 | C223B | 2.6588 | 2.6734 | 0.0146 | 9520.67 | 9521.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 168.5 | 292.7 | 500.0 | <5 | N | <u>ا</u> ــــــــــــــــــــــــــــــــــــ | |
| | Sunny | 11:09 | C223C | 2.6711 | 2.6851 | 0.0140 | 9521.67 | 9522.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 161.6 | 292.7 | 500.0 | <5 | N | <u>ا</u> ــــــــــــــــــــــــــــــــــــ | |
| 30-Jan-19 | Fine | 09:00 | C225A | 2.6706 | 2.6881 | 0.0175 | 9546.67 | 9547.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 202.0 | 292.7 | 500.0 | <5 | N | <u>ا</u> ــــــــــــــــــــــــــــــــــــ | |
| | Fine | 10:04 | C225B | 2.6588 | 2.6761 | 0.0173 | 9547.67 | 9548.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 199.7 | 292.7 | 500.0 | <5 | N | <u>ا</u> ـــــــــــا | |
| | Fine | 11:08 | C225C | 2.6613 | 2.6785 | 0.0172 | 9548.67 | 9549.67 | 1.00 | 51 | 51 | 51.0 | 1.44 | 1.44 | 1.44 | 86.65 | 198.5 | 292.7 | 500.0 | <5 | N | <u>ا</u> ا | |
| | | | | | | | | | | | | | | | | Average | 154.9 | | | | | | |
| | | | | | | | | | | | | | | | | Min | 96.9 | | | | | | |
| | | | | | | | | | | | | | | | | Max | 202.0 | | | | | | |

Detailed Calculation of 1-Hour TSP Monitoring Result at Station: SR77

Note:

No major dust source observed during the monitoring period Data in **Bold** denotes exceedanece of respective Action Level Data in <u>Bold Underline</u> denotes exceedance of respective Limit Level







Appendix G Summary of Event and Action Plan



Event and Action Plan for Air Quality

| Event | Action | | | |
|---|---|---|--|--|
| | ET Leader | IEC | ER | Contractor |
| Action level being exceeded by one sampling day | Identify source; Inform IEC and ER; | Check monitoring data submitted by ET; | 1. Notify Contractor. | 1. Rectify any unacceptable practice; |
| Sampling day | Repeat measurement to confirm finding; | 2. Check Contractor's working method. | | 2. Amend working methods if appropriate. |
| | Increase monitoring frequency to daily. | | | |
| Action level being | 1. Identify source; | 1. Check monitoring data submitted | 1. Confirm receipt of notification of | 1. Submit proposals for remedial |
| exceeded by two or more consecutive | 2. Inform IEC and ER; | by ET; | failure in writing; | actions to IEC within 3 working |
| sampling days | Repeat measurements to confirm findings; | Check Contractor's working method; | Notify Contractor; Ensure remedial measures | days of notification;2. Implement the agreed proposals; |
| | Increase monitoring frequency to daily; | Discuss with ET and Contractor on possible remedial measures; | properly implemented. | 3. Amend proposal if appropriate. |
| | Discuss with IEC and Contractor on remedial actions required; | Advise the ER on the effectiveness of the proposed remedial measures; | | |
| | If exceedance continues, arrange meeting with IEC and ER; | Supervise Implementation of remedial measures. | | |
| | If exceedance stops, cease additional monitoring. | | | |

| Event | Action | | | |
|--|--|--|--|--|
| | ET Leader | IEC | ER | Contractor |
| Limit level being exceeded by one sampling day | Identify source; Inform IEC, ER, Contractor and EPD; Repeat measurement to confirm | Check monitoring data submitted by ET; Check Contractor's working method; | Confirm receipt of notification of exceedance in writing; Notify Contractor; Ensure remedial measures | Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of netification; |
| | finding; Increase monitoring frequency to daily; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results. | Discuss with ET and Contractor on possible remedial measures; Advise ER on the effectiveness of the proposed remedial measures; Supervise implementation of remedial measures. | properly implemented. | days of notification;3. Implement the agreed proposals;4. Amend proposal if appropriate. |
| Limit level being exceeded by two or more consecutive sampling days | Notify IEC, ER, Contractor, and EPD; Identify source; Repeat measurement to confirm findings; Increase frequency to daily; Analyse Contractor's working procedures to determine possible mitigation to be; Arrange meeting with IEC and ER to discuss the remedial actions to be taken; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; If exceedance stops, cease additional monitoring. | Discus amongst ER, ET, and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise ER accordingly; Supervise the implementation of remedial measures. | Confirm receipt of notification of exceedance in writing; Notify Contractor; In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; Ensure remedial measures properly implemented; 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. | Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Resubmit proposals if problem still not under control; Stop the relevant portion of works as determined by ER until the exceedance is abated. |

Event and Action Plan for Noise

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



Event and Action Plan for Water Quality

| Event | Action | | | | | | | |
|---|---|---|---|--|--|--|--|--|
| | ET Leader | IEC | ER | Contractor | | | | |
| Action level being exceeded by one sampling day | Repeat in-situ measurement on next day of exceedance to confirm findings; | | 1. Confirm receipt of notification of failure in writing; Notify, Contractor | Inform the ER & confirm notification of the non-compliance in writing; | | | | |
| | 2. Identify source(s) of impact; | | | 2. Rectify unacceptable practice; | | | | |
| | 3. Inform IEC, Contractor & ER; | | | 3. Amend working methods if | | | | |
| | Check monitoring data, all plant, equipment & contractor's working methods; | | | appropriate. | | | | |
| Action level being exceeded by two or more consecutive sampling days | Repeat measurement on next day of exceedance to confirm findings; | Checking monitoring data submitted by ET & Contractor's working method; | Discuss with IEC on the proposed mitigation measures; Ensure mitigation measures | Inform the Engineer & confirm notification of the non-compliance in writing; | | | | |
| | Identify source(s) of impact; | 2. Discuss with ET & Contractor on | properly implemented; | 2. Rectify unacceptable practice; | | | | |
| | 3. Inform IEC, Contractor, ER & EPD; | 3. Review the proposed mitigation | 3. Assess the effectiveness of the implemented mitigation | 3. Check all plant & equipment & consider changes of working | | | | |
| | Check monitoring data, all plant, equipment & Contractor's working methods; | accordingly; | measures. | methods; 4. Submit proposal of mitigation measures to ER within 3 working days of notification & discuss with | | | | |
| | Discuss mitigation measures with IEC, ER & Contractor; | 4. Supervise the implementation of mitigation measures. | | ET, IEC & ER; | | | | |
| | Ensure mitigation measures are implemented; | | | 5. Implement the agreed mitigation measures. | | | | |
| | Increase monitoring to daily until no exceedance of Action level. | | | | | | | |

| Event | Action | | | | | | | |
|--|--|---|---|---|--|--|--|--|
| | ET Leader | IEC | ER | Contractor | | | | |
| Limit level being exceeded by one sampling day | Repeat measurement on next day of exceedance to confirm findings; Identify source(s) of impact; Inform IEC, contractor, ER & EPD; Check monitoring data, all plant, equipment & contractor's working methods; Discuss mitigation measures with IEC, Contractor & ER. | Checking monitoring data submitted by ET & Contractor's working method; Discuss with ET & Contractor on the possible mitigation measures; Review the proposed mitigation measures submitted by Contractor & advise the ER accordingly. | Confirm receipt of notification of failure in writing; Discuss with IEC, ET & Contractor on the proposed mitigation measures; Request Contractor to review the working methods. | Inform the ER & confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant & equipment & consider changes of working methods; Submit proposal of mitigation measures to ER within 3 working days of notification & discuss with ET, IEC & ER. | | | | |
| Limit level being exceeded by two or more consecutive sampling days | Repeat measurement on the next day of exceedance to confirm findings; Identify source(s) of impact; Inform IEC, Contractor, ER & EPD; Check monitoring data, all plant, equipment & Contractor's working methods; Discuss mitigation measures within IEC, Contractor & ER; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days. | Checking monitoring data submitted by ET & Contractor's working method; Discuss with ET & Contractor on potential remedial actions; Review Contractor's mitigation measures whenever necessary to assure their effectiveness & advise the ER accordingly; Supervise the implementation of mitigation measures. | review the working methods; | measures; 4. Resubmit proposals of mitigation measures if problem still not under control; | | | | |



Appendix H Noise Monitoring Results and their Graphical Presentation

Appendix H Noise Monitoring Results and their Graphical Presentation

Noise Monitoring Result at SR77

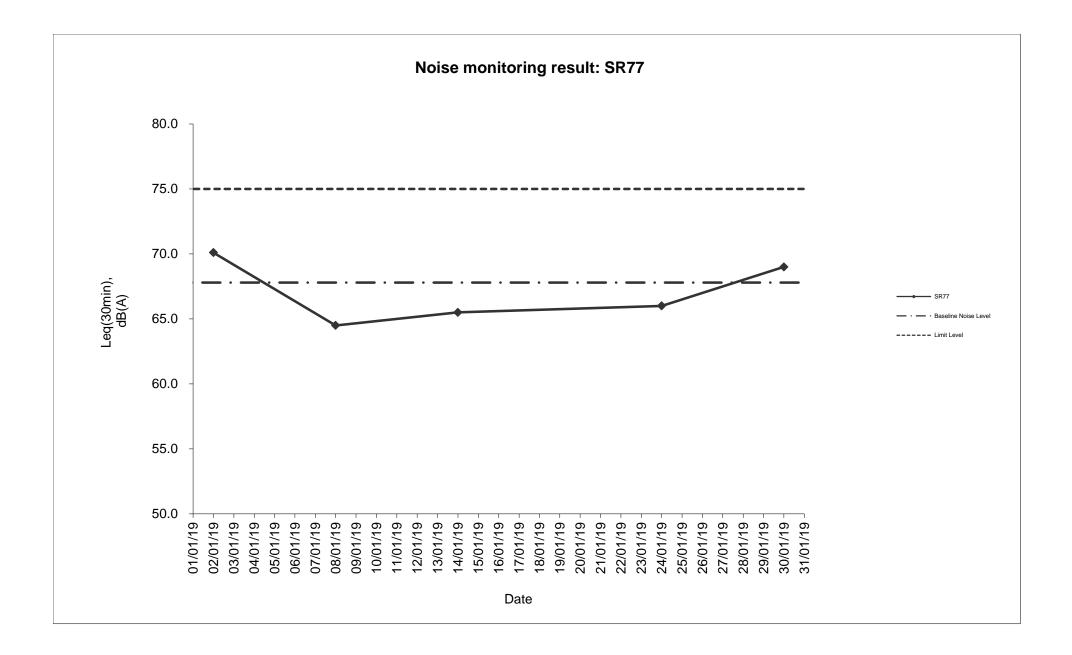
| Date | Weather | Start | End | Measured Noise Level (dB(A))* | | Baseline Corrected | Baseline Noise Level | Limit Level | |
|------------|-----------|-------|-------|-------------------------------|------------|--------------------|----------------------|---------------------|-------|
| | Condition | Time | Time | L10(30min) | L90(30min) | Leq(30min) | Level, dB(A)** | (dB(A)), Leq(30min) | dB(A) |
| 2019-01-02 | Cloudy | 11:15 | 11:45 | 88.5 | 65.5 | 70.1 | - | 67.8 | 75.0 |
| 2019-01-08 | Cloudy | 11:15 | 11:45 | 92.0 | 63.5 | 64.5 | - | 67.8 | 75.0 |
| 2019-01-14 | Cloudy | 11:15 | 11:45 | 93.0 | 62.5 | 65.5 | - | 67.8 | 75.0 |
| 2019-01-24 | Sunny | 11:30 | 12:00 | 88.5 | 64.5 | 66.0 | - | 67.8 | 75.0 |
| 2019-01-30 | Fine | 11:05 | 11:35 | 96.0 | 63.0 | 69.0 | - | 67.8 | 75.0 |
| | | | | | Average | 67.0 | | | |
| | | | | | Minimum | 64.5 | | | |
| | | | | | Maximum | 70.1 | | | |

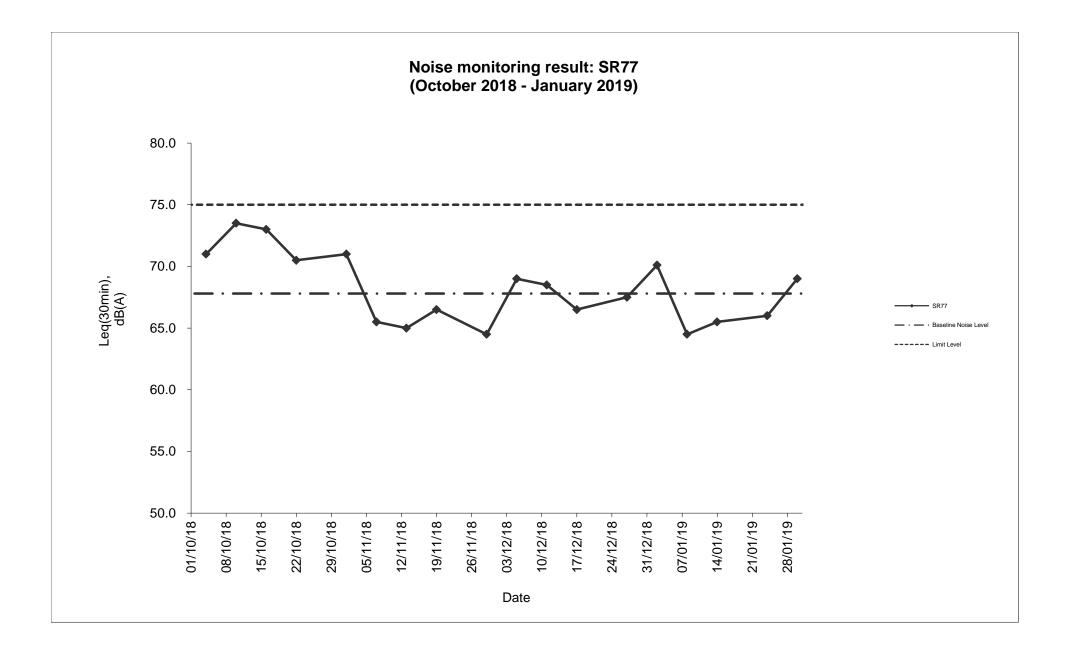
Remarks

* +3dB(A) Façade effect correction included

** Baseline corrected level is only calculated when measured noise level (Leq) > limit level.

*** Data in **Bold Underline** denotes exceedance of respective Limit Level







Appendix K Waste Flow Table

Monthly Summary Waste Flow Table

| | | Actual Quantities of Inert C&D Materials Generated Monthly | | | | | | | | C&D Wastes | Generated M | lonthly |
|-----------|--------------------------|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | Hard Rock | | | | | | | Paper/ | | | |
| | Total | and Large | | Soil Reused | Soil Reused | | | | cardboard | | | General |
| | Quantity | Broken | | in the | in other | Soil Disposed | | | packaging | | Chemical | Refuse |
| Month | Generated | Concrete | Soil | Contract | Projects | as Public Fill | Imported Fill | Metals | (Note 3) | Plastics | Waste | (Note 2) |
| Unit | (in '000m ³) | (in '000m ³) | (in '000m ³) | (in '000m ³) | (in '000m ³) | (in '000m ³) | (in '000m ³) | (in '000m ³) | (in '000m ³) | (in '000m ³) | (in m ³) | (in '000m ³) |
| Jan-19 | 2.937 | 0.927 | 2.010 | - | - | 2.010 | 0.997 | - | - | - | - | 0.145 |
| Feb-19 | | | | | | | | | | | | |
| Mar-19 | | | | | | | | | | | | |
| Apr-19 | | | | | | | | | | | | |
| May-19 | | | | | | | | | | | | |
| Jun-19 | | | | | | | | | | | | |
| Sub-Total | | | | | | | | | | | | |
| Jul-19 | | | | | | | | | | | | |
| Aug-19 | | | | | | | | | | | | |
| Sep-19 | | | | | | | | | | | | |
| Oct-19 | | | | | | | | | | | | |
| Nov-19 | | | | | | | | | | | | |
| Dec-19 | | | | | | | | | | | | |
| Total | | | | | | | | | | | | |

Note: 1. Assume the density of soil fill is 2 ton/m^3 .

2. Assume the density of rock and broken concrete is 2.5 ton/m^3 .

3. Assume each truck of C&D wastes is $5m^3$.

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

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

6. The non-inert C&D wastes are disposed at NENT.

7. Assume the density of metal is $7,850 \text{ kg/m}^3$.

8. Assume the density of plastic is 941 kg/m³.

9. Assume the density of paper is 800 kg/m^3 .



Appendix L Implementation Schedule of Environmental Mitigation Measures (EMIS)



| Impact | Environmental Protection Measures | Timing | Responsibility | Implementation Status [#] |
|---------------------------------|--|---------------------|----------------|---------------------------------------|
| Air Quality | | | | |
| Air Quality during Construction | • Restricting heights from which materials are dropped, as far as practicable to minimize the fugitive dust arising from unloading/loading. | During Construction | Contractor | V |
| | • All stockpiles of excavated materials or spoil of more than 50m ³ shall be enclosed, covered or dampened during dry or windy conditions. | | | ~ |
| | • Effective water sprays shall be used to control potential dust emission sources such as unpaved haul roads and active construction areas. | | | ~ |
| | All spraying of materials and surfaces shall avoid excessive water usage. | | | \checkmark |
| | • Vehicles that have the potential to create dust while transporting materials shall be covered, with the cover properly secured and extended over the edges of the side and tail boards. | | | * |
| | Materials shall be dampened, if necessary, before transportation. | | | \checkmark |
| | • Travelling speeds shall be controlled to reduce traffic induced dust dispersion and re-suspension within the site from the operating haul trucks. | | | ~ |
| | • Vehicle washing facilities shall be provided to minimise the quantity of material deposited on public roads. | | | ~ |
| Air Quality during Operation | Not required | N/A | N/A | N/A |
| Noise | | | | |
| Noise during Construction | • Use of silenced plant or plant equipped with mufflers or dampers in substitute of ordinary plant. | During Construction | Contractor | ✓ |
| | Reduce the number of equipment and their percentage on-time. | | | \checkmark |
| Noise during Operation | Not required | N/A | N/A | N/A |
| Water Quality | | | | |
| Water Quality during | Road Widening Works, Earthworks and Culvert Extension Works | | | |
| Construction | • Wastewater generated from any concrete batching washdown of equipment or similar activities should be discharged into foul sewers, after the removal of settable solids, and pH adjustment as necessary. All sewage discharges from the study area should meet the TM standards and approval from EPD through the licensing process is required. | During Construction | Contractor | ✓ |



| Impact | Environmental Protection Measures | Timing | Responsibility | Implementation Status [#] |
|---|---|---------------------|----------------|---------------------------------------|
| | • Sand traps, oil interceptors and other pollution prevention installations should be provided, properly cleaned and maintained. | | | ✓ |
| | • Runoff from exposed working areas, unfinished slopes and from unlined temporary channels should be directed to stilling basins and/or silt traps before discharging to the drainage outfalls. | | | ~ |
| | • Regular inspections of stilling basins and/or silt traps is required to ensure that sediment is not conveyed into the existing drainage system. | | | ~ |
| | Open stockpiles should be covered with a tarpaulin cover. | | | \checkmark |
| | • During the wet season, any exposed top soils should be covered with a tarpaulin, shotcreted or hydroseeded. | | | ✓ |
| | • Sand and silt from wash-water from vehicle washing should be settled out before discharging into storm drains. | | | ~ |
| | • Fuels should be stored in bunded areas such that spillage can be easily collected. | | | ~ |
| Water Quality during Operation | Not required | N/A | N/A | N/A |
| Waste Management | | 1 | | |
| Waste Management during Construction | General Waste | | | |
| | Transport of wastes off site as soon as possible. | During Construction | Contractor | ✓ |
| | Maintenance of accurate waste records. | | | ~ |
| | • Minimisation of waste generation for disposal (via reduction/recycling/re-use). | | | ✓ |
| | No on-site burning will be permitted. | | | ~ |
| | Use of re-useable metal hoardings/signboards. | | | ✓ |
| | Vegetation from site clearance | | | |
| | Segregation of materials to facilitate disposal. | During Construction | Contractor | \checkmark |
| | • Mulching to reduce bulk and where possible review opportunities for the possible beneficial use within landscaping areas. | | | \checkmark |



| Impact | Environmental Protection Measures | Timing | Responsibility | Implementation Status [#] |
|--------|--|---------------------|----------------|---------------------------------------|
| | Demolition Wastes | | | |
| | Segregation of materials to facilitate disposal. | During Construction | Contractor | \checkmark |
| | Appropriate stockpile management. | | | \checkmark |
| | Excavated Materials | | | |
| | Segregation of materials to facilitate disposal / reuse. | During Construction | Contractor | \checkmark |
| | Appropriate stockpile management. | | | ~ |
| | • Re-use of excavated material on or off site (where possible). | | | ~ |
| | • Special handling and disposal procedures in the event that contaminated materials are excavated. | | | N/A |
| | Construction Wastes | | | |
| | • Segregation of materials to facilitate recycling/reuse (within designated area in appropriate containers/stockpiles). | During Construction | Contractor | ~ |
| | Appropriate stockpile management. | | | \checkmark |
| | Planning to reduce over ordering and waste generation. | | | ~ |
| | Recycling and re-use of materials where possible (e.g. metal, wood from formwork) | | | V |
| | • For material which cannot be re-used/recycled, collection should be carried out by an approved waste contractor for landfill disposal. | | | ~ |
| | Bentonite Slurries | | | |
| | • Bentonite slurries should be reused as far as possible. | During Construction | Contractor | N/A |
| | • Disposal in accordance with Practice Note For Professional Persons ProPECC PN 1/94. | | | N/A |
| | Chemical Wastes | | | |
| | Storage within locked, covered and bunded area. | During Construction | Contractor | Obs. |
| | • The storage area shall not be located adjacent to sensitive receivers e.g. drains. | | | ~ |
| | Minimise waste production and recycle oils/solvents where possible. | | | \checkmark |

Notes ([#]): \checkmark – Compliance; Rem – Reminder; Obs – Observation; N/C – Non Compliance; N/A – Not Applicable



| Impact | Environmental Protection Measures | Timing | Responsibility | Implementation Status [#] |
|--------------------------------------|--|---------------------|----------------|---------------------------------------|
| | • A spill response procedure shall be in place and absorption material available for minor spillages. | | | \checkmark |
| | Use appropriate and labelled containers. | | | \checkmark |
| | Educate site workers on site cleanliness/waste management procedures. | | | \checkmark |
| | • If chemical wastes are to be generated, the contractor must register with EPD as a chemical waste producer. | | | ✓ |
| | • The chemical wastes shall be collected by a licensed chemical waste collector. | | | ✓ |
| | Municipal Wastes | | | |
| | • Waste shall be stored within a temporary refuse collection facility, in appropriate containers prior to collection and disposal. | During Construction | Contractor | ✓ |
| | Regular, daily collections are required by an approved waste collector. | | | \checkmark |
| Waste Management during Operation | Not required. | N/A | N/A | N/A |
| Ecology | | | | |
| Ecology during Construction | Accurate Delineation of Works Area | | | |
| | • Boundaries of proposed works areas shall be clearly identified and separated from external areas by a physical barrier to prevent encroachment of adjacent habitats. | During Construction | Contractor | * |
| | • Individual trees which fall within the works areas but which work plans show do not require removal are to be retained and fenced off to maximise protection. | | | * |
| | Dust generation | | | |
| | There are a number of measures which shall be taken as specified in the Air Pollution Control (Construction Dust) Regulation on 'Dust Control Requirements, including the following key measures to be applied during construction: | | | |
| | vehicle washing facilities to be provided at every discernible or designated vehicle exit point; | During Construction | Contractor | ✓ |



| Impact | Environmental Protection Measures | Timing | Responsibility | Implementation Status [#] |
|---|--|--------------------------------------|--|---------------------------------------|
| | • all temporary site access roads shall be sprayed with water to suppress dust as necessary; | | | ✓ |
| | • all dusty materials should be sprayed with water immediately prior to any handling; and | | | \checkmark |
| | • all debris should be covered entirely by impervious sheeting or stored in a sheltered debris collection area. | | | \checkmark |
| | Surface Run-off | | | |
| | In general, mitigation measures shall be in accordance with ProPECC PN1/94 on 'Construction Site Drainage'. Key measures include: | | | |
| | Bund and cover stockpiles to avoid run-off; | During Construction | Contractor | ~ |
| | • Channel any run-off through a system of oil, grease and sediment / silt traps and reuse water on site where ever practical; | | | * |
| | • All vehicle maintenance to be undertaken within a bunded area; and | | | ✓ |
| | • Maximise vegetation retention on-site to maximise absorption (minimise transport). | | | * |
| Ecology during Operation | • To conduct compensatory ecological planting as specified in the latest landscape plans approved by EPD (Clause 2.6 of the Environmental Permit refers). | During Construction and operation | Contractor (during construction) / LCSD* (during operation) (Note: * The division of vegetation planting and maintenance responsibilities shall follow the guidelines stipulated in ETWB TCW No. 2/2004.) | N/A |
| Landscape and Visual | | 1 | | |
| Landscape and Visual during Construction | Preservation of Existing Vegetation Trees identified for retention within the project limit would be protected during the works | During Construction | Contractor | ~ |
| | The tree transplanting and planting works shall be implemented by approved Landscape Contractors | | | × |



| Impact | Environmental Protection Measures | Timing | Responsibility | Implementation Status [#] |
|---------------------------------------|--|---------------------|----------------|---------------------------------------|
| | Temporary Works Areas | | | |
| | Where feasible the works areas would be screened using hoarding and existing vegetation would be retained where possible to reduce the landscape and visual impacts arising from the construction activity. The landscape of these works areas would be restored following the completion of the construction phase. | During Construction | Contractor | × |
| | Hoarding | | | |
| | A hoarding would be erected where practicable in the most visually sensitive locations to screen the temporary construction works from the local VSRs. | During Construction | Contractor | \checkmark |
| | Top Soils | | | |
| | The works will result in disturbance to extensive areas of topsoil. Topsoil worthy of retention should be stockpiled for use following completion of the civil engineering works. It should either be temporarily vegetated with hydroseeded grass or turned over on a regular basis. | During Construction | Contractor | N/A |
| | Protection of Important Landscape Features | | | |
| | Important features such as temples, Island House and kilns within the study area, although remote from the proposed works retained and adequately protected. | During Construction | Contractor | N/A |
| Landscape and Visual during Operation | Not required. | N/A | N/A | N/A |



Appendix N Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions



Cumulative Complaint Log

| Complaint Log No. | Date of Complaint | Received From and Received By | Location of Complainant | Nature of Complaint | Outcome | Status |
|----------------------|--------------------------|--|---|--|---|-----------|
| C131126 | 26, November, 2013 | Mr. Tony Hung from WWF | Mat Wat River (works sites for box culvert extension) | Suspected unauthorised discharge of water from a construction site to Ma Wat River, Tai Wo Service Road East, Tai Po | It was found that the water leaving the end of the steel pipes was the diverted water from the upstream of the existing box culverts, instead of being discharged from the construction works sites. An EM&A Programme is being undertaken to monitoring the environmental performance of the construction works, and the Contractor has also implemented appropriate mitigation measures to avoid silt-laden runoff discharging from the works sites into the river. The complaint is considered an invalid complaint under this Project. | Completed |



| Complaint Log No. | Date of Complaint | Received From and Received By | Location of Complainant | Nature of Complaint | Outcome | Status |
|----------------------|-------------------------|--|--|---|--|-----------|
| C141120 | 20 November, 2014 | EPD | Ng Tung River and Ma Wat River nearby the site of the Liantang/ Heung Yuen Wai BCP Project (Contract Number CV/2012/09) | At Bridge NF426 in Fanling, the whole Ng Tung River showed milky and suspected illegal discharge by nearby factory has undertaken. (粉嶺近天橋編號 NF426 梧桐河整條河 河水呈奶白色懷疑附 近有工廠非法排放污 水) | Water Supplies Department (WSD) conducted a washout procedure on 20 November 2014 at about 9:30am to flush the newly installed water pipe of diameter of 1400mm which has recently finished disinfection. It is understood that the procedure has lasted for about 1 hour and large amount of freshwater has been discharged into the Ma Wat River through a washout port. Although water was observed seeping from the gantry switch and flew into the works sites, the area is a sump pit and the water was unlikely to run off and entered the river directly. As such, it is anticipated that only freshwater has been discharged into Ma Wat River through the washout port. Both site inspections conducted by the ET before the complaint (19 November 2014), and after the complaint (24 November 2014) did not identify any deficiencies on environmental mitigation measures. Also, there were no rains during the period and the risk of construction site run-off is considered minimal. | Completed |



| Complaint Log No. | Date of Complaint | Received From and Received By | Location of Complainant | Nature of Complaint | Outcome | Status |
|----------------------|-------------------------|--|--|---|--|--------|
| | | | | | The water from the Ma Wat Channel adjoins the Ng Tung River before passing through the complaint location, so other pollution sources may also occur at upstream of Ng Tung River The complaint is considered unlikely due to the construction works of this | |
| C171228 | 28 December, 2017 | 1823 | Kau Lung Hang and Hong Lok Yuen | Air quality issue nearby Kau Lung Hang and Hong Lok Yuen area. Stockpiling within the Project area was observed to be uncovered, causing dust dispersion within the area. (大埔 九龍坑附近的空氣污 染問題嚴重。吐露港 公路蓮塘口岸隧道工 程經常見到沙泥沒有 覆蓋,導致沙土飛揚 散佈九龍坑,康樂園 一帶,造成極大困擾 與明顯健康風險。要 求立即改善,懲罰相 | project. The Environmental Team (ET) was informed of the complaint through Chun Wo and CEDD via 1823 online-enquiry/ complaint form received on 28 December 2017 at 9:04am. Investigation was triggered in accordance with the procedures as specified in Section 7.3 of the EM&A Manual. A joint investigation by the ET and the IEC was conducted on 28 December 2017. As advised by the Contractor, no construction works were carried out during the public holiday. No exceedance of TSP level at the air monitoring station under this Contract was recorded in the past six months except 8 December 2017. | |



| • | ate of complaint | Received From and Received By | Location of Complainant | Nature of Complaint | Outcome | Status |
|---|---------------------|--|----------------------------|--------------------------------------|---|--------|
| | | | | 關建築商。附圖是該 區狀況。昨日洗車, 一日已經沙塵滿佈。) | Exceedance on 8 December 2017 was considered not project related as no major excavation works located close to the monitoring location at SR77. Based on the routine environmental site inspection and information provided by the Contractor, it is considered that dust suppression measures have been implemented to minimize dust nuisance arising from the works areas. Nonetheless, the ET and IEC will continue the auditing and reviewing of the Contractor's implementation of mitigation measures during the construction period. | |



Meinhardt Infrastructure and Environment Ltd 邁進基建環保工程顧問有限公司

10/F Genesis 33-35 Wong Chuk Hang Road Hong Kong 香港黃竹坑道33-35號 創協坊10樓

Tel 電話: +852 2858 0738 Fax 傳真: +852 2540 1580

mail@meinhardt.com.hk www.meinhardt-china.com www.meinhardtgroup.com