

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

Monthly EM&A Report November 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

(November 2019)

Certified by:	Fredrick Leong
Desition	

Position: Environmental Team Leader

Date: <u>13 December 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 Reférence

Our Reference AFK/EC/ST/cy/T329380/2 2.05/L-0296

3/F International Trade Tower 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 – November 2019 for the portion of Stage 2 works entrusted to Civil Engineering and Development Department (CEDD) under Contract No. CV/2012/09

13 December 2019 By Fax (2805 5028) & Hand

We refer to the revised Monthly EM&A Report – November 2019 (Rev.1) received on 13 December 2019 submitted by the Environmental Team via email. Pursuant to Environmental Permit Condition 3.3, I hereby verify the Monthly EM&A Report – November 2019 (Rev. 1) 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)



Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2 – Chun Wo Monthly EM&A Report – November 2019



Date	Revision	Prepared By	Checked By	Approved By
13 Dec 2019	0	WK CHIU BoBo HUI	Fredrick LEONG	Helen COCHRANE
		(*(		Im
			r	
			V	



## Contents

			Page
EXE	CUTIVE	SUMMARY	i
1	INTRO	DUCTION	1
	1.2	Purpose of the Report	1
	1.3	Report Structure	1
2	PROJE	ECT 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	IS OF ENVIRONMENTAL LICENSES, NOTIFICATION AND PERMITS	5
4	AIR QU	JALITY MONITORING	6
	4.1	Monitoring Requirement	6
	4.2	Monitoring Equipment	6
	4.3	Monitoring Location	6
	4.4	Monitoring Parameters, Frequency and Duration	7
	4.5	Monitoring Methodology	7
	4.6	Monitoring Schedule for the Reporting month	8
	4.7	Monitoring Results	8
5	NOISE	MONITORING	9
	5.1	Monitoring Requirements	9
	5.2	Monitoring Equipment	9
	5.3	Monitoring Locations	9
	5.4	Monitoring Parameters, Frequency and Duration	9
	5.5	Monitoring Methodology	10
	5.6	Monitoring Schedule for the Reporting Month	10
	5.7	Monitoring Results	10
6	WATE	R MONITORING	12
7	WASTI	E MANAGEMENT	13
8	ENVIR	ONMENTAL SITE INSPECTION AND AUDIT	14
	8.1	Site Inspection	14
9	IMPLE	MENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES	15
10	SUMM	ARY OF EP SUBMISSION IN THE REPORTING MONTH	16
11	ENVIR	ONMENTAL NON-CONFORMANCE	17
	11.1	Summary of Monitoring Exceedances	17



	11.2	Summary of Environmental Non-Compliance	17
	11.3	Summary of Environmental Complaints	17
	11.4	Summary of Environmental Summon and Successful Prosecutions	17
12	FUTUF	RE KEY ISSUES	18
	12.1	Construction Programme for the Next Month	18
	12.2	Key Issues for the Coming Month	18
	12.3	Monitoring Schedule for the Next Month	18
13	CONC	LUSIONS AND RECOMMENDATIONS	19
	13.1	Conclusions	19
	13.2	Recommendations	19

#### List of Tables

- 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
- Air Quality Monitoring Parameters, Frequency and Duration Table 4.3
- 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

- Demarcation of Entrusted Portion of Widening of Tolo Highway / Fanling Highway Figure 1 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 November 2019. As informed by the Contractor, the remaining activities in the reporting month were:

- Road pavement works
- Road Drainage Works;
- Remaining works of Kiu Tau Footbridge ; and
- Remaining Landscape Works.

#### 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;



- Remaining Landscape Woks; 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 November 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 remaining construction activities undertaken in the reporting month are summarized below:
  - Road pavement works
  - Road Drainage Works;
  - Remaining works of Kiu Tau Footbridge ; and
  - Remaining Landscape Works.
- 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
AECOM	Engineer's Representative	Senior Resident Engineer	Mr. Alan Lee	2171 3303	2171 3498
Mott MacDonald	Independent Environmental Checker (IEC)	IEC	Mr. Steven Tang	2828 5920	2827 1823
Chun Wo Con		Site Agent	Mr. Ken Lun	2638 6144	
	Contractor	Environmental Officer	Mr. Yip Yun Lam	3166 5111	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		Otation	Damada					
No. / Notification / Reference No.			Status	Remarks					
Environmental Perr	Environmental Permit								
EP-324/2008/E	26 Jan 2017		Granted on 26 Jan 2017						
Construction Noise	Permit		I						
GW-RN0310 -19	26 May 2019	25 Nov 2019	Valid	For lane shifting work of Fanling Highwaay bothbound.					
GW-RN0312-19	26 May 2019	25 Nov 2019	Valid	For loading and unloading along Fanling Highway bothbound.					
GW-RN0313-19	26 May 2019	25 Nov 2019	Valid	For road diversion and maintenance of Fanling Highway bothbound.					
GW-RN0494-19	1 Aug 2019	26 Nov 2019	Valid	For road diversion and maintenance of Fanling Highway bothbound					
Wastewater Discha	rge License		I						
WT00032188-2018	20 Sep 2018	31 Aug 2023	Valid						
Chemical Waste Pro	oducer Registra	tion	- 	1					
5113-634-C3817- 01	7 Oct 2013		Valid						
Billing Account for	Construction <b>W</b>	/aste Disposal	1.						
7017914	2 Aug 2013		Account Active						
Notification Under	Air Pollution Co	ntrol (Construct	ion Dust) Regula						
	9 Aug 2019		Notified	- Extension of notification was submitted to EPD on 9 Aug 2019					

 Table 3.1
 Status of Environmental Licenses, Notifications and Permits



#### 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**.

Equipment	Brand and Model	Quantity	Serial Number
High Volume Sampler (1-hr TSP and 24-hr TSP)	Tisch Total Suspended Particulate Mass Flow Controlled High Volume Air Sampler (Model No. TE-5170 MFC)	1	2359
Handheld TSP meter	TSI AM520	1	5201735006

Table 4.1 **Air Quality Monitoring Equipment** 

- 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.
- Calibration of the HVS (five point calibration) using Calibration Kit was carried out 4.2.3 every two months. The HVS calibration orifice will be calibrated annually.
- 4.2.4 The electricity supply of HVS at AM1(SR77) was suspended from 16 May 2019 and was no longer available. In order to have a more secure electricity supply, an alternative Handheld TSP meter was proposed to use for the temporary monitoring of 24-hr & 1hr air quality from 22 May 2019. In this regard, IEC and ER have no adverse comment on it. And Calibration certificates of the Handheld TSP meter 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.

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.

 Table 4.3
 Air Quality Monitoring Parameters, Frequency and Duration

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. And EPD are replied the EM&A monitoring shall only be terminated when insignificant environmental impacts of the remaining outstanding construction works are expected and agreement of EPD. After that we have submitted the termination proposal to EPD on 4 April 2019 again. EPD replied we need to provide the Final EM&A Report to facilitate their consideration for the termination on 14 May 2019. Therefore, the EM&A monitoring and audit works will be ceased upon EPD's approval for the termination proposal is approved. The tentative schedule for environmental monitoring for the reporting month is provided in **Appendix D**.
- 4.6.2 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) *	144.4	122.4 – 164.9	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) *	102.8	79.3 – 142.1	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**.



# 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	00175560

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**.

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	<b>Monitoring Results</b>
-----------	------------------	---------------------------

Noise Monitoring Station ID	Average, dB(A), Leq (30min) <sup>(2)</sup>	Range, dB(A), Leq (30min) <sup>(2)</sup>	Action Level	Limit Level, dB(A)
M1(SR77) <sup>(1)</sup>	63.1	62.5 – 64.0	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 2462m<sup>3</sup> of excavated material has been generated. 2462m<sup>3</sup> of inert C&D materials was disposed of at public fill to TM Area 38. Om<sup>3</sup> of inert C&D materials were reused on site. 55m<sup>3</sup> 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 chemical waste 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, 4 site inspections were carried out on 1, 7, 20 and 28 November 2019. And the site walk on 14 November was cancelled due to the public traffic incident. 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	N/A	N/A	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 October 2019	13 Nov 2019



# 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;
  - Remaining Landscape Woks; 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

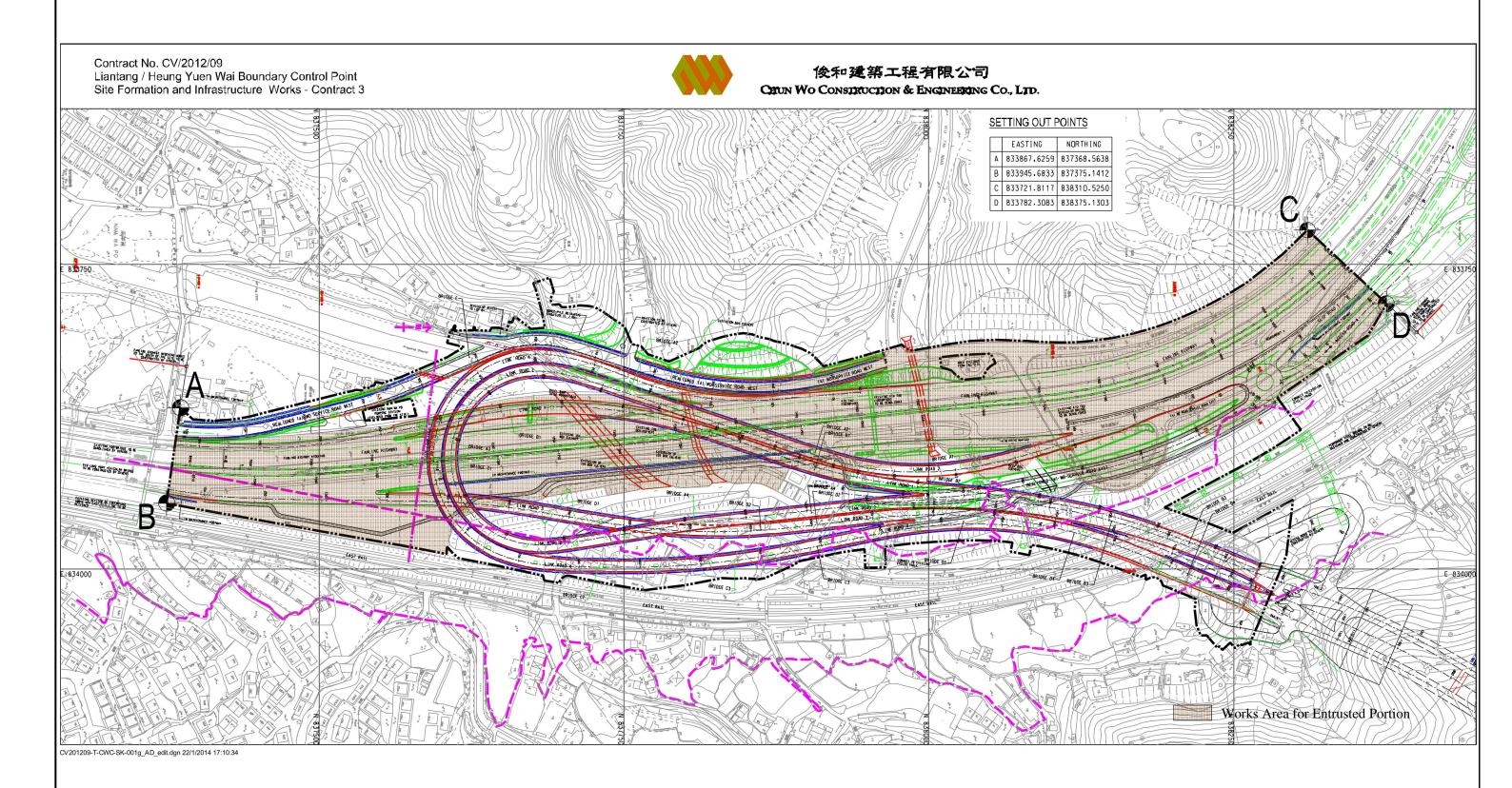
- 13.1.1 The construction phase EM&A programme of the Project commenced on 5 November 2013.
- 13.1.2 The 1-hr TSP, 24-hr TSP, noise and water quality monitoring were carried out in the reporting period.
- 13.1.3 No exceedance of Action and Limit Level was recorded for 24-hour TSP monitoring at the monitoring 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 Four (4) 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

According to the environmental site inspections performed in the reporting month, no following recommendation was provided.



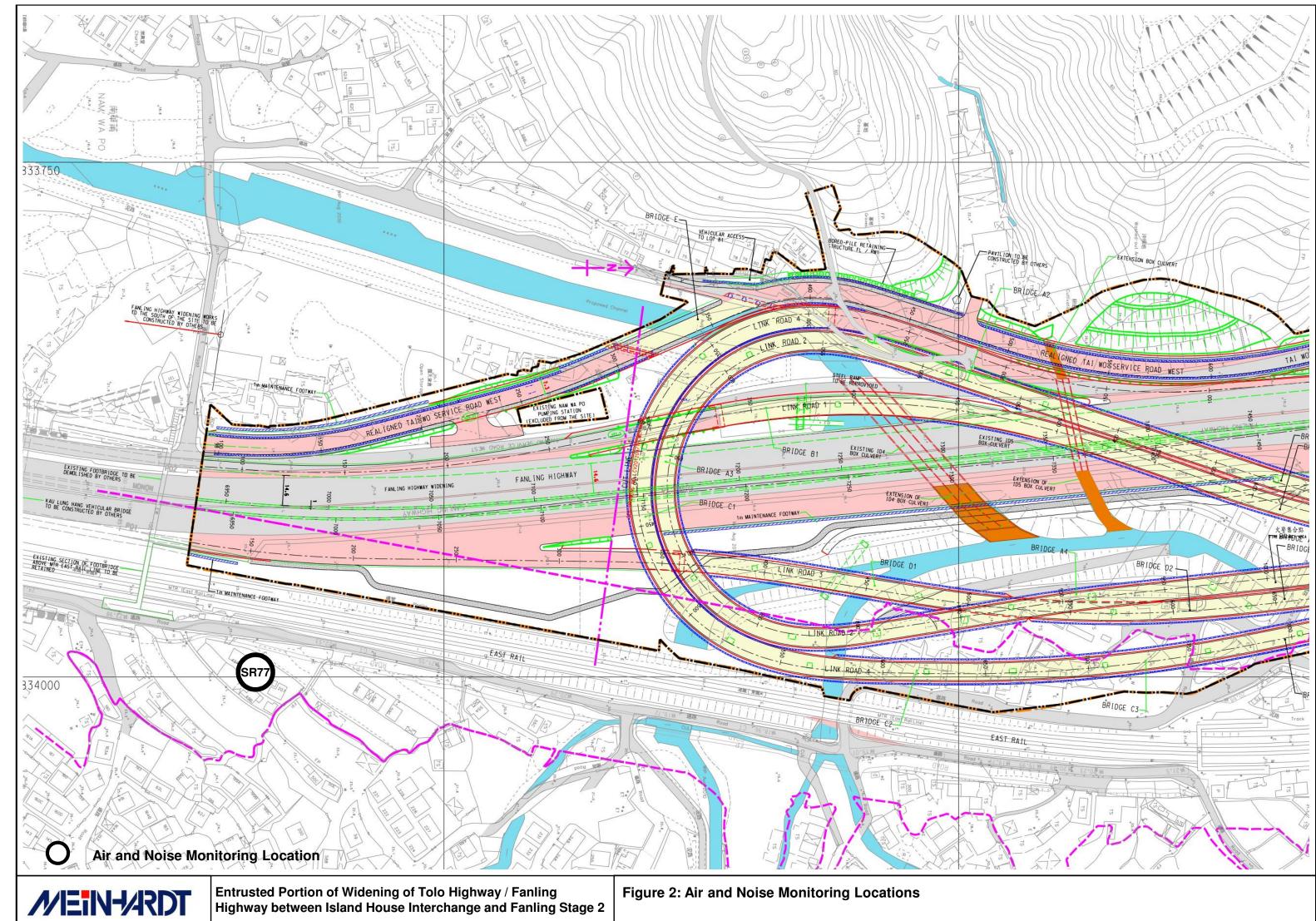
# Figure





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

Activity ID	Activity Name	OD	RD Start	Finish	TF		2019				
2 Month Dolli	ne Dragonne 2010 2 01 (Based on (IMDOCC)					Feb Mar Ap	r		May	Jun	Jul
Key Dates (C	ng Programme 2019-3-21 (Based on (UMP06C)										
KD-0400a	KD4: Section 3 - Remainder of Landscape Softworks not included in Section 3A (Ptel. EOT by Claim 56, 58)	0	0	20-May-19*	0					3 - Remainder of Landscape Softworks r	ot included in Se
KD-0500	KD4A: Section 3A - Landscape Softworks in NBZ1 (Potential EOT by Inclement Weather)	0	0	20-Apr-19*	-183		KD4/	A: Section 3A - Lands	cape Softworks in NBZ1 (Potenti		
KD-0800	KD6: Section 5 - Preservation and Protection of Trees (Potential EOT by Inclement Weather)	0	0	20-May-19*	-111				-	5 - Preservation and Protection of Trees (	
Key Dates (Fo	NPCCAST) KD4: Section 3 - Remainder of Landscape Softworks not included in Section 3A	0	0	20-May-19	0					3 - Remainder of Landscape Softworks r	
KD-0505	KD4A: Section 3A - Landscape Softworks in NBZ1	0	0	20-May-19	-214				KD4A: Section	3A - Landscape Softworks in NBZ1	
KD-0805	KD6: Section 5 - Preservation and Protection of Trees	0	0	20-May-19	-111				♦ KD6: Section	5 - Preservation and Protection of Trees	
Section IA & I	B - Fanling Highway Widening (KD-1 & KD-2)										
	ay South Portion between CH6935 and CH7470										
Noise Barrie	way Zone 1 between CH6935 and CH7130 (within SBZ2) ar										
FHW-1110	<ul> <li>Noise Barrier NB6 and NB7 - Remaining Stem Wall (28m, maintain access for extensioin of NB 70, VO199)</li> </ul>	30	177 16-Aug-18 A	22-Nov-19	125						
FHW-1140	c Noise Barrier NB70 - Footing (extended 10m under VO199)	153	153 23-Apr-19*	25-Oct-19	143					: :	
	padworks (195m)	1								<u> </u>	
	b Road Pavement (FLH NB 1st lane and Hard Shoulder)	138	138 23-Apr-19*	08-Oct-19	164						
Fanling High Noise Barrie	way Zone 2 between CH7130 and CH7290 ar										
	b Noise Barrier NB67-2 - Cap ID4-1A_1 and Cap ID4-1A_2 head beam (affected by Tau Pass, VO 191)	15	15 23-Apr-19*	10-May-19	241		•	:		04-1A_1 and Cap ID4-1A_2 head beam	
FHW-2370	c Access Ramp at Tau Pass - Additional Mini-Piling (3 nos.) (under VO191)	34	34 23-Apr-19*	03-Jun-19	268					Access Ramp at Tau Pass - Additi	ional Mini-Piling (
FHW-2370	d Access Ramp at Tau Pass - Pile caps and other structures (under VO191)	48	37 07-Mar-19 A	06-Jun-19	265					Access Ramp at Tau Pass - F	Pile caps and oth
	padworks (160m)										
	Permanent Street Light Installation (due to Claim No. 63)	21	21 20-Jun-18 A	18-May-19	270				Permanent Stree	Light Installation (due to Claim No. 63),	Permanent Stree
	Road Pavement on FLH SB 4th lane after Removal of Temp. Street Light (due to Claim No. 63)	11	11 20-May-19*	31-May-19	270					Road Pavement on FLH SB 4th lane a	after Removal of
FHW-2350	a Road Drainage and Pavement (near NB67-2, MN7.9 to MN7.11)	58	33 29-Mar-18 A	01-Jun-19	269					Road Drainage and Pavement (near	NB67-2, MN7.9
FHW-2350	<ul> <li>Installation of Drain pipe and Manholes (MN7.12 &amp; MN7.12A) (affected by Tau Pass under VO191)</li> </ul>	29	157 26-Nov-18 A	30-Oct-19	145						
FHW-2350	c Road Drainage and Pavement (near NB67-2, MN7.12 & MN7.12A) (affected by Tau Pass, VO not yet issed)	46	46 11-May-19*	06-Jul-19	241					1	F
Fanling High Noise Barrie	way Zone 3 between CH7290 and CH7380										
	Noise Barrier NB69 - Pile cap/ Footing and Stem Wall adjacent to NB lane (108m)	77	35 16-Oct-17 A	04-Jun-19	249					Noise Barrier NB69 - Pile cap/ Fo	oting and Stem
	padworks (130m) Road Pavement on FLH SB 4th lane after Removal of Temp. Street Light (due to Claim	10	10 31-Aug-18 A	04-May-19	292			Boad	Pavement on FLH SB 4th lane:	after Removal of Temp. Street Light (due	to Claim No. 63)
	No. 63) a Road Drainage (FLH NB hard shoulder, next to NB69)	61	50 26-Feb-18 A	22-Jun-19	227						Drainage (FLH N
	b Road Formation and Pavement (FLH NB 1st lane and HS next to NB69, due to Tau	25	25 24-Jun-19*	23-Jul-19	227						Bidinago (i Eiri
	Pass under VO191) ay North Portion between CH7470 and CH7925										
Fanling High	vay Zone 4 between CH7380 and CH7470										
	padworks (90m) Road Pavement (FLH SB 1st lane) by re-surfacing (due to Claim No. 63)	15	33 10-Sep-18 A	01-Jun-19	269					Road Pavement (FLH SB 1st lane) b	y re-surfacing (du
FHW-4150	a Road Drainage and Road Pavement (FLH H.S., Merging Lane)(due to Claim No. 63)	48	48 10-Sep-18 A	20-Jun-19	254					Road Dr	ainage and Road
FHW-4330	c Construction of FL/RW2 (mass concrete wall, VO not yet received)	38	38 27-Aug-18 A	08-Jun-19	259					Construction of FL/RW2 (r	mass concrete w
FHW-4330	d Remaining Gullies and Road Pavement after Construction of FL/RW2 (VO not yet	25	25 16-May-19*	14-Jun-19	259					Remaining Gullies	s and Road Pave
	received)			<u> </u>					3-Month Rollins P	ogramme updated to 2019-4-20	
			Actual Work			CEDD Contract No. CV/2012/09		Da		-	Approved
			Remaining Work			Liantang / Heung Yuen Wai BCP - Site Formation	on &	20-Apr-		FC D	
	📼		Summary Bar			Infrastructure Works, Contract 3					
			Critical Remaining	g Work		3-Month Rolling Programme					
	· · · · · · · · · · · · · · · · · · ·	•	Milestone			• •	Apr-19				
			Project Baseline E	Bar		· · · · · · · · · · · · · · · · · · ·	.p. 10				

vity ID	Activity Name	OD	RD	Start	Finish	TF	Feb Mar	2019 Apr		May	Jun	
FHW-43306	Road Drainage MN9.1 - MN9.3	24	0	23-Aug-18 A	23-Apr-19	302	i co ividi		load Drainage MN9.1 - MN9.	,		
Fanling Highw	ay Zone 5 between CH7470 and CH7600 (Provision of Kiu Tau Footbridge)											
	bridge Reprovision (East)		10		1 10 1 10	0.50						
FHW-50/0	Installation of Lighting Facilities (affect by design change which is under VO)	21	46	20-Jun-18 A	18-Jun-19	256						Installation of Lightin
FHW-5090	Erection of Pillar Box (affect by design change which is under VO)	30	0	28-Feb-19 A	29-Mar-19 A						Erection of Pilla	ar Box (affect by desi
FHW-5100	Power Cable Laying Works (affect by design change which is under VO)	36	36	23-Apr-19*	05-Jun-19	229					Power Cable Laying	g Works (affect by de
FHW-5110	Permanent Power Supply Connection (affect by design change which is under VO)	10	10	06-Jun-19	18-Jun-19	256						Permanent Power Su
FHW-5110a	Installation of Drainage Pipe	32	22	10-Sep-18 A	20-May-19	280				Installation of I	Drainage Pipe, Installation of	f Drainage Pipe
FHW-5110b	Laying of Floor Tiles (affect by design change which is under VO)	72	12	28-Jun-18 A	07-May-19	290			Laving of	Floor Tiles (affect by dea	ign change which is under \	/O). Laving of Floor ]
	Installation of Suspended Ceiling (affect by design change which is under VO)	104	12	21-May-18 A	07-May-19	290					(affect by design change wh	
				,					motaliatic	on or ouspended oalling	and by design unange with	
	f BFA Facilities (Lift) Permanent Power Supply (affect by design change which is under VO)	10	10	06-Jun-19*	18-Jun-19	229						Permanent Power Su
	Testing & Commissioning (affect by design change which is under VO)	27	27	19-Jun-19*	20-Jul-19	229					c	
		-		io dali io	20 001 10	220						
	sting TWSRE Road Drainage, Pavement and TCSS duct laying (Merging lane next to NB72)(due to raim)	2	2	25-May-19*	27-May-19	274				🔲 Roat	Drainage, Pavement and T	ICSS duct laying (Me
FHW-5500	Road Drainage (MS10.1-10.3A), Road Pavement and TCSS duct laying (Merging lane next to NB73)	31	44	21-Apr-18 A	15-Jun-19	258					Roa	d Drainage (MS10.1-
At-Grade Ro	ad Works (130m)											
FHW-5130	Road Pavement (FLH SB 1st lane) by re-surfacing (due to claim 63)	15	18	10-Sep-18 A	15-May-19	284				Road Pavement (FLH	SB 1st lane) by re-surfacing	(due to claim 63), Ro
FHW-5330a	Road Drainage (MN10.1-10.3A, gullies affected by Slope F18)	60	15	16-Dec-17 A	10-May-19	287			Road	d Drainage (MN10.1-10.3	A, gullies affected by Slope	F18), Road Drainage
FHW-53300	Fill Replacement Works 3SW-D/F18 next to FLH NB (further modified by VO not yet	73	24	01-Aug-18 A	22-May-19	278				Fill Replace	nent Works 3SW-D/F18 nex	t to FLH NB (further)
FHW-53300	received) Remaining Gullies, road formation and TCSS duct laying (log on effect by Slope F18	25	0	23-Jan-19 A	26-Mar-19 A							- Remaining Gulli
FHW-53306	under VO) Road Pavement (log on effect by Slope F18 under VO)	14	14	23-Apr-19*	09-May-19	288			Road	Pavement (log on effect t	y Slope F18 under VO)	
Fanling Highy	ay Zone 6 between CH7600 and CH7660 (Existing Vehicular Bridge)											
At-Grade Ro	adworks (60m)											
FHW-6330a	Road Drainage and Road Formation (FLH NB hard shoulder)	60	18	16-Dec-17 A	15-May-19	284				Road Drainage and R	ad Formation (FLH NB han	d shoulder), Road Dra
	ay Zone 7 between CH7660 and CH7925 at NBZ (Section 1B) adworks (265m)											
	Road Pavement (FLH NB 3rd lane at NBZ joint with CSHK) by re-surfacing	24	35	20-Aug-18 A	04-Jun-19	267			:		Road Pavement (FL	H NB 3rd lane at NB2
FHW-7340	Road Pavement, Central Barrier (FLH NB 4th lane) by re-surfacing	24	24	20-Aug-18 A	22-May-19	278				Boad Paver	nent, Central Barrier (FLH NE	3 4th lane) by resurfa
										ribud r dro		
	rks for Noise Barrier along widened Fanling Highway Installation of Steelworks & Panel for NB72 & NB73 (248m), adjacent to FLH SB lanes	16	16	23-Apr-19	11-May-19	286			Ins	tallation of Steelworks &	Panel for NB72 & NB73 (24	8m), adjacent to FLH
	at Zones 4, 5 & 6 Installation of Steelworks & Panel for NB67-2 (85m), adjacent to FLH NB lanes at	14	14	23-Apr-19*	09-May-19	270					nel for NB67-2 (85m), adjao	
	Zones 2 & 3									ation of Steeworks & Pa	er for NB67-2 (6511), adjac	
	Installation of Steelworks & Panel for NB69 (109m), adjacent to FLH NB lanes near LR1 at Zone 3	18	18	05-Jun-19*	26-Jun-19	249						Installatio
	nainder of the Works (KD-3) Road at Fanling Highway Interchange											
Link Road 1 (	near Abutment AB1)											
FHI-LR1-102	Backfilling works of abutment, Gully and Profile Barrier at Abutment AB1	20	0	28-May-18 A	03-Apr-19 A		Bac	ackfilling works of abutment, G	Gully and Profile Barrier at Ab	utment AB1		
Noise Barrie	Noise Barrier NB67-1 - Remaining ground beam of Bay 3 (allow access from TWSRW)	7	7	23-Apr-19*	30-Apr-19	295			Noise Barrier NB67-	1 - Remaining ground be	am of Bay 3 (allow access fr	nm TWSBW)
										r Handaning ground ba	an or buy o (allow about i	
	near Abutment AA1) SSW-D/FR32 Bay 3213 (including temporary works)	35	0	11-Mar-19 A	20-Mar-19 A				3SW-D/FR32	Bay 3213 (including tem	porary works)	
			Act	ual Work			CEDD Contract No. CV/2012/0	)9			gramme updated to 2	
			Re	maining Work					Date	Revision		ed Approv
				mmary Bar			Liantang / Heung Yuen Wai BCP - Site Fo		20-Apr-19	Revision 0	FC	DH
			_		- 14/		Infrastructure Works, Contract	t 3				
			_	tical Remainin	g vvork		3-Month Rolling Programme	!				
	◀	• •	🔶 Mil	estone			3MPR069 Page 2 of 5	20-Apr-19				
			Pro	ject Baseline E	Bar		······································	=• Api 10				

Sum Mall	Jun J i Pavement and Drainage next to Abutment (after completion of 1 Pabrication and Delivery of Sign Gantry DS11, Fabrication of n Gantry FAD\$11 and DS64 (include On site Fabrication) Permanent Fill Slope, Construction of Gullie Road Pavement Road Pormation, Road Drainage, TCSS du Road Formation, Road Drainage, TCSS du Road Marking I Road Marking Pipe Laying - CHA 185 - 228 (DN450) near Ext. TWSRW, 43n
Stem         M	Fabrication and Delivery of Sign Gantry DS11, Fabrication and Delivery of Sign Gantry DS11, Fabrication and Gantry FAD\$11 and DS64 (Include On sile Fabrication) Permanent Fil Slope, Construction of Guilia Road Pavement Road Pavement Road Formation, Road Drainage, TCSS du Road Formation, Road Drainage, TCSS du Road Marking Road Marking
grade         grade <th< td=""><td>n Gantry FAD\$11 and DS64 (include On site Fabrication) Permanent Fill Slope, Construction o Guilit Road Pavement Road Formation, Road Drainage, TCSS du B, Handrall, Itaffic signs, etc. for Bridge A, B, C and D I Road Marking</td></th<>	n Gantry FAD\$11 and DS64 (include On site Fabrication) Permanent Fill Slope, Construction o Guilit Road Pavement Road Formation, Road Drainage, TCSS du B, Handrall, Itaffic signs, etc. for Bridge A, B, C and D I Road Marking
HW SG 102         Fabrication and D8key of Sgin Ganty EAD S11         99         28         28 Dec 17A         24 May 19         276           HW SG 102         Fabrication and D8key of Sgin Ganty FAD S11 and DS64 (ndude On ella Flabriation)         15         15         23 Apr-19         10 May-19         27           HK SG 302         Pamaent FIB Slops, Contruction of Guiles and Profile Barless         48         35         25 Apr-18 A         04-Ju-19         22           HF4 LF3 3020         Pamaent FIB Slops, Contruction of Guiles and Profile Barless         48         35         25 Apr-18 A         04-Ju-19         22           HF4 LF3 3020         Pamaent FIB Slops, Contruction of Calles and Profile Barless         48         35         27 Apr-17         05 Ju-19         24           HF4 LF3 3020         Pamaent FIB Slops, Contruction of Callesgeeny corrrect to FLH         4         4         05 Ju-19         22           HF4 LF3 4040         Pemaent FIB Slops, Contruction of Callesgeeny corrrect to FLH         4         4         02 Apr-19A         22           HF4 LF3 4040         Pemaent FIB Slops, Contruction of Slops Flamiture including Slip Ganty, MB, Handrad, Italific Slips, add, to FIB Slops, MB, H	n Gantry FAD\$11 and DS64 (include On site Fabrication) Permanent Fill Slope, Construction o Guilit Road Pavement Road Formation, Road Drainage, TCSS du B, Handrall, Itaffic signs, etc. for Bridge A, B, C and D I Road Marking
Likk Road 3 (near Abdiment ACI)	Permanent Fil Slope, Construction of Gullie Road Pavement Poad Formation, Road Drainage, TCSS du Road Formation, Road Drainage, TCSS du Road Marking
Likk Road 3 gear Abdition (AD)	Permanent Fil Slope, Construction of Gullie Road Pavement Poad Formation, Road Drainage, TCSS du Road Formation, Road Drainage, TCSS du Road Marking
FH4LR3 3020       Permanent FII Slopa, Construction of Quiles and Profile Baniers       48       35       25 Apri 18 A       04-un-19       24         FH4LR3 3030       Road Pavement       1       1       05-un-19       05-un-19       242         FH4LR3 3040       Other Crill Works for TCSS ductlaying - along Link Road 3       25       25       05-un-19       05-un-19       242         Link Road 4 [veer Abutment ACI)       Veer Abutment ACI       Veer Abutment Abutmain Abutman Abutman Abutman Abutman Abutma	Road Pavement Road Formation, Road Drainage, TCSS du BB, Handrail, Itaffic signs, etc. for Bridge A, B, C and D I Road Marking
HH-LR3:040       Other CAil Works for TCSS duct laying - along Link Road 3       25       25       05-Jun-19       05-Jul-19       242         Link Road 4 (near Abutment AC)	Road Formation, Road Drainage, TCSS du B, Handrail, traffic signs, etc. for Bidge A, B, C and D J Road Marking
FH-LR3 3040       Other CAil Works for TCSS duct laying - along Link Road 3       25       25       05-Jun-19       05-Jul-19       242         Link Road 4 (near Abutinent AC!)	Road Formation, Road Drainage, TCSS du B, Handrail, traffic signs, etc. for Bidge A, B, C and D J Road Marking
Link Road A latiment AC1)	IB, Handrall, traffic signs, etc, for Bridge A, B, C and D
HH-LR4-4030       Read Formation, Road Drainage, TCSS ducting and Pavement       55       35       27-Nov-17A       04-Jun-19       223         HH-LR4-4040       Remaining Section of Carriageway connect to FLH       44       44       05-Jun-19*       27-Jul-19       223         R5-1020b       Other Street Funiture including Sign Gantry, NB, Handrail, traffic signs, etc, for BridgeA, 112       0       26-Feb-18A       20-Apr-19A       -         R5-1020b       Other Street Funiture including Sign Gantry, NB, Handrail, traffic signs, etc, for BridgeA, 112       0       26-Feb-18A       20-Apr-19A       -         R5-1100       Rinal Pavement and Road Marking       12       0       01-Mar-19A       19-Apr-19A       -       -       -       Final Pavement and Road Marking       -	IB, Handrall, traffic signs, etc, for Bridge A, B, C and D
FHI-LR4-400       Remaining Section of Carriageway connect to FLH       44       44       44       44       60-Jun-19*       27-Jul-19       23         Value - Payement, Street Fundures Lighting nake Internal Voids and Others         Value - Payement, Street Fundures Lighting nake Internal Voids and Others         Sect Fundures including Sign Gantry, NB, Handrall, Itaffic signs, etc, for Bridge, A       12       0       26-Feb-18A       20-Apr-19A       2         RS-1110       Pina Payement and Pood Marking       12       0       0-14-Mar-19A       19-Apr-19A       2         VBMORES         VINAU OTHER WASH (CHT)         VINAU OTHER WASH (CHT)         VA-1010c       Pipe Laying - CHA 135 - 160 (DN450) near Ext. TWSRW, 20m       10       16-Apr-18A       23-Aug-19       102         WA-1020       Pipe Laying - CHA 135 - 160 (DN450) near Ext. TWSRW, 20m       10       23-Apr-19*       23-Aug-19*       102       18-Apr-18A       23-Aug-19*       20         WA-1020       Pipe Laying - CHA 135 - 160 (DN450) near Ext. TWSRW, 25m       10       18-Apr-18A       23-Aug-19*       20       18-Apr-18A       23-Aug-19*       20       18-Apr-18A       23-Aug-19*       20       18-Apr-18A       23-Aug-19*       20       18-Apr-18A       <	IB, Handrall, traffic signs, etc, for Bridge A, B, C and D
Vaduet - Pavement, Store Funiture, icliphing inside Internal Vadisand Others       Image: Constraint of the street Funiture including Sign Ganty, NB, Handrail, traffic signs, etc. (or BridgeA, 112 0 26-Feb-18A 20-Apr-19A B, C and D       Image: Constraint of the street Funiture including Sign Ganty, NB, Handrail, traffic signs, etc. (or BridgeA, 112 0 0 01-Mar-19A 19-Apr-19A B, C and D       Image: Constraint of the street Funiture including Sign Ganty, NB, Handrail, traffic signs, etc. (or BridgeA, 12 0 0 01-Mar-19A 19-Apr-19A 19	I Foad Marking
RS-1020b       Other Street Fumiture including Sign Gantry, NB, Handrail, traffic signs, etc., for BridgeA, 112       0       26-Feb-18A       20-Apr-19A <ul> <li>B, C and D</li> <li>Final Pavement and Road Marking</li> <li>0</li> <li>0.1-Mar-19A</li> <li>19-Apr-19A</li> <li>WSD Works</li> <li>Final Pavement and Road Marking</li> <li>11</li> <li>10</li> <li>16-Apr-18A</li> <li>23-Aug-19</li> <li>102</li> </ul> 11         102         16-Apr-18A         23-Aug-19         102         10-         11         102         16-Apr-18A         23-Aug-19         102         10-	I Foad Marking
BC, Cand D       Real Payment and Road Marking       12       0       01-Mar-19A       19-Apr-19 A       19-Apr-19 A       19-Apr-19 A       19-Apr-19 A       10-Apr-19 A	I Foad Marking
WSD Works         WSD Works         WSD Works         WSD Prive         WSD Prive <t< td=""><td></td></t<>	
DM450 Fire Mains (CH4)         U	Pipe Laying - CHA 185 - 228 (DN450) near Ext. TWSRW, 43n
WA-1010c         Pipe Laying - CHA 38 - 113 (DN450) near Ext. TWSRW, 20m         11         102         16 Apr:18 A         23 Aug-19         102           WA-1020         Pipe Laying - CHA 113 - 135 (DN450) near Ext. TWSRW, 20m         102         102         23 Aug-19         187           WA-1030         Pipe Laying - CHA 135 - 160 (DN450) near Ext. TWSRW, 25m         19         102         18 Apr:18 A         23 Aug-19'         200           WA-110a         Pipe Laying - CHA 185 - 228 (DN450) near Ext. TWSRW, 43m         24         24         23 Aug-19'         276	Pipe Laying - CHA 185 - 228 (DN450) near Ext. TWSRW, 43n
WA-1030         Pipe Laying - CHA 135 - 160 (DN450) near Ext. TWSRW, 25m         19         102         18 Apr:18 A         23 - Aug-19*         200           WA-1110a         Pipe Laying - CHA 185 - 228 (DN450) near Ext. TWSRW, 43m         24         24         23 - Apr:19*         22 - May-19         278	Pipe Laying - CHA 185 - 228 (DN450) near Ext. TWSRW, 43n
WA-1030       Pipe Laying - CHA 135 - 160 (DN450) near Ext. TWSRW, 25m       19       102       18 Apr.18 A       23-Aug.19*       200         WA-1110a       Pipe Laying - CHA 185 - 228 (DN450) near Ext. TWSRW, 43m       24       24       23-Apr.19*       22-May.19       278	Pipe Laying - CHA 185 - 228 (DN450) near Ext. TW SRW, 43n
WA-1110a         Pipe Laying - CHA 185 - 228 (DN450) near Ext. TWSRW, 43m         24         24         23-Apr-19*         22-May-19         278	Pipe Laying - CHA 185 - 228 (DN450) near Ext. TW SRW, 43n
	Pipe Laying - CHA 185 - 228 (DN450) near Ext. TW SRW, 43r.
WA-1130b Pipe Laying - CHA 373 - 380 (DN450) near Ext. TWSRW, 7m 18 18 23-Apr-19" 15-May-19 271	ying - CHA 373 - 380 (DN450) near Ext. TWSRW, 7m
WA-1130c Pipe Laying - CHA 380 - 388 (DN450) near Ext. TWSRW, 8m 12 12 23-Apr-19* 07-May-19 277	380 - 388 (DN450) near Ext. TWSRW, 8m
WA-3040 Pipe Laying - CHA 810 - 835 (DN450) abng Ext. TWSRW SB, 25m (NBZ) 74 74 23-Apr-19* 22-Jul-19 215	
WA-3050 Pipe Laying - CHA 835 - 880 (DN450) along Ext. TWSRW SB, 45m (NBZ) 74 74 23-Apr-19* 22-Jul-19 215	
WA-3060 Pipe Laying - CHA 880 - 925 (DN450) abing Ext. TWSFW SB, 45m (NBZ) 68 68 23-Apr-19" 115-Jul-19 119	
WA-3080 Pipe Laying - CHA 925 - 972 (DN450) abing Ext. TWSRW SB (Slage 2), 47m (NBZ) 102 102 16-Jul-19* 114-Nov-19 119	
WA-4200 Pressure Test for CHA (CHA 380 -810) 13 13 08-May-19" 23-May-19 277	Pressure Test for CHA (CHA 380 - 810)
DN1200 Water Mains (CHC)	
WC-1030 Construction of IT inspection tee chamber(s) near the Jacking Pits 47 47 10-May-18A 19-Jun-19 25	Construction of IT in
DR2200 Water Mains (CHF)	
WF-4000 Modification of Existing DN2200 DAV Chamber at FLH NB near Kiu Tau Footbridge 35 35 23-Apr-19* 04-Jun-19 267 (covered by VO no.50)	Modification of Existing DN2200 DAV Char
Existing Nam Wa Po Trunk Sevage Pumping Station (PST3)	
PS-1010 Construction of New Boundary Wall for Pumping Station (PST3) 80 74 25-Nov-16 A 22-Jul-19 228	
Stage 1A - Realignment of Tai Wo Service Road West (KD-7)	
TWSRW Zone 5 between CH376 and CH520 Construction of Retaining Structures	
	Remaining works incl. railing, u-channel on top of Bored Pile Wal
TWSRW 515 (Siope Works and Retaining Wall of FL-C2 (covered by VO183) 60 25 01-Dec-17 A 23-May-19 277	Slope Works and Retaining Wall of FL-C2 (covered by VO18
Al-Grade Roadworks	
A-strate fuedwarks	;
	Rolling Programme updated to 2019-4-20
	Revision Checked Approve
Summary Bar     Liantang / Heung Yuen wai BCP - Site Formation & 20Apr-19     Revisic       Summary Bar     Infrastructure Works, Contract 3     0	m 0 FC DH
3-Month Rolling Programme	
3MPR069 Page 3 of 5 20-Apr-19	
Project Baseline Bar	<b> </b>

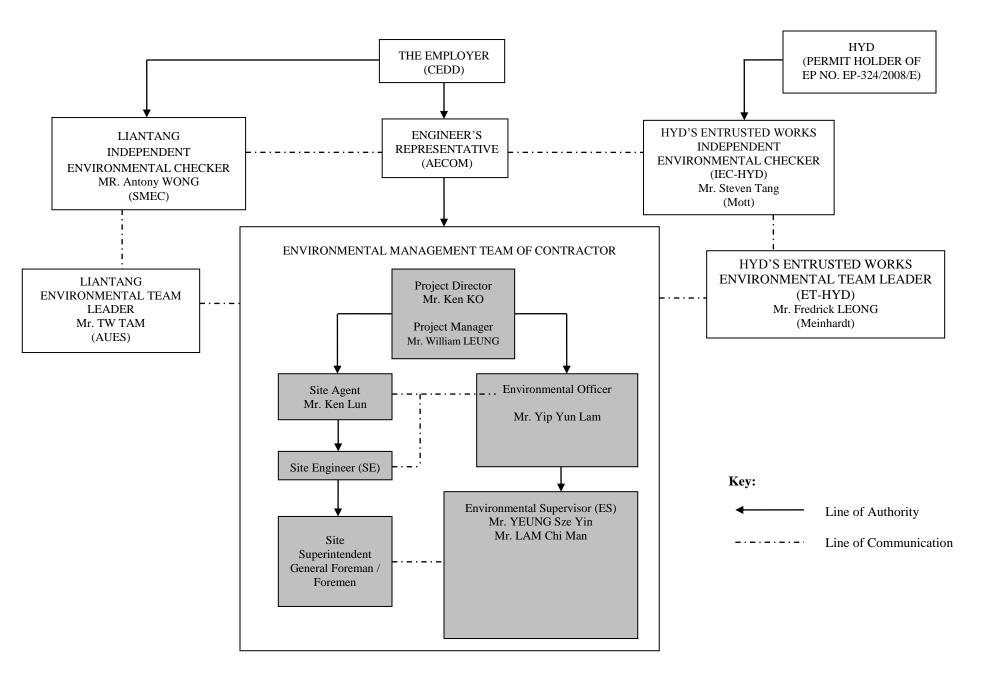
UNDERSTRATE       Contract Name (Windows)	ctivity ID Activity Name	OD	RD	Start	Finish	TF		2019					
1       1	TWSRW-511( Betaining Wall RW9 - Bay 9002 & 9003 (govered by VO No 116)	45	26	05-Feb-16 A	24-May-19	276		r	N				Jul
1000 (a) for all marked marked marked (marked marked ma										netaini			
<ul> <li></li></ul>	TW SRW-512( Hilling Works between Retaining Wall RW/ and RW8	192	39	07-Jun-16 A	10-Jun-19	263						Filling Works between F	Retaining Wall R
	TWSRW-512(Road Pavement and remaining works of Vehicular Access to Lot 81	27	27	12-Jul-18 A	25-May-19	260				Road	Pavement and re	maining works of Vehicu	Iar Access to Lo
The Start Start         Start	TWSRW-516( Construction of Extended Podium near RW7 incl. filling works & slope protection	85	48	27-Oct-16 A	20-Jun-19	254						Construc	tion of Extender
Above Another Services       Above And Another Services       Abo		49	49	10-Aug-18 A	21-Jun-19	253						Constru	uction of Pavilior
With Water And Young And	TWSRW Zone 7 betweeen CH530 and CH640												
		. 44	14	02 Apr 105	15 km 10	0.40						Deve alativa De a	Diana Dia
Addam         Addam <th< td=""><td>6 &amp; Zone 7)</td><td>ne 44</td><td>44</td><td>23-Apr-19"</td><td>12-Jun-19</td><td>242</td><td></td><td></td><td></td><td></td><td></td><td>Hemaining Roa</td><td>d Drainage, Hoa</td></th<>	6 & Zone 7)	ne 44	44	23-Apr-19"	12-Jun-19	242						Hemaining Roa	d Drainage, Hoa
Image: Normal Set al: S													
With With Source Sou	TWSRW-812( Remaining Road Drainage, Road Formation, Road Pavement and Footpath	60	60	23-Apr-19*	05-Jul-19	242							Re
Image: Additional system of the sys													
Unter Build Large And Particle 20* 1000 (1000 (1000 Agence) and a losse 10         1		75	75	23-Apr-19*	23-Jul-19	227							
india         india <td< td=""><td></td><td>16</td><td>12</td><td>10- Jan-18 A</td><td>07-May-19</td><td>166</td><td></td><td></td><td>Lititian Di</td><td>ut Loving in Arco 1. Ph</td><td>0002 CLP 122</td><td>k//(150m//A) approv 2/</td><td></td></td<>		16	12	10- Jan-18 A	07-May-19	166			Lititian Di	ut Loving in Arco 1. Ph	0002 CLP 122	k//(150m//A) approv 2/	
whole w	section								Otilities Dt	ici Laying In Area 1, Ph	lasez, ole - 132	.kv(15011VA), approx.30	on al intenaces
Life or case of multiple in Max Parale C. P. 1200(15000), spec. Sim         7         4         1 Main 1A         7 data 13         7           LUX 100         Life for trans Parale C. P. 1200(15000), spec. Sim         7         4         1 Main 1A         7 data 13         7           LUX 100         Life for trans Parale C. P. 1200(15000), spec. Sim for 10         10         5         5         4         3         6         5         4         3         6         5         6         5         6         5         6         5         6<		58	58	26-Jun-19	02-Sep-19	166						-	
under and		7	7	20-Apr-19*	26-Apr-19	245		Utiliti	es Duct Laying in Area	a 3, Phase 1 (along exis	sting TWSRW, Ap	pprox. 150m) (by utilities	s undertakers)
Barborn Thy	UU-1030A Utilities Duct Laying in Area 3, Phase 2, CLP - 132kV(150mVA), approx. 30m	27	49	10-Jan-18 A	21-Jun-19	156						Utilities	Duct Laying in A
Uit Bill Duil Lage Lage Lage Lage Lage Lage Lage Lage		/ 121	50	15-Sep-16 A	22-Jun-19	122						Utilitie	is Duct Laying ir
Jose TR3		r 33	33	24-Jun-19	01-Aug-19	122							
U-0002000       Betchner Works (LP 110)       10       0.0       0.04/14/19       96         U-0002000       Betchner Works (LP 110)       0       0.2///41/19       20       0.0         Windtag Works (Mark 1000000000000000000000000000000000000	own TTA)												
Processor (Section Laboration La		16	16	20-Apr-19*	05-May-19	349			Switch-over V	Works (CLP 11 kV)			
Processor (Processor A Processor A Procesor A Processor A Processor A Processor A Processor	UU-SO-3500 Switch-over Works (Town gas, DN400)	30	30	23-Jun-19*	22-Jul-19	271							
TWSW 14 1 Hole Bairs Stands 2.8 Mail 12 Kinds 21 Kind													
Note:         Contraction           Visit:         1000 Functions         4         0         1100 F174         1346r19A         0         1546r19A         0         0         1546r19A         0         0         1546r19A         0         0         0         1546r19A         0 <td></td> <td>15</td> <td>15</td> <td>27-May-19*</td> <td>13-Jun-19</td> <td>260</td> <td></td> <td></td> <td></td> <td></td> <td>:</td> <td>Noise Barrier Steelv</td> <td>vorks &amp; Panel fo</td>		15	15	27-May-19*	13-Jun-19	260					:	Noise Barrier Steelv	vorks & Panel fo
Address Randomis       Visite: 160 National Prevenent (ind. RuFeA RLP9)       24       0       11:02:17.4       13:Mer:18.4       20:Mar:18.4	Stage N4A & N4B - Realignment of Tai Wo Service Road East (KD-13 & KD-14)												
WistE-180         Read Formation, Keb and Prevenent (bot. RLP64, RLP6)         24         0         11-Od-17.4         13-Mer19A         Read Formation, Keb and Prevenent (bot. RLP64, RLP6)         Performation													
Willer         State         Organization         State		24	0	11-Oct-17 A	13-Mar-19 A		Road Formation, Kerb and Pavement (Incl. FL/F8	BA, FL/F9)					
WSRE-120         Read Pavement on Permanent Oyde Track         32         0         0.949/r19A         1748/r19A         Proad Powement	TWSRE-1190 Drainage Works on Permanent Cycle Track (under VO159)	80	0	15-Jan-18 A	20-Mar-19 A	_	Drainage Works on Permanent Cycle T	rack (under VO159)					
Wildle Zowe 2 between CK20 and C4000         ArGed Roadworks         TWSRE 2010       Darkage Works on Permanent       20       0       25 Oct 17       0 8Mar-19A       Pead Formation, Keb and Pavement       0       0       26 Mar-19A         TWSRE 2010       Darkage Works on Permanent Cycle Track. (under VO159)       80       0       26 Mar-19A       12 Apr-19A         TWSRE 2010       Darkage Works on Permanent Cycle Track. (under VO159)       45       0       03 Apr-18A       15 Mar-19A         TWSRE 2000       Darkage Works on Permanent Cycle Track. (under VO159)       45       0       03 Apr-18A       15 Mar-19A         WSRE 2000       Darkage Works on Permanent Cycle Track. (under VO159)       45       0       03 Apr-18A       15 Mar-19A         TWSRE 2000       Darkage Works on Permanent Opele Track. (under VO159)       45       0       03 Apr-18A       15 Mar-19A         WSRE 2000       Darkage Works on Permanent Opele Track. (under VO159)       45       0       03 Apr-18A       15 Mar-19A         WSRE 2000       Darkage Works for Malke Barrier akog readgend TWSR East       Darkage Works for Malke Barrier akog readgend TWSR East       Darkage Works for Malke Barrier akog readgend TWSR East       SMorth Rolling Programme       SMorth Rolling Programme       20 Apr-19       Darkage Revision O       East Approx      <		32	0	09-Apr-19 A	17-May-19.4			,			Deed Devenor	nt on Dominion ant Cuelo	Tro di
Accual Work       CEDD Contract No. CV/2012/09         Accual Work       Accual Work         TWSRE 2000       Read Formation, Keb and Pavement         20       0       22-02:17.A       08-Mar19A         20       0       22-02:17.A       08-Mar19A       Read Formation, Keb and Pavement         TWSRE 2100       Datage Works on Permanent Oyde Track (under VO159)       80       0       28-Mar19A       12-Apr19A         TWSRE 2006       Read Pavement on Permanent Oyde Track (under VO159)       45       0       03-Apr19A       15-Mar19A         TWSRE 2006       Read Pavement on Permanent Oyde Track (under VO159)       45       0       03-Apr19A       15-Mar19A         TWSRE 2006       Read Pavement on Permanent Oyde Track (under VO159)       45       0       03-Apr19A       15-Mar19A         TWSRE 2006       Read Pavement on Permanent Oyde Track (under VO159)       45       0       03-Apr19A       19-Apr19A         TWSRE 2006       Read Pavement on Permanent Oyde Track (under VO159)       45       0       03-Apr19A       19-Apr19A       19-Apr19A         TWSRE 2006       Read Formation, Keb and Pavement on Permanent Oyde Track (under VO159)       45       0       03-Apr19A       20-Apr19A         Actual Work       Track       40       0		02	Ŭ	03 Api-13 A	17 Way 13 A						noau ravenie	ni on Pernaneni Cyde	ITAUN
WSRE 210       Datage Works on Permanent Cycle Track (under VO159)       80       0       28-Mar:18A       28-Jun-19A       Image Works on Permanent Cycle Track (under VO159)       Image Permanent Cycle Track (under VO159)       Imag													
WSRE-2120       Road Pavement on Permanent Oyde Track       33       0       22Mar19A       12Apr19A         WSRE-2009       Jebraen OX800 and OHS6       Jebraen OX800 and OHS6       Jebraen OX800 and OHS6       Jebraen OX800 and OHS6         WSRE-3060       Dainage Works on Permanent Oyde Track (under VO159)       45       0       03Apr18A       15Mar19A       Dainage Works on Permanent Oyde Track (under VO159)       <	TWSRE-2100 Road Formation, Kerb and Pavement	20	0	23-Oct-17 A	08-Mar-19 A		Road Formation, Kerb and Pavement						
Wisher 20ne 3 between CHB0 and CH56         AtCrade Readworks         Wisher 3050 Datage Works on Permanent Cycle Track (under V0159)       45       0       03-Apr:18 A       15-Mar:19 A         Wisher 3050 Datage Works on Permanent Cycle Track (under V0159)       45       0       03-Apr:18 A       15-Mar:19 A         Wisher 3050 Datage Works on Permanent Cycle Track (under V0159)       40       0       21-Mar:19 A       19-Apr:19 A         Wisher 3060 Read Pavement on Permanent Cycle Track (under V0159)       40       0       21-Mar:19 A       19-Apr:19 A         Remaining Works for Noise Barrier along reakgned TWSR East       Actual Work       CEDD Contract No. CV/2012/09       3Month Rolling Programme updated to 2019-420         Liantang / Heung Yuen Wai BCP - Site Formation &       Infrastructure Works, Contract 3       3-Month Rolling Programme       20-Apr:19       Berision 0       FC       DH         Milestone       Milestone       3MPR069       Page 4 of 5       20-Apr:19       20-Apr:19	TWSRE-2110 Drainage Works on Permanent Cycle Track (under VO159)	80	0	26-Mar-18 A	28-Jun-19 A								Drainage W
Actual Works for Noise Burler along realigned TWSR East       Actual Work       CEDD Contract No. CV/2012/09       3Month Rolling Programme updated to 2019-420         Milestone       Citical Remaining Work       Summay Bar       Citical Remaining Work       Infrastructure Works, Contract 3       Summay Bar         Milestone       Milestone       Milestone       Milestone       Summay Bar       Infrastructure Works, Contract 3       Summay Bar         Milestone       Milestone       Milestone       Milestone       Milestone       Milestone	TWSRE-2120 Road Pavement on Permanent Cycle Track	33	0	22-Mar-19 A	12-Apr-19 A	-							
Actual Works for Noise Burler along realigned TWSR East       Actual Work       CEDD Contract No. CV/2012/09       3Month Rolling Programme updated to 2019-420         Milestone       Citical Remaining Work       Summay Bar       Citical Remaining Work       Infrastructure Works, Contract 3       Summay Bar         Milestone       Milestone       Milestone       Milestone       Summay Bar       Infrastructure Works, Contract 3       Summay Bar         Milestone       Milestone       Milestone       Milestone       Milestone       Milestone	TWSRE Zone 3 between CH380 and CH456												
TWSRE-3060       Read Pavement on Permanent Cycle Track       40       0       21-Mar-19 A       19-Apr-19 A         Remaining Works for Noise Barrier along realigned TWSR East       Actual Work       CEDD Contract No. CV/2012/09       3-Month Rolling Programme updated to 2019-4-20         Date       Revision       Checked       Approv         Summary Bar       Critical Remaining Work       3-Month Rolling Programme       Bervision 0       FC       DH         Summary Bar       Critical Remaining Work       Milestone       3-Month Rolling Programme       20-Apr-19       Infrastructure Works, 20-Apr-19	At-Grade Roadworks			00.4	45.11 10.1								
Remaining Works for Noise Barrier along realigned TWSR East       Actual Work       3Month Rolling Programme updated to 2019420         Actual Work       Remaining Work       Bernaining Work       Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3       Date       Revision       Checked       Approv         Critical Remaining Work       Milestone       3-Month Rolling Programme       3Month Rolling Programme       Date       Revision       Checked       Approv         Summary Bar       Critical Remaining Work       Milestone       3-Month Rolling Programme       3Month Rolling Programme       Date       Revision       Checked       Approv         3MPR069       Page 4 of 5       20-Apr-19       Date			0				Drainage Works on Permanent Cycle Track (ur	nder VO159)					
Actual Work       CEDD Contract No. CV/2012/09       3Month Rolling Programme updated to 2019-4-20         Remaining Work       Summary Bar       Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3       Date       Revision       Checked       Approv         Critical Remaining Work	TWSRE-3060 Road Pavement on Permanent Cycle Track	40	0	21-Mar-19 A	19-Apr-19 A			-				Road Pavement on P	ermanent Cycle
Numerical Contract No. CV/2012/09       Date       Revision       Checked       Approv         Remaining Work       Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3       Date       Revision 0       FC       DH         Summary Bar       Infrastructure Works, Contract 3         Milestone       3MPR069       Page 4 of 5       20-Apr-19       Infrastructure Works, Contract 3       Infrastructure Works, Contract 3	Remaining Works for Noise Barrier along realigned TWSR East				1	1							
Numerical Contract No. CV/2012/09       Date       Revision       Checked       Approv         Remaining Work       Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3       Date       Revision 0       FC       DH         Summary Bar       Infrastructure Works, Contract 3         Milestone       3MPR069       Page 4 of 5       20-Apr-19       Infrastructure Works, Contract 3       Infrastructure Works, Contract 3									1				
Remaining Work       Liantang / Heung Yuen Wai BCP - Site Formation &       Date       Revision       Checked       Approv         Summary Bar       Infrastructure Works, Contract 3       Infrastructure Works, Contract 3       Date       Revision       FC       DH         Otical Remaining Work       Milestone       3MPR069       Page 4 of 5       20-Apr-19       Image: Contract 3       Image: Contra 3       Image: Contract 3       Ima			Ac	ctual Work			CEDD Contract No. CV/2012/09						
Summary Bar     Infrastructure Works, Contract 3       Critical Remaining Work     3-Month Rolling Programme       Milestone     3MPR069		Remaining Work										Approved	
Critical Remaining Work				•					20-Apr-19	Revision 0	F	-C Di	1
♦ ♦ Milestone     3/MORth Rolling Programme     3/MORth Rolling Programme     3/MORth Rolling Programme	-			-	na Work								
3MPR069 Page 4 of 5 20-Apr-19		•											
Project Baseline Bar		-	•				3MPR069Page 4 of 520-4	Apr-19					
			Př	Ujeci Baseline E	⊃aſ								

Activity ID	ly ID Activity Name OD RD Start Finish TF 2019												
							Feb Mai	r	Apr		May	Jun	Jul
TW SRE-NB-	12 Installation of Steelwork & Transparent Panel - Noise Barrier NB3 (254m)	35	0	09-Jun-17 A	10-Apr-19 A				Installation of S	Steelwork & Tr	ansparent Panel - Noise Barrier NB3 (254m)		
Landscaping	& Establishment Works (KD-4, 4A, 5, 5A, 6)												
Secton 3A - L	andscaping Softworks in NBZ1												
S3A-1000	Transplant and Landscaping Softworks in NBZ1	50	0	14-Feb-19 A	29-Mar-19 A							Transpla	int and Land
Secton 3 - Re	mainder of Landscaping Softworks Not Included in Secton 3A												
S3-1000	Transplant and Landscaping Softworks on At grade Road	131	22	26-Mar-18 A	20-May-19	-168					Transplant ar	nd Landscaping Softworks on At grade Road	I, Transplan
S3-1010	Transplant and Landscaping Softworks on Viaduct or other remaining area	48	0	28-Nov-18 A	20-Feb-19 A							Transplant a	and Landsc
Section 4A: E	stablishment Works for Landscape Softworks under Section 3A												+
S4A-1000	Establishment Works at NBZ1	365	365	23-Mar-19 A	18-Apr-20	-230					:		<u></u>
Section 4: Es	tablishment Works for Landscape Softworks under Section 3												
S4-1000	Establishment Works for Remaining Part of Site	365	365	13-Mar-19 A	18-Apr-20	-228							
Section 5: Pre	eservation and Protection of Trees												
S5-1000	Preservation and Protection of Trees	0	0		20-May-19	-83					Preservation a	and Protection of Trees	

Actual Work	CEDD Contract No. CV/2012/09	3-Month Rolling Programme updated to 2019-4-20					
Remaining Work		Date	Revision	Checked	Approved		
	Liantang / Heung Yuen Wai BCP - Site Formation &	20-Apr-19	Revision 0	FC	DH		
Summary Bar	Infrastructure Works, Contract 3						
Critical Remaining Work	3-Month Rolling Programme						
Milestone							
Project Baseline Bar	3MPR069Page 5 of 520-Apr-19						



# Appendix B Project Organization Structure





# Appendix C Calibration Certificates of Monitoring Equipment



**Enovative Environmental Service Limited** 

### **REPORT OF EQUIPMENT CALIBRATION**

#### **INSTRUMENT DESCRIPTION**

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler and the filter paper is weighted by HOKLAS laboratory.

Instrument:Handheld TSP meterBrand Name:TSIModel No.:AM520Serial No.:5201735006Date of Calibration:01 August, 2019Date of Next Calibration : 01 August, 2020

#### **ISSUING ORGANISATION**

Phone:

Email:

Fax:

#### Address

Enovative Environmental Service Limited

Flat 23, 6/F, Block C, Goldfield Industrial Centre 1 Sui Wo Road Shatin, N.T. Hong Kong 852-2242 1020 852-3691 9240 info@eno.com.hk

homas

Mr Wong Siu Ho, Thomas Manager

Page 1 of 2

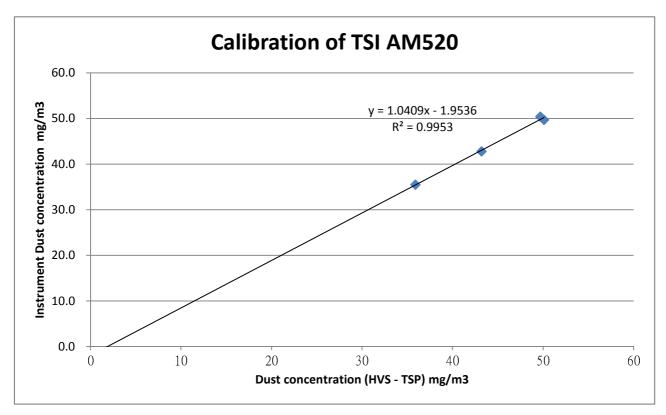


### **Enovative Environmental Service Limited**

Brand Name:	TSI
Model No.:	AM520
Serial No.:	5201735006
HVS No.:	A12-TSP-102
HVS Calibration Kit No.:	Tisch 1612
Date of Calibration:	01 August, 2019
Date of next Calibration:	01 August, 2020

#### **Calibration Record**

HVS - TSP mg/m3	35.9	43.2	50.1	49.7
TSI AM520	35.5	42.8	49.7	50.4



\*\*\* Filter paper being used in the calibration : 203475, 203476, 206020, 206603 Those filter papers are weighted by HOKLAS laboratory (ALS Technichem (HK) Pty Ltd.)

homas

Mr Wong Siu Ho, Thomas Manager

Page 2 of 2



.

## **Calibration Certificate**

Certificate No.	903414		Page	1 of 2	Pages
Customer :	Enovative Environmental Service	e Limited			
Address :	Flat 6, 3/F, Block E, Wah Lok Indust	trial Centre, 31-35 Sha	an Mei Street, Shat	tin, N.T., Hong	Kong.
Order No. :	Q91328		Date of receipt	:	4-Apr-19
Item Tested					
Manufacturer :	Sound Level Calibrator Rion NC-74		l.D. Serial No.	: 217656 : 3467850	06
Test Conditi	ons				
Date of Test : Ambient Temp	11-Apr-19		Supply Voltage Relative Humid		) %
Test Specific	cations				
Calibration chec Ref. Document/	k. Procedure : F21, Z02.				•
Test Results	3				
All results were	within the IEC 60942 Class 1 spe	ecifications.			
	shown in the attached page(s).				
Main Test equip	ment used:				
Equipment No.		Cert. No.		Traceable to	-
S014	Spectrum Analyzer	805025		NIM-PRC &	SCL-HKSAR
S240	Sound Level Calibrator	803357		NIM-PRC &	SCL-HKSAR
S041	Universal Counter	902477		SCL-HKSAF	2
S206	Sound Level Meter	805027		SCL-HKSAF	2
will not include allow overloading, mis-ha for any loss or dam The test equipment	this Calibration Certificate only relate to wance for the equipment long term drift, v andling, or the capability of any other labor age resulting from the use of the equipm to used for calibration are traceable to Inter only to the above Unit-Under-Test only Elva Chong	variations with environme oratory to repeat the mea ent. rnational System of Unit	ental changes, vibrations vibrations (SI), or by references (SI), or	on and shock dung Calibration Lto	ring transportation, d. shall not be liable
Hong Kong Calibration Lt	d.	vai Chung, NT Hong Kong			

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong, Tel: 2425 8801 Fax: 2425 8646



### **Calibration Certificate**

Certificate No. 903414

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	94.1	$\pm$ 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	1.001	± 1 %

Uncertainty :  $\pm$  3.6 x 10 <sup>-6</sup>

 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 : 996 hPa.

----- END -----

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



.

### **Calibration Certificate**

Certificate No.	903412		Page	1 of 3	Pages
Customer :	Enovative Environmental Service	Limited			
Address : F	Flat 6, 3/F, Block E, Wah Lok Industr	rial Centre, 31-35 Sha	an Mei Street, Shat	in, N.T., Hong	g Kong.
Order No. :	Q91328		Date of receipt	:	4-Apr-19
Item Tested					
Description :	Sound Level Meter				
Manufacturer :	Rion		I.D.	: 217524	
Model :	NL-52		Serial No.	: 001755	60
Test Conditio	ons				
Date of Test :	11-Apr-19		Supply Voltage	:	
Ambient Tempe			<b>Relative Humid</b>	ity: (50 ± 2	5) %
Test Specific	ations				
Calibration checl Ref. Document/F	k. Procedure: Z01, IEC 61672.				
Test Results					
	within the IEC 61672 Type 1 or m shown in the attached page(s).	anufacturer's spec	ification.		
Main Test equip	ment used:				•
Equipment No.		<u>Cert. No.</u>		Traceable t	<u>o</u>
	Multi-Function Generator	C190926		SCL-HKSA	R
S240	Sound Level Calibrator	803357		NIM-PRC 8	SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant. The test results apply to the above Unit-Under-Test only

$\sim 1$			$\square$	,
Calibrated by :	Appro	ved by :	(AA)	
Elva Chong			Kin Wong	
This Certificate is issued by:	Date:	11-Apr-19		
Hong Kong Calibration Ltd.				
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong K	ong.			
Tel: 2425 8801 Fax: 2425 8646				



### **Calibration Certificate**

Certificate No. 903412

Page 2 of 3 Pages

Results :

.

Acoustical signal test

1. Self-generated noise: 16.2 dBA (Mfr's Spec  $\leq$  17 dBA)

#### 2. Reference Sound Pressure Level

	UUT S				
	Frequency		Octave	Applied	UUT
Range (dB)	Weighting	Weighting	Filter	Value (dB)	Reading (dB)
$\begin{array}{c c} 1 \text{ cunge (ub)} & \text{ it engineses} \\ \hline 20 \sim 130 & \text{A} \end{array}$		F	OFF	94.0	94.1
		S	OFF		94.1
	С	F	OFF	· .	94.1
	Z	F	OFF		94.2
	A	F	OFF	114.0	114.1
		S	OFF		114.1
	С	F	OFF	]	114.1
	Z	F	OFF		114.2

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

#### **Electrical signal tests**

### 3. Electrical signal tests of frequency weightings (A weighting)

Frequency	Attenuation (dB)	IEC 61672 Type 1 Spec.
31.5 Hz	-39.6	- 39.4 dB, ± 2 dB
63 Hz	-26.1	- 26.2 dB, ± 1.5 dB
125 Hz	-16.1	- 16.1 dB, ± 1.5 dB
250 Hz	-8.6	- 8.6 dB, $\pm 1$ dB
500 Hz	-3.2	- $3.2 \text{ dB}, \pm 1.4 \text{ dB}$
1 kHz	0.0 (Ref)	$0 \text{ dB}, \pm 1.1 \text{ dB}$
2 kHz	+1.1	$+$ 1.2 dB, $\pm$ 1.6 dB
4 kHz	+0.7	$+$ 1.0 dB, $\pm$ 1.6 dB
8 kHz	-1.1	- 1.1 dB, + 2.1 dB ~ -3.1 dB
16 kHz	-8.5	- 6.6 dB, + 3.5 dB ~ - 17.0 dB

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

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



### **Calibration Certificate**

Certificate No. 903412

Page 3 of 3 Pages

#### 4. Frequency & Time weightings at 1 kHz

4.1 Frequency Weighting (Fast)

III IIoquonoj				
UUT	Applied	UUT	Difference	IEC 61672
Setting	Value (dB)	Reading (dB)	(dB)	Type 1 Spec.
A	94.0	94.0 (Ref.)		± 0.4 dB
С	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 :  $\pm 0.1 \text{ dB}$ 

1

Remarks : 1. UUT : Unit-Under-Test

- 2. The uncertainty claimed is for a confidence probability of not less than 95%.
- 3. Atmospheric Pressure : 996 hPa.
- 4. Preamplifier model : NH-25, S/N : 65662
- 5. Firmware Version: 1.8
- 6. Power Supply Check: OK
- 7. The UUT was adjusted with the supplied sound calibrator at the reference sound pressure level before the calibration.

----- END -----

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



# 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 November 2019

November 2019							
Sun	Mon	Tue	Wed	Thu	Fri	Sat	
					<b>1</b> ET Site Walk(14:00pm – 18:00pm)	2	
3	4	<b>5</b> 24-hour TSP + 3 x 1-hour TSP, Noise (SR77)	6	<b>7</b> ET Site Walk(14:00pm – 18:00pm)	8	9	
10	<b>11</b> 24-hour TSP + 3 x 1-hour TSP, Noise (SR77)	12	13	14	<b>15</b> 24-hour TSP + 3 x 1-hour TSP(SR77)	16	
17	18	19	20 ET Site Walk(09:45 am – 14:00 pm) with Liantang Project-wide & SSEMC	<b>21</b> 24-hour TSP + 3 x 1-hour TSP, Noise (SR77)	22	23	
24	25	26	<b>27</b> 24-hour TSP + 3 x 1-hour TSP, Noise (SR77)	<b>28</b> ET Site Walk(14:00pm – 18:00pm)	29	30	

	December 2019 December 2019								
Sun	Mon	Tue	Wed	Thu	Fri	Sat			
1	2	<b>3</b> 24-hour TSP + 3 x 1-hour TSP, Noise (SR77)	4	<b>5</b> ET Site Walk(14:00pm – 18:00pm)	6	7			
8	<b>9</b> 24-hour TSP + 3 x 1-hour TSP, Noise (SR77)	10	11	<b>12</b> ET Site Walk(14:00pm – 18:00pm)	<b>13</b> 24-hour TSP + 3 x 1-hour TSP	14			
15	16	17	18	<b>19</b> ET Site Walk(14:00pm – 18:00pm) 24-hour TSP + 3 x 1-hour TSP, Noise (SR77)	20	21			
22	23	<b>24</b> 24-hour TSP + 3 x 1-hour TSP, Noise (SR77) ET Site Walk(09:45 am – 14:00 pm) with Liantang Project-wide & SSEMC (To be confirmed)	25 Christmas Day	26 The first weekday after Christmas Day	27	28			
29	<b>30</b> 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 December 2019



# Appendix E Meteorological Data Extracted from Hong Kong Observatory

				Hong Kong	Observatory				King's Park	Wagian Isl	and*
		Air	Temperat	ture			Mean				
Day	Mean Pressure (hPa)	Absolute Daily Max (deg. C)	Mean (deg. C)	Absolute Delly Min (deg. C)	Nean Dew Point (deg. C)	Mean Relative Humidity (%)	Amount of Cloud (%)	Tofai Rainfail (mm)	Total Bright Sunchine (hours)	Prevailing Wind Direction (degreec)	Mean Wind Speed (km/h)
01	1015.7	29.3	25.7	24.0	20.4	73	49	0.0	9.7		
02	1014.6	28.2	25.3	23.9	20.3	74	31	0.0	9.6		
03	1013.9	28.8	25.7	23.8	20.7	74	48	0.0	9.3		
04	1014.5	28.6	25.0	22.8	15.5	56	28	0.0	9.5		**
05	1013.4	27.4	23.9	21.6	14.5	56	11	0.0	10.2		
06	1012.0	26.5	23.8	22.3	17.7	69	47	0.0	9.0		
87	1013.7	26.9	23.8	21.4	14.3	56	32	0.0	10.1		
08	1017.0	26.8	23.3	20.8	12.5	51	21	0.0	10.2		
09	1017.6	26.0	22.7	20.4	15.0	62	33	0.0	10.1		
10	1016.1	26.7	22.7	20.6	16.7	70	16	0.0	10.1		
11	1014.7	26.8	23.1	20.9	17.7	72	32	0.0	10.2		
12	1016.4	25.2	23.3	22.3	19.2	78	70	0.0	4.6		
13	1018.3	26.8	24.1	22.3	19.4	75	39	0.0	9.0		
14	1018.9	25.9	23.0	21.1	15.7	64	42	0.0	8.6		
15	1016.9	25.7	22.8	21.5	16.9	70	29	0.0	9.8		
16	1015.7	25.6	22.5	21.5	18.0	76	33	0.0	6.8		
17	1015.0	26.5	23.4	21.4	19.5	79	18	0.0	9.8		
18	1015.7	28.4	24.3	20.6	18.1	69	18	0.0	9.9		
19	1018.4	22.7	20.5	17.9	13.3	63	49	0.0	4.3		
20	1019.5	24.0	21.1	19.4	14.6	66	56	0.0	6.3		
21	1018.9	25.2	21.7	19.2	15.0	66	16	Trace	10.0		
22	1017.1	26.3	22.3	19.6	15.3	66	14	0.0	10.0		
23	1016.9	26.9	23.3	21.4	19.2	78	44	0.0	8.7		
24	1017.5	27.4	23.4	21.1	19.1	77	24	0.0	9.9		
25	1019.6	26.6	23.8	22.4	18.7	73	58	0.0	8.2		
26	1020.7	23.4	22.0	21.0	17.5	76	88	Trace	0.9		
27	1020.0	24.8	22.3	21.1	18.2	78	53	0.0	9.0		
28	1021.9	23.1	20.3	18.0	12.5	61	41	0.0	9.8		
29	1022.3	22.6	19.7	17.0	13.0	65	48	0.0	9.6		
30	1020.4	23.8	20.4	17.9	14.9	71	34	0.0	9.8		
Mean/Total	1017.1	26.1	23.0	21.0	16.8	69	37	Trace	263.0		
Normal <sup>7</sup>	1017.7	24.1	21.8	19.8	16.0	71	54	37.6	180.1	080	27.0

#### Dali Extract of Meteorological Observations, November 2019

\*\*\* unavallable

<sup>2</sup> Information of wind direction and wind speed for Wagian 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

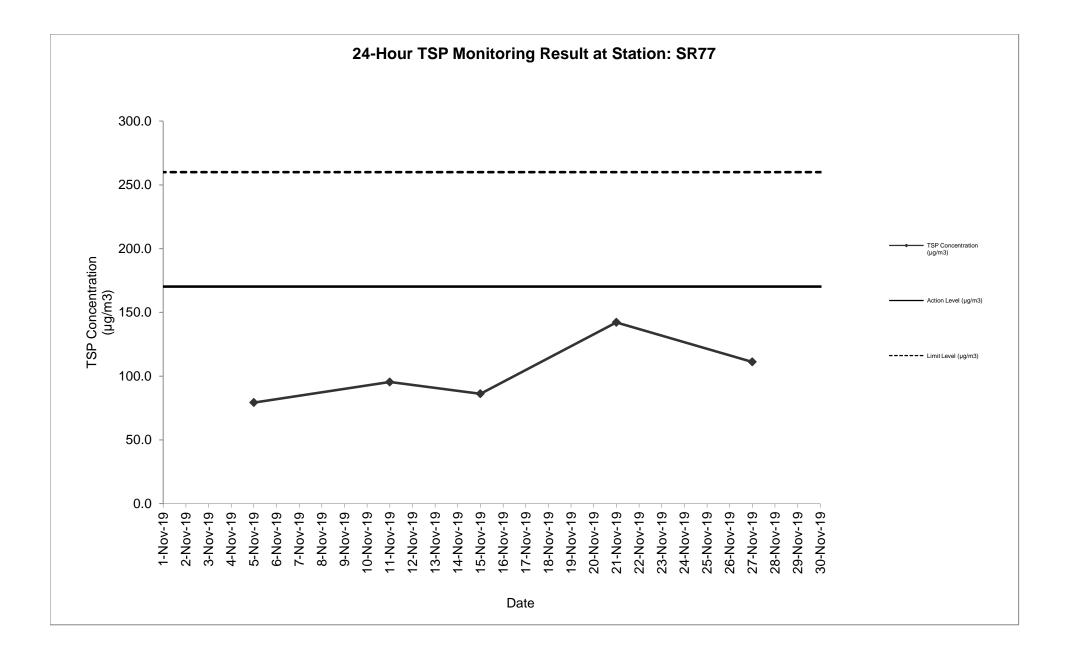
Sampling Date	Weather Condition	Starting Time	Paper No.		Nt. of paper	. (g)		Elapse Ti	me	Flo	ow Rate (C	FM)	Flov	w Rate (m <sup>3</sup>	/min)	Total Volume	TSP Concentration	Action Level	Limit Level	Wind speed	Wind direction	NOE	IR
Date	Condition	Time		Initial Wt	. Final Wt.	Wt. of Dust	Initial	Final	Sampling Hour	Initial	Final	Avg Flow Rate	Initial	Final	Avg Flow Rate	(m³)	(µg/m³)	(µg/m3)	(µg/m3)	m/s	unection		
5-Nov-19	Sunny	12:30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79.3	170.3	260.0	<5	N		
11-Nov-19	Sunny	13:30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	95.4	170.3	260.0	<5	N		
15-Nov-19	Sunny	13:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	86.2	170.3	260.0	<5	N		
21-Nov-19	Sunny	12:30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	142.1	170.3	260.0	<5	N		
27-Nov-19	Sunny	13:30	-	-	-	-	-	-	-	-	-	-	-	-	-		111.2	170.3	260.0	<5	N		
																Average	102.8						
																Min	79.3						
																Max	142.1						

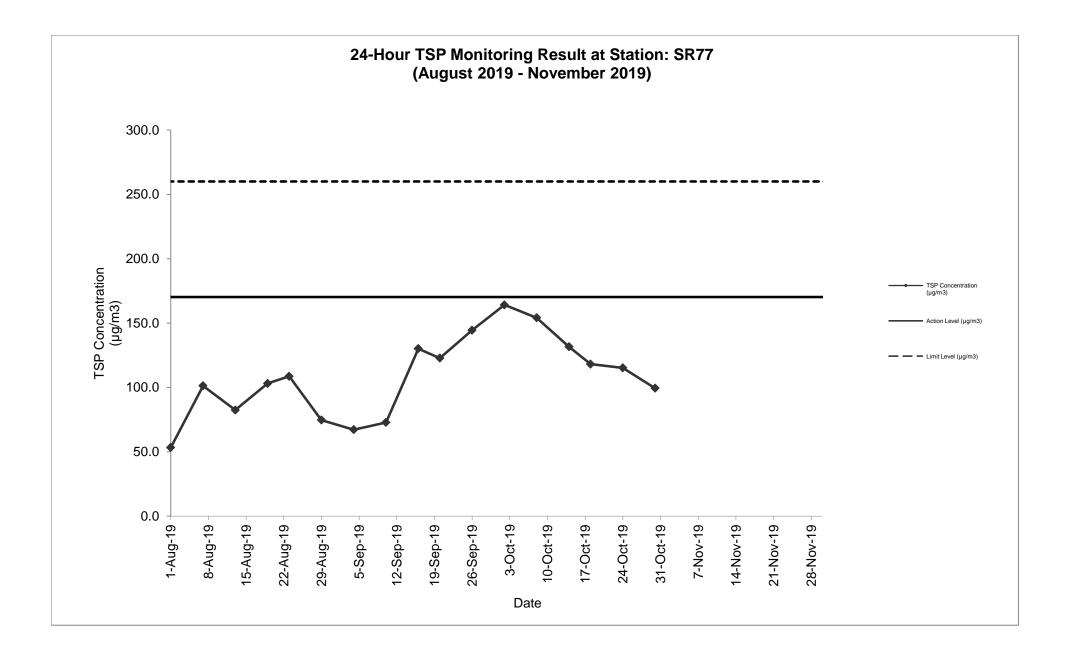
### 24-Hour TSP Monitoring Result at Station: SR77

Note:

No major dust source observed during the monitoring period Data in **Bold** denotes exceedanece of respective Action Level

Data in Bold Underline denotes exceedance of respective Limit Level The electricity supply of HVS at AM1(SR77) was suspended from 16 May 2019 and was no longer available. In order to have a more secure electricity supply, an alternative Handheld TSP meter was proposed to use for the temporary monitoring of 24-hr & 1hr air quality from 22 May 2019.





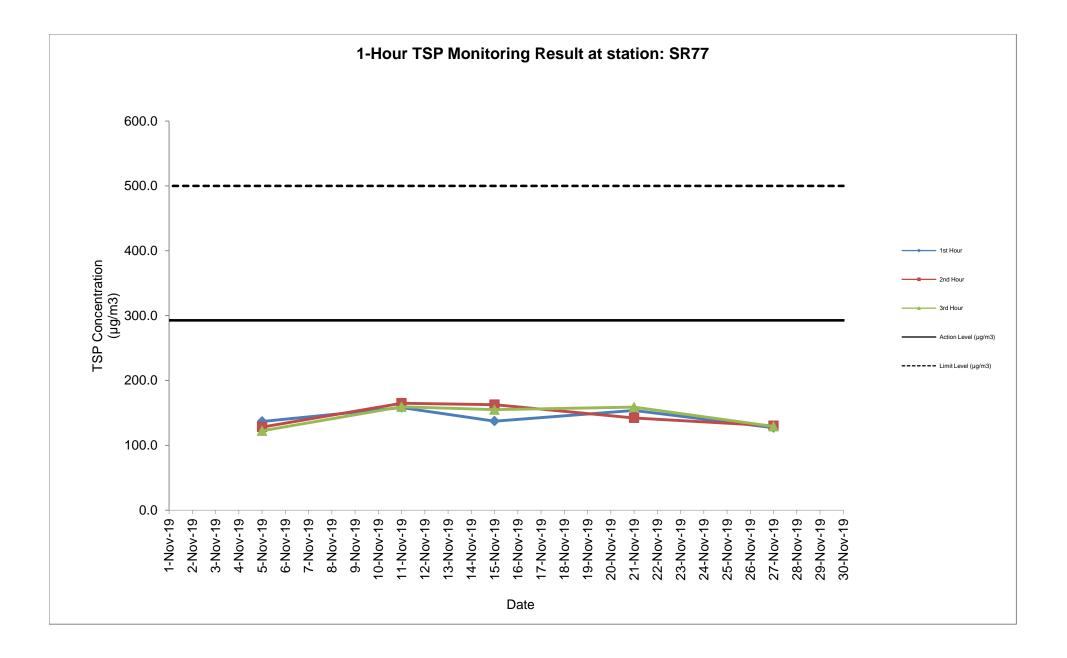
### Appendix E

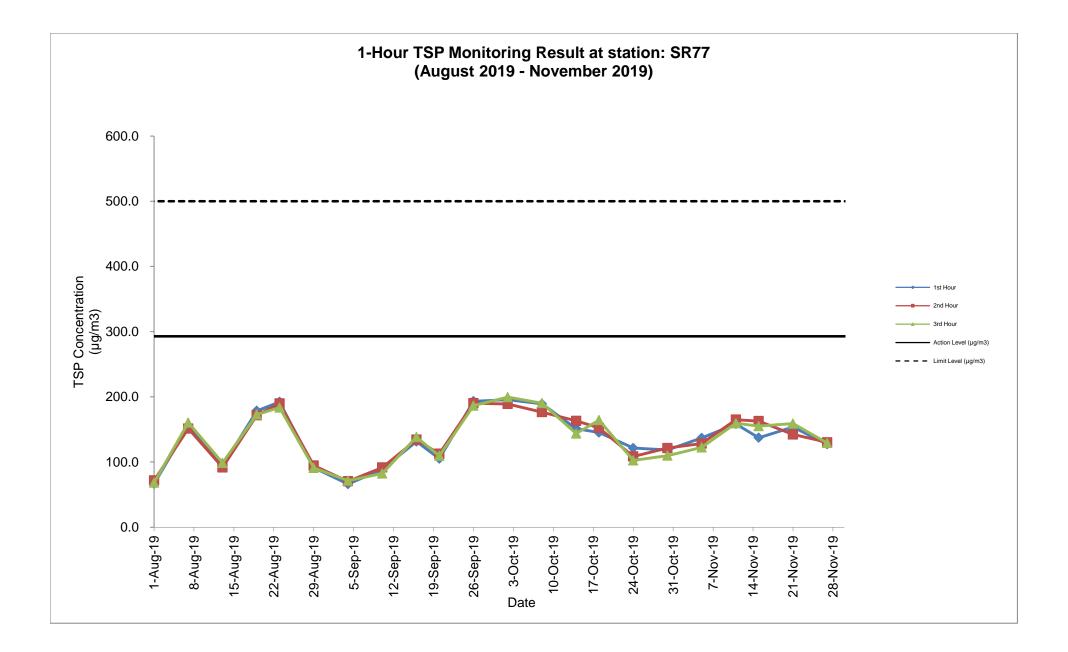
Air Quality Monitoring Results and their Graphical Presentation

Date	Weather	Time			Conc.(µg/m <sup>3</sup>	Action Level	Limit Level		
Dale	Condition		Time		1 <sup>st</sup> Hour	2 <sup>nd</sup> Hour	3 <sup>rd</sup> Hour	(µg/m3)	(µg/m3)
5-Nov-19	Sunny	9:30	-	12:30	136.8	128.2	122.4	292.7	500.0
11-Nov-19	Sunny	10:30	-	13:30	158.3	164.9	159.4	292.7	500.0
15-Nov-19	Sunny	11:00	-	13:00	137.2	162.7	154.9	292.7	500.0
21-Nov-19	Sunny	9:30	-	12:30	153.7	142.2	158.9	292.7	500.0
27-Nov-19	Sunny	10:30	-	13:30	127.1	130.2	129.1	292.7	500.0
						Average	144.4		
						Min	122.4		
						Max	164.9		

### 1-Hour TSP Monitoring Result at Station: SR77

Note:No major dust source observed during the monitoring periodData in Bold denotes exceedance of respective Action LevelData in Bold Underlinedenotes 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	<ol> <li>Identify source;</li> <li>Inform IEC and ER;</li> </ol>	<ol> <li>Check monitoring data submitted by ET;</li> </ol>	1. Notify Contractor.	1. Rectify any unacceptable practice;
Sampling day	<ol> <li>Repeat measurement to confirm finding;</li> </ol>	2. Check Contractor's working method.		2. Amend working methods if appropriate.
	<ol> <li>Increase monitoring frequency to daily.</li> </ol>			
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	<ol> <li>Repeat measurements to confirm findings;</li> </ol>	<ol> <li>Check Contractor's working method;</li> </ol>	<ol> <li>Notify Contractor;</li> <li>Ensure remedial measures</li> </ol>	<ul><li>days of notification;</li><li>2. Implement the agreed proposals;</li></ul>
	<ol> <li>Increase monitoring frequency to daily;</li> </ol>	<ol> <li>Discuss with ET and Contractor on possible remedial measures;</li> </ol>	properly implemented.	3. Amend proposal if appropriate.
	<ol> <li>Discuss with IEC and Contractor on remedial actions required;</li> </ol>	<ol> <li>Advise the ER on the effectiveness of the proposed remedial measures;</li> </ol>		
	<ol> <li>If exceedance continues, arrange meeting with IEC and ER;</li> </ol>	<ol> <li>Supervise Implementation of remedial measures.</li> </ol>		
	<ol> <li>If exceedance stops, cease additional monitoring.</li> </ol>			

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

#### Event and Action Plan for Noise

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



#### Event and Action Plan for Water Quality

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

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



# Appendix H Noise Monitoring Results and their Graphical Presentation

#### Appendix H Noise Monitoring Results and their Graphical Presentation

Noise Monitoring Result at SR77

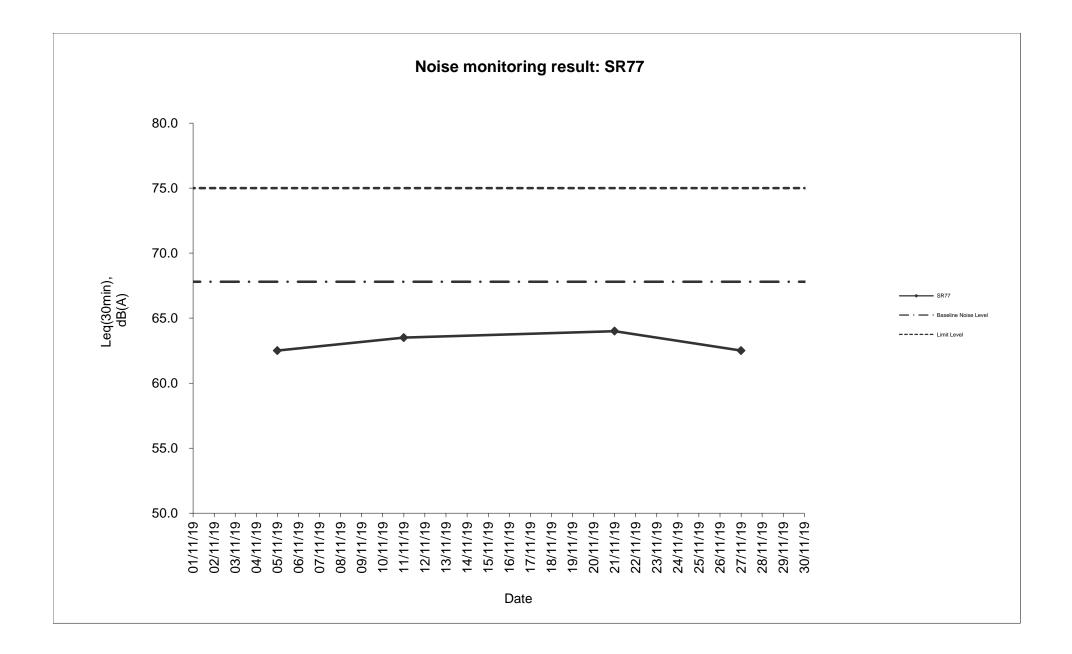
Date	Weather	Start	End	Measure	ed Noise Level	(dB(A))*	Baseline Corrected	Baseline Noise Level	Limit Level
	Condition	Time	Time	L10(30min)	L90(30min)	Leq(30min)	Level, dB(A)**	(dB(A)), Leq(30min)	dB(A)
2019-11-05	Sunny	11:15	11:45	88.5	55.5	62.5	-	67.8	75.0
2019-11-11	Sunny	11:15	11:45	93.5	56.0	63.5	-	67.8	75.0
2019-11-21	Sunny	11:15	11:45	101.5	58.5	64.0	-	67.8	75.0
2019-11-27	Sunny	11:15	11:45	87.0	59.0	62.5	-	67.8	75.0
					Average	63.1			
					Minimum	62.5			
					Maximum	64.0			

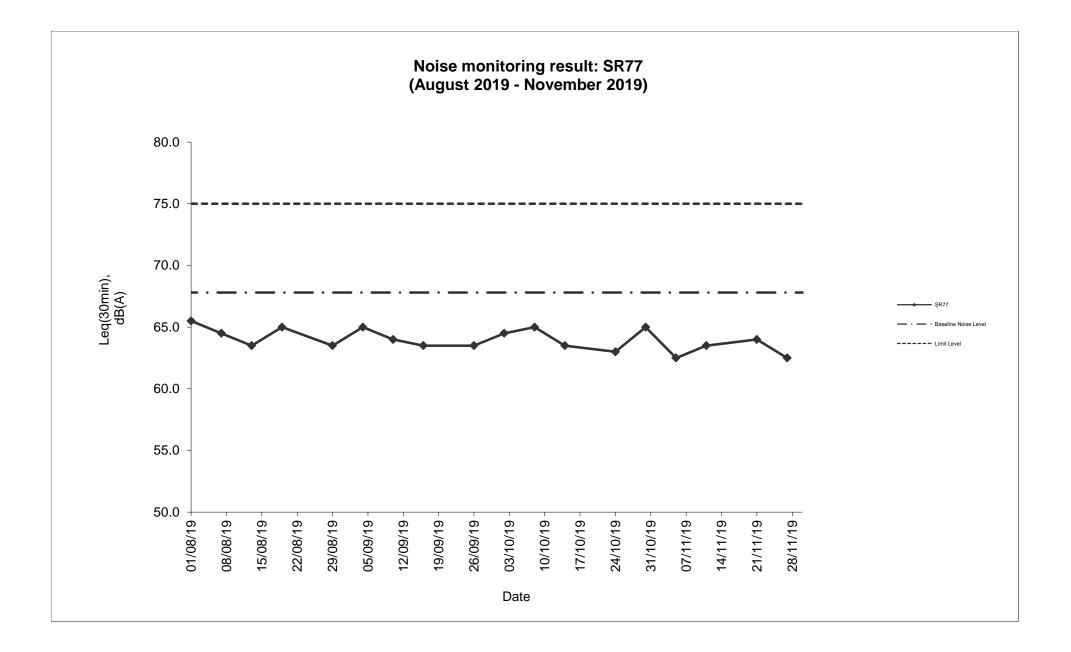
#### Remarks

\* +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 C	Quantities of In-	ert C&D Materia	als Generated	Monthly		Actual	Quantities of	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 <sup>3</sup> )	(in m <sup>3</sup> )	(in '000m <sup>3</sup> )									
Jan-19	2.937	0.927	2.010	-	-	2.010	0.997	-	-	-	-	0.145
Feb-19	4.659	0.841	3.818	-	-	3.818	0.030	-	-	-	-	0.075
Mar-19	5.146	0.376	4.770	-	-	4.770	-	-	-	-	-	0.075
Apr-19	0.787	0.138	0.644	-	-	0.644	-	-	-	-	-	0.145
May-19	4.291	0.414	3.877	-	-	3.877	-	-	-	-	-	0.180
Jun-19	1.345	-	1.345	-	-	1.345	0.301	-	-	-	-	0.115
Sub-Total	19.165	2.696	16.464	-	-	16.464	1.328	-	-	-	-	0.735
Jul-19	1.105	-	1.105	-	-	1.105	0.048	-	-	-	-	0.090
Aug-19	1.395	-	1.395	-	-	1.395	-	-	-	-	-	0.205
Sep-19	3.496	-	3.496	-	-	3.496	-	-	-	-	-	0.200
Oct-19	2.063	-	2.063	-	-	2.063	-	-	-	-	-	0.105
Nov-19	2.462	-	2.462	-	-	2.462	0.254	-	-	-	-	0.055
Dec-19												
Total												

Note: 1. Assume the density of soil fill is  $2 \text{ ton/m}^3$ .

2. Assume the density of rock and broken concrete is  $2.5 \text{ ton/m}^3$ .

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/m<sup>3</sup>.

9. Assume the density of paper is  $800 \text{ kg/m}^3$ .



## Appendix L Implementation Schedule of Environmental Mitigation Measures (EMIS)



Impact	Environmental Protection Measures	Timing	Responsibility	Implementation Status <sup>#</sup>
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	✓
	• All stockpiles of excavated materials or spoil of more than 50m <sup>3</sup> shall be enclosed, covered or dampened during dry or windy conditions.			$\checkmark$
	• 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.			✓
	• Travelling speeds shall be controlled to reduce traffic induced dust dispersion and re-suspension within the site from the operating haul trucks.			$\checkmark$
	• Vehicle washing facilities shall be provided to minimise the quantity of material deposited on public roads.			$\checkmark$
Air Quality during Operation	Not required	N/A	N/A	N/A
Noise			I	
Noise during Construction	• Use of silenced plant or plant equipped with mufflers or dampers in substitute of ordinary plant.	During Construction	Contractor	<ul> <li>✓</li> </ul>
	Reduce the number of equipment and their percentage on-time.			$\checkmark$
Noise during Operation	Not required	N/A	N/A	N/A
Water Quality			I	
Water Quality during	Road Widening Works, Earthworks and Culvert Extension Works			
Construction	<ul> <li>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.</li> </ul>	During Construction	Contractor	✓



Impact	Environmental Protection Measures	Timing	Responsibility	Implementation Status <sup>#</sup>
	• Sand traps, oil interceptors and other pollution prevention installations should be provided, properly cleaned and maintained.			$\checkmark$
	• 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	1	
Waste Management during Construction	General Waste			
	<ul> <li>Transport of wastes off site as soon as possible.</li> </ul>	During Construction	Contractor	$\checkmark$
	Maintenance of accurate waste records.			$\checkmark$
	• Minimisation of waste generation for disposal (via reduction/recycling/re-use).			$\checkmark$
	No on-site burning will be permitted.			$\checkmark$
	Use of re-useable metal hoardings/signboards.			$\checkmark$
	Vegetation from site clearance			
	<ul> <li>Segregation of materials to facilitate disposal.</li> </ul>	During Construction	Contractor	✓
	• Mulching to reduce bulk and where possible review opportunities for the possible beneficial use within landscaping areas.			✓



Impact	Environmental Protection Measures	Timing	Responsibility	Implementation Status <sup>#</sup>
	Demolition Wastes			
	<ul> <li>Segregation of materials to facilitate disposal.</li> </ul>	During Construction	Contractor	$\checkmark$
	Appropriate stockpile management.			$\checkmark$
	Excavated Materials			
	Segregation of materials to facilitate disposal / reuse.	During Construction	Contractor	$\checkmark$
	Appropriate stockpile management.			$\checkmark$
	• Re-use of excavated material on or off site (where possible).			$\checkmark$
	• 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.			$\checkmark$
	<ul> <li>Recycling and re-use of materials where possible (e.g. metal, wood from formwork)</li> </ul>			$\checkmark$
	• For material which cannot be re-used/recycled, collection should be carried out by an approved waste contractor for landfill disposal.			$\checkmark$
	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	~
	• The storage area shall not be located adjacent to sensitive receivers e.g. drains.			✓
	<ul> <li>Minimise waste production and recycle oils/solvents where possible.</li> </ul>			$\checkmark$

Notes (<sup>#</sup>):  $\checkmark$  – Compliance; Rem – Reminder; Obs – Observation; N/C – Non Compliance; N/A – Not Applicable



Impact	Environmental Protection Measures	Timing	Responsibility	Implementation Status <sup>#</sup>
	• A spill response procedure shall be in place and absorption material available for minor spillages.			✓
	<ul> <li>Use appropriate and labelled containers.</li> </ul>			$\checkmark$
	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.			$\checkmark$
	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:			
	<ul> <li>vehicle washing facilities to be provided at every discernible or designated vehicle exit point;</li> </ul>	During Construction	Contractor	✓



Impact	Environmental Protection Measures	Timing	Responsibility	Implementation Status <sup>#</sup>
	• 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:			
	<ul> <li>Bund and cover stockpiles to avoid run-off;</li> </ul>	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 Landscape and Visual during	Preservation of Existing Vegetation			
Construction		During Construction	Contractor	
	• 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 <sup>#</sup>
	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	<b>√</b>
	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	
C171000	20	1000	Koulung	Air quality issue	due to the construction works of this project.	
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	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	
				一帶,造成極大困擾 與明顯健康風險。要 求立即改善,懲罰相	monitoring station under this Contract was recorded in the past six months except 8 December 2017.	



Complaint Log No.	Date 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