

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

Annual EM&A Review Report

November 2019 to October 2020

Submitted to

Environmental Protection Department

Prepared By

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**

Annual EM&A Review Report

(November 2019 to October 2020)

Certified by: W. K. CHIU 

Position: Environmental Team Leader

Date: 27 November 2020

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Attn: **Mr. James Penny**

Your Reference

Our Reference

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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– Annual EM&A Report for November 2019 to October 2020 for the portion of Stage 2 works entrusted to CEDD under Contract No. CV/2012/09

24 November 2020
By Fax (2805 5028) & Hand

We refer to the Annual EM&A Report for November 2019 to October 2020 for the Project received on 18 November 2020 submitted by ET via email. We confirm we have no comment.

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED



Steven Tang
Independent Environmental Checker

c.c.		
HyD	Mr. Chung Lok Chin	By Fax (2714 5198)
CEDD/BCP	Mr. Lu Pei Yu	By Fax (3547 1659)
AECOM	Mr. Julian Ling	By Fax (2251 0698)
Meinhardt	Mr. W.K. Chiu	By Fax (2559 1613)

Date	Revision	Prepared By	Checked By	Approved By
27 November 2020	0	Bobo HUI 	WK CHIU 	Claudine LEE 

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EXECUTIVE SUMMARY

This report documents the findings of EM&A works conducted during the period between November 2019 and October 2020.

The impact stage EM&A programme for the Project includes air quality and noise quality monitoring.

The EM&A programme was carried out by the ET in accordance with the EM&A Manual requirement. It is concluded from the environmental monitoring and audit works that adequate environmental mitigation measures have been implemented by the civil works contractors where appropriate in the reporting period.

In the reporting period, no exceedance event was recorded. No necessary remedial actions have been taken.

No environmental non-compliance was noted. One environmental complaint was received, which was concluded that it was unlikely due to the construction works of this Project after investigations, was received. No environmental related prosecution or notification of summons was received in the reporting period.

1 INTRODUCTION AND PROJECT INFORMATION

1.1 Background

1.1.1 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.

1.1.2 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/D 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 in 5 November 2013.

1.1.3 **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.

1.2 Construction Programme and Activities

1.2.1 The master construction programme for the entire construction period is presented in **Appendix A**. The major construction activities undertaken in the reporting period are summarized below:

- Road Pavement Works;
- Remaining Works of Kiu Tau Footbridge
- Remaining Landscape Works; and
- Connect the permanent power supply for the lighting system.

1.3 Project Organisation

1.3.1 The project organization structure is shown in **Appendix B**. The key personnel contact names and numbers for the Project, together with the general enquiry hotline, are summarised in Error! Reference source not found..

Party	Role	Position	Name	Telephone	Fax
AECOM	Engineer's Representative	Senior Resident Engineer	Mr. Julian Ling	2171 3308	2171 3498
Mott MacDonald	Independent Environmental Checker (IEC)	IEC	Mr. Steven Tang	2828 5920	2827 1823
Chun Wo	Contractor	Site Agent	Mr. Chan	2638 6144	2638 7077
		Environmental Officer	Mr. Yip Yun Lam	3166 5111	
		Environmental Supervisor	Mr. Yeung Sze Yin Mr. Lam Chi Man	2638 7005	
Meinhardt	Environmental Team (ET)	ET Leader	Mr. Wk. Chiu	2859 5881	2540 1580

1.4 Purpose of the Report

1.4.1 This is the Annual EM&A Review Report which summaries the impact monitoring results and audit findings for the Project during the reporting period between November 2019 and October 2020.

2 SUMMARY OF EM&A REQUIREMENTS

2.1 Environmental Impact Hypothesis under Monitoring

2.1.1 The EIA Report concluded that with proper mitigation measures implemented, fugitive dust emission during construction phase would be controlled and will not exceed the acceptable criteria.

2.1.2 For construction noise, exceedances were predicted only at 2 schools (SR41 Wong Shiu Chi Middle School and SR45 HK Teacher's Association Secondary School) but they are out of the scope of this EM&A Programme. Hence the EIA did not anticipate any noise exceedances during construction phase within the scope of this EM&A Programme.

2.1.3 The above criteria have been tested under this EM&A Programme during the reporting period.

2.2 Monitoring Requirements

2.2.1 In accordance with the Updated EM&A Manual, environmental parameters including air quality, noise have been monitored. The specific parameters, monitoring frequency and the respective Action and Limit Levels are given in **Table 2.1** and the location of the monitoring station is shown in the **Figure 2**.

Table 2.1 Monitoring Parameter

Parameter	Unit	Action Level	Limit Level	Frequency
Air Quality				
1-hour TSP	µg/m ³	292.7	500	Three times every 6 days
24-hour TSP	µg/m ³	170.3	260	Once every 6 days
Construction Noise				
Leq 30min	dB(A)	When one documented valid complaint is received	75	Once every Week

2.2.2 The Event and Action Plan for the occurrence of non-compliance of the criteria of the monitoring parameters is annexed in **Appendix C**.

2.3 Environmental Mitigation Measures

2.3.1 Environmental mitigation measures have been recommended in the EM&A Manual and are given in **Appendix D**. The implementation status for the reporting period is also given in the Appendix.

3 SUMMARY OF EM&A MONITORING DATA

3.1 Monitoring Data

3.1.1 Monitoring has been conducted in accordance with the specification in the EM&A Manual in the reporting period. Summary of meteorological condition for the reporting period have been extracted from Hong Kong Observatory and are given in **Appendix E**. Monitoring data with graphical presentation for the reporting period have been given in **Appendix F**. A summary on the monitoring results has also been given in **Table 3.1**.

Table 3.1 Summary of Monitoring Data in the Reporting Period

Monitoring Location	Minimum	Maximum	Average
Air Quality			
1-hour Total Suspended Particulate			
SR77	25.4µg/m ³	199.4µg/m ³	133.4µg/m ³
24-hour Total Suspended Particulate			
SR77	14.3µg/m ³	155.1µg/m ³	79.3µg/m ³
Construction Noise			
SR77	61.5dB(A)	68.5dB(A)	64.4dB(A)

3.2 Summary of Monitoring Exceedances

3.2.1 The number of exceedance events recorded in the reporting period is summarized in **Table 3.2**.

3.2.2 Investigation for the exceedance event in the reporting period has been completed and the exceedance was concluded not related to the Project. No necessary remedial actions have been taken. The respective investigation report has been presented in the respective Monthly EM&A Report.

Table 3.2 Summary of Exceedance Events in the Reporting Period

Parameter		Number of Exceedance Events	Number of Project Related Exceedance Events
Air Quality			
1-hour Total Suspended Particulates	Action Level	0	0
	Limit Level	0	0
24-hour Total Suspended Particulates	Action Level	0	0
	Limit Level	0	0
Construction Noise			
Leq 30min	Action Level	0	0
	Limit Level	0	0

4 ENVIRONMENTAL NON-CONFORMANCE

4.1 Summary of Environmental Non-Compliance

4.1.1 No environmental non-compliance was recorded in the reporting period.

4.2 Summary of Environmental Complaints

4.2.1 No environmental complaint was received in the reporting period.

4.3 Summary of Environmental Summon and Successful Prosecutions

4.3.1 No environmental related prosecution or notification of summons was received in the reporting period. The cumulative statistics are provided in is provided in **Appendix G**.

5 REVIEW OF THE VALIDITY OF EIA PREDICTIONS

5.1.1 The EIA report predicted that with proper implementation of the mitigation measures for air and noise, environmental impact would be locally confined and controllable. During the reporting period, no exceedance was recorded and it is concluded that the EIA predictions are valid for the reporting period.

6 REVIEW OF EM&A PROGRAMME

6.1.1 The EM&A programme was considered successfully and adequately conducted during the course of the reporting period.

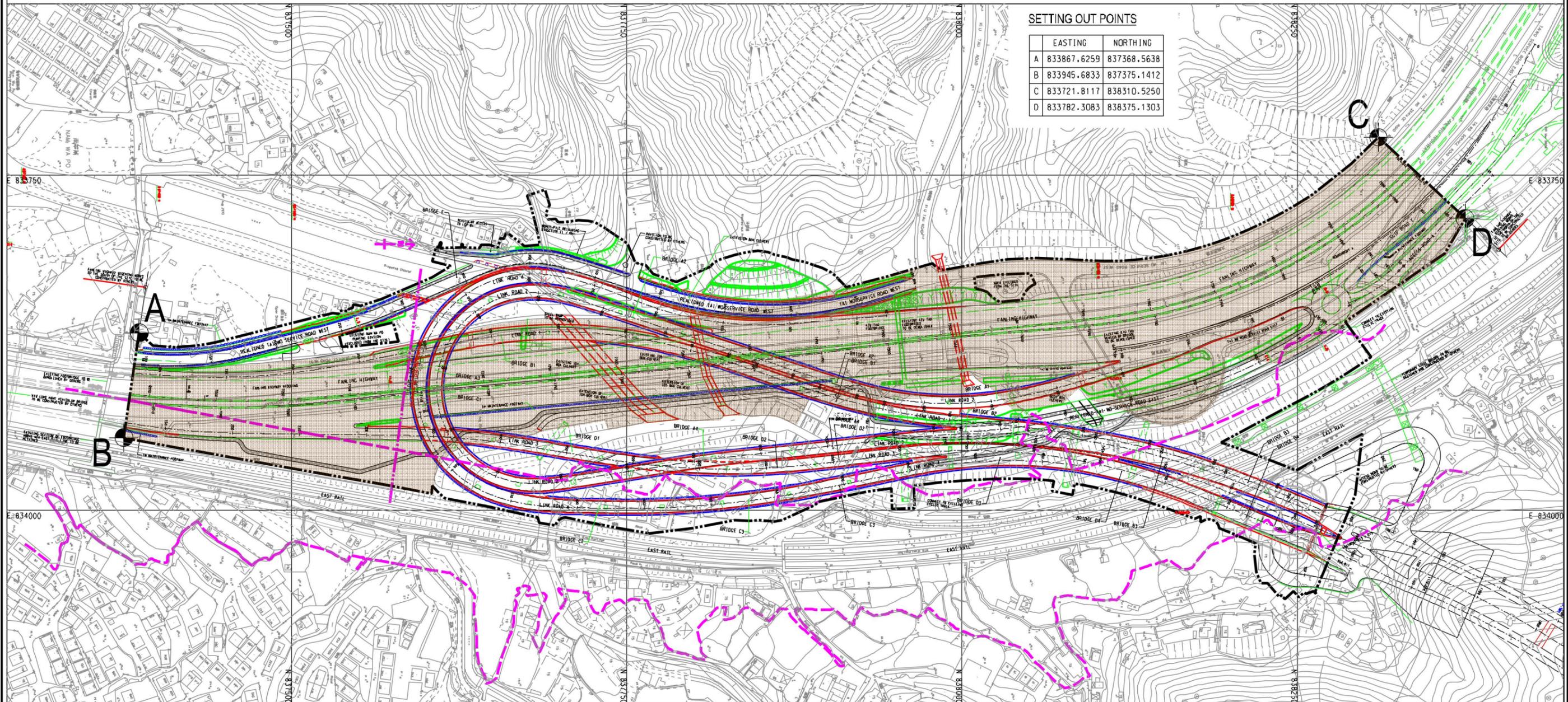
7 CONCLUSIONS

7.1.1 The EM&A programme was carried out by the ET in accordance with the EM&A Manual requirements. It is concluded from the environmental monitoring and audit works that adequate environmental mitigation measures have been implemented by the civil works contractors where appropriate in the reporting period.

7.1.2 In the reporting period, no exceedance event has been recorded. No necessary remedial actions have been taken.

7.1.3 No environmental non-compliances were noted. No environmental complaint was received in the reporting period.

Figure



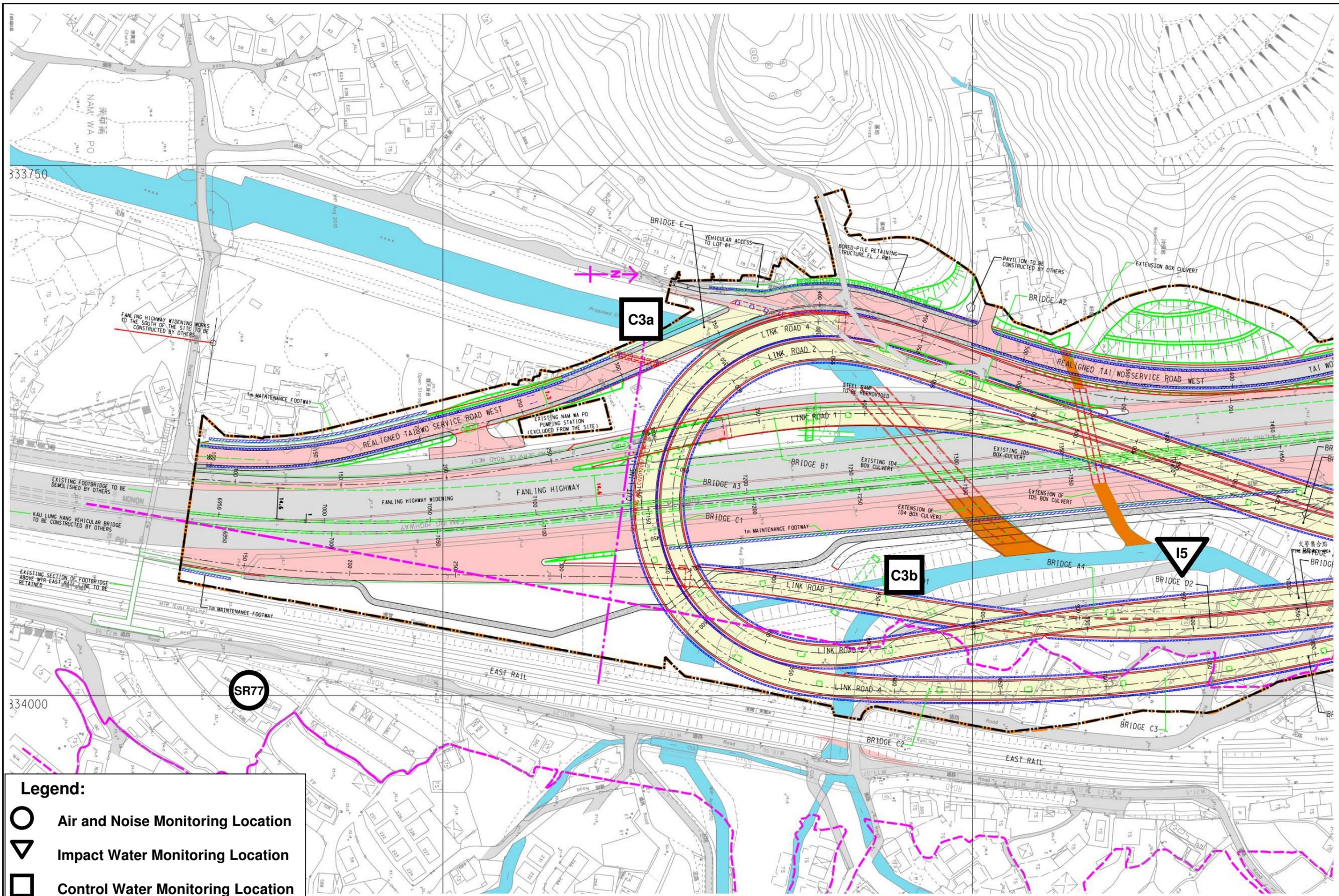
SETTING OUT POINTS

	EASTING	NORTHING
A	833867.6259	837368.5638
B	833945.6833	837375.1412
C	833721.8117	838310.5250
D	833782.3083	838375.1303

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Legend:

Works Area for Entrusted Portion



- Legend:**
- Air and Noise Monitoring Location
 - ▽ Impact Water Monitoring Location
 - Control Water Monitoring Location

Figure 2: Environmental Monitoring Locations

Appendix A Construction Programme

Activity ID	Activity Name	OD	RD	Start	Finish	TF	2019					
							Mar	Apr	May	Jun	Jul	Aug
3-Month Rolling Programme 2019-4-21 (Based on UMP06C)												
Key Dates (Contractual)												
KD-0400a	KD4: Section 3 - Remainder of Landscape Softworks not included in Section 3A (Pref. EOT by Claim 56, 58)	0	0		20-May-19*	0						
KD-0500	KD4A: Section 3A - Landscape Softworks in NBZ1 (Potential EOT by Inclement Weather)	0	0		20-May-19*	-213						
KD-0800	KD6: Section 5 - Preservation and Protection of Trees (Potential EOT by Inclement Weather)	0	0		20-May-19*	-110						
Key Dates (Forecast)												
KD-0405	KD4: Section 3 - Remainder of Landscape Softworks not included in Section 3A	0	0		20-May-19	1						
KD-0505	KD4A: Section 3A - Landscape Softworks in NBZ1	0	0		20-May-19	-213						
KD-0805	KD6: Section 5 - Preservation and Protection of Trees	0	0		20-May-19	-110						
Section IA & IB - Fanling Highway Widening (KD-1 & KD-2)												
Fanling Highway South Portion between CH6935 and CH7470												
Fanling Highway Zone 1 between CH6935 and CH7130 (within SBZ2)												
Noise Barrier												
FHW-1110b	Noise Barrier NB6 and NB7 - Remaining Stem Wall (28m, maintain access for extension of NB 70, VO199)	30	0	16-Aug-18 A	30-Apr-19 A		Noise Barrier NB6 and NB7 - Remaining Stem Wall (28m, maintain access for extension of NB 70, VO199)					
FHW-1140c	Noise Barrier NB70 - Footing (extended 10m under VO199)	153	0	20-Feb-19 A	30-Apr-19 A							
At-Grade Roadworks (195m)												
FHW-1350b	Road Pavement (FLH NB 1st lane and Hard Shoulder)	138	0	20-Mar-19 A	20-May-19 A							
Fanling Highway Zone 2 between CH7130 and CH7290												
Noise Barrier												
FHW-2340b	Noise Barrier NB67-2 - Cap ID4-1A_1 and Cap ID4-1A_2 head beam (affected by Tau Pass, VO 191)	15	0	23-Apr-19 A	10-May-19 A		Noise Barrier NB67-2 - Cap ID4-1A_1 and Cap ID4-1A_2 head beam (affected by Tau Pass, VO 191)					
FHW-2370c	Access Ramp at Tau Pass - Additional Mini-Piling (3 nos.) (under VO191)	34	0	20-Feb-19 A	28-Apr-19 A		Access Ramp at Tau Pass - Additional Mini-Piling (3 nos.) (under VO191)					
FHW-2370d	Access Ramp at Tau Pass - Pile caps and other structures (under VO191)	48	0	07-Mar-19 A	03-May-19 A		Access Ramp at Tau Pass - Pile caps and other structures (under VO191)					
At-Grade Roadworks (160m)												
FHW-2240	Permanent Street Light Installation (due to Claim No. 63)	21	0	20-Jun-18 A	13-Mar-19 A		Permanent Street Light Installation (due to Claim No. 63)					
FHW-2250	Road Pavement on FLH SB 4th lane after Removal of Temp. Street Light (due to Claim No. 63)	11	0	20-Mar-19 A	10-Apr-19 A		Road Pavement on FLH SB 4th lane after Removal of Temp. Street Light (due to Claim No. 63)					
FHW-2350a	Road Drainage and Pavement (near NB67-2, MN7.9 to MN7.11)	58	0	29-Mar-18 A	18-May-19 A		Road Drainage and Pavement (near NB67-2, MN7.9 to MN7.11)					
FHW-2350b	Installation of Drain pipe and Manholes (MN7.12 & MN7.12A) (affected by Tau Pass under VO191)	29	0	26-Nov-18 A	23-Apr-19 A		Installation of Drain pipe and Manholes (MN7.12 & MN7.12A) (affected by Tau Pass under VO191)					
FHW-2350c	Road Drainage and Pavement (near NB67-2, MN7.12 & MN7.12A) (affected by Tau Pass, VO not yet issued)	46	0	20-Jan-19 A	13-May-19 A		Road Drainage and Pavement (near NB67-2, MN7.12 & MN7.12A) (affected by Tau Pass, VO not yet issued)					
Fanling Highway Zone 3 between CH7290 and CH7380												
Noise Barrier												
FHW-3340	Noise Barrier NB69 - Pile cap/ Footing and Stem Wall adjacent to NB lane (108m)	77	0	16-Oct-17 A	30-Apr-19 A		Noise Barrier NB69 - Pile cap/ Footing and Stem Wall adjacent to NB lane (108m)					
At-Grade Roadworks (130m)												
FHW-3240	Road Pavement on FLH SB 4th lane after Removal of Temp. Street Light (due to Claim No. 63)	10	10	31-Aug-18 A	30-May-19	296	Road Pavement on FLH SB 4th lane after Removal of Temp. Street Light (due to Claim No. 63), Road					
FHW-3350a	Road Drainage (FLH NB hard shoulder, next to NB69)	61	0	26-Feb-18 A	18-May-19 A		Road Drainage (FLH NB hard shoulder, next to NB69)					

- Actual Work
- Remaining Work
- Summary Bar
- Critical Remaining Work
- ◆ ◆ Milestone
- Project Baseline Bar

CEDD Contract No. CV/2012/09
Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3
3-Month Rolling Programme
3MPR070 _____ **Page 1 of 5** _____ **20-May-19**

3-Month Rolling Programme			
Date	Revision	Checked	Approved
20-May-19	Revision 0	FC	DH

Activity ID	Activity Name	OD	RD	Start	Finish	TF	2019					
							Mar	Apr	May	Jun	Jul	Aug
FHW-3350b	Road Formation and Pavement (FLH NB 1st lane and HS next to NB69, due to Tau Pass under VO191)	25	0	19-Mar-19 A	16-May-19 A		[Gantt bar: Mar to May]					
Fanling Highway North Portion between CH7470 and CH7925												
Fanling Highway Zone 4 between CH7380 and CH7470												
At-Grade Roadworks (90m)												
FHW-4150	Road Pavement (FLH SB 1st lane) by re-surfacing (due to Claim No. 63)	15	0	10-Sep-18 A	27-Apr-19 A		[Gantt bar: Mar to May]					
FHW-4150a	Road Drainage and Road Pavement (FLH H.S., Merging Lane)(due to Claim No. 63)	48	0	10-Sep-18 A	16-Apr-19 A		[Gantt bar: Mar to May]					
FHW-4330c	Construction of FL/RW2 (mass concrete wall, VO not yet received)	38	0	27-Aug-18 A	04-Apr-19 A		[Gantt bar: Mar to May]					
FHW-4330d	Remaining Gullies and Road Pavement after Construction of FL/RW2 (VO not yet received)	25	0	11-Feb-19 A	18-May-19 A		[Gantt bar: Mar to May]					
FHW-4330e	Road Drainage MN9.1 - MN9.3	24	0	23-Aug-18 A	20-May-19 A		[Gantt bar: Mar to May]					
Fanling Highway Zone 5 between CH7470 and CH7600 (Provision of Kiu Tau Footbridge)												
Kiu Tau Footbridge Re-provision (East)												
FHW-5070	Installation of Lighting Facilities (affect by design change which is under VO)	21	46	20-Jun-18 A	13-Jul-19	260	[Gantt bar: Jun to Jul]					
FHW-5090	Erection of Pillar Box (affect by design change which is under VO)	30	0	28-Feb-19 A	29-Mar-19 A		[Gantt bar: Mar to Apr]					
FHW-5100	Power Cable Laying Works (affect by design change which is under VO)	36	36	20-May-19*	02-Jul-19	233	[Gantt bar: May to Jul]					
FHW-5110	Permanent Power Supply Connection (affect by design change which is under VO)	10	10	03-Jul-19	13-Jul-19	260	[Gantt bar: Jul to Jul]					
FHW-5110a	Installation of Drainage Pipe	32	22	10-Sep-18 A	14-Jun-19	284	[Gantt bar: Mar to Jun]					
FHW-5110b	Laying of Floor Tiles (affect by design change which is under VO)	72	12	28-Jun-18 A	01-Jun-19	294	[Gantt bar: Mar to Jun]					
FHW-5110c	Installation of Suspended Ceiling (affect by design change which is under VO)	104	12	21-May-18 A	01-Jun-19	294	[Gantt bar: Mar to Jun]					
Provision of BFA Facilities (Lift)												
FHW-L-104f	Permanent Power Supply (affect by design change which is under VO)	10	10	03-Jul-19*	13-Jul-19	233	[Gantt bar: Jul to Jul]					
FHW-L-106f	Testing & Commissioning (affect by design change which is under VO)	27	27	15-Jul-19*	14-Aug-19	233	[Gantt bar: Jul to Aug]					
Works at existing TWSRE												
FHW-5490	Road Drainage, Pavement and TCSS duct laying (Merging lane next to NB72)(due to claim)	2	2	25-May-19*	27-May-19	299	[Gantt bar: May to May]					
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	11-Jul-19	262	[Gantt bar: Mar to Jul]					
At-Grade Road Works (130m)												
FHW-5130	Road Pavement (FLH SB 1st lane) by re-surfacing (due to claim 63)	15	18	10-Sep-18 A	10-Jun-19	288	[Gantt bar: Mar to Jun]					
FHW-5330a	Road Drainage (MN10.1-10.3A, gullies affected by Slope F18)	60	15	16-Dec-17 A	05-Jun-19	291	[Gantt bar: Mar to Jun]					
FHW-5330c	Fill Replacement Works 3SW-DF18 next to FLH NB (further modified by VO not yet received)	73	24	01-Aug-18 A	17-Jun-19	282	[Gantt bar: Mar to Jun]					
FHW-5330d	Remaining Gullies, road formation and TCSS duct laying (log on effect by Slope F18 under VO)	25	0	23-Jan-19 A	26-Mar-19 A		[Gantt bar: Mar to Mar]					
FHW-5330e	Road Pavement (log on effect by Slope F18 under VO)	14	14	20-May-19*	04-Jun-19	292	[Gantt bar: May to Jun]					
Fanling Highway Zone 6 between CH7600 and CH7660 (Existing Vehicular Bridge)												
At-Grade Roadworks (60m)												
FHW-6330a	Road Drainage and Road Formation (FLH NB hard shoulder)	60	18	16-Dec-17 A	10-Jun-19	288	[Gantt bar: Mar to Jun]					
Fanling Highway Zone 7 between CH7660 and CH7925 at NBZ (Section 1B)												

- Actual Work
- Remaining Work
- Summary Bar
- Critical Remaining Work
- ◆ Milestone
- Project Baseline Bar

CEDD Contract No. CV/2012/09
Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3
3-Month Rolling Programme
 3MPR070 Page 2 of 5 20-May-19

3-Month Rolling Programme			
Date	Revision	Checked	Approved
20-May-19	Revision 0	FC	DH

Activity ID	Activity Name	OD	RD	Start	Finish	TF	2019						
							Mar	Apr	May	Jun	Jul	Aug	
At-Grade Roadworks (265m)													
FHW-7330	Road Pavement (FLH NB 3rd lane at NBZ joint with CSHK) by re-surfacing	24	35	20-Aug-18 A	29-Jun-19	271	Road Pavement (FLH NB 3rd lane at NBZ joint with CSHK)						
FHW-7340	Road Pavement, Central Barrier (FLH NB 4th lane) by re-surfacing	24	24	20-Aug-18 A	17-Jun-19	282	Road Pavement, Central Barrier (FLH NB 4th lane) by re-surfacing, Road Pa						
Remaining Works for Noise Barrier along widened Fanling Highway													
FHW-NB-150	Installation of Steelworks & Panel for NB72 & NB73 (248m), adjacent to FLH SB lanes at Zones 4, 5 & 6	16	16	20-May-19	06-Jun-19	290	Installation of Steelworks & Panel for NB72 & NB73 (248m), adjacent to FLH SB lanes at Z						
FHW-NB-320	Installation of Steelworks & Panel for NB67-2 (85m), adjacent to FLH NB lanes at Zones 2 & 3	14	14	20-May-19*	04-Jun-19	274	Installation of Steelworks & Panel for NB67-2 (85m), adjacent to FLH NB lanes at Zones 2 & 3						
FHW-NB-330	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	274	Installation of Steelworks & Panel for NB69 (109m), adjacent t						
Section II - Remainder of the Works (KD-3)													
At Grade Link Road at Fanling Highway Interchange													
Link Road 1 (near Abutment AB1)													
FHI-LR1-1020	Backfilling works of abutment, Gully and Profile Barrier at Abutment AB1	20	0	28-May-18 A	03-Apr-19 A		Backfilling works of abutment, Gully and Profile Barrier at Abutment AB1						
Noise Barrier													
FHI-LR1-1091	Noise Barrier NB67-1 - Remaining ground beam of Bay 3 (allow access from TWSRW)	7	0	21-Jan-19 A	27-Apr-19 A		Noise Barrier NB67-1 - Remaining ground beam of Bay 3 (allow access from TWSRW)						
Link Road 2 (near Abutment AA1)													
FHI-LR2-2040	3SW-D/FR32 Bay 3213 (including temporary works)	35	0	11-Mar-19 A	20-Mar-19 A		3SW-D/FR32 Bay 3213 (including temporary works)						
FHI-LR2-2050	Road Pavement and Drainage next to Abutment (after completion of NB73 Bay 12&13 Stem Wall)	20	0	23-Mar-19 A	12-Apr-19 A		Road Pavement and Drainage next to Abutment (after completion of NB73 Bay 12&13 Stem Wall)						
FHI-LR2-2050	Road Formation, Road Drainage and Pavement (SMH1302 - 1303 & MY2.4 - 2.5) at grade	72	0	01-Mar-18 A	13-May-19 A		Road Formation, Road Drainage and Pavement (SMH1302 - 1303 & MY2.4 - 2.5) at grade						
FHW-SG-1031	Fabrication and Delivery of Sign Gantry DS11	99	0	28-Dec-17 A	18-May-19 A		Fabrication and Delivery of Sign Gantry DS11						
FHW-SG-1041	Erection of Sign Gantry FADS11 and DS64 (include On-site Fabrication)	15	0	20-Apr-19 A	20-May-19 A		Erection of Sign Gantry FADS11 and DS64 (include On-site Fabrication)						
Link Road 3 (near Abutment AD1)													
FHI-LR3-3020	Permanent Fill Slope, Construction of Gullies and Profile Barriers	48	0	25-Apr-18 A	18-May-19 A		Permanent Fill Slope, Construction of Gullies and Profile Barriers						
FHI-LR3-3030	Road Pavement	1	0	02-Mar-19 A	04-Mar-19 A		Road Pavement						
FHI-LR3-3040	Other Civil Works for TCSS duct laying - along Link Road 3	25	0	02-Apr-19 A	30-Apr-19 A		Other Civil Works						
Link Road 4 (near Abutment AC1)													
FHI-LR4-4030	Road Formation, Road Drainage, TCSS ducting and Pavement	55	0	27-Nov-17 A	29-Apr-19 A		Road Formation, Road Drainage, TCSS ducting and Pavement						
FHI-LR4-4040	Remaining Section of Carriageway connect to FLH	44	0	20-Mar-19 A	30-Apr-19 A		Remaining Section of Carriageway connect						
Viaduct - Pavement, Street Furnitures, Lighting inside Internal Voids and Others													
RS-1020b	Other Street Furniture including Sign Gantry, NB, Handrail, traffic signs, etc, for Bridge A, B, C and D	112	0	26-Feb-18 A	20-Apr-19 A		Other Street Furniture including Sign Gantry, NB, Handrail, traffic signs, etc, for Bridge A, B, C and D						
RS-1110	Final Pavement and Road Marking	12	0	01-Mar-19 A	19-Apr-19 A		Final Pavement and Road Marking						
WSD Works													
DN450 Fire Mains (CHA)													
WA-1010c	Pipe Laying - CHA 38 - 113 (DN450) near Ext. TWSRW, 20m	11	102	16-Apr-18 A	18-Sep-19	106	Pipe Laying - CHA 38 - 113 (DN450) near Ext. TWSRW, 20m						
WA-1020	Pipe Laying - CHA 113 - 135 (DN450) near Ext. TWSRW, 20m	102	102	20-May-19*	18-Sep-19	191	Pipe Laying - CHA 113 - 135 (DN450) near Ext. TWSRW, 20m						
WA-1030	Pipe Laying - CHA 135 - 160 (DN450) near Ext. TWSRW, 25m	19	102	18-Apr-18 A	18-Sep-19*	204	Pipe Laying - CHA 135 - 160 (DN450) near Ext. TWSRW, 25m						

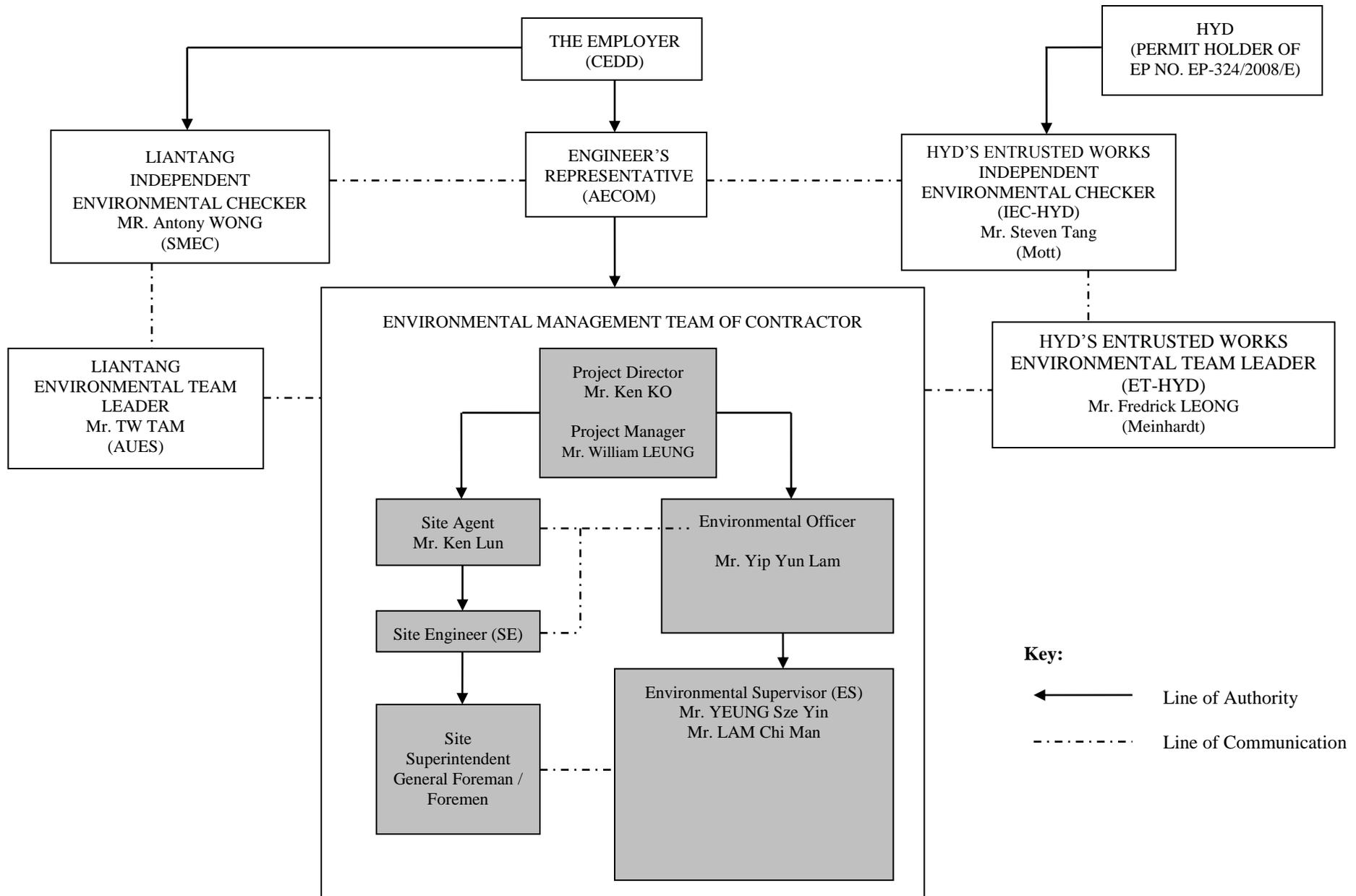
- Actual Work
- Remaining Work
- Summary Bar
- Critical Remaining Work
- ◆ Milestone
- Project Baseline Bar

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3-Month Rolling Programme			
Date	Revision	Checked	Approved
20-May-19	Revision 0	FC	DH

Appendix B

Project Organization Structure



Appendix C

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 style="list-style-type: none"> 1. Identify source; 2. Inform IEC and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method. 	<ol style="list-style-type: none"> 1. Notify Contractor. 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
Action level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> 1. Identify source; 2. Inform IEC and ER; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency to daily; 5. Discuss with IEC and Contractor on remedial actions required; 6. If exceedance continues, arrange meeting with IEC and ER; 7. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> 1. Submit proposals for remedial actions to IEC within 3 working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.

Event	Action			
	ET Leader	IEC	ER	Contractor
Limit level being exceeded by one sampling day	<ol style="list-style-type: none"> 1. Identify source; 2. Inform IEC, ER, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
Limit level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> 1. Notify IEC, ER, Contractor, and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase frequency to daily; 5. Analyse Contractor's working procedures to determine possible mitigation to be; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise ER accordingly; 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by ER until the exceedance is abated.

Event and Action Plan for Noise Quality

Event	Action			
	ET Leader	IEC	ER	Contractor
Action Level	<ol style="list-style-type: none"> 1. Notify IEC and the Contractor. 2. Carry out investigation. 3. Report the results of investigation to IEC and the Contractor. 4. Discuss with the Contractor and formulate remedial measures. 5. Increase monitoring frequency to check mitigation effectiveness. 	<ol style="list-style-type: none"> 1. Review with analysed results submitted by ET. 2. Review the proposed remedial measures by the Contractor and advise ER accordingly. 3. Supervise the implement of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to IEC. 2. Implement noise mitigation proposals.
Limit Level	<ol style="list-style-type: none"> 1. Notify IEC, ER, EPD and the Contractor. 2. Identify the source. 3. Repeat measurement to confirm findings. 4. Increase monitoring frequency. 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented. 6. Inform IEC, ER, and EPD the causes & actions taken for the exceedances. 7. Assess effectiveness of the Contractor's remedial actions and keep IEC, EPD and ER informed of the results. 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Discuss amongst ER, ET Leader and the Contractor on the potential remedial actions. 2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise ER accordingly. 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 5. 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. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance. 2. Submit proposals for remedial actions to IEC within 3 working days of notification. 3. Implement the agreed proposals. 4. Resubmit proposals if problem still not under control. 5. Stop the relevant activity of works as determined by the ER until the exceedance is abated.

Event and Action Plan for Water Quality

Event	Action			
	ET Leader	IEC	ER	Contractor
Action level being exceeded by one sampling day	<ol style="list-style-type: none"> Repeat in-situ measurement on next day of exceedance to confirm findings; Identify source(s) of impact; Inform IEC, Contractor & ER; Check monitoring data, all plant, equipment & contractor's working methods; 	<ol style="list-style-type: none"> Check monitoring data submitted by ET & Contractor's working methods; 	<ol style="list-style-type: none"> Confirm receipt of notification of failure in writing; Notify, Contractor 	<ol style="list-style-type: none"> Inform the ER & confirm notification of the non-compliance in writing; Rectify unacceptable practice; Amend working methods if appropriate.
Action level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> Repeat measurement on next day of exceedance to confirm findings; Identify source(s) of impact; Inform IEC, Contractor, ER & EPD; Check monitoring data, all plant, equipment & Contractor's working methods; Discuss mitigation measures with IEC, ER & Contractor; Ensure mitigation measures are implemented; Increase monitoring to daily until no exceedance of Action level. 	<ol style="list-style-type: none"> Checking monitoring data submitted by ET & Contractor's working method; Discuss with ET & Contractor on possible remedial actions; Review the proposed mitigation measures submitted by Contractor & advise the ER accordingly; Supervise the implementation of mitigation measures. 	<ol style="list-style-type: none"> Discuss with IEC on the proposed mitigation measures; Ensure mitigation measures properly implemented; Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> Inform the Engineer & confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant & equipment & consider changes of working methods; Submit proposal of mitigation measures to ER within 3 working days of notification & discuss with ET, IEC & ER; Implement the agreed mitigation measures.

Event	Action			
	ET Leader	IEC	ER	Contractor
Limit level being exceeded by one sampling day	<ol style="list-style-type: none"> 1. Repeat measurement on next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor, ER & EPD; 4. Check monitoring data, all plant, equipment & contractor's working methods; 5. Discuss mitigation measures with IEC, Contractor & ER. 	<ol style="list-style-type: none"> 1. Checking monitoring data submitted by ET & Contractor's working method; 2. Discuss with ET & Contractor on the possible mitigation measures; 3. Review the proposed mitigation measures submitted by Contractor & advise the ER accordingly. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Discuss with IEC, ET & Contractor on the proposed mitigation measures; 3. Request Contractor to review the working methods. 	<ol style="list-style-type: none"> 1. Inform the ER & confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant & equipment & consider changes of working methods; 4. Submit proposal of mitigation measures to ER within 3 working days of notification & discuss with ET, IEC & ER.
Limit level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> 1. Repeat measurement on the next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, Contractor, ER & EPD; 4. Check monitoring data, all plant, equipment & Contractor's working methods; 5. Discuss mitigation measures within IEC, Contractor & ER; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days. 	<ol style="list-style-type: none"> 1. Checking monitoring data submitted by ET & Contractor's working method; 2. Discuss with ET & Contractor on potential remedial actions; 3. Review Contractor's mitigation measures whenever necessary to assure their effectiveness & advise the ER accordingly; 4. Supervise the implementation of mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with IEC, ET & Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Ensure mitigation measures are properly implemented; 5. Consider & instruct, if necessary, the Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit level. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposal of mitigation measures to ER within 3 working days of notification & discuss with ET, IEC & ER; 3. Implement the agreed mitigation measures; 4. Resubmit proposals of mitigation measures if problem still not under control; 5. As directed by the Engineer, to slow down or to stop all or part of the construction activities until no exceedance of Limit level.

Appendix D Implementation Schedule of Environmental Mitigation Measures (EMIS)

Impact	Environmental Protection Measures	Timing	Responsibility	Implementation Status #
Air Quality				
Air Quality during Construction	<ul style="list-style-type: none"> Restricting heights from which materials are dropped, as far as practicable to minimize the fugitive dust arising from unloading/loading. All stockpiles of excavated materials or spoil of more than 50m³ shall be enclosed, covered or dampened during dry or windy conditions. Effective water sprays shall be used to control potential dust emission sources such as unpaved haul roads and active construction areas. All spraying of materials and surfaces shall avoid excessive water usage. 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. Vehicle washing facilities shall be provided to minimise the quantity of material deposited on public roads. 	During Construction	Contractor	✓ Rem./ Obs. ✓ ✓ ✓ ✓ Obs.
Air Quality during Operation	Not required	N/A	N/A	N/A
Noise				
Noise during Construction	<ul style="list-style-type: none"> Use of silenced plant or plant equipped with mufflers or dampers in substitute of ordinary plant. Reduce the number of equipment and their percentage on-time. 	During Construction	Contractor	✓ ✓
Noise during Operation	Not required	N/A	N/A	N/A
Water Quality				
Water Quality during Construction	<u>Road Widening Works, Earthworks and Culvert Extension Works</u> <ul style="list-style-type: none"> Wastewater generated from any concrete batching washdown of equipment or similar activities should be discharged into foul sewers, after the removal of settleable solids, and pH adjustment as necessary. All sewage discharges from the study area should meet the TM standards and approval from EPD through the licensing process is required. 	During Construction	Contractor	Rem.

	<ul style="list-style-type: none"> • Sand traps, oil interceptors and other pollution prevention installations should be provided, properly cleaned and maintained. 			✓
	<ul style="list-style-type: none"> • 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. • 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				
Waste Management during Construction	<u>General Waste</u> <ul style="list-style-type: none"> • Transport of wastes off site as soon as possible. • Maintenance of accurate waste records. • Minimisation of waste generation for disposal (via reduction/recycling/re-use). • No on-site burning will be permitted. • Use of re-useable metal hoardings/signboards. <u>Vegetation from site clearance</u> <ul style="list-style-type: none"> • Segregation of materials to facilitate disposal. • Mulching to reduce bulk and where possible review opportunities for the possible beneficial use within landscaping areas. 	During Construction During Construction	Contractor Contractor	Rem. ✓ Obs. ✓ ✓ ✓ ✓
	<u>Demolition Wastes</u> <ul style="list-style-type: none"> • Segregation of materials to facilitate disposal. • Appropriate stockpile management. 	During Construction	Contractor	✓ ✓

Notes (#): ✓ – Compliance; Rem – Reminder; Obs – Observation; N/C – Non Compliance; N/A – Not Applicable;

	<p><u>Excavated Materials</u></p> <ul style="list-style-type: none"> • Segregation of materials to facilitate disposal / reuse. • Appropriate stockpile management. • Re-use of excavated material on or off site (where possible). • Special handling and disposal procedures in the event that contaminated materials are excavated. 	During Construction	Contractor	<p>✓</p> <p>✓</p> <p>N/A</p>
	<p><u>Construction Wastes</u></p> <ul style="list-style-type: none"> • Segregation of materials to facilitate recycling/reuse (within designated area in appropriate containers/stockpiles). • Appropriate stockpile management. • Planning to reduce over ordering and waste generation. • Recycling and re-use of materials where possible (e.g. metal, wood from formwork) • For material which cannot be re-used/recycled, collection should be carried out by an approved waste contractor for landfill disposal. 	During Construction	Contractor	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>
	<p><u>Bentonite Slurries</u></p> <ul style="list-style-type: none"> • Bentonite slurries should be reused as far as possible. • Disposal in accordance with Practice Note For Professional Persons ProPECC PN 1/94. <p><u>Chemical Wastes</u></p> <ul style="list-style-type: none"> • Storage within locked, covered and bunded area. • The storage area shall not be located adjacent to sensitive receivers e.g. drains. • Minimise waste production and recycle oils/solvents where possible. • A spill response procedure shall be in place and absorption material available for minor spillages. • Use appropriate and labelled containers. • Educate site workers on site cleanliness/waste management procedures. 	During Construction	Contractor	<p>N/A</p> <p>N/A</p>
		During Construction	Contractor	<p>Obs.</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>

	<ul style="list-style-type: none"> • 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. <p><u>Municipal Wastes</u></p> <ul style="list-style-type: none"> • Waste shall be stored within a temporary refuse collection facility, in appropriate containers prior to collection and disposal. • Regular, daily collections are required by an approved waste collector. 	During Construction	Contractor	✓ ✓ ✓ ✓
Waste Management during Operation	Not required.	N/A	N/A	N/A
Ecology				
Ecology during Construction	<p><u>Accurate Delineation of Works Area</u></p> <ul style="list-style-type: none"> • Boundaries of proposed works areas shall be clearly identified and separated from external areas by a physical barrier to prevent encroachment of adjacent habitats. • 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. <p><u>Dust generation</u></p> <p>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:</p> <ul style="list-style-type: none"> • vehicle washing facilities to be provided at every discernible or designated vehicle exit point; • 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 • all debris should be covered entirely by impervious sheeting or stored in a sheltered debris collection area. 	During Construction	Contractor	✓ ✓
		During Construction	Contractor	✓ ✓ ✓

	<p><u>Surface Run-off</u></p> <p>In general, mitigation measures shall be in accordance with ProPECC PN1/94 on 'Construction Site Drainage'. Key measures include:</p> <ul style="list-style-type: none"> • Bund and cover stockpiles to avoid run-off; • 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). 	During Construction	Contractor	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>
Ecology during Operation	<ul style="list-style-type: none"> • 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	<p>Contractor (during construction) / LCSD* (during operation)</p> <p>(Note: * The division of vegetation planting and maintenance responsibilities shall follow the guidelines stipulated in ETWB TCW No. 2/2004.)</p>	N/A
Landscape and Visual				
Landscape and Visual during Construction	<p><u>Preservation of Existing Vegetation</u></p> <ul style="list-style-type: none"> • Trees identified for retention within the project limit would be protected during the works • The tree transplanting and planting works shall be implemented by approved Landscape Contractors 	During Construction	Contractor	<p>✓</p> <p>✓</p>
	<p><u>Temporary Works Areas</u></p> <ul style="list-style-type: none"> • 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	<p>✓</p>
	<p><u>Hoarding</u></p> <ul style="list-style-type: none"> • 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	<p>✓</p>

Notes (#): ✓ – Compliance; Rem – Reminder; Obs – Observation; N/C – Non Compliance; N/A – Not Applicable;

	<p><u>Top Soils</u></p> <ul style="list-style-type: none"> 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. <p><u>Protection of Important Landscape Features</u></p> <ul style="list-style-type: none"> 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
		During Construction	Contractor	N/A
Landscape and Visual during Operation	Not required.	N/A	N/A	N/A

Appendix E

Summary of Meteorological Condition Extracted from Hong Kong Observatory

Year 2019

In Hong Kong, with eleven out of the twelve months warmer than usual, 2019 was the warmest year since records began in 1884 with an annual mean temperature of 24.5 degrees, 1.2 degrees above the 1981-2010 normal (or 1.5 degrees above the 1961-1990 normal). The annual mean maximum temperature of 27.1 degrees and annual mean minimum temperature of 22.6 degrees were also the highest on record. In particular, the mean temperatures for winter (December 2018 to February 2019) and autumn (September to November 2019) respectively reached 19.1 degrees and 26.1 degrees, both ranking the highest on record. The highest temperature recorded at the Hong Kong Observatory in the year was 35.1 degrees on 9 August, the fourteenth highest on record. There were 46 Hot Nights and 33 Very Hot Days in Hong Kong in 2019, ranking the highest and one of the fourth highest on record respectively. The lowest temperature recorded at the Hong Kong Observatory in the year was 11.4 degrees on 1 January, the highest annual absolute minimum temperature on record. There was only one Cold Day^[4] in the year, which is 16.1 days less than the 1981-2010 normal and the fewest annual number of Cold Days since 1884.

Year 2020 (Jan to Oct)

With the northeast monsoon over southern China generally weaker than normal for most of the time in the month, January 2020 was much warmer than usual. The mean maximum temperature of 21.2 degrees and mean temperature of 18.6 degrees were respectively 2.6 degrees and 2.3 degrees above their corresponding normals and both were the highest on record for January. The mean minimum temperature of 16.8 degrees was 2.3 degrees above the normal and one of the second highest on record for January. The month was also drier than usual with 14.8 millimetres of rainfall recorded in the month, about 60 percent of the normal figure of 24.7 millimetres.

February 2020 was much warmer than usual. The monthly mean maximum temperature was 21.4 degrees, 2.5 degrees above the normal figure of 18.9 degrees and the sixth highest on record for February. The monthly mean temperature of 18.5 degrees and mean minimum temperature of 16.6 degrees were respectively 1.7 degrees and 1.6 degrees above their corresponding normal figures. Both were one of the eighth highest on record for February. Moreover, the winter from December 2019 to February 2020 was exceptionally warm in Hong Kong. The mean maximum temperature of 21.5 degrees was the highest on record for the same period. The mean temperature of 18.7 degrees and mean minimum temperature of 16.8 degrees were both the second highest on record for the same period. February 2020 was also wetter than normal with the monthly rainfall of 79.8 millimetres, about 47 percent above the normal of 54.4 millimetres. The accumulated rainfall recorded in the first two months of the year was 94.6 millimetres, about 20 percent above the normal figure of 79.1 millimetres for the same period.

With the northeast monsoon over southern China generally weaker than normal for most of the time in the month, March 2020 continued to be much warmer than usual in Hong Kong. The monthly mean temperature of 21.3 degrees and mean minimum temperature of 19.7 degrees were respectively 2.2 degrees and 2.5 degrees above their corresponding

normal figures and both were one of the second highest on record for March. The monthly mean maximum temperature was 23.8 degrees, 2.4 degrees above the normal figure and the fifth highest on record for March. The month was also drier than usual with a total rainfall of 41.3 millimetres, about half of the normal figure of 82.2 millimetres. The accumulated rainfall recorded in the first three months of the year was 135.9 millimetres, about 16 percent below the normal figure of 161.3 millimetres for the same period

Mainly attributing to the stronger than usual northeast monsoon over southern China, April 2020 was slightly cooler than usual with the mean temperature of 22.0 degrees, 0.6 degree below the normal figure of 22.6 degrees. With weaker southerlies and less moisture in the lower atmosphere over southern China, the month was also drier than usual in Hong Kong. The total rainfall in the month was 77.8 millimetres, about 55 percent below the normal figure of 174.7 millimetres. The accumulated rainfall recorded in the first four months of the year was 213.7 millimetres, about 36 percent below the normal figure of 336.1 millimetres for the same period.

May 2020 was characterized by generally fine and hot weather during the first part of the month and unsettled weather with outbreaks of heavy showers in the latter part. Overall, the month was much hotter than usual. The monthly mean minimum temperature was 25.9 degrees, 1.8 degrees above the normal figure and one of the second highest on record for May. The monthly mean temperature of 27.7 degrees and mean maximum temperature of 30.4 degrees were respectively 1.8 degrees and 2.0 degrees above their corresponding normal figures and both were the fifth highest on record for May. Moreover, the spring of this year from March to May was exceptionally warm. The mean minimum temperature of 21.9 degrees, mean temperature of 23.7 degrees and mean maximum temperature of 26.4 degrees were respectively the fourth, fifth and sixth highest on record for the same period. May 2020 was also wetter than usual. The monthly rainfall was 352.5 millimetres, about 16 percent above the normal figure of 304.7 millimetres. The accumulated rainfall recorded in the first five months of the year was 566.2 millimetres, about 12 percent below the normal figure of 640.8 millimetres for the same period.

June 2020 was much hotter than usual in Hong Kong. The monthly mean minimum temperature was 27.8 degrees, 1.6 degrees above the normal figure and the highest on record for June. The monthly mean temperature and monthly mean maximum temperature were 29.6 degrees and 32.3 degrees respectively, both were the second highest on record for June. With a total of 18 hot nights, June 2020 was on par with July 1993 as one of the highest record of number of hot nights in a month. The 12 consecutive hot nights that started from 19 June also set a new record for June. Moreover, the first half of this year was exceptionally warm. The mean maximum temperature of 25.7 degrees and mean temperature of 23.0 degrees were both the highest on record for the same period. The mean minimum temperature of 21.1 degrees was the third highest on record for the same period. June 2020 was also marked by sunny weather with the monthly total sunshine duration amounting to 192.5 hours, about 32 percent above the

normal of 146.1 hours. Despite the heavy rain episode on 6 – 8 June, the monthly total rainfall was only 397.2 millimetres, about 13 percent below the normal figure of 456.1 millimetres. The accumulated rainfall for the first half of the year of 963.4 millimetres was about 12 percent below the normal figure of 1096.9 millimetres.

July 2020 became the hottest month in Hong Kong since records began in 1884. The monthly mean maximum temperature of 33.3 degrees, monthly mean temperature of 30.2 degrees and monthly mean minimum temperature of 28.3 degrees were 1.9 degrees, 1.4 degrees and 1.5 degrees above their corresponding normals and all of them were the highest of the correspondingly monthly mean values on record. With a total of 21 hot nights, July 2020 was the month with the highest number of hot nights on record and the 11 consecutive hot nights that started from 5 July also set a new record for July. Moreover, there were 20 very hot days in the month, the highest number of very hot days in a month on record. With long spell sunny weather, the month was also much drier than usual. The total monthly rainfall was only 125.4 millimetres, about 33 percent of the normal figure of 376.5 millimetres. The accumulated rainfall for the first seven months of the year was 1088.8 millimetres, about 26 percent below the normal figure of 1473.3 millimetres.

August 2020 was hotter than usual in Hong Kong. The monthly mean temperature of 29.0 degrees was 0.4 degree above the normal figure of 28.6 degrees. Together with the extremely high temperature weather in June and July, Hong Kong experienced the hottest summer on record from June to August 2020. The mean temperature of 29.6 degrees, mean minimum temperature of 27.7 degrees and mean maximum temperature of 32.6 degrees for June to August 2020 were all the highest on record for the same period. There were 16 very hot days in August 2020, the highest number of very hot days on record for August. Moreover, from January to August, the annual number of very hot days in 2020 already reached 43, which is 32.8 days above the annual normal and broke the previous highest record of 38 days set in 2016. The number of hot nights up to August 2020 also reached 46, on par with the highest record in 2019. The monthly rainfall was 448.4 millimetres, about 4 percent above the normal figure of 432.2 millimetres. The accumulated rainfall recorded in the first eight months of the year was 1537.2 millimetres, about 19 percent below the normal figure of 1905.5 millimetres for the same period.

September 2020 was hotter than usual in Hong Kong. The monthly mean temperature of 28.4 degrees was 0.7 degree above the normal figure of 27.7 degrees. With more than usual low-level moisture supply from the south over southern China, the month was also much cloudier and wetter than usual. The monthly total rainfall was 708.8 millimetres, about 116 percent above the normal figure of 327.6 millimetres and the sixth highest on record for September. The mean amount of cloud in the month was 78 percent, 12 percent above the normal of 66 percent and one of the third highest on record for September. The

duration of bright sunshine in the month was only 131.3 hours, about 24 percent lower than the normal figure of 172.3 hours and the fifth lowest on record for September. The accumulated rainfall up to September this year was 2246.0 millimetres, slightly more than the normal figure of 2233.1 millimetres for the same period.

The mean temperature for October 2020 was 25.6 degrees, close to the normal figure of 25.5 degrees. Mainly attributing to the heavy downpour on 5 October, the month was wetter than usual with the monthly rainfall of 142.4 millimeters, about 41 percent above the normal of 100.9 millimetres. The accumulated rainfall this year up to October was 2388.4 millimetres, about 2 percent above the normal figure of 2334.0 millimetres for the same period.

Appendix F Environmental Monitoring Data for Air, Noise Quality

Appendix F
Air Quality Monitoring Results and their Graphical Presentation

24-Hour TSP Monitoring Result at Station: SR77

Sampling Date	Weather Condition	Paper No.	Wt. of paper (g)			Elapse Time			Flow Rate (CFM)			Flow Rate (m ³ /min)			Total Volume (m ³)	TSP Concentration (µg/m ³)	Action Level (µg/m ³)	Limit Level (µg/m ³)	Wind speed m/s	Wind direction
			Initial Wt.	Final Wt.	Wt. of Dust	Initial	Final	Sampling Hour	Initial	Final	Avg Flow Rate	Initial	Final	Avg Flow Rate						
5-Nov-19	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	79.3	170.3	260.0	<5	N
11-Nov-19	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	95.4	170.3	260.0	<5	N
15-Nov-19	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	86.2	170.3	260.0	<5	N
21-Nov-19	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	142.1	170.3	260.0	<5	N
27-Nov-19	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	111.2	170.3	260.0	<5	N
3-Dec-19	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	122.7	170.3	260.0	<5	N
9-Dec-19	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	117.3	170.3	260.0	<5	N
13-Dec-19	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	108.9	170.3	260.0	<5	N
19-Dec-19	Cloudy	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	103.5	170.3	260.0	<5	N
24-Dec-19	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	144.7	170.3	260.0	<5	N
30-Dec-19	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	73.2	170.3	260.0	<5	N
3-Jan-20	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	83.2	170.3	260.0	<5	N
9-Jan-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	55.4	170.3	260.0	<5	N
15-Jan-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	101.4	170.3	260.0	<5	N
21-Jan-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	89.7	170.3	260.0	<5	N
24-Jan-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	61.1	170.3	260.0	<5	N
30-Jan-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	121.2	170.3	260.0	<5	N
5-Feb-20	Cloudy	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	80.2	170.3	260.0	<5	N
11-Feb-20	Cloudy	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	61.4	170.3	260.0	<5	N
17-Feb-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	94.1	170.3	260.0	<5	N
21-Feb-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	121.2	170.3	260.0	<5	N
27-Feb-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	101.2	170.3	260.0	<5	N
4-Mar-20	Cloudy	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	61.1	170.3	260.0	<5	N
10-Mar-20	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	88.2	170.3	260.0	<5	N
16-Mar-20	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	101.7	170.3	260.0	<5	N
20-Mar-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	55.2	170.3	260.0	<5	N
26-Mar-20	Cloudy	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	50.6	170.3	260.0	<5	N
2-Apr-20	Cloudy	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	55.4	170.3	260.0	<5	N
9-Apr-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	88.2	170.3	260.0	<5	N
16-Apr-20	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	141.7	170.3	260.0	<5	N
23-Apr-20	Cloudy	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	73.9	170.3	260.0	<5	N
29-Apr-20	Cloudy	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	68.6	170.3	260.0	<5	N
5-May-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	155.1	170.3	260.0	<5	N
11-May-20	Cloudy	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	66.7	170.3	260.0	<5	N
15-May-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	88.6	170.3	260.0	<5	N
21-May-20	Cloudy	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	89.3	170.3	260.0	<5	N
27-May-20	Cloudy	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	71.3	170.3	260.0	<5	N
4-Jun-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	144.7	170.3	260.0	<5	N
11-Jun-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	131.4	170.3	260.0	<5	N
18-Jun-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	141.2	170.3	260.0	<5	N
24-Jun-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	91.1	170.3	260.0	<5	N
30-Jun-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	14.3	170.3	260.0	<5	N
6-Jul-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	55.1	170.3	260.0	<5	N
10-Jul-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	77.4	170.3	260.0	<5	N
16-Jul-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	121.2	170.3	260.0	<5	N
22-Jul-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	26.3	170.3	260.0	<5	N
28-Jul-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	81.2	170.3	260.0	<5	N

Appendix F
Air Quality Monitoring Results and their Graphical Presentation

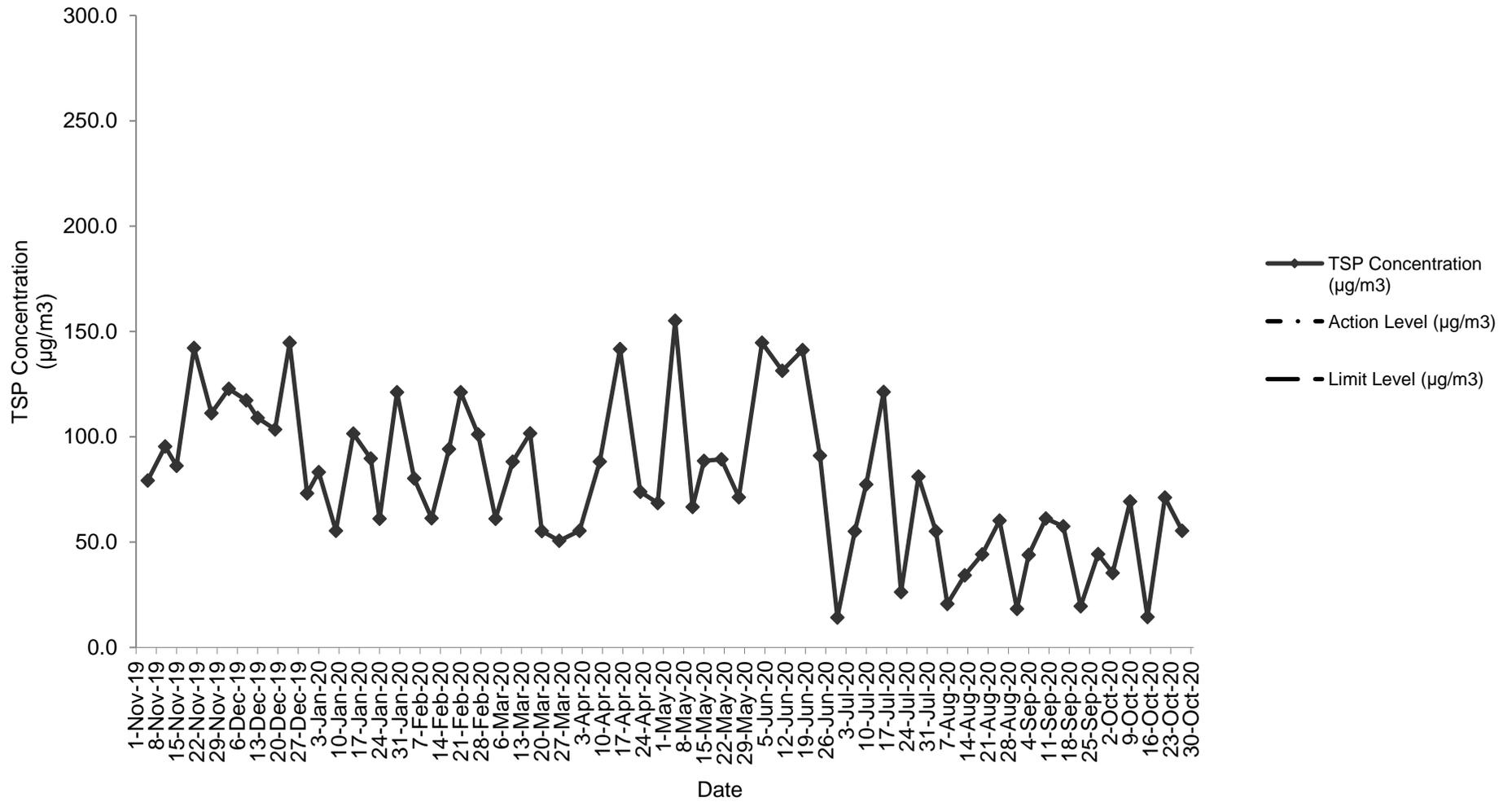
24-Hour TSP Monitoring Result at Station: SR77

Sampling Date	Weather Condition	Paper No.	Wt. of paper (g)			Elapse Time			Flow Rate (CFM)			Flow Rate (m ³ /min)			Total Volume (m ³)	TSP Concentration (µg/m ³)	Action Level (µg/m ³)	Limit Level (µg/m ³)	Wind speed m/s	Wind direction
			Initial Wt.	Final Wt.	Wt. of Dust	Initial	Final	Sampling Hour	Initial	Final	Avg Flow Rate	Initial	Final	Avg Flow Rate						
3-Aug-20	Cloudy	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	55.1	170.3	260.0	<5	N
7-Aug-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	20.6	170.3	260.0	<5	N
13-Aug-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	34.2	170.3	260.0	<5	N
19-Aug-20	Cloudy	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	44.2	170.3	260.0	<5	N
25-Aug-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	60.3	170.3	260.0	<5	N
31-Aug-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	18.3	170.3	260.0	<5	N
4-Sep-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	43.9	170.3	260.0	<5	N
10-Sep-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	61.2	170.3	260.0	<5	N
16-Sep-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	57.4	170.3	260.0	<5	N
22-Sep-20	Fine	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	19.5	170.3	260.0	<5	N
28-Sep-20	Cloudy	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	44.3	170.3	260.0	<5	N
3-Oct-20	Cloudy	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	35.3	170.3	260.0	<5	N
9-Oct-20	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	69.3	170.3	260.0	<5	N
15-Oct-20	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	14.4	170.3	260.0	<5	N
21-Oct-20	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	71.1	170.3	260.0	<5	N
27-Oct-20	Sunny	-	-	-	-	-	-	24.00	-	-	-	-	-	-	-	55.3	170.3	260.0	<5	N

Summary For the Reporting Period (Nov19 - Oct 20)	
Average	79.3
Minimum	14.3
Maximum	155.1

Note: No major dust source observed during the monitoring period
Data in **Bold** denotes exceedance of respective Action Level
Data in **Bold Underline** denotes exceedance of respective Limit Level

24-Hour TSP Monitoring Result at Station: SR77 (Nov 2019 - Oct 2020)



Appendix F
Air Quality Monitoring Results and their Graphical Presentation

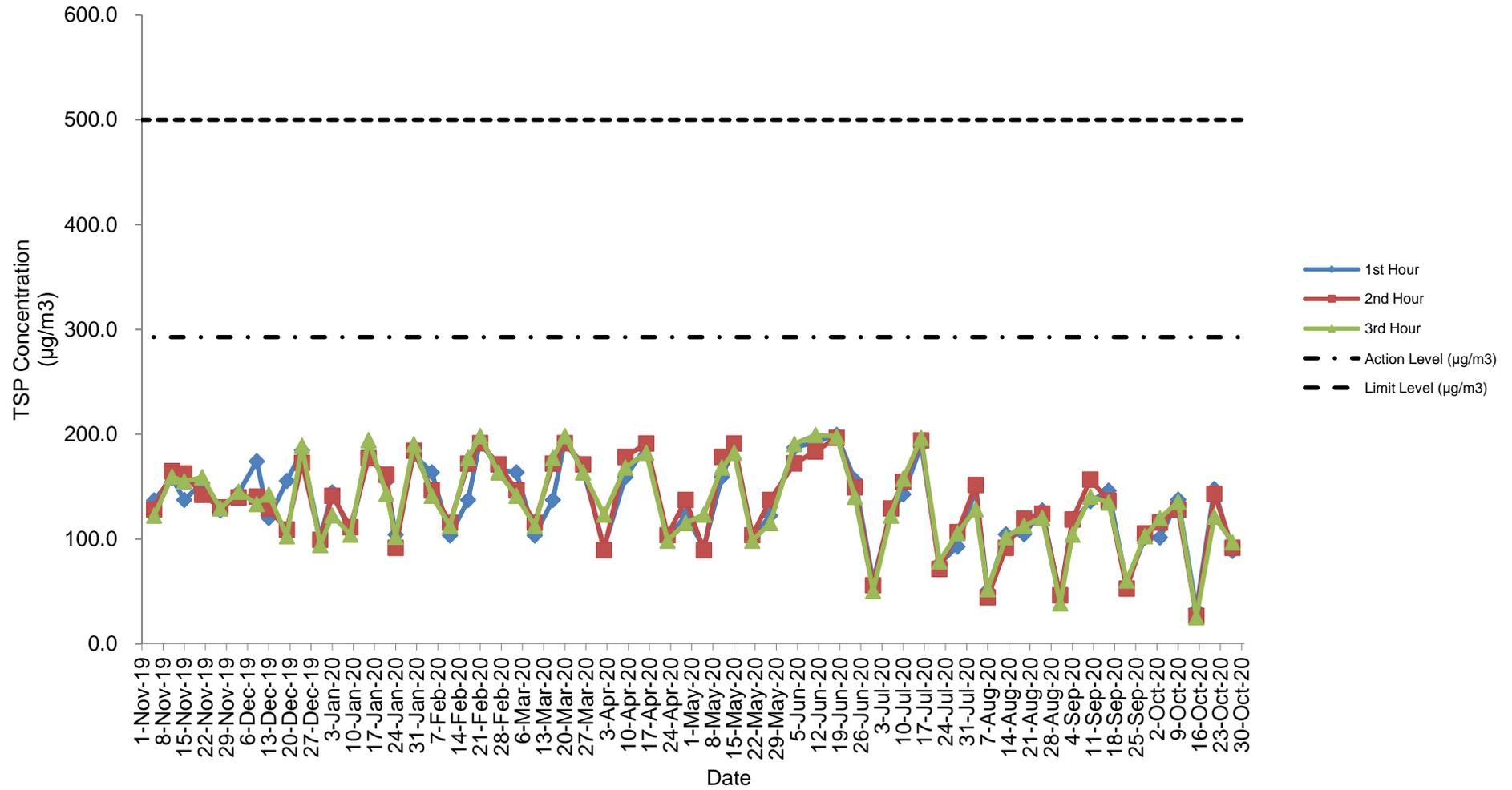
1-Hour TSP Monitoring Result at Station: SR77

Date	Weather Condition	Time	Conc.(µg/m ³)			Action Level (µg/m ³)	Limit Level (µg/m ³)
			1 st Hour	2 nd Hour	3 rd Hour		
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
3-Dec-19	Sunny	9:30 - 12:30	144.3	139.9	145.2	292.7	500.0
9-Dec-19	Sunny	9:30 - 12:30	174.3	140.6	133.4	292.7	500.0
13-Dec-19	Sunny	9:30 - 12:30	120.2	128.9	142.5	292.7	500.0
19-Dec-19	Cloudy	10:00 - 13:00	155.4	109.1	102.7	292.7	500.0
24-Dec-19	Sunny	9:30 - 12:30	184.4	172.8	189.0	292.7	500.0
30-Dec-19	Sunny	9:30 - 12:30	101.1	99.3	94.4	292.7	500.0
3-Jan-20	Sunny	10:00 - 13:00	144.3	141.3	122.7	292.7	500.0
9-Jan-20	Fine	10:15 - 13:15	106.2	111.3	104.2	292.7	500.0
15-Jan-20	Fine	11:00 - 14:00	181.6	177.1	194.3	292.7	500.0
21-Jan-20	Fine	10:30 - 13:30	155.2	161.4	143.2	292.7	500.0
24-Jan-20	Fine	10:30 - 13:30	104.2	91.7	102.2	292.7	500.0
30-Jan-20	Fine	10:00 - 13:00	180.6	184.3	190.5	292.7	500.0
5-Feb-20	Cloudy	10:30 - 13:30	163.7	146.4	141.3	292.7	500.0
11-Feb-20	Cloudy	10:30 - 13:30	103.4	115.4	112.4	292.7	500.0
17-Feb-20	Fine	10:00 - 13:00	137.3	172.1	177.4	292.7	500.0
21-Feb-20	Fine	10:30 - 13:30	194.2	191.5	198.2	292.7	500.0
27-Feb-20	Fine	10:30 - 13:30	166.4	171.1	163.7	292.7	500.0
4-Mar-20	Cloudy	10:00 - 13:30	163.7	146.4	141.3	292.7	500.0
10-Mar-20	Sunny	10:30 - 13:30	103.4	115.4	112.4	292.7	500.0
16-Mar-20	Sunny	10:30 - 13:00	137.3	172.1	177.4	292.7	500.0
20-Mar-20	Fine	10:00 - 13:30	194.2	191.5	198.2	292.7	500.0
26-Mar-20	Cloudy	10:45 - 13:30	166.4	171.1	163.7	292.7	500.0
2-Apr-20	Cloudy	10:15 - 13:30	92.1	89.4	123.2	292.7	500.0
9-Apr-20	Fine	10:30 - 13:30	159.2	178.3	168.3	292.7	500.0
16-Apr-20	Sunny	10:00 - 13:00	188.1	191.3	182.4	292.7	500.0
23-Apr-20	Cloudy	10:30 - 13:30	101.4	103.7	98.4	292.7	500.0
29-Apr-20	Cloudy	10:00 - 13:30	122.3	137.3	115.2	292.7	500.0
5-May-20	Fine	10:45 - 13:45	92.1	89.4	123.2	292.7	500.0
11-May-20	Cloudy	10:45 - 13:45	159.2	178.3	168.3	292.7	500.0
15-May-20	Fine	10:30 - 13:30	188.1	191.3	182.4	292.7	500.0
21-May-20	Cloudy	10:20 - 13:20	101.4	103.7	98.4	292.7	500.0
27-May-20	Cloudy	10:30 - 13:30	122.3	137.3	115.2	292.7	500.0
4-Jun-20	Fine	10:30 - 13:30	187.3	172.3	190.6	292.7	500.0
11-Jun-20	Fine	10:00 - 13:00	192.4	183.6	199.3	292.7	500.0
18-Jun-20	Fine	10:45 - 13:45	199.4	196.6	197.8	292.7	500.0
24-Jun-20	Fine	10:15 - 13:15	156.3	149.4	140.3	292.7	500.0
30-Jun-20	Fine	10:45 - 13:45	60.1	55.9	50.5	292.7	500.0
6-Jul-20	Fine	10:15 - 13:15	125.1	129.2	122.4	292.7	500.0
10-Jul-20	Fine	10:45 - 13:45	142.6	154.5	157.8	292.7	500.0
16-Jul-20	Fine	10:15 - 13:15	189.4	194.1	196.4	292.7	500.0
22-Jul-20	Fine	10:45 - 13:45	76.4	71.5	78.6	292.7	500.0
28-Jul-20	Fine	10:15 - 13:15	92.7	106.7	105.6	292.7	500.0
3-Aug-20	Cloudy	10:15 - 13:15	148.4	151.5	128.6	292.7	500.0
7-Aug-20	Fine	10:45 - 13:45	50.9	44.3	52.2	292.7	500.0
13-Aug-20	Fine	10:15 - 13:15	104.3	91.7	101.6	292.7	500.0
19-Aug-20	Cloudy	11:45 - 14:45	104.6	119.3	112.8	292.7	500.0
25-Aug-20	Fine	10:00 - 13:00	127.3	124.2	120.4	292.7	500.0
31-Aug-20	Fine	10:00 - 13:00	44.1	46.3	38.6	292.7	500.0
4-Sep-20	Fine	10:20 - 13:20	115.1	118.6	104.2	292.7	500.0
10-Sep-20	Fine	10:10 - 13:10	136.1	156.9	140.4	292.7	500.0
16-Sep-20	Fine	10:00 - 13:00	146.2	136.6	135.0	292.7	500.0
22-Sep-20	Fine	10:45 - 13:35	56.5	52.6	60.3	292.7	500.0
28-Sep-20	Cloudy	10:30 - 13:00	101.5	105.4	102.7	292.7	500.0
3-Oct-20	Cloudy	10:15 - 13:15	101.3	115.6	119.9	292.7	500.0
9-Oct-20	Sunny	10:45 - 13:45	137.5	128.3	135.7	292.7	500.0
15-Oct-20	Sunny	10:00 - 13:00	32.5	26.6	25.4	292.7	500.0
21-Oct-20	Sunny	10:30 - 13:30	147.7	143.3	121.4	292.7	500.0
27-Oct-20	Sunny	10:00 - 13:00	88.6	91.6	96.6	292.7	500.0

Summary For the Reporting Period (Nov19 - Oct20)	
Average	133.4
Minimum	25.4
Maximum	199.4

Note: No major dust source observed during the monitoring period

1-Hour TSP Monitoring Result at station: SR77 (Nov 2019 - Oct 2020)



Appendix F
Noise Monitoring Results and their Graphical Presentation

Noise Monitoring Result at SR77

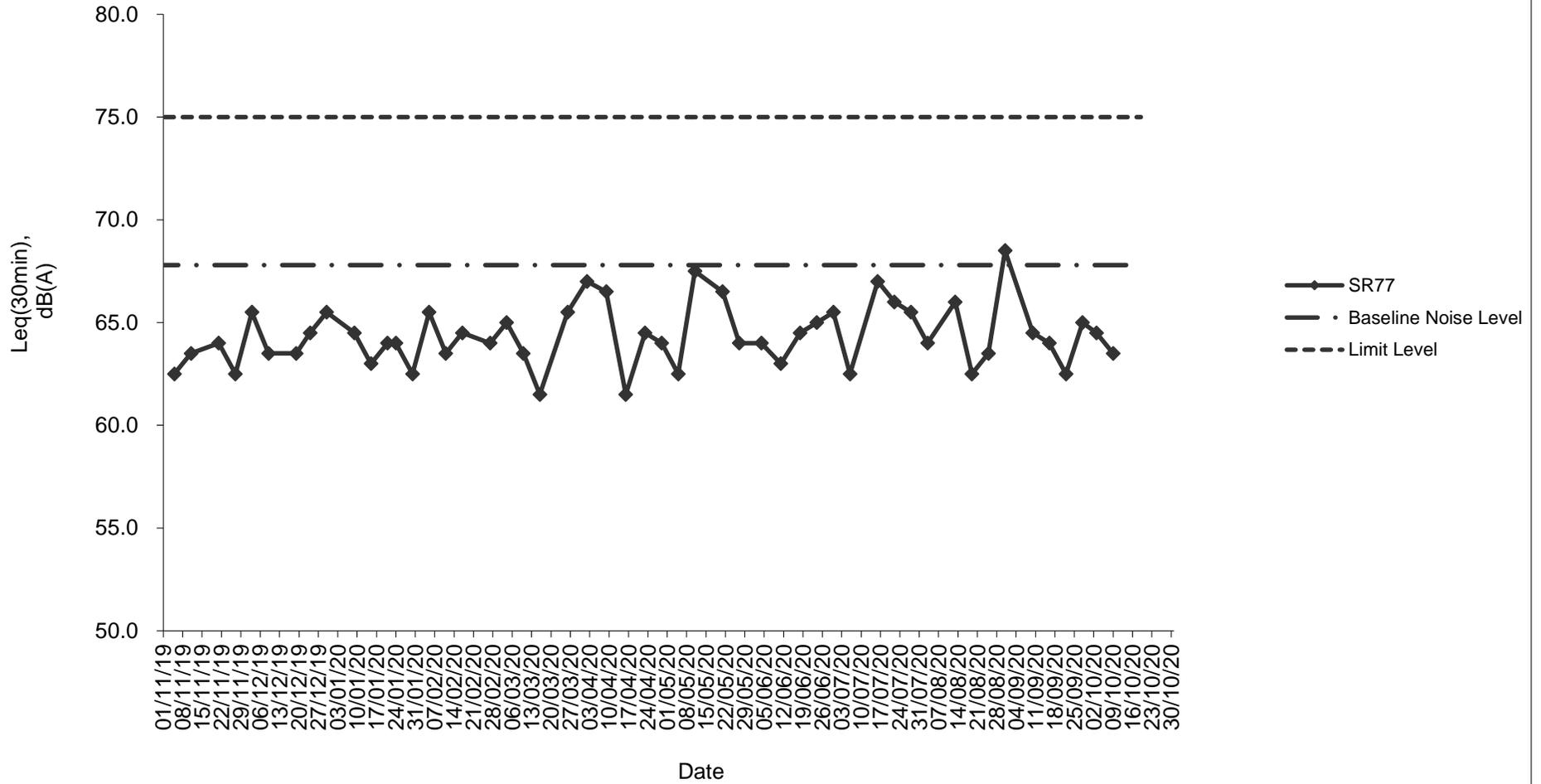
Date	Weather Condition	Start Time	End Time	Measured Noise Level (dB(A))*			Baseline Corrected Level, dB(A)**	Baseline Noise Level (dB(A)), Leq(30min)	Limit Level dB(A)	Exceedance (Y / N)
				L10(30min)	L90(30min)	Leq(30min)				
2019/11/05	Sunny	11:15	11:45	88.5	55.5	62.5	-	67.8	75.0	N
2019/11/11	Sunny	11:15	11:45	93.5	56.0	63.5	-	67.8	75.0	N
2019/11/21	Sunny	11:15	11:45	101.5	58.5	64.0	-	67.8	75.0	N
2019/11/27	Sunny	11:15	11:45	87.0	59.0	62.5	-	67.8	75.0	N
2019/12/03	Sunny	11:15	11:45	77.0	58.0	65.5	-	67.8	75.0	N
2019/12/09	Sunny	11:15	11:45	76.0	55.5	63.5	-	67.8	75.0	N
2019/12/19	Cloudy	11:15	11:45	75.0	54.5	63.5	-	67.8	75.0	N
2019/12/24	Sunny	11:15	11:45	80.5	55.5	64.5	-	67.8	75.0	N
2019/12/30	Cloudy	11:15	11:45	79.5	55.0	65.5	-	67.8	75.0	N
2020/01/09	Cloudy	11:00	11:30	81.0	57.0	64.5	-	67.8	75.0	N
2020/01/15	Fine	11:15	11:45	79.5	54.5	63.0	-	67.8	75.0	N
2020/01/21	Fine	11:30	12:00	78.5	54.0	64.0	-	67.8	75.0	N
2020/01/24	Fine	11:15	11:45	97.5	55.5	64.0	-	67.8	75.0	N
2020/01/30	Fine	11:15	11:45	101.0	56.0	62.5	-	67.8	75.0	N
2020/02/05	Cloudy	11:15	11:45	80.5	58.0	65.5	-	67.8	75.0	N
2020/02/11	Cloudy	11:15	11:45	78.5	56.5	63.5	-	67.8	75.0	N
2020/02/17	Fine	11:15	11:45	86.5	57.0	64.5	-	67.8	75.0	N
2020/02/27	Fine	11:15	11:45	79.5	56.0	64.0	-	67.8	75.0	N
2020/03/04	Cloudy	11:15	11:45	91.5	61.5	65.0	-	67.8	75.0	N
2020/03/10	Sunny	11:15	11:45	92.0	58.5	63.5	-	67.8	75.0	N
2020/03/16	Sunny	11:15	11:45	98.5	56.5	61.5	-	67.8	75.0	N
2020/03/26	Cloudy	11:15	11:45	93.0	57.5	65.5	-	67.8	75.0	N
2020/04/02	Cloudy	11:15	11:45	104.0	61.0	67.0	-	67.8	75.0	N
2020/04/09	Fine	11:30	12:00	101.0	59.5	66.5	-	67.8	75.0	N
2020/04/16	Sunny	11:00	11:30	92.0	55.5	61.5	-	67.8	75.0	N
2020/04/23	Cloudy	11:15	11:45	95.0	57.5	64.5	-	67.8	75.0	N
2020/04/29	Cloudy	11:15	11:45	94.5	54.5	64.0	-	67.8	75.0	N
2020/05/05	Fine	11:15	11:45	97.0	58.5	62.5	-	67.8	75.0	N
2020/05/11	Cloudy	11:15	11:45	101.0	56.5	67.5	-	67.8	75.0	N
2020/05/21	Cloudy	11:15	11:45	92.5	63.0	66.5	-	67.8	75.0	N
2020/05/27	Cloudy	11:15	11:45	102.0	60.0	64.0	-	67.8	75.0	N
2020/06/04	Fine	11:30	12:00	97.5	60.0	64.0	-	67.8	75.0	N
2020/06/11	Fine	11:00	11:30	98.5	57.5	63.0	-	67.8	75.0	N
2020/06/18	Fine	11:45	12:15	76.0	58.0	64.5	-	67.8	75.0	N
2020/06/24	Fine	11:15	11:45	78.5	59.5	65.0	-	67.8	75.0	N
2020/06/30	Fine	11:15	11:45	77.5	57.5	65.5	-	67.8	75.0	N
2020/07/06	Fine	11:15	11:45	68.0	60.0	62.5	-	67.8	75.0	N
2020/07/16	Fine	11:15	11:45	77.5	58.0	67.0	-	67.8	75.0	N
2020/07/22	Fine	11:45	12:15	75.5	64.0	66.0	-	67.8	75.0	N
2020/07/28	Fine	11:15	11:45	74.0	57.5	65.5	-	67.8	75.0	N
2020/08/03	Cloudy	11:15	11:45	72.0	59.5	64.0	-	67.8	75.0	N
2020/08/13	Fine	11:15	11:45	73.0	59.5	66.0	-	67.8	75.0	N
2020/08/19	Cloudy	11:45	12:15	75.5	54.5	62.5	-	67.8	75.0	N
2020/08/25	Fine	11:15	11:45	70.5	57.0	63.5	-	67.8	75.0	N
2020/08/31	Fine	11:15	11:45	78.0	57.0	68.5	-	67.8	75.0	N
2020/09/10	Fine	11:10	11:40	79.5	57.0	64.5	-	67.8	75.0	N
2020/09/16	Fine	11:00	11:30	78.0	58.5	64.0	-	67.8	75.0	N
2020/09/22	Fine	11:45	12:15	75.0	54.5	62.5	-	67.8	75.0	N
2020/09/28	Cloudy	11:30	12:00	75.0	57.0	65.0	-	67.8	75.0	N
2020/10/03	Cloudy	11:15	11:45	75.5	64.5	64.5	-	67.8	75.0	N
2020/10/09	Sunny	11:15	11:45	73.0	63.5	63.5	-	67.8	75.0	N
2020/10/15	Sunny	11:15	11:45	79.5	62.5	62.5	-	67.8	75.0	N
2020/10/21	Sunny	11:15	11:45	77.0	65.5	65.5	-	67.8	75.0	N
2020/10/27	Sunny	11:15	11:45	73.5	65.5	65.5	-	67.8	75.0	N

Summary For the Reporting Period (Nov 2019 - Oct 2020)	
Average	64.4
Minimum	61.5
Maximum	68.5

Remarks

- * +3dB(A) Façade effect correction included
- ** Baseline corrected level is only calculated when measured noise level (Leq) > limit level.
- *** Data in **Underline** denotes exceedance of respective Limit Level

Noise monitoring result: SR77
(Nov 2019 - Oct 2020)



Appendix G

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	<p>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.</p> <p>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.</p> <p>The complaint is considered an invalid complaint under this Project.</p>	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)	<p>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.</p> <p>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.</p> <p>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.</p>	Completed

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					<p>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</p> <p>The complaint is considered unlikely due to the construction works of this project.</p>	
C171228	28 December, 2017	1823	Kau Lung Hang and Hong Lok Yuen	<p>Air quality issue nearby Kau Lung Hang and Hong Lok Yuen area. Stockpiling within the Project area was observed to be uncovered, causing dust dispersion within the area. (大埔九龍坑附近的空氣污染問題嚴重。吐露港公路蓮塘口岸隧道工程經常見到沙泥沒有覆蓋，導致沙土飛揚散佈九龍坑，康樂園一帶，造成極大困擾與明顯健康風險。要求立即改善，懲罰相</p>	<p>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.</p> <p>As advised by the Contractor, no construction works were carried out during the public holiday.</p> <p>No exceedance of TSP level at the air monitoring station under this Contract was recorded in the past six months except 8 December 2017.</p>	

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
				<p>關建築商。附圖是該區狀況。昨日洗車，一日已經沙塵滿佈。)</p>	<p>Exceedance on 8 December 2017 was considered not project related as no major excavation works located close to the monitoring location at SR77.</p> <p>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.</p>	



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