

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

Annual EM&A Review Report

1 November 2020 to 28 September 2021

**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 2020 to September 2021)

Certified by: W. K. CHIU 

Position: Environmental Team Leader

Date: 9 November 2021

Date	Revision	Prepared By	Checked By	Approved By
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**Your 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 2020 to September 2021 for the portion of Stage 2 works entrusted to CEDD under Contract No. CV/2012/09**

09 November 2021  
By Fax (2805 5028) & Hand

We refer to the Annual EM&A Report for November 2020 to September 2021 received on 09 November 2021 submitted by Environmental Team via email. We confirm we have no comment.

Yours faithfully  
for MOTT MACDONALD HONG KONG LIMITED



Steven Tang  
Independent Environmental Checker

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## **EXECUTIVE SUMMARY**

This report documents the findings of EM&A works conducted during the period between 1 November 2020 and 28 September 2021.

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. No environmental complaint was received, No environmental related prosecution or notification of summons was received in the reporting period.

As informed by the contractor, all major construction activities under Contract No. CV/2012/09 of the EP/324/2008 were completed. ETL have submitted the termination proposal for the construction phase EM&A Programme to EPD on 31 Aug 2021. Referring to EPD replied letter dated on 28 Sep 2021, the termination of construction phase EM&A for this Project is approved.

## 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 No construction activities undertaken in the reporting month. No construction programme will be presented in **Appendix A**.

### 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/ Mr. Eddie Luk	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	
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 1 November 2020 to 28 September 2021.
- 1.4.2 Since the termination of construction phase EM&A for this Project is approved on 28 September 2021, the Final EM&A Report which summaries the impact monitoring results and audit findings for the Project during the reporting period between 1 August 2021 to 28 September 2021.

## 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
<b>Air Quality</b>				
1-hour TSP	µg/m <sup>3</sup>	292.7	500	Three times every 6 days
24-hour TSP	µg/m <sup>3</sup>	170.3	260	Once every 6 days
<b>Construction Noise</b>				
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
<b>Air Quality</b>			
1-hour Total Suspended Particulate			
SR77	25.4µg/m <sup>3</sup>	199.4µg/m <sup>3</sup>	133.4µg/m <sup>3</sup>
24-hour Total Suspended Particulate			
SR77	14.3µg/m <sup>3</sup>	155.1µg/m <sup>3</sup>	79.3µg/m <sup>3</sup>
<b>Construction Noise</b>			
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
<b>Air Quality</b>			
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
<b>Construction Noise</b>			
Leq 30min	Action Level	0	0
	Limit Level	0	0

## **4 ENVIRONMENTAL NON-COMFORMANCE**

### **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.

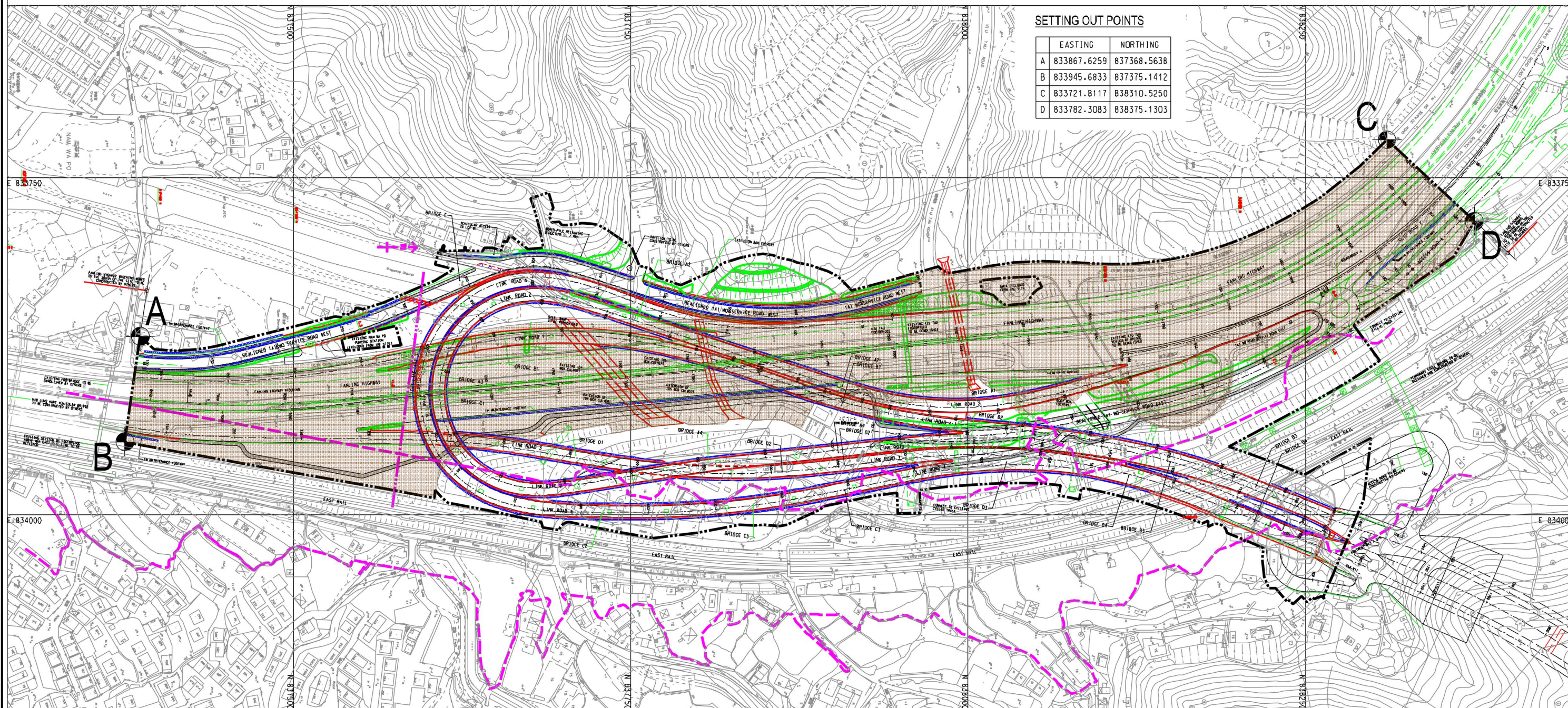
## **7 CONCLUSIONS**

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.

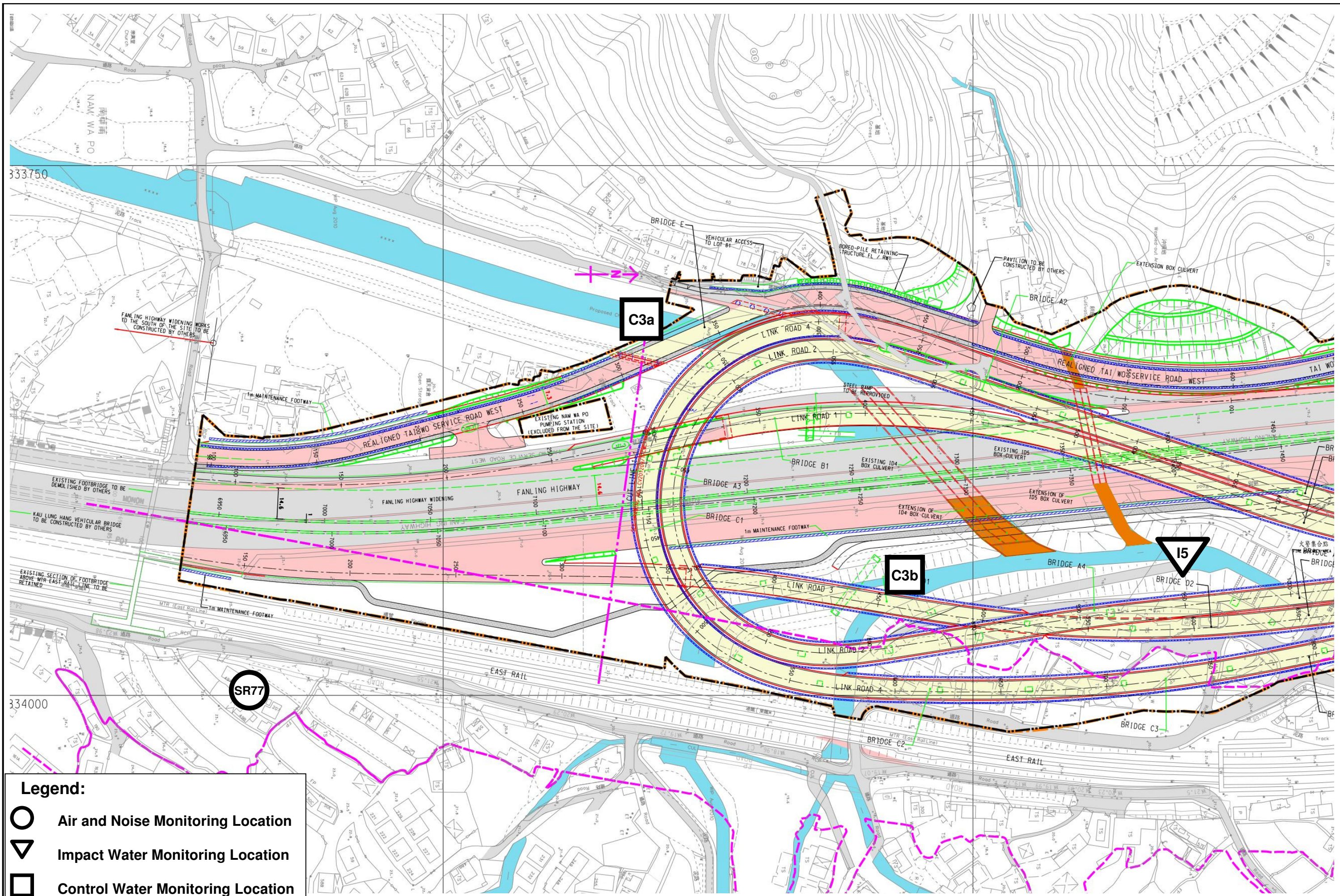
# Figure






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**Legend:**

 Works Area for Entrusted Portion



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



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

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
<b>3-Month Rolling Programme 2019-4-21 (Based on UMP06C)</b>												
<b>Key Dates (Contractual)</b>												
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						◆ KD4: Section 3 - Remainder of Landscape Softworks not included in Section 3A (Pref. EOT by Claim 56, 58)
KD-0500	KD4A: Section 3A - Landscape Softworks in NBZ1 (Potential EOT by Inclement Weather)	0	0		20-May-19*	-213						◆ KD4A: Section 3A - Landscape Softworks in NBZ1 (Potential EOT by Inclement Weather)
KD-0800	KD6: Section 5 - Preservation and Protection of Trees (Potential EOT by Inclement Weather)	0	0		20-May-19*	-110						◆ KD6: Section 5 - Preservation and Protection of Trees (Potential EOT by Inclement Weather)
<b>Key Dates (Forecast)</b>												
KD-0405	KD4: Section 3 - Remainder of Landscape Softworks not included in Section 3A	0	0		20-May-19	1						◆ KD4: Section 3 - Remainder of Landscape Softworks not included in Section 3A
KD-0505	KD4A: Section 3A - Landscape Softworks in NBZ1	0	0		20-May-19	-213						◆ KD4A: Section 3A - Landscape Softworks in NBZ1
KD-0805	KD6: Section 5 - Preservation and Protection of Trees	0	0		20-May-19	-110						◆ KD6: Section 5 - Preservation and Protection of Trees
<b>Section IA &amp; IB - Fanling Highway Widening (KD-1 &amp; KD-2)</b>												
<b>Fanling Highway South Portion between CH6935 and CH7470</b>												
<b>Fanling Highway Zone 1 between CH6935 and CH7130 (within SBZ2)</b>												
<b>Noise Barrier</b>												
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							
<b>At-Grade Roadworks (195m)</b>												
FHW-1350b	Road Pavement (FLH NB 1st lane and Hard Shoulder)	138	0	20-Mar-19 A	20-May-19 A							
<b>Fanling Highway Zone 2 between CH7130 and CH7290</b>												
<b>Noise Barrier</b>												
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)					
<b>At-Grade Roadworks (160m)</b>												
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)					
<b>Fanling Highway Zone 3 between CH7290 and CH7380</b>												
<b>Noise Barrier</b>												
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)					
<b>At-Grade Roadworks (130m)</b>												
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								
<b>Fanling Highway North Portion between CH7470 and CH7925</b>													
<b>Fanling Highway Zone 4 between CH7380 and CH7470</b>													
<b>At-Grade Roadworks (90m)</b>													
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								
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								
FHW-4330c	Construction of FL/RW2 (mass concrete wall, VO not yet received)	38	0	27-Aug-18 A	04-Apr-19 A								
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								
FHW-4330e	Road Drainage MN9.1 - MN9.3	24	0	23-Aug-18 A	20-May-19 A								
<b>Fanling Highway Zone 5 between CH7470 and CH7600 (Provision of Kiu Tau Footbridge)</b>													
<b>Kiu Tau Footbridge Reprovision (East)</b>													
FHW-5070	Installation of Lighting Facilities (affect by design change which is under VO)	21	46	20-Jun-18 A	13-Jul-19	260							
FHW-5090	Erection of Pillar Box (affect by design change which is under VO)	30	0	28-Feb-19 A	29-Mar-19 A								
FHW-5100	Power Cable Laying Works (affect by design change which is under VO)	36	36	20-May-19*	02-Jul-19	233							
FHW-5110	Permanent Power Supply Connection (affect by design change which is under VO)	10	10	03-Jul-19	13-Jul-19	260							
FHW-5110a	Installation of Drainage Pipe	32	22	10-Sep-18 A	14-Jun-19	284							
FHW-5110b	Laying of Floor Tiles (affect by design change which is under VO)	72	12	28-Jun-18 A	01-Jun-19	294							
FHW-5110c	Installation of Suspended Ceiling (affect by design change which is under VO)	104	12	21-May-18 A	01-Jun-19	294							
<b>Provision of BFA Facilities (Lift)</b>													
FHW-L-104f	Permanent Power Supply (affect by design change which is under VO)	10	10	03-Jul-19*	13-Jul-19	233							
FHW-L-106f	Testing & Commissioning (affect by design change which is under VO)	27	27	15-Jul-19*	14-Aug-19	233							
<b>Works at existing TWSRE</b>													
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							
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							
<b>At-Grade Road Works (130m)</b>													
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							
FHW-5330a	Road Drainage (MN10.1-10.3A, gullies affected by Slope F18)	60	15	16-Dec-17 A	05-Jun-19	291							
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							
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								
FHW-5330e	Road Pavement (log on effect by Slope F18 under VO)	14	14	20-May-19*	04-Jun-19	292							
<b>Fanling Highway Zone 6 between CH7600 and CH7660 (Existing Vehicular Bridge)</b>													
<b>At-Grade Roadworks (60m)</b>													
FHW-6330a	Road Drainage and Road Formation (FLH NB hard shoulder)	60	18	16-Dec-17 A	10-Jun-19	288							
<b>Fanling Highway Zone 7 between CH7660 and CH7925 at NBZ (Section 1B)</b>													

- 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



- Actual Work
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**CEDD Contract No. CV/2012/09**  
**Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3**  
**3-Month Rolling Programme**  
 3MPR070 \_\_\_\_\_ Page 3 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
UU-1010A	Utilities Duct Laying in Area 1, Phase2, CLP - 132kV(150mVA), approx.30m at interface section	16	12	10-Jan-18 A	01-Jun-19	171	Utilities Duct Laying in Area 1, Phase2, CLP - 132kV(150mVA), approx.30m at interface section, U				
UU-1010B	Utilities Duct Laying in Area 1, Phase2, Towngas - DN600, approx.20m at interface section	58	58	22-Jul-19	27-Sep-19	171	Utilities Duct Laying in Area 1, Phase2, Towngas - DN600, approx.20m at interface section				
UU-1030	Utilities Duct Laying in Area 3, Phase1 (along existing TWSRW, Approx. 150m) (by utilities undertakers)	7	7	20-May-19*	26-May-19	246	Utilities Duct Laying in Area 3, Phase1 (along existing TWSRW, Approx. 150m) (by utilities undertakers)				
UU-1030A	Utilities Duct Laying in Area 3, Phase2, CLP - 132kV(150mVA), approx. 30m	27	49	10-Jan-18 A	17-Jul-19	161	Utilities Duct Laying in Area 3, Phase2, CLP - 132kV(150mVA), approx. 30m				
UU-1040A	Utilities Duct Laying in Area 4, Phase2, Towngas - DN600 & DN400, approx. 50m (by their own TTA)	121	50	15-Sep-16 A	18-Jul-19	127	Utilities Duct Laying in Area 4, Phase2, Towngas - DN600 & DN400, approx. 50m (by their own TTA)				
UU-1040B	Utilities Duct Laying in Area 4, Phase2, CLP - 132kV(150mVA), approx. 50m (by their own TTA)	33	33	19-Jul-19	26-Aug-19	127	Utilities Duct Laying in Area 4, Phase2, CLP - 132kV(150mVA), approx. 50m (by their own TTA)				
<b>Switch-Over of Existing Utilities</b>											
UU-SO-2520	Switch-over Works (CLP 11kV)	16	16	20-May-19*	04-Jun-19	349	Switch-over Works (CLP 11kV)				
UU-SO-3500	Switch-over Works (Towngas, DN400)	30	30	19-Jul-19*	17-Aug-19	275	Switch-over Works (Towngas, DN400)				
<b>Remaining Works for Noise Barrier along realigned TWSRW</b>											
TWSRW-NB-14	Noise Barrier Steelworks & Panel for NB2 at Zone 5	15	15	21-Jun-19*	09-Jul-19	264	Noise Barrier Steelworks & Panel for NB2 at Zone 5				
<b>Stage N4A &amp; N4B - Realignment of Tai Wo Service Road East (KD-13 &amp; KD-14)</b>											
<b>TWSRE Zone 1 between CH100 and CH270</b>											
<b>At-Grade Roadworks</b>											
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 Track (under VO159)				
<b>TWSRE Zone 2 between CH270 and CH380</b>											
<b>At-Grade Roadworks</b>											
TWSRE-2120	Road Pavement on Permanent Cycle Track	33	0	22-Mar-19 A	12-Apr-19 A		Road Pavement on Permanent Cycle Track				
<b>TWSRE Zone 3 between CH380 and CH56</b>											
<b>At-Grade Roadworks</b>											
TWSRE-3060	Road Pavement on Permanent Cycle Track	40	0	21-Mar-19 A	19-Apr-19 A		Road Pavement on Permanent Cycle Track				
<b>Remaining Works for Noise Barrier along realigned TWSR East</b>											
TWSRE-NB-12	Installation of Steelwork & Transparent Panel - Noise Barrier NB3 (254m)	35	0	09-Jun-17 A	10-Apr-19 A		Installation of Steelwork & Transparent Panel - Noise Barrier NB3 (254m)				
<b>Landscaping &amp; Establishment Works (KD-4, 4A, 5, 5A, 6)</b>											
<b>Section 3A - Landscaping Softworks in NBZ1</b>											
S3A-1000	Transplant and Landscaping Softworks in NBZ1	50	0	14-Feb-19 A	29-Mar-19 A		Transplant and Landscaping Softworks in NBZ1				
<b>Section 3 - Remainder of Landscaping Softworks Not Included in Section 3A</b>											
S3-1000	Transplant and Landscaping Softworks on At grade Road	131	0	26-Mar-18 A	14-May-19 A		Transplant and Landscaping Softworks on At grade Road				
<b>Section 4A: Establishment Works for Landscape Softworks under Section 3A</b>											
S4A-1000	Establishment Works at NBZ1	365	365	23-Mar-19 A	18-May-20	-260	Establishment Works at NBZ1				
<b>Section 4: Establishment Works for Landscape Softworks under Section 3</b>											
S4-1000	Establishment Works for Remaining Part of Site	365	365	13-Mar-19 A	18-May-20	-258	Establishment Works for Remaining Part of Site				
<b>Section 5: Preservation and Protection of Trees</b>											
SS-1000	Preservation and Protection of Trees	0	0		20-May-19	-82	Preservation and Protection of Trees				

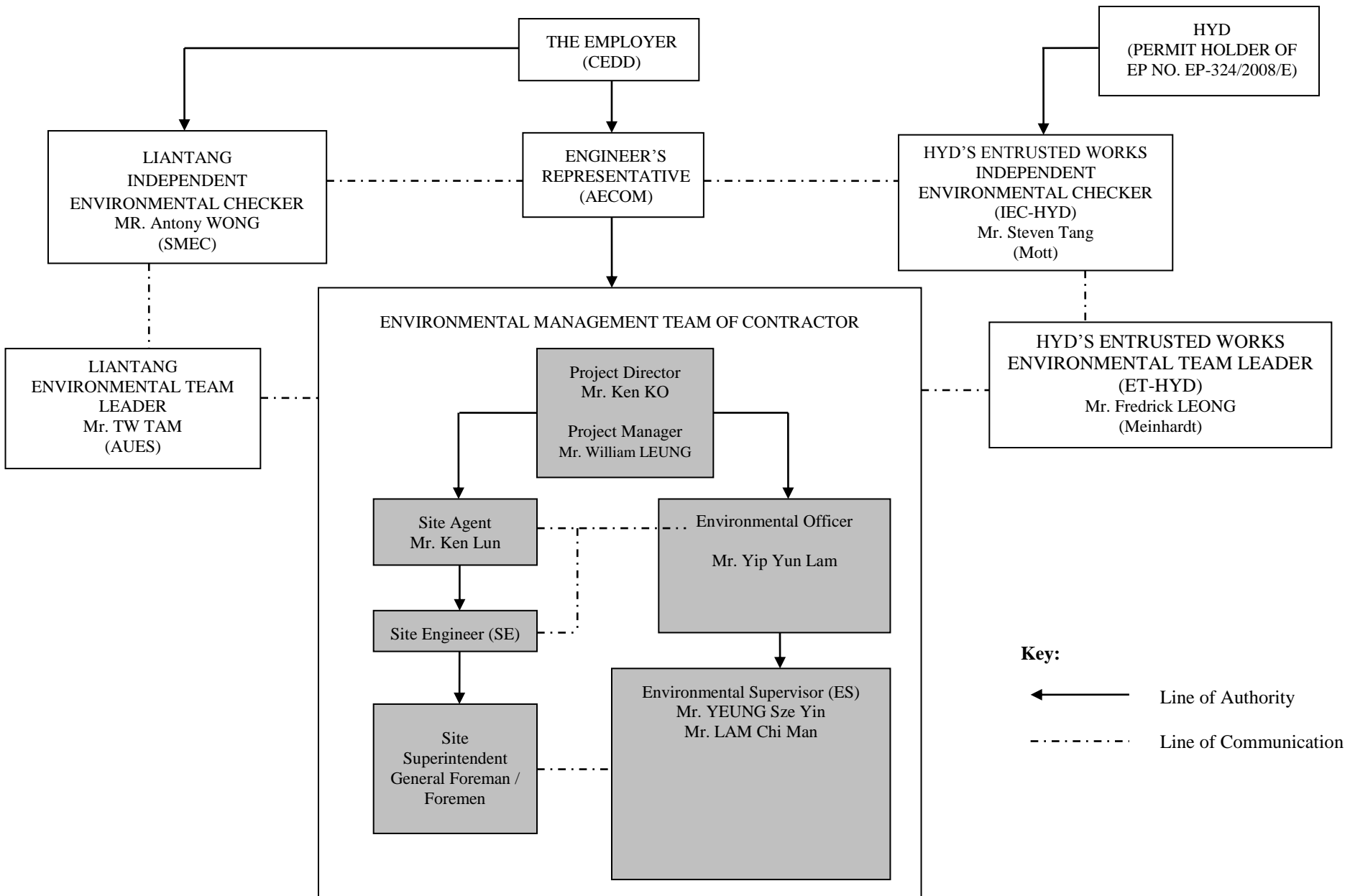
- Actual Work
- Remaining Work
- Summary Bar
- Critical Remaining Work
- ◆ Milestone
- Project Baseline Bar

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

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



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

**Event and Action Plan for Noise Quality**

Event	Action			
	ET Leader	IEC	ER	Contractor
Action Level	<ol style="list-style-type: none"> <li>1. Notify IEC and the Contractor.</li> <li>2. Carry out investigation.</li> <li>3. Report the results of investigation to IEC and the Contractor.</li> <li>4. Discuss with the Contractor and formulate remedial measures.</li> <li>5. Increase monitoring frequency to check mitigation effectiveness.</li> </ol>	<ol style="list-style-type: none"> <li>1. Review with analysed results submitted by ET.</li> <li>2. Review the proposed remedial measures by the Contractor and advise ER accordingly.</li> <li>3. Supervise the implement of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing.</li> <li>2. Notify the Contractor.</li> <li>3. Require the Contractor to propose remedial measures for the analysed noise problem.</li> <li>4. Ensure remedial measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IEC.</li> <li>2. Implement noise mitigation proposals.</li> </ol>
Limit Level	<ol style="list-style-type: none"> <li>1. Notify IEC, ER, EPD and the Contractor.</li> <li>2. Identify the source.</li> <li>3. Repeat measurement to confirm findings.</li> <li>4. Increase monitoring frequency.</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented.</li> <li>6. Inform IEC, ER, and EPD the causes &amp; actions taken for the exceedances.</li> <li>7. Assess effectiveness of the Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET Leader and the Contractor on the potential remedial actions.</li> <li>2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise ER accordingly.</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing.</li> <li>2. Notify the Contractor.</li> <li>3. Require the Contractor to propose remedial measures for the analysed noise problem.</li> <li>4. Ensure remedial measures are properly implemented.</li> <li>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.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance.</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification.</li> <li>3. Implement the agreed proposals.</li> <li>4. Resubmit proposals if problem still not under control.</li> <li>5. Stop the relevant 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 style="list-style-type: none"> <li>Repeat in-situ measurement on next day of exceedance to confirm findings;</li> <li>Identify source(s) of impact;</li> <li>Inform IEC, Contractor &amp; ER;</li> <li>Check monitoring data, all plant, equipment &amp; contractor's working methods;</li> </ol>	<ol style="list-style-type: none"> <li>Check monitoring data submitted by ET &amp; Contractor's working methods;</li> </ol>	<ol style="list-style-type: none"> <li>Confirm receipt of notification of failure in writing; Notify, Contractor</li> </ol>	<ol style="list-style-type: none"> <li>Inform the ER &amp; confirm notification of the non-compliance in writing;</li> <li>Rectify unacceptable practice;</li> <li>Amend working methods if appropriate.</li> </ol>
Action level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> <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, ER &amp; Contractor;</li> <li>Ensure mitigation measures are implemented;</li> <li>Increase monitoring to daily until no exceedance of Action level.</li> </ol>	<ol style="list-style-type: none"> <li>Checking monitoring data submitted by ET &amp; Contractor's working method;</li> <li>Discuss with ET &amp; Contractor on possible remedial actions;</li> <li>Review the proposed mitigation measures submitted by Contractor &amp; advise the ER accordingly;</li> <li>Supervise the implementation of mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>Discuss with IEC on the proposed mitigation measures;</li> <li>Ensure mitigation measures properly implemented;</li> <li>Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>Inform the Engineer &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> <li>Implement the agreed mitigation measures.</li> </ol>

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

# **Appendix D Implementation Schedule of Environmental Mitigation Measures (EMIS)**

Impact	Environmental Protection Measures	Timing	Responsibility	Implementation Status #
<b>Air Quality</b>				
Air Quality during Construction	<ul style="list-style-type: none"> <li>Restricting heights from which materials are dropped, as far as practicable to minimize the fugitive dust arising from unloading/loading.</li> <li>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.</li> <li>Effective water sprays shall be used to control potential dust emission sources such as unpaved haul roads and active construction areas.</li> <li>All spraying of materials and surfaces shall avoid excessive water usage.</li> <li>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.</li> <li>Materials shall be dampened, if necessary, before transportation.</li> <li>Travelling speeds shall be controlled to reduce traffic induced dust dispersion and re-suspension within the site from the operating haul trucks.</li> <li>Vehicle washing facilities shall be provided to minimise the quantity of material deposited on public roads.</li> </ul>	During Construction	Contractor	✓  Rem./ Obs.  ✓  ✓  ✓  ✓  Obs.
Air Quality during Operation	Not required	N/A	N/A	N/A
<b>Noise</b>				
Noise during Construction	<ul style="list-style-type: none"> <li>Use of silenced plant or plant equipped with mufflers or dampers in substitute of ordinary plant.</li> <li>Reduce the number of equipment and their percentage on-time.</li> </ul>	During Construction	Contractor	✓  ✓
Noise during Operation	Not required	N/A	N/A	N/A
<b>Water Quality</b>				
Water Quality during Construction	<u>Road Widening Works, Earthworks and Culvert Extension Works</u> <ul style="list-style-type: none"> <li>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.</li> </ul>	During Construction	Contractor	Rem.

	<ul style="list-style-type: none"> <li>• Sand traps, oil interceptors and other pollution prevention installations should be provided, properly cleaned and maintained.</li> </ul>			✓
	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Regular inspections of stilling basins and/or silt traps is required to ensure that sediment is not conveyed into the existing drainage system.</li> <li>• Open stockpiles should be covered with a tarpaulin cover.</li> <li>• During the wet season, any exposed top soils should be covered with a tarpaulin, shotcreted or hydroseeded.</li> <li>• Sand and silt from wash-water from vehicle washing should be settled out before discharging into storm drains.</li> <li>• Fuels should be stored in bunded areas such that spillage can be easily collected.</li> </ul>			✓ ✓ ✓ ✓ ✓ ✓
Water Quality during Operation	Not required	N/A	N/A	N/A
<b>Waste Management</b>				
Waste Management during Construction	<u>General Waste</u> <ul style="list-style-type: none"> <li>• Transport of wastes off site as soon as possible.</li> <li>• Maintenance of accurate waste records.</li> <li>• Minimisation of waste generation for disposal (via reduction/recycling/re-use).</li> <li>• No on-site burning will be permitted.</li> <li>• Use of re-useable metal hoardings/signboards.</li> </ul> <u>Vegetation from site clearance</u> <ul style="list-style-type: none"> <li>• Segregation of materials to facilitate disposal.</li> <li>• Mulching to reduce bulk and where possible review opportunities for the possible beneficial use within landscaping areas.</li> </ul>	During Construction           During Construction	Contractor           Contractor	Rem. ✓ Obs. ✓ ✓  ✓ ✓
	<u>Demolition Wastes</u> <ul style="list-style-type: none"> <li>• Segregation of materials to facilitate disposal.</li> <li>• Appropriate stockpile management.</li> </ul>	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"> <li>• Segregation of materials to facilitate disposal / reuse.</li> <li>• Appropriate stockpile management.</li> <li>• Re-use of excavated material on or off site (where possible).</li> <li>• Special handling and disposal procedures in the event that contaminated materials are excavated.</li> </ul>	During Construction	Contractor	<p>✓</p> <p>✓</p> <p>N/A</p>
	<p><u>Construction Wastes</u></p> <ul style="list-style-type: none"> <li>• Segregation of materials to facilitate recycling/reuse (within designated area in appropriate containers/stockpiles).</li> <li>• Appropriate stockpile management.</li> <li>• Planning to reduce over ordering and waste generation.</li> <li>• Recycling and re-use of materials where possible (e.g. metal, wood from formwork)</li> <li>• For material which cannot be re-used/recycled, collection should be carried out by an approved waste contractor for landfill disposal.</li> </ul>	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"> <li>• Bentonite slurries should be reused as far as possible.</li> <li>• Disposal in accordance with Practice Note For Professional Persons ProPECC PN 1/94.</li> </ul> <p><u>Chemical Wastes</u></p> <ul style="list-style-type: none"> <li>• Storage within locked, covered and bunded area.</li> <li>• The storage area shall not be located adjacent to sensitive receivers e.g. drains.</li> <li>• Minimise waste production and recycle oils/solvents where possible.</li> <li>• A spill response procedure shall be in place and absorption material available for minor spillages.</li> <li>• Use appropriate and labelled containers.</li> <li>• Educate site workers on site cleanliness/waste management procedures.</li> </ul>	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"> <li>• If chemical wastes are to be generated, the contractor must register with EPD as a chemical waste producer.</li> <li>• The chemical wastes shall be collected by a licensed chemical waste collector.</li> </ul> <p><u>Municipal Wastes</u></p> <ul style="list-style-type: none"> <li>• Waste shall be stored within a temporary refuse collection facility, in appropriate containers prior to collection and disposal.</li> <li>• Regular, daily collections are required by an approved waste collector.</li> </ul>	During Construction	Contractor	✓ ✓ ✓ ✓
Waste Management during Operation	Not required.	N/A	N/A	N/A
<b>Ecology</b>				
Ecology during Construction	<p><u>Accurate Delineation of Works Area</u></p> <ul style="list-style-type: none"> <li>• Boundaries of proposed works areas shall be clearly identified and separated from external areas by a physical barrier to prevent encroachment of adjacent habitats.</li> <li>• 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.</li> </ul> <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"> <li>• vehicle washing facilities to be provided at every discernible or designated vehicle exit point;</li> <li>• all temporary site access roads shall be sprayed with water to suppress dust as necessary;</li> <li>• all dusty materials should be sprayed with water immediately prior to any handling; and</li> <li>• all debris should be covered entirely by impervious sheeting or stored in a sheltered debris collection area.</li> </ul>	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"> <li>• Bund and cover stockpiles to avoid run-off;</li> <li>• Channel any run-off through a system of oil, grease and sediment / silt traps and reuse water on site where ever practical;</li> <li>• All vehicle maintenance to be undertaken within a bunded area; and</li> <li>• Maximise vegetation retention on-site to maximise absorption (minimise transport).</li> </ul>	During Construction	Contractor	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>
Ecology during Operation	<ul style="list-style-type: none"> <li>• To conduct compensatory ecological planting as specified in the latest landscape plans approved by EPD (Clause 2.6 of the Environmental Permit refers).</li> </ul>	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
<b>Landscape and Visual</b>				
Landscape and Visual during Construction	<p><u>Preservation of Existing Vegetation</u></p> <ul style="list-style-type: none"> <li>• Trees identified for retention within the project limit would be protected during the works</li> <li>• The tree transplanting and planting works shall be implemented by approved Landscape Contractors</li> </ul>	During Construction	Contractor	<p>✓</p> <p>✓</p>
	<p><u>Temporary Works Areas</u></p> <ul style="list-style-type: none"> <li>• 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.</li> </ul>	During Construction	Contractor	<p>✓</p>
	<p><u>Hoarding</u></p> <ul style="list-style-type: none"> <li>• A hoarding would be erected where practicable in the most visually sensitive locations to screen the temporary construction works from the local VSRs.</li> </ul>	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"> <li>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.</li> </ul> <p><u>Protection of Important Landscape Features</u></p> <ul style="list-style-type: none"> <li>Important features such as temples, Island House and kilns within the study area, although remote from the proposed works retained and adequately protected.</li> </ul>	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 (Not Used)**

# **Appendix F Environmental Monitoring Data for Air, Noise Quality (Not Used)**

# **Appendix G Statistics on Complaints, Notifications of Summons and Successful Prosecutions**



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