

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

Quarterly EM&A Report

February 2018 to April 2018

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**

Quarterly EM&A Report

(February 2018 to April 2018)

Certified by:


_____ Fredrick Leong _____

Position:

_____ Environmental Team Leader _____

Date:

_____ 16 May 2018 _____

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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 Quarterly EM&A Summary Report for February 2018 to April 2018 for the portion of Stage 2 works entrusted to CEDD under Contract No. CV/2012/09

05 June 2018

By Fax (2805 5028) & Hand

We refer to the Quarterly EM&A Summary Report for February 2018 to April 2018 for the Project received on 29 May 2018 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
CEDD/BCP
AECOM
Meinhardt

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Date	Revision	Prepared By	Checked By	Approved By
16 May 2018	0	WK CHIU Vanessa HO Bobo HUI	Fredrick LEONG	Helen COCHRANE

Handwritten signatures and initials are present below the printed names in the table.

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EXECUTIVE SUMMARY

This report documents the findings of EM&A works conducted in the quarter between 1 February 2017 and 30 April 2018.

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

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 quarter.

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

No environmental non-compliance was recorded in the reporting quarter. No environmental complaint was received in the reporting quarter. No environmental related prosecution or notification of summons was received in the reporting quarter.

The box culvert works have been partially completed by the end of March 2014 except the last construction activity, installation of a base slab at Box Culvert ID4. The installation of the base slab at Box Culvert ID4 was commenced in December 2016 and has been completed in March 2017.

The 4-week post construction water quality monitoring has been commenced and completed in April 2017.

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 March 2015) 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 construction programme is presented in **Appendix A**. The major construction activities undertaken in the reporting quarter are summarized below:
- Cable Detection and Trial Trenches;
 - Remaining Works on New Footbridge;
 - Noise Barrier Construction;
 - Road Pavement Works;
 - Viaduct segment erection;
 - Demolition of Existing Kiu Tau Vehicular Bridge;
 - Water main laying works (on Grade and on bridge deck);
 - Installation of Noise barrier steel column & panel;
 - Parapet Installation on bridge deck;

- Drainage Work;
- Mini-pile installation;
- Construction of Profile Barrier & Planter Wall on Bridge Deck;
- Stressing of External Tendon;
- Construction of Retaining Wall Behind Abutment;
- Bitumen paving on bridge deck;
- Installation of deck cell light inside the bridge deck;
- Installation of movement joint on the bridge;
- Construction of retaining wall; and
- Landscaping works.

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 **Table 1.1**.

Table 1.1 Contact Information of Key Personnel

Party	Role	Position	Name	Telephone	Fax
AECOM	Engineer's Representative	Senior Resident Engineer	Mr. Alan Lee	2171 3303	2171 3498
		Resident Engineer (Environmental)	Mr. Perry Yam	2171 3350	
Mott MacDonald	Independent Environmental Checker (IEC)	IEC	Mr. Steven Tang	2828 5920	2827 1823
Chun Wo	Contractor	Site Agent	Mr. Daniel Ho	2638 6144	2638 7077
		Environmental Officer	Ms. Tiffany Tsang	2638 6150	
Meinhardt	Environmental Team (ET)	ET Leader	Mr. Fredrick Leong	2859 1739	2540 1580
Enquiry Hotline	General Enquiry	--	Ms Helena Mak	6355 1731	--

1.4 Purpose of the Report

1.4.1 This is the Quarterly EM&A Report which summaries the impact monitoring results and audit findings for the Project during the reporting period between 1 February 2018 and 30 April 2018.

2 SUMMARY OF EM&A REQUIREMENTS

2.1 Monitoring Requirements

2.1.1 In accordance with the Updated EM&A Manual, environmental parameters including Air Quality and 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

Temporary Suspension of Box Culvert Works and Water Quality Monitoring

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

2.2 Environmental Mitigation Measures

2.2.1 Environmental mitigation measures have been recommended in the EM&A Manual and are given in **Appendix C**. The implementation status for the reporting quarter 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 quarter. Meteorological data for the reporting quarter have been extracted from Hong Kong Observatory and are given in **Appendix D**. Monitoring data with graphical presentation for the reporting quarter have been given in **Appendix E**. A summary on the monitoring results has also been given in **Table 3.1**.

Table 3.1 Summary of Monitoring Data in the Reporting Quarter

Monitoring Location	Minimum	Maximum	Average
Air Quality			
1 hour Total Suspended Particulate			
SR77	91.2µg/m ³	197.3µg/m ³	137.9µg/m ³
24 hour Total Suspended Particulate			
SR77	12.1µg/m ³	97.1µg/m ³	65.2µg/m ³
Construction Noise			
SR77	68.5dB(A)	74.5dB(A)	72.2dB(A)

3.2 Summary of Monitoring Exceedances

3.2.1 The number of exceedances event recorded in the reporting quarter is summarized in **Table 3.2**.

Table 3.2 Summary of Exceedance Events in the Reporting Quarter

Parameter	Criteria	Number of Exceedances 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
	Limit Level	0	0

3.2.2 No exceedance of Action Level and Limit level for 1-hour TSP and 24-hour TSP monitoring were recorded at SR77 in the reporting quarter.

3.2.3 No exceedance of noise monitoring was recorded at SR77 in the reporting quarter.

3.2.4 The Contractor has been reminded to strengthen the mitigation measures including:

Air Quality

- Watering within site and vehicle washing facilities shall be enhanced.
- Stockpiling shall be covered coverage with impervious sheeting and/or sufficient water spraying for dust suppression.
- Water spraying shall be enhanced to avoid dust generation.

Water Quality

- Preventive measure shall be enhanced to prevent soil/ rock from engineering the WSD area.
- Enhancement to water pumping pipe at NB 67 shall be adopted.

Noise

- NRMM label shall be provided for all relevant mobile machinery on site.

4 WASTE MANAGEMENT

4.1.1 The Contractor has registered as a chemical waste producer of the Project. The C&D materials and waste sorting were carried out on-site. Receptacles were provided for general refuse collection.

4.1.2 During the reporting quarter, a total of 7,102m³ of excavated material has been generated. 5,289m³ of inert C&D materials was disposed of at public fill to Tuen Mun

Area 38, while 630m³ of inert C&D materials was reused on site. 305m³ of general refuse was disposed of at North East New Territories (NENT) Landfill. No plastics and no paper/cardboard packaging were collected by recycling contractor in the reporting quarter. No metals were collected by recycling contractor in the reporting quarter. No chemical waste was collected by licensed contractor in the reporting quarter. Details of the waste management data are presented in **Appendix F**.

5 ENVIRONMENTAL NON-CONFORMANCE

- 5.1.1 No environmental non-compliance was recorded in the reporting quarter. No environmental complaint was received. No environmental related prosecution or notification of summons was received in the reporting quarter. The summary for the non-compliance, complaints and prosecutions is provided in **Appendix G**.

6 CONCLUSION, COMMENTS AND RECOMMENDATIONS

- 6.1.1 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 quarter.
- 6.1.2 In the reporting quarter, no exceedance event was recorded.
- 6.1.3 No environmental non-compliance was recorded in the reporting quarter. No environmental complaints were received in the reporting quarter. No environmental related prosecution or notification of summons was received in the reporting quarter.
- 6.1.4 The box culvert works have been completed in the end of March 2017. The 4-week post construction water quality monitoring has been completed in the end of April 2017 in the same manner as the impact monitoring

Figure

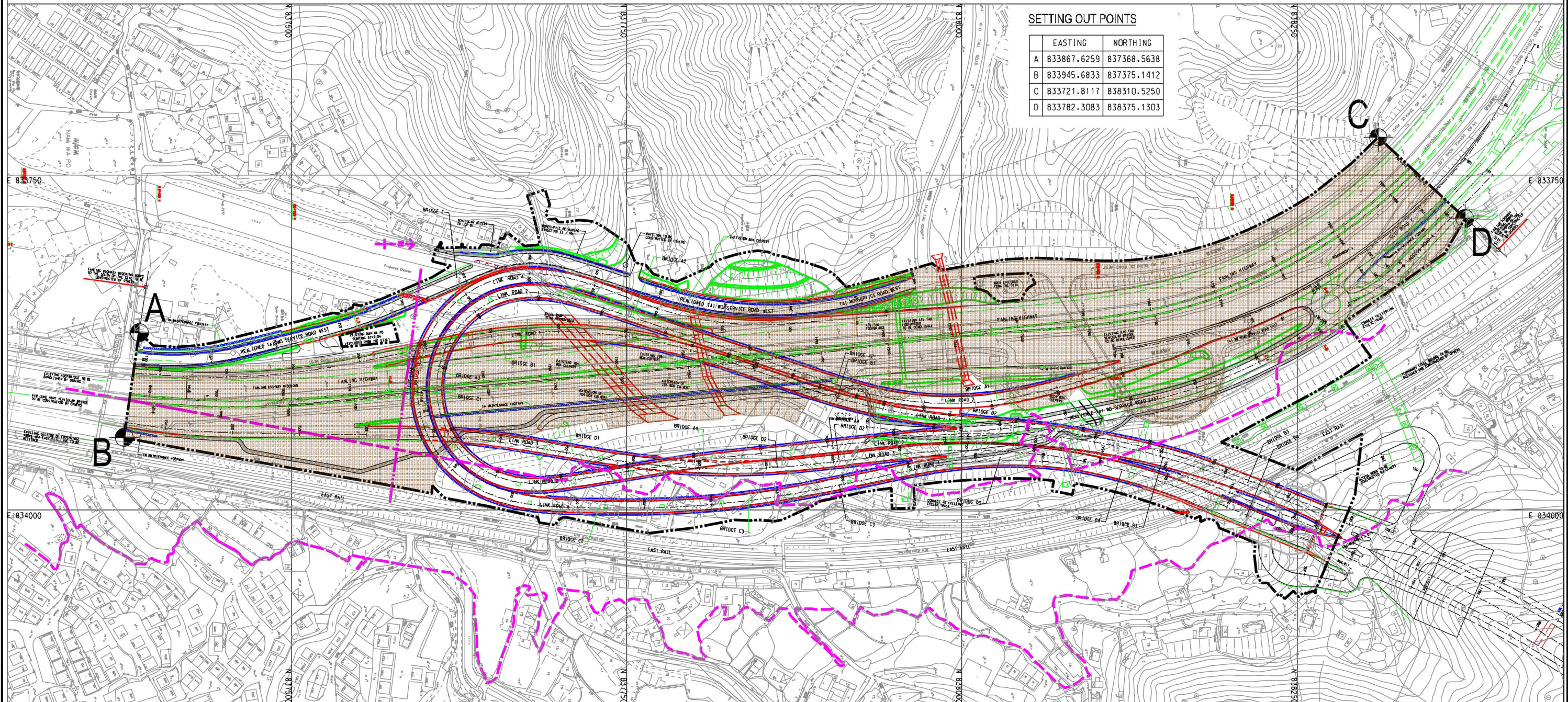
Contract No. CV/2012/09
 Liantang / Heung Yuen Wai Boundary Control Point
 Site Formation and Infrastructure Works - Contract 3



俊和建築工程有限公司
 CHUN WO CONSTRUCTION & ENGINEERING CO., LTD.

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



CV/201209-T-CWC-SK-001g_AD_edit.dgn 22/1/2014 17:10:34

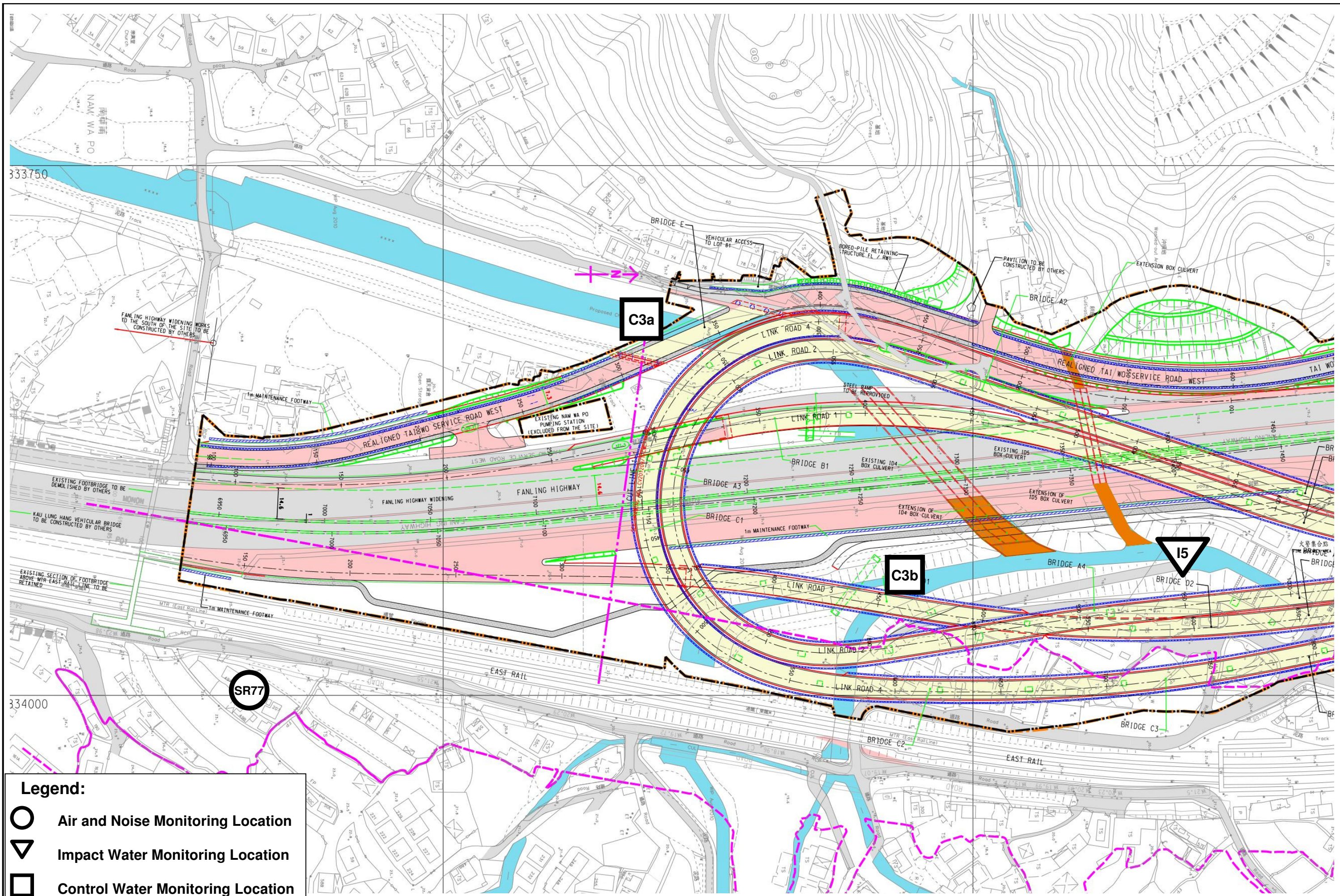
Legend:

Works Area for Entrusted Portion

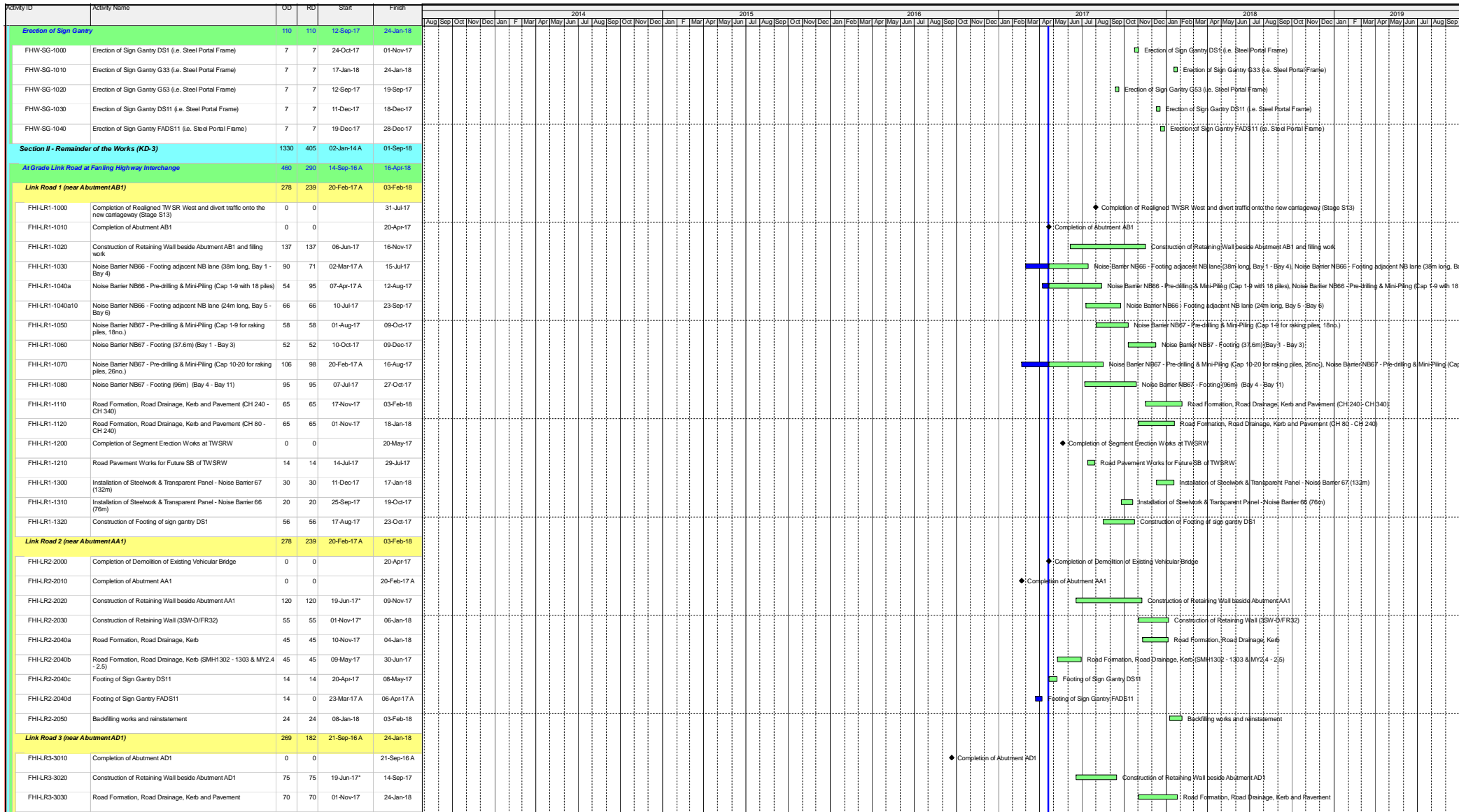


Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2

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



Appendix A Construction Programme



- Actual Work
- Remaining Work
- Summary Bar
- Critical Remaining Work
- Milestone
- Actual Level of Effort



CEDD Contract No. CV/2012/09

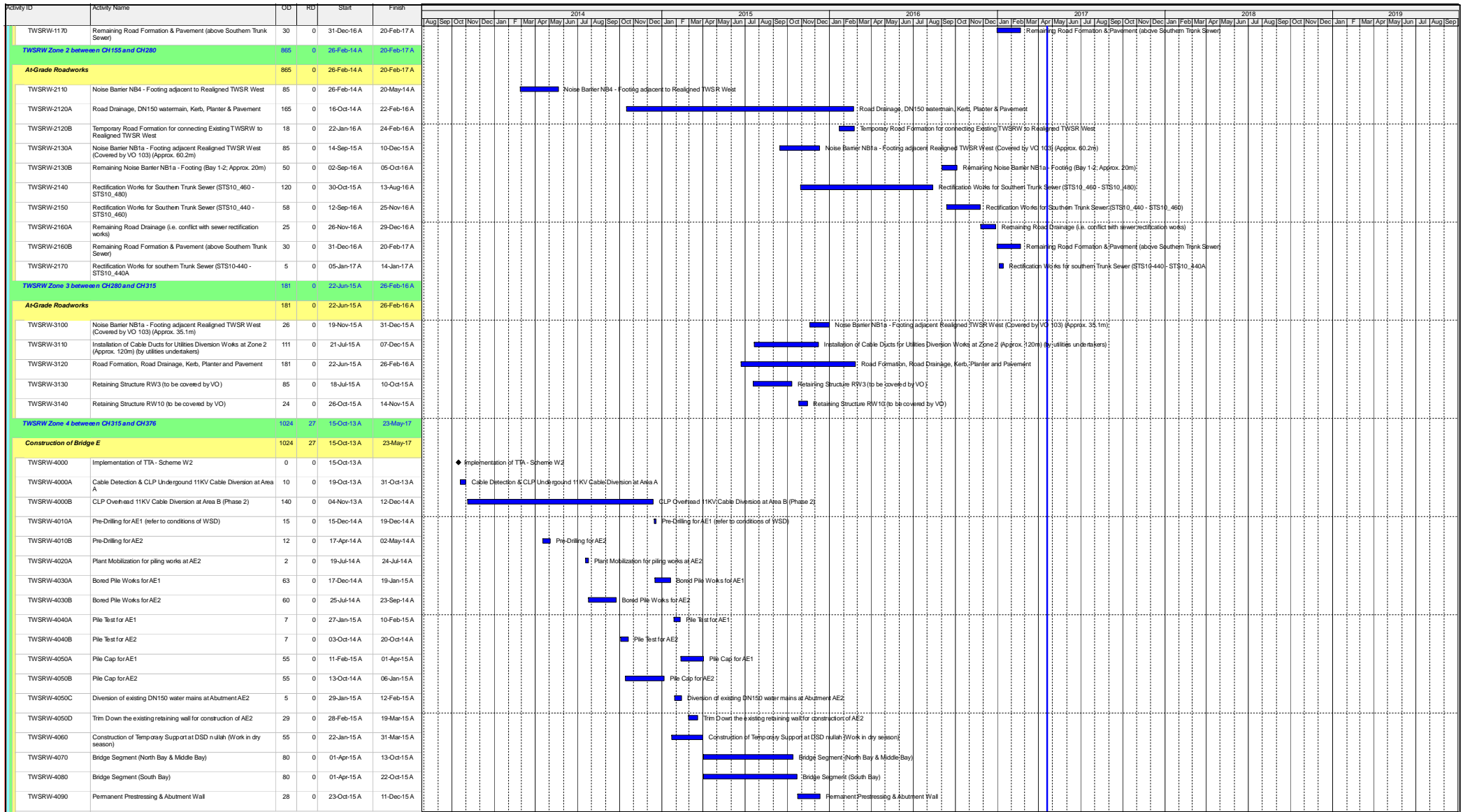
Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3

Updated Master Works Programme (Revision UMP05B)

Programme ID: UMP05B (Data Date: 20-Apr-17) Print Date: 13-May-17

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Date	Revision	Checked	Approved
07-Mar-17	Draft	Sam Lam	David Tung



- Actual Work
- Remaining Work
- Summary Bar
- Critical Remaining Work
- Milestone
- Actual Level of Effort

CEDD Contract No. CV/2012/09

Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3

Updated Master Works Programme (Revision UMP05B)

Programme ID: UMP05B (Data Date: 20-Apr-17) Print Date: 13-May-17
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Date	Revision	Checked	Approved
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Activity ID	Activity Name	OD	RD	Start	Finish	2014												2015												2016												2017												2018												2019											
						Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec							
Box Culvert Extension - BC01																																																																													
Flow Diversion of Existing Stream																																																																													
Excavation and Sub-base for construction of Bay 1																																																																													
Excavation and Sub-base for construction of Bay 2																																																																													
Bay 1 - Base Slab																																																																													
Bay 2 - Base Slab																																																																													
Bay 2 - Remaining Base Slab (treated as outstanding works)																																																																													
Bay 1 - Wall and Top Slab																																																																													
Bay 2 - Wall and Top Slab																																																																													
Backfilling to existing road level																																																																													
Inlet structure of the box culvert BC01 (Covered by VO. 41)																																																																													
Backfilling to existing road level after completion of inlet structure																																																																													
At-Grade Roadworks																																																																													
Slope Upgrading Works for unequipped feature beside Slope 3SW-D/C80 (Covered by VO. 68)																																																																													
TWSRW Zone 7 between CH530 and CH640																																																																													
Construction of Retaining Structures																																																																													
Implementation of TTA - Scheme W2 (Part 2)																																																																													
Slope Cutting and Drainage Channel																																																																													
Installation of Soil Nail (129 nos)																																																																													
At-Grade Roadworks																																																																													
Preparation Works for Implementation of TTA - Scheme W3A (temporary road connecting the realigned TWSRW to existing)																																																																													
Implementation of TTA - Scheme W3A (temporary road connecting the realigned TWSRW to existing)																																																																													
Road Drainage (incl. Zone 6 & Zone 7)																																																																													
Installation of Cable Ducts for Utilities Diversion Works at Area 4 (Approx. 150m) (by utilities undertakers)																																																																													
Road Drainage, Road Formation, DN150 watermain, Kerb, Planter and Pavement (incl. Zone 6 & Zone 7)																																																																													
Pipe Laying - DN150																																																																													
Preparation Works for Implementation of TTA - Scheme W3B (shift TWSRW NB traffic westward, permanent alignment)																																																																													
Implementation of TTA - Scheme W3B (shift TWSRW NB traffic westward, i.e. permanent alignment)																																																																													
Remaining Road Drainage, Road Formation, Road Pavement and Footpath (incl. Zone 6 & Zone 7)																																																																													
TWSRW Zone 8 between CH640 and CH655																																																																													
Kiu Tau Footbridge Re-provision (West)																																																																													
Pre-Drilling Works for Socket H-Pile																																																																													
Working Platform for Piling Work of Proposed Kiu Tau Footbridge																																																																													
Installation of Socket H-Pile for Proposed Kiu Tau Footbridge (13 nos of Pile)																																																																													
KTP1 & P5 - Pile Cap																																																																													
KTP1 & P5 - Pier Construction																																																																													
KTP1 & P5 - RC Deck & Bearing Installation																																																																													
KT-AB4 - Pile Cap, Abutment and Bearing Installation																																																																													
Steel Truss Installation at TWSRW West																																																																													
At-Grade Roadworks																																																																													



- Actual Work
- Remaining Work
- Summary Bar
- Critical Remaining Work
- Milestone
- Actual Level of Effort



CEDD Contract No. CV/2012/09

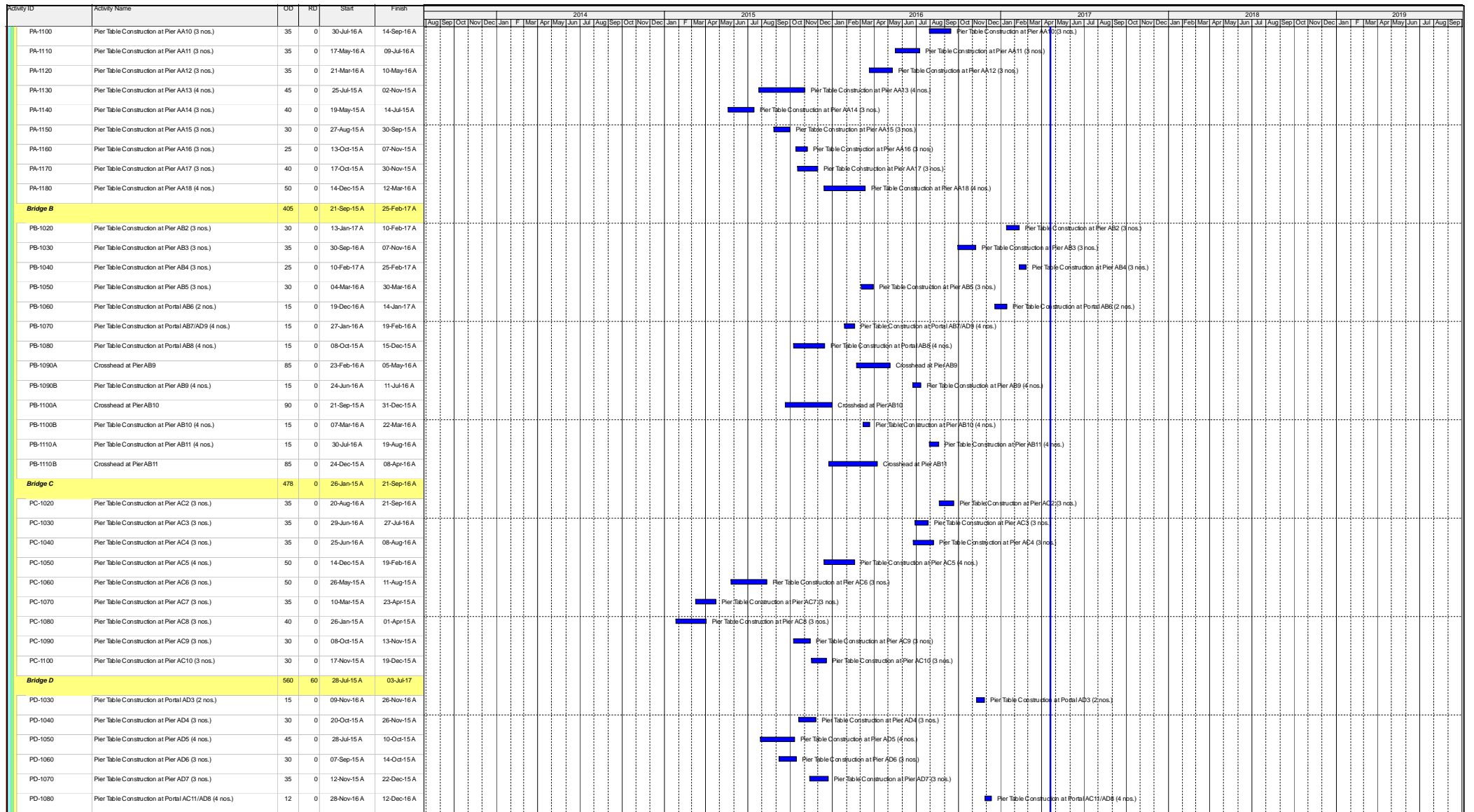
Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3

Updated Master Works Programme (Revision UMP05B)

Programme ID: UMP05B (Data Date: 20-Apr-17) Print Date: 13-May-17

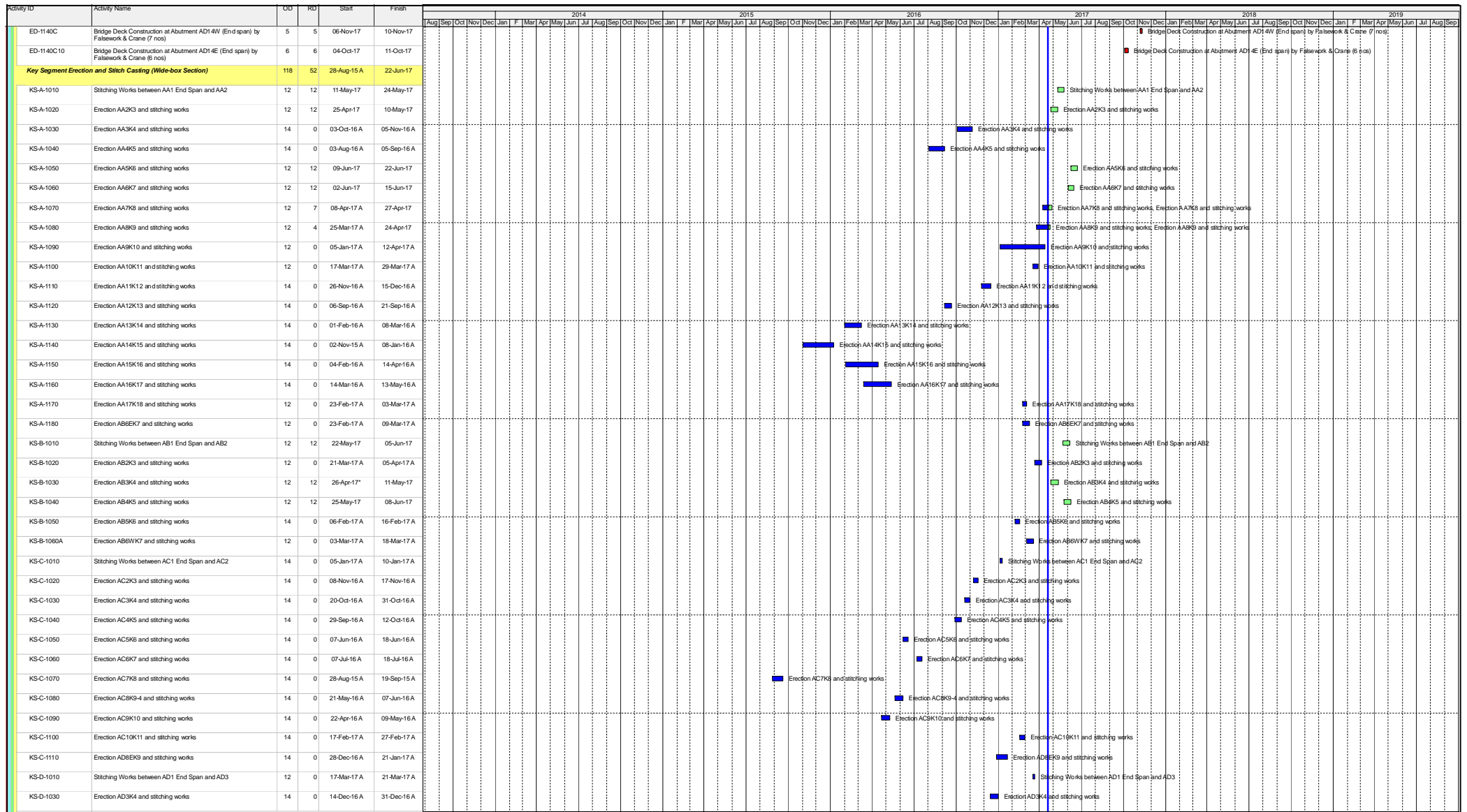
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07-Mar-17	Draft	Sam Lam	David Tung



- Actual Work
- Remaining Work
- Summary Bar
- Critical Remaining Work
- ◆ Milestone
- Actual Level of Effort

Date	Revision	Checked	Approved
07-Mar-17	Draft	Sam Lam	David Tung



- Actual Work
- Remaining Work
- Summary Bar
- Critical Remaining Work
- Milestone
- Actual Level of Effort

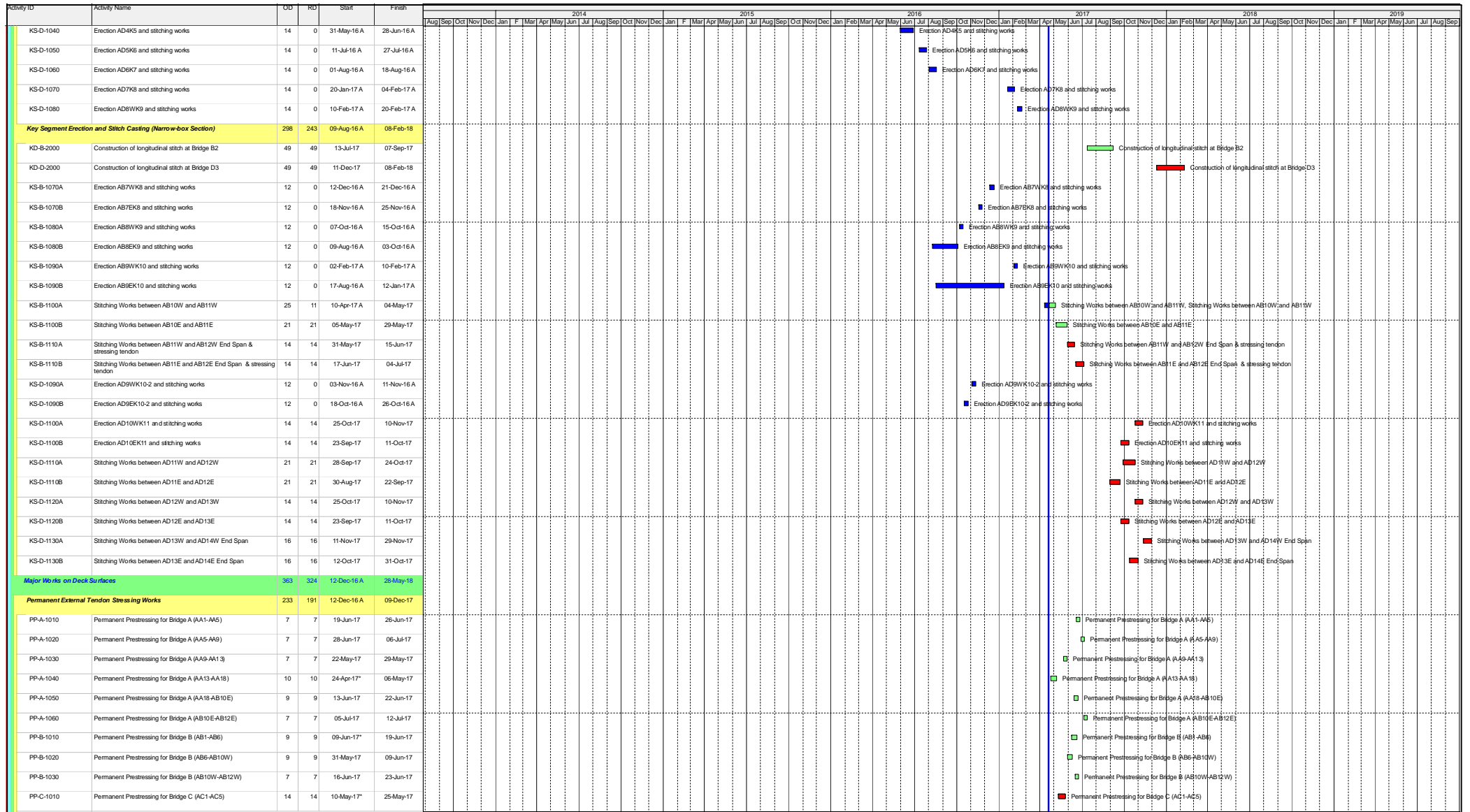
CEDD Contract No. CV/2012/09

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Updated Master Works Programme (Revision UMP05B)

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CHUN WO CONSTRUCTION & ENGINEERING CO., LTD.

- Actual Work
- Remaining Work
- Summary Bar
- Critical Remaining Work
- Milestone
- Actual Level of Effort

CEDD Contract No. CV/2012/09

Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3

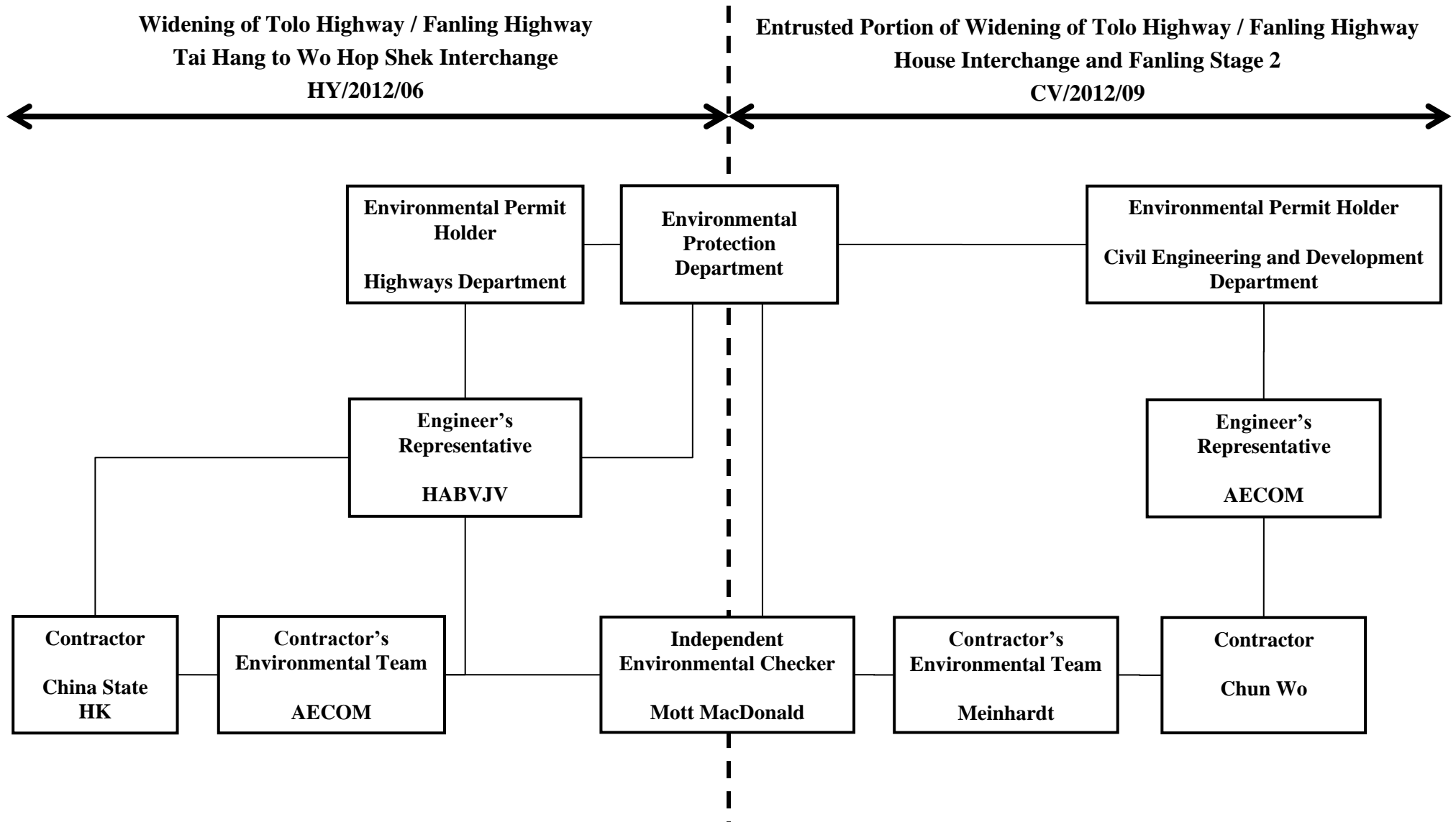
Updated Master Works Programme (Revision UMP05B)

Programme ID: UMP05B (Data Date: 20-Apr-17) Print Date: 13-May-17

Date	Revision	Checked	Approved
07-Mar-17	Draft	Sam Lam	David Tung

Appendix B

Project Organization Structure



Appendix C 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. Rem. / 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	Obs. ✓
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. ● Sand traps, oil interceptors and other pollution prevention installations should be provided, properly cleaned and maintained. 	During Construction	Contractor	✓ ✓

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

Impact	Environmental Protection Measures	Timing	Responsibility	Implementation Status #
	<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. 			<p>✓</p> <p>Rem.</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>
Water Quality during Operation	Not required	N/A	N/A	N/A
Waste Management				
Waste Management during Construction	<p><u>General Waste</u></p> <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. <p><u>Vegetation from site clearance</u></p> <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. <p><u>Demolition Wastes</u></p> <ul style="list-style-type: none"> • Segregation of materials to facilitate disposal. • Appropriate stockpile management. 	<p>During Construction</p> <p>During Construction</p> <p>During Construction</p>	<p>Contractor</p> <p>Contractor</p> <p>Contractor</p>	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>

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

Impact	Environmental Protection Measures	Timing	Responsibility	Implementation Status #
	<ul style="list-style-type: none"> • Educate site workers on site cleanliness/waste management procedures. • 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 	During Construction During Construction	Contractor Contractor	✓ ✓ ✓ ✓ ✓

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

Impact	Environmental Protection Measures	Timing	Responsibility	Implementation Status #
	<ul style="list-style-type: none"> all debris should be covered entirely by impervious sheeting or stored in a sheltered debris collection area. <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	Contractor (during construction) / LCSD* (during operation)	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>

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

Impact	Environmental Protection Measures	Timing	Responsibility	Implementation Status #
	<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. <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. <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	✓
		During Construction	Contractor	✓
		During Construction	Contractor	N/A
		During Construction	Contractor	N/A
Landscape and Visual during Operation	Not required.	N/A	N/A	N/A

Appendix D

Meteorological Data Extracted from Hong Kong Observatory

Daily Extract of Meteorological Observations , February 2018

Day	Hong Kong Observatory								King's Park	Waglan Island [^]	
	Mean Pressure (hPa)	Air Temperature			Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)	Total Bright Sunshine (hours)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
		Absolute Daily Max (deg. C)	Mean (deg. C)	Absolute Daily Min (deg. C)							
01	1022.2	12.3	10.2	6.8	3.7	64	76	0.0	2.0	***	***
02	1024.6	12.3	11.1	9.3	4.6	64	88	Trace	0.0	***	***
03	1025.9	11.8	10.2	8.8	1.6	55	88	0.0	0.0	***	***
04	1026.1	11.7	10.2	9.2	0.4	51	88	0.0	0.0	***	***
05	1026.6	11.8	9.8	8.1	-0.9	48	79	0.0	1.7	***	***
06	1023.7	14.2	11.1	7.9	1.0	50	48	0.0	10.1	***	***
07	1021.0	15.3	12.7	10.5	3.8	56	79	0.0	1.4	***	***
08	1018.8	16.7	14.0	11.3	6.3	61	73	0.0	8.1	***	***
09	1016.5	17.1	15.5	13.7	11.3	76	90	0.0	1.4	***	***
10	1017.4	22.1	18.0	15.9	14.1	78	71	0.0	6.9	***	***
11	1022.7	19.7	16.1	14.5	8.8	63	78	0.0	7.1	***	***
12	1026.4	19.0	14.9	11.9	6.8	59	26	0.0	10.3	***	***
13	1023.8	18.4	15.2	12.8	8.0	64	32	0.0	10.5	***	***
14	1019.1	18.6	16.8	14.6	8.4	58	74	0.0	2.3	***	***
15	1016.0	24.0	19.8	17.2	15.4	76	57	0.0	4.7	***	***
16	1015.0	24.8	20.6	17.5	16.4	78	10	0.0	10.2	***	***
17	1016.9	20.2	17.7	16.6	15.1	85	72	Trace	2.7	***	***
18	1017.6	20.2	18.3	16.5	14.6	79	87	0.0	0.4	***	***
19	1016.0	24.4	21.4	19.5	18.0	81	82	Trace	2.8	***	***
20	1014.3	25.0	21.0	18.8	18.6	86	83	Trace	1.5	***	***
21	1014.9	19.4	18.2	16.7	15.4	84	92	Trace	0.0	***	***
22	1018.2	16.8	15.1	13.0	13.2	89	100	2.3	0.0	***	***
23	1019.9	16.5	14.8	12.8	12.2	85	87	2.0	1.4	***	***
24	1019.0	20.8	18.3	15.5	13.2	72	86	0.2	2.8	***	***
25	1018.0	23.5	20.4	18.4	16.8	80	81	Trace	4.9	***	***
26	1019.8	18.7	17.3	16.5	14.1	81	83	Trace	0.1	***	***
27	1017.3	23.2	19.1	15.8	13.6	71	83	0.0	8.5	***	***
28	1013.7	26.2	21.4	18.5	17.6	79	57	Trace	6.9	***	***
Mean/Total	1019.7	18.7	16.0	13.9	10.4	70	73	4.5	108.7	***	***
Normal [§]	1018.5	18.9	16.8	15.0	13.0	80	74	54.4	94.2	070	24.5

*** unavailable

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

Trace means rainfall less than 0.05 mm

[§] 1981-2010 Climatological Normal, unless otherwise specified

Daily Extract of Meteorological Observations , March 2018

Day	Hong Kong Observatory								King's Park	Waglan Island [^]	
	Mean Pressure (hPa)	Air Temperature			Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)	Total Bright Sunshine (hours)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
		Absolute Daily Max (deg. C)	Mean (deg. C)	Absolute Daily Min (deg. C)							
01	1012.5	24.8	21.3	19.4	18.9	86	47	0.0	7.4	***	***
02	1012.1	24.7	21.3	19.5	17.3	78	80	Trace	5.4	***	***
03	1011.2	23.6	22.0	21.0	20.4	91	86	0.0	0.5	***	***
04	1011.0	27.3	24.0	21.9	22.0	89	86	Trace	0.5	***	***
05	1012.4	27.8	25.1	23.4	22.1	84	71	0.0	7.9	***	***
06	1017.2	23.5	19.8	18.3	16.7	83	82	Trace	1.8	***	***
07	1016.7	20.6	19.1	17.6	15.5	79	86	Trace	1.1	***	***
08	1019.4	20.5	14.5	12.5	11.4	82	90	20.3	0.0	***	***
09	1022.8	19.8	14.8	11.1	7.4	81	12	0.0	10.7	***	***
10	1022.1	20.3	16.7	13.7	10.0	66	12	0.0	10.8	***	***
11	1021.5	22.5	18.0	15.3	12.1	69	20	0.0	10.7	***	***
12	1019.0	23.3	19.6	16.9	13.9	71	10	0.0	10.7	***	***
13	1016.7	24.5	20.9	18.1	16.3	75	48	0.0	9.2	***	***
14	1014.8	20.8	20.2	19.4	17.1	83	88	2.4	0.0	***	***
15	1013.2	25.1	22.1	20.1	19.1	84	76	Trace	3.3	***	***
16	1014.8	26.3	22.7	20.3	19.2	81	39	0.0	9.4	***	***
17	1017.3	22.0	19.5	18.6	16.9	85	87	Trace	0.0	***	***
18	1016.0	24.1	20.8	19.2	17.7	83	85	Trace	4.9	***	***
19	1011.7	25.6	22.8	20.7	20.2	86	87	Trace	2.5	***	***
20	1013.0	25.3	21.4	16.9	15.5	70	55	Trace	6.2	***	***
21	1016.7	24.1	18.7	14.5	8.2	51	5	0.0	11.2	***	***
22	1016.9	24.1	19.5	16.2	10.6	57	9	0.0	10.7	***	***
23	1018.4	24.7	20.5	17.2	14.0	68	11	0.0	11.0	***	***
24	1018.9	23.8	21.1	19.6	16.8	77	78	Trace	4.7	***	***
25	1019.4	24.5	21.7	20.5	15.6	68	80	Trace	4.3	***	***
26	1018.3	26.5	22.6	20.4	17.0	71	69	0.0	6.8	***	***
27	1016.2	26.0	22.8	20.8	17.7	73	50	0.0	8.2	***	***
28	1014.7	26.7	22.7	21.0	18.5	77	41	0.0	8.7	***	***
29	1014.3	27.0	22.9	21.1	18.8	78	69	0.0	7.1	***	***
30	1015.4	27.9	23.5	21.2	18.8	76	46	0.0	9.9	***	***
31	1015.5	27.5	23.5	21.4	16.3	65	31	0.0	10.6	***	***
Mean/Total	1016.1	24.4	20.8	18.6	16.2	76	56	22.7	196.2	***	***
Normal [§]	1016.0	21.4	19.1	17.2	15.7	82	79	82.2	90.8	060	23.0

*** unavailable

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

Trace means rainfall less than 0.05 mm

[§] 1981-2010 Climatological Normal, unless otherwise specified

Daily Extract of Meteorological Observations , April 2018

Day	Hong Kong Observatory								King's Park	Waglan Island [^]	
	Mean Pressure (hPa)	Air Temperature			Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)	Total Bright Sunshine (hours)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
		Absolute Daily Max (deg. C)	Mean (deg. C)	Absolute Daily Min (deg. C)							
01	1014.5	27.9	23.6	21.3	18.3	73	51	0.0	9.7	***	***
02	1013.8	28.7	24.3	21.5	18.4	71	22	0.0	10.4	***	***
03	1013.6	29.4	24.7	21.9	19.4	74	38	0.0	10.8	***	***
04	1012.7	28.5	24.7	22.6	20.4	78	33	0.0	10.5	***	***
05	1011.6	27.8	24.6	22.7	20.4	78	57	0.0	8.8	***	***
06	1015.1	26.6	22.3	17.5	16.5	70	71	Trace	4.2	***	***
07	1023.6	20.3	18.0	16.1	5.7	45	88	Trace	0.5	***	***
08	1020.7	24.9	20.1	16.3	9.9	53	22	0.0	11.1	***	***
09	1017.6	26.5	22.0	19.0	17.3	75	43	0.0	10.7	***	***
10	1014.7	28.5	23.8	21.1	19.7	78	48	0.0	8.0	***	***
11	1012.3	27.6	24.6	22.5	21.5	83	75	0.0	2.2	***	***
12	1011.1	28.1	25.6	23.9	22.1	82	84	0.0	5.3	***	***
13	1011.7	30.6	26.7	24.6	22.7	79	71	Trace	6.0	***	***
14	1011.3	29.9	26.7	25.2	22.8	79	82	Trace	2.0	***	***
15	1014.2	25.7	21.0	18.6	18.4	85	89	17.2	0.9	***	***
16	1016.5	19.4	18.5	17.5	16.4	88	93	2.0	0.0	***	***
17	1017.1	22.9	19.9	17.4	16.6	82	90	0.2	0.5	***	***
18	1015.8	25.6	22.5	21.1	18.3	78	89	0.1	3.1	***	***
19	1014.6	26.3	23.2	21.4	18.7	76	78	0.0	8.4	***	***
20	1014.1	26.2	23.2	22.5	20.2	83	88	Trace	0.5	***	***
21	1013.1	27.5	24.5	23.0	21.4	83	83	Trace	4.6	***	***
22	1011.2	29.0	25.2	23.7	22.6	86	77	Trace	4.5	***	***
23	1009.2	30.2	26.3	24.3	22.3	79	77	Trace	7.1	***	***
24	1009.9	26.7	25.2	23.9	22.5	85	85	8.2	0.4	***	***
25	1012.1	24.7	23.7	23.3	19.7	79	85	Trace	0.0	***	***
26	1013.6	24.6	23.4	22.7	20.4	84	92	0.3	0.0	***	***
27	1015.0	28.5	24.9	22.9	21.1	80	86	Trace	1.7	***	***
28	1015.0	26.4	24.5	23.1	21.6	84	89	0.1	0.7	***	***
29	1013.3	29.3	25.6	23.9	22.2	82	74	Trace	7.8	***	***
30	1012.9	29.2	20.1	24.0	23.4	85	83	Trace	3.1	***	***
Mean/Total	1014.1	26.9	23.6	21.7	19.4	78	71	28.1	143.5	***	***
Normal [§]	1012.9	25.0	22.6	20.8	19.4	83	81	174.7	101.7	070	20.9

*** unavailable

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

Trace means rainfall less than 0.05 mm

[§] 1981-2010 Climatological Normal, unless otherwise specified

Appendix E Environmental Monitoring Data for Air, Noise and Water Quality

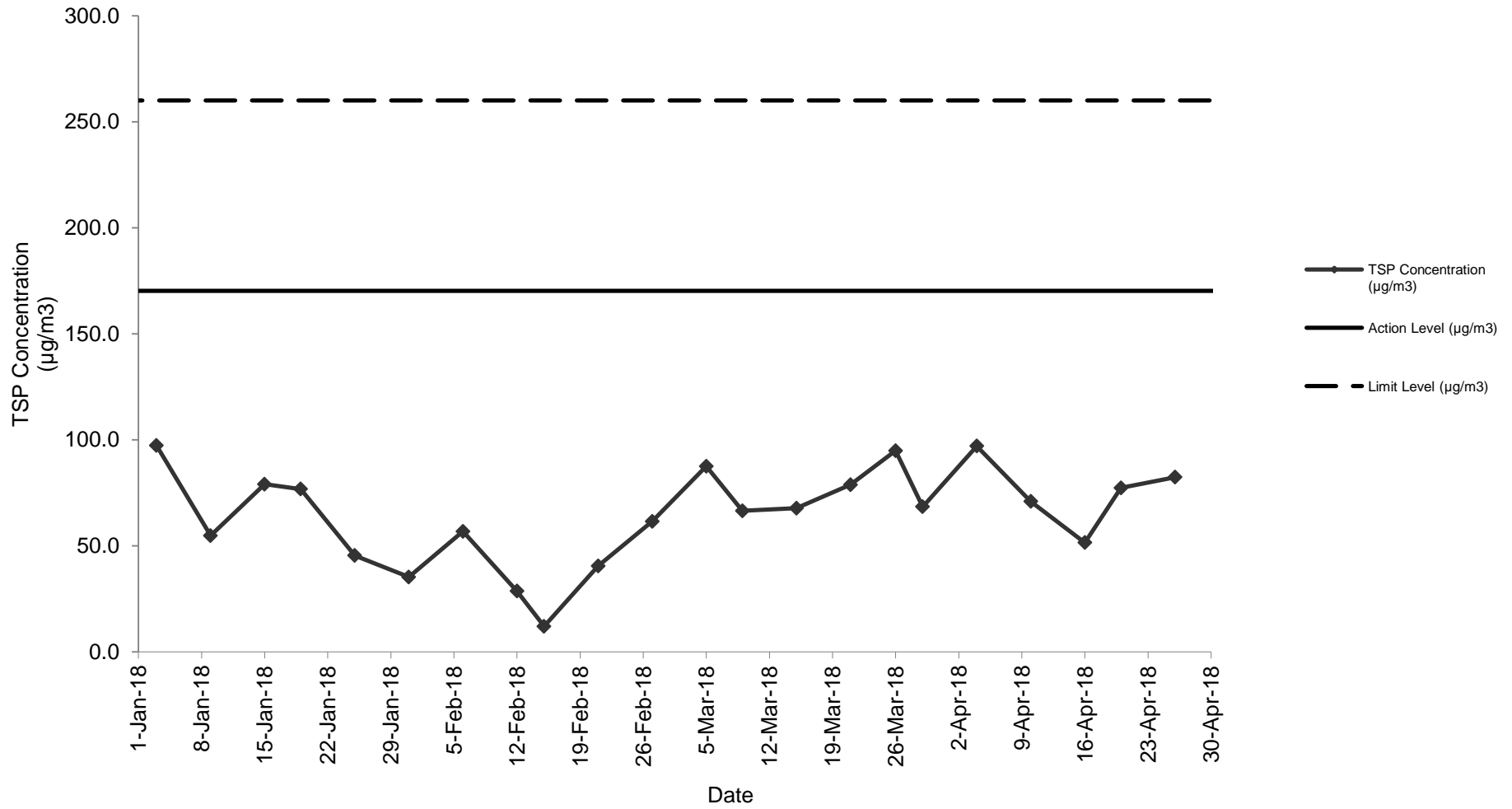
Appendix E
Air Quality Monitoring Results and their Graphical Presentation

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-Jan-18	Fine	CC128	2.8619	3.0643	0.2024	7630.67	7654.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	97.3	170.3	260.0	<5	N
9-Jan-18	Cloudy	CC130	2.8888	3.0028	0.1140	7657.67	7681.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	54.8	170.3	260.0	<5	N
15-Jan-18	Sunny	C484	2.8237	2.9882	0.1645	7684.67	7708.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	79.1	170.3	260.0	<5	N
19-Jan-18	Fine	C486	2.8015	2.9612	0.1597	7711.67	7735.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	76.8	170.3	260.0	<5	N
25-Jan-18	Fine	C488	2.8839	2.9784	0.0945	7738.67	7762.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	45.4	170.3	260.0	<6	N
31-Jan-18	Cloudy	C490	2.8736	2.9470	0.0734	7765.67	7789.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	35.3	170.3	260.0	<5	N
6-Feb-18	Sunny	C492	2.8634	2.9816	0.1182	7792.67	7816.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	56.8	170.3	260.0	<5	N
12-Feb-18	Sunny	C494	2.8701	2.9297	0.0596	7819.67	7843.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	28.7	170.3	260.0	<5	N
15-Feb-18	Fine	C496	2.7852	2.8103	0.0251	7846.67	7870.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	12.1	170.3	260.0	<5	N
21-Feb-18	Cloudy	C498	2.8097	2.8940	0.0843	7873.67	7897.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	40.5	170.3	260.0	<5	N
27-Feb-18	Sunny	C500	2.8026	2.9306	0.1280	7901.67	7925.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	61.6	170.3	260.0	<6	N
5-Mar-18	Sunny	C502	2.8215	3.0035	0.1820	7928.67	7952.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	87.5	170.3	260.0	<5	N
9-Mar-18	Sunny	C504	2.8085	2.9468	0.1383	7955.67	7979.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	66.5	170.3	260.0	<5	N
15-Mar-18	Cloudy	C506	2.8086	2.9495	0.1409	7982.67	8006.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	67.8	170.3	260.0	<5	N
21-Mar-18	Sunny	C508	2.8157	2.9796	0.1639	8009.67	8033.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	78.8	170.3	260.0	<5	N
26-Mar-18	Cloudy	C510	2.8036	3.0009	0.1973	8036.67	8060.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	94.9	170.3	260.0	<5	N
29-Mar-18	Sunny	C512	2.8105	2.9528	0.1423	8063.67	8087.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	68.4	170.3	260.0	<5	N
4-Apr-18	Fine	C116	2.7865	2.9884	0.2019	8090.67	8114.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	97.1	170.3	260.0	<5	N
10-Apr-18	Fine	C118	2.8056	2.9531	0.1475	8117.67	8141.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	70.9	170.3	260.0	<5	N
16-Apr-18	Cloudy	C120	2.8095	2.9167	0.1072	8144.67	8168.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	51.5	170.3	260.0	<5	N
20-Apr-18	Fine	C122	2.8115	2.9723	0.1608	8171.67	8195.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	77.3	170.3	260.0	<5	N
26-Apr-18	Cloudy	C124	2.8095	2.9808	0.1713	8198.67	8222.67	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	82.4	170.3	260.0	<5	N

Summary For the Reporting Quarter (February 2018 - April 2018)	
Average	65.2
Minimum	12.1
Maximum	97.1

24-Hour TSP Monitoring Result at Station: SR77 (January 2018 - April 2018)



Appendix E

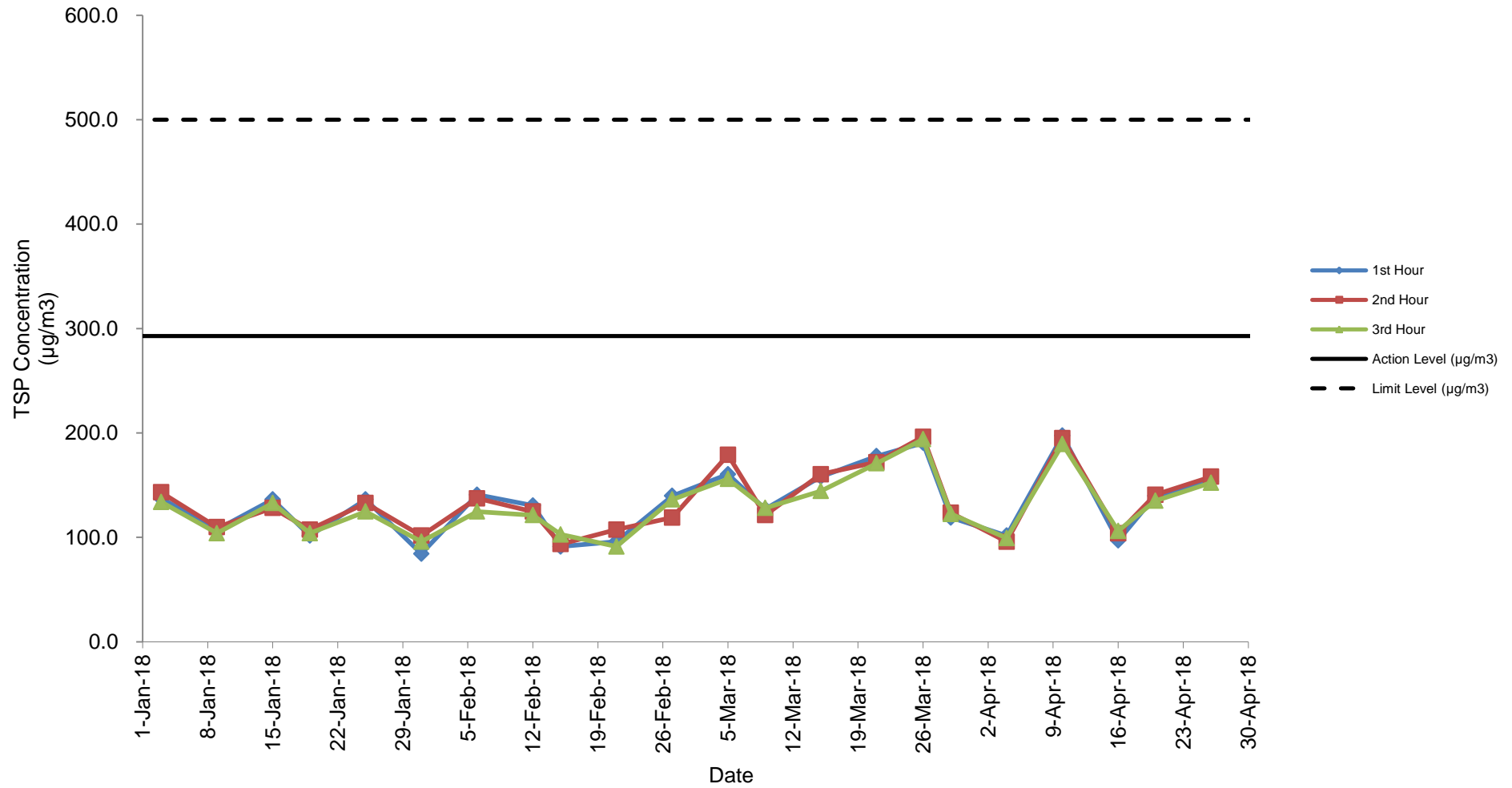
Air Quality Monitoring Results and their Graphical Presentation

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		
3-Jan-18	Fine	9:00 - 12:08	137.3	143.1	133.9	292.7	500.0
9-Jan-18	Cloudy	9:00 - 12:08	107.3	109.6	103.9	292.7	500.0
15-Jan-18	Sunny	9:00 - 12:08	136.2	128.1	132.7	292.7	500.0
19-Jan-18	Fine	9:00 - 12:08	101.6	107.3	103.9	292.7	500.0
25-Jan-18	Fine	9:00 - 12:08	136.2	132.7	124.6	292.7	500.0
31-Jan-18	Cloudy	9:00 - 12:08	84.2	101.6	95.8	292.7	500.0
6-Feb-18	Sunny	9:00 - 12:08	140.8	137.3	124.6	292.7	500.0
12-Feb-18	Sunny	9:00 - 12:08	130.4	124.6	121.2	292.7	500.0
15-Feb-18	Fine	9:00 - 12:08	91.2	93.5	102.7	292.7	500.0
21-Feb-18	Cloudy	9:00 - 12:09	95.8	107.3	91.2	292.7	500.0
27-Feb-18	Sunny	9:00 - 12:09	139.6	118.9	136.2	292.7	500.0
5-Mar-18	Sunny	9:00 - 12:08	160.4	178.9	155.8	292.7	500.0
9-Mar-18	Sunny	9:00 - 12:08	126.9	121.2	128.1	292.7	500.0
15-Mar-18	Cloudy	9:00 - 12:09	158.1	160.4	144.3	292.7	500.0
21-Mar-18	Sunny	9:00 - 12:08	177.7	172.0	170.8	292.7	500.0
26-Mar-18	Cloudy	9:00 - 12:08	190.4	196.2	193.9	292.7	500.0
29-Mar-18	Sunny	9:00 - 12:08	118.9	123.5	122.3	292.7	500.0
4-Apr-18	Fine	9:00 - 12:08	101.6	95.8	99.3	292.7	500.0
10-Apr-18	Fine	9:00 - 12:09	197.3	195.0	189.3	292.7	500.0
16-Apr-18	Cloudy	9:00 - 12:08	96.9	103.9	106.2	292.7	500.0
20-Apr-18	Fine	9:00 - 12:09	139.6	140.8	135.0	292.7	500.0
26-Apr-18	Cloudy	9:00 - 12:08	153.5	158.1	152.3	292.7	500.0

Summary For the Reporting Quarter (February 2018 - April 2018)	
Average	137.9
Minimum	91.2
Maximum	197.3

1-Hour TSP Monitoring Result at station: SR77 (January 2018 - April 2018)

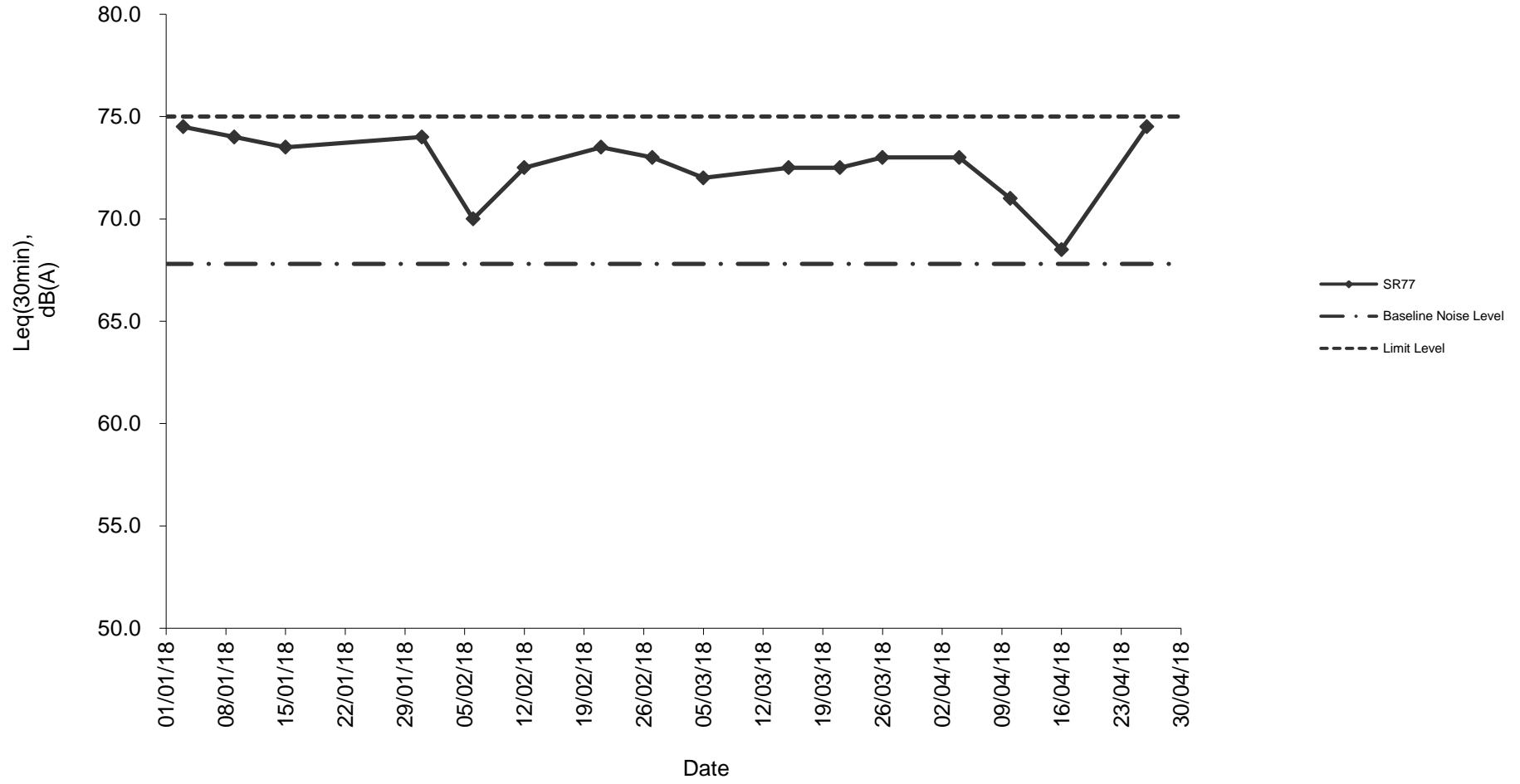


Noise Monitoring Result at SR77

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)				
2018-01-03	Fine	11:00	11:30	97.0	60.0	74.5	-	67.8	75.0	N
2018-01-09	Cloudy	11:30	12:00	91.0	63.5	74.0	-	67.8	75.0	N
2018-01-15	Sunny	11:30	12:00	93.0	61.0	73.5	-	67.8	75.0	N
2018-01-31	Cloudy	11:30	12:00	90.0	65.0	74.0	-	67.8	75.0	N
2018-02-06	Sunny	11:15	11:45	91.0	60.0	70.0	-	67.8	75.0	N
2018-02-12	Sunny	11:30	12:00	90.0	57.5	72.5	-	67.8	75.0	N
2018-02-21	Cloudy	11:30	12:00	95.5	57.5	73.5	-	67.8	75.0	N
2018-02-27	Sunny	11:20	11:50	92.0	60.0	73.0	-	67.8	75.0	N
2018-03-05	Sunny	16:15	16:45	89.0	58.5	72.0	-	67.8	75.0	N
2018-03-15	Cloudy	11:30	12:00	91.5	59.0	72.5	-	67.8	75.0	N
2018-03-21	Sunny	11:15	11:45	93.5	58.0	72.5	-	67.8	75.0	N
2018-03-26	Cloudy	11:30	12:00	92.0	59.5	73.0	-	67.8	75.0	N
2018-04-04	Sunny	11:15	11:45	92.0	58.0	73.0	-	67.8	75.0	N
2018-04-10	Fine	11:30	12:00	76.5	62.5	71.0	-	67.8	75.0	N
2018-04-16	Cloudy	11:30	12:00	75.5	65.5	68.5	-	67.8	75.0	N
2018-04-26	Cloudy	11:30	12:00	89.5	65.0	74.5	-	67.8	75.0	N

Summary For the Reporting Quarter (February 2018 - April 2018)	
Average	72.2
Minimum	68.5
Maximum	74.5

Noise monitoring result: SR77
(January 2018 - April 2018)



Appendix F Waste Flow Table

Monthly Summary Waste Flow Table

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Soil	Soil Reused in the Contract	Soil Reused in other Projects	Soil Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging (Note 3)	Plastics	Chemical Waste	General Refuse (Note 2)
Unit	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in m ³)	(in '000m ³)
Feb-18	2.698	0.256	2.442	0.150	-	2.292	0.923	-	-	-	-	0.095
Mar-18	1.524	0.141	1.383	0.120	-	1.263	1.144	-	-	-	-	0.085
Apr-18	2.880	0.786	2.094	0.360	-	1.734	0.211	-	-	-	-	0.125
Total	7.102	1.183	5.919	0.630	-	5.289	2.278	-	-	-	-	0.305

- Note:
1. Assume the density of soil fill is 2 ton/m³.
 2. Assume the density of rock and broken concrete is 2.5 ton/m³.
 3. Assume each truck of C&D wastes is 5m³.
 4. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38.
 5. The slurry and bentonite are disposed at Tseung Kwun O 137.
 6. The non-inert C&D wastes are disposed at NENT.
 7. Assume the density of metal is 7,850 kg/m³.

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

Cumulative Complaint Log

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
C131126	26, November, 2013	Mr. Tony Hung from WWF	Mat Wat River (works sites for box culvert extension)	Suspected unauthorised discharge of water from a construction site to Ma Wat River, Tai Wo Service Road East, Tai Po	<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
				關建築商。附圖是該區狀況。昨日洗車，一日已經沙塵滿佈。)	<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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