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

Monthly EM&A Report

October 2014

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

Monthly EM&A Report

(October 2014)

Certified by: Fredrick Leong

Position: Environmental Team Leader

Date: 13 November 2014

Our ref AFK/TK/jn/T329380/22.05/L-0045
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Mott MacDonald

Hyder-Arup-Black & Veatch Joint Venture
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47/F Hopewell Centre
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12 November 2014
By Fax (2805 5028) & Post

Dear Sir,

Attn: Mr. James Penny

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/B
Condition 3.3 – Submission of Monthly EM&A Report – October 2014 for the portion of Stage 2 works entrusted to Civil Engineering and Development Department (CEDD) under Contract No. CV/2012/09

We refer to the revised Monthly EM&A Report – October 2014 received on 7, 10 and 12 November 2014 submitted by the Environmental Team via email. Pursuant to Environmental Permit Condition 3.3, I hereby verify the Monthly EM&A Report – October 2014 (Rev. 0) for the portion of works under Stage 2 of the captioned Project which is entrusted to CEDD under Contract No. CV/2012/09.

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED

Terence Kong
Independent Environmental Checker

c.c. HyD – Mr. Chung Lok Chin (Fax: 2714 5198) / Ms. Jackei Yin (Fax: 2761 4864)
CEDD/BCP – Mr. Chris Wong / Mr. Desmond Lam (Fax: 2714 0103)
AECOM – Mr. Alan Lee (Fax: 3922 9797)
Meinhardt Infrastructure and Environment Limited – Mr. Fredrick Leong (Fax: 2540 1580)

Date	Revision	Prepared By	Checked By	Approved By
13 Nov 2014	0	Ivan TING Cindy KWOK	Fredrick LEONG	Helen COCHRANE

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EXECUTIVE SUMMARY

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

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

This report documents the findings of EM&A works conducted in October 2014. As informed by the Contractor, the major activities in the reporting month were:

- Abutment construction for Bridge E;
- Cable detection and trial trenches;
- Excavation by trenchless method;
- Extension of Bored pile for bored pile wall;
- Filling Works at Tong Hang East;
- Lay storm drains;
- Local diversion of DN1400;
- Load test for installed Mini pile;
- Noise barrier installation;
- Pier Construction;
- Pile Cap works;
- Pre-drilling;
- RC structure of new valve control & Telemetry House;
- Road works at Fanling Highway;
- Sewer works at TWSRW;
- Slope upgrading works;
- Socket H-pile installation;
- Tree Felling Works;
- Utilities duct laying; and

- Water pipe works.

Breach of Action and Limit Levels for Air Quality

One (1) Action Level exceedance of 24-hour TSP monitoring was recorded at the monitoring location AM1(SR77) on 17 October 2014 in the reporting month. Investigation for the exceedance was conducted which concluded that the exceedance was not related to the project works. The investigation report for the incident is presented in **Appendix M**.

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

Breach of Action and Limit Levels for Noise

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

Breach of Action and Limit Levels for Water Quality

The box culvert works have been partially completed by the end of March 2014 except the last construction activity, installation of a base slab at Box Culvert ID4. Due to the loading requirement of a fresh water main under the box culvert, installation of the base slab at Box Culvert ID4 has to be scheduled to be carried out in November 2015 after the utilities diversions complete. The construction works are temporarily suspended until the utilities diversion works complete. The 4-week post construction water quality monitoring will be commenced after the installation of the base slab finishes, hence the completion of the box culvert works.

Impact monitoring for water quality was not necessary in the reporting month due to temporary suspension of the construction works and is anticipated to be resumed in November 2015 during the course of remaining box culvert works.

Complaint, Notification of Summons and Successful Prosecution

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

Future Key Issues

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

- ADMS installation;
- Lagging wall and capping beam for bored pile wall;
- Cable detection and trial trenches;
- Catch Fence installation;
- Diversion of DN600;
- Demolition of central barrier at Fanling Highway;
- E & M work for new valve control & Telemetry House;

- Laying storm drains;
- Noise barrier works;
- Pier construction;
- Pile Cap;
- Piling works for Bridge E;
- Pre-drilling works and piling works for viaduct;
- Retaining Structure;
- Road works at Fanling highway;
- Sewer works at TWSRW;
- Socket H-pile installation;
- Traffic diversion for Fanling Highway;
- Tree Felling Works; and
- Water pipe works.

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

1 INTRODUCTION

1.1.1 Chun Wo Construction & Engineering Co Ltd (Chun Wo) was commissioned by the Civil Engineering and Development Department (CEDD) as the Civil Contractor for the Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2. Meinhardt Infrastructure & Environment Ltd (MIEL) has been appointed by Chun Wo as the Environmental Team (ET) to fulfill the corresponding EM&A requirements pursuant to Environmental Permit No. EP-324/2008/B 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.

1.2 Purpose of the Report

1.2.1 This is the monthly EM&A Report which summaries the impact monitoring results and audit findings for the Project during the reporting month of October 2014.

1.3 Report Structure

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

- Section 1: Introduction
- Section 2: Project Information
- Section 3: Status of Environmental Licenses, Notifications and Permits
- Section 4: Air Quality Monitoring
- Section 5: Noise Monitoring
- Section 6: Water Monitoring
- Section 7: Waste Management
- Section 8: Environmental Site Inspection and Audit
- Section 9: Implementation Status of Environmental Mitigation Measures
- Section 10: Environmental Non-conformance
- Section 11: Future Key Issues
- Section 12: Conclusions and Recommendations

2 PROJECT INFORMATION

2.1 Background

2.1.1 Tolo Highway and Fanling Highway are expressways in the North East New Territories connecting Sha Tin, Tai Po and Fanling. These highways form a vital part of the strategic Route 1, which links Hong Kong Island to Shenzhen. At present, this section of Route 1 is a dual 3-lane carriageway. However, at several major interchanges along this section of Route 1, the highway is only dual-2 lane. Severe congestion is a frequent occurrence during peak periods, particularly in the Kowloon bound direction.

2.1.2 The objective of the Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling is to widen Tolo Highway and Fanling Highway to dual 4-lane carriageway in order to alleviate the current traffic congestion problems and to cope with the increasing transport demands to and from the urban areas and also cross boundary traffic.

2.1.3 The construction works for the Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling are to be delivered in 2 stages:

- Stage 1 – Construction works between Island House Interchange and Tai Hang; and
- Stage 2 – Construction works between Tai Hang and Wo Hop Shek Interchange.

2.1.4 The construction works of Stage 1 under the EP commenced in November 2009 and was planned to be completed in December 2013 tentatively. The works of Stage 2 was planned to commence in November 2013 and complete by end of 2016. Hyder-Arup-Black and Veatch Joint Venture (HABVJV) was appointed by the Highways Department (HyD) as the consultants for the design and construction assignment for the Project. Mott MacDonald Hong Kong Ltd is the Independent Environmental Checker (IEC) of both Stage 1 and Stage 2 works.

2.1.5 A portion of Stage 2 works of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling (hereafter called “the Project”) is entrusted to the contractor of Contract No. CV/2012/09 Liantang / Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works Contract 3, i.e. Chun Wo. AECOM Asia Co Ltd was appointed by the CEDD as the consultant for the design and construction assignment for the Liantang development.

2.1.6 The Project is a Designated Project under the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499). An Environmental Impact Assessment (EIA) Report together with an Environmental Monitoring and Audit (EM&A) Manual were approved on 14 July 2000 (Register Number: EIA-043/2000). The Project is governed by an Environmental Permit (EP) (EP-324/2008) which was granted on 23 December 2008. A variation of EP (VEP) was applied and the VEP (EP-324/2008/A) was subsequently granted on 31 January 2012. An additional VEP has been applied on 24 February 2014 and the VEP (EP-324/2008/B) was subsequently granted on 17 March 2014.

2.2 Site Description

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

- At-Grade Road Works – Temporary and permanent road formation, pipe laying, road drainage, footpath and noise barrier construction;
- Demolition of existing Kiu Tau Footbridge and Footbridge Reprovision; and
- Box Culvert Extension – Flow diversion of existing stream, excavation, sub-base and blinding, base, wall and top slab construction.

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

2.3 Construction Programme and Activities

2.3.1 The major construction activities undertaken in the reporting month are summarized below:

- Abutment construction for Bridge E;
- Cable detection and trial trenches;
- Excavation by trenchless method;
- Extension of Bored pile for bored pile wall;
- Filling Works at Tong Hang East;
- Lay storm drains;
- Local diversion of DN1400;
- Load test for installed Mini pile;
- Noise barrier installation;
- Pier Construction;
- Pile Cap works;
- Pre-drilling;
- RC structure of new valve control & Telemetry House;
- Road works at Fanling highway;
- Sewer works at TWSRW;
- Slope upgrading works;
- Socket H-pile installation;
- Tree Felling Works;
- Utilities duct laying; and

- Water pipe works.

2.3.2 The construction programme is presented in **Appendix A**.

2.4 Project Organisation

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

Table 2.1 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. Terence Kong	2828 5919	2827 1823
Chun Wo	Contractor	Site Agent	Mr. Daniel Ho	2638 6144	2638 7077
		Senior Environmental Officer	Mr. Sam Lam	2638 6168	
		Environmental Officer	Mr. Victor Huang	2638 6181	
Meinhardt	Environmental Team (ET)	ET Leader	Mr. Fredrick Leong	2859 1739	2540 1580

3 STATUS OF ENVIRONMENTAL LICENSES, NOTIFICATION AND PERMITS

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

Table 3.1 Status of Environmental Licenses, Notifications and Permits

Permit / License No. / Notification / Reference No.	Valid Period		Status	Remarks
	From	To		
Environmental Permit				
EP-324/2008/B	17 Mar 2014	--	Granted on 17/03/2014	--
Construction Noise Permit				
GW-RN0397-14	29 Jun 2014	28 Dec 2014	Valid	For tree felling / transplanting works
GW-RN0445-14	28 Jul 2014	25 Jan 2015	Valid	For operating water pump in Kiu Tau at night
GW-RN0485-14	5 Aug 2014	5 Feb 2015	Valid	For operating water pump in jacking pit at Nam Wah Po
GW-RN0557-14	15 Sep 2014	28 Dec 2014	Valid	For road diversion of Southbound of Fanling Highway
GW-RN0651-14	21 Oct 2014	20 Nov 2014	Valid	For erection of catch fence near Pier AD11 & AB10 in the night time
Wastewater Discharge License				
WT00016832-2013	28 Aug 2013	31 Aug 2018	Valid	--
Chemical Waste Producer Registration				
5113-634-C3817-01	7 Oct 2013	--	Valid	--
Billing Account for Construction Waste Disposal				
7017914	2 Aug 2013	--	Account Active	--
Notification Under Air Pollution Control (Construction Dust) Regulation				
--	31 Jul 2013	30 Jul 2019	Notified	--

4 AIR QUALITY MONITORING

4.1 Monitoring Requirement

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

4.2 Monitoring Equipment

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

Table 4.1 Air Quality Monitoring Equipment

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

4.2.2 The HVS and its accessories were maintained in good working condition, such as replacing motor brushes routinely and checking electrical wiring to ensure a continuous power supply.

4.2.3 Calibration of the HVS (five point calibration) using Calibration Kit was carried out every two months. The HVS calibration orifice will be calibrated annually. Calibration certificate of the TE-5025A Calibration Kit and the HVS are provided in **Appendix C**.

4.3 Monitoring Location

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

Table 4.2 Location of Air Quality Monitoring

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

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

4.4 Monitoring Parameters, Frequency and Duration

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

Table 4.3 Air Quality Monitoring Parameters, Frequency and Duration

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

4.5 Monitoring Methodology

1-hr and 24-hr TSP Monitoring

4.5.1 With the consideration of criteria stated in the Updated EM&A Manual, the HVS was installed in the vicinity of the air sensitive receivers.

4.5.2 The relevant data including temperature, pressure, weather conditions, elapsed-time meter reading for the start and stop of the sampler, identification and weight of the filter paper, and any special phenomena observed were recorded. The weather information was referenced from Hong Kong Observatory (http://www.weather.gov.hk/wxinfo/pastwx/extractc.htm).

4.5.3 A HOKLAS accredited laboratory with constant temperature and humidity control, and equipped with necessary measuring and conditioning instruments, to handle the 24-hr TSP samples, was employed for sample analysis.

4.5.4 Filter papers of size 8"x10" were labelled before sampling. They were inspected to be clean with no pin holes and conditioned in a humidity controlled chamber for over 24-hr and were pre-weighed before use for the sampling.

4.5.5 The 24-hr TSP levels were measured by following the standard high volume sampling method for TSP as set out in the Title 40 of the United States Code of Federal Regulations, Chapter 1 (Part 50), Appendix B. TSP was sampled by drawing air through a conditioned, pre-weighted filter paper inside the HVS at a controlled air flow rate. After 24-hr sampling, the filter papers loaded with dust were kept in a clean and tightly sealed plastic bag, and then returned to the laboratory for reconditioning in the humidity controlled chamber followed by accurate weighing by an electronic balance with a readout down to 0.1 mg.

4.5.6 All the collected samples were kept in a good condition for 6 months before disposal.

4.5.7 For 1-hr TSP monitoring, monitoring methodology is the same as 24-hr TSP monitoring which has been presented in **Section 4.5.1** to **Section 4.5.6**, but with sampling period changed to 1 hour.

4.6 Monitoring Schedule for the Reporting month

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

4.7 Monitoring Results

4.7.1 The monitoring results for 1-hr and 24-hr TSP are summarised in **Table 4.4** and **Table 4.5** respectively. Detailed air quality monitoring results and the graphical presentation

of air quality monitoring data for the current and past three reporting months are presented in **Appendix F**.

Table 4.4 Summary of 1-hr TSP Monitoring Results

ASR ID	Average ($\mu g/m^3$)	Range ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
AM1(SR77) *	117.0	75.0 – 163.9	292.7	500

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

Table 4.5 Summary of 24-hr TSP Monitoring Results

ASR ID	Average ($\mu g/m^3$)	Range ($\mu g/m^3$)	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
AM1(SR77) *	123.3	85.5 – 180.8	170.3	260

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

4.7.2 One (1) Action Level exceedance of 24-hour TSP monitoring was recorded at the monitoring location AM1(SR77) on 17 October 2014 in the reporting month. Investigation for the exceedance was conducted which concluded that the exceedance was not related to the project works. The investigation report for the incident is presented in **Appendix M**.

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

4.7.4 The Event and Action Plan for the occurrence of non-compliance of the air quality criteria is annexed in **Appendix G**.

4.7.5 Meteorological data extracted from Hong Kong Observatory for the reporting month is provided in **Appendix E**.

5 NOISE MONITORING

5.1 Monitoring Requirements

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

5.2 Monitoring Equipment

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

Table 5.1 Noise Monitoring Equipment

Equipment	Brand and Model	Quantity	Serial Number
Sound Level Calibrator	B&K (Model No. 4231)	1	2685684
Sound Level Meter	B&K (Model No. 2238)	1	2694908

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

5.3 Monitoring Locations

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

Table 5.2 Location of Noise Monitoring

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

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

5.4 Monitoring Parameters, Frequency and Duration

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

Table 5.3 Noise Monitoring Parameters, Frequency and Duration

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

5.5 Monitoring Methodology

5.5.1 The monitoring procedures are summarised as follows:

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

5.6 Monitoring Schedule for the Reporting Month

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

5.7 Monitoring Results

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

Table 5.4 Summary of Noise Monitoring Results

Noise Monitoring Station ID	Average, dB(A), Leq (30min) (2)	Range, dB(A), Leq (30min) (2)	Action Level	Limit Level, dB(A)
M1(SR77) (1)	70.3	68.5 – 71.5	When one documented valid complaint is received	75

Remark:
(1) Station / NSR ID as identified in Updated EM&A Manual / EIA Report for Widening of Tolo Highway/Fanling Highway between Island House Interchange and Fanling
(2) +3dB(A) façade correction included

5.7.2 Major noise sources during the noise monitoring included construction activities of the Project and that along Tai Wo Service Road East, and nearby traffic noise.

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

5.7.4 The Event and Action Plan for the occurrence of non-compliance of the noise criteria is annexed in **Appendix G**.

6 WATER MONITORING

6.1.1 The box culvert works have been partially completed by the end of March 2014 except the last construction activity, installation of a base slab at Box Culvert ID4. Due to the loading requirement of a fresh water main under the box culvert, installation of the base slab at Box Culvert ID4 has to be scheduled to be carried out in November 2015 after the utilities diversions complete. The construction works are temporarily suspended until the utilities diversion works complete. The 4-week post construction water quality monitoring will be commenced after the installation of the base slab finishes, hence the completion of the box culvert works.

6.1.2 Impact monitoring for water quality was not necessary in the reporting month due to temporary suspension of the construction works and is anticipated to be resumed in November 2015 during the course of remaining box culvert works.

7 WASTE MANAGEMENT

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

7.1.2 As advised by the Contractor, a total of 6,494m^3 of excavated material has been generated. 4,244m^3 of inert C&D materials was disposed of at public fill to Tuen Mun Area 38. 2,160m^3 of inert C&D materials was reused on site. 85m^3 of general refuse was disposed of at North East New Territories (NENT) Landfill. 5m^3 of plastics, paper/cardboard packaging was collected, and no metals were collected by recycling contractor in the reporting month. No chemical waste was collected by licensed contractor in the reporting period. Details of the waste management data are presented in **Appendix K**.

8 ENVIRONMENTAL SITE INSPECTION AND AUDIT

8.1 Site Inspection

8.1.1 Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures for the Project. A summary of the site inspection is provided in **Appendix L**.

8.1.2 In the reporting month, 4 site inspections were carried out on 6, 13, 22 and 27 October 2014. The one held on 27 October 2014 was a joint inspection with the IEC, ER, ET and Contractor. No site inspection was conducted by the EPD during the reporting month. No non-compliance was recorded during the site inspection. A summary of the reminders and observations recorded during the site inspections are presented in **Table 8.1**.

Table 8.1 Observations and Recommendations of Site Audit

Parameters	Date	Observations and Recommendations	Follow-up
Water Quality	N/A	N/A	N/A
Air Quality	6 Oct 2014	Reminder: The Contractor is reminded to implement proper sign to stop the driver at the wheel washing facilities at SA16.	A signage of washing area has been put up at the wheel washing facility at SA16 as observed during the ET weekly site inspection on 13 Oct 2014.
	13 Oct 2014	Reminder: The Contractor is reminded to ensure all vehicles being washed properly to remove any dusty materials before leaving the site at SA16.	Dusty material was not observed at the site entrance of SA16. Personnel is now in place to wash the wheels of the vehicles before leaving the site as observed during the ET weekly site inspection on 22 Oct 2014.
	22 Oct 2014	Observation: Stockpile was observed on site without proper cover or water spraying (SA12)	Impervious sheets have been provided to cover the stockpile during the ET weekly site inspection on 27 Oct 2014.
	22 Oct 2014	Reminder: A portion of the construction site was observed not having enough water spraying (SA12)	The Contractor has implemented sufficient water spraying at SA12 as observed during the ET weekly site inspection on 27 Oct 2014.
	27 Oct 2014	Reminder: The Contractor is reminded to place signage at appropriate locations to indicate the washing area of wheel washing facilities for the drivers at SA13 and SA16.	The signage of washing area has been put up at the wheel washing facilities at SA13 and SA16 as observed during the ET weekly site inspection on 3 Nov 2014.
Noise	N/A	N/A	N/A
Waste / Chemical Management	6 Oct 2014	Reminder: Proper labelling should be provided to the bins at SA16 and SA12.	Proper labelled bins for general refuse have been provided at SA16 and SA12 as observed during the ET weekly site inspection on 13 Oct 2014.

Parameters	Date	Observations and Recommendations	Follow-up
	6 Oct 2014	Observation: Piles of C&D Waste were observed near the site entrance at SA16. The contractor was reminded to clean the waste storage area in a regular basis.	The C&D waste had been removed and sorted as far as practicable according to the Contractor. Only the reused soil has been remained on site and covered with tarpaulin as observed during the ET weekly site inspection on 13 Oct 2014.
Landscape & Visual	N/A	N/A	N/A
Permits / Licenses	N/A	N/A	N/A

9 IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

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

10 SUMMARY OF EP SUBMISSION IN THE REPORTING MONTH

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

Table 10.1 Status of Required Submission under Environmental Permit

EP Condition	Submission	Submission Date
Condition 3.3	Monthly EM&A Report for September 2014	13 October 2014

11 ENVIRONMENTAL NON-CONFORMANCE

11.1 Summary of Monitoring Exceedances

11.1.1 One (1) Action Level exceedance of 24-hour TSP monitoring was recorded at the monitoring location AM1(SR77) on 17 October 2014 in the reporting month. Investigation for the exceedance was conducted which concluded that the exceedance was not related to the project works. The investigation report for the incident is presented in **Appendix M**.

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

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

11.2 Summary of Environmental Non-Compliance

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

11.3 Summary of Environmental Complaints

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

11.4 Summary of Environmental Summon and Successful Prosecutions

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

12 FUTURE KEY ISSUES

12.1 Construction Programme for the Next Month

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

- ADMS installation;
- Lagging wall and capping beam for bored pile wall;
- Cable detection and trial trenches;
- Catch Fence installation;
- Diversion of DN600;
- Demolition of central barrier at Fanling Highway;
- E & M work for new valve control & Telemetry House;
- Laying storm drains;
- Noise barrier works;
- Pier construction;
- Pile Cap;
- Piling works for Bridge E;
- Pre-drilling works and piling works for viaduct;
- Retaining Structure;
- Road works at Fanling highway;
- Sewer works at TWSRW;
- Socket H-pile installation;
- Traffic diversion for Fanling Highway;
- Tree Felling Works; and
- Water pipe works.

12.2 Key Issues for the Coming Month

12.2.1 Key issues to be considered in the coming month are anticipated to include:

- Site discharges should be properly collected and treated prior to discharge;
- Properly maintain all drainage facilities and wheel washing facilities on site;

- Expose slopes and dusty stockpile should be covered up properly if no work will be conducted; and

- Operation of construction plant should be sequenced where practicable.

12.3 Monitoring Schedule for the Next Month

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

13 CONCLUSIONS AND RECOMMENDATIONS

13.1 Conclusions

13.1.1 The construction phase EM&A programme of the Project commenced on 5 November 2013.

13.1.2 The 1-hr TSP, 24-hr TSP and noise monitoring were carried out in the reporting period.

13.1.1 One (1) Action Level exceedance of 24-hour TSP monitoring was recorded at the monitoring location AM1(SR77) on 17 October 2014 in the reporting month. Investigation for the exceedance was conducted which concluded that the exceedance was not related to the project works. The investigation report for the incident is presented in **Appendix M**.

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

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

13.1.4 Four (4) environmental site inspections were carried out in the reporting month. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site audit.

Temporary Suspension of Box Culvert Works and Water Quality Monitoring

13.1.5 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. Due to the loading requirement of a fresh water main under the box culvert, installation of the base slab at Box Culvert ID4 has to be scheduled to be carried out in November 2015 after the utilities diversions complete. The construction works are temporarily suspended until the utilities diversion works complete. The 4-week post construction water quality monitoring will be commenced after the installation of the base slab finishes, hence the completion of the box culvert works.

13.1.6 Impact monitoring for water quality was not necessary in the reporting month due to temporarily suspension of the construction works and is anticipated to be resumed in November 2015 during the course of remaining box culvert works.

13.2 Recommendations

13.2.1 According to the environmental site inspections performed in the reporting month, the following recommendations were provided:

Air Quality

- Water spraying or covering of tarpaulin should be properly implemented whenever necessary for the unpaved roads, access roads and construction areas.

- All vehicles should be washed to remove any dusty materials before leaving the construction site.

- Wheel washing facilities should be properly maintained to ensure proper functioning.

Chemical and Waste Management

- All types of wastes, both on land and floating in the river stream, should be collected and sorted properly, and also be disposed timely and properly.

- Refuse collection bins should be labelled properly.

Figure

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

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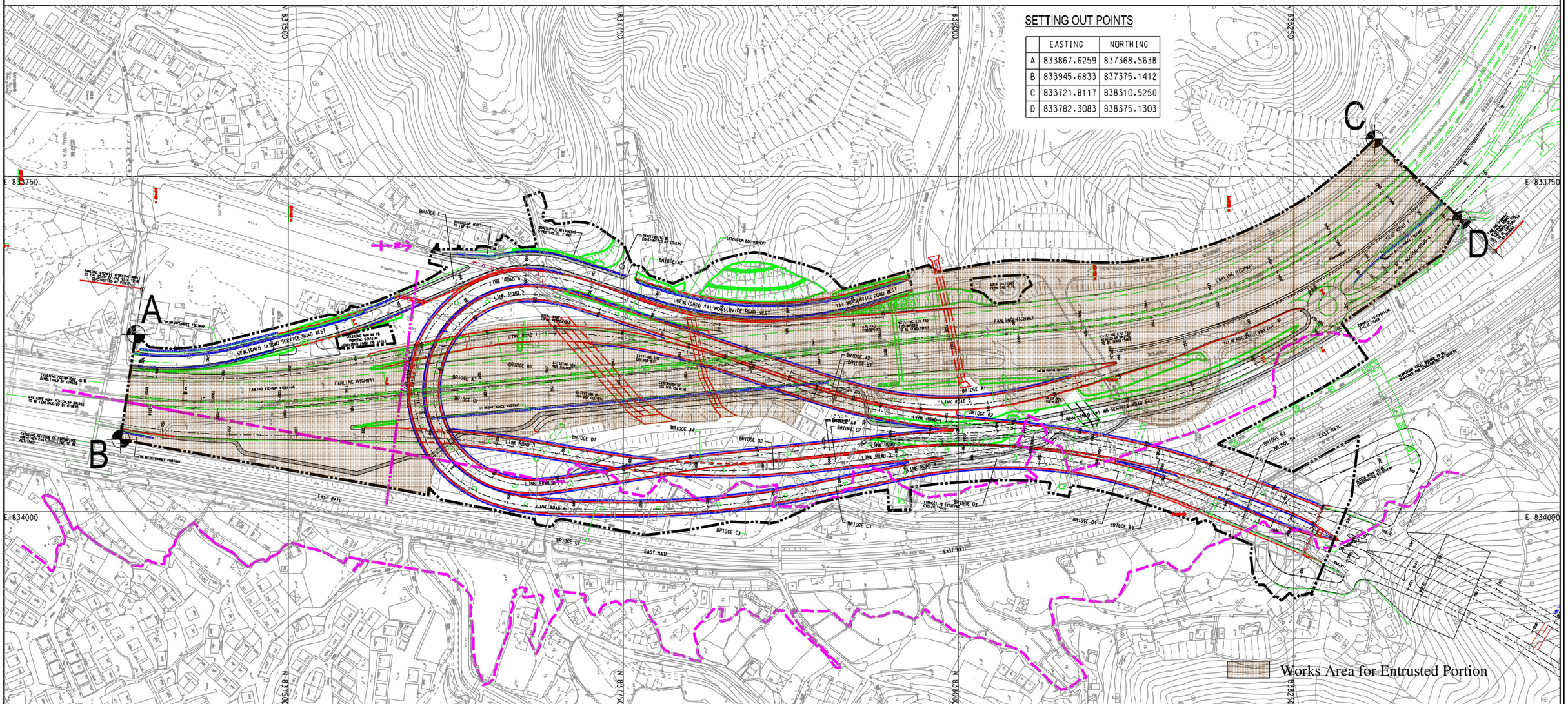
SETTING OUT POINTS

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



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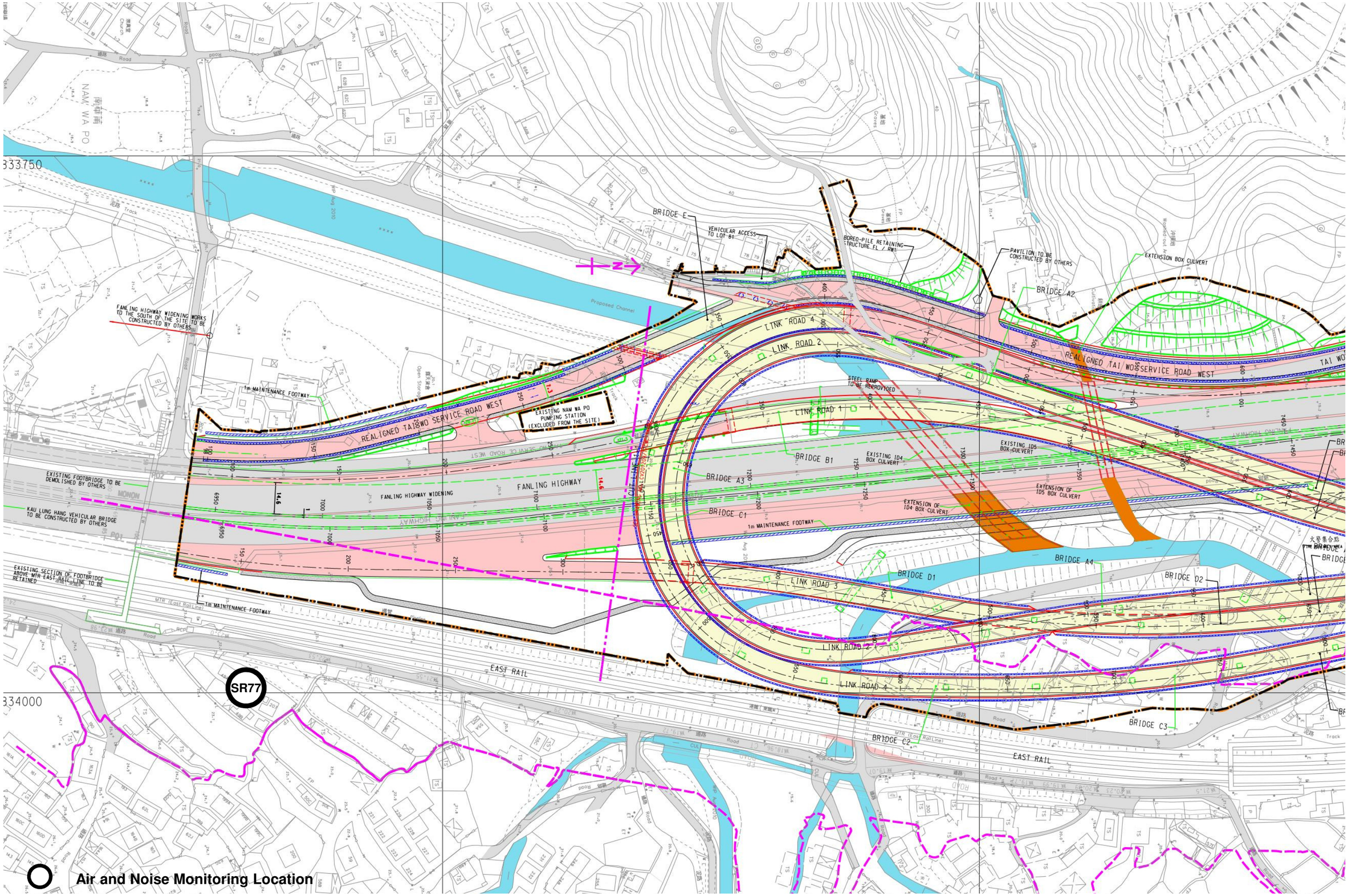
MEINHARDT

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



MEINHARDT	**Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2**	**Figure 2: Air and Noise Monitoring Locations**

Appendix A
Construction Programme

Activity ID	Activity Name	OD	RD	Start	Finish	TF
3-Month Rolling Programme 2014-10-21						
Key Dates (Contractual)						
KD-0010	Commencement of Works	0	0	31-Jul-13 A		
Dependent Milestones from Other Contracts						
MS-0100	Completion of Temporary Vehicular Bridge by C2 Contractor	0	0		31-Dec-14*	-99
Major Milestones and Events						
MS-2000A1	T1a: TTA to shift FLHS SB eastward to the widened pavement (shift 1st lanes)	2	2	01-Nov-14*	02-Nov-14	7
MS-2000A2	T1b: TTA to shift FLHS SB eastward to the widened pavement (shift 2nd lanes)	2	2	06-Dec-14*	07-Dec-14	7
MS-2000A3	T1c: TTA to shift FLHS SB eastward to the widened pavement (shift 3rd lanes)	2	2	10-Jan-15*	11-Jan-15	7
Major Procurement & Delivery						
Water Supply Pipeworks						
MM-1050	DN450 DI pipe and pipe fittings	60	7	21-Jun-14 A	28-Oct-14	174
MM-1060	E&M equipment for the re-provisioned WSD Valve Control House	60	60	21-Oct-14	31-Dec-14	5
Precast Bridge Segment Lifting Frames and Precast Yard						
MM-2020	Procurement and fabrication of lifting frame	105	0	05-May-14 A	27-Sep-14 A	
MM-2040	Deliver to Site and assembly works	44	27	28-Sep-14 A	20-Nov-14	30
MM-2050	Certification of lifting frame	6	6	21-Nov-14	27-Nov-14	30
Design and Submissions						
Statutory Approval						
PRE-1040	Submission & approval of temporary works on nullah for construction of pad footing of Bridge E - DSD	40	7	11-Sep-14 A	28-Oct-14	29
PRE-1220	Consent for construction of noise barrier (NB1a) within WSD Tau Pass Restricted Zone - WSD	45	7	09-Apr-14 A	28-Oct-14	31
PRE-1500	Confirmation of Noise Barrier Footing Design for NB71 (CH7150 to CH7290)	70	14	17-Apr-14 A	05-Nov-14	1412
PRE-1260	Approval of Water Mains Alignment beside Fanling Highway (CH7380-7925) (incl. Twin DN1400, DN1200, DN600, DN2300) - WSD	45	14	19-Mar-14 A	05-Nov-14	152
PRE-1230B	Consent for installation of bored pile within 30m from WSD Tau Pass Restricted Zone -WSD	90	36	15-Jan-14 A	01-Dec-14	12
PRE-1210	Consent for Dong Jiang watermians connection for DN1400 - WSD	0	0		02-Jan-15*	0
Method Statement and Design (Major) Approved by AECOM						
PRE-2020	Submission of noise barrier design for absorptive panels, transparent panels and associated fixing details	60	30	11-Mar-14 A	24-Nov-14	181
Contractor's Alternative Design (AD) Submission & Approval						
PRE-4290	Portal Beam Design Package 2 (AD3)	5	0	23-Aug-14 A	30-Sep-14 A	

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CEDD Contract No. CV/2012/09

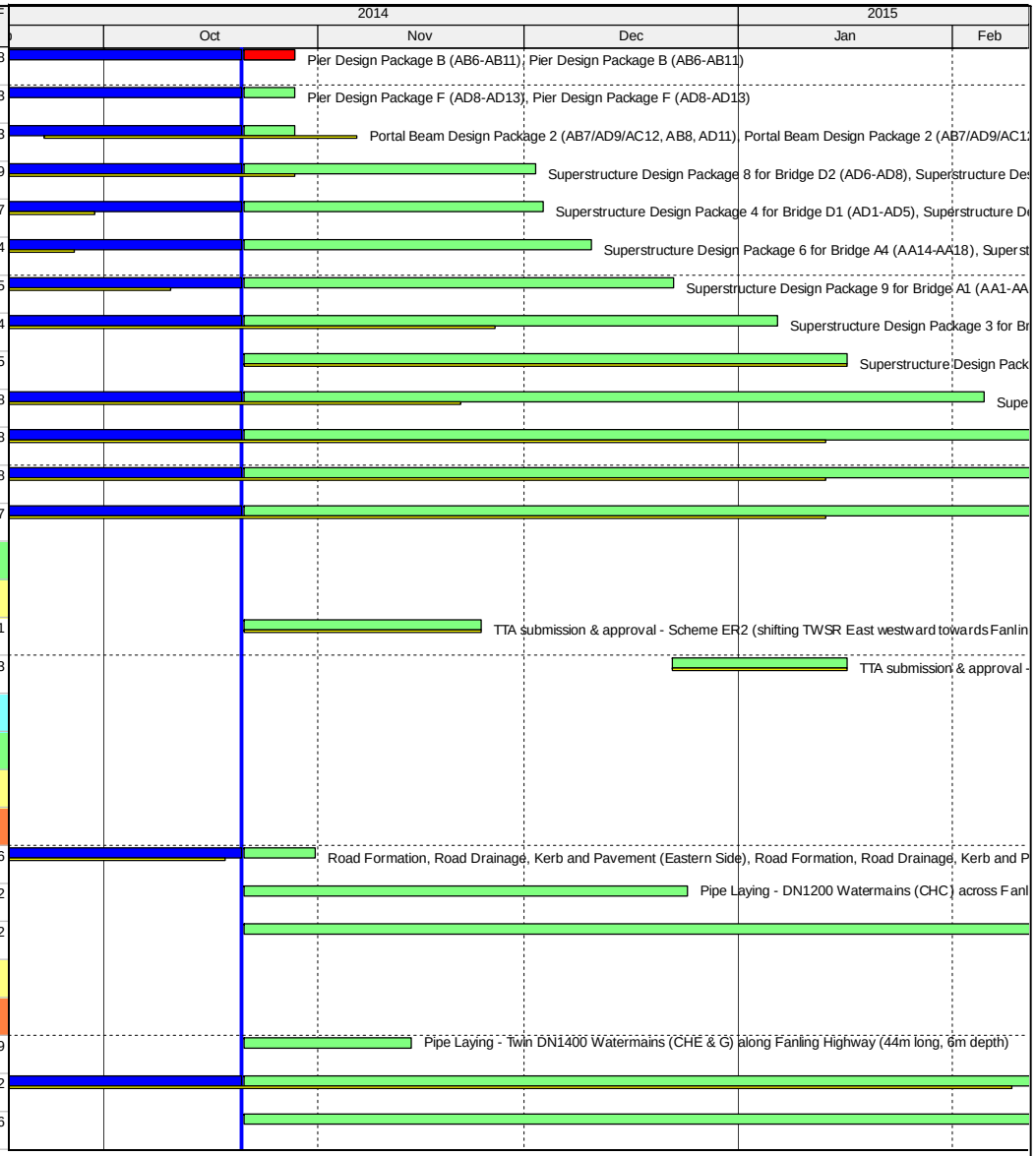
Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3

3-Month Rolling Programme

3-Month Rolling Programme updated to 2014-10-21

Date	Revision	Checked	Approved
23-Oct-14	Rev.1	SL	

Activity ID	Activity Name	OD	RD	Start	Finish	TF
PRE-4220	Pier Design Package B (AB6-AB11)	43	7	28-Nov-13 A	28-Oct-14	-28
PRE-4260	Pier Design Package F (AD8-AD13)	50	7	20-Jan-14 A	28-Oct-14	23
PRE-4280	Portal Beam Design Package 2 (AB7/AD9/AC12, AB8, AD11)	38	7	23-Aug-14 A	28-Oct-14	3
PRE-4340B	Superstructure Design Package 8 for Bridge D2 (AD6-AD8)	56	37	30-Jul-14 A	02-Dec-14	239
PRE-4340A	Superstructure Design Package 4 for Bridge D1 (AD1-AD5)	110	38	07-May-14 A	03-Dec-14	177
PRE-4310D	Superstructure Design Package 6 for Bridge A4 (AA14-AA18)	108	44	16-May-14 A	10-Dec-14	104
PRE-4310A	Superstructure Design Package 9 for Bridge A1 (AA1-AA5)	118	54	16-May-14 A	22-Dec-14	355
PRE-4310C	Superstructure Design Package 3 for Bridge A3 (AA10-AA13)	158	64	04-Apr-14 A	06-Jan-15	94
PRE-4320A	Superstructure Design Package 11 for Bridge B1 (AB1-AB6)	73	73	21-Oct-14*	16-Jan-15	325
PRE-4310B	Superstructure Design Package 10 for Bridge A2 (AA6-AA9)	154	90	16-May-14 A	05-Feb-15	458
PRE-4330A	Superstructure Design Package 2 for Bridge C1 (AC1-AC5)	196	96	28-Mar-14 A	12-Feb-15	98
PRE-4320B	Superstructure Design Package 7 for Bridge B2 (AB7-AB12)	196	96	21-May-14 A	12-Feb-15	8
PRE-4340C	Superstructure Design Package 5 for Bridge D3 (AD9-AD14)	196	96	07-May-14 A	12-Feb-15	37
Temporary Traffic Arrangement (TTA) Submission and Approval						
TTA for Tai Wo Service Road East						
PRE-6220	TTA submission & approval - Scheme ER2 (shifting TWSR East westward towards Fanling Highway for pipe laying works)	30	30	21-Oct-14*	24-Nov-14	71
PRE-6210	TTA submission & approval - Scheme ER1 (shifting TWSR East to Access Road A)	20	20	22-Dec-14*	16-Jan-15	1353
Section IA & IB - Fanling Highway Widening (KD-1 & KD-2)						
Fanling Highway South Portion between CH6935 and CH7470						
Fanling Highway Zone 1 between CH6935 and CH7130 (within SBZ2)						
At-Grade Roadworks (195m)						
FHW-1160	Road Formation, Road Drainage, Kerb and Pavement (Eastern Side)	48	10	31-Jul-14 A	31-Oct-14	6
FHW-1110*	Pipe Laying - DN1200 Watermains (CHC) across Fanling Highway (total 80m for 2 shafts)	275	56	09-Jun-14 A	24-Dec-14	722
FHW-1150*	Pipe Laying - DN1200 Watermains (CHC) along Fanling Highway (80m long, 4m depth)	182	176	20-Feb-14 A	30-May-15	722
Fanling Highway Zone 2 between CH7130 and CH7290						
At-Grade Roadworks (160m)						
FHW-2120*	Pipe Laying - Twin DN1400 Watermains (CHE & G) along Fanling Highway (44m long, 6m depth)	85	22	09-Jul-14 A	14-Nov-14	299
FHW-2110B	Noise Barrier NB71 - Footing adjacent to SB lane (96m) (affected due to design change)	128	154	26-Jul-14 A	04-May-15	102
FHW-2130*	Pipe Laying - DN1200 & DN600 Watermains (CHB & CHC) along Fanling Highway (183m long, 4m depth)	95	249	26-May-14 A	26-Aug-15	486



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Critical Remaining Work
Milestone
Project Baseline Bar

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

3-Month Rolling Programme

3-Month Rolling Programme updated to 2014-10-21

Date	Revision	Checked	Approved
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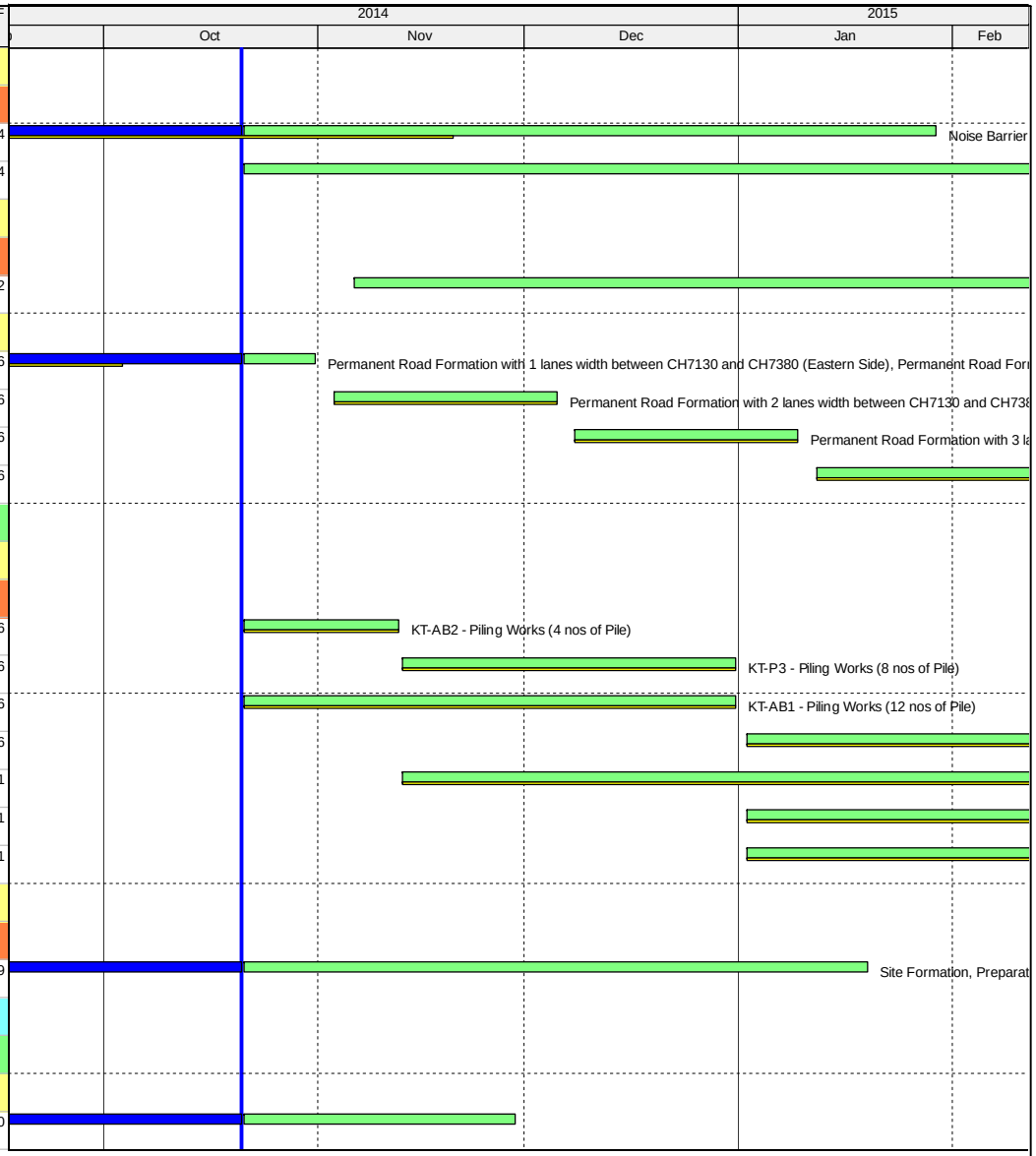
Activity ID	Activity Name	OD	RD	Start	Finish	TF
	Fanling Highway Zone 3 between CH7290 and CH7380					
	At-Grade Roadworks (130m)					
FHW-3130	Noise Barrier NB71 - Footing adjacent to SB lane (130m) Including pile cap	109	84	23-May-14 A	29-Jan-15	144
FHW-3150*	Pipe Laying - DN600, DN1200 Watermains (CHB &CHC) along Fanling Highway (90m long, 3m depth)	150	429	07-Jun-14 A	11-Apr-16	414
	Fanling Highway Zone 4 between CH7380 and CH7470					
	At-Grade Roadworks (90m)					
FHW-4120*	Pipe Laying - Twin DN1400 Watermains (CHE & CHG) along Fanling Highway (90m long, 3m depth)	155	155	06-Nov-14	21-May-15	152
	Miscellaneous Works for Facilitating Traffic Diversion of Fanling Highway					
FHW-M-1010	Permanent Road Formation with 1 lanes width between CH7130 and CH7380 (Eastern Side)	62	10	13-Jul-14 A	31-Oct-14	6
FHW-M-1020	Permanent Road Formation with 2 lanes width between CH7130 and CH7380 (Eastern Side)	29	29	03-Nov-14	05-Dec-14	6
FHW-M-1030	Permanent Road Formation with 3 lanes width between CH7130 and CH7380 (Eastern Side)	26	26	08-Dec-14	09-Jan-15	6
FHW-M-1000	Demolition of Central Barrier & Make Good of Road Pavement for further Traffic Diversion	30	30	12-Jan-15	14-Feb-15	6
	Fanling Highway North Portion between CH7470 and CH7925					
	Fanling Highway Zone 5 between CH7470 and CH7600 (Provision of Kiu Tau Footbridge)					
	Kiu Tau Footbridge Reprovision (East)					
FHW-5000B	KT-AB2 - Piling Works (4 nos of Pile)	20	20	21-Oct-14	12-Nov-14	96
FHW-5000D	KT-P3 - Piling Works (8 nos of Pile)	40	40	13-Nov-14	31-Dec-14	96
FHW-5000A	KT-AB1 - Piling Works (12 nos of Pile)	60	60	21-Oct-14	31-Dec-14	96
FHW-5000E	KT-P4 - Piling Works (8 nos of Pile)	40	40	02-Jan-15	17-Feb-15	96
FHW-5010B	KT-AB2 - Pile Cap & Abutment	105	105	13-Nov-14	25-Mar-15	291
FHW-5010D	KT-P3 - Pile Cap & Pier	75	75	02-Jan-15	10-Apr-15	281
FHW-5010A	KT-AB1 - Pile Cap & Abutment	105	105	02-Jan-15	16-May-15	251
	Fanling Highway Zone 7 between CH7660 and CH7925					
	At-Grade Roadworks (265m)					
FHW-7100	Site Formation, Preparation Works & Tree Transplant	127	75	30-Aug-13 A	19-Jan-15	309
	Section II - Remainder of the Works (KD-3)					
	WSD Works					
	DN600 Water Mains (CHB)					
WB-1000	Pipe Laying - CHB 0 - 153 (DN600) near Fanling Highway S/B (FHW: CH7130-7290), 153m long (common trench with NB)	95	35	26-May-14 A	29-Nov-14	700



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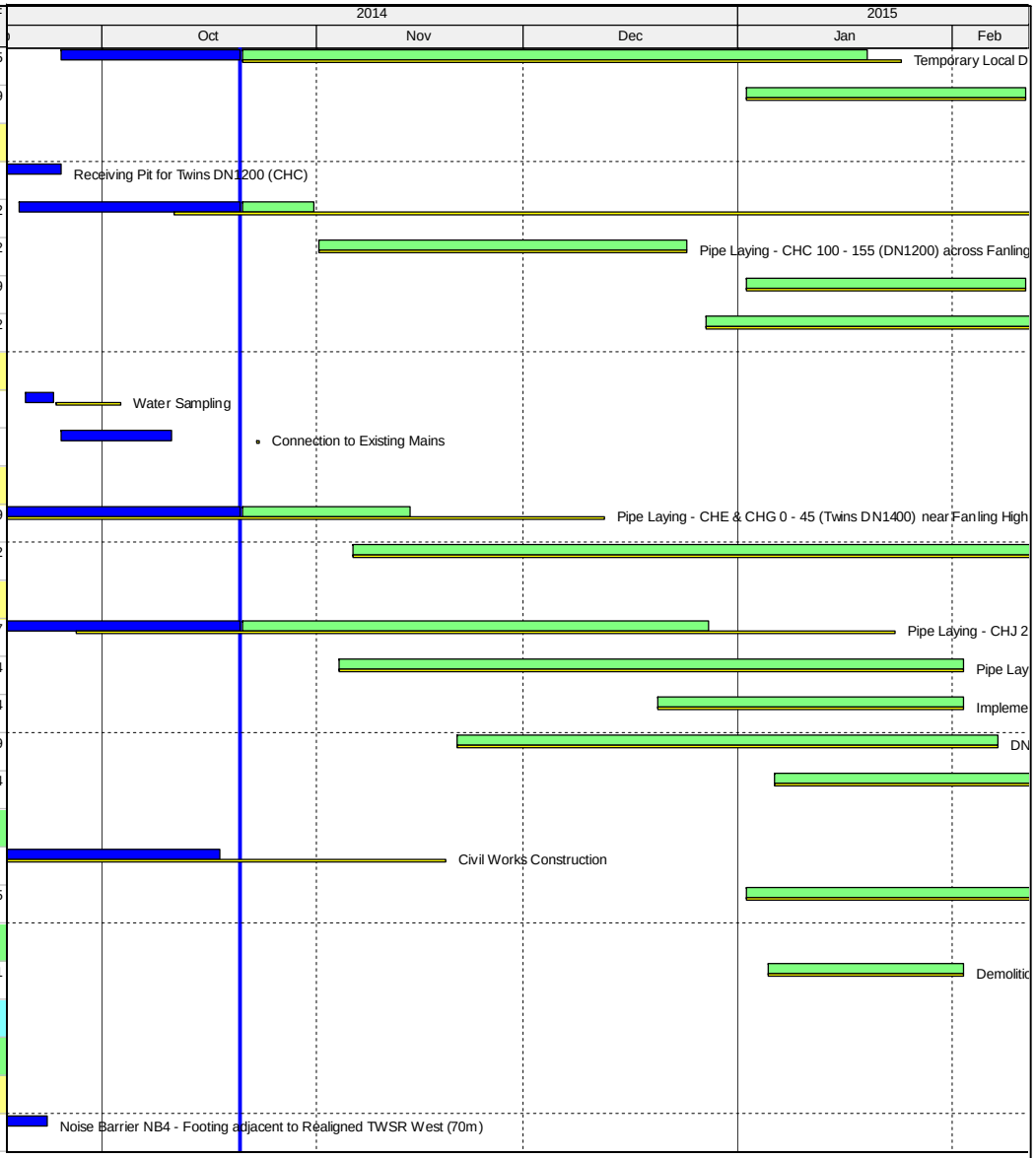
Activity ID	Activity Name	OD	RD	Start	Finish	TF
WB-0100	Temporary Local Diversion for DN600 near Abutment AD1	80	75	25-Sep-14 A	19-Jan-15	565
WB-1080	Pipe Laying - CHB 700 - 756 (DN600) near Realigned TWSR East (along Roundabout), 56m long & GL	35	35	02-Jan-15*	11-Feb-15	19
DN1200 Water Mains (CHC)						
WC-1040	Receiving Pit for Twins DN1200 (CHC)	50	0	09-Jun-14 A	25-Sep-14 A	
WC-1030A	Excavation - CHC 100 - 155 (DN1200) across Fanling Highway by Trenchless Method, 110m long for 2 shafts	169	10	19-Sep-14 A	31-Oct-14	722
WC-1030B	Pipe Laying - CHC 100 - 155 (DN1200) across Fanling Highway & associated Grouting Works	46	46	01-Nov-14	24-Dec-14	722
WC-1140	Pipe Laying - CHC 980 - 1030 (DN1200) near Realigned TWSR East (along Roundabout), 50m long & GL	35	35	02-Jan-15*	11-Feb-15	19
WC-1050A	Pipe Laying - CHC 155 - 235 (DN1200) near Fanling Highway S/B (FHW: CH6935-7130), 50m long, 4m depth	120	120	27-Dec-14	30-May-15	722
DN1400 Water Mains (CHD)						
WD-2020	Water Sampling	7	0	20-Sep-14 A	24-Sep-14 A	
WD-2030	Connection to Existing Mains	1	0	25-Sep-14 A	11-Oct-14 A	
Twin DN1400 Water Mains (CHE & CHG)						
WE-1000	Pipe Laying - CHE & CHG 0 - 45 (Twins DN1400) near Fanling Highway S/B (FHW: CH7130-7290), 45m long & 6m depth	85	22	09-Jul-14 A	14-Nov-14	299
WE-1020	Pipe Laying - CHE & CHG 135 - 225 (Twins DN1400) near Fanling Highway S/B (FHW: CH7380-7470), 90m long & 3m depth	155	155	06-Nov-14	21-May-15	152
DN2300 Water Mains and Leakage Collection System (CHJ & CHKA/CHK)						
WJ-1050	Pipe Laying - CHJ 200 - 292 (DN2300) near Realigned TWSR East (along Access Road A), 92m long & GL	97	57	01-Sep-14 A	27-Dec-14	57
WJ-1030	Pipe Laying - CHJ 100 - 170 (DN2300) near Realigned TWSR East, 70m long & 3m depth	75	75	04-Nov-14	02-Feb-15	14
WJ-1000	Implementation of TTA - Scheme EX2 (Shifting TWSRE toward newly formation area beside Fanling Highway)	35	35	20-Dec-14	02-Feb-15	14
WJ-1100	DN300 Washout at CHJ 212	65	65	21-Nov-14	07-Feb-15	149
WJ-1020B	Pipe Laying - CHKA 0 - 73 (DN1400) near Realigned TWSR East, 73m long & 4m depth	65	65	06-Jan-15	11-Mar-15	4
Kau Lung Hang Valve Control & Telemetry House Reprovision						
VCTH-1000	Civil Works Construction	75	0	15-Aug-14 A	18-Oct-14 A	
VCTH-1010	BS and E&M Works	90	90	02-Jan-15	28-Apr-15	5
Existing Nam Wa Po Trunk Sewage Pumping Station (PST3)						
PS-1000	Demolition of Existing Boundary Wall of Pumping Station (PST3)	25	25	05-Jan-15*	02-Feb-15	841
Stage 1A - Realignment of Tai Wo Service Road West (KD-7)						
TWSRW Zone 1 betweeen CH100 and CH155						
At-Grade Roadworks						
TWSRW-1120	Noise Barrier NB4 - Footing adjacent to Realigned TWSR West (70m)	85	0	12-Apr-14 A	23-Sep-14 A	



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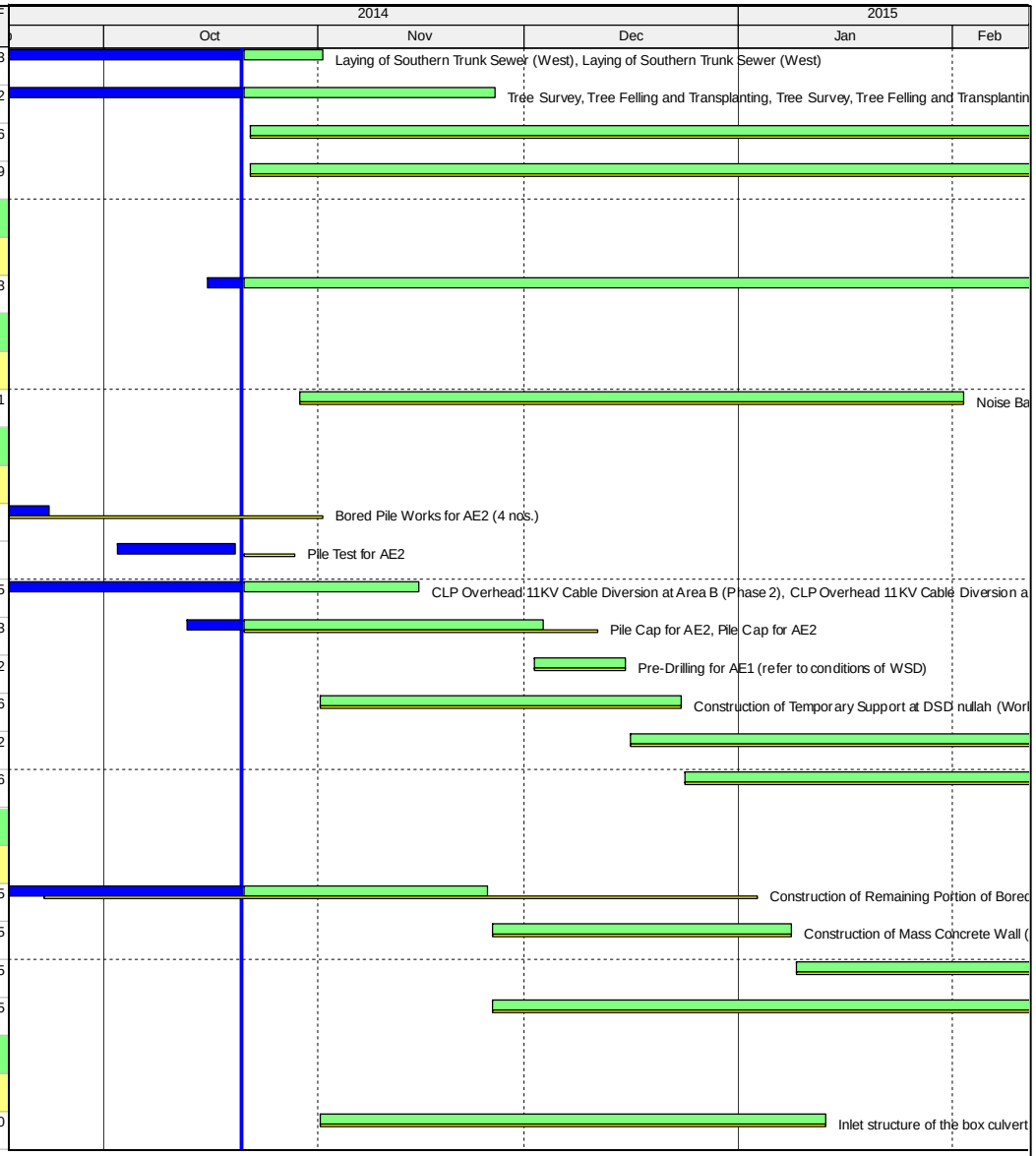
Activity ID	Activity Name	OD	RD	Start	Finish	TF
TWSRW-1130	Laying of Southern Trunk Sewer (West)	95	11	23-Apr-14 A	01-Nov-14	83
TWSRW-1100	Tree Survey, Tree Felling and Transplanting	81	32	16-Oct-13 A	26-Nov-14	72
TWSRW-1150	Installation of Cable Ducts for Utilities Diversion Works at Zone 1 & Zone 2 (Approx. 100m) (by utilities undertakers)	167	167	22-Oct-14*	06-Apr-15	96
TWSRW-1160	Road Formation, Road Drainage, Kerb, Planter & Pavement	286	286	22-Oct-14	12-Oct-15	79
TWSRW Zone 2 betweeen CH155 and CH280						
At-Grade Roadworks						
TWSRW-2120	Road Formation, Road Drainage, Kerb, Planter and Pavement	337	333	16-Oct-14 A	05-Dec-15	33
TWSRW Zone 3 betweeen CH280 and CH315						
At-Grade Roadworks						
TWSRW-3100	Noise Barrier NB1a - Footing adjacent Realigned TWSR West (31m)	80	80	29-Oct-14	02-Feb-15	31
TWSRW Zone 4 betweeen CH315 and CH376						
Construction of Bridge E						
TWSRW-4030B	Bored Pile Works for AE2 (4 nos.)	60	0	25-Jul-14 A	23-Sep-14 A	
TWSRW-4040B	Pile Test for AE2	7	0	03-Oct-14 A	20-Oct-14 A	
TWSRW-4000B	CLP Overhead 11KV Cable Diversion at Area B (Phase 2)	140	23	04-Nov-13 A	15-Nov-14	25
TWSRW-4050B	Pile Cap for AE2	45	38	13-Oct-14 A	03-Dec-14	43
TWSRW-4010A	Pre-Drilling for AE1 (refer to conditions of WSD)	12	12	02-Dec-14*	15-Dec-14	12
TWSRW-4060	Construction of Temporary Support at DSD nullah (Work in dry season)	45	45	01-Nov-14	23-Dec-14	26
TWSRW-4030A	Bored Pile Works for AE1	65	65	16-Dec-14	11-Mar-15	12
TWSRW-4070	In-situ Casting for Bridge Segment (North Bay & Middle Bay)	110	110	24-Dec-14	16-May-15	26
TWSRW Zone 5 betweeen CH376 and CH520						
Construction of Retaining Structures						
TWSRW-5050D	Construction of Remaining Portion of Bored Pile Wall at formation level	85	31	02-Sep-14 A	25-Nov-14	25
TWSRW-5070	Construction of Mass Concrete Wall (FL/RW4)	35	35	26-Nov-14	08-Jan-15	35
TWSRW-5080	Slope Work incl. 53 nos. Soil Nail for 3SW-C/C898 & 3SW-D/C29	90	90	09-Jan-15	06-May-15	35
TWSRW-5090	Lagging Wall Construction and Capping Beam	135	135	26-Nov-14	18-May-15	25
TWSRW Zone 6 betweeen CH520 and CH530						
Box Culvert Extension - BC01						
TWSRW-6070	Inlet structure of the box culvert BC01	60	60	01-Nov-14*	13-Jan-15*	60



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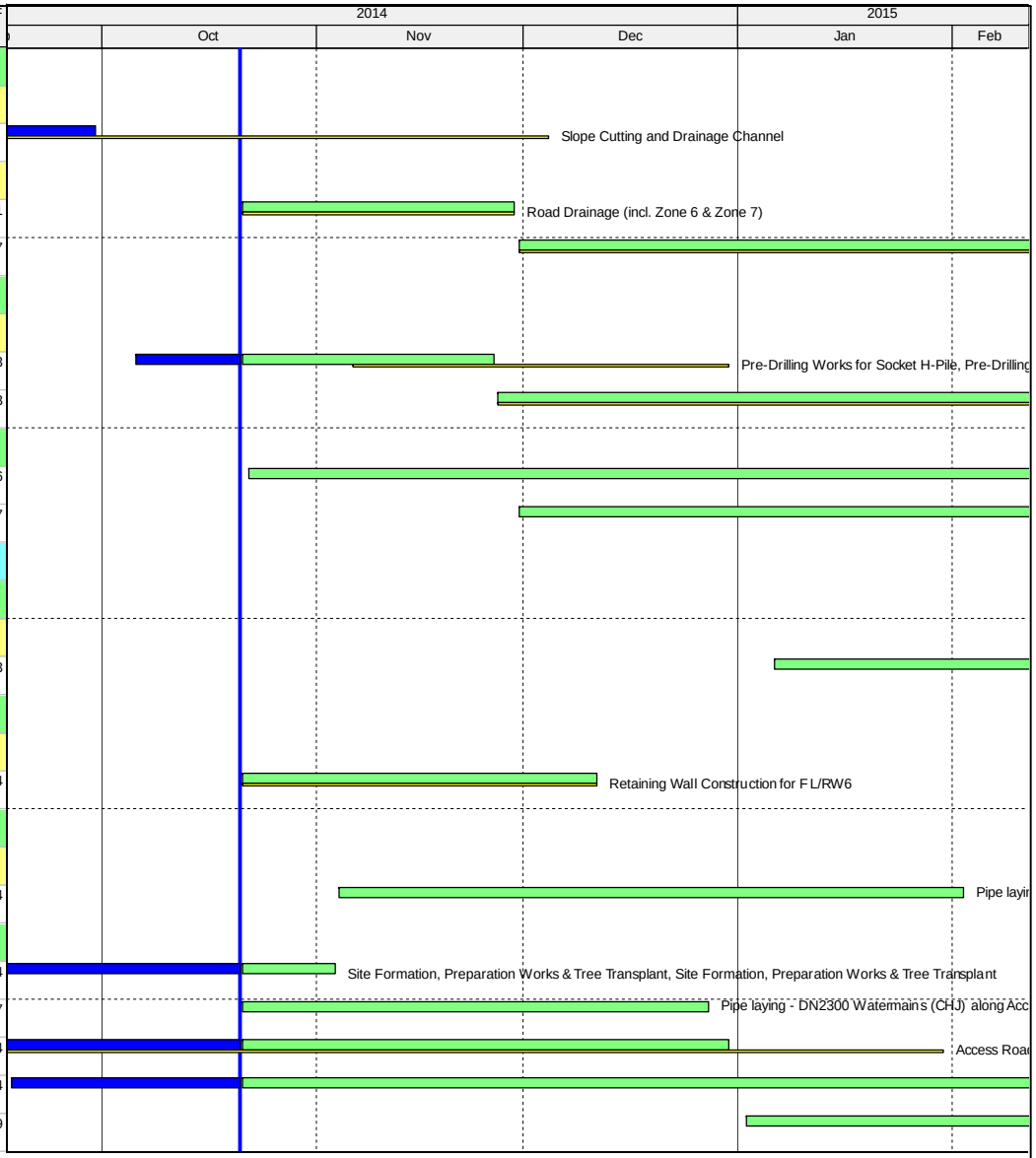
Activity ID	Activity Name	OD	RD	Start	Finish	TF
	TWSRW Zone 7 betweeen CH530 and CH640					
	Construction of Retaining Structures					
TWSRW-7010	Slope Cutting and Drainage Channel	235	0	06-Dec-13 A	30-Sep-14 A	
	At-Grade Roadworks					
TWSRW-7130	Road Drainage (incl. Zone 6 & Zone 7)	35	35	21-Oct-14	29-Nov-14	21
TWSRW-7140	Installation of Cable Ducts for Utilities Diversion Works at Area 4 (Approx. 150m) (by utilities undertakers)	251	251	30-Nov-14	07-Aug-15	27
	TWSRW Zone 8 betweeen CH640 and CH695					
	Kiu Tau Footbridge Reprovision (West)					
TWSRW-8000	Pre-Drilling Works for Socket H-Pile	45	32	06-Oct-14 A	26-Nov-14	13
TWSRW-8010	Installation of Socket H-Pile for Proposed Kiu Tau Footbridge (14 nos of Pile)	70	70	27-Nov-14	26-Feb-15	13
	Remainder of the Works					
TWSRW-9010*	Utilities Diversion in Area 1 (along Re-aligned TWSRW CH100 - CH280)	167	167	22-Oct-14	06-Apr-15	96
TWSRW-9040*	Utilities Diversion in Area 4 (along Re-aligned TWSRW CH530 - CH640)	251	251	30-Nov-14	07-Aug-15	27
	Stage N4A & N4B - Realignment of Tai Wo Service Road East (KD-13 & KD-14)					
	TWSRE Zone 1 between CH100 and CH270					
	At-Grade Roadworks					
TWSRE-1140*	Pipe laying - DN1400 Watermains (CHKA) along Realigned TWSR East	50	50	06-Jan-15	11-Mar-15	3
	TWSRE Zone 2 between CH270 and CH380					
	At-Grade Roadworks					
TWSRE-2020	Retaining Wall Construction for FL/RW6	45	45	21-Oct-14	11-Dec-14	4
	TWSRE Zone 3 between CH380 and CH456					
	At-Grade Roadworks					
TWSRE-3020B*	Pipe laying - DN2300 Watermains (CHJ) along Realigned TWSR East	75	75	04-Nov-14	02-Feb-15	14
	Roundabout A, Slip Road and Access Road					
TWSRE-4000	Site Formation, Preparation Works & Tree Transplant	65	12	15-Apr-14 A	03-Nov-14	14
TWSRE-4050B*	Pipe laying - DN2300 Watermains (CHJ) along Access Road A & Roundabout	91	57	20-Jun-14 A	27-Dec-14	57
TWSRE-4060	Access Road A - Road Formation, Road Drainage, Kerb, Planter and Pavement	134	59	18-Jul-14 A	30-Dec-14	114
TWSRE-4040	Slip Road Y (CH100-CH230) - Road Formation, Road Drainage, Kerb, Planter and Pavement	158	132	18-Sep-14 A	02-Apr-15	54
TWSRE-4050A*	Pipe laying - DN600 & DN1200 Watermains (CHB & CHC) along Access Road A & Roundabout	107	107	02-Jan-15	19-May-15	19



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

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

CEDD Contract No. CV/2012/09

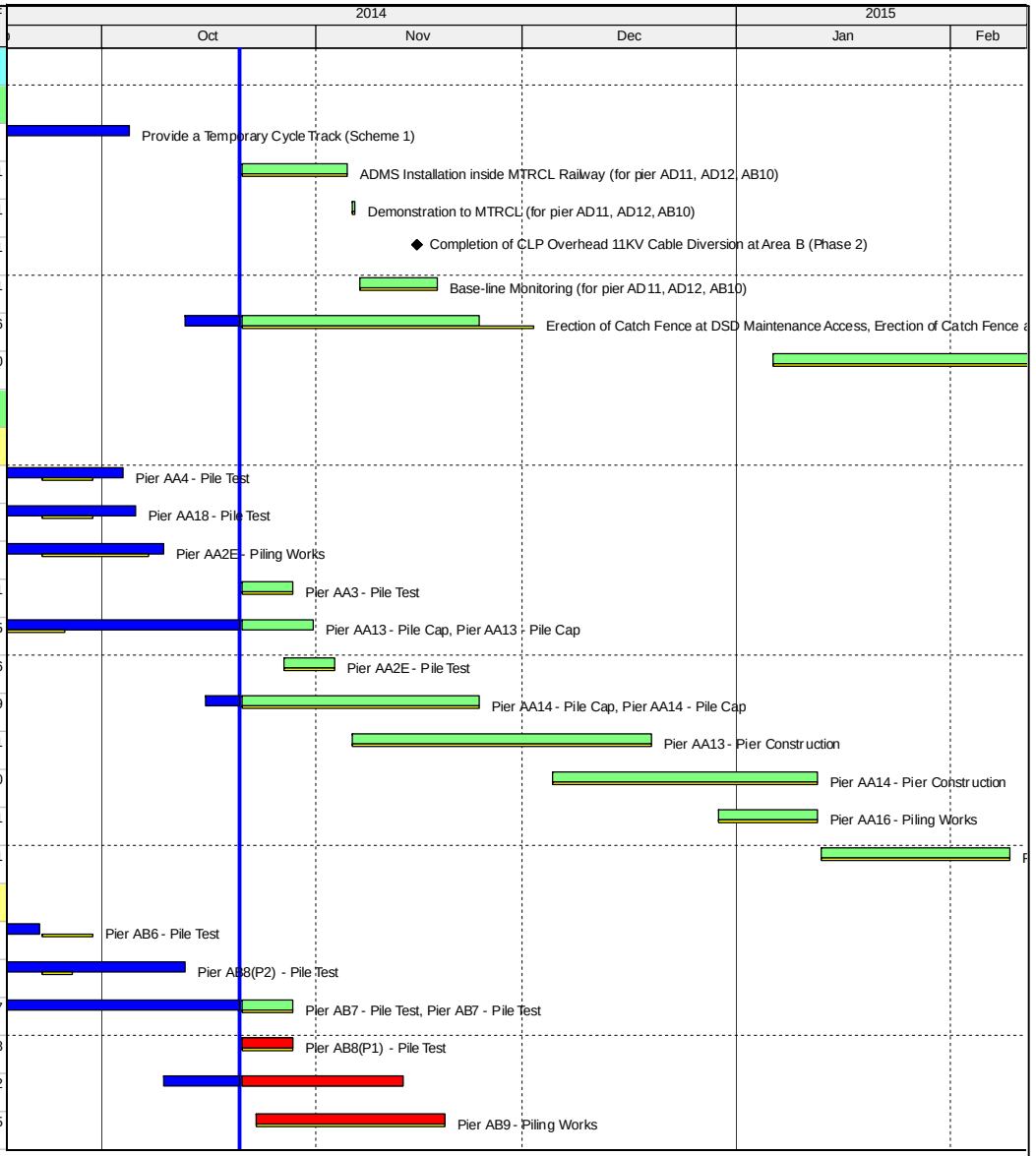
Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3

3-Month Rolling Programme

3-Month Rolling Programme updated to 2014-10-21

Date	Revision	Checked	Approved
23-Oct-14	Rev.1	SL	

Activity ID	Activity Name	OD	RD	Start	Finish	TF
	Stage 1C - Viaduct Structure & TCSS Civil Provisions (KD-9)					
	Preliminaries					
B-5000	Provide a Temporary Cycle Track (Scheme 1)	27	0	22-May-14 A	05-Oct-14 A	
B-1000A	ADMS Installation inside MTRCL Railway (for pier AD11, AD12, AB10)	14	14	21-Oct-14*	05-Nov-14	21
B-1010A	Demonstration to MTRCL (for pier AD11, AD12, AB10)	1	1	06-Nov-14	06-Nov-14	21
B-2030	Completion of CLP Overhead 11KV Cable Diversion at Area B (Phase 2)	0	0		15-Nov-14	51
B-1020A	Base-line Monitoring (for pier AD11, AD12, AB10)	10	10	07-Nov-14	18-Nov-14	21
B-4020	Erection of Catch Fence at DSD Maintenance Access	37	30	13-Oct-14 A	24-Nov-14	16
B-9000	Trial Operation (AC8 - Early Start on 26 Nov 14)	60	60	06-Jan-15	23-Mar-15	0
	Foundation & Pier Construction					
	Bridge A					
BA-04-1010	Pier AA4 - Pile Test	7	0	30-Aug-14 A	04-Oct-14 A	
BA-18-1010	Pier AA18 - Pile Test	7	0	08-Sep-14 A	06-Oct-14 A	
BA-02-2000	Pier AA2E - Piling Works	12	0	17-Sep-14 A	10-Oct-14 A	
BA-03-1010	Pier AA3 - Pile Test	7	7	21-Oct-14	28-Oct-14	201
BA-13-1020	Pier AA13 - Pile Cap	30	10	13-Aug-14 A	31-Oct-14	25
BA-02-2010	Pier AA2E - Pile Test	7	7	27-Oct-14	03-Nov-14	226
BA-14-1020	Pier AA14 - Pile Cap	30	30	16-Oct-14 A	24-Nov-14	9
BA-13-1030	Pier AA13 - Pier Construction	38	38	06-Nov-14	19-Dec-14	21
BA-14-1030	Pier AA14 - Pier Construction	30	30	05-Dec-14	12-Jan-15	0
BA-16-1000	Pier AA16 - Piling Works	12	12	29-Dec-14	12-Jan-15	41
BA-10-1000	Pier AA10 - Piling Works	24	24	13-Jan-15	09-Feb-15	41
	Bridge B					
BB-06-1010	Pier AB6 - Pile Test	7	0	19-Jul-14 A	22-Sep-14 A	
BB-08-1010A	Pier AB8(P2) - Pile Test	5	0	04-Jul-14 A	13-Oct-14 A	
BB-07-1010	Pier AB7 - Pile Test	7	7	13-Sep-14 A	28-Oct-14	17
BB-08-1010B	Pier AB8(P1) - Pile Test	7	7	21-Oct-14	28-Oct-14	-58
BB-06-1020A	Pier AB6E - Pile Cap	30	21	10-Oct-14 A	13-Nov-14	-72
BB-09-1000	Pier AB9 - Piling Works	24	24	23-Oct-14*	19-Nov-14	-35



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

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Summary Bar
Critical Remaining Work
Milestone
Project Baseline Bar

CEDD Contract No. CV/2012/09

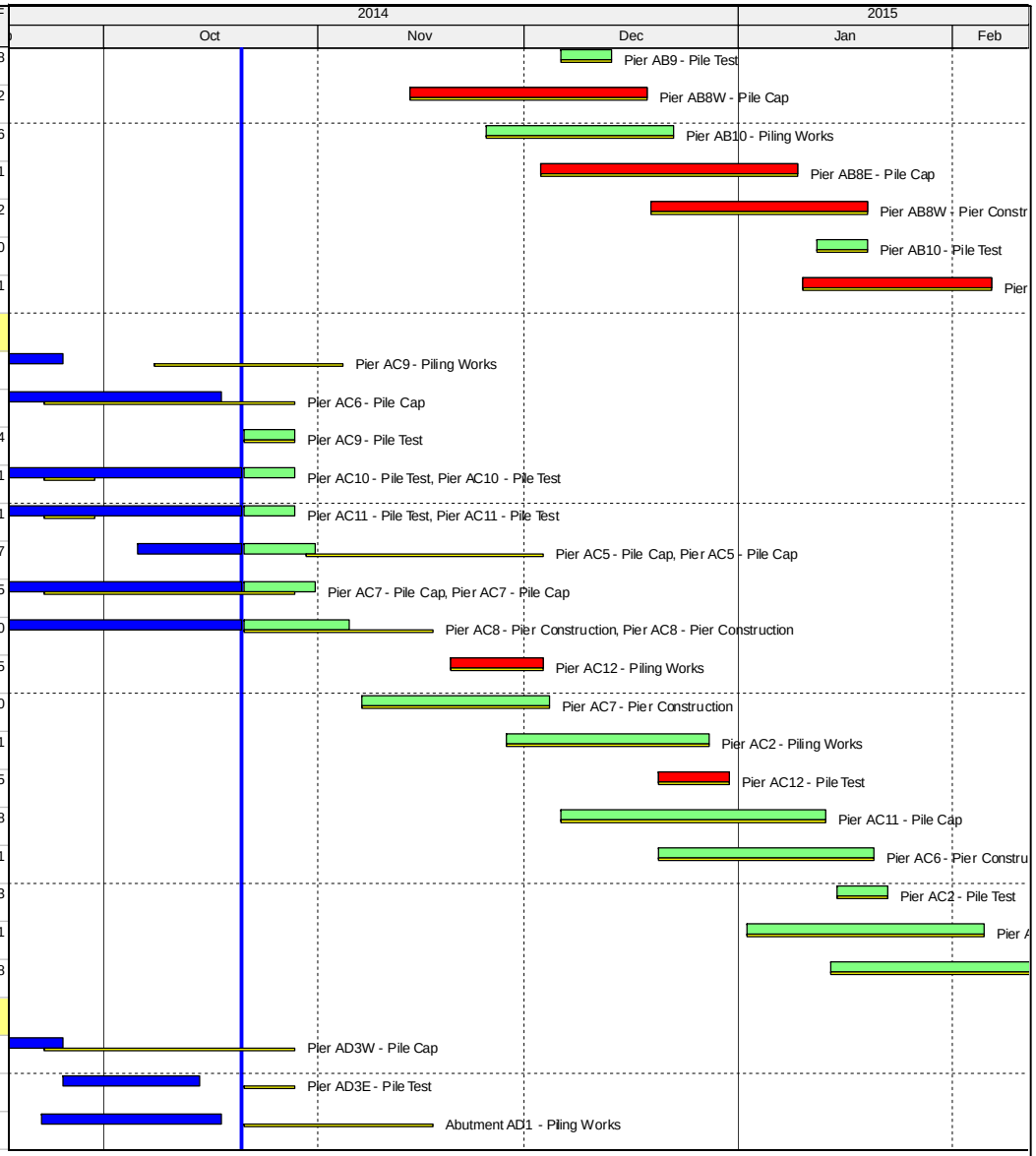
Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3

3-Month Rolling Programme

3-Month Rolling Programme updated to 2014-10-21

Date	Revision	Checked	Approved
23-Oct-14	Rev.1	SL	

Activity ID	Activity Name	OD	RD	Start	Finish	TF
BB-09-1010	Pier AB9 - Pile Test	7	7	06-Dec-14	13-Dec-14	38
BB-08-1020B	Pier AB8W - Pile Cap	30	30	14-Nov-14	18-Dec-14	-72
BB-10-1000	Pier AB10 - Piling Works	24	24	25-Nov-14	22-Dec-14	16
BB-08-1020A	Pier AB8E - Pile Cap	30	30	03-Dec-14	09-Jan-15	-81
BB-08-1030	Pier AB8W - Pier Construction	24	24	19-Dec-14	19-Jan-15	-72
BB-10-1010	Pier AB10 - Pile Test	7	7	12-Jan-15	19-Jan-15	40
BB-08-1040	Pier AB8E - Pier Construction	24	24	10-Jan-15*	06-Feb-15	-81
Bridge C						
BC-09-1000	Pier AC9 - Piling Works	24	0	01-Sep-14 A	25-Sep-14 A	
BC-06-1020	Pier AC6 - Pile Cap	30	0	25-Aug-14 A	18-Oct-14 A	
BC-09-1010	Pier AC9 - Pile Test	7	7	21-Oct-14	28-Oct-14	84
BC-10-1010	Pier AC10 - Pile Test	7	7	13-Sep-14 A	28-Oct-14	141
BC-11-1010	Pier AC11 - Pile Test	7	7	30-Aug-14 A	28-Oct-14	111
BC-05-1020	Pier AC5 - Pile Cap	30	10	06-Oct-14 A	31-Oct-14	57
BC-07-1020	Pier AC7 - Pile Cap	30	10	05-Sep-14 A	31-Oct-14	5
BC-08-1030	Pier AC8 - Pier Construction	24	14	13-Sep-14 A	05-Nov-14	0
BC-12-1000	Pier AC12 - Piling Works	12	12	20-Nov-14	03-Dec-14	-35
BC-07-1030	Pier AC7 - Pier Construction	24	24	07-Nov-14	04-Dec-14	0
BC-02-1000	Pier AC2 - Piling Works	24	24	28-Nov-14	27-Dec-14	41
BC-12-1010	Pier AC12 - Pile Test	7	7	20-Dec-14	30-Dec-14	-35
BC-11-1020	Pier AC11 - Pile Cap	30	30	06-Dec-14	13-Jan-15	78
BC-06-1030	Pier AC6 - Pier Construction	24	24	20-Dec-14	20-Jan-15	21
BC-02-1010	Pier AC2 - Pile Test	7	7	15-Jan-15	22-Jan-15	43
BC-09-1020	Pier AC9 - Pile Cap	30	30	02-Jan-15	05-Feb-15	31
BC-10-1020	Pier AC10 - Pile Cap	30	30	14-Jan-15	17-Feb-15	78
Bridge D						
BD-03-1020B	Pier AD3W - Pile Cap	30	0	22-Aug-14 A	25-Sep-14 A	
BD-03-2010	Pier AD3E - Pile Test	7	0	25-Sep-14 A	15-Oct-14 A	
BD-01-1000	Abutment AD1 - Piling Works	24	0	22-Sep-14 A	18-Oct-14 A	



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

Actual Work
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CEDD Contract No. CV/2012/09

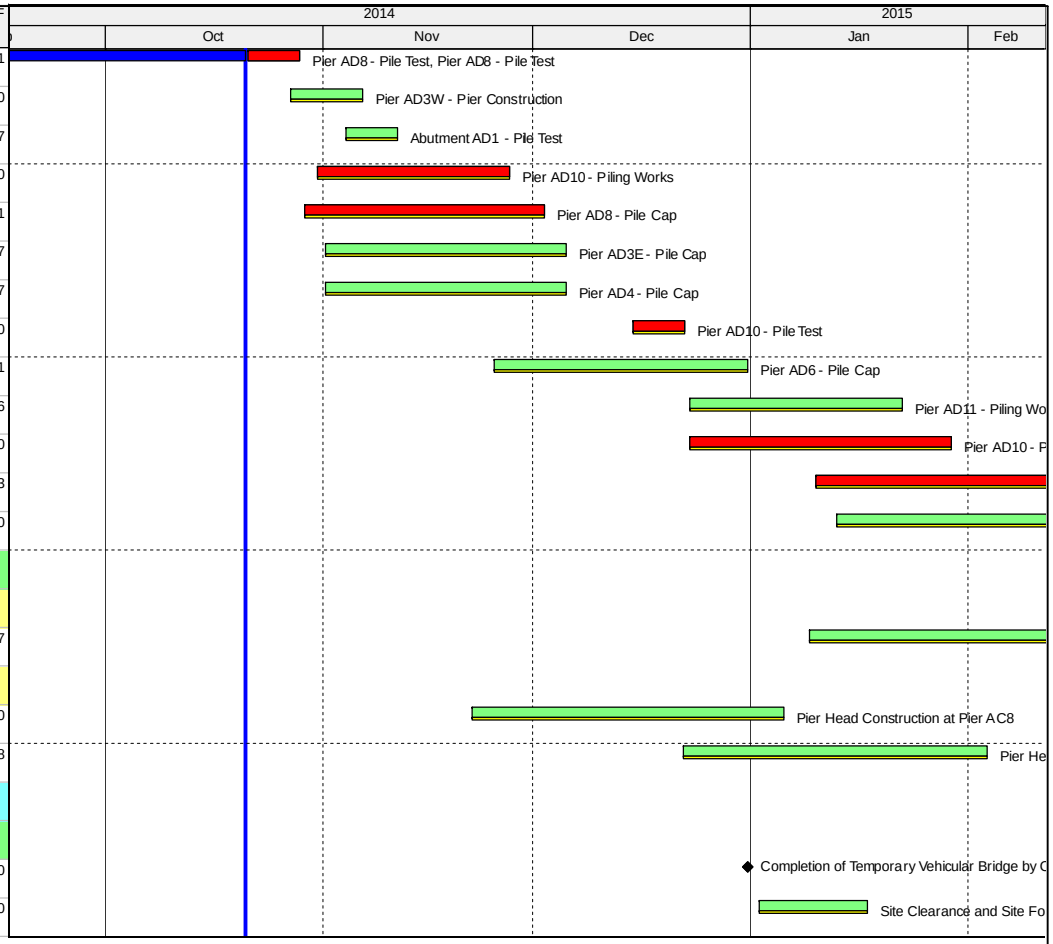
Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3

3-Month Rolling Programme

3-Month Rolling Programme updated to 2014-10-21

Date	Revision	Checked	Approved
23-Oct-14	Rev.1	SL	

Activity ID	Activity Name	OD	RD	Start	Finish	TF
BD-08-1010	Pier AD8 - Pile Test	7	7	23-Aug-14 A	28-Oct-14	-81
BD-03-1030	Pier AD3W - Pier Construction	10	10	27-Oct-14*	06-Nov-14	0
BD-01-1010	Abutment AD1 - Pile Test	7	7	04-Nov-14	11-Nov-14	537
BD-10-1000	Pier AD10 - Piling Works	24	24	31-Oct-14*	27-Nov-14	-60
BD-08-1020	Pier AD8 - Pile Cap	30	30	29-Oct-14	02-Dec-14	-81
BD-03-1020A	Pier AD3E - Pile Cap	30	30	01-Nov-14	05-Dec-14	57
BD-04-1020	Pier AD4 - Pile Cap	30	30	01-Nov-14	05-Dec-14	67
BD-10-1010	Pier AD10 - Pile Test	7	7	15-Dec-14	22-Dec-14	-60
BD-06-1020	Pier AD6 - Pile Cap	30	30	25-Nov-14	31-Dec-14	31
BD-11-1000	Pier AD11 - Piling Works	24	24	23-Dec-14	22-Jan-15	16
BD-10-1020	Pier AD10 - Pile Cap	30	30	23-Dec-14	29-Jan-15	-60
BD-09-1020	Pier AD9 - Pile Cap	30	30	10-Jan-15	13-Feb-15	-73
BD-05-1030	Pier AD5 - Pier Construction (Twin Pier)	38	38	13-Jan-15	04-Mar-15	0
Pier Head Construction						
Bridge A						
PA-1130	Pier Head Construction at Pier AA13	35	35	09-Jan-15	18-Feb-15	57
Bridge C						
PC-1080	Pier Head Construction at Pier AC8	35	35	22-Nov-14	05-Jan-15	0
PC-1070	Pier Head Construction at Pier AC7	35	35	22-Dec-14	03-Feb-15	48
Section VI - Works in Portion FH9 (KD-6A)						
Preliminary Preparation Works						
S6-1000	Completion of Temporary Vehicular Bridge by C2 Contractor	0	0		31-Dec-14	20
S6-1020	Site Clearance and Site Formation	14	14	02-Jan-15	17-Jan-15	20



Actual Work
Remaining Work
Summary Bar
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Project Baseline Bar

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

CEDD Contract No. CV/2012/09

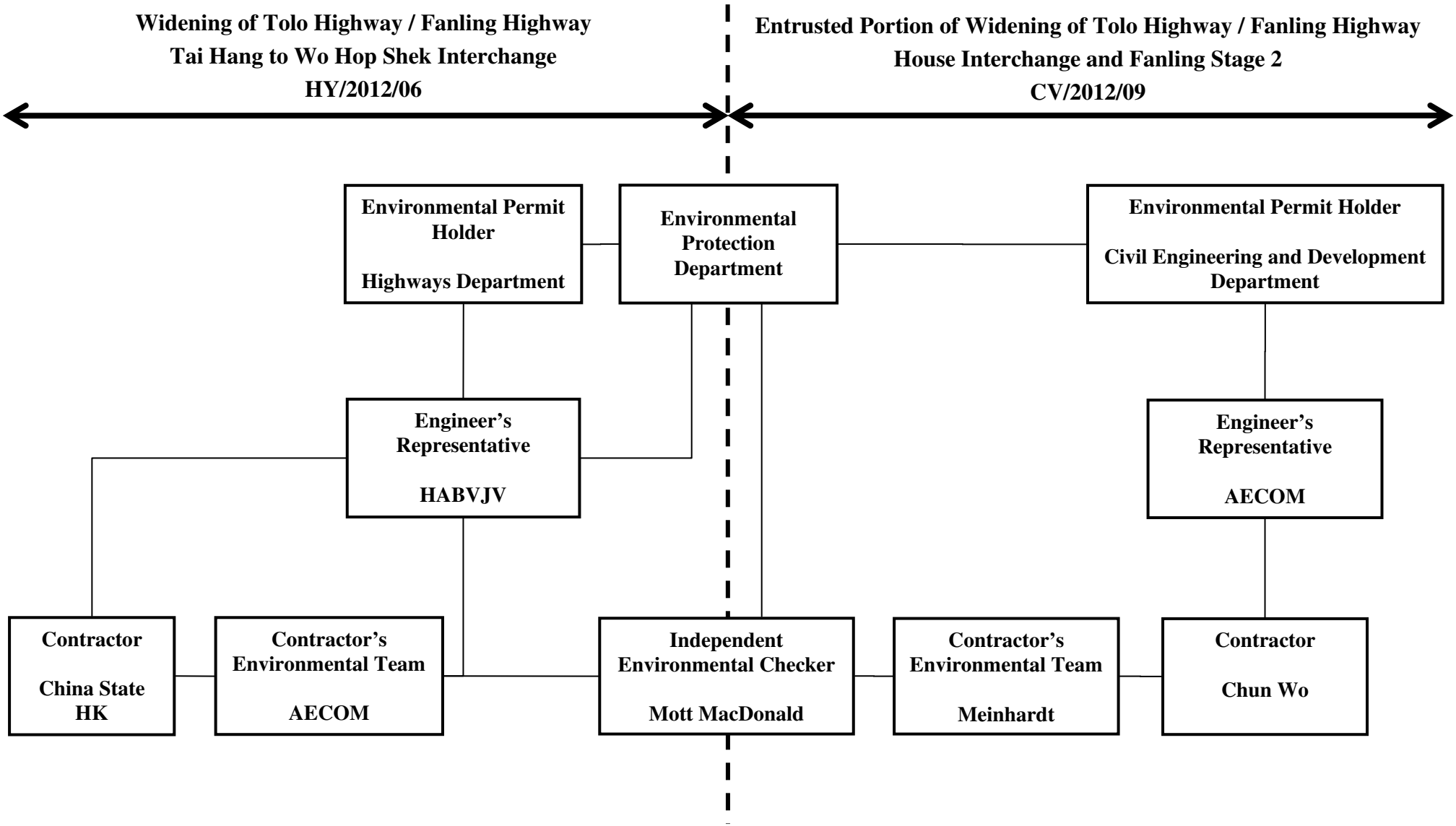
Liantang / Heung Yuen Wai BCP - Site Formation & Infrastructure Works, Contract 3

3-Month Rolling Programme

3-Month Rolling Programme updated to 2014-10-21

Date	Revision	Checked	Approved
23-Oct-14	Rev.1	SL	

Appendix B
Project Organization Structure


Widening of Tolo Highway / Fanling Highway
Tai Hang to Wo Hop Shek Interchange
HY/2012/06
Entrusted Portion of Widening of Tolo Highway / Fanling Highway
House Interchange and Fanling Stage 2
CV/2012/09
Environmental Permit Holder
Highways Department
Environmental Protection Department
Environmental Permit Holder
Civil Engineering and Development Department
Engineer's Representative
HABVJV
Engineer's Representative
AECOM
Contractor
China State HK
Contractor's Environmental Team
AECOM
Independent Environmental Checker
Mott MacDonald
Contractor's Environmental Team
Meinhardt
Contractor
Chun Wo

Appendix C
Calibration Certificates of Monitoring Equipment

TISCH ENVIRONMENTAL, INC.
145 SOUTH MIAMI AVE
VILLAGE OF CLEVES, OH
45002
513.467.9000
877.263.7610 TOLL FREE
513.467.9009 FAX

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Apr 07, 2014 Rootsmeter S/N 0438320 Ta (K) - 294
Operator Tisch Orifice I.D. - 1612 Pa (mm) - 742.95

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.3940	3.2	2.00
2	NA	NA	1.00	0.9790	6.4	4.00
3	NA	NA	1.00	0.8800	7.8	5.00
4	NA	NA	1.00	0.8350	8.8	5.50
5	NA	NA	1.00	0.6910	12.7	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)
0.9866	0.7077	1.4077
0.9823	1.0034	1.9908
0.9804	1.1140	2.2258
0.9791	1.1726	2.3345
0.9739	1.4094	2.8155

Qstd slope (m) = 2.00757
intercept (b) = -0.01628
coefficient (r) = 0.99989

y axis = SQRT[H2O(Pa/760)(298/Ta)]

Va	(x axis) Qa	(y axis)
0.9957	0.7142	0.8896
0.9914	1.0127	1.2581
0.9894	1.1243	1.4066
0.9881	1.1834	1.4753
0.9829	1.4224	1.7793

Qa slope (m) = 1.25710
intercept (b) = -0.01029
coefficient (r) = 0.99989

y axis = SQRT[H2O(Ta/Pa)]

CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]
Qa = Va/Time

For subsequent flow rate calculations:

Qstd = 1/m{[SQRT(H2O(Pa/760)(298/Ta))]- b}
Qa = 1/m{[SQRT H2O(Ta/Pa)]- b}

TSP Sampler Calibration

SITE

Location: Lian Tang 3 — Date: September 4, 2014
Sampler: TE-5170 MFC (Serial # : 2359) — Tech: Sam Wong

CONDITIONS

Barometric Pressure (in Hg):	39.64	Corrected Pressure (mm Hg):	1007
Temperature (deg F):	92	Temperature (deg K):	306
Average Press. (in Hg):	39.64	Corrected Average (mm Hg):	1007
Average Temp. (deg F):	92	Average Temp. (deg K):	306

CALIBRATION ORIFICE

Make:	Tisch	Qstd Slope:	2.00757
Model:	TE-5025A	Qstd Intercept:	-0.01628
Serial#:	1612	Date Certified:	April 7, 2014

CALIBRATIONS

Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)
1	12.00	1.967	58.0	65.84
2	10.00	1.796	53.0	60.17
3	8.20	1.627	47.0	53.36
4	5.20	1.298	38.0	43.14
5	3.20	1.020	30.0	34.06

LINEAR REGRESSION

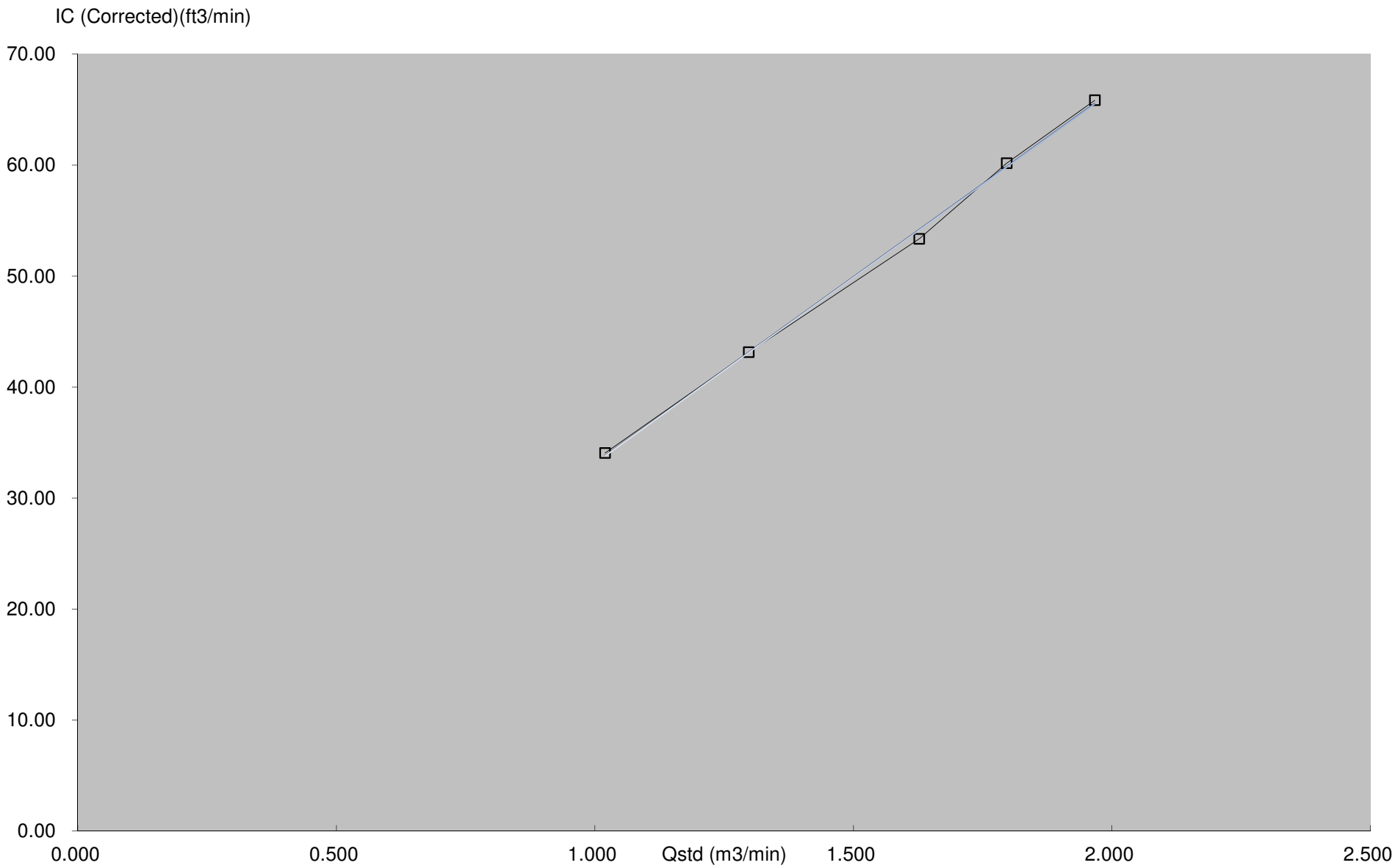
Slope =	33.5180
Intercept =	-0.3582
Corr. coeff.=	0.9993
# of Observations:	5

Calculations

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

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

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


IC (Corrected)(ft3/min)
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
0.000
0.500
1.000
Qstd (m3/min)
1.500
2.000
2.500

Hong Kong Calibration Ltd.
香港校正有限公司

Calibration Certificate

Certificate No. 37521 Page 1 of 2 Pages

Customer : Enovative Environmental Service Limited

Address : Room 3, 12/F., New City Centre, 2 Lei Yue Mun Road, Kwun Tong, Kowloon, H.K.

Order No. : Q32432 **Date of receipt :** 16-Oct-13

Item Tested

Description : Sound Level Calibrator

Manufacturer : B&K

Model : Type 4231 **Serial No. :** 2685684

Test Conditions

Date of Test : 31-Oct-13 **Supply Voltage :** --

Ambient Temperature : (23 ± 3)°C **Relative Humidity :** (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : F21, Z02.

Test Results

All results were within the IEC 942 Class 1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

Equipment No.	Description	Cert. No.	Traceable to
S014	Spectrum Analyzer	35730	NIM-PRC & SCL-HKSAR
S205	Ref. Sound Level Calibrator	PHCO40002	SCL-HKSAR
S041	Universal Counter	34621	SCL-HKSAR
S206	Sound Level Meter	36203	SCL-HKSAR
S031	6½ dgt. Multimeter	30128	NIM-PRC

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

The test equipment used for calibration are traceable to International System of Units (SI).
The test results apply to the above Unit-Under-Test only

Calibrated by : Dorothy Cheuk

Approved by : Steve Kwan

Date: 31-Oct-13

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

E

Calibration Certificate

Results :

1. Level Accuracy

UUT Nominal Value (dB)	Measured Value (dB)	IEC 942 Class 1 Spec.
94	94.08	± 0.3 dB
114	114.07	

Uncertainty : ± 0.1 dB

2. Frequency

UUT Nominal Value	Measured Value	IEC 942 Class 1 Spec.
1 kHz	1.002 kHz	± 2 %

Uncertainty : ± 3.6 x 10^{-6}

3. Level Stability : 0.0 dB
IEC 942 Class 1 Spec. : ± 0.1 dB
Uncertainty : ± 0.01 dB

4. Total Harmonic Distortion : < 0.7 %
IEC 942 Class 1 Spec. : < 3 %
Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test
2. The uncertainty claimed is for a confidence probability of not less than 95%.
3. Atmospheric Pressure : 1014 hPa.

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

Hong Kong Calibration Ltd.
香港校正有限公司

Calibration Certificate

Certificate No. 37520 Page 1 of 3 Pages

Customer : Enovative Environmental Service Limited

Address : Room 3, 12/F., New City Centre, 2 Lei Yue Mun Road, Kwun Tong, Kowloon, H.K.

Order No. : Q32432 **Date of receipt :** 16-Oct-13

Item Tested

Description : Sound Level Meter

Manufacturer : B&K

Model : 2238 **Serial No. :** 2694908

Test Conditions

Date of Test : 31-Oct-13 **Supply Voltage :** --

Ambient Temperature : (23 ± 3)°C **Relative Humidity :** (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure: Z01.

Test Results

All results were within the IEC 651 Type1 and IEC 804 Type1 specifications after adjustment.

The results are shown in the attached page(s).

Main Test equipment used:

Equipment No.	Description	Cert. No.	Traceable to
S017	Multi-Function Generator	C127181	SCL-HKSAR
S205	Ref. Sound Level Calibrator	PHCO40002	SCL-HKSAR

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

The test equipment used for calibration are traceable to International System of Units (SI).
The test results apply to the above Unit-Under-Test only

Calibrated by : Dorothy Cheuk

Approved by : Steve Kwan

Date: 31-Oct-13

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

E

Calibration Certificate

Results :

1. SPL Accuracy

UUT Setting				Applied Value (dB)	UUT Reading (dB)	
Range	Freq. Wgt.	Bandwith	Center Freq.		Before adjust	After adjust
20 ~ 100	A	BB/F	--	94.0	*89.0	93.7
	A	BB/S	--		--	93.7
	C	BB/F	--		--	93.7
40 ~ 120	A	BB/F	--	94.0	--	93.7
	A	BB/F	--	114.0	--	113.7

IEC 651 Type 1 Spec. : ± 0.7 dB
Uncertainty : ± 0.1 dB

2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. : ± 0.3 dB
Uncertainty : ± 0.1 dB

3. Linearity

3.1 Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
140	114.0	113.7	0.0	± 0.7 dB
130	104.0	103.7	0.0	
120	94.0	93.7 (Ref.)	- -	
110	84.0	83.7	0.0	
100	74.0	73.7	0.0	
90	64.0	63.7	0.0	
80	54.0	53.7	0.0	

Uncertainty : ± 0.1 dB

3.2 Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec.
120	84.0	83.7	0.0	± 0.4 dB
	94.0	93.7 (Ref.)	- -	
	95.0	94.7	0.0	± 0.2 dB

Uncertainty : ± 0.1 dB

Calibration Certificate

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-39.1	- 39.4 dB, ± 1.5 dB
63 Hz	-26.0	- 26.2 dB, ± 1.5 dB
125 Hz	-16.0	- 16.1 dB, ± 1 dB
250 Hz	-8.5	- 8.6 dB, ± 1 dB
500 Hz	-3.1	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref)	0 dB, ± 1 dB
2 kHz	+0.9	+ 1.2 dB, ± 1 dB
4 kHz	+0.8	+ 1.0 dB, ± 1 dB
8 kHz	-0.7	- 1.1 dB, + 1.5 dB ~ -3 dB
16 kHz	-6.0	- 6.6 dB, + 3 dB ~ - ∞

Uncertainty : ± 0.1 dB

5. Time Averaging

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	40.0	40.0	--
1/10	40.0	40.0	± 0.5 dB
$1/10^2$	40.0	40.0	
$1/10^3$	40.0	40.0	± 1.0 dB
$1/10^4$	40.0	39.6	

Uncertainty : ± 0.1 dB

Remarks:
1. UUT : Unit-Under-Test
2. The uncertainty claimed is for a confidence probability of not less than 95%.
3. Atmospheric Pressure : 1014 hPa
4. The UUT was adjusted with the supplied sound calibrator at the reference sound pressure level before the calibration.
5. * Out of specification.

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

Appendix D
EM&A Monitoring Schedules

Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2
Impact Monitoring & Site Auditing Schedule for October 2014

October 2014						
Sun	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**
			1 National Day	2 Chung Yeung Festival	3	4
5	6 24-hour TSP + 3 x 1-hour TSP, Noise (SR77) ET Site Walk(09:30 – 11:00) with Liantang Project-wide ET and IEC	7	8	9	10	11 24-hour TSP + 3 x 1-hour TSP
12	13 ET Site Walk(09:30 – 11:00) with Liantang Project-wide ET and IEC	14	15	16	17 24-hour TSP + 3 x 1-hour TSP, Noise (SR77)	18
19	20	21	22 ET Site Walk(09:30 – 11:00) with Fanling Stage 2 IEC & Liantang Project-wide ET + SSEMC	23 24-hour TSP + 3 x 1-hour TSP, Noise (SR77)	24	25
26	27 ET Site Walk(09:30 – 11:00) with Fanling Stage 2 IEC & Liantang Project-wide ET and IEC	28	29 24-hour TSP + 3 x 1-hour TSP, Noise (SR77)	30	31	

Entrusted Portion of Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling Stage 2
Impact Monitoring & Site Auditing Schedule for November 2014

November 2014						
Sun	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**
						1
2	3 ET Site Walk(09:30 – 11:00) with Liantang Project-wide ET and IEC	4 24-hour TSP + 3 x 1-hour TSP, Noise (SR77)	5	6	7	8
9	10 24-hour TSP + 3 x 1-hour TSP, Noise (SR77) ET Site Walk(09:30 – 11:00) with Liantang Project-wide ET and IEC	11	12	13	14	15 24-hour TSP + 3 x 1-hour TSP
16	17	18	19 ET Site Walk(09:30 – 11:00) with Liantang Project-wide ET and IEC + SSEMC	20	21 24-hour TSP + 3 x 1-hour TSP, Noise (SR77)	22
23	24 ET Site Walk(09:30 – 11:00) with Fanling Stage 2 IEC & Liantang Project-wide ET and IEC	25	26	27 24-hour TSP + 3 x 1-hour TSP, Noise (SR77)	28	29
30						

Appendix E
Meteorological Data Extracted from Hong Kong Observatory

Extract of Meteorological Observations for Sheung Shui Automatic Weather Station, October 2014 (Table 1)

Date	Mean Pressure at M.S.L. (hPa)	Air Temperature			Mean Dew Point Temperature (deg C)	Relative Humidity		
		Max. (deg C)	Mean (deg C)	Min. (deg C)		Max. (%)	Mean (%)	Min. (%)
Oct 1	1012.0	32.9	28.4	25.4	23.8	91	77	56
Oct 2	1010.2	33.9	28.7	25.4	24.7	94	80	58
Oct 3	1009.2	33.5	28.5	25.5	23.9	95	77	50
Oct 4	1010.7	32.2	26.7	24.0	23.5	95	84	60
Oct 5	1012.9	32.6	26.7	23.0	19.7	97	69	34
Oct 6	1015.3	31.3	25.6	21.0	17.9	90	66	38
Oct 7	1014.7	31.2	25.7	22.5	17.1	84	61	41
Oct 8	1013.0	31.0	25.2	20.7	17.6	93	66	36
Oct 9	1010.9	30.8	25.4	21.3	17.7	90	65	38
Oct 10	1010.3	31.6	25.2	20.6	18.2	88	67	42
Oct 11	1011.0	33.9	26.6	22.0	18.8	84	64	41
Oct 12	1013.7	33.3	26.6	22.3	17.6	87	60	35
Oct 13	1016.5	30.9	25.4	20.8	15.7	80	56	40
Oct 14	1017.9	30.1	24.8	21.3	15.3	84	57	41
Oct 15	1017.4	30.8	24.3	18.9	17.3	86	66	43
Oct 16	1017.9	29.0	24.9	21.9	18.3	90	68	46
Oct 17	1017.5	31.4	25.3	22.2	17.5	77	63	38
Oct 18	1016.3	31.9	25.7	21.1	18.5	88	66	38
Oct 19	1015.8	32.8	26.4	23.7	19.9	85	69	42
Oct 20	1014.8	32.1	26.8	23.8	21.4	87	73	52
Oct 21	1015.1	34.0	26.7	22.0	21.2	93	74	46
Oct 22	1015.5	31.6	27.1	24.3	19.2	87	63	48
Oct 23	1016.3	27.5	24.5	21.9	19.9	95	76	60
Oct 24	1016.3	26.2	24.9	24.1	20.2	83	75	66
Oct 25	1016.6	27.6	25.2	23.6	20.4	84	75	62
Oct 26	1016.7	30.7	26.3	23.7	21.0	90	74	51
Oct 27	1016.3	32.1	26.4	23.0	20.9	94	73	45
Oct 28	1016.8	28.9	25.6	23.8	17.7	76	63	43
Oct 29	1016.9	30.4	25.9	23.5	19.5	80	68	51
Oct 30	1015.7	31.8	26.0	23.7	20.4	87	72	50
Oct 31	1014.0	30.7	25.5	23.0	21.3	90	78	56
Mean	1014.6	31.2	26.0	22.7	19.6	88	69	47
Maximum	1017.9	34.0	28.7	25.5	24.7	97	84	66
Minimum	1009.2	26.2	24.3	18.9	15.3	76	56	34

Extract of Meteorological Observations for Sheung Shui Automatic Weather Station, October 2014 (Table 2)

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
Oct 1	0.0	***	*****
Oct 2	0.0	***	*****
Oct 3	0.0	***	*****
Oct 4	8.5	***	*****
Oct 5	0.0	***	*****
Oct 6	0.0	***	*****
Oct 7	0.0	***	*****
Oct 8	0.0	***	*****
Oct 9	0.0	***	*****
Oct 10	0.0	***	*****
Oct 11	0.0	***	*****
Oct 12	0.0	***	*****
Oct 13	0.0	***	*****
Oct 14	0.0	***	*****
Oct 15	0.0	***	*****
Oct 16	0.0	***	*****
Oct 17	0.0	***	*****
Oct 18	0.0	***	*****
Oct 19	0.0	***	*****
Oct 20	0.0	***	*****
Oct 21	0.0	***	*****
Oct 22	0.0	***	*****
Oct 23	1.0	***	*****
Oct 24	0.0	***	*****
Oct 25	0.0	***	*****
Oct 26	0.0	***	*****
Oct 27	0.0	***	*****
Oct 28	0.0	***	*****
Oct 29	0.0	***	*****
Oct 30	0.0	***	*****
Oct 31	0.0	***	*****
Mean	-----	***	*****
Total	9.5	---	-----
Maximum	8.5	---	*****
Minimum	0.0	---	*****

*** unavailable

missing (less than 24 hourly observations a day)

Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

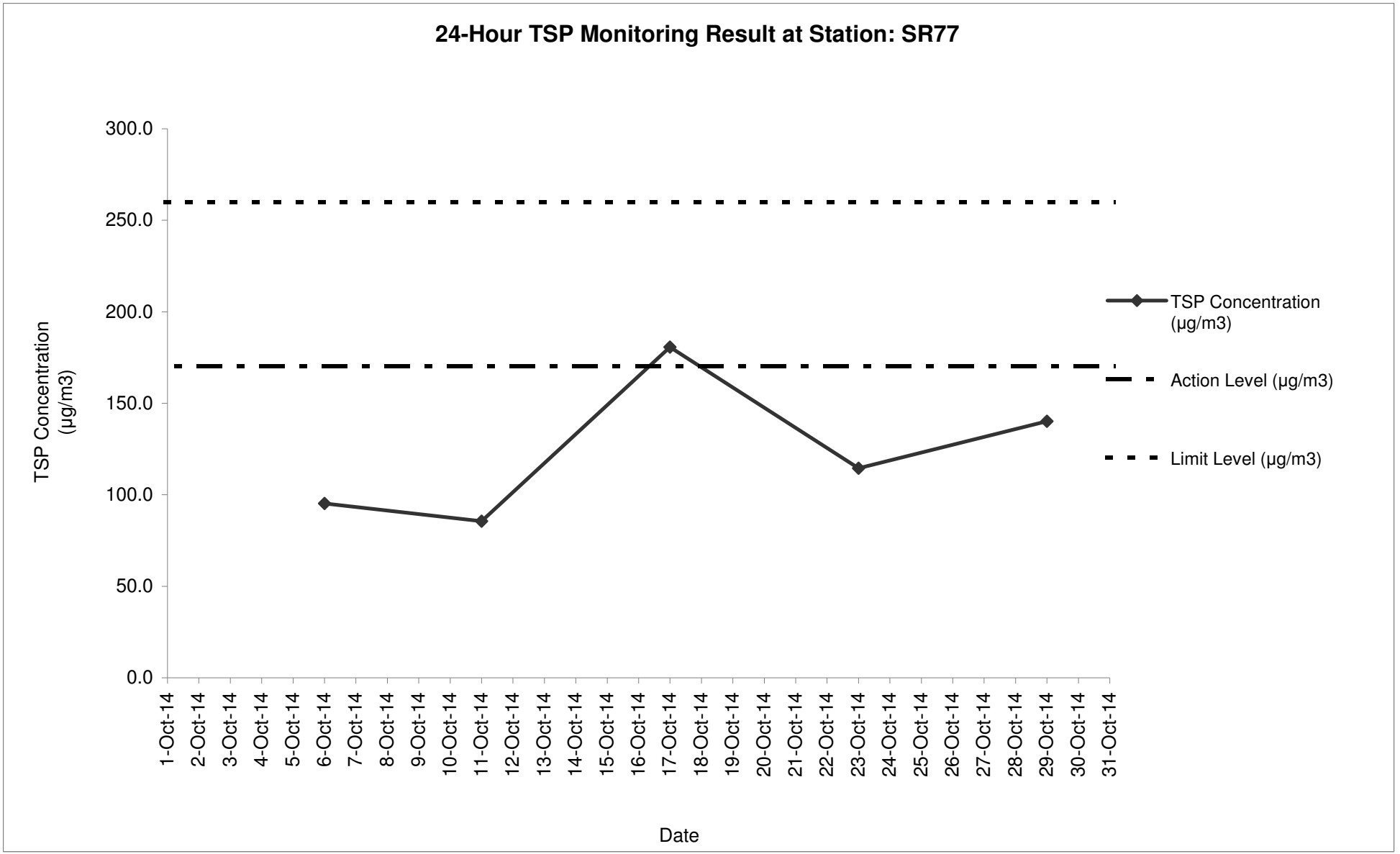
Appendix F
Air Quality Monitoring Results and their Graphical Presentation

Appendix F
Air Quality Monitoring Results and their Graphical Presentation

24-Hour TSP Monitoring Result at Station: SR77

Sampling Date	Weather Condition	Paper No.	Wt. of paper (g)			Elapse Time			Flow Rate (CFM)			Flow Rate (m^3/min)			Total Volume (m^3)	TSP Concentration ($\mu g/m^3$)	Action Level ($\mu g/m3$)	Limit Level ($\mu g/m3$)	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						
6-Oct-14	Fine	93	2.7227	2.9208	0.1981	0.00	24.00	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	95.3	170.3	260.0	<5	N
11-Oct-14	Sunny	94	2.6914	2.8693	0.1779	0.00	24.00	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	85.5	170.3	260.0	<5	N
17-Oct-14	Sunny	97	2.8002	3.1761	0.3759	0.00	24.00	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	**180.8**	170.3	260.0	<5	N
23-Oct-14	Sunny	101	2.7829	3.0210	0.2381	0.00	24.00	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	114.5	170.3	260.0	<5	N
29-Oct-14	Fine	100	2.7114	3.0030	0.2916	0.00	24.00	24.00	51	51	51.0	1.44	1.44	1.44	2079.59	140.2	170.3	260.0	<5	N
															Average	123.3				
															Min	85.5				
															Max	180.8				

Note: No major dust source observed during the monitoring period


24-Hour TSP Monitoring Result at Station: SR77
TSP Concentration (µg/m3)
300.0
250.0
200.0
150.0
100.0
50.0
0.0
1-Oct-14
2-Oct-14
3-Oct-14
4-Oct-14
5-Oct-14
6-Oct-14
7-Oct-14
8-Oct-14
9-Oct-14
10-Oct-14
11-Oct-14
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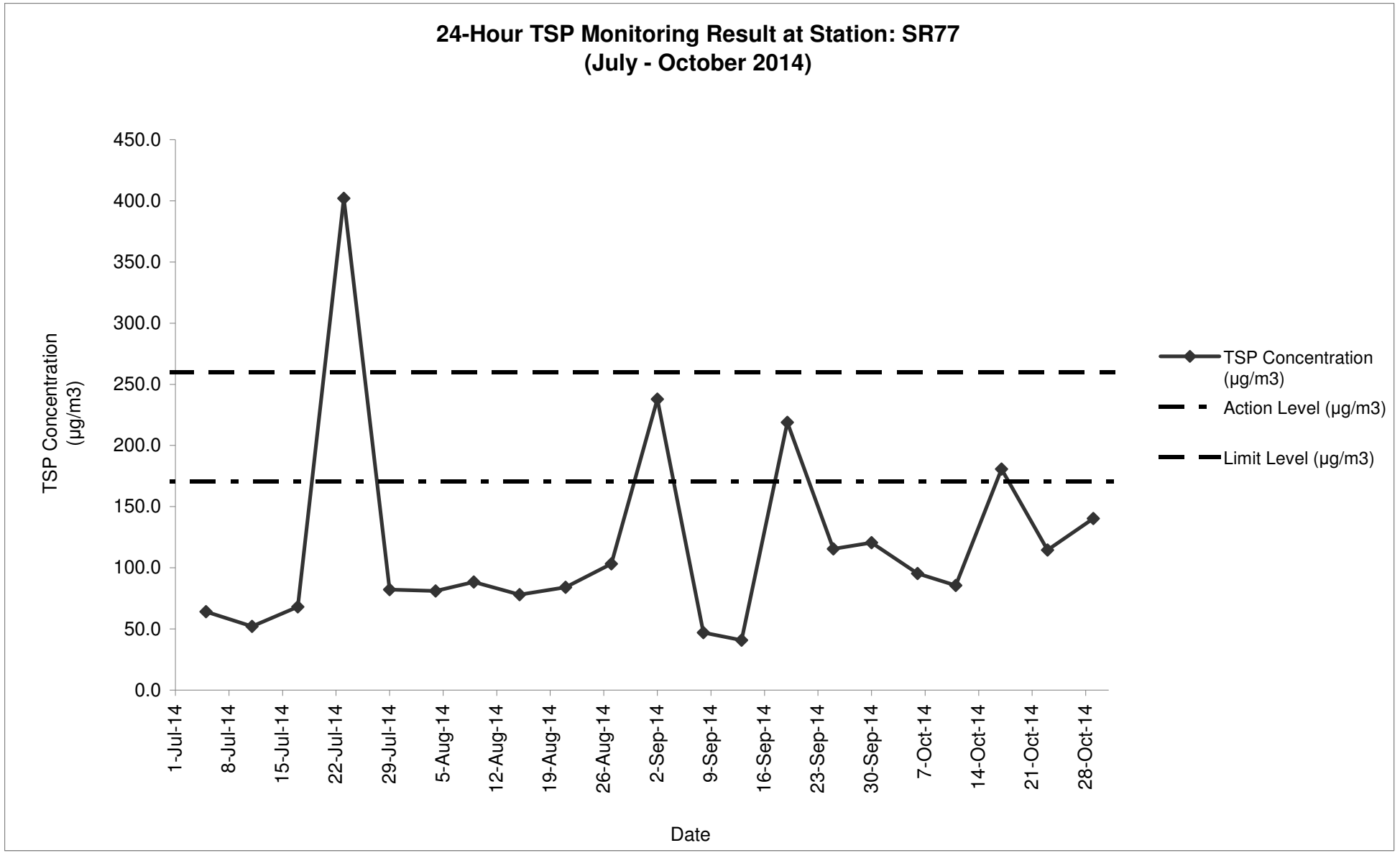
22-Oct-14
23-Oct-14
24-Oct-14
25-Oct-14
26-Oct-14
27-Oct-14
28-Oct-14
29-Oct-14
30-Oct-14
31-Oct-14
Date
TSP Concentration (µg/m3)
Action Level (µg/m3)
Limit Level (µg/m3)

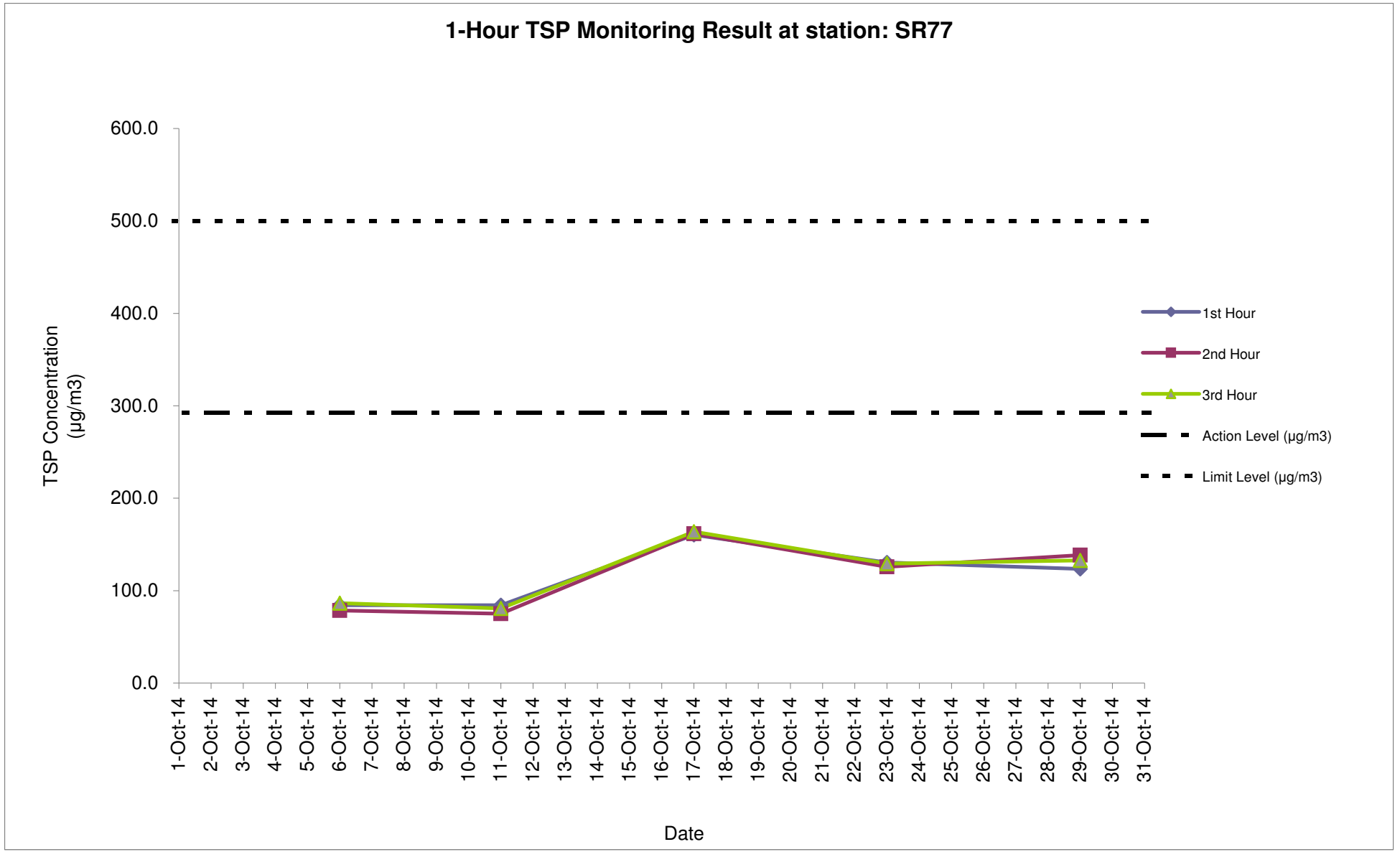

24-Hour TSP Monitoring Result at Station: SR77
(July - October 2014)
TSP Concentration (µg/m3)
450.0
400.0
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0
1-Jul-14
8-Jul-14
15-Jul-14
22-Jul-14
29-Jul-14
5-Aug-14
12-Aug-14
19-Aug-14
26-Aug-14
2-Sep-14
9-Sep-14
16-Sep-14
23-Sep-14
30-Sep-14
7-Oct-14
14-Oct-14
21-Oct-14
28-Oct-14
Date
TSP Concentration (µg/m3)
Action Level (µg/m3)
Limit Level (µg/m3)

Appendix F
Air Quality Monitoring Results and their Graphical Presentation

Detailed Calculation of 1-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 ($\mu g/m^3$)	Action Level ($\mu g/m3$)	Limit Level ($\mu g/m3$)	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						
6-Oct-14	Fine	92A	2.7226	2.7299	0.0073	0.00	1.00	1.00	51	51	51.0	1.44	1.44	1.44	86.65	84.2	292.7	500.0	<5	N
		92B	2.7033	2.7101	0.0068	0.00	1.00	1.00	51	51	51.0	1.44	1.44	1.44	86.65	78.5	292.7	500.0	<5	N
		92C	2.7113	2.7188	0.0075	0.00	1.00	1.00	51	51	51.0	1.44	1.44	1.44	86.65	86.6	292.7	500.0	<5	N
11-Oct-14	Sunny	95A	2.7011	2.7084	0.0073	0.00	1.00	1.00	51	51	51.0	1.44	1.44	1.44	86.65	84.2	292.7	500.0	<5	N
		95B	2.7108	2.7173	0.0065	0.00	1.00	1.00	51	51	51.0	1.44	1.44	1.44	86.65	75.0	292.7	500.0	<5	N
		95C	2.6889	2.6959	0.0070	0.00	1.00	1.00	51	51	51.0	1.44	1.44	1.44	86.65	80.8	292.7	500.0	<5	N
17-Oct-14	Sunny	98A	2.7892	2.8031	0.0139	0.00	1.00	1.00	51	51	51.0	1.44	1.44	1.44	86.65	160.4	292.7	500.0	<5	N
		98B	2.6898	2.7038	0.0140	0.00	1.00	1.00	51	51	51.0	1.44	1.44	1.44	86.65	161.6	292.7	500.0	<5	N
		98C	2.7049	2.7191	0.0142	0.00	1.00	1.00	51	51	51.0	1.44	1.44	1.44	86.65	163.9	292.7	500.0	<5	N
23-Oct-14	Sunny	96A	2.7866	2.7979	0.0113	0.00	1.00	1.00	51	51	51.0	1.44	1.44	1.44	86.65	130.4	292.7	500.0	<5	N
		96B	2.6781	2.6890	0.0109	0.00	1.00	1.00	51	51	51.0	1.44	1.44	1.44	86.65	125.8	292.7	500.0	<5	N
		96C	2.7059	2.7171	0.0112	0.00	1.00	1.00	51	51	51.0	1.44	1.44	1.44	86.65	129.3	292.7	500.0	<5	N
29-Oct-14	Fine	99A	2.7034	2.7141	0.0107	0.00	1.00	1.00	51	51	51.0	1.44	1.44	1.44	86.65	123.5	292.7	500.0	<5	N
		99B	2.6861	2.6981	0.0120	0.00	1.00	1.00	51	51	51.0	1.44	1.44	1.44	86.65	138.5	292.7	500.0	<5	N
		99C	2.6904	2.7019	0.0115	0.00	1.00	1.00	51	51	51.0	1.44	1.44	1.44	86.65	132.7	292.7	500.0	<5	N
															Average	117.0				
															Min	75.0				
															Max	163.9				

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


1-Hour TSP Monitoring Result at station: SR77
TSP Concentration (µg/m3)
600.0
500.0
400.0
300.0
200.0
100.0
0.0
1-Oct-14
2-Oct-14
3-Oct-14
4-Oct-14
5-Oct-14
6-Oct-14
7-Oct-14
8-Oct-14
9-Oct-14
10-Oct-14
11-Oct-14
12-Oct-14
13-Oct-14
14-Oct-14
15-Oct-14
16-Oct-14
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18-Oct-14
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22-Oct-14
23-Oct-14
24-Oct-14
25-Oct-14
26-Oct-14
27-Oct-14
28-Oct-14
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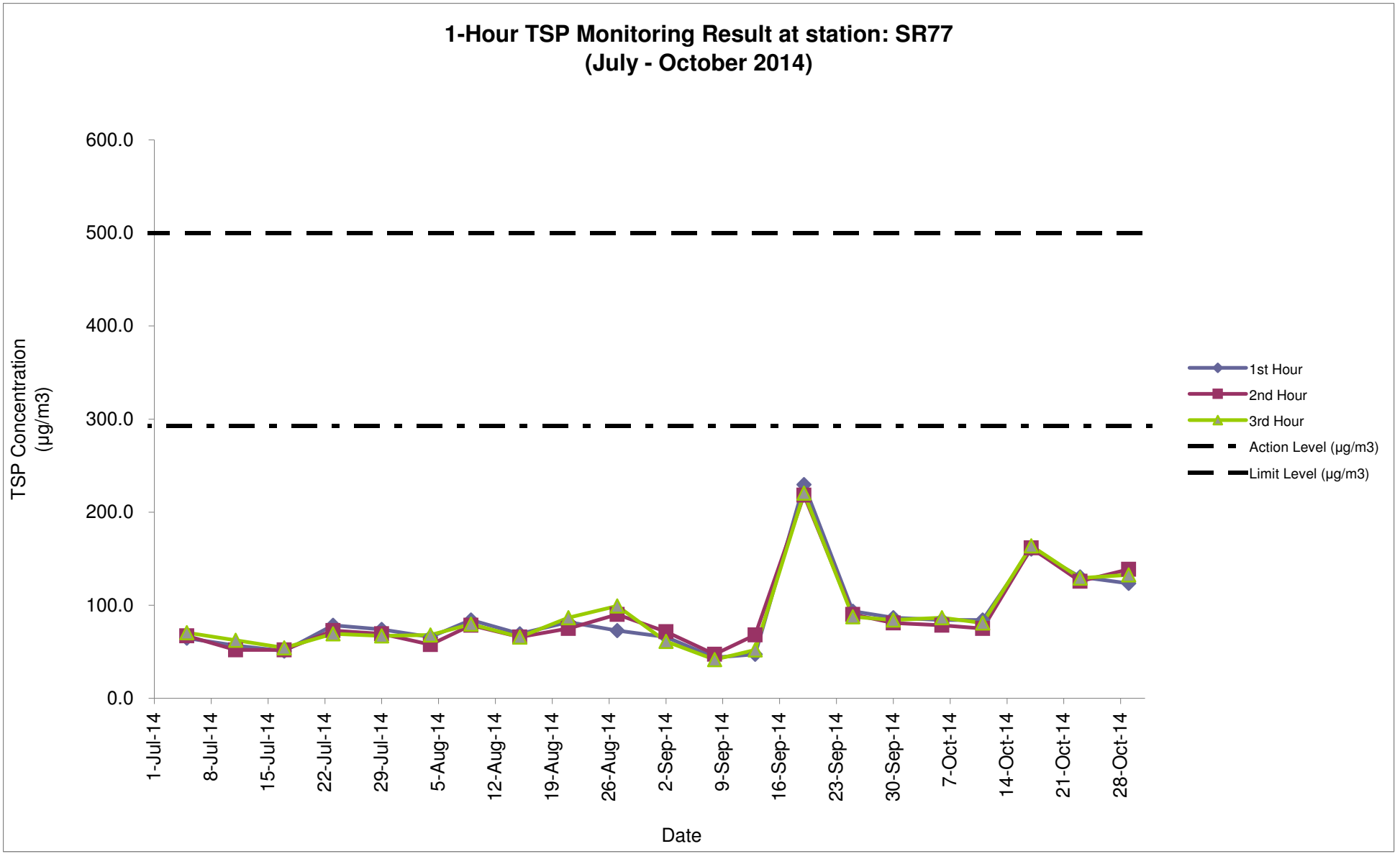
31-Oct-14
Date
1st Hour
2nd Hour
3rd Hour
Action Level (µg/m3)
Limit Level (µg/m3)


1-Hour TSP Monitoring Result at station: SR77
(July - October 2014)
TSP Concentration (µg/m3)
600.0
500.0
400.0
300.0
200.0
100.0
0.0
1-Jul-14
8-Jul-14
15-Jul-14
22-Jul-14
29-Jul-14
5-Aug-14
12-Aug-14
19-Aug-14
26-Aug-14
2-Sep-14
9-Sep-14
16-Sep-14
23-Sep-14
30-Sep-14
7-Oct-14
14-Oct-14
21-Oct-14
28-Oct-14
Date
1st Hour
2nd Hour
3rd Hour
Action Level (µg/m3)
Limit Level (µg/m3)

Appendix G
Summary of Event and Action Plan

Event and Action Plan for Air Quality

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Action level being exceeded by one sampling day	1. Identify source; 2. Inform IEC and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
Action level being exceeded by two or more consecutive sampling days	1. Identify source; 2. Inform IEC and ER; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency to daily; 5. Discuss with IEC and Contractor on remedial actions required; 6. If exceedance continues, arrange meeting with IEC and ER; 7. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Submit proposals for remedial actions to IEC within 3 working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Limit level being exceeded by one sampling day	1. Identify source; 2. Inform IEC, ER, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
Limit level being exceeded by two or more consecutive sampling days	1. Notify IEC, ER, Contractor, and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase frequency to daily; 5. Analyse Contractor's working procedures to determine possible mitigation to be; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discus amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by ER until the exceedance is abated.

Event and Action Plan for Noise Quality

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Action Level	1. Notify IEC and the Contractor. 2. Carry out investigation. 3. Report the results of investigation to IEC and the Contractor. 4. Discuss with the Contractor and formulate remedial measures. 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review with analysed results submitted by ET. 2. Review the proposed remedial measures by the Contractor and advise ER accordingly. 3. Supervise the implement of remedial measures.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented.	1. Submit noise mitigation proposals to IEC. 2. Implement noise mitigation proposals.
Limit Level	1. Notify IEC, ER, EPD and the Contractor. 2. Identify the source. 3. Repeat measurement to confirm findings. 4. Increase monitoring frequency. 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented. 6. Inform IEC, ER, and EPD the causes & actions taken for the exceedances. 7. Assess effectiveness of the Contractor's remedial actions and keep IEC, EPD and ER informed of the results. 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET Leader and the Contractor on the potential remedial actions. 2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise ER accordingly. 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 5. If exceedance continues, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedance is abated.	1. Take immediate action to avoid further exceedance. 2. Submit proposals for remedial actions to IEC within 3 working days of notification. 3. Implement the agreed proposals. 4. Resubmit proposals if problem still not under control. 5. Stop the relevant activity of works as determined by the ER until the exceedance is abated.

Event and Action Plan for Water Quality

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Action level being exceeded by one sampling day	1. Repeat in-situ measurement on next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, Contractor & ER; 4. Check monitoring data, all plant, equipment & contractor's working methods;	1. Check monitoring data submitted by ET & Contractor's working methods;	1. Confirm receipt of notification of failure in writing; Notify, Contractor	1. Inform the ER & confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Amend working methods if appropriate.
Action level being exceeded by two or more consecutive sampling days	1. Repeat measurement on next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, Contractor, ER & EPD; 4. Check monitoring data, all plant, equipment & Contractor's working methods; 5. Discuss mitigation measures with IEC, ER & Contractor; 6. Ensure mitigation measures are implemented; 7. Increase monitoring to daily until no exceedance of Action level.	1. Checking monitoring data submitted by ET & Contractor's working method; 2. Discuss with ET & Contractor on possible remedial actions; 3. Review the proposed mitigation measures submitted by Contractor & advise the ER accordingly; 4. Supervise the implementation of mitigation measures.	1. Discuss with IEC on the proposed mitigation measures; 2. Ensure mitigation measures properly implemented; 3. Assess the effectiveness of the implemented mitigation measures.	1. Inform the Engineer & confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant & equipment & consider changes of working methods; 4. Submit proposal of mitigation measures to ER within 3 working days of notification & discuss with ET, IEC & ER; 5. Implement the agreed mitigation measures.

Event	Action			
	ET Leader	**IEC**	**ER**	**Contractor**
Limit level being exceeded by one sampling day	1. Repeat measurement on next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor, ER & EPD; 4. Check monitoring data, all plant, equipment & contractor's working methods; 5. Discuss mitigation measures with IEC, Contractor & ER.	1. Checking monitoring data submitted by ET & Contractor's working method; 2. Discuss with ET & Contractor on the possible mitigation measures; 3. Review the proposed mitigation measures submitted by Contractor & advise the ER accordingly.	1. Confirm receipt of notification of failure in writing; 2. Discuss with IEC, ET & Contractor on the proposed mitigation measures; 3. Request Contractor to review the working methods.	1. Inform the ER & confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant & equipment & consider changes of working methods; 4. Submit proposal of mitigation measures to ER within 3 working days of notification & discuss with ET, IEC & ER.
Limit level being exceeded by two or more consecutive sampling days	1. Repeat measurement on the next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, Contractor, ER & EPD; 4. Check monitoring data, all plant, equipment & Contractor's working methods; 5. Discuss mitigation measures within IEC, Contractor & ER; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days.	1. Checking monitoring data submitted by ET & Contractor's working method; 2. Discuss with ET & Contractor on potential remedial actions; 3. Review Contractor's mitigation measures whenever necessary to assure their effectiveness & advise the ER accordingly; 4. Supervise the implementation of mitigation measures.	1. Discuss with IEC, ET & Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Ensure mitigation measures are properly implemented; 5. Consider & instruct, if necessary, the Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit level.	1. Take immediate action to avoid further exceedance; 2. Submit proposal of mitigation measures to ER within 3 working days of notification & discuss with ET, IEC & ER; 3. Implement the agreed mitigation measures; 4. Resubmit proposals of mitigation measures if problem still not under control; 5. As directed by the Engineer, to slow down or to stop all or part of the construction activities until no exceedance of Limit level.

Appendix H
Noise Monitoring Results and their Graphical Presentation

Appendix H
Noise Monitoring Results and their Graphical Presentation

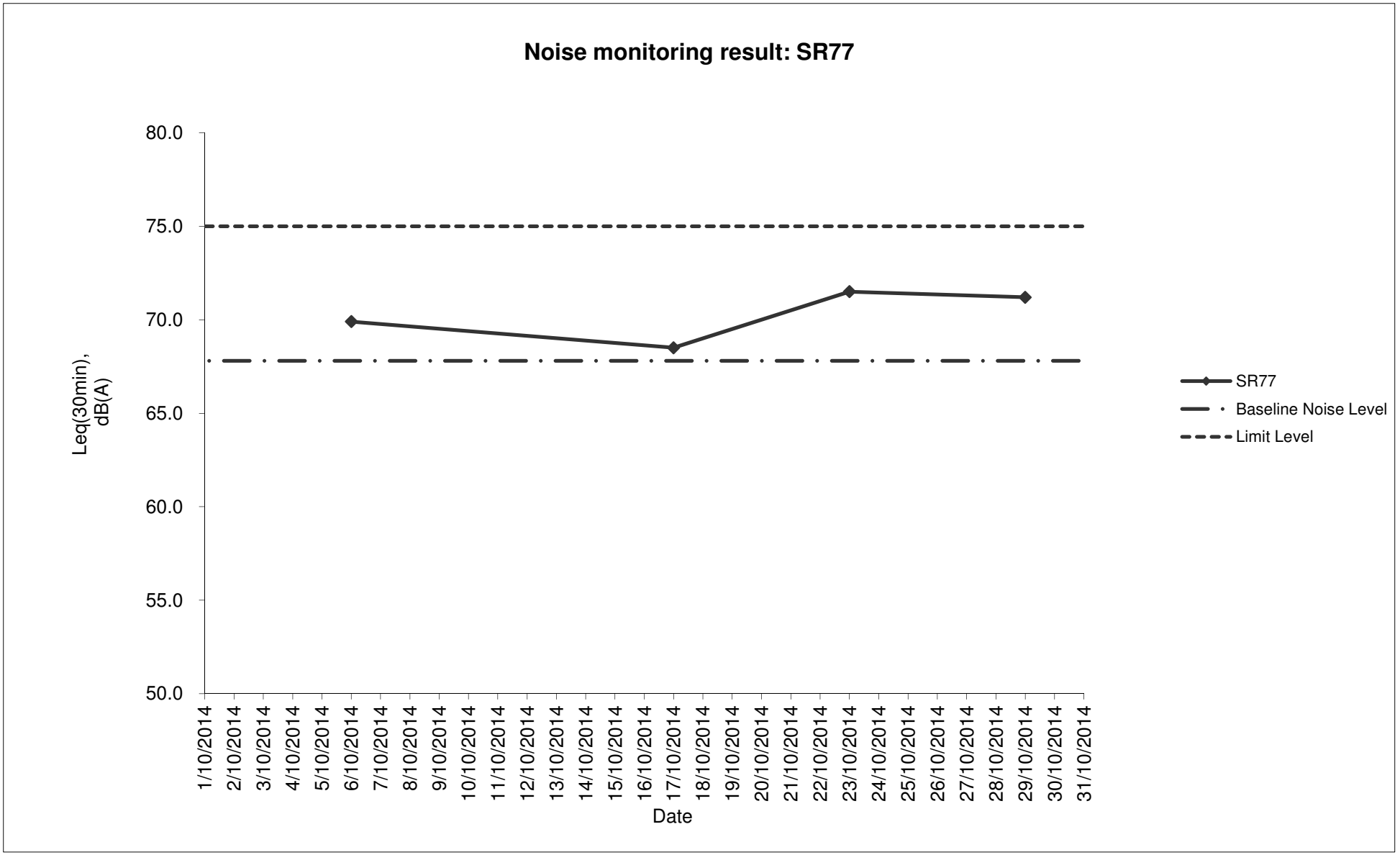
Noise Monitoring Result at SR77

Date	Weather Condition	Start Time	End Time	Measured Noise Level (dB(A))*			Baseline Corrected Level, dB(A)**	Baseline Noise Level (dB(A)), Leq(30min)	Limit Level dB(A)	Exceedance (Y / N)
				L10(30min)	L90(30min)	Leq(30min)				
2014/10/06	Fine	11:00	11:30	73.0	61.5	69.9	-	67.8	75.0	N
2014/10/17	Sunny	11:30	12:00	73.0	60.5	68.5	-	67.8	75.0	N
2014/10/23	Sunny	11:30	12:00	76.0	63.5	71.5	-	67.8	75.0	N
2014/10/29	Fine	10:30	11:00	74.0	65.0	71.2	-	67.8	75.0	N
					Average	70.3				
					Minimum	68.5				
					Maximum	71.5				

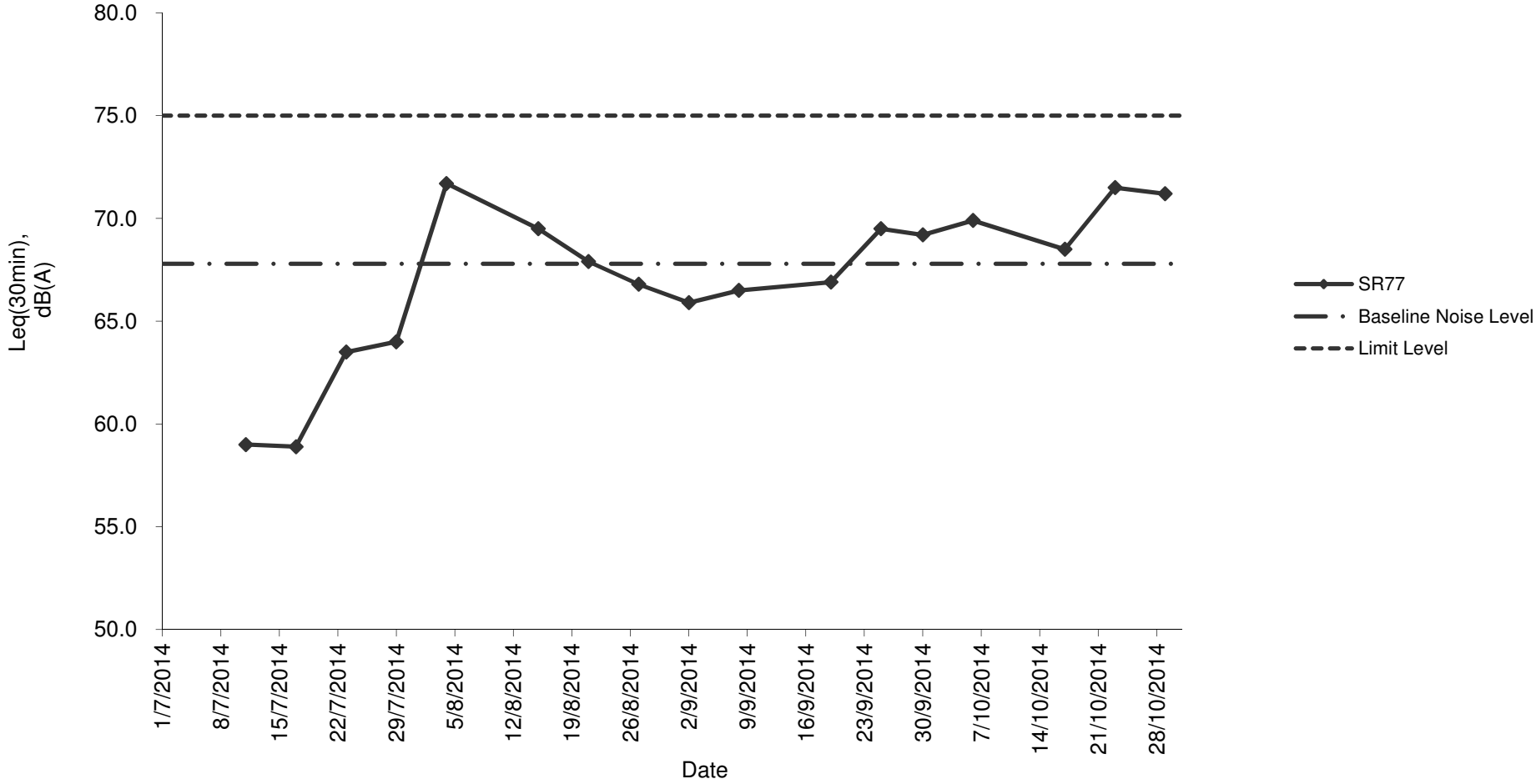
Remarks

* +3dB(A) Façade effect correction included

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


Noise monitoring result: SR77
80.0
75.0
70.0
65.0
60.0
55.0
50.0
Leq(30min), dB(A)
1/10/2014
2/10/2014
3/10/2014
4/10/2014
5/10/2014
6/10/2014
7/10/2014
8/10/2014
9/10/2014
10/10/2014
11/10/2014
12/10/2014
13/10/2014
14/10/2014
15/10/2014
16/10/2014
17/10/2014
18/10/2014
19/10/2014
20/10/2014
21/10/2014
22/10/2014
23/10/2014
24/10/2014
25/10/2014
26/10/2014
27/10/2014
28/10/2014
29/10/2014
30/10/2014
31/10/2014
Date
SR77
Baseline Noise Level
Limit Level

Noise monitoring result: SR77
(July - October2014)



Appendix K
Waste Flow Table

Monthly Summary Waste Flow Table

	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of C&D Wastes Generated Monthly				
Month	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 '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)
Jan-14	0.493	0.084	0.409	-	-	0.409	0.200	-	-	0.010	-	0.110
Feb-14	2.209	0.356	1.853	0.380	-	1.473	-	0.002	-	-	0.019	0.040
Mar-14	4.460	0.506	3.954	1.092	-	2.862	-	-	-	-	-	0.265
Apr-14	1.654	0.054	1.600	0.672	-	0.928	0.200	-	-	-	0.020	0.135
May-14	3.190	0.450	2.740	0.192	-	2.548	0.500	-	-	-	0.020	0.195
Jun-14	2.473	0.258	2.215	0.675	-	1.540	1.075	-	-	-	0.001	0.180
Sub-Total	14.479	1.708	12.771	3.011	-	9.760	1.975	0.002	-	0.010	0.060	0.925
Jul-14	3.829	0.233	3.596	0.502	-	3.094	0.747	-	-	0.005	-	0.165
Aug-14	6.153	0.649	5.504	0.732	-	4.772	1.200	-	-	0.005	0.009	0.220
Sep-14	2.780	0.176	2.604	1.176	-	1.428	0.750	-	-	0.005	-	0.085
Oct-14	6.494	0.090	6.404	2.160	-	4.244	1.501	-	-	0.005	-	0.085
Nov-14	-	-	-	-	-	-	-	-	-	-	-	-
Dec-14	-	-	-	-	-	-	-	-	-	-	-	-
Total	33.735	2.856	30.879	7.581	-	23.298	6.173	0.002	-	0.030	0.069	1.480

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 L
Implementation Schedule of Environmental Mitigation Measures (EMIS)

Impact	Environmental Protection Measures	Timing	Responsibility	Implementation Status [#]
Air Quality				
Air Quality during Construction	• Restricting heights from which materials are dropped, as far as practicable to minimize the fugitive dust arising from unloading/loading. • All stockpiles of excavated materials or spoil of more than 50m^3 shall be enclosed, covered or dampened during dry or windy conditions. • Effective water sprays shall be used to control potential dust emission sources such as unpaved haul roads and active construction areas. • All spraying of materials and surfaces shall avoid excessive water usage. • 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	✓ Obs Rem ✓ ✓ ✓ ✓ Rem
Air Quality during Operation	Not required	N/A	N/A	N/A
Noise				
Noise during Construction	• Use of silenced plant or plant equipped with mufflers or dampers in substitute of ordinary plant. • Reduce the number of equipment and their percentage on-time.	During Construction	Contractor	✓ ✓
Noise during Operation	Not required	N/A	N/A	N/A
Water Quality				
Water Quality during Construction	<u>Road Widening Works, Earthworks and Culvert Extension Works</u> • Wastewater generated from any concrete batching washdown of equipment or similar activities should be discharged into foul sewers, after the removal of settable solids, and pH adjustment as necessary. All sewage discharges from the study area should meet the TM standards and approval from EPD through the licensing process is required.	During Construction	Contractor	✓

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

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

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

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

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

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

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

Impact	Environmental Protection Measures	Timing	Responsibility	Implementation Status #
	• all temporary site access roads shall be sprayed with water to suppress dust as necessary; • all dusty materials should be sprayed with water immediately prior to any handling; and • all debris should be covered entirely by impervious sheeting or stored in a sheltered debris collection area. <u>Surface Run-off</u> In general, mitigation measures shall be in accordance with ProPECC PN1/94 on 'Construction Site Drainage'. Key measures include: • Bund and cover stockpiles to avoid run-off; • 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	✓ ✓ ✓ ✓ ✓ N/A ✓
Ecology during Operation	• To conduct compensatory ecological planting as specified in the latest landscape plans approved by EPD (Clause 2.6 of the Environmental Permit refers).	During Construction and operation	Contractor (during construction) / LCSD* (during operation) (Note: * The division of vegetation planting and maintenance responsibilities shall follow the guidelines stipulated in ETWB TCW No. 2/2004.)	N/A
Landscape and Visual				
Landscape and Visual during Construction	<u>Preservation of Existing Vegetation</u> • 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	✓ ✓

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

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

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

Appendix M
Investigation Report for Exceedances

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

Investigation Report of Environmental Quality Exceedance(s)
Ref. No.: A141017_24TSP

Date	17 October 2014
Time	--
Monitoring Location	SR77
Parameter	24-Hr Total Suspended Particulate
Action / Limit Levels	Action Level: 170.3μg/m^3 Limit Level: 260μg/m^3
Measured Level	180.8μg/m^3 (Action level being exceeded)
Possible reason for the exceedance	Construction Works of other Contracts Multiple construction works being undertaken by other Contractors have been observed within proximity of the High Volume Sampler (HVS) of the air quality monitoring station at SR77 (refer to the attached photos). Identified construction works including an excavation site (refer to the attached Photo 1); construction of a brick wall with a stockpile of sands (refer to the attached Photo 2) and excavation works under another contractor for Highway's Department (refer to attached Photo 3). These construction sites are located within a distance of about 20m from the SR77. Handling of spoils or concreting has also been observed as evidenced by an empty cement bag near the HVS (refer to the attached Photo 4). These operations may generate dust issues and would contribute to a higher TSP Level during sampling. Also, dusty materials may be disturbed by traffics and release fugitive dust during the sunny weather and such emission would contribute to a higher TSP Level (refer to attached Photo 5). Therefore, these construction works are anticipated to cause the elevated TSP levels as have been measured by our HVS. Construction Works of Entrusted Portion On the other hand, the construction works carried out for the Entrusted Portion during the monitoring period included backfilling works being carried out at northern side of the site and erection of noise barrier NB71, which were at a much farther distance from the air quality monitoring station at SR77 (refer to the attached location plan showing the works activities of the entrusted portion). In addition, proper mitigation measures for these construction works, including the use of water spraying and covering of exposed slopes where applicable, have been implemented and being monitored by an

	EM&A programme. No significant dust emission has been observed. <u>Conclusion</u> As such, the exceedance was unlikely due to the construction works of the project.
Action taken / to be taken	As the exceedance was non-project related, no further investigation and specific remedial measure(s) would be recommended for the Entrusted Works. Nevertheless, the following mitigation measures had been implemented on-site for dust suppression: 1. Exposed slopes near the river were covered with impervious sheets; 2. Any open stockpile of construction materials were covered with impervious sheet; and 3. Sufficient watering was applied along the haul road.
Remarks	-

Photo 1: Excavation Site observed within proximity of SR77 (Red Circle) (Date: 17 October 2014)

Photo 2: Construction of a brick wall with a stockpile of sands observed near the monitoring station SR77 (Date: 17 October 2014)

Photo 3: Excavation works under another contractor for Highway's Department observed near the monitoring station SR77 (Date: 17 October 2014)

Photo 4: Empty cement bag observed near the monitoring station SR77 (Date: 17 October 2014)

Photo 5: Traffic may disturb dusty material and generate fugitive dust as observed near the monitoring station SR77 (Date: 17 October 2014)

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

Location of construction works site by other contractors

Trimming ground surface

Installation of sheet pile for DN1400 watermain pipe

Breaking down existing head wall on ID5

Laying watermain pipe in trench

Welding wailing for sheet pile

Backfilling of soil to reach the same level as Fanling Highway

Laying sheet pile on concrete block in cycle track

Construction of noise barrier NB71

SR77
Air Monitoring Satation

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

Cumulative Complaint Log

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
C131126	November 26, 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	1) 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. 2) 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. 3) The complaint is considered an invalid complaint under this Project.	Completed

Cumulative Log for Notifications of Summons

Log No.	Date/Location	Subject	Status	Total Received in this reporting month	Total no. Received since project commencement

Cumulative log for Successful Prosecutions

Log No.	Date/Location	Subject	Status	Total Received in this reporting month	Total no. Received since project commencement

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