

Highways Department

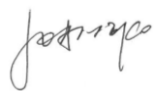

Agreement No. CE 20/2009 (EP)

Environmental Team for the Widening of Tolo Highway / Fanling Highway between Island House Interchange and Fanling

(Stage 1) Between Island House Interchange and Tai Hang - Investigation

Monthly EM&A Report for October 2013

[11/2013]

	Name	Signature
Prepared & Checked:	Joanne Ko	
Reviewed & Approved:	Y T Tang	

Version:	Rev. 0	Date: 15 November 2013
<p>Disclaimer</p> <p>This report is prepared for Highways Department and is given for its sole benefit in relation to and pursuant to Environmental Team for the Widening of Tolo Highway/Fanling Highway between Island House Interchange and Fanling (Stage 1) Between Island House Interchange and Tai Hang - Investigation and may not be disclosed to, quoted to or relied upon by any person other than Highways Department without our prior written consent. No person (other than Highways Department) into whose possession a copy of this report comes may rely on this report without our express written consent and Highways Department may not rely on it for any purpose other than as described above.</p>		

AECOM Asia Co. Ltd.
15/F, Grand Central Plaza, Tower 1, 138 Shatin Rural Committee Road, Shatin, NT, Hong Kong
Tel: (852) 3922 9000 Fax: (852) 2317 7609 www.aecom.com

Our ref AFK/TK/bw/T264022/22.01/L-0170
T 2828 5919
E terence.kong@mottmac.com.hk
Your ref

Hyder-Arup-Black & Veatch Joint Venture
c/o Hyder Consulting Limited
47/F Hopewell Centre
183 Queen's Road East
Wanchai
Hong Kong

12 November 2013
By Fax (2805 5028) and Post

Attn.: Mr. James Penny

Dear Sir,

**Widening of Tolo Highway between
Island House Interchange and Tai Hang
Environmental Permit (EP) No.: EP-324/2008/A
Condition 3.3 – Submission of Monthly EM&A Report for October 2013 (Stage 1)**

We refer to the captioned Monthly EM&A Report received on 11 and 12 November 2013 submitted by Environmental Team (ET) via email. Pursuant to EP Condition 3.3, I hereby verify the Monthly EM&A Report for October 2013 (Stage 1) for the Project.

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED



Terence Kong
Independent Environmental Checker

c.c. HyD – Mr. Raymond T W Kong / Mr. Dennis Wong / Mr. William Chiang (Fax: 2761 4864)
ETL, AECOM – Mr. Y T Tang (Fax: 2317 7609)

Highways Department

Agreement No. CE 20/2009 (EP)

**Environmental Team for the Widening of
Tolo Highway / Fanling Highway between
Island House Interchange and Fanling**

**(Stage 1)
Between Island House Interchange and
Tai Hang - Investigation**

**Monthly EM&A Report
for October 2013**

[11/2013]

	Name	Signature
Prepared & Checked:	Joanne Ko	
Reviewed & Approved:	Y T Tang	

Version:	Rev. 0	Date: 14 November 2013
<p>Disclaimer</p> <p>This report is prepared for Highways Department and is given for its sole benefit in relation to and pursuant to Environmental Team for the Widening of Tolo Highway/Fanling Highway between Island House Interchange and Fanling (Stage 1) Between Island House Interchange and Tai Hang - Investigation and may not be disclosed to, quoted to or relied upon by any person other than Highways Department without our prior written consent. No person (other than Highways Department) into whose possession a copy of this report comes may rely on this report without our express written consent and Highways Department may not rely on it for any purpose other than as described above.</p>		

<p>AECOM Asia Co. Ltd. 15/F, Grand Central Plaza, Tower 1, 138 Shatin Rural Committee Road, Shatin, NT, Hong Kong Tel: (852) 3922 9000 Fax: (852) 2317 7609 www.aecom.com</p>

Our ref AFK/TK/bw/T264022/22.01/L-0170
T 2828 5919
E terence.kong@mottmac.com.hk
Your ref

Hyder-Arup-Black & Veatch Joint Venture
c/o Hyder Consulting Limited
47/F Hopewell Centre
183 Queen's Road East
Wanchai
Hong Kong

12 November 2013
By Fax (2805 5028) and Post

Attn.: Mr. James Penny

Dear Sir,

**Widening of Tolo Highway between
Island House Interchange and Tai Hang
Environmental Permit (EP) No.: EP-324/2008/A
Condition 3.3 – Submission of Monthly EM&A Report for October 2013 (Stage 1)**

We refer to the captioned Monthly EM&A Report received on 11 and 12 November 2013 submitted by Environmental Team (ET) via email. Pursuant to EP Condition 3.3, I hereby verify the Monthly EM&A Report for October 2013 (Stage 1) for the Project.

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED



Terence Kong
Independent Environmental Checker

c.c. HyD – Mr. Raymond T W Kong / Mr. Dennis Wong / Mr. William Chiang (Fax: 2761 4864)
ETL, AECOM – Mr. Y T Tang (Fax: 2317 7609)

TABLE OF CONTENTS

	Page
EXECUTIVE SUMMARY	1
Reporting Change	2
1 INTRODUCTION	2
1.1 Background	2
1.2 Scope of Report	3
1.3 Project Organization	4
1.4 Summary of Construction Works	5
1.5 Summary of EM&A Programme Requirements	5
2 AIR QUALITY MONITORING	6
2.1 Monitoring Requirements	6
2.2 Monitoring Equipment	6
2.3 Monitoring Locations	6
2.4 Monitoring Parameters, Frequency and Duration	7
2.5 Monitoring Methodology	7
2.6 Monitoring Schedule for the Reporting Month	8
2.7 Monitoring Results	9
2.8 Results and Observations	9
3 NOISE MONITORING	10
3.1 Monitoring Requirements	10
3.2 Monitoring Equipment	10
3.3 Monitoring Locations	10
3.4 Monitoring Parameters, Frequency and Duration	11
3.5 Monitoring Methodology	11
3.6 Monitoring Schedule for the Reporting Month	12
3.7 Monitoring Results	12
4 ENVIRONMENTAL SITE INSPECTION AND AUDIT	13
4.1 Site Inspection	13
4.2 Advice on the Solid and Liquid Waste Management Status	14
4.3 Environmental Licenses and Permits	14
4.4 Implementation Status of Environmental Mitigation Measures	19
4.5 Summary of Exceedances of the Environmental Quality Performance Limit	19
4.6 Summary of Complaints, Notification of Summons and Successful Prosecutions	19
5 FUTURE KEY ISSUES	21
5.1 Construction Programme for the Coming Months	21
5.2 Key Issues for the Coming Month	21
5.3 Monitoring Schedule for the Coming Month	21
6 CONCLUSIONS AND RECOMMENDATIONS	22
6.1 Conclusions	22
6.2 Recommendations	22

List of Tables

Table 1.1	Contact Information of Key Personnel
Table 2.1	Air Quality Monitoring Equipment
Table 2.2	Locations of Impact Air Quality Monitoring Stations
Table 2.3	Air Quality Monitoring Parameters, Frequency and Duration
Table 2.4	Summary of 1-hour TSP Monitoring Results in the Reporting Period
Table 2.5	Summary of 24-hour TSP Monitoring Results in the Reporting Period
Table 3.1	Noise Monitoring Equipment
Table 3.2	Locations of Impact Noise Monitoring Stations
Table 3.3	Noise Monitoring Parameters, Frequency and Duration
Table 3.4	Summary of Construction Noise Monitoring Results in the Reporting Period
Table 4.1	Summary of Environmental Licensing and Permit Status

Figures

Figure 1.1	General Project Layout Plan
Figure 2.1	EM&A Monitoring Locations
Figure 4.1	Environmental Complaint Handling Procedures

List of Appendices

Appendix A	Project Organization Structure
Appendix B	Construction Programmes
Appendix C	Implementation Schedule of Environmental Mitigation Measures (EMIS)
Appendix D	Summary of Action and Limit Levels
Appendix E	Calibration Certificates of Monitoring Equipments
Appendix F	EM&A Monitoring Schedules
Appendix G	Impact Air Quality Monitoring Results and their Graphical Presentation
Appendix H	Meteorological Data for the Reporting Month
Appendix I	Impact Daytime Construction Noise Monitoring Results and their Graphical Presentation
Appendix J	Event Action Plan
Appendix K	Site Inspection Summaries
Appendix L	Statistics on Complaints, Notifications of Summons and Successful Prosecutions

EXECUTIVE SUMMARY

The proposed widening of Tolo Highway and Fanling Highway between Island House Interchange and Fanling (the Project) is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO) and is governed by an Environmental Permit (EP-324/2008)(EP) issued by EPD on 23 December 2008. Subsequently, EPD issued a Variation of Environmental Permit (EP-324/2008/A) (VEP) on 31 January 2012.

The Project aims 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 construction works for this Project will be delivered in 2 stages i.e. Stage 1 (between Island House Interchange and Tai Hang) and Stage 2 (between Tai Hang and Wo Hop Shek Interchange). The construction works of Stage 1 were commenced on 23 November 2009 and will tentatively be completed in December 2013; while construction programme of Stage 2 is currently under review. This report focuses on Stage 1 of the Project only.

The construction phase of Stage 1 under the EP and the Environmental Monitoring and Audit (EM&A) programme for Stage 1 of the Project commenced on 23 November 2009. The impact environmental monitoring and audit includes air quality and noise monitoring.

This report documents the findings of EM&A works conducted in the period between 1 and 31 October 2013. As informed by the Contract 1 Contractor (China State Construction Engineering (Hong Kong) Ltd.), construction activities in the reporting period were:-

- Temporary shoring, sheetpiling and excavation
- At-grade road construction
- Widening and demolition of central dividers
- Retaining wall construction
- Noise barrier footing construction
- Noise barrier panels installation
- Asphalt laying
- Installation of drainage pipes
- Modification of edge coping

The construction works carried out by the Contract 2 Contractor (Gammon Construction Ltd.) in the reporting period were:-

- Condition survey of existing structures
- Initial and record survey
- Survey Setting out works for slopes and structures
- Setting up the temporary traffic arrangement
- Excavation of trial trenches to locate existing utilities
- Construction of haul road
- Construction of concrete profile barrier and beam barrier
- Construction of Pilecap / Spread footing of Noise Barrier / Semi Noise Enclosure
- Slope works, including installation of soil nails
- NTHA mitigation works
- Construction of retaining wall and associated mini-piles
- Noise barrier construction
- Modification of existing bridge structures
- Entrusted watermains works
- Sewer Installation
- Road and drainage works
- Landscaping works

Reporting Change

There was no reporting change required in the reporting month.

Breaches of Action and Limit Levels for Air Quality

No exceedance of Action and Limit Level was recorded for 1-hour and 24-hour TSP monitoring in the reporting month.

Breaches of Action and Limit Levels for Noise

No Action Level exceedance of construction noise was recorded in the reporting month, since no noise complaints related to 0700 – 1900 hours on normal weekdays was received and followed by Environmental Team in the reporting month.

No Limit Level exceedance of construction noise was recorded in the reporting month.

Complaint, Notification of Summons and Successful Prosecution

There was one (1) complaint (included one (1) air related complaint) received on 7 October 2013 and followed up by Environmental Team in October 2013. Summary of investigation is described in Section 4.6.3.

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

Future Key Issues

Key issues to be considered in the coming month included:-

- Properly store and label oils and chemicals on site;
- Chemical, chemical waste and waste management;
- Collection of construction waste should be carried out regularly;
- Site runoff should be properly collected and treated prior to discharge;
- Properly maintain all drainage facilities and wheel washing facilities on site;
- Exposed slopes should be covered up properly if no temporary work will be conducted;
- Suppress dust generated from excavation, breaking and drilling activities, haul road traffic and grout mixing process;
- Quieter powered mechanical equipment should be used;
- Closely check and replace the sound insulation materials wrapped at the concrete breaker tip regularly;
- Better scheduling of construction works to minimize noise nuisance; and
- Tree protective measures for all retained trees should be well maintained.

1 INTRODUCTION

1.1 Background

1.1.1. 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 9, which links other major strategic routes to Shenzhen. At present, this section of Route 9 is dual 3-lane carriageway. However, at several major interchanges along this section of Route 9, the highway is only dual-2 lane. Severe congestion is a frequent occurrence during peak periods, particularly in the Kowloon bound direction.

1.1.2. The objective of the Project “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.

- 1.1.3. The Project is a designated project and is governed by an Environmental Permit (EP-324/2008)(EP) issued by EPD on 23 December 2008. Subsequently, EPD issued a Variation of Environmental Permit (EP-324/2008/A) (VEP) on 31 January 2012.
- 1.1.4. The scope of the Project comprises mainly:-
- (i) Widening of a 5.7 km section of Tolo Highway and 3.0 km section of Fanling Highway between Island House Interchange and Wo Hop Shek Interchange from the existing dual 3-lane to dual 4-lane, including construction of new vehicular bridges;
 - (ii) Widening of interchange sections at Island House Interchange, Tai Po North Interchange, and Lam Kam Road Interchange from dual 2-lane to dual 3-lane, except Sha Tin bound carriageway at Tai Po North Interchange, which is widened from 3-lane to 4-lane, including realignment of various slip roads;
 - (iii) Modification and reconstruction of highways, vehicular bridges, underpasses and footbridges.
- 1.1.5. The construction works for this Project will be delivered in 2 stages i.e. Stage 1 (between Island House Interchange and Tai Hang) and Stage 2 (between Tai Hang and Wo Hop Shek Interchange). The construction works of Stage 1 commenced on 23 November 2009 and will tentatively be completed in December 2013; while construction programme of Stage 2 is currently under review. This report focuses on Stage 1 of the Project only.
- 1.1.6. The construction works for Stage 1 of the Project will be implemented under 2 works contracts (Contract 1 and Contract 2). Contract 1 covers the section of Tolo Highway between Island House Interchange and Ma Wo, Contract 2 covers the section of Tolo Highway between Ma Wo and Tai Hang.
- 1.1.7. Hyder-Arup-Black and Veatch Joint Venture (HABVJV) are appointed by Highways Department (HyD) as the consultants for the design and construction assignment for the Tolo project under Agreement No. CE 58/2000 Supplementary Agreement No. 3 (SA3) (i.e. the Engineer for the Contracts).
- 1.1.8. China State Construction Engineering (Hong Kong) Ltd. (CSHK) was commissioned as the Contractor of Contract 1 of Stage 1 of the Project, while Gammon Construction Limited (GCL) was commissioned as the Contractor of Contract 2 of Stage 1 of the Project.
- 1.1.9. AECOM Asia Co. Ltd. was employed by HyD as the Environmental Team (ET) to undertake the Environmental Monitoring and Audit (EM&A) works for Stage 1 of the Project and Mott MacDonald Hong Kong Ltd. acts as the Independent Environmental Checker (IEC) for the Contracts.
- 1.1.10. The construction phase of Stage 1 under the EP commenced on 23 November 2009.
- 1.1.11. According to the updated EM&A Manual of Stage 1 of the Project, there is a need of an EM&A programme including air quality and noise monitoring. The EM&A programme for Stage 1 of the Project commenced on 23 November 2009.

1.2 Scope of Report

- 1.2.1 This is the forty-eighth monthly EM&A Report under the Agreement No. CE 20/2009 (EP) - Widening of Tolo Highway between Island House Interchange and Tai Hang – Investigation. This report presents a summary of the environmental monitoring and audit works, list of activities and mitigation measures proposed by the ET for Stage 1 of the Project in October 2013.

1.3 Project Organization

1.3.1 The project organization structure is shown in Appendix A. The key personnel contact names and numbers are summarized in Table 1.1.

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone	Fax
ER of Stage 1, Contract 1 (Hyder-Arup-Black & Veatch Joint Venture)	Chief Resident Engineer /TOL01	James Tsang	9038 8797	26674000
ER of Stage 1, Contract 2 (Hyder-Arup-Black & Veatch Joint Venture)	Chief Resident Engineer /TOL02	Paul Appleton	9097 5833	2653 2348
IEC of Stage 1 (Mott MacDonald Hong Kong Limited)	Independent Environmental Checker	Terence Kong	2828 5919	2827 1823
Contractor of Stage 1, Contract 1 (China State Construction Engineering (Hong Kong) Limited)	Site Agent	Eddie Tang	9863 7686	2667 5666
	Environmental Officer	Michael Tsang	9277 4956	2667 5666
		M L Lam	9489 4641	2667 5666
Contractor of Stage 1, Contract 2 (Gammon Construction Limited)	Site Agent	John Chan	3126 1202	2559 3410
	Environmental Officer	Thomson Chang	9213 6569	2559 3410
		Crispin Ao	9223 8773	2559 3410
		Ao Ho Fo	9220 5848	2559 3410
ET of Stage 1 (AECOM Asia Company Limited)	ET Leader	Y T Tang	3922 9393	3922 9797

1.4 Summary of Construction Works

- 1.4.1 The construction phase of Stage 1 under the EP commenced on 23 November 2009.
- 1.4.2 Details of the construction works carried out by the Contract 1 Contractor (China State Construction Engineering (Hong Kong) Ltd.) in this reporting period are listed below:-
- Temporary shoring, sheetpiling and excavation
 - At-grade road construction
 - Widening and demolition of central dividers
 - Retaining wall construction
 - Noise barrier footing construction
 - Noise barrier panels installation
 - Asphalt laying
 - Installation of drainage pipes
 - Modification of edge coping
- 1.4.3 Details of the construction works carried out by the Contract 2 Contractor (Gammon Construction Ltd.) in this reporting period are listed below:-
- Condition survey of existing structures
 - Initial and record survey
 - Survey Setting out works for slopes and structures
 - Setting up the temporary traffic arrangement
 - Excavation of trial trenches to locate existing utilities
 - Construction of haul road
 - Construction of concrete profile barrier and beam barrier
 - Construction of Pilecap / Spread footing of Noise Barrier / Semi Noise Enclosure
 - Slope works, including installation of soil nails
 - NTHA mitigation works
 - Construction of retaining wall and associated mini-piles
 - Noise barrier construction
 - Modification of existing bridge structures
 - Entrusted watermains works
 - Sewer Installation
 - Road and drainage works
 - Landscaping works
- 1.4.4 The Construction Programmes are shown in Appendix B.
- 1.4.5 The general layout plan of the Project site showing the contract areas is shown in Figure 1.1.
- 1.4.6 The environmental mitigation measures implementation schedule are presented in Appendix C.

1.5 Summary of EM&A Programme Requirements

- 1.5.1 The EM&A programme required environmental monitoring for air quality, noise and environmental site inspections for air quality, water quality, noise, waste management, ecology, and landscape and visual impact. The EM&A requirements for each parameter described in the following sections include:-
- All monitoring parameters;
 - Monitoring schedules for the reporting month and forthcoming months;
 - Action and Limit levels for all environmental parameters;
 - Event / Action Plan;
 - Environmental mitigation measures, as recommended in the Project EIA study final report; and
 - Environmental requirement in contract documents.

2 AIR QUALITY MONITORING

2.1 Monitoring Requirements

2.1.1 In accordance with the updated EM&A Manual, baseline 1-hour and 24-hour TSP levels at 4 air quality monitoring stations were established. Impact 1-hour TSP monitoring was conducted for at least three times every 6 days, while impact 24-hour TSP monitoring was carried out for at least once every 6 days. The Action and Limit level of the air quality monitoring is provided in Appendix D.

2.2 Monitoring Equipment

2.2.1 24-hour TSP air quality monitoring was performed using High Volume Sampler (HVS) located at each designated monitoring station. The HVS meets all the requirements of the updated EM&A Manual. Portable direct reading dust meters were used to carry out the 1-hour TSP monitoring. Brand and model of the equipment is given in Table 2.1.

Table 2.1 Air Quality Monitoring Equipment

Equipment	Brand and Model
Portable direct reading dust meter (1-hour TSP)	Sibata Digital Dust Monitor (Model No. LD-3 and LD-3B)
High Volume Sampler (24-hour TSP)	Tisch Total Suspended Particulate Mass Flow Controlled High Volume Air Sampler (Model No. TE-5170 & GMW-2310)

2.3 Monitoring Locations

2.3.1 Monitoring locations AM2 and AM3 were set up at the proposed locations in accordance with updated EM&A Manual. However, for monitoring locations: Dynasty View and Tai Po Garden, proposed in the updated EM&A Manual, as approval could not be obtained from the owner's corporation of the premises, baseline and impact air quality monitoring was conducted at 13 Ha Wun Yiu (AM1) and Tai Kwong Secondary School (AM4) respectively. The monitoring station at 13 Ha Wun Yiu (AM1) was relocated to Fan Sin Temple, 3 Sheung Wun Yiu (AM1A) in February 2010. Also, the monitoring station at Tai Kwong Secondary School (AM4) was relocated to 168 Shek Kwu Lung Village (AM4A) in September 2011.

2.3.2 Figure 2.1 shows the locations of monitoring stations. Table 2.2 describes the details of the monitoring stations.

Table 2.2 Locations of Impact Air Quality Monitoring Stations

Monitoring Station	Location	Description
AM1A	3 Sheung Wun Yiu	Ground floor at the boundary outside Fan Sin Temple
AM2	12 Shan Tong New Village	Ground floor outside the premises
AM3	Riverain Bayside	Roof of the switch room
AM4A	168 Shek Kwu Lung Village	Roof of the switch room

2.4 Monitoring Parameters, Frequency and Duration

2.4.1 Table 2.3 summarizes the monitoring parameters, frequency and duration of impact TSP monitoring.

Table 2.3 Air Quality Monitoring Parameters, Frequency and Duration

Parameter	Frequency and Duration
1-hour TSP	Three times every 6 days while the highest dust impact was expected
24-hour TSP	Once every 6 days

2.5 Monitoring Methodology

2.5.1 24-hour TSP Monitoring

- (a) The HVS was installed in the vicinity of the air sensitive receivers. The following criteria were considered in the installation of the HVS.
- (i) A horizontal platform with appropriate support to secure the sampler against gusty wind was provided.
 - (ii) The distance between the HVS and any obstacles, such as buildings, was at least twice the height that the obstacle protrudes above the HVS.
 - (iii) A minimum of 2 meters separation from walls, parapets and penthouse for rooftop sampler.
 - (iv) A minimum of 2 meters separation from any supporting structure, measured horizontally.
 - (v) No furnace or incinerator flues nearby.
 - (vi) Airflow around the sampler was unrestricted.
 - (vii) Permission was obtained to set up the samplers and access to the monitoring stations.
 - (viii) A secured supply of electricity was obtained to operate the samplers.
 - (ix) The sampler was located more than 20 meters from any dripline.
 - (x) Any wire fence and gate, required to protect the sampler, did not obstruct the monitoring process.
 - (xi) Flow control accuracy was kept within $\pm 2.5\%$ deviation over 24-hour sampling period.
- (b) Preparation of Filter Papers
- (i) Glass fibre filters, G810 were labelled and sufficient filters that were clean and without pinholes were selected.
 - (ii) All filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than ± 3 °C; the relative humidity (RH) was < 50% and not variable by more than $\pm 5\%$. A convenient working RH was 40%.
 - (iii) All filter papers were prepared and analysed by ALS Technichem (HK) Pty Ltd., which is a HOKLAS accredited laboratory and has comprehensive quality assurance and quality control programmes.
- (c) Field Monitoring
- (i) The power supply was checked to ensure the HVS works properly.
 - (ii) The filter holder and the area surrounding the filter were cleaned.
 - (iii) The filter holder was removed by loosening the four bolts and a new filter, with stamped number upward, on a supporting screen was aligned carefully.
 - (iv) The filter was properly aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter.
 - (v) The swing bolts were fastened to hold the filter holder down to the frame. The pressure applied was sufficient to avoid air leakage at the edges.
 - (vi) Then the shelter lid was closed and was secured with the aluminum strip.

- (vii) The HVS was warmed-up for about 5 minutes to establish run-temperature conditions.
- (viii) A new flow rate record sheet was set into the flow recorder.
- (ix) On site temperature and atmospheric pressure readings were taken and the flow rate of the HVS was checked and adjusted at around 1.1 m³/min, and complied with the range specified in the updated EM&A Manual (i.e. 0.6-1.7 m³/min).
- (x) The programmable digital timer was set for a sampling period of 24 hrs, and the starting time, weather condition and the filter number were recorded.
- (xi) The initial elapsed time was recorded.
- (xii) At the end of sampling, on site temperature and atmospheric pressure readings were taken and the final flow rate of the HVS was checked and recorded.
- (xiii) The final elapsed time was recorded.
- (xiv) The sampled filter was removed carefully and folded in half length so that only surfaces with collected particulate matter were in contact.
- (xv) It was then placed in a clean plastic envelope and sealed.
- (xvi) All monitoring information was recorded on a standard data sheet.
- (xvii) Filters were then sent to ALS Technichem (HK) Pty Ltd. for analysis.

(d) Maintenance and Calibration

- (i) 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.
- (ii) 5-point calibration of the HVS was conducted using TE-5025A Calibration Kit prior to the commencement of baseline monitoring. Bi-monthly 5-point calibration of the HVS will be carried out during impact monitoring.
- (iii) Calibration certificate of the HVSs are provided in Appendix E.

2.5.2 1-hour TSP Monitoring

(a) Measuring Procedures

The measuring procedures of the 1-hour dust meter were in accordance with the Manufacturer's Instruction Manual as follows:-

- (i) Turn the power on.
- (ii) Close the air collecting opening cover.
- (iii) Push the "TIME SETTING" switch to [BG].
- (iv) Push "START/STOP" switch to perform background measurement for 6 seconds.
- (v) Turn the knob at SENSI ADJ position to insert the light scattering plate.
- (vi) Leave the equipment for 1 minute upon "SPAN CHECK" is indicated in the display.
- (vii) Push "START/STOP" switch to perform automatic sensitivity adjustment. This measurement takes 1 minute.
- (viii) Pull out the knob and return it to MEASURE position.
- (ix) Push the "TIME SETTING" switch the time set in the display to 3 hours.
- (x) Lower down the air collection opening cover.
- (xi) Push "START/STOP" switch to start measurement.

(b) Maintenance and Calibration

- (i) The 1-hour TSP meter was calibrated at 1-year intervals against a continuous particulate TEOM Monitor, Series 1400ab. Calibration certificates of the Laser Dust Monitors are provided in Appendix E.
- (ii) 1-hour validation checking of the TSP meter against HVS is carried out yearly at the air quality monitoring locations.

2.6 Monitoring Schedule for the Reporting Month

2.6.1 The schedule for environmental monitoring in October 2013 is provided in Appendix F.

2.7 Monitoring Results

2.7.1 The baseline condition of air quality in the Project site was reviewed in October and November 2009. A baseline monitoring of air quality, in terms of 1-hour Total Suspended Particulates (TSP) and 24-hour TSP, was carried out from 20 October 2009 to 4 November 2009 for 14 days. The baseline monitoring report was submitted by ETL and approved by the ER and the IEC on 9 November 2009. Action Levels for air quality were established and are summarized in Table 2.4, Table 2.5 and Appendix D.

2.8 Results and Observations

2.8.1 The monitoring results for 1-hour TSP and 24-hour TSP are summarized in Table 2.4 and 2.5 respectively. Detailed impact air quality monitoring results are presented in Appendix G.

Table 2.4 Summary of 1-hour TSP Monitoring Results in the Reporting Period

	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
AM1A	81.0	75.6 – 87.1	302.1	500
AM2	80.1	75.8 – 84.0	301.9	500
AM3	81.5	74.9 – 88.1	301.9	500
AM4A	81.9	75.0 – 87.9	302.3	500

Table 2.5 Summary of 24-hour TSP Monitoring Results in the Reporting Period

	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
AM1A	71.9	47.9 – 97.9	176.6	260
AM2	49.3	37.6 – 64.0	178.6	260
AM3	52.2	35.9 – 76.7	193.1	260
AM4A	66.3	47.0 – 86.7	198.5	260

2.8.2 The major dust source in the reporting period included construction activities from Stage 1 of the Project, as well as nearby traffic emissions.

2.8.3 All 1-hour and 24-hour TSP results were below the Action and Limit Level at all monitoring locations in the reporting month.

2.8.4 The event action plan is annexed in Appendix J.

2.8.5 Weather information including wind speed and wind direction is annexed in Appendix H. The information was obtained from Hong Kong Observatory Sha Tin and Tai Mei Tuk Automatic Weather Station. As some of the weather data in October 2013 from the Tai Mei Tuk Automatic Weather Station were missing, the weather data from Tai Po Automatic Weather Station in October 2013 are included in Appendix H for supplementary purpose.

3 NOISE MONITORING

3.1 Monitoring Requirements

3.1.1 In accordance with the EM&A Manual, impact noise monitoring was conducted for at least once per week during the construction phase of Stage 1 of the Project. The Action and Limit level of the noise monitoring is provided in Appendix D.

3.2 Monitoring Equipment

3.2.1 Noise monitoring was performed using sound level meter at each designated monitoring station. The sound level meters deployed comply with the International Electrotechnical Commission Publications (IEC) 651:1979 (Type 1) and 804:1985 (Type 1) specifications. Acoustic calibrator was deployed to check the sound level meters at a known sound pressure level. Brand and model of the equipment is given in Table 3.1.

Table 3.1 Noise Monitoring Equipment

Equipment	Brand and Model
Integrated Sound Level Meter	B&K 2250-L / B&K 2238
Acoustic Calibrator	Rion NC-73

3.3 Monitoring Locations

3.3.1 Monitoring stations NM3, NM6 and NM7 were set up at the proposed locations in accordance with updated EM&A Manual. However, for monitoring locations: Tai Po Garden (NM1), Dynasty View (NM2), Hong Kong Teachers' Association Lee Heng Kwei Secondary School (NM4) and Grand Palisades (NM5), proposed in the updated EM&A Manual, impact noise monitoring was conducted at alternative monitoring locations, as approval of access could not be obtained from the owner's corporation of the premises or the principal of the education institutes. The monitoring station at Tai Kwong Secondary School (NM1) was relocated to 168 Shek Kwu Lung Village (NM1A) in September 2011.

3.3.2 Figure 2.1 shows the locations of the monitoring stations. Table 3.2 describes the details of the monitoring stations.

Table 3.2 Locations of Impact Noise Monitoring Stations

Monitoring Station	Location	Description
NM1A	168 Shek Kwu Lung Village	1m from the exterior wall of the village house
NM2	38 Ha Wun Yiu	1.2m from the ground floor free-field of the village house
NM3	Wong Shiu Chi Middle School	1m from the exterior of the roof top façade of the New Wing
NM4	Uptown Plaza	1m from the exterior of the roof top façade of Block 4
NM5	The Paragon	1m from the exterior of the roof top façade of the club house
NM6	PLK Tin Ka Ping Primary School	1.2m ground floor free-field near the entrance
NM7	Riverain Bayside	1m from the exterior of the roof façade of the switch room

3.4 Monitoring Parameters, Frequency and Duration

3.4.1 Table 3.3 summarizes the monitoring parameters, frequency and duration of impact noise monitoring.

Table 3.3 Noise Monitoring Parameters, Frequency and Duration

Parameter	Frequency and Duration
30-mins measurement at each monitoring station between 0700 and 1900 on normal weekdays. L_{eq} , L_{10} and L_{90} would be recorded.	At least once per week

3.5 Monitoring Methodology

3.5.1 Monitoring Procedure

- (a) Façade measurements were made at all monitoring locations, except monitoring stations NM2 and NM6.
- (b) The sound level meter was set on a tripod at a height of 1.2 m above the ground for free-field measurements at NM2 and NM6.
- (c) The battery condition was checked to ensure the correct functioning of the meter.
- (d) Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:-
 - (i) frequency weighting: A
 - (ii) time weighting: Fast
 - (iii) time measurement: $L_{eq(30\text{-minutes})}$ during non-restricted hours i.e. 07:00 – 1900 on normal weekdays; $L_{eq(5\text{-minutes})}$ during restricted hours i.e. 19:00 – 23:00 and 23:00 – 07:00 of normal weekdays, whole day of Sundays and Public Holidays
- (e) 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 1 dB(A), the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.
- (f) During the monitoring period, the L_{eq} , L_{10} and L_{90} were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
- (g) Noise measurement was paused during periods of high intrusive noise (e.g. dog barking, helicopter noise) if possible. Observations were recorded when intrusive noise was unavoidable.
- (h) Noise monitoring was cancelled in the presence of fog, rain, wind with a steady speed exceeding 5m/s, or wind with gusts exceeding 10m/s.

3.5.2 Maintenance and Calibration

- (a) The microphone head of the sound level meter was cleaned with soft cloth at regular intervals.
- (b) The meter and calibrator were sent to the supplier or HOKLAS laboratory to check and calibrate at yearly intervals.
- (c) Calibration certificates of the sound level meters and acoustic calibrators are provided in Appendix E.

3.6 Monitoring Schedule for the Reporting Month

3.6.1 The schedule for environmental monitoring in October 2013 is provided in Appendix F.

3.7 Monitoring Results

3.7.1 The monitoring results for construction noise are summarized in Table 3.4 and the monitoring data is provided in Appendix I.

Table 3.4 Summary of Construction Noise Monitoring Results in the Reporting Period

	Average, dB(A), L_{eq} (30 mins)	Range, dB(A), L_{eq} (30 mins)	Limit Level, dB(A), L_{eq} (30 mins)
NM1A	61.1	59.6 – 63.2	75
NM2	63.2*	61.8 – 64.4*	75
NM3	62.5	54.6 – 63.6	70 [#]
NM4	64.2	62.7 – 65.7	75
NM5	62.3	59.6 – 65.2	75
NM6	62.5*	60.1 – 64.0*	70 [#]
NM7	59.4	58.0 – 61.3	75

*+3dB(A) Façade correction included

Limit Level of 70dB(A) applies to education institutes while 65dB(A) applies during school examination period.

3.7.2 There was no noise complaint related to 0700 – 1900 hours on normal weekdays was received and followed up by Environmental Team in the reporting period. Hence, no Action Level exceedance was recorded.

3.7.3 No noise monitoring result exceeding the Limit Level was recorded at all monitoring stations in the reporting month.

3.7.4 Major noise sources during the noise monitoring included construction activities of Stage 1 of the Project and nearby traffic noise and general school activities.

3.7.5 The event action plan is annexed in Appendix J.

4 ENVIRONMENTAL SITE INSPECTION AND AUDIT

4.1 Site Inspection

4.1.1 Site Inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures for Stage 1 of the Project. In the reporting month, 4 site inspections were carried out on 2, 9, 16, 23 and 30 October 2013 for Contract 1 of the Project, and 4 site inspections for Contract 2 of the Project were carried out on 3, 10, 17, 24 and 31 October 2013.

4.1.2 The environmental site inspections summaries are provided in Appendix K.

4.1.3 Particular observations during the site inspections for Contract 1 are described below:

Air Quality

4.1.4 No adverse observation was identified in the reporting month.

Noise

4.1.5 No adverse observation was identified in the reporting month.

Water Quality

4.1.6 No adverse observation was identified in the reporting month.

Chemical and Waste Management

4.1.7 The Contractor was reminded to provide a drip tray to hold the oil cans or remove the oil cans.

Landscape and Visual Impact

4.1.8 No adverse observation was identified in the reporting month.

Miscellaneous

4.1.9 No adverse observation was identified in the reporting month.

4.1.10 Particular observations and reminder during the site inspections for Contract 2 are described below:

Air Quality

4.1.11 The Contractor was reminded to clear the mud trails at Gate 65 and prevent vehicles from bringing the mud trails to the public roads.

Noise

4.1.12 No adverse observation was identified in the reporting month.

Water Quality

4.1.13 No adverse observation was identified in the reporting month.

Chemical and Waste Management

- 4.1.14 The contractor was reminded to remove the general refuse at W74.
- 4.1.15 The contractor was reminded to provide a larger drip tray to hold oil drums at Lam Kam Bridge.
- 4.1.16 The Contractor was reminded to remove the oil drum or provide a drip tray for holding the oil drum at Lam Kam Bridge.

Landscape and Visual Impact

- 4.1.17 No adverse observation was identified in the reporting month.

Miscellaneous

- 4.1.18 No adverse observation was identified in the reporting month.

4.2 Advice on the Solid and Liquid Waste Management Status

- 4.2.1 The Contract 1 Contractor (CSHK) and the Contract 2 Contractor (GCL) are registered as chemical waste producers for Stage 1 of the Project. C&D material sorting was carried out on site. Sufficient numbers of receptacles were available for general refuse collection.
- 4.2.2 As advised by the Contract 1 Contractor (CSHK), 414m³ of inert C&D material was disposed as public fill to Tuen Mun 38 (of which 0m³ was broken concrete), while 91m³ of general refuse was disposed at NENT landfill. 87kg of paper/cardboard packaging, 2,831kg of plastics and 0kg of metals were collected by recycling contractor in the reporting month. 1,268m³ and 514m³ of inert C&D materials were reused on site and reused in NENT for backfilling purpose respectively. 0kg of chemical waste was collected by licensed contractor in the reporting period.
- 4.2.3 As advised by the Contract 2 Contractor (GCL), 420m³ of inert C&D material were disposed to Tuen Mun 38 and 155m³ general refuse was disposed to NENT landfill in the reporting period. 0kg of paper/cardboard packaging, metals and plastics was collected by recycling contractor in the reporting month. Besides, no chemical waste or metals was collected by licensed contractor in the reporting period.
- 4.2.4 The Contract 1 Contractor (CSHK) and the Contract 2 Contractor (GCL) are advised to maintain on site waste sorting and recording system and maximize reuse / recycle of C&D wastes.

4.3 Environmental Licenses and Permits

- 4.3.1 The environmental licenses and permits for Stage 1 of the Project and valid in the reporting month is summarized in Table 4.1.

Table 4.1 Summary of Environmental Licensing and Permit Status

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
EIAO	Environmental Permit	EP-324/2008/A	31/01/2012	N/A	HyD	Tolo Highway/Fanling Highway between Island House Interchange and Ma Wo
WPCO	Discharge License (Office)	WT00005096-2009	03/12/2009	31/12/2014	CSHK	Discharge at Site Office

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
	Discharge License (Site)	WT00005445-2009	15/12/2009	31/12/2014	CSHK	Discharge of Construction Runoff
	Discharge License (Office)	WT00006782-2010	25/06/2010	30/06/2015	GCL	Discharge at Site Office
	Discharge License (Site)	WT00007162-2010	09/08/2010	31/07/2015	GCL	Discharge of Construction Runoff
WDO	Chemical Waste Producer Registration	5213-727-C3249-46	25/09/2009	N/A	CSHK	Chemical waste produced in Contract HY/2008/09
		5213-722-G2347-18	18/05/2010	N/A	GCL	Chemical waste produced in Contract HY/2009/08
WDO	Billing Account for Disposal of Construction Waste	7009328	08/09/2009	N/A	CSHK	Waste disposal in Contract HY/2008/09
		7010320	02/03/2010	N/A	GCL	Waste disposal in Contract HY/2009/08
NCO	Construction Noise Permit	GW-RN0226-13	24/04/2013	23/10/2013	CSHK	Construction of W4 - NLKRB South Abutment
		GW-RN0388-13	27/07/2013	06/10/2013	CSHK	Modification of Sign Gantry_G11, 73, 74, 75 & 76
		GW-RN0417-13	21/07/2013	17/01/2014	CSHK	Construction works at Island House Interchange
		GW-RN0422-13	29/07/2013	31/12/2013	CSHK	Road Paving on Tolo Highway at Island House Interchange
		GW-RN0454-13	14/08/2013	06/10/2013	CSHK	Modification of G 12
		GW-RN0468-13	19/08/2013	23/01/2014	CSHK	Routine Road Maintenance
		GW-RN0479-13	21/08/2013	15/11/2013	CSHK	Lifting Operation at W20A
		GW-RN0507-13	28/08/2013	31/10/2013	CSHK	Road Pavement at North Bound of Tolo Highway near The Paragon and Ma Wo
		GW-RN0512-13	01/09/2013	31/10/2013	CSHK	Carrying out construction works within MTRC's tracks protection zone

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
		GW-RN0513-13	07/09/2013	03/11/2013	CSHK	Road Marking Alternation near Sign Gantry G14
		GW-RN0524-13	04/09/2013	15/11/2013	CSHK	Sign Gantry at Tolo Highway between Yuen Chau Tsai and Ma Wo
		GW-RN0525-13	16/09/2013	30/11/2013	CSHK	Stitching Works on Bridge 11
		GW-RN0561-13	02/10/2013	01/04/2014	CSHK	Modification of Sign Gantry_G11, G13, G70, G73, G74, G75 & G76
		GW-RN0564-13	28/09/2013	22/12/2013	CSHK	Road Paving Reconstruction on Tolo Highway (Fanling Bound) near Shan Tong Road
		GW-RN0566-13	25/09/2013	30/11/2013	CSHK	Road Paving Reconstruction on Slip Road from Tai Po Road-Yuen Chau Tsai
		GW-RN0572-13	07/09/2013	03/12/2013	CSHK	Modification of Sign Gantry_G14, G15, G16, G17, G65, G66, G67 & G68
		GW-RN0582-13	06/10/2013	22/12/2013	CSHK	Road Paving for slip road from Tai Po Road-Yuen Chau Tsai
		GW-RN0584-13	05/10/2013	24/11/2013	CSHK	Road Marking Alternation at Tolo Highway near Shan Tong Road from CH17.0A to CH16.1A
		GW-RN0606-13	13/10/2013	24/11/2013	CSHK	Road Paving & Road Marking Works at Yuen Shin Road near Tolo Highway
		GW-RN0607-13	19/10/2013	22/12/2013	CSHK	Road Paving on Tolo Highway between Ma Wo and NLKRB (Shatin Bound)
		GW-RN0614-13	19/10/2013	22/12/2013	CSHK	Road Paving on North Bound of Tolo Highway at Island House Interchange

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
		GW-RN0620-13	19/10/2013	22/12/2013	CSHK	Road Paving Reconstruction on Tolo Highway (Fanling Bound) Between NB12 and Tat Wan Road
		GW-RN0647-13	01/11/2013	31/12/2013	CSHK	Carrying out construction works within MTRC's tracks protection zone
		GW-RN0194-13	03/04/2013	02/10/2013	GCL	Near Lam Kam Interchange Supersede CNP GW-RN0064-13
		GW-RN0235-13	19/04/2013	16/10/2013	GCL	Tolo Highway Northbound near Buddhist Tai Kwong Middle School and Shek Lin Road
		GW-RN0250-13	30/04/2013	26/10/2013	GCL	Tolo Highway Southbound near Parc Versailles
		GW-RN0260-13	08/05/2013	25/10/2013	GCL	Slip Road from Tolo Highway North Bound to Tai Po Tai Wo Road
		GW-RN0284-13	15/05/2013	02/11/2013	GCL	Construction of B15A
		GW-RN0309-13	27/06/2013	26/12/2013	GCL	Tai Po Tai Wo Road Uphill Northbound
		GW-RN0362-13	16/07/2013	29/10/2013	GCL	Renewal of GW-RN0259-13 Dismantling of Overhead Falsework between NLKP8 and NLKP10
		GW-RN0405-13	25/07/2013	24/01/2014	GCL	Northbound near CH.18.39 - 19.1 near Shek Link Road
		GW-RN0435-13	04/08/2013	14/10/2013	GCL	Road Diversion from Dynasty View to Mui Shu Hang Playground
		GW-RN0439-13	01/08/2013	17/10/2013	GCL	Erection of Sign Gantry at Tolo Highway Ch19.6 to 17.1
		GW-RN0445-13	11/08/2013	14/10/2013	GCL	Lane Shifting at Tolo Highway Shatin Bound CH18 - 19.2 and Slip Road of Tai

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
						Po Tai Wo Road
		GW-RN0457-13	11/08/2013	14/10/2013	GCL	Tolo Highway South Bound CH19.8 to CH 18.7
		GW-RN0467-13	16/08/2013	31/10/2013	GCL	Dismantling of B18 Pier
		GW-RN0473-13	27/08/2013	11/10/2013	GCL	A section of Fanling Highway and Tai Wo Service Road West near Wai Tau
		GW-RN0484-13	02/09/2013	31/12/2013	GCL	Renewal of GW-RN0091-13 Tolo Highway and Fanling Highway near Tai Po Tai Wo Road, Lam Kam Interchange & Tai Wo Service Road West
		GW-RN0519-13	15/09/2013	09/03/2014	GCL	Renewal of GW-RN0351-13 Tolo Highway near Ma Wo Village
		GW-RN0530-13	03/10/2013	02/02/2014	GCL	Renewal of GW-RN0194-13 Tolo Highway near Tai Po Tau Raw Water Pumping Station
		GW-RN0549-13	17/09/2013	30/11/2013	GCL	Erection and dismantle of Sign Gantry
		GW-RN0551-13	19/09/2013	03/12/2013	GCL	Stitching Construction of B12B
		GW-RN0575-13	27/09/2013	10/12/2013	GCL	Erection of Sign Gantry at Lam Kam Road Flyover CH. 20.2 to 20.3
		GW-RN608-13	12/10/2013	21/12/2013	GCL	Renewal of GW-RN0473-13 Dismantling of Overhead Falsework at NLKP6 to NLKP7
		GW-RN0610-13	16/10/2013	10/12/2013	GCL	Road Diversion at Tolo Highway South Bound CH.18.1-18.7
		GW-RN613-13	22/10/2013	24/12/2013	GCL	Renewal of GW-RN0362-13 Dismantling of Overhead Falsework at NLKP8 to NLKP10

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
		GW- RN617-13	18/10/2013	31/12/2013	GCL	Road Diversion at Tolo Highway CH19.4 to 19.9

4.4 Implementation Status of Environmental Mitigation Measures

- 4.4.1 In response to the site audit findings, the Contractors carried out corrective actions.
- 4.4.2 A summary of the Implementation Schedule of Environmental Mitigation Measures (EMIS) is presented in Appendix C. Most of the necessary mitigation measures were implemented properly.

4.5 Summary of Exceedances of the Environmental Quality Performance Limit

- 4.5.1 All 1-hour and 24-hour TSP monitoring results complied with the Action / Limit Levels in the reporting period.
- 4.5.2 For construction noise, no Action and Limit Level exceedance was recorded at all monitoring stations in the reporting period.

4.6 Summary of Complaints, Notification of Summons and Successful Prosecutions

- 4.6.1 The Environmental Complaint Handling Procedure is annexed in Figure 4.1.
- 4.6.2 There was one (1) complaint (including one (1) air related complaint) received on 7 October 2013 and followed up by Environmental Team in October 2013.
- 4.6.3 The air complaint, was received by EPD on 7 October 2013, and referred from EPD on 7 October 2013. The complaint is about dust emission in construction site of the Tolo Highway widening construction works at Ma Wo, causing nuisance to the complainant.

As informed by the Contractor (Gammon Construction Ltd) and confirmed by the Engineer of the Project, backfilling and compaction work of general fill material at W38 and delivery of fill material from W48 to W38 by dump truck on 7 October 2013 were being carried out at Ma Wo as shown in the layout plan below. Mitigation measures, including manual and sprinklers water spraying on haul road and exposed slope, covering non-working slope by tarpaulin sheet at a sight distance from complainant before the construction of permanent footpath, providing full-time manual water spray and setting a tarpaulin dust screen on the top of W45-47 along W44 & NB31, were taken by the Contractor. In case of any dump truck passing through W45-47, the mechanical covering would not open until they reach the unloading point.

With reference to the monitoring results recorded on days near to the day of complaint at the nearest EM&A monitoring station (AM1A- 3 Sheung Wun Yiu), the 24-hour TSP levels on 27 September 2013 and 2 October 2013 were found to be 39.2ug/m³ and 36.2ug/m³ respectively, which were below the action level of 198.5 ug/m³. Besides, the average 1-hour TSP levels on 27 September 2013 and 2 October 2013 at the nearest EM&A monitoring station (AM1A- 3 Sheung Wun Yiu) were found to be 81.8ug/m³ and 76.3ug/m³ respectively, which were also below the action level of 302.3ug/m³.

Nevertheless, the complaint was considered as project-related.

Therefore, the Contractor is reminded to enhance the dust mitigation measures as stated in "Recommended Mitigation Measures".

- 4.6.4 No notification of summons or prosecution was received in the reporting period.
- 4.6.5 Statistics on complaints, notifications of summons and successful prosecutions are summarized in Appendix L.

5 FUTURE KEY ISSUES

5.1 Construction Programme for the Coming Months

5.1.1 The major construction works for Contract 1 in November 2013 will be:-

- Temporary shoring, sheetpiling and excavation
- At-grade road construction
- Retaining wall construction
- Noise barrier footing construction
- Noise barrier panels installation
- Asphalt laying
- Installation of drainage pipes
- Modification of edge coping

5.1.2 The major construction works for Contract 2 in November 2013 will be:-

- Condition survey of existing structures
- Initial and record survey
- Survey Setting out works for slopes and structures
- Setting up the temporary traffic arrangement
- Excavation of trial trenches to locate existing utilities
- Construction of haul road
- Construction of concrete profile barrier and beam barrier
- Construction of Pilecap / Spread footing of Noise Barrier / Semi Noise Enclosure
- Slope works, including installation of soil nails
- NTHA mitigation works
- Construction of retaining walls
- Noise barrier construction
- Modification of existing bridge structures
- Entrusted watermains works
- Sewer Installation
- Road and drainage works
- Landscaping works

5.2 Key Issues for the Coming Month

5.2.1 Key issues to be considered in November 2013:-

- Properly store and label oils and chemicals on site;
- Chemical, chemical waste and waste management;
- Collection of construction waste should be carried out regularly;
- Site runoff should be properly collected and treated prior to discharge;
- Properly maintain all drainage facilities and wheel washing facilities on site;
- Exposed slopes should be covered up properly if no temporary work will be conducted;
- Suppress dust generated from excavation, breaking and drilling activities, haul road traffic and grout mixing process;
- Quieter powered mechanical equipment should be used;
- Closely check and replace the sound insulation materials wrapped at the concrete breaker tip regularly;
- Better scheduling of construction works to minimize noise nuisance; and
- Tree protective measures for all retained trees should be well maintained.

5.3 Monitoring Schedule for the Coming Month

5.3.1 The tentative schedule for environmental monitoring in November 2013 is provided in Appendix F.

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

- 6.1.1 The construction phase and EM&A programme of Stage 1 of the project commenced on 23 November 2009.
- 6.1.2 1-hour TSP, 24-hour TSP and noise monitoring were carried out in the reporting period.
- 6.1.3 All 1-hour and 24-hour TSP monitoring results complied with the Action / Limit Levels in the reporting period.
- 6.1.4 No Action and Limit Level exceedance for construction noise was recorded at all monitoring stations in the reporting month.
- 6.1.5 Environmental site inspection was carried out 10 times in October 2013. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site audits.
- 6.1.6 There was one (1) complaint (including one (1) air related complaint) received on 7 October 2013 and followed up by Environmental Team in October 2013. Investigation was carried out and the findings were submitted to all relevant parties.
- 6.1.7 No notification of summons or prosecution was received in the reporting period.

6.2 Recommendations

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

Air Quality Impact

- The soil stockpiles should be properly covered.
- The grouting station should be properly sheltered as one of the dust control measures

Construction Noise Impact

- Properly erect the temporary noise barriers in accordance with the Environmental Permit requirement.
- Noisy operations should be oriented to a direction away from sensitive receivers as far as possible.
- Sound insulation materials shall be wrapped at the breaker tip for concrete breaking works.

Water Quality Impact

- Preventive measures should be implemented to avoid the spread of mud trails on the public road.
- Silty effluent should be treated/desilted before discharged. Untreated effluent should be prevented from entering public drain channel.
- Proper drainage channels/bunds should be provided at the site boundaries to collect/intercept the surface run-off from works areas.
- Stagnant water accumulated within works area should be removed.

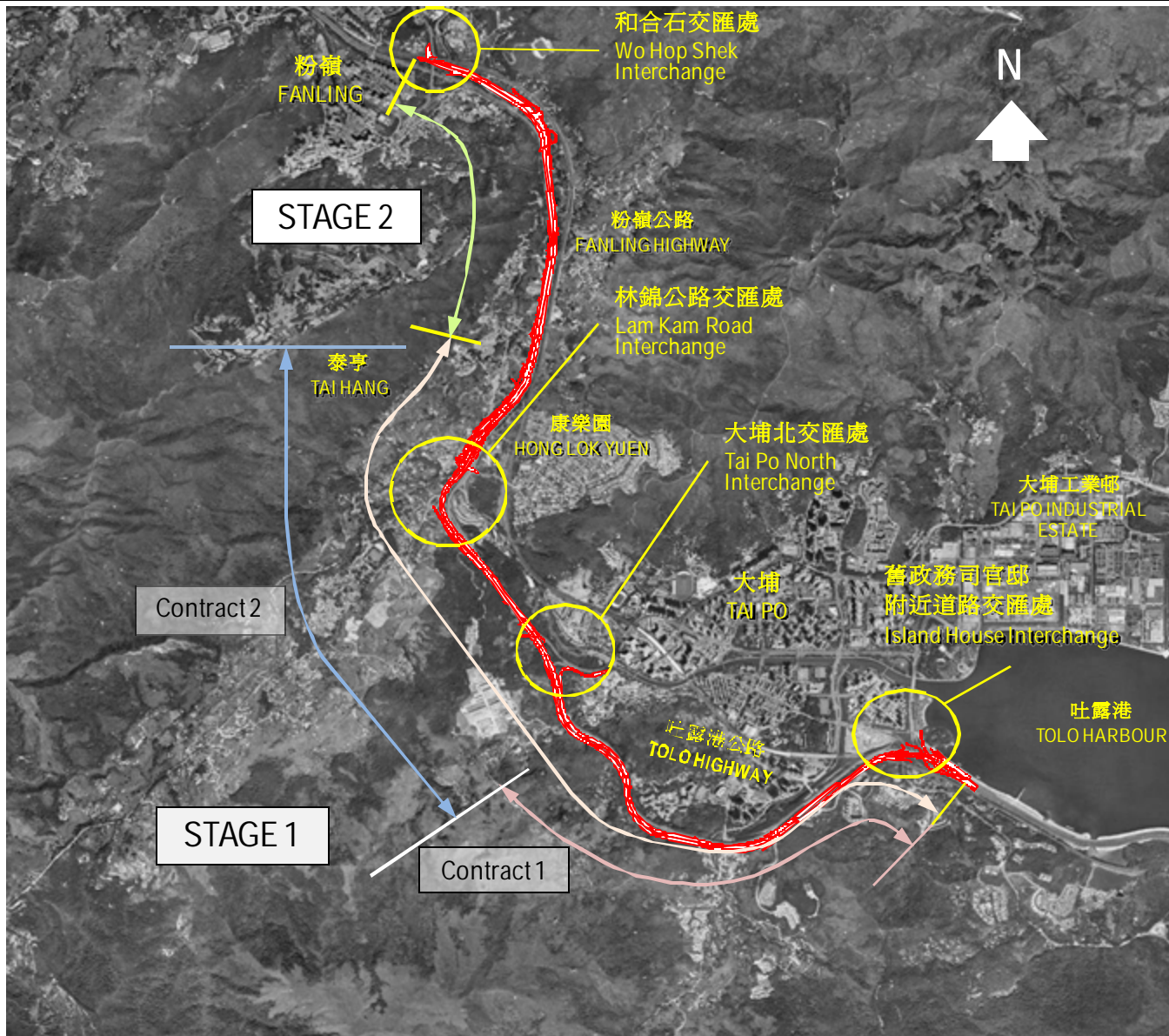
Chemical and Waste Management

- C&D materials and wastes, general refuse should be sorted properly and removed timely.
- All chemical containers and oil drums should be properly stored.
- All plants and vehicles on site should be properly maintained to prevent oil leakage.
- All drain holes of the drip trays utilized within works areas should be properly plugged to avoid any oil leakage.
- Oil stains on soil surface and empty chemical containers should be cleared and disposed of as chemical waste.
- Drip tray should be provided to prevent oil leakage.
- Only the recycling materials should be dumped into the appropriate recycling bins.

Landscape and Visual Impact

- All retained trees should be properly fenced off at the works area.

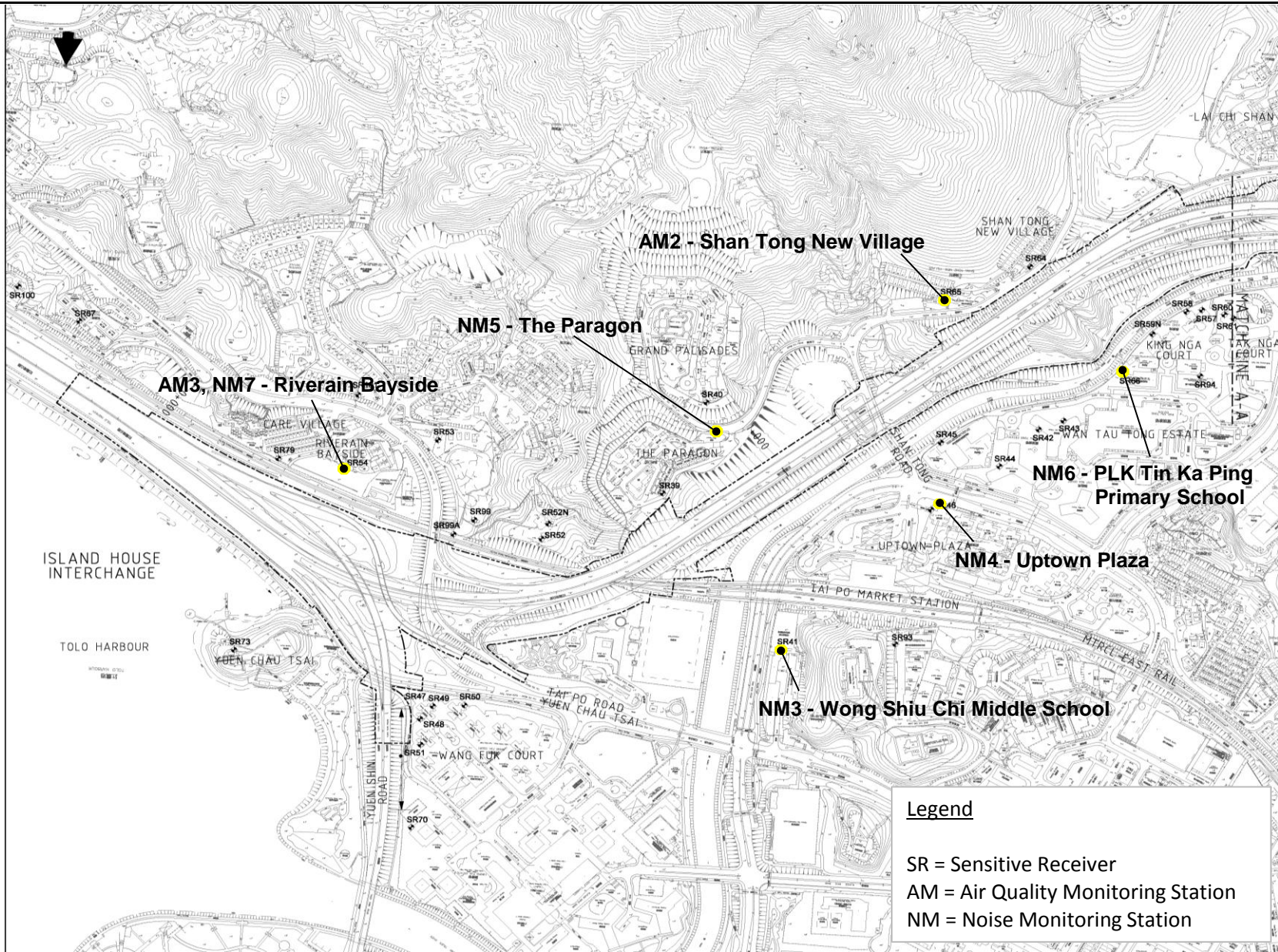
FIGURES



Environmental Team for the Widening of Tolo Highway between
Island House Interchange and Tai Hang - Investigation

General Project Layout Plan

SCALE	N.T.S.	DATE	Dec-09	
CHECK	ENFL	DRAWN	RWHW	
JOB NO.	60102979	FIGURE NO.	1.1	Rev 0



Legend

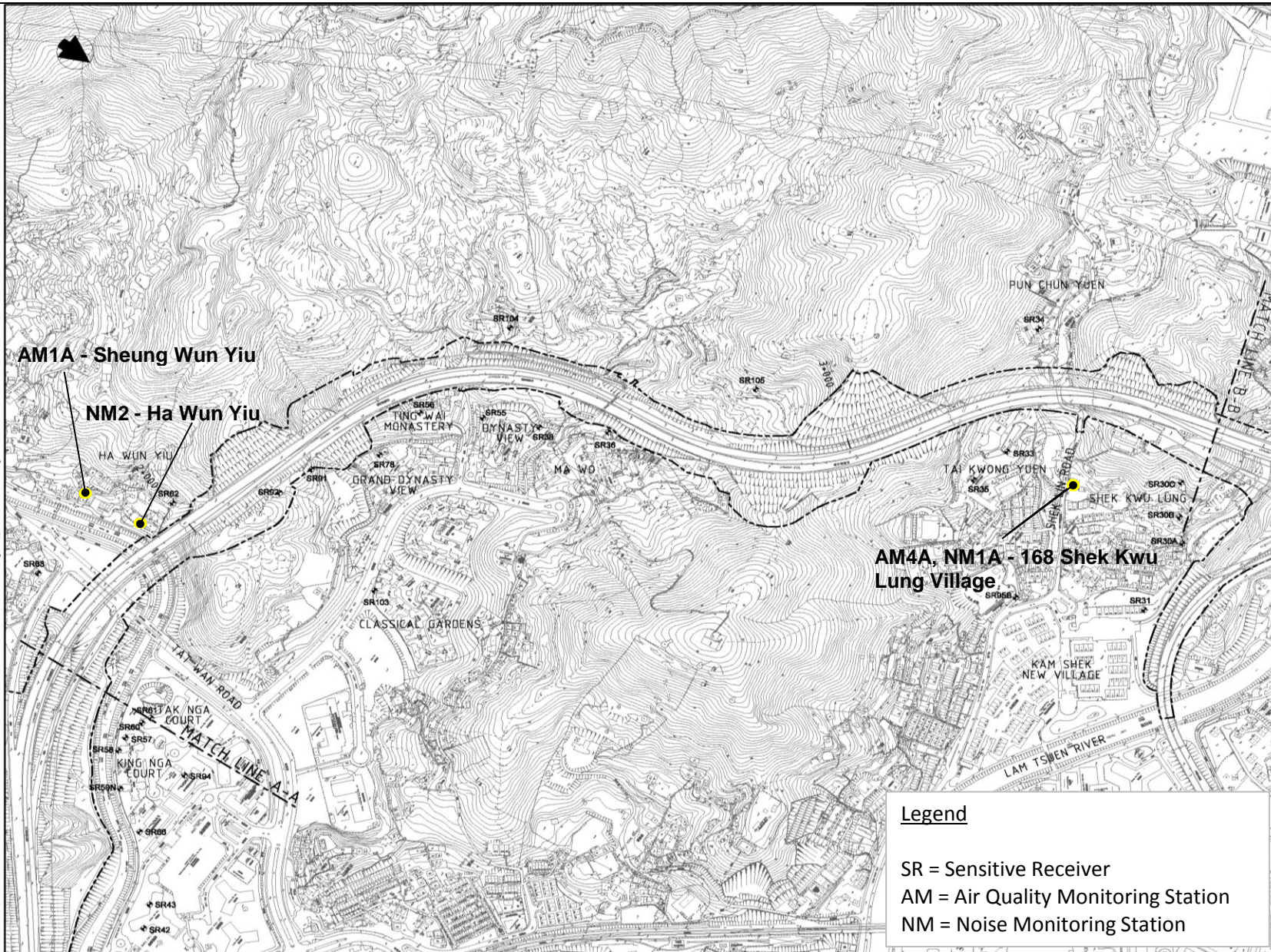
SR = Sensitive Receiver
 AM = Air Quality Monitoring Station
 NM = Noise Monitoring Station



**Environmental Team for the Widening of Tolo Highway between
 Island House Interchange and Tai Hang - Investigation**

EM&A Monitoring Locations (Sheet 1 of 2)

SCALE	N.T.S.	DATE	Sep-11
CHECK	ENFL	DRAWN	LCHC
JOB NO.	60102979	FIGURE NO.	2.1
			Rev 0



Legend

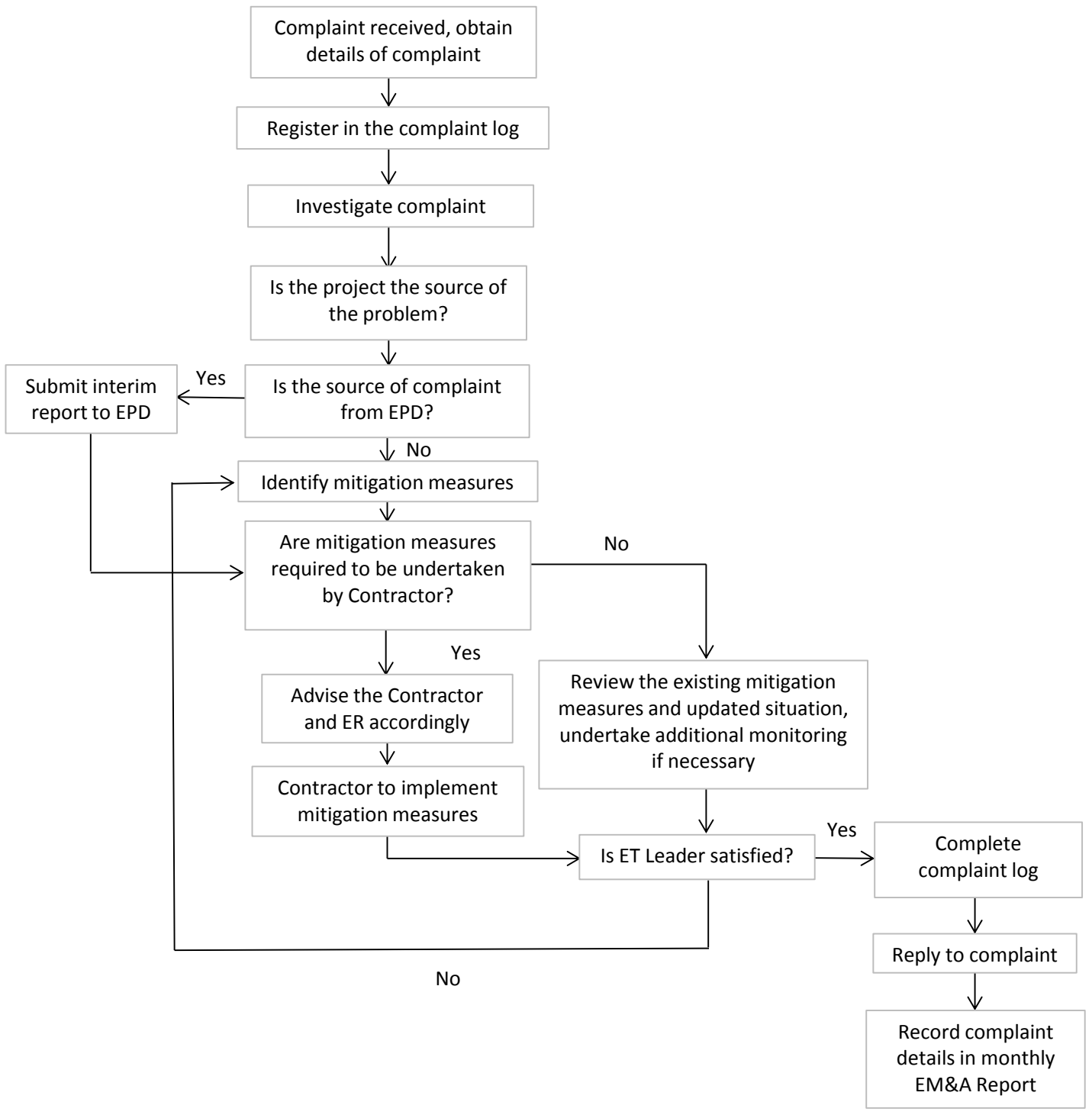
SR = Sensitive Receiver
 AM = Air Quality Monitoring Station
 NM = Noise Monitoring Station



**Environmental Team for the Widening of Tolo Highway between
 Island House Interchange and Tai Hang - Investigation**

EM&A Monitoring Locations (Sheet 2 of 2)

SCALE	N.T.S.	DATE	Sep-11
CHECK	ENFL	DRAWN	LCHC
JOB NO.	60102979	FIGURE NO.	2.1
		Rev	0

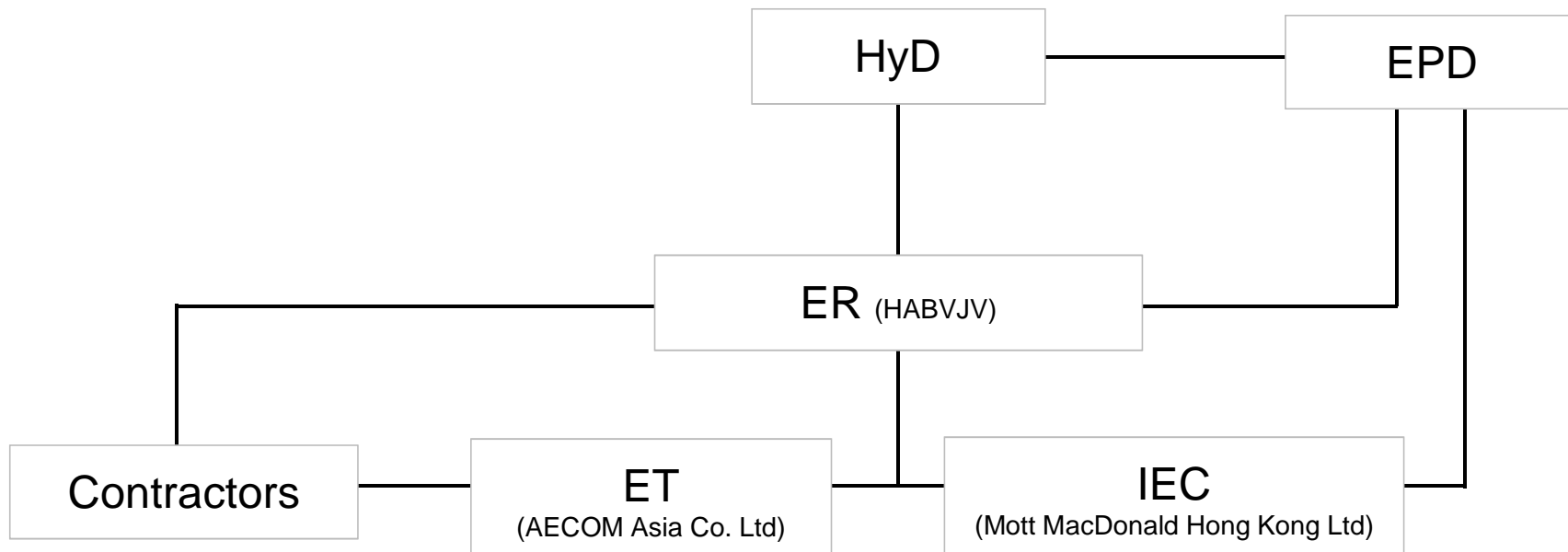


Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation

Environmental Complaint Handling Procedure

SCALE	N.T.S.	DATE	Mar-13
CHECK	ENFL	DRAWN	CHCL
JOB NO.	60102979	FIGURE	Rev.
		4.1	-

**APPENDIX A
PROJECT ORGANIZATION STRUCTURE**



**Environmental Team for the Widening of Tolo Highway between
Island House Interchange and Tai Hang - Investigation**

Project Organization Structure

SCALE	N.T.S.	DATE	2009
CHECK	ENFL	DRAWN	RWHW
JOB NO.	60102979	APPENDIX	Rev
		A	-

**APPENDIX B
CONSTRUCTION PROGRAMMES**

Activity ID	Activity Name	Original Durat...	Start	Finish	2013												2014	
					October					November				December			January	
					22	29	06	13	20	27	03	10	17	24	01	08	15	22
KEY DATES																		
Section Completion																		
Section Completion Date																		
Key Date																		
KD-300200	KD2 Section 2 Areas SA8,SA9 + SA9A Work (1052d)	0		30-Nov-13*														◆ KD2 Section 2 Areas SA8,SA9
KD-300900	KD9 Section 9 Area SA1, 3 to 9A Road Maintenance (1580)	0		23-Dec-13*														◆ KD9 Section 9
PRELIMINARES & GENERAL REQUIREMENTS, PROCUREMENT																		
TCSS Works																		
General																		
Gantry Beam Procurement: Batch 5 (G75, 76)																		
GS1400	Fabrication of Gantry Beam	90	15-May-13 A	30-Sep-13 A														◆ Fabrication of Gantry Beam
GS1410	Gantry Beam Available (batch 5)	0		30-Sep-13 A														◆ Gantry Beam Available (batch 5)
Gantry Beam Procurement: Batch 6 (G13, 66)																		
GS3800	Fabrication of Gantry Beam	90	15-May-13 A	30-Sep-13 A														◆ Fabrication of Gantry Beam
GS3810	Gantry Beam Available (batch 6)	0		30-Sep-13 A														◆ Gantry Beam Available (batch 6)
SOFT LANDSCAPE IN SA1: SECT. 5 WORKS																		
Landscaping Works																		
Landscape Works																		
S5-212800	Areas SA1 Irrigation + Landscape Soft Works	30	11-Jan-14	09-Feb-14														
ROUTINE MAINTENANCE: SECT. 9 WORKS																		
Road Maintenance																		
Routine Maintenance of Road Network																		
S9-100000	Road Maintenance of Road Network	1401	22-Feb-10 A	23-Dec-13*														◆ Road Maintenance
Z1: CH 0 to CH 500: SECT. 1 WORKS																		
Banyan & Banyan West Bridge Construction																		
Demolition of Temporary Steel Bridge TB1																		
S1-197165	Remove Retaining Wall	124	21-Jan-13 A	30-Nov-13														◆ Remove Retaining Wall
New Banyan Bridge																		
Bridge Deck																		
S1-080870	Painting Bridge (after bridge opening)	177	20-Nov-12 A	20-Nov-13														◆ Painting Bridge (after bridge opening)
S1-080900	New Banyan Bridge Completion	0		20-Nov-13														◆ New Banyan Bridge Completion
New Banyan Bridge West																		
Bridge Deck																		
S1-090860	Painting Bridge (w/ TTA & night works)	227	19-Sep-12 A	20-Nov-13														◆ Painting Bridge (w/ TTA & night works)
S1-090900	New Banyan West Bridge Completion	0		20-Nov-13														◆ New Banyan West Bridge Completion
Noise Barrier at Kwong Fuk West																		
Noise Barrier at Kwong Fuk West Viaduct																		
Noise Barrier Foundation Works																		
S1-180510b005	Column PC1A(trad form), 2A,3A,4A (steel form)	26	13-Jun-13 A	06-Nov-13														◆ Column PC1A(trad form), 2A,3A,4A (steel form)
S1-180510A050	Pier Head (incl. all cast-in item)-PC5B (Tradition formwork)	9	16-Sep-13 A	02-Oct-13 A														◆ Pier Head (incl. all cast-in item)-PC5B (Tradition formwork)
S1-180510A150	Pier Head (incl. all cast-in item)-PC6A (Steel formwork)	8	16-Sep-13 A	14-Oct-13 A														◆ Pier Head (incl. all cast-in item)-PC6A (Steel formwork)
S1-180510b030	Pier Head (incl. all cast-in item)-PC2A (Steel formwork)	8	21-Sep-13 A	16-Oct-13 A														◆ Pier Head (incl. all cast-in item)-PC2A (Steel formwork)
S1-180510A060	Pier Head (incl. all cast-in item)-PC7A(Tradition formwork)	9	10-Oct-13 A	30-Oct-13														◆ Pier Head (incl. all cast-in item)-PC7A(Tradition formwork)
S1-180510A090	Pier Head (incl. all cast-in item)-PC2B(Steel formwork)	8	11-Oct-13 A	29-Oct-13														◆ Pier Head (incl. all cast-in item)-PC2B(Steel formwork)
S1-180510A120	Pier Head (incl. all cast-in item)-PC3B (Steel formwork)	8	15-Oct-13 A	02-Nov-13														◆ Pier Head (incl. all cast-in item)-PC3B (Steel formwork)
S1-180510b040	Pier Head (incl. all cast-in item)-PC3A (Steel formwork)	8	15-Oct-13 A	29-Oct-13														◆ Pier Head (incl. all cast-in item)-PC3A (Steel formwork)
S1-180510A140	Pier Head (incl. all cast-in item)-PC4B (Steel formwork)	8	18-Oct-13 A	06-Nov-13														◆ Pier Head (incl. all cast-in item)-PC4B (Steel formwork)
S1-180510A040	Pier Head (incl. all cast-in item)-PC5A(Tradition formwork)	9	21-Oct-13	30-Oct-13														◆ Pier Head (incl. all cast-in item)-PC5A(Tradition formwork)
S1-180510b020	Pier Head (incl. all cast-in item)-PC1A (Tradition formwork)	8	23-Oct-13	31-Oct-13														◆ Pier Head (incl. all cast-in item)-PC1A (Tradition formwork)
S1-180510b050	Pier Head (incl. all cast-in item)-PC4A (Steel formwork)	8	30-Oct-13	07-Nov-13														◆ Pier Head (incl. all cast-in item)-PC4A (Steel formwork)
S1-180810	KFWV structural steel, (bay 5-7)	26	14-Dec-13	15-Jan-14														◆ KFWV structural steel, (bay 5-7)
S1-180700A	KFWV structural steel, (bay 1-5)	18	23-Dec-13	14-Jan-14														◆ KFWV structural steel, (bay 1-5)
S1-180800	KFWV Panel Installation, (bay 1-5)	14	15-Jan-14	30-Jan-14														◆ KFWV Panel Installation, (bay 1-5)
S1-180820	KFWV Panel Installation, (bay 5-7)	26	16-Jan-14	24-Feb-14														◆ KFWV Panel Installation, (bay 5-7)
TCSS Works/Other Utilities																		
S1-180905	Civil prov. works (CPW)- TCSS Pillar Box B	18	05-Dec-13	27-Dec-13														◆ Civil prov. works (CPW)- TCSS Pillar Box B
WM Test+Drain CCTV+ E&M Works																		
Drainage CCTV																		
S1-700100	Drainage CCTV	10	20-Dec-13	02-Jan-14														◆ Drainage CCTV
S1-700110	Drainage submit CCTV Report	14	24-Dec-13	10-Jan-14														◆ Drainage submit CCTV Report
Watermain Pressure Test																		
S1-700120	FH+ Watermain Pressure Test	7	17-Dec-13	24-Dec-13														◆ FH+ Watermain Pressure Test
S1-700130	Watermain Sterilization+submission of report	14	17-Dec-13	03-Jan-14														◆ Watermain Sterilization+submission of report
TCSS Works																		
New Sign Gantry Construction																		
G18 (VO205 Slip Road)																		
GS1778	Footing besides Slip road (pending for Engineer design clarification)	45	21-Aug-13 A	06-Dec-13														◆ Footing besides Slip road
GS1790	Erect column besides slip road & Gantry Beam	4	06-Dec-13	11-Dec-13														◆ Erect column besides slip road & Gantry Beam
Existing Sign Gantry Modification																		
G19 (VO: New Gantry Modification without drawing)																		
GS2650	Carry out Sign Gantry modification (LCS, TCSS etc)-New Gantry	14	11-Dec-13	30-Dec-13														◆ Carry out Sign Gantry modification (LCS, TCSS etc)-New Gantry

Contract: HY/2008/09

Widening of Tolo Highway / Fanling Highway
Between Island House Interchange and Fanling
(Stage 1 - Between Island House Interchange and Ma Wo)

Three Months Rolling Programme
for the Period of 21 Oct 2013 to 20 Jan 2014

Activity ID	Activity Name	Original Durat...	Start	Finish	2013												2014								
					September					October					November					December			January		
					22	29	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12				
GS2660	Speed Enforcement Camera installation	2	30-Dec-13	01-Jan-14																					
GS2670	VLSLS and VDS installation	2	01-Jan-14	03-Jan-14																					
TCSS E&M Works & Handover																									
S1-700075	T&C - Lighting	20	11-Dec-13	06-Jan-14																					
S1-700080	T&C - power supply system to TCSS	20	11-Dec-13	06-Jan-14																					
S1-700090	Handover to TCSS Contractor	0		14-Jan-14																					
Southbound Work- Ret. Wall, Noise B, Rd NB6, and Slope S4																									
High Mast Lighting																									
S1-203068	Install/delete lamps at high mast HM2 & HM3	18	13-Nov-13	03-Dec-13																					
Noise Barrier NB6																									
S1-207055	NB production period	76	10-Apr-13 A	30-Oct-13																					
S1-207060	NB6 Structural Steel	14	31-Oct-13	15-Nov-13																					
S1-208060	NB6 NB Panels	14	12-Nov-13	27-Nov-13																					
Road Lighting/ or High Mast																									
S1-203067	Relocate pillar box for high mast HM1 - HM10	14	13-Nov-13	28-Nov-13																					
S1-700050	Cabling works for utilities/Lighting	20	13-Nov-13	05-Dec-13																					
S1-700070	Pillar Box + MCB Board installation	18	15-Nov-13	05-Dec-13																					
Cut Slope S4																									
S1-031060B	Cut Slope S4 - drainage/ u channels	20	15-Oct-13 A	12-Nov-13																					
NB7 , Slope S3, Slip Rd C																									
Cut Slpe S3																									
S1-031030A	Cut Slope S3- excavation	483	20-Dec-11 A	30-Oct-13																					
SB Road & Drain, Ch 0-300, after NB3																									
TCSS Works/Other Utilities																									
S1-035045	TCSS P57 - footing	14	13-Nov-13	28-Nov-13																					
S1-035055	TCSS S167 - footing	14	29-Nov-13	14-Dec-13																					
Road Lighting/ or High Mast																									
S1-051215	Public Lighting - install Lamp Pole + Lamps	18	13-Nov-13	03-Dec-13																					
S1-051215A	Public Lighting - cabling works	18	13-Nov-13	03-Dec-13																					
S1-051215B	Public Lighting - power supply connection & test	18	13-Nov-13	03-Dec-13																					
Roadworks																									
S1-051200	Roadworks- 1st TTA - Half fast lane	18	08-Aug-13 A	25-Sep-13 A																					
S1-051205	Roadworks- 2nd TTA - Slow lane	26	20-Oct-13 A	02-Nov-13																					
S1-051210	Roadworks- 3rd TTA - middle lane	26	04-Nov-13	03-Dec-13																					
S1-051230	Roadworks- 4th TTA - fast lane	26	04-Dec-13	04-Jan-14																					
NB6 and Slope S4A, after TB1 demolition																									
Noise Barrier NB6 (remaining 1 bay after TB1 removal)																									
S1-208130	NB6 Structural Steel	10	15-Nov-13*	26-Nov-13																					
S1-208135	NB6 NB Panels	6	27-Nov-13	03-Dec-13																					
Cut Slope S4A																									
S1-208140A	Cut Slope S4A - excavation	20	24-Oct-13*	15-Nov-13																					
S1-208140B	Cut Slope S4A - u channels	20	16-Nov-13	09-Dec-13																					
NB11, Slope S4B & F124, after TB2 dem.																									
High Mast Lighting																									
S1-200112	High Mast HM5 - footing + relocation + lamp	30	11-Nov-13*	14-Dec-13																					
Noise Barrier NB11																									
S1-207110	NB11 Structural Steel	10	30-Oct-13	09-Nov-13																					
S1-208120	W3A construction	14	05-Nov-13	20-Nov-13																					
S1-208110	NB11 NB Panels	10	11-Nov-13	21-Nov-13																					
Cut Slope S4B, S4C																									
S1-031040A	Cut Slope S4B, S4C - excavation	21	21-Oct-13	13-Nov-13																					
S1-031040B	Cut Slope S4B, S4C - drainage/ channels	48	14-Nov-13	10-Jan-14																					
South Bound Road and Drain, Ch 300-500																									
Road Drainage																									
S1-051347	Road Drainage - pipelaying + manhole, L=200	20	05-Dec-13	30-Dec-13																					
Firemain																									
S1-051305	Firemain- excav, pipe install + pit/new hydrants	14	30-Nov-13	17-Dec-13																					
TCSS Works/Other Utilities																									
S1-051303	Civil prov. works (CPW)- TCSS Pillar Box A	18	05-Dec-13	27-Dec-13																					
S1-051325	Utilities & TCSS buried ducts	24	05-Dec-13	03-Jan-14																					
Road Lighting/ or High Mast																									
S1-051350A	Public Lighting - cabling works	18	05-Dec-13	27-Dec-13																					
S1-051350	Public Lighting - Lamp Pole + Lamps	18	07-Dec-13	30-Dec-13																					
S1-051350B	Public Lighting - power supply connection & test	18	07-Dec-13	30-Dec-13																					
Roadworks																									
S1-051335	Roadworks- 1st TTA - Temp lane about 500mm (Lane 4)	9	25-Oct-13	04-Nov-13																					
S1-051340	Roadworks- 2nd TTA - Slow lane	11	05-Nov-13	16-Nov-13																					
S1-051345	Roadworks- 3rd TTA - middle lane	15	18-Nov-13	04-Dec-13																					
S1-051355	Roadworks- 4th TTA - Fast lane	20	31-Dec-13	22-Jan-14																					
TCSS HUB (near KFW Viaduct)																									
TCSS Hub																									
S1-700016	E&M procurement & delivery	90	09-Apr-13 A	21-Oct-13																					
S1-700030	CLP Cable laying and provide power	180	15-May-13 A	17-Dec-13																					
S1-700010	TCSS HUB - ABWF	30	20-Jul-13 A	24-Oct-13																					
S1-700020	TCSS HUB - E&M	40	22-Oct-13	06-Dec-13																					



Contract: HY/2008/09
Widening of Tolo Highway / Fanling Highway
Between Island House Interchange and Fanling
(Stage 1 - Between Island House Interchange and Ma Wo)

Three Months Rolling Programme
for the Period of 21 Oct 2013 to 20 Jan 2014

Activity ID	Activity Name	Original Durat...	Start	Finish	2013												2014	
					October					November				December			January	
					22	29	06	13	20	27	03	10	17	24	01	08	15	22
TCSS HUB (Ma Liu Shui)																		
TCSS Hub																		
S1-700180	E&M procurement & delivery	90	09-Apr-13 A	21-Sep-13 A	E&M procurement & delivery													
S1-700190	TCSS HUB - E&M	40	23-Sep-13 A	09-Nov-13	TCSS HUB - E&M													
Central Median Work- Noise Barrier + Road/Drain																		
Noise Barrier NB3 CH0-357																		
Road Lighting/ or High Mast																		
S1-208040	Public Lighting - Lamp Pole + Lamps	18	22-Aug-13 A	30-Nov-13	Public Lighting - Lamp Pole +													
S1-208040A	Public Lighting - cabling works	18	22-Aug-13 A	30-Nov-13	Public Lighting - cabling works													
S1-208040B	Public Lighting - power supply connection & test	18	11-Nov-13	30-Nov-13	Public Lighting - power supply													
Noise Barrier Structural Steel & Panels																		
S1-208030	NB3 NB Panels	10	16-Sep-13 A	12-Oct-13 A	NB3 NB Panels													
Noise Barrier NB3 CH357-381, after TB1 demolition																		
Noise Barrier Structural Steel & Panels																		
S1-208080	NB3 NB Panels	6	02-Oct-13 A	12-Oct-13 A	NB3 NB Panels													
Noise Barrier NB10 CH444-500, after TB2 demolition																		
Noise Barrier Foundation Works																		
S1-200094	Pending VO for searching existing ducting for TCSS works	10	21-Oct-13	31-Oct-13	Pending VO for searching existing ducting for TCSS works													
Noise Barrier Structural Steel & Panels																		
S1-207100	NB10 Structural Steel + Lighting	12	02-Dec-13*	14-Dec-13	NB10 Structural Steel													
S1-208100	NB10 NB Panels	12	16-Dec-13	31-Dec-13	NB10 NB Panels													
Northbound Work- Ret. Wall, Noise B, Rd																		
RW W1+ NB1+S1, NB2 Ch200-300																		
Noise Barrier NB1																		
S1-208015	Northbound work Complete	0	20-Nov-13		Northbound work Complete													
Cut Slope S1																		
S1-031015005	VO for footing modification & relocation of HM7	14	20-Jun-13 A	24-Sep-13 A	VO for footing modification & relocation of HM7													
S1-031015020	Fill Slope S1- drainage	26	18-Oct-13 A	19-Nov-13	Fill Slope S1- drainage													
S1-031015015	Fill Slope S1- backfilling (remaining 50% after relocation of HM7)	31	21-Oct-13	25-Nov-13	Fill Slope S1- backfilling (remain													
Northbound Rd/ Dr, Ch 0-300, after NB3																		
Roadworks																		
S1-051105	Roadworks- 2nd TTA (Fast lane)	115	06-Feb-13 A	20-Oct-13 A	Roadworks- 2nd TTA (Fast lane)													
S1-051115	Roadworks- 3rd TTA (middle lane)	18	21-Oct-13	09-Nov-13	Roadworks- 3rd TTA (middle lane)													
S1-051135	Drainage at Slow Lane	12	11-Nov-13	23-Nov-13	Drainage at Slow Lane													
S1-051137	Roadworks- 4th TTA (Slow lane)	12	25-Nov-13	07-Dec-13	Roadworks- 4th TTA (Slow lane)													
S1-051145	Implement TTA	0	09-Dec-13		Implement TTA													
Slip Rd B after Banyan Br. Completion																		
Slip Rd B																		
S1-051150	Slip Road B - drainage + road reconstruction	193	11-Oct-12 A	09-Nov-13	Slip Road B - drainage + road reconstructio													
Slip Rd A after Banyan West Completion																		
Slip Rd A																		
S1-051155	Slip Road A - drainage + road reconstruction	175	20-Oct-12 A	30-Nov-13	Slip Road A - drainage + road													
NB2 & Slope S2, after TB1 demolition																		
High Mast Lighting																		
S1-031037	High Mast HM6 - footing, relocation + lamp	36	21-Oct-13	30-Nov-13	High Mast HM6 - footing, relo													
S1-031039	High Mast HM10 - install/delete lamps	6	02-Dec-13	07-Dec-13	High Mast HM10 - instal/													
Noise Barrier NB2																		
S1-031055	NB2 Structural Steel	10	20-Nov-13*	30-Nov-13	NB2 Structural Steel													
S1-031065	NB2 NB Panels	10	02-Dec-13	12-Dec-13	NB2 NB Panels													
Cut Slope S2																		
S1-031025B	Cut Slope S2- channel	20	27-Nov-13	19-Dec-13	Cut Slope S2- cha													
NB9, Slope F121, S5, (after TB2 demolition)																		
Noise Barrier NB9																		
S1-200130	NB9 Structural Steel	12	15-Nov-13*	28-Nov-13	NB9 Structural Steel													
S1-200135	NB9 NB Panels	12	29-Nov-13	12-Dec-13	NB9 NB Panels													
Cut Slope S5																		
S1-200140	Slope F121 + S5	28	20-Nov-13*	21-Dec-13	Slope F121 + S5													
North Bound Road and Drain, Ch 300-500																		
Road Drainage																		
S1-200155	Road Drainage - pipelaying + manhole	15	21-Oct-13	06-Nov-13	Road Drainage - pipelaying + manhole													
Firemain																		
S1-200170	Firemain- excav, pipe install + pit/new hydrants	15	21-Oct-13	06-Nov-13	Firemain- excav, pipe install + pit/new hydran													
TCSS Works/Other Utilities																		
S1-200180	Utilities & TCSS buried ducts	15	21-Oct-13	06-Nov-13	Utilities & TCSS buried ducts													
Road Lighting/ or High Mast																		
S1-200175	Public Lighting - buried ducts	15	21-Oct-13	06-Nov-13	Public Lighting - buried ducts													
S1-200205	Public Lighting - Lamp Pole + Lamps	15	07-Nov-13	23-Nov-13	Public Lighting - Lamp Pole + Lam													
Roadworks																		
S1-200154	Roadworks - 1st TTA - Half fast lane (Lane 4)	8	02-Oct-13 A	20-Oct-13 A	Roadworks - 1st TTA - Half fast lane (Lane 4)													
S1-200190	Roadworks - 2nd TTA - Slow lane	20	07-Nov-13	29-Nov-13	Roadworks - 2nd TTA - Slow l													
S1-200195	Roadworks - 3rd TTA - middle lane	20	30-Nov-13	23-Dec-13	Roadworks - 3rd													
S1-200200	Roadworks - 4th TTA - fast lane	20	24-Dec-13	17-Jan-14														
S1-200215	complete	0	17-Jan-14															
Z2: CH 500 to CH 1100: SECT. 4 WORKS																		
Zone 2: CH500 to Ch1100 (Section 4 Works)																		
VO No.28 (VO 211) - Diversion of Existing Stormwater Drain in Kwong Fuk Park																		



Contract: HY/2008/09
Widening of Tolo Highway / Fanling Highway
Between Island House Interchange and Fanling
(Stage 1 - Between Island House Interchange and Ma Wo)

Three Months Rolling Programme
for the Period of 21 Oct 2013 to 20 Jan 2014

Activity ID	Activity Name	Original Durat...	Start	Finish	2013												2014				
					October					November				December			January				
					22	29	06	13	20	27	03	10	17	24	01	08	15	22	29	05	12
VO28-1070	Construct manhole Q to Half (18m) (sheet pile, trench excavation, pi...	45	22-Jul-13 A	25-Oct-13	Construct manhole Q to Half (18m) (sheet pile, trench excavation, pi...																
VO28-1080	Construct Half to manhole P (18m) (sheet pile, trench excavation, p...	50	19-Aug-13 A	09-Nov-13	Construct Half to manhole P (18m) (sheet pile, trench excavation, p...																
VO28-1085	Town Gas installation works (from main to complete connection to ...	50	11-Nov-13	09-Jan-14	Town Gas installation works (from main to complete connection to ...																
VO28-1090	Backfill Topsoil Manhole Z to P	18	10-Jan-14	30-Jan-14	Backfill Topsoil Manhole Z to P																
WM Test+Drain CCTV+ E&M Works																					
Drainage CCTV																					
S4-208380	Drainage CCTV	24	26-Oct-13	22-Nov-13	Drainage CCTV																
S4-208385	Drainage submit CCTV Report	18	09-Nov-13	29-Nov-13	Drainage submit CCTV Report																
TCSS E&M Works & Handover																					
S4-208355	Cabling works for Utilities/TCSS/Lighting	22	20-Sep-13 A	31-Oct-13	Cabling works for Utilities/TCSS/Lighting																
S4-208370	T&C - power supply system to TCSS/Lighting	36	01-Nov-13	12-Dec-13	T&C - power supply system to TCSS/Lighting																
TCSS Works																					
New Sign Gantry Construction																					
G20																					
GS1835	Erect Column FL	2	11-Oct-13 A	12-Oct-13 A	Erect Column FL																
GS1820	Footing for SL (NB16 bay 11)	20	29-Nov-13	21-Dec-13	Footing for SL (NB16 bay 11)																
GS1840	Erect Column SL	4	23-Dec-13	28-Dec-13	Erect Column SL																
GS1850	Erect Gantry Beam	4	30-Dec-13	02-Jan-14	Erect Gantry Beam																
G63																					
GS2194	Erect column SL	2	15-Jul-13 A	09-Nov-13	Erect column SL																
GS2200	Erect Gantry Beam	4	03-Jan-14*	07-Jan-14	Erect Gantry Beam																
G64																					
GS2255	Erect column (FL)	18	21-Oct-13	09-Nov-13	Erect column (FL)																
GS2260	Erect Gantry Beam	4	11-Dec-13*	16-Dec-13	Erect Gantry Beam																
Stage 1: Southbound Work- Ret. Wall, Noise B, Rd																					
NLKR - Bridge Deck + Noise Barrier																					
Bridge Deck																					
S4-N01355	Wing Wall construction	63	02-Jul-13 A	17-Oct-13 A	Wing Wall construction																
S4-N01365	NB footing besides Retaining wall	12	07-Sep-13 A	30-Oct-13	NB footing besides Retaining wall																
S4-N100900	NLKR Complete	0		17-Oct-13 A	NLKR Complete																
S4-N01375	Noise barrier Post	3	11-Dec-13	13-Dec-13	Noise barrier Post																
S4-N01385	Noise barrier panel	3	14-Dec-13	17-Dec-13	Noise barrier panel																
RW W4-W7+Slope S7+NB15, NB12+Slip Rd L																					
Noise Barrier NB12																					
S4-208120	NB12 NB Panels	454	01-Feb-12 A	22-Oct-13	NB12 NB Panels																
S4-208260	NB12 (bay 1-3) NB structure steel	7	30-Nov-13	07-Dec-13	NB12 (bay 1-3) NB structure steel																
S4-208270	NB12 (bay 1-3) NB Panel	7	09-Dec-13	16-Dec-13	NB12 (bay 1-3) NB Panel																
Cut Slope S6 and Slip Rd L																					
S1-203065A	Cut slope S6 - excavation	403	01-Feb-12 A	30-Oct-13	Cut slope S6 - excavation																
S1-203065B	Cut slope S6 - drainage/U-channels	11	31-Oct-13	12-Nov-13	Cut slope S6 - drainage/U-channels																
Fill Slope S7																					
S4-031070A	Fill Slope S7- backfilling to RW coping level	1066	07-May-10 A	07-Jan-14	Fill Slope S7- backfilling to RW coping level																
S4-031070B	Fill Slope S7- backfilling to road level	1016	20-Jul-10 A	18-Jan-14	Fill Slope S7- backfilling to road level																
S4-031070C	Fill Slope S7- u channels	24	30-Dec-13	25-Jan-14	Fill Slope S7- u channels																
S4-031070D	Fill Slope S7- metal works + hand rails etc.	18	13-Jan-14	11-Feb-14	Fill Slope S7- metal works + hand rails etc.																
Retaining Wall W7																					
S4-035070A	Retaining Wall W7, excav + base slab + wall stem	37	20-Jul-13 A	09-Nov-13	Retaining Wall W7, excav + base slab + wall stem																
S4-035070B	Retaining Wall W7, backfill (assumed rockfill as VO No. 90)	41	11-Nov-13	30-Dec-13	Retaining Wall W7, backfill (assumed rockfill as VO No. 90)																
SB: CH500-1100, Road&Drain+Utilities																					
TCSS Works/Other Utilities																					
S4-512850	Civil prov. works (CPW)- TCSS Pillar Box C	20	20-Sep-13 A	31-Oct-13	Civil prov. works (CPW)- TCSS Pillar Box C																
S4-512880	Utilities+ TCSS + CPW- SC 63/S63	14	16-Oct-13 A	31-Oct-13	Utilities+ TCSS + CPW- SC 63/S63																
S4-031160	Power supply cable ducts	9	21-Oct-13	30-Oct-13	Power supply cable ducts																
Road Lighting/ or High Mast																					
S4-031178	Public lighting - Lamp Pole + Lamps	12	18-Oct-13 A	30-Oct-13	Public lighting - Lamp Pole + Lamps																
S4-031178A	Public Lighting - cabling works	6	18-Oct-13 A	26-Oct-13	Public Lighting - cabling works																
S4-031178A10	Public Lighting - cabling works	13	21-Oct-13	04-Nov-13	Public Lighting - cabling works																
S4-031178B	Public Lighting - power supply connection & test	6	31-Oct-13	06-Nov-13	Public Lighting - power supply connection & test																
S4-512930	Public lighting - Lamp Pole + Lamps	18	05-Nov-13	25-Nov-13	Public lighting - Lamp Pole + Lamps																
S4-031178B10	Public Lighting - power supply connection & test	18	13-Nov-13	03-Dec-13	Public Lighting - power supply connection & test																
Roadworks																					
S4-512900	Roadworks- subbase + subsoil drain + gully connect	48	20-Jun-13 A	24-Oct-13	Roadworks- subbase + subsoil drain + gully connect																
S4-512910	Roadworks - base course to friction course	6	01-Nov-13	07-Nov-13	Roadworks - base course to friction course																
S4-512920	Roadworks - road marking + furnitures	6	08-Nov-13	14-Nov-13	Roadworks - road marking + furnitures																
S4-031185	Implement TTA - Divert to completed southbound (RW 8 Bay 1 ~ Ba...	5	15-Nov-13	20-Nov-13	Implement TTA - Divert to completed southbound (RW 8 Bay 1 ~ Ba...																
Stage 3: Central Median - Ret. Wall, Noise B, Rd																					
Noise Barrier NB10, NB14, NB17 Foundation Works																					
Noise Barrier NB10																					
S4-203194	NB10 (5,6 bays) excavation & footing & wall stem	30	11-Jul-13 A	18-Oct-13 A	NB10 (5,6 bays) excavation & footing & wall stem																
S4-203170B35	Drainage & Roadwork for NB10 area (Bays 7-13)	24	01-Aug-13 A	24-Oct-13	Drainage & Roadwork for NB10 area (Bays 7-13)																
S4-203192	NB10 (14-16 bays) Steel Column & NB Panel	30	18-Sep-13 A	31-Oct-13	NB10 (14-16 bays) Steel Column & NB Panel																
S4-203202	Drainage & Roadwork for NB10 area (5,6,14-16 bays)	13	07-Oct-13 A	24-Oct-13	Drainage & Roadwork for NB10 area (5,6,14-16 bays)																
S4-203195	NB10 (5,6 bays) Steel Column & NB Panel	14	28-Nov-13	13-Dec-13	NB10 (5,6 bays) Steel Column & NB Panel																
Noise Barrier NB14																					
S4-203170B50	NB14 (bay 1-8) Footing & wall stem	37	19-Jun-13 A	26-Oct-13	NB14 (bay 1-8) Footing & wall stem																
S4-203170B55	NB14 (bay 1-8) Backfilling	3	28-Oct-13	30-Oct-13	NB14 (bay 1-8) Backfilling																



Contract: HY/2008/09

Widening of Tolo Highway / Fanling Highway
Between Island House Interchange and Fanling
(Stage 1 - Between Island House Interchange and Ma Wo)

Three Months Rolling Programme
for the Period of 21 Oct 2013 to 20 Jan 2014

Activity ID	Activity Name	Original Durat...	Start	Finish	2013												2014		
					October					November				December			January		
					22	29	06	13	20	27	03	10	17	24	01	08	15	22	29
KD-300400B	ZONE 3 COMPLETE - KD4 Section 4	0		30-Dec-13															◆ ZONE 3 CC
TCSS Works																			
New Sign Gantry Construction																			
G21																			
GS1880	Footing for SL	122	10-Jan-13 A	08-Oct-13 A															
GS1900	Erect Column SL/FL	4	24-May-13 A	09-Nov-13															
GS1910	Erect Gantry Beam	4	06-Nov-13	09-Nov-13															
G22																			
GS1960	Erect Column SL/FL	4	21-Jun-13 A	06-Oct-13 A															
GS1970	Erect Gantry Beam	1	09-Nov-13	09-Nov-13															
G61																			
GS2090	Erect Gantry Beam	6	23-Sep-13 A	06-Oct-13 A															
G62																			
GS2135	Erect Column SL/FL	4	13-Aug-13 A	04-Nov-13															
GS2140	Erect Gantry Beam	4	11-Nov-13	14-Nov-13															
TCSS E&M Works & Handover																			
S4-0512765	Cabling works for Utilities/TCSS/Lighting	24	20-Sep-13 A	30-Nov-13															
S4-0512780	T&C - power supply system to TCSS/Lighting	36	20-Sep-13 A	14-Dec-13															
S4-0512785	Handover to TCSS Contractor	0		14-Dec-13														◆ Handover to TCSS C	
Stage 1: Southbound Work- Ret. Wall, Noise B, Rd																			
Fill Slope S13 and NB21																			
Fill Slope S13																			
S4-031130C	Fill Slope S13- u channels	363	12-Mar-12 A	30-Oct-13															
S4-031130D	Fill Slope S13- metal works + hand rails etc.	236	15-Aug-12 A	30-Oct-13															
Stage 2 - Slip Rd L, Ret. Wall W11, W12																			
Slip Rd P																			
S4-208231	Slip Rd P- road reconstruction, Stage 2	265	13-Jul-12 A	15-Nov-13															
SB: CH1260-1600, L=410m, Road&Drain+Utilities																			
Road Lighting/ or High Mast																			
S4-050785A	Public Lighting - cabling works	290	20-Jun-12 A	26-Oct-13															
S4-050785B	Public Lighting - power supply connection & test	18	21-Oct-13	09-Nov-13															
Roadworks																			
S4-0507845	Roadworks - base course to friction course	219	31-Aug-12 A	02-Nov-13															
S4-0507850	Roadworks - road marking + furnitures	244	31-Aug-12 A	02-Nov-13															
S4-0507865	Complete (divert SB traffic to RW10, B11A, RW8 area)	0	09-Nov-13															◆ Complete (divert SB traffic to RW10, B11A,	
Stage 3: Central Median - Ret. Wall, Noise B, Rd																			
CM: CH1260-1600, L=410m, Road&Drain+Utilities																			
TCSS Works/Other Utilities																			
S4-0512710	Power supply cable ducts	91	20-Feb-13 A	30-Nov-13															
Road Lighting/ or High Mast																			
S4-051273A	Public Lighting - cabling works	91	20-Feb-13 A	30-Nov-13															
S4-0512730	Public lighting - Lamp Pole + Lamps	23	06-Aug-13 A	30-Nov-13															
S4-051273B	Public Lighting - power supply connection & test	12	18-Nov-13	30-Nov-13															
Roadworks																			
S4-0512720	Roadworks - base course to friction course	106	18-Feb-13 A	15-Nov-13															
S4-0512725	Roadworks - road marking + furnitures	18	11-Nov-13	30-Nov-13															
S4-0512740	Road Works completed	0	02-Dec-13															◆ Road Works completed	
Noise Barrier Structural Steel & Panels																			
S4-208200	NB20 & NB23 NB Panels	160	15-Dec-12 A	15-Nov-13															
W20A + Slope S20																			
Cut Slope S20A																			
S4-03120AA	Cut Slope S20A - excavation	24	21-Oct-13	16-Nov-13															
S4-03120AB	Cut Slope S20A - drainage/channels	10	18-Nov-13	28-Nov-13															
Retaining Wall W20A																			
S4-03520BB	Ret. Wall W20A wall stem + backfill+Roadworks	60	01-Aug-13 A	29-Sep-13 A															
Stage 2: Northbound Work- Ret. Wall, Noise B, Rd																			
Modification of Existing Bridge No. 10 + Noise B																			
Bridge Roadworks & Furnitures																			
S4-194887	Modify Coping (2nd half to west end)	90	20-May-13 A	09-Nov-13															
S4-194870	Modify Coping (1st half from east end)-after W20A complete	80	07-Oct-13 A	10-Jan-14															
S4-194889	Install noise barrier (2nd half to west end)	24	27-Dec-13	23-Jan-14															
S4-194899	Road Surfacing & Furnitures	12	11-Jan-14	24-Jan-14															
Modification of Existing Bridge No.11 + Noise B																			
Bridge Roadworks & Furnitures																			
S4-195890	MJ & Road Surfacing	93	25-Jan-13 A	18-Oct-13 A															
S4-195850	Stitching Beam & Decking	76	16-Aug-13 A	18-Oct-13 A															
S4-195895	Road Surfacing & Furnitures after stitching	12	21-Oct-13	02-Nov-13															
S4-195910	Install Noise barrier panel	7	21-Oct-13	28-Oct-13															
S4-195900	Bridge No. 11 Modification Completion	0		02-Nov-13														◆ Bridge No. 11 Modification Completion	
Remaining Work after Road opening																			
S4-1958211	Greening works (Pending for VO of Deletion)	60	04-Nov-13	14-Jan-14															
RW W9, Slope S9, & Noise Barrier NB19, NB22																			
Noise Barrier NB19																			
S4-203190	NB19, 22-31 bays Footing + Wall stem [Pile cap, Plinth DELETED]	189	12-Nov-12 A	30-Oct-13															
S4-207190A	NB19 Structural Steel, 21 bays	10	21-Oct-13	31-Oct-13															
S4-208190A	NB19 NB Panels, 21 bays	10	01-Nov-13	12-Nov-13															



Contract: HY/2008/09
Widening of Tolo Highway / Fanling Highway
Between Island House Interchange and Fanling
(Stage 1 - Between Island House Interchange and Ma Wo)

Three Months Rolling Programme
for the Period of 21 Oct 2013 to 20 Jan 2014

Activity ID	Activity Name	Original Durat...	Start	Finish	2013												2014			
					October			November			December			January						
					22	29	06	13	20	27	03	10	17	24	01	08	15	22	29	05
S4-207190	NB19 Structural Steel, 10 bays	10	05-Dec-13	16-Dec-13																
S4-208190	NB19 NB Panels, 10 bays	10	17-Dec-13	30-Dec-13																
Noise Barrier NB22																				
S4-207220	NB22 Structural Steel	13	20-Sep-13 A	15-Nov-13																
S4-208220	NB22 NB Panels	24	20-Sep-13 A	15-Nov-13																
Fill Slope S9																				
S4-031095A	Fill Slope S9- backfilling	24	21-Oct-13	16-Nov-13																
S4-031095B	Fill Slope S9 - drainage	12	11-Nov-13	23-Nov-13																
NB: CH1260-1750, L=410m, Road&Drain+Utilities																				
Road Drainage																				
S4-0512620	Road Drainage - pipelayinng + manhole	48	01-Aug-13 A	15-Nov-13																
Firemain																				
S4-0512630	Firemain- excav, pipe install+pit/new hydrants	24	17-Sep-13 A	29-Nov-13																
TCSS Works/Other Utilities																				
S4-0512627	TCSS High mast M7/S117 - footing	36	21-Oct-13	30-Nov-13																
S4-0512635	Utilities +TCSS buried ducts + civil prov. works	36	21-Oct-13	30-Nov-13																
S4-0512640	Power supply cable ducts	36	21-Oct-13	30-Nov-13																
Road Lighting/ or High Mast																				
S4-0512660	Public lighting - Lamp Pole + Lamps	36	21-Oct-13	30-Nov-13																
S4-051266A	Public Lighting - cabling works	36	21-Oct-13	30-Nov-13																
S4-051266B	Public Lighting - power supply connection & test	12	02-Dec-13	14-Dec-13																
Roadworks																				
S4-0512645	Roadworks +Slip Road N- Resurfacing	26	18-Oct-13 A	19-Nov-13																
S4-0512655	Roadworks +Slip Road N- road marking + furnitures	6	25-Nov-13	30-Nov-13																
Z4: CH 2000 to CH 2400: SECT. 2 WORKS																				
Stage 1A: Southbound - S14-, RW21-28, TP7,Rd/Dr																				
Retaining Wall W24 to W28 & Slope S17																				
Cut Slope S17																				
S2-031170	Slope S17 (SB) (after 29A & W29B part)	45	03-Jun-13 A	29-Nov-13																
SB Road & Drain, Ch 2000-2200, L=200m																				
TCSS Works/Other Utilities																				
S2-031290	Utilities +TCSS buried ducts + civil prov. works	277	25-Jul-12 A	20-Oct-13 A																
S2-031295	Power supply cable ducts	277	25-Jul-12 A	30-Nov-13																
Cut Slope S14																				
S2-031140E10	Slope S14 - Soil nail & remaining drainage work	61	10-Jun-13 A	15-Nov-13																
Stage 1B: Northbound- S15-S19, RW31-33, Rd/Dr																				
Retaining Wall W30, W31, W32(Piled), W33																				
Retaining Wall W31,32, 33																				
S2-035325C10	RW W31,W32,33 - wall stem + backfill (5 months)	161	18-Mar-13 A	14-Nov-13																
S2-GCL026	Southbound Stage 7A - GCL's earliest interfacing work completion d...	0		21-Oct-13*																
Stage 2A: Southbound- S17, RW 29-34, NB27-29																				
Noise Barrier NB27, NB29																				
Noise Barrier NB29																				
S2-035350	NB29 NB Panels	7	16-Oct-13 A	28-Oct-13																
Retaining Wall, W29 & NB27 (@W29)																				
Retaining Wall W29A																				
S2-03529AB	RW W29A facing panel structure (bay 1)	30	21-Oct-13	23-Nov-13																
SB: CH2200-2400, L=200m, Road&Drain+Utilities																				
Road Drainage																				
S2-031250	W29A bay 1 road drainage after GCL TTA stage 6A	14	25-Nov-13	10-Dec-13																
TCSS Works/Other Utilities																				
S2-031287	TCSS S160 (VDS) - footing	23	14-Sep-13 A	11-Nov-13																
Roadworks																				
S2-031255	W29A bay 1 road work after GCL TTA stage 6A	14	11-Dec-13	28-Dec-13																
S2-031265	Remaining roadwork to final pavement level after GCL TTA stage 6A	6	30-Dec-13	04-Jan-14																
Stage 3: Central Median- NB26, NB29 +Road&Drain																				
CM: NB26 & NB28 L=400m & Road&Drain+Utilities																				
Noise Barrier Structural Steel & Panels																				
S2-208300	NB26 NB Structural Steel	7	08-Jul-13 A	15-Nov-13																
S2-208310	NB26 NB Panels	12	16-Nov-13	29-Nov-13																
S2-208395	Implement TTA- divert traffic to new SB, NB & CM	0	30-Nov-13																	
Stage 2B: Northbound- NB25																				
Noise Barrier NB25																				
S4-207250	NB25 Structural Steel	3	01-Nov-13*	04-Nov-13																
S4-208250	NB25 NB Panels	3	05-Nov-13	07-Nov-13																
TCSS Works																				
New Sign Gantry Construction																				
G23																				
GS2020	Erect Column SL/FL	18	25-Sep-13 A	06-Oct-13 A																
GS2030	Erect Gantry Beam	6	21-Oct-13	26-Oct-13																
TCSS E&M Works & Handover																				
S2-208420	Lighting & T&C	24	15-Oct-13 A	11-Nov-13																
S2-208450	T&C - power supply system to TCSS	24	28-Oct-13	23-Nov-13																
S2-208425	Handover to TCSS Contractor	0		23-Nov-13																



Contract: HY/2008/09

Widening of Tolo Highway / Fanling Highway
Between Island House Interchange and Fanling
(Stage 1 - Between Island House Interchange and Ma Wo)

Three Months Rolling Programme
for the Period of 21 Oct 2013 to 20 Jan 2014

Activity ID	Activity Name	Original Durat...	Start	Finish	2013												2014			
					September		October				November				December				January	
					22	29	06	13	20	27	03	10	17	24	01	08	15	22	29	05
Z6: TCSS IN PORTION SA11: SECT. 4 WORKS																				
TCSS Works																				
New Sign Gantry Construction																				
G12																				
GS1600	Erect Gantry Beam	7	21-Oct-13*	28-Oct-13																
G14 (Outside Site Boundary)																				
GS1645	Shifting of traffic lane	26	20-Sep-13 A	15-Oct-13 A																
GS1650	Footing for FL	48	21-Oct-13	14-Dec-13																
GS1660	Erect Column	4	16-Dec-13	19-Dec-13																
GS1670	Erect Gantry Beam	3	20-Dec-13	23-Dec-13																
GS1680	Reinstatement & Shifting of traffic lane	52	24-Dec-13	05-Mar-14																
G15																				
GS1720	Erect Gantry Beam	4	08-Nov-13*	12-Nov-13																
G65																				
GS2300	Erection of gantry column (SL/FL)	52	01-Aug-13 A	06-Nov-13																
GS2320	Erect Gantry Beam	4	07-Nov-13	11-Nov-13																
Existing Sign Gantry Modification																				
G13 (Substantial Modification Works of Sign Gantries)																				
GS2410	Carry out Sign Gantry modification (LCS, TCSS etc)	52	20-Dec-13	01-Mar-14																
G16																				
GS2490	Carry out Sign Gantry modification (LCS, TCSS etc)	52	25-Jul-13 A	14-Nov-13																
G17																				
GS2570	Carry out Sign Gantry modification (LCS, TCSS etc)	52	25-Jul-13 A	14-Nov-13																
G66 (Substantial Modification Works of Sign Gantries)																				
GS2730	Carry out Sign Gantry modification (LCS, TCSS etc)	30	15-Nov-13	19-Dec-13																
G68																				
GS2890	Carry out Sign Gantry modification (LCS, TCSS etc)	52	18-Jun-13 A	30-Oct-13																
G70																				
GS2970	Carry out Sign Gantry modification (LCS, TCSS etc)	52	18-Jun-13 A	05-Nov-13																
G75 (Substantial Modification Works of Sign Gantries)																				
GS3290	Carry out Sign Gantry modification (LCS, TCSS etc)	52	20-Dec-13	01-Mar-14																
G76 (Substantial Modification Works of Sign Gantries)																				
GS3370	Carry out Sign Gantry modification (LCS, TCSS etc)	52	20-Dec-13	01-Mar-14																
VO214, 223, 227 - Ground Works & Ducts Works for TCSS (Outside Site Boundary)																				
VO214 - Outside site Boundary- Install UPVC Ducts for TCSS Works-Road Side Work																				
GS3570	Road Side Works - SK1258 - G66	20	01-May-13 A	26-Oct-13																
GS3490	Road Side Works - SK1252, SK1253 - G11 LHS (Case 113/111-112)	26	21-Oct-13	19-Nov-13																
GS3530	Cycle Track G73 - G74 Sk1253	26	20-Nov-13	19-Dec-13																
VO214 - Outside site Boundary- Install UPVC Ducts for TCSS Works-Cross Road Work																				
GS3610	(Pending for VO for cancellation)Cross Road Ducts - SK1253 - P12 ...	30	21-Oct-13	23-Nov-13																
GS3620	(Pending for VO for cancellation)Cross Road Ducts - SK1253 - P12 ...	30	25-Nov-13	31-Dec-13																
GS3630	(Pending for VO for cancellation)Cross Road Ducts - SK1256 - P59 ...	30	01-Jan-14	13-Feb-14																
SI-40 - 7 Nos of Trial Pits for P11, P12, S107 and P59																				
GS3680	Trial Pits for P11, P12, S107 and P59	30	21-Oct-13	23-Nov-13																



Contract: HY/2008/09
Widening of Tolo Highway / Fanling Highway
Between Island House Interchange and Fanling
(Stage 1 - Between Island House Interchange and Ma Wo)

Three Months Rolling Programme
for the Period of 21 Oct 2013 to 20 Jan 2014

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014					
							Q4				Q1		Q2		Q3	
							44	45	46	47	48	49	50	51	52	53
HY/2009/08 TOLO HIGHWAY WIDENING, Based on UWP July, upto Oct progress																
EXECUTIVE SUMMARY																
Design																
A1330	Alternative Design		100%	292	29-Mar-10 A	14-Jan-11 A										
Construction																
Section 1																
A1000	SA21 - North Bound	-107	93.74%	959	15-Oct-10 A	24-Dec-13	SA21 - North Bound									
A1010	SA21 - South Bound	-107	92.63%	814	15-Oct-10 A	24-Dec-13	SA21 - South Bound									
A1020	SA21 - Middle Lane	-79	88.36%	275	08-May-12 A	26-Nov-13	SA21 - Middle Lane									
Section 2																
A1030	SA22 - North Bound	-51	94.19%	1016	26-Feb-10 A	23-Dec-13	SA22 - North Bound									
A1040	SA22 - South Bound	-107	88.87%	1037	01-Apr-10 A	18-Feb-14	SA22 - South Bound									
A1060	SA23 - South Bound	-76	78.48%	388	28-Dec-11 A	17-Jan-14	SA23 - South Bound									
A1070	SA24 - North Bound	-82	88.51%	787	25-Aug-10 A	24-Jan-14	SA24 - North Bound									
A1080	SA25 - South Bound	-75	93.18%	777	20-Oct-10 A	17-Dec-13	SA25 - South Bound									
A1090	SA26 - North Bound	-109	90.34%	1216	26-Feb-10 A	20-Feb-14	SA26 - North Bound									
A1100	SA26 - South Bound	-87	92.19%	1216	26-Feb-10 A	28-Jan-14	SA26 - South Bound									
Section 3																
A1110	SA26A - North Bound	-45	91.27%	1191	26-Feb-10 A	06-Feb-14	SA26A - North Bound									
A1120	SA26A - South Bound	6	93.97%	879	26-Feb-10 A	17-Dec-13	SA26A - South Bound									
A1130	SA26A - North & South Bound		100%	612	26-Feb-11 A	30-Jul-13 A	North & South Bound									
A1140	SA27 - South Bound	-18	90.74%	826	27-Mar-10 A	10-Jan-14	SA27 - South Bound									
Section 4																
A1150	SA28 - North Bound	-59	89.15%	1216	26-Feb-10 A	06-Mar-14	SA28 - North Bound									
A1160	SA28 - South Bound	-42	89.54%	1099	23-Jun-10 A	17-Feb-14	SA28 - South Bound									
A1170	SA29 - North Bound		100%	909	26-Jan-11 A	26-Sep-13 A	SA29 - North Bound									
A1180	SA32 - Roadside FVMS		100%	265	26-Mar-11 A	15-Dec-11 A										
Section 5																
A1190	SA31 - South Bound		100%	884	26-Feb-10 A	28-Mar-13 A										
Section 7																
A1200	SA41 - Site Office	16	85.58%	1581	26-Feb-10 A	10-Jun-14	SA41 - Site Office									
A1210	SA42 - Temporary Contractor's Works Area	0	84.64%	1582	25-Feb-10 A	25-Jun-14	SA42 - Temporary Contractor's Works Area									
Section 17 (Subject to Excision, Engineer may instruct within 819 days)																
A1300	Validity Period	233	98.6%	819	25-Feb-10 A	06-Nov-13	Validity Period									
A1310	SA28 - North Bound		100%	34	24-May-12 A	31-Aug-13 A	SA28 - North Bound									
A1320	SA30A - North Bound		100%	155	14-May-12 A	31-Aug-13 A	SA30A - North Bound									

Project ID: J3318-UPDATE 2013OCT
 Project Name: HY/2009/08 TOLO HIGHWAY WIDENING...
 Print Date: 30-Oct-13
 Data Date: 26-Oct-13
 Page 1 of 45

- Current Bar
- Level of Effort
- Critical
- Milestone

Highways Department - Contract No. HY/2009/08

Widening of Tolo Highway/ Fanling Highway
Stage 1 - Between Ma Wo and Tai Hang

Updated Works Programme, 26 October 2013

UWP Revision			
Date	Revision	Checked	Approved
26-Oct-13	UWP October, 2013	WY	JC

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014							
							Q4		Q1		Q2			Q3				
							44	45	46	47	48	49	50	51	52	53	54	
AD000330	AD3 - Approval by ER/CLIENT/CEDD (GEO)		100%	100	02-Aug-10 A	29-Nov-10 A												
Package AD4: W38																		
AD000410	AD4 - Design Period		100%	78	09-Jun-10 A	09-Sep-10 A												
AD000420	AD4 - Full Package to ICE for Certification		100%	18	10-Sep-10 A	09-Nov-10 A												
AD000430	AD4 - Approval by ER/CLIENT/CEDD (GEO)		100%	54	11-Nov-10 A	15-Jan-11 A												
Package AD5 (Noise Barrier Foundation): NB38, NB39, NB41 & NB43																		
AD000510	AD5 - Design Period		100%	98	21-Jul-10 A	22-Oct-10 A												
AD000520	AD5 - Full Package to ICE for Certification		100%	51	23-Oct-10 A	22-Dec-10 A												
AD000530	AD5 - Approval by ER/CLIENT/CEDD (GEO)		100%	74	18-Oct-10 A	14-Jan-11 A												
MATERIALS PROCUREMENT																		
Major Materials (Detail shall refer to supplementary information)																		
Water Works																		
MA001010	Place Order		100%	0	31-Aug-10 A													
MA001030	Fabrication, Manufacturing & Delivery		100%	900	31-Aug-10 A	31-Aug-12 A												
Vehicular Parapet SSD161																		
MA001050	Place Order		100%	0	26-May-11 A													
MA001060	Fabrication, Manufacturing & Delivery		100%	350	26-May-11 A	24-Aug-12 A												
Bearing																		
MA001070	Place Order		100%	0	31-Jul-10 A													
MA001080	Fabrication, Manufacturing & Delivery		100%	630	31-Jul-10 A	05-Aug-12 A												
Movement Joint																		
MA001090	Place Order		100%	0	31-Aug-10 A													
MA001100	Fabrication, Manufacturing & Delivery		100%	620	31-Aug-10 A	31-Aug-12 A												
CONSTRUCTION PHASE																		
Preliminaries & General Requirement																		
Preliminaries																		
General Submissions																		
PR000000	Commencement of Works		100%	0	26-Feb-10 A													
PR001000	Site Establishment		100%	90	26-Feb-10 A	25-May-10 A												
PR001010	Effect required Insurances		100%	0	26-Feb-10 A													
PR001030	Erect Contractor's Office Compound		100%	69	26-Feb-10 A	04-May-10 A												
PR001040	Submit Site Organization Chart		100%	14	26-Feb-10 A	10-Mar-10 A												
PR001050	Submit Site Layout Plan		100%	7	26-Feb-10 A	03-Mar-10 A												
PR001060	Prepare/Submit Initial Works Programme		100%	7	26-Feb-10 A	03-Mar-10 A												
PR001070	Approval on Initial Works Programme		100%	30	04-Mar-10 A	02-Apr-10 A												
PR001080	Prepare/Submit Detailed Works Programme		100%	58	03-Apr-10 A	30-May-10 A												
PR001090	Prepare/Submit First 3-month Programme		100%	14	26-Feb-10 A	10-Mar-10 A												
PR001100	Submit initial 12-month Pgr for Rou. Maint. Work		100%	14	26-Feb-10 A	10-Mar-10 A												
PR001110	Submit Rolling 3month Routine Maint. Program		100%	14	26-Feb-10 A	10-Mar-10 A												
PR001170	Prepare/Submit Subcon Management Plan (SMP)		100%	30	26-Feb-10 A	26-Mar-10 A												
PR001200	Submit Interface Management Plan		100%	60	26-Feb-10 A	25-Apr-10 A												
PR001242	Application of Expressway Permit		100%	7	26-Feb-10 A	03-Mar-10 A												
PR001244	Approval of Expressway Permit		100%	21	04-Mar-10 A	24-Mar-10 A												
PR001246	Issurance of Excavation Permit form Hyd		100%	7	26-Feb-10 A	03-Mar-10 A												
PR001256	Complete All General Submission		100%	0		30-May-10 A												
Technical Submission																		

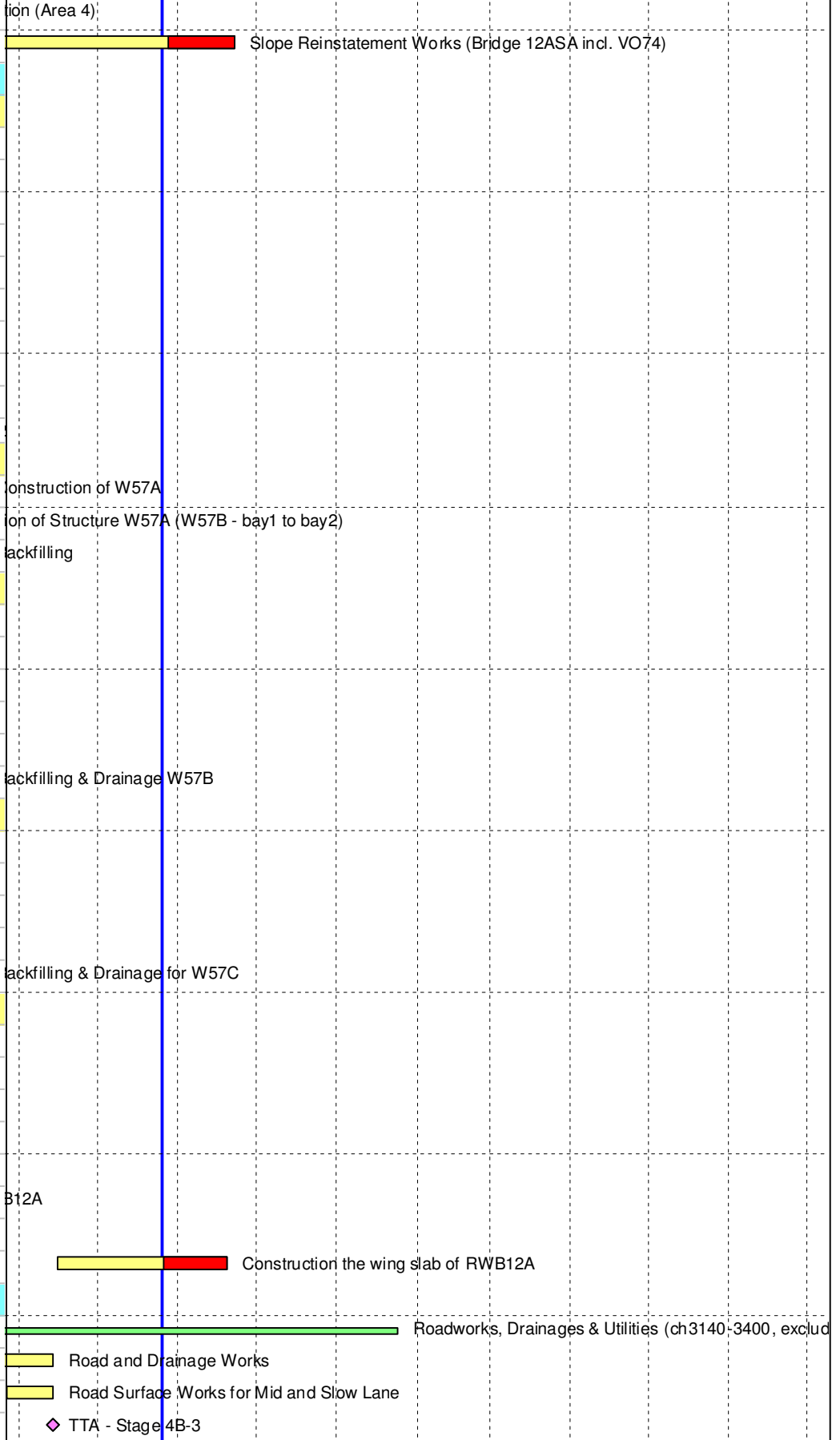
Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014				Q3 54
							Q4				Q1		Q2		
							44	45	46	47	48	49	50	51	
North Bound															
Preliminaries															
S21N0000	Site Clearance/Access Rd & acquisition of Sub-con		100%	63	15-Oct-10 A	30-Dec-10 A									
Slopeworks															
S21N5000	Slopeworks Fill(S21)	-71	90%	10	16-Feb-12 A	05-Nov-13	Slopeworks Fill(S21)								
S21N5010	U-Channel and Berm	-55	10%	10	05-Oct-13 A	15-Nov-13	U-Channel and Berm								
S21N5100	Slopeworks Cut (S22)	-63	90.53%	266	17-Feb-11 A	25-Nov-13	Slopeworks Cut (S22)								
S21N5110	Slopeworks Cut (S22) - Stage 1 (Upper +59mPD)		100%	72	17-Feb-11 A	20-May-11 A									
S21N5120	Slopeworks Cut (S22) - Stage 2 (Middle +57mPD)		100%	72	26-Oct-11 A	20-Jan-12 A									
S21N5130	Slopeworks Cut (S22) - Stage 3 (Lower +55mPD)	-71	90%	72	28-May-12 A	04-Nov-13	Slopeworks Cut (S22) - Stage 3 (Lower +55mPD)								
S21N5140	U-Channel and Berm	-63	10%	20	05-Oct-13 A	25-Nov-13	U-Channel and Berm								
S21N5210	Slopeworks Fill(S24)	-89	80%	55	14-Jan-13 A	07-Nov-13	Slopeworks Fill(S24)								
Extension of Culverts															
S21N1000	Extension of Box Culvert (N581)		100%	148	08-Nov-10 A	21-Mar-11 A									
S21N1010	Temporary Water Diversion		100%	23	08-Nov-10 A	11-Dec-10 A									
S21N1020	Construction of Base Slab		100%	75	13-Dec-10 A	02-Mar-11 A									
S21N1030	Construction of Wall Stem		100%	50	13-Dec-10 A	21-Mar-11 A									
S21N1040	Construction of Top Slab		100%	45	19-Jan-11 A	21-Mar-11 A									
S21N1050	Extension of Box Culvert (TP9), Upstream (CSD 3) (incl. VO.22)		100%	0	26-Mar-11 A	31-Dec-11 A									
S21N1060	Temporary Water Diversion		100%	16	26-Mar-11 A	15-Apr-11 A									
S21N1070	Construction of Base Slab		100%	75	30-Mar-11 A	05-Jul-11 A									
S21N1080	Construction of Wall Stem		100%	72	01-Jul-11 A	31-Dec-11 A									
S21N1090	Construction of Top Slab		100%	0	01-Dec-11 A	31-Dec-11 A									
Construction of Retaining Wall															
Retaining Wall W35															
S21N2000	Sheet Pile/Excavate & Construct W35		100%	53	26-Mar-11 A	02-Jun-11 A									
S21N2010	Opencut excavation		100%	18	26-Mar-11 A	16-Apr-11 A									
S21N2020	Construction of W35 Structure		100%	30	26-May-11 A	18-Jun-11 A									
S21N2030	Backfilling		100%	14	26-Jul-11 A	10-Aug-11 A									
Retaining Wall W36															
S21N2100	Sheet Pile/Excavate & Construct W36		100%	85	11-Aug-11 A	23-Apr-12 A									
S21N2110	Opencut excavation		100%	12	11-Aug-11 A	24-Aug-11 A									
S21N2120	Construction of W36 Structure		100%	50	19-Sep-11 A	23-Apr-12 A									
S21N2130	Backfilling		100%	0	06-Feb-12 A	18-Feb-12 A									
S21N2140	Backfilling behind W36 and drainage works	-59	75%	70	04-Mar-13 A	15-Nov-13	Backfilling behind W36 and drainage works								
Retaining Wall W38 (AD4)															
S21N2210	Pre-drilling		100%	24	26-Feb-11 A	25-Mar-11 A									
S21N2220	Prepare Piling Platform for W38		100%	30	26-Feb-11 A	01-Apr-11 A									
S21N2225	COD: Mobilization of 1 no. rig from W56B to W38 for piling work		100%	60	14-Mar-11 A	27-Jun-11 A									
S21N2230	Pile for W38 (2 rig)		100%	141	26-Mar-11 A	22-Jun-11 A									
S21N2231	Installation of Piles - Stage 1 (CH2470-2545)		100%	69	26-Mar-11 A	22-Jun-11 A									
S21N2232	Installation of Piles - Stage 2 (Remain)		100%	72	12-Apr-11 A	22-Jun-11 A									
S21N2240	Retaining Wall & Drainage W38		100%	230	27-Jun-11 A	24-Dec-12 A									
S21N2242	Excavation to +54.5mPD		100%	60	27-Jun-11 A	05-Sep-11 A									
S21N2244	Excavation to formation		100%	60	26-Sep-11 A	06-Dec-11 A									
S21N2250	Construction of Base & Wall - Stage 1 (CH2470 - 2520)		100%	75	07-Dec-11 A	31-Jan-12 A									
S21N2252	Backfilling to road formation - Stage 1 (CH2470 - 2520)		100%	50	21-Jan-12 A	18-Feb-12 A									
S21N2254	Construction of Base & Wall - Stage 2 (Ch2520 - 2600)		100%	75	20-Feb-12 A	29-Sep-12 A									

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014						
							Q4				Q1		Q2		Q3		
							44	45	46	47	48	49	50	51	52	53	54
S21N4100	Roadworks, Drainages & Utilities (CH 2400 - 2840)	-81	67.86%	133	06-Aug-11 A	14-Dec-13	Roadworks, Drainages & Utilities (CH 2400 - 2840)										
S21N4110	Removal of existing paving		100%	25	06-Aug-11 A	13-Jul-13 A	existing paving										
S21N4120	Drainages (incl. VO 33 : Drainage details at W48)		100%	25	06-Aug-12 A	05-Apr-13 A	Drainages										
S21N4130	Utilities (incl. VO 26: Permanent Diversion of existing DN80 WSD Watermain at Ma WO Subway TP9)	-48	60%	25	08-Jul-13 A	06-Nov-13	Utilities (incl. VO:26: Permanent Diversion of existing DN80 WSD Watermain at Ma										
S21N4135	Road Surface (Stage 1: CH2400 - CH2520)		100%	75	26-Dec-11 A	24-Feb-12 A											
S21N4140	Road Surface (Stage 2 : CH2520 - CH2840)	-81	43%	75	08-Jan-13 A	14-Dec-13	Road Surface (Stage 2 : CH2520 -CH2840)										
S21N4141	Road Construction Works (CH2600 - CH3000) for traffic diversion stage 4B-1		100%	75	10-Jan-13 A	04-May-13 A	CH3000) for traffic diversion stage 4B-1										
S21N4142	Road Construction Works (Fast Lane) for C1/ C2 Interface stage 6B		100%	40	21-Jan-13 A	11-May-13 A	e) for C1/ C2 Interface stage 6B										
S21N4143	Road Construction Works (Mid Lane) for C1/ C2 Interface stage 7B		100%	28	13-May-13 A	09-Jun-13 A	s (Mid Lane) for C1/ C2 Interface stage 7B										
S21N4144	Road Construction Works (Slow Lane) for C1/ C2 Interface stage 8B		100%	27	10-Jun-13 A	06-Jul-13 A	on Works (Slow Lane) for C1/ C2 Interface stage 8B										
S21N4145	Road Construction Works for C1/ C2 Interface Final stage	-70	10%	36	08-Jul-13 A	03-Dec-13	Road Construction Works for C1/ C2 Interface Final stage										
S21N4150	Shift lane for C1/ C2 Interface (Stage 1)		100%	0	27-Feb-12 A												
S21N4152	Shift lane for C1/ C2 interface (Stage 2: North Bound along W38 to W46)		100%	0	20-Jan-13 A												
S21N4153	Shift lane for (CH2600 - CH3000) stage 4B-1		100%	0	05-May-13 A		ge 4B-1										
S21N4155	Shift lane for C1/ C2 Interface stage 6B		100%	0	12-May-13 A		e 6B										
S21N4156	Shift lane for C1/ C2 Interface stage 7B		100%	0	09-Jun-13 A		face stage 7B										
S21N4157	Shift lane for C1/ C2 Interface stage 8B		100%	0	07-Jul-13 A		1/C2 Interface stage 8B										
S21N4160	Shift lane for C1/ C2 interface Final stage	-81	0%	0	14-Dec-13		◆ Shift lane for C1/ C2 interface Final stage										
Noise Barriers & Road Barriers																	
Noise Barrier NB31																	
S21N3010	NB31 (CH 0-183.6, W39 - W49)		100%	80	07-Nov-12 A	17-Jan-13 A											
S21N3060	NB31 : Excavation and Footing (Bay 1-4)		100%	24	07-Nov-12 A	05-Jan-13 A											
S21N3070	NB31 : Excavation and Footing (Bay 5 - 7)		100%	24	01-Dec-12 A	08-Jan-13 A											
S21N3080	NB31 : Erecting H-Column		100%	18	02-Jan-13 A	10-Jan-13 A											
S21N3090	NB31 (CH 90-183.6) : Installation Panel		100%	18	11-Jan-13 A	17-Jan-13 A											
S21N3100	Remaining NB31 Installation of Panel	-38	98.01%	7	27-Jun-13 A	26-Oct-13	Remaining NB31 Installation of Panel										
Traffic Control & Survelance System																	
S21N4800	TCSS (Gantry G23A) (incl. VO73 Revised Sign Gantry Details)		100%	50	10-Jan-13 A	07-Sep-13 A	TCSS (Gantry G23A) (incl. VO73 Revised Sign Gantry Details)										
Landscaping																	
S21N6000	Landscaping Works	-89	0%	40	08-Nov-13	24-Dec-13	Landscaping Works										
South Bound																	
Preliminaries																	
S21S0000	Site Clearance/Access Rd		100%	48	15-Oct-10 A	10-Dec-10 A											
S21S0010	Site Clearance		100%	36	15-Oct-10 A	26-Nov-10 A											
S21S0030	Access Road		100%	34	02-Nov-10 A	10-Dec-10 A											
Slopeworks																	
S21S5000	Slopeworks Fill(S26)	-85	83.13%	40	25-Mar-13 A	02-Nov-13	Slopeworks Fill(S26)										
S21S5010	Slopeworks Fill(S26) - Lower +50mPD		100%	15	25-Mar-13 A	10-May-13 A	PD										
S21S5020	Slopeworks Fill(S26) - Upper +55mPD	-85	70%	23	13-May-13 A	02-Nov-13	Slopeworks Fill(S26) - Upper +55mPD										
S21S5100	Slopeworks Fill(S27)	-84	95%	120	09-Jan-13 A	01-Nov-13	Slopeworks Fill(S27)										
S21S5110	Slopeworks Fill(S27) - Lower +50mPD		100%	60	09-Jan-13 A	17-Jan-13 A											
S21S5120	Slopeworks Fill(S27) - Lower +55mPD	-84	90%	60	18-Jan-13 A	01-Nov-13	Slopeworks Fill(S27) - Lower +55mPD										
Extension of Culverts																	
S21S1100	Extension of Box Culvert (TP9), Downstream		100%	60	20-Dec-12 A	06-Feb-13 A											
S21S5130	Temporary Water Diversion		100%	12	20-Dec-12 A	28-Dec-12 A											
S21S5140	Construction of Base Slab, Wall & Top Slab		100%	48	29-Dec-12 A	06-Feb-13 A											
Construction of Retaining Wall																	
Retaining Wall W50																	

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014									
							Q4				Q1		Q2		Q3					
							44	45	46	47	48	49	50	51	52	53	54			
S22N2264	Base Slab (W56B), (Bay 9, 10 & 12A)		100%	35	27-Jul-12 A	13-Oct-12 A														
S22N2270	Wall Stem (W56B), (Bay 1 - 3, Total 18 pours)		100%	75	01-Nov-12 A	06-Apr-13 A														
S22N2274	Wall Stem (W56B), (Bay 4 - 8, Total 30 pours)		100%	75	12-Nov-12 A	06-Apr-13 A														
S22N2276	Wall Stem (W56B), (Bay 9 - 10, Total 12 pours)		100%	75	24-Nov-12 A	06-Apr-13 A														
S22N2290	Backfilling (Bay 1 to Bay 3)		100%	15	10-Jan-13 A	19-Jan-13 A														
S22N2292	Backfilling (Bay 4 to Bay 10)		100%	30	14-Jan-13 A	05-Mar-13 A														
Roadworks & Drainage																				
S22N4000	Roadworks, Drainages & Utilities (CH 2840 - 3140)	-43	61.24%	129	15-Jan-13 A	23-Dec-13	Roadworks, Drainages & Utilities (CH 2840 - 3140)													
S22N4010	Roadworks Stage 1 (CH 2840 - 3000)		100%	30	15-Jan-13 A	29-Mar-13 A														
S22N4030	Drainages Stage 1 (CH2840 - 3000)		100%	30	15-Jan-13 A	05-Mar-13 A														
S22N4040	Road Surface Works		100%	30	21-Mar-13 A	23-Apr-13 A														
S22N4042	Roadworks Stage 2 (CH3000 - 3140)		100%	30	18-Mar-13 A	30-Jul-13 A	Roadworks Stage 2 (CH3000 - 3140)													
S22N4044	Drainages Stage 2 (CH3000 - 3140)		100%	30	20-Feb-13 A	11-Apr-13 A														
S22N4046	Road Surface Works		100%	30	17-May-13 A	18-Aug-13 A	Road Surface Works													
S22N4048	Road Construction Works Remain Fast Lane (along CH2840 - 3140)	-43	0%	50	26-Oct-13	23-Dec-13	Road Construction Works Remain Fast Lane (along CH2840 - 3140)													
Noise Barriers																				
Noise Barrier NB31A																				
S22N3020	NB31A (CH 0-21.9) on W56A (incl. VO 9: Construction of double leaf access door for noise barrier)		100%	74	15-Oct-12 A	22-Nov-12 A	Noise Barrier													
S22N3021	NB31A (CH 0-21.9) on W56A : Erecting H-Column		100%	38	15-Oct-12 A	19-Oct-12 A														
S22N3022	NB31A (CH 0-21.9) on W56A : Installing Panel		100%	36	22-Oct-12 A	22-Nov-12 A														
South Bound																				
Preliminaries																				
S22S0000	Site Clearance/Access Rd		100%	84	01-Apr-10 A	16-Jul-10 A														
S22S0010	Site Clearance		100%	72	01-Apr-10 A	02-Jul-10 A														
S22S0020	Access Road		100%	72	20-Apr-10 A	16-Jul-10 A														
Slopeworks																				
S22S5000	Slopeworks Cut(S28-sn) (incl. VO15: Revised Layout of Slope S28)		100%	198	21-Oct-10 A	17-Aug-11 A														
S22S5010	Slopeworks Cut(S28) - Stage 1 (Cutslope)		100%	23	21-Oct-10 A	16-Nov-10 A														
S22S5030	Slopeworks Cut(S28) - Stage 1 (Soil Nail Installation : IJKL)		100%	23	17-Nov-10 A	08-Feb-11 A														
S22S5040	Slopeworks Cut(S28) - Stage 2 (Cutslope)		100%	37	11-Dec-10 A	03-Jan-11 A														
S22S5060	Slopeworks Cut(S28) - Stage 2 (Soil Nail Installation : EFGH)		100%	37	08-Feb-11 A	23-Mar-11 A														
S22S5070	Slopeworks Cut(S28) - Stage 3 (Cutslope)		100%	36	06-Jul-11 A	17-Aug-11 A														
S22S5090	Slopeworks Cut(S28) - Stage 3 (Soil Nail Installation : ABCD)		100%	36	20-Aug-11 A	04-Oct-11 A														
S22S5100	Slope Reinstatement Works (Bridge 12B)	-79	0%	40	13-Nov-13	02-Jan-14	Slope Reinstatement Works (Bridge 12B)													
Construction of Retaining Wall																				
Retaining Wall RWB12B																				
S22S2110	Pre-drilling for RWB12B		100%	24	16-Jul-10 A	12-Aug-10 A														
S22S2120	Piles for RWB12B		100%	116	13-Aug-10 A	20-Nov-10 A														
S22S2130	Excavate to cut-off level		100%	60	26-Jan-11 A	09-Apr-11 A														
S22S2140	Capping/Walling for Bay 1-2, RWB12B		100%	60	28-Mar-11 A	10-May-12 A														
S22S2142	Capping/Walling for Bay 3-6, RWB12B		100%	75	11-May-12 A	03-Sep-12 A														
S22S2150	Backfilling		100%	60	04-Sep-12 A	22-Jun-13 A														
Road Re-construction Works, Roadworks & Drainage																				
S22S4000	Road Re-construction Works (CH 2840 - 3450)	-85	49.96%	185	06-May-13 A	18-Feb-14	Road Re-construction Works (CH 2840 - 3450)													
S22S4405	Road and Drainages Works for Fast Lane (CH2840 - 3000)	-71	90%	45	06-May-13 A	31-Oct-13	Road and Drainages Works for Fast Lane (CH2840 - 3000)													
S22S4410	Road Surface Works for Fast Lane (CH2840 - 3000)	-71	0%	12	31-Oct-13	14-Nov-13	Road Surface Works for Fast Lane (CH2840 - 3000)													
S22S4415	Road Re-Construction Works for Mid 2 Lane (CH2840 - 3000)	-71	0%	30	14-Nov-13	19-Dec-13	Road Re-Construction Works for Mid 2 Lane (CH2840 - 3000)													
S22S4420	Road and Drainages Works for Fast and Mid Lane (CH3000 - 3450)	-71	0%	30	14-Nov-13	19-Dec-13	Road and Drainages Works for Fast and Mid Lane (CH3000 - 3450)													

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014					
							Q4				Q1		Q2		Q3	
							44	45	46	47	48	49	50	51	52	53
S22S4425	Road Surface Works for Fast Lane and Mid Lane (CH3000 - 3450)	-71	0%	12	19-Dec-13	06-Jan-14										
S22S4430	Road and Drainages Works for Slow Lane (CH2840 - 3450)	-71	0%	12	06-Jan-14	20-Jan-14										
S22S4435	Road Surface Works for Slow Lane (CH3000 - 3450)	-71	0%	7	20-Jan-14	28-Jan-14										
S22S4440	Road Construction Works Remaining Works (along CH2840 - 3450)	-85	0%	7	10-Feb-14	18-Feb-14										
S22S4500	Roadworks for Realignment of Existing Shek Lin Road	-79	0%	30	02-Jan-14	10-Feb-14										
Traffic Control & Surveillance System																
S22S4820	TCSS - (Gantry 60) (incl. VO73 Revised Sign Gantry Details)	-71	30%	50	16-Sep-13 A	28-Jan-14										
Modification of Existing Bridge 12																
S22S1300	Demolish Existing Parapet & Stitching Works for bridge 12 & 12B (incl. VO3 & VO29)	-85	0%	70	16-Sep-13 A	18-Feb-14										
S22S1315	VO 3: Existing Bridge 12 pile cap construction		100%	30	17-Sep-10 A	15-Feb-11 A										
S22S1322	Removal of Existing Steel Barrier and Surface	-6	80%	8	22-Jul-13 A	28-Oct-13										
S22S1323	Stitching Works of Existing Bridge Decks B12 and B12B	-6	80%	20	08-Aug-13 A	01-Nov-13										
S22S1324	Road Surface of B12B for TW Slip Road	-6	0%	7	01-Nov-13	09-Nov-13										
S22S1326	Removal of existing central barrier along B12 and Erection breaking platform	-85	0%	12	16-Sep-13 A	07-Dec-13										
S22S1328	Breaking the existing stitch of B12 and condition survey	-85	0%	18	23-Nov-13	14-Dec-13										
S22S1329	Removal M.J and Replacement M.J	-85	0%	8	14-Dec-13	24-Dec-13										
S22S1331	Stitching Works for B12	-85	0%	35	24-Dec-13	10-Feb-14										
S22S1332	Road Surface Works	-85	0%	7	10-Feb-14	18-Feb-14										
Landscaping																
S22S6000	Landscaping Works	-79	40%	50	23-Sep-13 A	10-Feb-14										
Site Area SA23																
PHSA2320	Possession of SA23 (Day180)		100%	0	04-May-10 A											
SA230000	Site Area SA23 Works Period	-76	85.75%	586	16-Jul-10 A	17-Jan-14										
SA230010	Site Area SA23 Works Completion	161	0%	0		17-Jan-14										
South Bound																
Preliminaries																
S23S0000	Site Clearance / Site Access		100%	144	28-Dec-11 A	24-Aug-13 A										
S23S1000	Site Clearance		100%	72	28-Dec-11 A	27-Dec-12 A										
S23S2000	Site Access		100%	72	28-Dec-12 A	24-Aug-13 A										
Slopeworks																
S21N2638	Slopeworks Fill (S27)		100%	99	29-Nov-12 A	24-Jan-13 A										
S21N26381	Slopeworks Fill (S27) - Stage 1, +45mPD		100%	33	29-Nov-12 A	07-Dec-12 A										
S21N26382	Slopeworks Fill (S27) - Stage 2, +50mPD		100%	33	08-Dec-12 A	31-Dec-12 A										
S21N26383	Slopeworks Fill (S27) - Stage 3, +55mPD		100%	33	04-Jan-13 A	24-Jan-13 A										
Landscaping																
S23S6000	Landscaping Works	-62	80%	50	23-Sep-13 A	17-Jan-14										
Site Area SA24																
PHSA2410	Possession of SA24 (Day180)		100%	0	04-May-10 A											
SA240000	Site Area SA24 Works Period	-82	88.52%	788	04-May-10 A	24-Jan-14										
SA240010	Site Area SA24 Works Completion	154	0%	0		24-Jan-14										
North Bound																
Preliminaries																
S24N0000	Site Clearance/Access Rd		100%	89	25-Aug-10 A	09-Dec-10 A										
S24N0010	Site Clearance		100%	72	25-Aug-10 A	19-Nov-10 A										
S24N0020	Access Road		100%	72	07-Sep-10 A	09-Dec-10 A										
Slopeworks																
S24N5000	Slopeworks Cut(S31A)		100%	150	01-Jun-11 A	25-Nov-11 A										

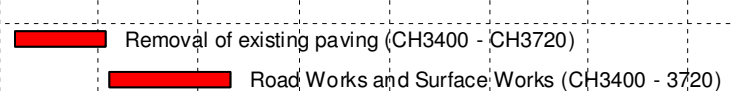
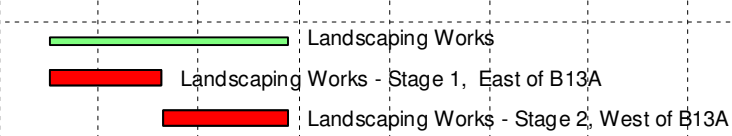
Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014								
							Q4				Q1		Q2		Q3				
							44	45	46	47	48	49	50	51	52	53	54		
S24N5010	Slopeworks Cut (S31A) & Soil Nail : Stage 1 (Upper +80mPD)		100%	60	01-Jun-11 A	06-Aug-11 A													
S24N5020	Slopeworks Cut (S31A) & Soil Nail : Stage 2 (Lower +72mPD)		100%	60	08-Aug-11 A	22-Oct-11 A													
S24N5030	Slopeworks Cut (S31A) : Shortcreting		100%	30	24-Oct-11 A	25-Nov-11 A													
S24N5810	Erect Scaffolding & Soil Nail Installation (Area 4)		100%	60	19-Mar-13 A	08-May-13 A													
S24N5831	Slope Reinstatement Works (Bridge 12ASA incl. VO74)	-17	70%	75	30-Apr-13 A	22-Nov-13													
Construction of Retaining Wall																			
Retaining Wall W56B-2 (Bay 12) (AD)																			
S24N2110	Prepare Piling Platform for W56B-2		100%	24	02-Oct-10 A	07-Feb-11 A													
S24N2120	Pre-drilling for W56B-2		100%	18	28-Oct-10 A	18-Nov-10 A													
S24N2130	Retaining Wall W56B-2		100%	255	21-Jan-11 A	01-Dec-11 A													
S24N2140	Piles for W56B-2 (Stage 2)		100%	75	21-Jan-11 A	23-Sep-11 A													
S24N2150	Excavation, upper		100%	75	26-Sep-11 A	13-Jan-12 A													
S24N2152	Excavation, Middle		100%	60	26-Sep-11 A	19-Apr-12 A													
S24N2155	Excavation, Bottom		100%	75	11-May-12 A	26-Jul-12 A													
S24N2160	Construction of Base Slab (Bay 12)		100%	75	27-Jul-12 A	25-Aug-12 A													
S24N2162	Retaining Wall Structure (Bay 12B)		100%	40	01-Oct-12 A	23-Nov-12 A													
S24N2170	Drainage & Backfilling W56B-2		100%	75	27-Feb-13 A	22-May-13 A													
Retaining Wall W57A																			
S24N2200	Construction of W57A		100%	35	26-Jun-13 A	17-Aug-13 A													
S24N2202	Construction of Structure W57A (W57B - bay1 to bay2)		100%	20	26-Jun-13 A	23-Jul-13 A													
S24N2203	Backfilling		100%	7	22-Jul-13 A	17-Aug-13 A													
Retaining Wall W57B (AD 2)																			
S24N2310	Prepare Piling Platform for W57B		100%	18	11-Jan-11 A	31-Jan-11 A													
S24N2320	Pre-drill for W57B		100%	20	01-Apr-11 A	13-Apr-11 A													
S24N2330	Piles for W57B		100%	45	01-Apr-11 A	14-May-11 A													
S24N2340	Excavate at W57B		100%	75	26-May-11 A	23-Aug-11 A													
S24N2360	Retaining Wall W57B		100%	75	19-Apr-12 A	11-Dec-12 A													
S24N2370	Backfilling & Drainage W57B		100%	60	25-Jan-13 A	17-Aug-13 A													
Retaining Wall W57C, (CSD 2)																			
S24N2402	Pre-drilling for W57C		100%	20	26-Mar-11 A	19-Apr-11 A													
S24N2404	Piles for W57C		100%	45	01-Apr-11 A	14-May-11 A													
S24N2407	Excavate to cut-off level		100%	75	26-May-11 A	23-Aug-11 A													
S24N2408	Retaining Wall, W57C		100%	75	19-Apr-12 A	13-Dec-12 A													
S24N2420	Backfilling & Drainage for W57C		100%	54	25-Jan-13 A	17-Aug-13 A													
Retaining Wall RWB12A																			
S24N1500	Piling & Construct RWB12A		100%	195	04-Jun-11 A	31-Jan-12 A													
S24N1510	Piling of RWB12A, Stage 1 (28/34 nos)		100%	60	04-Jun-11 A	31-Aug-11 A													
S24N1515	Piling of RWB12A, Stage 2 (6nos)		100%	24	01-Sep-11 A	23-Sep-11 A													
S24N1517	Piles Load Test		100%	36	26-Nov-11 A	10-Jan-12 A													
S24N1520	Construction of Base Slab, RWB12A		100%	60	23-Apr-12 A	17-Apr-13 A													
S24N1522	Construction of Wall, RWB12A		100%	40	18-Apr-13 A	07-Jun-13 A													
S24N1530	Backfilling		100%	20	09-May-13 A	25-Jun-13 A													
S24N1540	Construction the wing slab of RWB12A	-64	30%	30	16-Sep-13 A	19-Nov-13													
Roadworks, Drainage & Utilities																			
S24N4000	Roadworks, Drainages & Utilities (ch3140-3400, exclude B12A)	-67	31.7%	109	19-Aug-13 A	24-Jan-14													
S24N4015	Road and Drainage Works		100%	10	19-Aug-13 A	14-Sep-13 A													
S24N4025	Road Surface Works for Mid and Slow Lane		100%	14	27-Aug-13 A	14-Sep-13 A													
S24N4026	TTA - Stage 4B-3		100%	0		14-Sep-13 A													



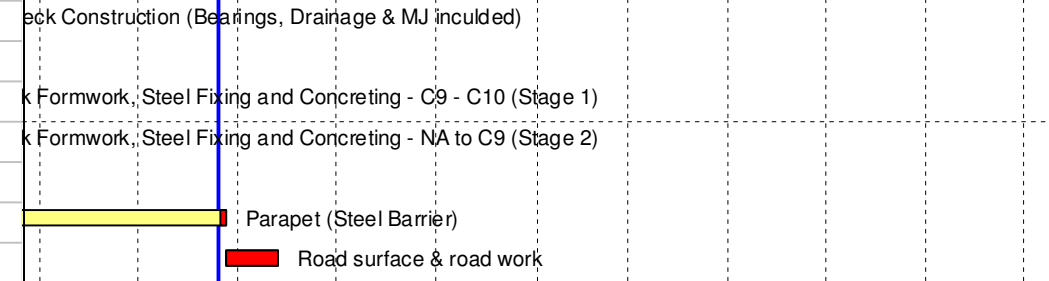
Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014									
							Q4				Q1		Q2		Q3					
							44	45	46	47	48	49	50	51	52	53	54			
SA260040	Additional work to existing ball valves, HKCG	-45	0%	52	26-Oct-13	27-Dec-13														
North Bound																				
Preliminaries																				
S26N0000	Site Clearance/Access Rd (Tai Wo Road)		100%	150	26-Feb-10 A	28-Aug-10 A														
S26N0010	Site Clearance (Tai Wo Road)		100%	75	26-Feb-10 A	31-May-10 A														
S26N0020	Access Road (Tai Wo Road)		100%	75	01-Jun-10 A	28-Aug-10 A														
Slopeworks																				
S26N5000	Slopeworks Cut(S31A-sn)		100%	150	01-Jun-11 A	25-Nov-11 A														
S26N5010	Slopeworks Cut(S31A-sn) - Stage 1 (Upper +65mPD)		100%	50	01-Jun-11 A	06-Aug-11 A														
S26N5020	Slopeworks Cut(S31A-sn) - Stage 2 (Middle +60mPD)		100%	50	08-Aug-11 A	22-Oct-11 A														
S26N5030	Slopeworks Cut(S31A-sn) - Stage 3 (Lower +55mPD)		100%	50	24-Oct-11 A	25-Nov-11 A														
S26N5040	Remaining Works of S31A	-33	40%	40	27-Jul-13 A	11-Dec-13														
Construction of Retaining Wall																				
Retaining Wall W59																				
S26N2000	Excavate & Construct W59 (w/SP)		100%	286	01-Mar-12 A	22-Mar-13 A														
S26N2002	W59: Base Slab of Bay 1-3		100%	60	01-Mar-12 A	04-Jun-12 A														
S26N2004	W59: Wall of Bay 1-3		100%	60	02-Jul-12 A	24-Dec-12 A														
S26N2006	W59: Base Slab & Wall of Bay 9-12a		100%	56	19-Apr-12 A	12-Jan-13 A														
S26N2008	W59: Excavation + Soil Nail for Bay 4-8		100%	45	19-Apr-12 A	09-Jul-12 A														
S26N2012	W59: Base Slab of Bay 4-8		100%	40	16-Jul-12 A	24-Dec-12 A														
S26N2014	W59: Wall of Bay 4-8		100%	75	27-Aug-12 A	02-Feb-13 A														
S26N2020	Backfilling		100%	24	23-Apr-12 A	22-Mar-13 A														
Roadworks, Drainage & Utilities																				
S26N4000	Roadworks, Drainages & Utilities (ch3400-3720)	-67	19.08%	92	29-Jul-13 A	24-Jan-14														
S26N4035	Removal of existing paving	-64	50%	7	29-Jul-13 A	30-Oct-13														
S26N4055	Road and Drainage Works for Slow and Mid Lane	-64	50%	25	27-Jul-13 A	13-Nov-13														
S26N4065	Road Surface for Slow and Mid Lane	-64	50%	10	27-Aug-13 A	19-Nov-13														
S26N4075	Road Construction Fast Lane and Remaining Works (along CH3400 - 3720)	-67	0%	50	23-Nov-13	24-Jan-14														
Traffic Control & Survelance System																				
S26N4810	TCSS - (15m High mast M9), (SEC Poles SC24/ S24) & (Gantry 24) (incl. VO73 Revised Sign Gantry ...	-29	50%	40	08-Jul-13 A	06-Dec-13														
Modification of Existing Bridge																				
Modification of Existing Bridge 13																				
S26N1200	VO 27: Temporary access and lighting for inspection on Bridge Deck interior of Existing Bridge 13		100%	10	02-Jan-12 A	17-Jan-12 A														
S26N1210	Construction of Temporary Pier supports & Installation of Jacks	-87	29.51%	134	22-Jul-13 A	20-Feb-14														
S26N1260	Removal of existing central barrier along B13, Erection breaking platform and re-construction of existi...		100%	14	22-Jul-13 A	25-Sep-13 A														
S26N1270	Breaking the existing stitch of B13 and conditional survey	-87	68%	25	27-Jul-13 A	04-Nov-13														
S26N1330	Removal existing M.J, Bridge Jacking and replacement bearing & M.J	-87	53%	35	27-Jul-13 A	23-Nov-13														
S26N1340	TTA - Stage 4B-4	-87	0%	0		23-Nov-13														
S26N1350	Stitch Works for B13	-87	0%	35	23-Nov-13	07-Jan-14														
S26N1360	Road Surfacing and Road Diversion	-87	0%	35	07-Jan-14	20-Feb-14														
Landscaping																				
S26N6040	Landscaping Works (CH3400 - 3720)	-39	50%	50	16-Sep-13 A	18-Dec-13														
South Bound																				
Preliminaries																				
S26S0000	Site Clearance/Access Rd (Tai Wo Road)		100%	129	26-Feb-10 A	04-Aug-10 A														
S26S10	Site Clearance (Tai Wo Road)		100%	80	26-Feb-10 A	05-Jun-10 A														
S26S20	Access Rd (Tai Wo Road)		100%	80	29-Apr-10 A	04-Aug-10 A														
Slopeworks																				

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014						
							Q4				Q1		Q2		Q3		
							44	45	46	47	48	49	50	51	52	53	54
S26S5000	Slopeworks Fill(S32)	-71	25%	24	18-Feb-13 A	15-Nov-13	Slopeworks Fill(S32)										
S26S5010	Slopeworks Fill (S32) - Stage 1 (Lower +42mPD)		100%	20	18-Feb-13 A	30-May-13 A	1 (Lower +42mPD)										
S26S5020	Slopeworks Fill (S32) - Stage 2 (Upper +45mPD)	-71	20%	20	08-Jun-13 A	15-Nov-13	Slopeworks Fill (S32) - Stage 2 (Upper +45mPD)										
S26S5110	Slope Reinstatement Works (besides LB3)	-13	16.67%	24	04-Mar-13 A	18-Nov-13	Slope Reinstatement Works (besides LB3)										
S26S5120	Slope Reinstatement Works (besides LB3) - Lower: below +24mPD	-13	70%	20	04-Mar-13 A	01-Nov-13	Slope Reinstatement Works (besides LB3) - Lower: below +24mPD										
S26S5130	Slope Reinstatement Works (besides LB3) - Upper: above +24mPD	-13	30%	20	27-Aug-13 A	18-Nov-13	Slope Reinstatement Works (besides LB3) - Upper: above +24mPD										
Construction of Retaining Wall																	
Retaining Wall RWTW1, (CSD 1)																	
S26S1289	Pre-drilling for RWTW1 part 1		100%	11	26-May-11 A	08-Jun-11 A											
S26S1290	Construct RWTW1N & RWTW1S		100%	325	26-Nov-11 A	25-Sep-13 A	Construct RWTW1N & RWTW1S										
S26S1391	Temp. Working Platform		100%	30	26-Nov-11 A	17-Dec-11 A											
S26S1392	Construction of Structure (mini piles)		100%	60	04-Jan-12 A	31-Jan-12 A											
S26S1394	Construction of Structure (part 1, Half of North & South RW)		100%	50	29-Dec-11 A	17-Feb-12 A											
S26S1395	Backfilling (part 1, Half of North & South RW)		100%	30	18-Feb-12 A	23-Feb-13 A											
S26S1401	ELS Works, Excavation and Protection Existing Gas Main		100%	20	25-Mar-13 A	21-Jun-13 A	on and Protection Existing Gas Main										
S26S1402	Construction of Structure (part 2, Remaining RW)		100%	35	19-Apr-13 A	17-Jul-13 A	of Structure (part 2, Remaining RW)										
S26S1403	Backfilling (part 2, Remaining RW)		100%	15	21-Jun-13 A	11-Sep-13 A	Backfilling (part 2, Remaining RW)										
S26S1404	Roadworks		100%	18	15-Aug-13 A	25-Sep-13 A	Roadworks										
Retaining Wall RWTW2, (CSD 1)																	
S26S1379	Pre-drilling for RWTW2		100%	12	12-Jan-11 A	25-Jan-11 A											
S26S1380	Piling/Excavate & Construct RWTW2		100%	609	26-May-11 A	25-Sep-13 A	Piling/Excavate & Construct RWTW2										
S26S1381	Minipile Piling works, Stage 1 (Half Bay 1)		100%	50	26-May-11 A	24-Sep-11 A											
S26S1382	Piling platform for Stage 2 (Bay 2-4)		100%	9	19-Apr-12 A	04-Jun-12 A											
S26S1383	Minipile piling works, stage 2 (31 nos.)		100%	58	04-Jun-12 A	08-Aug-12 A											
S26S1384	Base slab of RWTW2 (stage 1 & 2: half Bay1 & Bay 2-4)		100%	75	26-Nov-11 A	10-Nov-12 A											
S26S1386	Wall of RWTW2 (stage 1 & 2: half Bay1 & Bay 2-4)		100%	48	12-Nov-12 A	22-Jan-13 A											
S26S1520	Construction of Remain of RWTW2 (stage 3: Remaining Half Bay 1, Connection to LB2)		100%	50	18-Feb-13 A	04-Jun-13 A	RWTW2 (stage 3: Remaining Half Bay 1, Connection to LB2)										
S26S1530	Backfilling of RWTW2		100%	20	02-May-13 A	18-Jun-13 A											
S26S1540	Roadworks		100%	20	22-Aug-13 A	25-Sep-13 A	Roadworks										
Retaining Wall RWTW3, (VO)																	
S26S1389	Pre-drilling for RWTW3		100%	12	28-Dec-10 A	11-Jan-11 A											
S26S1390	Piling/Excavate & Construct RWTW3		100%	708	01-Aug-11 A	25-Sep-13 A	Piling/Excavate & Construct RWTW3										
S26S1591	Piling for RWTW3		100%	24	01-Aug-11 A	23-Sep-11 A											
S26S1592	ELS Works & Excavation		100%	24	28-Dec-11 A	28-Jan-12 A											
S26S1593	VO 51.1: Modification works of ELS		100%	20	03-Jul-12 A	31-Jul-12 A											
S26S1596	VO 51.1: Construction RWTW Base Slab (Bay2-8)		100%	60	20-Aug-12 A	10-Nov-12 A											
S26S1598	VO 51.1: Construction RWTW Wall Stem (Bay 2-8)		100%	60	17-Sep-12 A	14-Jan-13 A											
S26S1600	VO 51.1: Temporary cut to slope toe		100%	25	22-Jan-13 A	12-Apr-13 A											
S26S1602	VO 51.1: Rockfill Slope (Bay 1 -Bay 7)		100%	40	13-Apr-13 A	17-Jun-13 A	e (Bay 1 -Bay 7)										
S26S1604	VO 51.1: Construction RWTW3 (Bay 1)		100%	40	12-Nov-12 A	12-Dec-12 A											
S26S1606	VO 51.1: Remaining Rockfill below LB3	195	90%	20	19-Jun-13 A	28-Oct-13	VO 51.1: Remaining Rockfill below LB3										
S26S1608	VO 51.1: Roadworks		100%	30	26-Jun-13 A	25-Sep-13 A	VO 51.1 Roadworks										
Retaining Wall RWTW3A																	
S26S1614	Construction of RWTW 3A		100%	168	01-Oct-12 A	25-Sep-13 A	Construction of RWTW 3A										
S26S1628	ELS works RWTW3A		100%	32	01-Oct-12 A	15-Nov-12 A											
S26S1638	Excavation works RWTW 3A		100%	25	16-Nov-12 A	24-Nov-12 A											
S26S1648	RC wall construction RWTW 3A		100%	70	26-Nov-12 A	27-Apr-13 A											
S26S1658	Backfill RWTW 3A		100%	20	06-May-13 A	15-Jun-13 A											

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014								
							Q4				Q1		Q2		Q3				
							44	45	46	47	48	49	50	51	52	53	54		
S26S1668	Roadworks		100%	30	26-Jun-13 A	25-Sep-13 A													
Retaining Wall W60 & W61A (CSD 2)																			
S26S2020	Pre-drilling for W60 & W61A		100%	7	06-May-11 A	24-Jun-11 A													
S26S2030	Mini Piles for W60 & W61A		100%	30	15-Jun-11 A	20-Aug-11 A													
S26S2040	Excavation		100%	50	19-Apr-12 A	25-Aug-12 A													
S26S2050	Construct Cap & Wall		100%	52	06-Jun-12 A	31-Aug-12 A													
S26S2060	Backfilling		100%	30	04-Sep-12 A	10-Apr-13 A													
Temporary Bridge bet. RWTW2 & RWTW1																			
S26S2520	TTA Stage 5		100%	0	27-Sep-12 A														
Road Re-construction Works, Roadworks, Drainage & Utilities																			
S26S4000	Roadworks, Drainages & Utilities (Landing between B13A & B15A within CH 3600 - 3720)		100%	62	18-Feb-13 A	21-Jun-13 A													
S26S4002	Removal of existing paving of landing area		100%	12	18-Feb-13 A	09-Apr-13 A													
S26S4005	Road Works		100%	25	10-Apr-13 A	31-May-13 A													
S26S4006	Drainages Works		100%	15	23-Apr-13 A	30-May-13 A													
S26S4010	Road Surface Works (incl. VO14: Revised Layout of Police Observation Platform at CH3700)		100%	10	01-Jun-13 A	21-Jun-13 A													
Noise Barriers & Road Barriers																			
Noise Barrier NB35																			
S26S3000	Construct Noise Barrier & Beam Barrier, NB35		100%	60	15-Mar-13 A	18-Jun-13 A													
S26S3010	Construct Noise Barrier : foundation Works. NB35		100%	30	15-Mar-13 A	11-May-13 A													
S26S3020	Construct Noise Barrier : Installation of H-coumn & Panel NB35		100%	7	17-May-13 A	18-Jun-13 A													
S26S3030	Remaining Works of NB35	-71	80%	10	27-Aug-13 A	28-Oct-13													
Traffic Control & Survelance System																			
S26S4800	TCSS		100%	57	12-Mar-13 A	10-Aug-13 A													
S26S4810	TCSS - Stage 1 (LB1) (VSLP Pole P55)		100%	30	12-Mar-13 A	21-Sep-13 A													
S26S4820	TCSS - Stage 1 (LB2)		100%	15	15-Jul-13 A	20-Aug-13 A													
S26S4830	TCSS - Stage 1 (LB3), (Gantry G101) (incl. VO73 Revised Sign Gantry Details)		100%	30	10-Jun-13 A	10-Aug-13 A													
Landscaping																			
S26S6000	Landscaping Works	-71	0%	60	16-Nov-13	28-Jan-14													
S26S6010	Landscaping Works - Stage 1, East of B13A	-71	0%	30	16-Nov-13	20-Dec-13													
S26S6040	Landscaping Works - Stage 2, West of B13A	-71	0%	30	21-Dec-13	28-Jan-14													
Middle Lane																			
Road Re-construction Works, Roadworks & Drainage																			
S26S4014	Removal of existing paving (CH3400 - CH3720)	-56	0%	25	05-Nov-13	03-Dec-13													
S26S4019	Road Works and Surface Works (CH3400 - 3720)	-56	0%	30	04-Dec-13	10-Jan-14													
Construction of Bridge 12B																			
S22S1310	Construction of Bridge 12B		100%	367	15-Apr-10 A	20-Jul-13 A													
Preparatory and Enabling Works																			
S22S1210	Prepare Piling Platform		100%	38	15-Apr-10 A	31-May-10 A													
S22S1220	Pre-drilling Works		100%	26	15-Apr-10 A	15-May-10 A													
Construction Works of Bridge 12B																			
S22S1230	Socketed H-Pile (B12BP8)		100%	62	01-Jun-10 A	13-Aug-10 A													
S22S1250	Modify Pile caps & Additional Foundation (B12BP8)		100%	101	02-Jul-10 A	30-Oct-10 A													
S22S1251	Excavation & ELS Works		100%	36	02-Jul-10 A	12-Aug-10 A													
S22S1260	VO 17.1: Modify Pilecap of Bridge 12, Pier 5, 6 & 7 (Deleted)		100%	48	18-May-12 A	28-May-12 A													
S22S1270	VO 17.1: Modify Pilecap of Bridge 12, Pier 8 (Deleted)		100%	48	18-May-12 A	28-May-12 A													
S22S1280	VO 17.2: Piling for C9		100%	24	26-Jul-11 A	20-Aug-11 A													
S22S1290	VO 17.2: Piling for C10		100%	20	26-Sep-11 A	08-Oct-11 A													



Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014									
							Q4				Q1		Q2		Q3					
							44	45	46	47	48	49	50	51	52	53	54			
S22S1340	VO 17.2: Pilecap construction of C9		100%	60	06-Mar-12 A	02-Jun-12 A														
S22S1350	VO 17.2: Pilecap construction of C10		100%	54	01-Jun-12 A	21-Aug-12 A														
S22S1400	VO 17.2: Backfilling & Site Formation		100%	24	11-May-12 A	05-Jan-13 A														
S22S1410	VO 17.2: Pier Construction of C9 & C10		100%	94	01-Jun-12 A	20-Sep-12 A														
S22S1420	VO 17.2: Pier Construction of C9		100%	60	01-Jun-12 A	31-Jul-12 A														
S22S1430	VO 17.2: Pier Construction of C10		100%	75	28-Aug-12 A	13-Oct-12 A														
S22S1440	Construction of 12B North Abutment		100%	75	26-Aug-11 A	31-Oct-11 A														
S22S1450	VO 17.2: Deck Construction (Bearings, Drainage & MJ included)		100%	179	20-Dec-12 A	20-Jul-13 A														
S22S1460	VO 17.2: Scaffolding & Falsework		100%	35	20-Dec-12 A	28-Mar-13 A														
S22S1470	VO 17.2: Deck Formwork, Steel Fixing and Concreting - C9 - C10 (Stage 1)		100%	65	14-Mar-13 A	12-Jul-13 A														
S22S1480	VO 17.2: Deck Formwork, Steel Fixing and Concreting - NA to C9 (Stage 2)		100%	65	23-Mar-13 A	12-Jul-13 A														
S22S1500	Stressing		100%	5	15-Jul-13 A	20-Jul-13 A														
S22S1520	Parapet (Steel Barrier)	-79	90%	15	15-Aug-13 A	28-Oct-13														
S22S1540	Road surface & road work	-79	0%	14	28-Oct-13	13-Nov-13														
Construction of Bridge 12A																				
S24S1280	Construction of Bridge 12A (incl. VO29 & VO37: revised piling details and pile caps sleeving details)		100%	451	25-Aug-10 A	14-Sep-13 A														
Preparatory and Enabling Works																				
S24N1210	Site Clearance		100%	42	25-Aug-10 A	14-Oct-10 A														
S24N1220	Haul Road		100%	42	25-Aug-10 A	14-Oct-10 A														
S24N1230	Gas main Diversion, HKCG		100%	55	25-Aug-10 A	22-Apr-11 A														
S24N1240	11 KV Cable Diversion		100%	55	25-Aug-10 A	30-Oct-10 A														
S24N1250	Telephone Cable Diversion		100%	55	25-Aug-10 A	30-Oct-10 A														
Substructure and Pier Construction																				
South Abutment																				
S24N1260	Piling-South Abutment		100%	29	15-Oct-10 A	19-Jan-11 A														
S24N1261	Preparing piling platform		100%	18	15-Oct-10 A	05-Nov-10 A														
S24N1262	Pre-drilling		100%	18	15-Oct-10 A	05-Nov-10 A														
S24N1263	Piling (21nos)		100%	43	27-Nov-10 A	19-Jan-11 A														
S24N1310	Excavation & Cap-South Abutment		100%	35	04-May-11 A	04-Jun-11 A														
S24N1360	Pier & backfill, South Abutment		100%	36	27-Jun-11 A	17-Aug-11 A														
Pier 1																				
S24N1270	Piling-Pier 1 (15nos)		100%	30	02-Mar-11 A	07-Apr-11 A														
S24N1320	Cap-Pier 1 & Backfill		100%	36	23-May-11 A	05-Jul-11 A														
S24N1370	Pier 1 (Pierhead included)		100%	96	26-Sep-11 A	17-Dec-11 A														
Pier 2																				
S24N1280	Piling-Pier 2 (15nos)		100%	38	02-Aug-10 A	15-Sep-10 A														
S24N1330	Cap-Pier 2 & Backfill		100%	38	20-Nov-10 A	19-Jan-11 A														
S24N1380	Pier 2 (Pierhead included)		100%	96	14-Apr-11 A	12-Aug-11 A														
Pier 3																				
S24N1290	Piling-Pier 3 (15nos)		100%	38	16-Feb-11 A	27-Apr-11 A														
S24N1340	Cap-Pier 3 & Backfill		100%	32	26-May-11 A	04-Jul-11 A														
S24N1390	Pier 3 (pierhead included)		100%	96	11-Jul-11 A	02-Nov-11 A														
North Abutment																				
S24N1300	Pre-drilling & Preparation for Piling (incl. VO 39: Revised Foundation for North Abutment)		100%	24	26-May-11 A	23-Jun-11 A														
S24N1302	ELS for North abutment		100%	75	19-Jan-12 A	07-Nov-12 A														
S24N1350	Cap-North Abutment		100%	25	08-Nov-12 A	20-Nov-12 A														
S24N1400	Abutment, Drainage & backfill, North Abutment		100%	75	21-Nov-12 A	25-Jun-13 A														



Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014				Q3			
							Q4				Q1		Q2					
							44	45	46	47	48	49	50	51		52	53	54
S26S1422	Piling-TW3		100%	54	28-Dec-10 A	21-Mar-11 A												
S26S1432	Cap & Backfill - TW3		100%	45	26-May-11 A	19-Jul-11 A												
S26S1442	Pier-TW3 (Pierhead included)		100%	75	08-Aug-11 A	17-Dec-11 A												
TW1																		
S26S1460	Piling-TW1		100%	70	21-Oct-10 A	11-Nov-10 A												
S26S1470	Cap & Backfill - TW1		100%	36	27-Jan-11 A	19-Feb-11 A												
S26S1480	Pier-TW1 (Pierhead included)		100%	75	23-May-11 A	08-Jul-11 A												
TW2																		
S26S1462	Piling-TW2		100%	41	28-Mar-11 A	15-Apr-11 A												
S26S1472	Cap & Backfill - TW2		100%	45	21-Jun-11 A	15-Jul-11 A												
S26S1482	Pier-TW2 (Pierhead included)		100%	75	26-Jul-11 A	11-Feb-12 A												
Decking and Finishing																		
S26S560	Decking (Bearings, Drainage & MJ included) (incl. VO 45: Details Drainage Arrangement of LB1 & B1...		100%	199	27-Jul-11 A	12-Jul-12 A												
S26S570	Balanced Cantilever at TW1		100%	63	27-Jul-11 A	12-Oct-11 A												
S26S580	Preparing of Travelling Form		100%	18	27-Jul-11 A	17-Aug-11 A												
S26S590	Construction of Cantiliver Deck, TW1		100%	40	30-Sep-11 A	17-Dec-11 A												
S26S610	South End Span		100%	40	28-Dec-11 A	16-Feb-12 A												
S26S630	Balanced Cantilever at TW2 & Stitching (TW1-TW2)		100%	58	01-Feb-12 A	15-May-12 A												
S26S640	Preparing of Travelling Form		100%	12	01-Feb-12 A	29-Feb-12 A												
S26S650	Construction of Cantiliver Deck, TW2		100%	40	19-Apr-12 A	15-May-12 A												
S26S660	Stitching TW1-TW2		100%	18	11-May-12 A	11-Jun-12 A												
S26S670	Balanced Cantilever at TW3 & Stitching (TW2-TW3)		100%	52	28-Dec-11 A	19-Apr-12 A												
S26S680	Preparing of Travelling Form		100%	12	28-Dec-11 A	11-Jan-12 A												
S26S690	Construction of Cantiliver Deck, TW3		100%	40	12-Jan-12 A	19-Apr-12 A												
S26S700	Stitching TW2-TW3		100%	22	18-May-12 A	22-Jun-12 A												
S26S720	North End Span		100%	50	18-May-12 A	12-Jul-12 A												
S26S740	Parapet (incl. precast concrete skin)		100%	52	05-Nov-12 A	21-Sep-13 A												
S26S750	Erecting of Precast Parapet		100%	32	05-Nov-12 A	27-Aug-13 A												
S26S760	Installing M-Barrier		100%	6	15-Aug-13 A	21-Sep-13 A												
S26S770	Noise Barrier		100%	6	15-Aug-13 A	07-Sep-13 A												
S26S780	Surfacing		100%	7	16-Sep-13 A	25-Sep-13 A												
S26S790	Road Lighting		100%	7	27-Aug-13 A	14-Sep-13 A												
S26S800	Handover Inspection of LB1		100%	1	02-Oct-13 A	02-Oct-13 A												
Construction of Bridge 13A																		
S26S1300	Construction of Bridge 13A (incl. VO29 & VO37: revised piling details and pile caps sleeving details)		100%	744	03-May-10 A	22-Jun-13 A												
Preparatory and Enabling Works																		
S26S1610	Site Clearance		100%	24	03-May-10 A	31-May-10 A												
S26S1611	Access Road		100%	63	03-May-10 A	17-Jul-10 A												
S26S1620	Gas main Diversion at North/South Abutment, HKCG		100%	37	01-Jun-10 A	15-Jul-10 A												
S26S1690	SA25-Site Clearance		100%	25	26-Feb-11 A	26-Mar-11 A												
S26S1700	SA25 Haul Road		100%	25	26-Feb-11 A	26-Mar-11 A												
S26S1710	SA25-Gas Main diversion at South Abutment & P1		100%	25	26-Feb-11 A	26-Mar-11 A												
Substructure and Pier Construction																		
North Abutment																		
S26S1630	Piling-North Abutment		100%	65	16-Jul-10 A	30-Sep-10 A												
S26S1631	Pre-drilling & Preparing of piling platform		100%	20	16-Jul-10 A	07-Aug-10 A												
S26S1632	Piling		100%	45	09-Aug-10 A	30-Nov-10 A												

- Parapet (incl. precast concrete skin)
- Erecting of Precast Parapet
- Installing M-Barrier
- Noise Barrier
- Surfacing
- Road Lighting
- Handover Inspection of LB1

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014				Q3 54
							Q4				Q1		Q2		
							44	45	46	47	48	49	50	51	
S26S1650	Excavation & Cap-Nouth Abutment		100%	50	04-Jan-11 A	04-Apr-11 A									
S26S1670	Construction of Abutment-Nouth Abutment		100%	50	27-Oct-11 A	17-Dec-11 A									
S26S1930	Backfill Stage 1, North Abutment		100%	24	01-Mar-12 A	14-Apr-12 A									
S26S1940	Backfill Stage 2, North Abutment		100%	60	15-Oct-12 A	24-Apr-13 A									
South Abutment															
S26S1720	Piling-South Abutment		100%	90	02-Dec-10 A	23-Mar-11 A									
S26S1721	Pre-drilling & Preparing of piling platform		100%	30	20-Aug-10 A	20-Sep-10 A									
S26S1722	Piling		100%	60	10-Jan-11 A	17-Mar-11 A									
S26S1750	Excavation & Cap-South Abutment		100%	40	26-May-11 A	14-Jul-11 A									
S26S1780	Abutment, South Abutment		100%	38	26-Oct-11 A	17-Dec-11 A									
S26S1950	Backfill Stage 1, South Abutment		100%	24	01-Mar-12 A	04-Jul-12 A									
S26S1960	Backfill Stage 2, South Abutment		100%	43	19-Nov-12 A	25-Feb-13 A									
S26S1970	COD: 13ASA 18 days additional Drainage works (if RFI can be replied before 4-12-2012)		100%	18	01-Apr-13 A	19-Apr-13 A									
P1															
S26S1730	Piling-P1		100%	20	18-Oct-10 A	30-Nov-10 A									
S26S1760	Cap & Backfill - P1		100%	33	26-May-11 A	30-Jun-11 A									
S26S1790	Pier-P1		100%	75	26-Jul-11 A	24-Oct-11 A									
S26S1820	Pier-P1 Pierhead		100%	48	14-Feb-12 A	19-Apr-12 A									
P2															
S26S1740	Piling-P2		100%	35	28-Mar-11 A	16-Apr-11 A									
S26S1770	Cap & Backfill - P2		100%	38	26-May-11 A	11-Jul-11 A									
S26S1800	Pier-P2		100%	75	26-Oct-11 A	27-Jan-12 A									
S26S1910	Pier-P2 Pierhead		100%	53	01-Aug-12 A	12-Oct-12 A									
P3															
S26S1640	Piling-P3		100%	50	26-Feb-11 A	19-Mar-11 A									
S26S1660	Cap & Backfill - P3		100%	50	26-May-11 A	30-Jul-11 A									
S26S1680	Pier-P3		100%	96	26-Sep-11 A	20-Jan-12 A									
S26S1920	Pier-P3 Pierhead		100%	48	19-Apr-12 A	31-Jul-12 A									
Decking and Finishing															
S26S1808	Decking (Bearings, drainage & MJ included) (incl. VO 45: Details of Drainage Arrangement of LB1 & ...		100%	110	01-Jun-12 A	01-Mar-13 A									
S26S1810	Balanced Cantilever deck at P1		100%	0	01-Jun-12 A	20-Jul-12 A									
S26S1811	Preparing of Travelling Form		100%	12	01-Jun-12 A	25-Sep-12 A									
S26S1812	Construction of Cantiliver Deck at P1		100%	55	15-Jun-12 A	04-Aug-12 A									
S26S1816	South End Span (South abutment-P1)		100%	197	13-Aug-12 A	09-Nov-12 A									
S26S1818	South End Span		100%	50	13-Aug-12 A	10-Nov-12 A									
S26S1830	Balanced Cantilever deck at P2 & Stitching (P1-P2)		100%	78	19-Nov-12 A	14-Jan-13 A									
S26S1831	Preparing of Travelling Form		100%	12	19-Nov-12 A	08-Dec-12 A									
S26S1832	Balanced Cantilever deck at P2		100%	50	10-Dec-12 A	05-Jan-13 A									
S26S1833	Stitching (P1-P2)		100%	18	11-Jan-13 A	14-Jan-13 A									
S26S1840	Balanced Cantilever deck at P3 & Stitching (P2-P3)		100%	73	20-Aug-12 A	17-Jan-13 A									
S26S1841	Preparing of Travelling Form		100%	12	20-Aug-12 A	05-Sep-12 A									
S26S1842	Balanced Cantilever deck at P3		100%	43	06-Sep-12 A	05-Nov-12 A									
S26S1843	Stitching (P2-P3)		100%	18	15-Jan-13 A	17-Jan-13 A									
S26S1850	North End Span & Stitching (Nouth Abutment-P3)		100%	96	29-Oct-12 A	01-Mar-13 A									
S26S1851	End Spans for B13A		100%	29	29-Oct-12 A	01-Feb-13 A									
S26S1852	Post Tentioning Works		100%	18	18-Feb-13 A	01-Mar-13 A									
S26S1860	Parapet (icl, precast concrete skin)		100%	24	19-Mar-13 A	25-May-13 A									
S26S1863	Erection of Short Column and Barrier		100%	12	03-May-13 A	15-Jun-13 A									

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014							
							Q4				Q1			Q2		Q3		
							44	45	46	47	48	49	50	51	52	53	54	
Retaining Wall W65A																		
S27S1000	Sheet Pile/Excavate & Construct W65A		100%	83	28-Dec-10 A	08-Apr-11 A												
S27S1001	Sheet Pile & Excavation		100%	32	28-Dec-10 A	07-Feb-11 A												
S27S1002	Construction of Structure W65A		100%	50	11-Apr-11 A	13-Aug-11 A												
S27S1012	Backfilling behind W65A and drainage works	15	50%	40	15-Jul-13 A	05-Dec-13	Backfilling behind W65A and drainage works											
Retaining Wall W65B, (CSD 1)																		
S27S1040	WSD 1220 dia Diversion		100%	36	26-Jul-11 A	17-Dec-12 A												
S27S1041	HyD Lighting relocation		100%	36	26-May-11 A	18-Jun-11 A												
S27S1042	Excavate to cut-off level		100%	42	15-Oct-10 A	03-Dec-10 A												
S27S1043	COD: CLP overhead cable		100%	75	15-Jan-11 A	11-Apr-11 A												
S27S1044	Relocation of Existing Electric Poles, CLP		100%	24	15-Feb-11 A	11-Apr-11 A												
S27S1060	Capping/Walling for W65B		100%	42	06-Apr-11 A	20-Aug-11 A												
S27S1070	Backfilling for W65A & B		100%	75	10-Sep-11 A	21-Jul-12 A												
S27S1090	COD: DAN 273- revised thrust box detail and additional works for DN1220		100%	30	17-Dec-12 A	24-Jan-13 A												
S27S1110	Backfilling behind W65B and drainage works	23	70%	40	15-Jul-13 A	26-Nov-13	Backfilling behind W65B and drainage works											
Road Re-Construction Works, Roadworks, Drainage & Utilities																		
S26AS400	Roadworks, Drainages & Utilities (CH 4020 - 4500)	5	88.73%	399	14-Feb-12 A	17-Dec-13	Roadworks, Drainages & Utilities (CH 4020 - 4500)											
S26AS410	Roadworks, Drainages & Utilities Stage 1 (ch4020-ch4200 & Tai Po Tai Wo Road)		100%	110	14-Feb-12 A	11-Dec-12 A												
S26AS411	Removal of existing paving		100%	25	14-Feb-12 A	02-Jul-12 A												
S26AS412	Utilities		100%	75	14-Feb-12 A	31-Jul-12 A												
S26AS416	Drainages		100%	75	27-Jun-12 A	31-Jul-12 A												
S26AS418	Road Surface & Roadmark - Stage 1		100%	5	14-Jul-12 A	11-Dec-12 A												
S26AS420	Roadworks, Drainages & Utilities Stage 2(ch4200-ch4500)		100%	737	14-Feb-12 A	28-Sep-12 A												
S26AS422	Removal of existing paving		100%	50	14-Feb-12 A	12-Jan-13 A												
S26AS424	Utilities		100%	75	14-Feb-12 A	28-May-12 A												
S26AS426	Drainages		100%	75	27-Jun-12 A	11-Aug-12 A												
S26AS428	Road Surface & Roadmark - Stage 2		100%	8	10-Sep-12 A	28-Sep-12 A												
S26AS430	Roadworks Stage 3 (ch4020-ch4200 & Tai Po Tai Wo Road)		100%	35	28-Jan-13 A	21-Jun-13 A	ch4020-ch4200 & Tai Po Tai Wo Road											
S26AS440	Road Construction and Remaining Works (along CH4020 - 4500)		100%	75	28-Jan-13 A	20-Jul-13 A	Construction and Remaining Works (along CH4020 - 4500)											
S27S4090	HyD/Lighting (Existing Street Light removal by HyD Lightings)		100%	52	26-May-11 A	25-Jun-11 A												
S27S4100	Slip Road K (utilities & drainage), Stage 1 (excl. WSD connection)		100%	75	14-Feb-12 A	19-Apr-12 A												
S27S4102	Slip Road K (utilities & drainage roadwork), Stage 2 (incl. WSD connection)		100%	50	18-May-12 A	15-Oct-12 A												
S27S4110	Slip Road S (utilities, drainage & roadwork)	5	10%	50	04-Oct-13 A	17-Dec-13	Slip Road S (utilities, drainage & roadwork)											
S27S4160	TTA Stage 0		100%	0	07-Oct-12 A													
Noise Barriers & Road Barriers																		
Noise Barrier NB36 & NB37																		
S26AS300	Construct Noise Barrier & Beam Barrier, NB36 & NB37		100%	255	28-Dec-11 A	05-Jul-12 A												
S26AS310	Noise Barrier : Foundation Works		100%	75	28-Dec-11 A	31-Jan-12 A												
S26AS320	Noise Barrier : Installation of H-column & Panel		100%	60	01-Feb-12 A	05-Jul-12 A												
S26AS330	Remaining NB36 installation of panel		100%	7	25-May-13 A	15-Jun-13 A	Installation of panel											
Traffic Control & Surveillance System																		
S26AS480	TCSS (ch3720 - ch4820)		100%	56	30-Nov-12 A	15-Jul-13 A	ch3720 - ch4820											
S26AS481	TCSS - Stage 1 (ch3720 - ch3900)		100%	24	11-Mar-13 A	19-Apr-13 A												
S26AS482	TCSS - Stage 2 (ch3900 - ch4080)		100%	24	19-Apr-13 A	06-Jun-13 A	ch4080											
S26AS483	TCSS - Stage 3 (ch4080 - ch4260), (Gantry G59) (incl. VO73 Revised Sign Gantry Details)		100%	24	22-Jan-13 A	06-Jun-13 A	ch4260), (Gantry G59) (incl. VO73 Revised Sign Gantry Details)											
S26AS484	TCSS - Stage 4 (ch4260 - ch4440), (Gantry G58) (incl. VO73 Revised Sign Gantry Details)		100%	24	30-Nov-12 A	21-Dec-12 A	Details)											
S26AS485	TCSS - Stage 5 (ch4440 - ch4620)	50	60%	24	24-Dec-12 A	06-Nov-13	TCSS - Stage 5 (ch4440 - ch4620)											
S26AS486	TCSS - Stage 6 (ch4620 - ch4820), (Gantry G57) (incl. VO73 Revised Sign Gantry Details)		100%	24	07-Jan-13 A	15-Jul-13 A	Stage 6 (ch4620 - ch4820), (Gantry G57) (incl. VO73 Revised Sign Gantry Details)											

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014				Q3 54		
							Q4		Q1		Q2		Q3				
							44	45	46	47	48	49		50		51	52
P2																	
S26AS640	Piling - P2		100%	66	26-Apr-11 A	27-May-11 A											
S26AS650	Cap & Backfill - P2		100%	37	09-Jun-11 A	23-Jul-11 A											
S26AS660	Pier - P2		100%	36	26-Aug-11 A	22-Oct-11 A											
P3																	
S26AS670	Piling - P3		100%	66	28-Dec-10 A	01-Feb-11 A											
S26AS680	Cap & Backfill - P3		100%	37	26-Mar-11 A	14-May-11 A											
S26AS700	Pier - P3		100%	36	09-May-11 A	21-Jun-11 A											
P4																	
S26AS548	Piling - P4		100%	63	09-Feb-11 A	26-Mar-11 A											
S26AS550	Cap & Backfill - P4		100%	46	07-Apr-11 A	16-May-11 A											
S26AS560	Pier - P4		100%	36	27-Jun-11 A	08-Aug-11 A											
P5																	
S26AS570	Piling - P5		100%	54	23-May-11 A	23-Jul-11 A											
S26AS580	Cap & Backfill - P5		100%	36	04-Aug-11 A	16-Sep-11 A											
S26AS590	Pier - P5		100%	36	18-Nov-11 A	29-Feb-12 A											
P6																	
S26AS222	Piling-P6 Stage 1 (6 no.)		100%	20	26-Nov-11 A	19-Dec-11 A											
S26AS226	Piling-P6 Stage 2 (Remain, 9 no.)		100%	30	18-May-12 A	26-May-12 A											
S26AS232	Cap & Backfill - P6		100%	36	05-Oct-12 A	09-Nov-12 A											
S26AS242	Pier-P6		100%	12	20-Nov-12 A	13-Dec-12 A											
North Abutment																	
S26AS224	Piling-North Abutment, Stage 1 (11no.)		100%	36	07-Oct-11 A	17-Nov-11 A											
S26AS228	Piling-North Abutment, Stage 2 (Remain, 16 no.)		100%	60	11-May-12 A	16-Jul-12 A											
S26AS234	Excavation & Cap-North Abutment		100%	30	08-Aug-12 A	18-Dec-12 A											
S26AS236	Abutment		100%	20	24-Dec-12 A	18-Jan-13 A											
S26AS244	Backfilling		100%	50	22-Jan-13 A	15-May-13 A											
Decking and Finishing																	
S26AS250	Bridge Deck (7 spans) (Bearing, Drainage & MJ included) (incl. VO 44: Revised Drainage Arrangeme...		100%	314	26-Nov-11 A	28-Mar-13 A	cluded) (incl. VO 44: Revised Drainage Arrangement for Bridge 15A Deck)										
S26AS251	Bridge Deck - Pier 1 to South Abutment		100%	75	26-Nov-11 A	26-May-12 A											
S26AS252	Bridge Deck - Pier 2 to Pier 1		100%	75	11-May-12 A	29-Aug-12 A											
S26AS253	Bridge Deck - Pier 3 to Pier 2		100%	75	01-Jun-12 A	06-Nov-12 A											
S26AS254	Falsework dismantling of deck - Pier 3 to Pier 2		100%	18	03-Dec-12 A	22-Feb-13 A											
S26AS255	Bridge Deck - Pier 4 to Pier 3		100%	75	11-Aug-12 A	22-Dec-12 A											
S26AS256	Falsework dismantling of deck - Pier 4 to Pier 3		100%	18	25-Feb-13 A	03-May-13 A	to Pier 3										
S26AS257	Bridge Deck - Pier 5 to Pier 4		100%	75	27-Aug-12 A	31-Jan-13 A											
S26AS258	Falsework dismantling of deck - Pier 5 to Pier 4		100%	18	11-Mar-13 A	30-May-13 A	sk - Pier 5 to Pier 4										
S26AS259	Falsework Erection of deck - Pier 6 to Pier 5		100%	18	03-Dec-12 A	23-Feb-13 A											
S26AS260	Bridge Deck - Pier 6 to Pier 5		100%	75	29-Dec-12 A	19-Apr-13 A											
S26AS261	Falsework dismantling of deck - Pier 6 to Pier 5		100%	18	06-May-13 A	14-Jun-13 A	of deck - Pier 6 to Pier 5										
S26AS262	Falsework Erection of deck - North Abutment to Pier 6		100%	18	31-Dec-12 A	04-Feb-13 A											
S26AS263	Bridge Deck - North Abutment to Pier 6		100%	50	14-Jan-13 A	28-Mar-13 A											
S26AS264	Falsework dismantling of deck - North Abutment to Pier 6		100%	18	13-May-13 A	14-Jun-13 A	of deck - North Abutment to Pier 6										
S26AS269	Parapet (icl, precast concrete skin)		100%	50	06-Dec-12 A	08-Jun-13 A	rete skin)										
S26AS270	Noise Barrier for Bridge 15A		100%	25	27-Mar-13 A	12-Jun-13 A	15A										
S26AS272	Surfacing		100%	10	10-May-13 A	20-Jun-13 A											
S26AS275	Lighting		100%	7	04-May-13 A	07-Jun-13 A											
S26AS280	Handover Inspection of Bridge 15A		100%	3	20-Jun-13 A	22-Jun-13 A	of Bridge 15A										

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014				Q3	
							Q4				Q1		Q2			
							44	45	46	47	48	49	50	51		52
Ready For Pre-Handover Retaining Wall of Section 3																
HRW0030	Ready For Pre-Handover Retaining Wall W65C, W68, W69, W70, W72A	43	0%	7	26-Oct-13	02-Nov-13										
HRW0031	Ready For Pre-Handover Retaining Wall W65A, W65B, W66, W67, W71	43	0%	7	26-Oct-13	02-Nov-13										
Section 4																
Site Area SA28																
PHSA2820	Possession of SA28 (Day0)		100%	0	26-Feb-10 A											
SA280000	Site Area SA28 Works Period	112	89.15%	1216	26-Feb-10 A	06-Mar-14										
SA280010	Site Area SA28 Works Completion	112	0%	0		06-Mar-14										
SA280030	Temporary Traffic Arrangement (Detail shall refer to supplementary information)	90	89.12%	983	26-Feb-10 A	06-Mar-14										
SA280040	Overall Utilities Diversion (Detail shall refer to supplementary information)	90	89.12%	983	26-Feb-10 A	06-Mar-14										
North Bound																
Preliminaries																
S28N0000	Site Clearance/Access Rd		100%	239	26-Feb-10 A	19-Feb-11 A										
S28N0010	Site Clearance (ch 4830-5250)		100%	75	26-Feb-10 A	05-Jun-10 A										
S28N0020	Site Clearance (ch 5250-5700)		100%	75	17-Apr-10 A	23-Jul-10 A										
S28N0110	Access Rd (ch 4830-5250)		100%	75	30-Jun-10 A	04-Oct-10 A										
S28N0120	Access Rd (ch 5250-5700)		100%	75	09-Sep-10 A	19-Feb-11 A										
Slopeworks																
S28N5000	Slopeworks Fill S44		100%	36	28-Dec-11 A	11-Feb-12 A										
S28N5010	Slopeworks Fill S45	19	0%	40	26-Oct-13	11-Dec-13										
Construction of Retaining Wall																
Retaining Wall W72B (CSD 1)																
S28N2010	Prepare Piling Platform for W72B		100%	13	14-Sep-10 A	29-Sep-10 A										
S28N2020	Pre-drilling for W72B		100%	13	14-Sep-10 A	29-Sep-10 A										
S28N2040	Piling works		100%	24	01-Mar-11 A	21-Mar-11 A										
S28N2050	Capping/Walling for W72B		100%	50	26-May-11 A	25-Jul-11 A										
S28N2051	Pile Cap for W72B		100%	30	26-May-11 A	09-Jun-11 A										
S28N2052	Walling for W72B		100%	75	21-Jun-11 A	17-Sep-11 A										
S28N2060	Backfilling		100%	68	26-Sep-11 A	15-Dec-11 A										
Retaining Wall W73 (CSD 1)																
S28N2071	Excavation & ELS		100%	24	14-Sep-10 A	13-Oct-10 A										
S28N2072	W73 wall Structure (7 bays)		100%	45	01-Mar-11 A	20-Apr-11 A										
S28N2073	Base Slab W73		100%	24	01-Mar-11 A	28-Mar-11 A										
S28N2074	Wall Stem & W73		100%	24	25-Mar-11 A	20-Apr-11 A										
S28N2080	Backfill		100%	75	09-Jul-11 A	24-Dec-11 A										
Retaining Wall for Accom. Underpass Extn. (CSD 1)																
S28N230	Pre-drilling for Accommodation Underpass Extension		100%	30	30-Jun-10 A	04-Aug-10 A										
S28N240	Prepare Piling Platform for Accom. Underpass Extn		100%	30	30-Jun-10 A	04-Aug-10 A										
S28N250	Piling works		100%	45	01-Mar-11 A	25-Mar-11 A										
S28N260	Capping/Walling (incl. VO71: Details of typical section for slip road R verge at AUE wall)		100%	54	26-Mar-11 A	03-Jun-11 A										
S28N270	Capping (AUE)		100%	45	26-Mar-11 A	25-May-11 A										
S28N280	Walling (AUE)		100%	55	26-May-11 A	30-Jul-11 A										
S28N290	Backfilling		100%	62	26-Sep-11 A	17-Dec-11 A										
Retaining Wall W74																
S28N2105	Liasion with location resident for slip road diversion		100%	75	26-Feb-10 A	05-Jun-10 A										
S28N2115	Utilities Diversion		100%	60	07-Jun-10 A	17-Aug-10 A										
S28N2120	Temporary road and pedestrian diversion		100%	60	18-Aug-10 A	29-Oct-10 A										

Ready For Pre-Handover Retaining Wall W65C, W68, W69, W70, W72A
 Ready For Pre-Handover Retaining Wall W65A, W65B, W66, W67, W71

Site Area SA28 Works Period
 Site Area SA28 Works Completion
 Temporary Traffic Arrangement (Detail shall refer to supplementary information)
 Overall Utilities Diversion (Detail shall refer to supplementary information)

Slopeworks Fill S45

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013				2014					
							Q4				Q1		Q2		Q3	
							44	45	46	47	48	49	50	51	52	53
S30AN650	Pipe Laying and concrete surround works		100%	50	28-Feb-13 A	18-Mar-13 A										
S30AN660	Backfilling (15 Layers)		100%	30	22-Mar-13 A	18-May-13 A										
S30AN670	Gravity Sewer Line STS10_120 to 110 (33m Long)		100%	205	03-Aug-12 A	17-Nov-12 A										
S30AN680	M/H 110 construction (2.7m depth)		100%	30	03-Aug-12 A	15-Sep-12 A										
S30AN690	Pipe laying and concrete surround works		100%	40	06-Oct-12 A	26-Oct-12 A										
S30AN700	Backfilling (9 Layers)		100%	20	01-Nov-12 A	17-Nov-12 A										
S30AN710	Gravity Sewer Line STS10_100 to 105a (56.5m Long)		100%	75	03-Aug-12 A	15-Dec-12 A										
S30AN720	M/ H 100, M/ H 105 and M/ H 105a construction (2.5m depth)		100%	45	03-Aug-12 A	27-Jun-13 A										
S30AN730	Pipe Laying and concrete surround works		100%	50	17-Sep-12 A	06-Oct-12 A										
S30AN740	Construction of temporary access for Villager		100%	30	08-Oct-12 A	22-Oct-12 A										
S30AN750	Backfilling (5 Layers)		100%	25	24-Oct-12 A	15-Dec-12 A										
S30AN760	Gravity Sewer Line STS10_105a to 110 and STS10_105 to STS10_105a		100%	8	24-Jun-13 A	13-Aug-13 A										
S30AN770	Modification of existing DN2200 valve chamber		100%	1	09-Sep-13 A	17-Sep-13 A										
S30AN780	Pipe Laying and concrete surround works (2.5m depth)		100%	26	24-Jun-13 A	05-Aug-13 A										
S30AN790	Backfilling (7 Layers)		100%	7	06-Aug-13 A	13-Aug-13 A										

and M/ H 105a construction (2.5m depth)

Gravity Sewer Line STS10_105a to 110 and STS10_105 to STS10_105a

Modification of existing DN2200 valve chamber

Laying and concrete surround works (2.5m depth)

Backfilling (7 Layers)

**APPENDIX C
IMPLEMENTATION SCHEDULE OF
ENVIRONMENTAL MITIGATION MEASURES
(EMIS)**

Appendix C - Implementation Schedule of Environmental Mitigation Measures (EMIS)

Air Quality - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
Air Quality during Construction	• Restricting heights from which materials are dropped, as far as practicable to minimize the fugitive dust arising from unloading/loading.	During construction	V
	• All stockpiles of excavated materials or spoil of more than 50m ³ shall be enclosed, covered or dampened during dry or windy conditions.		V
	• Effective water sprays shall be used to control potential dust emission sources such as unpaved haul roads and active construction areas.		V
	• All spraying of materials and surfaces shall avoid excessive water usage.		V
	• 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.		V
	• Materials shall be dampened, if necessary, before transportation.		V
	• Travelling speeds shall be controlled to reduce traffic induced dust dispersion and resuspension within the site from the operating haul trucks.		V
	• Vehicle washing facilities shall be provided to minimize the quantity of material deposited on public roads.		@

Noise - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
Noise during Construction	• Use of silenced plant or plant equipped with mufflers or dampers in substitute of ordinary plant.	During construction	V
	• Reduce the number of equipment and their percentage on-time.		V
	• 3.5 m and 5.5 m high temporary noise barrier at culvert construction work area (Figure 2a of the Environmental Permit).		V
	• 3 m high temporary noise barrier along the northern edge of Bridge 12 at ground level (Figure 2b of the Environmental Permit).		V
	• 2 m high temporary noise barrier along the northern edge of Bridge 12 at bridge level (Figure 2b of the Environmental Permit).		In progress
	• 2.5 m high temporary noise barrier along Tai Wo Service Road West (Figure 2c of the Environmental Permit).		V
	• 3.5m high temporary noise barrier along Tai Wo Services Road West near Tai Hang (Figure2c of the Environmental Permit).		In progress

Water Quality - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
Water quality during Construction	Demolition and reconstruction of bridges	During construction	
	<ul style="list-style-type: none"> Prevent off-site migration through use of sheet piles. 		V
	<ul style="list-style-type: none"> Minimize duration of works as far as practical. 		V
	<ul style="list-style-type: none"> All sewer and drainage connections should be sealed to prevent debris, soil, sand, etc, from entering public sewers/drains. 		V
	<ul style="list-style-type: none"> Site surface runoff should be settled to remove sand/silt before it is discharged into the existing storm drains. 		V
	River training works		
	<ul style="list-style-type: none"> Inspection and testing of water quality in the nullah on the Tai Po River. 		N/A
	Road Widening Works and Earthworks		
	<ul style="list-style-type: none"> Wastewater generated from any concrete batching washdown of equipment or similar activities should be discharged into foul sewers, after the removal of 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. 		V
	<ul style="list-style-type: none"> Sand traps, oil interceptors and other pollution prevention installations should be provided, properly cleaned and maintained. 		V
	<ul style="list-style-type: none"> Runoff from exposed working areas, unfinished slopes and from unlined temporary channels should be directed to stilling basins and/or silt traps before discharging to the drainage outfalls. 		V
	<ul style="list-style-type: none"> Regular inspections of stilling basins and/or silt traps are required to ensure that sediment is not conveyed into the existing drainage system. 		V
	<ul style="list-style-type: none"> Open stockpiles should be covered with a tarpaulin cover. 		V
	<ul style="list-style-type: none"> During the wet season, any exposed top soils should be covered with a tarpaulin, shotcreted or hydroseeded. 		V
	<ul style="list-style-type: none"> Sand and silt from wash-water from vehicle washing should be settled out before discharging into storm drains. 		V
<ul style="list-style-type: none"> Fuels should be stored in bunded areas such that spillage can be easily collected. 	V		

Waste - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
Waste Management during Construction	General Waste	During construction	
	<ul style="list-style-type: none"> Transport of wastes off site as soon as possible. 		@
	<ul style="list-style-type: none"> Maintenance of accurate waste records 		V
	<ul style="list-style-type: none"> Minimization of waste generation for disposal (via reduction/recycling/re-use). 		V
	<ul style="list-style-type: none"> No on-site burning will be permitted. 		V
	<ul style="list-style-type: none"> Use of re-useable metal hoardings/signboards. 		V
	Vegetation from site clearance		
	<ul style="list-style-type: none"> Segregation of materials to facilitate disposal. 		V
	<ul style="list-style-type: none"> Mulching to reduce bulk and where possible review opportunities for the possible beneficial use within landscaping areas. 		V
	Demolition Wastes		
	<ul style="list-style-type: none"> Segregation of materials to facilitate disposal. 		V

• Appropriate stockpile management.	V
Excavated Materials	
• Segregation of materials to facilitate disposal / reuse.	V
• Appropriate stockpile management.	V
• Re-use of excavated material on or off site (where possible).	V
• 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).	V
• Appropriate stockpile management.	V
• Planning to reduce over ordering and waste generation.	V
• Recycling and re-use of materials where possible (e.g. metal, wood from formwork)	V
• For material which cannot be re-used/recycled, collection should be carried out by an approved waste contractor for landfill disposal.	V
Bentonite Slurries	
• Bentonite slurries should be reused as far as possible.	N/A
• Disposal in accordance with <i>Practice Note For Professional Persons ProPECC PN 1/94</i> .	N/A
Chemical Wastes	
• Storage within locked, covered and bunded area.	V
• The storage area shall not be located adjacent to sensitive receivers e.g. drains.	V
• Minimize waste production and recycle oils/solvents where possible.	V
• A spill response procedure shall be in place and absorption material available for minor spillages.	@
• Use appropriate and labelled containers.	V
• Educate site workers on site cleanliness/waste management procedures.	V
• If chemical wastes are to be generated, the contractor must register with EPD as a Chemical Waste Producer.	V
• The chemical wastes shall be collected by a licensed chemical waste collector.	V
Municipal Wastes	
• Waste shall be stored within a temporary refuse collection facility, in appropriate containers prior to collection and disposal.	V
• Regular, daily collections are required by an approved waste collector.	V

Ecology - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
Ecology during Construction	Accurate Delineation of Works Area	During construction	
	• Boundaries of proposed works areas shall be clearly identified and separated from external areas by a physical barrier to prevent encroachment of adjacent habitats.		V
	• 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 maximize protection.		V
	Vegetation Clearance		
	• No fires shall be lit within the works area for the purpose of burning cleared vegetation.		V
	• The Contractor shall give consideration to mulching the cleared vegetation for recycling within the works area /	V	

	adjacent land.		
	Dust generation		
	• Vehicle washing facilities to be provided at every discernible or designated vehicle exit point;		V
	• All temporary site access roads shall be sprayed with water to suppress dust as necessary;		V
	• All dusty materials should be sprayed with water immediately prior to any handling; and		V
	• All debris should be covered entirely by impervious sheeting or stored in a sheltered debris collection area.		V
	Surface Run-off		
	• Bund and cover stockpiles to avoid run-off;		V
	• Channel any run-off through a system of oil, grease and sediment / silt traps and reuse water on site where ever practical;		V
	• All vehicle maintenance to be undertaken within a bunded area; and		N/A
	• Maximize vegetation retention on-site to maximize absorption (minimize transport).		V

Landscape and Visual Impact - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
Landscape and Visual Impact during Construction	Preservation of Existing Vegetation	During construction	
	• Trees identified for retention within the project limit would be protected during the works		V
	• The tree transplanting and planting works shall be implemented by approved Landscape Contractors		V
	Temporary Works Areas		
	• Where feasible the works areas would be screened using hoarding and existing vegetation would be retained where possible to reduce the landscape and visual impacts arising from the construction activity. The landscape of these works areas would be restored following the completion of the construction phase.		V
	Hoarding		
	• A hoarding would be erected where practicable in the most visually sensitive locations to screen the temporary construction works from the local VSR's.		V
	Top Soils		
	• The works will result in disturbance to extensive areas of topsoil. Topsoil worthy of retention should be stockpiled for use following completion of the civil engineering works. It should either be temporarily vegetated with hydroseeded grass or turned over on a regular basis.		N/A
Protection of Important Landscape Features			
• Important features such as temples, Island House and kilns within the study area, although remote from the proposed works retained and adequately protected.	V		

Legend: V = implemented;
x = not implemented;
@ = partially implemented;
N/A = not applicable - No such work was undertaken or no such material was used on site.

**APPENDIX D
SUMMARY OF ACTION AND LIMIT LEVELS**

Appendix D - Summary of Action and Limit Levels

Table 1 – Action and Limit Levels for 1-hour TSP

Location	Action Level	Limit Level
AM1A	302.1 µg/m ³	500 µg/m ³
AM2	301.9 µg/m ³	500 µg/m ³
AM3	301.9 µg/m ³	500 µg/m ³
AM4A	302.3 µg/m ³	500 µg/m ³

Table 2 – Action and Limit Levels for 24-hour TSP

Location	Action Level	Limit Level
AM1A	176.6 µg/m ³	260 µg/m ³
AM2	178.6 µg/m ³	260 µg/m ³
AM3	193.1 µg/m ³	260 µg/m ³
AM4A	198.5 µg/m ³	260 µg/m ³

Table 3 – Action and Limit Levels for Construction Noise (0700-1900 hrs of normal weekdays)

Location	Action Level	Limit Level
NM1A	When one documented complaint, related to 0700 – 1900 hours on normal weekdays, is received from any one of the sensitive receivers	75 dB(A)
NM2		75 dB(A)
NM3		65/70 dB(A)*
NM4		75 dB(A)
NM5		75 dB(A)
NM6		70 dB(A)*
NM7		75 dB(A)

*Daytime noise Limit Level of 70 dB(A) applies to education institutions, while 65dB(A) applies during school examination period

**APPENDIX E
CALIBRATION CERTIFICATES OF
MONITORING EQUIPMENTS**

AECOM Asia Company Limited

TSP High Volume Sampler

Field Calibration Report

Station: Sheung Wun Yiu (AM1A) Operator: Gary Choi
 Cal. Date: 18-Sep-13 Next Due Date: 18-Nov-13
 Equipment No.: A-001-53T Serial No.: 10216

Ambient Condition			
Temperature, Ta (K)	302	Pressure, Pa (mmHg)	755.0

Orifice Transfer Standard Information					
Serial No:	843	Slope, mc	1.99238	Intercept, bc	-0.00351
Last Calibration Date:	6-Dec-12	$mc \times Qstd + bc = [DH \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	6-Dec-13	$Qstd = \{ [DH \times (Pa/760) \times (298/Ta)]^{1/2} - bc \} / mc$			

Calibration of TSP Sampler					
Resistance Plate No.	Orifice			HVS Flow Recorder	
	DH (orifice), in. of water	[DH x (Pa/760) x (298/Ta)] ^{1/2}	Qstd (m ³ /min) X-axis	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) Y-axis
18	8.9	2.95	1.48	46.0	45.54
13	6.3	2.49	1.25	38.0	37.62
10	4.5	2.10	1.06	32.0	31.68
7	3.6	1.88	0.94	27.0	26.73
5	2.3	1.50	0.76	20.0	19.80

By Linear Regression of Y on X

Slope, mw = 35.2147 Intercept, bw = -6.3839

Correlation Coefficient* = 0.9972

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 1.30m³/min

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = IC \times [(Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; IC = (mw x Qstd + bw) x [(760 / Pa) x (Ta / 298)]^{1/2} = 39.79

Remarks: _____

QC Reviewer: WS CHAN

Signature: [Signature]

Date: 19/09/13

AECOM Asia Company Limited

TSP High Volume Sampler

Field Calibration Report

Station: Shan Tong New Village (AM2) Operator: Choi Wing Ho
 Cal. Date: 23-Aug-13 Next Due Date: 23-Oct-13
 Equipment No.: A-001-29T Serial No.: 10202

Ambient Condition			
Temperature, Ta (K)	301	Pressure, Pa (mmHg)	748.3

Orifice Transfer Standard Information					
Serial No:	988	Slope, mc	1.94727	Intercept, bc	0.02332
Last Calibration Date:	20-May-13	$mc \times Qstd + bc = [DH \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	20-May-14	$Qstd = \{[DH \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Resistance Plate No.	Orifice			HVS Flow Recorder	
	DH (orifice), in. of water	[DH x (Pa/760) x (298/Ta)] ^{1/2}	Qstd (m ³ /min) X-axis	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) Y-axis
18	8.7	2.91	1.48	47.0	46.40
13	6.8	2.57	1.31	40.0	39.49
10	5.2	2.25	1.14	34.0	33.57
7	3.8	1.92	0.98	27.0	26.66
5	2.6	1.59	0.81	22.0	21.72

By Linear Regression of Y on X

Slope, mw = 36.8110 Intercept, bw = -8.5424

Correlation Coefficient* = 0.9972

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 1.30m³/min

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = IC \times [(Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; IC = (mw x Qstd + bw) x [(760 / Pa) x (Ta / 298)]^{1/2} = 39.82

Remarks: _____

QC Reviewer: WS CHAN

Signature: [Signature]

Date: 26/8/13

AECOM Asia Company Limited

TSP High Volume Sampler

Field Calibration Report

Station: Shan Tong New Village (AM2) Operator: Choi Wing Ho
 Cal. Date: 22-Oct-13 Next Due Date: 22-Dec-13
 Equipment No.: A-001-29T Serial No.: 10202

Ambient Condition			
Temperature, Ta (K)	297.8	Pressure, Pa (mmHg)	760.0

Orifice Transfer Standard Information					
Serial No:	988	Slope, mc	1.94727	Intercept, bc	0.02332
Last Calibration Date:	20-May-13	$mc \times Qstd + bc = [DH \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	20-May-14	$Qstd = \{ [DH \times (Pa/760) \times (298/Ta)]^{1/2} - bc \} / mc$			

Calibration of TSP Sampler					
Resistance Plate No.	Orifice			HVS Flow Recorder	
	DH (orifice), in. of water	[DH x (Pa/760) x (298/Ta)] ^{1/2}	Qstd (m ³ /min) X-axis	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) Y-axis
18	8.8	2.97	1.51	46.0	46.02
13	6.7	2.59	1.32	39.0	39.01
10	5.3	2.30	1.17	35.0	35.01
7	3.7	1.92	0.98	28.0	28.01
5	2.6	1.61	0.82	22.0	22.01

By Linear Regression of Y on X

Slope, mw = 34.0930 Intercept, bw = -5.4880

Correlation Coefficient* = 0.9980

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 1.30m³/min

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = IC \times [(Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; IC = (mw x Qstd + bw) x [(760 / Pa) x (Ta / 298)]^{1/2} = 38.82

Remarks: _____

QC Reviewer: K. M. SHEK

Signature: Mke

Date: 25 Oct 13

AECOM Asia Company Limited

TSP High Volume Sampler

Field Calibration Report

Station: Riverain Bayside (AM3) Operator: Choi Wing Ho
 Cal. Date: 23-Aug-13 Next Due Date: 23-Oct-13
 Equipment No.: A-001-69T Serial No.: 716

Ambient Condition			
Temperature, Ta (K)	301	Pressure, Pa (mmHg)	748.3

Orifice Transfer Standard Information					
Serial No:	988	Slope, mc	1.94727	Intercept, bc	0.02332
Last Calibration Date:	20-May-13	$mc \times Qstd + bc = [DH \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	20-May-14	$Qstd = \{[DH \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Resistance Plate No.	Orifice			HVS Flow Recorder	
	DH (orifice), in. of water	[DH x (Pa/760) x (298/Ta)] ^{1/2}	Qstd (m ³ /min) X-axis	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) Y-axis
18	8.6	2.90	1.47	45.0	44.43
13	7.3	2.67	1.36	41.0	40.48
10	5.6	2.34	1.19	35.0	34.56
7	4.2	2.02	1.03	29.0	28.63
5	3.1	1.74	0.88	22.0	21.72

By Linear Regression of Y on X

Slope, mw = 37.7138 Intercept, bw = -10.7541

Correlation Coefficient* = 0.9957

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 1.30m³/min

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = IC \times [(Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; IC = (mw x Qstd + bw) x [(760 / Pa) x (Ta / 298)]^{1/2} = 38.77

Remarks: _____

QC Reviewer: WS CHAN

Signature: [Signature]

Date: 26/8/13

AECOM Asia Company Limited

TSP High Volume Sampler

Field Calibration Report

Station: Riverain Bayside (AM3) Operator: Choi Wing Ho
 Cal. Date: 22-Oct-13 Next Due Date: 22-Dec-13
 Equipment No.: A-001-69T Serial No.: 716

Ambient Condition			
Temperature, Ta (K)	297.8	Pressure, Pa (mmHg)	760.0

Orifice Transfer Standard Information					
Serial No:	988	Slope, mc	1.94727	Intercept, bc	0.02332
Last Calibration Date:	20-May-13	$mc \times Qstd + bc = [DH \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	20-May-14	$Qstd = \{ [DH \times (Pa/760) \times (298/Ta)]^{1/2} - bc \} / mc$			

Calibration of TSP Sampler					
Resistance Plate No.	Orifice			HVS Flow Recorder	
	DH (orifice), in. of water	[DH x (Pa/760) x (298/Ta)] ^{1/2}	Qstd (m ³ /min) X-axis	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) Y-axis
18	9.0	3.00	1.53	48.0	48.02
13	7.4	2.72	1.39	42.0	42.01
10	5.6	2.37	1.20	35.0	35.01
7	4.0	2.00	1.02	26.0	26.01
5	3.0	1.73	0.88	21.0	21.01

By Linear Regression of Y on X

Slope, mw = 41.9095 Intercept, bw = -15.9768

Correlation Coefficient* = 0.9986

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 1.30m³/min

From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = IC \times [(Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; IC = (mw x Qstd + bw) x [(760 / Pa) x (Ta / 298)]^{1/2} = 38.49

Remarks: _____

QC Reviewer: K. H. SHEK Signature: Mike Date: 23 Oct 13

AECOM Asia Company Limited
TSP High Volume Sampler
Field Calibration Report

Station: 168 Shek Kwu Lung Village (AM4A) Operator: Gary Choi
 Cal. Date: 18-Sep-13 Next Due Date: 18-Nov-13
 Equipment No.: A-001-70T Serial No.: 10273

Ambient Condition			
Temperature, Ta (K)	302	Pressure, Pa (mmHg)	755.0

Orifice Transfer Standard Information					
Serial No:	843	Slope, mc	1.99238	Intercept, bc	-0.00351
Last Calibration Date:	6-Dec-12	$mc \times Qstd + bc = [DH \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	6-Dec-13	$Qstd = \{[DH \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Resistance Plate No.	Orifice			HVS Flow Recorder	
	DH (orifice), in. of water	[DH x (Pa/760) x (298/Ta)] ^{1/2}	Qstd (m ³ /min) X-axis	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) Y-axis
18	9.0	2.97	1.49	47.0	46.53
13	7.6	2.73	1.37	42.0	41.58
10	5.2	2.26	1.13	34.0	33.66
7	3.6	1.88	0.94	28.0	27.72
5	2.5	1.57	0.79	22.0	21.78

By Linear Regression of Y on X
 Slope, mw = 34.3955 Intercept, bw = -5.1697
 Correlation Coefficient* = 0.9987
 *If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 1.30m³/min
 From the Regression Equation, the "Y" value according to

$$mw \times Qstd + bw = IC \times [(Pa/760) \times (298/Ta)]^{1/2}$$

Therefore, Set Point; IC = (mw x Qstd + bw) x [(760 / Pa) x (Ta / 298)]^{1/2} = 39.94

Remarks: _____

QC Reviewer: WIS CHAN Signature: [Signature] Date: 19/09/13



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

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - May 20, 2013 Rootsometer S/N 0438320 Ta (K) - 297
 Operator Tisch Orifice I.D. - 0988 Pa (mm) - 751.84

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER	ORFICE
					DIFF Hg (mm)	DIFF H2O (in.)
1	NA	NA	1.00	1.3900	3.2	2.00
2	NA	NA	1.00	0.9720	6.4	4.00
3	NA	NA	1.00	0.8670	7.9	5.00
4	NA	NA	1.00	0.8270	8.7	5.50
5	NA	NA	1.00	0.6800	12.6	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
0.9884	0.7110	1.4090	0.9957	0.7163	0.8889
0.9842	1.0125	1.9926	0.9915	1.0201	1.2570
0.9821	1.1327	2.2278	0.9894	1.1412	1.4054
0.9811	1.1863	2.3365	0.9884	1.1952	1.4740
0.9759	1.4352	2.8179	0.9832	1.4459	1.7777
Qstd slope (m) = 1.94727			Qa slope (m) = 1.21935		
intercept (b) = 0.02332			intercept (b) = 0.01471		
coefficient (r) = 0.99998			coefficient (r) = 0.99998		
y axis = SQRT[H2O(Pa/760)(298/Ta)]			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}

EQUIPMENT CALIBRATION RECORD

Type: Laser Dust Monitor
 Manufacturer/Brand: SIBATA
 Model No.: LD-3
 Equipment No.: A.005.07a
 Sensitivity Adjustment Scale Setting: 557 CPM

Operator: Mike Shek (MSKM)

Standard Equipment

Equipment: Rupprecht & Patashnick TEOM®
 Venue: Cyberport (Pui Ying Secondary School)
 Model No.: Series 1400AB
 Serial No: Control: 140AB219899803
 Sensor: 1200C143659803 K_o: 12500
 Last Calibration Date*: 18 May 2013

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): 557 CPM
 Sensitivity Adjustment Scale Setting (After Calibration): 557 CPM

Hour	Date (dd-mm-yy)	Time	Ambient Condition		Concentration ¹ (mg/m ³) Y-axis	Total Count ²	Count/ Minute ³ X-axis
			Temp (°C)	R.H. (%)			
1	18-05-13	12:30 - 13:30	28.1	78	0.04714	1887	31.45
2	18-05-13	13:30 - 14:30	28.1	78	0.04932	1970	32.83
3	18-05-13	14:30 - 15:30	28.2	77	0.05156	2056	34.27
4	18-05-13	15:30 - 16:30	28.1	78	0.05083	2026	33.77

Note: 1. Monitoring data was measured by Rupprecht & Patashnick TEOM®
 2. Total Count was logged by Laser Dust Monitor
 3. Count/minute was calculated by (Total Count/60)

By Linear Regression of Y or X

Slope (K-factor): 0.0015
 Correlation coefficient: 0.9978

Validity of Calibration Record: 17 May 2014

Remarks:

QC Reviewer: YW Fung Signature:  Date: 20 May 2013

EQUIPMENT CALIBRATION RECORD

Type: Laser Dust Monitor
 Manufacturer/Brand: SIBATA
 Model No.: LD-3
 Equipment No.: A.005.08a
 Sensitivity Adjustment Scale Setting: 702 CPM
 Operator: Mike Shek (MSKM)

Standard Equipment

Equipment: Rupprecht & Patashnick TEOM®
 Venue: Cyberport (Pui Ying Secondary School)
 Model No.: Series 1400AB
 Serial No: Control: 140AB219899803
 Sensor: 1200C143659803 K₀: 12500
 Last Calibration Date*: 18 May 2013

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): 702 CPM
 Sensitivity Adjustment Scale Setting (After Calibration): 702 CPM

Hour	Date (dd-mm-yy)	Time	Ambient Condition		Concentration ¹ (mg/m ³) Y-axis	Total Count ²	Count/ Minute ³ X-axis
			Temp (°C)	R.H. (%)			
1	18-05-13	12:30 - 13:30	28.1	78	0.04714	1764	29.40
2	18-05-13	13:30 - 14:30	28.1	78	0.04932	1846	30.77
3	18-05-13	14:30 - 15:30	28.2	77	0.05156	1935	32.25
4	18-05-13	15:30 - 16:30	28.1	78	0.05083	1899	31.65

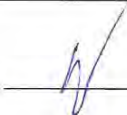
Note: 1. Monitoring data was measured by Rupprecht & Patashnick TEOM®
 2. Total Count was logged by Laser Dust Monitor
 3. Count/minute was calculated by (Total Count/60)

By Linear Regression of Y or X

Slope (K-factor): 0.0016
 Correlation coefficient: 0.9976

Validity of Calibration Record: 17 May 2014

Remarks:

QC Reviewer: YW Fung Signature:  Date: 20 May 2013

EQUIPMENT CALIBRATION RECORD

Type: Laser Dust Monitor
 Manufacturer/Brand: SIBATA
 Model No.: LD-3
 Equipment No.: A.005.09a
 Sensitivity Adjustment Scale Setting: 797 CPM
 Operator: Mike Shek (MSKM)

Standard Equipment

Equipment: Rupprecht & Patashnick TEOM®
 Venue: Cyberport (Pui Ying Secondary School)
 Model No.: Series 1400AB
 Serial No: Control: 140AB219899803
 Sensor: 1200C143659803 K₀: 12500
 Last Calibration Date*: 18 May 2013

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): 797 CPM
 Sensitivity Adjustment Scale Setting (After Calibration): 797 CPM

Hour	Date (dd-mm-yy)	Time	Ambient Condition		Concentration ¹ (mg/m ³) Y-axis	Total Count ²	Count/ Minute ³ X-axis
			Temp (°C)	R.H. (%)			
1	18-05-13	12:30 - 13:30	28.1	78	0.04714	1885	31.42
2	18-05-13	13:30 - 14:30	28.1	78	0.04932	1965	32.75
3	18-05-13	14:30 - 15:30	28.2	77	0.05156	2059	34.32
4	18-05-13	15:30 - 16:30	28.1	78	0.05083	2024	33.73


- Note: 1. Monitoring data was measured by Rupprecht & Patashnick TEOM®
 2. Total Count was logged by Laser Dust Monitor
 3. Count/minute was calculated by (Total Count/60)

By Linear Regression of Y or X

Slope (K-factor): 0.0015
 Correlation coefficient: 0.9973

Validity of Calibration Record: 17 May 2014

Remarks:

QC Reviewer: YW Fung Signature:  Date: 20 May 2013

EQUIPMENT CALIBRATION RECORD

Type: Laser Dust Monitor
 Manufacturer/Brand: SIBATA
 Model No.: LD-3
 Equipment No.: A.005.10a
 Sensitivity Adjustment Scale Setting: 753 CPM
 Operator: Mike Shek (MSKM)

Standard Equipment

Equipment: Rupprecht & Patashnick TEOM®
 Venue: Cyberport (Pui Ying Secondary School)
 Model No.: Series 1400AB
 Serial No: Control: 140AB219899803
 Sensor: 1200C143659803 K₀: 12500
 Last Calibration Date*: 18 May 2013

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): 753 CPM
 Sensitivity Adjustment Scale Setting (After Calibration): 753 CPM

Hour	Date (dd-mm-yy)	Time	Ambient Condition		Concentration ¹ (mg/m ³) Y-axis	Total Count ²	Count/ Minute ³ X-axis
			Temp (°C)	R.H. (%)			
1	18-05-13	12:30 - 13:30	28.1	78	0.04714	1886	31.43
2	18-05-13	13:30 - 14:30	28.1	78	0.04932	1968	32.80
3	18-05-13	14:30 - 15:30	28.2	77	0.05156	2061	34.35
4	18-05-13	15:30 - 16:30	28.1	78	0.05083	2026	33.77

Note: 1. Monitoring data was measured by Rupprecht & Patashnick TEOM®
 2. Total Count was logged by Laser Dust Monitor
 3. Count/minute was calculated by (Total Count/60)

By Linear Regression of Y or X

Slope (K-factor): 0.0015
 Correlation coefficient: 0.9983

Validity of Calibration Record: 17 May 2014

Remarks:

QC Reviewer: YW Fung Signature:  Date: 20 May 2013

EQUIPMENT CALIBRATION RECORD

Type: Laser Dust Monitor
 Manufacturer/Brand: SIBATA
 Model No.: LD-3
 Equipment No.: A.005.11a
 Sensitivity Adjustment Scale Setting: 799 CPM
 Operator: Mike Shek (MSKM)

Standard Equipment

Equipment: Rupprecht & Patashnick TEOM®
 Venue: Cyberport (Pui Ying Secondary School)
 Model No.: Series 1400AB
 Serial No: Control: 140AB219899803
 Sensor: 1200C143659803 K₀: 12500
 Last Calibration Date*: 18 May 2013

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): 799 CPM
 Sensitivity Adjustment Scale Setting (After Calibration): 799 CPM

Hour	Date (dd-mm-yy)	Time	Ambient Condition		Concentration ¹ (mg/m ³) Y-axis	Total Count ²	Count/ Minute ³ X-axis
			Temp (°C)	R.H. (%)			
1	18-05-13	12:15 - 13:15	28.1	78	0.04685	1871	31.18
2	18-05-13	13:15 - 14:15	28.1	78	0.04941	1979	32.98
3	18-05-13	14:15 - 15:15	28.2	77	0.05127	2055	34.25
4	18-05-13	15:15 - 16:15	28.1	78	0.05060	2021	33.68

- Note: 1. Monitoring data was measured by Rupprecht & Patashnick TEOM®
 2. Total Count was logged by Laser Dust Monitor
 3. Count/minute was calculated by (Total Count/60)

By Linear Regression of Y or X

Slope (K-factor): 0.0015
 Correlation coefficient: 0.9976

Validity of Calibration Record: 17 May 2014

Remarks:

QC Reviewer: YW Fung Signature:  Date: 20 May 2013

EQUIPMENT CALIBRATION RECORD

Type: Laser Dust Monitor
 Manufacturer/Brand: SIBATA
 Model No.: LD-3B
 Equipment No.: A.005.14a
 Sensitivity Adjustment Scale Setting: 786 CPM
 Operator: Mike Shek (MSKM)

Standard Equipment

Equipment: Rupprecht & Patashnick TEOM®
 Venue: Cyberport (Pui Ying Secondary School)
 Model No.: Series 1400AB
 Serial No: Control: 140AB219899803
 Sensor: 1200C143659803 K₀: 12500
 Last Calibration Date*: 18 May 2013

*Remarks: Recommended interval for hardware calibration is 1 year

Calibration Result

Sensitivity Adjustment Scale Setting (Before Calibration): 786 CPM
 Sensitivity Adjustment Scale Setting (After Calibration): 786 CPM

Hour	Date (dd-mm-yy)	Time	Ambient Condition		Concentration ¹ (mg/m ³) Y-axis	Total Count ²	Count/ Minute ³ X-axis
			Temp (°C)	R.H. (%)			
1	18-05-13	12:15 - 13:15	28.1	78	0.04685	2005	33.42
2	18-05-13	13:15 - 14:15	28.1	78	0.04941	2121	35.35
3	18-05-13	14:15 - 15:15	28.2	77	0.05127	2194	36.57
4	18-05-13	15:15 - 16:15	28.1	78	0.05060	2167	36.12

- Note: 1. Monitoring data was measured by Rupprecht & Patashnick TEOM®
 2. Total Count was logged by Laser Dust Monitor
 3. Count/minute was calculated by (Total Count/60)

By Linear Regression of Y or X

Slope (K-factor): 0.0014
 Correlation coefficient: 0.9987

Validity of Calibration Record: 17 May 2014

Remarks:

QC Reviewer: YW Fung Signature:  Date: 20 May 2013



CERTIFICATE OF CALIBRATION

Certificate No.: 12CA1115 01-01 Page 1 of 2

Item tested

Description:	Sound Level Meter (Type 1)	,	Microphone
Manufacturer:	B & K	,	B & K
Type/Model No.:	2238	,	4188
Serial/Equipment No.:	2255680 / N.009.01	,	2250447
Adaptors used:	-	,	-

Item submitted by

Customer Name: AECOM ASIA CO., LTD.
Address of Customer: -
Request No.: -
Date of receipt: 15-Nov-2012

Date of test: 15-Nov-2012

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	22-Jun-2013	CIGISMEC
Signal generator	DS 360	33873	29-May-2013	CEPREI
Signal generator	DS 360	61227	29-May-2013	CEPREI

Ambient conditions

Temperature: 22 ± 1 °C
Relative humidity: 60 ± 10 %
Air pressure: 1000 ± 5 hPa

Test specifications

- The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
- The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.
- The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsiveness of the Sound Level Meter.

Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

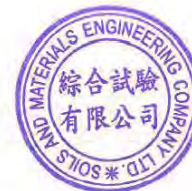
Actual Measurement data are documented on worksheets.

Approved Signatory:


Huang Jian Min/Feng Jun Qi

Date: 17-Nov-2012

Company Chop:



Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.



CERTIFICATE OF CALIBRATION

Certificate No.: 13CA0305 01-01 Page 1 of 2

Item tested

Description:	Sound Level Meter (Type 1)	,	Microphone
Manufacturer:	B & K	,	B & K
Type/Model No.:	2250-L	,	4950
Serial/Equipment No.:	2681366 (N.011.01)	,	2665582
Adaptors used:	-	,	-

Item submitted by

Customer Name:	AECOM ASIA CO LIMITED
Address of Customer:	-
Request No.:	-
Date of receipt:	05-Mar-2013

Date of test: 05-Mar-2013

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	23-May-2013	CIGISMEC
Signal generator	DS 360	33873	29-May-2013	CEPREI
Signal generator	DS 360	61227	29-May-2013	CEPREI

Ambient conditions

Temperature:	21 ± 1 °C
Relative humidity:	60 ± 10 %
Air pressure:	1000 ± 10 hPa

Test specifications

- The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
- The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.
- The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsiveness of the Sound Level Meter.

Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory:


Huang Jian Min/Feng Jun Qi

Date: 05-Mar-2013

Company Chop:



Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.



CERTIFICATE OF CALIBRATION

Certificate No.: 13CA0325 01-03

Page: 1 of 2

Item tested

Description: Acoustical Calibrator (Class 1)
Manufacturer: Rion Co., Ltd.
Type/Model No.: NC-73
Serial/Equipment No.: 10186482 / N.004.09
Adaptors used: -

Item submitted by

Customer: AECOM ASIA CO., LTD.
Address of Customer: -
Request No.: -
Date of receipt: 25-Mar-2013

Date of test: 26-Mar-2013

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2412857	29-May-2013	SCL
Preamplifier	B&K 2673	2239857	17-Dec-2013	CEPREI
Measuring amplifier	B&K 2610	2346941	17-Dec-2013	CEPREI
Signal generator	DS 360	61227	29-May-2013	CEPREI
Digital multi-meter	34401A	US36087050	10-Dec-2013	CEPREI
Audio analyzer	8903B	GB41300350	29-May-2013	CEPREI
Universal counter	53132A	MY40003662	29-May-2013	CEPREI

Ambient conditions

Temperature: 22 ± 1 °C
Relative humidity: 60 ± 10 %
Air pressure: 1000 ± 10 hPa

Test specifications

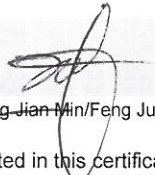
- 1, The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.
- 2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- 3, The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

This is to certify that the sound calibrator conforms to the requirements of annex B of IEC 60942: 1997 for the conditions under which the test was performed. This does not imply that the sound calibrator meets IEC 60942 under any other conditions.

Details of the performed measurements are presented on page 2 of this certificate.

Approved Signatory:


Huang Jian Min/Feng Jun Qi

Date: 26-Mar-2013

Company Chop:



Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

**APPENDIX F
EM&A MONITORING SCHEDULES**

**Widening of Tolo Highway / Fanling Highway (Stage 1) Between Island House Interchange and Tai Hang - Investigation
Tentative Impact Monitoring and Audit Schedule for October 2013**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Oct	2-Oct	3-Oct	4-Oct	5-Oct
			24-hour TSP 1-hour TSP & Noise Site inspection (Contract 1)	Site inspection (Contract 2)		
6-Oct	7-Oct	8-Oct	9-Oct	10-Oct	11-Oct	12-Oct
		24-hour TSP 1-hour TSP & Noise	Site inspection (Contract 1)	Site inspection (Contract 2)		24-hour TSP 1-hour TSP
13-Oct	14-Oct	15-Oct	16-Oct	17-Oct	18-Oct	19-Oct
			Site inspection (Contract 1)	Site inspection (Contract 2)	24-hour TSP 1-hour TSP & Noise	
20-Oct	21-Oct	22-Oct	23-Oct	24-Oct	25-Oct	26-Oct
			Site inspection (Contract 1)	24-hour TSP 1-hour TSP & Noise Site inspection (Contract 2)		
27-Oct	28-Oct	29-Oct	30-Oct	31-Oct		
			24-hour TSP 1-hour TSP & Noise Site inspection (Contract 1)	Site inspection (Contract 2)		

**Widening of Tolo Highway / Fanling Highway (Stage 1) Between Island House Interchange and Tai Hang - Investigation
Tentative Impact Monitoring and Audit Schedule for November 2013**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1-Nov	2-Nov
3-Nov	4-Nov	5-Nov	6-Nov	7-Nov	8-Nov	9-Nov
		24-hour TSP 1-hour TSP & Noise	Site inspection (Contract 1)	Site inspection (Contract 2)		
10-Nov	11-Nov	12-Nov	13-Nov	14-Nov	15-Nov	16-Nov
	24-hour TSP 1-hour TSP & Noise		Site inspection (Contract 1)	Site inspection (Contract 2)		24-hour TSP 1-hour TSP
17-Nov	18-Nov	19-Nov	20-Nov	21-Nov	22-Nov	23-Nov
			Site inspection (Contract 1)	Site inspection (Contract 2)	24-hour TSP 1-hour TSP & Noise	
24-Nov	25-Nov	26-Nov	27-Nov	28-Nov	29-Nov	30-Nov
			Site inspection (Contract 1)	24-hour TSP 1-hour TSP & Noise Site inspection (Contract 2)		

The schedule is subject to change due to unforeseeable circumstances (e.g. adverse weather, etc)

**APPENDIX G
IMPACT AIR QUALITY MONITORING
RESULTS AND THEIR GRAPHICAL
PRESENTATION**

Appendix G
Impact Air Quality Monitoring Results

1-hour TSP Monitoring Results at Station AM1A
(Fan Sin Temple, 3 Sheung Wun Yiu G/F)

Date	Start Time (hh:mm)	1st Hour Conc. ($\mu\text{g}/\text{m}^3$)	2nd Hour Conc. ($\mu\text{g}/\text{m}^3$)	3rd Hour Conc. ($\mu\text{g}/\text{m}^3$)
2-Oct-13	10:00	76.2	75.6	77.0
8-Oct-13	10:26	78.6	79.1	78.0
12-Oct-13	10:20	82.5	83.3	80.9
18-Oct-13	10:34	78.5	79.6	80.2
24-Oct-13	9:45	86.8	84.2	87.1
30-Oct-13	9:50	83.8	81.8	84.4
Average				81.0
Min				75.6
Max				87.1

1-hour TSP Monitoring Results at Station AM2
(12 Shan Tong New Village G/F)

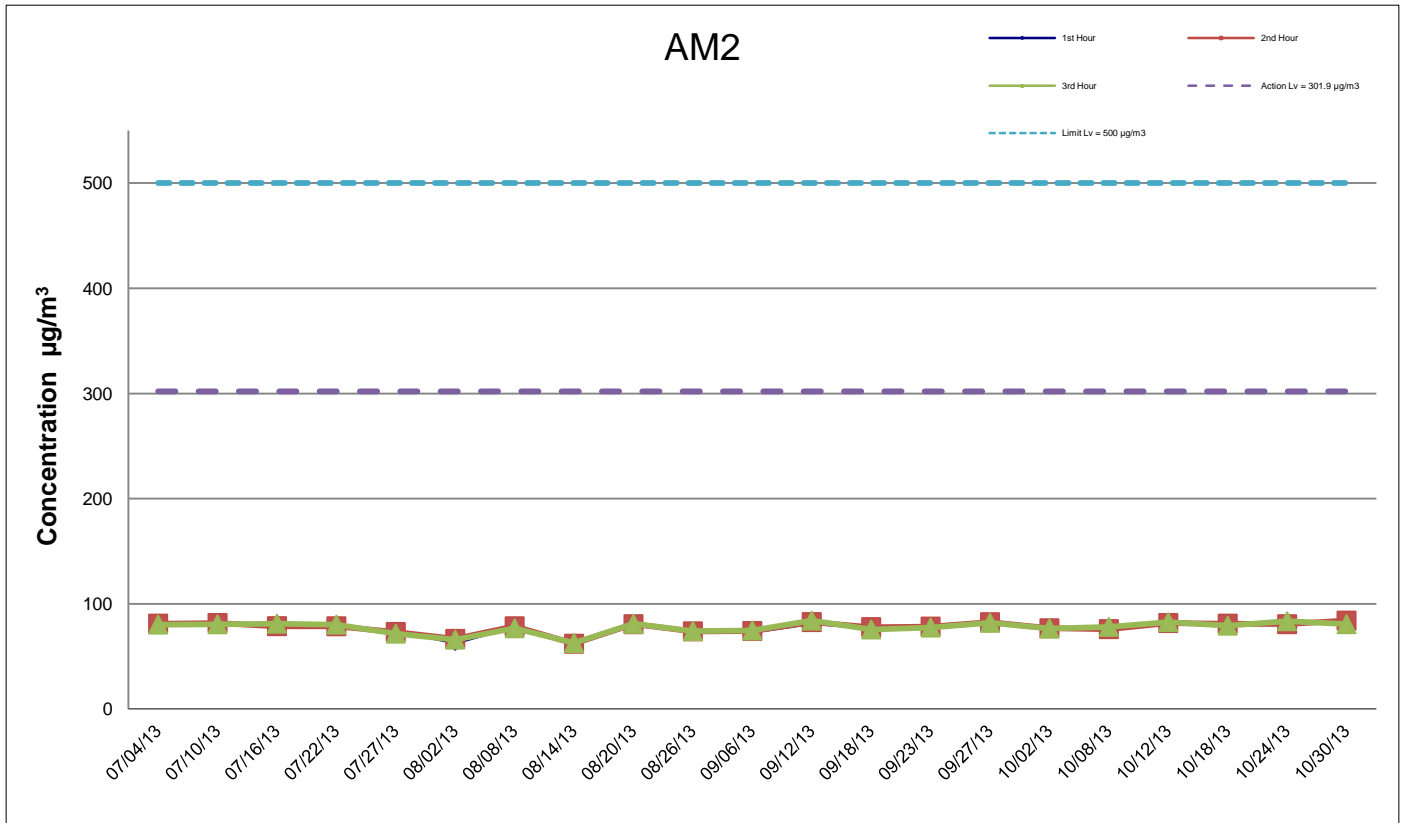
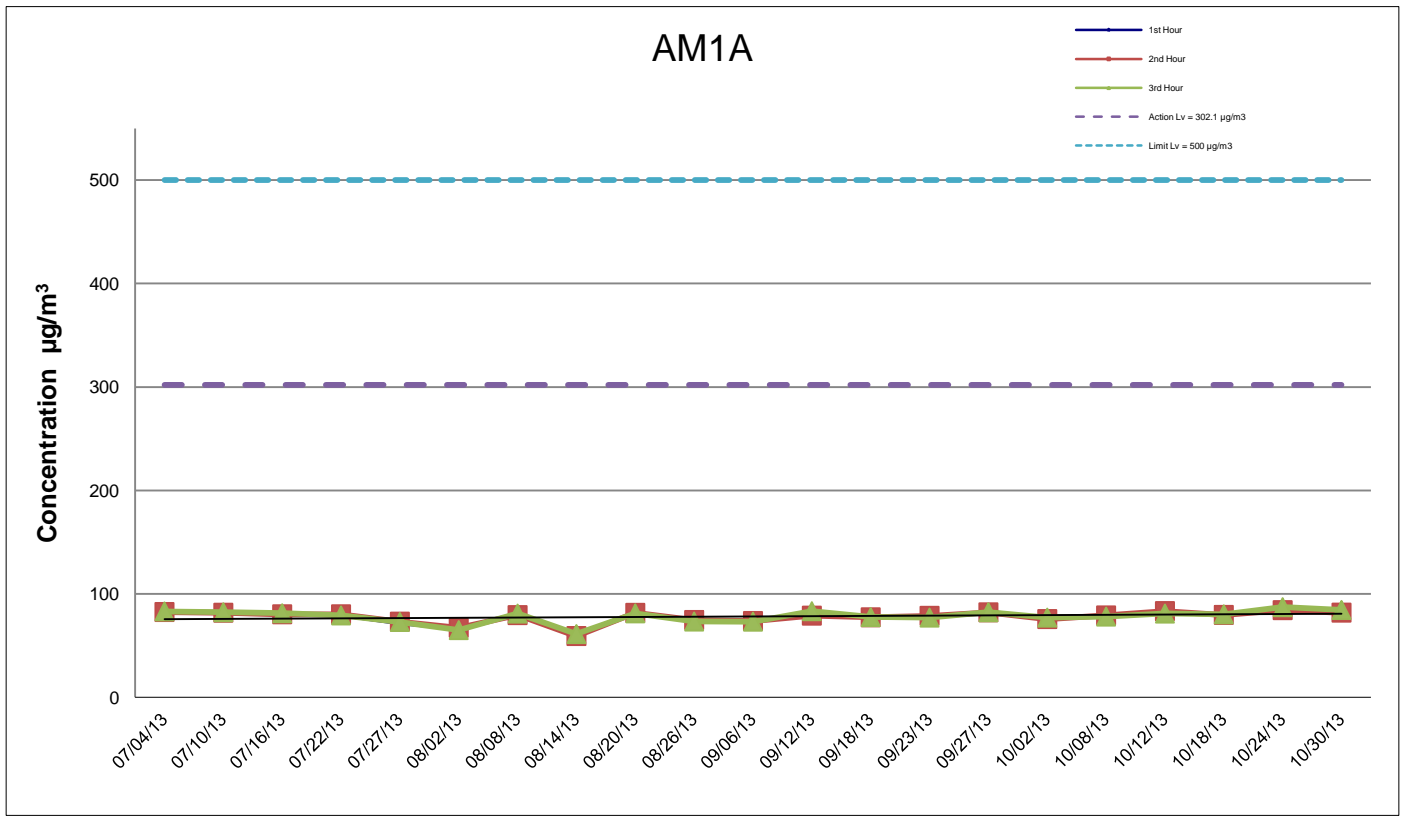
Date	Start Time (hh:mm)	1st Hour Conc. ($\mu\text{g}/\text{m}^3$)	2nd Hour Conc. ($\mu\text{g}/\text{m}^3$)	3rd Hour Conc. ($\mu\text{g}/\text{m}^3$)
2-Oct-13	9:40	75.8	76.7	76.5
8-Oct-13	10:02	77.9	75.9	78.1
12-Oct-13	10:10	83.4	81.7	82.6
18-Oct-13	9:45	80.6	81.1	79.2
24-Oct-13	9:55	81.2	80.6	83.4
30-Oct-13	9:45	81.7	84.0	80.6
Average				80.1
Min				75.8
Max				84.0

1-hour TSP Monitoring Results at Station AM3
(Roof of Switch Room at Riverain Bayside)

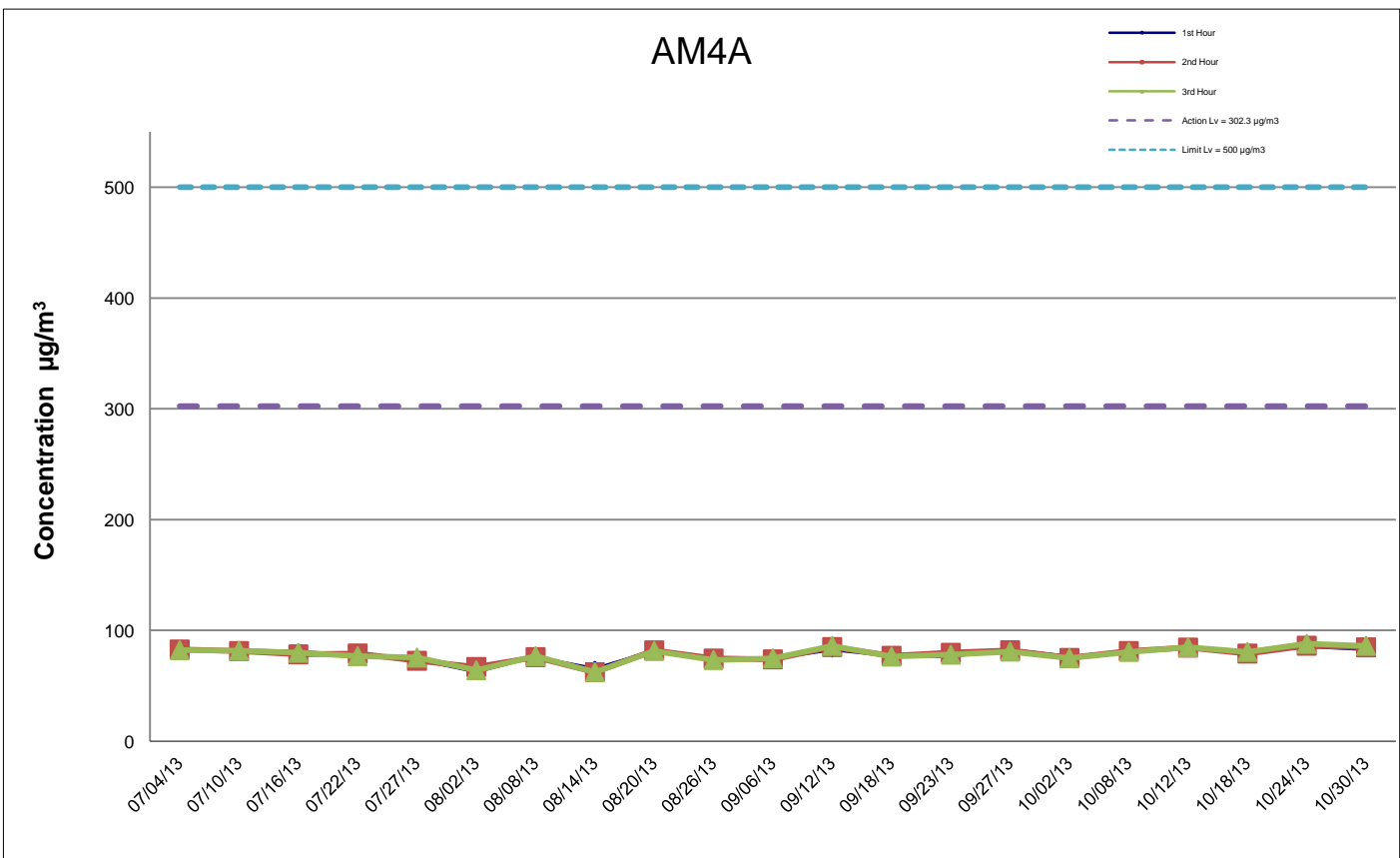
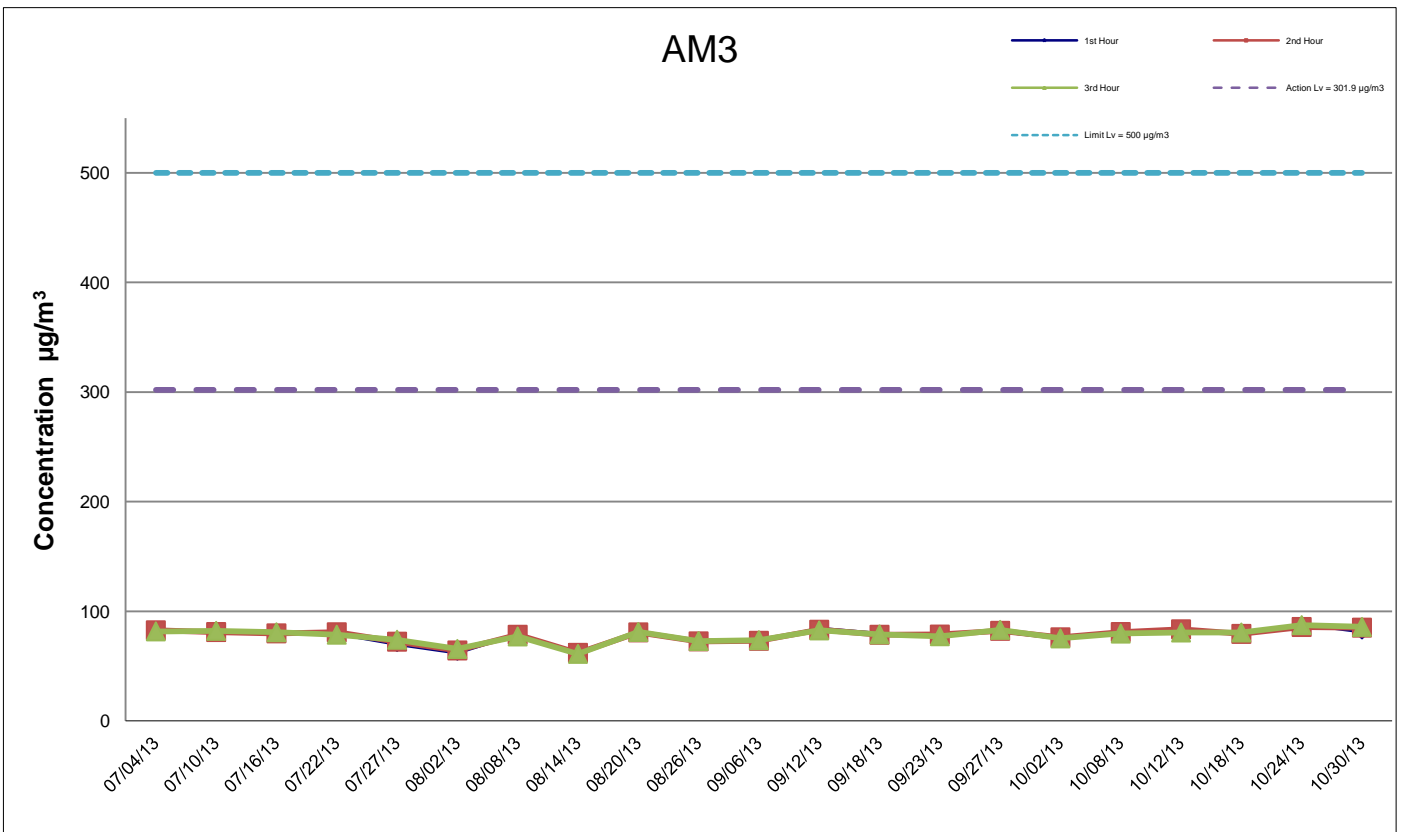
Date	Start Time (hh:mm)	1st Hour Conc. ($\mu\text{g}/\text{m}^3$)	2nd Hour Conc. ($\mu\text{g}/\text{m}^3$)	3rd Hour Conc. ($\mu\text{g}/\text{m}^3$)
2-Oct-13	9:50	74.9	76.3	75.3
8-Oct-13	10:15	80.2	81.1	79.7
12-Oct-13	9:48	83.0	83.6	80.7
18-Oct-13	13:56	78.5	79.4	80.7
24-Oct-13	9:30	88.1	85.7	87.4
30-Oct-13	9:35	81.1	85.1	85.8
Average				81.5
Min				74.9
Max				88.1

1-hour TSP Monitoring Results at Station AM4A
(Roof of Switch Room at 168 Shek Kwu Lung Village)

Date	Start Time (hh:mm)	1st Hour Conc. ($\mu\text{g}/\text{m}^3$)	2nd Hour Conc. ($\mu\text{g}/\text{m}^3$)	3rd Hour Conc. ($\mu\text{g}/\text{m}^3$)
2-Oct-13	10:15	76.8	75.2	75.0
8-Oct-13	10:38	80.5	81.4	80.6
12-Oct-13	13:40	84.2	84.5	84.9
18-Oct-13	10:16	78.8	79.1	80.6
24-Oct-13	10:05	85.0	86.2	87.9
30-Oct-13	10:05	82.6	84.7	86.1
Average				81.9
Min				75.0
Max				87.9



	Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation	SCALE	N.T.S.	DATE	Nov-13
	Graphical Presentation of Impact 1-hour TSP Monitoring Results	CHECK	ENFL	DRAWN	JCYK
		JOB NO.	60102979	APPENDIX No.	G
					-



Remark: The monitoring station at Tai Kwong Secondary School (AM4) was relocated to 168 Shek Kwu Lung Village (AM4A) starting from 1 September 2011 due to the mentioned school was closed down.

AECOM	Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation	SCALE	N.T.S.	DATE	Nov-13
	Graphical Presentation of Impact 1-hour TSP Monitoring Results	CHECK	ENFL	DRAWN	JCYK
		JOB NO.	60102979	APPENDIX No. G	

Impact Air Quality Monitoring Results

24-hour TSP Monitoring Results at Station AM1A (Fan Sin Temple, 3 Sheung Wun Yiu G/F)

Date	Weather Condition	Air Temp. (°C)	Atmospheric Pressure(hPa)	Flow Rate (m ³ /min.)		Av. flow (m ³ /min)	Total vol. (m ³)	Filter Weight (g)		Particulate weight(g)	Elapse Time		Sampling Time(hrs.)	Conc. (µg/m ³)
				Initial	Final			Initial	Final		Initial	Final		
2-Oct-13	Sunny	27.8	1012.6	1.33	1.33	1.33	1916.6	2.9204	3.0779	0.1575	19971.46	19995.46	24.00	82.2
8-Oct-13	Sunny	26.8	1008.1	1.33	1.33	1.33	1916.6	2.9348	3.1225	0.1877	19995.46	20019.46	24.00	97.9
12-Oct-13	Sunny	27.6	1011.0	1.33	1.33	1.33	1916.6	2.8965	2.9884	0.0919	20019.46	20043.46	24.00	47.9
18-Oct-13	Sunny	25.2	1018.4	1.33	1.33	1.33	1916.6	2.8066	2.9720	0.1654	20043.46	20067.46	24.00	86.3
24-Oct-13	Sunny	24.4	1013.1	1.33	1.33	1.33	1916.6	2.8948	3.0268	0.1320	20067.46	20091.46	24.00	68.9
30-Oct-13	Sunny	24.2	1017.2	1.33	1.33	1.33	1916.6	2.8134	2.9054	0.0920	20091.46	20115.46	24.00	48.0
													Average	71.9
													Min	47.9
													Max	97.9

24-hour TSP Monitoring Results at Station AM2 (12 Shan Tong New Village G/F)

Date	Weather Condition	Air Temp. (°C)	Atmospheric Pressure(hPa)	Flow Rate (m ³ /min.)		Av. flow (m ³ /min)	Total vol. (m ³)	Filter Weight (g)		Particulate weight(g)	Elapse Time		Sampling Time(hrs.)	Conc. (µg/m ³)
				Initial	Final			Initial	Final		Initial	Final		
2-Oct-13	Sunny	27.8	1012.6	1.34	1.34	1.34	1925.3	2.9501	3.055	0.1049	16543.12	16567.12	24.00	54.5
8-Oct-13	Sunny	26.8	1008.1	1.34	1.34	1.34	1925.3	2.934	3.0573	0.1233	16567.12	16591.12	24.00	64.0
12-Oct-13	Sunny	27.6	1011.0	1.34	1.34	1.34	1925.3	2.8759	2.9497	0.0738	16591.12	16615.12	24.00	38.3
18-Oct-13	Sunny	25.2	1018.4	1.34	1.34	1.34	1925.3	2.8177	2.9357	0.1180	16615.12	16639.12	24.00	61.3
24-Oct-13	Sunny	24.4	1013.1	1.34	1.34	1.34	1925.3	2.9109	2.9833	0.0724	16639.12	16663.12	24.00	37.6
30-Oct-13	Sunny	24.2	1017.2	1.34	1.34	1.34	1925.3	2.7996	2.8765	0.0769	16663.12	16687.12	24.00	39.9
													Average	49.3
													Min	37.6
													Max	64.0

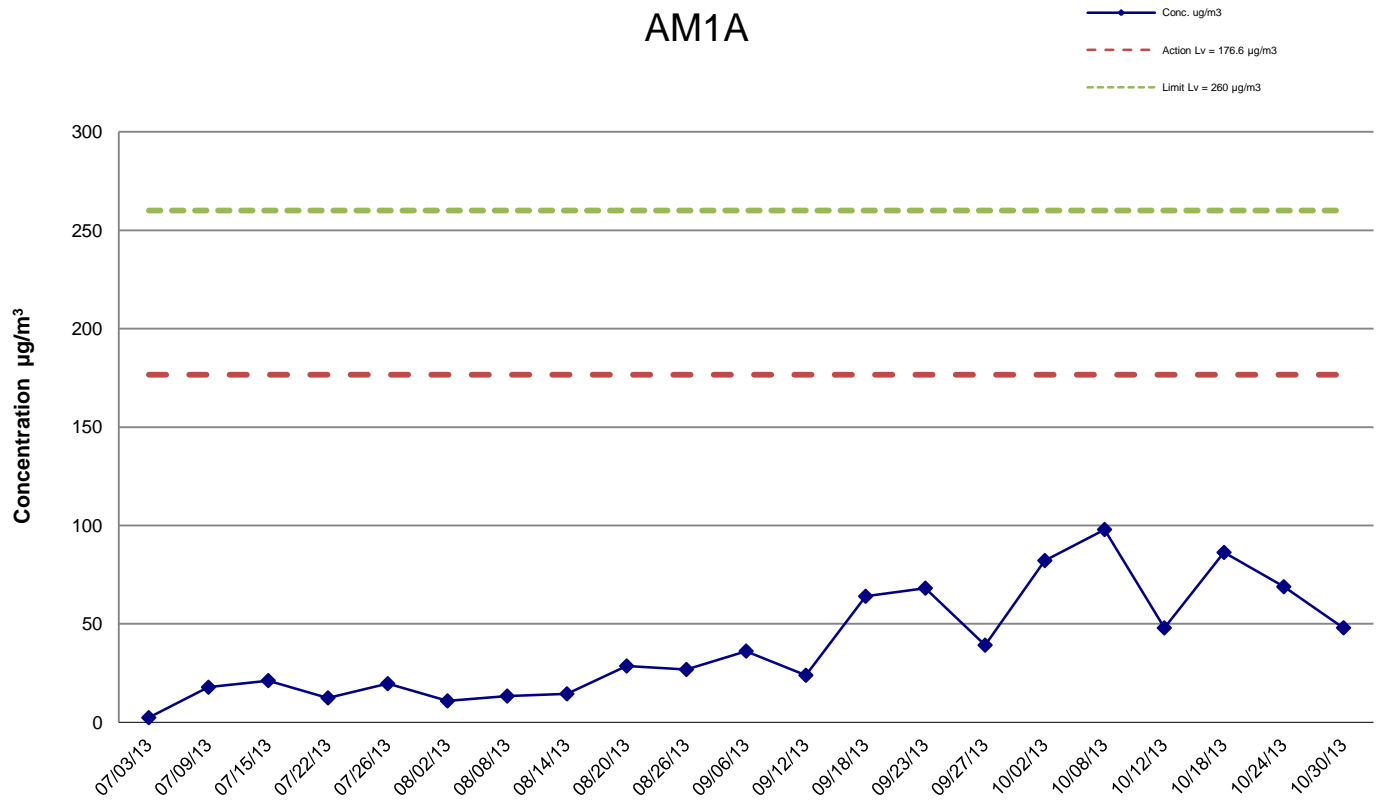
24-hour TSP Monitoring Results at Station AM3 (Roof of Switch Room at Riverain Bayside)

Date	Weather Condition	Air Temp. (°C)	Atmospheric Pressure(hPa)	Flow Rate (m ³ /min.)		Av. flow (m ³ /min)	Total vol. (m ³)	Filter Weight (g)		Particulate weight(g)	Elapse Time		Sampling Time(hrs.)	Conc. (µg/m ³)
				Initial	Final			Initial	Final		Initial	Final		
2-Oct-13	Sunny	27.8	1012.6	1.33	1.33	1.33	1921.0	2.9056	3.0118	0.1062	20272.59	20296.59	24.00	55.3
8-Oct-13	Sunny	26.8	1008.1	1.33	1.33	1.33	1921.0	2.9096	3.057	0.1474	20296.59	20320.59	24.00	76.7
12-Oct-13	Sunny	27.6	1011.0	1.33	1.33	1.33	1921.0	2.885	2.9583	0.0733	20320.59	20344.59	24.00	38.2
18-Oct-13	Sunny	25.2	1018.4	1.33	1.33	1.33	1921.0	2.8067	2.9017	0.0950	20344.59	20368.59	24.00	49.5
24-Oct-13	Sunny	24.4	1013.1	1.33	1.33	1.33	1921.0	2.9127	3.0231	0.1104	20368.59	20392.59	24.00	57.5
30-Oct-13	Sunny	24.2	1017.2	1.33	1.33	1.33	1921.0	2.8116	2.8805	0.0689	20392.59	20416.59	24.00	35.9
													Average	52.2
													Min	35.9
													Max	76.7

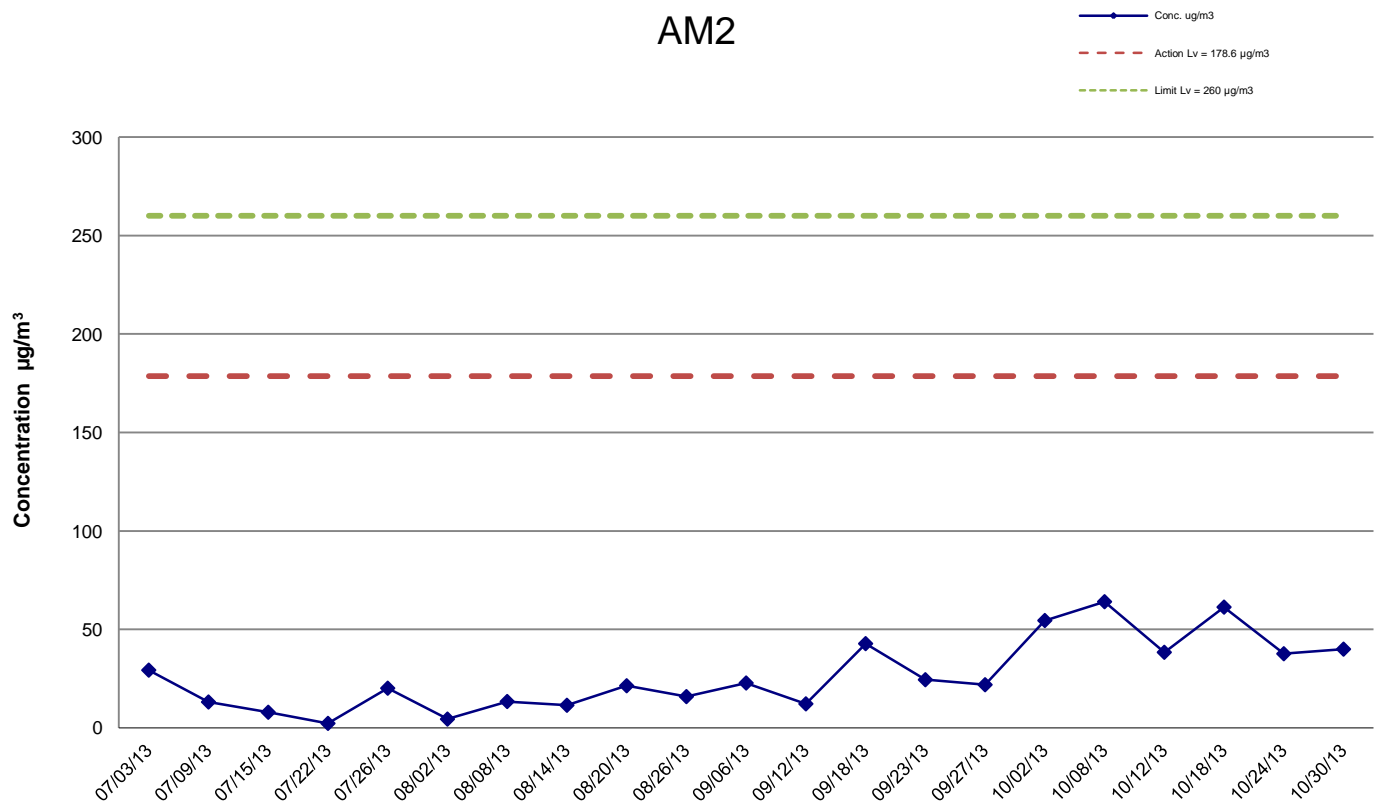
24-hour TSP Monitoring Results at Station AM4A (Roof of Switch Room at 168 Shek Kwu Lung Village)

Date	Weather Condition	Air Temp. (°C)	Atmospheric Pressure(hPa)	Flow Rate (m ³ /min.)		Av. flow (m ³ /min)	Total vol. (m ³)	Filter Weight (g)		Particulate weight(g)	Elapse Time		Sampling Time(hrs.)	Conc. (µg/m ³)
				Initial	Final			Initial	Final		Initial	Final		
2-Oct-13	Sunny	27.8	1012.6	1.33	1.33	1.33	1918.1	2.9048	3.046	0.1412	16402.36	16426.36	24.00	73.6
8-Oct-13	Sunny	26.8	1008.1	1.33	1.33	1.33	1918.1	2.9400	3.1063	0.1663	16426.36	16450.36	24.00	86.7
12-Oct-13	Sunny	27.6	1011.0	1.33	1.33	1.33	1918.1	2.8997	2.9999	0.1002	16450.36	16474.36	24.00	52.2
18-Oct-13	Sunny	25.2	1018.4	1.33	1.33	1.33	1918.1	2.8058	2.9277	0.1219	16474.36	16498.36	24.00	63.6
24-Oct-13	Sunny	24.4	1013.1	1.33	1.33	1.33	1918.1	2.9089	3.0520	0.1431	16498.36	16522.36	24.00	74.6
30-Oct-13	Sunny	24.2	1017.2	1.33	1.33	1.33	1918.1	2.7873	2.8774	0.0901	16522.36	16546.36	24.00	47.0
													Average	66.3
													Min	47.0
													Max	86.7

AM1A



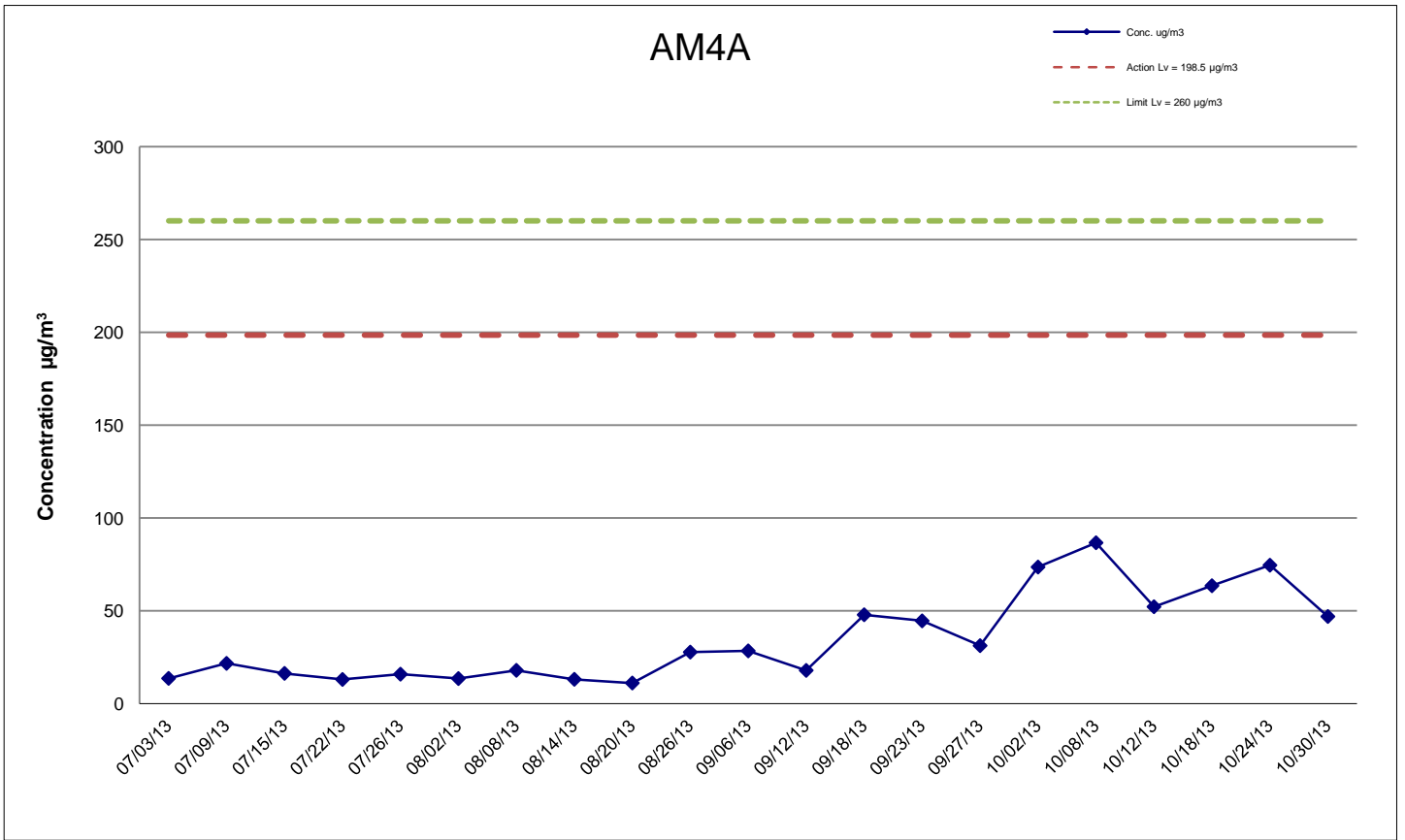
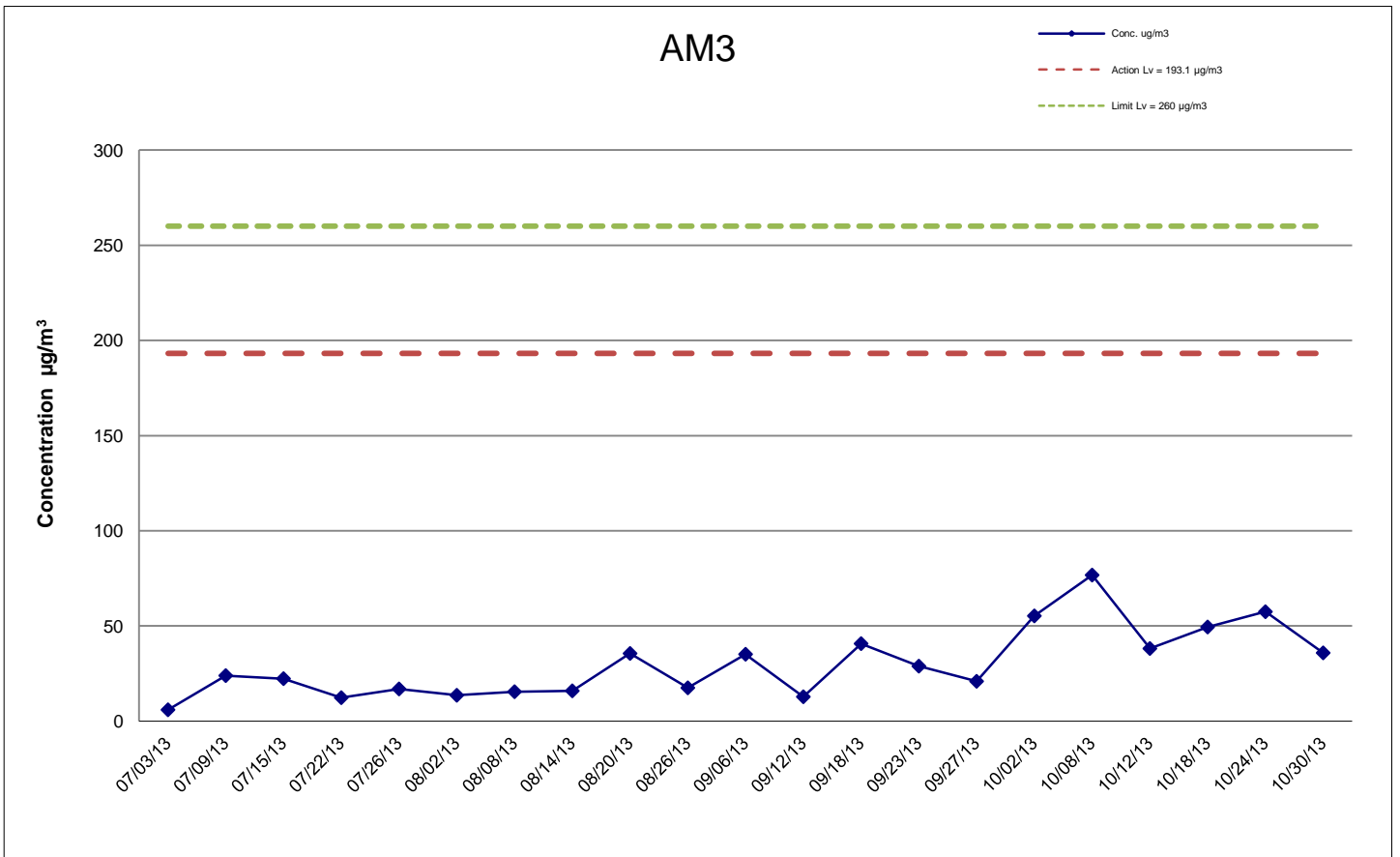
AM2



Environmental Team for the Widening of Tolo Highway
between Island House Interchange and Tai Hang - Investigation

Graphical Presentation of Impact 24-hour TSP Monitoring
Results

SCALE	N.T.S.	DATE	Nov-13
CHECK	ENFL	DRAWN	JCYK
JOB NO.	60102979	APPENDIX No.	Rev.
		G	-



Remark: The monitoring station at Tai Kwong Secondary School (AM4) was relocated to 168 Shek Kwu Lung Village (AM4A) starting from 1 September 2011 due to the mentioned school was closed down.

AECOM	Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation	SCALE	N.T.S.	DATE	Nov-13
	Graphical Presentation of Impact 24-hour TSP Monitoring Results	CHECK	ENFL	DRAWN	JCYK
		JOB NO.	60102979	APPENDIX No.	Rev.

**APPENDIX H
METEOROLOGICAL DATA FOR THE
REPORTING MONTH**

**Extract of Meteorological Observations for Tai Mei Tuk Automatic Weather Station,
October 2013**

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. (%)
1-Oct	*****	32.2	27.8	25.6	****	***	***	***
2-Oct	*****	32.1	27.9	24.7	****	***	***	***
3-Oct	*****	30.9	26.6	23.6	****	***	***	***
4-Oct	*****	30.1	25.9	23.6	****	***	***	***
5-Oct	*****	30.3	25.9	23.1	****	***	***	***
6-Oct	*****	30.9	27.3	23.1	****	***	***	***
7-Oct	*****	31.9	28.1	23.4	****	***	***	***
8-Oct	*****	29.7	26.3	23.9	****	***	***	***
9-Oct	*****	31	26.8	23.9	****	***	***	***
10-Oct	*****	31.9	27.4	25	****	***	***	***
11-Oct	*****	32.6	27.9	24.8	****	***	***	***
12-Oct	*****	32	27.8	25.6	****	***	***	***
13-Oct	*****	31	27	24.7	****	***	***	***
14-Oct	*****	27.8	25.9	24.8	****	***	***	***
15-Oct	*****	30.9	26.8	24.7	****	***	***	***
16-Oct	*****	28.6	25.5	23.4	****	***	***	***
17-Oct	*****	26.3	24	22.3	****	***	***	***
18-Oct	*****	29.1	25	22.5	****	***	***	***
19-Oct	*****	28.8	25.3	22.3	****	***	***	***
20-Oct	*****	29.7	25.4	21.3	****	***	***	***
21-Oct	*****	29.1	25	21.5	****	***	***	***
22-Oct	*****	29.7	25.4	21.9	****	***	***	***
23-Oct	*****	29	24.8	21.2	****	***	***	***
24-Oct	*****	28.6	24.7	20.5	****	***	***	***
25-Oct	*****	27.9	23.7	21.4	****	***	***	***
26-Oct	*****	26.4	21.8	18.4	****	***	***	***
27-Oct	*****	26.7	21.9	19	****	***	***	***
28-Oct	*****	26.9	22.7	19.7	****	***	***	***
29-Oct	*****	27.8	23.6	21.2	****	***	***	***
30-Oct	*****	28.6	24.3	22	****	***	***	***
31-Oct	*****	30.2	25.1	22	****	***	***	***
Mean	*****	29.6	25.6	22.7	****	***	***	***
Maximum	*****	32.6	28.1	25.6	****	***	***	***
Minimum	*****	26.3	21.8	18.4	****	***	***	***

**Extract of Meteorological Observations for Tai Mei Tuk Automatic Weather Station,
October 2013**

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind (km/h)
1-Oct	0.0	60	12.0
2-Oct	0.0	50	9.3
3-Oct	0.0	150	7.7
4-Oct	0.0	60	6.3
5-Oct	0.0	50	6.5
6-Oct	0.0	30	10.2
7-Oct	0.0	40	12.6
8-Oct	0.0	40	10.1
9-Oct	0.5	90	9.8
10-Oct	0.0	50	12.9
11-Oct	0.0	150	7.4
12-Oct	0.0	100	10.7
13-Oct	0.0	90	19.9
14-Oct	0.0	60	16.5
15-Oct	0.0	90	13.5
16-Oct	0.0	100	23.5
17-Oct	0.5	50	16.9
18-Oct	0.0	50	16.5
19-Oct	0.0	40	7.1
20-Oct	0.0	60	7.3
21-Oct	0.0	50	9.8
22-Oct	0.0	40	13.1
23-Oct	0.0	30	12.5
24-Oct	0.0	30	14.6
25-Oct	0.0	30	22.0
26-Oct	0.0	60	9.9
27-Oct	0.0	40	10.0
28-Oct	0.0	50	12.8
29-Oct	0.0	50	11.3
30-Oct	0.0	100	13.3
31-Oct	0.0	50	10.1
Mean	-----	50	12.1
Total	1.0	---	-----
Maximum	0.5	---	23.5
Minimum	0.0	---	6.3

*** 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

**Extract of Meteorological Observations for Tai Po Automatic Weather Station,
October 2013**

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. (%)
1-Oct	1012	29.3	27.1	25.3	23.4	89	80	68
2-Oct	1012	30.4	26.7	24.1	19.3	93	66	38
3-Oct	1012.5	28.5	25.4	21.7	18.9	84	68	51
4-Oct	1011.4	28	25.1	22.6	20	89	75	53
5-Oct	1010	28.2	24.7	21.9	18.1	90	68	43
6-Oct	1008.3	30.9	26.2	21.5	15.3	66	52	37
7-Oct	1005.6	31	27.5	24	17.8	68	56	46
8-Oct	1007.7	27.9	26.4	25	19.2	83	65	54
9-Oct	1010.4	28.4	26.2	24	22.2	91	79	67
10-Oct	1012.3	29.4	27	25.1	23.3	91	81	66
11-Oct	*****#	30.7	****#	24.9	****#	92	***#	59
12-Oct	1010.5	29.6	27.4	25	21.3	81	70	52
13-Oct	1010.5	29.1	27	25.6	20.6	79	69	56
14-Oct	1011	26.9	25.8	24.8	21.2	92	76	64
15-Oct	1013	29.2	26.7	25.4	21.7	86	74	58
16-Oct	1016.8	26.6	25.5	24.2	19.8	80	71	62
17-Oct	1018.5	25.2	24.2	23.1	19.5	84	75	68
18-Oct	1018	27.1	24.7	22.6	17.7	78	65	53
19-Oct	1017.4	27.2	24	21	17.6	80	68	53
20-Oct	1015.6	27.4	24.3	20.7	18.3	86	70	57
21-Oct	1014.8	27	24.4	20.9	18.8	83	71	62
22-Oct	1015.2	27.7	24.4	20.6	16.5	81	63	40
23-Oct	1014.1	27.8	23.3	19.5	12.3	64	51	34
24-Oct	1012.8	27.5	23.6	19.1	9.6	58	42	27
25-Oct	1015.2	26.3	23.3	19.8	6.8	54	36	18
26-Oct	1018	24.8	20.3	16.2	10.2	77	53	36
27-Oct	1018.3	24.2	20.4	17.1	14.6	86	71	49
28-Oct	1018.4	25	22	19.1	16.3	85	71	54
29-Oct	1018.2	25.9	23.2	20.7	17.7	86	72	56
30-Oct	1016.8	26	23.7	21.8	18.4	86	73	60
31-Oct	1016.2	28	24.4	21.2	19.3	90	74	54
Mean	1013.7#	27.8	24.9#	22.2	17.9#	82	67#	51
Maximum	1018.5#	31	27.5#	25.6	23.4#	93	81#	68
Minimum	1005.6#	24.2	20.3#	16.2	6.8#	54	36#	18

**Extract of Meteorological Observations for Tai Po Automatic Weather Station,
October 2013**

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

*** 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

**Extract of Meteorological Observations for Sha Tin Automatic Weather Station,
October 2013**

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. (%)
1-Oct	1012.6	30.9	27.5	25.7	22.9	87	76	62
2-Oct	1012.6	32	27.2	23.7	18.9	96	63	29
3-Oct	1013	30.5	26	21.9	18.5	88	65	41
4-Oct	1011.9	29.7	25.4	22.4	19.6	92	72	43
5-Oct	1010.5	30.1	24.8	20.7	17.9	95	69	33
6-Oct	1008.8	32	26.6	19.9	15	85	52	33
7-Oct	1005.9	32.1	28.5	25.2	16.9	58	49	41
8-Oct	1008.1	29.1	26.9	25.2	18.8	80	61	53
9-Oct	1010.9	30.2	26.8	24.8	21.8	85	74	59
10-Oct	1012.8	30.7	27.2	24.6	23	92	78	62
11-Oct	1011.8	32.6	27.7	23.7	22.4	96	74	51
12-Oct	1011	30.9	27.7	25.3	20.4	84	65	46
13-Oct	1011.1	30.6	27.4	25.7	19.3	75	62	49
14-Oct	1011.6	27.9	26.3	25.4	20.4	85	70	59
15-Oct	1013.5	30.3	26.9	25.4	21.2	83	72	53
16-Oct	1017.3	27.5	25.5	23.8	19.1	77	68	56
17-Oct	1019.1	25.7	24.2	23.4	18.8	81	72	64
18-Oct	1018.5	28.7	25.1	22.8	17.2	78	63	42
19-Oct	1017.9	28.8	24.7	22.3	17.1	82	63	44
20-Oct	1016.1	28.7	24.8	21.1	18	91	67	48
21-Oct	1015.3	28.2	25	22.4	18.2	83	67	52
22-Oct	1015.7#	28.5	25.0#	21.8	15.5#	78	57#	40
23-Oct	1014.6	27.6	23.5	19.2	11.3	77	48	30
24-Oct	1013.2	27.9	23.4	18.5	9.0	74	41	23
25-Oct	1015.6	26.8	23.8	21.7	6.0	44	32	19
26-Oct	1018.5	25.1	20.9	16.6	8.7	86	48	31
27-Oct	1018.8	24.5	19.8	15.6	14.2	94	72	45
28-Oct	1018.9	25.5	21.7	18.3	15.3	86	68	44
29-Oct	1018.7	26.5	22.8	19.9	17	89	71	50
30-Oct	1017.3	26.2	23.3	21.2	17.8	88	72	55
31-Oct	1016.8	29.2	24.3	20.1	18.4	94	72	45
Mean	1014.1#	28.9	25.2#	22.2	17.4#	83	64#	45
Maximum	1019.1#	32.6	28.5#	25.7	23.0#	96	78#	64
Minimum	1005.9#	24.5	19.8#	15.6	6.0#	44	32#	19

**Extract of Meteorological Observations for Sha Tin Automatic Weather Station,
October 2013**

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind (km/h)
1-Oct	0.0	100	5.6
2-Oct	0.0	20	4.5
3-Oct	0.0	10	4.4
4-Oct	0.0	110	4.0
5-Oct	0.0	120	4.5
6-Oct	0.0	340	7.3
7-Oct	0.0	340	11.4
8-Oct	0.0	340	7.8
9-Oct	0.0	350	6.0
10-Oct	0.0	80	4.7
11-Oct	0.0	10	5.7
12-Oct	0.0	80	7.0
13-Oct	0.0	360	9.5
14-Oct	0.0	70	7.0
15-Oct	0.0	90	7.9
16-Oct	0.0	90	10.2
17-Oct	0.0	90	7.3
18-Oct	0.0	60	7.3
19-Oct	0.0	20	4.8
20-Oct	0.0	10	4.8
21-Oct	0.0	30	5.5
22-Oct	0.0	020#	6.0#
23-Oct	0.0	30	6.3
24-Oct	0.0	30	6.6
25-Oct	0.0	20	11.7
26-Oct	0.0	40	7.5
27-Oct	0.0	140	5.0
28-Oct	0.0	110	6.1
29-Oct	0.0	70	4.6
30-Oct	0.0	100	6.2
31-Oct	0.0	20	4.6
Mean	-----	020#	6.5#
Total	0.0	---	-----
Maximum	0.0	---	11.7#
Minimum	0.0	---	4.0#

*** 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 I
IMPACT DAYTIME CONSTRUCTION NOISE
MONITORING RESULTS AND THEIR
GRAPHICAL PRESENTATION**

Appendix I Impact Daytime Construction Noise Monitoring Results

Location : NM1A (168 Shek Kwu Lung Village G/F- Façade)

Day time 07:00-19:00 hrs Normal Weekdays Impact Noise Monitoring Results

Date	Measured Noise Level for 30-min, dB(A)				Baseline Noise Level, dB(A)	Corrected Construction Noise Level, dB(A) **	Limit Level, dB(A)	Exceedance (Y/N)
	Start Time	Leq	L10	L90				
2-Oct-13	10:20	59.6	60.6	57.2	64.2	59.6	75	N
8-Oct-13	13:43	61.7	63.5	59.6	64.2	61.7	75	N
18-Oct-13	13:12	63.2	65.4	61.1	64.2	63.2	75	N
24-Oct-13	10:05	60.1	61.5	57.5	64.2	60.1	75	N
30-Oct-13	10:10	60.0	61.5	57.0	64.2	60.0	75	N

Corrected Noise Level dB(A)	
Average	61.1
Max	63.2
Min	59.6

Location : NM2 (38 Ha Wun Yiu G/F - Free Field)

Day time 07:00-19:00 hrs Normal Weekdays Impact Noise Monitoring Results

Date	Measured Noise Level for 30-min, dB(A)				Baseline Noise Level, dB(A)*	Corrected Construction Noise Level, dB(A) **	Limit Level, dB(A)	Exceedance (Y/N)
	Start Time	Leq*	L10*	L90*				
2-Oct-13	10:50	64.4	65.9	57.2	68.1	64.4	75	N
8-Oct-13	10:47	61.8	63.5	60.4	68.1	61.8	75	N
18-Oct-13	11:26	62.1	64.2	60.4	68.1	62.1	75	N
24-Oct-13	11:00	64.1	66.0	62.0	68.1	64.1	75	N
30-Oct-13	10:35	62.8	64.2	61.1	68.1	62.8	75	N

Corrected Noise Level dB(A)	
Average	63.2
Max	64.4
Min	61.8

* +3dB(A) Façade effect correction included

** Construction noise level is only calculated when Measured noise level (Leq) > Baseline noise level.

If Measured noise level < Baseline noise level, Corrected noise level = Measured noise level

Appendix I Impact Daytime Construction Noise Monitoring Results

Location : NM3 (Wong Shiu Chi Middle School Rooftop - Façade)

Day time 07:00-19:00 hrs Normal Weekdays Impact Noise Monitoring Results

Date	Measured Noise Level for 30-min, dB(A)				Baseline Noise Level, dB(A)	Corrected Construction Noise Level, dB(A) **	Limit Level, dB(A)#	Exceedance (Y/N)
	Start Time	Leq	L10	L90				
2-Oct-13	14:00	63.6	64.7	61.2	64.8	63.6	70	N
8-Oct-13	10:56	63.2	65.6	61.3	64.8	63.2	70	N
18-Oct-13	10:48	65.2	67.8	64.3	64.8	54.6	70	N
24-Oct-13	11:30	63.4	65.0	61.5	64.8	63.4	70	N
30-Oct-13	13:05	63.2	64.5	61.0	64.8	63.2	70	N

Corrected Noise Level dB(A)	
Average	62.5
Max	63.6
Min	54.6

Location : NM4 (Uptown Plaza Block 4 Rooftop - Façade)

Day time 07:00-19:00 hrs Normal Weekdays Impact Noise Monitoring Results

Date	Measured Noise Level for 30-min, dB(A)				Baseline Noise Level, dB(A)	Corrected Construction Noise Level, dB(A) **	Limit Level, dB(A)	Exceedance (Y/N)
	Start Time	Leq	L10	L90				
2-Oct-13	13:05	64.1	65.6	60.2	67.4	64.1	75	N
8-Oct-13	10:12	64.6	65.1	63.2	67.4	64.6	75	N
18-Oct-13	9:45	65.7	66.9	63.1	67.4	65.7	75	N
24-Oct-13	13:00	63.1	65.3	61.8	67.4	63.1	75	N
30-Oct-13	13:15	62.7	63.5	62.0	67.4	62.7	75	N

Corrected Noise Level dB(A)	
Average	64.2
Max	65.7
Min	62.7

- Limit Level of 70dB(A) applies to education institutes while 65dB(A) applies during school examination period.

** Construction noise level is only calculated when Measured noise level (Leq) > Baseline noise level.

If Measured noise level < Baseline noise level, Corrected noise level = Measured noise level

Appendix I Impact Daytime Construction Noise Monitoring Results

Location : NM5 (The Paragon Clubhouse Rooftop - Façade)

Day time 07:00-19:00 hrs Normal Weekdays Impact Noise Monitoring Results

Date	Measured Noise Level for 30-min, dB(A)				Baseline Noise Level, dB(A)	Corrected Construction Noise Level, dB(A) **	Limit Level, dB(A)	Exceedance (Y/N)
	Start Time	Leq	L10	L90				
2-Oct-13	13:15	63.1	63.6	60.0	65.2	63.1	75	N
8-Oct-13	14:50	60.4	62.5	58.7	65.2	60.4	75	N
18-Oct-13	13:20	65.2	68.1	63.8	65.2	65.2	75	N
24-Oct-13	10:35	59.6	60.8	57.4	65.2	59.6	75	N
30-Oct-13	11:30	60.2	62.6	61.0	65.2	60.2	75	N

Corrected Noise Level dB(A)	
Average	62.3
Max	65.2
Min	59.6

Location : NM6 (PLK Tin Ka Ping Primary School near the entrance - Free Field)

Day time 07:00-19:00 hrs Normal Weekdays Impact Noise Monitoring Results

Date	Measured Noise Level for 30-min, dB(A)				Baseline Noise Level, dB(A)*	Corrected Construction Noise Level, dB(A) **	Limit Level, dB(A)#	Exceedance (Y/N)
	Start Time	Leq*	L10*	L90*				
2-Oct-13	11:10	62.2	63.4	61.0	64.5	62.2	70	N
8-Oct-13	13:42	60.1	62.1	57.8	64.5	60.1	70	N
18-Oct-13	9:50	61.7	62.9	59.6	64.5	61.7	70	N
24-Oct-13	13:15	63.6	64.7	62.2	64.5	63.6	70	N
30-Oct-13	11:05	64.0	65.5	63.0	64.5	64.0	70	N

Corrected Noise Level dB(A)	
Average	62.5
Max	64.0
Min	60.1

Remarks

* +3dB(A) Façade effect correction included

- Limit Level of 70dB(A) applies to education institutes while 65dB(A) applies during school examination period.

** Construction noise level is only calculated when Measured noise level (Leq) > Baseline noise level.

If Measured noise level < Baseline noise level, Corrected noise level = Measured noise level

Appendix I Impact Daytime Construction Noise Monitoring Results

Location : NM7 (Riverain Bayside Switch Room Rooftop - Façade)

Day time 07:00-19:00 hrs Normal Weekdays Impact Noise Monitoring Results

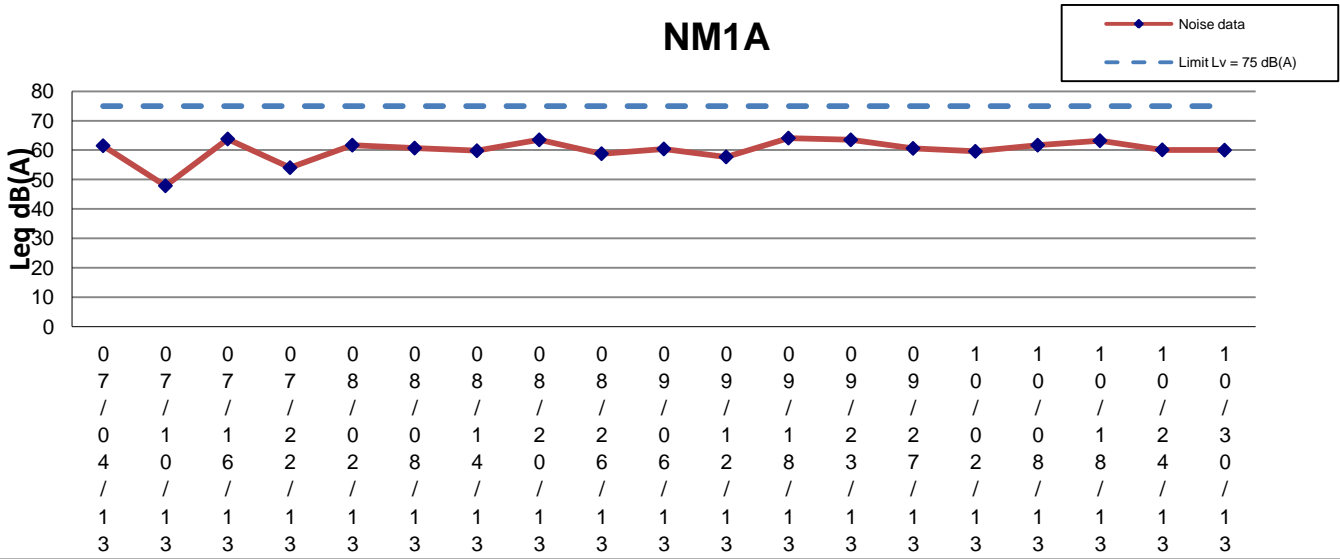
Date	Measured Noise Level for 30-min, dB(A)				Baseline Noise Level, dB(A)	Corrected Construction Noise Level, dB(A) **	Limit Level, dB(A)	Exceedance (Y/N)
	Start Time	Leq	L10	L90				
2-Oct-13	9:55	58.0	59.4	55.7	61.5	58.0	75	N
8-Oct-13	10:09	64.4	65.9	62.5	61.5	61.3	75	N
18-Oct-13	10:38	64.0	65.7	62.1	61.5	60.4	75	N
24-Oct-13	9:35	58.1	59.7	56.6	61.5	58.1	75	N
30-Oct-13	9:40	58.0	59.2	56.3	61.5	58.0	75	N

Corrected Noise Level dB(A)	
Average	59.4
Max	61.3
Min	58.0

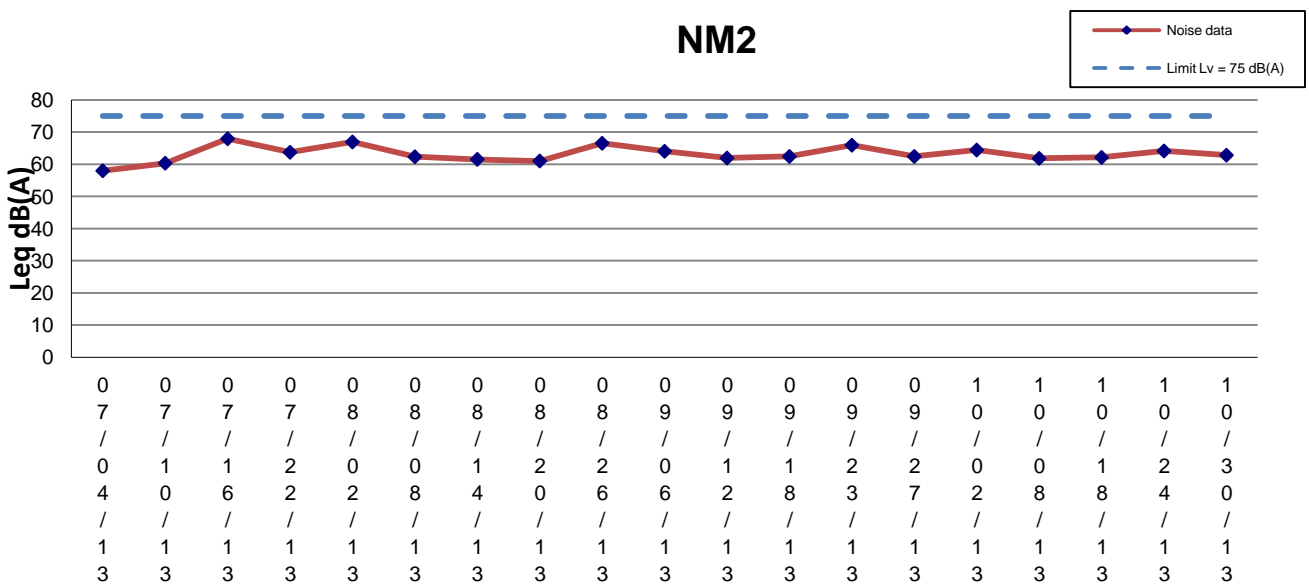
Remarks

** Construction noise level is only calculated when Measured noise level (Leq) > Baseline noise level.
 If Measured noise level < Baseline noise level, Corrected noise level = Measured noise level

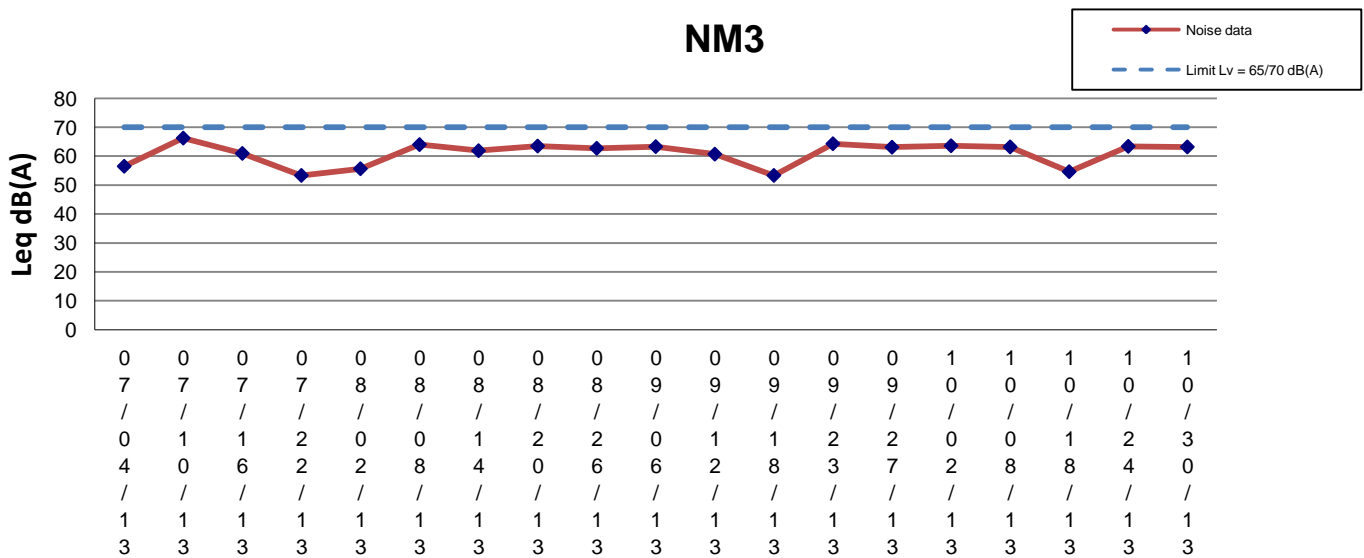
NM1A




NM2



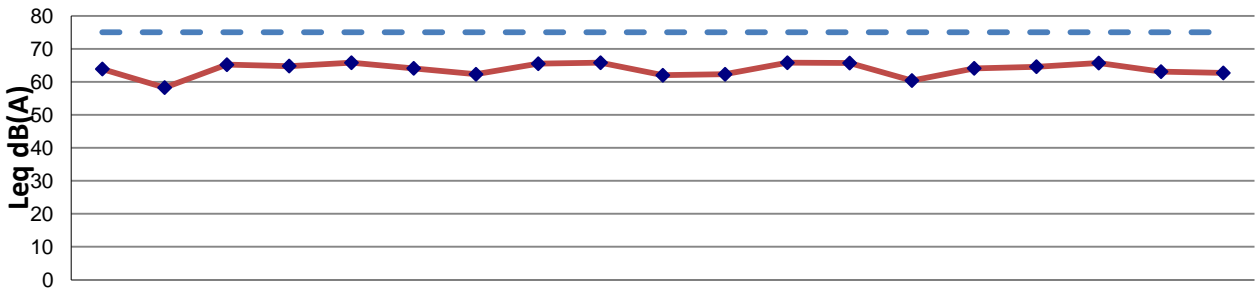
NM3



Remarks: (1) The monitoring station at Tai Kwong Secondary School (NM1) was relocated to 168 Shek Kwu Lung Village (NM1A) starting from 1 September 2011 due to the mentioned school was closed down;
 (2) Measured noise level would be shown if Measured noise level (Leq) <= Baseline noise level

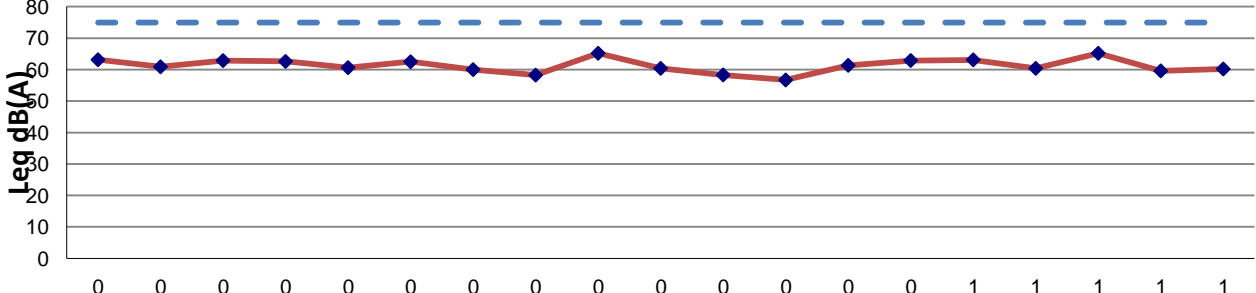
	Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation	SCALE	N.T.S.	DATE	Nov-13
		CHECK	ENFL	DRAWN	JCYK
	Graphical Presentation of Impact Daytime Construction Noise Monitoring Results	JOB NO.	60102979	APPENDIX No.	I
					-

NM4



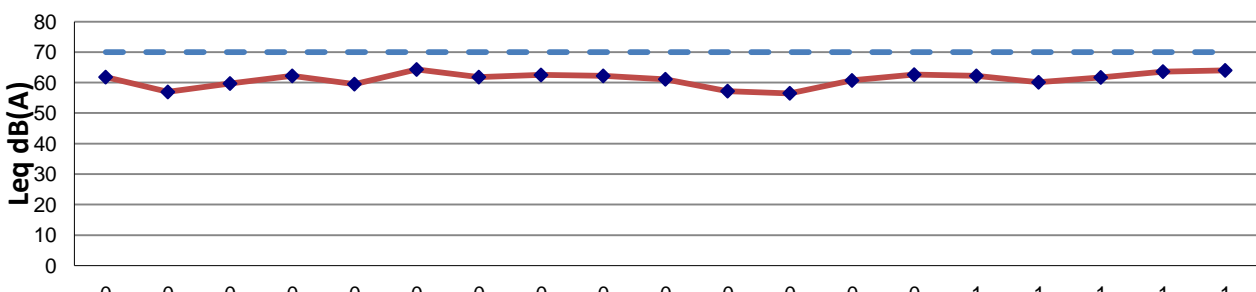
0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
7	7	7	7	8	8	8	8	8	9	9	9	9	9	0	0	0	0	0
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
0	1	1	2	0	0	1	2	2	0	1	1	2	2	0	0	1	2	3
4	0	6	2	2	8	4	0	6	6	2	8	3	7	2	8	8	4	0
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

NM5




0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
7	7	7	7	8	8	8	8	8	9	9	9	9	9	0	0	0	0	0
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
0	1	1	2	0	0	1	2	2	0	1	1	2	2	0	0	1	2	3
4	0	6	2	2	8	4	0	6	6	2	8	3	7	2	8	8	4	0
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

NM6

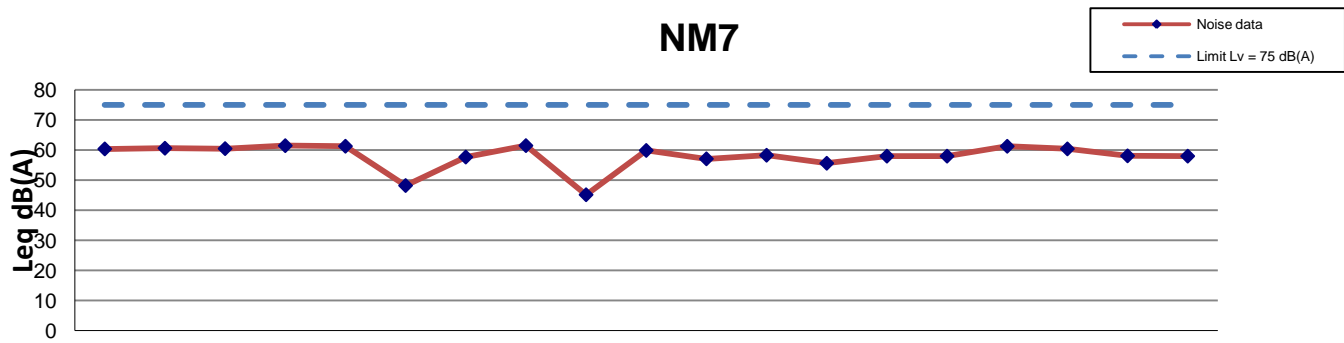


0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
7	7	7	7	8	8	8	8	8	9	9	9	9	9	0	0	0	0	0
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
0	1	1	2	0	0	1	2	2	0	1	1	2	2	0	0	1	2	3
4	0	6	2	2	8	4	0	6	6	2	8	3	7	2	8	8	4	0
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Remark: Measured noise level would be shown if Measured noise level (Leq) <= Baseline noise level

	Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation	SCALE	N.T.S.	DATE	Nov-13
	Graphical Presentation of Impact Daytime Construction Noise Monitoring Results	CHECK	ENFL	DRAWN	JCYK
		JOB NO.	60102979	APPENDIX No.	I

NM7



0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
7	7	7	7	8	8	8	8	8	9	9	9	9	9	0	0	0	0	0
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
0	1	1	2	0	0	1	2	2	0	1	1	2	2	0	0	1	2	3
4	0	6	2	2	8	4	0	6	6	2	8	3	7	2	8	8	4	0
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Remark: Measured noise level would be shown if Measured noise level (Leq) <= Baseline noise level

	Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation	SCALE	N.T.S.	DATE	Nov-13
		CHECK	ENFL	DRAWN	JCYK
	Graphical Presentation of Impact Daytime Construction Noise Monitoring Results	JOB NO.	60102979	APPENDIX No.	I
					-

**APPENDIX J
EVENT ACTION PLAN**

Appendix J – Event Action Plan

Event / Action Plan for Air Quality

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

Event / Action Plan for Air Quality

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

Event / Action Plan for Noise Impact

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

**APPENDIX K
SITE INSPECTION SUMMARIES**

EM&A Environmental Inspection Record

WIDENING OF TOLO HIGHWAY (STAGE 1)
BETWEEN ISLAND HOUSE INTERCHANGE AND TAI HANG - INVESTIGATION



Site Inspection Summary

Inspection Information

Contract No.	HY/2008/09 (Between Island House Interchange and Ma Wo)
Date:	2 October 2013
Time:	14:00
Inspection No.:	377

Non-compliance

Nil

Observations

Follow Up Observation

1. The construction waste within the construction area at bridge 10 had been removed. (Closed)

New Observation

Nil.

Remarks

Nil

EM&A Environmental Inspection Record

WIDENING OF TOLO HIGHWAY (STAGE 1)
BETWEEN ISLAND HOUSE INTERCHANGE AND TAI HANG - INVESTIGATION



Site Inspection Summary

Inspection Information

Contract No.	HY/2009/08 (Between Ma Wo and Tai Hang)
Date:	3 October 2013
Time:	14:00
Inspection No.:	378

Non-compliance

Nil

Observations

Follow Up Observations

1. The oil cans at Link Bridge 1 had been removed. (Closed)
2. The cement bags at Link Bridge 1 had been removed. (Closed)
3. The standing water within the drip tray at Link Bridge 1 had been removed. (Closed)

New Observation

4. Mud trails were observed at Gate 65. The Contractor was reminded to clear the mud trails and prevent vehicles from bringing the mud trails to the public roads.

Remarks

Nil

EM&A Environmental Inspection Record

WIDENING OF TOLO HIGHWAY (STAGE 1)
BETWEEN ISLAND HOUSE INTERCHANGE AND TAI HANG - INVESTIGATION



Site Inspection Summary

Inspection Information

Contract No.	HY/2008/09 (Between Island House Interchange and Ma Wo)
Date:	9 October 2013
Time:	14:30
Inspection No.:	379

Non-compliance

Nil

Observations

Follow Up Observation

Nil.

New Observation

Nil.

Remarks

Nil

EM&A Environmental Inspection Record

WIDENING OF TOLO HIGHWAY (STAGE 1)
BETWEEN ISLAND HOUSE INTERCHANGE AND TAI HANG - INVESTIGATION



Site Inspection Summary

Inspection Information

Contract No.	HY/2009/08 (Between Ma Wo and Tai Hang)
Date:	10 October 2013
Time:	09:00
Inspection No.:	380

Non-compliance

Nil

Observations

Follow Up Observations

1. Mud Trails at Gate 65 were cleared. (Closed)

New Observation

Nil.

Remarks

Nil

EM&A Environmental Inspection Record

WIDENING OF TOLO HIGHWAY (STAGE 1)
BETWEEN ISLAND HOUSE INTERCHANGE AND TAI HANG - INVESTIGATION



Site Inspection Summary

Inspection Information

Contract No.	HY/2008/09 (Between Island House Interchange and Ma Wo)
Date:	16 October 2013
Time:	09:15
Inspection No.:	381

Non-compliance

Nil

Observations

<p><u>Follow Up Observation</u></p> <p>Nil.</p> <p><u>New Observation</u></p> <p>Nil.</p>
--

Remarks

Nil

EM&A Environmental Inspection Record

WIDENING OF TOLO HIGHWAY (STAGE 1)
BETWEEN ISLAND HOUSE INTERCHANGE AND TAI HANG - INVESTIGATION



Site Inspection Summary

Inspection Information

Contract No.	HY/2009/08 (Between Ma Wo and Tai Hang)
Date:	17 October 2013
Time:	14:30
Inspection No.:	382

Non-compliance

Nil

Observations

Follow Up Observations

Nil.

New Observation

Nil.

Remarks

Nil

EM&A Environmental Inspection Record

WIDENING OF TOLO HIGHWAY (STAGE 1)
BETWEEN ISLAND HOUSE INTERCHANGE AND TAI HANG - INVESTIGATION



Site Inspection Summary

Inspection Information

Contract No.	HY/2008/09 (Between Island House Interchange and Ma Wo)
Date:	23 October 2013
Time:	09:15
Inspection No.:	383

Non-compliance

Nil

Observations

Follow Up Observation

Nil.

New Observation

1. Oil cans were observed at Gate 41. The Contractor was reminded to provide a drip tray to hold the oil cans or remove the oil cans.

Remarks

Nil

EM&A Environmental Inspection Record

WIDENING OF TOLO HIGHWAY (STAGE 1)
BETWEEN ISLAND HOUSE INTERCHANGE AND TAI HANG - INVESTIGATION



Site Inspection Summary

Inspection Information

Contract No.	HY/2009/08 (Between Ma Wo and Tai Hang)
Date:	24 October 2013
Time:	14:30
Inspection No.:	384

Non-compliance

Nil

Observations

Follow Up Observations

Nil.

New Observation

1. The contractor was reminded to remove the general refuse at W74.

Remarks

Nil

EM&A Environmental Inspection Record

WIDENING OF TOLO HIGHWAY (STAGE 1)
BETWEEN ISLAND HOUSE INTERCHANGE AND TAI HANG - INVESTIGATION



Site Inspection Summary

Inspection Information

Contract No.	HY/2008/09 (Between Island House Interchange and Ma Wo)
Date:	30 October 2013
Time:	09:30
Inspection No.:	385

Non-compliance

Nil

Observations

Follow Up Observation

1. The chemicals had been removed and stored inside the drip tray. (Closed)

New Observation

Nil.

Remarks

Nil

EM&A Environmental Inspection Record

WIDENING OF TOLO HIGHWAY (STAGE 1)
BETWEEN ISLAND HOUSE INTERCHANGE AND TAI HANG - INVESTIGATION



Site Inspection Summary

Inspection Information

Contract No.	HY/2009/08 (Between Ma Wo and Tai Hang)
Date:	31 October 2013
Time:	14:30
Inspection No.:	386

Non-compliance

Nil

Observations

Follow Up Observation

1. General refuse at W74 was removed. (Closed)

New Observation

2. The contractor was reminded to provide a larger drip try to hold oil drums at Lam Kam Bridge.
3. The contractor was reminded to provide a drip try to oil cans to prevent oil leakage at Lam Kam Bridge.

Remarks

Nil

**APPENDIX L
STATISTICS ON COMPLAINTS,
NOTIFICATION OF SUMMONS AND
SUCCESSFUL PROSECUTIONS**

Appendix L

Statistics on Complaints, Notifications of Summons and Successful Prosecutions

	Date Received	Subject	Status	Total no. followed up by ET in this month	Total no. followed up by ET since project commencement
Environmental complaints	-	-	-	1	33
Notification of summons	-	-	-	0	0
Successful Prosecutions	-	-	-	0	0