

Highways Department

Agreement No. CE 20/2009 (EP)

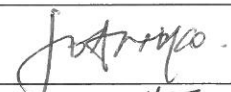

**Environmental Team for the Widening of
Tolo Highway / Fanling Highway between
Island House Interchange and Fanling**

(Stage 1)

**Between Island House Interchange and
Tai Hang - Investigation**

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

[10/2013]

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Version:	Rev. 0	Date: 17 October 2013
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17 October 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 September 2013 (Stage 1)**

We refer to the captioned Monthly EM&A Report received on 11 and 16 October 2013 submitted by Environmental Team (ET) via email. Pursuant to EP Condition 3.3, I hereby verify the Monthly EM&A Report for September 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	20
5.1 Construction Programme for the Coming Months	20
5.2 Key Issues for the Coming Month	20
5.3 Monitoring Schedule for the Coming Month	21
6 CONCLUSIONS AND RECOMMENDATIONS	21
6.1 Conclusions	21
6.2 Recommendations	21

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 30 September 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
- Installation of soil nails
- 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

No follow-up complaint, new complaint, 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-seventh 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 September 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
- Installation of soil nails
- 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 September 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	78.4	72.4 – 83.2	302.1	500
AM2	78.6	72.9 – 84.0	301.9	500
AM3	79.3	72.6 – 84.8	301.9	500
AM4A	79.1	73.9 – 86.0	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	46.3	23.9 – 68.1	176.6	260
AM2	24.8	12.2 – 42.7	178.6	260
AM3	27.7	12.8 – 40.7	193.1	260
AM4A	34.0	17.9 – 34.0	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 September 2013 from the Tai Mei Tuk Automatic Weather Station were missing, the weather data from Tai Po Automatic Weather Station in September 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	Rion NL-31 / 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 September 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	61.8	57.7 – 64.1	75
NM2	63.6*	65.9 – 61.9*	75
NM3	62.2	53.3 – 64.3	70 [#]
NM4	63.8	60.4 – 65.8	75
NM5	60.5	56.7 – 62.9	75
NM6	60.2*	56.5 – 62.6*	70 [#]
NM7	58.0	55.6 – 59.9	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 4, 11, 18 and 25 September 2013 for Contract 1 of the Project, and 4 site inspections for Contract 2 of the Project were carried out on 5, 12, 19 and 26 September 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 The Contractor was reminded to remove the stagnant water within the construction site at Bridge 11.

Chemical and Waste Management

4.1.7 The Contractor was reminded to remove the general refuse at Bridge 11.

4.1.8 The Contractor was reminded to remove the construction waste within the construction area at Bridge 10.

Landscape and Visual Impact

4.1.9 No adverse observation was identified in the reporting month.

Miscellaneous

4.1.10 No adverse observation was identified in the reporting month.

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

Air Quality

4.1.12 The Contractor was reminded to cover the exposed soil stockpile at Lam Kam Bridge P2.

4.1.13 The Contractor was reminded to cover the cement bags with impervious sheet at Link Bridge 1.

Noise

4.1.14 No adverse observation was identified in the reporting month.

Water Quality

4.1.15 The Contractor was reminded to remove the standing water held within the drip tray at Link Bridge 1.

Chemical and Waste Management

4.1.16 The Contractor was reminded to remove the general refuse at NB 30.

4.1.17 The Contractor was reminded to remove the oil drum or provide a drip tray for holding the oil drum at NB 30.

4.1.18 The Contractor was reminded to provide drip tray for holding the oil cans at Link Bridge 1.

Landscape and Visual Impact

4.1.19 No adverse observation was identified in the reporting month.

Miscellaneous

4.1.20 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), 0m³ of inert C&D material was disposed as public fill to Tuen Mun 38 (of which 0m³ was broken concrete), while 104m³ of general refuse was disposed at NENT landfill. 96kg of paper/cardboard packaging, 2,424kg of plastics and 0kg of metals were collected by recycling contractor in the reporting month. 2,137m³ and 688m³ 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), 380m³ of inert C&D material were disposed to Tuen Mun 38 and 290m³ general refuse was disposed to NENT landfill in the reporting period. 240kg of paper/cardboard packaging, 0kg of plastics and 0kg of metals were collected by recycling contractor in the reporting month. No inert C&D material was reused on site or reused in NENT for backfilling purpose. Besides, no chemical waste 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		

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
	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-RN0375-13	09/07/2013	17/09/2013	CSHK	Erection of Columns of Sign Gantry & Noise Barrier between Shan Tong Road and Ma Wo
		GW-RN0377-13	09/07/2013	17/09/2013	CSHK	Modification of Sign Gantry_G13, G14, 15, 16, 17, 65, 66, 67 68 & 70
		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

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
		GW-RN0425-13	29/07/2013	28/09/2013	CSHK	Installation of Noise Barrier on Tolo Highway at Island House Interchange
		GW-RN0434-13	03/08/2013	23/09/2013	CSHK	Road Marking Alternation at SB of Tolo Highway near King Nga Court
		GW-RN0444-13	06/08/2013	28/09/2013	CSHK	Road Paving on Slip Road from Tolo Highway (Fanling Bound) to Yuen Shin Road
		GW-RN0453-13	11/08/2013	29/09/2013	CSHK	Road Paving & Road Marking Works at Yuen Shin Road near Tolo Highway
		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-RN0487-13	21/08/2013	14/09/2013	CSHK	Stitching Works on Bridge 11
		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
		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-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

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
						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-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-RN0351-13	30/06/2013	08/09/2013	GCL	Tolo Highway near Ma Wo Village
		GW-RN0360-13	03/07/2013	27/09/2013	GCL	Renewal of GW-RN0237-13 Dismantling at Tai Po Tai Wo Road Uphill
		GW-RN0362-13	16/07/2013	29/10/2013	GCL	Renewal of GW-RN0259-13 Dismantling of Overhead Falsework between NLKP8 and NLKP10
		GW-RN0391-13	14/07/2013	16/09/2013	GCL	Lane Shifting at Tolo Highway Northbound for tie-in with NLKRF
		GW-RN0398-13	12/07/2013	26/09/2013	GCL	Steel Portal Dismantle at Tai Po Tai Wo Road Uphill
		GW-RN0405-13	25/07/2013	24/01/2014	GCL	Northbound near CH.18.39 - 19.1 near Shek Link

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
						Road
		GW-RN0421-13	28/07/2013	23/09/2013	GCL	Near CH.18.7 to 20.01
		GW-RN0435-13	04/08/2013	14/10/2013	GCL	Road Diversion from Dynasty View to Mui Shu Hang Playground
		GW-RN0437-13	04/08/2013	23/09/2013	GCL	Road diversion at Tolo Highway CH18.7 to 19.3
		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 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-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

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 no complaint followed up by Environmental Team in the reporting period.
- 4.6.3 No new complaint, notification of summons and prosecution was received in the reporting period.
- 4.6.4 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 October 2013 will be:-

- 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

5.1.2 The major construction works for Contract 2 in October 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 wall and associated mini-piles
- 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 October 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 October 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 8 times in September 2013. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site audits.

6.1.6 There was no complaint followed up by Environmental Team in the reporting month.

6.1.7 No new complaint, notification of summons and 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.

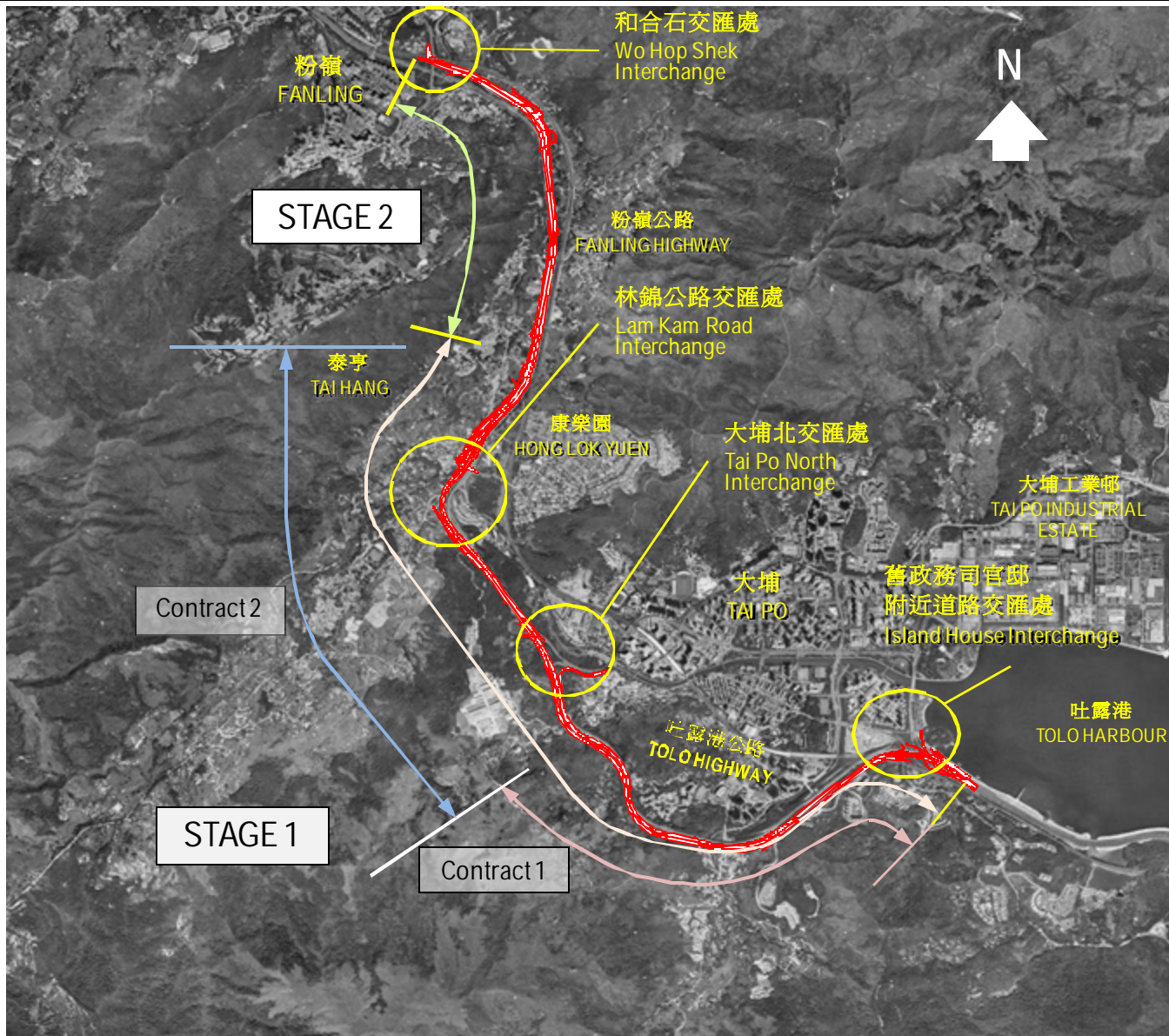
Chemical and Waste Management

- 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.

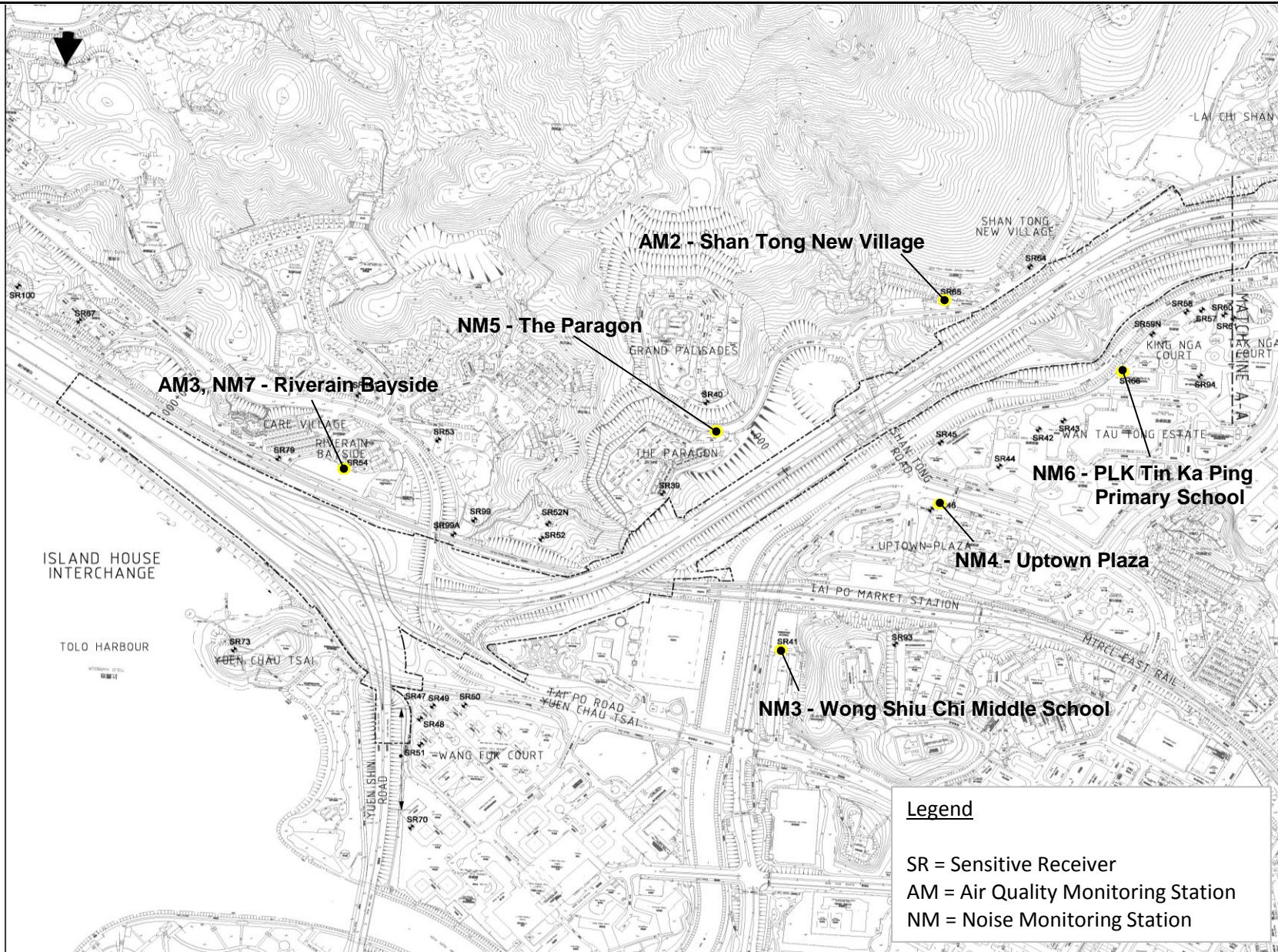
FIGURES



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

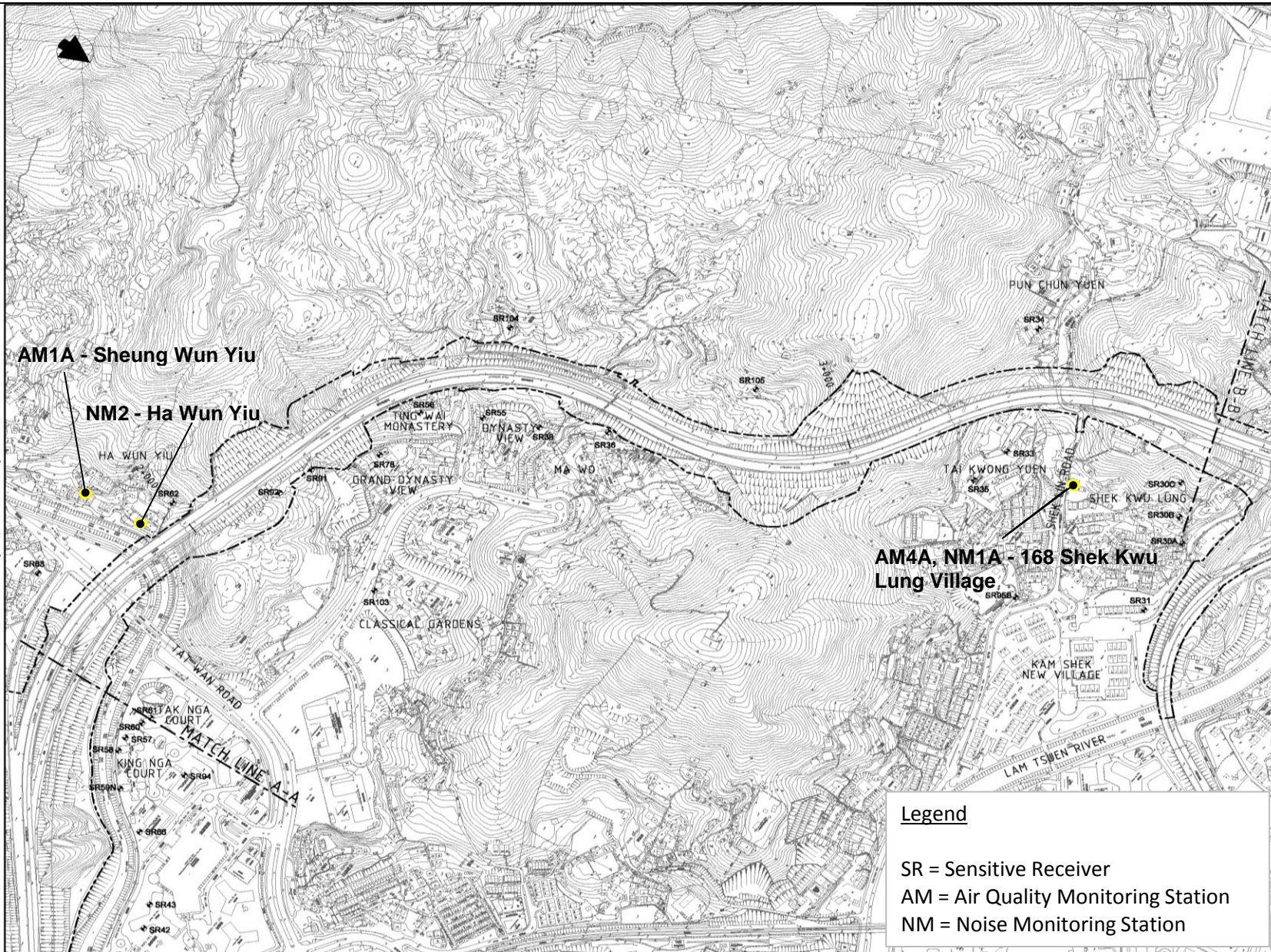
SR = Sensitive Receiver
 AM = Air Quality Monitoring Station
 NM = Noise Monitoring Station



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

EM&A Monitoring Locations (Sheet 1 of 2)

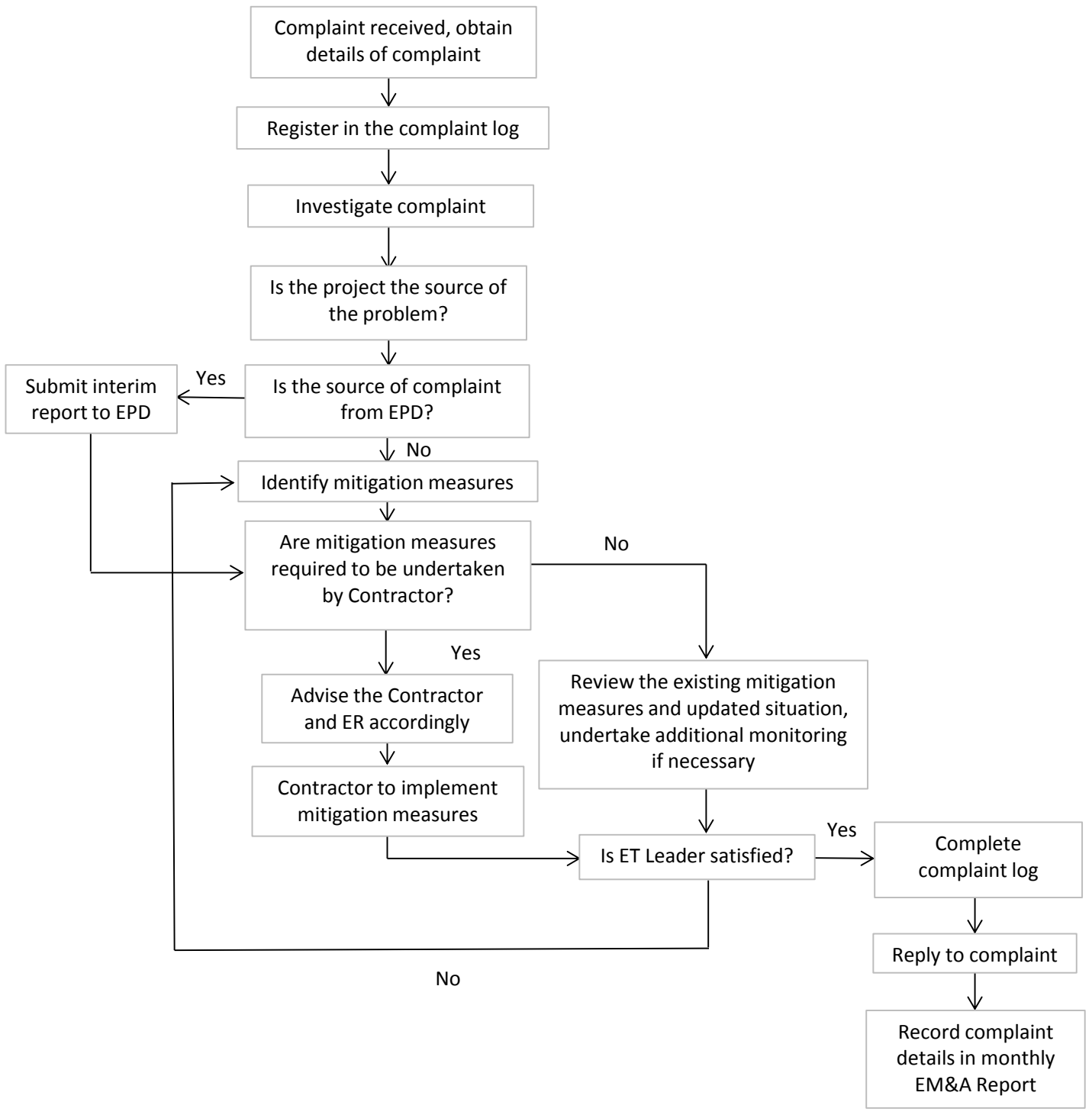
SCALE	N.T.S.	DATE	Sep-11
CHECK	ENFL	DRAWN	LCHC
JOB NO.	60102979	FIGURE NO.	2.1
		Rev	0



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

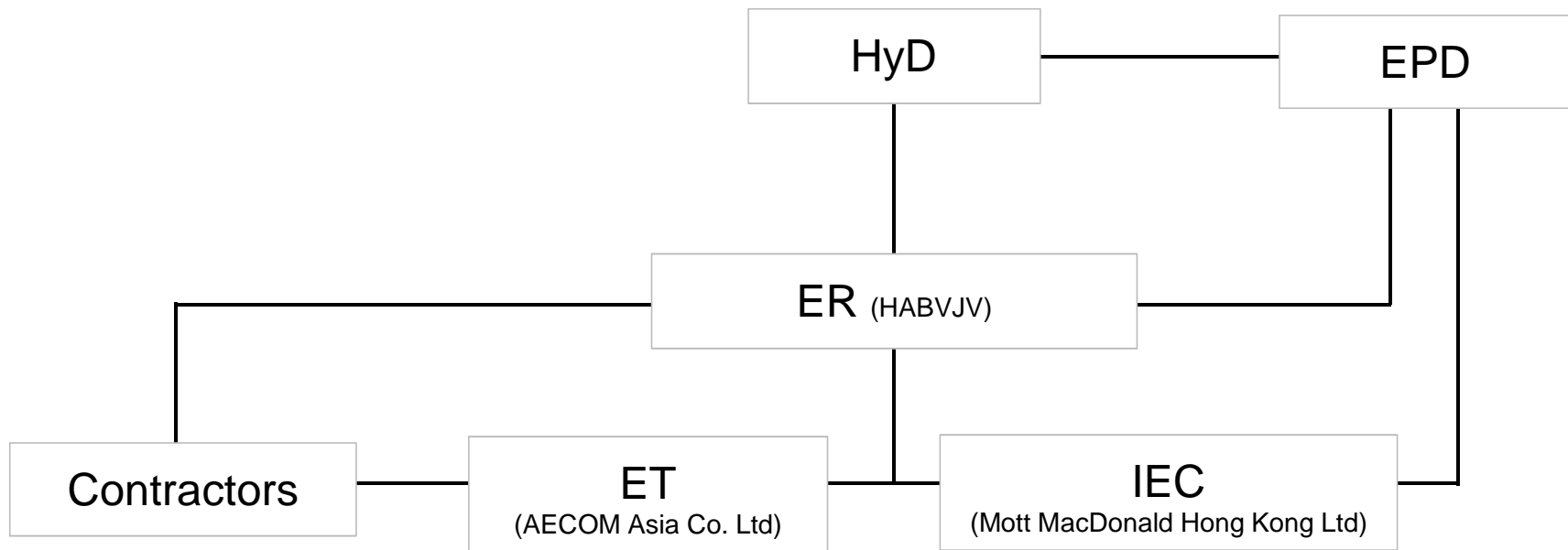
EM&A Monitoring Locations (Sheet 2 of 2)

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



AECOM	Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation	SCALE	N.T.S.	DATE	Mar-13
		CHECK	ENFL	DRAWN	CHCL
	Environmental Complaint Handling Procedure	JOB NO.	60102979	FIGURE	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	Total Float	Activity % Complete	Original Duration	Start	Finish	2013					2014				
							Q3			Q4		Q1				
							41	42	43	44	45	46	47	48	49	50
HY/2009/08 TOLO HIGHWAY WIDENING, External July [20130726 CRE submission]																
EXECUTIVE SUMMARY																
Design																
A1330	Alternative Design		100%	292	29-Mar-10 A	14-Jan-11 A										
Construction																
Section 1																
A1000	SA21 - North Bound	-69	93.34%	959	15-Oct-10 A	27-Sep-13	SA21 - North Bound									
A1010	SA21 - South Bound	-75	91.4%	814	15-Oct-10 A	03-Oct-13	SA21 - South Bound									
A1020	SA21 - Middle Lane	-120	58.09%	275	08-May-12 A	18-Nov-13	SA21 - Middle Lane									
Section 2																
A1030	SA22 - North Bound	-6	90.92%	1016	26-Feb-10 A	26-Oct-13	SA22 - North Bound									
A1040	SA22 - South Bound	-73	84.67%	1037	01-Apr-10 A	31-Dec-13	SA22 - South Bound									
A1060	SA23 - South Bound	-47	65.75%	388	28-Dec-11 A	05-Dec-13	SA23 - South Bound									
A1070	SA24 - North Bound	-47	83.1%	787	25-Aug-10 A	05-Dec-13	SA24 - North Bound									
A1080	SA25 - South Bound	-41	87.77%	777	20-Oct-10 A	28-Oct-13	SA25 - South Bound									
A1090	SA26 - North Bound	-73	86.92%	1216	26-Feb-10 A	31-Dec-13	SA26 - North Bound									
A1100	SA26 - South Bound	-57	88.22%	1216	26-Feb-10 A	16-Dec-13	SA26 - South Bound									
Section 3																
A1110	SA26A - North Bound	-22	86.8%	1191	26-Feb-10 A	30-Dec-13	SA26A - North Bound									
A1120	SA26A - South Bound	40	89.19%	879	26-Feb-10 A	28-Oct-13	SA26A - South Bound									
A1130	SA26A - North & South Bound	17	99.35%	612	26-Feb-11 A	29-Jul-13	SA26A - North & South Bound									
A1140	SA27 - South Bound	17	85.71%	826	27-Mar-10 A	20-Nov-13	SA27 - South Bound									
Section 4																
A1150	SA28 - North Bound	-12	85.49%	1216	26-Feb-10 A	18-Jan-14	SA28 - North Bound									
A1160	SA28 - South Bound	-7	84.35%	1099	23-Jun-10 A	13-Jan-14	SA28 - South Bound									
A1170	SA29 - North Bound	-7	81.06%	909	26-Jan-11 A	14-Jan-14	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	-327	58.07%	1581	26-Feb-10 A	19-May-15										
A1210	SA42 - Temporary Contractor's Works Area	0	78.82%	1582	25-Feb-10 A	25-Jun-14										
Section 17 (Subject to Excision, Engineer may instruct within 819 days)																
A1300	Validity Period	319	97.9%	819	25-Feb-10 A	12-Aug-13	Validity Period									
A1310	SA28 - North Bound	318	47.65%	34	24-May-12 A	12-Aug-13	SA28 - North Bound									
A1320	SA30A - North Bound	318	88.52%	155	14-May-12 A	12-Aug-13	SA30A - North Bound									
KEY DATES/ MILESTONES																
Portion Handover Dates																
Section 1 (Site Area SA21)																

Project ID: J3318-UPDATE 2013JUL-2
 Project Name: HY/2009/08 TOLO HIGHWAY WIDENING...
 Print Date: 07-Aug-13
 Data Date: 26-Jul-13
 Page 1 of 45

- Current Bar
- Level of Effort
- Critical
- Milestone

Highways Department - Contract No. HY/2009/08

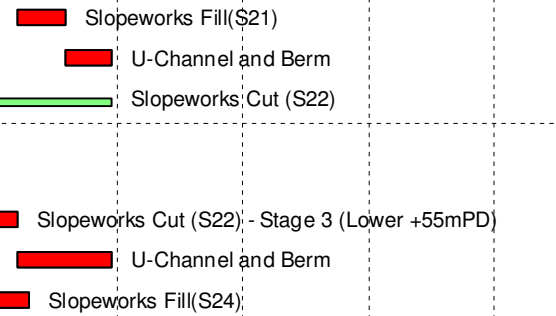
Widening of Tolo Highway/ Fanling Highway
Stage 1 - Between Ma Wo and Tai Hang

Updated Works Programme, 26 July 2013

UWP Revision			
Date	Revision	Checked	Approved
26-Jul-13	UWP July, 2013	WY	JC

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013					2014								
							Q3			Q4		Q1								
							41	42	43	44	45	46	47	48	49	50				
VO000830	VO. 83: Stormwater Drainage System MN18.1 to MN18.11 in Front of Reta...		100%	0	08-Feb-13 A															
VO000840	VO. 84: Removal and Storage of Remaining Parts of Existing Speed Enfor...		100%	0	08-Feb-13 A															
VO000860	VO. 86: Provision of Verge Tubular Railing Adjacent to Retaining Wall W67		100%	0	12-Apr-13 A															
VO000870	VO. 87: Existing Retaining Wall at Tai Po Tai Wo Road - Modification Works		100%	0	19-Apr-13 A															
VO000880	VO. 88: Additional Hospital Sign Plate for Existing Directional Signs DSX01...		100%	0	10-May-13 A															
VO000890	VO. 89: Change of Material of Southern Trunk Sewer Pipes between manh...		100%	0	10-May-13 A															
VO000900	VO. 90: Revised Southern Trunk Sewer Details		100%	0	10-May-13 A															
VO000910	VO. 91: Nosing Details at South Abutment of Bridge 13A - Modification Wo...		100%	0	02-Jul-13 A															
VO000920	VO. 92: Revised Noise Barrier Footing fro NB30 Bay 1		100%	0	14-Jun-13 A															
VO000930	VO. 93: Irrigation System for the Shrub Planting Area Adjacent to Fanling ...		100%	0	13-Jun-13 A															
VO000940	VO. 94: Irrigation System for the Shrub Planting Area Adjacent to Lam Ka...		100%	0	11-Jun-13 A															
VO000950	VO. 95: Revised Sign Gantry G101 Details		100%	0	07-Jun-13 A															
VO000970	VO. 97: Provision of Stormwater Drainage System for the Wai Tau Tsuen ...		100%	0	13-Jun-13 A															
VO000980	VO. 98: Revised Sign Gantry G101 Sign Face DS T8(B) Details		100%	0	11-Jun-13 A															
VO000990	VO. 99: Revised Sign Gantry G59 Details		100%	0	11-Jun-13 A															
VO001000	VO. 100: Revised Sign Gantry G58 Details		100%	0	11-Jun-13 A															
VO001010	VO. 101: Existing Bridges 12&13 - Revised Detail of the Strengthening Bea...		100%	0	02-Jul-13 A															
VO001030	VO. 103: Parapet Wall PW1 - Revised Drainage and Miscellaneous Details		100%	0	03-Jul-13 A															
VO001040	VO. 104: Revised Alignment and Layout of Noise Barrier NB38		100%	0	26-Jun-13 A															
VO001050	VO. 105: Additional Precast Concrete Cover for Catchpit No. CP1.1		100%	0	02-Jul-13 A															
VO001060	VO. 106: Revised Details fo Retaining Wall No. W71 and Slope S43 at CH...		100%	0	02-Jul-13 A															
VO001070	VO. 107: Revised Alignment of U-Channel at Interface of Retaining Wall W...		100%	0	02-Jul-13 A															
VO001080	VO. 108: Revision for Proposed Cut Slope S31A		100%	0	11-Jul-13 A															
VO001090	VO. 109: Revision for Proposed Cut Slope S45		100%	0	19-Jul-13 A															
Milestones of Temporary Traffic Arrangement																				
TTA000	TTA Stage 0 - Divert the traffic to new Slip Road J & K		100%	0	07-Oct-12 A															
TTA010	TTA Stage 1 - divert the traffic to new bridge 18a		100%	0	23-Jun-13 A															
TTA050	TTA Stage 5 - Full enclosure of Tai Wo Road (CH3350 - CH3540)		100%	0	27-Sep-12 A															
TTA060	TTA Stage 6 - Open the new Northbound but reserve one lane & close the ...		100%	0	25-Feb-12 A															
TTA070	TTA Stage 7 - Close the existing southbound and temporary divert the traffi...		100%	0	25-Feb-12 A															
TTA090	TTA Stage 9 - NLK Open the new Northbound but reserve one lane & clos...	-11	0%	0	03-Aug-13															
TTA110	TTA Stage 11 - Open the new LB2 and link up the LB1 & LB3	39	0%	0	31-Aug-13															
TTA310	TTA Stage 5A-1 Diversion the traffic to B13A and B15A		100%	0	23-Jun-13 A															
TTA320	TTA Stage 4B-1 Diversion the traffic to (CH2600 - CH3000) N/B		100%	0	05-May-13 A															
TTA330	TTA Shift Lane for C1/C2 interface Final Stage (N/B)	-38	0%	0	04-Sep-13															
TTA340	TTA Shift Lane for C1/C2 interface Final Stage (S/B)	-58	0%	0	28-Sep-13															
TTA350	TTA Shift Lane for C2/C3 interface at TWSRW Road (Transition)	117	0%	0	16-Aug-13															
TTA360	TTA Shift Lane for C2/C3 interface (N/B)	85	0%	0	24-Sep-13															
TTA370	TTA Shift Lane for C2/C3 interface (S/B)	6	0%	0	30-Dec-13															
Section 1																				
Site Area SA21																				
PHSA2120	Possession of SA21 (Day141)		100%	0	16-Jul-10 A															
SA210000	Site Area SA21 Works Period	244	91.43%	1076	16-Jul-10 A	26-Oct-13														Site Area SA21 Works Period
SA210010	Site Area SA21 Works Completion	244	0%	0		26-Oct-13														Site Area SA21 Works Completion
SA210020	Temporary Traffic Management (Detail shall refer to supplementary inform...	197	91.26%	872	16-Jul-10 A	26-Oct-13														Temporary Traffic Management (Detail shall refer to supplementa
SA210030	Overall Utilities Diversion (Detail shall refer to supplementary information)	197	91.26%	872	16-Jul-10 A	26-Oct-13														Overall Utilities Diversion (Detail shall refer to supplementary info
North Bound																				

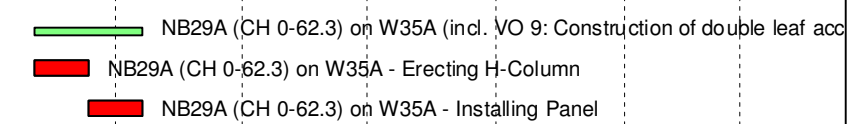
Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013							2014					
							Q3			Q4				Q1					
							41	42	43	44	45	46	47	48	49	50			
Preliminaries																			
S21N0000	Site Clearance/Access Rd & acquisition of Sub-con		100%	63	15-Oct-10 A	30-Dec-10 A													
Slopeworks																			
S21N5000	Slopeworks Fill(S21)	-50	0%	10	07-Aug-13	19-Aug-13													
S21N5010	U-Channel and Berm	-35	0%	10	19-Aug-13	30-Aug-13													
S21N5100	Slopeworks Cut (S22)	-35	88.42%	266	17-Feb-11 A	30-Aug-13													
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)	-50	85%	72	28-May-12 A	07-Aug-13													
S21N5140	U-Channel and Berm	-35	0%	20	07-Aug-13	30-Aug-13													
S21N5210	Slopeworks Fill(S24)	-58	75%	55	14-Jan-13 A	10-Aug-13													
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	-39	50%	70	04-Mar-13 A	04-Sep-13													
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													
S21N2256	Backfilling to formation level - Stage 2 (CH2520 - 2600)		100%	30	01-Oct-12 A	24-Dec-12 A													



Backfilling behind W36 and drainage works

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013										2014		
							Q3			Q4			Q1						
							41	42	43	44	45	46	47	48	49	50			
S21N4110	Removal of existing paving		100%	25	06-Aug-11 A	13-Jul-13 A	Removal of existing paving												
S21N4120	Drainages (incl. VO 33 : Drainage details at W48)		100%	25	06-Aug-12 A	05-Apr-13 A	NB31: Drainage details at W48												
S21N4130	Utilities (incl. VO 26: Permanent Diversion of existing DN80 WSD Waterm...)	-28	5%	25	08-Jul-13 A	22-Aug-13	Utilities (incl. VO 26: Permanent Diversion of existing DN80 WSD Watermain at Ma WO Subv												
S21N4135	Road Surface (Stage 1: CH2400 - CH2520)		100%	75	26-Dec-11 A	24-Feb-12 A													
S21N4140	Road Surface (Stage 2 : CH2520 - CH2840)	-99	65%	75	08-Jan-13 A	26-Aug-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	Road Construction Works (CH2600 - 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	Road Construction Works (Fast Lane) 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	Road Construction Works (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	Road Construction Works (Slow Lane) for C1/ C2 Interface stage 8B												
S21N4145	Road Construction Works for C1/ C2 Interface Final stage	-38	5%	36	08-Jul-13 A	04-Sep-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		Shift lane for C1/ C2 interface (Stage 2: North Bound along W38 to W46)												
S21N4153	Shift lane for (CH2600 - CH3000) stage 4B-1		100%	0	05-May-13 A		Shift lane for (CH2600 - CH3000) stage 4B-1												
S21N4155	Shift lane for C1/ C2 Interface stage 6B		100%	0	12-May-13 A		Shift lane for C1/ C2 Interface stage 6B												
S21N4156	Shift lane for C1/ C2 Interface stage 7B		100%	0	09-Jun-13 A		◆ Shift lane for C1/ C2 Interface stage 7B												
S21N4157	Shift lane for C1/ C2 Interface stage 8B		100%	0	07-Jul-13 A		◆ Shift lane for C1/ C2 Interface stage 8B												
S21N4160	Shift lane for C1/ C2 interface Final stage	-38	0%	0	04-Sep-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	-11	0%	7	26-Jul-13	02-Aug-13	Remaining NB31 Installation of Panel												
Traffic Control & Surveillance System																			
S21N4800	TCSS (Gantry G23A) (incl. VO73 Revised Sign Gantry Details)	-12	85%	50	10-Jan-13 A	03-Aug-13	TCSS (Gantry G23A) (incl. VO73 Revised Sign Gantry Details)												
Landscaping																			
S21N6000	Landscaping Works	-58	0%	40	10-Aug-13	27-Sep-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)	-60	60.63%	40	25-Mar-13 A	13-Aug-13	Slopeworks Fill(S26)												
S21S5010	Slopeworks Fill(S26) - Lower +50mPD		100%	15	25-Mar-13 A	10-May-13 A	Slopeworks Fill(S26) - Lower +50mPD												
S21S5020	Slopeworks Fill(S26) - Upper +55mPD	-60	30%	23	13-May-13 A	13-Aug-13	Slopeworks Fill(S26) - Upper +55mPD												
S21S5100	Slopeworks Fill(S27)	-62	85%	120	09-Jan-13 A	15-Aug-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	-62	70%	60	18-Jan-13 A	15-Aug-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																			
S21S2000	Sheet Pile/Excavate & Construct W50 (w/SP)		100%	215	21-May-12 A	23-Apr-13 A	Excavate & Construct W50 (w/SP)												

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013							2014					
							Q3			Q4				Q1					
							41	42	43	44	45	46	47	48	49	50			
S21S2010	Sheet Pile & ELS Works		100%	24	21-May-12 A	07-Sep-12 A													
S21S2020	Construction of W50 Structure		100%	75	02-Jan-13 A	19-Mar-13 A													
S21S2030	Backfilling		100%	50	20-Mar-13 A	23-Apr-13 A													
Retaining Wall W51-56 (CSD 3)																			
S21S2100	Sheet Pile / Excavate & Construct W51-56 (w/SP)		100%	216	25-Feb-11 A	27-Dec-12 A													
S21S2110	Sheet Pile & ELS Works (W51)		100%	24	25-Feb-11 A	11-May-11 A													
S21S2120	Construction of W51 Structure		100%	42	19-Apr-11 A	14-Jun-11 A													
S21S2130	Sheet Pile & ELS Works (W52 & W53)		100%	24	28-Jul-11 A	16-Sep-11 A													
S21S2140	Construction of W52 & W53 Structure		100%	42	17-Oct-11 A	05-Dec-11 A													
S21S2150	Backfilling of W51, W52 & W53		100%	24	17-Jan-12 A	27-Dec-12 A													
S21S2160	Sheet Pile & ELS Works (W54, 55 & 56)		100%	24	17-Feb-12 A	03-Mar-12 A													
S21S2170	Construction of W54, 55 & 56 Structure		100%	75	15-Feb-12 A	06-Jul-12 A													
S21S2180	Backfilling of W54, 55 & 56		100%	30	02-Aug-12 A	27-Dec-12 A													
S21S2190	Backfilling behind W51 to W56 and drainage works	-39	50%	70	04-Mar-13 A	04-Sep-13													
Retaining Wall W51A (CSD 3)																			
S21S2163	Excavate to cut-off level		100%	8	17-Jan-11 A	25-Jan-11 A													
S21S2164	Capping/Walling for W51A		100%	18	12-Jul-11 A	01-Aug-11 A													
S21S2165	Backfilling		100%	30	28-Dec-11 A	04-Feb-12 A													
Retaining Wall W35A, (CSD 2)																			
S21S2211	Construction of W35A (w/MP)		100%	198	13-Apr-12 A	05-Dec-12 A													
S21S2212	Removal of existing concrete structure at W35A		100%	35	13-Apr-12 A	03-Jul-12 A													
S21S2218	Mini Piles for W35A (8 nos.)		100%	30	25-Jul-12 A	14-Aug-12 A													
S21S2230	Excavation and tie back installation		100%	25	15-Aug-12 A	09-Oct-12 A													
S21S2240	Capping/Walling for W35A		100%	40	10-Oct-12 A	24-Nov-12 A													
S21S2250	Backfilling		100%	6	29-Nov-12 A	05-Dec-12 A													
Road Re-construction Works, Roadworks & Drainage																			
S21S3895	Roadwork (South Bound slow lane along W35A)		100%	6	06-Dec-12 A	09-Dec-12 A													
S21S3896	Roadwork (South Bound slow lane along W50 - W56)		100%	30	01-Feb-13 A	29-Apr-13 A													
S21S3900	Roadworks, Drainages & Utilities (CH 2400 - 2840)	-58	63.83%	150	25-Jan-13 A	28-Sep-13													
S21S4001	Removal of Existing Paving	-58	60%	40	25-Jan-13 A	13-Aug-13													
S21S4002	Drainages (incl. VO33: Drainage details at W48)	-64	0%	30	26-Jul-13	29-Aug-13													
S21S4003	Utilities (incl. VO 26 & VO69)	-64	0%	30	30-Aug-13	05-Oct-13													
S21S4010	Road Surface (CH2400 - CH2840)	-58	20%	65	04-Mar-13 A	16-Oct-13													
S21S4011	Road Construction Works (Fast Lane) for C1/ C2 Interface stage 4A		100%	40	21-Jan-13 A	13-Apr-13 A													
S21S4012	Road Construction Works (Mid Lane) for C1/ C2 Interface stage 5A		100%	27	15-Apr-13 A	25-May-13 A													
S21S4013	Road Construction Works (Slow Lane) for C1/ C2 Interface stage 6A		100%	39	27-May-13 A	30-Jun-13 A													
S21S4014	Road Construction Works for C1/ C2 Interface Final stage	-58	15%	45	02-Jul-13 A	28-Sep-13													
S21S4030	Shift lane for C1/ C2 interface (South Bound along W35A)		100%	0	09-Dec-12 A														
S21S4031	Shift lane for C1/ C2 Interface stage 4A		100%	0	14-Apr-13 A														
S21S4032	Shift lane for C1/ C2 Interface stage 5A		100%	0	26-May-13 A														
S21S4033	Shift lane for C1/ C2 Interface stage 6A		100%	0	30-Jun-13 A														
S21S4050	Shift lane for C1/ C2 interface (Final stage)	-58	0%	0	28-Sep-13														
Noise Barriers																			
Noise Barrier NB29																			
S21S3010	NB29A (CH 0-62.3) on W35A (incl. VO 9: Construction of double leaf acce...	-65	0%	20	11-Sep-13	07-Oct-13													
S21S3011	NB29A (CH 0-62.3) on W35A - Erecting H-Column	-65	0%	10	11-Sep-13	24-Sep-13													
S21S3012	NB29A (CH 0-62.3) on W35A - Installing Panel	-65	0%	10	24-Sep-13	07-Oct-13													
Noise barrier NB30																			



Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013										2014		
							Q3			Q4			Q1						
							41	42	43	44	45	46	47	48	49	50			
S21S3020	NB30 (CH 0-201.9) (incl. VO 9: Construction of double leaf access door for...	-65	41.69%	104	01-Aug-12 A	07-Oct-13	NB30 (CH 0-201.9) (incl. VO 9: Construction of double leaf access door for...												
S21S3021	NB30 - Excavation and Footing (bay 1 - bay 3)		100%	75	01-Aug-12 A	22-Nov-12 A	NB30 - Excavation and Footing (bay 1 - bay 3)												
S21S3026	NB30 - Excavation and Footing (bay 13 - bay 15)		100%	25	02-May-13 A	14-Jun-13 A	NB30 - Excavation and Footing (bay 13 - bay 15)												
S21S3027	NB30 - Excavation and Footing (bay 4 - bay 12)	-65	10%	45	02-Jul-13 A	11-Sep-13	NB30 - Excavation and Footing (bay 4 - bay 12)												
S21S3028	NB30 : Erecting H-Column	-65	0%	10	11-Sep-13	24-Sep-13	NB30 : Erecting H-Column												
S21S3029	NB30 : Installing Panel	-65	0%	10	24-Sep-13	07-Oct-13	NB30 : Installing Panel												
Noise Barrier NB33																			
S21S3030	NB33 (CH 0-143) (incl. VO 9: Construction of double leaf access door for n...	-11	93.14%	102	01-Sep-12 A	02-Aug-13	NB33 (CH 0-143) (incl. VO 9: Construction of double leaf access door for noise barrier)												
S21S3031	NB33 : Excavation, construction of Footing & Backfilling (bay 3 - bay 13)		100%	75	01-Sep-12 A	10-Jan-13 A	NB33 : Excavation, construction of Footing & Backfilling (bay 3 - bay 13)												
S21S3032	NB33 : Erecting H-Column (bay 3 - bay 13)		100%	15	14-Jan-13 A	17-Jan-13 A	NB33 : Erecting H-Column (bay 3 - bay 13)												
S21S3033	NB33 : Installing Panel (bay 3 - bay 13)		100%	12	25-Jan-13 A	02-Mar-13 A	NB33 : Installing Panel (bay 3 - bay 13)												
S21S3034	NB33 : Excavation, construction of Footing & Backfilling (bay 1 - bay 2)		100%	15	07-Mar-13 A	21-Mar-13 A	NB33 : Excavation, construction of Footing & Backfilling (bay 1 - bay 2)												
S21S3035	NB33 : Erecting H-Column (bay 1 - bay 2)		100%	7	26-Apr-13 A	27-Apr-13 A	NB33 : Erecting H-Column (bay 1 - bay 2)												
S21S3036	NB33 : Installing Panel (bay 1 - bay 2)	-11	0%	7	26-Jul-13	02-Aug-13	NB33 : Installing Panel (bay 1 - bay 2)												
Traffic Control & Surveillance System																			
S21S4800	TCSS (Gantry G60A) (incl. VO73 Revised Sign Gantry Details)	-58	15%	45	02-Jul-13 A	28-Sep-13	TCSS (Gantry G60A) (incl. VO73 Revised Sign Gantry Details)												
Landscaping																			
S21S6000	Landscaping Works	-62	0%	40	16-Aug-13	03-Oct-13	Landscaping Works												
Middle Lane																			
Road Re-construction Works																			
S21M4030	Roadworks, Drainage & Utilities (CH 2400 - 2840)	-99	0%	65	08-May-12 A	18-Nov-13	Roadworks, Drainage & Utilities (CH 2400 - 2840)												
S21M4035	Removal of Central barrier & Roadmark		100%	25	08-May-12 A	06-Jun-13 A	Removal of Central barrier & Roadmark												
S21M4040	Removal of Existing Paving		100%	25	18-May-12 A	06-Jun-13 A	Removal of Existing Paving												
Noise Barriers																			
Noise barrier NB32, G23A & G60A																			
S21M380	Excavate to cut-off level (Stage 1: Bay 1 - Bay 2)		100%	7	31-Jan-13 A	25-Feb-13 A	Excavate to cut-off level (Stage 1: Bay 1 - Bay 2)												
S21M390	Construction for NB32 (Stage 1: Bay 1 - Bay 2)		100%	15	25-Feb-13 A	16-Mar-13 A	Construction for NB32 (Stage 1: Bay 1 - Bay 2)												
S21M391	Excavate to cut-off level (Stage 2: Bay 3 - Bay 26)	-99	85%	15	18-May-13 A	29-Jul-13	Excavate to cut-off level (Stage 2: Bay 3 - Bay 26)												
S21M392	Construction for NB32 (Stage 2: Bay 3 - Bay 26 with G23A and G60A)	-99	52%	50	31-May-13 A	26-Aug-13	Construction for NB32 (Stage 2: Bay 3 - Bay 26 with G23A and G60A)												
S21M393	Erecting H-Column, NB32	-80	0%	20	26-Aug-13	18-Sep-13	Erecting H-Column, NB32												
S21M394	Installing Panel & Road Barrier, NB32	-80	0%	30	18-Sep-13	26-Oct-13	Installing Panel & Road Barrier, NB32												
S21M400	Backfilling (Stage 1: Bay 1 - Bay 2)		100%	10	18-Mar-13 A	20-Apr-13 A	Backfilling (Stage 1: Bay 1 - Bay 2)												
S21M401	Backfilling (Stage 2: Bay 3 - Bay 26)	-99	5%	20	15-Jul-13 A	17-Sep-13	Backfilling (Stage 2: Bay 3 - Bay 26)												
S21M403	Road Lighting Works	-99	0%	10	17-Sep-13	30-Sep-13	Road Lighting Works												
S21M404	Remaining Roadworks & Road Surfacing	-99	0%	40	30-Sep-13	18-Nov-13	Remaining Roadworks & Road Surfacing												
Ready For Pre-Handover Retaining Wall of Section 1																			
HRW0010	Ready For Pre-Handover Retaining Wall W35, W36, W38, W39, W40, W4...	-11	0%	7	26-Jul-13	02-Aug-13	Ready For Pre-Handover Retaining Wall W35, W36, W38, W39, W40, W44, W45, W46, W47, W48, W...												
HRW0011	Ready For Pre-Handover Retaining Wall W35A, W50, W51, W52, W53, W...	-11	0%	7	26-Jul-13	02-Aug-13	Ready For Pre-Handover Retaining Wall W35A, W50, W51, W52, W53, W54, W55, W56												
Section 2																			
Site Area SA22																			
PHSA2220	Possession of SA22 (Day0)		100%	0	26-Feb-10 A		Possession of SA22 (Day0)												
SA220000	Site Area SA22 Works Period (incl. VO 28: Provision of hoarding at site bo...	177	86.92%	1216	26-Feb-10 A	31-Dec-13	Site Area SA22 Works Period (incl. VO 28: Provision of hoarding at site bo...)										Site Area SA22 Works Period (incl. VO 28: Provision of hoarding at site bo...)		
SA220010	Site Area SA22 Works Completion	177	0%	0		31-Dec-13	Site Area SA22 Works Completion										Site Area SA22 Works Completion		
SA220020	Temporary Traffic Management (Detail shall refer to supplementary inform...	177	83.86%	985	25-Feb-10 A	31-Dec-13	Temporary Traffic Management (Detail shall refer to supplementary inform...)										Temporary Traffic Management (Detail shall refer to supplementary inform...)		
SA220030	Overall Utilities Diversion (Detail shall refer to supplementary information)	177	83.86%	985	25-Feb-10 A	31-Dec-13	Overall Utilities Diversion (Detail shall refer to supplementary information)										Overall Utilities Diversion (Detail shall refer to supplementary information)		
North Bound																			
Preliminaries																			

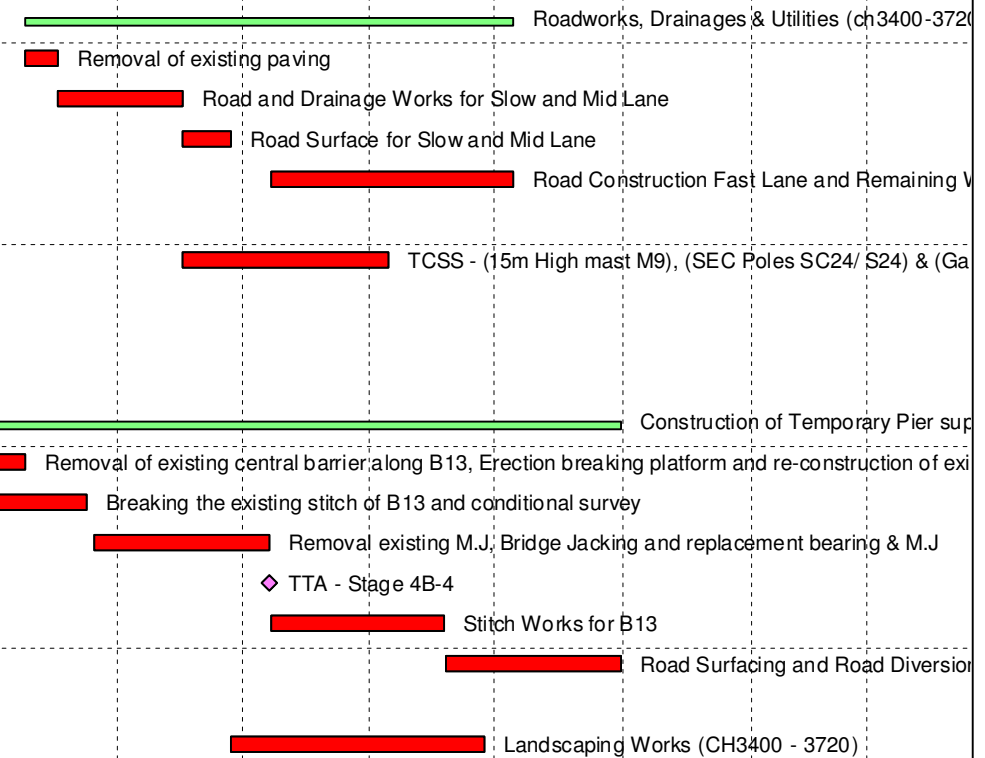
Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013							2014		
							Q3			Q4				Q1		
							41	42	43	44	45	46	47	48	49	50
S22N2270	Wall Stem (W56B), (Bay 1 - 3, Total 18 pours)		100%	75	01-Nov-12 A	06-Apr-13 A	Bay 1 - 3, Total 18 pours)									
S22N2274	Wall Stem (W56B), (Bay 4 - 8, Total 30 pours)		100%	75	12-Nov-12 A	06-Apr-13 A	Bay 4 - 8, Total 30 pours)									
S22N2276	Wall Stem (W56B), (Bay 9 - 10, Total 12 pours)		100%	75	24-Nov-12 A	06-Apr-13 A	Bay 9 - 10, Total 12 pours)									
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)	-5	40.89%	129	15-Jan-13 A	26-Oct-13	Roadworks, Drainages & Utilities (CH 2840 - 3140)									
S22N4010	Roadworks Stage 1 (CH 2840 - 3000)		100%	30	15-Jan-13 A	29-Mar-13 A	Roadworks Stage 1 (CH 2840 - 3000)									
S22N4030	Drainages Stage 1 (CH2840 - 3000)		100%	30	15-Jan-13 A	05-Mar-13 A	Drainages Stage 1 (CH2840 - 3000)									
S22N4040	Road Surface Works		100%	30	21-Mar-13 A	23-Apr-13 A	Road Surface Works									
S22N4042	Roadworks Stage 2 (CH3000 - 3140)	3	90%	30	18-Mar-13 A	29-Jul-13	Roadworks Stage 2 (CH3000 - 3140)									
S22N4044	Drainages Stage 2 (CH3000 - 3140)		100%	30	20-Feb-13 A	11-Apr-13 A	Drainages Stage 2 (CH3000 - 3140)									
S22N4046	Road Surface Works	3	50%	30	17-May-13 A	15-Aug-13	Road Surface Works									
S22N4048	Road Construction Works Remain Fast Lane (along CH2840 - 3140)	-5	0%	50	26-Aug-13	26-Oct-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 acce...		100%	74	15-Oct-12 A	22-Nov-12 A	Preparation for 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)	-48	0%	40	29-Aug-13	17-Oct-13	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	Backfilling									
Road Re-construction Works, Roadworks & Drainage																
S22S4000	Road Re-construction Works (CH 2840 - 3450)	-60	29.09%	185	06-May-13 A	31-Dec-13	Road Re-construction Works (CH 2840 - 3450)									
S22S4405	Road and Drainages Works for Fast Lane (CH2840 - 3000)	-40	85%	45	06-May-13 A	02-Aug-13	Road and Drainages Works for Fast Lane (CH2840 - 3000)									
S22S4410	Road Surface Works for Fast Lane (CH2840 - 3000)	-40	0%	12	02-Aug-13	16-Aug-13	Road Surface Works for Fast Lane (CH2840 - 3000)									
S22S4415	Road Re-Construction Works for Mid 2 Lane (CH2840 - 3000)	-40	0%	30	16-Aug-13	21-Sep-13	Road Re-Construction Works for Mid 2 Lane (CH2840 - 3000)									
S22S4420	Road and Drainages Works for Fast and Mid Lane (CH3000 - 3450)	-40	0%	30	16-Aug-13	21-Sep-13	Road and Drainages Works for Fast and Mid Lane (CH3000 - 3450)									
S22S4425	Road Surface Works for Fast Lane and Mid Lane (CH3000 - 3450)	-40	0%	12	21-Sep-13	07-Oct-13	Road Surface Works for Fast Lane and Mid Lane (CH3000 - 3450)									

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013										2014							
							Q3			Q4			Q1											
							41	42	43	44	45	46	47	48	49	50								
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	Scaffolding & Soil Nail Installation (Area 4)																	
S24N5831	Slope Reinstatement Works (Bridge 12ASA incl. VO74)	24	45%	75	30-Apr-13 A	19-Sep-13	Slope Reinstatement Works (Bridge 12ASA incl. VO74)																	
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	Drainage & Backfilling W56B-2																	
Retaining Wall W57A																								
S24N2200	Construction of W57A	-59	96%	35	26-Jun-13 A	27-Jul-13	Construction of W57A																	
S24N2202	Construction of Structure W57A (W57B - bay1 to bay2)		100%	20	26-Jun-13 A	23-Jul-13 A	Construction of Structure W57A (W57B - bay1 to bay2)																	
S24N2203	Backfilling	-59	80%	7	22-Jul-13 A	27-Jul-13	Backfilling																	
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	-60	97%	60	25-Jan-13 A	27-Jul-13	Backfilling & Drainage W57B																	
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	-60	97%	54	25-Jan-13 A	27-Jul-13	Backfilling & Drainage for W57C																	
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	Base Slab, RWB12A																	
S24N1522	Construction of Wall, RWB12A		100%	40	18-Apr-13 A	07-Jun-13 A	Construction of Wall, RWB12A																	
S24N1530	Backfilling		100%	20	09-May-13 A	25-Jun-13 A	Backfilling																	
S24N1540	Construction the wing slab of RWB12A	-35	0%	30	24-Aug-13	30-Sep-13	Construction the wing slab of RWB12A																	
Roadworks, Drainage & Utilities																								
S24N4000	Roadworks, Drainages & Utilities (ch3140-3400, exclude B12A)	-40	0%	109	27-Jul-13	05-Dec-13	Roadworks, Drainages & Utilities (ch3140-3400)																	
S24N4015	Road and Drainage Works	-60	0%	10	27-Jul-13	08-Aug-13	Road and Drainage Works																	
S24N4025	Road Surface Works for Mid and Slow Lane	-60	0%	14	08-Aug-13	24-Aug-13	Road Surface Works for Mid and Slow Lane																	
S24N4026	TTA - Stage 4B-3	-60	0%	0		24-Aug-13	TTA - Stage 4B-3																	
S24N4035	Road Construction Fast Lane and Remaining Works (along CH3140 - 3400)	-40	0%	50	08-Oct-13	05-Dec-13	Road Construction Fast Lane and Remaining Works																	

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013					2014							
							Q3			Q4		Q1							
							41	42	43	44	45	46	47	48	49	50			
Landscaping																			
S24N6000	Landscaping Works	-40	0%	50	08-Oct-13	05-Dec-13												Landscaping Works	
Site Area SA25																			
PHSA2520	Possession of SA25 (Day270)		100%	0	04-May-10 A														
SA250000	Site Area SA25 Works Period (incl, Provision of hoarding at site boundary ...	212	83.9%	770	04-May-10 A	26-Nov-13												Site Area SA25 Works Period (incl, Provision of ho	
SA250010	Site Area SA25 Works Completion	212	0%	0		26-Nov-13												Site Area SA25 Works Completion	
SA250020	Temporary Traffic Management (Detail shall refer to supplementary inform...	170	86.54%	765	04-May-10 A	26-Nov-13												Temporary Traffic Management (Detail shall refer t	
SA250030	Overall Utility Diversion (Detail shall refer to supplementary information)	170	86.54%	765	04-May-10 A	26-Nov-13												Overall Utility Diversion (Detail shall refer to suppl	
South Bound																			
Preliminaries																			
S25S0000	Site Clearance/Access Rd (ch3400-3600)		100%	97	20-Oct-10 A	16-Feb-11 A													
S25S0010	Site Clearance (ch3400-3600)		100%	75	20-Oct-10 A	18-Jan-11 A													
S25S0020	Access Road (ch3400-3600)		100%	75	15-Nov-10 A	16-Feb-11 A													
Slopeworks																			
S25S5000	Slopeworks Fill(S30A)		100%	60	15-Oct-12 A	10-Nov-12 A													
S25S5010	Slopeworks Fill (S30A) - Stage 1: +53.5mPD		100%	30	15-Oct-12 A	30-Oct-12 A													
S25S5020	Slopeworks Fill (S30A) - Stage 2: 55.8mPD		100%	30	31-Oct-12 A	10-Nov-12 A													
S25S5110	Slope Reinstatement Works (Bridge 13A)	-32	0%	25	28-Aug-13	26-Sep-13												Slope Reinstatement Works (Bridge 13A)	
S25S5140	Slope Reinstatement Works (Bridge LB1)	-32	0%	25	27-Sep-13	28-Oct-13												Slope Reinstatement Works (Bridge LB1)	
S25S5150	Slope Reinstatement Works (S30A)	-32	0%	25	29-Oct-13	26-Nov-13												Slope Reinstatement Works (S30A)	
Construction of Retaining Wall																			
Retaining Wall W58B, (CSD 2)																			
S25S2020	Site Formation		100%	25	01-Nov-10 A	30-Nov-10 A													
S25S2030	Excavate to cut-off level		100%	10	01-Nov-10 A	31-Dec-10 A													
S25S2050	Construction of Structure W58B		100%	75	13-May-11 A	15-Sep-12 A													
S25S2060	Backfilling		100%	45	05-Nov-12 A	08-Feb-13 A													
Road Re-construction Works, Roadworks & Drainage																			
S25S4000	Roadworks, Drainages & Utilities (CH 3400 - 3600)	273	100%	109	27-Feb-13 A	26-Jul-13												Roadworks, Drainages & Utilities (CH 3400 - 3600)	
S25S4025	Road Works for Mid and Slow Lane		100%	60	27-Feb-13 A	03-Jun-13 A												Road Works for Mid and Slow Lane	
S25S4030	Drainages Works		100%	60	04-Mar-13 A	19-Apr-13 A													
S25S4040	Road Surface for Mid and Slow Lane		100%	10	31-May-13 A	21-Jun-13 A												Road Surface for Mid and Slow Lane	
S25S4060	Removal of existing central barrier and forming temporary road (CH 3350 - ...		100%	12	24-Jun-13 A	09-Jul-13 A												Removal of existing central barrier and forming temporary road (CH 3350 - CH 3550)	
S25S4070	Road Construction and Remaining Works (along CH 3400 - 3600)	-20	0%	30	08-Oct-13	12-Nov-13												Road Construction and Remaining Works (along CH 3400 - 3600)	
S25S4200	Slip Road H	15	0%	50	02-Aug-13	30-Sep-13												Slip Road H	
Noise Barriers & Road Barriers																			
Noise Barrier NB34																			
S25S3000	Construct Noise Barrier & Beam Barrier, NB34		100%	95	13-Nov-12 A	04-Feb-13 A													
S25S3010	NB34 : Foundation Works		100%	36	13-Nov-12 A	03-Jan-13 A													
S25S3020	NB34 : Installation of H-column & Panel		100%	36	23-Jan-13 A	04-Feb-13 A													
Traffic Control & Surveillance System																			
S25S4810	TCSS - Stage 1 (Bridge 13A)		100%	30	08-Apr-13 A	25-May-13 A												TCSS - Stage:1 (Bridge 13A)	
Site Area SA26																			
PHSA2620	Possession of SA26 (Day0)		100%	0	26-Feb-10 A														
SA260000	Site Area SA26 Works Period	-72	86.92%	1216	26-Feb-10 A	31-Dec-13												Site Area SA26 Works Period	
SA260010	Site Area SA26 Works Completion	-72	0%	0		31-Dec-13												Site Area SA26 Works Completion	
SA260020	Temporary Traffic Management (Detail shall refer to supplementary inform...	-60	86.67%	983	26-Feb-10 A	31-Dec-13												Temporary Traffic Management (De	
SA260030	Overall Utility Diversion (Detail shall refer to supplementary information)	-60	86.67%	983	26-Feb-10 A	31-Dec-13												Overall Utility Diversion (Detail shall	

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013					2014						
							Q3		Q4			Q1						
							41	42	43	44	45	46	47	48	49	50		
SA260040	Additional work to existing ball valves, HKCG	19	0%	52	26-Jul-13	25-Sep-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	-14	0%	40	16-Sep-13	05-Nov-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)	-40	0%	98	09-Aug-13	05-Dec-13												
S26N4035	Removal of existing paving	-34	0%	7	09-Aug-13	17-Aug-13												
S26N4055	Road and Drainage Works for Slow and Mid Lane	-34	0%	25	17-Aug-13	16-Sep-13												
S26N4065	Road Surface for Slow and Mid Lane	-34	0%	10	16-Sep-13	28-Sep-13												
S26N4075	Road Construction Fast Lane and Remaining Works (along CH3400 - 3720)	-40	0%	50	08-Oct-13	05-Dec-13												
Traffic Control & Survelance System																		
S26N4810	TCSS - (15m High mast M9), (SEC Poles SC24/ S24) & (Gantry 24) (incl. ...	-14	0%	40	16-Sep-13	05-Nov-13												
Modification of Existing Bridge																		
Modification of Existing Bridge 13																		
S26N1200	VO 27: Temporary access and lighting for inspection on Bridge Deck interi...		100%	10	02-Jan-12 A	17-Jan-12 A												
S26N1210	Construction of Temporary Pier supports & Installation of Jacks	-60	2.24%	134	22-Jul-13 A	31-Dec-13												
S26N1260	Removal of existing central barrier along B13, Erection breaking platform a...	-60	10%	14	22-Jul-13 A	09-Aug-13												
S26N1270	Breaking the existing stitch of B13 and conditional survey	-60	0%	25	27-Jul-13	24-Aug-13												
S26N1330	Removal existing M.J, Bridge Jacking and replacement bearing & M.J	-60	0%	35	26-Aug-13	07-Oct-13												
S26N1340	TTA - Stage 4B-4	-60	0%	0		07-Oct-13												
S26N1350	Stitch Works for B13	-60	0%	35	08-Oct-13	18-Nov-13												
S26N1360	Road Surfacing and Road Diversion	-60	0%	35	19-Nov-13	31-Dec-13												
Landscaping																		
S26N6040	Landscaping Works (CH3400 - 3720)	-34	0%	50	28-Sep-13	28-Nov-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																		

(w/SP)



Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013					2014			
							Q3			Q4		Q1			
							41	42	43	44	45	46	47	48	49
S26S5000	Slopeworks Fill(S32)	-48	0%	24	18-Feb-13 A	05-Oct-13	Slopeworks Fill(S32)								
S26S5010	Slopeworks Fill (S32) - Stage 1 (Lower +42mPD)		100%	20	18-Feb-13 A	30-May-13 A	Slopeworks Fill (S32) - Stage 1 (Lower +42mPD)								
S26S5020	Slopeworks Fill (S32) - Stage 2 (Upper +45mPD)	-48	10%	20	08-Jun-13 A	05-Oct-13	Slopeworks Fill (S32) -Stage 2 (Upper +45mPD)								
S26S5110	Slope Reinstatement Works (besides LB3)	24	0%	24	04-Mar-13 A	18-Sep-13	Slope Reinstatement Works (besides LB3)								
S26S5120	Slope Reinstatement Works (besides LB3) - Lower: below +24mPD	24	50%	20	04-Mar-13 A	26-Aug-13	Slope Reinstatement Works (besides LB3) - Lower: below +24mPD								
S26S5130	Slope Reinstatement Works (besides LB3) - Upper: above +24mPD	24	0%	20	27-Aug-13	18-Sep-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	-47	90.77%	325	26-Nov-11 A	29-Aug-13	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	h RW)								
S26S1401	ELS Works, Excavation and Protection Existing Gas Main		100%	20	25-Mar-13 A	21-Jun-13 A	ELS Works, Excavation and Protection Existing Gas Main								
S26S1402	Construction of Structure (part 2, Remaining RW)		100%	35	19-Apr-13 A	17-Jul-13 A	Construction of Structure (part 2, Remaining RW)								
S26S1403	Backfilling (part 2, Remaining RW)	-47	20%	15	21-Jun-13 A	08-Aug-13	Backfilling (part 2, Remaining RW)								
S26S1404	Roadworks	-47	0%	18	09-Aug-13	29-Aug-13	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	-37	96.71%	609	26-May-11 A	17-Aug-13	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, Conn...		100%	50	18-Feb-13 A	04-Jun-13 A	Construction of Remain of RWTW2 (stage 3: Remaining Half Bay 1, Connection to LB2)								
S26S1530	Backfilling of RWTW2		100%	20	02-May-13 A	18-Jun-13 A	Backfilling of RWTW2								
S26S1540	Roadworks	-37	0%	20	26-Jul-13	17-Aug-13	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	-41	96.61%	708	01-Aug-11 A	22-Aug-13	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	ary cut to slope toe								
S26S1602	VO 51.1: Rockfill Slope (Bay 1 -Bay 7)		100%	40	13-Apr-13 A	17-Jun-13 A	VO 51.1: Rockfill Slope (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	-41	50%	20	19-Jun-13 A	06-Aug-13	VO 51.1: Remaining Rockfill below LB3								
S26S1608	VO 51.1: Roadworks	-41	20%	30	26-Jun-13 A	22-Aug-13	VO 51.1: Roadworks								
Retaining Wall RWTW3A															
S26S1614	Construction of RWTW 3A	59	92.85%	168	01-Oct-12 A	08-Aug-13	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	nstruction RWTW 3A								
S26S1658	Backfill RWTW 3A		100%	20	06-May-13 A	15-Jun-13 A	Backfill RWTW 3A								

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013										2014			
							Q3			Q4			Q1							
							41	42	43	44	45	46	47	48	49	50				
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	VO 17.2: Deck Construction (Bearings, Drainage & MJ included)													
S22S1460	VO 17.2: Scaffolding & Falsework		100%	35	20-Dec-12 A	28-Mar-13 A	falsework													
S22S1470	VO 17.2: Deck Formwork, Steel Fixing and Concreting - C9 - C10 (Stage 1)		100%	65	14-Mar-13 A	12-Jul-13 A	VO 17.2: Deck Formwork, Steel Fixing and Concreting - C9 -C10 (Stage 1)													
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	VO 17.2: Deck Formwork, Steel Fixing and Concreting - NA to C9 (Stage 2)													
S22S1500	Stressing		100%	5	15-Jul-13 A	20-Jul-13 A	Stressing													
S22S1520	Parapet (Steel Barrier)	-48	0%	15	26-Jul-13	12-Aug-13	Parapet (Steel Barrier)													
S22S1540	Road surface & road work	-48	0%	14	13-Aug-13	28-Aug-13	Road surface & road work													
Construction of Bridge 12A																				
S24S1280	Construction of Bridge 12A (incl. VO29 & VO37: revised piling details and ...	52	95.68%	451	25-Aug-10 A	17-Aug-13	Construction of Bridge 12A (incl. VO29 & VO37: revised piling details and pile caps sleeving det													
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 N...		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	Abutment, Drainage & backfill, North Abutment													
Decking and Finishing																				

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013							2014					
							Q3			Q4				Q1					
							41	42	43	44	45	46	47	48	49	50			
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...		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 (icl, precast concrete skin)	42	63.85%	52	05-Nov-12 A	16-Aug-13													
S26S750	Erecting of Precast Parapet	42	60%	32	05-Nov-12 A	09-Aug-13													
S26S760	Installing M-Barrier	42	0%	6	09-Aug-13	16-Aug-13													
S26S770	Noise Barrier	42	0%	6	09-Aug-13	16-Aug-13													
S26S780	Surfacing	42	0%	7	16-Aug-13	24-Aug-13													
S26S790	Road Lighting	42	0%	7	16-Aug-13	24-Aug-13													
S26S800	Handover Inspection of LB1	42	0%	3	24-Aug-13	28-Aug-13													
Construction of Bridge 13A																			
S26S1300	Construction of Bridge 13A (incl. VO29 & VO37: revised piling details and ...		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													
S26S1650	Excavation & Cap-Nouth Abutment		100%	50	04-Jan-11 A	04-Apr-11 A													

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

Construction of Bridge 13A (incl. VO29 & VO37: revised piling details and pile caps sleeving details)

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013							2014					
							Q3			Q4				Q1					
							41	42	43	44	45	46	47	48	49	50			
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 befo...		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 Draina...		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													
S26S1873	Noise Barrier (Erection of H-Column and Panel)		100%	12	03-May-13 A	11-Jun-13 A													

e 2, North Abutment

8 days additional Drainage works (if RFI can be replied before 4-12-2012)

cluded) (incl. VO 45: Details of Drainage Arrangement of LB1 & B13A)

abutment-P3)

Parapet (icl, precast concrete skin)

Erection of Short Column and Barrier

Noise Barrier (Erection of H-Column and Panel)

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013													
							Q3			Q4				2014						
							41	42	43	44	45	46	47	48	49	50				
S26AN433	Slip Road R (From W70 to B18A) Stage 1.1 pavement & roadworks		100%	15	04-Jul-12 A	26-Jul-12 A														
S26AN435	Slip Road R (From W70 to B18A) Stage 2	67	80.65%	93	18-May-12 A	15-Aug-13	Slip Road R (From W70 to B18A) Stage 2													
S26AN436	Slip Road R (From W70 to B18A) Stage 2, formation (Remaining)	67	90%	30	18-May-12 A	06-Aug-13	Slip Road R (From W70 to B18A) Stage 2, formation (Remaining)													
S26AN437	Slip Road R (From W70 to B18A) Stage 2, Drainage & utilities (Remaining)	67	90%	30	27-Jun-12 A	09-Aug-13	Slip Road R (From W70 to B18A) Stage 2, Drainage & utilities (Remaining)													
S26AN438	Slip Road R (From W70 to B18A) Stage 2, pavement & roadworks (Remai...	67	90%	50	14-Jul-12 A	15-Aug-13	Slip Road R (From W70 to B18A) Stage 2, pavement & roadworks (Remaining)													
S26AN447	Construction Slip Road J (Under Bridge 15A)	19	0%	45	23-Sep-13	16-Nov-13	Construction Slip Road J (Under Bridge 15A)													
S26AN448	Construction Slip Road Q (At W65C)	19	0%	45	23-Sep-13	16-Nov-13	Construction Slip Road Q (At W65C)													
S26AN451	Road and Drainage Works (CH 3720 - 4550)	-16	23.18%	168	24-Jun-13 A	30-Dec-13	Road and Drainage Works (CH 3720 - 4550)													
S26AN452	Removal of existing central barrier and forming temporary road (CH3720-4...		100%	12	24-Jun-13 A	20-Jul-13 A	Removal of existing central barrier and forming temporary road (CH3720-4100)													
S26AN4525	TTA - Stage 4B-2		100%	0		21-Jul-13 A	TTA - Stage 4B-2													
S26AN453	Road and Drainage Works for Slow and Mid Lane (CH3720 - 3850)	16	40%	20	08-Jul-13 A	08-Aug-13	Road and Drainage Works for Slow and Mid Lane (CH3720 - 3850)													
S26AN454	Road Surface Works for Slow and Mid Lane (CH3720 - 3850)	16	0%	10	09-Aug-13	20-Aug-13	Road Surface Works for Slow and Mid Lane (CH3720 - 3850)													
S26AN455	Removal of existing central barrier (CH4100-4550)	-16	0%	8	08-Aug-13	17-Aug-13	Removal of existing central barrier (CH4100-4550)													
S26AN456	Road Works for Fast and Mid Lane (CH3850 - CH4550)	-16	0%	20	17-Aug-13	10-Sep-13	Road Works for Fast and Mid Lane (CH3850 - CH4550)													
S26AN457	Road Surface Works for Fast and Mid Lane (CH3850 - 4550)	-16	0%	10	10-Sep-13	23-Sep-13	Road Surface Works for Fast and Mid Lane (CH3850 - 4550)													
S26AN458	Road Works for Fast Lane (CH3720 - 3850)	-11	0%	20	23-Sep-13	18-Oct-13	Road Works for Fast Lane (CH3720 - 3850)													
S26AN459	Road Surface Works for Fast Lane (CH3720 - 3850)	-11	0%	10	18-Oct-13	30-Oct-13	Road Surface Works for Fast Lane (CH3720 - 3850)													
S26AN460	Road and Drainage Works for Slow Lane (CH4250 - 4550)	-16	0%	35	23-Sep-13	05-Nov-13	Road and Drainage Works for Slow Lane (CH4250 - 4550)													
S26AN461	Road Surface Works for Slow Lane (CH4250 - 4550)	-16	0%	10	05-Nov-13	16-Nov-13	Road Surface Works for Slow Lane (CH4250 - 4550)													
S26AN462	Road Construction and Remaining Works (along CH 3720 - 4550)	-16	0%	35	16-Nov-13	30-Dec-13	Road Construction and Remaining Works (along CH 3720 - 4550)													
S26AN470	Road and Drainage Works (CH 4550 - 4720)	17	0%	88	03-Aug-13	18-Nov-13	Road and Drainage Works (CH 4550 - 4720)													
S26AN471	Road and Drainage Works for Fast Lane (CH 4550 - 4720)	17	0%	35	03-Aug-13	13-Sep-13	Road and Drainage Works for Fast Lane (CH 4550 - 4720)													
S26AN472	Road Surface Works for Fast Lane (CH4550 - 4720)	17	0%	8	13-Sep-13	24-Sep-13	Road Surface Works for Fast Lane (CH4550 - 4720)													
S26AN482	Road Construction and Remaining Works (along CH 4550 - 4720)	17	0%	45	24-Sep-13	18-Nov-13	Road Construction and Remaining Works (along CH 4550 - 4720)													
Traffic Control & Survelance System																				
S26AN480	TCSS (G25, G26, G27, G28 & SEC Poles SC58/S58) (incl. VO73 Revised ...	51	0%	50	09-Aug-13	08-Oct-13	TCSS (G25, G26, G27, G28 & SEC Poles SC58/S58) (incl. VO73 Revised ...)													
Modification of Existing Bridge																				
S26AN200	Modification of Existing Bridge 15	9	0%	104	24-Jun-13 A	28-Nov-13	Modification of Existing Bridge 15													
S26AN230	Demolish of Central Barrier	29	50%	12	24-Jun-13 A	01-Aug-13	Demolish of Central Barrier													
S26AN240	Raising of Concrete Edge for N/B (CH3800 -3900)	29	0%	15	02-Aug-13	19-Aug-13	Raising of Concrete Edge for N/B (CH3800-3900)													
S26AN250	Removal existing M.J and install new M.J for Slow and Mid Lane (S/B)	29	0%	8	20-Aug-13	28-Aug-13	Removal existing M.J and install new M.J for Slow and Mid Lane (S/B)													
S26AN260	Raising of Concrete Edge for S/B (CH3800 - 4020) and N/B (CH3900 - 4020)	9	0%	25	23-Sep-13	24-Oct-13	Raising of Concrete Edge for S/B (CH3800 - 4020) and N/B (CH3900 - 4020)													
S26AN270	Removal existing M.J and install new M.J for Fast Lane (S/B and N/B)	9	0%	10	24-Oct-13	05-Nov-13	Removal existing M.J and install new M.J for Fast Lane (S/B and N/B)													
S26AN280	Removal existing M.J and install new M.J for Slow and Mid Lane (N/B)	9	0%	20	05-Nov-13	28-Nov-13	Removal existing M.J and install new M.J for Slow and Mid Lane (N/B)													
Landscaping																				
S26AN610	Landscaping Works	87	20%	29	15-Mar-13 A	26-Aug-13	Landscaping Works													
South Bound																				
Preliminaries																				
S26AS000	Site Clearance/Access Rd		100%	164	26-Feb-10 A	14-Sep-10 A														
S26AS010	Site Clearance		100%	75	26-Feb-10 A	18-Jun-10 A														
S26AS020	Access Road		100%	75	31-May-10 A	14-Sep-10 A														
Slopeworks																				
S26AS510	Slope Reinstatement Works (Bridge 15A)	18	0%	95	26-Jul-13	16-Nov-13	Slope Reinstatement Works (Bridge 15A)													
S26AS515	Backfilling Slope	18	0%	30	26-Jul-13	29-Aug-13	Backfilling Slope													
S26AS520	Soil Nail Installation	18	0%	50	30-Aug-13	30-Oct-13	Soil Nail Installation													
S26AS540	Slope Surface Treatment	18	0%	15	31-Oct-13	16-Nov-13	Slope Surface Treatment													
Construction of Retaining Wall																				
Retaining Wall W65A																				

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013							2014				
							Q3			Q4				Q1				
							41	42	43	44	45	46	47	48	49	50		
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	43	0%	40	30-Aug-13	18-Oct-13												
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	43	0%	40	30-Aug-13	18-Oct-13												
Road Re-Construction Works, Roadworks, Drainage & Utilities																		
S26AS400	Roadworks, Drainages & Utilities (CH 4020 - 4500)	35	80.47%	399	14-Feb-12 A	28-Oct-13												
S26AS410	Roadworks, Drainages & Utilities Stage 1 (ch4020-ch4200 & Tai Po Tai W...)		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												
S26AS440	Road Construction and Remaining Works (along CH4020 - 4500)	-16	85%	75	28-Jan-13 A	08-Aug-13												
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)	35	0%	50	28-Aug-13	28-Oct-13												
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												
Traffic Control & Surveillance System																		
S26AS480	TCSS (ch3720 - ch4820)	92	62.41%	56	30-Nov-12 A	20-Aug-13												
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												
S26AS483	TCSS - Stage 3 (ch4080 - ch4260), (Gantry G59) (incl. VO73 Revised Sign...)		100%	24	22-Jan-13 A	06-Jun-13 A												
S26AS484	TCSS - Stage 4 (ch4260 - ch4440), (Gantry G58) (incl. VO73 Revised Sign...)		100%	24	30-Nov-12 A	21-Dec-12 A												
S26AS485	TCSS - Stage 5 (ch4440 - ch4620)	92	50%	24	24-Dec-12 A	08-Aug-13												
S26AS486	TCSS - Stage 6 (ch4620 - ch4820), (Gantry G57) (incl. VO73 Revised Sign...)	92	20%	24	07-Jan-13 A	20-Aug-13												

North & South Bound

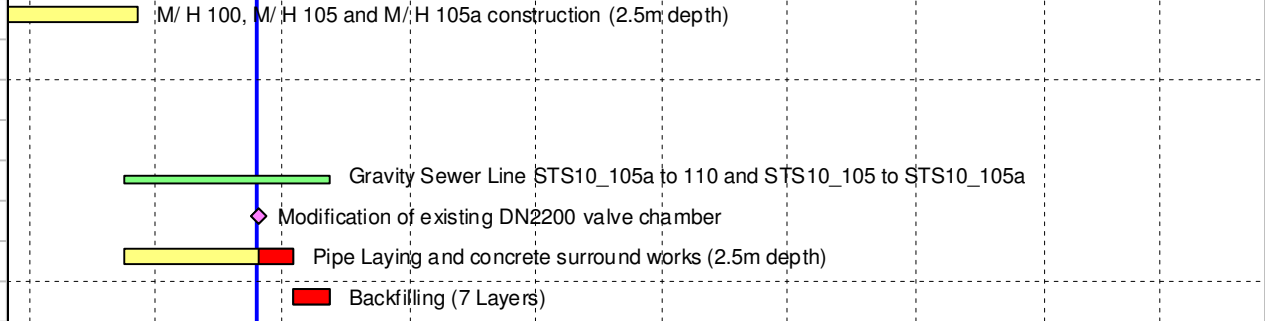
Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013										2014			
							Q3			Q4			Q1			Q1				
							41	42	43	44	45	46	47	48	49	50	48	49	50	
S27S5132	Slopeworks Cut(S39) - Stage 2, +35mPD		100%	46	13-Aug-10 A	07-Oct-10 A														
S27S5133	Slopeworks Cut(S39) - Stage 3, formation level		100%	46	28-Dec-10 A	23-Feb-11 A														
S27S5150	Slope Reinstatement Works (S42)	70	0%	40	30-Jul-13	13-Sep-13														
Construction of Retaining Wall W66/67 (CSD 2) & W71																				
S27S1100	W66 & W67 (CSD 2)		100%	45	02-Oct-10 A	19-Mar-11 A														
S27S1101	Base Slab (W66)		100%	30	02-Oct-10 A	01-Nov-10 A														
S27S1102	Wall Stem (W66)		100%	30	02-Nov-10 A	26-Dec-10 A														
S27S1103	Base Slab (W67)		100%	30	08-Nov-10 A	25-Dec-10 A														
S27S1113	Wall Stem (W67)		100%	24	28-Feb-11 A	19-Mar-11 A														
S27S1115	Backfill for W66&67		100%	61	27-Jun-11 A	15-Oct-11 A														
S27S1200	Retaining Wall W71 (Bay1 - Bay5)		100%	110	02-Jun-10 A	12-Oct-10 A														
S27S1210	Retaining Wall W71 : Base Slab		100%	55	02-Jun-10 A	06-Aug-10 A														
S27S1220	Retaining Wall W71 : Wall Stem		100%	55	07-Aug-10 A	12-Oct-10 A														
S27S1230	Backfill for W71		100%	50	27-Jun-11 A	24-Aug-11 A														
Roadworks, Drainage & Utilities																				
S27S4000	Roadworks, Drainages & Utilities - Stage 1 (CH 3900 - 4740)	15	72.57%	357	13-Apr-12 A	20-Nov-13														
S27S4004	Utilities - Stage 1 (W66 & W67)		100%	60	13-Apr-12 A	19-Apr-12 A														
S27S4006	Road and Drainages Works - Stage 1		100%	60	11-May-12 A	31-Jul-12 A														
S27S4010	Road Surface - Stage 1		100%	50	28-Jul-12 A	11-Dec-12 A														
S27S4012	Roadmark and Lane Shifting - Stage 1		100%	30	12-Dec-12 A	27-Dec-12 A														
S27S4018	Removal of existing paving - Stage 2 (Remaining CH4500 - 4740)	15	0%	25	30-Jul-13	27-Aug-13														
S27S4035	Road and Drainage Works for Slow Lane - Stage 2 (incl. VO 55: Provision ...)	15	0%	30	28-Aug-13	03-Oct-13														
S27S4045	Road Surface Works for Slow Lane	15	0%	10	04-Oct-13	16-Oct-13														
S27S4055	Road Construction and Remaining Works (along CH4500 - 4740)	15	0%	30	17-Oct-13	20-Nov-13														
Construction of Bridge 15A																				
Preparatory and Enabling Works																				
S26AS205	Site Clearance		100%	102	01-Jun-10 A	30-Sep-10 A														
S26AS210	Hual Road		100%	102	01-Jun-10 A	30-Sep-10 A														
S26AS215	11KV Diversion, CLP		100%	102	01-Jun-10 A	30-Sep-10 A														
S26AS225	2 nos. Existing fresh water mains diversion		100%	36	26-Jan-11 A	11-Mar-11 A														
S26AS235	Existing tel cable diversion, PCCW		100%	36	26-Jan-11 A	11-Mar-11 A														
S26AS245	HyD/Lighting		100%	60	26-Jan-11 A	09-Apr-11 A														
Substructure and Pier Construction																				
South Abutment, P1 to P5																				
S26AS220	Piling - South Abutment, P1 to P5 (incl. VO29: revised piling details)		100%	335	02-Jul-10 A	16-Aug-11 A														
S26AS230	Excavation & Cap-South Abutment, P1 to P5 (incl. VO6: Bridge 15A cap sl...)		100%	173	07-Feb-11 A	05-Sep-11 A														
S26AS240	Pier & backfill, South Abutment, P1 to P5		100%	112	13-Jun-11 A	26-Oct-11 A														
South Abutment																				
S26AS770	Piling - South Abutment		100%	71	02-Jul-10 A	07-Feb-11 A														
S26AS780	Cap & Backfill - South Abutment		100%	37	07-Feb-11 A	22-Mar-11 A														
S26AS790	South Abutment		100%	21	13-Jun-11 A	14-Jul-11 A														
S26AS800	COD: 15ASA Wingwall		100%	14	13-Jun-11 A	14-Jul-11 A														
P1																				
S26AS610	Piling - P1		100%	66	18-Jan-11 A	09-Apr-11 A														
S26AS620	Cap & Backfill - P1		100%	37	26-May-11 A	09-Jul-11 A														
S26AS630	Pier - P1		100%	36	11-Jul-11 A	22-Sep-11 A														
P2																				

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013						2014						
							Q3			Q4			Q1						
							41	42	43	44	45	46	47	48	49	50			
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: Re...		100%	314	26-Nov-11 A	28-Mar-13 A	Bearing, Drainage & MJ included) (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													
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													
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													
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													
S26AS269	Parapet (icl, precast concrete skin)		100%	50	06-Dec-12 A	08-Jun-13 A													
S26AS270	Noise Barrier for Bridge 15A		100%	25	27-Mar-13 A	12-Jun-13 A													
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													

Ready For Pre-Handover Retaining Wall of Section 3

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013							2014			
							Q3			Q4				Q1			
							41	42	43	44	45	46	47	48	49	50	
S31G7000	Tentative Start Date for SA31 Route Maintenance Works		100%	0	26-Feb-10 A												
Section 17 (Subject to Excision and Instruct by Engineer within 819 days)																	
General																	
SC150025	Validity Period	327	99%	819	25-Feb-10 A	03-Aug-13	Validity Period										
SC150030	Latest Date for the Engineer to Issue EI	327	0%	0		03-Aug-13	Latest Date for the Engineer to Issue EI										
Site Area SA28 & SA30																	
PHSA2840	Possession of SA28 & SA30		100%	0	26-Feb-10 A												
SA280005	Site Area SA28 Works Period	318	0%	0	24-May-12 A	12-Aug-13	Site Area SA28 Works Period										
SA280020	Site Area SA28 & SA30 Works Completion	318	0%	0		12-Aug-13	Site Area SA28 & SA30 Works Completion										
All Area																	
Preliminaries																	
S28N1000	Site Clearance/TTM/Access Rd/Utility Diversion	265	99%	45	24-May-12 A	03-Aug-13	Site Clearance/TTM/Access Rd/Utility Diversion										
Site Area SA30A																	
PHSA30A5	Possession of SA30A		100%	0	27-Jul-10 A												
SA30A005	Site Area SA30A Works Period	318	88.52%	155	23-May-12 A	12-Aug-13	Site Area SA30A Works Period										
SA30A020	Site Area SA30A Works Completion	318	0%	0		12-Aug-13	Site Area SA30A Works Completion										
North Bound																	
Preliminaries																	
S30AN100	Site Clearance/TTM/Access Rd/Utility Diversion		100%	75	14-May-12 A	23-May-12 A											
Roadworks, Drainage & Utilities																	
S30AN415	Section 17 subject to Excision Works Instruction date (Trunk Sewer Line)	-23	93.96%	245	23-May-12 A	12-Aug-13	Section 17 subject to Excision Works Instruction date (Trunk Sewer Line)										
S30AN420	Issuing of latest design drawing		100%	75	24-May-12 A	05-Sep-12 A											
S30AN430	Procurement & delivery of Trunk Sewer pipe (Stage 1)		100%	75	06-Sep-12 A	17-Sep-12 A											
S30AN440	Design clarification period	-10	98%	60	06-Sep-12 A	27-Jul-13	Design clarification period										
S30AN450	Procurement & delivery of Trunk Sewer pipe (Stage 2)	-10	99%	75	01-Nov-12 A	27-Jul-13	Procurement & delivery of Trunk Sewer pipe (Stage 2)										
S30AN460	Underground Utilities cable detection before ELS works		100%	60	17-Aug-12 A	24-Aug-12 A											
S30AN470	Gravity Sewer Line STS10_170 to 160 (22m Long)		100%	90	05-Dec-12 A	06-Feb-13 A	Gravity Sewer Line STS10_170 to 160 (22m Long)										
S30AN480	M/H 170 and M/H160 construction (6m depth)		100%	75	05-Dec-12 A	23-Jan-13 A											
S30AN490	Pipe laying and concrete surround works		100%	60	05-Dec-12 A	07-Jan-13 A	Pipe laying and concrete surround works										
S30AN500	Backfilling (2 Layers + Temp fill)		100%	30	08-Jan-13 A	06-Feb-13 A	Backfilling (2 Layers + Temp fill)										
S30AN510	Gravity Sewer Line STS10_160 to 150 (40m Long)	-22	84.95%	95	27-Feb-13 A	12-Aug-13	Gravity Sewer Line STS10_160 to 150 (40m Long)										
S30AN520	M/H150 construction (5m depth)		100%	40	27-Feb-13 A	16-Mar-13 A	M/H150 construction (5m depth)										
S30AN530	Pipe laying and concrete surround works (Stage 1)		100%	25	18-Mar-13 A	30-Apr-13 A	Pipe laying and concrete surround works (Stage 1)										
S30AN540	Construction of Temporary Access for Villager		100%	8	30-Apr-13 A	10-May-13 A	Construction of Temporary Access for Villager										
S30AN550	Pipe Laying and concrete works (Stage 2)	-22	70%	21	13-May-13 A	02-Aug-13	Pipe Laying and concrete works (Stage 2)										
S30AN560	Backfilling (15 Layers)	-22	0%	8	02-Aug-13	12-Aug-13	Backfilling (15 Layers)										
S30AN570	Gravity Sewer Line STS10_120 to 130 (41m Long)		100%	120	17-Sep-12 A	03-Jan-13 A	Gravity Sewer Line STS10_120 to 130 (41m Long)										
S30AN580	M/H 120 and M/H130 construction (3.5m & 4m depth)		100%	70	24-Sep-12 A	12-Oct-12 A											
S30AN585	Pipe Laying & concrete surround works		100%	30	14-Nov-12 A	20-Nov-12 A	Pipe Laying & concrete surround works										
S30AN590	Backfilling (15 Layers)		100%	20	21-Nov-12 A	03-Jan-13 A	Backfilling (15 Layers)										
S30AN600	Gravity Sewer Line STS10_130 to 140 (40m Long)		100%	88	08-Jan-13 A	18-Mar-13 A	Gravity Sewer Line STS10_130 to 140 (40m Long)										
S30AN610	M/H 140 construction (4.5m depth)		100%	40	08-Jan-13 A	19-Jan-13 A	M/H 140 construction (4.5m depth)										
S30AN620	Pipe Laying & concrete Surround works		100%	40	14-Jan-13 A	28-Jan-13 A	Pipe Laying & concrete Surround works										
S30AN630	Backfilling (12 Layers)		100%	25	01-Mar-13 A	18-Mar-13 A	Backfilling (12 Layers)										
S30AN640	Gravity Sewer Line STS10_140 to 150 (38m Long)		100%	80	28-Feb-13 A	18-May-13 A	Gravity Sewer Line STS10_140 to 150 (38m Long)										
S30AN650	Pipe Laying and concrete surround works		100%	50	28-Feb-13 A	18-Mar-13 A	Pipe Laying and concrete surround works										
S30AN660	Backfilling (15 Layers)		100%	30	22-Mar-13 A	18-May-13 A	Backfilling (15 Layers)										

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2013							2014				
							Q3			Q4				Q1				
							41	42	43	44	45	46	47	48	49	50		
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	-23	0%	8	24-Jun-13 A	12-Aug-13												
S30AN770	Modification of existing DN2200 valve chamber	-23	0%	0	26-Jul-13													
S30AN780	Pipe Laying and concrete surround works (2.5m depth)	-23	70%	26	24-Jun-13 A	03-Aug-13												
S30AN790	Backfilling (7 Layers)	-23	0%	7	03-Aug-13	12-Aug-13												



**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.		@
	• 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.		V

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 TaiWo 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	
	• Prevent off-site migration through use of sheet piles.		V
	• Minimize duration of works as far as practical.		V
	• All sewer and drainage connections should be sealed to prevent debris, soil, sand, etc, from entering public sewers/drains.		V
	• Site surface runoff should be settled to remove sand/silt before it is discharged into the existing storm drains.		V
	River training works		
	• Inspection and testing of water quality in the nullah on the Tai Po River.		N/A
	Road Widening Works and Earthworks		
	• 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
	• Sand traps, oil interceptors and other pollution prevention installations should be provided, properly cleaned and maintained.		V
	• 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
	• Regular inspections of stilling basins and/or silt traps are required to ensure that sediment is not conveyed into the existing drainage system.		V
	• Open stockpiles should be covered with a tarpaulin cover.		@
	• During the wet season, any exposed top soils should be covered with a tarpaulin, shotcreted or hydroseeded.		V
	• Sand and silt from wash-water from vehicle washing should be settled out before discharging into storm drains.		V
• 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	
	• Transport of wastes off site as soon as possible.		@
	• Maintenance of accurate waste records		V
	• Minimization of waste generation for disposal (via reduction/recycling/re-use).		V
	• No on-site burning will be permitted.		V
	• Use of re-useable metal hoardings/signboards.		V
	Vegetation from site clearance		
	• Segregation of materials to facilitate disposal.		V
	• Mulching to reduce bulk and where possible review opportunities for the possible beneficial use within landscaping areas.		V
	Demolition Wastes		
	• 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: 19-Jul-13 Next Due Date: 19-Sep-13
 Equipment No.: A-001-53T Serial No.: 10216

Ambient Condition			
Temperature, Ta (K)	301	Pressure, Pa (mmHg)	753.2

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	$[DH \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (m ³ /min) X-axis	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) Y-axis
18	8.8	2.94	1.48	45.0	44.57
13	6.3	2.49	1.25	38.0	37.64
10	4.5	2.10	1.06	31.0	30.71
7	3.5	1.85	0.93	26.0	25.75
5	2.2	1.47	0.74	21.0	20.80

By Linear Regression of Y on X
 Slope, mw = 33.0773 Intercept, bw = -4.1832
 Correlation Coefficient* = 0.9963
 *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 = $(mw \times Qstd + bw) \times [(760 / Pa) \times (Ta / 298)]^{1/2} =$ 39.19

Remarks: _____

QC Reviewer: WIS CHAN Signature: [Signature] Date: 22/7/13

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: 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: RI Date: 26/8/13

AECOM Asia Company Limited

TSP High Volume Sampler

Field Calibration Report

Station: 168 Shek Kwu Lung Village (AM4A) Operator: Gary Choi
 Cal. Date: 19-Jul-13 Next Due Date: 19-Sep-13
 Equipment No.: A-001-70T Serial No.: 10273

Ambient Condition			
Temperature, Ta (K)	301	Pressure, Pa (mmHg)	753.2

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	9.1	2.99	1.50	46.0	45.56
13	7.6	2.73	1.37	41.0	40.61
10	5.1	2.24	1.12	34.0	33.68
7	3.5	1.85	0.93	29.0	28.73
5	2.4	1.53	0.77	23.0	22.78

By Linear Regression of Y on X

Slope, mw = 30.1022 Intercept, bw = -0.0572

Correlation Coefficient* = 0.9961

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation	
From the TSP Field Calibration Curve, take Qstd = 1.30m ³ /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} =	<u>39.45</u>

Remarks: _____

QC Reviewer: WS CHAN

Signature: RC

Date: 22/7/13

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.
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 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

$$Vstd = \text{Diff. Vol} [(Pa - \text{Diff. Hg}) / 760] (298 / Ta)$$

$$Qstd = Vstd / \text{Time}$$

$$Va = \text{Diff Vol} [(Pa - \text{Diff Hg}) / Pa]$$

$$Qa = Va / \text{Time}$$

For subsequent flow rate calculations:

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

$$Qa = 1/m \{ [\text{SQRT} \text{H2O}(\text{Ta}/\text{Pa})] - b \}$$

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

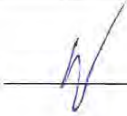
Note: 1. Monitoring data was measured by Rupprecht & Patashnick TEOM®
 2. Total Count was logged by Laser Dust Monitor
 3. Count/minute was calculated by (Total Count/60)

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

- 1, 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.
- 2, 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 $\pm 20\%$.
- 3, 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.

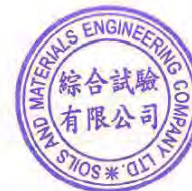
Actual Measurement data are documented on worksheets.

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.: 12CA1008 02 Page 1 of 2

Item tested

Description:	Sound Level Meter (Type 1)	Microphone	Preamp
Manufacturer:	Rion Co., Ltd.	Rion Co., Ltd.	Rion Co., Ltd.
Type/Model No.:	NL-31	UC-53A	NH-19
Serial/Equipment No.:	00320528 <i>NL 007.03A</i>	90565	75883
Adaptors used:	-	-	-

Item submitted by

Customer Name: AECOM ASIA CO., LTD.
Address of Customer: -
Request No.: -
Date of receipt: 08-Oct-2012

Date of test: 08-Oct-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 responses 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: 08-Oct-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.: 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

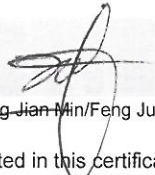
- 1, The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.
- 2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- 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
Impact Monitoring and Audit Schedule for September 2013**

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

**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)		

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**

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. ($\mu\text{g}/\text{m}^3$)
6-Sep-13	10:35	72.4	73.7	73.1
12-Sep-13	10:05	82.8	78.9	83.2
18-Sep-13	13:31	78.6	77.3	77.5
23-Sep-13	10:50	77.5	78.7	77.0
27-Sep-13	21:30	81.1	82.1	82.2
Average				78.4
Min				72.4
Max				83.2

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

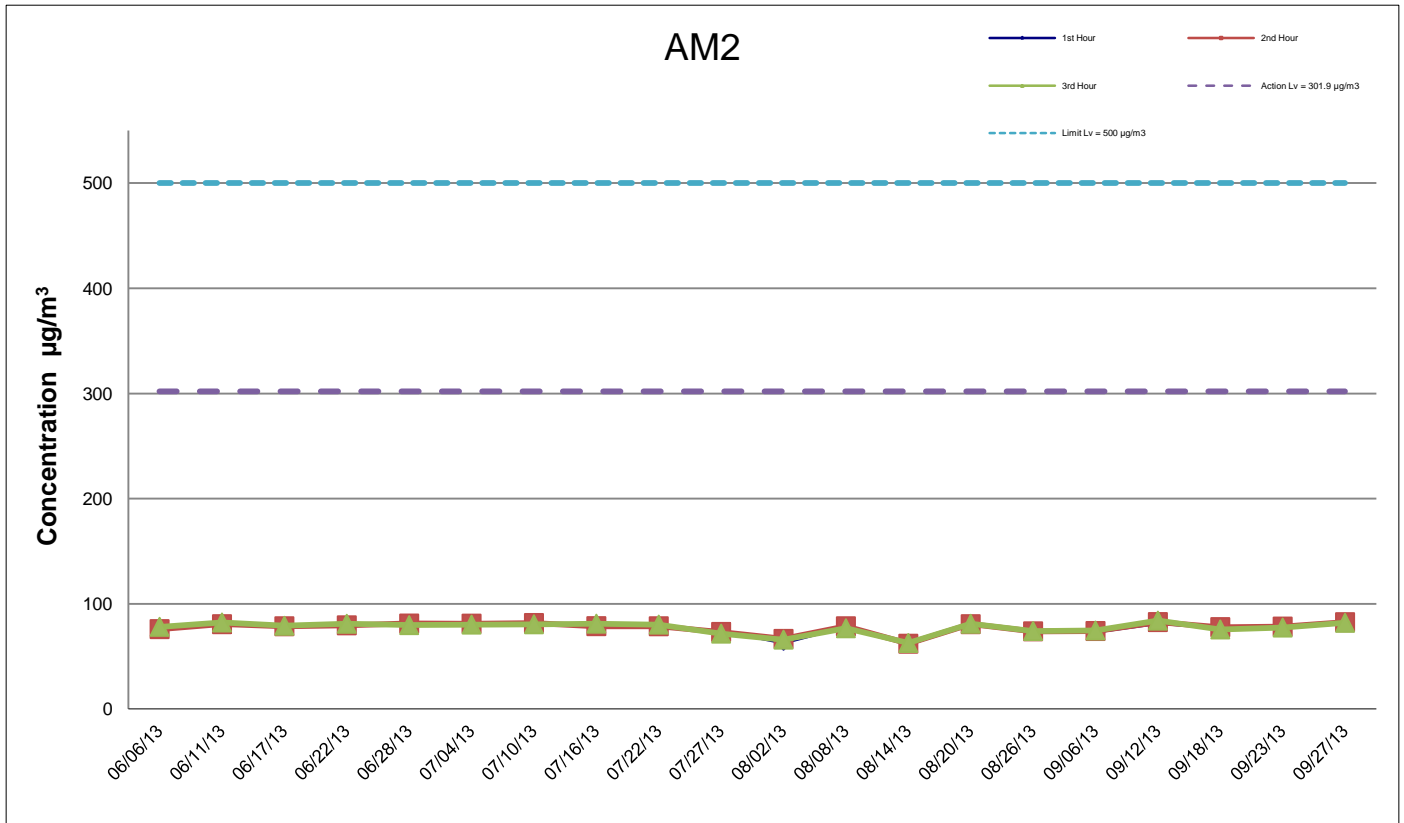
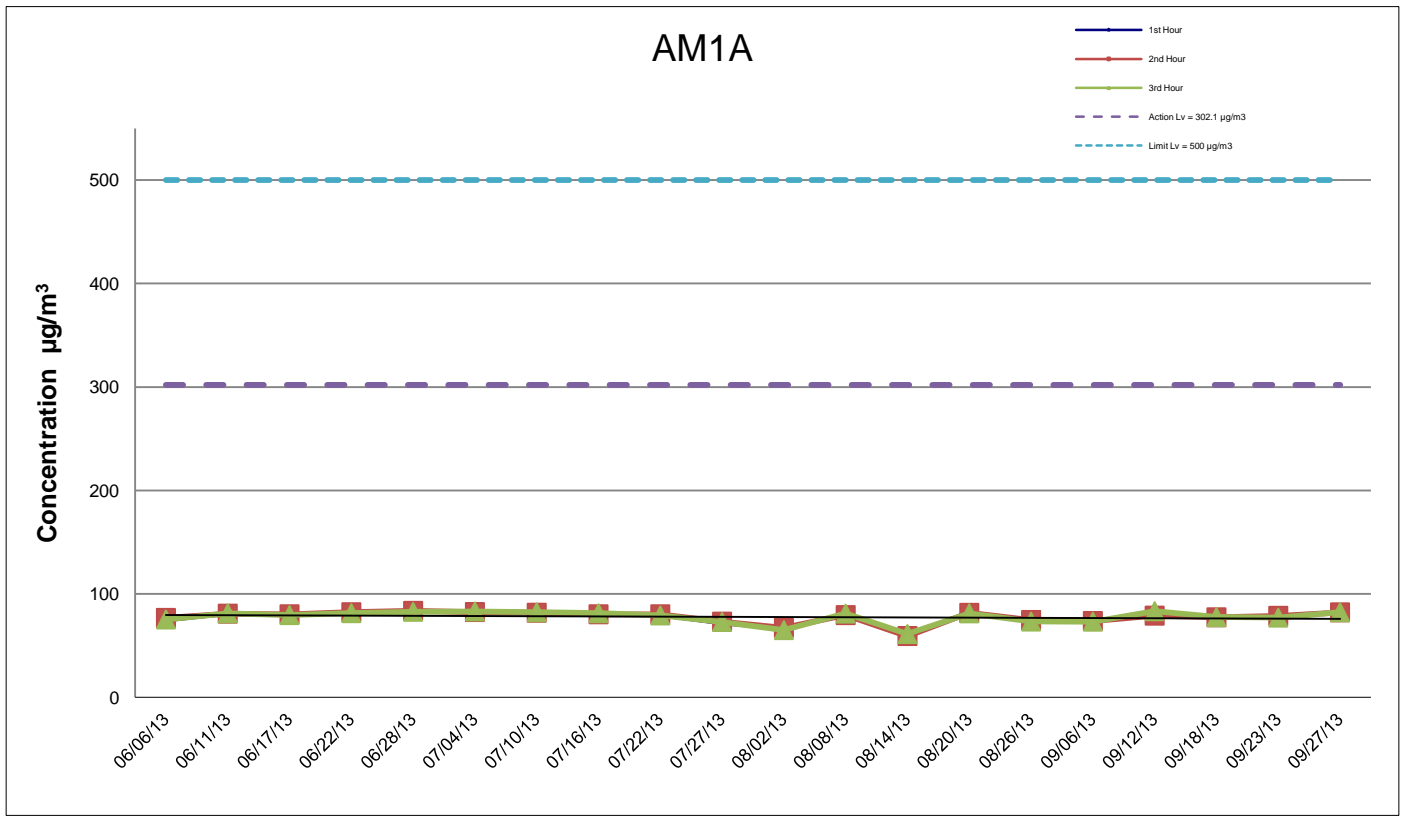
Date	Start Time (hh:mm)	1st Hour Conc. ($\mu\text{g}/\text{m}^3$)	2nd Hour Conc. ($\mu\text{g}/\text{m}^3$)	3rd Hour Conc. ($\mu\text{g}/\text{m}^3$)
6-Sep-13	9:59	72.9	74.1	74.6
12-Sep-13	9:50	81.1	82.6	84.0
18-Sep-13	13:00	76.9	77.8	75.6
23-Sep-13	10:42	76.9	78.3	77.4
27-Sep-13	10:00	82.6	82.5	81.9
Average				78.6
Min				72.9
Max				84.0

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

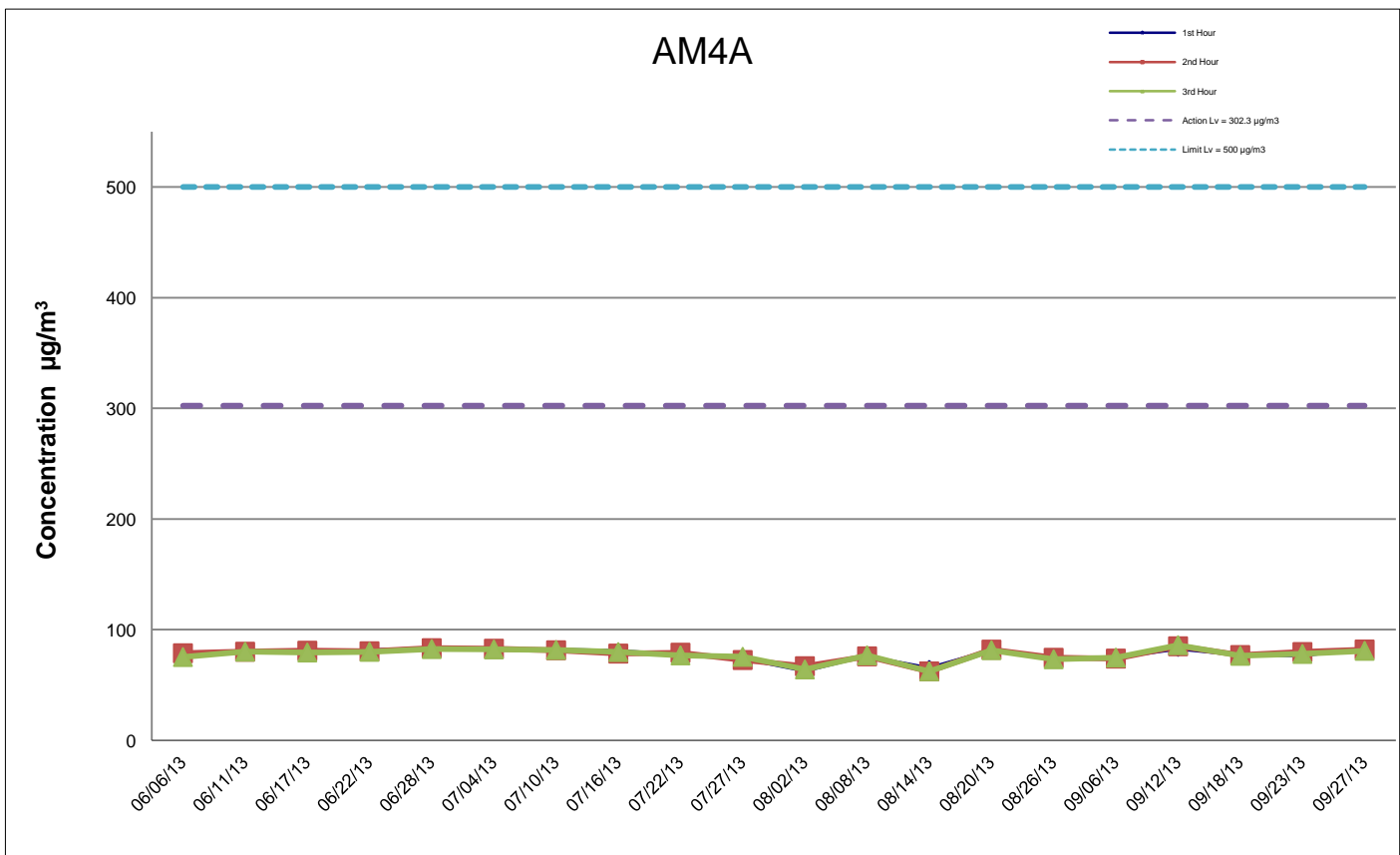
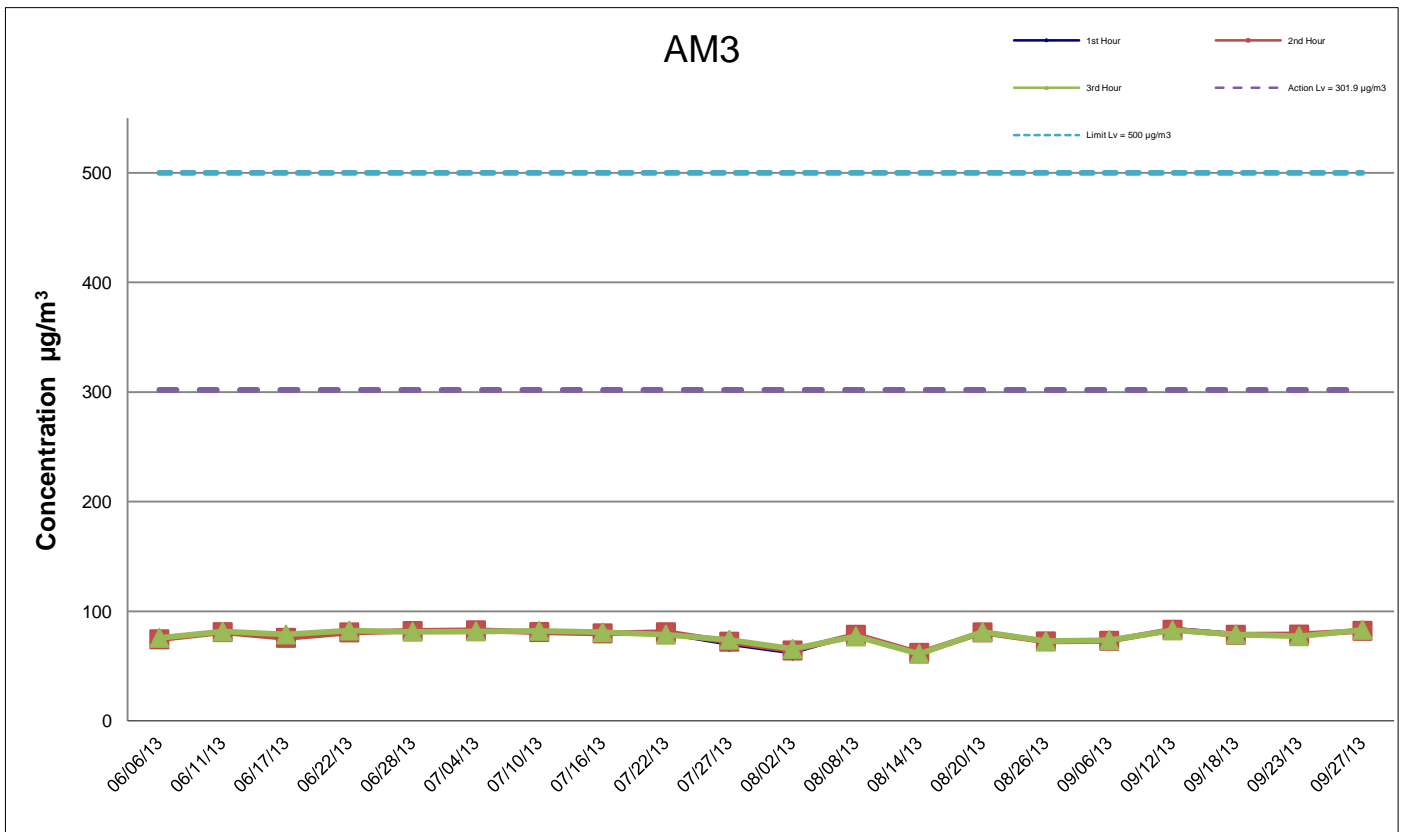
Date	Start Time (hh:mm)	1st Hour Conc. ($\mu\text{g}/\text{m}^3$)	2nd Hour Conc. ($\mu\text{g}/\text{m}^3$)	3rd Hour Conc. ($\mu\text{g}/\text{m}^3$)
6-Sep-13	9:46	72.6	73.1	73.7
12-Sep-13	10:15	84.8	83.2	82.6
18-Sep-13	13:15	80.1	78.6	79.0
23-Sep-13	10:35	79.0	78.8	77.3
27-Sep-13	10:15	81.3	82.2	83.1
Average				79.3
Min				72.6
Max				84.8

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. ($\mu\text{g}/\text{m}^3$)
6-Sep-13	11:00	74.4	73.9	74.8
12-Sep-13	9:35	82.2	85.0	86.0
18-Sep-13	11:20	76.8	77.1	76.4
23-Sep-13	11:05	76.2	79.8	78.1
27-Sep-13	10:30	82.9	82.1	80.9
Average				79.1
Min				73.9
Max				86.0



	Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation	SCALE	N.T.S.	DATE	Oct-13
		CHECK	ENFL	DRAWN	CHCL
	Graphical Presentation of Impact 1-hour TSP Monitoring Results	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	Oct-13
	Graphical Presentation of Impact 1-hour TSP Monitoring Results	CHECK	ENFL	DRAWN	CHCL
		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		
6-Sep-13	Rainy	26.3	1013.2	1.33	1.33	1.33	1916.6	2.9476	3.0169	0.0693	19851.46	19875.46	24.00	36.2
12-Sep-13	Sunny	28.5	1011.5	1.33	1.33	1.33	1916.6	3.6731	3.7189	0.0458	19875.46	19899.46	24.00	23.9
18-Sep-13	Fine	27.7	1008.3	1.33	1.33	1.33	1916.6	2.9659	3.0886	0.1227	19899.46	19923.46	24.00	64.0
23-Sep-13	Cloudy	27.9	998.9	1.33	1.33	1.33	1916.6	2.9436	3.0742	0.1306	19923.46	19947.46	24.00	68.1
27-Sep-13	Sunny	27.5	1012.3	1.33	1.33	1.33	1916.6	3.6821	3.7572	0.0751	19947.46	19971.46	24.00	39.2
													Average	46.3
													Min	23.9
													Max	68.1

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

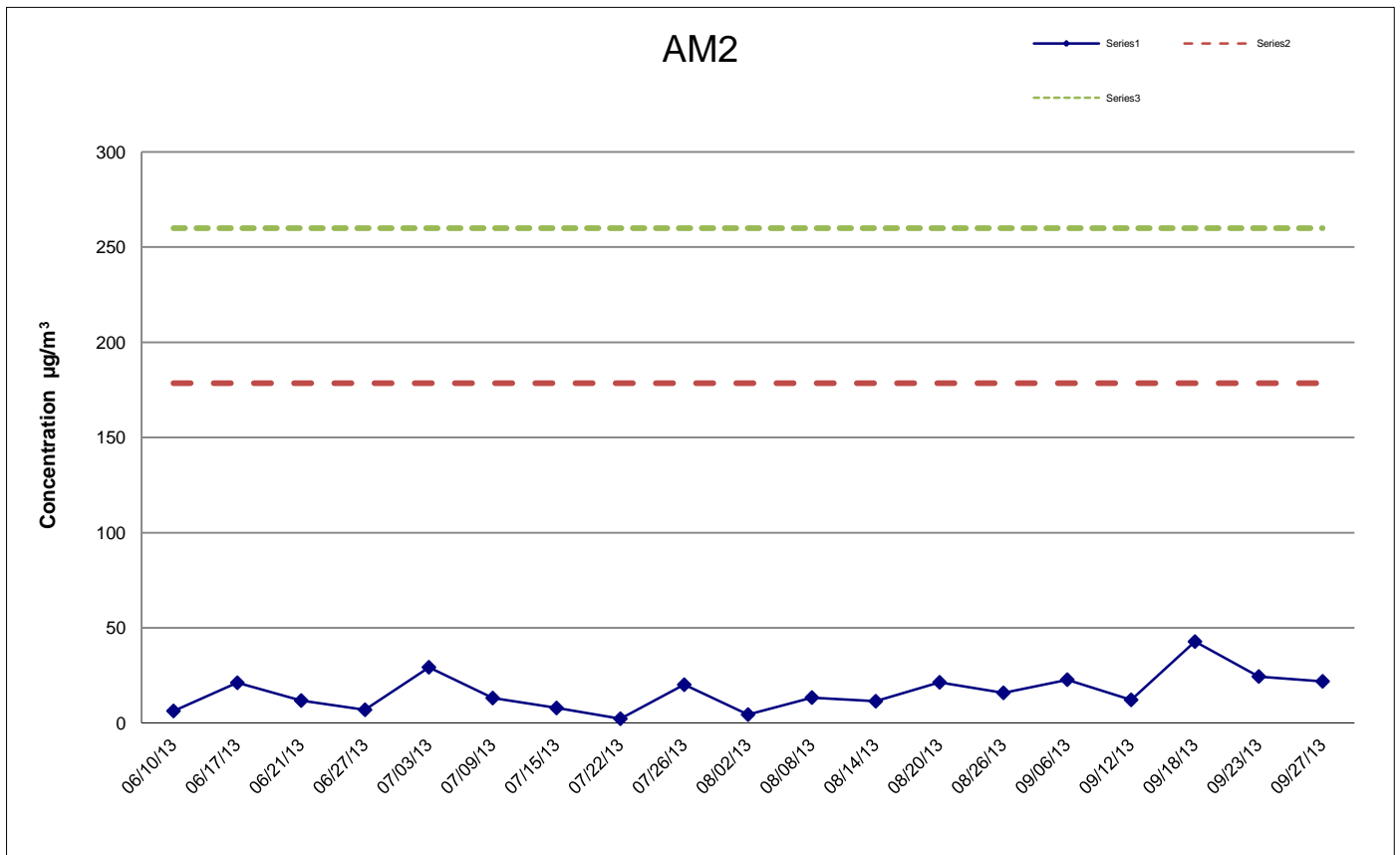
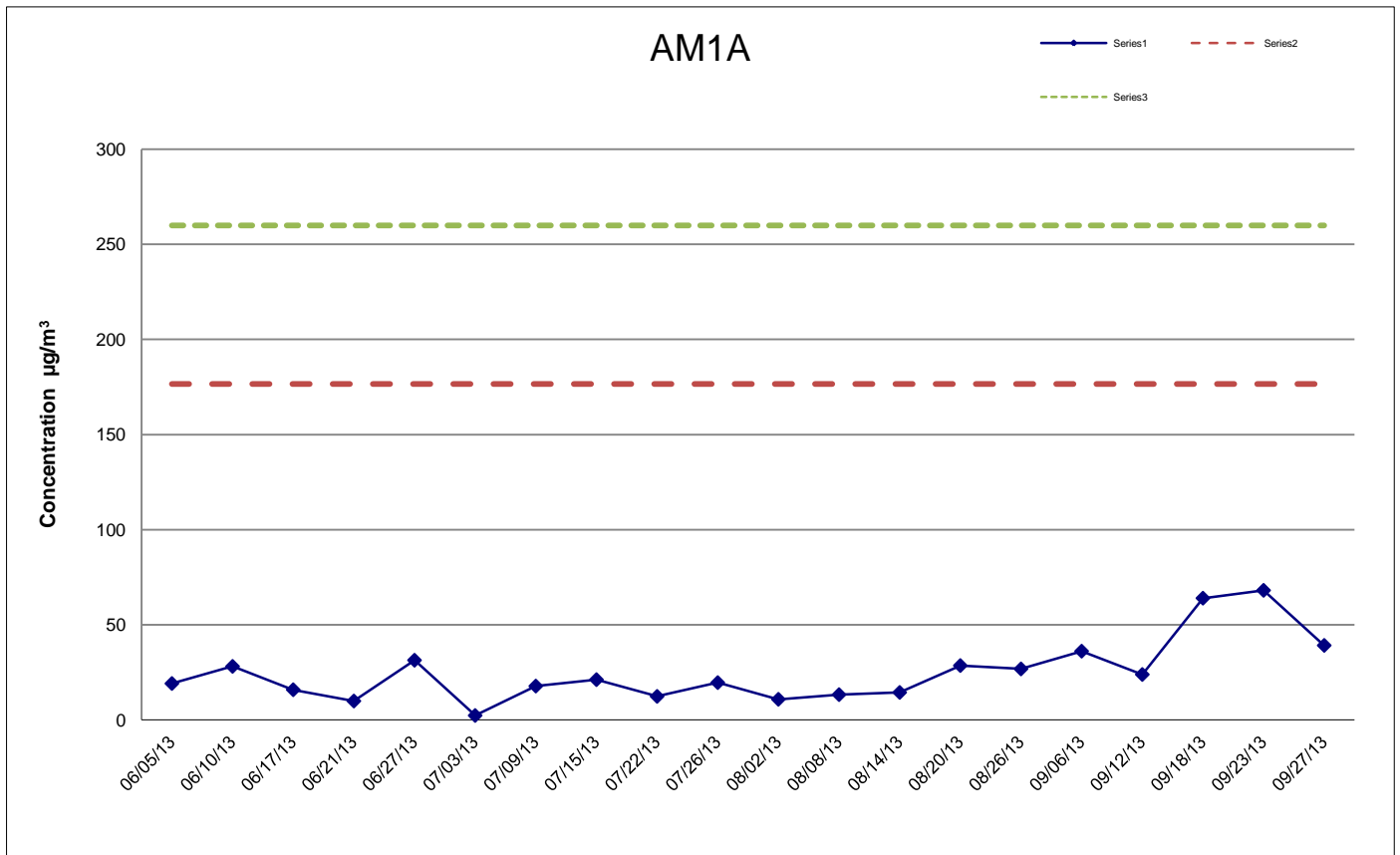
Date	Weather Condition	Air Temp. (°C)	Atmospheric Pressure(hPa)	Flow Rate (m ³ /min.)		Av. flow (m ³ /min)	Total vol. (m ³)	Filter Weight (g)		Particulate weight(g)	Elapse Time		Sampling Time(hrs.)	Conc. (µg/m ³)
				Initial	Final			Initial	Final		Initial	Final		
6-Sep-13	Rainy	26.3	1013.2	1.34	1.34	1.34	1925.3	3.6243	3.6681	0.0438	16423.12	16447.12	24.00	22.7
12-Sep-13	Sunny	28.5	1011.5	1.34	1.34	1.34	1925.3	3.6773	3.7007	0.0234	16447.12	16471.12	24.00	12.2
18-Sep-13	Fine	27.7	1008.3	1.34	1.34	1.34	1925.3	2.9663	3.0486	0.0823	16471.12	16495.12	24.00	42.7
23-Sep-13	Cloudy	27.9	998.9	1.34	1.34	1.34	1925.3	3.6964	3.7434	0.0470	16495.12	16519.12	24.00	24.4
27-Sep-13	Sunny	27.5	1012.3	1.34	1.34	1.34	1925.3	3.6794	3.7215	0.0421	16519.12	16543.12	24.00	21.9
													Average	24.8
													Min	12.2
													Max	42.7

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

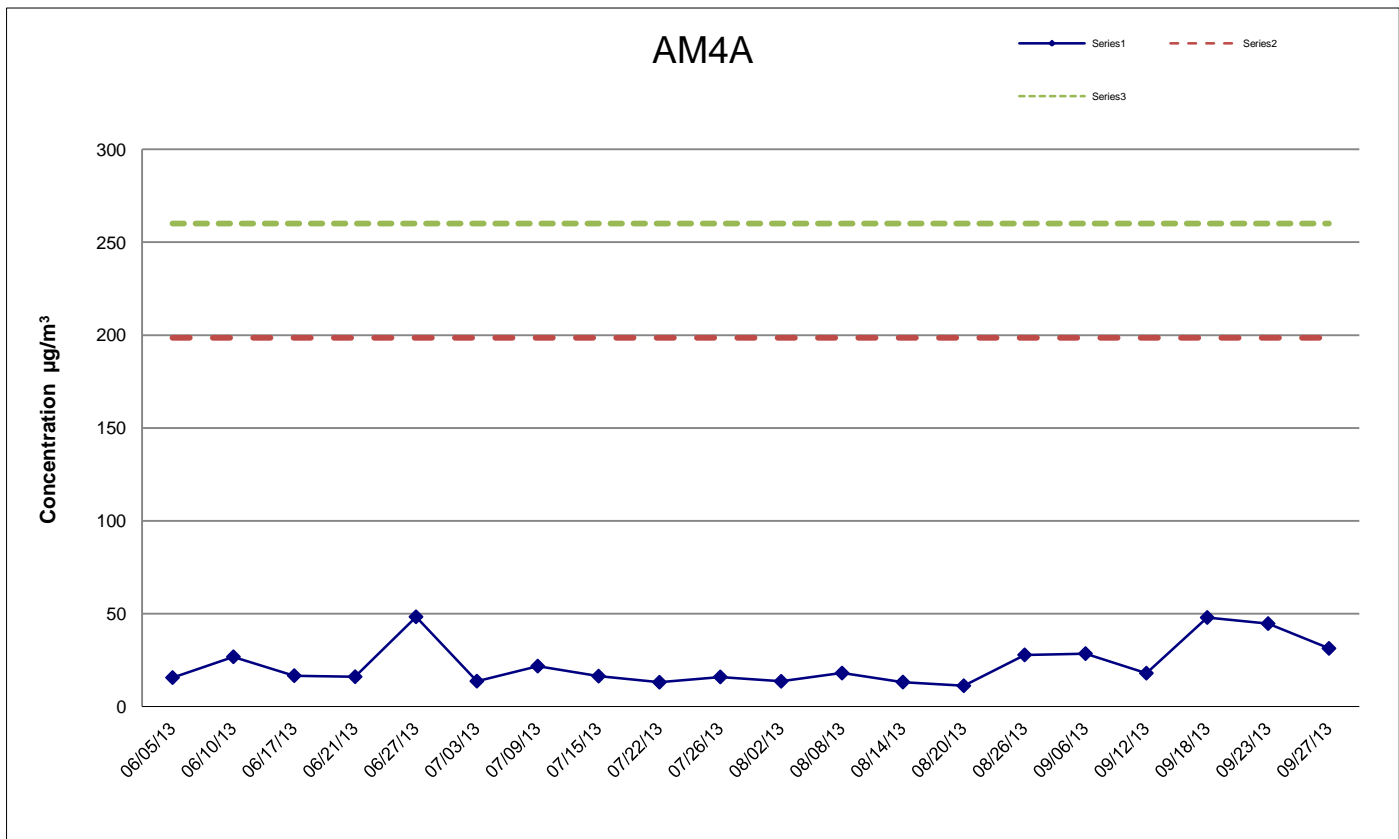
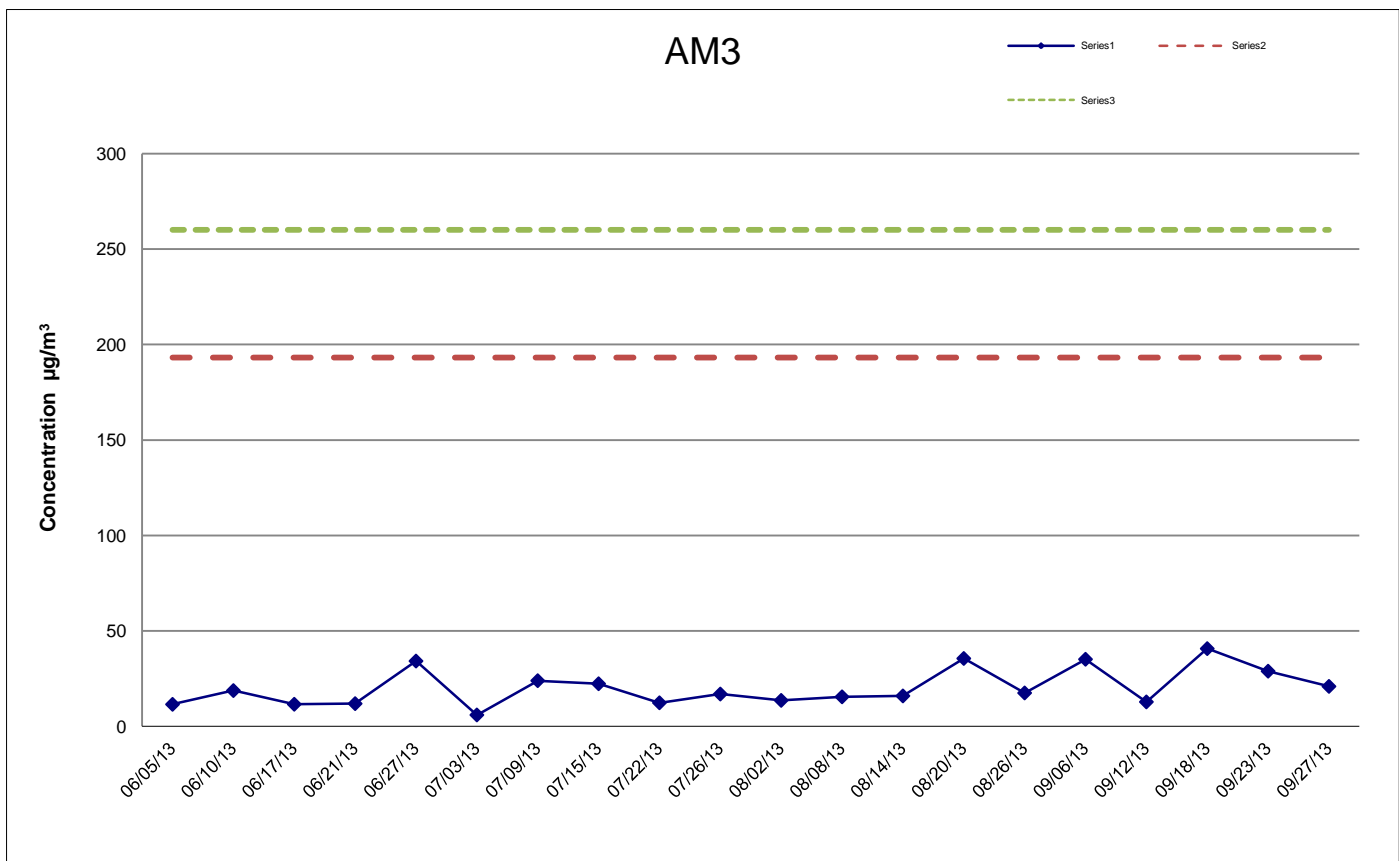
Date	Weather Condition	Air Temp. (°C)	Atmospheric Pressure(hPa)	Flow Rate (m ³ /min.)		Av. flow (m ³ /min)	Total vol. (m ³)	Filter Weight (g)		Particulate weight(g)	Elapse Time		Sampling Time(hrs.)	Conc. (µg/m ³)
				Initial	Final			Initial	Final		Initial	Final		
6-Sep-13	Rainy	26.3	1013.2	1.33	1.33	1.33	1921.0	2.9548	3.0223	0.0675	20152.59	20176.59	24.00	35.1
12-Sep-13	Sunny	28.5	1011.5	1.33	1.33	1.33	1921.0	3.6692	3.6938	0.0246	20176.59	20200.59	24.00	12.8
18-Sep-13	Fine	27.7	1008.3	1.33	1.33	1.33	1921.0	2.9566	3.0348	0.0782	20200.59	20224.59	24.00	40.7
23-Sep-13	Cloudy	27.9	998.9	1.33	1.33	1.33	1921.0	3.6755	3.7310	0.0555	20224.59	20248.59	24.00	28.9
27-Sep-13	Sunny	27.5	1012.3	1.33	1.33	1.33	1921.0	3.6775	3.7177	0.0402	20248.59	20272.59	24.00	20.9
													Average	27.7
													Min	12.8
													Max	40.7

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		
6-Sep-13	Rainy	26.3	1013.2	1.33	1.33	1.33	1918.1	2.9770	3.0316	0.0546	16282.36	16306.36	24.00	28.5
12-Sep-13	Sunny	28.5	1011.5	1.33	1.33	1.33	1918.1	3.6685	3.7029	0.0344	16306.36	16330.36	24.00	17.9
18-Sep-13	Fine	27.7	1008.3	1.33	1.33	1.33	1918.1	2.9543	3.0462	0.0919	16330.36	16354.36	24.00	47.9
23-Sep-13	Cloudy	27.9	998.9	1.33	1.33	1.33	1918.1	3.6700	3.7556	0.0856	16354.36	16378.36	24.00	44.6
27-Sep-13	Sunny	27.5	1012.3	1.33	1.33	1.33	1918.1	3.6790	3.7390	0.0600	16378.36	16402.36	24.00	31.3
													Average	34.0
													Min	17.9
													Max	47.9



	Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation	SCALE	N.T.S.	DATE	Oct-13
	Graphical Presentation of Impact 24-hour TSP Monitoring Results	CHECK	ENFL	DRAWN	CHCL
		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.

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

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

**Extract of Meteorological Observations for Tai Mei Tuk Automatic Weather Station,
September 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-Sep	*****	32	27.5	24.3	****	***	***	***
2-Sep	*****	32.9	28.3	25.8	****	***	***	***
3-Sep	*****	30.2	26.3	25.3	****	***	***	***
4-Sep	*****	26.2	24.8	23.8	****	***	***	***
5-Sep	*****	25.2	24.2	23.2	****	***	***	***
6-Sep	*****	30.5	26.3	23.9	****	***	***	***
7-Sep	*****	32.1	27.7	24.7	****	***	***	***
8-Sep	*****	32.2	28.2	25.4	****	***	***	***
9-Sep	*****	32.1	28.3	26	****	***	***	***
10-Sep	*****	33.3	28.5	26.3	****	***	***	***
11-Sep	*****	32.9	28.6	26.2	****	***	***	***
12-Sep	*****	33.3	28.7	26.3	****	***	***	***
13-Sep	*****	31.7	28	26	****	***	***	***
14-Sep	*****	32.8	28.5	25.8	****	***	***	***
15-Sep	*****	34.8	28.5	23.6	****	***	***	***
16-Sep	*****	31.7	28.4	26.4	****	***	***	***
17-Sep	*****	30.9	28	26.2	****	***	***	***
18-Sep	*****	31.1	27.7	25.7	****	***	***	***
19-Sep	*****	32.8	28.6	26.1	****	***	***	***
20-Sep	*****	33.2	29.8	26.6	****	***	***	***
21-Sep	*****	34.4	31.5	29.2	****	***	***	***
22-Sep	*****	31.3	27.6	24.7	****	***	***	***
23-Sep	*****	30.9	27.2	24.8	****	***	***	***
24-Sep	*****	30.1	27.9	26.8	****	***	***	***
25-Sep	*****	31.9	27.8	26	****	***	***	***
26-Sep	*****	30.5	26.9	23.9	****	***	***	***
27-Sep	*****	30.7	26.3	23.2	****	***	***	***
28-Sep	*****	29.1	26.5	24.1	****	***	***	***
29-Sep	*****	27.2	25.5	23.8	****	***	***	***
30-Sep	*****	27.2	25.8	24	****	***	***	***
Mean	*****	31.2	27.6	25.3	****	***	***	***
Maximum	*****	34.8	31.5	29.2	****	***	***	***
Minimum	*****	25.2	24.2	23.2	****	***	***	***

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

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind (km/h)
1-Sep	0.0	230	7.4
2-Sep	0.5	130	7.0
3-Sep	4.0	50	7.5
4-Sep	125	50	12.6
5-Sep	48.5	50	14.1
6-Sep	0.5	50	14.4
7-Sep	0.0	40	12.1
8-Sep	0.0	40	10.1
9-Sep	0.0	50	14.1
10-Sep	0.0	40	12.5
11-Sep	0.0	50	13.2
12-Sep	0.0	90	13.0
13-Sep	0.0	40	14.3
14-Sep	0.0	40	7.6
15-Sep	12.0	50	7.0
16-Sep	0.0	90	24.0
17-Sep	0.0	80	26.4
18-Sep	0.0	90	24.5
19-Sep	0.0	90	15.2
20-Sep	0.0	50	6.6
21-Sep	0.0	40	15.0
22-Sep	53.5	260	25.1
23-Sep	56.0	150	18.9
24-Sep	0.0	90	22.3
25-Sep	0.0	50	17.0
26-Sep	0.0	40	17.1
27-Sep	0.0	40	13.2
28-Sep	0.5	40	15.8
29-Sep	1.5	40	24.1
30-Sep	2.0	40	18.8
Mean	-----	40	15.0
Total	304	---	-----
Maximum	125	---	26.4
Minimum	0.0	---	6.6

*** 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,
September 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-Sep	1009.4	29.3	26.5	23.7	23.9	97	86	70
2-Sep	1009.8	28.7	26.7	24.8	24.8	97	90	78
3-Sep	1008.2	27.6	25.8	24.8	24.5	97	92	86
4-Sep	1008.7	25.8	24.7	23.7	23.8	99	95	89
5-Sep	1010.7	25.5	24	23	23.2	99	96	85
6-Sep	1012.8	28.5	26	23.3	22.8	98	84	66
7-Sep	1013	30.1	27.1	24.2	22.7	94	78	55
8-Sep	1013.4	30.3	27.5	24.8	23.6	94	80	63
9-Sep	1012.1	30.3	28.1	26.8	23.7	87	77	64
10-Sep	1010	30.9	28.3	26.4	24.6	90	81	67
11-Sep	1010.5	30.4	28.3	26.9	24.5	90	80	66
12-Sep	1010.9	30.6	28.2	26.6	24.3	90	80	67
13-Sep	1009.2	29.3	27.5	26.2	24.3	92	82	73
14-Sep	1006.2	30.7	27.8	25.2	24	91	80	63
15-Sep	1005.3	31.1	27.5	24.9	24.4	97	84	66
16-Sep	1006.9	30.1	28.6	26.7	23.6	94	75	63
17-Sep	1007.4	29.5	28.1	27.3	21.7	82	69	58
18-Sep	1007.9	28.7	27.6	26.5	22.5	86	74	62
19-Sep	1007.3	30.4	28.2	25.8	23.7	90	77	62
20-Sep	1005.1	32.9	29.2	26.2	23.2	89	72	50
21-Sep	999.4	34.1	30.8	27.1	20.9	72	56	43
22-Sep	991.9	31.2	27.4	24.5	22.8	96	78	52
23-Sep	997.9	30.1	26.8	24.5	25.3	99	92	76
24-Sep	1006.1	29.3	27.8	26.8	24.9	95	84	75
25-Sep	1009.5	29.2	27.7	26.8	23.3	85	77	66
26-Sep	1011.9	28.7	27	24.4	22.3	85	76	65
27-Sep	1011.3	27.9	25.7	22.7	21.3	92	77	68
28-Sep	1008.3	27.8	26.4	24.4	22.1	96	78	67
29-Sep	1007.8	26.9	25.7	23.4	21.3	96	77	68
30-Sep	1009.8	27.1	25.5	23.1	23.3	98	88	79
Mean	1008	29.4	27.2	25.2	23.4	92	80	67
Maximum	1013.4	34.1	30.8	27.3	25.3	99	96	89
Minimum	991.9	25.5	24	22.7	20.9	72	56	43

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

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind (km/h)
1-Sep	*****	***	*****
2-Sep	*****	***	*****
3-Sep	*****	***	*****
4-Sep	*****	***	*****
5-Sep	*****	***	*****
6-Sep	*****	***	*****
7-Sep	*****	***	*****
8-Sep	*****	***	*****
9-Sep	*****	***	*****
10-Sep	*****	***	*****
11-Sep	*****	***	*****
12-Sep	*****	***	*****
13-Sep	*****	***	*****
14-Sep	*****	***	*****
15-Sep	*****	***	*****
16-Sep	*****	***	*****
17-Sep	*****	***	*****
18-Sep	*****	***	*****
19-Sep	*****	***	*****
20-Sep	*****	***	*****
21-Sep	*****	***	*****
22-Sep	*****	***	*****
23-Sep	*****	***	*****
24-Sep	*****	***	*****
25-Sep	*****	***	*****
26-Sep	*****	***	*****
27-Sep	*****	***	*****
28-Sep	*****	***	*****
29-Sep	*****	***	*****
30-Sep	*****	***	*****
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,
September 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-Sep	1009.9	30.8	27.3	24.3	23.5	95	81	62
2-Sep	1010.2	29.9	27.3	24.8	24.3	95	84	70
3-Sep	1008.6	28.9	26.2	24.5	24.1	97	89	75
4-Sep	1009.1	26.2	24.9	23.8	23.6	98	93	83
5-Sep	1011	26.3	24.5	23.6	23.2	98	93	81
6-Sep	1013.1	29.9	26.8	23.8	22.8	94	79	60
7-Sep	1013.5	31.2	27.7	24.6	22.1	91	73	44
8-Sep	1013.8	31.2	28	24.8	23.2	93	76	58
9-Sep	1012.5	31.2	28.5	26	23	85	73	58
10-Sep	1010.5	31.9	28.6	26	24	91	77	58
11-Sep	1011	31.5	28.7	26.8	24.1	87	76	60
12-Sep	1011.4	31.9	28.7	26.6	23.7	87	75	58
13-Sep	1009.7	30.6	28	26.1	23.8	88	79	63
14-Sep	1006.8	31.9	28.2	25.4	23.6	90	77	60
15-Sep	1005.8	33.6	28.2	25.1	24.1	92	79	51
16-Sep	1007.5	31.8	28.9	26.8	22.6	90	69	54
17-Sep	1008	31.2	28.5	27.3	20.3	73	61	48
18-Sep	1008.5	29.9	27.9	26.5	21.4	78	68	57
19-Sep	1007.9	32	28.5	25.4	22.9	89	72	53
20-Sep	1005.7	34.1	29.4	26.3	23.5	89	72	46
21-Sep	999.8	35.2	31.7	26.5	20.4	83	52	40
22-Sep	992.6	31.8	28.3	25.1	22	90	70	48
23-Sep	998.6	31.6	28	25	24.8	96	83	67
24-Sep	1006.7	30.5	28.5	27.4	24.2	86	78	69
25-Sep	1010	31.3	28.4	26.9	22.5	82	71	57
26-Sep	1012.4	29.9	27.4	24.3	21.1	80	68	59
27-Sep	1011.8	28.6	25.9	23.3	20.4	80	72	62
28-Sep	1008.8	29	27	25	21.3	82	72	60
29-Sep	1008.3	27.2	25.8	24.2	20.5	89	73	64
30-Sep	1010.2	28.2	26.2	24	22.6	92	81	68
Mean	1008.5	30.6	27.7	25.3	22.8	89	76	60
Maximum	1013.8	35.2	31.7	27.4	24.8	98	93	83
Minimum	992.6	26.2	24.5	23.3	20.3	73	52	40

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

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind (km/h)
1-Sep	0.0	230	5.8
2-Sep	2.5	80	4.4
3-Sep	6.0	40	3.4
4-Sep	117	350	3.6
5-Sep	59.5	350	4.7
6-Sep	0.0	100	5.2
7-Sep	0.0	360	6.8
8-Sep	0.0	100	6.8
9-Sep	0.0	90	8.0
10-Sep	0.0	90	5.3
11-Sep	0.0	100	5.9
12-Sep	0.0	80	6.1
13-Sep	0.0	360	5.8
14-Sep	0.0	100#	5.2#
15-Sep	2.0	20	4.7
16-Sep	4.5	80	9.9
17-Sep	0.0	70	11.6
18-Sep	0.0	70	10.4
19-Sep	0.0	70	6.8
20-Sep	0.0	10	4.0
21-Sep	0.0	350	8.2
22-Sep	48.0	350	11.5
23-Sep	77.0	210	14.8
24-Sep	2.0	140	11.0
25-Sep	0.0	70	7.1
26-Sep	0.0	20	9.1
27-Sep	0.0	80	8.2
28-Sep	0.0	20	7.7
29-Sep	2.5	20	11.7
30-Sep	4.5	360	8.6
Mean	-----	010#	7.4#
Total	325.5	---	-----
Maximum	117	---	14.8#
Minimum	0.0	---	3.4#

*** 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				
6-Sep-13	15:15	60.4	62.5	59.0	64.2	60.4	75	N
12-Sep-13	9:40	57.7	58.9	56.3	64.2	57.7	75	N
18-Sep-13	11:22	64.1	66.5	62.6	64.2	64.1	75	N
23-Sep-13	11:07	63.5	65.0	62.0	64.2	63.5	75	N
27-Sep-13	11:10	60.6	61.5	56.5	64.2	60.6	75	N

Corrected Noise Level dB(A)	
Average	61.8
Max	64.1
Min	57.7

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*				
6-Sep-13	13:45	64.0	65.5	61.5	68.1	64.0	75	N
12-Sep-13	11:00	61.9	63.0	59.4	68.1	61.9	75	N
18-Sep-13	16:22	62.4	63.8	60.1	68.1	62.4	75	N
23-Sep-13	10:54	65.9	67.7	63.0	68.1	65.9	75	N
27-Sep-13	13:00	62.4	64.0	60.5	68.1	62.4	75	N

Corrected Noise Level dB(A)	
Average	63.6
Max	65.9
Min	61.9

* +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				
6-Sep-13	11:30	63.3	64.0	61.0	64.8	63.3	70	N
12-Sep-13	13:00	60.7	62.4	57.0	64.8	60.7	70	N
18-Sep-13	13:52	65.1	66.2	63.5	64.8	53.3	70	N
23-Sep-13	13:03	64.3	66.5	61.5	64.8	64.3	70	N
27-Sep-13	10:45	63.1	64.8	61.1	64.8	63.1	70	N

Corrected Noise Level dB(A)	
Average	62.2
Max	64.3
Min	53.3

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				
6-Sep-13	10:36	62.0	63.5	60.0	67.4	62.0	75	N
12-Sep-13	11:30	62.3	64.8	59.6	67.4	62.3	75	N
18-Sep-13	13:05	65.8	67.2	64.0	67.4	65.8	75	N
23-Sep-13	13:10	65.7	67.2	62.5	67.4	65.7	75	N
27-Sep-13	9:45	60.4	63.3	58.9	67.4	60.4	75	N

Corrected Noise Level dB(A)	
Average	63.8
Max	65.8
Min	60.4

- 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				
6-Sep-13	14:31	60.4	62.5	58.5	65.2	60.4	75	N
12-Sep-13	13:10	58.3	60.2	56.2	65.2	58.3	75	N
18-Sep-13	16:10	56.7	58.9	54.3	65.2	56.7	75	N
23-Sep-13	13:45	66.7	68.5	63.5	65.2	61.4	75	N
27-Sep-13	13:30	62.9	64.1	59.3	65.2	62.9	75	N

Corrected Noise Level dB(A)	
Average	60.5
Max	62.9
Min	56.7

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*				
6-Sep-13	13:02	61.1	63.0	59.5	64.5	61.1	70	N
12-Sep-13	13:40	57.2	58.5	55.6	64.5	57.2	70	N
18-Sep-13	14:35	56.5	58.1	54.2	64.5	56.5	70	N
23-Sep-13	13:55	60.7	62.2	58.1	64.5	60.7	70	N
27-Sep-13	14:00	62.6	63.5	61.5	64.5	62.6	70	N

Corrected Noise Level dB(A)	
Average	60.2
Max	62.6
Min	56.5

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

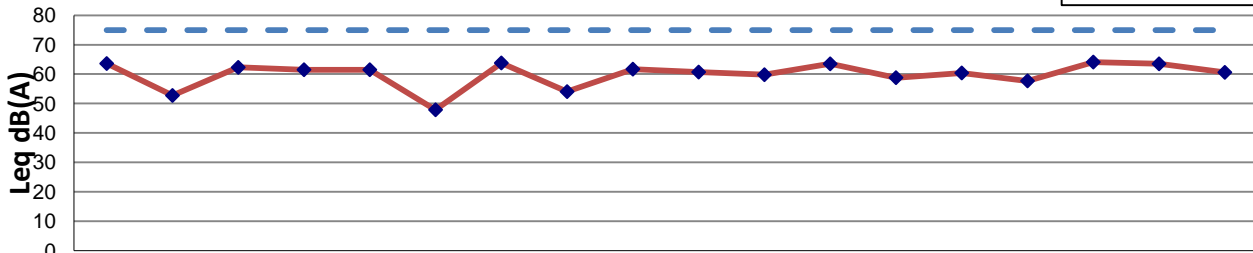
Date	Measured Noise Level for 30-min, dB(A)				Baseline Noise Level, dB(A)	Corrected Construction Noise Level, dB(A) **	Limit Level, dB(A)	Exceedance (Y/N)
	Start Time	Leq	L10	L90				
6-Sep-13	9:48	59.9	62.0	57.0	61.5	59.9	75	N
12-Sep-13	10:20	57.1	58.5	55.0	61.5	57.1	75	N
18-Sep-13	13:17	58.3	61.2	55.8	61.5	58.3	75	N
23-Sep-13	14:48	62.5	64.3	60.5	61.5	55.6	75	N
27-Sep-13	10:20	58.0	59.5	56.5	61.5	58.0	75	N

Corrected Noise Level dB(A)	
Average	58.0
Max	59.9
Min	55.6

Remarks

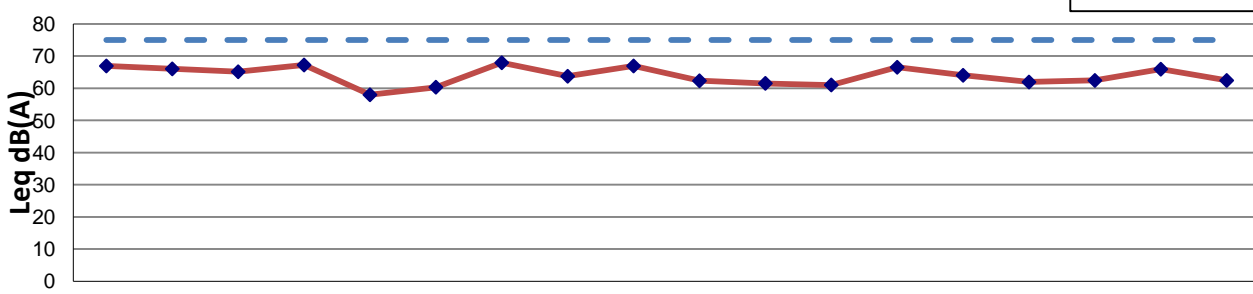
** Construction noise level is only calculated when Measured noise level (Leq) > Baseline noise level.
 If Measured noise level < Baseline noise level, Corrected noise level = Measured noise level

NM1A



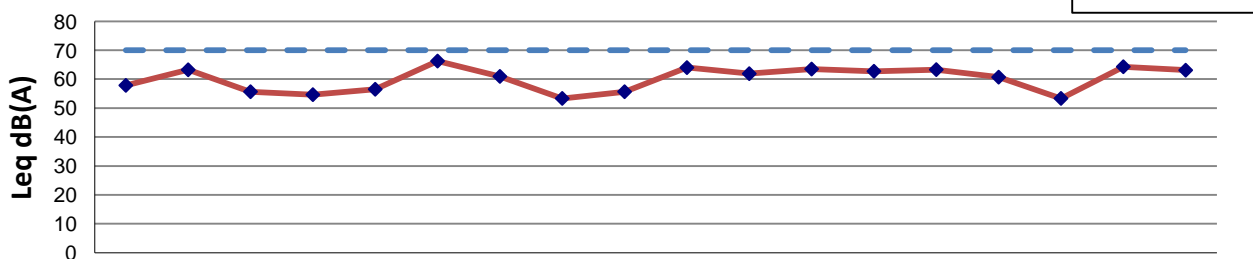
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1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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NM2




0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	6	6	6	7	7	7	7	8	8	8	8	8	9	9	9	9	9
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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6	1	7	8	4	0	6	2	2	8	4	0	6	6	2	8	3	7
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1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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NM3

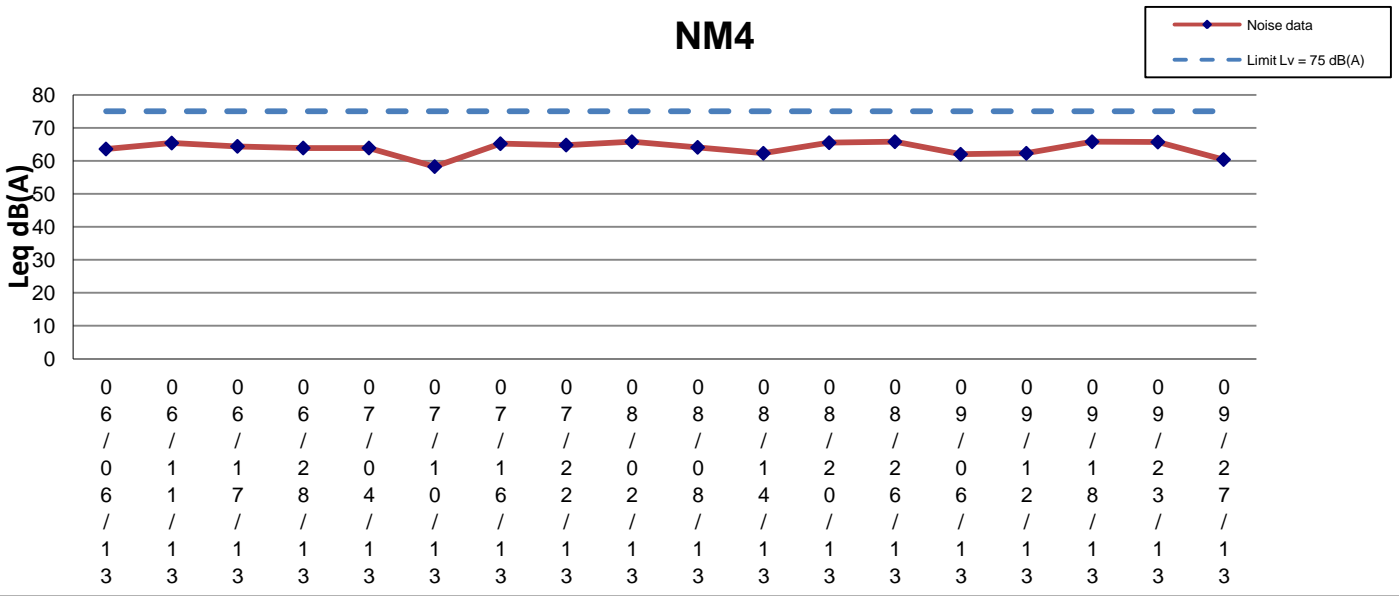


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1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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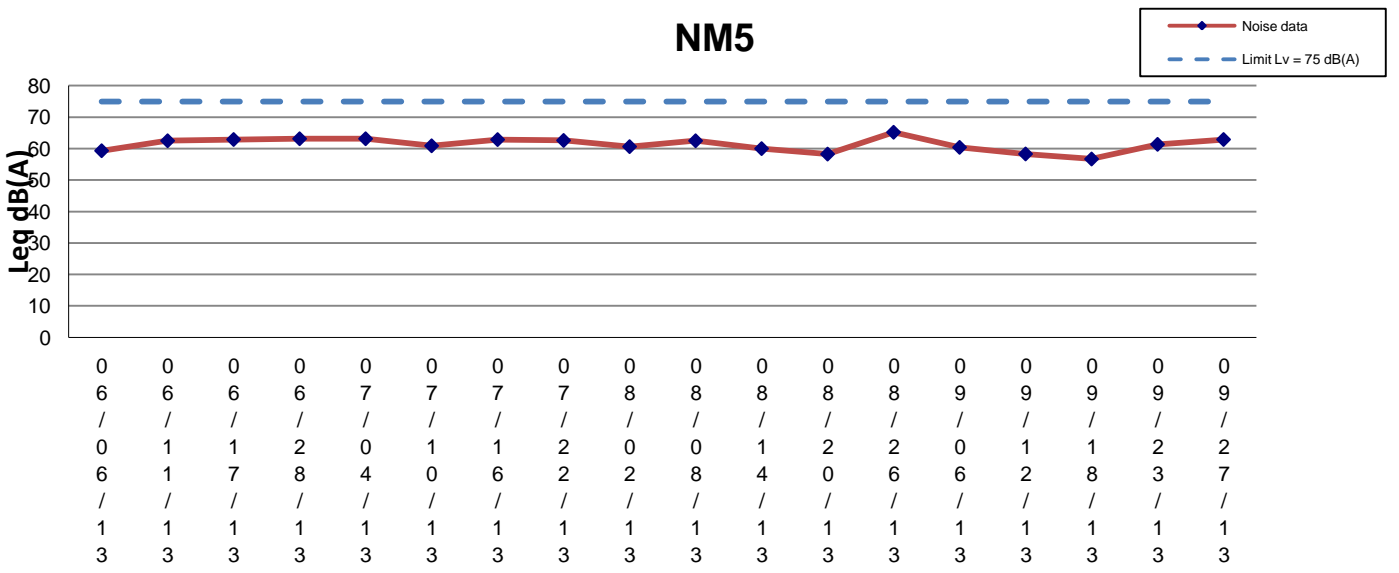
Remarks: (1) The monitoring station at Tai Kwong Secondary School (NM1) was relocated to 168 Shek Kwu Lung Village (NM1A) starting from 1 September 2011 due to the mentioned school was closed down;
 (2) Measured noise level would be shown if Measured noise level (Leq) <= Baseline noise level

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

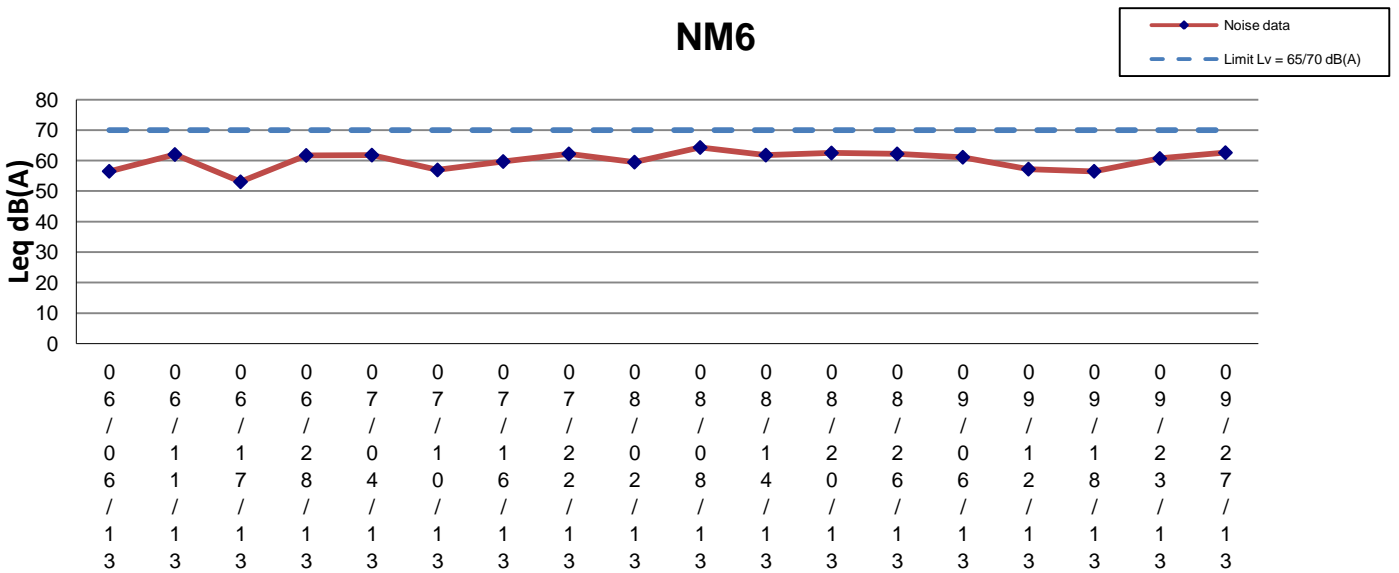
NM4



NM5



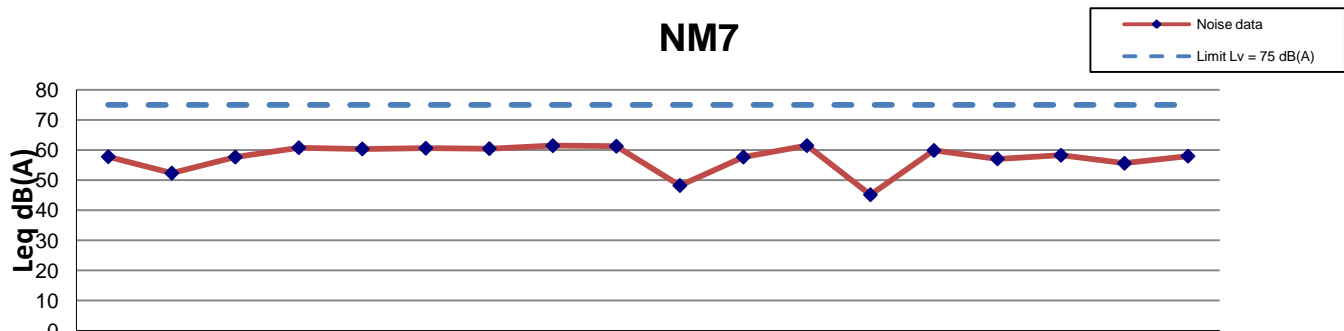
NM6



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	Oct-13	
		CHECK	ENFL	DRAWN	CHCL	
	Graphical Presentation of Impact Daytime Construction Noise Monitoring Results	JOB NO.	60102979	APPENDIX No.	I	Rev.

NM7



0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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1	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	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	Oct-13
		CHECK	ENFL	DRAWN	CHCL
	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:	4 September 2013
Time:	14:00
Inspection No.:	369

Non-compliance

Nil

Observations

Follow Up Observation

Nil.

New Observation

1. The Contractor was reminded to remove the general refuse at Bridge 11.

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:	5 September 2013
Time:	14:00
Inspection No.:	370

Non-compliance

Nil

Observations

Follow Up Observations

1. Soil stockpile at Wall 59 had been removed. (Closed)

New Observation

2. The Contractor was reminded to remove the general refuse at NB 30.
3. The Contractor was reminded to remove the oil drum or provide a drip tray for holding the oil drum at NB 30.

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:	11 September 2013
Time:	14:00
Inspection No.:	371

Non-compliance

Nil

Observations

Follow Up Observation

1. General refuse at Bridge 11 had been removed. (Closed)

New Observation

2. The Contractor was reminded to remove the stagnant water within the construction site at Bridge 11.

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:	12 September 2013
Time:	14:00
Inspection No.:	372

Non-compliance

Nil

Observations

Follow Up Observations

1. General refuse at NB 30 had been removed. (Closed)
2. Oil drum at NB 30 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/2008/09 (Between Island House Interchange and Ma Wo)
Date:	18 September 2013
Time:	9:00
Inspection No.:	373

Non-compliance

Nil

Observations

Follow Up Observation

1. Stagnant water within the construction site at Bridge 11 had been 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/2009/08 (Between Ma Wo and Tai Hang)
Date:	19 September 2013
Time:	9:30
Inspection No.:	374

Non-compliance

Nil

Observations

Follow Up Observations

Nil.

New Observation

1. The Contractor was reminded to cover the exposed soil stockpile at Lam Kam Bridge P2.

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:	25 September 2013
Time:	9:30
Inspection No.:	375

Non-compliance

Nil

Observations

Follow Up Observation

Nil.

New Observation

1. The Contractor was reminded to remove the construction waste within the construction area at Bridge 10.

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:	26 September 2013
Time:	14:00
Inspection No.:	376

Non-compliance

Nil

Observations

Follow Up Observations

1. Exposed soil stockpile at Lam Kam Bridge P2 had been covered with tarpaulin. (Closed)

New Observation

2. The Contractor was reminded to provide drip tray for holding the oil cans at Link Bridge 1.
3. The Contractor was reminded to cover the cement bags with impervious sheet at Link Bridge 1.
4. The Contractor was reminded to remove the standing water held within the drip tray at Link Bridge 1.

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	-	-	-	0	32
Notification of summons	-	-	-	0	0
Successful Prosecutions	-	-	-	0	0