

Highways Department

Agreement No. CE 20/2009 (EP)

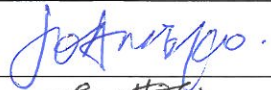
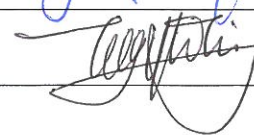
**Environmental Team for the Widening of
Tolo Highway / Fanling Highway between
Island House Interchange and Fanling**

(Stage 1)

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

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

[12/2013]

	Name	Signature
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Reviewed & Approved:	Y T Tang	

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16 December 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 November 2013 (Stage 1)**

We refer to the captioned Monthly EM&A Report received on 13 and 16 December 2013 submitted by Environmental Team (ET) via email. Pursuant to EP Condition 3.3, I hereby verify the Monthly EM&A Report for November 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)

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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 January 2014; 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 November 2013.

As informed by the Contract 1 Contractor (China State Construction Engineering (Hong Kong) Ltd.), construction activities in the reporting period were:-

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

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

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

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 the Environmental Team in the reporting month.

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

Complaint, Notification of Summons and Successful Prosecution

There was one (1) complaint (including one (1) noise related complaint) received on 4 November 2013 and followed up by the Environmental Team in November 2013. The complaint is still under investigation in November 2013 and the investigation result will be reported in the next Monthly EM&A Report (December 2013).

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

Future Key Issues

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

- Properly store and label oils and chemicals on site;
- Chemical, chemical waste and waste management;
- Collection of construction waste should be carried out regularly;
- Site runoff should be properly collected and treated prior to discharge;
- Properly maintain all drainage facilities and wheel washing facilities on site;
- Exposed slopes should be covered up properly if no temporary work will be conducted;
- Suppress dust generated from excavation, breaking and drilling activities, haul road traffic and grout mixing;
- 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 January 2014; while the 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-ninth 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 November 2013.

1.3 Project Organization

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

Table 1.1 Contact Information of Key Personnel

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

1.4 Summary of Construction Works

1.4.1 The construction phase of Stage 1 under the EP commenced on 23 November 2009.

1.4.2 Details of the construction works carried out by the Contract 1 Contractor (China State Construction Engineering (Hong Kong) Ltd.) in this reporting period are listed below:-

- Temporary shoring, sheetpiling and excavation
- At-grade road construction
- Widening and demolition of central dividers
- Retaining wall construction
- Noise barrier footing construction

- Noise barrier panels installation
- Asphalt laying
- Installation of Drainage Pipes
- Modification of Edge coping

1.4.3 Details of the construction works carried out by the Contract 2 Contractor (Gammon Construction Ltd.) in this reporting period are listed below:-

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

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 November 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	82.1	78.8 – 84.1	302.1	500
AM2	82.0	76.9 – 85.5	301.9	500
AM3	81.7	78.5 – 84.5	301.9	500
AM4A	82.3	77.3 – 86.1	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	52.9	42.9 – 62.2	176.6	260
AM2	50.5	34.5 – 93.2	178.6	260
AM3	24.3	7.3 – 37.0	193.1	260
AM4A	42.6	26.0 – 58.2	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 November 2013 from the Tai Mei Tuk Automatic Weather Station were missing, the weather data from Tai Po Automatic Weather Station in November 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 / B&K 2250-L / B&K 2270
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 November 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	60.0	47.9 – 62.8	75
NM2	63.7*	62.3 – 65.1*	75
NM3	61.3	56.5 – 62.9	70 [#]
NM4	63.0	62.0 – 64.3	75
NM5	60.3	58.0 – 61.7	75
NM6	62.3*	59.1 – 64.4*	70 [#]
NM7	59.0	57.7 – 61.1	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 No noise complaint related to 0700 – 1900 hours on normal weekdays was received and followed up by the 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 6, 13, 20 and 27 November 2013 for Contract 1 of the Project, and 4 site inspections for Contract 2 of the Project were carried out on 7, 14, 21 and 28 November 2013.

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

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

Air Quality

4.1.4 No adverse observation was identified in the reporting month.

Noise

4.1.5 No adverse observation was identified in the reporting month.

Water Quality

4.1.6 No adverse observation was identified in the reporting month.

Chemical and Waste Management

4.1.7 No adverse observation was identified in the reporting month.

Landscape and Visual Impact

4.1.8 No adverse observation was identified in the reporting month.

Miscellaneous

4.1.9 No adverse observation was identified in the reporting month.

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

Air Quality

4.1.11 No adverse observation was identified in the reporting month.

Noise

4.1.12 No adverse observation was identified in the reporting month.

Water Quality

4.1.13 The Contractor was reminded to provide a drip tray to hold the oil can or remove the oil can.

4.1.14 Oil leakage was observed under the generator. The Contractor was reminded to clear the oil stain, and identify and eliminate the source of leakage.

Chemical and Waste Management

4.1.15 The Contractor was reminded to cover the stockpiles at Gate 7B.

4.1.16 The Contractor was reminded to clear the general refuse at Bridge 13.

Landscape and Visual Impact

4.1.17 No adverse observation was identified in the reporting month.

Miscellaneous

4.1.18 No adverse observation was identified in the reporting month.

4.2 Advice on the Solid and Liquid Waste Management Status

4.2.1 The Contract 1 Contractor (CSHK) and the Contract 2 Contractor (GCL) are registered as chemical waste producers for Stage 1 of the Project. C&D material sorting was carried out on site. Sufficient numbers of receptacles were available for general refuse collection.

4.2.2 As advised by the Contract 1 Contractor (CSHK), 326m³ of inert C&D materials was disposed of to the public fill at Tuen Mun 38 (of which 122m³ was broken concrete), while 130m³ of general refuse was disposed of at the NENT landfill. 107kg of paper/cardboard packaging, 3,133kg of plastics and 36,741kg of metals were collected by recycling contractors in the reporting month. 1,106m³ and 1,133m³ of inert C&D materials were reused on site and reused in NENT for backfilling purpose respectively. 0kg of chemical waste was collected by the licensed contractor in the reporting period.

4.2.3 As advised by the Contract 2 Contractor (GCL), 200m³ of inert C&D materials was disposed of to Tuen Mun 38 and 215m³ of general refuse was disposed of to the NENT landfill in the reporting period. No paper/cardboard packaging, plastics or metals was collected by the recycling contractors in the reporting month. Besides, no chemical waste was collected by the licensed contractor in the reporting period.

4.2.4 The Contract 1 Contractor (CSHK) and the Contract 2 Contractor (GCL) are advised to maintain on site waste sorting and recording system and maximize reuse / recycle of C&D wastes.

4.3 Environmental Licenses and Permits

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

Table 4.1 Summary of Environmental Licensing and Permit Status

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

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
	Discharge License (Site)	WT00005445-2009	15/12/2009	31/12/2014	CSHK	Discharge of Construction Runoff
	Discharge License (Office)	WT00006782-2010	25/06/2010	30/06/2015	GCL	Discharge at Site Office
	Discharge License (Site)	WT00007162-2010	09/08/2010	31/07/2015	GCL	Discharge of Construction Runoff
WDO	Chemical Waste Producer Registration	5213-727-C3249-46	25/09/2009	N/A	CSHK	Chemical waste produced in Contract HY/2008/09
		5213-722-G2347-18	18/05/2010	N/A	GCL	Chemical waste produced in Contract HY/2009/08
WDO	Billing Account for Disposal of Construction Waste	7009328	08/09/2009	N/A	CSHK	Waste disposal in Contract HY/2008/09
		7010320	02/03/2010	N/A	GCL	Waste disposal in Contract HY/2009/08
NCO	Construction Noise Permit	GW-RN0417-13	21/07/2013	17/01/2014	CSHK	Construction works at Island House Interchange
		GW-RN0422-13	29/07/2013	31/12/2013	CSHK	Road Paving on Tolo Highway at Island House Interchange
		GW-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-RN0513-13	07/09/2013	03/11/2013	CSHK	Road Marking Alternation near Sign Gantry G14
		GW-RN0524-13	04/09/2013	15/11/2013	CSHK	Sign Gantry at Tolo Highway between Yuen Chau Tsai and Ma Wo
		GW-RN0525-13	16/09/2013	30/11/2013	CSHK	Stitching Works on Bridge 11
		GW-RN0561-13	02/10/2013	01/04/2014	CSHK	Modification of Sign Gantry_G11, G13, G70, G73, G74, G75 & G76
		GW-RN0564-13	28/09/2013	22/12/2013	CSHK	Road Paving Reconstruction on Tolo Highway (Fanling Bound) near Shan Tong

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
						Road
		GW-RN0566-13	25/09/2013	30/11/2013	CSHK	Road Paving Reconstruction on Slip Road from Tai Po Road-Yuen Chau Tsai
		GW-RN0572-13	07/09/2013	03/12/2013	CSHK	Modification of Sign Gantry_G14, G15, G16, G17, G65, G66, G67 & G68
		GW-RN0582-13	06/10/2013	22/12/2013	CSHK	Road Paving for slip road from Tai Po Road-Yuen Chau Tsai
		GW-RN0584-13	05/10/2013	24/11/2013	CSHK	Road Marking Alternation at Tolo Highway near Shan Tong Road from CH17.0A to CH16.1A
		GW-RN0606-13	13/10/2013	24/11/2013	CSHK	Road Paving & Road Marking Works at Yuen Shin Road near Tolo Highway
		GW-RN0607-13	19/10/2013	22/12/2013	CSHK	Road Paving on Tolo Highway between Ma Wo and NLKRB (Shatin Bound)
		GW-RN0614-13	19/10/2013	22/12/2013	CSHK	Road Paving on North Bound of Tolo Highway at Island House Interchange
		GW-RN0620-13	19/10/2013	22/12/2013	CSHK	Road Paving Reconstruction on Tolo Highway (Fanling Bound) Between NB12 and Tat Wan Road
		GW-RN0647-13	01/11/2013	31/12/2013	CSHK	Carrying out construction works within MTRC's tracks protection zone
		GW-RN0693-13	16/11/2013	22/12/2013	CSHK	Road Paving on Tolo Highway at Island House Interchange (Shatin Bound)
		GW-RN0703-13	19/11/2013	28/12/2013	CSHK	Installation of Noise Barrier on Kwong Fuk West Viaduct

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
		GW-RN0707-13	19/11/2013	28/12/2013	CSHK	Road Paving Reconstruction on Tolo Highway (Fanling & Shatin Bound) near Shan Tong Road
		GW-RN0710-13	21/11/2013	24/12/2013	CSHK	Sign Gantry at Tolo Highway between Yuen Chau Tsai and Ma Wo
		GW-RN0726-13	27/11/2013	31/12/2013	CSHK	Concreting Works on Tolo Highway (Fanling Bound) near Tat Wan 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-RN0405-13	25/07/2013	24/01/2014	GCL	Northbound near CH.18.39 - 19.1 near Shek Link Road
		GW-RN0484-13	02/09/2013	31/12/2013	GCL	Renewal of GW-RN0091-13 Tolo Highway and Fanling Highway near Tai Po Tai Wo Road, Lam Kam Interchange & Tai Wo Service Road West
		GW-RN0519-13	15/09/2013	09/03/2014	GCL	Renewal of GW-RN0351-13 Tolo Highway near Ma Wo Village
		GW-RN0530-13	03/10/2013	02/02/2014	GCL	Renewal of GW-RN0194-13 Tolo Highway near Tai Po Tau Raw Water Pumping Station
		GW-RN0549-13	17/09/2013	30/11/2013	GCL	Erection and dismantle of Sign Gantry
		GW-RN0551-13	19/09/2013	03/12/2013	GCL	Stitching Construction of B12B
		GW-RN0575-13	27/09/2013	10/12/2013	GCL	Erection of Sign Gantry at Lam Kam Road Flyover CH. 20.2 to 20.3

Statutory Reference	License/ Permit	License or Permit No.	Valid Period		License/ Permit Holder	Remarks
			From	To		
		GW-RN608-13	12/10/2013	21/12/2013	GCL	Renewal of GW-RN0473-13 Dismantling of Overhead Falsework at NLKP6 to NLKP7
		GW-RN0610-13	16/10/2013	10/12/2013	GCL	Road Diversion at Tolo Highway South Bound CH.18.1-18.7
		GW-RN613-13	22/10/2013	24/12/2013	GCL	Renewal of GW-RN0362-13 Dismantling of Overhead Falsework at NLKP8 to NLKP10
		GW-RN617-13	18/10/2013	31/12/2013	GCL	Road Diversion at Tolo Highway CH19.4 to 19.9
		GW-RN0652-13	10/11/2013	29/12/2013	GCL	Road Diversion at Tolo Highway CH18.1 - 18.4B Fanling Bound near Ma Wo
		GW-RN0665-13	10/11/2013	29/12/2013	GCL	Road Diversion at Tolo Highway CH19.4 to 19.9
		GW-RN0686-13	17/11/2013	29/12/2013	GCL	Road diversion at Tolo Highway CH18.4-18.6, CH19.3-19.5 and CH20-20.2 Fanling Bound near Ma Wo
		GW-RN0695-13	17/11/2013	12/05/2014	GCL	General work and asphalt paving at Tolo Highway near Shek Kwu Lung and Ma Wo (CH18.1 - 19.2)
		GW-RN0716-13	28/11/2013	31/12/2013	GCL	Dismantle of overhead falsework between NLKP8 to NLKP10

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 No complaint from previous reporting months were followed up by the Environmental Team in the reporting period.
- 4.6.3 There was one (1) complaint (including one (1) noise related complaint) received on 4 November 2013 and followed up by the Environmental Team in November 2013. The complaint is still under investigation in November 2013 and the investigation result will be reported in the next Monthly EM&A Report (December 2013).
- 4.6.4 EPD referred a noise complaint from a resident living near Uptown Plaza at Tai Po. The complainant expressed that the construction work between late-night hours on 2 November and early morning of 3 November at Tolo Highway disturbed the resident's sleep.
- 4.6.5 No new notification of summons and prosecution was received in the reporting period.
- 4.6.6 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 December 2013 will be:-

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

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

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

5.2 Key Issues for the Coming Month

5.2.1 Key issues to be considered in December 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 December 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 November 2013. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site audits.
- 6.1.6 No complaint from previous reporting months were followed up by the Environmental Team in the reporting period.
- 6.1.7 There was one (1) complaint (including one (1) noise related complaint) received on 4 November 2013 and followed up by the Environmental Team in November 2013. The complaint is still under investigation in November 2013 and the investigation result will be reported in the next Monthly EM&A Report (December 2013).
- 6.1.8 No new 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.

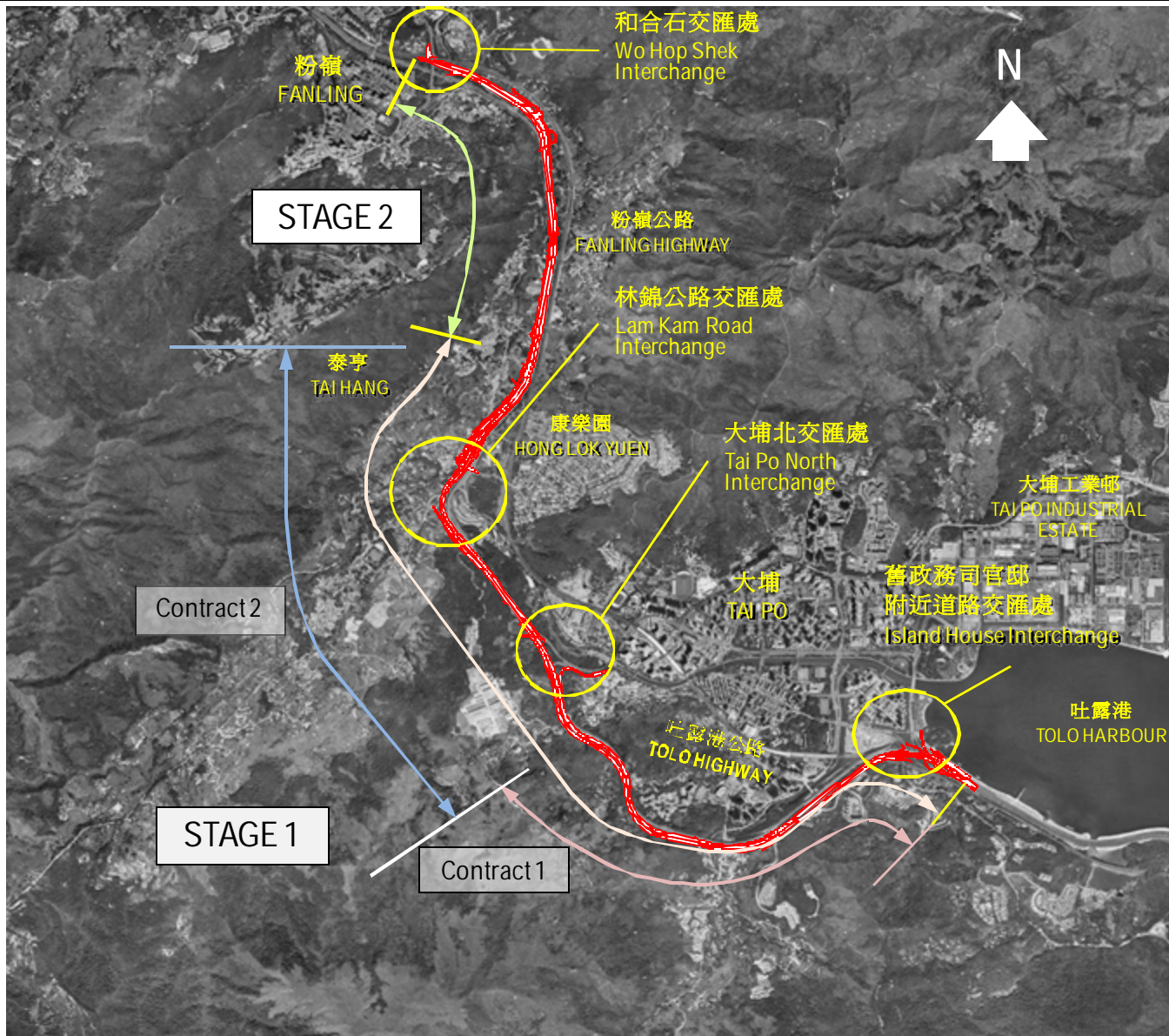
Chemical and Waste Management

- 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.

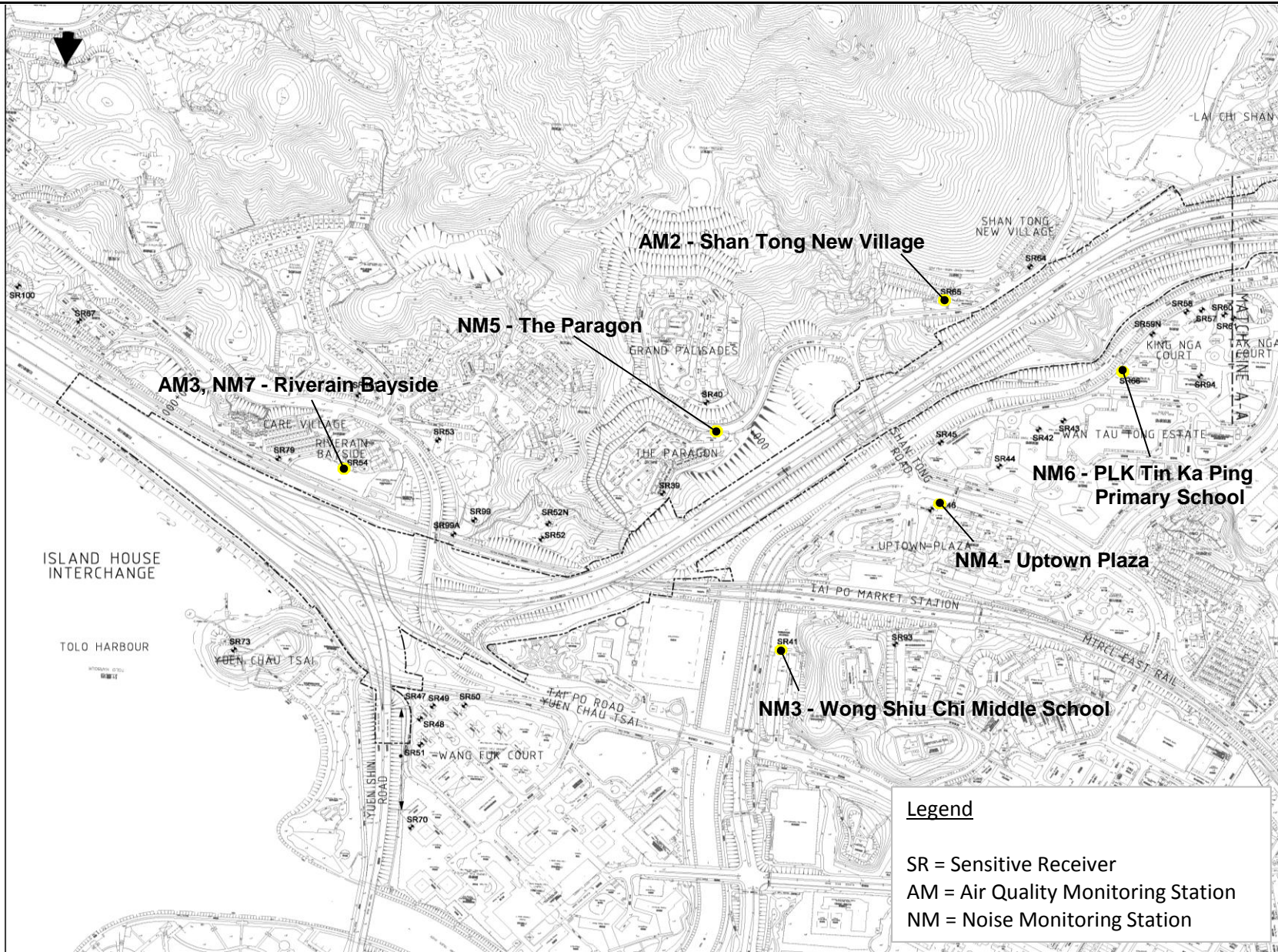
FIGURES



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

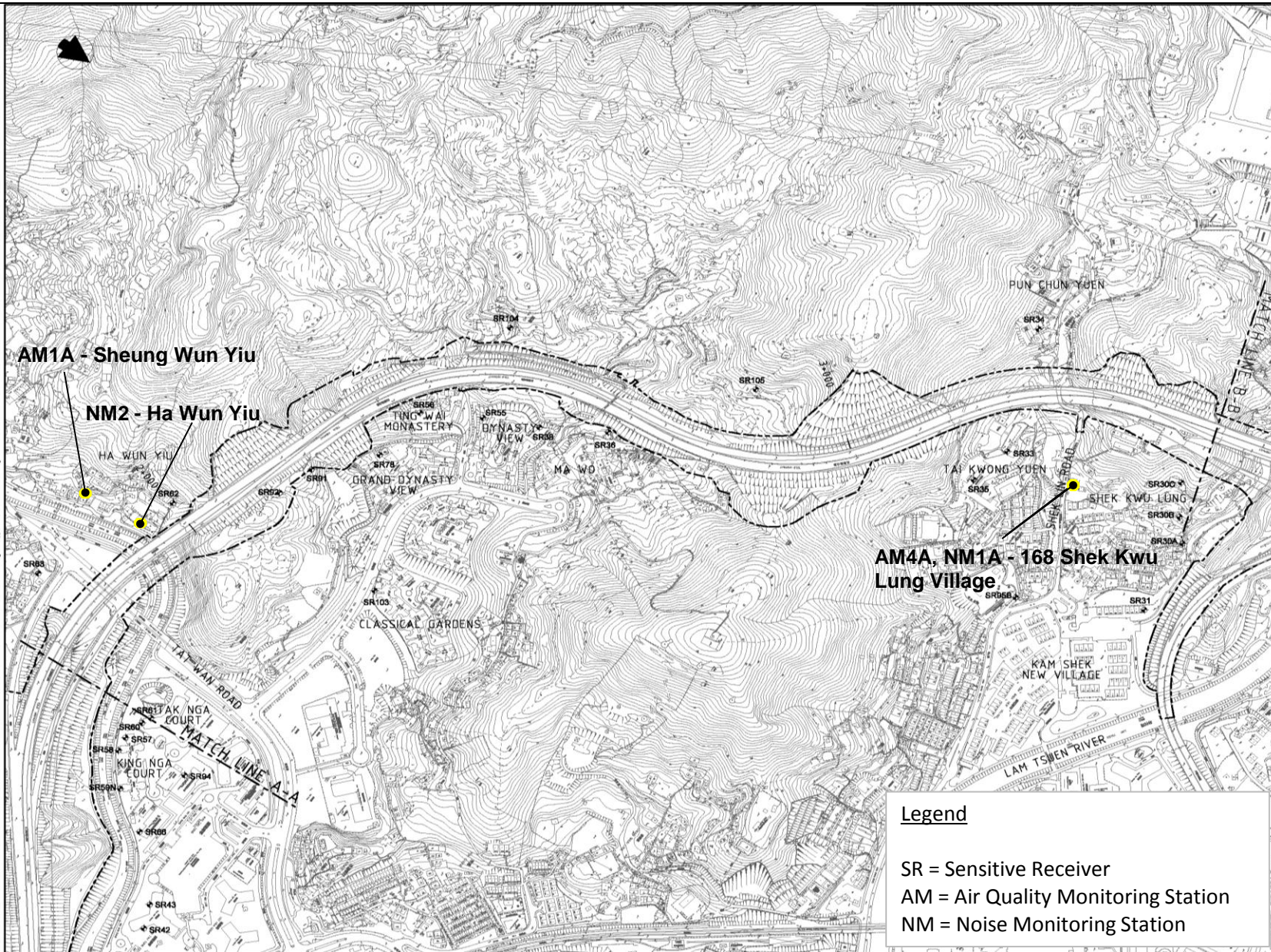
SR = Sensitive Receiver
 AM = Air Quality Monitoring Station
 NM = Noise Monitoring Station



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

EM&A Monitoring Locations (Sheet 1 of 2)

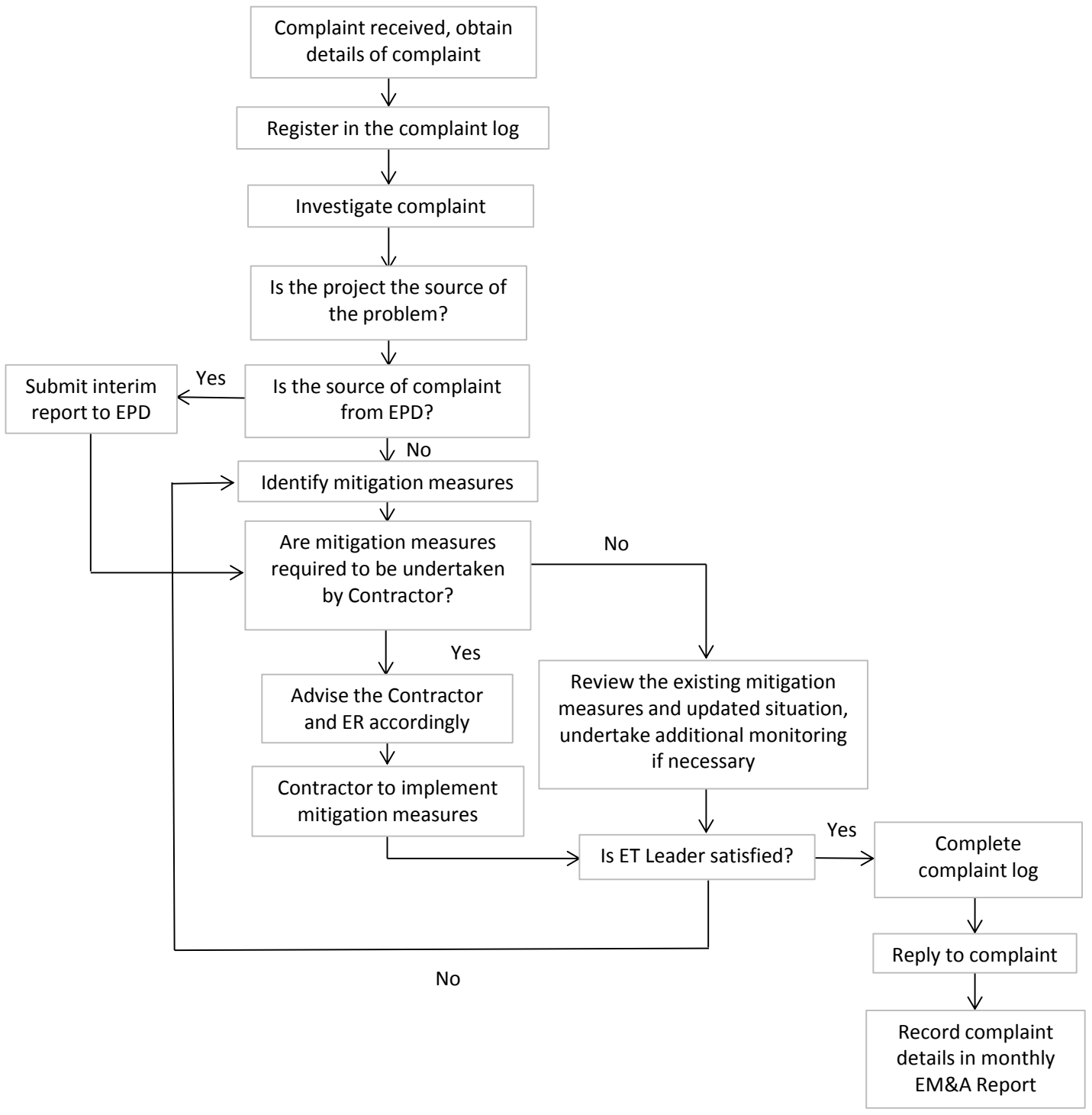
SCALE	N.T.S.	DATE	Sep-11
CHECK	ENFL	DRAWN	LCHC
JOB NO.	60102979	FIGURE NO.	2.1
		Rev	0



**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

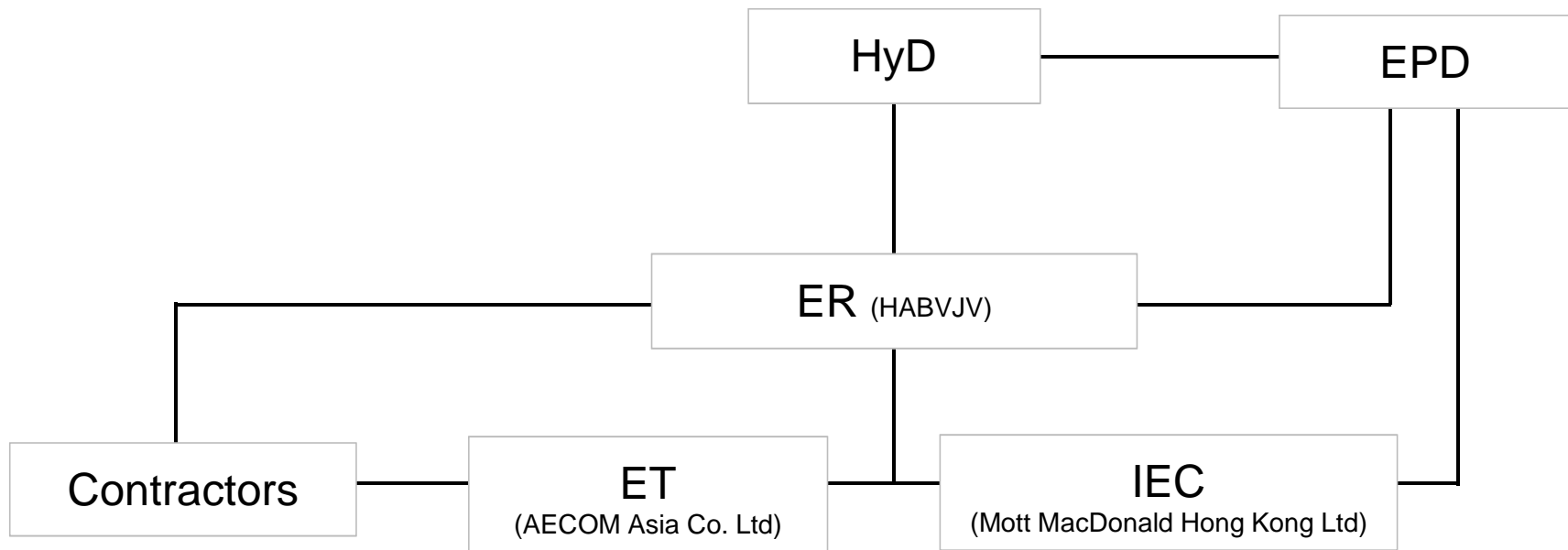


Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation

Environmental Complaint Handling Procedure

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

**APPENDIX A
PROJECT ORGANIZATION STRUCTURE**



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

Project Organization Structure

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

**APPENDIX B
CONSTRUCTION PROGRAMMES**

Activity ID	Activity Name	Original Durat...	Start	Finish	2013								2014							
					November				December				January		February					
					20	27	03	10	17	24	01	08	15	22	29	05	12	19	26	02
Northbound Rd/ Dr, Ch 0-300, after NB3																				
Roadworks																				
S1-051105	Roadworks- 2nd TTA (Fast lane)	115	06-Feb-13 A	20-Oct-13 A	Roadworks- 2nd TTA (Fast lane)															
S1-051115	Roadworks- 3rd TTA (middle lane)	18	21-Oct-13 A	21-Nov-13 A	Roadworks- 3rd TTA (middle lane)															
S1-051135	Drainage at Slow Lane	15	20-Nov-13	06-Dec-13	Drainage at Slow Lane															
S1-051137	Roadworks- 4th TTA (Slow lane)	12	26-Nov-13 A	06-Dec-13	Roadworks- 4th TTA (Slow lane)															
S1-051145	Implement TTA	0	07-Dec-13		◆ Implement TTA															
Slip Rd B after Banyan Br. Completion																				
Slip Rd B																				
S1-051150	Slip Road B - drainage + road reconstruction	193	11-Oct-12 A	14-Dec-13	Slip Road B - drainage + road reconstruction															
Slip Rd A after Banyan West Completion																				
Slip Rd A																				
S1-051155	Slip Road A - drainage + road reconstruction	175	20-Oct-12 A	30-Dec-13	Slip Road A - drainage + road reconstruction															
NB2 & Slope S2, after TB1 demolition																				
High Mast Lighting																				
S1-031037	High Mast HM6 - footing, relocation + lamp	10	16-Dec-13*	28-Dec-13	High Mast HM6 - footing, relocation + lamp															
S1-031039	High Mast HM10 - instal/delete lamps	6	30-Dec-13	04-Jan-14	High Mast HM10 - instal/delete lamps															
Noise Barrier NB2																				
S1-031055	NB2 Structural Steel	10	07-Dec-13*	18-Dec-13	NB2 Structural Steel															
S1-031065	NB2 NB Panels	10	19-Dec-13	01-Jan-14	NB2 NB Panels															
Cut Slope S2																				
S1-031025B	Cut Slope S2- channel	20	23-Dec-13	16-Jan-14	Cut Slope S2- channel															
NB9, Slope F121, S5, (after TB2 demolition)																				
Noise Barrier NB9																				
S1-200130	NB9 Structural Steel	5	07-Dec-13*	12-Dec-13	NB9 Structural Steel															
S1-200135	NB9 NB Panels	5	13-Dec-13	18-Dec-13	NB9 NB Panels															
Cut Slope S5																				
S1-200140	Slope F121 + S5	28	14-Dec-13*	17-Jan-14	Slope F121 + S5															
North Bound Road and Drain, Ch 300-500																				
Road Drainage																				
S1-200155	Road Drainage - pipelayinnng + manhole	15	22-Nov-13 A	06-Dec-13	Road Drainage - pipelayinnng + manhole															
Firemain																				
S1-200170	Firemain- excav, pipe install + pit/new hydrants	15	28-Nov-13*	14-Dec-13	Firemain- excav, pipe install + pit/new hydrants															
TCSS Works/Other Utilities																				
S1-200180	Utilities & TCSS buried ducts	15	10-Dec-13*	28-Dec-13	Utilities & TCSS buried ducts															
Road Lighting/ or High Mast																				
S1-200175	Public Lighting - buried ducts	15	10-Dec-13*	28-Dec-13	Public Lighting - buried ducts															
S1-200205	Public Lighting - Lamp Pole + Lamps	15	10-Dec-13	28-Dec-13	Public Lighting - Lamp Pole + Lamps															
Roadworks																				
S1-200154	Roadworks - 1st TTA - Half fast lane (Lane 4)	8	02-Oct-13 A	20-Oct-13 A	Roadworks - 1st TTA - Half fast lane (Lane 4)															
S1-200190	Roadworks - 2nd TTA - Slow lane	20	07-Nov-13 A	05-Dec-13	Roadworks - 2nd TTA - Slow lane															
S1-200195	Roadworks - 3rd TTA - middle lane	14	06-Dec-13	21-Dec-13	Roadworks - 3rd TTA - middle lane															
S1-200200	Roadworks - 4th TTA - fast lane	6	23-Dec-13	31-Dec-13	Roadworks - 4th TTA - fast lane															
S1-200215	complete	0	31-Dec-13		◆ complete															
Z2: CH 500 to CH 1100: SECT. 4 WORKS																				
Zone 2: CH500 to Ch1100 (Section 4 Works)																				
VO No.28 (VO 211) - Diversion of Existing Stormwater Drain in Kwong Fuk Park																				
VO28-1070	Construct manhole Q to Half (18m) (sheet pile, trench excavation, pi...	45	22-Jul-13 A	16-Nov-13 A	Construct manhole Q to Half (18m) (sheet pile, trench excavation, pi...															
VO28-1080	Construct Half to manhole P (18m) (sheet pile, trench excavation, p...	50	19-Aug-13 A	26-Nov-13	Construct Half to manhole P (18m) (sheet pile, trench excavation, p...															
VO28-1085	Town Gas installation works (from main to complete connection to ...	50	27-Nov-13	25-Jan-14	Town Gas installation works (from main to complete connection to ...															
VO28-1090	Backfill Topsoil Manhole Z to P	18	27-Jan-14	25-Feb-14	Backfill Topsoil Manhole Z to P															
WM Test+Drain CCTV+ E&M Works																				
Drainage CCTV																				
S4-208380	Drainage CCTV	24	26-Nov-13	23-Dec-13	Drainage CCTV															
S4-208385	Drainage submit CCTV Report	18	09-Dec-13	31-Dec-13	Drainage submit CCTV Report															
TCSS E&M Works & Handover																				
S4-208355	Cabling works for Utilities/TCSS/Lighting	22	20-Sep-13 A	30-Nov-13	Cabling works for Utilities/TCSS/Lighting															
S4-208370	T&C - power supply system to TCSS/Lighting	24	02-Dec-13	31-Dec-13	T&C - power supply system to TCSS/Lighting															
TCSS Works																				
New Sign Gantry Construction																				
G20																				
GS1820	Footing for SL (NB16 bay 11)	20	18-Nov-13 A	29-Nov-13	Footing for SL (NB16 bay 11)															
GS1840	Erect Column SL	4	06-Dec-13*	10-Dec-13	Erect Column SL															
GS1850	Erect Gantry Beam	4	11-Dec-13	14-Dec-13	Erect Gantry Beam															
G63																				
GS2194	Erect column SL	2	15-Jul-13 A	09-Nov-13 A	Erect column SL															
GS2200	Erect Gantry Beam	4	16-Dec-13*	19-Dec-13	Erect Gantry Beam															
G64																				
GS2255	Erect column (FL)	4	27-Nov-13*	30-Nov-13	Erect column (FL)															
GS2260	Erect Gantry Beam	4	11-Dec-13*	16-Dec-13	Erect Gantry Beam															
Stage 1: Southbound Work- Ret. Wall, Noise B, Rd																				
NLKR - Bridge Deck + Noise Barrier																				
Bridge Deck																				
S4-N01365	NB footing besides Retaining wall	12	07-Sep-13 A	30-Oct-13 A	NB footing besides Retaining wall															
S4-N01375	Noise barrier Post	3	10-Dec-13	12-Dec-13	Noise barrier Post															
S4-N01385	Noise barrier panel	3	13-Dec-13	16-Dec-13	Noise barrier panel															
RW W4-W7+Slope S7+NB15, NB12+Slip Rd L																				
Noise Barrier NB12																				
S4-208120	NB12 NB Panels	454	01-Feb-12 A	20-Nov-13	NB12 NB Panels															
S4-208260	NB12 (bay 1-3) NB structure steel	7	30-Nov-13*	07-Dec-13	NB12 (bay 1-3) NB structure steel															
S4-208270	NB12 (bay 1-3) NB Panel	7	09-Dec-13	16-Dec-13	NB12 (bay 1-3) NB Panel															

Activity ID	Activity Name	Original Durat...	Start	Finish	2013								2014									
					November				December				January			February						
					20	27	03	10	17	24	01	08	15	22	29	05	12	19	26	02	09	16
Cut Slope S6 and Slip Rd L																						
S4-203065A	Cut slope S6 - excavation	403	01-Feb-12 A	14-Dec-13	Cut slope S6 - excavation																	
S4-203065B	Cut slope S6 - drainage/U-channels	11	16-Dec-13	30-Dec-13	Cut slope S6 - drainage/U-channels																	
Fill Slope S7																						
S4-031070A	Fill Slope S7- backfilling to RW coping level	1066	07-May-10 A	07-Jan-14	Fill Slope S7- backfilling to RW coping level																	
S4-031070B	Fill Slope S7- backfilling to road level	1016	20-Jul-10 A	18-Jan-14	Fill Slope S7- backfilling to road level																	
S4-031070C	Fill Slope S7- u channels	24	30-Dec-13	25-Jan-14	Fill Slope S7- u channels																	
S4-031070D	Fill Slope S7- metal works + hand rails etc.	18	13-Jan-14	11-Feb-14	Fill Slope S7- metal works + hand rails etc.																	
Retaining Wall W7																						
S4-035070A	Retaining Wall W7, excav + base slab + wall stem	37	20-Jul-13 A	30-Nov-13	Retaining Wall W7, excav + base slab + wall stem																	
S4-035070B	Retaining Wall W7, backfill (assumed rockfill as VO No. 90)	23	02-Dec-13	30-Dec-13	Retaining Wall W7, backfill (a)																	
SB: CH500-1100, Road&Drain+Utilities																						
TCSS Works/Other Utilities																						
S4-512850	Civil prov. works (CPW)- TCSS Pillar Box C	20	20-Sep-13 A	27-Dec-13	Civil prov. works (CPW)- TCSS Pillar Box C																	
S4-512880	Utilities+ TCSS + CPW- SC 63/S63	14	16-Oct-13 A	27-Dec-13	Utilities+ TCSS + CPW- SC 63/S63																	
S4-031160	Power supply cable ducts	31	20-Nov-13	27-Dec-13	Power supply cable ducts																	
Road Lighting/ or High Mast																						
S4-031178	Public lighting - Lamp Pole + Lamps	12	18-Oct-13 A	11-Dec-13	Public lighting - Lamp Pole + Lamps																	
S4-031178A	Public Lighting - cabling works	6	18-Oct-13 A	16-Dec-13	Public Lighting - cabling works																	
S4-031178A10	Public Lighting - cabling works	13	20-Nov-13	04-Dec-13	Public Lighting - cabling works																	
S4-512930	Public lighting - Lamp Pole + Lamps	18	05-Dec-13	27-Dec-13	Public lighting - Lamp Pole + Lamps																	
S4-031178B	Public Lighting - power supply connection & test	4	12-Dec-13	16-Dec-13	Public Lighting - power supply connection & test																	
S4-031178B10	Public Lighting - power supply connection & test	12	12-Dec-13	27-Dec-13	Public Lighting - power supply connection & test																	
Roadworks																						
S4-512900	Roadworks- subbase + subsoil drain + gully connect	48	20-Jun-13 A	23-Nov-13	Roadworks- subbase + subsoil drain + gully connect																	
S4-512910	Roadworks - base course to friction course	6	02-Dec-13	07-Dec-13	Roadworks - base course to friction course																	
S4-512920	Roadworks - road marking + furnitures	6	09-Dec-13	14-Dec-13	Roadworks - road marking + furnitures																	
S4-031185	Implement TTA - Divert to completed southbound (RW 8 Bay 1 ~ Ba...	5	16-Dec-13	20-Dec-13	Implement TTA - Divert to completed																	
Stage 3: Central Median - Ret. Wall, Noise B, Rd																						
Noise Barrier NB10, NB14, NB17 Foundation Works																						
Noise Barrier NB10																						
S4-203170B35	Drainage & Roadwork for NB10 area (Bays 7-13)	24	01-Aug-13 A	24-Oct-13 A	Drainage & Roadwork for NB10 area (Bays 7-13)																	
S4-203192	NB10 (14-16 bays) Steel Column & NB Panel	30	18-Sep-13 A	31-Oct-13 A	NB10 (14-16 bays) Steel Column & NB Panel																	
S4-203202	Drainage & Roadwork for NB10 area (5,6,14-16 bays)	13	07-Oct-13 A	24-Oct-13 A	Drainage & Roadwork for NB10 area (5,6,14-16 bays)																	
S4-203195	NB10 (5,6 bays) Steel Column & NB Panel	14	28-Nov-13	13-Dec-13	NB10 (5,6 bays) Steel Column & NB Panel																	
Noise Barrier NB14																						
S4-203170B50	NB14 (bay 1-8) Footing & wall stem	37	19-Jun-13 A	30-Oct-13 A	NB14 (bay 1-8) Footing & wall stem																	
S4-203170B55	NB14 (bay 1-8) Backfilling	3	29-Oct-13 A	02-Nov-13 A	NB14 (bay 1-8) Backfilling																	
S4-203170B60	NB14 (bay 1-8) Steel Column & NB Panel	11	16-Nov-13 A	16-Dec-13	NB14 (bay 1-8) Steel Column & NB Panel																	
Noise Barrier NB17																						
S4-203170B150	NB17 (Bay 21-26)Steel Column & NB Panel	12	17-Sep-13 A	22-Nov-13 A	NB17 (Bay 21-26)Steel Column & NB Panel																	
S4-203170B090	NB17 (Bay 1-8)Steel Column & NB Panel	21	22-Nov-13*	16-Dec-13	NB17 (Bay 1-8)Steel Column & NB Panel																	
CM: CH500-1100, Road&Drain+Utilities																						
Road Drainage																						
S4-208285	Road Drainage - pipelayinnng + manhole	30	01-Aug-13 A	23-Nov-13	Road Drainage- pipelayinnng + manhole																	
TCSS Works/Other Utilities																						
S4-208305	Power supply cable ducts	36	14-Aug-13 A	23-Nov-13	Power supply cable ducts																	
S4-208300	Utilities+TCSS buried ducts + civil prov. works	48	16-Aug-13 A	23-Nov-13	Utilities+TCSS buried ducts + civil prov. works																	
Road Lighting/ or High Mast																						
S4-208325A	Public Lighting - cabling works	18	20-Sep-13 A	23-Nov-13	Public Lighting - cabling works																	
S4-208325	Public lighting - Lamp Pole + Lamps	24	25-Nov-13	21-Dec-13	Public lighting - Lamp Pole + Lamps																	
S4-208325B	Public Lighting - power supply connection & test	18	02-Dec-13	21-Dec-13	Public Lighting - power supply connection & test																	
Roadworks																						
S4-208310	Roadworks- subbase + subsoil drain + gully connect	40	24-Aug-13 A	23-Nov-13 A	Roadworks- subbase + subsoil drain + gully connect																	
S4-208320	Roadworks - road marking + furnitures	16	20-Nov-13	07-Dec-13	Roadworks - road marking + furnitures																	
S4-208315	Roadworks - base course to friction course	11	25-Nov-13	06-Dec-13	Roadworks - base course to friction course																	
S4-208335	Central Median Works Complete	0	17-Dec-13		◆ Central Median Works Complete																	
Stage 2: Northbound Work- Ret. Wall, Noise B, Rd																						
Mod. Existing Lam Kam Railway Br. +Noise B.																						
S4-19383050	Concrete casting	3	17-Oct-13 A	20-Oct-13 A	Concrete casting																	
S4-193840	Road Works	9	21-Oct-13 A	07-Dec-13	Road Works																	
S4-193890	Lam Kam Railway Bridge Modification Completion	0		07-Dec-13	◆ Lam Kam Railway Bridge Modification Comp																	
S4-193900	LKRB NB plinth at slow lane (besides W4A)	75	09-Dec-13	17-Mar-14																		
Noise Barrier NB16																						
Noise Barrier Foundation Works																						
S4-513140	NB16 - (18,19) bay Remaining Wall Stem	18	02-Dec-13*	21-Dec-13	NB16 - (18,19) bay Remaining Wall																	
S4-513145	NB16 - (5-7) bay Remaining Wall Stem & plinth	42	16-Dec-13	13-Feb-14	NB16 - (5-7) bay Remaining Wall																	
S4-513150	NB16 - Drainage work	26	14-Feb-14	15-Mar-14																		
Retaining Wall W4A & NB13 & Slip Rd M																						
Retaining Wall W4A																						
S4-03504A040	RW W4A (last 4 bays) excavation + base slab (I&P)	30	16-Dec-13	28-Feb-14																		
Noise Barrier NB13																						
S4-207130	NB13 Structural Steel	5	20-Nov-13	25-Nov-13	NB13 Structural Steel																	
S4-208130	NB13 NB Panels	8	30-Nov-13	09-Dec-13	NB13 NB Panels																	
NB: CH500-1100, Road&Drain+Utilities																						
Road Drainage																						
S4-031210	Road Drainage - pipelayinnng + manhole	44	02-Jul-13 A	25-Nov-13	Road Drainage - pipelayinnng + manhole																	
Firemain																						
S4-031220	Firemain- excav, pipe install + pit/new hydrants	36	25-Jul-13 A	25-Nov-13	Firemain-excav, pipe install + pit/new hydrants																	
TCSS Works/Other Utilities																						
S4-031225	Utilities + TCSS + CPW- SC 20/S20	36	17-Jul-13 A	25-Nov-13	Utilities + TCSS + CPW- SC 20/S20																	
S4-031230	Power supply cable ducts	36	20-Jul-13 A	25-Nov-13	Power supply cable ducts																	
Road Lighting/ or High Mast																						
S4-031250A	Public Lighting - cabling works	18	04-Oct-13 A	25-Nov-13	Public Lighting - cabling works																	
S4-031250	Public lighting - Lamp Pole + Lamps	24	26-Nov-13	23-Dec-13	Public lighting - Lamp Pole + Lamps																	

Activity ID	Activity Name	Original Durat...	Start	Finish	2013											2014					
					November					December				January		February					
					20	27	03	10	17	24	01	08	15	22	29	05	12	19	26	02	09
S4-031250B	Public Lighting - power supply connection & test	18	03-Dec-13	23-Dec-13	Public Lighting - power supply connection & test																
Roadworks																					
A1040	Road Re-construction for Lane 4 (Fast Lane)	22	09-Oct-13 A	30-Nov-13	Road Re-construction for Lane 4 (Fast Lane)																
A1030	NLKR stitching at Lane 2 complete	0		20-Oct-13 A	NLKR stitching at Lane 2 complete																
A1060	Road Re-construction for Lane 3 (2nd middle lane)	22	21-Oct-13 A	30-Nov-13	Road Re-construction for Lane 3 (2nd middle lane)																
A1080	Road Re-construction for Lane 2 (1st middle lane)	22	15-Nov-13 A	14-Dec-13	Road Re-construction for Lane 2 (1st middle lane)																
A1010	NB14 (bay1-8) backfilling work complete	0		20-Nov-13	NB14 (bay1-8) backfilling work complete																
A1070	Stage 3 (Open Lane 3,4 & Close Lane 1,2)	0		30-Nov-13	Stage 3 (Open Lane 3,4 & Close Lane 1,2)																
A1090	Stage 4 (Open Lane 2 & Close HS)	0		14-Dec-13	Stage 4 (Open Lane 2 & Close HS)																
A1100	Road Re-construction for Lane 1 (slow lane)	12	16-Dec-13	31-Dec-13	Road Re-construction for Lane 1 (slow lane)																
A1110	4 lane opening Complete (including slip Road)	0		31-Dec-13	4 lane opening Complete (including slip Road)																
S4-031260	Northbound road substantial completed in Zone 2	0	01-Jan-14		Northbound road substantial completed in Zone 2																
Z3: CH 1100 to CH 2000: SECT. 4 WORKS																					
WM Test+Drain CCTV+ E&M Works																					
Drainage CCTV																					
S4-0512790	Drainage CCTV	24	26-Nov-13	23-Dec-13	Drainage CCTV																
S4-0512795	Drainage submit CCTV Report	18	10-Dec-13	01-Jan-14	Drainage submit CCTV Report																
Watermain Pressure Test																					
S4-0512800	FH + Watermain Pressure Test	24	17-Dec-13	15-Jan-14	FH + Watermain Pressure Test																
Section Completion																					
Section Completion Date																					
KD-300400B	ZONE 3 COMPLETE - KD4 Section 4	0		31-Dec-13	ZONE 3 COMPLETE - KD4 Section 4																
TCSS Works																					
New Sign Gantry Construction																					
G21																					
GS1900	Erect Column SL/FL	4	24-May-13 A	27-Nov-13	Erect Column SL/FL																
GS1910	Erect Gantry Beam	4	04-Dec-13	07-Dec-13*	Erect Gantry Beam																
G22																					
GS1970	Erect Gantry Beam	1	22-Nov-13 A	23-Nov-13 A	Erect Gantry Beam																
G62																					
GS2135	Erect Column SL/FL	4	13-Aug-13 A	24-Dec-13	Erect Column SL/FL																
GS2140	Erect Gantry Beam	4	20-Dec-13	24-Dec-13	Erect Gantry Beam																
TCSS E&M Works & Handover																					
S4-0512765	Cabling works for Utilities/TCSS/Lighting	24	20-Sep-13 A	31-Dec-13	Cabling works for Utilities/TCSS/Lighting																
S4-0512780	T&C - power supply system to TCSS/Lighting	36	20-Sep-13 A	31-Dec-13	T&C - power supply system to TCSS/Lighting																
S4-0512785	Handover to TCSS Contractor	0		31-Dec-13	Handover to TCSS Contractor																
Stage 1: Southbound Work- Ret. Wall, Noise B, Rd																					
Fill Slope S13 and NB21																					
Fill Slope S13																					
S4-031130C	Fill Slope S13- u channels	363	12-Mar-12 A	14-Dec-13	Fill Slope S13- u channels																
S4-031130D	Fill Slope S13- metal works + hand rails etc.	236	15-Aug-12 A	14-Dec-13	Fill Slope S13- metal works + hand rails etc.																
Stage 2 - Slip Rd L, Ret. Wall W11, W12																					
Slip Rd P																					
S4-208231	Slip Rd P- road reconstruction, Stage 2	265	13-Jul-12 A	16-Dec-13	Slip Rd P- road reconstruction, Stage 2																
SB: CH1260-1600, L=410m, Road&Drain+Utilities																					
Road Lighting/ or High Mast																					
S4-050785A	Public Lighting - cabling works	290	20-Jun-12 A	09-Nov-13 A	Public Lighting - cabling works																
S4-050785B	Public Lighting - power supply connection & test	18	20-Nov-13	10-Dec-13	Public Lighting - power supply connection & test																
Roadworks																					
S4-0507845	Roadworks - base course to friction course	219	31-Aug-12 A	14-Dec-13	Roadworks - base course to friction course																
S4-0507850	Roadworks - road marking + furnitures	244	31-Aug-12 A	14-Dec-13	Roadworks - road marking + furnitures																
S4-0507865	Complete (divert SB traffic to RW10, B11A, RW8 area)	0	16-Dec-13		Complete (divert SB traffic to RW10, B11A, RW8 area)																
Stage 3: Central Median - Ret. Wall, Noise B, Rd																					
CM: CH1260-1600, L=410m, Road&Drain+Utilities																					
TCSS Works/Other Utilities																					
S4-0512710	Power supply cable ducts	91	20-Feb-13 A	14-Dec-13	Power supply cable ducts																
Road Lighting/ or High Mast																					
S4-051273A	Public Lighting - cabling works	91	20-Feb-13 A	14-Dec-13	Public Lighting - cabling works																
S4-0512730	Public lighting - Lamp Pole + Lamps	23	06-Aug-13 A	14-Dec-13	Public lighting - Lamp Pole + Lamps																
S4-051273B	Public Lighting - power supply connection & test	12	02-Dec-13	14-Dec-13	Public Lighting - power supply connection & test																
Roadworks																					
S4-0512720	Roadworks - base course to friction course	106	18-Feb-13 A	15-Nov-13 A	Roadworks - base course to friction course																
S4-0512725	Roadworks - road marking + furnitures	18	11-Nov-13 A	29-Nov-13	Roadworks - road marking + furnitures																
S4-0512740	Road Works completed	0	16-Dec-13		Road Works completed																
Noise Barrier Structural Steel & Panels																					
S4-208200	NB20 & NB23 NB Panels	160	15-Dec-12 A	16-Dec-13	NB20 & NB23 NB Panels																
W20A + Slope S20																					
Cut Slope S20A																					
S4-03120AA	Cut Slope S20A - excavation	24	20-Dec-13*	18-Jan-14	Cut Slope S20A - excavation																
S4-03120AB	Cut Slope S20A - drainage/channels	24	30-Dec-13	25-Jan-14	Cut Slope S20A - drainage/channels																
Stage 2: Northbound Work- Ret. Wall, Noise B, Rd																					
Modification of Existing Bridge No. 10 + Noise B																					
Bridge Roadworks & Furnitures																					
S4-194887	Modify Coping (2nd half to west end)	90	20-May-13 A	19-Nov-13 A	Modify Coping (2nd half to west end)																
S4-194870	Modify Coping (1st half from east end)-after W20A complete	80	07-Oct-13 A	23-Nov-13	Modify Coping (1st half from east end)-after W20A complete																
S4-194899	Road Surfacing & Furnitures	12	25-Nov-13	07-Dec-13	Road Surfacing & Furnitures																
S4-194990	Bridge No. 10 Modification Completion	0		07-Dec-13	Bridge No. 10 Modification Completion																
S4-194889	Install noise barrier (2nd half to west end)	24	04-Jan-14	10-Feb-14	Install noise barrier (2nd half to west end)																
S4-194880	Install noise barrier (1st half from east end)	12	10-Jan-14	23-Jan-14	Install noise barrier (1st half from east end)																
Remaining Work after Road opening																					

Activity ID	Activity Name	Original Durat...	Start	Finish	2013								2014							
					November				December				January				February			
					20	27	03	10	17	24	01	08	15	22	29	05	12	19	26	02
S4-195894	Greenin works (Pending for VO of Deletion)	45	11-Feb-14	03-Apr-14																
Modification of Existing Bridge No.11 + Noise B																				
Bridge Roadworks & Furnitures																				
S4-195895	Road Surfacing & Furnitures after stitching	22	20-Nov-13	14-Dec-13																
S4-195910	Install Noise barrier panel	7	20-Nov-13	27-Nov-13																
S4-195900	Bridge No. 11 Modification Completion	0		14-Dec-13																
Remaining Work after Road opening																				
S4-1958211	Greening works (Pending for VO of Deletion)	60	16-Dec-13	06-Mar-14																
RW W9, Slope S9, & Noise Barrier NB19, NB22																				
Noise Barrier NB19																				
S4-203190	NB19, 22-31 bays Footing + Wall stem [Pile cap, Plinth DELETED]	189	12-Nov-12 A	08-Nov-13 A																
S4-207190A	NB19 Structural Steel, 21 bays	5	12-Dec-13*	17-Dec-13																
S4-207190	NB19 Structural Steel, 10 bays	5	13-Dec-13	18-Dec-13																
S4-208190A	NB19 NB Panels, 21 bays	5	18-Dec-13	23-Dec-13																
S4-208190	NB19 NB Panels, 10 bays	5	19-Dec-13	24-Dec-13																
Noise Barrier NB22																				
S4-207220	NB22 Structural Steel	13	20-Sep-13 A	30-Nov-13																
S4-208220	NB22 NB Panels	24	20-Sep-13 A	30-Nov-13																
Fill Slope S9																				
S4-031095A	Fill Slope S9- backfilling	24	16-Dec-13*	14-Jan-14																
S4-031095B	Fill Slope S9 - drainage	12	08-Jan-14	21-Jan-14																
NB: CH1260-1750, L=410m, Road&Drain+Utilities																				
Road Drainage																				
S4-0512620	Road Drainage - pipelayinng + manhole	48	01-Aug-13 A	16-Dec-13																
Firemain																				
S4-0512630	Firemain- excav, pipe install+pit/new hydrants	24	17-Sep-13 A	01-Jan-14																
TCSS Works/Other Utilities																				
S4-0512635	Utilities +TCSS buried ducts + civil prov. works	36	21-Oct-13 A	31-Dec-13																
S4-0512627	TCSS High mast M7/S117 - footing	17	10-Dec-13*	31-Dec-13																
S4-0512640	Power supply cable ducts	17	10-Dec-13*	31-Dec-13																
Road Lighting/ or High Mast																				
S4-0512660	Public lighting - Lamp Pole + Lamps	36	21-Oct-13 A	31-Dec-13																
S4-051266A	Public Lighting - cabling works	36	21-Oct-13 A	31-Dec-13																
S4-051266B	Public Lighting - power supply connection & test	12	16-Dec-13	31-Dec-13																
Roadworks																				
S4-0512645	Roadworks +Slip Road N- Resurfacing	26	18-Oct-13 A	30-Nov-13																
S4-0512655	Roadworks +Slip Road N- road marking + furnitures	6	23-Dec-13	31-Dec-13																
Z4: CH 2000 to CH 2400: SECT. 2 WORKS																				
Stage 1A: Southbound - S14-, RW21-28, TP7,Rd/Dr																				
Retaining Wall W24 to W28 & Slope S17																				
Cut Slope S17																				
S2-031170	Slope S17 (SB) (after 29A & W29B part)	45	03-Jun-13 A	29-Nov-13																
SB Road & Drain, Ch 2000-2200, L=200m																				
TCSS Works/Other Utilities																				
S2-031290	Utilities +TCSS buried ducts + civil prov. works	277	25-Jul-12 A	20-Oct-13 A																
S2-031295	Power supply cable ducts	277	25-Jul-12 A	16-Dec-13																
Cut Slope S14																				
S2-031140E10	Slope S14 - Soil nail & remaining drainage work (VO343-additional ...	61	10-Jun-13 A	31-Dec-13																
Stage 1B: Northbound- S15-S19, RW31-33, Rd/Dr																				
Retaining Wall W30, W31, W32(Piled), W33																				
Retaining Wall W31,32, 33																				
S2-035325C10	RW W31,W32,33 - wall stem + backfill (5 months)	161	18-Mar-13 A	14-Dec-13																
S2-GCL026	Southbound Stage 7A - GCL's earliest interfacing work completion d...	0		20-Nov-13*																
Stage 2A: Southbound- S17, RW 29-34, NB27-29																				
Noise Barrier NB27, NB29																				
Noise Barrier NB29																				
S2-035350	NB29 NB Panels	7	16-Oct-13 A	14-Dec-13																
Retaining Wall, W29 & NB27(@W29)																				
Retaining Wall W29A																				
S2-03529AB	RW W29A facing panel structure (bay 1)	30	15-Jan-14*	27-Feb-14																
SB: CH2200-2400, L=200m, Road&Drain+Utilities																				
Road Drainage																				
S2-031250	W29A bay 1 road drainage after GCL TTA stage 6A	20	11-Feb-14	05-Mar-14																
TCSS Works/Other Utilities																				
S2-031287	TCSS S160 (VDS) - footing	23	14-Sep-13 A	30-Nov-13																
Roadworks																				
S2-031255	W29A bay 1 road work after GCL TTA stage 6A	20	11-Feb-14	05-Mar-14																
Stage 3: Central Median- NB26, NB29 +Road&Drain																				
CM: NB26 & NB28 L=400m & Road&Drain+Utilities																				
Noise Barrier Structural Steel & Panels																				
S2-208300	NB26 NB Structural Steel	7	08-Jul-13 A	16-Dec-13																
S2-208310	NB26 NB Panels	12	03-Dec-13	16-Dec-13																
S2-208395	Implement TTA- divert traffic to new SB, NB & CM	0	20-Dec-13																	
Stage 2B: Northbound- NB25																				
Noise Barrier NB25																				
S4-207250	NB25 Structural Steel	3	14-Dec-13*	17-Dec-13																
S4-208250	NB25 NB Panels	3	18-Dec-13	20-Dec-13																
TCSS Works																				
New Sign Gantry Construction																				
G23																				
GS2030	Erect Gantry Beam	6	15-Nov-13 A	16-Nov-13 A																
TCSS E&M Works & Handover																				

Activity ID	Activity Name	Original Durat...	Start	Finish	2013								2014							
					November				December				January				February			
					20	27	03	10	17	24	01	08	15	22	29	05	12	19	26	02
S2-208420	Lighting & T&C	24	15-Oct-13 A	14-Dec-13	Lighting & T&C															
S2-208450	T&C - power supply system to TCSS	22	20-Nov-13	14-Dec-13	T&C - power supply system to TCSS															
S2-208425	Handover to TCSS Contractor	0		14-Dec-13	◆ Handover to TCSS Contractor															
Z6: TCSS IN PORTION SA11: SECT. 4 WORKS																				
TCSS Works																				
New Sign Gantry Construction																				
G12																				
GS1600	Erect Gantry Beam	7	24-Oct-13 A	25-Oct-13 A	■ Erect Gantry Beam															
G14 (Outside Site Boundary)																				
GS1650	Footing for FL	48	02-Oct-13 A	25-Oct-13 A	■ Footing for FL															
GS1660	Erect Column	4	04-Dec-13*	07-Dec-13	■ Erect Column															
GS1670	Erect Gantry Beam	3	09-Dec-13	11-Dec-13	■ Erect Gantry Beam															
GS1680	Reinstatement & Shifting of traffic lane	52	12-Dec-13	21-Feb-14	■															
G15																				
GS1720	Erect Gantry Beam	4	04-Dec-13*	07-Dec-13	■ Erect Gantry Beam															
G65																				
GS2320	Erect Gantry Beam	2	21-Nov-13*	22-Nov-13	■ Erect Gantry Beam															
Existing Sign Gantry Modification																				
G13 (Substantial Modification Works of Sign Gantries)																				
GS2410	Carry out Sign Gantry modification (LCS, TCSS etc)	52	15-Jan-14	25-Mar-14	■															
G16																				
GS2490	Carry out Sign Gantry modification (LCS, TCSS etc)	52	25-Jul-13 A	07-Dec-13	■ Carry out Sign Gantry modification (LCS, TCSS etc)															
G17																				
GS2570	Carry out Sign Gantry modification (LCS, TCSS etc)	52	25-Jul-13 A	07-Dec-13	■ Carry out Sign Gantry modification (LCS, TCSS etc)															
G66 (Substantial Modification Works of Sign Gantries)																				
GS2730	Carry out Sign Gantry modification (LCS, TCSS etc)	30	09-Dec-13	14-Jan-14	■ Carry out Sign Gantry modification (LCS, TCSS etc)															
G68																				
GS2890	Carry out Sign Gantry modification (LCS, TCSS etc)	52	18-Jun-13 A	22-Nov-13 A	■ Carry out Sign Gantry modification (LCS, TCSS etc)															
G70																				
GS2970	Carry out Sign Gantry modification (LCS, TCSS etc)	52	18-Jun-13 A	21-Nov-13 A	■ Carry out Sign Gantry modification (LCS, TCSS etc)															
G75 (Substantial Modification Works of Sign Gantries)																				
GS3290	Carry out Sign Gantry modification (LCS, TCSS etc)	52	15-Jan-14	25-Mar-14	■															
G76 (Substantial Modification Works of Sign Gantries)																				
GS3370	Carry out Sign Gantry modification (LCS, TCSS etc)	52	15-Jan-14	25-Mar-14	■															
VO214, 223, 227 - Ground Works & Ducts Works for TCSS (Outside Site Boundary)																				
VO214 -Outside site Boundary- Install UPVC Ducts for TCSS Works-Road Side Work																				
GS3570	Road Side Works - SK1258 - G66	20	01-May-13 A	26-Nov-13	■ Road Side Works- SK1258 - G66															
GS3490	Road Side Works - SK1252, SK1253 - G11 LHS (Case 113/111-112)	26	20-Nov-13	19-Dec-13	■ Road Side Works - SK1252, SK1253															
GS3530	Cycle Track G73 - G74 Sk1253	26	20-Dec-13	21-Jan-14	■ Cycle Track G73															
VO214 -Outside site Boundary- Install UPVC Ducts for TCSS Works-Cross Road Work																				
GS3610	(Pending for VO for cancellation)Cross Road Ducts - SK1253 - P12 ...	30	20-Nov-13	24-Dec-13	■ (Pending for VO for cancellation)C															
GS3620	(Pending for VO for cancellation)Cross Road Ducts - SK1253 - P12 ...	30	27-Dec-13	30-Jan-14	■ (Pending fo															
GS3630	(Pending for VO for cancellation)Cross Road Ducts - SK1256 - P59 ...	30	10-Feb-14	15-Mar-14	■															
SI-40 - 7 Nos of Trial Pits for P11, P12, S107 and P59																				
GS3680	Trial Pils for P11, P12, S107 and P59	30	20-Nov-13	24-Dec-13	■ Trial Pils for P11, P12, S107 and P															

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014													
							Q1			Q2			Q3			Q4			Q1		Q2		Q3		Q4		Q1		Q2		Q3													
							1	2	3	4	5	6	7	8	9	10	11	12	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4
HY/2009/08 TOLO HIGHWAY WIDENING, Update on 20131125																																												
EXECUTIVE SUMMARY																																												
Design																																												
A1330	Alternative Design		100%	292	26-Jul-10 A	14-Jan-11 A	Alternative Design																																					
Construction																																												
Section 1																																												
A1000	SA21 - North Bound	-97	95.6%	959	15-Oct-10 A	07-Jan-14	SA21 - North Bound																					SA21 - North Bound																
A1010	SA21 - South Bound	-97	94.82%	814	15-Oct-10 A	07-Jan-14	SA21 - South Bound																					SA21 - South Bound																
A1020	SA21 - Middle Lane	-79	91.27%	275	08-May-12 A	19-Dec-13	SA21 - Middle Lane																					SA21 - Middle Lane																
Section 2																																												
A1030	SA22 - North Bound	-53	94.49%	1016	26-Feb-10 A	20-Jan-14	SA22 - North Bound																					SA22 - North Bound																
A1040	SA22 - South Bound	-83	91.71%	1037	01-Apr-10 A	19-Feb-14	SA22 - South Bound																					SA22 - South Bound																
A1060	SA23 - South Bound	-77	79.51%	388	28-Dec-11 A	13-Feb-14	SA23 - South Bound																					SA23 - South Bound																
A1070	SA24 - North Bound	-58	92.25%	787	25-Aug-10 A	25-Jan-14	SA24 - North Bound																					SA24 - North Bound																
A1080	SA25 - South Bound	-53	94.34%	777	20-Oct-10 A	08-Jan-14	SA25 - South Bound																					SA25 - South Bound																
A1090	SA26 - North Bound	-41	96.38%	1216	26-Feb-10 A	08-Jan-14	SA26 - North Bound																					SA26 - North Bound																
A1100	SA26 - South Bound	-92	92.19%	1216	26-Feb-10 A	28-Feb-14	SA26 - South Bound																					SA26 - South Bound																
Section 3																																												
A1110	SA26A - North Bound	-12	94.88%	1191	26-Feb-10 A	25-Jan-14	SA26A - North Bound																					SA26A - North Bound																
A1120	SA26A - South Bound	-1	94.31%	879	26-Feb-10 A	14-Jan-14	SA26A - South Bound																					SA26A - South Bound																
A1130	SA26A - North & South Bound		100%	612	26-Feb-11 A	30-Jul-13 A	SA26A - North & South Bound																					SA26A - North & South Bound																
A1140	SA27 - South Bound	-28	90.74%	826	27-Mar-10 A	10-Feb-14	SA27 - South Bound																					SA27 - South Bound																
Section 4																																												
A1150	SA28 - North Bound	-57	90.45%	1216	26-Feb-10 A	22-Mar-14	SA28 - North Bound																					SA28 - North Bound																
A1160	SA28 - South Bound	-33	91.65%	1099	23-Jun-10 A	25-Feb-14	SA28 - South Bound																					SA28 - South Bound																
A1170	SA29 - North Bound		100%	909	26-Jan-11 A	26-Sep-13 A	SA29 - North Bound																					SA29 - North Bound																
A1180	SA32 - Roadside FVMS		100%	265	26-Mar-11 A	15-Dec-11 A	SA32 - Roadside FVMS																					SA32 - Roadside FVMS																
Section 5																																												
A1190	SA31 - South Bound		100%	884	26-Feb-10 A	28-Mar-13 A	SA31 - South Bound																					SA31 - South Bound																
Section 7																																												
A1200	SA41 - Site Office	-15	85.59%	1581	26-Feb-10 A	11-Jul-14	SA41 - Site Office																					SA41 - Site Office																
A1210	SA42 - Temporary Contractor's Works Area	0	86.6%	1582	25-Feb-10 A	25-Jun-14	SA42 - Temporary Contractor's Works Area																					SA42 - Temporary Contractor's Works Area																
Section 17 (Subject to Excision, Engineer may instruct within 819 days)																																												
A1300	Validity Period	202	98.6%	819	25-Feb-10 A	07-Dec-13	Validity Period																					Validity Period																
A1310	SA28 - North Bound		100%	34	24-May-12 A	31-Aug-13 A	SA28 - North Bound																					SA28 - North Bound																
A1320	SA30A - North Bound		100%	155	14-May-12 A	31-Aug-13 A	SA30A - North Bound																					SA30A - North Bound																

Project ID: J3318-UPDATE 2013NOV
 Project Name: HY/2009/08 TOLO HIGHWAY WIDENING...
 Print Date: 27-Nov-13
 Data Date: 26-Nov-13
 Page 1 of 47

- 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 November 2013

UWP Revision			
Date	Revision	Checked	Approved
26-Nov-13	UWP November, 2013	WY	JC

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010				2011				2012				2013				2014																	
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3															
							1	2	3	4	5	6	7	8	9	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4
PHSA2100	Possession of SA21 (Day365)		100%	0	16-Jul-10	A	◇ Possession of SA21 (Day365)																																	
Section 3 (Site Area SA26A and SA 27)																																								
PHSA26A0	Possession of SA26A (Day0)		100%	0	26-Feb-10	A	◇ Possession of SA26A (Day0)																																	
PHSA2700	Possession of SA27 (Day 90)		100%	0	26-Mar-10	A	◇ Possession of SA27 (Day 90)																																	
Section 2 (Site Area SA22, SA23, SA24, SA25 and SA26)																																								
PHSA2200	Possession of SA22 (Day0)		100%	0	26-Feb-10	A	◇ Possession of SA22 (Day0)																																	
PHSA2300	Possession of SA23 (Day180)		100%	0	04-May-10	A	◇ Possession of SA23 (Day180)																																	
PHSA2400	Possession of SA24 (Day180)		100%	0	04-May-10	A	◇ Possession of SA24 (Day180)																																	
PHSA2500	Possession of SA25 (Day270)		100%	0	04-May-10	A	◇ Possession of SA25 (Day270)																																	
PHSA2600	Possession of SA26 (Day0)		100%	0	26-Feb-10	A	◇ Possession of SA26 (Day0)																																	
Section 4 (Site Area SA28, SA29 and SA32)																																								
PHSA2800	Possession of SA28 (Day0)		100%	0	26-Feb-10	A	◇ Possession of SA28 (Day0)																																	
PHSA2900	Possession of SA29 (Day270)		100%	0	27-Jul-10	A	◇ Possession of SA29 (Day270)																																	
PHSA3200	Possession of SA32 (Day365)		100%	0	25-Feb-11	A	◇ Possession of SA32 (Day365)																																	
Section 5 (Site Area SA31)																																								
PHSA3100	Possession of SA31 (Day0)		100%	0	26-Feb-10	A	◇ Possession of SA31 (Day0)																																	
Section 7 (All Works Except Works Included in Other Sections)																																								
PHSA4100	Possession of SA41 (Day0)		100%	0	26-Feb-10	A	◇ Possession of SA41 (Day0)																																	
PHSA4200	Possession of SA42 (Day0)		100%	0	26-Feb-10	A	◇ Possession of SA42 (Day0)																																	
PHSA4300	Possession of SA43 (Day90)		100%	0	04-May-10	A	◇ Possession of SA43 (Day90)																																	
Section 8 (Establishment Works in Site Area SA21)																																								
PHSA2110	Possession of SA21 (Day1217)	-152	0%	0	26-Nov-13		◇ Possession of SA21 (Day1217)																																	
Section 9 (Establishment Works in Site Area SA22, SA23, SA24, SA25 and SA26)																																								
PHSA2210	Possession of SA22 (Day1217)	-152	0%	0	26-Nov-13		◇ Possession of SA22 (Day1217)																																	
PHSA2310	Possession of SA23 (Day1217)	-152	0%	0	26-Nov-13		◇ Possession of SA23 (Day1217)																																	
PHSA2420	Possession of SA24 (Day1217)	-152	0%	0	26-Nov-13		◇ Possession of SA24 (Day1217)																																	
PHSA2510	Possession of SA25 (Day1217)	-152	0%	0	26-Nov-13		◇ Possession of SA25 (Day1217)																																	
PHSA2610	Possession of SA26 (Day1217)	-152	0%	0	26-Nov-13		◇ Possession of SA26 (Day1217)																																	
Section 10 (Establishment Works in Site Area SA26A and SA27)																																								
PHSA26A1	Possession of SA26A (Day1217)	-152	0%	0	26-Nov-13		◇ Possession of SA26A (Day1217)																																	
PHSA2710	Possession of SA27 (Day1217)	-152	0%	0	26-Nov-13		◇ Possession of SA27 (Day1217)																																	
Section 11 (Establishment Works in Site Area SA28 and SA29)																																								
PHSA2810	Possession of SA28 (Day1217)	-152	0%	0	26-Nov-13		◇ Possession of SA28 (Day1217)																																	
PHSA2910	Possession of SA29 (Day1217)	-152	0%	0	26-Nov-13		◇ Possession of SA29 (Day1217)																																	
Section 12 (Establishment Works in Site Area SA30 and SA30A)																																								
PHSA3000	Possession of SA30 (Day1217)	-152	0%	0	26-Nov-13		◇ Possession of SA30 (Day1217)																																	
PHSA30A0	Possession of SA30A (Day1217)	-152	0%	0	26-Nov-13		◇ Possession of SA30A (Day1217)																																	
Section 13 (Remainder of Establishment Works)																																								
PHSA3110	Possession of SA31 (Day1217)	-128	0%	0	26-Nov-13*		◇ Possession of SA31 (Day1217)																																	
PHSA3220	Possession of SA32 (Day1217)	-128	0%	0	26-Nov-13*		◇ Possession of SA32 (Day1217)																																	
PHSA4120	Possession of SA41 (Day1217)	-128	0%	0	26-Nov-13*		◇ Possession of SA41 (Day1217)																																	
PHSA4220	Possession of SA42 (Day1217)	-128	0%	0	26-Nov-13*		◇ Possession of SA42 (Day1217)																																	
PHSA4330	Possession of SA43 (Day1217)	-128	0%	0	26-Nov-13*		◇ Possession of SA43 (Day1217)																																	
Section 14 Comprises Routine Maintenance of Road Network in Site Area SA21 to SA31)																																								
PHSA2130	Possession of SA21 for Routine Maintenance (Day365)		100%	0	16-Jul-10	A	◇ Possession of SA21 for Routine Maintenance (Day365)																																	
PHSA2230	Possession of SA22 for Routine Maintenance (Day0)		100%	0	26-Feb-10	A	◇ Possession of SA22 for Routine Maintenance (Day0)																																	

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014													
							Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3															
							1	2	3	4	5	6	7	8	9	10	11	12	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4
AD000330	AD3 - Approval by ER/CLIENT/CEDD (GEO)		100%	100	02-Aug-10 A	29-Nov-10 A	AD3 - Approval by ER/CLIENT/CEDD (GEO)																																					
Package AD4: W38																																												
AD000410	AD4 - Design Period		100%	78	09-Jun-10 A	09-Sep-10 A	AD4 - Design Period																																					
AD000420	AD4 - Full Package to ICE for Certification		100%	18	10-Sep-10 A	09-Nov-10 A	AD4 - Full Package to ICE for Certification																																					
AD000430	AD4 - Approval by ER/CLIENT/CEDD (GEO)		100%	54	11-Nov-10 A	15-Jan-11 A	AD4 - Approval by ER/CLIENT/CEDD (GEO)																																					
Package AD5 (Noise Barrier Foundation): NB38, NB39, NB41 & NB43																																												
AD000510	AD5 - Design Period		100%	98	21-Jul-10 A	22-Oct-10 A	AD5 - Design Period																																					
AD000520	AD5 - Full Package to ICE for Certification		100%	51	23-Oct-10 A	22-Dec-10 A	AD5 - Full Package to ICE for Certification																																					
AD000530	AD5 - Approval by ER/CLIENT/CEDD (GEO)		100%	74	18-Oct-10 A	14-Jan-11 A	AD5 - Approval by ER/CLIENT/CEDD (GEO)																																					
MATERIALS PROCUREMENT																																												
Major Materials (Detail shall refer to supplementary information)																																												
Water Works																																												
MA001010	Place Order		100%	0	31-Aug-10 A		Place Order																																					
MA001030	Fabrication, Manufacturing & Delivery		100%	900	31-Aug-10 A	31-Aug-12 A	Fabrication, Manufacturing & Delivery																																					
Vehicular Parapet SSD161																																												
MA001050	Place Order		100%	0	26-May-11 A		Place Order																																					
MA001060	Fabrication, Manufacturing & Delivery		100%	350	26-May-11 A	24-Aug-12 A	Fabrication, Manufacturing & Delivery																																					
Bearing																																												
MA001070	Place Order		100%	0	31-Jul-10 A		Place Order																																					
MA001080	Fabrication, Manufacturing & Delivery		100%	630	31-Jul-10 A	05-Aug-12 A	Fabrication, Manufacturing & Delivery																																					
Movement Joint																																												
MA001090	Place Order		100%	0	31-Aug-10 A		Place Order																																					
MA001100	Fabrication, Manufacturing & Delivery		100%	620	31-Aug-10 A	31-Aug-12 A	Fabrication, Manufacturing & Delivery																																					
CONSTRUCTION PHASE																																												
Preliminaries & General Requirement																																												
Preliminaries																																												
General Submissions																																												
PR000000	Commencement of Works		100%	0	26-Feb-10 A		Commencement of Works																																					
PR001000	Site Establishment		100%	90	26-Feb-10 A	25-May-10 A	Site Establishment																																					
PR001010	Effect required Insurances		100%	0	26-Feb-10 A		Effect required Insurances																																					
PR001030	Erect Contractor's Office Compound		100%	69	26-Feb-10 A	04-May-10 A	Erect Contractor's Office Compound																																					
PR001040	Submit Site Organization Chart		100%	14	26-Feb-10 A	10-Mar-10 A	Submit Site Organization Chart																																					
PR001050	Submit Site Layout Plan		100%	7	26-Feb-10 A	03-Mar-10 A	Submit Site Layout Plan																																					
PR001060	Prepare/Submit Initial Works Programme		100%	7	26-Feb-10 A	03-Mar-10 A	Prepare/Submit Initial Works Programme																																					
PR001070	Approval on Initial Works Programme		100%	30	04-Mar-10 A	02-Apr-10 A	Approval on Initial Works Programme																																					
PR001080	Prepare/Submit Detailed Works Programme		100%	58	03-Apr-10 A	30-May-10 A	Prepare/Submit Detailed Works Programme																																					
PR001090	Prepare/Submit First 3-month Programme		100%	14	26-Feb-10 A	10-Mar-10 A	Prepare/Submit First 3-month Programme																																					
PR001100	Submit initial 12-month Pgr for Rou. Maint. Work		100%	14	26-Feb-10 A	10-Mar-10 A	Submit initial 12-month Pgr for Rou. Maint. Work																																					
PR001110	Submit Rolling 3month Routine Maint. Program		100%	14	26-Feb-10 A	10-Mar-10 A	Submit Rolling 3month Routine Maint. Program																																					
PR001170	Prepare/Submit Subcon Management Plan (SMP)		100%	30	26-Feb-10 A	26-Mar-10 A	Prepare/Submit Subcon Management Plan (SMP)																																					
PR001200	Submit Interface Management Plan		100%	60	26-Feb-10 A	25-Apr-10 A	Submit Interface Management Plan																																					
PR001242	Application of Expressway Permit		100%	7	26-Feb-10 A	03-Mar-10 A	Application of Expressway Permit																																					
PR001244	Approval of Expressway Permit		100%	21	04-Mar-10 A	24-Mar-10 A	Approval of Expressway Permit																																					
PR001246	Issurance of Excavation Permit form Hyd		100%	7	26-Feb-10 A	03-Mar-10 A	Issurance of Excavation Permit form Hyd																																					
PR001256	Complete All General Submission		100%	0		30-May-10 A	Complete All General Submission																																					
Technical Submission																																												

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014													
							Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3															
							1	2	3	4	5	6	7	8	9	10	11	12	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4
PR001250	Submit Draft Traffic Management Contingency		100%	45	26-Feb-10 A	10-Apr-10 A	Submit Draft Traffic Management Contingency																																					
PR001260	Submit Sch of Const Seq/TTA in Prin Agreement		100%	14	26-Feb-10 A	10-Mar-10 A	Submit Sch of Const Seq/TTA in Prin Agreement																																					
PR001270	Submit TIA/TTA to ER, TD, HKPF etc for Approval		100%	60	26-Feb-10 A	25-Apr-10 A	Submit TIA/TTA to ER, TD, HKPF etc for Approval																																					
PR001280	Prepare/Submit Sch of Util Arrangement		100%	60	26-Feb-10 A	25-Apr-10 A	Prepare/Submit Sch of Util Arrangement																																					
PR001290	Prepare/Submit Conc Mix Design and Trial Test		100%	70	26-Feb-10 A	05-May-10 A	Prepare/Submit Conc Mix Design and Trial Test																																					
PR001300	Perform Slope / Topographic Survey		100%	95	26-Feb-10 A	30-May-10 A	Perform Slope / Topographic Survey																																					
PR001310	Perform Natural Terrain Survey		100%	200	01-Jan-11 A	19-Jul-11 A	Perform Natural Terrain Survey																																					
PR001320	Perform Tree Survey		100%	125	26-Feb-10 A	29-Jun-10 A	Perform Tree Survey																																					
PR001330	Perform Existing Structural Survey		100%	95	26-Feb-10 A	30-May-10 A	Perform Existing Structural Survey																																					
PR001340	Install Geotechnical Instrumentation		100%	90	26-Feb-10 A	25-May-10 A	Install Geotechnical Instrumentation																																					
PR001350	Design for Temporary Noise Barrier		100%	120	26-Feb-10 A	24-Jun-10 A	Design for Temporary Noise Barrier																																					
PR001360	Approval for Temporary Noise Barrier		100%	30	26-Jun-10 A	24-Jul-10 A	Approval for Temporary Noise Barrier																																					
PR001370	Design for Irrigation System		100%	150	26-Feb-10 A	24-Jul-10 A	Design for Irrigation System																																					
PR001380	Approval for Irrigation System		100%	24	26-Feb-11 A	21-Mar-11 A	Approval for Irrigation System																																					
PR001385	Detail review of the natural terrain hazard assessment by GEO		100%	90	26-Oct-11 A	23-Jan-12 A	Detail review of the natural terrain hazard assessment by GEO																																					
PR001390	Design for Permanent Debris Catch Fence		100%	90	26-Oct-11 A	23-Jan-12 A	Design for Permanent Debris Catch Fence																																					
PR001400	Approval for Debris Catch Fence System Design		100%	30	24-Jan-12 A	22-Feb-12 A	Approval for Debris Catch Fence System Design																																					
PR001410	Temporary Works Design		100%	200	26-Feb-10 A	12-Sep-10 A	Temporary Works Design																																					
PR001420	Complete All Technical Submission		100%	0		22-Feb-12 A	Complete All Technical Submission																																					
Specialist Consultants																																												
PR001220	Nominate/Submit Horticulturist for Approval		100%	45	26-Feb-10 A	10-Apr-10 A	Nominate/Submit Horticulturist for Approval																																					
PR001230	Nominate/Submit IIC (Highway Structures)		100%	45	26-Feb-10 A	10-Apr-10 A	Nominate/Submit IIC (Highway Structures)																																					
PR001240	Nominate/Submit Traffic Consultant for Approval		100%	7	26-Feb-10 A	03-Mar-10 A	Nominate/Submit Traffic Consultant for Approval																																					
PR001440	Complete Engagement of Specialist Consultants		100%	0		10-Apr-10 A	Complete Engagement of Specialist Consultants																																					
QSHE Submission																																												
PR001120	Prepare/Submit Quality Plan		100%	28	26-Feb-10 A	24-Mar-10 A	Prepare/Submit Quality Plan																																					
PR001130	Prepare/Submit Draft Health & Safety Plan		100%	14	26-Feb-10 A	10-Mar-10 A	Prepare/Submit Draft Health & Safety Plan																																					
PR001140	Prepare/Submit Final Health & Safety Plan		100%	35	26-Feb-10 A	31-Mar-10 A	Prepare/Submit Final Health & Safety Plan																																					
PR001150	Prepare/Submit Draft Env Management Plan		100%	21	26-Feb-10 A	17-Mar-10 A	Prepare/Submit Draft Env Management Plan																																					
PR001160	Prepare/Submit Final Env Management Plan		100%	45	26-Feb-10 A	10-Apr-10 A	Prepare/Submit Final Env Management Plan																																					
PR001180	Submit Site Management Plan for Trip Ticket Sys		100%	45	26-Feb-10 A	10-Apr-10 A	Submit Site Management Plan for Trip Ticket Sys																																					
PR001430	Complete All QSHE Submission		100%	0		10-Apr-10 A	Complete All QSHE Submission																																					
Variation Orders																																												
VO000010	VO. 1: Revised layout of Piles, NLKP5		100%	0	17-Jun-10 A		VO. 1: Revised layout of Piles, NLKP5																																					
VO000020	VO. 2: Fencing Details Along Site Boundaries of SA29		100%	0	20-Aug-10 A		VO. 2: Fencing Details Along Site Boundaries of SA29																																					
VO000030	VO. 3: Existing Bridge 12 Pilecap Concrete Testing (P5/6/8)		100%	0	17-Sep-10 A		VO. 3: Existing Bridge 12 Pilecap Concrete Testing (P5/6/8)																																					
VO000040	VO. 4: Revised Setting Out Plan of Slip Road W in SA28 & SA31		100%	0	15-Sep-10 A		VO. 4: Revised Setting Out Plan of Slip Road W in SA28 & SA31																																					
VO000050	VO. 5: Revised Setting Out Plan of Slip Road W in Site Area SA30		100%	0	15-Sep-10 A		VO. 5: Revised Setting Out Plan of Slip Road W in Site Area SA30																																					
VO000060	VO. 6: Bridge 15A Pilecap Sleeving Details		100%	0	19-Oct-10 A		VO. 6: Bridge 15A Pilecap Sleeving Details																																					
VO000070	VO. 7: Modification of Noise Barrier Footing for NB42 & NB44		100%	0	14-Dec-10 A		VO. 7: Modification of Noise Barrier Footing for NB42 & NB44																																					
VO000080	VO. 8: Revised Layout of Southern Trunk Sewer		100%	0	15-Dec-10 A		VO. 8: Revised Layout of Southern Trunk Sewer																																					
VO000090	VO. 9: Relocation and Deletion of Access Door at Noise Barrier		100%	0	04-Jan-11 A		VO. 9: Relocation and Deletion of Access Door at Noise Barrier																																					
VO000100	VO. 10: Fencing details along Site Boundaries of Section subject to Excision		100%	0	04-Jan-11 A		VO. 10: Fencing details along Site Boundaries of Section subject to Excision																																					
VO000110	VO. 11: Fencing details along Site Boundaries of Section subject to Excision		100%	0	04-Jan-11 A		VO. 11: Fencing details along Site Boundaries of Section subject to Excision																																					
VO000120	VO. 12: Fencing for Former Lot 1308 S.B in D.D.6		100%	0	12-Jan-11 A		VO. 12: Fencing for Former Lot 1308 S.B in D.D.6																																					
VO000130	VO. 13: Relocation of Existing HKCG HP600mm Gas mains at Slip Road T		100%	0	12-Aug-11 A		VO. 13: Relocation of Existing HKCG HP600mm Gas mains at Slip Road T																																					
VO000140	VO. 14: Revised Layout of Police Observation Platform at CH3700		100%	0	27-Jan-11 A		VO. 14: Revised Layout of Police Observation Platform at CH3700																																					
VO000150	VO. 15: Revised Layout of Slope S28		100%	0	01-Feb-11 A		VO. 15: Revised Layout of Slope S28																																					

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014																								
							Q1			Q2			Q3			Q4			Q1		Q2		Q3		Q4		Q1		Q2		Q3		Q4																						
							1	2	3	4	5	6	7	8	9	10	11	12	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4
S21N2100	Sheet Pile/Excavate & Construct W36		100%	85	11-Aug-11 A	23-Apr-12 A	Sheet Pile/Excavate & Construct W36																																																
S21N2110	Opencut excavation		100%	12	11-Aug-11 A	24-Aug-11 A	Opencut excavation																																																
S21N2120	Construction of W36 Structure		100%	50	19-Sep-11 A	23-Apr-12 A	Construction of W36 Structure																																																
S21N2130	Backfilling		100%	0	06-Feb-12 A	18-Feb-12 A	Backfilling																																																
S21N2140	Backfilling behind W36 and drainage works	-60	80%	70	04-Mar-13 A	11-Dec-13	Backfilling behind W36 and drainage works																																																
Retaining Wall W38 (AD4)																																																							
S21N2210	Pre-drilling		100%	24	26-Feb-11 A	25-Mar-11 A	Pre-drilling																																																
S21N2220	Prepare Piling Platform for W38		100%	30	26-Feb-11 A	01-Apr-11 A	Prepare Piling Platform for W38																																																
S21N2225	COD: Mobilization of 1 no. rig from W56B to W38 for piling work		100%	60	14-Mar-11 A	27-Jun-11 A	COD: Mobilization of 1 no. rig from W56B to W38 for piling work																																																
S21N2230	Pile for W38 (2 rig)		100%	141	26-Mar-11 A	22-Jun-11 A	Pile for W38 (2 rig)																																																
S21N2231	Installation of Piles - Stage 1 (CH2470-2545)		100%	69	26-Mar-11 A	22-Jun-11 A	Installation of Piles - Stage 1 (CH2470-2545)																																																
S21N2232	Installation of Piles - Stage 2 (Remain)		100%	72	12-Apr-11 A	22-Jun-11 A	Installation of Piles - Stage 2 (Remain)																																																
S21N2240	Retaining Wall & Drainage W38		100%	230	27-Jun-11 A	24-Dec-12 A	Retaining Wall & Drainage W38																																																
S21N2242	Excavation to +54.5mPD		100%	60	27-Jun-11 A	05-Sep-11 A	Excavation to +54.5mPD																																																
S21N2244	Excavation to formation		100%	60	26-Sep-11 A	06-Dec-11 A	Excavation to formation																																																
S21N2250	Construction of Base & Wall - Stage 1 (CH2470 - 2520)		100%	75	07-Dec-11 A	31-Jan-12 A	Construction of Base & Wall - Stage 1 (CH2470 - 2520)																																																
S21N2252	Backfilling to road formation - Stage 1 (CH2470 - 2520)		100%	50	21-Jan-12 A	18-Feb-12 A	Backfilling to road formation - Stage 1 (CH2470 - 2520)																																																
S21N2254	Construction of Base & Wall - Stage 2 (Ch2520 - 2600)		100%	75	20-Feb-12 A	29-Sep-12 A	Construction of Base & Wall - Stage 2 (Ch2520 - 2600)																																																
S21N2256	Backfilling to formation level - Stage 2 (CH2520 - 2600)		100%	30	01-Oct-12 A	24-Dec-12 A	Backfilling to formation level - Stage 2 (CH2520 - 2600)																																																
S21N2266	Backfilling behind W38 and drainage works	-49	95%	70	04-Mar-13 A	29-Nov-13	Backfilling behind W38 and drainage works																																																
Retaining Wall W39 (CDS 3)																																																							
S21N2302	Clearing & Prepare Piling Platform & Pre-drilling for W39		100%	10	27-Jun-11 A	09-Jul-11 A	Clearing & Prepare Piling Platform & Pre-drilling for W39																																																
S21N2304	Piling Works		100%	36	03-Oct-11 A	14-Nov-11 A	Piling Works																																																
S21N2306	Sheet Pile/ Excavate & Construct W39		100%	75	20-Aug-12 A	01-Dec-12 A	Sheet Pile/ Excavate & Construct W39																																																
S21N2307	Opencut Excavation		100%	7	20-Aug-12 A	03-Sep-12 A	Opencut Excavation																																																
S21N2308	Construction of W39 Structure		100%	50	04-Sep-12 A	21-Nov-12 A	Construction of W39 Structure																																																
S21N2309	Backfilling		100%	12	26-Nov-12 A	01-Dec-12 A	Backfilling																																																
S21N2319	Backfilling behind W39 and drainage works	-60	80%	70	04-Mar-13 A	11-Dec-13	Backfilling behind W39 and drainage works																																																
Retaining Wall W40 (CSD 3)																																																							
S21N2312	Clearing & Prepare Piling Platform & Pre-drilling for W40		100%	12	03-Oct-11 A	17-Oct-11 A	Clearing & Prepare Piling Platform & Pre-drilling for W40																																																
S21N2314	Excavation for W40		100%	12	20-Aug-12 A	06-Sep-12 A	Excavation for W40																																																
S21N2316	Construct W40		100%	40	07-Sep-12 A	13-Oct-12 A	Construct W40																																																
S21N2326	Backfilling		100%	11	20-Dec-12 A	29-Dec-12 A	Backfilling																																																
S21N2336	Backfilling behind W40 and drainage works	-74	60%	70	04-Mar-13 A	30-Dec-13	Backfilling behind W40 and drainage works																																																
Retaining Wall W41A																																																							
S21N2400	Sheet Pile/Excavate & Construct W41A		100%	72	26-Sep-11 A	25-Nov-11 A	Sheet Pile/Excavate & Construct W41A																																																
S21N2410	Opencut Excavation		100%	7	26-Sep-11 A	04-Oct-11 A	Opencut Excavation																																																
S21N2420	Construction of W41A Structure		100%	47	05-Oct-11 A	31-Oct-11 A	Construction of W41A Structure																																																
S21N2430	Backfilling		100%	18	01-Nov-11 A	25-Nov-11 A	Backfilling																																																
Retaining Wall W41B																																																							
S21N2618	Sheet Pile/Excavate & Construct W41B		100%	71	26-Sep-11 A	25-Nov-11 A	Sheet Pile/Excavate & Construct W41B																																																
S21N2628	Opencut Excavation		100%	7	26-Sep-11 A	04-Oct-11 A	Opencut Excavation																																																
S21N2648	Construction of W41B Structure		100%	47	05-Oct-11 A	31-Oct-11 A	Construction of W41B Structure																																																
S21N2658	Backfilling		100%	17	01-Nov-11 A	25-Nov-11 A	Backfilling																																																
Retaining Wall W45-48/A																																																							
S21N2500	Sheet Pile/Excavate & Construct W45-48/A		100%	174	01-Mar-11 A	11-Jan-13 A	Sheet Pile/Excavate & Construct W45-48/A																																																
S21N2510	Opencut Excavation (W45, W46 & W47)		100%	36	12-Oct-11 A	23-Nov-11 A	Opencut Excavation (W45, W46 & W47)																																																
S21N2520	Opencut Excavation (W48, W48A)		100%	18	01-Mar-11 A	31-Mar-11 A	Opencut Excavation (W48, W48A)																																																

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014																
							Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4			Q1			Q2			Q3										
							1	2	3	4	5	6	7	8	9	10	11	12	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4
S22N2154	Excavate to cut-off level (Stage 1, Bay 1 - 5)		100%	60	20-Apr-11 A	06-Jul-11 A													■ Excavate to cut-off level (Stage 1, Bay 1 - 5)																												
S22N2155	Excavate to cut-off level (Stage 2, Bay 5 - 9)		100%	50	26-Sep-11 A	24-Nov-11 A													■ Excavate to cut-off level (Stage 2, Bay 5 - 9)																												
S22N2160	Base Slab for W56A		100%	141	05-Jul-11 A	19-Dec-11 A													■ Base Slab for W56A																												
S22N2165	Base Slab for W56A (Stage 1), South		100%	50	05-Jul-11 A	17-Sep-11 A													■ Base Slab for W56A (Stage 1), South																												
S22N2166	Base Slab for W56A (Stage 2), North		100%	56	04-Jun-12 A	14-Jul-12 A													■ Base Slab for W56A (Stage 2), North																												
S22N2170	Wall Stem		100%	172	11-Aug-11 A	17-Nov-12 A													■ Wall Stem																												
S22N2171	Wall Stem (Bay 1e & 1f)		100%	25	11-Aug-11 A	23-Sep-11 A													■ Wall Stem (Bay 1e & 1f)																												
S22N2173	Wall Stem (Bay 1c & 1d, 1a & 1b, 1g)		100%	25	26-Sep-11 A	26-Oct-11 A													■ Wall Stem (Bay 1c & 1d, 1a & 1b, 1g)																												
S22N2174	Wall Stem (Bay 2a, 2bnb, 2b)		100%	75	16-Jul-12 A	13-Oct-12 A													■ Wall Stem (Bay 2a, 2bnb, 2b)																												
S22N2175	Wall Stem (Bay 2c, 2d)		100%	30	06-Aug-12 A	03-Nov-12 A													■ Wall Stem (Bay 2c, 2d)																												
S22N2176	Wall Stem (Bay 3)		100%	25	31-Aug-12 A	17-Nov-12 A													■ Wall Stem (Bay 3)																												
S22N2186	Backfilling		100%	30	19-Nov-12 A	26-Jan-13 A													■ Backfilling																												
Retaining Wall W56B (AD 1)																																															
S22N2210	Prepare Piling Platform for W56B		100%	37	02-Oct-10 A	11-Feb-11 A													■ Prepare Piling Platform for W56B																												
S22N2220	Pre-drilling for W56B		100%	37	02-Oct-10 A	15-Nov-10 A													■ Pre-drilling for W56B																												
S22N2240	Pipe Pile for W56B		100%	98	20-Nov-10 A	21-Mar-11 A													■ Pipe Pile for W56B																												
S22N2241	Pipe Pile for W56B - Stage 1		100%	75	20-Nov-10 A	23-Feb-11 A													■ Pipe Pile for W56B - Stage 1																												
S22N2242	Pipe Pile for W56B - Stage 2		100%	75	31-Jan-11 A	23-Sep-11 A													■ Pipe Pile for W56B - Stage 2																												
S22N2250	Construction of W56B		100%	276	17-Sep-11 A	06-Apr-13 A													■ Construction of W56B																												
S22N2251	Excavation (W56B), upper		100%	75	17-Sep-11 A	05-Jan-12 A													■ Excavation (W56B), upper																												
S22N2252	Excavation (W56B), Middle		100%	60	06-Jan-12 A	26-May-12 A													■ Excavation (W56B), Middle																												
S22N2254	Excavation (W56B), bottom		100%	60	11-May-12 A	29-Sep-12 A													■ Excavation (W56B), bottom																												
S22N2260	Base Slab (W56B), (Bay 1 -3)		100%	25	27-Jul-12 A	10-Sep-12 A													■ Base Slab (W56B), (Bay 1 -3)																												
S22N2262	Base Slab (W56B), (Bay 4 - 8)		100%	60	27-Sep-12 A	10-Nov-12 A													■ Base Slab (W56B), (Bay 4 - 8)																												
S22N2264	Base Slab (W56B), (Bay 9, 10 & 12A)		100%	35	27-Jul-12 A	13-Oct-12 A													■ Base Slab (W56B), (Bay 9, 10 & 12A)																												
S22N2270	Wall Stem (W56B), (Bay 1 - 3, Total 18 pours)		100%	75	01-Nov-12 A	06-Apr-13 A													■ Wall Stem (W56B), (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													■ Wall Stem (W56B), (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													■ Wall Stem (W56B), (Bay 9 - 10, Total 12 pours)																												
S22N2290	Backfilling (Bay 1 to Bay 3)		100%	15	10-Jan-13 A	19-Jan-13 A													■ Backfilling (Bay 1 to Bay 3)																												
S22N2292	Backfilling (Bay 4 to Bay 10)		100%	30	14-Jan-13 A	05-Mar-13 A													■ Backfilling (Bay 4 to Bay 10)																												
Roadworks & Drainage																																															
S22N4000	Roadworks, Drainages & Utilities (CH 2840 - 3140)	-42	65.12%	129	15-Jan-13 A	20-Jan-14													■ 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)		100%	30	18-Mar-13 A	30-Jul-13 A													■ Roadworks Stage 2 (CH3000 - 3140)																												
S22N4044	Drainages Stage 2 (CH3000 - 3140)		100%	30	20-Feb-13 A	11-Apr-13 A													■ Drainages Stage 2 (CH3000 - 3140)																												
S22N4046	Road Surface Works		100%	30	17-May-13 A	18-Aug-13 A													■ Road Surface Works																												
S22N4048	Road Construction Works Remain Fast Lane (along CH2840 - 3140)	-42	10%	50	25-Nov-13 A	20-Jan-14													■ Road Construction Works Remain Fast Lane (along CH2840 - 3140)																												
Noise Barriers																																															
Noise Barrier NB31A																																															
S22N3020	NB31A (CH 0-21.9) on W56A (incl. VO 9: Construction of double leaf access door for noise barrier)		100%	74	15-Oct-12 A	22-Nov-12 A													■ NB31A (CH 0-21.9) on W56A (incl. VO 9: Construction of double leaf access door for noise barrier)																												
S22N3021	NB31A (CH 0-21.9) on W56A : Erecting H-Column		100%	38	15-Oct-12 A	19-Oct-12 A													■ NB31A (CH 0-21.9) on W56A : Erecting H-Column																												
S22N3022	NB31A (CH 0-21.9) on W56A : Installing Panel		100%	36	22-Oct-12 A	22-Nov-12 A													■ NB31A (CH 0-21.9) on W56A : Installing Panel																												
South Bound																																															
Preliminaries																																															
S22S0000	Site Clearance/Access Rd		100%	84	01-Apr-10 A	16-Jul-10 A	■ Site Clearance/Access Rd																																								

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014							
							Q1				Q2				Q3				Q4				Q1				Q2				Q3				Q4			
							1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8
S22S0010	Site Clearance		100%	72	01-Apr-10 A	02-Jul-10 A	Site Clearance																															
S22S0020	Access Road		100%	72	20-Apr-10 A	16-Jul-10 A	Access Road																															
Slopeworks																																						
S22S5000	Slopeworks Cut(S28-sn) (incl. VO15: Revised Layout of Slope S28)		100%	198	21-Oct-10 A	17-Aug-11 A	Slopeworks Cut(S28-sn) (incl. VO15: Revised Layout of Slope S28)																															
S22S5010	Slopeworks Cut(S28) - Stage 1 (Cutslope)		100%	23	21-Oct-10 A	16-Nov-10 A	Slopeworks Cut(S28) - Stage 1 (Cutslope)																															
S22S5030	Slopeworks Cut(S28) - Stage 1 (Soil Nail Installation : IJKL)		100%	23	17-Nov-10 A	08-Feb-11 A	Slopeworks Cut(S28) - Stage 1 (Soil Nail Installation : IJKL)																															
S22S5040	Slopeworks Cut(S28) - Stage 2 (Cutslope)		100%	37	11-Dec-10 A	03-Jan-11 A	Slopeworks Cut(S28) - Stage 2 (Cutslope)																															
S22S5060	Slopeworks Cut(S28) - Stage 2 (Soil Nail Installation : EFGH)		100%	37	08-Feb-11 A	23-Mar-11 A	Slopeworks Cut(S28) - Stage 2 (Soil Nail Installation : EFGH)																															
S22S5070	Slopeworks Cut(S28) - Stage 3 (Cutslope)		100%	36	06-Jul-11 A	17-Aug-11 A	Slopeworks Cut(S28) - Stage 3 (Cutslope)																															
S22S5090	Slopeworks Cut(S28) - Stage 3 (Soil Nail Installation : ABCD)		100%	36	20-Aug-11 A	04-Oct-11 A	Slopeworks Cut(S28) - Stage 3 (Soil Nail Installation : ABCD)																															
S22S5100	Slope Reinstatement Works (Bridge 12B)	-62	0%	40	26-Nov-13	14-Jan-14	Slope Reinstatement Works (Bridge 12B)																															
Construction of Retaining Wall																																						
Retaining Wall RWB12B																																						
S22S2110	Pre-drilling for RWB12B		100%	24	16-Jul-10 A	12-Aug-10 A	Pre-drilling for RWB12B																															
S22S2120	Piles for RWB12B		100%	116	13-Aug-10 A	20-Nov-10 A	Piles for RWB12B																															
S22S2130	Excavate to cut-off level		100%	60	26-Jan-11 A	09-Apr-11 A	Excavate to cut-off level																															
S22S2140	Capping/Walling for Bay 1-2, RWB12B		100%	60	28-Mar-11 A	10-May-12 A	Capping/Walling for Bay 1-2, RWB12B																															
S22S2142	Capping/Walling for Bay 3-6, RWB12B		100%	75	11-May-12 A	03-Sep-12 A	Capping/Walling for Bay 3-6, RWB12B																															
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)	-65	63.19%	185	06-May-13 A	19-Feb-14	Road Re-construction Works (CH 2840 - 3450)																															
S22S4405	Road and Drainages Works for Fast Lane (CH2840 - 3000)	-69	90%	45	06-May-13 A	30-Nov-13	Road and Drainages Works for Fast Lane (CH2840 - 3000)																															
S22S4410	Road Surface Works for Fast Lane (CH2840 - 3000)	-69	0%	12	30-Nov-13	14-Dec-13	Road Surface Works for Fast Lane (CH2840 - 3000)																															
S22S4415	Road Re-Construction Works for Mid 2 Lane (CH2840 - 3000)	-69	0%	24	14-Dec-13	15-Jan-14	Road Re-Construction Works for Mid 2 Lane (CH2840 - 3000)																															
S22S4420	Road and Drainages Works for Fast and Mid Lane (CH3000 - 3450)	-69	0%	24	14-Dec-13	15-Jan-14	Road and Drainages Works for Fast and Mid Lane (CH3000 - 3450)																															
S22S4425	Road Surface Works for Fast Lane and Mid Lane (CH3000 - 3450)	-69	0%	12	15-Jan-14	29-Jan-14	Road Surface Works for Fast Lane and Mid Lane (CH3000 - 3450)																															
S22S4430	Road and Drainages Works for Slow Lane (CH2840 - 3450)	-69	0%	12	29-Jan-14	15-Feb-14	Road and Drainages Works for Slow Lane (CH2840 - 3450)																															
S22S4435	Road Surface Works for Slow Lane (CH3000 - 3450)	-69	0%	7	15-Feb-14	24-Feb-14	Road Surface Works for Slow Lane (CH3000 - 3450)																															
S22S4440	Road Construction Works Remaining Works (along CH2840 - 3450)	-65	0%	7	12-Feb-14	19-Feb-14	Road Construction Works Remaining Works (along CH2840 - 3450)																															
S22S4500	Roadworks for Realignment of Existing Shek Lin Road	-55	0%	18	15-Jan-14	07-Feb-14	Roadworks for Realignment of Existing Shek Lin Road																															
Traffic Control & Surveillance System																																						
S22S4820	TCSS - (Gantry 60) (incl. VO73 Revised Sign Gantry Details)	-69	40%	50	16-Sep-13 A	24-Feb-14	TCSS - (Gantry 60) (incl. VO73 Revised Sign Gantry Details)																															
Modification of Existing Bridge 12																																						
S22S1300	Demolish Existing Parapet & Stitching Works for bridge 12 & 12B (incl. VO3 & VO29)	-65	2.86%	70	16-Sep-13 A	19-Feb-14	Demolish Existing Parapet & Stitching Works for bridge 12 & 12B (incl. VO3 & VO29)																															
S22S1315	VO 3: Existing Bridge 12 pile cap construction		100%	30	17-Sep-10 A	15-Feb-11 A	VO 3: Existing Bridge 12 pile cap construction																															
S22S1322	Removal of Existing Steel Barrier and Surface	-10	80%	8	22-Jul-13 A	27-Nov-13	Removal of Existing Steel Barrier and Surface																															
S22S1323	Stitching Works of Existing Bridge Decks B12 and B12B	-10	80%	20	08-Aug-13 A	02-Dec-13	Stitching Works of Existing Bridge Decks B12 and B12B																															
S22S1324	Road Surface of B12B for TW Slip Road	-10	0%	7	02-Dec-13	10-Dec-13	Road Surface of B12B for TW Slip Road																															
S22S1326	Removal of existing central barrier along B12 and Erection breaking platform	-65	0%	12	16-Sep-13 A	09-Dec-13	Removal of existing central barrier along B12 and Erection breaking platform																															
S22S1328	Breaking the existing stitch of B12 and condition survey	-65	0%	18	26-Nov-13	16-Dec-13	Breaking the existing stitch of B12 and condition survey																															
S22S1329	Removal M.J and Replacement M.J	-65	0%	8	17-Dec-13	27-Dec-13	Removal M.J and Replacement M.J																															
S22S1331	Stitching Works for B12	-65	0%	35	28-Dec-13	11-Feb-14	Stitching Works for B12																															
S22S1332	Road Surface Works	-65	0%	7	12-Feb-14	19-Feb-14	Road Surface Works																															
Landscaping																																						
S22S6000	Landscaping Works	-62	16.67%	30	23-Sep-13 A	15-Feb-14	Landscaping Works																															
Site Area SA23																																						
PHSA2320	Possession of SA23 (Day180)		100%	0	04-May-10 A		Possession of SA23 (Day180)																															
SA230000	Site Area SA23 Works Period	-77	86.43%	586	16-Jul-10 A	13-Feb-14	Site Area SA23 Works Period																															

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014																		
							Q1			Q2			Q3			Q4			Q1		Q2		Q3		Q4		Q1		Q2		Q3																		
							1	2	3	4	5	6	7	8	9	10	11	12	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4
SA230010	Site Area SA23 Works Completion	134	0%	0		13-Feb-14																									◆ Site Area SA																		
South Bound																																																	
Preliminaries																																																	
S23S0000	Site Clearance / Site Access		100%	144	28-Dec-11 A	24-Aug-13 A																									Site Clearance / Site Access																		
S23S1000	Site Clearance		100%	72	28-Dec-11 A	27-Dec-12 A																									Site Clearance																		
S23S2000	Site Access		100%	72	28-Dec-12 A	24-Aug-13 A																									Site Access																		
Slopeworks																																																	
S21N2638	Slopeworks Fill (S27)		100%	99	29-Nov-12 A	24-Jan-13 A																									Slopeworks Fill (S27)																		
S21N26381	Slopeworks Fill (S27) - Stage 1, +45mPD		100%	33	29-Nov-12 A	07-Dec-12 A																									Slopeworks Fill (S27) - Stage 1, +45mPD																		
S21N26382	Slopeworks Fill (S27) - Stage 2, +50mPD		100%	33	08-Dec-12 A	31-Dec-12 A																									Slopeworks Fill (S27) - Stage 2, +50mPD																		
S21N26383	Slopeworks Fill (S27) - Stage 3, +55mPD		100%	33	04-Jan-13 A	24-Jan-13 A																									Slopeworks Fill (S27) - Stage 3, +55mPD																		
Landscaping																																																	
S23S6000	Landscaping Works	-60	80%	50	23-Sep-13 A	13-Feb-14																									Landscaping																		
Site Area SA24																																																	
PHSA2410	Possession of SA24 (Day180)		100%	0	04-May-10 A																										◆ Possession of SA24 (Day180)																		
SA240000	Site Area SA24 Works Period	-58	92.26%	788	04-May-10 A	25-Jan-14																									Site Area SA24																		
SA240010	Site Area SA24 Works Completion	152	0%	0		25-Jan-14																									◆ Site Area SA24																		
North Bound																																																	
Preliminaries																																																	
S24N0000	Site Clearance/Access Rd		100%	89	25-Aug-10 A	09-Dec-10 A																									Site Clearance/Access Rd																		
S24N0010	Site Clearance		100%	72	25-Aug-10 A	19-Nov-10 A																									Site Clearance																		
S24N0020	Access Road		100%	72	07-Sep-10 A	09-Dec-10 A																									Access Road																		
Slopeworks																																																	
S24N5000	Slopeworks Cut(S31A)		100%	150	01-Jun-11 A	25-Nov-11 A																									Slopeworks Cut(S31A)																		
S24N5010	Slopeworks Cut (S31A) & Soil Nail : Stage 1 (Upper +80mPD)		100%	60	01-Jun-11 A	06-Aug-11 A																									Slopeworks Cut (S31A) & Soil Nail : Stage 1 (Upper +80mPD)																		
S24N5020	Slopeworks Cut (S31A) & Soil Nail : Stage 2 (Lower +72mPD)		100%	60	08-Aug-11 A	22-Oct-11 A																									Slopeworks Cut (S31A) & Soil Nail : Stage 2 (Lower +72mPD)																		
S24N5030	Slopeworks Cut (S31A) : Shortcreting		100%	30	24-Oct-11 A	25-Nov-11 A																									Slopeworks Cut (S31A) : Shortcreting																		
S24N5810	Erect Scaffolding & Soil Nail Installation (Area 4)		100%	60	19-Mar-13 A	08-May-13 A																									Erect Scaffolding & Soil Nail Install																		
S24N5831	Slope Reinstatement Works (Bridge 12ASA incl. VO74)	-21	70%	75	30-Apr-13 A	23-Dec-13																									Slope Reinstatement																		
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																									Prepare Piling Platform for W56B-2																		
S24N2120	Pre-drilling for W56B-2		100%	18	28-Oct-10 A	18-Nov-10 A																									Pre-drilling for W56B-2																		
S24N2130	Retaining Wall W56B-2		100%	255	21-Jan-11 A	01-Dec-11 A																									Retaining Wall W56B-2																		
S24N2140	Piles for W56B-2 (Stage 2)		100%	75	21-Jan-11 A	23-Sep-11 A																									Piles for W56B-2 (Stage 2)																		
S24N2150	Excavation, upper		100%	75	26-Sep-11 A	13-Jan-12 A																									Excavation, upper																		
S24N2152	Excavation, Middle		100%	60	26-Sep-11 A	19-Apr-12 A																									Excavation, Middle																		
S24N2155	Excavation, Bottom		100%	75	11-May-12 A	26-Jul-12 A																									Excavation, Bottom																		
S24N2160	Construction of Base Slab (Bay 12)		100%	75	27-Jul-12 A	25-Aug-12 A																									Construction of Base Slab (Bay 12)																		
S24N2162	Retaining Wall Structure (Bay 12B)		100%	40	01-Oct-12 A	23-Nov-12 A																									Retaining Wall Structure (Bay 12B)																		
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		100%	35	26-Jun-13 A	17-Aug-13 A																									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																		
S24N2203	Backfilling		100%	7	22-Jul-13 A	17-Aug-13 A																									Backfilling																		
Retaining Wall W57B (AD 2)																																																	
S24N2310	Prepare Piling Platform for W57B		100%	18	11-Jan-11 A	31-Jan-11 A																									Prepare Piling Platform for W57B																		

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014													
							Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3															
							1	2	3	4	5	6	7	8	9	10	11	12	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4
Retaining Wall W57B, (CSD 2)							<ul style="list-style-type: none"> Pre-drill for W57B Piles for W57B Excavate at W57B Retaining Wall W57B Backfilling & Drainage W57B 																																					
S24N2320	Pre-drill for W57B		100%	20	01-Apr-11 A	13-Apr-11 A																																						
S24N2330	Piles for W57B		100%	45	01-Apr-11 A	14-May-11 A																																						
S24N2340	Excavate at W57B		100%	75	26-May-11 A	23-Aug-11 A																																						
S24N2360	Retaining Wall W57B		100%	75	19-Apr-12 A	11-Dec-12 A																																						
S24N2370	Backfilling & Drainage W57B		100%	60	25-Jan-13 A	17-Aug-13 A																																						
Retaining Wall W57C, (CSD 2)							<ul style="list-style-type: none"> Pre-drilling for W57C Piles for W57C Excavate to cut-off level Retaining Wall, W57C Backfilling & Drainage for W57C 																																					
S24N2402	Pre-drilling for W57C		100%	20	26-Mar-11 A	19-Apr-11 A																																						
S24N2404	Piles for W57C		100%	45	01-Apr-11 A	14-May-11 A																																						
S24N2407	Excavate to cut-off level		100%	75	26-May-11 A	23-Aug-11 A																																						
S24N2408	Retaining Wall, W57C		100%	75	19-Apr-12 A	13-Dec-12 A																																						
S24N2420	Backfilling & Drainage for W57C		100%	54	25-Jan-13 A	17-Aug-13 A																																						
Retaining Wall RWB12A							<ul style="list-style-type: none"> Piling & Construct RWB12A Piling of RWB12A, Stage 1 (28/34 nos) Piling of RWB12A, Stage 2 (6nos) Piles Load Test Construction of Base Slab, RWB12A Construction of Wall, RWB12A Backfilling Construction the wing slab of RWB12A 																																					
S24N1500	Piling & Construct RWB12A		100%	195	04-Jun-11 A	31-Jan-12 A																																						
S24N1510	Piling of RWB12A, Stage 1 (28/34 nos)		100%	60	04-Jun-11 A	31-Aug-11 A																																						
S24N1515	Piling of RWB12A, Stage 2 (6nos)		100%	24	01-Sep-11 A	23-Sep-11 A																																						
S24N1517	Piles Load Test		100%	36	26-Nov-11 A	10-Jan-12 A																																						
S24N1520	Construction of Base Slab, RWB12A		100%	60	23-Apr-12 A	17-Apr-13 A																																						
S24N1522	Construction of Wall, RWB12A		100%	40	18-Apr-13 A	07-Jun-13 A																																						
S24N1530	Backfilling		100%	20	09-May-13 A	25-Jun-13 A																																						
S24N1540	Construction the wing slab of RWB12A		100%	30	16-Sep-13 A	09-Nov-13 A																																						
Roadworks, Drainage & Utilities							<ul style="list-style-type: none"> Roadworks, Drainages & Utilities (ch3140-3400, exclude B12A) Road and Drainage Works Road Surface Works for Mid and Slow Lane TTA - Stage 4B-3 Road Construction Fast Lane and Remaining Works (along CH3140 - 3400) 																																					
S24N4000	Roadworks, Drainages & Utilities (ch3140-3400, exclude B12A)	-47	97.71%	109	19-Aug-13 A	28-Nov-13																																						
S24N4015	Road and Drainage Works		100%	10	19-Aug-13 A	14-Sep-13 A																																						
S24N4025	Road Surface Works for Mid and Slow Lane		100%	14	27-Aug-13 A	14-Sep-13 A																																						
S24N4026	TTA - Stage 4B-3		100%	0		14-Sep-13 A																																						
S24N4035	Road Construction Fast Lane and Remaining Works (along CH3140 - 3400)	-47	95%	50	26-Oct-13 A	28-Nov-13																																						
Landscaping							<ul style="list-style-type: none"> Landscaping Works 																																					
S24N6000	Landscaping Works	-47	0%	50	26-Nov-13	25-Jan-14																																						
Site Area SA25							<ul style="list-style-type: none"> Possession of SA25 (Day270) Site Area SA25 Works Period (incl. Provision of hoarding at site boundary of SA25) Site Area SA25 Works Completion Temporary Traffic Management (Detail shall refer to supplementary information) Overall Utility Diversion (Detail shall refer to supplementary information) 																																					
PHSA2520	Possession of SA25 (Day270)		100%	0	04-May-10 A																																							
SA250000	Site Area SA25 Works Period (incl. Provision of hoarding at site boundary of SA25)	157	92.73%	770	04-May-10 A	20-Jan-14																																						
SA250010	Site Area SA25 Works Completion	157	0%	0		20-Jan-14																																						
SA250020	Temporary Traffic Management (Detail shall refer to supplementary information)	126	94.12%	765	04-May-10 A	20-Jan-14																																						
SA250030	Overall Utility Diversion (Detail shall refer to supplementary information)	126	94.12%	765	04-May-10 A	20-Jan-14																																						
South Bound							<ul style="list-style-type: none"> Site Clearance/Access Rd (ch3400-3600) Site Clearance (ch3400-3600) Access Road (ch3400-3600) Slopeworks Fill(S30A) Slopeworks Fill (S30A) - Stage 1: +53.5mPD Slopeworks Fill (S30A) - Stage 2: 55.8mPD Slope Reinstatement Works (Bridge 13A) Slope Reinstatement Works (Bridge LB1) Slope Reinstatement Works (S30A) 																																					
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)	-42	30%	25	26-Sep-13 A	16-Dec-13																																						
S25S5140	Slope Reinstatement Works (Bridge LB1)	-42	30%	25	26-Sep-13 A	08-Jan-14																																						
S25S5150	Slope Reinstatement Works (S30A)	-42	60%	25	28-Sep-13 A	20-Jan-14																																						
Construction of Retaining Wall																																												

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014													
							Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3															
							1	2	3	4	5	6	7	8	9	10	11	12	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4
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)	171	100%	109	27-Feb-13 A	26-Nov-13																																						
S25S4025	Road Works for Mid and Slow Lane		100%	60	27-Feb-13 A	03-Jun-13 A																																						
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																																						
S25S4060	Removal of existing central barrier and forming temporary road (CH 3350 - CH 3550)		100%	12	24-Jun-13 A	09-Jul-13 A																																						
S25S4070	Road Construction and Remaining Works (along CH 3400 - 3600)	0	90%	30	27-Jul-13 A	28-Nov-13																																						
S25S4200	Slip Road H	-2	90%	50	27-Aug-13 A	30-Nov-13																																						
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																																						
Site Area SA26																																												
PHSA2620	Possession of SA26 (Day0)		100%	0	26-Feb-10 A																																							
SA260000	Site Area SA26 Works Period	-92	92.19%	1216	26-Feb-10 A	28-Feb-14																																						
SA260010	Site Area SA26 Works Completion	-92	0%	0		28-Feb-14																																						
SA260020	Temporary Traffic Management (Detail shall refer to supplementary information)	-73	92.27%	983	26-Feb-10 A	28-Feb-14																																						
SA260030	Overall Utility Diversion (Detail shall refer to supplementary information)	-73	92.27%	983	26-Feb-10 A	28-Feb-14																																						
SA260040	Additional work to existing ball valves, HKCG	-49	0%	52	26-Nov-13	28-Jan-14																																						
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	70%	40	27-Jul-13 A	16-Dec-13																																						
Construction of Retaining Wall																																												
Retaining Wall W59																																												
S26N2000	Excavate & Construct W59 (w/SP)		100%	286	01-Mar-12 A	22-Mar-13 A																																						
S26N2002	W59: Base Slab of Bay 1-3		100%	60	01-Mar-12 A	04-Jun-12 A																																						
S26N2004	W59: Wall of Bay 1-3		100%	60	02-Jul-12 A	24-Dec-12 A																																						
S26N2006	W59: Base Slab & Wall of Bay 9-12a		100%	56	19-Apr-12 A	12-Jan-13 A																																						
S26N2008	W59: Excavation + Soil Nail for Bay 4-8		100%	45	19-Apr-12 A	09-Jul-12 A																																						
S26N2012	W59: Base Slab of Bay 4-8		100%	40	16-Jul-12 A	24-Dec-12 A																																						
S26N2014	W59: Wall of Bay 4-8		100%	75	27-Aug-12 A	02-Feb-13 A																																						

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014													
							Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3															
							1	2	3	4	5	6	7	8	9	10	11	12	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4
Noise Barriers & Road Barriers																																												
Noise Barrier NB35																																												
S26S3000	Construct Noise Barrier & Beam Barrier, NB35		100%	60	15-Mar-13 A	18-Jun-13 A																																						
S26S3010	Construct Noise Barrier : foundation Works. NB35		100%	30	15-Mar-13 A	11-May-13 A																																						
S26S3020	Construct Noise Barrier : Installation of H-couln & Panel NB35		100%	7	17-May-13 A	18-Jun-13 A																																						
S26S3030	Remaining Works of NB35	-73	80%	10	27-Aug-13 A	27-Nov-13																																						
Traffic Control & Survelance System																																												
S26S4800	TCSS		100%	57	12-Mar-13 A	10-Aug-13 A																																						
S26S4810	TCSS - Stage 1 (LB1) (VSL Pole P55)		100%	30	12-Mar-13 A	21-Sep-13 A																																						
S26S4820	TCSS - Stage 1 (LB2)		100%	15	15-Jul-13 A	20-Aug-13 A																																						
S26S4830	TCSS - Stage 1 (LB3), (Gantry G101) (incl. VO73 Revised Sign Gantry Details)		100%	30	10-Jun-13 A	10-Aug-13 A																																						
Landscaping																																												
S26S6000	Landscaping Works	-73	0%	60	14-Dec-13	28-Feb-14																																						
S26S6010	Landscaping Works - Stage 1, East of B13A	-73	0%	30	14-Dec-13	21-Jan-14																																						
S26S6040	Landscaping Works - Stage 2, West of B13A	-73	0%	30	22-Jan-14	28-Feb-14																																						
Middle Lane																																												
Road Re-construction Works, Roadworks & Drainage																																												
S26S4014	Removal of existing paving (CH3400 - CH3720)		100%	25	26-Aug-13 A	13-Sep-13 A																																						
S26S4019	Road Works and Surface Works (CH3400 - 3720)		100%	30	26-Aug-13 A	13-Sep-13 A																																						
Construction of Bridge 12B																																												
Preparatory and Enabling Works																																												
S22S1210	Prepare Piling Platform		100%	38	15-Apr-10 A	31-May-10 A																																						
S22S1220	Pre-drilling Works		100%	26	15-Apr-10 A	15-May-10 A																																						
Construction Works of Bridge 12B																																												
S22S1230	Socketed H-Pile (B12BP8)		100%	62	01-Jun-10 A	13-Aug-10 A																																						
S22S1250	Modify Pile caps & Additional Foundation (B12BP8)		100%	101	02-Jul-10 A	30-Oct-10 A																																						
S22S1251	Excavation & ELS Works		100%	36	02-Jul-10 A	12-Aug-10 A																																						
S22S1260	VO 17.1: Modify Pilecap of Bridge 12, Pier 5, 6 & 7 (Deleted)		100%	48	18-May-12 A	28-May-12 A																																						
S22S1270	VO 17.1: Modify Pilecap of Bridge 12, Pier 8 (Deleted)		100%	48	18-May-12 A	28-May-12 A																																						
S22S1280	VO 17.2: Piling for C9		100%	24	26-Jul-11 A	20-Aug-11 A																																						
S22S1290	VO 17.2: Piling for C10		100%	20	26-Sep-11 A	08-Oct-11 A																																						
S22S1340	VO 17.2: Pilecap construction of C9		100%	60	06-Mar-12 A	02-Jun-12 A																																						
S22S1350	VO 17.2: Pilecap construction of C10		100%	54	01-Jun-12 A	21-Aug-12 A																																						
S22S1400	VO 17.2: Backfilling & Site Formation		100%	24	11-May-12 A	05-Jan-13 A																																						
S22S1410	VO 17.2: Pier Construction of C9 & C10		100%	94	01-Jun-12 A	20-Sep-12 A																																						
S22S1420	VO 17.2: Pier Construction of C9		100%	60	01-Jun-12 A	31-Jul-12 A																																						
S22S1430	VO 17.2: Pier Construction of C10		100%	75	28-Aug-12 A	13-Oct-12 A																																						
S22S1440	Construction of 12B North Abutment		100%	75	26-Aug-11 A	31-Oct-11 A																																						
S22S1450	VO 17.2: Deck Construction (Bearings, Drainage & MJ included)		100%	179	20-Dec-12 A	20-Jul-13 A																																						
S22S1460	VO 17.2: Scaffolding & Falsework		100%	35	20-Dec-12 A	28-Mar-13 A																																						
S22S1470	VO 17.2: Deck Formwork, Steel Fixing and Concreting - C9 - C10 (Stage 1)		100%	65	14-Mar-13 A	12-Jul-13 A																																						
S22S1480	VO 17.2: Deck Formwork, Steel Fixing and Concreting - NA to C9 (Stage 2)		100%	65	23-Mar-13 A	12-Jul-13 A																																						
S22S1500	Stressing		100%	5	15-Jul-13 A	20-Jul-13 A																																						
S22S1520	Parapet (Steel Barrier)	-37	95%	15	15-Aug-13 A	26-Nov-13																																						
S22S1540	Road surface & road work	-37	0%	14	26-Nov-13	12-Dec-13																																						
Construction of Bridge 12A																																												

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010				2011				2012				2013				2014							
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
							1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
S24S1280	Construction of Bridge 12A (incl. VO29 & VO37: revised piling details and pile caps sleeving details)		100%	451	25-Aug-10 A	14-Sep-13 A	Construction of Bridge 12A																							
Preparatory and Enabling Works																														
S24N1210	Site Clearance		100%	42	25-Aug-10 A	14-Oct-10 A	Site Clearance																							
S24N1220	Haul Road		100%	42	25-Aug-10 A	14-Oct-10 A	Haul Road																							
S24N1230	Gas main Diversion, HKCG		100%	55	25-Aug-10 A	22-Apr-11 A	Gas main Diversion, HKCG																							
S24N1240	11 KV Cable Diversion		100%	55	25-Aug-10 A	30-Oct-10 A	11 KV Cable Diversion																							
S24N1250	Telephone Cable Diversion		100%	55	25-Aug-10 A	30-Oct-10 A	Telephone Cable Diversion																							
Substructure and Pier Construction																														
South Abutment																														
S24N1260	Piling-South Abutment		100%	29	15-Oct-10 A	19-Jan-11 A	Piling-South Abutment																							
S24N1261	Preparing piling platform		100%	18	15-Oct-10 A	05-Nov-10 A	Preparing piling platform																							
S24N1262	Pre-drilling		100%	18	15-Oct-10 A	05-Nov-10 A	Pre-drilling																							
S24N1263	Piling (21nos)		100%	43	27-Nov-10 A	19-Jan-11 A	Piling (21nos)																							
S24N1310	Excavation & Cap-South Abutment		100%	35	04-May-11 A	04-Jun-11 A	Excavation & Cap-South Abutment																							
S24N1360	Pier & backfill, South Abutment		100%	36	27-Jun-11 A	17-Aug-11 A	Pier & backfill, South Abutment																							
Pier 1																														
S24N1270	Piling-Pier 1 (15nos)		100%	30	02-Mar-11 A	07-Apr-11 A	Piling-Pier 1 (15nos)																							
S24N1320	Cap-Pier 1 & Backfill		100%	36	23-May-11 A	05-Jul-11 A	Cap-Pier 1 & Backfill																							
S24N1370	Pier 1 (Pierhead included)		100%	96	26-Sep-11 A	17-Dec-11 A	Pier 1 (Pierhead included)																							
Pier 2																														
S24N1280	Piling-Pier 2 (15nos)		100%	38	02-Aug-10 A	15-Sep-10 A	Piling-Pier 2 (15nos)																							
S24N1330	Cap-Pier 2 & Backfill		100%	38	20-Nov-10 A	19-Jan-11 A	Cap-Pier 2 & Backfill																							
S24N1380	Pier 2 (Pierhead included)		100%	96	14-Apr-11 A	12-Aug-11 A	Pier 2 (Pierhead included)																							
Pier 3																														
S24N1290	Piling-Pier 3 (15nos)		100%	38	16-Feb-11 A	27-Apr-11 A	Piling-Pier 3 (15nos)																							
S24N1340	Cap-Pier 3 & Backfill		100%	32	26-May-11 A	04-Jul-11 A	Cap-Pier 3 & Backfill																							
S24N1390	Pier 3 (pierhead included)		100%	96	11-Jul-11 A	02-Nov-11 A	Pier 3 (pierhead included)																							
North Abutment																														
S24N1300	Pre-drilling & Preparation for Piling (incl. VO 39: Revised Foundation for North Abutment)		100%	24	26-May-11 A	23-Jun-11 A	Pre-drilling & Preparation for Piling (incl. VO 39: Revised Foundation for North Abutment)																							
S24N1302	ELS for North abutment		100%	75	19-Jan-12 A	07-Nov-12 A	ELS for North abutment																							
S24N1350	Cap-North Abutment		100%	25	08-Nov-12 A	20-Nov-12 A	Cap-North Abutment																							
S24N1400	Abutment, Drainage & backfill, North Abutment		100%	75	21-Nov-12 A	25-Jun-13 A	Abutment, Drainage & backfill, North Abutment																							
Decking and Finishing																														
S24N1410	Deck-South Abutment to Pier 1		100%	62	07-Dec-11 A	26-Apr-12 A	Deck-South Abutment to Pier 1																							
S24N1420	Deck-Pier 1 to Pier 2		100%	75	23-Apr-12 A	30-Aug-12 A	Deck-Pier 1 to Pier 2																							
S24N1430	Deck-Pier 2 to Pier 3		100%	75	02-Jun-12 A	22-Dec-12 A	Deck-Pier 2 to Pier 3																							
S24N1434	Erection of Falsework		100%	25	29-Dec-12 A	22-Jan-13 A	Erection of Falsework																							
S24N1440	Deck-Pier 3 to North Abutment		100%	60	22-Jan-13 A	30-Apr-13 A	Deck-Pier 3 to North Abutment																							
S24N1444	Dismantling of Falsework	-21	95%	25	14-May-13 A	27-Nov-13	Dismantling of Falsework																							
S24N1450	Parapet (incl. precast concrete skin)		100%	21	18-Feb-13 A	09-Jul-13 A	Parapet (incl. precast concrete skin)																							
S24N1457	Erecting Railing (Short Column and barrier)		100%	10	13-Aug-13 A	14-Sep-13 A	Erecting Railing (Short Column and barrier)																							
S24N1463	Noise Barrier (Erecting H-Column and Panel)		100%	15	06-Jun-13 A	14-Sep-13 A	Noise Barrier (Erecting H-Column and Panel)																							
S24N1470	Road Lighting		100%	12	27-Aug-13 A	14-Sep-13 A	Road Lighting																							
S24N1480	Surfacing		100%	12	30-Jul-13 A	11-Sep-13 A	Surfacing																							
S24N1490	Inspection and Handover of Bridge 12A		100%	3	12-Sep-13 A	14-Sep-13 A	Inspection and Handover of Bridge 12A																							

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010				2011				2012				2013				2014			
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
							1	2	3	4	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	3
Construction of Bridge LB2																										
S26S1200	Construction of Bridge LB2 (incl. VO29 & 37: revised piling details and pile caps sl...		100%	641	16-Apr-11 A	25-Sep-13 A	Construction of Bridge L																			
Preparatory and Enabling Works																										
S26S1205	Gas main Diversion at East Abutment (No Connection)		100%	15	24-Jan-13 A	28-Feb-13 A																				
S26S1215	Temporary Traffic Arrangement for Piling Work		100%	75	28-Dec-11 A	04-Jun-12 A																				
Substructure and Pier Construction																										
TW4																										
S26S1203	Excavation and lateral support		100%	20	05-Mar-12 A	30-Jun-12 A																				
S26S1204	Coring and backfill for Piling works		100%	75	02-Jul-12 A	28-Jul-12 A																				
S26S1212	Piling-TW4 (20)		100%	49	30-Jul-12 A	17-Oct-12 A																				
S26S1217	Pile Load Test (1 Tension & 2 compression)		100%	25	31-Oct-12 A	22-Nov-12 A																				
S26S1222	Cap-TW4 & Backfill		100%	35	23-Nov-12 A	05-Feb-13 A																				
S26S1225	Pier-TW4 Pier		100%	35	06-Feb-13 A	16-Mar-13 A																				
TW5																										
S26S1206	Els, coring and backfill for Piling works		100%	30	19-Jun-12 A	12-Oct-12 A																				
S26S1210	Piling-TW5 (20)		100%	40	09-Nov-12 A	21-Dec-12 A																				
S26S1220	Cap-TW5 & Backfill		100%	24	23-Jan-13 A	22-Feb-13 A																				
S26S1227	Pier-TW5 Pier		100%	35	23-Feb-13 A	05-Mar-13 A																				
East Abutment																										
S26S1214	Piling-East Abutment, Stage 1		100%	36	16-Apr-11 A	30-Jun-11 A																				
S26S1218	Piling-East Abutment, (stage 2, 6 nos. piles remain)		100%	18	29-Oct-12 A	08-Nov-12 A																				
S26S1219	Pile Load Test (1 compression)		100%	15	28-Nov-12 A	11-Dec-12 A																				
S26S1224	Excavation & Pilecap (Delay by gasmain)		100%	28	04-Mar-13 A	27-Mar-13 A																				
S26S1234	East Abutment		100%	30	02-Apr-13 A	29-Apr-13 A																				
S26S1254	Backfilling		100%	14	04-Jun-13 A	10-Jun-13 A																				
West Abutment																										
S26S1202	Els, coring & backfill for Piling works		100%	75	26-Nov-11 A	08-Oct-12 A																				
S26S1216	Piling-West Abutment (28)		100%	65	09-Oct-12 A	30-Nov-12 A																				
S26S1226	Excavation & Pilecap		100%	28	27-Dec-12 A	01-Feb-13 A																				
S26S1236	West Abutment		100%	35	02-Feb-13 A	10-Apr-13 A																				
S26S1256	Backfilling		100%	14	29-Apr-13 A	07-Aug-13 A																				
Decking and Finishing																										
S26S1238	Bridge Decking (Bearings, Drainage & MJ included)		100%	84	18-Mar-13 A	25-Sep-13 A																				
S26S1240	Falsework Erection of Deck - West Abutment to TW4		100%	14	18-Mar-13 A	30-Apr-13 A																				
S26S1241	Bridge Deck - West Abutment to TW4		100%	48	20-Apr-13 A	08-Jun-13 A																				
S26S1242	Falsework Dismantling of deck - West Abutment to TW4		100%	10	10-Jul-13 A	24-Aug-13 A																				
S26S1243	Falsework Erection of Deck - TW4 to TW5		100%	14	18-Mar-13 A	30-Apr-13 A																				
S26S1244	Bridge Deck - TW4 to TW5		100%	48	24-Apr-13 A	19-Jun-13 A																				
S26S1245	Falsework Dismantling of deck - TW4 to TW5		100%	10	10-Jul-13 A	24-Aug-13 A																				
S26S1246	Falsework Erection of Deck - TW5 to East Abutment		100%	14	08-May-13 A	29-May-13 A																				
S26S1247	Bridge Deck - TW5 to East Abutment		100%	48	15-May-13 A	06-Jul-13 A																				
S26S1248	Falsework Dismantling of deck - TW5 to East Abutment		100%	10	10-Jul-13 A	24-Aug-13 A																				
S26S1260	Parapet (incl. precast concrete skin)		100%	25	08-Jul-13 A	25-Sep-13 A																				
S26S1265	Road Lighting		100%	5	27-Aug-13 A	14-Sep-13 A																				
S26S1270	Surfacing		100%	10	16-Sep-13 A	25-Sep-13 A																				
S26S1310	Handover Inspection of LB2 (TTA Stage 11)		100%	158	18-Mar-13 A	25-Sep-13 A																				
Construction of Bridge LB3																										

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014													
							Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3															
							1	2	3	4	5	6	7	8	9	10	11	12	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4
S26S1280	Construction of Bridge LB3(incl. excavation & backfill) (incl. VO29 & VO37)		100%	267	26-Feb-11 A	02-Oct-13 A	Construction of Bridge LB3																																					
Substructure & Abutment																																												
S26S1320	Piling for East Abutment		100%	60	26-Feb-11 A	14-May-11 A	Piling for East Abutment																																					
S26S1330	Piling for West Abutment		100%	60	14-May-11 A	26-Jul-11 A	Piling for West Abutment																																					
S26S1340	ELS & Excavation for East & West Abutment		100%	36	07-Dec-11 A	21-Jan-12 A	ELS & Excavation for East & West Abutment																																					
S26S1350	Construction of East/West Abutment Structure		100%	45	19-Jan-12 A	13-Jul-12 A	Construction of East/West Abutment Structure																																					
Decking and Finishing																																												
S26S1370	Bridge Deck (Bearings, Drainage & MJ included)		100%	257	19-Apr-12 A	24-Nov-12 A	Bridge Deck (Bearings, Drainage & MJ included)																																					
S26S1371	Falsework and Scaffolding		100%	36	19-Apr-12 A	31-Aug-12 A	Falsework and Scaffolding																																					
S26S1372	Construction of Deck		100%	69	05-Sep-12 A	24-Nov-12 A	Construction of Deck																																					
S26S1373	Falsework dismantling of Deck		100%	24	21-Dec-12 A	09-Jan-13 A	Falsework dismantling of Deck																																					
S26S1375	Parapet (incl. precast concrete skin)		100%	20	26-May-13 A	20-Jul-13 A	Parapet (incl. precast concrete skin)																																					
S26S1376	Erecting of Short Column		100%	20	19-Jun-13 A	13-Aug-13 A	Erecting of Short Column																																					
S26S1377	Installing M-Barrier		100%	7	27-Aug-13 A	21-Sep-13 A	Installing M-Barrier																																					
S26S1378	Surfacing		100%	8	16-Sep-13 A	25-Sep-13 A	Surfacing																																					
S26S1385	Handover Inspection of LB3		100%	1	02-Oct-13 A	02-Oct-13 A	Handover Inspection of LB3																																					
Construction of Bridge LB1																																												
S26S1400	Construction of Bridge LB1 (incl. VO29 & VO37: revised piling details and pile caps sleeving details)		100%	643	03-May-10 A	02-Oct-13 A	Construction of Bridge LB1																																					
Preparatory and Enabling Works																																												
S26S1405	Site Clearance		100%	75	03-May-10 A	06-Aug-10 A	Site Clearance																																					
S26S1406	Site Clearance - Stage 1 (LB1-North Abutment)		100%	60	03-May-10 A	14-Jul-10 A	Site Clearance - Stage 1 (LB1-North Abutment)																																					
S26S1407	Site Clearance - Stage 2 (LB1-TW3)		100%	60	27-May-10 A	06-Aug-10 A	Site Clearance - Stage 2 (LB1-TW3)																																					
S26S1410	Access Road		100%	75	03-May-10 A	31-Jul-10 A	Access Road																																					
S26S1411	Access Road - Stage 1 (LB1-North Abutment)		100%	60	03-May-10 A	14-Jul-10 A	Access Road - Stage 1 (LB1-North Abutment)																																					
S26S1412	Access Road - Stage 2 (LB1-TW3)		100%	60	20-May-10 A	31-Jul-10 A	Access Road - Stage 2 (LB1-TW3)																																					
S26S1450	SA25-Site Clearance (TW1 & TW2)		100%	53	26-Mar-11 A	02-Jun-11 A	SA25-Site Clearance (TW1 & TW2)																																					
S26S1455	SA25 - Access Road (TW1 & TW2)		100%	53	26-Mar-11 A	02-Jun-11 A	SA25 - Access Road (TW1 & TW2)																																					
S26S1465	VO 31: Fencing for Former Lot 1308 S.B in D.D.6		100%	10	27-Jun-11 A	09-Jul-11 A	VO 31: Fencing for Former Lot 1308 S.B in D.D.6																																					
Substructure and Pier Construction																																												
North Abutment																																												
S26S1420	Piling-North Abutment		100%	51	01-Jun-10 A	31-Jul-10 A	Piling-North Abutment																																					
S26S1430	Excavation & Cap-North Abutment		100%	54	11-Nov-10 A	28-Dec-10 A	Excavation & Cap-North Abutment																																					
S26S1440	Pier & backfill, North Abutment		100%	56	26-Jan-11 A	04-Apr-11 A	Pier & backfill, North Abutment																																					
TW3																																												
S26S1422	Piling-TW3		100%	54	28-Dec-10 A	21-Mar-11 A	Piling-TW3																																					
S26S1432	Cap & Backfill - TW3		100%	45	26-May-11 A	19-Jul-11 A	Cap & Backfill - TW3																																					
S26S1442	Pier-TW3 (Pierhead included)		100%	75	08-Aug-11 A	17-Dec-11 A	Pier-TW3 (Pierhead included)																																					
TW1																																												
S26S1460	Piling-TW1		100%	70	21-Oct-10 A	11-Nov-10 A	Piling-TW1																																					
S26S1470	Cap & Backfill - TW1		100%	36	27-Jan-11 A	19-Feb-11 A	Cap & Backfill - TW1																																					
S26S1480	Pier-TW1 (Pierhead included)		100%	75	23-May-11 A	08-Jul-11 A	Pier-TW1 (Pierhead included)																																					
TW2																																												
S26S1462	Piling-TW2		100%	41	28-Mar-11 A	15-Apr-11 A	Piling-TW2																																					
S26S1472	Cap & Backfill - TW2		100%	45	21-Jun-11 A	15-Jul-11 A	Cap & Backfill - TW2																																					
S26S1482	Pier-TW2 (Pierhead included)		100%	75	26-Jul-11 A	11-Feb-12 A	Pier-TW2 (Pierhead included)																																					
Decking and Finishing																																												

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014																
							Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3																		
							1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4
S26S560	Decking (Bearings, Drainage & MJ included) (incl. VO 45: Details Drainage Arrangement of LB1 & B13A)		100%	199	27-Jul-11 A	12-Jul-12 A	Decking (Bearings, Drainage & MJ included) (incl. VO 45: Details Drainage Arrangement of LB1 & B13A)																																								
S26S570	Balanced Cantilever at TW1		100%	63	27-Jul-11 A	12-Oct-11 A	Balanced Cantilever at TW1																																								
S26S580	Preparing of Travelling Form		100%	18	27-Jul-11 A	17-Aug-11 A	Preparing of Travelling Form																																								
S26S590	Construction of Cantiliver Deck, TW1		100%	40	30-Sep-11 A	17-Dec-11 A	Construction of Cantiliver Deck, TW1																																								
S26S610	South End Span		100%	40	28-Dec-11 A	16-Feb-12 A	South End Span																																								
S26S630	Balanced Cantilever at TW2 & Stitching (TW1-TW2)		100%	58	01-Feb-12 A	15-May-12 A	Balanced Cantilever at TW2 & Stitching (TW1-TW2)																																								
S26S640	Preparing of Travelling Form		100%	12	01-Feb-12 A	29-Feb-12 A	Preparing of Travelling Form																																								
S26S650	Construction of Cantiliver Deck, TW2		100%	40	19-Apr-12 A	15-May-12 A	Construction of Cantiliver Deck, TW2																																								
S26S660	Stitching TW1-TW2		100%	18	11-May-12 A	11-Jun-12 A	Stitching TW1-TW2																																								
S26S670	Balanced Cantilever at TW3 & Stitching (TW2-TW3)		100%	52	28-Dec-11 A	19-Apr-12 A	Balanced Cantilever at TW3 & Stitching (TW2-TW3)																																								
S26S680	Preparing of Travelling Form		100%	12	28-Dec-11 A	11-Jan-12 A	Preparing of Travelling Form																																								
S26S690	Construction of Cantiliver Deck, TW3		100%	40	12-Jan-12 A	19-Apr-12 A	Construction of Cantiliver Deck, TW3																																								
S26S700	Stitching TW2-TW3		100%	22	18-May-12 A	22-Jun-12 A	Stitching TW2-TW3																																								
S26S720	North End Span		100%	50	18-May-12 A	12-Jul-12 A	North End Span																																								
S26S740	Parapet (incl. precast concrete skin)		100%	52	05-Nov-12 A	21-Sep-13 A	Parapet (incl. precast concrete skin)																																								
S26S750	Erecting of Precast Parapet		100%	32	05-Nov-12 A	27-Aug-13 A	Erecting of Precast Parapet																																								
S26S760	Installing M-Barrier		100%	6	15-Aug-13 A	21-Sep-13 A	Installing M-Barrier																																								
S26S770	Noise Barrier		100%	6	15-Aug-13 A	07-Sep-13 A	Noise Barrier																																								
S26S780	Surfacing		100%	7	16-Sep-13 A	25-Sep-13 A	Surfacing																																								
S26S790	Road Lighting		100%	7	27-Aug-13 A	14-Sep-13 A	Road Lighting																																								
S26S800	Handover Inspection of LB1		100%	1	02-Oct-13 A	02-Oct-13 A	Handover Inspection of LB1																																								
Construction of Bridge 13A																																															
S26S1300	Construction of Bridge 13A (incl. VO29 & VO37: revised piling details and pile caps sleeving details)		100%	744	03-May-10 A	22-Jun-13 A	Construction of Bridge 13A (incl. VO29 & VO37: revised piling details and pile caps sleeving details)																																								
Preparatory and Enabling Works																																															
S26S1610	Site Clearance		100%	24	03-May-10 A	31-May-10 A	Site Clearance																																								
S26S1611	Access Road		100%	63	03-May-10 A	17-Jul-10 A	Access Road																																								
S26S1620	Gas main Diversion at North/South Abutment, HKCG		100%	37	01-Jun-10 A	15-Jul-10 A	Gas main Diversion at North/South Abutment, HKCG																																								
S26S1690	SA25-Site Clearance		100%	25	26-Feb-11 A	26-Mar-11 A	SA25-Site Clearance																																								
S26S1700	SA25 Haul Road		100%	25	26-Feb-11 A	26-Mar-11 A	SA25 Haul Road																																								
S26S1710	SA25-Gas Main diversion at South Abutment & P1		100%	25	26-Feb-11 A	26-Mar-11 A	SA25-Gas Main diversion at South Abutment & P1																																								
Substructure and Pier Construction																																															
North Abutment																																															
S26S1630	Piling-North Abutment		100%	65	16-Jul-10 A	30-Sep-10 A	Piling-North Abutment																																								
S26S1631	Pre-drilling & Preparing of piling platform		100%	20	16-Jul-10 A	07-Aug-10 A	Pre-drilling & Preparing of piling platform																																								
S26S1632	Piling		100%	45	09-Aug-10 A	30-Nov-10 A	Piling																																								
S26S1650	Excavation & Cap-Nouth Abutment		100%	50	04-Jan-11 A	04-Apr-11 A	Excavation & Cap-Nouth Abutment																																								
S26S1670	Construction of Abutment-Nouth Abutment		100%	50	27-Oct-11 A	17-Dec-11 A	Construction of Abutment-Nouth Abutment																																								
S26S1930	Backfill Stage 1, North Abutment		100%	24	01-Mar-12 A	14-Apr-12 A	Backfill Stage 1, North Abutment																																								
S26S1940	Backfill Stage 2, North Abutment		100%	60	15-Oct-12 A	24-Apr-13 A	Backfill Stage 2, North Abutment																																								
South Abutment																																															
S26S1720	Piling-South Abutment		100%	90	02-Dec-10 A	23-Mar-11 A	Piling-South Abutment																																								
S26S1721	Pre-drilling & Preparing of piling platform		100%	30	20-Aug-10 A	20-Sep-10 A	Pre-drilling & Preparing of piling platform																																								
S26S1722	Piling		100%	60	10-Jan-11 A	17-Mar-11 A	Piling																																								
S26S1750	Excavation & Cap-South Abutment		100%	40	26-May-11 A	14-Jul-11 A	Excavation & Cap-South Abutment																																								
S26S1780	Abutment, South Abutment		100%	38	26-Oct-11 A	17-Dec-11 A	Abutment, South Abutment																																								
S26S1950	Backfill Stage 1, South Abutment		100%	24	01-Mar-12 A	04-Jul-12 A	Backfill Stage 1, South Abutment																																								

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014													
							Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3															
							1	2	3	4	5	6	7	8	9	10	11	12	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4
Section 3																																												
Site Area SA26A																																												
PHSA26A2	Possession of SA26A (Day0)		100%	0	26-Feb-10 A		◆ Possession of SA26A (Day0)																																					
SA26A000	Site Area SA26A Works Period	-12	94.98%	1215	26-Feb-10 A	25-Jan-14																																						
SA26A010	Site Area SA26A Works Completion	-12	0%	0		25-Jan-14																																						
SA26A020	Temporary Traffic Arrangement (Detail shall refer to supplementary information)	-11	94.91%	983	26-Feb-10 A	25-Jan-14																																						
SA26A030	Overall Utilities Diversion (Detail shall refer to supplementary information)	-11	94.91%	983	26-Feb-10 A	25-Jan-14																																						
North Bound																																												
Preliminaries																																												
S26AN000	Site Clearance/Access Rd		100%	75	26-Feb-10 A	18-Jun-10 A																																						
S26AN010	Site Clearance		100%	60	26-Feb-10 A	12-May-10 A																																						
S26AN020	Access Rd		100%	60	07-Apr-10 A	18-Jun-10 A																																						
Slopeworks																																												
S26AN502	Cut Slope (S37A)		100%	48	26-Apr-12 A	03-Jul-12 A																																						
S26AN506	Cut Slope (S40-sn, Including removal of existing retaining wall)		100%	168	19-Jun-10 A	08-Jan-11 A																																						
S26AN508	Slopeworks Cut(S40) - Stage 1 (Cut Slope and Erect Scaffolding)		100%	11	19-Jun-10 A	16-Jul-10 A																																						
S26AN510	Slopeworks Cut(S40) - Stage 1 (Soil Nail Installation : QRST)		100%	11	19-Jul-10 A	18-Aug-10 A																																						
S26AN514	Slopeworks Cut(S40) - Stage 2 (Cut Slope and Erect Scaffolding)		100%	14	19-Aug-10 A	17-Sep-10 A																																						
S26AN516	Slopeworks Cut(S40) - Stage 2 (Soil Nail Installation : MNOP)		100%	14	21-Nov-10 A	26-Dec-10 A																																						
S26AN518	Slopeworks Cut(S40) - Stage 3 (Cut Slope and Erect Scaffolding)		100%	17	18-Aug-10 A	17-Sep-10 A																																						
S26AN520	Slopeworks Cut(S40) - Stage 3 (Soil Nail Installation : IJKL)		100%	17	27-Dec-10 A	01-Feb-11 A																																						
S26AN522	Slopeworks Cut(S40) - Stage 4 (Cut Slope and Erect Scaffolding)		100%	12	28-Jan-11 A	15-Feb-11 A																																						
S26AN524	Slopeworks Cut(S40) - Stage 4 (Soil Nail Installation : EFGH)		100%	12	02-Feb-11 A	19-Feb-11 A																																						
S26AN525	Slopeworks Cut(S40) - Stage 5 (Cut Slope and Erect Scaffolding)		100%	15	29-Oct-11 A	16-Nov-11 A																																						
S26AN526	Slopeworks Cut(S40) - Stage 5 (Soil Nail Installation : ABCD)		100%	18	16-Nov-11 A	07-Dec-11 A																																						
S26AN528	Removal of Existing Retaining Wall		100%	30	11-Apr-11 A	20-May-11 A																																						
S26AN530	Cut Slope (S41-sn)		100%	138	19-Jun-10 A	02-Dec-10 A																																						
S26AN531	Cut Slope (S41-sn) - Stage 1 (Cut Slope and Erect Scaffolding)		100%	11	19-Jun-10 A	16-Jul-10 A																																						
S26AN532	Cut Slope (S41-sn) - Stage 1 (Soil Nail Installation : MNOPQ)		100%	11	19-Jul-10 A	13-Aug-10 A																																						
S26AN533	Cut Slope (S41-sn) - Stage 2 (Cut Slope and Erect Scaffolding)		100%	26	23-Aug-10 A	17-Sep-10 A																																						
S26AN534	Cut Slope (S41-sn) - Stage 2 (Soil Nail Installation : IJKL)		100%	26	28-Dec-10 A	27-Jan-11 A																																						
S26AN535	Cut Slope (S41-sn) - Stage 3 (Cut Slope and Erect Scaffolding)		100%	20	20-Sep-10 A	27-Nov-10 A																																						
S26AN536	Cut Slope (S41-sn) - Stage 3 (Soil Nail Installation : EFGH)		100%	19	30-May-11 A	22-Jun-11 A																																						
S26AN537	Cut Slope (S41-sn) - Stage 4 (Cut Slope and Erect Scaffolding)		100%	12	26-Oct-11 A	08-Nov-11 A																																						
S26AN538	Cut Slope (S41-sn) - Stage 4 (Soil Nail Installation : ABCD)		100%	12	03-Dec-12 A	14-Jan-13 A																																						
S26AN540	Slope 7NW-B/C 349		100%	75	02-Oct-10 A	25-Nov-10 A																																						
S26AN541	Erect Scaffolding & Soil Nail Installation (7NW-B/C 349) - Stage 1 (EF) 52nos.		100%	15	02-Oct-10 A	19-Oct-10 A																																						
S26AN542	Erect Scaffolding & Soil Nail Installation (7NW-B/C 349) - Stage 2 (ABCD) 270nos.		100%	72	20-Oct-10 A	25-Nov-10 A																																						
S26AN550	Slope 7NW-A/C35-sn		100%	200	01-Sep-10 A	20-Nov-10 A																																						
S26AN560	Erect Scaffolding & Soil Nail Installation (7NW-A/C35-sn) - Stage 1 (OP) 25nos.		100%	10	01-Sep-10 A	11-Sep-10 A																																						
S26AN570	Erect Scaffolding & Soil Nail Installation (7NW-A/C35-sn) - Stage 2 (KLMN) 285nos.		100%	40	13-Sep-10 A	19-Oct-10 A																																						
S26AN580	Erect Scaffolding & Soil Nail Installation (7NW-A/C35-sn) - Stage 3 (GHIJ) 370nos.		100%	57	30-Sep-10 A	19-Oct-10 A																																						
S26AN590	Erect Scaffolding & Soil Nail Installation (7NW-A/C35-sn) - Stage 4 (CDEF) 407nos.		100%	62	20-Oct-10 A	19-Nov-10 A																																						
S26AN650	Erect Scaffolding & Soil Nail Installation (7NW-A/C35-sn) - Stage 5 (AB) 204nos.		100%	31	01-Nov-10 A	20-Nov-10 A																																						
S26AN660	Slope 7NW-A/CR39		100%	80	22-Nov-10 A	28-Mar-11 A																																						
S26AN670	Erect Scaffolding & Soil Nail Installation (7NW-A/CR39) - Stage 1 (JK) 28nos.		100%	10	22-Nov-10 A	15-Dec-10 A																																						
S26AN680	Erect Scaffolding & Soil Nail Installation (7NW-A/CR39) - Stage 2 (DEFGHI) 162nos.		100%	40	16-Dec-10 A	25-Feb-11 A																																						

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014		
							Q1				Q2				Q3				Q4				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
							1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3
S26AN690	Erect Scaffolding & Soil Nail Installation (7NW-A/CR39) - Stage 3 (ABC) 109nos.		100%	30	22-Feb-11 A	28-Mar-11 A																											
S26AN930	Erect Scaffolding & Soil Nail Installation (Area 6-1)		100%	75	20-Feb-13 A	25-Nov-13 A																											
Construction of Retaining Wall																																	
Retaining Wall W65C (w/SP)																																	
S26AN100	Sheet Pile/Excavate & Construct W65C (w/SP)		100%	150	27-Jun-11 A	25-Jul-11 A																											
S26AN101	Sheet Pile and Excavation		100%	24	27-Jun-11 A	25-Jul-11 A																											
S26AN102	Construction of Structure W65C		100%	72	27-Jun-11 A	25-Jul-11 A																											
S26AN103	Backfilling		100%	24	27-Jun-11 A	25-Jul-11 A																											
Retaining Wall W68																																	
S26AN120	Sheet Pile/Excavate & Construct W68 (w/SP)		100%	99	15-Nov-10 A	16-Jul-12 A																											
S26AN121	Sheet Pile and Excavation		100%	19	15-Nov-10 A	04-Dec-10 A																											
S26AN122	Construction of Structure W68		100%	75	26-Aug-11 A	24-Nov-11 A																											
S26AN123	Backfilling		100%	54	01-Jun-12 A	16-Jul-12 A																											
Retaining Wall W69 on Mini-Piles (AD 3)																																	
S26AN142	Prepare Piling Platform for W69		100%	24	21-Sep-10 A	10-Oct-10 A																											
S26AN144	Pre-drilling for W69		100%	24	10-Sep-10 A	10-Oct-10 A																											
S26AN146	Pipe Pile for W69		100%	77	20-Oct-10 A	24-Dec-10 A																											
S26AN147	Pipe Pile for W69 - Stage 1 (south)		100%	38	20-Oct-10 A	19-Nov-10 A																											
S26AN148	Pipe Pile for W69 - Stage 2 (north)		100%	26	20-Nov-10 A	19-Dec-10 A																											
S26AN149	Excavate and Tension Piles W69		100%	110	26-Mar-11 A	11-Aug-11 A																											
S26AN150	Excavation and Installation of Tension Piles - Stage 1 (south)		100%	55	26-Mar-11 A	04-Jun-11 A																											
S26AN151	Excavation and Installation of Tension Piles - Stage 2 (north)		100%	55	13-Jun-11 A	16-Aug-11 A																											
S26AN152	Retaining Wall & Drainage W69		100%	120	26-Aug-11 A	19-Jan-12 A																											
S26AN153	Construction of Structure W69		100%	75	26-Aug-11 A	24-Nov-11 A																											
S26AN154	Drainage		100%	40	06-Feb-12 A	15-Mar-13 A																											
S26AN155	Backfilling		100%	75	01-Jun-12 A	16-Jul-12 A																											
Retaining Wall W70																																	
S26AN170	Sheet Pile/Excavate & Construct W70 (w/SP)		100%	165	03-Dec-10 A	15-Mar-13 A																											
S26AN171	Sheet Pile and Excavation		100%	18	03-Dec-10 A	14-Dec-10 A																											
S26AN172	Construction of Structure W70 (w/SP)		100%	75	18-Jul-11 A	15-Oct-11 A																											
S26AN173	Drainage & Backfilling		100%	54	18-Feb-13 A	28-Jun-13 A																											
S26AN174	Backfilling behind W68 to W70 and drainage works		100%	60	18-Mar-13 A	25-Nov-13 A																											
S26AN184	Erect Scaffolding & Soil Nail Installation		100%	35	04-Oct-13 A	25-Nov-13 A																											
Retaining Wall W72A (w/SP)																																	
S26AN190	Sheet Pile/Excavate & Construct W72A (w/SP)		100%	92	30-Oct-10 A	21-Nov-11 A																											
S26AN191	Sheet Pile and Excavation		100%	34	30-Oct-10 A	31-Jan-11 A																											
S26AN192	Construction of Structure W72A (w/SP)		100%	46	03-Jan-11 A	24-Mar-11 A																											
S26AN193	Drainage & Backfilling		100%	68	01-Jun-11 A	21-Nov-11 A																											
Road Re-Construction Works, Roadworks & Drainage																																	
S26AN430	Slip Road R (From W72A to W73) Stage 1 (incl. VO 36: Slip Road R & Drainage detail.)		100%	15	30-Jan-12 A	25-Jul-12 A																											
S26AN431	Slip Road R (From W70 to B18A) Stage 1.1 formation		100%	15	26-May-12 A	13-Jun-12 A																											
S26AN432	Slip Road R (From W70 to B18A) Stage 1.1 Drainage & utilities		100%	15	14-Jun-12 A	03-Jul-12 A																											
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		100%	93	18-May-12 A	14-Sep-13 A																											
S26AN436	Slip Road R (From W70 to B18A) Stage 2, formation (Remaining)		100%	30	18-May-12 A	06-Aug-13 A																											
S26AN437	Slip Road R (From W70 to B18A) Stage 2, Drainage & utilities (Remaining)		100%	30	27-Jun-12 A	14-Sep-13 A																											
S26AN438	Slip Road R (From W70 to B18A) Stage 2, pavement & roadworks (Remaining)		100%	50	14-Jul-12 A	14-Sep-13 A																											

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014													
							Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3															
							1	2	3	4	5	6	7	8	9	10	11	12	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4
Retaining Wall W65B, (CSD 1)																																												
S27S1040	WSD 1220 dia Diversion		100%	36	26-Jul-11 A	17-Dec-12 A	WSD 1220 dia Diversion																																					
S27S1041	HyD Lighting relocation		100%	36	26-May-11 A	18-Jun-11 A	HyD Lighting relocation																																					
S27S1042	Excavate to cut-off level		100%	42	15-Oct-10 A	03-Dec-10 A	Excavate to cut-off level																																					
S27S1043	COD: CLP overhead cable		100%	75	15-Jan-11 A	11-Apr-11 A	COD: CLP overhead cable																																					
S27S1044	Relocaltion of Existing Electric Poles, CLP		100%	24	15-Feb-11 A	11-Apr-11 A	Relocaltion of Existing Electric Poles, CLP																																					
S27S1060	Capping/Walling for W65B		100%	42	06-Apr-11 A	20-Aug-11 A	Capping/Walling for W65B																																					
S27S1070	Backfilling for W65A & B		100%	75	10-Sep-11 A	21-Jul-12 A	Backfilling for W65A & B																																					
S27S1090	COD: DAN 273- revised thrust box detail and additional works for DN1220		100%	30	17-Dec-12 A	24-Jan-13 A	COD: DAN 273- revised thrust box detail and additional works for DN1220																																					
S27S1110	Backfilling behind W65B and drainage works	15	70%	40	15-Jul-13 A	23-Dec-13	Backfilling behind W65B and drainage works																																					
Road Re-Construction Works, Roadworks, Drainage & Utilities																																												
S26AS400	Roadworks, Drainages & Utilities (CH 4020 - 4500)	-1	89.98%	399	14-Feb-12 A	14-Jan-14	Roadworks, Drainages & Utilities (CH 4020 - 4500)																																					
S26AS410	Roadworks, Drainages & Utilities Stage 1 (ch4020-ch4200 & Tai Po Tai Wo Road)		100%	110	14-Feb-12 A	11-Dec-12 A	Roadworks, Drainages & Utilities Stage 1 (ch4020-ch4200 & Tai Po Tai Wo Road)																																					
S26AS411	Removal of existing paving		100%	25	14-Feb-12 A	02-Jul-12 A	Removal of existing paving																																					
S26AS412	Utilities		100%	75	14-Feb-12 A	31-Jul-12 A	Utilities																																					
S26AS416	Drainages		100%	75	27-Jun-12 A	31-Jul-12 A	Drainages																																					
S26AS418	Road Surface & Roadmark - Stage 1		100%	5	14-Jul-12 A	11-Dec-12 A	Road Surface & Roadmark - Stage 1																																					
S26AS420	Roadworks, Drainages & Utilities Stage 2(ch4200-ch4500)		100%	737	14-Feb-12 A	28-Sep-12 A	Roadworks, Drainages & Utilities Stage 2(ch4200-ch4500)																																					
S26AS422	Removal of existing paving		100%	50	14-Feb-12 A	12-Jan-13 A	Removal of existing paving																																					
S26AS424	Utilities		100%	75	14-Feb-12 A	28-May-12 A	Utilities																																					
S26AS426	Drainages		100%	75	27-Jun-12 A	11-Aug-12 A	Drainages																																					
S26AS428	Road Surface & Roadmark - Stage 2		100%	8	10-Sep-12 A	28-Sep-12 A	Road Surface & Roadmark - Stage 2																																					
S26AS430	Roadworks Stage 3 (ch4020-ch4200 & Tai Po Tai Wo Road)		100%	35	28-Jan-13 A	21-Jun-13 A	Roadworks Stage 3 (ch4020-ch4200 & Tai Po Tai Wo Road)																																					
S26AS440	Road Construction and Remaining Works (along CH4020 - 4500)		100%	75	28-Jan-13 A	20-Jul-13 A	Road Construction and Remaining Works (along CH4020 - 4500)																																					
S27S4090	HyD/Lighting (Existing Street Light removal by HyD Lightings)		100%	52	26-May-11 A	25-Jun-11 A	HyD/Lighting (Existing Street Light removal by HyD Lightings)																																					
S27S4100	Slip Road K (utilities & drainage), Stage 1 (excl. WSD connection)		100%	75	14-Feb-12 A	19-Apr-12 A	Slip Road K (utilities & drainage), Stage 1 (excl. WSD connection)																																					
S27S4102	Slip Road K (utilities & drainage roadwork), Stage 2 (incl. WSD connection)		100%	50	18-May-12 A	15-Oct-12 A	Slip Road K (utilities & drainage roadwork), Stage 2 (incl. WSD connection)																																					
S27S4110	Slip Road S (utilities, drainage & roadwork)	-1	20%	50	04-Oct-13 A	14-Jan-14	Slip Road S (utilities, drainage & roadwork)																																					
S27S4160	TTA Stage 0		100%	0	07-Oct-12 A		TTA Stage 0																																					
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	Construct Noise Barrier & Beam Barrier, NB36 & NB37																																					
S26AS310	Noise Barrier : Foundation Works		100%	75	28-Dec-11 A	31-Jan-12 A	Noise Barrier : Foundation Works																																					
S26AS320	Noise Barrier : Installation of H-column & Panel		100%	60	01-Feb-12 A	05-Jul-12 A	Noise Barrier : Installation of H-column & Panel																																					
S26AS330	Remaining NB36 installation of panel		100%	7	25-May-13 A	15-Jun-13 A	Remaining NB36 installation of panel																																					
Traffic Control & Survelance System																																												
S26AS480	TCSS (ch3720 - ch4820)		100%	56	30-Nov-12 A	15-Jul-13 A	TCSS (ch3720 - ch4820)																																					
S26AS481	TCSS - Stage 1 (ch3720 - ch3900)		100%	24	11-Mar-13 A	19-Apr-13 A	TCSS - Stage 1 (ch3720 - ch3900)																																					
S26AS482	TCSS - Stage 2 (ch3900 - ch4080)		100%	24	19-Apr-13 A	06-Jun-13 A	TCSS - Stage 2 (ch3900 - ch4080)																																					
S26AS483	TCSS - Stage 3 (ch4080 - ch4260), (Gantry G59) (incl. VO73 Revised Sign Gantry Details)		100%	24	22-Jan-13 A	06-Jun-13 A	TCSS - Stage 3 (ch4080 - ch4260), (Gantry G59) (incl. VO73 Revised Sign Gantry Details)																																					
S26AS484	TCSS - Stage 4 (ch4260 - ch4440), (Gantry G58) (incl. VO73 Revised Sign Gantry Details)		100%	24	30-Nov-12 A	21-Dec-12 A	TCSS - Stage 4 (ch4260 - ch4440), (Gantry G58) (incl. VO73 Revised Sign Gantry Details)																																					
S26AS485	TCSS - Stage 5 (ch4440 - ch4620)	39	60%	24	24-Dec-12 A	06-Dec-13	TCSS - Stage 5 (ch4440 - ch4620)																																					
S26AS486	TCSS - Stage 6 (ch4620 - ch4820), (Gantry G57) (incl. VO73 Revised Sign Gantry Details)		100%	24	07-Jan-13 A	15-Jul-13 A	TCSS - Stage 6 (ch4620 - ch4820), (Gantry G57) (incl. VO73 Revised Sign Gantry Details)																																					
North & South Bound																																												
Slopworks																																												

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014																
							Q1				Q2				Q3				Q4				Q1				Q2				Q3				Q4				Q1			Q2			Q3		
							1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5
S27S5133	Slopeworks Cut(S39) - Stage 3, formation level		100%	46	28-Dec-10 A	23-Feb-11 A	Slopeworks Cut(S39) - Stage 3, formation level																																								
S27S5150	Slope Reinstatement Works (S42)	37	95%	40	06-Sep-13 A	27-Nov-13	Slope Reinstatement Works (S42)																																								
Construction of Retaining Wall W66/67 (CSD 2) & W71																																															
S27S1100	W66 & W67 (CSD 2)		100%	45	02-Oct-10 A	19-Mar-11 A	W66 & W67 (CSD 2)																																								
S27S1101	Base Slab (W66)		100%	30	02-Oct-10 A	01-Nov-10 A	Base Slab (W66)																																								
S27S1102	Wall Stem (W66)		100%	30	02-Nov-10 A	26-Dec-10 A	Wall Stem (W66)																																								
S27S1103	Base Slab (W67)		100%	30	08-Nov-10 A	25-Dec-10 A	Base Slab (W67)																																								
S27S1113	Wall Stem (W67)		100%	24	28-Feb-11 A	19-Mar-11 A	Wall Stem (W67)																																								
S27S1115	Backfill for W66&67		100%	61	27-Jun-11 A	15-Oct-11 A	Backfill for W66&67																																								
S27S1200	Retaining Wall W71 (Bay1 - Bay5)		100%	110	02-Jun-10 A	12-Oct-10 A	Retaining Wall W71 (Bay1 - Bay5)																																								
S27S1210	Retaining Wall W71 : Base Slab		100%	55	02-Jun-10 A	06-Aug-10 A	Retaining Wall W71 : Base Slab																																								
S27S1220	Retaining Wall W71 : Wall Stem		100%	55	07-Aug-10 A	12-Oct-10 A	Retaining Wall W71 : Wall Stem																																								
S27S1230	Backfill for W71		100%	50	27-Jun-11 A	24-Aug-11 A	Backfill for W71																																								
Roadworks, Drainage & Utilities																																															
S27S4000	Roadworks, Drainages & Utilities - Stage 1 (CH 3900 - 4740)	-21	83.35%	357	13-Apr-12 A	10-Feb-14	Roadworks, Drainages & Utilities - Stage 1 (CH 3900 - 4740)																																								
S27S4004	Utilities - Stage 1 (W66 & W67)		100%	60	13-Apr-12 A	19-Apr-12 A	Utilities - Stage 1 (W66 & W67)																																								
S27S4006	Road and Drainages Works - Stage 1		100%	60	11-May-12 A	31-Jul-12 A	Road and Drainages Works - Stage 1																																								
S27S4010	Road Surface - Stage 1		100%	50	28-Jul-12 A	11-Dec-12 A	Road Surface - Stage 1																																								
S27S4012	Roadmark and Lane Shifting - Stage 1		100%	30	12-Dec-12 A	27-Dec-12 A	Roadmark and Lane Shifting - Stage 1																																								
S27S4018	Removal of existing paving - Stage 2 (Remaining CH4500 - 4740)		100%	25	27-Aug-13 A	12-Oct-13 A	Removal of existing paving - Stage 2 (Remaining CH4500 - 4740)																																								
S27S4035	Road and Drainage Works for Slow Lane - Stage 2 (incl. VO 55: Provision of drainage at Retaining Wall W71 & Bridge B18A)	-21	20%	30	06-Oct-13 A	23-Dec-13	Road and Drainage Works for Slow Lane - Stage 2 (incl. VO 55: Provision of drainage at Retaining Wall W71 & Bridge B18A)																																								
S27S4045	Road Surface Works for Slow Lane	-21	0%	10	24-Dec-13	07-Jan-14	Road Surface Works for Slow Lane																																								
S27S4055	Road Construction and Remaining Works (along CH4500 - 4740)	-21	15%	30	27-Aug-13 A	10-Feb-14	Road Construction and Remaining Works (along CH4500 - 4740)																																								
Construction of Bridge 15A																																															
Preparatory and Enabling Works																																															
S26AS205	Site Clearance		100%	102	01-Jun-10 A	30-Sep-10 A	Site Clearance																																								
S26AS210	Hual Road		100%	102	01-Jun-10 A	30-Sep-10 A	Hual Road																																								
S26AS215	11KV Diversion, CLP		100%	102	01-Jun-10 A	30-Sep-10 A	11KV Diversion, CLP																																								
S26AS225	2 nos. Existing fresh water mains diversion		100%	36	26-Jan-11 A	11-Mar-11 A	2 nos. Existing fresh water mains diversion																																								
S26AS235	Existing tel cable diversion, PCCW		100%	36	26-Jan-11 A	11-Mar-11 A	Existing tel cable diversion, PCCW																																								
S26AS245	HyD/Lighting		100%	60	26-Jan-11 A	09-Apr-11 A	HyD/Lighting																																								
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	Piling - South Abutment, P1 to P5 (incl. VO29: revised piling details)																																								
S26AS230	Excavation & Cap-South Abutment, P1 to P5 (incl. VO6: Bridge 15A cap sleeving details)		100%	173	07-Feb-11 A	05-Sep-11 A	Excavation & Cap-South Abutment, P1 to P5 (incl. VO6: Bridge 15A cap sleeving details)																																								
S26AS240	Pier & backfill, South Abutment, P1 to P5		100%	112	13-Jun-11 A	26-Oct-11 A	Pier & backfill, South Abutment, P1 to P5																																								
South Abutment																																															
S26AS770	Piling - South Abutment		100%	71	02-Jul-10 A	07-Feb-11 A	Piling - South Abutment																																								
S26AS780	Cap & Backfill - South Abutment		100%	37	07-Feb-11 A	22-Mar-11 A	Cap & Backfill - South Abutment																																								
S26AS790	South Abutment		100%	21	13-Jun-11 A	14-Jul-11 A	South Abutment																																								
S26AS800	COD: 15ASA Wingwall		100%	14	13-Jun-11 A	14-Jul-11 A	COD: 15ASA Wingwall																																								
P1																																															
S26AS610	Piling - P1		100%	66	18-Jan-11 A	09-Apr-11 A	Piling - P1																																								
S26AS620	Cap & Backfill - P1		100%	37	26-May-11 A	09-Jul-11 A	Cap & Backfill - P1																																								
S26AS630	Pier - P1		100%	36	11-Jul-11 A	22-Sep-11 A	Pier - P1																																								

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010				2011				2012				2013				2014					
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3			
							1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3			
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																												
HRW0030	Ready For Pre-Handover Retaining Wall W65C, W68, W69, W70, W72A	32	0%	7	26-Nov-13	03-Dec-13																						
HRW0031	Ready For Pre-Handover Retaining Wall W65A, W65B, W66, W67, W71	32	0%	7	26-Nov-13	03-Dec-13																						
Section 4																												
Site Area SA28																												
PHSA2820	Possession of SA28 (Day0)		100%	0	26-Feb-10 A																							
SA280000	Site Area SA28 Works Period	97	90.45%	1216	26-Feb-10 A	22-Mar-14	Site Area																					
SA280010	Site Area SA28 Works Completion	97	0%	0		22-Mar-14	Site Area																					
SA280030	Temporary Traffic Arrangement (Detail shall refer to supplementary information)	77	90.43%	983	26-Feb-10 A	22-Mar-14	Temporari																					
SA280040	Overall Utilities Diversion (Detail shall refer to supplementary information)	77	90.43%	983	26-Feb-10 A	22-Mar-14	Overall Ut																					
North Bound																												
Preliminaries																												
S28N0000	Site Clearance/Access Rd		100%	239	26-Feb-10 A	19-Feb-11 A	Site Clearance/Access Rd																					
S28N0010	Site Clearance (ch 4830-5250)		100%	75	26-Feb-10 A	05-Jun-10 A	Site Clearance (ch 4830-5250)																					
S28N0020	Site Clearance (ch 5250-5700)		100%	75	17-Apr-10 A	23-Jul-10 A	Site Clearance (ch 5250-5700)																					
S28N0110	Access Rd (ch 4830-5250)		100%	75	30-Jun-10 A	04-Oct-10 A	Access Rd (ch 4830-5250)																					
S28N0120	Access Rd (ch 5250-5700)		100%	75	09-Sep-10 A	19-Feb-11 A	Access Rd (ch 5250-5700)																					
Slopeworks																												
S28N5000	Slopeworks Fill S44		100%	36	28-Dec-11 A	11-Feb-12 A	Slopeworks Fill S44																					
S28N5010	Slopeworks Fill S45	8	0%	40	26-Nov-13	14-Jan-14	Slopeworks Fill																					
Construction of Retaining Wall																												
Retaining Wall W72B (CSD 1)																												
S28N2010	Prepare Piling Platform for W72B		100%	13	14-Sep-10 A	29-Sep-10 A	Prepare Piling Platform for W72B																					
S28N2020	Pre-drilling for W72B		100%	13	14-Sep-10 A	29-Sep-10 A	Pre-drilling for W72B																					
S28N2040	Piling works		100%	24	01-Mar-11 A	21-Mar-11 A	Piling works																					
S28N2050	Capping/Walling for W72B		100%	50	26-May-11 A	25-Jul-11 A	Capping/Walling for W72B																					
S28N2051	Pile Cap for W72B		100%	30	26-May-11 A	09-Jun-11 A	Pile Cap for W72B																					
S28N2052	Walling for W72B		100%	75	21-Jun-11 A	17-Sep-11 A	Walling for W72B																					
S28N2060	Backfilling		100%	68	26-Sep-11 A	15-Dec-11 A	Backfilling																					
Retaining Wall W73 (CSD 1)																												
S28N2071	Excavation & ELS		100%	24	14-Sep-10 A	13-Oct-10 A	Excavation & ELS																					
S28N2072	W73 wall Structure (7 bays)		100%	45	01-Mar-11 A	20-Apr-11 A	W73 wall Structure (7 bays)																					
S28N2073	Base Slab W73		100%	24	01-Mar-11 A	28-Mar-11 A	Base Slab W73																					
S28N2074	Wall Stem & W73		100%	24	25-Mar-11 A	20-Apr-11 A	Wall Stem & W73																					
S28N2080	Backfill		100%	75	09-Jul-11 A	24-Dec-11 A	Backfill																					
Retaining Wall for Accom. Underpass Extn. (CSD 1)																												
S28N230	Pre-drilling for Accommodation Underpass Extension		100%	30	30-Jun-10 A	04-Aug-10 A	Pre-drilling for Accommodation Underpass Extension																					
S28N240	Prepare Piling Platform for Accom. Underpass Extn		100%	30	30-Jun-10 A	04-Aug-10 A	Prepare Piling Platform for Accom. Underpass Extn																					
S28N250	Piling works		100%	45	01-Mar-11 A	25-Mar-11 A	Piling works																					
S28N260	Capping/Walling (incl. VO71: Details of typical section for slip road R verge at AUE wall)		100%	54	26-Mar-11 A	03-Jun-11 A	Capping/Walling (incl. VO71: Details of typical section for slip road R verge at AUE wall)																					
S28N270	Capping (AUE)		100%	45	26-Mar-11 A	25-May-11 A	Capping (AUE)																					
S28N280	Walling (AUE)		100%	55	26-May-11 A	30-Jul-11 A	Walling (AUE)																					

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014													
							Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3															
							1	2	3	4	5	6	7	8	9	10	11	12	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4
S28N2302	Temporary Noise Barrier Installation		100%	45	18-Oct-10 A	26-Dec-10 A	Temporary Noise Barrier Installation																																					
S28N2303	Pre-Drilling for NB39 & NB41		100%	21	26-Jan-11 A	22-Feb-11 A	Pre-Drilling for NB39 & NB41																																					
S28N2304	Confirmation of Founding Level		100%	14	26-Mar-11 A	12-Apr-11 A	Confirmation of Founding Level																																					
S28N2310	Excavation		100%	10	03-Feb-12 A	14-Feb-12 A	Excavation																																					
S28N2314	Noise barrier Construction (NB38 - NB41)	-24	92.36%	937	26-Apr-11 A	24-Feb-14	Noise barrier Construction (NB38 - NB41)																																					
S28N2316	Noise barrier Construction NB38	32	80%	30	27-Aug-13 A	03-Dec-13	Noise barrier Construction NB38																																					
S28N2318	Noise barrier Construction NB39 (base slab)		100%	75	19-Apr-12 A	31-Dec-12 A	Noise barrier Construction NB39 (base slab)																																					
S28N2320	Noise barrier Construction NB41 (incl. VO 23: Provision of Drainage of Noise Barrier 41)		100%	50	26-Apr-11 A	25-Jun-11 A	Noise barrier Construction NB41 (incl. VO 23: Provision of Drainage of Noise Barrier 41)																																					
S28N2330	Noise barrier Construction NB39 (Wall)	29	70%	30	27-Feb-13 A	06-Dec-13	Noise barrier Construction NB39 (Wall)																																					
S28N2340	Erection of steel and panel (NB41)		100%	24	11-May-12 A	05-Jun-12 A	Erection of steel and panel (NB41)																																					
S28N2350	Erection of steel and panel (NB39)	29	0%	10	06-Dec-13	18-Dec-13	Erection of steel and panel (NB39)																																					
S28N2355	Erection of steel and panel (NB38)	32	0%	10	03-Dec-13	14-Dec-13	Erection of steel and panel (NB38)																																					
S28N2370	Noise Barrier Construction NB40 (Bay1 to Bay3)	-24	55%	50	27-Aug-13 A	12-Feb-14	Noise Barrier Construction NB40 (Bay1 to Bay3)																																					
S28N2380	Noise Barrier Construction NB40 (Bay4 to Bay5)		100%	40	25-Mar-13 A	06-Jul-13 A	Noise Barrier Construction NB40 (Bay4 to Bay5)																																					
S28N2385	Erection of steel and panel (NB40)	-24	0%	10	12-Feb-14	24-Feb-14	Erection of steel and panel (NB40)																																					
Traffic Control & Surveillance System																																												
S28N4800	TCSS (ch4820-ch5640) & (Gantry G29) (incl. VO73 Revised Sign Gantry Details)	24	40%	40	29-Apr-13 A	23-Dec-13	TCSS (ch4820-ch5640) & (Gantry G29) (incl. VO73 Revised Sign Gantry Details)																																					
Landscaping																																												
S28N6000	Landscaping Works (ch4820 - 5640)	8	20%	50	27-Apr-13 A	14-Jan-14	Landscaping Works (ch4820 - 5640)																																					
South Bound																																												
Preliminaries																																												
S28S0000	Site Clearance/Access Rd (incl. VO4 & VO5: Revised setting out plan of Slip Road W)		100%	0	23-Jun-10 A	01-Feb-11 A	Site Clearance/Access Rd (incl. VO4 & VO5: Revised setting out plan of Slip Road W)																																					
S28S0010	Site Clearance		100%	75	23-Jun-10 A	18-Sep-10 A	Site Clearance																																					
S28S0020	Access Rd		100%	75	27-Jul-10 A	01-Feb-11 A	Access Rd																																					
Roadworks, Drainage & Utilities																																												
S28S4010	Roadworks, Drainages & Utilities (CH4820 - Ch5700)(incl. VO20: Revised Fire mains alignment plan)	30	96.91%	454	11-May-12 A	11-Dec-13	Roadworks, Drainages & Utilities (CH4820 - Ch5700)(incl. VO20: Revised Fire mains alignment plan)																																					
S28S4012	Removal of existing paving - Stage 1 (CH5300 - 5700 & Slip Road W)		100%	75	11-May-12 A	08-Jun-13 A	Removal of existing paving - Stage 1 (CH5300 - 5700 & Slip Road W)																																					
S28S4016	Utilities - Stage 1		100%	75	11-May-12 A	08-Feb-13 A	Utilities - Stage 1																																					
S28S4020	Road and Drainages Works - Stage 1 (incl. VO 75 Modification of existing SAV Chamber)		100%	75	11-May-12 A	25-Jun-13 A	Road and Drainages Works - Stage 1 (incl. VO 75 Modification of existing SAV Chamber)																																					
S28S4021	Road Surface and Roadmark - Stage 1 (Slow Lane)		100%	30	18-Mar-13 A	18-Jul-13 A	Road Surface and Roadmark - Stage 1 (Slow Lane)																																					
S28S4025	Removal of existing paving - Stage 2 (CH5300 - 5700 & Slip Road W)		100%	30	19-Jul-13 A	02-Aug-13 A	Removal of existing paving - Stage 2 (CH5300 - 5700 & Slip Road W)																																					
S28S4027	Utilities - Stage 2 (CH5300 - 5700) (incl. VO 77 Provision of cable duct for power supply)		100%	30	03-Aug-13 A	12-Aug-13 A	Utilities - Stage 2 (CH5300 - 5700) (incl. VO 77 Provision of cable duct for power supply)																																					
S28S4029	Road and Drainages Works - Stage 2		100%	30	03-Aug-13 A	12-Aug-13 A	Road and Drainages Works - Stage 2																																					
S28S4031	Road Surface and Roadmark - Stage 2 (Fast Lane)	30	80%	30	13-Aug-13 A	02-Dec-13	Road Surface and Roadmark - Stage 2 (Fast Lane)																																					
S28S4085	Remaining Road Works at Slip Road W	30	80%	40	27-Aug-13 A	11-Dec-13	Remaining Road Works at Slip Road W																																					
Noise Barriers 44 & Road Barriers																																												
Noise Barrier NB44																																												
S28S2000	Excavation for NB44		100%	219	25-Aug-10 A	24-May-11 A	Excavation for NB44																																					
S28S2010	Excavation for NB44 (Bay1 & Bay2)		100%	44	25-Aug-10 A	18-Oct-10 A	Excavation for NB44 (Bay1 & Bay2)																																					
S28S2020	Excavation for NB44 (Bay3 & Bay4)		100%	44	19-Oct-10 A	08-Dec-10 A	Excavation for NB44 (Bay3 & Bay4)																																					
S28S2030	Excavation for NB44 (Bay5 & Bay6)		100%	44	26-Apr-11 A	26-May-11 A	Excavation for NB44 (Bay5 & Bay6)																																					
S28S2040	Excavation for NB44 (Bay7 & Bay8)		100%	36	26-Aug-11 A	10-Oct-11 A	Excavation for NB44 (Bay7 & Bay8)																																					
S28S2050	Excavation for NB44 (Bay9 & Bay10)		100%	43	14-Oct-11 A	03-Dec-11 A	Excavation for NB44 (Bay9 & Bay10)																																					

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014							
							Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3									
							1	2	3	4	5	6	7	8	9	10	11	12	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	4	4
S28S2060	Noise Barrier Footing Construction for NB44 (incl. VO 46: Modification of Noise Barrier Footing for NB44)		100%	282	26-Mar-11 A	20-Dec-11 A	Noise Barrier Footing Construction for NB44 (incl. VO 46: Modification of Noise Barrier Footing for NB44)																															
S28S2070	Noise Barrier Footing Construction for NB44 (Bay 1)		100%	32	26-Mar-11 A	15-Apr-11 A	Noise Barrier Footing Construction for NB44 (Bay 1)																															
S28S2080	Noise Barrier Footing Construction for NB44 (Bay 2)		100%	32	06-Apr-11 A	21-Apr-11 A	Noise Barrier Footing Construction for NB44 (Bay 2)																															
S28S2090	Noise Barrier Footing Construction for NB44 (Bay 3)		100%	32	26-May-11 A	04-Jun-11 A	Noise Barrier Footing Construction for NB44 (Bay 3)																															
S28S2100	Noise Barrier Footing Construction for NB44 (Bay 4)		100%	30	26-Apr-11 A	26-May-11 A	Noise Barrier Footing Construction for NB44 (Bay 4)																															
S28S2110	Noise Barrier Footing Construction for NB44 (Bay 5)		100%	24	26-Sep-11 A	25-Oct-11 A	Noise Barrier Footing Construction for NB44 (Bay 5)																															
S28S2120	Noise Barrier Footing Construction for NB44 (Bay 6)		100%	24	26-Oct-11 A	22-Nov-11 A	Noise Barrier Footing Construction for NB44 (Bay 6)																															
S28S2130	Noise Barrier Footing Construction for NB44 (Bay 7)		100%	24	23-Nov-11 A	20-Dec-11 A	Noise Barrier Footing Construction for NB44 (Bay 7)																															
S28S2140	Noise Barrier Footing Construction for NB44 (Bay 8)		100%	24	23-Nov-11 A	20-Dec-11 A	Noise Barrier Footing Construction for NB44 (Bay 8)																															
S28S2150	Noise Barrier Footing Construction for NB44 (Bay 9)		100%	23	23-Nov-11 A	20-Dec-11 A	Noise Barrier Footing Construction for NB44 (Bay 9)																															
S28S2160	Noise Barrier Footing Construction for NB44 (Bay 10)		100%	18	23-Nov-11 A	20-Dec-11 A	Noise Barrier Footing Construction for NB44 (Bay 10)																															
S28S2170	Remaining NB44 installation of panel		100%	7	27-Aug-13 A	26-Sep-13 A	Remaining NB44 installation of panel																															
Traffic Control & Surveillance System																																						
S28S4800	TCSS	19	77.8%	130	28-Feb-13 A	31-Dec-13	TCSS																															
S28S4810	TCSS - Stage 1 (ch4820 - ch5520)	19	80%	24	28-Feb-13 A	30-Nov-13	TCSS - Stage 1 (ch4820 - ch5520)																															
S28S4850	TCSS - Stage 5 (ch5520 - ch5640), (Gantry G56) (incl. VO73 Revised Sign Gantry Details)	19	0%	24	30-Nov-13	31-Dec-13	TCSS - Stage 5 (ch5520 - ch5640), (Gantry G56) (incl. VO73 Revised Sign Gantry Details)																															
Modification of Existing Bridge																																						
S28S1200	Modification of Lam Kam Rd. Flyover	-39	39.22%	119	26-Aug-13 A	25-Feb-14	Modification of Lam Kam Rd. Flyover																															
S28S1240	Diversion for modification kerb and road reconstruction (N/B)	-39	95%	43	26-Aug-13 A	28-Nov-13	Diversion for modification kerb and road reconstruction (N/B)																															
S28S1250	Removal central barrier and road construction	-39	25%	40	26-Sep-13 A	06-Jan-14	Removal central barrier and road construction																															
S28S1260	Diversion for modification kerb and road reconstruction (S/B)	-39	0%	40	06-Jan-14	25-Feb-14	Diversion for modification kerb and road reconstruction (S/B)																															
Road Construction and Road Resurfacing																																						
S28S4960	Road Construction and Resurfacing S/B for SA28	30	80%	60	26-Sep-13 A	16-Dec-13	Road Construction and Resurfacing S/B for SA28																															
Site Area SA29																																						
PHSA2920	Possession of SA29 (Day270)		100%	0	27-Jul-10 A		Possession of SA29 (Day270)																															
SA290000	Site Area SA29 Works Period (incl. VO002 & VO0011: Fencing details along site boundaries SA 29)	153	93.65%	946	27-Jul-10 A	25-Jan-14	Site Area SA29 Works Period (incl. VO002 & VO0011: Fencing details along site boundaries SA 29)																															
SA290010	Site Area SA29 Works Completion	153	0%	0		25-Jan-14	Site Area SA29 Works Completion																															
SA290020	Temporary Traffic Arrangement (Detail shall refer to supplementary information)	122	93.57%	764	27-Jul-10 A	25-Jan-14	Temporary Traffic Arrangement (Detail shall refer to supplementary information)																															
SA290030	Overall Utilities Diversion (Detail shall refer to supplementary information)	122	93.57%	764	27-Jul-10 A	25-Jan-14	Overall Utilities Diversion (Detail shall refer to supplementary information)																															
North Bound																																						
Preliminaries																																						
S29N0000	Site Clearance/Access Rd		100%	60	26-Jan-11 A	09-Apr-11 A	Site Clearance/Access Rd																															
Roadworks, Drainage & Utilities																																						
S29N4010	Roadworks, Realignment of Tai Wo Service Rd. West (NB42)		100%	58	13-Apr-12 A	21-Jan-13 A	Roadworks, Realignment of Tai Wo Service Rd. West (NB42)																															
S29N4020	Roadworks, Realignment of Tai Wo Service Rd. West (exclude NB42)		100%	38	15-Jan-13 A	28-Mar-13 A	Roadworks, Realignment of Tai Wo Service Rd. West (exclude NB42)																															
S29N4100	Gravity Sewer Line (4 sections) (incl. VO 8 & VO 35: Revised layout of Southern Trunk Sewer & Manhole Schedule)		100%	111	03-Jan-11 A	15-Dec-12 A	Gravity Sewer Line (4 sections) (incl. VO 8 & VO 35: Revised layout of Southern Trunk Sewer & Manhole Schedule)																															
S29N4110	Gravity Sewer Line - Stage 1 (STS10.30-80)		100%	60	03-Jan-11 A	31-Mar-12 A	Gravity Sewer Line - Stage 1 (STS10.30-80)																															
S29N4120	Gravity Sewer Line - Stage 2 (STS10.10-30)		100%	60	01-Apr-11 A	30-Jul-11 A	Gravity Sewer Line - Stage 2 (STS10.10-30)																															
S29N4130	Gravity Sewer Line - Stage 2 (STS10.80-105)		100%	63	28-May-11 A	15-Dec-12 A	Gravity Sewer Line - Stage 2 (STS10.80-105)																															
Noise Barriers & Road Barriers																																						
Noise Barrier NB42 on Mini-Piles (AD)																																						
S29N2000	WSD/DSD/HKCG/PCCW/HGC/CATV/NWT/HKBN/TGT/CLP Diversion		100%	72	11-Apr-11 A	11-Jul-11 A	WSD/DSD/HKCG/PCCW/HGC/CATV/NWT/HKBN/TGT/CLP Diversion																															
S29N2020	Footing for NB42 (Bay1 - Bay9) (incl. VO 7: Construction of modified noise barrier foundation for NB42)		100%	110	06-Dec-10 A	05-Jul-11 A	Footing for NB42 (Bay1 - Bay9) (incl. VO 7: Construction of modified noise barrier foundation for NB42)																															

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010				2011				2012				2013				2014			
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
							1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1	1	1	1	1
S28N1261	Pier Construction		100%	36	11-Feb-11 A	18-Jul-11 A																				
Pier NLKP3							<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Pier Construction 																			
S28N1271	Pre-drilling for Piles		100%	11	11-Sep-10 A	24-Sep-10 A	<input checked="" type="checkbox"/> Pre-drilling for Piles																			
S28N1272	Confirmation of Founding Level		100%	21	12-Sep-10 A	15-Oct-10 A	<input checked="" type="checkbox"/> Confirmation of Founding Level																			
S28N1273	Piling Work (24shp)		100%	68	20-Sep-10 A	16-Nov-10 A	<input checked="" type="checkbox"/> Piling Work (24shp)																			
S28N1274	Temporary Shoring System		100%	31	17-Nov-10 A	03-Dec-10 A	<input checked="" type="checkbox"/> Temporary Shoring System																			
S28N1275	Excavation to Formation Level		100%	10	06-Dec-10 A	18-Dec-10 A	<input checked="" type="checkbox"/> Excavation to Formation Level																			
S28N1276	Pile Head Trimming and bearing plate		100%	11	20-Dec-10 A	24-Dec-10 A	<input checked="" type="checkbox"/> Pile Head Trimming and bearing plate																			
S28N1277	Pile Cap Construction (incl. VO29: revised piling details)		100%	24	20-Dec-10 A	05-Jan-11 A	<input checked="" type="checkbox"/> Pile Cap Construction (incl. VO29: revised piling details)																			
S28N1278	Backfilling		100%	30	26-Feb-11 A	01-Apr-11 A	<input checked="" type="checkbox"/> Backfilling																			
S28N1279	Pier Construction		100%	61	02-Apr-11 A	11-Jun-11 A	<input checked="" type="checkbox"/> Pier Construction																			
Pier NLKP4							<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Gas main Diversion 																			
S28N1281	Gas main Diversion		100%	120	13-May-10 A	31-Jul-10 A	<input checked="" type="checkbox"/> Gas main Diversion																			
S28N1282	Pre-drilling for Piles		100%	9	01-Aug-10 A	14-Aug-10 A	<input checked="" type="checkbox"/> Pre-drilling for Piles																			
S28N1283	Confirmation of Founding Level		100%	22	16-Aug-10 A	31-Aug-10 A	<input checked="" type="checkbox"/> Confirmation of Founding Level																			
S28N1284	Piling Work (16shp)		100%	63	01-Sep-10 A	30-Sep-10 A	<input checked="" type="checkbox"/> Piling Work (16shp)																			
S28N1285	Temporary Shoring System		100%	44	20-Oct-10 A	23-Oct-10 A	<input checked="" type="checkbox"/> Temporary Shoring System																			
S28N1286	Excavation to Formation Level		100%	7	25-Oct-10 A	28-Oct-10 A	<input checked="" type="checkbox"/> Excavation to Formation Level																			
S28N1287	Pile Head Trimming and bearing plate		100%	14	29-Oct-10 A	06-Nov-10 A	<input checked="" type="checkbox"/> Pile Head Trimming and bearing plate																			
S28N1288	Pile Cap Construction (incl. VO29: revised piling details)		100%	21	08-Nov-10 A	19-Nov-10 A	<input checked="" type="checkbox"/> Pile Cap Construction (incl. VO29: revised piling details)																			
S28N1289	Backfilling		100%	30	20-Dec-10 A	11-Jan-11 A	<input checked="" type="checkbox"/> Backfilling																			
S28N1290	Pier Construction		100%	71	02-Feb-11 A	26-Mar-11 A	<input checked="" type="checkbox"/> Pier Construction																			
Pier NLKP5							<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Gas main Diversion 																			
S28N1301	Gas main Diversion		100%	120	13-May-10 A	31-Aug-10 A	<input checked="" type="checkbox"/> Gas main Diversion																			
S28N1302	Pre-drilling for Piles		100%	7	01-Sep-10 A	11-Sep-10 A	<input checked="" type="checkbox"/> Pre-drilling for Piles																			
S28N1303	Confirmation of Founding Level		100%	14	13-Sep-10 A	25-Sep-10 A	<input checked="" type="checkbox"/> Confirmation of Founding Level																			
S28N1304	Piling Work (16shp) (incl. VO001: Revised Layout of Piles at New Lam Kam Road ...)		100%	62	26-Sep-10 A	19-Oct-10 A	<input checked="" type="checkbox"/> Piling Work (16shp) (incl. VO001: Revised Layout of Piles at New Lam Kam Road Flyover Pier NLKP5)																			
S28N1305	Temporary Shoring System		100%	44	20-Oct-10 A	05-Nov-10 A	<input checked="" type="checkbox"/> Temporary Shoring System																			
S28N1306	Excavation to Formation Level		100%	7	08-Nov-10 A	12-Nov-10 A	<input checked="" type="checkbox"/> Excavation to Formation Level																			
S28N1307	Pile Head Trimming and bearing plate		100%	14	15-Nov-10 A	27-Nov-10 A	<input checked="" type="checkbox"/> Pile Head Trimming and bearing plate																			
S28N1308	Pile Cap Construction (incl. VO29: revised piling details)		100%	21	29-Nov-10 A	11-Dec-10 A	<input checked="" type="checkbox"/> Pile Cap Construction (incl. VO29: revised piling details)																			
S28N1309	Backfilling		100%	30	13-Dec-10 A	18-Dec-10 A	<input checked="" type="checkbox"/> Backfilling																			
S28N1310	Pier Construction		100%	74	28-Dec-10 A	28-Mar-11 A	<input checked="" type="checkbox"/> Pier Construction																			
Pier NLKP6							<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Gas main Diversion 																			
S28N1321	Gas main Diversion		100%	150	13-May-10 A	10-Nov-10 A	<input checked="" type="checkbox"/> Gas main Diversion																			
S28N1322	Pre-drilling for Piles		100%	14	21-Jul-10 A	23-Feb-11 A	<input checked="" type="checkbox"/> Pre-drilling for Piles																			
S28N1323	Confirmation of Founding Level		100%	14	21-Jul-10 A	25-Feb-11 A	<input checked="" type="checkbox"/> Confirmation of Founding Level																			
S28N1324	Piling Work (23shp)		100%	75	28-Feb-11 A	28-Mar-11 A	<input checked="" type="checkbox"/> Piling Work (23shp)																			
S28N1325	Temporary Shoring System		100%	44	26-May-11 A	18-Jul-11 A	<input checked="" type="checkbox"/> Temporary Shoring System																			
S28N1326	Excavation to Formation Level		100%	7	05-May-11 A	23-Jun-11 A	<input checked="" type="checkbox"/> Excavation to Formation Level																			
S28N1327	Pile Head Trimming and bearing plate		100%	14	29-Jun-11 A	05-Jul-11 A	<input checked="" type="checkbox"/> Pile Head Trimming and bearing plate																			
S28N1328	Pile Cap Construction (incl. VO29: revised piling details)		100%	23	28-Jul-11 A	24-Aug-11 A	<input checked="" type="checkbox"/> Pile Cap Construction (incl. VO29: revised piling details)																			
S28N1329	Backfilling		100%	28	26-Sep-11 A	29-Oct-11 A	<input checked="" type="checkbox"/> Backfilling																			
S28N1330	Pier Construction		100%	71	28-Sep-11 A	12-Nov-11 A	<input checked="" type="checkbox"/> Pier Construction																			
Pier NLKP7							<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Realignment of Existing slip road 																			
S28N1341	Realignment of Existing slip road		100%	45	19-May-10 A	13-Jul-10 A	<input checked="" type="checkbox"/> Realignment of Existing slip road																			
S28N1342	Existing Water main Diversion		100%	45	14-Jul-10 A	03-Sep-10 A	<input checked="" type="checkbox"/> Existing Water main Diversion																			
S28N1343	Pre-drilling for Piles		100%	7	04-Sep-10 A	18-Sep-10 A	<input checked="" type="checkbox"/> Pre-drilling for Piles																			

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014																								
							Q1				Q2				Q3				Q4				Q1				Q2				Q3				Q4																				
							1	2	3	4	5	6	7	8	9	10	11	12	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4
SA310000	Site Area SA31 Works Period (incl. VO42, VO52, VO59 & VO65)	208	99.43%	884	26-Feb-10 A	30-Nov-13	[Gantt bar for SA310000]																																																
SA310010	Site Area SA31 Works Completion	208	0%	0		30-Nov-13	[Gantt bar for SA310010]																																																
South Bound																																																							
Preliminaries																																																							
S31S0000	Site Clearance/TTM/Access Rd/Utility Diversion (Incl. Liason and Coordination)		100%	252	26-Feb-10 A	31-Dec-10 A	[Gantt bar for S31S0000]																																																
Roadworks, Drainage & Utilities																																																							
Portion 3																																																							
S31S5000	Portion 3 - New Footpath (CH0 to 175)		100%	165	11-Jun-11 A	15-Jan-13 A	[Gantt bar for S31S5000]																																																
S31S5010	Formation level of footpath		100%	45	04-Jan-12 A	28-Feb-12 A	[Gantt bar for S31S5010]																																																
S31S5020	Preparation for footpath & Cycle Track Diversion		100%	7	11-Jun-11 A	18-Jun-11 A	[Gantt bar for S31S5020]																																																
S31S5025	Uncharted Towngas DN400 HP		100%	178	29-May-12 A	05-Jan-13 A	[Gantt bar for S31S5025]																																																
S31S5030	Additional UU works (CLP 132kV & 11kv)		100%	17	10-Oct-12 A	16-Jan-13 A	[Gantt bar for S31S5030]																																																
S31S5035	Roadworks		100%	215	07-Sep-12 A	16-Mar-13 A	[Gantt bar for S31S5035]																																																
S31S5040	Footpath Sub-base, kerb and concrete surface		100%	17	07-Sep-12 A	30-May-13 A	[Gantt bar for S31S5040]																																																
S31S5050	CLP Overhead wooden Pole		100%	12	26-Dec-12 A	07-Jan-13 A	[Gantt bar for S31S5050]																																																
S31S5060	New cycle track formation level		100%	15	28-Nov-12 A	06-Apr-13 A	[Gantt bar for S31S5060]																																																
S31S5070	New cycle track (Bituminous Layer)		100%	10	29-Jan-13 A	25-Apr-13 A	[Gantt bar for S31S5070]																																																
S31S5080	New Kerb		100%	7	07-Jan-13 A	23-Apr-13 A	[Gantt bar for S31S5080]																																																
S31S5090	Public Lighting & TCSS Ductings (incl. VO 77 Provision of cable duct for power supply)		100%	7	06-Oct-12 A	23-Apr-13 A	[Gantt bar for S31S5090]																																																
S31S5100	New public lightings poles		100%	15	17-Apr-13 A	20-Apr-13 A	[Gantt bar for S31S5100]																																																
S31S5110	Reconstruction carriageway		100%	7	05-Mar-13 A	20-Apr-13 A	[Gantt bar for S31S5110]																																																
S31S5120	Traffic Lights	166	0%	5	26-Nov-13	30-Nov-13	[Gantt bar for S31S5120]																																																
S31S5130	Roadworks (Other area not affected by towngas)		100%	60	21-May-12 A	16-Mar-13 A	[Gantt bar for S31S5130]																																																
S31S5132	Roadworks (Remaining area affected by towngas)		100%	19	26-Dec-12 A	15-Jan-13 A	[Gantt bar for S31S5132]																																																
Portion 1																																																							
S31S4620	Portion 1 - CH 0 to CH 50 (From Hong Lok Yuen Junction to WSD Gate)		100%	146	20-Jun-11 A	16-Mar-13 A	[Gantt bar for S31S4620]																																																
S31S4630	Site Clearance		100%	7	20-Jun-11 A	27-Jun-11 A	[Gantt bar for S31S4630]																																																
S31S4640	Excavation road formation level		100%	50	28-Jun-11 A	25-Aug-11 A	[Gantt bar for S31S4640]																																																
S31S4648	Uncharted Towngas / CLP		100%	65	16-Jan-12 A	10-Aug-12 A	[Gantt bar for S31S4648]																																																
S31S4650	Trial Pit for Towngas DN400 HP		100%	14	16-Jan-12 A	04-Feb-12 A	[Gantt bar for S31S4650]																																																
S31S4660	Additional Towngas DN400 HP preparation and materials delivery		100%	50	06-Feb-12 A	27-Apr-12 A	[Gantt bar for S31S4660]																																																
S31S4670	Additional Towngas DN400 HP laying works		100%	12	28-Apr-12 A	26-May-12 A	[Gantt bar for S31S4670]																																																
S31S4675	Uncharted CLP 11kV Existing diversion (Ducting & Cabling, Tie-in and uncharted cables)		100%	65	30-Jul-12 A	10-Aug-12 A	[Gantt bar for S31S4675]																																																
S31S4678	UU diversion		100%	67	15-Dec-11 A	18-Dec-12 A	[Gantt bar for S31S4678]																																																
S31S4679	Excavation for UU diversion		100%	20	15-Dec-11 A	10-Jan-12 A	[Gantt bar for S31S4679]																																																
S31S4680	Additional CLP 11kV Existing Diversion (Ducting & Cabling, Tie-in and uncharted cables)		100%	10	25-Apr-12 A	10-Aug-12 A	[Gantt bar for S31S4680]																																																
S31S4690	Additional CLP 132 kV (New Lay)		100%	17	02-Apr-12 A	18-Jun-12 A	[Gantt bar for S31S4690]																																																
S31S4700	Additional CLP 132kV (Existing)		100%	22	11-Aug-12 A	16-Aug-12 A	[Gantt bar for S31S4700]																																																
S31S4710	Additional UU work (HGC, HKBN, TGT & NWT)		100%	35	06-Aug-12 A	18-Dec-12 A	[Gantt bar for S31S4710]																																																
S31S4720	Excavation and DN 600 FW & DN 300 SW		100%	68	28-Jun-11 A	09-Nov-12 A	[Gantt bar for S31S4720]																																																
S31S4725	Roadwork		100%	0	15-Oct-12 A	29-Jul-13 A	[Gantt bar for S31S4725]																																																
S31S4730	Footpath & Kerb		100%	30	20-Dec-12 A	29-Jul-13 A	[Gantt bar for S31S4730]																																																
S31S4740	Roadwork		100%	30	15-Oct-12 A	16-Mar-13 A	[Gantt bar for S31S4740]																																																
Portion 2																																																							
S31S4750	Portion 2 - CH 50 to 80 (From WSD Gate to Hong Lok Yuen)		100%	108	20-Jun-11 A	29-Jul-13 A	[Gantt bar for S31S4750]																																																

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010												2011				2012				2013				2014														
							Q1				Q2				Q3				Q4				Q1				Q2				Q3				Q4										
							1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
S31S4760	Site clearance		100%	7	20-Jun-11 A	27-Jun-11 A	[Gantt bar: 20-Jun-11 to 27-Jun-11]												Site clearance																										
S31S4765	UU Diversion		100%	82	28-Mar-12 A	05-Oct-12 A	[Gantt bar: 28-Mar-12 to 05-Oct-12]												UU Diversion																										
S31S4766	Slopeworks S45A		100%	18	28-Mar-12 A	21-Apr-12 A	[Gantt bar: 28-Mar-12 to 21-Apr-12]												Slopeworks S45A																										
S31S4770	Additional CLP 132kV (New Lay & clashing with existing)		100%	45	25-Apr-12 A	18-Jun-12 A	[Gantt bar: 25-Apr-12 to 18-Jun-12]												Additional CLP 132kV (New Lay & clashing with existing)																										
S31S4780	Additional CLP 11kV New Lay (Ducting & Cabling and Tie-in)		100%	46	19-Jun-12 A	27-Jul-12 A	[Gantt bar: 19-Jun-12 to 27-Jul-12]												Additional CLP 11kV New Lay (Ducting & Cabling and Tie-in)																										
S31S4790	UU works (HKBN & New Lay HGC)		100%	12	27-Aug-12 A	05-Oct-12 A	[Gantt bar: 27-Aug-12 to 05-Oct-12]												UU works (HKBN & New Lay HGC)																										
S31S4800	Footpath & kerb and Diversion of footpath		100%	15	10-Sep-12 A	29-Jul-13 A	[Gantt bar: 10-Sep-12 to 29-Jul-13]												Footpath & kerb and Diversion of footpath																										
S31S4810	Roadwork		100%	21	25-Oct-12 A	25-Feb-13 A	[Gantt bar: 25-Oct-12 to 25-Feb-13]												Roadwork																										
Roadworks, Drainage & Utilities																																													
S31S4820	Eastbound Roadworks		100%	50	07-Jan-13 A	08-Apr-13 A	[Gantt bar: 07-Jan-13 to 08-Apr-13]												Eastbound Roadworks																										
S31S4830	Westbound Roadworks		100%	50	17-Jan-13 A	20-Apr-13 A	[Gantt bar: 17-Jan-13 to 20-Apr-13]												Westbound Roadworks																										
Section 7																																													
Site Area SA41																																													
PHSA4110	Possession of SA41 (Day0)		100%	0	26-Feb-10 A		[Gantt bar: 26-Feb-10 to 26-Feb-10]												Possession of SA41 (Day0)																										
SA410000	Site Area SA41 Works Period	-15	85.59%	1581	26-Feb-10 A	11-Jul-14	[Gantt bar: 26-Feb-10 to 11-Jul-14]												Site Area SA41 Works Period																										
SA410010	Site Area SA41 Works Completion	-15	0%	0		11-Jul-14	[Gantt bar: 11-Jul-14 to 11-Jul-14]												Site Area SA41 Works Completion																										
Temporary Site Office																																													
S41G0000	Site Clearance / TTM		100%	60	26-Feb-10 A	12-May-10 A	[Gantt bar: 26-Feb-10 to 12-May-10]												Site Clearance / TTM																										
S41G9000	Construction of ER & Contractor's Office (incl. VO 24: Office Renovation)		100%	60	26-Feb-10 A	12-May-10 A	[Gantt bar: 26-Feb-10 to 12-May-10]												Construction of ER & Contractor's Office (incl. VO 24: Office Renovation)																										
S41G9100	Temp Warehouse, Fabrication & Equip Yard	-16	90%	1419	13-May-10 A	16-Apr-14	[Gantt bar: 13-May-10 to 16-Apr-14]												Temp Warehouse, Fabrication & Equip Yard																										
S41G9120	Dismantle of ER & Contractor's Office	-12	0%	68	16-Apr-14	11-Jul-14	[Gantt bar: 16-Apr-14 to 11-Jul-14]												Dismantle of ER & Contractor's Office																										
Site Area SA42 (Core Storage & Works Area)																																													
PHSA4210	Possession of SA42 (Day0)		100%	0	26-Feb-10 A		[Gantt bar: 26-Feb-10 to 26-Feb-10]												Possession of SA42 (Day0)																										
SA410040	Site Area SA42 Works Period	0	86.59%	1581	26-Feb-10 A	25-Jun-14	[Gantt bar: 26-Feb-10 to 25-Jun-14]												Site Area SA42 Works Period																										
SA420010	Site Area SA42 Works Completion	0	0%	0		25-Jun-14*	[Gantt bar: 25-Jun-14 to 25-Jun-14]												Site Area SA42 Works Completion																										
Site Area SA43																																													
PHSA4310	Possession of SA43 (Day90)		100%	0	04-May-10 A		[Gantt bar: 04-May-10 to 04-May-10]												Possession of SA43 (Day90)																										
SA410020	Site Area SA43 Works Period	-16	84.73%	1492	04-May-10 A	11-Jul-14	[Gantt bar: 04-May-10 to 11-Jul-14]												Site Area SA43 Works Period																										
SA410030	Site Area SA43 Works Completion	-16	0%	0		11-Jul-14*	[Gantt bar: 11-Jul-14 to 11-Jul-14]												Site Area SA43 Works Completion																										
Mulching Production Area																																													
S41G010	Site Clearance		100%	59	27-May-10 A	05-Aug-10 A	[Gantt bar: 27-May-10 to 05-Aug-10]												Site Clearance																										
S41G020	Site Clearance (Mulching Office Area)		100%	45	27-May-10 A	20-Jul-10 A	[Gantt bar: 27-May-10 to 20-Jul-10]												Site Clearance (Mulching Office Area)																										
S41G030	Site Clearance (Wood Storage Area)		100%	45	12-Jun-10 A	05-Aug-10 A	[Gantt bar: 12-Jun-10 to 05-Aug-10]												Site Clearance (Wood Storage Area)																										
S41G040	Construction of Mulching Production Yard		100%	60	06-Aug-10 A	18-Oct-10 A	[Gantt bar: 06-Aug-10 to 18-Oct-10]												Construction of Mulching Production Yard																										
S41G050	Temp Warehouse, Fabrication & Equip Yard (Site allocated for period till 8 May 2012) : Expected production = 900m3	213	100%	1260	13-Sep-10 A	26-Nov-13	[Gantt bar: 13-Sep-10 to 26-Nov-13]												Temp Warehouse, Fabrication & Equip Yard																										
S41G060	Mulching Production Phase 1 (45m3)		100%	63	13-Sep-10 A	09-Oct-10 A	[Gantt bar: 13-Sep-10 to 09-Oct-10]												Mulching Production Phase 1 (45m3)																										
S41G070	Mulching Production Phase 2 (45m3) (incl. VO16, VO 18)		100%	63	21-Dec-10 A	21-Feb-11 A	[Gantt bar: 21-Dec-10 to 21-Feb-11]												Mulching Production Phase 2 (45m3) (incl. VO16, VO 18)																										
S41G080	Mulching Production Phase 3 (45m3)		100%	63	20-Feb-11 A	24-Apr-11 A	[Gantt bar: 20-Feb-11 to 24-Apr-11]												Mulching Production Phase 3 (45m3)																										
S41G090	Mulching Production Phase 4 (45m3)		100%	63	24-Apr-11 A	26-Jun-11 A	[Gantt bar: 24-Apr-11 to 26-Jun-11]												Mulching Production Phase 4 (45m3)																										
S41G100	Mulching Production Phase 5 (45m3)		100%	63	27-Jun-11 A	28-Aug-11 A	[Gantt bar: 27-Jun-11 to 28-Aug-11]												Mulching Production Phase 5 (45m3)																										
S41G110	Mulching Production Phase 6 (45m3)		100%	63	29-Aug-11 A	30-Oct-11 A	[Gantt bar: 29-Aug-11 to 30-Oct-11]												Mulching Production Phase 6 (45m3)																										
S41G120	Mulching Production Phase 7 (45m3)		100%	63	31-Oct-11 A	01-Jan-12 A	[Gantt bar: 31-Oct-11 to 01-Jan-12]												Mulching Production Phase 7 (45m3)																										
S41G130	Mulching Production Phase 8 (45m3)		100%	63	02-Jan-12 A	31-Mar-12 A	[Gantt bar: 02-Jan-12 to 31-Mar-12]												Mulching Production Phase 8 (45m3)																										
S41G140	Mulching Production Phase 9 (45m3)		100%	63	02-Apr-12 A	31-Dec-12 A	[Gantt bar: 02-Apr-12 to 31-Dec-12]												Mulching Production Phase 9 (45m3)																										
S41G260	Dismantle of Mulching Production Yard	-13	0%	68	16-Apr-14	11-Jul-14	[Gantt bar: 16-Apr-14 to 11-Jul-14]												Dismantle of Mulching Production Yard																										
S41G270	Dismantle of Mulching Production Yard : Removing Mulching Office	-13	0%	48	16-Apr-14	17-Jun-14	[Gantt bar: 16-Apr-14 to 17-Jun-14]												Dismantle of Mulching Production Yard : Removing Mulching Office																										

Activity ID	Activity Name	Total Float	Activity % Complete	Original Duration	Start	Finish	2010				2011				2012				2013				2014												
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3										
							1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
S41G280	Dismantle of Mulching Production Yard : Removing Security Fence and Security Device	-13	0%	20	17-Jun-14	11-Jul-14																													
Section 8																																			
Establishment Works																																			
S21G8000	SA21 Establishment Works	-152	0%	365	26-Nov-13	25-Nov-14																													
Section 9																																			
Establishment Works																																			
S22G8000	SA22 Establishment Works	-152	0%	365	26-Nov-13	25-Nov-14																													
S23G8000	SA23 Establishment Works	-152	0%	365	26-Nov-13	25-Nov-14																													
S24G8000	SA24 Establishment Works	-152	0%	365	26-Nov-13	25-Nov-14																													
S25G8000	SA25 Establishment Works	-152	0%	365	26-Nov-13	25-Nov-14																													
S26G8000	SA26 Establishment Works	-152	0%	365	26-Nov-13	25-Nov-14																													
Section 10																																			
Establishment Works																																			
S26AG800	SA26A Establishment Works	-152	0%	365	26-Nov-13	25-Nov-14																													
S27G8000	SA27 Establishment Works	-152	0%	365	26-Nov-13	25-Nov-14																													
Section 11																																			
Establishment Works																																			
S28G8000	SA28 Establishment Works	-152	0%	365	26-Nov-13	25-Nov-14																													
S29G8000	SA29 Establishment Works	-152	0%	365	26-Nov-13	25-Nov-14																													
Section 12																																			
Establishment Works																																			
S30AG800	SA30A Establishment Works	-152	0%	365	26-Nov-13	25-Nov-14																													
S30G8000	SA30 Establishment Works	-152	0%	365	26-Nov-13	25-Nov-14																													
Section 13																																			
Establishment Works																																			
S30AG810	Remainder of Establishment Works (Exclude Section 8 to 12)	-152	0%	365	26-Nov-13	25-Nov-14																													
Section 14																																			
Route Network Maintenance (Subject to the the Engineer's Instruction)																																			
S21G7000	Tentative Start Date for SA21 Route Maintenance Works		100%	0	17-Sep-10 A																														
S22G7000	Tentative Start Date for SA22 Route Maintenance Works		100%	0	26-Feb-10 A																														
S23G7000	Tentative Start Date for SA23 Route Maintenance Works		100%	0	25-Aug-10 A																														
S24G7000	Tentative Start Date for SA24 Route Maintenance Works		100%	0	25-Aug-10 A																														
S25G7000	Tentative Start Date for SA25 Route Maintenance Works		100%	0	20-Oct-10 A																														
S26AG700	Tentative Start Date for SA26A Route Maintenance Works		100%	0	26-Feb-10 A																														
S26G7000	Tentative Start Date for SA26 Route Maintenance Works		100%	0	26-Feb-10 A																														
S27G7000	Tentative Start Date for SA27 Route Maintenance Works		100%	0	27-May-10 A																														
S28G7000	Tentative Start Date for SA28 Route Maintenance Works		100%	0	26-Feb-10 A																														
S29G7000	Tentative Start Date for SA29 Route Maintenance Works		100%	0	20-Oct-10 A																														
S30AG700	Tentative Start Date for SA30A Route Maintenance Works		100%	0	25-Aug-10 A																														
S30G7000	Tentative Start Date for SA30 Route Maintenance Works		100%	0	26-Feb-10 A																														
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		100%	819	25-Feb-10 A	31-Aug-13 A																													
SC150030	Latest Date for the Engineer to Issue EI		100%	0		31-Aug-13 A																													

◇ Tentative Start Date for SA21 Route Maintenance Works
◇ Tentative Start Date for SA22 Route Maintenance Works
◇ Tentative Start Date for SA23 Route Maintenance Works
◇ Tentative Start Date for SA24 Route Maintenance Works
◇ Tentative Start Date for SA25 Route Maintenance Works
◇ Tentative Start Date for SA26A Route Maintenance Works
◇ Tentative Start Date for SA26 Route Maintenance Works
◇ Tentative Start Date for SA27 Route Maintenance Works
◇ Tentative Start Date for SA28 Route Maintenance Works
◇ Tentative Start Date for SA29 Route Maintenance Works
◇ Tentative Start Date for SA30A Route Maintenance Works
◇ Tentative Start Date for SA30 Route Maintenance Works
◇ Tentative Start Date for SA31 Route Maintenance Works

Validity Period
◇ Latest Date for the Engineer

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

Waste - Schedule of Recommended Mitigation Measures

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

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

Ecology - Schedule of Recommended Mitigation Measures

Impact	Mitigation Measures	Timing	Implementation Status
Ecology during Construction	Accurate Delineation of Works Area	During construction	
	• Boundaries of proposed works areas shall be clearly identified and separated from external areas by a physical barrier to prevent encroachment of adjacent habitats.		V
	• Individual trees which fall within the works areas but which work plans show do not require removal are to be retained and fenced off to maximize protection.		V
	Vegetation Clearance		
	• No fires shall be lit within the works area for the purpose of burning cleared vegetation.		V
	• The Contractor shall give consideration to mulching the cleared vegetation for recycling within the works area /	V	

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

Landscape and Visual Impact - Schedule of Recommended Mitigation Measures

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

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

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

Appendix D - Summary of Action and Limit Levels

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

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

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

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

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

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

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

**APPENDIX E
CALIBRATION CERTIFICATES OF
MONITORING EQUIPMENTS**

AECOM Asia Company Limited

TSP High Volume Sampler

Field Calibration Report

Station: Sheung Wun Yiu (AM1A) Operator: Gary Choi
 Cal. Date: 16-Nov-13 Next Due Date: 16-Jan-14
 Equipment No.: A-001-53T Serial No.: 10216

Ambient Condition			
Temperature, Ta (K)	297.4	Pressure, Pa (mmHg)	763.4

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	8.8	2.98	1.50	46.0	46.15
13	6.2	2.50	1.26	38.0	38.12
10	4.4	2.10	1.06	32.0	32.10
7	3.5	1.88	0.94	27.0	27.09
5	2.3	1.52	0.77	20.0	20.06

By Linear Regression of Y on X

Slope, mw = 35.4352 Intercept, bw = -6.4026

Correlation Coefficient* = 0.9959

*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} = 39.53

Remarks: _____

QC Reviewer: R M SHEK

Signature: [Signature]

Date: 18-Nov-13

AECOM Asia Company Limited

TSP High Volume Sampler

Field Calibration Report

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

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

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

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

By Linear Regression of Y on X

Slope, mw = 34.0930 Intercept, bw = -5.4880

Correlation Coefficient* = 0.9980

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

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

Remarks: _____

QC Reviewer: K. M. SHEK

Signature: [Signature]

Date: 25 Oct 13

AECOM Asia Company Limited

TSP High Volume Sampler

Field Calibration Report

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

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

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

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

By Linear Regression of Y on X

Slope, mw = 41.9095 Intercept, bw = -15.9768

Correlation Coefficient* = 0.9986

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation
From the TSP Field Calibration Curve, take Qstd = 1.30m ³ /min
From the Regression Equation, the "Y" value according to
$mw \times Q_{std} + bw = IC \times [(Pa/760) \times (298/Ta)]^{1/2}$
Therefore, Set Point; IC = (mw x Qstd + bw) x [(760 / Pa) x (Ta / 298)] ^{1/2} = <u style="float: right;">38.49</u>

Remarks: _____

QC Reviewer: K. H. SHEK Signature: [Signature] Date: 23-Oct-13

AECOM Asia Company Limited

TSP High Volume Sampler

Field Calibration Report

Station: 168 Shek Kwu Lung Village (AM4A) Operator: Gary Choi
 Cal. Date: 16-Nov-13 Next Due Date: 16-Jan-14
 Equipment No.: A-001-70T Serial No.: 10273

Ambient Condition			
Temperature, Ta (K)	297.4	Pressure, Pa (mmHg)	763.4

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	2.99	1.50	47.0	47.15
13	7.5	2.75	1.38	42.0	42.14
10	5.1	2.27	1.14	34.0	34.11
7	3.5	1.88	0.94	28.0	28.09
5	2.4	1.55	0.78	22.0	22.07

By Linear Regression of Y on X

Slope, mw = 34.0386 Intercept, bw = -4.4274

Correlation Coefficient* = 0.9986

*If Correlation Coefficient < 0.990, check and recalibrate.

Set Point Calculation

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

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

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

Therefore, Set Point; IC = (mw x Qstd + bw) x [(760 / Pa) x (Ta / 298)]^{1/2} = 39.69

Remarks: _____

QC Reviewer: K. H. SHEK

Signature: Mike

Date: 18-Nov-13



TISCH ENVIRONMENTAL, INC.
 145 SOUTH MIAMI AVE.
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 513.467.9009 FAX
 WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

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

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

DATA TABULATION

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

CALCULATIONS

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

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

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

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

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.005.13a
 Sensitivity Adjustment Scale Setting: 643 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): 643 CPM
 Sensitivity Adjustment Scale Setting (After Calibration): 643 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	1867	31.12
2	18-05-13	13:15 - 14:15	28.1	78	0.04941	1975	32.92
3	18-05-13	14:15 - 15:15	28.2	77	0.05127	2048	34.13
4	18-05-13	15:15 - 16:15	28.1	78	0.05060	2017	33.62

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: 0.9986

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.005.16a
 Sensitivity Adjustment Scale Setting: 521 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): 521 CPM
 Sensitivity Adjustment Scale Setting (After Calibration): 521 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	27-07-13	11:00 - 12:00	27.3	75	0.04734	1893	31.55
2	27-07-13	12:00 - 13:00	27.3	75	0.04789	1915	31.92
3	27-07-13	13:00 - 14:00	27.4	74	0.04953	1976	32.93
4	27-07-13	14:00 - 15:00	27.4	75	0.04867	1949	32.48

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: 0.9934

Validity of Calibration Record: 26 July 2014

Remarks:

QC Reviewer: YW Fung Signature:  Date: 29 July 2013



CERTIFICATE OF CALIBRATION

Certificate No.: 13CA1107 01-02

Page: 1 of 2

Item tested

Description: Acoustical Calibrator (Class 1)
Manufacturer: Rion Co., Ltd.
Type/Model No.: NC-73
Serial/Equipment No.: 10307223 / N.004.08
Adaptors used: -

Item submitted by

Customer: AECOM ASIA CO., LTD.
Address of Customer: -
Request No.: -
Date of receipt: 07-Nov-2013

Date of test: 08-Nov-2013

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2341427	17-Apr-2014	SCL
Preamplifier	B&K 2673	2239857	16-Apr-2014	CEPREI
Measuring amplifier	B&K 2610	2346941	24-Apr-2014	CEPREI
Signal generator	DS 360	61227	15-Apr-2014	CEPREI
Digital multi-meter	34401A	US36087050	10-Dec-2013	CEPREI
Audio analyzer	8903B	GB41300350	15-Apr-2014	CEPREI
Universal counter	53132A	MY40003662	15-Apr-2014	CEPREI

Ambient conditions

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

Test specifications

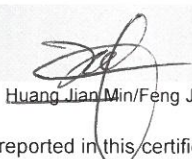
- The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.
- The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- The results 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: 11-Nov-2013

Company Chop:



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



CERTIFICATE OF CALIBRATION

Certificate No.: 13CA0325 01-03

Page: 1 of 2

Item tested

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

Item submitted by

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

Date of test: 26-Mar-2013

Reference equipment used in the calibration

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

Ambient conditions

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

Test specifications

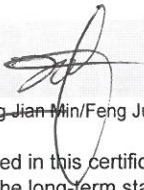
- 1, The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.
- 2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
-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

Test results

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

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

Approved Signatory:


Huang Jian Min/Feng Jun Qi

Date: 26-Mar-2013

Company Chop:



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



CERTIFICATE OF CALIBRATION

Certificate No.: 13CA1107 01-01 Page 1 of 2

Item tested

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

Item submitted by

Customer Name: AECOM ASIA CO., LTD.
Address of Customer: -
Request No.: -
Date of receipt: 07-Nov-2013

Date of test: 08-Nov-2013

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	22-Jun-2014	CIGISMEC
Signal generator	DS 360	33873	15-Apr-2014	CEPREI
Signal generator	DS 360	61227	15-Apr-2014	CEPREI

Ambient conditions

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

Test specifications

- The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
- The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.
- The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure response 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: 11-Nov-2013

Company Chop:



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



CERTIFICATE OF CALIBRATION

Certificate No.: 13CA0325 01-01 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.:	2285692	, 11009.04	2250420
Adaptors used:	-	,	-

Item submitted by

Customer Name: 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:
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 ± 10 hPa

Test specifications

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



CERTIFICATE OF CALIBRATION

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

Item tested

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

Item submitted by

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

Date of test: 05-Mar-2013

Reference equipment used in the calibration

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

Ambient conditions

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

Test specifications

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

Test results

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

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

Actual Measurement data are documented on worksheets.

Approved Signatory:


Huang Jian Min/Feng Jun Qi

Date: 05-Mar-2013

Company Chop:



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



CERTIFICATE OF CALIBRATION

Certificate No.: 13CA0305 01-02 Page 1 of 2

Item tested

Description:	Sound Level Meter (Type 1)	,	Microphone
Manufacturer:	B & K	,	B & K
Type/Model No.:	2270	,	4189
Serial/Equipment No.:	2644597	,	2638713
Adaptors used:	-	,	-

Item submitted by

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

Date of test: 05-Mar-2013

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	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: (21 ± 1) °C
Relative humidity: (60 ± 10) %
Air pressure: (1000 ± 10) hPa

Test specifications

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

Test results

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

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

Actual Measurement data are documented on worksheets.

Approved Signatory:


Huang Jian Min Feng Jun Qi

Date: 05-Mar-2013

Company Chop:



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

**APPENDIX F
EM&A MONITORING SCHEDULES**

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

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

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

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

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

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

Appendix G
Impact Air Quality Monitoring Results

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

Date	Start Time (hh:mm)	1st Hour Conc. ($\mu\text{g}/\text{m}^3$)	2nd Hour Conc. ($\mu\text{g}/\text{m}^3$)	3rd Hour Conc. ($\mu\text{g}/\text{m}^3$)
5-Nov-13	9:50	81.8	82.9	83.9
11-Nov-13	10:47	79.6	81.0	78.8
16-Nov-13	10:21	82.5	83.1	80.9
22-Nov-13	10:00	80.6	82.1	83.3
28-Nov-13	9:58	83.6	84.1	83.6
Average				82.1
Min				78.8
Max				84.1

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

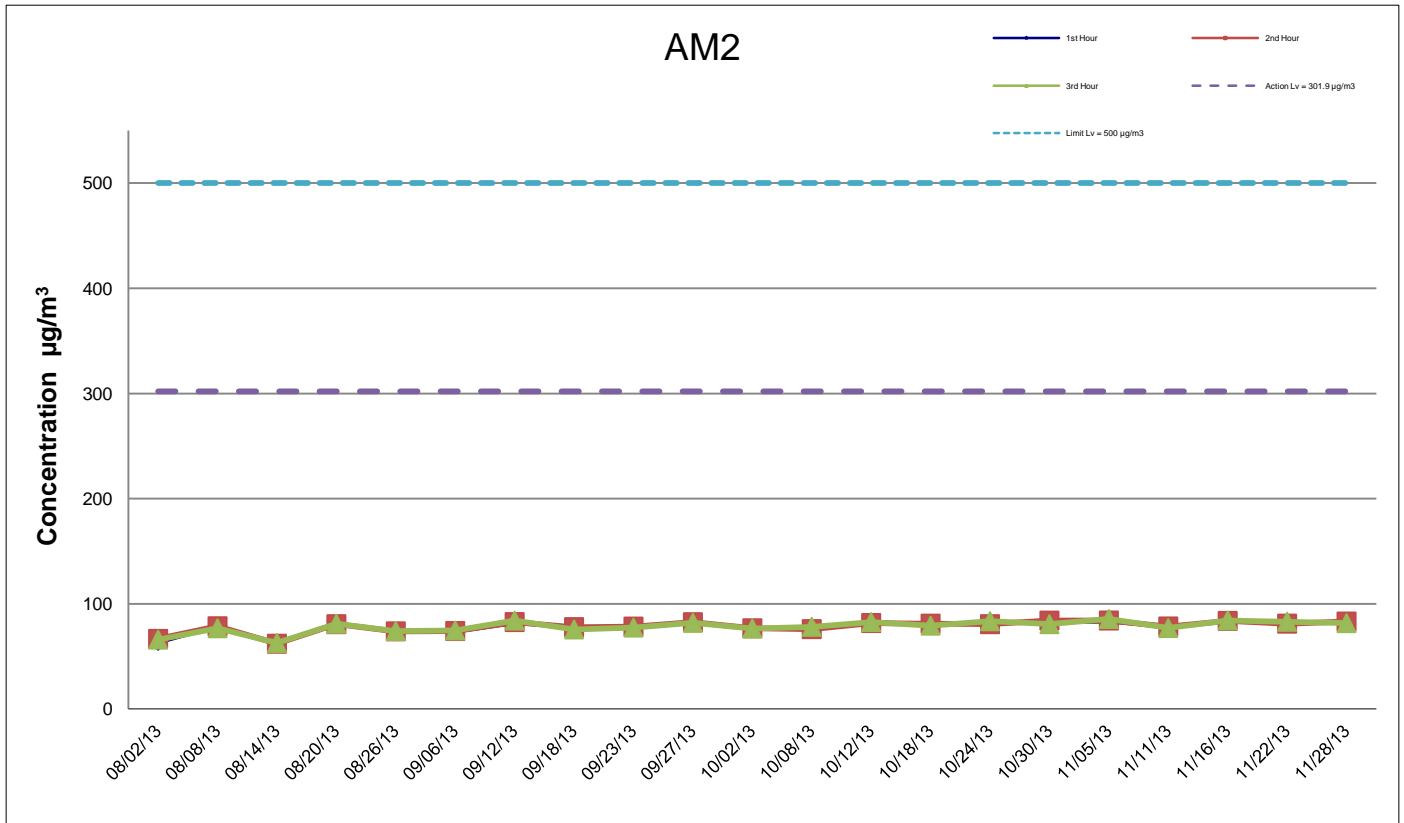
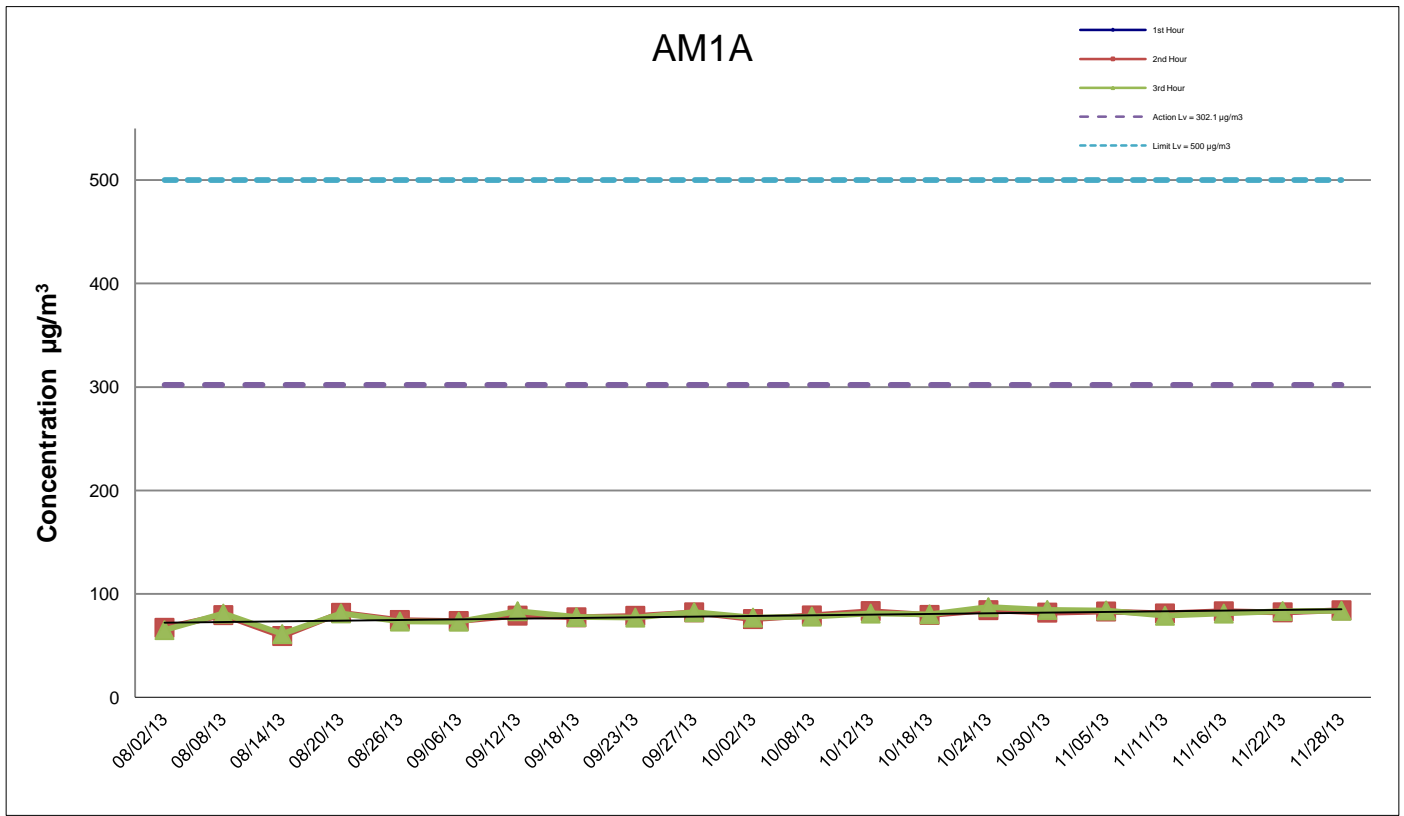
Date	Start Time (hh:mm)	1st Hour Conc. ($\mu\text{g}/\text{m}^3$)	2nd Hour Conc. ($\mu\text{g}/\text{m}^3$)	3rd Hour Conc. ($\mu\text{g}/\text{m}^3$)
5-Nov-13	10:00	82.6	84.1	85.5
11-Nov-13	10:36	77.5	78.4	76.9
16-Nov-13	13:36	82.7	83.7	84.2
22-Nov-13	10:10	82.4	81.1	82.9
28-Nov-13	10:39	82.9	83.1	81.6
Average				82.0
Min				76.9
Max				85.5

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

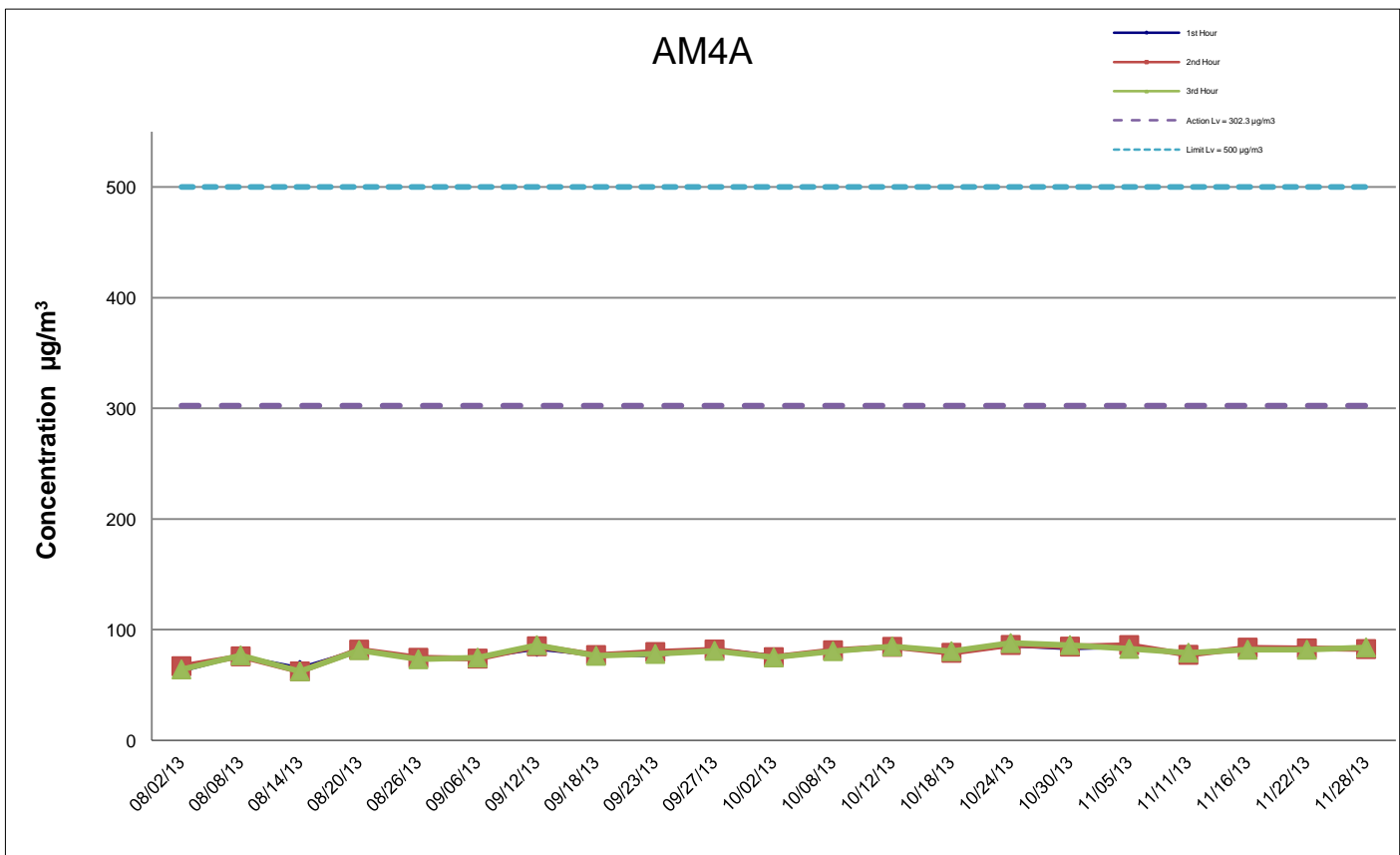
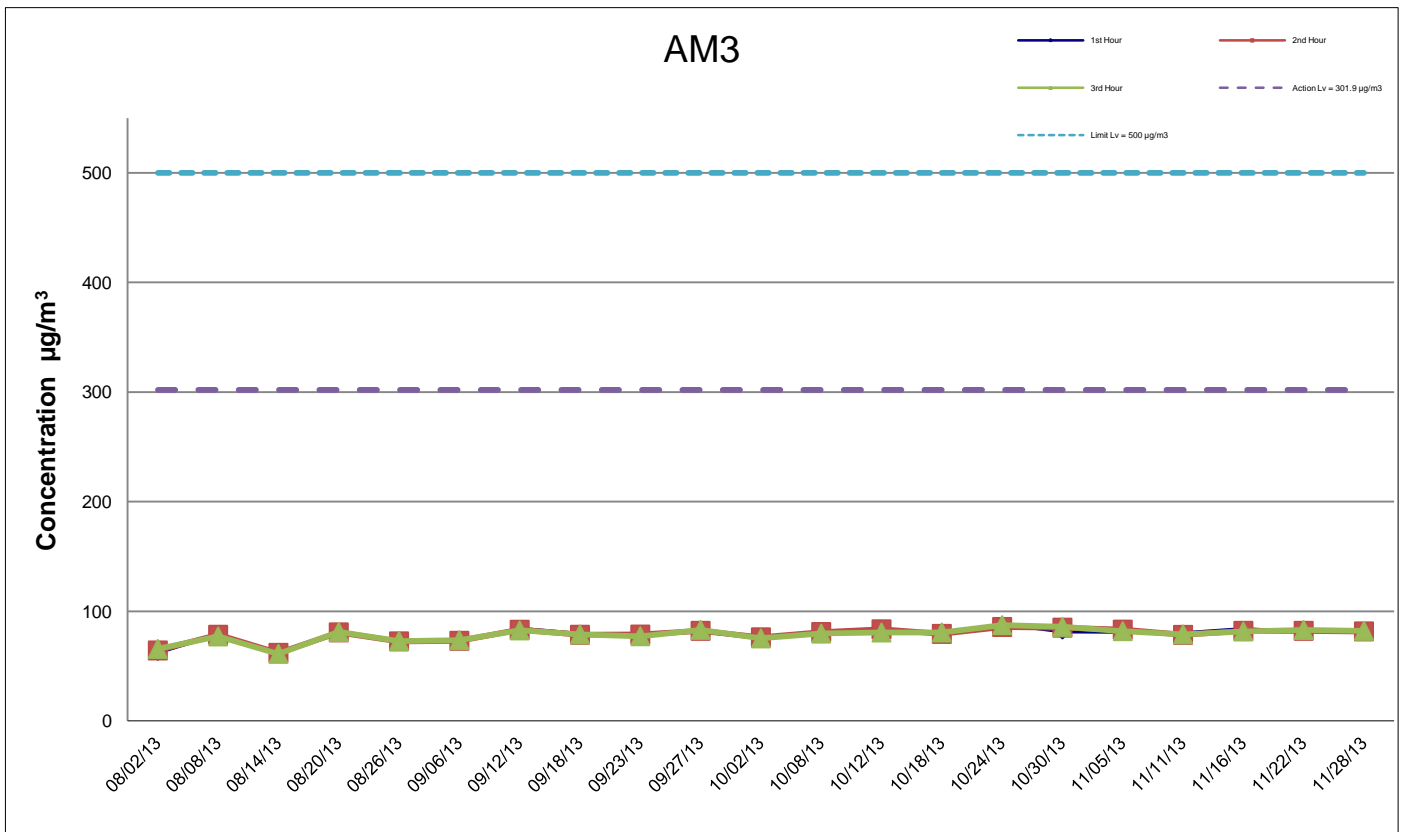
Date	Start Time (hh:mm)	1st Hour Conc. ($\mu\text{g}/\text{m}^3$)	2nd Hour Conc. ($\mu\text{g}/\text{m}^3$)	3rd Hour Conc. ($\mu\text{g}/\text{m}^3$)
5-Nov-13	9:35	80.6	83.3	81.9
11-Nov-13	10:58	80.6	78.5	79.0
16-Nov-13	10:13	84.5	82.2	81.6
22-Nov-13	9:45	81.7	82.2	83.0
28-Nov-13	10:24	82.7	81.7	82.2
Average				81.7
Min				78.5
Max				84.5

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. ($\mu\text{g}/\text{m}^3$)
5-Nov-13	10:30	84.1	86.1	82.7
11-Nov-13	10:14	78.6	77.3	79.2
16-Nov-13	13:49	82.0	83.8	81.9
22-Nov-13	10:30	82.6	83.1	81.9
28-Nov-13	10:51	84.3	82.5	84.0
Average				82.3
Min				77.3
Max				86.1



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



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

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

Impact Air Quality Monitoring Results

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

Date	Weather Condition	Air Temp. (°C)	Atmospheric Pressure(hPa)	Flow Rate (m ³ /min.)		Av. flow (m ³ /min)	Total vol. (m ³)	Filter Weight (g)		Particulate weight(g)	Elapse Time		Sampling Time(hrs.)	Conc. (µg/m ³)
				Initial	Final			Initial	Final		Initial	Final		
5-Nov-13	Sunny	22.60	1019.00	1.33	1.33	1.33	1916.6	2.7343	2.8229	0.0886	20115.46	20139.46	24.00	46.2
11-Nov-13	Rainy	24.10	1014.00	1.33	1.33	1.33	1916.6	2.6994	2.7816	0.0822	20139.46	20163.46	24.00	42.9
16-Nov-13	Fine	21.70	1018.20	1.33	1.33	1.33	1916.6	2.6908	2.8046	0.1138	20163.46	20187.46	24.00	59.4
22-Nov-13	Cloudy	21.00	1018.70	1.33	1.33	1.33	1916.6	2.7465	2.8493	0.1028	20187.46	20211.46	24.00	53.6
28-Nov-13	Cloudy	15.60	1023.50	1.33	1.33	1.33	1916.6	2.6899	2.8092	0.1193	20211.46	20235.46	24.00	62.2
													Average	52.9
													Min	42.9
													Max	62.2

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

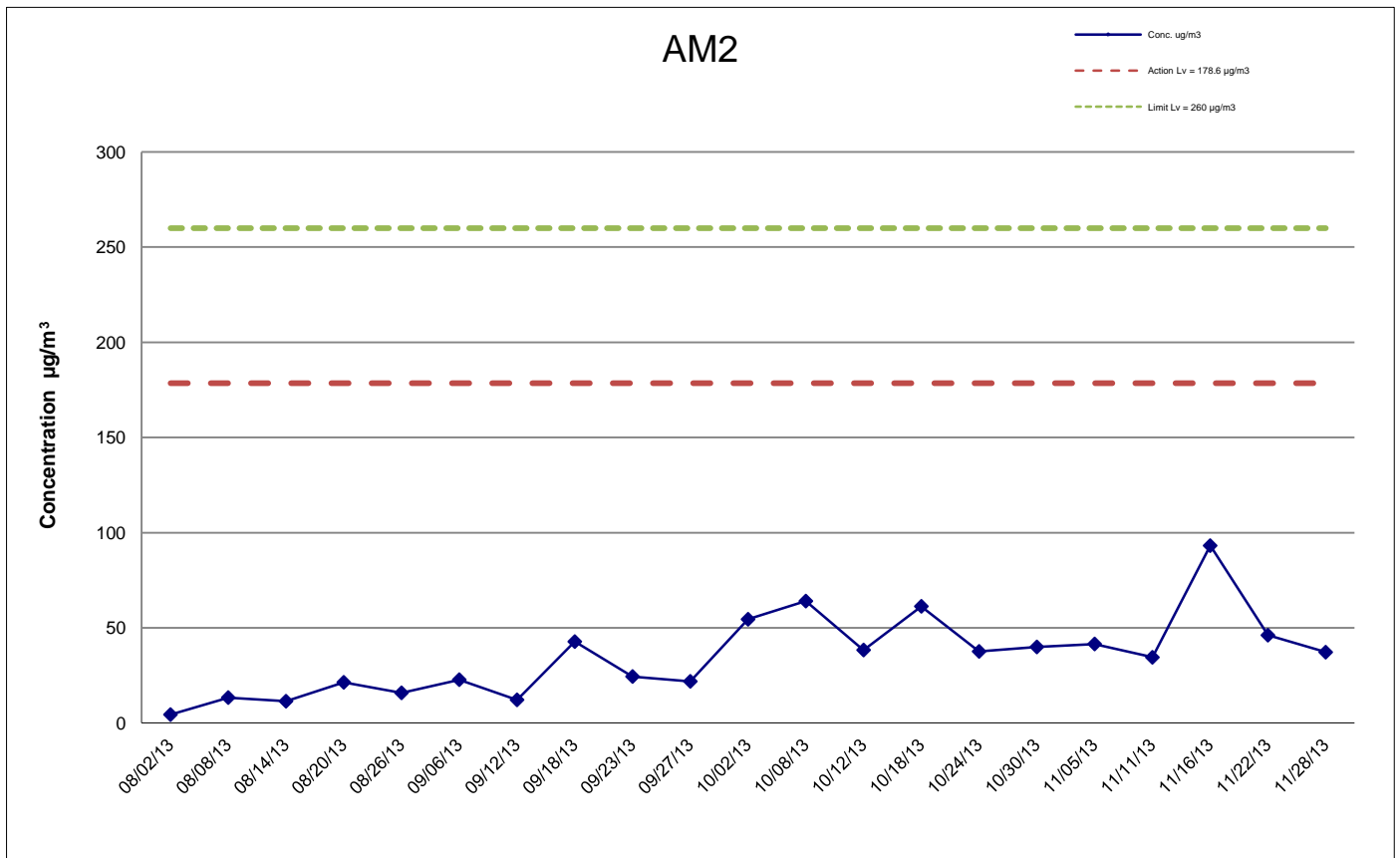
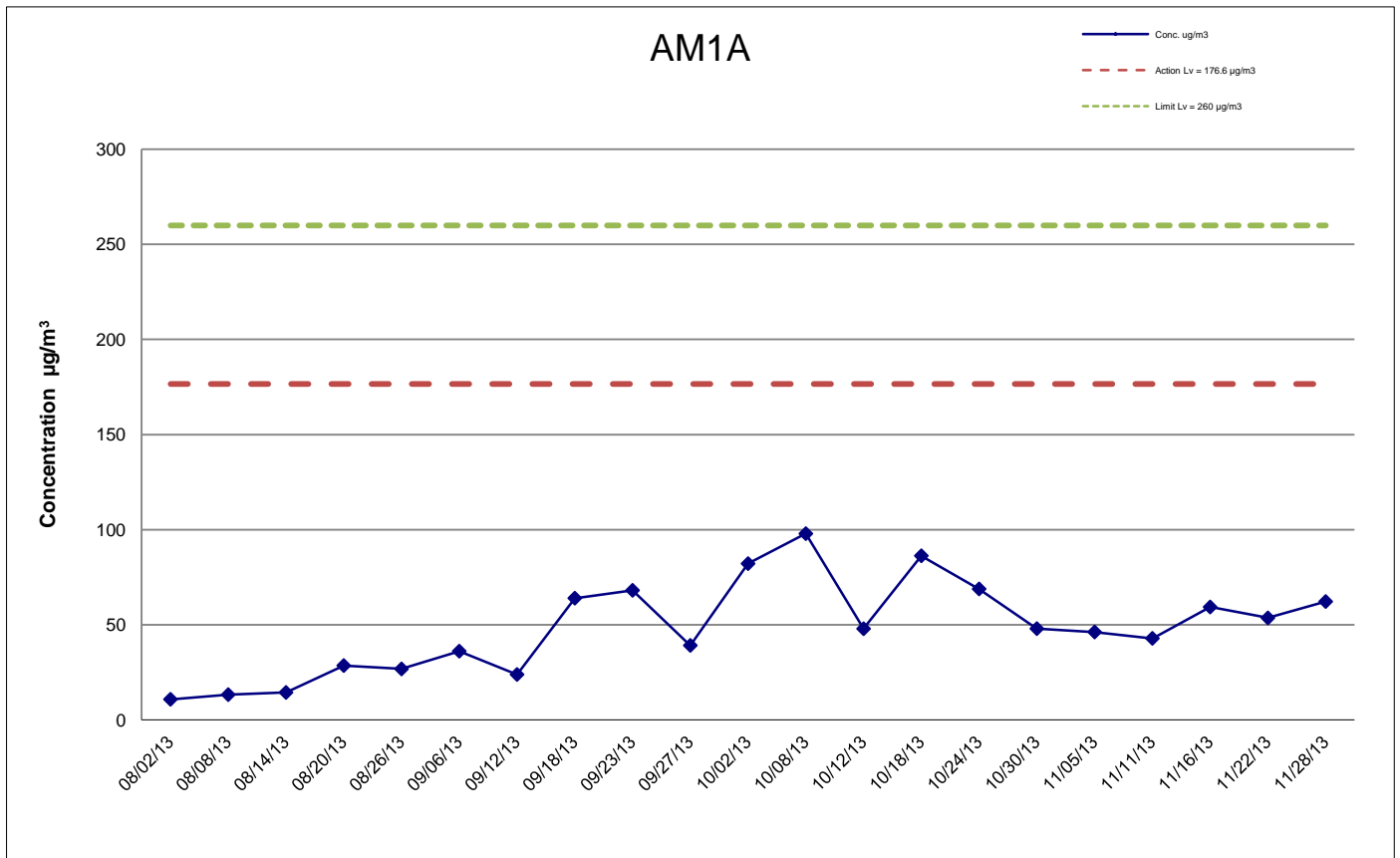
Date	Weather Condition	Air Temp. (°C)	Atmospheric Pressure(hPa)	Flow Rate (m ³ /min.)		Av. flow (m ³ /min)	Total vol. (m ³)	Filter Weight (g)		Particulate weight(g)	Elapse Time		Sampling Time(hrs.)	Conc. (µg/m ³)
				Initial	Final			Initial	Final		Initial	Final		
5-Nov-13	Sunny	22.60	1019.00	1.34	1.34	1.34	1925.3	2.7295	2.8094	0.0799	16687.12	16711.12	24.00	41.5
11-Nov-13	Rainy	24.10	1014.00	1.34	1.34	1.34	1925.3	2.7132	2.7796	0.0664	16711.12	16735.12	24.00	34.5
16-Nov-13	Fine	21.70	1018.20	1.34	1.34	1.34	1933.9	2.9232	3.1034	0.1802	16735.12	16759.12	24.00	93.2
22-Nov-13	Cloudy	21.00	1018.70	1.34	1.34	1.34	1925.3	2.7249	2.8137	0.0888	16759.12	16783.12	24.00	46.1
28-Nov-13	Cloudy	15.60	1023.50	1.34	1.34	1.34	1925.3	2.6804	2.7520	0.0716	16783.12	16807.12	24.00	37.2
													Average	50.5
													Min	34.5
													Max	93.2

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

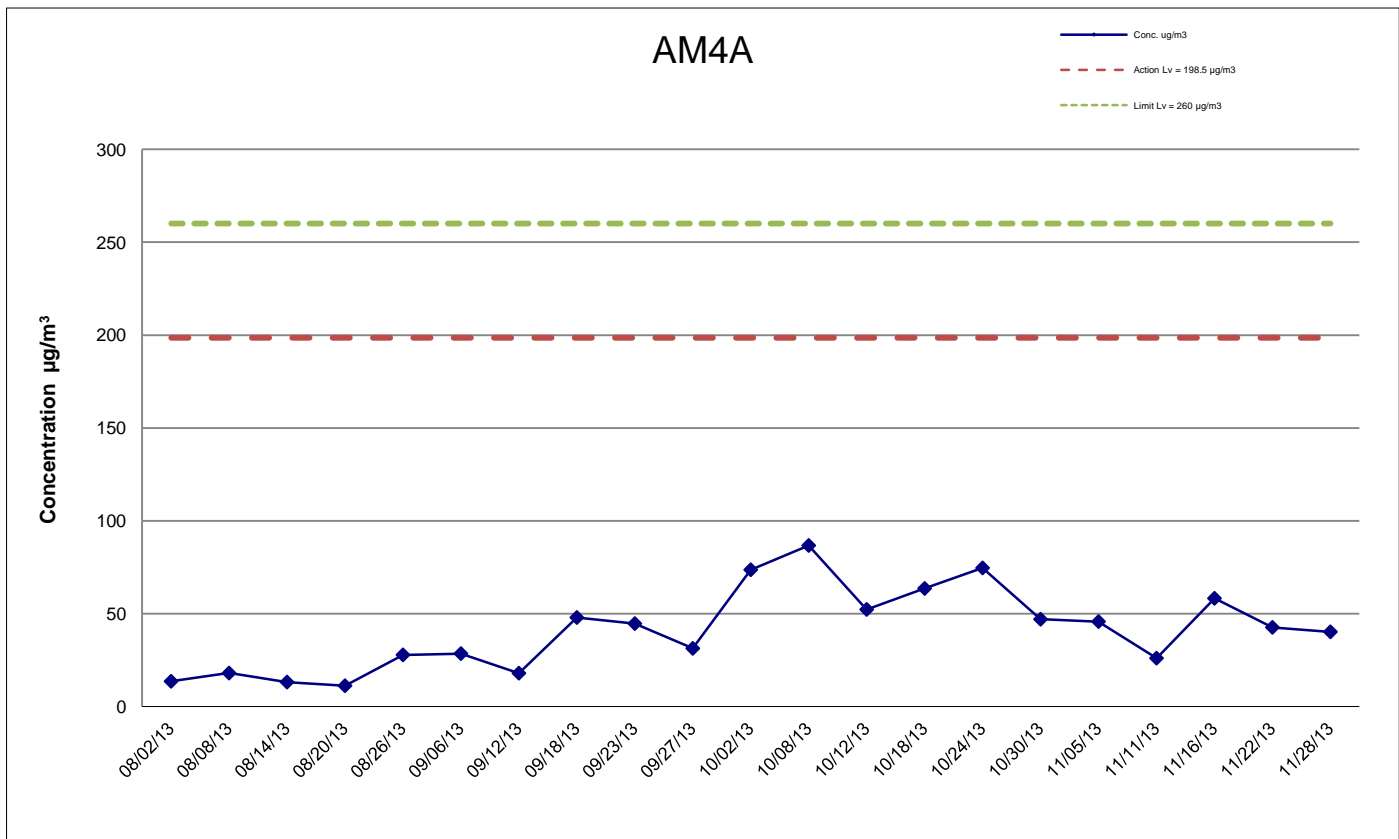
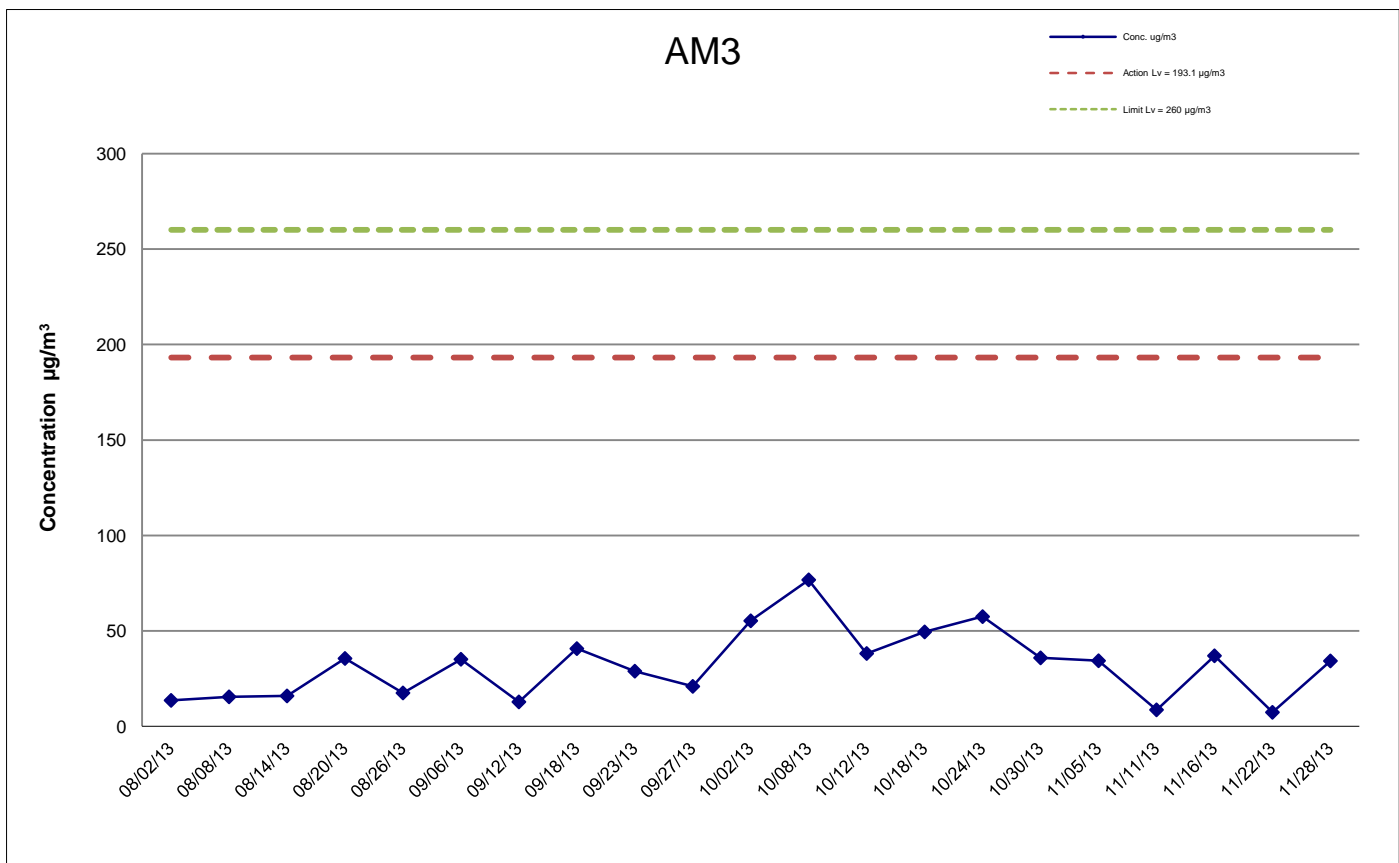
Date	Weather Condition	Air Temp. (°C)	Atmospheric Pressure(hPa)	Flow Rate (m ³ /min.)		Av. flow (m ³ /min)	Total vol. (m ³)	Filter Weight (g)		Particulate weight(g)	Elapse Time		Sampling Time(hrs.)	Conc. (µg/m ³)
				Initial	Final			Initial	Final		Initial	Final		
5-Nov-13	Sunny	22.60	1019.00	1.33	1.33	1.33	1921.0	2.7201	2.7861	0.0680	20416.59	20440.59	24.00	34.4
11-Nov-13	Rainy	24.10	1014.00	1.33	1.33	1.33	1921.0	2.7058	2.7224	0.0166	20440.59	20464.59	24.00	8.6
16-Nov-13	Fine	21.70	1018.20	1.33	1.33	1.33	1921.0	2.7082	2.7792	0.0710	20464.59	20488.59	24.00	37.0
22-Nov-13	Cloudy	21.00	1018.70	1.33	1.33	1.33	1921.0	2.7415	2.7556	0.0141	20488.59	20512.59	24.00	7.3
28-Nov-13	Cloudy	15.60	1023.50	1.33	1.33	1.33	1921.0	2.6503	2.7161	0.0658	20512.59	20536.59	24.00	34.3
													Average	24.3
													Min	7.3
													Max	37.0

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		
5-Nov-13	Sunny	22.60	1019.00	1.33	1.33	1.33	1918.1	2.7336	2.8213	0.0877	16546.36	16570.36	24.00	45.7
11-Nov-13	Rainy	24.10	1014.00	1.33	1.33	1.33	1918.1	2.7034	2.7533	0.0499	16570.36	16594.36	24.00	26.0
16-Nov-13	Fine	21.70	1018.20	1.33	1.33	1.33	1918.1	2.7445	2.8562	0.1117	16594.36	16618.36	24.00	58.2
22-Nov-13	Cloudy	21.00	1018.70	1.33	1.33	1.33	1918.1	2.7038	2.7855	0.0817	16618.36	16642.36	24.00	42.6
28-Nov-13	Cloudy	15.60	1023.50	1.33	1.33	1.33	1918.1	2.6887	2.7658	0.0771	16642.36	16666.36	24.00	40.2
													Average	42.6
													Min	26.0
													Max	58.2



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



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

AECOM	Environmental Team for the Widening of Tolo Highway between Island House Interchange and Tai Hang - Investigation	SCALE	N.T.S.	DATE	Dec-13
	Graphical Presentation of Impact 24-hour TSP Monitoring Results	CHECK	ENFL	DRAWN	JCYK
		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,
November 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-Nov	*****	30.2	25.7	21.5	****	***	***	***
2-Nov	*****	28.5	26.2	24.4	****	***	***	***
3-Nov	*****	28.3	25.6	23.4	****	***	***	***
4-Nov	*****	26.4	22.7	20.7	****	***	***	***
5-Nov	*****	24.6	22.4	20.3	****	***	***	***
6-Nov	*****	28.3	24.3	21.7	****	***	***	***
7-Nov	*****	28.5	24.3	22.1	****	***	***	***
8-Nov	*****	29.5	24.7#	22.4	****	***	***	***
9-Nov	*****	28.9	25.9#	22.2	****	***	***	***
10-Nov	*****	26.4	25.4	24.4	****	***	***	***
11-Nov	*****	26.3	24.5	23	****	***	***	***
12-Nov	*****	22.9	22.0#	21.3	****	***	***	***
13-Nov	*****	21.3	19.9	19	****	***	***	***
14-Nov	*****	24.2	20.4	18.2	****	***	***	***
15-Nov	*****	26.6	21.3	17	****	***	***	***
16-Nov	*****	26.2	21.7	17.4	****	***	***	***
17-Nov	*****	25.7	21.5	17.5	****	***	***	***
18-Nov	*****	25.2	21.1	18.6	****	***	***	***
19-Nov	*****	22.6	20	17.9	****	***	***	***
20-Nov	*****	21.4	19.5	18.4	****	***	***	***
21-Nov	*****	24.3	20.7	18.4	****	***	***	***
22-Nov	*****	25.2	20.8	17.6	****	***	***	***
23-Nov	*****	25.8	22.2	19.9	****	***	***	***
24-Nov	*****	28.3	22.9	20.1	****	***	***	***
25-Nov	*****	23.4	19.3	16	****	***	***	***
26-Nov	*****	22.8	19.5	16.4	****	***	***	***
27-Nov	*****	26.2	19.7	14.1	****	***	***	***
28-Nov	*****	18.8	15.2#	11.9	****	***	***	***
29-Nov	*****	18.2	15.7#	13.7	****	***	***	***
30-Nov	*****	21.1	16	11.5	****	***	***	***
Mean	*****	25.2	21.8#	19	****	***	***	***
Maximum	*****	30.2	26.2#	24.4	****	***	***	***
Minimum	*****	18.2	15.2#	11.5	****	***	***	***

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

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind (km/h)
1-Nov	0.0	50	9.2
2-Nov	0.0	30	24.8
3-Nov	0.0	40	30.7
4-Nov	5.0	40	21.4
5-Nov	4.0	40	14.0
6-Nov	0.0	50	9.3
7-Nov	0.0	90	14.3
8-Nov	0.0	050#	12.0#
9-Nov	0.0#	060#	26.0#
10-Nov	3.0	60	26.3
11-Nov	0.0	90	39.5
12-Nov	4.0#	090#	31.7#
13-Nov	0.5	50	11.3
14-Nov	0.0	260	6.2
15-Nov	0.0	40	8.6
16-Nov	0.0	40	5.6
17-Nov	0.0	40	10.0
18-Nov	0.0	40	14.2
19-Nov	0.0	50	13.9
20-Nov	0.0	50	16.0
21-Nov	0.0	50	11.7
22-Nov	2.0	50	14.0
23-Nov	0.0	90	18.1
24-Nov	11.0	60	11.3
25-Nov	0.0	50	14.3
26-Nov	0.0	40	12.6
27-Nov	1.0	40	15.4
28-Nov	3.0#	040#	20.5#
29-Nov	0.0#	040#	19.1#
30-Nov	0.0	270	6.1
Mean	-----	040#	16.2#
Total	33.5#	---	-----
Maximum	11.0#	---	39.5#
Minimum	0.0#	---	5.6#

*** 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,
November 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-Nov	1013.7	28.3	24.7	20.7	18.2	89	68	50
2-Nov	1011.4	27.3	25.6	22.7	18.5	75	65	57
3-Nov	1012.8	27.1	25.5	23.6	19.4	80	69	62
4-Nov	1017.4	24.8	22.6	20.7	19.4	98	83	69
5-Nov	1018.7	23.8	22	20.2	19.9	98	88	77
6-Nov	1017.9	26.4	23.6	21.4	20.3	92	82	66
7-Nov	1017.2	26.2	23.9	22	20.4	94	81	68
8-Nov	1016	27.4	24.1	21.8	19.5	90	76	58
9-Nov	1014.5	27.7	25.4	21.3	20.8	96	77	64
10-Nov	1014.4	26.6	25.7	24.7	22.7	93	83	76
11-Nov	1013.8#	25.2	24.2#	23.1	21.2#	88	83#	77
12-Nov	1012.8	23.1	21.8	20.9	20.6	98	93	83
13-Nov	1014.2	21.3	19.1	17.8	17.4	98	90	80
14-Nov	1017.3	23.3	19.8	17.9	15.7	89	77	65
15-Nov	1018.3	23.9	20.3	16.5	15	85	72	56
16-Nov	1018.1	24.4	20.6	16.9	13.8	80	66	48
17-Nov	1018.4	23.8	20.1	16	11.8	76	59	46
18-Nov	1020.3	23.4	19.9	17	9.1	76	51	31
19-Nov	1020.9	21.1	19.5	16.6	11.7	84	62	43
20-Nov	1019.4	20.5	19.5	18.1	13.6	78	69	60
21-Nov	1018.3	23.1	20	17.4	13.1	78	65	46
22-Nov	1018.5	23.1	20.5	17.2	16.2	94	77	58
23-Nov	1017	23.7	21.9	20.8	16.4	87	71	59
24-Nov	1014	25.6	22.2	19.3	19.1	97	83	68
25-Nov	1015	22.1	18.3	15.5	8.8	82	56	29
26-Nov	1016.8	21.2	18.1	13.6	12.2	82	69	51
27-Nov	1018.1	23.4	19.4	14.1	15.1	94	77	60
28-Nov	1023.8	17.9	15	11.6	7.1	96	64	30
29-Nov	1024.3	17.4	14.1	11.2	-1.8	57	35	19
30-Nov	1021.7	19.6	14.1	9.1	4.1	64	52	29
Mean	1017.2#	23.8	21.0#	18.3	15.2#	86	71#	56
Maximum	1024.3#	28.3	25.7#	24.7	22.7#	98	93#	83
Minimum	1011.4#	17.4	14.1#	9.1	-1.8#	57	35#	19

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

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind (km/h)
1-Nov	*****	***	*****
2-Nov	*****	***	*****
3-Nov	*****	***	*****
4-Nov	*****	***	*****
5-Nov	*****	***	*****
6-Nov	*****	***	*****
7-Nov	*****	***	*****
8-Nov	*****	***	*****
9-Nov	*****	***	*****
10-Nov	*****	***	*****
11-Nov	*****	***	*****
12-Nov	*****	***	*****
13-Nov	*****	***	*****
14-Nov	*****	***	*****
15-Nov	*****	***	*****
16-Nov	*****	***	*****
17-Nov	*****	***	*****
18-Nov	*****	***	*****
19-Nov	*****	***	*****
20-Nov	*****	***	*****
21-Nov	*****	***	*****
22-Nov	*****	***	*****
23-Nov	*****	***	*****
24-Nov	*****	***	*****
25-Nov	*****	***	*****
26-Nov	*****	***	*****
27-Nov	*****	***	*****
28-Nov	*****	***	*****
29-Nov	*****	***	*****
30-Nov	*****	***	*****
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,
November 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-Nov	1014.2	29.5	24.6	19.6	17.2	95	66	39
2-Nov	1011.8	27.7	25.9	24.3	17.7	70	61	52
3-Nov	1013.1	27.6	25.2	23.6	18.5	77	67	59
4-Nov	1017.9	24.6	22.4	20.5	18.6	95	80	66
5-Nov	1019.1	23.8	22	20	19.3	97	85	75
6-Nov	1018.4	27.9	23.9	21.7	19.4	93	77	56
7-Nov	1017.7	27	23.4	21.3	19.6	95	80	63
8-Nov	1016.5	27.4	23.9	21.5	18.6	89	73	52
9-Nov	1014.9	29.1	25.6	21.5	19.5	93	70	54
10-Nov	1015	27.3	26.2	25	21.5	84	75	67
11-Nov	1014.3	25.3	24.1	22.6	20.2	84	79	67
12-Nov	1013.4	22.6	21.6	20.7	19.7	96	89	79
13-Nov	1014.5	21.3	19.4	18.3	17	97	86	79
14-Nov	1017.4	23.9	20.1	18.1	15.5	90	75	62
15-Nov	1018.6	24.9	20.6	17.3	14.2	82	67	52
16-Nov	1018.4	24.9	21.1	17.8	13.4	83	62	46
17-Nov	1018.7	24.3	21	17.8	10.3	84	51	38
18-Nov	1020.6	23.8	20.1	15.7	7.6	86	47	27
19-Nov	1021.3	21	19	15.1	10.9	93	61	43
20-Nov	1019.7	20.5	19.2	18	12.9	76	67	57
21-Nov	1018.6	22.8	19.9	15.9	12.6	88	64	41
22-Nov	1018.8	23.2	20.5	17.8	15.6	92	74	54
23-Nov	1017.5	24	21.7	20.2	15.9	86	70	52
24-Nov	1014.4	26.1	22.3	19.8	18.4	93	79	66
25-Nov	1015.2	22.4	18.5	14.5	6.8	78	49	27
26-Nov	1017.1	21.6	18	13.5	11.7	91	68	49
27-Nov	1018.4	23.4	19.3	14.8	14.5	89	74	58
28-Nov	1023.8	18.5	15.5	12.1	5.6	89	55	27
29-Nov	1024.3	17.7	14.3	10.7	-2.9	68	33	18
30-Nov	1021.9	19.8	13.6	8.3	5.5	85	61	31
Mean	1017.5	24.1	21.1	18.3	14.5	87	68	52
Maximum	1024.3	29.5	26.2	25	21.5	97	89	79
Minimum	1011.8	17.7	13.6	8.3	-2.9	68	33	18

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

Date	Total Rainfall (mm)	Prevailing Wind Direction (degrees)	Mean Wind (km/h)
1-Nov	0.0	60	5.0
2-Nov	0.0	30	12.2
3-Nov	0.0	30	16.3
4-Nov	5.0	20	9.8
5-Nov	2.5	360	6.9
6-Nov	0.0	20	4.4
7-Nov	0.0	360	6.5
8-Nov	0.0	350	4.7
9-Nov	0.0	70	9.8
10-Nov	1.5	80	10.1
11-Nov	0.0	80	12.2
12-Nov	36.5	70	8.2
13-Nov	3.0	350	6.8
14-Nov	0.0	350	7.1
15-Nov	0.0	350	6.0
16-Nov	0.0	40	6.3
17-Nov	0.0	20	5.6
18-Nov	0.0	20	6.8
19-Nov	0.0	60	4.6
20-Nov	0.0	20	5.7
21-Nov	0.0	20	4.4
22-Nov	2.0	80	5.8
23-Nov	0.0	70	7.3
24-Nov	9.0	20	6.3
25-Nov	0.0	30	8.8
26-Nov	0.0	20	5.3
27-Nov	0.5	20	6.9
28-Nov	3.5	20	12.9
29-Nov	0.0	20	10.5
30-Nov	0.0	30	4.0
Mean	-----	20	7.6
Total	63.5	---	-----
Maximum	36.5	---	16.3
Minimum	0.0	---	4.0

*** unavailable

missing (less than 24 hourly observations a day)

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

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

Appendix I Impact Daytime Construction Noise Monitoring Results

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

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

Date	Measured Noise Level for 30-min, dB(A)				Baseline Noise Level, dB(A)	Corrected Construction Noise Level, dB(A) **	Limit Level, dB(A)	Exceedance (Y/N)
	Start Time	Leq	L10	L90				
5-Nov-13	10:35	60.0	61.5	57.0	64.2	60.0	75	N
11-Nov-13	13:18	62.8	64.2	60.1	64.2	62.8	75	N
22-Nov-13	10:30	60.0	61.5	57.5	64.2	60.0	75	N
28-Nov-13	13:39	64.3	66.5	62.7	64.2	47.9	75	N

Corrected Noise Level dB(A)	
Average	60.0
Max	62.8
Min	47.9

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*				
5-Nov-13	10:00	62.3	63.8	60.1	68.1	62.3	75	N
11-Nov-13	14:03	62.4	63.6	59.8	68.1	62.4	75	N
22-Nov-13	10:45	64.4	65.7	62.6	68.1	64.4	75	N
28-Nov-13	11:27	65.1	66.5	62.7	68.1	65.1	75	N

Corrected Noise Level dB(A)	
Average	63.7
Max	65.1
Min	62.3

* +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				
5-Nov-13	13:00	61.1	63.0	59.5	64.8	61.1	70	N
11-Nov-13	10:51	62.9	64.7	61.7	64.8	62.9	70	N
22-Nov-13	11:30	62.2	64.0	60.0	64.8	62.2	70	N
28-Nov-13	10:58	65.4	67.3	63.4	64.8	56.5	70	N

Corrected Noise Level dB(A)	
Average	61.3
Max	62.9
Min	56.5

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				
5-Nov-13	13:05	62.0	63.7	60.4	67.4	62.0	75	N
11-Nov-13	10:09	62.1	63.9	60.8	67.4	62.1	75	N
22-Nov-13	13:00	63.3	64.6	60.6	67.4	63.3	75	N
28-Nov-13	10:09	64.3	66.2	62.7	67.4	64.3	75	N

Corrected Noise Level dB(A)	
Average	63.0
Max	64.3
Min	62.0

- 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				
5-Nov-13	11:30	61.7	63.0	60.5	65.2	61.7	75	N
11-Nov-13	13:06	58.0	60.1	56.7	65.2	58.0	75	N
22-Nov-13	13:15	60.6	62.0	59.0	65.2	60.6	75	N
28-Nov-13	14:21	60.1	62.7	59.0	65.2	60.1	75	N

Corrected Noise Level dB(A)	
Average	60.3
Max	61.7
Min	58.0

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*				
5-Nov-13	10:55	63.0	64.2	62.1	64.5	63.0	70	N
11-Nov-13	10:20	59.1	61.4	57.2	64.5	59.1	70	N
22-Nov-13	13:50	64.4	65.6	63.2	64.5	64.4	70	N
28-Nov-13	13:32	60.9	63.5	58.2	64.5	60.9	70	N

Corrected Noise Level dB(A)	
Average	62.3
Max	64.4
Min	59.1

Remarks

* +3dB(A) Façade effect correction included

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

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

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

Appendix I Impact Daytime Construction Noise Monitoring Results

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

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

Date	Measured Noise Level for 30-min, dB(A)				Baseline Noise Level, dB(A)	Corrected Construction Noise Level, dB(A) **	Limit Level, dB(A)	Exceedance (Y/N)
	Start Time	Leq	L10	L90				
5-Nov-13	9:40	57.7	59.0	56.5	61.5	57.7	75	N
11-Nov-13	11:02	61.1	62.8	59.0	61.5	61.1	75	N
22-Nov-13	9:50	58.0	59.5	56.7	61.5	58.0	75	N
28-Nov-13	10:39	63.2	65.6	61.7	61.5	58.3	75	N

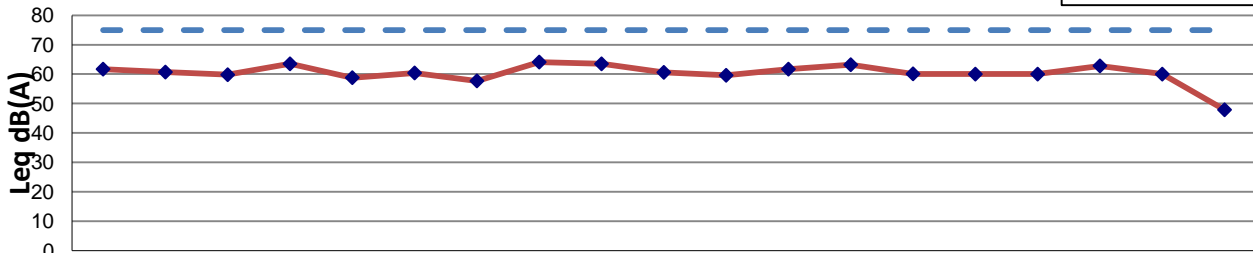
Corrected Noise Level dB(A)	
Average	59.0
Max	61.1
Min	57.7

Remarks

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

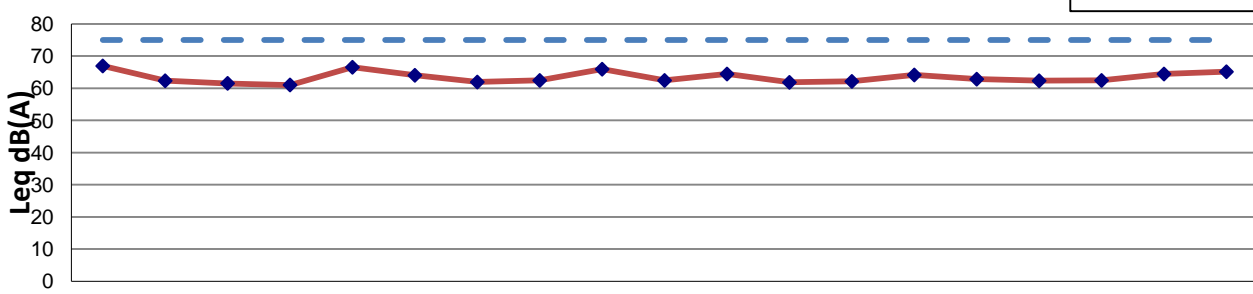
If Measured noise level < Baseline noise level, Corrected noise level = Measured noise level

NM1A



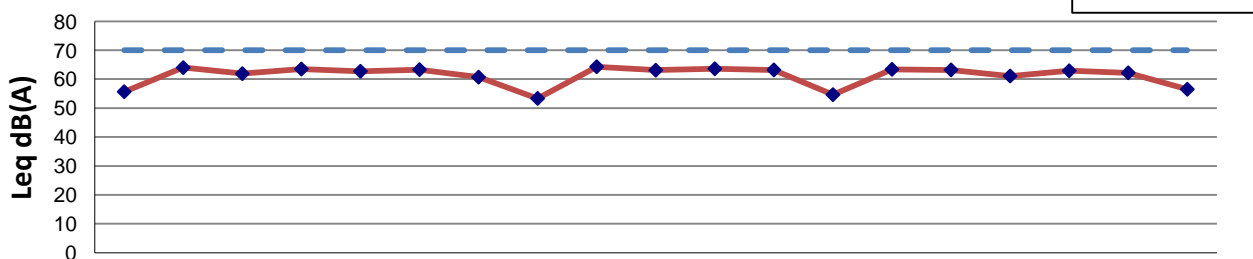
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1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

NM2




0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
8	8	8	8	8	9	9	9	9	9	0	0	0	0	0	1	1	1	1
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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2	8	4	0	6	6	2	8	3	7	2	8	8	4	0	5	1	2	8
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1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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NM3

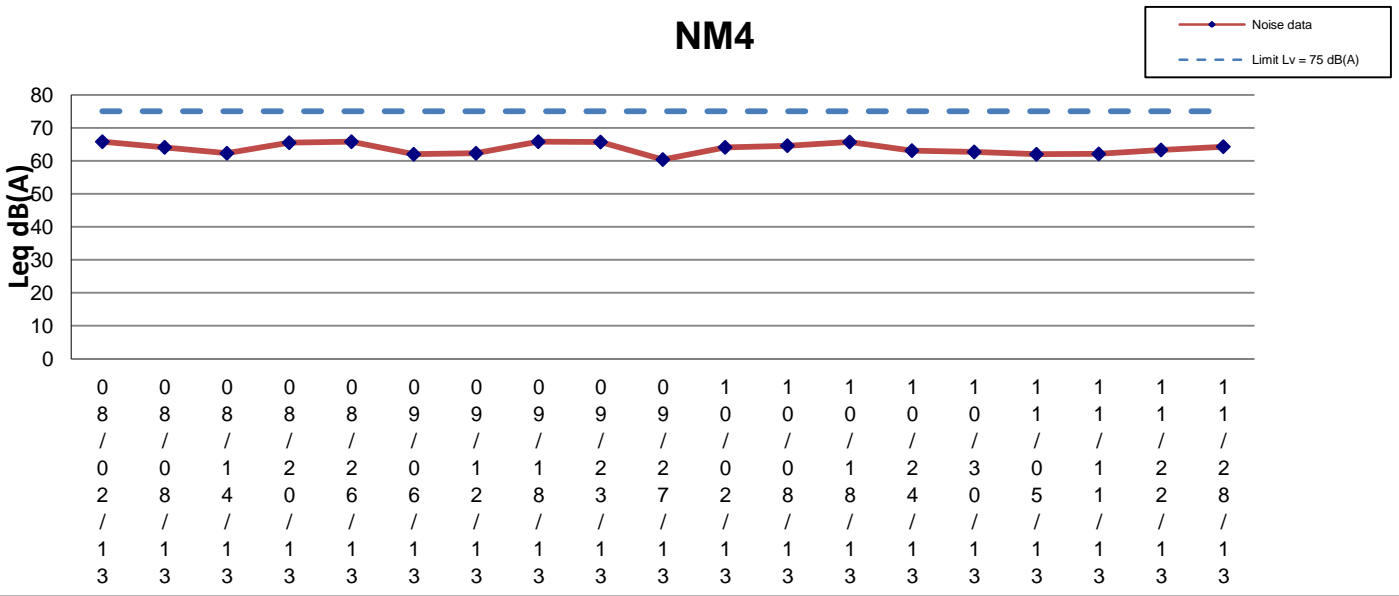


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2	8	4	0	6	6	2	8	3	7	2	8	8	4	0	5	1	2	8
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1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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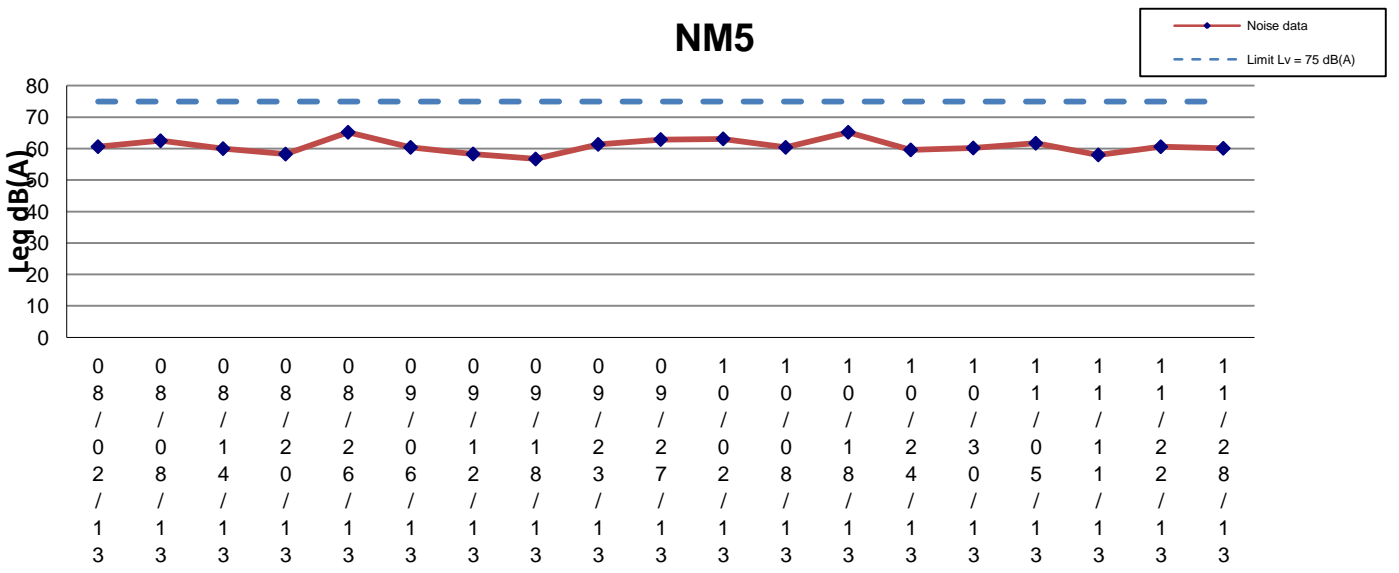
Remarks: (1) The monitoring station at Tai Kwong Secondary School (NM1) was relocated to 168 Shek Kwu Lung Village (NM1A) starting from 1 September 2011 due to the mentioned school was closed down;
 (2) Measured noise level would be shown if Measured noise level (Leq) <= Baseline noise level

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

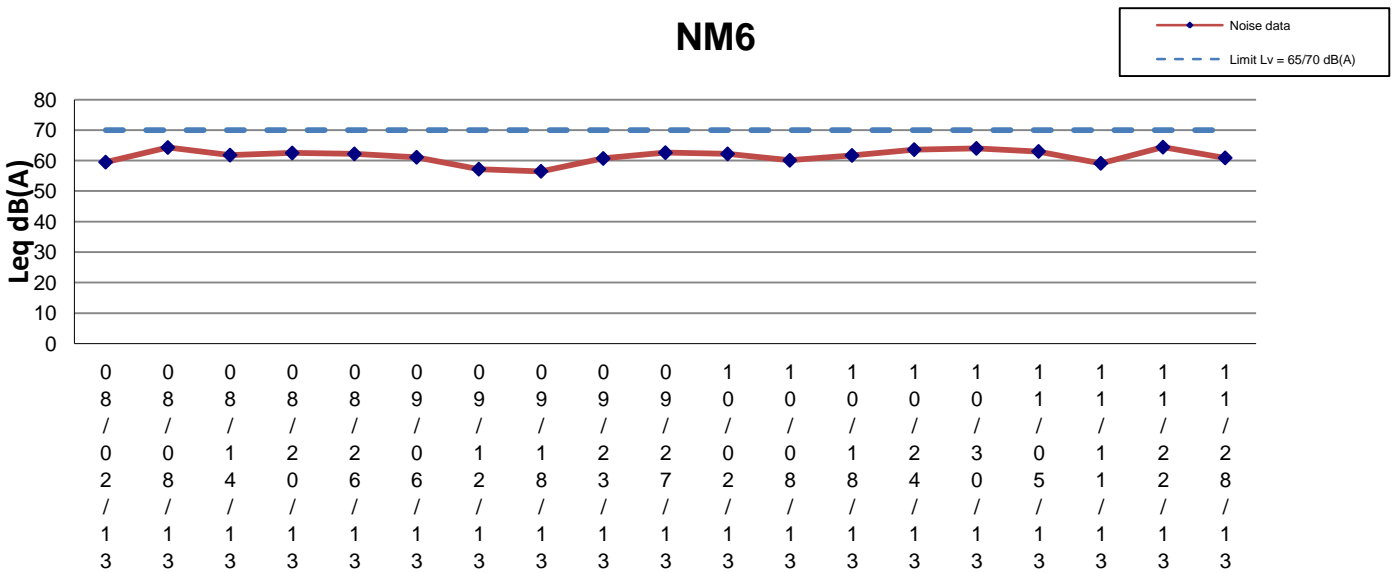
NM4



NM5



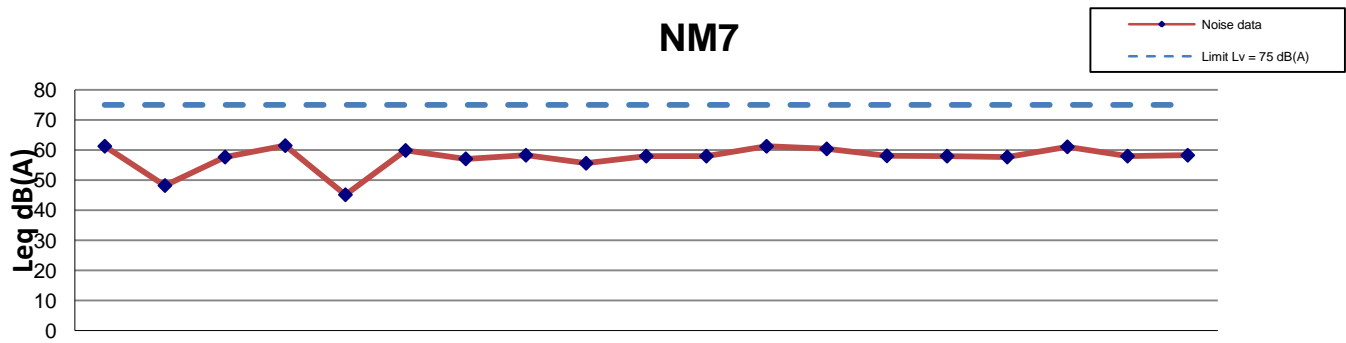
NM6



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

NM7



0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
8	8	8	8	8	9	9	9	9	9	0	0	0	0	0	1	1	1	1
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
0	0	1	2	2	0	1	1	2	2	0	0	1	2	3	0	1	2	2
2	8	4	0	6	6	2	8	3	7	2	8	8	4	0	5	1	2	8
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

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

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

**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:	6 November 2013
Time:	09:30
Inspection No.:	387

Non-compliance

Nil

Observations

Follow Up Observation

Nil.

New Observation

Nil.

Remarks

Nil

EM&A Environmental Inspection Record

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



Site Inspection Summary

Inspection Information

Contract No.	HY/2009/08 (Between Ma Wo and Tai Hang)
Date:	7 November 2013
Time:	14:30
Inspection No.:	388

Non-compliance

Nil

Observations

Follow Up Observations

1. Oil drum was removed under site clearance at Lam Kam Bridge (Closed).
2. Oil can was cleared at Lam Kam Bridge (Closed).

New Observation

3. The Contractor was reminded to cover the stockpiles at Gate 7B.

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:	13 November 2013
Time:	09:30
Inspection No.:	389

Non-compliance

Nil

Observations

Follow Up Observation

Nil.

New Observation

Nil.

Remarks

Nil

EM&A Environmental Inspection Record

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



Site Inspection Summary

Inspection Information

Contract No.	HY/2009/08 (Between Ma Wo and Tai Hang)
Date:	14 November 2013
Time:	14:30
Inspection No.:	390

Non-compliance

Nil

Observations

Follow Up Observations

1. The stockpiles at Gate 7B were 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:	20 November 2013
Time:	14:15
Inspection No.:	391

Non-compliance

Nil

Observations

Follow Up Observation

Nil.

New Observation

Nil.

Remarks

Nil

EM&A Environmental Inspection Record

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



Site Inspection Summary

Inspection Information

Contract No.	HY/2009/08 (Between Ma Wo and Tai Hang)
Date:	21 November 2013
Time:	14:15
Inspection No.:	392

Non-compliance

Nil

Observations

Follow Up Observation

Nil.

New Observations

1. The Contractor was reminded to provide a drip tray to hold the oil can or remove the oil can.
2. Oil leakage was observed under the generator. The Contractor was reminded to clear the oil stain, and identify and eliminate the source of leakage.

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:	27 November 2013
Time:	09:15
Inspection No.:	393

Non-compliance

Nil

Observations

Follow Up Observation

Nil.

New Observation

Nil.

Remarks

Nil

EM&A Environmental Inspection Record

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



Site Inspection Summary

Inspection Information

Contract No.	HY/2009/08 (Between Ma Wo and Tai Hang)
Date:	28 November 2013
Time:	14:15
Inspection No.:	394

Non-compliance

Nil

Observations

Follow Up Observations

1. The oil can at B15A P2 was removed (Closed).
2. Oil stains near the generator were removed. The drip tray was checked again to be in good conditions and no more leakage was found (Closed).

New Observations

3. The Contractor was reminded to clear the general refuse at Bridge 13.

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 this month	Total no. followed up by ET since project commencement
Environmental complaints	-	-	-	1	34
Notification of summons	-	-	-	0	0
Successful Prosecutions	-	-	-	0	0