


# Highways Department

## Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin

Contract No. HY/2003/10 - Environmental Team for  
Lai Chi Kok Viaduct and Eagle's Nest Tunnel

### Monthly EM&A Report Part I – Lai Chi Kok Viaduct (Version 1.0)

January 2008

Approved By   
(Environmental Team Leader)

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

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## ABBREVIATION AND ACRONYM

AL Levels	Action and Limit Levels
CEDD	Civil Engineering and Development Department
E / ER	Engineer/Engineer's Representative
EIA	Environmental Impact Assessment
EM&A	Environmental Monitoring and Audit
EMIS	Environmental Mitigation Implementation Schedule
EP	Environmental Permit
EPD	Environmental Protection Department
ET	Environmental Team
HVS	High Volume Sampler
HyD	Highways Department
IEC	Independent Environmental Checker
NOE	Notification of Exceedance
QA/QC	Quality Assurance / Quality Control
RE	Resident Engineer
RH	Relative Humidity
SLM	Sound Level Meter
TSP	Total Suspended Particulates

## EXECUTIVE SUMMARY

### Introduction

This is the 50<sup>th</sup> monthly Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for the “Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin, Lai Chi Kok Viaduct & Eagle’s Nest Tunnel”. This report documents the findings of EM&A Works conducted in January 2008 for Contract No. HY/2003/01, Lai Chi Kok Viaduct (the Project).

The major site activities for civil works undertaken in the reporting month included:

- Retaining wall construction at LCK-R2 to LCK-R3;
- Slope upgrading works for Feature No. 11NW-A/FR 54 & A/FR55;
- Drainage works at Lai Po Road, Castle Peak Road and Nob Hill (underneath LW Overpass);
- Installation of top rail of parapet at main viaduct, slip roads C&D and Ching Cheung Road;
- Installation of noise barrier and signage at slip roads A, B C, D and Main Viaduct;
- Installation of E&M works in Irrigation Pump House;
- RSSM and slope drains for CCR-S4;
- RSSM and slope drains for slope CCR-S4;
- RSSM for slope CCR-S1 and Batter 8
- Roadworks at main viaduct, slip roads C & D, Lai Po Road, Butterfly Valley Road and Ching Cheung Road; and
- Feature walls construction for landscape hardworks at Lai Po Road.

The major site activities for Traffic Control and Surveillance System (TCSS) works undertaken in the reporting month included:

- Site Acceptance Tests; and
- Minor rectification works to field equipment.

### Environmental Monitoring and Audit Works

Environmental monitoring and audit works for the Project was performed regularly as stipulated in the updated EM&A Manual and the results were checked and reviewed. Site audits were conducted once per week. The implementation of the environmental mitigation measures, Event Action Plans and environmental complaint handling procedures were also checked.

- Summary of the events and action taken in the reporting month is tabulated in **Table I**.

**Table I Summary Table for Events Recorded in the Reporting Month**

Parameter	No. of Events		No. of Events Due to the Project	Action Taken
	Action Level	Limit Level		
1-hr TSP	0	0	0	N/A
24-hr TSP	0	0	0	N/A
Noise	1	0	0 (Invalid complaint)	Complaint Investigation

**Environmental Licenses and Permits**

Licenses/Permits granted to the Project include the Environmental Permit (EP) for the Project, the Water Discharge Licenses (WDLs) and the Construction Noise Permits (CNPs). Two new CNPs were issued to the Project by EPD in the reporting month.

**Key Information in the Reporting Month**

Summary of key information in this reporting month is tabulated in **Table II**.

**Table II Summary Table for Key Information in the Reporting Month**

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	2	Noise, Dust	Complaint investigation	Investigation reports were submitted	---
Changes to the assumptions and key construction / operation activities recorded	0	---	N/A	N/A	---
Status of submissions under EP	0	---	N/A	N/A	---
Notifications of any summons & prosecutions received	0	---	N/A	N/A	---

**Future Key Issues:**

Major site activities for civil works in the coming month include:

- Landscaping works at retaining wall at CCR-R2 and CCR-R3-;
- Slope upgrading works for Feature No. 11NW-A/FR 54 & A/FR55;
- Drainage works and landscaping works at Lai Po Road and Nob Hill (underneath LW Overpass);
- Installation of top rail of parapet at main viaduct and slip roads D;
- Installation of traffic signs at slip roads A, B C, D, Main Viaduct and Ching Cheung Road;
- Installation of E&M works in Irrigation Pump House;
- RSSM and slope drains for CCR-S4 and slope CCR-S1, Batter 8;
- Road works at main viaduct, slip roads C & D, Lai Po Road, Butterfly Valley Interchange, Butterfly Valley Road and Ching Cheung Road; and
- Feature walls construction for landscape hardworks at Lai Po Road.

Major site activities for TCSS works in the coming month include:

- SAT for TCSS equipment.

The anticipated environmental issues will be mainly on dust impact from road works, retaining wall construction, slope upgrading works and noise nuisance from drainage works at Nob Hill (underneath LW Overpass).

## 1. INTRODUCTION

### Background

- 1.1 Route 9 (Kowloon Section) (R9K) (hereinafter call the R9K-Project) forms part of the Route 9 between Cheung Sha Wan and Sha Tin (R9-CSWST) project, which will be a new expressway connecting West Kowloon and Sha Tin. It will be the fourth external link between Sha Tin and Kowloon and will form an important link between the northeast New Territories and the west Kowloon, Lantau Island and the western New Territories. R9K is being managed and implemented by the Highways Department (HyD).
- 1.2 The engineering design of R9K is covered under Agreement No. CE 50/98 “Route 9 between Cheung Sha Wan and Sha Tin – Design Construction Assignment”. The main consultant engaged under Agreement No. CE 50/98 is Maunsell Hyder Joint Venture (MHJV), who will act as the Engineer for the construction contracts. The works of R9K mainly comprise a 1.4km dual 3-lane Lai Chi Kok Viaduct from Lai Wan Interchange to Butterfly Valley; 0.5 km of dual 3-lane at-grade carriageway linking to the 2.1 km dual 3-lane twin-bore Eagle's Nest Tunnel with associated portal buildings; a toll plaza with an administration building located with the Sha Tin valley woodland; a ventilation building and an adit; associated noise barriers, noise enclosures, drainage, slope and landscape works; and electrical and mechanical works for the whole R9-CSWST. The remainder of the R9-CSWST forms the Sha Tin Section (R9S) of the project and is being managed and implemented separately by the Civil Engineering and Development Department (CEDD).
- 1.3 The R9-CSWST project is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO). An environmental impact assessment (EIA) report has been prepared in 1998 for the R9-CSWST project (1998 R9 EIA) to consider the key issues of noise, air quality, water quality, ecological, construction waste, landscape and visual, land use and cultural impacts, and identify possible mitigation measures.
- 1.4 An Updated Final EIA report was subsequently completed in September 1999 for the R9-CSWST project (1999 R9 EIA), to cater for some changes in R9K portion as mentioned in paragraph 1 in the report. The 1999 R9 EIA was endorsed by Environmental Protection Department (EPD) in November 1999. The 1998 R9 EIA and the 1999 R9 EIA (R9 EIA Reports) were included in the EIA register under the EIAO as report no. EIA-135/BC and AEIAR-022/1999 respectively. Environmental Monitoring and Audit (EM&A) Manuals for each of the R9 EIA Reports (EM&A Manuals) were also included as part of the EIA reports in the register.
- 1.5 Subsequent to the endorsement of the R9 EIA Reports by EPD in November 1999, the project programme was deferred to start in 2002/2003 for completion by 2006/07. The implementation of the project was then separated into the R9S and R9K portion. An Environmental Permit (EP) No. EP-103/2001 was issued on 17 September 2001 for R9K to the HyD as Permit Holder and a varied EP No. EP-103/2001/A was subsequently issued on 20 May 2003 for R9K (R9K EP) to HyD as Permit Holder. A varied EP-103/2001/C was recently issued on 22 July 2005.

- 1.6 The major construction activities of two civil contracts of the R9K project, Contract No. HY/2003/01 entitled “Route 9 – Lai Chi Kok Viaduct” and Contract No. HY/2003/02 entitled “Route 9 – Eagle’s Nest Tunnel and Associated Works”, were commenced in 15<sup>th</sup> December 2003 for completion in April 2007.
- 1.7 “Route 9” was recently re-titled as “Route 8 (previously known as Route 9)”. Cinotech Consultants Limited (Cinotech) was commissioned by HyD to undertake the Environmental Monitoring and Audit works for “Route 8 between Cheung Sha Wan and Sha Tin - Environmental Team (ET) for Lai Chi Kok Viaduct and Eagle’s Nest Tunnel (Contract No. HY/2003/10)”. Dr. Priscilla CHOY of Cinotech Consultants Ltd. was appointed as the ET Leader under Condition 2.2 of the EP. Mr. Damien Ku of CH2M HILL Hong Kong Ltd. was appointed as the IEC under Condition 2.1 of the EP. This is the 50<sup>th</sup> monthly EM&A report summarizing the EM&A works for the Project in January 2008.

### **Project Organizations**

- 1.8 Different parties with different levels of involvement in the project organization include:
- Project Proponent – Major Works Project Management Office (MWPMO) of Highways Department (HyD)
  - Engineer (E) / Engineer’s Representative (ER) – Maunsell-Hyder Joint Venture
  - Environmental Team (ET) – Cinotech Consultants Limited
  - Independent Environmental Checker (IEC) – CH2M HILL Hong Kong Limited
  - Contractor – Acciona Infraestructuras S.A.
  - Engineer’s Representative for TCSS works – Ove Arup & Partners Hong Hong Limited
  - Contractor for TCSS works – Delcan-Imtech-Gtech Joint Venture
- 1.9 The responsibilities of respective parties are detailed in Section 1.8.3 of the EM&A Manual (1999) of the Project.
- 1.10 The key contacts of the Project are shown in **Table 1.1**.

### **Construction Programme**

- 1.11 The site activities for civil works undertaken in the reporting month included:
- Retaining wall construction at LCK-R2 to LCK-R3;
  - Slope upgrading works for Feature No. 11NW-A/FR 54 & A/FR55;
  - Drainage works at Lai Po Road, Castle Peak Road and Nob Hill (underneath LW Overpass);
  - Installation of top rail of parapet at main viaduct, slip roads C&D and Ching Cheung Road;
  - Installation of noise barrier and signage at slip roads A, B C, D and Main Viaduct;
  - Installation of E&M works in Irrigation Pump House;
  - RSSM and slope drains for CCR-S4;
  - RSSM and slope drains for slope CCR-S4;
  - RSSM for slope CCR-S1 and Batter 8
  - Roadworks at main viaduct, slip roads C & D, Lai Po Road, Butterfly Valley Road and Ching Cheung Road; and
  - Feature walls construction for landscape hardworks at Lai Po Road.
- 1.12 The site activities for TCSS works undertaken in the reporting month included:



- SAT for TCSS equipment.

**Table 1.1 Key Project Contacts**

Party	Role	Name	Position	Phone No.	Fax No.
HyD	Permit Holder	Mr. Kroc Leung	SE2/R8K	2762 3662	2714 5198
		Mr. Esther Yung	E1/R8K	2762 3677	
		Mr. LC Chung	E2/R8K	2762 3613	
MHJV	Engineer	Mr. Conrad Ng	Project Manager	2605 6262	2691 2649
	Engineer's Representative	Mr. Peter Poon	CRE	2959 0010	2959 0290
		Mr. Alan Chan	IOW	9860 8791	
Mr. Alex Tam	RE	9856 0199			
Cinotech	Environmental Team	Dr. Priscilla Choy	ET Leader	2151 2089	3107 1388
		Mr. Grace Wong	Audit Team Leader	2151 2092	
		Mr. Henry Leung	Monitoring Team Leader	2151 2087	
CH2M	Independent Environmental Checker	Mr. Damien Ku	Independent Environmental Checker	2872 2921	2507 2293
		Mr. Simon Lam	Assistant Independent Environmental Checker	2872 2946	
Acciona	Contractor	Mr. William D. Payne	Project Director	2956 3300	2956 3331
		Mr. Lawrence Kwok	QA/E Manager		
ARUP	Engineer's Representative (TCSS)	Mr. Donald Leung	RE	2436 7489	2436 1803
		Mr. Daniel So	ARE	2436 7435	
DIGJV	Contractor (TCSS)	Ms. Joyce Chan	Quality Manager	2123 0845	2123 0889
24-hour Emergency Hotline				2370 9200	-

### **Summary of EM&A Requirements**

- 1.13 The EM&A programme requires construction phase monitoring for air quality and construction noise, and environmental site audit. The EM&A requirements for each parameter are described in the following sections, including:
- All monitoring parameters;
  - Action and Limit levels for all environmental parameters;
  - Event Action Plans;
  - Environmental mitigation measures, as recommended in the project EIA study final report; and
  - Environmental requirements in contract documents.
- 1.14 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 4 of this report.
- 1.15 This report presents the environmental monitoring results, observations, locations, equipment, period, methodology and QA/QC procedures of the required monitoring parameters, namely dust and noise levels and audit works for the Project in the reporting month.

## 2. AIR QUALITY

### Monitoring Requirements

- 2.1 Monitoring of 1-hour and 24-hour TSP was conducted to monitor the air quality. **Appendix A** shows the established Action/Limit Levels for the environmental monitoring works.

### Monitoring Locations

- 2.2 One designated monitoring station, AM2 was selected for impact dust monitoring for the Project. **Table 2.1** describes the air quality monitoring location, which is also depicted in **Figures 1**.

**Table 2.1 Locations for Air Quality Monitoring**

Monitoring Station	Description	Location
AM2	Lai Chi Kok Park Sports Centre	Rooftop

### Monitoring Equipment

- 2.3 **Table 2.2** summarizes the equipment used for the air quality monitoring. Copies of calibration certificates are attached in **Appendix B**.

**Table 2.2 Air Quality Monitoring Equipment**

Equipment	Model and Make	Quantity
Calibrator	GMW25; S/N: 1536	1
HVS Sampler	Graseby GMW Model GS2310 High Volume TSP Sampler and associated equipment and shelter	1

### Monitoring Parameters, Frequency and Duration

- 2.4 **Table 2.3** summarizes the monitoring parameters and frequencies of impact dust monitoring for the whole construction period. The air quality monitoring schedule for the reporting period is shown in **Appendix C**.

**Table 2.3 Impact Dust Monitoring Parameters, Frequency and Duration**

Parameters	Frequency
1-hr TSP	Three times / 6 days
24-hr TSP	Once / 6 days

## Monitoring Methodology and QA/QC Procedure

### Instrumentation

- 2.5 Graseby GMW Model GS2310 TSP High Volume Sampler (HVS) was employed for 1-hour & 24-hour TSP monitoring. The sampler was composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complied with that required by USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50). Moreover, the HVS also met all the requirements in Sections 2.2 to 2.4 of the EM&A Manual (1999).

### Operating/Analytical Procedures

- 2.6 Operating/analytical procedures for the operation of HVS were as follows:
- A horizontal platform was provided with appropriate support to secure the samplers against gusty wind.
  - No two samplers were placed less than 2 meters apart.
  - The distance between the sampler and an obstacle, such as buildings, was at least twice the height that the obstacle protrudes above the sampler.
  - A minimum of 2 meters of separation from walls, parapets and penthouses was required for rooftop samples.
  - A minimum of 2 meters separation from any supporting structure, measured horizontally was required.
  - No furnaces or incineration flues were nearby.
  - Airflow around the sampler was unrestricted.
  - The sampler was more than 20 meters from the drip line.
  - Any wire fence and gate, to protect the sampler, should not cause any obstruction during monitoring.
- 2.7 Prior to the commencement of the dust sampling, the flow rate of the high volume sampler was properly set (between 1.1 m<sup>3</sup>/min. and 1.4 m<sup>3</sup>/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.
- 2.8 For TSP sampling, fiberglass filters (G810) were used.
- 2.9 The power supply was checked to ensure the sampler worked properly.
- 2.10 On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.
- 2.11 The filter holding frame was then removed by loosening the four nuts and a weighted and conditioned filter was carefully centered with the stamped number upwards, on a supporting screen.
- 2.12 The filter was aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter. Then the filter holding frame was tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges.

- 2.13 The shelter lid was closed and secured with the aluminum strip.
- 2.14 The timer was then programmed. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number).
- 2.15 After sampling, the filter was removed and sent to the laboratory for weighing. The elapsed time was also recorded.
- 2.16 Before weighing, all filters were equilibrated in a conditioning environment for 24 hours. The conditioning environment temperature should be between 25°C and 30°C and not vary by more than  $\pm 3^\circ\text{C}$ ; the relative humidity (RH) should be  $< 50\%$  and not vary by more than  $\pm 5\%$ . A convenient working RH is 40%.

#### Maintenance/Calibration

- 2.17 The following maintenance/calibration was required for the HVS:
- The high volume motors and their accessories were properly maintained. Appropriate maintenance such as routine motor brushes replacement and electrical wiring checking were made to ensure that the equipment and necessary power supply are in good working condition.
  - High volume samplers were calibrated at bi-monthly intervals using GMW-25 Calibration Kit throughout all stages of the air quality monitoring.

#### **Results and Observations**

- 2.18 All TSP monitoring was conducted as scheduled in this reporting month. No Action/Limit Level exceedance for both 1-hr and 24-hr TSP was recorded in the reporting month.
- 2.19 Wind data monitoring equipment has been installed in Shatin Heights for logging wind speed and wind direction. These wind data for the reporting month is summarized in **Appendix D**.
- 2.20 The monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results are shown in **Appendices E** and **F**, respectively.

### 3. NOISE

#### Monitoring Requirements

- 3.1 Monitoring and audit of construction noise levels is required to be conducted, in accordance with the EM&A Manual, to ensure that any unacceptable noise impacts could be readily detected and timely and appropriate action be undertaken to rectify the situation.
- 3.2 The construction noise levels shall be measured in terms of the A-weighted equivalent continuous sound pressure level (Leq). Leq (30min) shall be used as the monitoring parameter for the time period between 0700-1900 hours on normal weekdays. For all other time periods, Leq (5min) shall be employed for comparison with the Noise Control Ordinance (NCO) criteria. As supplementary information for data auditing, statistical results such as  $L_{10}$  and  $L_{90}$  shall also be obtained for reference.
- 3.3 Five designated noise monitoring stations, namely NM2, NM4, NM8a, NM8b and NM9 were selected for impact monitoring. **Appendix A** shows the established Action and Limit Levels for the environmental monitoring works.

#### Monitoring Locations

- 3.4 Noise monitoring was conducted at five designated monitoring stations as summarized in **Table 3.1**. **Figures 1** show the locations of these stations.

**Table 3.1** Noise Monitoring Stations

Stations <sup>(1)</sup>	Description	Location
NM2	Lai Chi Kok Correctional Institution	Rooftop
NM4	Mei Foo Sun Chuen, Phase 5	Rooftop of Block 9
NM8a	Nob Hill	M/F of Car Park
NM8b	Nob Hill	3/F of Car Park
NM9	Hoi Lai Estate	G/F of Hoi Fai House

(1) The Lai Chi Kok Hospital (NM3) was also found vacated and noise monitoring has been suspended since January 2005, as approved by EPD on 15<sup>th</sup> March 2005.

- 3.5 Stations NM8a and NM8b were installed at Nob Hill in May 2004. Station NM8b is located at 3/F of the car park of Nob Hill, which is strongly influenced by traffic noise from Ching Cheung Road. The measurement at this station is for reference purpose, but not for compliance check of construction noise. The measured noise level at Station NM8a, which is located at M/F of car park and closer to the construction site, acts as an indicator of the construction noise. Since the domestic premises are located above 5/F, noise assessment would be performed to assess the level of nuisance resulting from the construction noise at the domestic premises whenever the measured noise level at NM8a exceeds the noise limit level.

- 3.6 The noise monitoring at Lai Chi Kok Correctional Institution (NM2), which was formerly known as Lai Chi Kok Reception Centre, has been resumed since 8<sup>th</sup> September 2006 after the completion of the renovation works.
- 3.7 A new housing estate, Hoi Lai Estate, became one of the noise sensitive receivers close to the Project site. As recommended by the Regional (West) Office of EPD, noise monitoring at this location (Station NM9) was newly included in the EM&A programme. Approval for the change of EM&A programme was granted by EPD on 30<sup>th</sup> December 2004.

### Monitoring Equipment

- 3.8 **Table 3.2** summarizes the noise monitoring equipment model being used. Copies of calibration certificates are attached in **Appendix B**.

**Table 3.2 Noise Monitoring Equipment**

Equipment	Model and Make	Qty.
Integrating Sound Level Meter	B&K Model 2238	5
Calibrator	B&K 4231	2
Wind Speed Anemometer	RS232 Integral Vane Digital Anemometer	1

### Monitoring Parameters, Frequency and Duration

- 3.9 **Table 3.3** summarizes the monitoring parameters, frequency and total duration of monitoring. The noise monitoring schedule is shown in **Appendix C**.

**Table 3.3 Noise Monitoring Parameters, Frequency and Duration**

Stations	Parameter	Period	Frequency	Measurement
NM2	L <sub>10</sub> (30 min.)dB(A) L <sub>90</sub> (30 min.)dB(A) L <sub>eq</sub> (30 min.)dB(A)	0700-1900 hrs. on weekdays	Once per week	Façade
NM4				Façade
NM8a				Façade
NM8b				Façade
NM9				Façade

### Monitoring Methodology and QA/QC Procedures

- The Sound Level Meter was generally set on a tripod at a height of 1.2 m above the ground, depending to the actual monitoring condition.
- The battery condition was checked to ensure the correct functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
  - frequency weighting : A
  - time weighting : Fast
  - time measurement : 30 minutes / 5 minutes
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for

94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after re-calibration or repair of the equipment.

- The wind speed was frequently checked with the portable wind meter.
- At the end of the monitoring period, the  $L_{eq}$ ,  $L_{90}$  and  $L_{10}$  were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet.
- Noise measurement was paused during periods of high intrusive noise if possible and observation was recorded when intrusive noise was not avoided.
- Noise monitoring was cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s.

### **Maintenance and Calibration**

- 3.10 The microphone head of the sound level meter and calibrator was cleaned with soft cloth regularly.
- 3.11 The meters were sent to the supplier to check and calibrate on a yearly interval.

### **Results and Observations**

- 3.12 Noise monitoring was performed at the five designated locations (NM2, NM4, NM8a, NM8b and NM9) as scheduled in the reporting month.
- 3.13 All the Construction Noise Levels (CNLs) reported in this report, except those collected at Stations NM8a, NM8b and NM9, were adjusted with the corresponding baseline level (i.e. Measured  $L_{eq}$  – Baseline  $L_{eq}$  = Measured CNL), in order to facilitate the interpretation of the noise exceedance.
- 3.14 Noise monitoring results and graphical presentations are shown in **Appendix G**.
- 3.15 One Action Level exceedances was recorded due to noise complaints received on 21 January 2008. No noise Limit Level exceedance was recorded in the reporting monthly.
- 3.16 The complaint was referred by the Resident Site Staff (RSS) to the Environmental Team (ET) Leader of the Project on 21 January 2008 regarding construction noise and dust generation near Nob Hill. According to RSS's record, rock dowel installation for slope stabilization at CCR-S1 was commenced on 20 December 2007 and would likely last up to the 2 February 2008. As advised by the RSS, tarpaulin covering, water spraying and temporary noise absorbent materials were provided by the Contractor to suppress the dust and noise nuisance generated from the rock drilling works. Besides, the working hours was lie in between the normal working hours from 7am to 7pm. There was no non-compliance or observation with regard to noise and dust nuisance at the concerned site was recorded by the auditors during the site inspections carried out in December 2007 and January 2008. No Action / Limit level exceedance for air quality and limit level exceedance for construction noise was identified in the period between 20 December 2007 and 24 January 2008. Based on the RSS's information, environmental monitoring results as well as the observations made during site inspections, this complaint is considered to be invalid and not due to the construction activities of the



Project.

- 3.17 At Stations NM8a and NM8b, the major noise source identified during the monitoring exercises was mainly the road traffic noise.
- 3.18 At Stations NM2, NM4 and NM9, construction noise from the Project and occasionally the traffic noise were identified as the major noise source during monitoring.

#### **4. ENVIRONMENTAL AUDIT**

##### **Site Audits**

- 4.1 Site audits were carried out by ET on weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site. The summaries of site audits are attached in **Appendix I**.
- 4.2 Site audits for Civil contract were conducted on 2<sup>nd</sup>, 9<sup>th</sup>, 16<sup>th</sup>, 23<sup>rd</sup> and 30<sup>th</sup> January 2008. A joint site audit for Civil works was conducted on 2<sup>nd</sup> January 2008 with representatives from IEC, ER, the Contractor and ET while the joint site audit for TCSS works was conducted on 2<sup>nd</sup> January 2008 with the representatives from IEC, ER, the Contractor and ET. No environmental deficiency was recorded for TCSS contract during site inspections.

##### **Review of Environmental Monitoring Procedures**

- 4.3 The monitoring works conducted by the monitoring team were inspected regularly. The following observations have been recorded for the monitoring works:

###### *Air Quality Monitoring*

- The monitoring team recorded all observations around the monitoring stations within and outside the construction site.
- The monitoring team recorded the temperature and weather conditions on the monitoring days.

###### *Noise Monitoring*

- The monitoring team recorded all observations around the monitoring stations, which might affect the monitoring result.
- Major noise sources were identified and recorded. Other intrusive noise attributing to the result was trimmed off by pausing the monitoring temporarily.

##### **Status of Environmental Licensing and Permitting**

- 4.4 All valid permits/licenses obtained for the Project are summarized in **Table 4.1**. Two new CNPs were issued to the Project in the reporting month.

### Implementation Status of Environmental Mitigation Measures

4.5 According to the Environmental Permit and the EM&A Manuals, the mitigation measures detailed in the documents are required to be implemented. An updated summary of the EMIS is provided in **Appendix K**.

**Table 4.1 Summary of Environmental Licensing and Permit Status**

Permit No.	Valid Period		Details	Status
	From	To		
<b>Environmental Permit (EP)</b>				
EP-103/2001/C	22/7/05	N/A	<p><u>Construction and operation of</u></p> <p>(a) All civil works (including highways, traffic, geotechnical, drainage, structural, architectural and landscaping works) for the Lai Chi Kok Viaduct, the interchange with Ching Cheung Road, the main road within Butterfly Valley and the Eagle's Nest Tunnel;</p> <p>(b) All E&amp;M works (including ventilation, Traffic Control &amp; Surveillance System (TCSS), toll collection system and lighting) for the whole Route 9 between Cheung Sha Wan and Sha Tin;</p> <p>© The permanent slope works above the northern portal of the Eagle's Nest Tunnel;</p> <p>(d) The architectural works (including fitting out and furnishings) of the portal buildings of the Sha Tin Heights Tunnel.</p>	Valid
<b>Registration of Chemical Waste Producer</b>				
WPN 5213-261-N2413-04	17/11/03	N/A	N/A	Valid
<b>Water Discharge Licence</b>				
EP482/260/251/1	05/12/03	31/12/08	Discharge of industrial trade effluent arising from the construction site at Route 9 – Lai Po Road Section of Lai Chi Kok Viaduct (Contract HY/2003/01).	Valid
EP482/260/251/2	15/12/03	31/12/08	Discharge of industrial trade effluent arising from the construction site at Route 9 – Lai Chi Kok Viaduct excluding Lai Po Road Section.	Valid
<b>Construction Noise Permit (CNP)</b>				
GW-RW0419-07	23/08/07	20/02/08	<p><i>Location:</i> Ching Cheung Road near Castle Peak Road, Kowloon</p> <p><i>Time Period:</i> 0000-0600 (any day not being a general holiday or not immediately following a general holiday including Sundays).</p>	Valid
GW-RW0465-07	22/09/07	21/02/08	<p><i>Location:</i> Butterfly Valley Road, Lai Chi Kok, Kowloon</p> <p><i>Time Period:</i> 1900-2300 (any day not being a general holiday) and 0700-2300 (General holidays including Sundays).</p>	Valid
GW-RW0477-07	28/09/07	27/03/08	<p><i>Location:</i> Butterfly Valley, Lai Chi Kok, Kowloon</p> <p><i>Time Period:</i> 0700-2300 (general holidays including Sundays) and 1900-2300 (any day not being a general holiday).</p>	Valid
GW-RW0478-07	30/09/07	29/03/08	<p><i>Location:</i> Junction of Ching Cheung Road and Castle Peak Road</p> <p><i>Time Period:</i> 0700-2300 (general holidays including Sundays) and 1900-2300 (any day not being a general holiday).</p>	Valid

Permit No.	Valid Period		Details	Status
	From	To		
GW-RW0589-07	11/11/07	27/01/08	<i>Location:</i> Butterfly Valle Road near, Lai Chi Kok Reception Centre, Kowloon <i>Time Period:</i> 0900-1900 (general holidays including Sundays).	Expired
GW-RW0656-07	29/12/07	28/06/08	<i>Location:</i> Ching Cheung Road Section between Ching Lai Court and Castle Peak Road, Lai Chi Kok, Kowloon <i>Time Period:</i> 0700-2100 (general holidays including Sundays) and 1900-2300(any day not being a general holiday).	Valid
GW-RW0657-07	13/12/07	11/06/08	<i>Location:</i> Butterfly Valley Road Near Lai Chi Kok Reception Center, Kowloon. <i>Time Period:</i> 2300-2400 (general holidays including Sundays) and 0000-0700 and 2300-2400 (any day not being a general holiday).	Valid
GW-RW0658-07	12/12/07	11/06/08	<i>Location:</i> Lai Po Road near Sewage Pumping Station, Kowloon. <i>Time Period:</i> 2300-2400 (general holidays including Sundays) and 0000-0700 and 2300-2400 (any day not being a general holiday).	Valid
GW-RW0668-07	20/12/07	14/06/08	<i>Location:</i> Yuet Lun Street to Cheung Sha Wan Road, Kowloon. <i>Time Period:</i> 2300-2400 (general holidays including Sundays) and 0000-0700 and 2300-2400 (any day not being a general holiday).	Valid
GW-RW0669-07	21/12/07	18/06/08	<i>Location:</i> Ching Cheung Road near Mei Foo Sun Chuen, Lai Chi Kok, Kowloon. <i>Time Period:</i> 0000-0700 and 2300-2400 (any day not being a general holiday).	Valid
GW-RW0723-07	21/01/08	10/07/08	<i>Location:</i> Ching Cheung Road near Butterfly Valley Road, Lai Chi Kok, Kowloon. <i>Time Period:</i> 0000-0700 and 2300-2400 (any day not being a general holiday).	Valid
GW-RW0027-08	27/01/08	24/02/08	<i>Location:</i> Ching Cheung Road near Ching LaiCommercial Centre, Kowloon . <i>Time Period:</i> 0900-1900 (general holidays including Sundays).	Valid

4.6 During site inspections in the reporting month, no non-conformance was identified. The observations and recommendations are summarized in **Table 4.2** and **Table 4.3**.

**Table 4.2 Observations and Recommendations of Site Audits for Civil Works**

Parameters	Date	Observations and Recommendations	Follow-up
<b>Water Quality</b>	2-Jan-08	<u>Reminder</u> Follow up with the last site inspection, although the Contractor has put the granular larvicides, it is recommended to dry the water out from the hole to prevent mosquito breed.	The situation was found improved / rectified during the audit on 16-Jan 08.
	9-Jan-08	<u>Reminder</u> Follow up with the last site inspection, standing water was still observed at Lai Po Road. The Contractor was reminded to dry the water out to prevent mosquito breed.	The situation was found improved / rectified during the audit on 16-Jan 08.
	23-Jan-08	<u>Observation</u> Further rock dowell drilling will undergoes at Nob Hill. The Contractor was advised to install geotextile into the manholes to prevent any surface runoff running into the manholes nearby.	The situation was found improved / rectified during the audit on 30-Jan 08.
	30-Jan-08	<u>Observation</u> The discharge from rock dowel was observed overflow into the geo-textile installed in the manhole at Nob Hill. The Contractor was advised to pre-treated the discharge properly (e.g. further desilt it with the sandbags/ an additional geo-textile filter) before discharging into the manhole.	This item will be followed up on next audit session.
<b>Air Quality</b>	2-Jan-08	<u>Reminder</u> Follow up with last site inspection, the stockpile was in used by the Contractor at Lai Po Raod. The Contractor was reminded to cover it properly to suppress the dust generation when it is not in used.	The situation was found improved / rectified during the audit on 16-Jan 08
	9-Jan-08	<u>Reminder</u> Follow up with last site inspection, the stockpile was partially covered at Lai Po Road. The Contractor was reminded to cover it well.	The situation was found improved / rectified during the audit on 16-Jan 08.

Parameters	Date	Observations and Recommendations	Follow-up
<b>Waste/ Chemical Management</b>	2-Jan-08	<u>Observation</u> Oil leakage was observed on the ground at Nob Hill. The Contractor was advised to clear the oil.	The situation was found improved / rectified during the audit on 9-Jan 08
	16-Jan-08	<u>Observation</u> Contaminated soil was observed at Nob Hill next to the drip tray under the bridge. The Contractor was advised to clean the soil up and remind the operator to add the oil carefully.	The situation was found improved / rectified during the audit on 23-Jan 08
	16-Jan-08	<u>Observation</u> General refuse was observed accumulating at Lai Wan Road where is opposite to the Lai Chi Kok Public Library. The Contractor was advised to clean them out.	The situation was found improved / rectified during the audit on 23-Jan 08
<b>Others</b>	2-Jan-08	<u>Reminder</u> Follow up with the last site inspection, although the Contractor has put the granular larvicides, it is recommended to dry the water out from the hole to prevent mosquito breed.	The situation was found improved / rectified during the audit on 9-Jan 08

**Table 4.3 Observations and Recommendations of Site Audits for TCSS**

Parameters	Date	Observations and Recommendations	Follow-up
-	-	-	-

4.7 The observations and recommendations arising from pervious month and followed up in the reporting month are summarized in **Table 4.4** and **Table 4.5**.

**Table 4.4 Observations and Recommendations of Site Audits Followed up for Pervious Month for Civil Works**

Parameters	Date	Observations and Recommendations	Follow-up
<b>Water Quality and Others</b>	28-Dec-07	<u>Observation</u> Standing water was found at Lai Po Road. The Contractor was advised to provide mitigated measures to prevent mosquito breed.	The situation was found improved / rectified during the audit on 2 January 2008.
<b>Air Quality</b>	28-Dec-07	<u>Reminder</u> Stockpile was not covered well at Lai Po Road. The Contractor was reminded to cover it properly to suppress the dust generation.	The situation was found improved / rectified during the audit on 2 January 2008

**Table 4.5 Observations and Recommendations of Site Audits Followed up for Pervious Month for TCSS**

Parameters	Date	Observations and Recommendations	Follow-up
-	-	-	-

**Summary of Exceedance**

1-hr and 24-hr TSP Monitoring

4.8 No Action/Limit Level exceedance was recorded in the reporting month.

Construction Noise Monitoring

4.9 One Action Level exceedance was recorded. No noise Limit Level exceedance was recorded in the reporting monthly.

**Implementation Status of Event Action Plans**

4.10 The Event Action Plans for air quality and construction noise are presented in **Appendix J**.

### Summary of Complaint and Prosecution

- 4.11 Two public complaints were received in the reporting month.
- 4.12 One complaint was referred by the Environmental Protection Department (EPD) on 3 January 2008 about the construction dust of slope works near the junction of King Lai Path and Lai Wan Road. According to RSS's record, rock slope stabilization measures was carried on at batter 8 of slope CCR-S1. Rock drilling for installation of rock dowels (6m long) at CCR-S1 was commenced on 20 December 2007 and would likely last up to the 2 February 2008. As advised by the RSS, a three side's tarpaulin covering sheets were provided by the Contractor to suppress the dust nuisance generated from the rock drilling works. On 5 January 2008, the drilling rig was wrapped with a wet thick towel and the speed of the drill was controlled. Besides, there was no Action/Limit Level exceedance for both 1-hr and 24-hr TSP identified during the period in between the 20 December 2007 and 9 January 2008. Base on the information collected and the monitoring results, the complaint was considered not justifiable.
- 4.13 Another complaint was referred by the Resident Site Staff (RSS) to the Environmental Team (ET) Leader of the Project on 21 January 2008 regarding construction noise and dust generation near Nob Hill. According to RSS's record, rock dowel installation for slope stabilization at CCR-S1 was commenced on 20 December 2007 and would likely last up to the 2 February 2008. As advised by the RSS, tarpaulin covering, water spraying and temporary noise absorbent materials were provided by the Contractor to suppress the dust and noise nuisance generated from the rock drilling works. Besides, the working hours was lie in between the normal working hours from 7am to 7pm. There was no non-compliance or observation with regard to noise and dust nuisance at the concerned site was recorded by the auditors during the site inspections carried out in December 2007 and January 2008. No Action / Limit level exceedance for air quality and limit level exceedance for construction noise was identified in the period between 20 December 2007 and 24 January 2008. Based on the RSS's information, environmental monitoring results as well as the observations made during site inspections, this complaint is considered to be invalid and not due to the construction activities of the Project.
- 4.14 There were 43 environmental complaints referred to the ET and 1 prosecution received since the commencement of the Project. The Complaint Log is attached in **Appendix M**.

## 5. FUTURE KEY ISSUES

### Key Issues for the Coming Month

5.1 Key issues to be considered in the coming month include:

- Construction noise from drainage works at Nob Hill (underneath LW Overpass);
- Dust generation from road works, retaining wall construction, slope upgrading works or any other dusty materials.

### Monitoring Schedule for the Next Month

5.2 The tentative monitoring schedule for the next month is shown in **Appendix C**.

### Construction Program for the Next Month

5.3 The major construction activities for civil works in the coming month include:

- Retaining wall construction at LCK-R2 to LCK-R3;
- Slope upgrading works for Feature No. 11NW-A/FR 54 & A/FR55;
- Drainage works at Lai Po Road, Castle Peak Road and Nob Hill (underneath LW Overpass);
- Installation of top rail of parapet at main viaduct, slip roads C&D and Ching Cheung Road;
- Installation of noise barrier and signage at slip roads A, B C, D and Main Viaduct;
- Installation of E&M works in Irrigation Pump House;
- RSSM and slope drains for CCR-S4;
- RSSM and slope drains for slope CCR-S4;
- RSSM for slope CCR-S1 and Batter 8
- Roadworks at main viaduct, slip roads C & D, Lai Po Road, Butterfly Valley Road and Ching Cheung Road; and
- Feature walls construction for landscape hardworks at Lai Po Road.

5.4 The tentative construction program for civil works is provided in **Appendix L**.

5.5 The major activities for TCSS works in the coming month include:

- SAT for TCSS equipment.



## 6. CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

- 6.1 Environmental monitoring works were conducted in the reporting month and all monitoring results were checked and reviewed.
- 6.2 No Action/Limit Level exceedance for both 1-hour TSP and 24-hours TSP was recorded in the reporting month.
- 6.3 One Action Level exceedances was recorded due to noise complaints received on 21 January 2008. No noise Limit Level exceedance was recorded in the reporting monthly.
- 6.4 Two public complaints were received in the reporting month.
- 6.5 No prosecution was received in the reporting month.

### Recommendations

- 6.6 According to the environmental audit performed in the reporting month, the following recommendations were made:

#### *Water Impact*

- To ensure properly maintenance for de-silting facilities
- To review the capacity of de-silting facilities for discharge.
- To avoid stagnant water accumulation on site.

#### *Noise Impact*

- To provide temporary noise barriers for noisy activities, such as slope upgrading works for Feature No. 11NW-A/FR 54 & A/FR55
- To review the works sequence of site activities so as to reduce the number of noisy equipment in concurrent operation.
- To employ quiet powered mechanical equipment if possible.
- To ensure compliance of CNP conditions during restricted-hour works.

#### *Dust Impact*

- To ensure water spray is applied for the dust emissive works, such as slope upgrading, loading and unloading of soil materials.
- To cover soil stockpiles and exposed slope surface by impervious sheets or other means.
- To ensure that all vehicles carrying dusty material are properly covered before leaving the site.

#### *Waste / Chemical Management*

- To ensure the performance of sorting of C&D materials at source (during generation);
- To carry out inspection of dump truck at site exit to ensure inert and non-inert C&D materials are properly segregated before removing off site.
- To ensure proper collection and disposal of rubbish generated on site.
- To avoid any discharge or accidental spillage of chemical waste directly from the site.

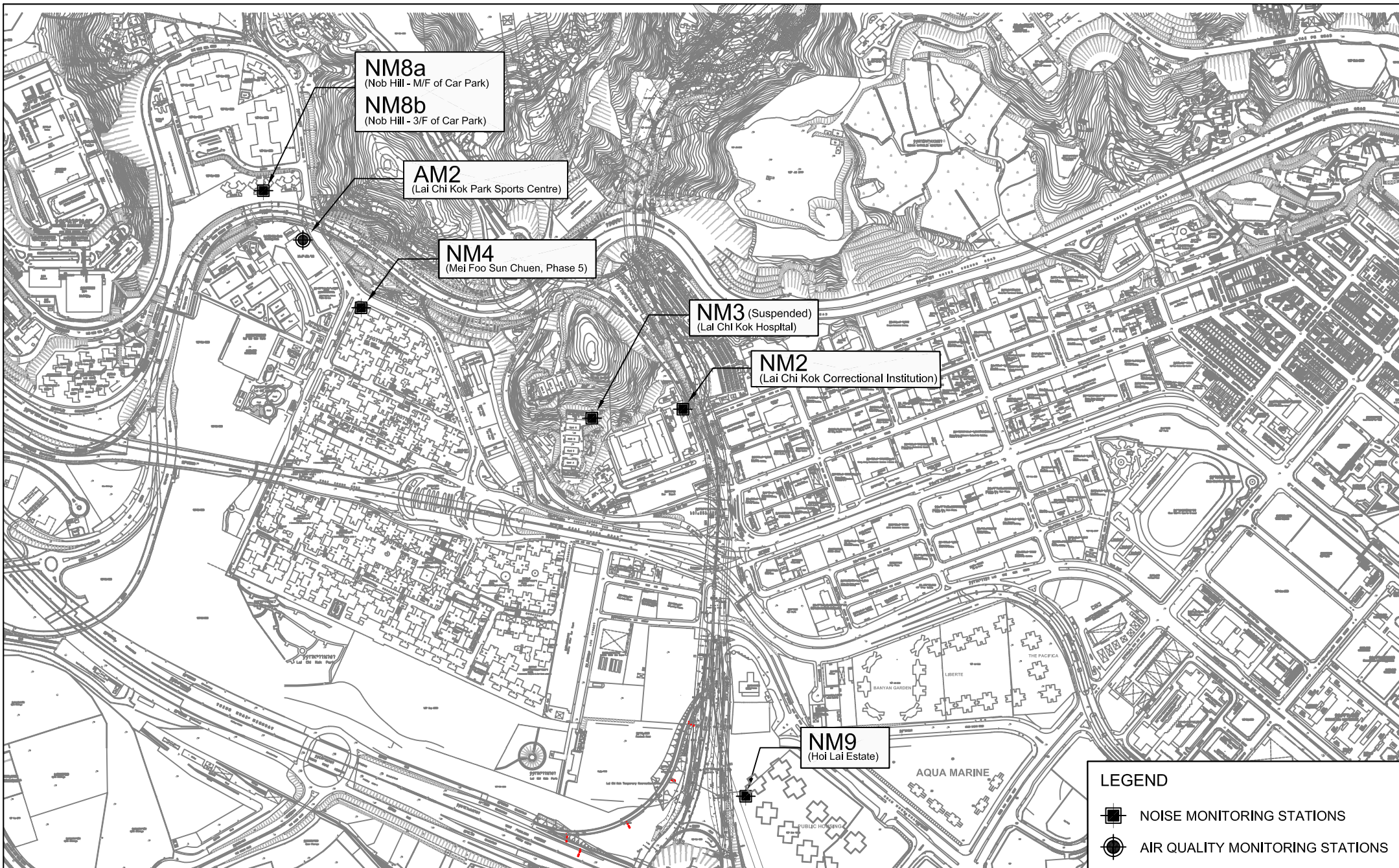
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## FIGURES

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Title ROUTE 8 (PREVIOUSLY KNOWN AS ROUTE 9) BETWEEN CHEUNG SHA WAN AND SHA TIN  
CONTRACT HY/2003/01 - LAI CHI KOK VIADUCT

LOCATIONS OF MONITORING STATIONS

Scale 1 : 8000 (A4)

Date 2006

LEGEND	
	NOISE MONITORING STATIONS
	AIR QUALITY MONITORING STATIONS

Project No. MA3024

Figure No. 1



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**APPENDIX A  
ACTION AND LIMIT LEVELS**

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## Appendix A - Action and Limit Levels (LCKV)

### 1-Hour TSP

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM2	301	500

### 24-Hour TSP

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM2	177	260

### Construction Noise

Period	Action Level	Limit Level
0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A)
0700-2300 hrs on holidays & 1900-2300 hrs on all other days		70* dB(A)
2300-0700 hrs of next day		55* dB(A)

(\*) The Area Sensitivity Rating for the noise monitoring stations (NM4, NM8a, NM8b and NM9) is taken as C, according to Table 1 of EPD's Technical Memorandum on Noise from Construction Work other than Percussive Piling.

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**APPENDIX B  
COPIES OF CALIBRATION  
CERTIFICATES**

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# High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

**CINOTECH**

File No. MA3024/20/0026

Station Lai Chi Kok Sport Centre (AM2)  
 Date: 12-Nov-07  
 Equipment No.: A-01-20

Operator: WK  
 Next Due Date: 11-Jan-08  
 Serial No. 0818

Ambient Condition			
Temperature, Ta (K)	293.6	Pressure, Pa (mmHg)	766.6

Orifice Transfer Standard Information					
Equipment No.:	A-04-05	Slope, mc	0.0575	Intercept, bc	0.0395
Last Calibration Date:	12-Mar-07	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	11-Mar-08	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler						
Calibration Point	Orifice			HVS		
	$\Delta H$ (orifice), in. of water	$[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$	Qstd (CFM) X-axis	$\Delta W$ (HVS), in. of oil	$[\Delta W \times (Pa/760) \times (298/Ta)]^{1/2}$ Y-axis	
1	11.4	3.42	58.73	8.5	2.95	
2	10.0	3.20	54.96	7.0	2.68	
3	7.2	2.72	46.53	4.8	2.21	
4	5.1	2.29	39.05	3.3	1.84	
5	3.0	1.75	29.79	1.8	1.36	

By Linear Regression of Y on X

Slope , mw = 0.0542                      Intercept, bw : -0.2770  
 Correlation coefficient\* = 0.9988

\*If Correlation Coefficient < 0.990, check and recalibrate.

### Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

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

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

Therefore, Set Point;  $W = (mw \times Qstd + bw)^2 \times (760 / Pa) \times (Ta / 298) =$  4.12

Remarks: \_\_\_\_\_

Conducted by: Wk Tang      Signature: [Signature]  
 Checked by: [Signature]      Signature: \_\_\_\_\_

Date: 12 Nov 07  
 Date: 12 Nov 2007

## High-Volume TSP Sampler 5-POINT CALIBRATION DATA SHEET

CINOTECH

File No. MA3024/20/0027

Station Lai Chi Kok Sport Centre (AM2)  
Date: 10-Jan-08  
Equipment No.: A-01-20

Operator: WK  
Next Due Date: 9-Mar-08  
Serial No. 0818

Ambient Condition			
Temperature, Ta (K)	293.3	Pressure, Pa (mmHg)	764.7

Orifice Transfer Standard Information					
Equipment No.:	A-04-05	Slope, mc	0.0575	Intercept, bc	0.0395
Last Calibration Date:	12-Mar-07	$mc \times Qstd + bc = [\Delta H \times (Pa/760) \times (298/Ta)]^{1/2}$			
Next Calibration Date:	11-Mar-08	$Qstd = \{[\Delta H \times (Pa/760) \times (298/Ta)]^{1/2} - bc\} / mc$			

Calibration of TSP Sampler					
Calibration Point	Orifice			HVS	
	ΔH (orifice), in. of water	[ΔH x (Pa/760) x (298/Ta)] <sup>1/2</sup>	Qstd (CFM) X - axis	ΔW (HVS), in. of oil	[ΔW x (Pa/760) x (298/Ta)] <sup>1/2</sup> Y- axis
1	11.2	3.38	58.16	8.6	2.97
2	10.1	3.21	55.20	7.0	2.68
3	7.4	2.75	47.15	5.0	2.26
4	5.3	2.33	39.79	3.2	1.81
5	3.0	1.75	29.77	1.7	1.32

By Linear Regression of Y on X

Slope, mw = 0.0569 Intercept, bw = -0.4126

Correlation coefficient\* = 0.9969

\*If Correlation Coefficient < 0.990, check and recalibrate.

### Set Point Calculation

From the TSP Field Calibration Curve, take Qstd = 43 CFM

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

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

Therefore, Set Point; W = (mw x Qstd + bw)<sup>2</sup> x (760 / Pa) x (Ta / 298) = 4.05

Remarks: \_\_\_\_\_

Conducted by: Wk Tang Signature: [Signature]  
Checked by: [Signature] Signature: \_\_\_\_\_

Date: 10 Jan 2008  
Date: 10 January 2008



# WELLAB LTD.

Unit C, 1/F, Goldlion Holdings Center  
13-15 Yuen Shun Circuit,  
Shatin, Hong Kong.  
Tel: (852) 2898 7388  
Fax: (852) 2898 7076

## TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
1602-1610 Delta House,  
3 On Yiu Street,  
Shatin, N.T.

Test Report No.:	C/07/70502
Date of Issue:	2007-05-02
Date Received:	2007-05-01
Date Tested:	2007-05-01
Date Completed:	2007-05-02

**ATTN:** Mr. Henry Leung

Page: 1 of 1

### Certificate of Calibration

**Item for calibration:**

Description : RS232 Integral Vane Digital Anemometer  
Manufacturer : AZ Instrument  
Model No. : 451104  
Serial No. : 9020746  
Equipment No. : A-03-01

**Test conditions:**

Room Temperature : 21 degree Celsius  
Relative Humidity : 65%  
Pressure : 101.3 kPa

**Methodology:**

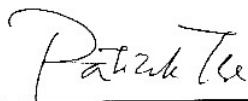
The anemometer has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

**Results:**

	Reference Set Point	Instrument Readings
Measuring Air Velocity, m/s	2.00	2.00
Temperature, °C	21.0	21.0

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**

Senior Chemist



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

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Mar 12, 2007 Roots-meter S/N 9833640 Ta (K) - 294  
 Operator Tisch Orifice I.D. - 0999 Pa (mm) - 746.76

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.3890	3.2	2.00
2	NA	NA	1.00	0.9850	6.3	4.00
3	NA	NA	1.00	0.8810	7.8	5.00
4	NA	NA	1.00	0.8410	8.6	5.50
5	NA	NA	1.00	0.6950	12.5	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
0.9917	0.7139	1.4113	0.9957	0.7168	0.8874
0.9876	1.0026	1.9959	0.9916	1.0067	1.2549
0.9854	1.1185	2.2315	0.9894	1.1231	1.4030
0.9844	1.1706	2.3405	0.9884	1.1753	1.4715
0.9792	1.4090	2.8227	0.9832	1.4147	1.7747
Qstd slope (m) = 2.03154			Qa slope (m) = 1.27212		
intercept (b) = -0.03970			intercept (b) = -0.02496		
coefficient (r) = 0.99999			coefficient (r) = 0.99999		
y axis = SQRT[H2O(Pa/760)(298/Ta)]			y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

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

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

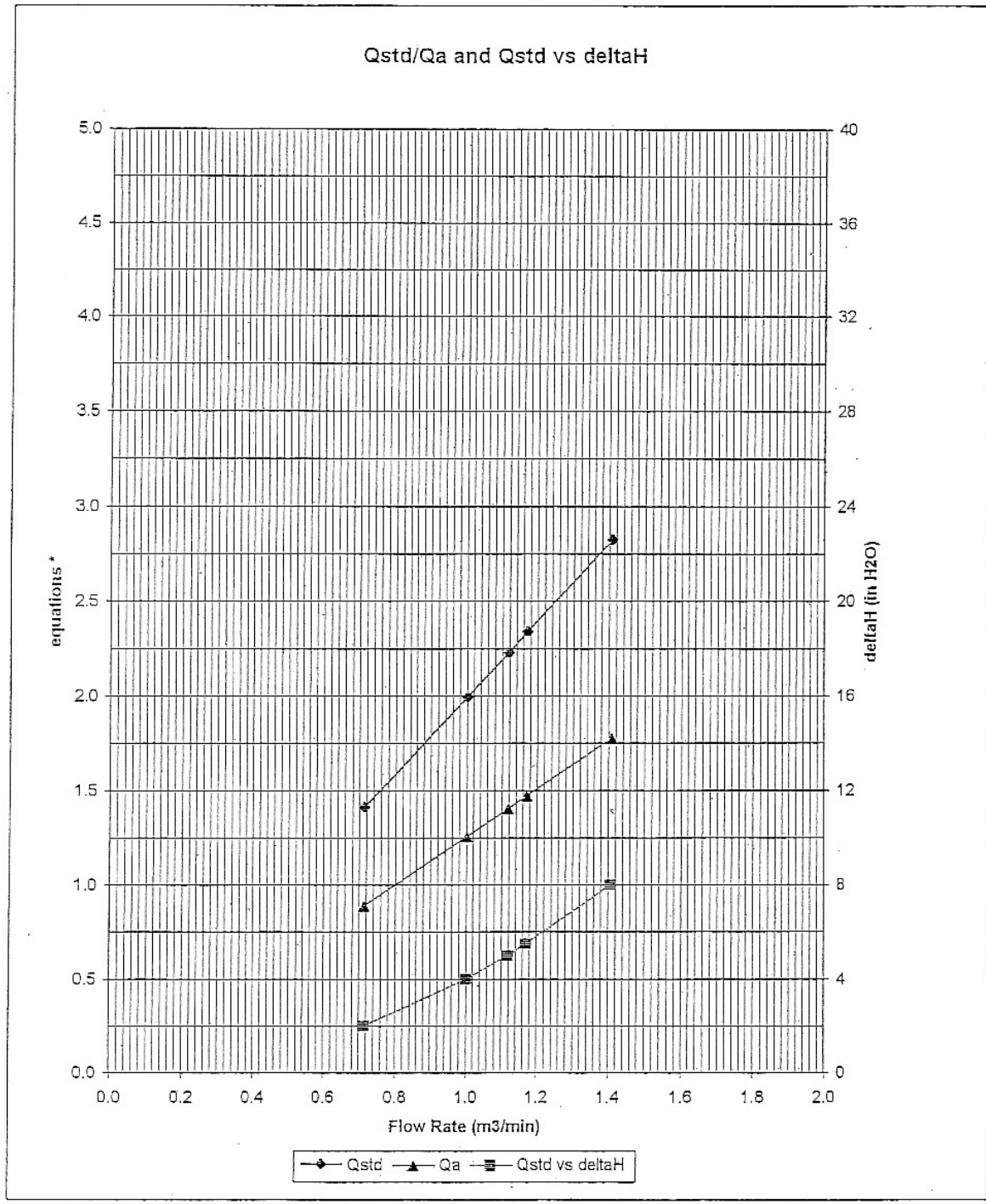
For subsequent flow rate calculations:

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



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

AIR POLLUTION MONITORING EQUIPMENT



\* y-axis equations:

Qstd series: 
$$\sqrt{\Delta H \left( \frac{P_a}{P_{std}} \right) \left( \frac{T_{std}}{T_a} \right)}$$

Qa series: 
$$\sqrt{(\Delta H (T_a / P_a))}$$

**TEST REPORT**

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/71213/1
Date of Issue:	2007-12-14
Date Received:	2007-12-13
Date Tested:	2007-12-14
Date Completed:	2007-12-14
Next Due Date:	2008-12-13

**ATTN:** Mr. Henry Leung

Page: 1 of 1

**Certificate of Calibration**

**Item for calibration:**

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2337665
Microphone No.	: 2289749
Equipment No.	: N-01-01

**Test conditions:**

Room Temperature	: 20 degree Celsius
Relative Humidity	: 60%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**  
Senior Chemist

## TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/71116/1
Date of Issue:	2007-11-16
Date Received:	2007-11-15
Date Tested:	2007-11-15
Date Completed:	2007-11-16
Next Due Date:	2008-11-15

**ATTN:** Mr. Henry Leung

Page: 1 of 1

### Certificate of Calibration

**Item for calibration:**

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2337666
Microphone No.	: 2289750
Equipment No.	: N-01-02

**Test conditions:**

Room Temperature	: 20 degree Celsius
Relative Humidity	: 59%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**  
Senior Chemist

## TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
1601-1610 Delta House,  
3 On Yiu Street,  
Shatin, N.T.

Test Report No.:	C/N/70903-1
Date of Issue:	2007-09-03
Date Received:	2007-09-01
Date Tested:	2007-09-03
Date Completed:	2007-09-03
Next Due Date:	2008-09-02

**ATTN:** Mr. Henry Leung

Page: 1 of 1

### Certificate of Calibration

**Item for calibration:**

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2359311
Microphone No.	: 2346382
Equipment No.	: N-01-03

**Test conditions:**

Room Temperature	: 22 degree Celsius
Relative Humidity	: 62%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**  
*Senior Chemist*

## TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
1602-1610 Delta House,  
3 On Yiu Street,  
Shatin, N.T.

Test Report No.:	C/N/70903-2
Date of Issue:	2007-09-03
Date Received:	2007-09-01
Date Tested:	2007-09-03
Date Completed:	2007-09-03
Next Due Date:	2008-09-02

**ATTN:** Mr. Henry Leung

Page: 1 of 1

### Certificate of Calibration

**Item for calibration:**

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2359303
Equipment No.	: N-01-04

**Test conditions:**

Room Temperature	: 22 degree Celsius
Relative Humidity	: 62%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**  
Senior Chemist

## TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/71015/1
Date of Issue:	2007-10-15
Date Received:	2007-10-13
Date Tested:	2007-10-13
Date Completed:	2007-10-15
Next Due Date:	2008-10-14

**ATTN:** Mr. Henry Leung

Page: 1 of 1

### Certificate of Calibration

**Item for calibration:**

Description	: Integrating Sound Level Meter
Manufacturer	: Brüel & Kjær
Model No.	: B&K 2238
Serial No.	: 2394976
Microphone No.	: 2407349
Equipment No.	: N-01-05

**Test conditions:**

Room Temperature	: 21 degree Celsius
Relative Humidity	: 60%

**Test Specifications:**

Performance checking at 94 and 114 dB

**Methodology:**

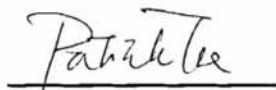
In-house method, according to manufacturer instruction manual

**Results:**

Reference Set Point, dB	Instrument Readings, dB
94	94.0
114	114.0

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**  
Senior Chemist



## TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
Room 1710, Technology Park,  
18 On Lai Street,  
Shatin, NT, Hong Kong

Test Report No.:	C/N/71116/2
Date of Issue:	2007-11-16
Date Received:	2007-11-15
Date Tested:	2007-11-15
Date Completed:	2007-11-16
Next Due Date:	2008-11-15

**ATTN:** Mr. Henry Leung

Page: 1 of 1

### Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: Brüel & Kjær
Model No.	: 4231
Serial No.	: 2326353
Project No.	: C13
Equipment No.	: N-02-01

### Test conditions:

Room Temperature	: 20 degree Celsius
Relative Humidity	: 59%
Pressure	: 1015.2 hPa

### Methodology:

The sound calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

### Results:

Sound Pressure Level	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**  
Senior Chemist

# WELLAB LTD.

Unit C, 1/F, Goldlion Holdings Center  
13-15 Yuen Shun Circuit,  
Shatin, Hong Kong.  
Tel: (852) 2898 7388  
Fax: (852) 2898 7076

## TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
1602-1610 Delta House,  
3 On Yiu Street,  
Shatin, N.T.

Test Report No.:	C/06/70305
Date of Issue:	2007-03-05
Date Received:	2007-03-03
Date Tested:	2007-03-03
Date Completed:	2007-03-05
Next Due Date:	2008-03-04

**ATTN:** Mr. Henry Leung

Page: 1 of 1

### Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: Brüel & Kjær
Model No.	: 4231
Serial No.	: 2343007
Project No.	: C13
Equipment No.	: N-02-02

### Test conditions:

Room Temperature	: 20 degree Celsius
Relative Humidity	: 65%
Pressure	: 1020.1hPa

### Methodology:

The sound calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

### Results:

Sound Pressure Level	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.2 dB

*PREPARED AND CHECKED BY:*

For and On Behalf of **WELLAB Ltd.**



**PATRICK TSE**

Operation Manager

## TEST REPORT

**APPLICANT:** Cinotech Consultants Limited  
1602-1610 Delta House,  
3 On Yiu Street,  
Shatin, N.T.

Test Report No.:	C/N/70903-3
Date of Issue:	2007-09-03
Date Received:	2007-09-01
Date Tested:	2007-09-03
Date Completed:	2007-09-03
Next Due Date:	2008-09-02

**ATTN:** Mr. Henry Leung

Page: 1 of 1

### Item for calibration:

Description	: Acoustical Calibrator
Manufacturer	: Brüel & Kjær
Model No.	: 4231
Serial No.	: 2412367
Equipment No.	: N-02-03

### Test conditions:

Room Temperature	: 22 degree Celsius
Relative Humidity	: 62%

### Methodology:

The Sound Level Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by the manufacturer, or equivalent.

### Results:

Sound Pressure Level (1kHz)	Measured SPL	Tolerance
At 94 dB SPL	94.0	94.0 ± 0.1 dB
At 114 dB SPL	114.0	114.0 ± 0.1 dB

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**

  
**PATRICK TSE**  
Senior Chemist

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**APPENDIX C  
ENVIRONMENTAL MONITORING AND  
AUDIT SCHEDULE**

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**Environmental Monitoring for Lai Chi Kok Viaduct  
Tentative Air Quality and Noise Monitoring Schedule for January 2008**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>30-Dec</b>	31-Dec	<b>1-Jan</b>	2-Jan	3-Jan	4-Jan	5-Jan
	24 hr TSP		1 hr TSP	1 hr TSP	1 hr TSP Noise	24 hr TSP
<b>6-Jan</b>	7-Jan	8-Jan	9-Jan	10-Jan	11-Jan	12-Jan
	1 hr TSP	1 hr TSP Noise		1 hr TSP	24 hr TSP	
<b>13-Jan</b>	14-Jan	15-Jan	16-Jan	17-Jan	18-Jan	19-Jan
	1 hr TSP	1 hr TSP Noise		24 hr TSP	1 hr TSP	
<b>20-Jan</b>	21-Jan	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan
		1 hr TSP Noise	24 hr TSP	1 hr TSP	1 hr TSP	
<b>27-Jan</b>	28-Jan	29-Jan	30-Jan	31-Jan	1-Feb	2-Feb
		1 hr TSP Noise 24 hr TSP	1 hr TSP	1 hr TSP		

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

AM2      Lai Chi Kok Sports Centre  
 NM2      Lai Chi Kok Correctional Institution  
 NM4      Mei Foo Sun Chuen, Phase 5  
 NM8a     M/F of Nob Hill  
 NM8b     3/F of Nob Hill  
 NM9      G/F, Hoi Fai House, Hoi Lai Estate

**Environmental Monitoring for Lai Chi Kok Viaduct  
Tentative Air Quality and Noise Monitoring Schedule for February 2008**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>27-Jan</b>	28-Jan	29-Jan	30-Jan	31-Jan	1-Feb	2-Feb
		1 hr TSP Noise 24 hr TSP	1 hr TSP	1 hr TSP		
<b>3-Feb</b>	4-Feb	5-Feb	6-Feb	<b>7-Feb</b>	<b>8-Feb</b>	<b>9-Feb</b>
	1 hr TSP Noise 24 hr TSP	1 hr TSP	1 hr TSP			
<b>10-Feb</b>	11-Feb	12-Feb	13-Feb	14-Feb	15-Feb	16-Feb
		1 hr TSP Noise 24 hr TSP	1 hr TSP	1 hr TSP		
<b>17-Feb</b>	18-Feb	19-Feb	20-Feb	21-Feb	22-Feb	23-Feb
	24 hr TSP	1 hr TSP	1 hr TSP	1 hr TSP Noise		24 hr TSP
<b>24-Feb</b>	25-Feb	26-Feb	27-Feb	28-Feb	29-Feb	1-Mar
	1 hr TSP	1 hr TSP Noise		1 hr TSP	24 hr TSP	

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

AM2      Lai Chi Kok Sports Centre  
 NM2      Lai Chi Kok Correctional Institution  
 NM4      Mei Foo Sun Chuen, Phase 5  
 NM8a     M/F of Nob Hill  
 NM8b     3/F of Nob Hill  
 NM9      G/F, Hoi Fai House, Hoi Lai Estate

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**APPENDIX D**  
**WIND DATA**

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## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
1-Jan-2008	0:00	1.0	W
1-Jan-2008	1:00	1.0	W
1-Jan-2008	2:00	1.0	WNW
1-Jan-2008	3:00	1.0	W
1-Jan-2008	4:00	1.0	W
1-Jan-2008	5:00	1.0	WSW
1-Jan-2008	6:00	1.0	WSW
1-Jan-2008	7:00	1.0	SW
1-Jan-2008	8:00	1.0	SW
1-Jan-2008	9:00	1.0	SW
1-Jan-2008	10:00	1.0	WSW
1-Jan-2008	11:00	2.0	W
1-Jan-2008	12:00	1.0	WNW
1-Jan-2008	13:00	1.0	W
1-Jan-2008	14:00	1.0	W
1-Jan-2008	15:00	1.0	W
1-Jan-2008	16:00	1.0	W
1-Jan-2008	17:00	0.0	---
1-Jan-2008	18:00	1.0	WNW
1-Jan-2008	19:00	1.0	WNW
1-Jan-2008	20:00	1.0	SW
1-Jan-2008	21:00	1.0	SSW
1-Jan-2008	22:00	1.0	SW
1-Jan-2008	23:00	1.0	SW
2-Jan-2008	0:00	1.0	SW
2-Jan-2008	1:00	1.0	SW
2-Jan-2008	2:00	2.0	SW
2-Jan-2008	3:00	2.0	W
2-Jan-2008	4:00	2.0	WSW
2-Jan-2008	5:00	1.0	W
2-Jan-2008	6:00	1.0	W
2-Jan-2008	7:00	2.0	W
2-Jan-2008	8:00	2.0	WNW
2-Jan-2008	9:00	1.0	W
2-Jan-2008	10:00	2.0	W
2-Jan-2008	11:00	2.0	W
2-Jan-2008	12:00	2.0	SSW
2-Jan-2008	13:00	2.0	SW
2-Jan-2008	14:00	2.0	WSW
2-Jan-2008	15:00	2.0	W
2-Jan-2008	16:00	2.0	WNW
2-Jan-2008	17:00	2.0	W
2-Jan-2008	18:00	1.0	WNW
2-Jan-2008	19:00	1.0	SSW
2-Jan-2008	20:00	1.0	WNW
2-Jan-2008	21:00	1.0	SW
2-Jan-2008	22:00	1.0	WNW
2-Jan-2008	23:00	2.0	WSW
3-Jan-2008	0:00	2.0	WSW
3-Jan-2008	1:00	2.0	W
3-Jan-2008	2:00	2.0	WSW
3-Jan-2008	3:00	2.0	W
3-Jan-2008	4:00	2.0	W
3-Jan-2008	5:00	3.0	SW



## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
3-Jan-2008	6:00	2.0	WNW
3-Jan-2008	7:00	2.0	WSW
3-Jan-2008	8:00	2.0	WSW
3-Jan-2008	9:00	2.0	W
3-Jan-2008	10:00	1.0	WSW
3-Jan-2008	11:00	1.0	WSW
3-Jan-2008	12:00	2.0	W
3-Jan-2008	13:00	2.0	WNW
3-Jan-2008	14:00	2.0	WNW
3-Jan-2008	15:00	1.0	WNW
3-Jan-2008	16:00	1.0	WNW
3-Jan-2008	17:00	1.0	WNW
3-Jan-2008	18:00	1.0	WNW
3-Jan-2008	19:00	1.0	WNW
3-Jan-2008	20:00	1.0	WSW
3-Jan-2008	21:00	1.0	SSW
3-Jan-2008	22:00	1.0	SW
3-Jan-2008	23:00	1.0	WNW
4-Jan-2008	0:00	1.0	WNW
4-Jan-2008	1:00	2.0	WNW
4-Jan-2008	2:00	1.0	WNW
4-Jan-2008	3:00	1.0	WNW
4-Jan-2008	4:00	1.0	WSW
4-Jan-2008	5:00	1.0	SSW
4-Jan-2008	6:00	1.0	SW
4-Jan-2008	7:00	2.0	WNW
4-Jan-2008	8:00	2.0	WNW
4-Jan-2008	9:00	2.0	WNW
4-Jan-2008	10:00	3.0	WNW
4-Jan-2008	11:00	3.0	WNW
4-Jan-2008	12:00	2.0	WNW
4-Jan-2008	13:00	3.0	WNW
4-Jan-2008	14:00	2.0	WNW
4-Jan-2008	15:00	1.0	WSW
4-Jan-2008	16:00	1.0	SW
4-Jan-2008	17:00	1.0	SW
4-Jan-2008	18:00	1.0	S
4-Jan-2008	19:00	1.0	S
4-Jan-2008	20:00	0.0	---
4-Jan-2008	21:00	0.0	---
4-Jan-2008	22:00	1.0	SW
4-Jan-2008	23:00	1.0	SW
5-Jan-2008	0:00	1.0	WSW
5-Jan-2008	1:00	1.0	WSW
5-Jan-2008	2:00	1.0	WNW
5-Jan-2008	3:00	1.0	WNW
5-Jan-2008	4:00	1.0	WNW
5-Jan-2008	5:00	1.0	WNW
5-Jan-2008	6:00	1.0	W
5-Jan-2008	7:00	1.0	W
5-Jan-2008	8:00	1.0	WNW
5-Jan-2008	9:00	1.0	W
5-Jan-2008	10:00	1.0	WSW
5-Jan-2008	11:00	1.0	W

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
5-Jan-2008	12:00	1.0	WSW
5-Jan-2008	13:00	1.0	SW
5-Jan-2008	14:00	1.0	SW
5-Jan-2008	15:00	1.0	SW
5-Jan-2008	16:00	1.0	WSW
5-Jan-2008	17:00	1.0	SW
5-Jan-2008	18:00	2.0	SW
5-Jan-2008	19:00	1.0	SW
5-Jan-2008	20:00	1.0	SW
5-Jan-2008	21:00	1.0	WSW
5-Jan-2008	22:00	0.0	---
5-Jan-2008	23:00	0.0	---
6-Jan-2008	0:00	0.0	---
6-Jan-2008	1:00	0.0	---
6-Jan-2008	2:00	0.0	---
6-Jan-2008	3:00	0.0	---
6-Jan-2008	4:00	0.0	---
6-Jan-2008	5:00	0.0	---
6-Jan-2008	6:00	1.0	WNW
6-Jan-2008	7:00	1.0	WSW
6-Jan-2008	8:00	1.0	WSW
6-Jan-2008	9:00	1.0	WNW
6-Jan-2008	10:00	2.0	WNW
6-Jan-2008	11:00	2.0	WNW
6-Jan-2008	12:00	2.0	W
6-Jan-2008	13:00	2.0	WSW
6-Jan-2008	14:00	1.0	WSW
6-Jan-2008	15:00	3.0	SW
6-Jan-2008	16:00	2.0	SW
6-Jan-2008	17:00	2.0	WNW
6-Jan-2008	18:00	1.0	WNW
6-Jan-2008	19:00	1.0	WNW
6-Jan-2008	20:00	1.0	WNW
6-Jan-2008	21:00	1.0	WSW
6-Jan-2008	22:00	0.0	---
6-Jan-2008	23:00	1.0	WNW
7-Jan-2008	0:00	1.0	WSW
7-Jan-2008	1:00	1.0	WSW
7-Jan-2008	2:00	1.0	WSW
7-Jan-2008	3:00	1.0	W
7-Jan-2008	4:00	1.0	SW
7-Jan-2008	5:00	1.0	WNW
7-Jan-2008	6:00	2.0	WSW
7-Jan-2008	7:00	2.0	WSW
7-Jan-2008	8:00	1.0	WSW
7-Jan-2008	9:00	1.0	WSW
7-Jan-2008	10:00	1.0	SW
7-Jan-2008	11:00	1.0	WSW
7-Jan-2008	12:00	1.0	WSW
7-Jan-2008	13:00	1.0	SW
7-Jan-2008	14:00	1.0	W
7-Jan-2008	15:00	1.0	SW
7-Jan-2008	16:00	1.0	WNW
7-Jan-2008	17:00	1.0	WSW

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
7-Jan-2008	18:00	0.0	---
7-Jan-2008	19:00	0.0	---
7-Jan-2008	20:00	0.0	---
7-Jan-2008	21:00	0.0	---
7-Jan-2008	22:00	0.0	---
7-Jan-2008	23:00	0.0	---
8-Jan-2008	0:00	0.0	---
8-Jan-2008	1:00	0.0	---
8-Jan-2008	2:00	0.0	---
8-Jan-2008	3:00	0.0	---
8-Jan-2008	4:00	0.0	---
8-Jan-2008	5:00	1.0	WNW
8-Jan-2008	6:00	1.0	W
8-Jan-2008	7:00	2.0	W
8-Jan-2008	8:00	2.0	W
8-Jan-2008	9:00	1.0	W
8-Jan-2008	10:00	2.0	WNW
8-Jan-2008	11:00	1.0	WNW
8-Jan-2008	12:00	2.0	WNW
8-Jan-2008	13:00	2.0	W
8-Jan-2008	14:00	2.0	W
8-Jan-2008	15:00	2.0	WSW
8-Jan-2008	16:00	2.0	WSW
8-Jan-2008	17:00	2.0	WSW
8-Jan-2008	18:00	1.0	S
8-Jan-2008	19:00	0.0	---
8-Jan-2008	20:00	1.0	S
8-Jan-2008	21:00	0.0	---
8-Jan-2008	22:00	1.0	WSW
8-Jan-2008	23:00	0.0	---
9-Jan-2008	0:00	0.0	---
9-Jan-2008	1:00	0.0	---
9-Jan-2008	2:00	1.0	S
9-Jan-2008	3:00	1.0	S
9-Jan-2008	4:00	1.0	SW
9-Jan-2008	5:00	1.0	SW
9-Jan-2008	6:00	1.0	WSW
9-Jan-2008	7:00	1.0	SW
9-Jan-2008	8:00	1.0	S
9-Jan-2008	9:00	1.0	WSW
9-Jan-2008	10:00	2.0	SW
9-Jan-2008	11:00	1.0	SW
9-Jan-2008	12:00	1.0	W
9-Jan-2008	13:00	1.0	W
9-Jan-2008	14:00	1.0	W
9-Jan-2008	15:00	1.0	WSW
9-Jan-2008	16:00	1.0	SW
9-Jan-2008	17:00	1.0	W
9-Jan-2008	18:00	0.0	---
9-Jan-2008	19:00	0.0	---
9-Jan-2008	20:00	0.0	---
9-Jan-2008	21:00	0.0	---
9-Jan-2008	22:00	0.0	---
9-Jan-2008	23:00	0.0	---

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
10-Jan-2008	0:00	0.0	---
10-Jan-2008	1:00	0.0	---
10-Jan-2008	2:00	0.0	---
10-Jan-2008	3:00	0.0	---
10-Jan-2008	4:00	0.0	---
10-Jan-2008	5:00	0.0	---
10-Jan-2008	6:00	0.0	---
10-Jan-2008	7:00	0.0	---
10-Jan-2008	8:00	1.0	WSW
10-Jan-2008	9:00	1.0	WSW
10-Jan-2008	10:00	1.0	WNW
10-Jan-2008	11:00	2.0	WNW
10-Jan-2008	12:00	2.0	WNW
10-Jan-2008	13:00	2.0	WNW
10-Jan-2008	14:00	2.0	W
10-Jan-2008	15:00	3.0	W
10-Jan-2008	16:00	3.0	W
10-Jan-2008	17:00	1.0	WNW
10-Jan-2008	18:00	1.0	WSW
10-Jan-2008	19:00	1.0	W
10-Jan-2008	20:00	0.0	---
10-Jan-2008	21:00	0.0	---
10-Jan-2008	22:00	0.0	---
10-Jan-2008	23:00	1.0	SSW
11-Jan-2008	0:00	0.0	---
11-Jan-2008	1:00	0.0	---
11-Jan-2008	2:00	0.0	---
11-Jan-2008	3:00	1.0	W
11-Jan-2008	4:00	1.0	WNW
11-Jan-2008	5:00	1.0	WSW
11-Jan-2008	6:00	0.0	---
11-Jan-2008	7:00	1.0	WSW
11-Jan-2008	8:00	0.0	---
11-Jan-2008	9:00	1.0	SSW
11-Jan-2008	10:00	1.0	SSW
11-Jan-2008	11:00	1.0	SSW
11-Jan-2008	12:00	1.0	W
11-Jan-2008	13:00	1.0	WSW
11-Jan-2008	14:00	1.0	W
11-Jan-2008	15:00	1.0	W
11-Jan-2008	16:00	0.0	---
11-Jan-2008	17:00	0.0	---
11-Jan-2008	18:00	0.0	---
11-Jan-2008	19:00	1.0	W
11-Jan-2008	20:00	1.0	WSW
11-Jan-2008	21:00	1.0	W
11-Jan-2008	22:00	1.0	W
11-Jan-2008	23:00	1.0	WSW
12-Jan-2008	0:00	1.0	WSW
12-Jan-2008	1:00	1.0	S
12-Jan-2008	2:00	1.0	ESE
12-Jan-2008	3:00	1.0	W
12-Jan-2008	4:00	1.0	WNW
12-Jan-2008	5:00	1.0	WNW

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
12-Jan-2008	6:00	2.0	WSW
12-Jan-2008	7:00	2.0	WSW
12-Jan-2008	8:00	2.0	WSW
12-Jan-2008	9:00	3.0	ESE
12-Jan-2008	10:00	3.0	W
12-Jan-2008	11:00	3.0	WNW
12-Jan-2008	12:00	3.0	WNW
12-Jan-2008	13:00	3.0	WSW
12-Jan-2008	14:00	2.0	N
12-Jan-2008	15:00	1.0	NE
12-Jan-2008	16:00	1.0	NE
12-Jan-2008	17:00	1.0	NE
12-Jan-2008	18:00	1.0	NNE
12-Jan-2008	19:00	0.0	---
12-Jan-2008	20:00	0.0	---
12-Jan-2008	21:00	0.0	---
12-Jan-2008	22:00	0.0	---
12-Jan-2008	23:00	0.0	---
13-Jan-2008	0:00	1.0	WNW
13-Jan-2008	1:00	2.0	W
13-Jan-2008	2:00	2.0	WNW
13-Jan-2008	3:00	2.0	WNW
13-Jan-2008	4:00	2.0	W
13-Jan-2008	5:00	2.0	SW
13-Jan-2008	6:00	2.0	WSW
13-Jan-2008	7:00	2.0	WSW
13-Jan-2008	8:00	2.0	SSW
13-Jan-2008	9:00	1.0	ESE
13-Jan-2008	10:00	1.0	W
13-Jan-2008	11:00	1.0	WNW
13-Jan-2008	12:00	2.0	WNW
13-Jan-2008	13:00	2.0	WSW
13-Jan-2008	14:00	2.0	WNW
13-Jan-2008	15:00	2.0	W
13-Jan-2008	16:00	2.0	W
13-Jan-2008	17:00	2.0	WNW
13-Jan-2008	18:00	2.0	W
13-Jan-2008	19:00	2.0	WNW
13-Jan-2008	20:00	2.0	WNW
13-Jan-2008	21:00	1.0	WNW
13-Jan-2008	22:00	2.0	WSW
13-Jan-2008	23:00	2.0	WSW
14-Jan-2008	0:00	2.0	WSW
14-Jan-2008	1:00	2.0	WSW
14-Jan-2008	2:00	2.0	WSW
14-Jan-2008	3:00	2.0	WSW
14-Jan-2008	4:00	2.0	WSW
14-Jan-2008	5:00	2.0	W
14-Jan-2008	6:00	2.0	WSW
14-Jan-2008	7:00	2.0	WSW
14-Jan-2008	8:00	2.0	WSW
14-Jan-2008	9:00	2.0	WSW
14-Jan-2008	10:00	2.0	WSW
14-Jan-2008	11:00	2.0	WSW

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
14-Jan-2008	12:00	2.0	WSW
14-Jan-2008	13:00	2.0	WSW
14-Jan-2008	14:00	2.0	SW
14-Jan-2008	15:00	2.0	WNW
14-Jan-2008	16:00	2.0	W
14-Jan-2008	17:00	2.0	WSW
14-Jan-2008	18:00	2.0	WNW
14-Jan-2008	19:00	2.0	WNW
14-Jan-2008	20:00	2.0	WNW
14-Jan-2008	21:00	2.0	WNW
14-Jan-2008	22:00	2.0	WNW
14-Jan-2008	23:00	2.0	W
15-Jan-2008	0:00	2.0	SSW
15-Jan-2008	1:00	2.0	WSW
15-Jan-2008	2:00	2.0	WSW
15-Jan-2008	3:00	1.0	SW
15-Jan-2008	4:00	2.0	SW
15-Jan-2008	5:00	2.0	SW
15-Jan-2008	6:00	2.0	SW
15-Jan-2008	7:00	2.0	SW
15-Jan-2008	8:00	2.0	SW
15-Jan-2008	9:00	2.0	SW
15-Jan-2008	10:00	2.0	WSW
15-Jan-2008	11:00	2.0	WSW
15-Jan-2008	12:00	3.0	SW
15-Jan-2008	13:00	3.0	SW
15-Jan-2008	14:00	2.0	SW
15-Jan-2008	15:00	3.0	SW
15-Jan-2008	16:00	4.0	WNW
15-Jan-2008	17:00	2.0	WNW
15-Jan-2008	18:00	2.0	W
15-Jan-2008	19:00	2.0	WNW
15-Jan-2008	20:00	2.0	W
15-Jan-2008	21:00	2.0	WNW
15-Jan-2008	22:00	2.0	WNW
15-Jan-2008	23:00	3.0	W
16-Jan-2008	0:00	3.0	SW
16-Jan-2008	1:00	3.0	WSW
16-Jan-2008	2:00	4.0	WSW
16-Jan-2008	3:00	3.0	SSW
16-Jan-2008	4:00	3.0	SSW
16-Jan-2008	5:00	2.0	SSW
16-Jan-2008	6:00	1.0	SW
16-Jan-2008	7:00	0.0	---
16-Jan-2008	8:00	0.0	---
16-Jan-2008	9:00	0.0	---
16-Jan-2008	10:00	0.0	---
16-Jan-2008	11:00	0.0	---
16-Jan-2008	12:00	0.0	---
16-Jan-2008	13:00	0.0	---
16-Jan-2008	14:00	0.0	---
16-Jan-2008	15:00	0.0	---
16-Jan-2008	16:00	0.0	---
16-Jan-2008	17:00	0.0	---

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
16-Jan-2008	18:00	1.0	WSW
16-Jan-2008	19:00	1.0	WSW
16-Jan-2008	20:00	2.0	WNW
16-Jan-2008	21:00	4.0	WNW
16-Jan-2008	22:00	4.0	WSW
16-Jan-2008	23:00	3.0	SW
17-Jan-2008	0:00	1.0	SW
17-Jan-2008	1:00	2.0	WSW
17-Jan-2008	2:00	2.0	SSW
17-Jan-2008	3:00	1.0	W
17-Jan-2008	4:00	1.0	W
17-Jan-2008	5:00	1.0	WNW
17-Jan-2008	6:00	1.0	WSW
17-Jan-2008	7:00	2.0	WSW
17-Jan-2008	8:00	3.0	W
17-Jan-2008	9:00	2.0	N
17-Jan-2008	10:00	2.0	W
17-Jan-2008	11:00	2.0	W
17-Jan-2008	12:00	1.0	WNW
17-Jan-2008	13:00	2.0	W
17-Jan-2008	14:00	2.0	W
17-Jan-2008	15:00	1.0	W
17-Jan-2008	16:00	1.0	WNW
17-Jan-2008	17:00	0.0	---
17-Jan-2008	18:00	0.0	---
17-Jan-2008	19:00	0.0	---
17-Jan-2008	20:00	0.0	---
17-Jan-2008	21:00	0.0	---
17-Jan-2008	22:00	0.0	---
17-Jan-2008	23:00	0.0	---
18-Jan-2008	0:00	0.0	---
18-Jan-2008	1:00	0.0	---
18-Jan-2008	2:00	0.0	---
18-Jan-2008	3:00	1.0	WNW
18-Jan-2008	4:00	1.0	W
18-Jan-2008	5:00	1.0	WNW
18-Jan-2008	6:00	1.0	WNW
18-Jan-2008	7:00	0.0	---
18-Jan-2008	8:00	0.0	---
18-Jan-2008	9:00	0.0	---
18-Jan-2008	10:00	0.0	---
18-Jan-2008	11:00	0.0	---
18-Jan-2008	12:00	1.0	WNW
18-Jan-2008	13:00	0.0	---
18-Jan-2008	14:00	0.0	---
18-Jan-2008	15:00	0.0	---
18-Jan-2008	16:00	0.0	---
18-Jan-2008	17:00	0.0	---
18-Jan-2008	18:00	0.0	---
18-Jan-2008	19:00	0.0	---
18-Jan-2008	20:00	1.0	WNW
18-Jan-2008	21:00	1.0	WSW
18-Jan-2008	22:00	3.0	WSW
18-Jan-2008	23:00	3.0	SW

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
19-Jan-2008	0:00	2.0	SW
19-Jan-2008	1:00	2.0	SW
19-Jan-2008	2:00	2.0	NW
19-Jan-2008	3:00	2.0	SW
19-Jan-2008	4:00	1.0	W
19-Jan-2008	5:00	2.0	W
19-Jan-2008	6:00	2.0	W
19-Jan-2008	7:00	2.0	W
19-Jan-2008	8:00	2.0	W
19-Jan-2008	9:00	2.0	W
19-Jan-2008	10:00	1.0	W
19-Jan-2008	11:00	2.0	WNW
19-Jan-2008	12:00	2.0	W
19-Jan-2008	13:00	2.0	W
19-Jan-2008	14:00	3.0	WNW
19-Jan-2008	15:00	1.0	WNW
19-Jan-2008	16:00	2.0	WNW
19-Jan-2008	17:00	1.0	W
19-Jan-2008	18:00	1.0	W
19-Jan-2008	19:00	0.0	---
19-Jan-2008	20:00	0.0	---
19-Jan-2008	21:00	0.0	---
19-Jan-2008	22:00	0.0	---
19-Jan-2008	23:00	0.0	---
20-Jan-2008	0:00	0.0	---
20-Jan-2008	1:00	0.0	---
20-Jan-2008	2:00	0.0	---
20-Jan-2008	3:00	0.0	---
20-Jan-2008	4:00	1.0	SSW
20-Jan-2008	5:00	0.0	---
20-Jan-2008	6:00	0.0	---
20-Jan-2008	7:00	0.0	---
20-Jan-2008	8:00	0.0	---
20-Jan-2008	9:00	1.0	W
20-Jan-2008	10:00	1.0	W
20-Jan-2008	11:00	1.0	W
20-Jan-2008	12:00	1.0	W
20-Jan-2008	13:00	1.0	WNW
20-Jan-2008	14:00	1.0	W
20-Jan-2008	15:00	1.0	WNW
20-Jan-2008	16:00	2.0	WNW
20-Jan-2008	17:00	0.0	---
20-Jan-2008	18:00	0.0	---
20-Jan-2008	19:00	0.0	---
20-Jan-2008	20:00	0.0	---
20-Jan-2008	21:00	0.0	---
20-Jan-2008	22:00	0.0	---
20-Jan-2008	23:00	2.0	WSW
21-Jan-2008	0:00	2.0	SW
21-Jan-2008	1:00	2.0	WSW
21-Jan-2008	2:00	2.0	SW
21-Jan-2008	3:00	2.0	WSW
21-Jan-2008	4:00	2.0	W
21-Jan-2008	5:00	2.0	WSW



## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
21-Jan-2008	6:00	2.0	WNW
21-Jan-2008	7:00	2.0	WNW
21-Jan-2008	8:00	2.0	W
21-Jan-2008	9:00	1.0	SW
21-Jan-2008	10:00	1.0	SW
21-Jan-2008	11:00	1.0	WSW
21-Jan-2008	12:00	1.0	WSW
21-Jan-2008	13:00	2.0	WSW
21-Jan-2008	14:00	2.0	SW
21-Jan-2008	15:00	1.0	WNW
21-Jan-2008	16:00	1.0	WNW
21-Jan-2008	17:00	2.0	W
21-Jan-2008	18:00	2.0	W
21-Jan-2008	19:00	2.0	WSW
21-Jan-2008	20:00	2.0	SSW
21-Jan-2008	21:00	2.0	W
21-Jan-2008	22:00	1.0	W
21-Jan-2008	23:00	1.0	SSW
22-Jan-2008	0:00	2.0	SSW
22-Jan-2008	1:00	2.0	WNW
22-Jan-2008	2:00	2.0	WSW
22-Jan-2008	3:00	2.0	WSW
22-Jan-2008	4:00	2.0	WNW
22-Jan-2008	5:00	2.0	WNW
22-Jan-2008	6:00	1.0	WNW
22-Jan-2008	7:00	1.0	SW
22-Jan-2008	8:00	2.0	W
22-Jan-2008	9:00	0.0	---
22-Jan-2008	10:00	1.0	SW
22-Jan-2008	11:00	0.0	---
22-Jan-2008	12:00	0.0	---
22-Jan-2008	13:00	0.0	---
22-Jan-2008	14:00	0.0	---
22-Jan-2008	15:00	0.0	---
22-Jan-2008	16:00	1.0	NNE
22-Jan-2008	17:00	1.0	NNE
22-Jan-2008	18:00	1.0	N
22-Jan-2008	19:00	1.0	WNW
22-Jan-2008	20:00	0.0	---
22-Jan-2008	21:00	0.0	---
22-Jan-2008	22:00	1.0	W
22-Jan-2008	23:00	0.0	---
23-Jan-2008	0:00	1.0	WNW
23-Jan-2008	1:00	1.0	WSW
23-Jan-2008	2:00	1.0	WSW
23-Jan-2008	3:00	0.0	---
23-Jan-2008	4:00	0.0	---
23-Jan-2008	5:00	0.0	---
23-Jan-2008	6:00	0.0	---
23-Jan-2008	7:00	0.0	---
23-Jan-2008	8:00	0.0	---
23-Jan-2008	9:00	0.0	---
23-Jan-2008	10:00	0.0	---
23-Jan-2008	11:00	0.0	---

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
23-Jan-2008	12:00	1.0	W
23-Jan-2008	13:00	1.0	W
23-Jan-2008	14:00	1.0	W
23-Jan-2008	15:00	1.0	W
23-Jan-2008	16:00	1.0	W
23-Jan-2008	17:00	3.0	W
23-Jan-2008	18:00	3.0	WNW
23-Jan-2008	19:00	3.0	W
23-Jan-2008	20:00	3.0	WNW
23-Jan-2008	21:00	3.0	W
23-Jan-2008	22:00	3.0	W
23-Jan-2008	23:00	2.0	WSW
24-Jan-2008	0:00	2.0	SW
24-Jan-2008	1:00	1.0	W
24-Jan-2008	2:00	2.0	W
24-Jan-2008	3:00	2.0	W
24-Jan-2008	4:00	2.0	WNW
24-Jan-2008	5:00	2.0	WNW
24-Jan-2008	6:00	2.0	NNW
24-Jan-2008	7:00	2.0	WNW
24-Jan-2008	8:00	0.0	---
24-Jan-2008	9:00	0.0	---
24-Jan-2008	10:00	0.0	---
24-Jan-2008	11:00	0.0	---
24-Jan-2008	12:00	0.0	---
24-Jan-2008	13:00	0.0	---
24-Jan-2008	14:00	1.0	WNW
24-Jan-2008	15:00	1.0	NNE
24-Jan-2008	16:00	0.0	---
24-Jan-2008	17:00	1.0	NE
24-Jan-2008	18:00	1.0	NE
24-Jan-2008	19:00	1.0	NE
24-Jan-2008	20:00	2.0	E
24-Jan-2008	21:00	1.0	ESE
24-Jan-2008	22:00	2.0	---
24-Jan-2008	23:00	2.0	ESE
25-Jan-2008	0:00	2.0	E
25-Jan-2008	1:00	2.0	E
25-Jan-2008	2:00	1.0	W
25-Jan-2008	3:00	1.0	W
25-Jan-2008	4:00	1.0	WNW
25-Jan-2008	5:00	1.0	WNW
25-Jan-2008	6:00	2.0	WNW
25-Jan-2008	7:00	1.0	W
25-Jan-2008	8:00	2.0	W
25-Jan-2008	9:00	2.0	WNW
25-Jan-2008	10:00	2.0	SW
25-Jan-2008	11:00	3.0	WNW
25-Jan-2008	12:00	2.0	WNW
25-Jan-2008	13:00	2.0	WNW
25-Jan-2008	14:00	1.0	WNW
25-Jan-2008	15:00	1.0	NNE
25-Jan-2008	16:00	1.0	NE
25-Jan-2008	17:00	1.0	NE

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
25-Jan-2008	18:00	0.0	---
25-Jan-2008	19:00	0.0	---
25-Jan-2008	20:00	1.0	NNE
25-Jan-2008	21:00	1.0	E
25-Jan-2008	22:00	1.0	E
25-Jan-2008	23:00	0.0	---
26-Jan-2008	0:00	0.0	---
26-Jan-2008	1:00	0.0	---
26-Jan-2008	2:00	0.0	---
26-Jan-2008	3:00	1.0	WSW
26-Jan-2008	4:00	2.0	WSW
26-Jan-2008	5:00	2.0	SW
26-Jan-2008	6:00	2.0	WSW
26-Jan-2008	7:00	1.0	WSW
26-Jan-2008	8:00	0.0	---
26-Jan-2008	9:00	0.0	---
26-Jan-2008	10:00	2.0	WNW
26-Jan-2008	11:00	1.0	WNW
26-Jan-2008	12:00	2.0	WNW
26-Jan-2008	13:00	1.0	WNW
26-Jan-2008	14:00	2.0	W
26-Jan-2008	15:00	2.0	W
26-Jan-2008	16:00	2.0	W
26-Jan-2008	17:00	2.0	W
26-Jan-2008	18:00	1.0	W
26-Jan-2008	19:00	1.0	NNE
26-Jan-2008	20:00	1.0	ENE
26-Jan-2008	21:00	1.0	ESE
26-Jan-2008	22:00	1.0	ESE
26-Jan-2008	23:00	0.0	---
27-Jan-2008	0:00	0.0	---
27-Jan-2008	1:00	1.0	NNE
27-Jan-2008	2:00	1.0	ENE
27-Jan-2008	3:00	2.0	---
27-Jan-2008	4:00	3.0	---
27-Jan-2008	5:00	2.0	---
27-Jan-2008	6:00	2.0	---
27-Jan-2008	7:00	1.0	---
27-Jan-2008	8:00	1.0	SSW
27-Jan-2008	9:00	1.0	W
27-Jan-2008	10:00	2.0	NW
27-Jan-2008	11:00	2.0	N
27-Jan-2008	12:00	1.0	ESE
27-Jan-2008	13:00	1.0	ESE
27-Jan-2008	14:00	1.0	E
27-Jan-2008	15:00	2.0	ESE
27-Jan-2008	16:00	2.0	SW
27-Jan-2008	17:00	2.0	WSW
27-Jan-2008	18:00	2.0	W
27-Jan-2008	19:00	1.0	WNW
27-Jan-2008	20:00	0.0	---
27-Jan-2008	21:00	0.0	---
27-Jan-2008	22:00	0.0	---
27-Jan-2008	23:00	0.0	---

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
28-Jan-2008	0:00	1.0	SW
28-Jan-2008	1:00	1.0	WSW
28-Jan-2008	2:00	1.0	WNW
28-Jan-2008	3:00	1.0	WSW
28-Jan-2008	4:00	1.0	WNW
28-Jan-2008	5:00	2.0	WNW
28-Jan-2008	6:00	2.0	WNW
28-Jan-2008	7:00	3.0	NE
28-Jan-2008	8:00	2.0	ENE
28-Jan-2008	9:00	1.0	ENE
28-Jan-2008	10:00	1.0	ENE
28-Jan-2008	11:00	2.0	ENE
28-Jan-2008	12:00	2.0	ENE
28-Jan-2008	13:00	1.0	ENE
28-Jan-2008	14:00	1.0	ENE
28-Jan-2008	15:00	0.0	---
28-Jan-2008	16:00	1.0	NNE
28-Jan-2008	17:00	2.0	NNE
28-Jan-2008	18:00	0.0	---
28-Jan-2008	19:00	0.0	---
28-Jan-2008	20:00	0.0	---
28-Jan-2008	21:00	2.0	E
28-Jan-2008	22:00	1.0	WSW
28-Jan-2008	23:00	2.0	WNW
29-Jan-2008	0:00	2.0	WNW
29-Jan-2008	1:00	2.0	WNW
29-Jan-2008	2:00	2.0	W
29-Jan-2008	3:00	2.0	SW
29-Jan-2008	4:00	2.0	SW
29-Jan-2008	5:00	2.0	W
29-Jan-2008	6:00	3.0	SW
29-Jan-2008	7:00	2.0	W
29-Jan-2008	8:00	2.0	WNW
29-Jan-2008	9:00	1.0	SW
29-Jan-2008	10:00	2.0	WNW
29-Jan-2008	11:00	3.0	W
29-Jan-2008	12:00	3.0	W
29-Jan-2008	13:00	3.0	W
29-Jan-2008	14:00	3.0	S
29-Jan-2008	15:00	3.0	S
29-Jan-2008	16:00	3.0	S
29-Jan-2008	17:00	3.0	SSW
29-Jan-2008	18:00	3.0	SW
29-Jan-2008	19:00	2.0	WSW
29-Jan-2008	20:00	1.0	W
29-Jan-2008	21:00	1.0	SW
29-Jan-2008	22:00	0.0	---
29-Jan-2008	23:00	0.0	---
30-Jan-2008	0:00	0.0	---
30-Jan-2008	1:00	0.0	---
30-Jan-2008	2:00	1.0	SW
30-Jan-2008	3:00	0.0	---
30-Jan-2008	4:00	1.0	SW
30-Jan-2008	5:00	1.0	WSW

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
30-Jan-2008	6:00	1.0	WSW
30-Jan-2008	7:00	1.0	SW
30-Jan-2008	8:00	0.0	---
30-Jan-2008	9:00	0.0	---
30-Jan-2008	10:00	0.0	---
30-Jan-2008	11:00	0.0	---
30-Jan-2008	12:00	1.0	WNW
30-Jan-2008	13:00	2.0	WNW
30-Jan-2008	14:00	2.0	WNW
30-Jan-2008	15:00	1.0	W
30-Jan-2008	16:00	1.0	WSW
30-Jan-2008	17:00	2.0	WNW
30-Jan-2008	18:00	2.0	WNW
30-Jan-2008	19:00	2.0	W
30-Jan-2008	20:00	2.0	WNW
30-Jan-2008	21:00	2.0	WNW
30-Jan-2008	22:00	2.0	WNW
30-Jan-2008	23:00	2.0	WNW
31-Jan-2008	0:00	3.0	WNW
31-Jan-2008	1:00	3.0	NW
31-Jan-2008	2:00	4.0	WNW
31-Jan-2008	3:00	4.0	WNW
31-Jan-2008	4:00	4.0	WNW
31-Jan-2008	5:00	4.0	WNW
31-Jan-2008	6:00	3.0	WNW
31-Jan-2008	7:00	2.0	WNW
31-Jan-2008	8:00	3.0	W
31-Jan-2008	9:00	3.0	WNW
31-Jan-2008	10:00	3.0	W
31-Jan-2008	11:00	3.0	W
31-Jan-2008	12:00	2.0	W
31-Jan-2008	13:00	2.0	W
31-Jan-2008	14:00	2.0	WSW
31-Jan-2008	15:00	3.0	W
31-Jan-2008	16:00	2.0	SW
31-Jan-2008	17:00	2.0	WSW
31-Jan-2008	18:00	2.0	SSW
31-Jan-2008	19:00	2.0	SW
31-Jan-2008	20:00	2.0	WNW
31-Jan-2008	21:00	2.0	WNW
31-Jan-2008	22:00	2.0	WNW
31-Jan-2008	23:00	2.0	WNW

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**APPENDIX E  
1-HOUR TSP MONITORING RESULTS  
AND GRAPHICAL PRESENTATION**

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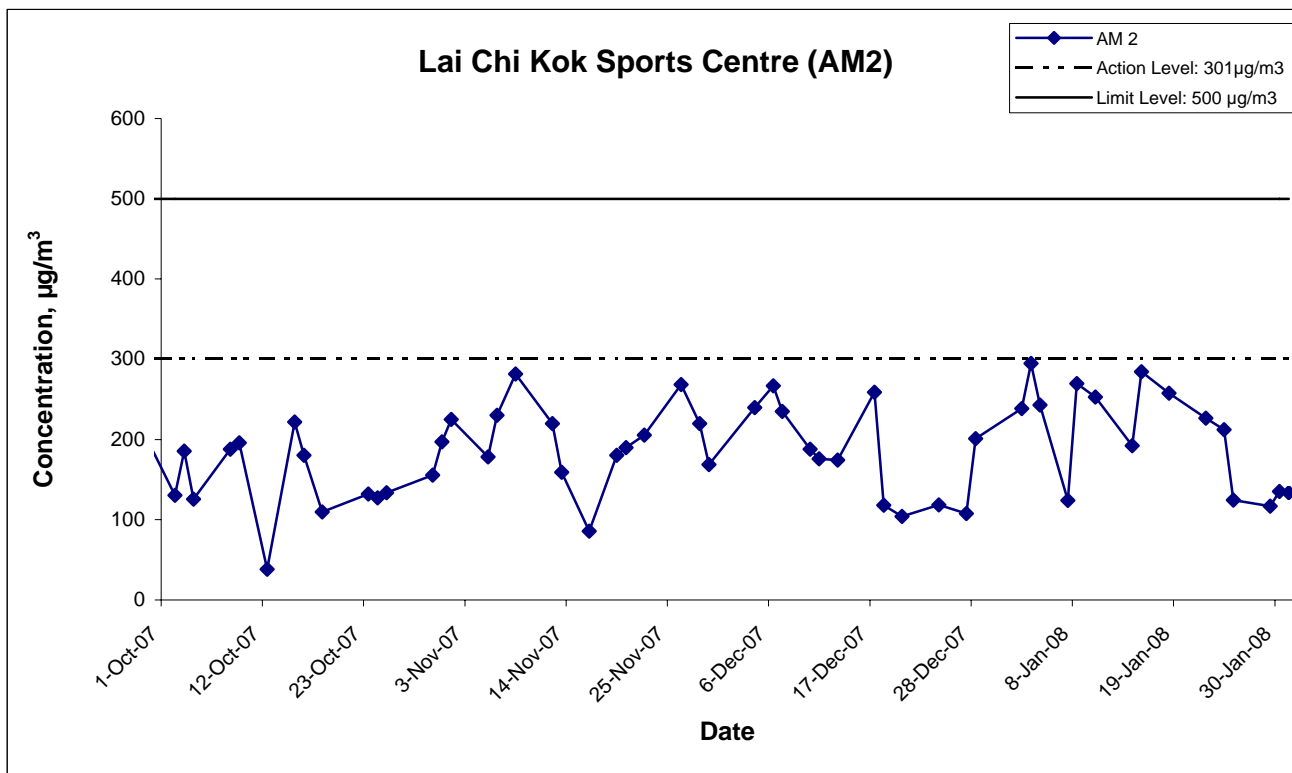
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## Appendix E - 1-hour TSP Monitoring Results

### Location AM 2 - Lai Chi Kok Sports Centre

Date	Weather Condition	Filter Weight (g)		Flow Rate (m <sup>3</sup> /min.)		Elapse Time		Air Temp. (K)	Atmospheric Pressure(Pa)	Particulate weight(g)	Av. flow (m <sup>3</sup> /min)	Total vol. (m <sup>3</sup> )	Sampling Time(hrs.)	Conc. (µg/m <sup>3</sup> )	
		Initial	Final	Initial	Final	Initial	Final								
2-Jan-08	Sunny	2.8282	2.8459	1.24	1.24	7081.1	7082.1	284.1	771.5	0.0177	1.24	74.1	1.0	238.7	
3-Jan-08	Sunny	2.8360	2.8578	1.23	1.23	7082.1	7083.1	286.0	772.0	0.0218	1.23	73.9	1.0	294.8	
4-Jan-08	Sunny	2.8295	2.8474	1.23	1.23	7083.1	7084.1	288.0	770.3	0.0179	1.23	73.6	1.0	243.1	
7-Jan-08	Sunny	2.8675	2.8766	1.22	1.22	7108.1	7109.1	290.0	767.9	0.0091	1.22	73.3	1.0	124.1	
8-Jan-08	Sunny	2.7970	2.8166	1.21	1.21	7109.1	7110.1	292.4	760.4	0.0196	1.21	72.7	1.0	269.5	
10-Jan-08	Sunny	2.8003	2.8187	1.21	1.21	7110.1	7111.1	293.4	764.6	0.0184	1.21	72.8	1.0	252.7	
14-Jan-08	Sunny	2.8251	2.8394	1.24	1.24	7135.1	7136.1	286.2	768.5	0.0143	1.24	74.3	1.0	192.4	
15-Jan-08	Sunny	2.7963	2.8175	1.24	1.24	7136.1	7137.1	285.5	770.6	0.0212	1.24	74.5	1.0	284.6	
18-Jan-08	Cloudy	2.7947	2.8138	1.24	1.24	7161.1	7162.1	287.8	768.2	0.0191	1.24	74.1	1.0	257.7	
22-Jan-08	Cloudy	2.8223	2.8391	1.24	1.24	7162.1	7163.1	287.2	767.9	0.0168	1.24	74.2	1.0	226.5	
24-Jan-08	Cloudy	2.8451	2.8609	1.24	1.24	7187.1	7188.1	286.1	771.3	0.0158	1.24	74.4	1.0	212.3	
25-Jan-08	Cloudy	2.8549	2.8642	1.25	1.25	7188.1	7189.1	282.7	770.2	0.0093	1.25	74.8	1.0	124.4	
29-Jan-08	Cloudy	2.8329	2.8416	1.24	1.24	7189.1	7190.1	284.1	765.6	0.0087	1.24	74.4	1.0	116.9	
30-Jan-08	Cloudy	2.8466	2.8567	1.25	1.25	7214.1	7215.1	281.4	766.9	0.0101	1.25	74.8	1.0	135.1	
31-Jan-08	Cloudy	2.8158	2.8258	1.25	1.25	7215.1	7216.1	281.7	767.3	0.0100	1.25	74.8	1.0	133.8	
														Min	116.9
														Max	294.8
														Average	207.1

### 1-hr TSP Levels



Title  
Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin  
Contract HY/2003/01 - Lai Chi Kok Viaduct  
Graphical Presentation of 1-hour TSP Impact Monitoring Results

Scale  
N.T.S  
Date  
Jan 08

Project No.  
MA3024  
Appendix  
E





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**APPENDIX F  
24-HOUR TSP MONITORING RESULTS  
AND GRAPHICAL PRESENTATION**

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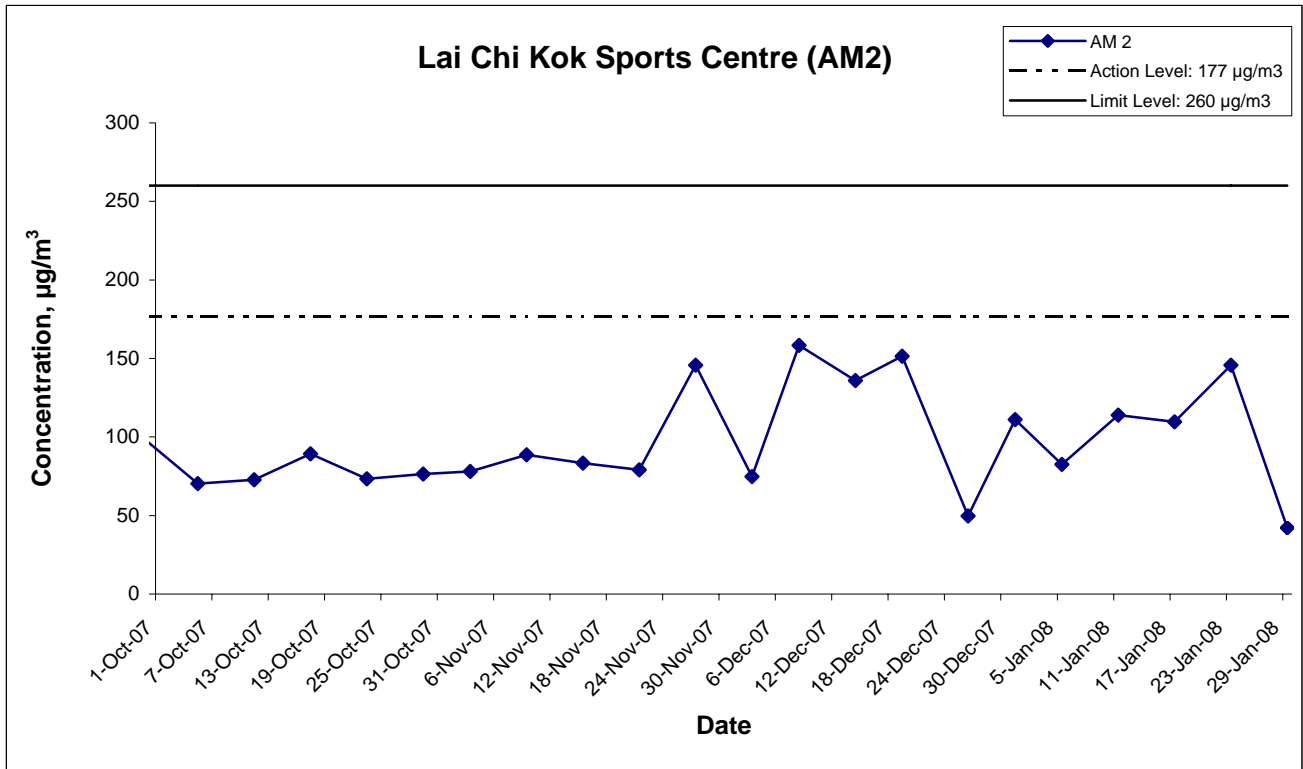
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## Appendix F - 24-hour TSP Monitoring Results

### Location AM 2 - Lai Chi Kok Sports Centre

Date	Weather Condition	Filter Weight (g)		Flow Rate (m <sup>3</sup> /min.)		Elapse Time		Air Temp. (K)	Atmospheric Pressure(Pa)	Particulate weight(g)	Av. flow (m <sup>3</sup> /min)	Total vol. (m <sup>3</sup> )	Sampling Time(hrs.)	Conc. (µg/m <sup>3</sup> )
		Initial	Final	Initial	Final	Initial	Final							
5-Jan-08	Sunny	2.8427	2.9878	1.22	1.22	7084.1	7108.1	289.9	767.0	0.1451	1.22	1758.9	24.0	82.5
11-Jan-08	Sunny	2.8112	3.0116	1.22	1.22	7111.1	7135.1	293.9	763.7	0.2004	1.22	1759.3	24.0	113.9
17-Jan-08	Cloudy	2.8849	3.0794	1.23	1.23	7137.1	7161.1	289.9	767.7	0.1945	1.23	1773.3	24.0	109.7
23-Jan-08	Cloudy	2.8109	3.0693	1.24	1.24	7163.1	7187.1	286.6	769.1	0.2584	1.24	1774.0	24.0	145.7
29-Jan-08	Cloudy	2.8289	2.9043	1.24	1.24	7190.1	7214.1	284.1	765.5	0.0754	1.24	1786.0	24.0	42.2
													Min	42.2
													Max	145.7
													Average	98.8

## 24-hr TSP Levels



Title Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/01 - Lai Chi Kok Viaduct Graphical Presentation of 24-hour TSP Impact Monitoring Results	Scale N.T.S	Project No. MA3024	
	Date Jan 08	Appendix F	

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**APPENDIX G  
NOISE MONITORING RESULTS AND  
GRAPHICAL PRESENTATION**

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## Appendix G - Noise Monitoring Results

Location NM2 - Lai Chi Kok Reception Centre								
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks		
			Measured Noise Level				Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>		L <sub>eq</sub>	L <sub>eq</sub>
4-Jan-08	9:00	Sunny	68.2	71.2	65.7	Resumed since September 2006		
8-Jan-08	13:00	Sunny	66.9	72.7	62.7			
15-Jan-08	11:30	Cloudy	65.4	67.7	56.7			
22-Jan-08	11:25	Sunny	69.8	72.2	63.7			
29-Jan-08	13:15	Cloudy	64.8	67.7	59.2			

Location NM4 - Mei Foo Sun Chuen, Phase 5								
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks		
			Measured Noise Level				Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>		L <sub>eq</sub>	L <sub>eq</sub>
4-Jan-08	9:45	Sunny	72.7	77.5	69.5	Road traffic noise from Ching Cheung Road was identified as the major noise source.		
8-Jan-08	10:18	Sunny	70.6	76.0	68.5			
15-Jan-08	10:40	Cloudy	75.4	78.0	68.0			
22-Jan-08	13:00	Sunny	74.2	76.0	66.5			
29-Jan-08	11:30	Cloudy	75.8	78.5	69.5			

Location NM8a - M/F of Nob Hill								
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks		
			Measured Noise Level				Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>		L <sub>eq</sub>	L <sub>eq</sub>
4-Jan-08	10:30	Sunny	73.7	77.5	69.5	Road traffic noise from Ching Cheung Road was identified as the major noise source.		
8-Jan-08	9:00	Sunny	72.7	74.0	64.5			
15-Jan-08	13:10	Cloudy	73.8	75.5	64.5			
22-Jan-08	9:20	Cloudy	72.4	74.0	69.5			
29-Jan-08	10:00	Cloudy	73.5	76.0	69.5			

Location NM8b - 3/F of Nob Hill								
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks		
			Measured Noise Level				Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>		L <sub>eq</sub>	L <sub>eq</sub>
4-Jan-08	11:15	Sunny	71.9	75.0	68.0	This Station (NM8b) which is strongly influenced by road traffic noise from Ching Cheung Road. The measurement at this station is for reference purpose, but not for compliance check for construction noise.		
8-Jan-08	9:39	Sunny	71.4	73.0	65.0			
15-Jan-08	13:50	Cloudy	76.2	78.5	66.5			
22-Jan-08	10:00	Cloudy	78.7	80.0	76.5			
29-Jan-08	10:40	Cloudy	76.4	79.0	70.5			

Location NM9 - Hoi Lai Estate								
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks		
			Measured Noise Level				Baseline Level	Construction Noise Level
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>		L <sub>eq</sub>	L <sub>eq</sub>
4-Jan-08	14:10	Sunny	67.3	69.5	65.0	-		
8-Jan-08	10:59	Sunny	65.6	67.0	62.5			
15-Jan-08	16:00	Cloudy	72.1	74.5	65.0			
22-Jan-08	13:45	Sunny	68.9	69.5	64.5			
29-Jan-08	14:20	Cloudy	69.7	72.5	65.5			

\*Bolted value indicated limit level exceedance

## Appendix G - Noise Monitoring Results

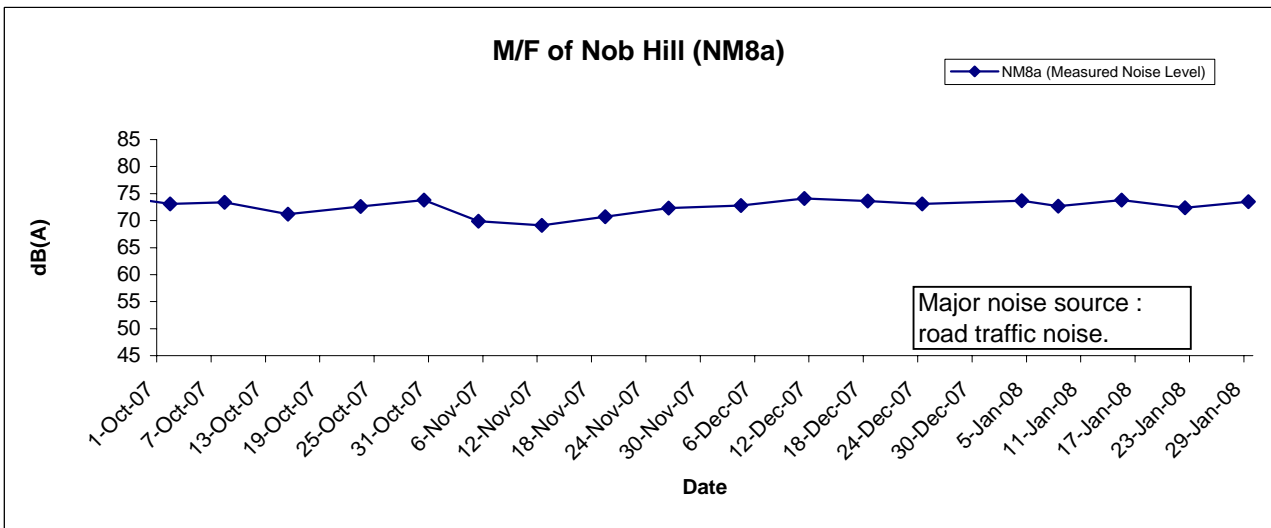
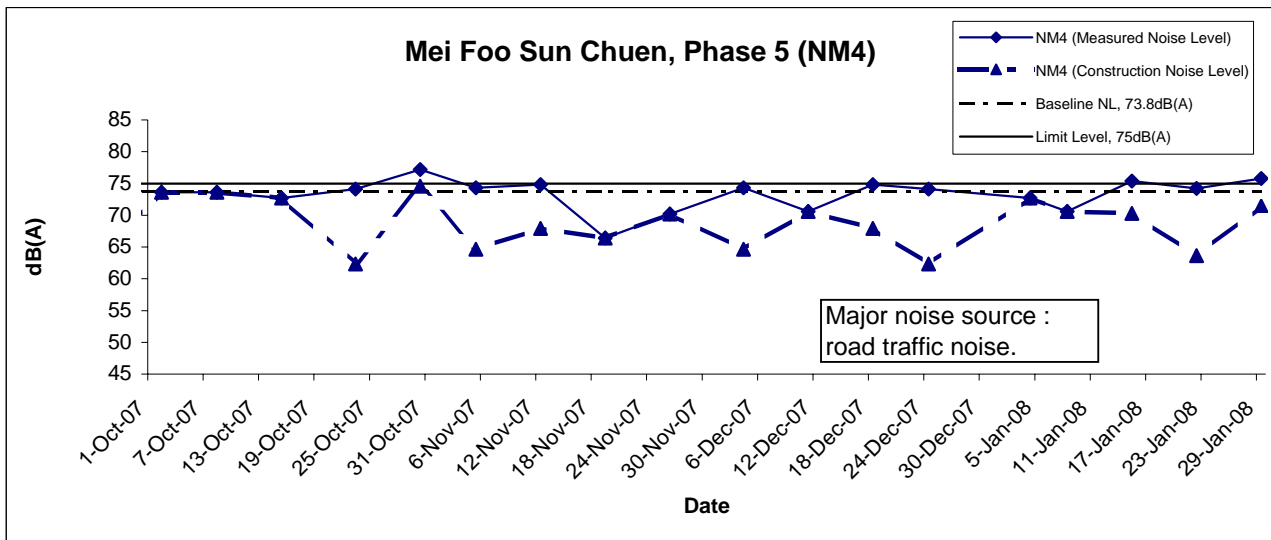
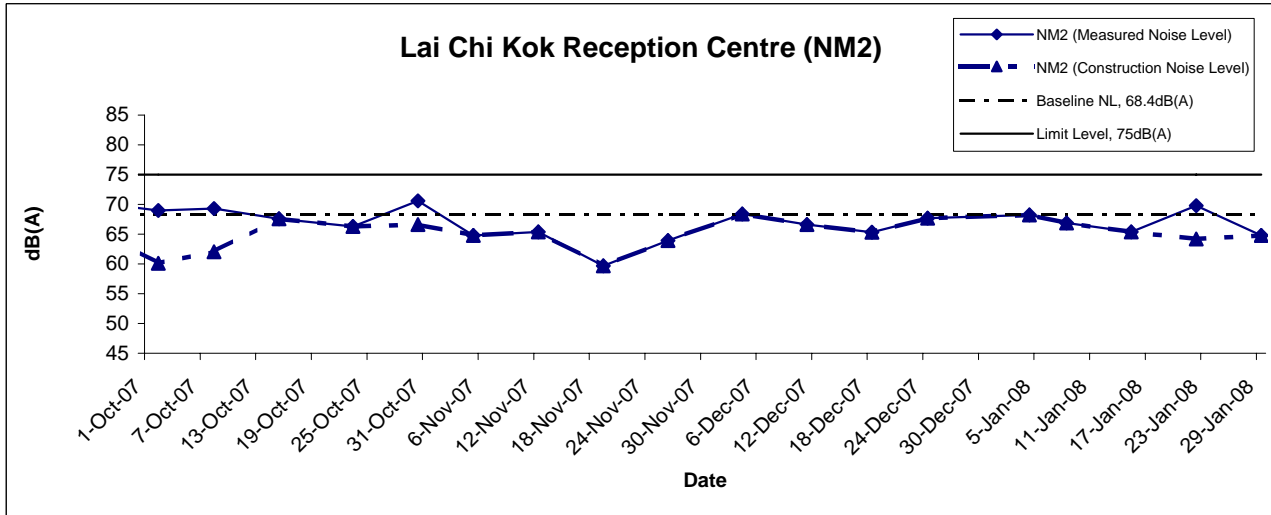
### Restricted Hours - 19:00 to 23:00 on normal weekdays

Location NM9 - Hoi Lai Estate						
Date	Time	Weather	dB (A) (5-min)			
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>	Average L <sub>eq</sub>
4-Jan-08	19:00	Cloudy	63.5	66.5	60.5	63.5
	19:05		63.7	66.5	60.5	
	19:10		63.2	66.0	60.0	
8-Jan-08	19:05	Cloudy	62.8	65.0	59.5	62.3
	19:10		62.0	65.0	59.0	
	19:15		62.2	65.0	59.0	
15-Jan-08	19:30	Cloudy	62.5	64.0	58.0	62.7
	19:35		62.7	64.0	58.0	
	19:40		62.8	64.0	58.0	
22-Jan-08	20:00	Cloudy	64.0	69.0	61.0	64.1
	20:05		64.3	69.5	61.0	
	20:10		64.1	69.0	61.0	
29-Jan-08	19:00	Cloudy	62.7	65.5	59.0	62.7
	19:05		62.4	65.5	59.0	
	19:10		62.9	66.0	59.0	

# Construction Noise Level (Leq) = Measured Noise Level (Leq) - Baseline Noise Level (Leq)

\*Bolted value indicated limit level exceedance

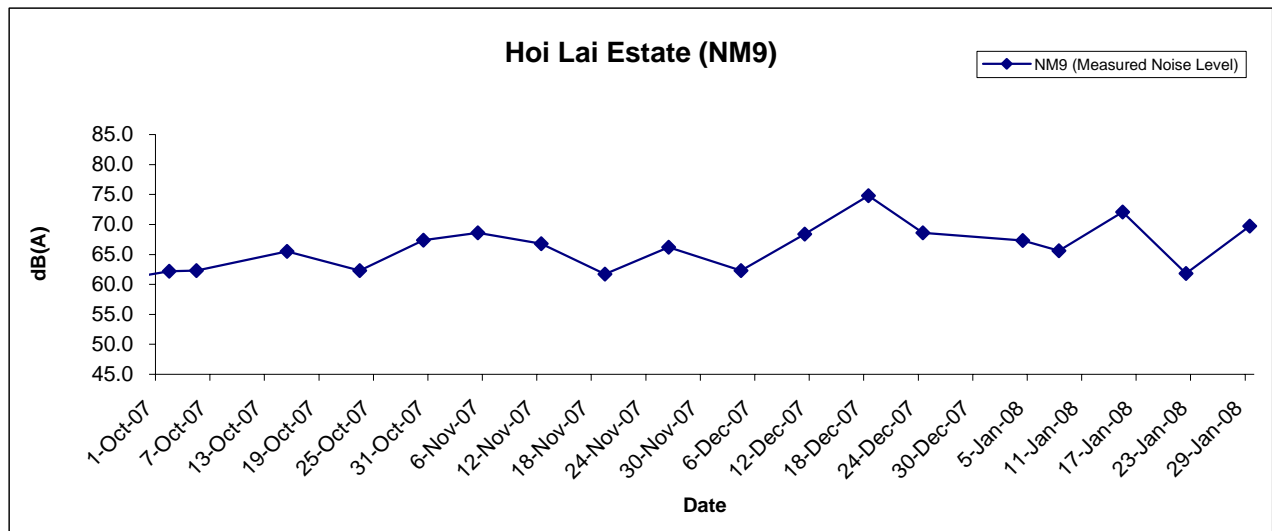
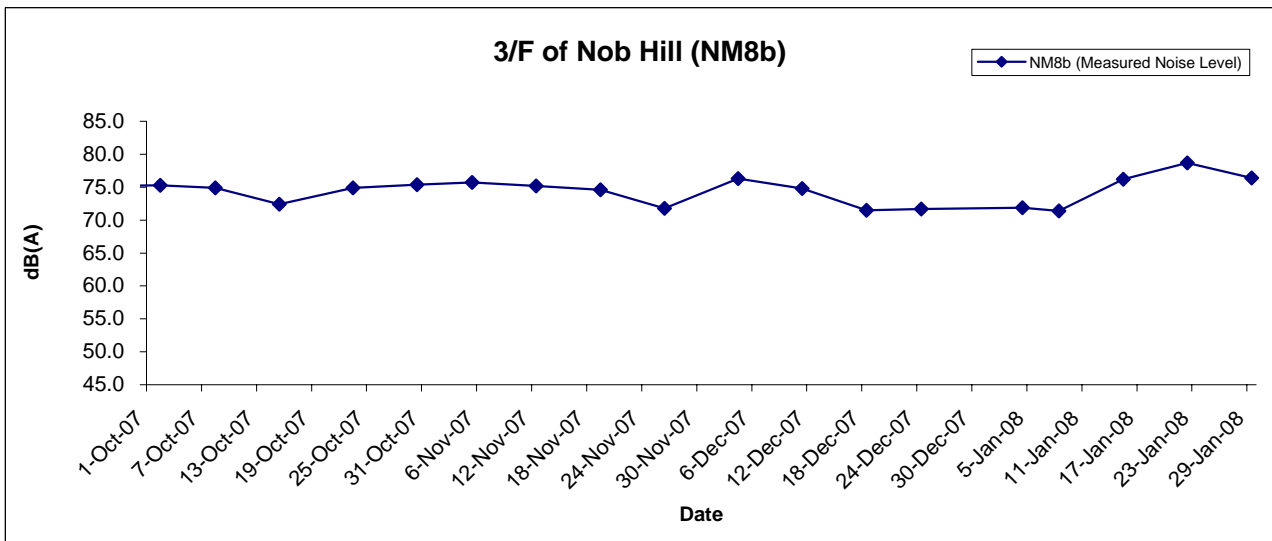
## Noise Levels



\* Construction Noise Level = Measured Noise Level - Baseline Level  
 (If the measured noise level is lower than the baseline level, the construction noise level will be taken as the measured one)

Title Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin Contract HY/2003/01 - Lai Chi Kok Viaduct  Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. MA3024	
	Date Jan 08	Appendix G	

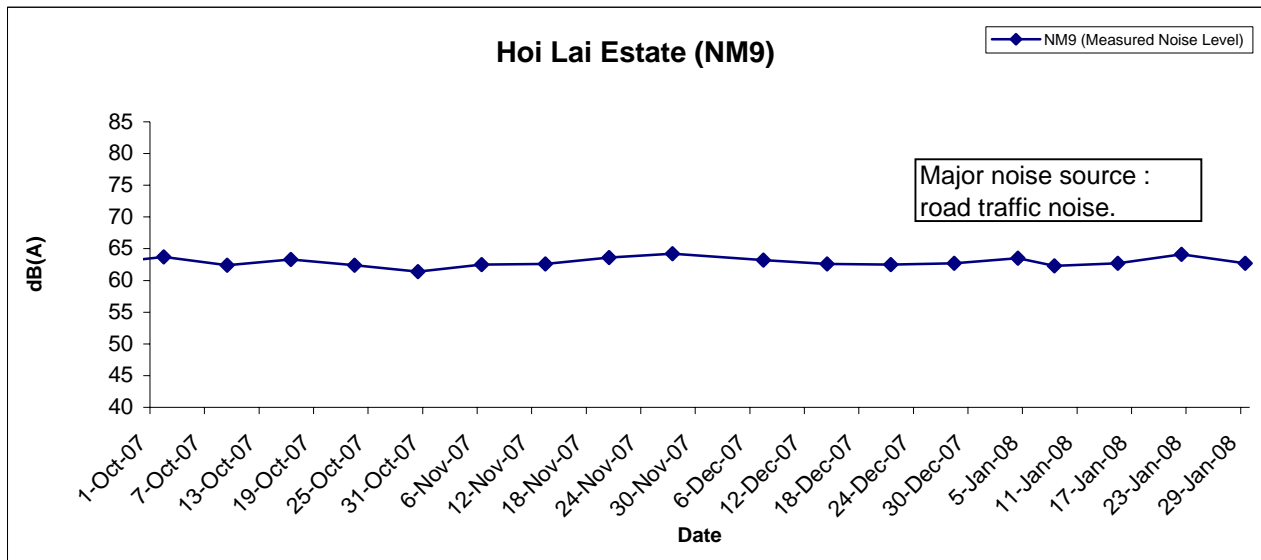
## Noise Levels



Title Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin Contract HY/2003/01 - Lai Chi Kok Viaduct  Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. MA3024	
	Date Jan 04	Appendix G	



## Restricted Hours (19:00 to 23:00) - Noise Levels



Title Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin Contract HY/2003/01 - Lai Chi Kok Viaduct  Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. MA3024	
	Date Jan 08	Appendix G	

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**APPENDIX H  
SUMMARY OF EXCEEDANCE**

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### **Summary of Exceedances Recorded in the Reporting Month**

***a) Exceedance Report for 1-hr TSP***

- No Action/Limit Level exceedance was recorded in the reporting month.

***b) Exceedance Report for 24-hr TSP***

- No Action/Limit Level exceedance was recorded in the reporting month.

***c) Exceedance Report for Construction Noise***

- One Action Level exceedances was recorded due to noise complaints received on 21 January 2008.
- No noise Limit Level exceedance was recorded in the reporting monthly.

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**APPENDIX I  
SITE AUDIT SUMMARY**

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**Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin  
Environmental Team for Lai Chi Kok Viaduct and Eagle's Nest Tunnel  
Contract No. HY/2003/01 - Lai Chi Kok Viaduct**

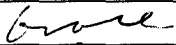
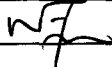
**Weekly Site Inspection Record Summary**

**Inspection Information**

Checklist Reference Number	80102C-LCKV
Date	2 January 2008 (Wednesday)
Time	09:30 – 10:40

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
R 02	<p><b>A. Water Quality</b></p> <ul style="list-style-type: none"> <li>Follow up with the last site inspection, although the Contractor has put the granular larvicides, it is recommended to dry the water out from the hole to prevent mosquito breed.</li> </ul>	B14
R 01	<p><b>B. Air Quality</b></p> <ul style="list-style-type: none"> <li>Follow up with last site inspection, the stockpile was in used by the Contractor at Lai Po Raod. The Contractor was reminded to cover it properly to suppress the dust generation when it is not in used.</li> </ul> <p><b>C. Noise</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul>	C8
O 01	<p><b>D. Waste / Chemical Management</b></p> <ul style="list-style-type: none"> <li>Oil leakage was observed on the ground at Nob Hill. The Contractor was advised to clear the oil.</li> </ul> <p><b>E. Permit / Licenses</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul>	E12
R 02	<p><b>F. Others</b></p> <ul style="list-style-type: none"> <li>Follow up with the last site inspection, although the Contractor has put the granular larvicides, it is recommended to dry the water out from the hole to prevent mosquito breed.</li> <li>Follow-up on previous audit (Ref. No.:71228-LCKV), although the environmental deficiencies have been improved, follow up actions are needed for further improvement on the pervious items.</li> <li>Covering of loaded truck leaving the site was checked during the site inspection. No uncovered truck leaving the construction site was observed during the site inspection.</li> </ul>	G5

	Name	Signature	Date
Recorded by	Grace Wong		2 January 2008
Checked by	Dr. Priscilla Choy		2 January 2008

**Route 8 - Environmental Team for Lai Chi Kok Viaduct and Eagle's Nest Tunnel**  
**Contract No. HY/2003/05 – Traffic Control and Surveillance System**

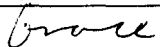
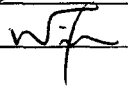
**Weekly Site Inspection Record Summary**

**Inspection Information**

Checklist Reference Number	80102-LCKV-TCSS
Date	2 January 2008 (Wednesday)
Time	11:20 – 11:40

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
	<p><b>A. Water Quality</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>B. Air Quality</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>C. Noise</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>D. Waste / Chemical Management</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>E. Permit / Licenses</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>F. Others</b></p> <ul style="list-style-type: none"> <li>Follow-up for previous audit session (Ref. No.: 71205-LCKV-TCSS), no environmental deficiency was identified during the site inspection.</li> </ul>	

	Name	Signature	Date
Recorded by	Grace Wong		2 January 2008
Checked by	Dr. Priscilla Choy		2 January 2008

**Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin  
Environmental Team for Lai Chi Kok Viaduct and Eagle's Nest Tunnel  
Contract No. HY/2003/01 - Lai Chi Kok Viaduct**

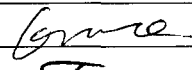
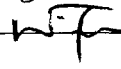
**Weekly Site Inspection Record Summary**

**Inspection Information**

Checklist Reference Number	80109C-LCKV
Date	9 January 2008 (Wednesday)
Time	14:15 – 15:40

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
R 02	<p><b>A. Water Quality</b></p> <ul style="list-style-type: none"> <li>Follow up with the last site inspection, standing water was still observed at Lai Po Road. The Contractor was reminded to dry the water out to prevent mosquito breed.</li> </ul>	B14
R 01	<p><b>B. Air Quality</b></p> <ul style="list-style-type: none"> <li>Follow up with last site inspection, the stockpile was partially covered at Lai Po Road. The Contractor was reminded to cover it well.</li> </ul> <p><b>C. Noise</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>D. Waste / Chemical Management</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>E. Permit / Licenses</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul>	C8
R 02	<p><b>F. Others</b></p> <ul style="list-style-type: none"> <li>Follow up with the last site inspection, standing water was still observed at Lai Po Road. The Contractor was reminded to dry the water out to prevent mosquito breed.</li> <li>Follow-up on previous audit (Ref. No.:80102-LCKV), the environmental deficiencies were found to be rectified/ improved except the item 80102-LCKV-R01 and 80102-LCKV-R02. Follow up action is needed for the outstanding items.</li> <li>Covering of loaded truck leaving the site was checked during the site inspection. No uncovered truck leaving the construction site was without cover.</li> </ul>	G5

	Name	Signature	Date
Recorded by	Grace Wong		9 January 2008
Checked by	Dr. Priscilla Choy		9 January 2008

**Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin  
 Environmental Team for Lai Chi Kok Viaduct and Eagle's Nest Tunnel  
 Contract No. HY/2003/01 - Lai Chi Kok Viaduct**

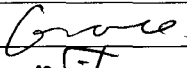
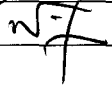
**Weekly Site Inspection Record Summary**

**Inspection Information**

Checklist Reference Number	80116C-LCKV
Date	16 January 2008 (Wednesday)
Time	09:00 – 10:20

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
001	<p><b>A. Water Quality</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>B. Air Quality</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>C. Noise</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>D. Waste / Chemical Management</b></p> <ul style="list-style-type: none"> <li>Contaminated soil was observed at Nob Hill next to the drip tray under the bridge. The Contractor was advised to clean the soil up and remind the operator to add the oil carefully.</li> </ul>	E12
002	<ul style="list-style-type: none"> <li>General refuse was observed accumulating at Lai Wan Road where is opposite to the Lai Chi Kok Public Library. The Contractor was advised to clean them out.</li> </ul> <p><b>E. Permit / Licenses</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>F. Others</b></p> <ul style="list-style-type: none"> <li>Follow-up on previous audit (Ref. No.:80109-LCKV), all of the environmental deficiencies were found to be rectified/ improved during the site inspection.</li> <li>Covering of loaded truck leaving the site was checked during the site inspection. No uncovered truck leaving the construction site was observed.</li> </ul>	E1i, E1iii

	Name	Signature	Date
Recorded by	Grace Wong		16 January 2008
Checked by	Dr. Priscilla Choy		17 January 2008



**Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin  
 Environmental Team for Lai Chi Kok Viaduct and Eagle's Nest Tunnel  
 Contract No. HY/2003/01 - Lai Chi Kok Viaduct**

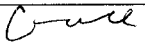
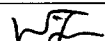
**Weekly Site Inspection Record Summary**

**Inspection Information**

Checklist Reference Number	80123C-LCKV
Date	23 January 2008 (Wednesday)
Time	10:30 – 11:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
O01	<p><b>A. Water Quality</b></p> <ul style="list-style-type: none"> <li>• Further rock dowell drilling will undergoes at Nob Hill. The Contractor was advised to install geotextile into the manholes to prevent any surface runoff running into the manholes nearby.</li> </ul> <p><b>B. Air Quality</b></p> <ul style="list-style-type: none"> <li>• No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>C. Noise</b></p> <ul style="list-style-type: none"> <li>• No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>D. Waste / Chemical Management</b></p> <ul style="list-style-type: none"> <li>• No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>E. Permit / Licenses</b></p> <ul style="list-style-type: none"> <li>• No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>F. Others</b></p> <ul style="list-style-type: none"> <li>• Follow-up on previous audit (Ref. No.:80116-LCKV), all of the environmental deficiencies were found to be rectified/ improved during the site inspection.</li> <li>• Covering of loaded truck leaving the site was checked during the site inspection. No uncovered truck leaving the construction site was observed.</li> </ul>	B13

	Name	Signature	Date
Recorded by	Grace Wong		23 January 2008
Checked by	Dr. Priscilla Choy		23 January 2008

**Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin  
 Environmental Team for Lai Chi Kok Viaduct and Eagle's Nest Tunnel  
 Contract No. HY/2003/01 - Lai Chi Kok Viaduct**

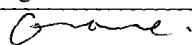

**Weekly Site Inspection Record Summary**

**Inspection Information**

Checklist Reference Number	80130C-LCKV
Date	30 January 2008 (Wednesday)
Time	09:20 – 10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-

Ref. No.	Remarks/Observations	Related Item No.
O01	<p><b>A. Water Quality</b></p> <ul style="list-style-type: none"> <li>The discharge from rock dowel was observed overflow into the geo-textile installed in the manhole at Nob Hill. The Contractor was advised to pre-treated the discharge properly (e.g. further desilt it with the sandbags/ an additional geo-textile filter) before discharging into the manhole.</li> </ul> <p><b>B. Air Quality</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>C. Noise</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>D. Waste / Chemical Management</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>E. Permit / Licenses</b></p> <ul style="list-style-type: none"> <li>No environmental deficiency was identified during the site inspection.</li> </ul> <p><b>F. Others</b></p> <ul style="list-style-type: none"> <li>Follow-up on previous audit (Ref. No.:80123-LCKV), the environmental deficiency was found to be rectified/ improved during the site inspection.</li> <li>Covering of loaded truck leaving the site was checked during the site inspection. No uncovered truck leaving the construction site was observed.</li> </ul>	B13

	Name	Signature	Date
Recorded by	Grace Wong		30 January 2008
Checked by	Dr. Priscilla Choy		30 January 2008

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**APPENDIX J**  
**EVENT ACTION PLANS**

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## Appendix J - Event Action Plans

### Event/Action Plan for Air Quality

EVENT	ACTION			
	ET	IEC	ER	Contractor
<b>ACTION LEVEL</b>				
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>1. Identify source</li> <li>2. Inform ER &amp; IEC</li> <li>3. Repeat measurement to confirm finding</li> <li>4. Increase monitoring frequency to daily</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET</li> <li>2. Check Contractor's working methods</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor</li> <li>2. Check monitoring data and Contractor's working methods</li> </ol>	<ol style="list-style-type: none"> <li>1. Rectify any unacceptable practice</li> <li>2. Amend working methods if appropriate</li> </ol>
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Identify source</li> <li>2. Inform ER &amp; IEC</li> <li>3. Repeat measurement to confirm findings</li> <li>4. Increase monitoring frequency to daily</li> <li>5. Discuss with ER &amp; for remedial actions required</li> <li>6. If exceedance continues, arrange meeting with ER &amp; IEC</li> <li>7. If exceedance stops, cease additional monitoring</li> </ol>	<ol style="list-style-type: none"> <li>1. Checking monitoring data submitted by ET</li> <li>2. Check Contractor's working methods</li> <li>3. Discuss with ET and Contractor on possible remedial measure</li> <li>4. Advise the ER &amp; ET on the effectiveness of the proposed remedial measures</li> <li>5. Supervise the implementation of the remedial measures</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing</li> <li>2. Notify Contractor</li> <li>3. Check Contractor's working methods</li> <li>4. Discuss with ET, IEC and Contractor on proposed remedial actions</li> <li>5. Ensure remedial actions properly implemented</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit proposals for remedial actions to ER within 3 working days of notification</li> <li>2. Implement the agreed proposals</li> <li>3. Amend proposal if appropriate</li> </ol>
<b>LIMIT LEVEL</b>				
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>1. Identify source</li> <li>2. Inform ER &amp; IEC and EPD</li> <li>3. Repeat measurement to confirm finding</li> <li>4. Increase monitoring frequency to daily</li> <li>5. Assess effectiveness of Contractor's</li> </ol>	<ol style="list-style-type: none"> <li>1. Checking monitoring data submitted by ET</li> <li>2. Check Contractor's working methods</li> <li>3. Discuss with ET and Contractor on possible remedial measure</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing</li> <li>2. Notify Contractor</li> <li>3. Check Contractor's working methods</li> <li>4. Discuss with ET, IEC and Contractor on</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance</li> <li>2. Submit proposals for remedial actions to ER within 3 working days of notification</li> </ol>

EVENT	ACTION			
	ET	IEC	ER	Contractor
	remedial actions and keep EPD and ER & IEC informed of the results	4. Advise the ER & ET on the effectiveness of the proposed remedial measures 5. Supervise the implementation of the remedial measures	proposed remedial actions 5. Ensure remedial actions properly implemented	3. Implement the agreed proposals 4. Amend proposal if appropriate
2. Exceedance for two or more consecutive samples	1. Identify source 2. Inform ER, IEC, Contractor and EPD the cause & actions taken for the exceedances 3. Repeat measurement to confirm findings 4. Increase monitoring frequency to daily 5. Investigate the causes of exceedance 6. Carry out analysis of contractor's working procedures to determine possible mitigation to be implemented. 7. Arrange meeting with EPD, IEC and ER to discuss the remedial actions to be taken 8. Assess effectiveness of Contractor's remedial actions and keep EPD and ER & IEC informed of the results 9. If exceedance stops, cease additional monitoring	1. Checking monitoring data submitted by ET 2. Discuss amongst ER, ET and Contractor on possible remedial measures 3. Review Contractor's remedial measures whenever necessary to ensure their effectiveness and advise the ER accordingly 4. Supervise the implementation of the remedial measures	1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented 4. Discuss amongst ET, IEC and the Contractor on proposed remedial actions 5. In consultation with IEC, agree with the contractor remedial measures to be implemented 6. Ensure remedial measure are properly implemented 7. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated	1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to IEC, ER 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 the ER until the exceedance is abated

Event/Action Plan for Construction Noise

Exceedance	ACTION			
	ET	.IEC	ER	Contractor
Action Level	<p>1. Discuss with the IEC and ER and seek to identify potential noise source</p> <p>2. Undertake noise measurement to confirm the validity of complaint</p> <p>3. Inform ER&amp;IEC in writing Discuss remedial actions required with ER&amp;IEC if an exceedance is recorded</p> <p>4. Increase monitoring frequency to demonstrate efficacy of remedial measures</p> <p>5. If exceedance continues, meet with ER&amp;IEC to review implementation of appropriate mitigation measures.</p> <p>6. If exceedance stops, cease additional monitoring</p>	<p>1. Review the analyzed results submitted by the ET</p> <p>2. Review the proposed remedial measures by the Contractor and advise the ER &amp; ET accordingly</p> <p>3. Supervise the implementation of remedial measures</p>	<p>1. Confirm receipt of notification of complaint and notify Contractor immediately</p> <p>2. Check monitoring data trends and Contractor's working methods</p> <p>3. Remind the Contractor of his contractual obligations and discuss with ET, IEC and Contractor on proposed remedial actions</p> <p>4. Assess the efficacy of remedial actions and keep the Contractor informed</p> <p>5. Inform complainant of actions taken</p>	<p>1. Submit proposals for remedial actions to ER within three working days of notification</p> <p>2. Amend proposals if required by the Engineer</p> <p>3. Implement the remedial actions immediately upon instruction</p> <p>4. Liaise with the ER to optimize the effectiveness of the agreed mitigation</p> <p>5. Amend proposal if appropriate</p>

Exceedance	ACTION			
	ET	IEC	ER	Contractor
Limit Level	<ol style="list-style-type: none"> <li>1. Repeat measurement to confirm findings</li> <li>2. Investigate the cause of the exceedance and identify the main source(s) of impact</li> <li>3. Inform ER&amp;IEC and EPD in writing</li> <li>4. Discuss remedial actions required with ER&amp;IEC</li> <li>5. Increase monitoring frequency to demonstrate efficacy of remedial measures</li> <li>6. Assess efficacy of remedial actions and keep ER &amp; IEC informed of the results</li> <li>7. If exceedance continues, meet with ER&amp;IEC to identify appropriate mitigation measures</li> <li>8. If exceedance stops, cease additional monitoring</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET</li> <li>2. Review Contractor's remedial actions to assure their effectiveness and advise the ER &amp;ET accordingly</li> <li>3. Supervise the implementation of the remedial measures</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance and notify Contractor</li> <li>2. Check monitoring data trends and Contractor's working methods</li> <li>3. Discuss with ET, IEC and Contractor on proposed remedial actions to be implemented</li> <li>4. Assess the efficacy of remedial actions and keep the Contractor informed</li> <li>5. If exceedance continuous, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is aborted</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance</li> <li>2. Submit proposals for remedial actions to ER immediately not more than 3 working days of notification</li> <li>3. Amend proposals if required by the ER</li> <li>4. Implement remedial actions immediately upon instruction</li> <li>5. Liaise with the ER to optimize the effectiveness of the agreed mitigation</li> <li>6. Resubmit proposals if problem still not under control</li> <li>7. Stop the relevant portion of works as determined by the ER until the exceedance is aborted</li> </ol>

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**APPENDIX K  
ENVIRONMENTAL MITIGATION  
IMPLEMENTATION SCHEDULE (EMIS)**

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## Appendix K - Summary of Environmental Mitigation Implementation Schedule

Types of Impacts	Mitigation Measures	Status
<p style="text-align: center;"><b>Construction Dust</b></p>	<ul style="list-style-type: none"> <li>• Any stockpile of dusty materials or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet.</li> </ul>	*
	<ul style="list-style-type: none"> <li>• A stockpile of dusty materials should not extend beyond the pedestrian barriers, fencing or traffic cones.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Vehicle washing facilities should be provided at every exit point.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Every main haul road should be sprayed with water or a dust suppression chemical so as to maintain the entire road surface wet.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• The portion of any road leading only to a construction site that is within 30m of a discernible or designated vehicle entrance or exit should be kept clear of dusty materials.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Any stockpile of dusty materials should be either covered entirely by impervious sheeting, placed in an area sheltered on the top and the 3 sides or sprayed with water or a dust suppression chemical so as to maintain the entire surface wet.</li> </ul>	*
	<ul style="list-style-type: none"> <li>• All dusty materials should be sprayed with water or a dust suppression chemical immediately prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Every vehicle should be washed to remove any dusty materials from its body and wheels immediately before leaving a construction site.</li> <li>• The working area of any excavation should be sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation so as to maintain the entire surface wet.</li> </ul>	^
<p style="text-align: center;"><b>Construction Noise</b></p>	<ul style="list-style-type: none"> <li>• Only well-maintained plant should be operated on –site and plant should be serviced regularly during the construction works.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Plant known to emit noise strongly in one direction, should where possible, be orientated to direct noise away from the NSRS.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Mobile plant should be sited as far away from NSRs as possible.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Use quiet plant and Working Method</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Reduce the number of plant operating in critical areas close NSRs.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Construct temporary and movable noise barriers</li> </ul>	^

<b>Water Quality</b>	<i>Construction Runoff and Drainage</i>	
	<ul style="list-style-type: none"> <li>• Use of sediment traps and the adequate maintenance of drainage systems to prevent flooding and overflow.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilities runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment traps should be regularly cleaned and maintained. The temporarily diverted drainage should be reinstated to its original condition when the construction works has finished or the temporary diversion is no longer required</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Sand silt in the wash water from the wheel washing facilities, which ensure no earth, mud and debris is deposited on roads, should be settled out the removed before discharging into storm drains. A section of the road between the wheel washing bay and the public road should be paved with backfill to prevent wash water or other site runoff form entering public road drains.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Oil interceptors should be provided in the drainage system and regularly emptied to prevent the release of oils and grease into the storm water drainage system after accidental spillage. The interceptor should have a bypass to prevent flushing during periods of heavy rain.</li> </ul>	N/A
	<ul style="list-style-type: none"> <li>• Catchpits and perimeter channels shall be constructed in advance of site formation works and earthworks.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Silt removal facilities, channels and manholes shall be suitably maintained with the deposited silt and grit being removed at least once a week, and at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Earthworks final surfaces shall be well compacted and the subsequent permanent work or surface protection shall be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate intercepting channels shall be provided along the site boundary or at the locations agreed with the ET Leader. Rainwater pumped out from trenches or foundation excavations shall be discharged into silt removal facilities before discharge into storm drains.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• All generators, fuel and oil storage shall be within bunded areas. Drainage from the areas shall be connected to storm drains via a petrol interceptor.</li> </ul>	^
<i>Tunnelling Work</i>		
<ul style="list-style-type: none"> <li>• Temporary open storage of excavated materials should be covered with tarpaulin or similar fabric during rainstorms. Any washout of construction or excavated materials form the drill and blast tunnelling work should be diverted to the drainage system via appropriate sediment traps.</li> </ul>	N/A	
<ul style="list-style-type: none"> <li>• Ground water pumped out of tunnels should be discharged into the drainage channels which incorporated sediment traps to enhance deposition rates and to remove silt.</li> </ul>	N/A	
<ul style="list-style-type: none"> <li>• Spent grouts used in diaphragm wall construction should be collected in a separate slurry collection system, reconditioned and reused wherever practicable. The disposal of used grouting materials will only be permitted if it is treated to the TM standards before discharge to the storm drains or disposal to landfill.</li> </ul>	N/A	
<i>General Construction Activities</i>		

	<ul style="list-style-type: none"> <li>Debris and rubbish on site should be collected, handled and disposed of properly to avoid entering the water column and cause water quality impacts.</li> <li>All fuel tanks and storage areas will be provided with locks and be located on sealed areas (within bunds of a capacity equal to 110% of the storage capacity of the largest tank or 20% by volume of the fuel stored in that areas, whichever is the greatest).</li> </ul>	<p>^</p> <p>^</p>
	<i>Sewage Effluent</i>	
	<ul style="list-style-type: none"> <li>Construction work force sewage discharges from fixed toilet facilities on-site should be connected to the nearby existing trunk sewer wherever feasible. However, for areas where existing trunk sewer is not available, it is recommended that appropriate and adequate on site portable chemical toilets should be provided by a licensed contractor who will be responsible for appropriate disposal and maintenance of these facilities.</li> <li>It is considered that sewage discharges could also be treated by on-site septic tanks and soakaway. Minimum clearance away from streams and catchments and other requirements for the proposed septic tank and soakaway should be referred to EPD's Practice Note for Professional Persons, Drainage Plans.</li> </ul>	<p>^</p> <p>N/A</p>
<b>Waste</b>	<i>General</i>	
	<ul style="list-style-type: none"> <li>Training and instruction shall be given at a site to construction staff to increase awareness and draw attention to waste management issues and the need to minimise waste generation. The training requirement shall be included in the site waste management plan.</li> </ul>	<p>^</p>
	<i>Storage, Collection and Transportation of Waste</i>	
	<ul style="list-style-type: none"> <li>Wastes shall be handled and stored in a manner to ensure that they are held securely without loss or leakage.</li> <li>Authorised or licensed waste hauliers shall be used and they shall only collect wastes prescribed by their permits.</li> <li>Waste shall be removed on a daily basis.</li> <li>Waste storage area shall be maintained and cleaned on a daily basis.</li> <li>Windblown litter and dust during transportation shall be minimised by either covering trucks or transporting wastes in enclosed containers.</li> <li>Obtain necessary waste disposal permits from the appropriate authorities if they are required.</li> <li>Wastes shall be disposed of at licensed waste disposal facilities.</li> <li>Develop procedure such as ticketing system to facilitate tracking of loads, particularly for chemical waste, and to ensure that illegal disposal of wastes does not occur.</li> </ul>	<p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>
	<ul style="list-style-type: none"> <li>Maintain records of the quantities of wastes generated, recycled and disposed.</li> </ul>	<p>^</p>
	<i>Surplus Excavated Materials</i>	
	<ul style="list-style-type: none"> <li>Due to the high risk of loose material being washed into the existing nullah, stockpile materials should be properly compacted and covered from water erosion and located at least 10m away from the nullah wall.</li> </ul>	<p>^</p>
	<i>Construction and Demolition (C&amp;D) Waste</i>	
	<ul style="list-style-type: none"> <li>Careful design, planning and good site management shall be adopted to minimise over-ordering and generation of waste materials such as concrete grouts.</li> </ul>	<p>^</p>
	<ul style="list-style-type: none"> <li>The handling and disposal of bentonite slurries shall be undertaken in accordance with Practice Note for Professional Persons – Construction Site Drainage (ProPECC PN 1/94) on construction site drainage.</li> </ul>	<p>N/A</p>

	<ul style="list-style-type: none"> <li>Construction and demolition (C&amp;D) material shall be segregated to inert and non-inert parts. The inert portion shall re-used at areas of reclamation or land formation, or to public filling area shall such allocation is deemed necessary. The non-inert portion shall be disposed of to landfill.</li> </ul>	^
	<i>Chemical Waste</i>	
	<ul style="list-style-type: none"> <li>Chemical waste that is produce during construction shall be handled in accordance with the Cod of Practice on the Packaging, Handling and Storage of Chemical Wastes.</li> <li>Containers used for the storage of chemical wastes should: <ul style="list-style-type: none"> <li>a. Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed;</li> <li>b. Have a capacity of less than 450 litres unless the specifications have been approved by the EPD;</li> <li>c. Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Chemical Waste Regulations.</li> </ul> </li> <li>The storage area for chemical wastes should: <ul style="list-style-type: none"> <li>a. Be clearly labelled and used solely for the storage of chemical waste;</li> <li>b. Be enclosed on at least 3 sides;</li> <li>c. Have an impermeable floor and bunding of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in the area, whichever is largest;</li> <li>d. Have adequate ventilation;</li> <li>e. Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary);</li> <li>f. Be arranged so that incompatible materials are adequately separated.</li> </ul> </li> <li>Disposal of chemical waste shall be via a licensed waste collector; and to a facility licensed to receive chemical waste; or a reuser of the waste (under approval from EPD).</li> </ul>	^
		^
		^
		^
	<i>General Refuse</i>	
	<ul style="list-style-type: none"> <li>General refuse generated on-site shall be stored in enclosed bins or compaction unit separate from C&amp;D and chemical wastes. A reputable waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&amp;D and chemical wastes, on a daily for every second day basis to minimise odour, pest and litter impacts. The burning of refuse on construction sites is prohibited by law.</li> <li>Reusable rather than disposable dishware shall be used if feasible.</li> </ul>	*
		^

<b>Ecology</b>	<ul style="list-style-type: none"> <li>• A sediment barrier shall be erected to minimize stream sedimentation at downstream of the project boundary of the Toll Plaza.</li> <li>• Conduct a tree survey before commencement of the construction work.</li> </ul>	N/A ^
	<ul style="list-style-type: none"> <li>• All measures recommended in the approved landscape proposals under Condition 2.4 in EP above shall be fully implemented in accordance with the details and time schedule set out in the submission.</li> <li>• Loss of the adjacent woodland due to temporary land take shall be returned to the original status immediately.</li> <li>• Wild and uncontrolled fire shall be strictly prohibited</li> <li>• Fences shall be erected along the boundary of the construction sites at the Toll Plaza before commencement of works, to prevent tipping, vehicle movements, and encroachment of personnel onto adjacent wooded areas.</li> </ul>	^ N/A ^ N/A
<b>Landscape and Visual Impact</b>	<ul style="list-style-type: none"> <li>• Landscape mitigation measure 1 (LMM1) – Construction programming and management. The periphery of the works areas at street level shall be managed so that they do not appear cluttered, untidy and unattractive and inconvenient to pedestrians. For example, all hoarding shall be colorfully designed with interesting motifs demonstrating the work of Highways Department. Hoardings with bland colours shall be avoided.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Landscape mitigation measure 2 (LMM2) – Advanced planting and erosion control works. Where possible, the transplantation of existing valuable trees, the stockpiling of topsoil, new planting and erosion control works shall be carried out as early as possible in the construction period instead of at the end. This will assist in maximizing the time for carrying out transplantation and new planting, resulting in a higher success rate for the survival of transplantation and new planting, resulting in a higher success rate for the survival of transplanted trees and the establishment of new screen trees. The stockpiling of topsoil will provide an abundant use of on-site material for growing media. During detailed design, the issue of stockpiling of topsoil in a manner that would avoid washing into the drainage scheme should be examined comprehensively.</li> </ul>	^
	<ul style="list-style-type: none"> <li>• Measurement of vibration would also be carried out on a need basis during the piling work</li> </ul>	^

Remarks:

- |     |                                   |   |  |
|-----|-----------------------------------|---|--|
| ^   | Compliance of mitigation measure; | X | Non-compliance of mitigation measure;          |
| N/A | Not Applicable;                   | • | Non-compliance but rectified by the contractor |

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**APPENDIX L**  
**CONSTRUCTION PROGRAMME**

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Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem. Durn.	2008														
							JAN		FEB				MAR				APR				
							21	28	4	11	18	25	3	10	17	24	31	7	14	21	
<b>Preliminaries &amp; General Requirements</b>																					
<b>Key Dates</b>																					
KD1050	KD-5: Completion of Section 3 of the Works	0		06FEB08*	0	0				◆KD1050											
KD1060	KD-6: Completion of Section 4 of the Works	0		01FEB08*	0	0				◆KD1060											
KD1070	KD-7: Completion of Section 5 of the Works	0		28JAN08*	0	0				◆KD1070											
KD1080	KD-8: Completion of Section 6 of the Works	0		28JAN08*	0	0				◆KD1080											
KD1170	KD-17: Completion of Section 15 of the Works	0		19JAN08*	0	0			◆KD1170												
<b>Portion Access Dates</b>																					
PD1140	Access to Portion F1 (NOT USED)	0	20JAN08*		0	0			◆PD1140												
<b>Portion Vacate Dates</b>																					
VD1000	Vacate Portion A	0		25FEB08*	0	0				◆VD1000											
VD1010	Vacate Portion B	0		25FEB08*	0	0				◆VD1010											
VD1020	Vacate Portion C	0		05MAR08*	0	0				◆VD1020											
VD1030	Vacate Portion D1	0		05MAR08*	0	0				◆VD1030											
VD1040	Vacate Portion D2	0		05MAR08*	0	0				◆VD1040											
VD1050	Vacate Portion E1	0		05MAR08*	0	0				◆VD1050											
VD1060	Vacate Portion E2	0		29FEB08*	0	0				◆VD1060											
VD1080	Vacate Portion E4	0		29FEB08*	0	0				◆VD1080											
VD1100	Vacate Portion G1	0		29FEB08*	0	0				◆VD1100											
VD1110	Vacate Portion F1	0		19JAN08*	0	0			◆VD1110												
VD1120	Vacate Portion F2	0		19JAN08*	0	0			◆VD1120												
VD1130	Vacate Portion F3	0		19JAN08*	0	0			◆VD1130												
VD1140	Vacate Portion G2	0		29FEB08*	0	0				◆VD1140											
VD1150	Vacate Portion G3	0		29FEB08*	0	0				◆VD1150											
VD1160	Vacate Portion G4	0		29FEB08*	0	0				◆VD1160											
VD1170	Vacate Portion K1	0		05MAR08*	0	0				◆VD1170											
VD1180	Vacate Portion K2 & K3	0		05MAR08*	0	0				◆VD1180											
VD1190	Vacate Portion K4 & K8	0		05MAR08*	0	0				◆VD1190											
VD1200	Vacate Portion K5 & K6	0		05MAR08*	0	0				◆VD1200											
VD1220	Vacate Portion K7, K9, K10	0		05MAR08*	0	0				◆VD1220											
VD1250	Vacate Portion W	0		29FEB08*	0	0				◆VD1250											
VD1260	Vacate Portion R1	0		29FEB08*	0	0				◆VD1260											
<b>Initial Submissions</b>																					
SU1075	Continuous Upating of Works & 3 Month Progs	927	09OCT03A	17JUN08	85	123															
<b>Design of Temporary Works</b>																					
TW1370	Design Temp Works Feature11NW-A/C66 (NOT USED)	24	21JAN08	20FEB08	0	24															
<b>Monitoring &amp; Instrumentation - Existing Features</b>																					
IM1005	Monitoring @ Sewage Pumping Station	1,295*	01MAR04A	17JUN08	18	123*															
IM1008	Monitoring @ Open Storage	1,294*	02MAR04A	17JUN08	18	123*															
IM1015	Monitoring @ PCCW Building	1,295*	01MAR04A	17JUN08	18	123*															
IM1025	Monitoring in @ Existing Footbridge	1,291*	05MAR04A	17JUN08	17	123*															
IM1035	Monitoring @ W. Chandler Bldg.	1,290*	06MAR04A	17JUN08	17	123*															
IM1045	Monitoring @ Tong Yuen Factory Bldg	1,292*	04MAR04A	17JUN08	18	123*															
IM1055	Monitoring @ LCK Off-take Station	1,292*	04MAR04A	17JUN08	18	123*															
IM1065	Monitoring @ Hop Hing Ind. Bldg.	1,292*	04MAR04A	17JUN08	18	123*															
IM1075	Monitoring @ KC Rd. Flyover Str. K3	1,268*	01APR04A	17JUN08	15	123*															
IM1085	Monitoring @ CLP Link Station	1,292*	04MAR04A	17JUN08	18	123*															
IM1095	Monitoring @ LCK Reception Ctr.	1,254*	19APR04A	17JUN08	14	123*															
IM2005	Monitoring @ LCKP Indoor Games Hall	1,277*	22MAR04A	17JUN08	16	123*															
IM2015	Monitoring @ LCK Public Library	1,272*	27MAR04A	17JUN08	16	123*															
IM2025	Monitoring @ Mei Foo Sun Chuen	1,271*	29MAR04A	17JUN08	17	123*															
IM2035	Monitoring @ CLP Lai Chi Kok Sub-Station	1,271*	29MAR04A	17JUN08	15	123*															
IM2045	Monitoring @ CLP Pylon A	1,254*	19APR04A	17JUN08	14	123*															
IM2065	Monitoring @ Nob Hill Development	1,277*	22MAR04A	17JUN08	16	123*															
IM2075	Monitoring @ Lai Wan Road Overpass	1,223*	26MAY04A	17JUN08	10	123*															

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							JAN		FEB			MAR				APR					
							21	28	4	11	18	25	3	10	17	24	31	7	14	21	
IM2085	Monitoring @ CLP H/ways Structure K40C	1,268*	01APR04A	17JUN08	15	123*															
IM2095	Monitoring @ CLP H/ways Structure K2	1,268*	01APR04A	17JUN08	15	123*															
IM2105	Monitoring @ CLP H/ways Structure K116	1,271*	29MAR04A	17JUN08	15	123*															
IM2135	Monitoring @ Along Lai Wan Road	1,254*	19APR04A	17JUN08	15	123*															
<b>Monitoring &amp; Instrumentation - New Works</b>																					
IM3010	Install Instrumentation @ Cut Slope CCR-S1	12	21JAN08	06FEB08	0	12															
IM3015	Monitoring @ Cut Slope CCR-S1	123*	21JAN08	17JUN08	0	123*															
IM3020	Install Instrumentation @ Cut Slope CCR-S2	12	21JAN08	06FEB08	0	12															
IM3025	Monitoring @ Cut Slope CCR-S2	123*	21JAN08	17JUN08	0	123*															
IM3030	Install Instrumentation @ Cut Slope CCR-S3	12	21JAN08	06FEB08	0	12															
IM3035	Monitoring @ Cut Slope CCR-S3	123*	21JAN08	17JUN08	0	123*															
IM3040	Install Instrumentation @ Cut Slope CCR-S4	12	21JAN08	06FEB08	0	12															
IM3045	Monitoring @ Cut Slope CCR-S4	123*	21JAN08	17JUN08	0	123*															
IM3050	Install Instrumentation @ Cut Slope CCR-S5	12	21JAN08	06FEB08	0	12															
IM3055	Monitoring @ Cut Slope CCR-S5	123*	21JAN08	17JUN08	0	123*															
IM3060	Install Instrumentation @ Cut Slope CCR-S6	12	21JAN08	06FEB08	0	12															
IM3065	Monitoring @ Cut Slope CCR-S6	123*	21JAN08	17JUN08	0	123*															
IM3080	Install Instrumentation @ Slope 11NW-A/C26	12	21JAN08	06FEB08	0	12															
IM3085	Monitoring @ Slope 11NW-A/C26	123*	21JAN08	17JUN08	0	123*															
IM3090	Install Instrumentation @ Slope 11NW-A/FR54 & 55	12	20MAR08	02APR08	0	12															
IM3095	Monitoring @ Slope 11NW-A/FR54 & 55	75*	20MAR08	17JUN08	0	75*															
IM3110	Install Instrumentation @ Slip Road A Embankment	12	21JAN08	06FEB08	0	12															
IM3115	Monitoring @ Slip Road A Embankment	123*	21JAN08	17JUN08	0	123*															
IM3120	Install Instrumentation @ Slip Road B Embankment	12	21JAN08	06FEB08	0	12															
IM3125	Monitoring @ Slip Road B Embankment	123*	21JAN08	17JUN08	0	123*															
IM3130	Install Instrumentation @ Piers P1 to P6	12	21JAN08	06FEB08	0	12															
IM3135	Monitoring @ Piers P1 to P6	123*	21JAN08	17JUN08	0	123*															
IM3140	Install Instrumentation @ Piers P7 to P10	12	21JAN08	06FEB08	0	12															
IM3145	Monitoring @ Piers P7 to P10	123*	21JAN08	17JUN08	0	123*															
IM3150	Install Instrumentation @ Piers P11 to P15	12	21JAN08	06FEB08	0	12															
IM3155	Monitoring @ Piers P11 to P15	123*	21JAN08	17JUN08	0	123*															
IM3160	Install Instrumentation @ Piers P16 to P18	12	21JAN08	06FEB08	0	12															
IM3165	Monitoring @ Piers P16 to P18	123*	21JAN08	17JUN08	0	123*															
IM3170	Install Instrumentation @ Piers P19 to Abut. M	12	21JAN08	06FEB08	0	12															
IM3175	Monitoring @ Piers P19 to Abut. M	123*	21JAN08	17JUN08	0	123*															
IM3180	Install Instrumentation @ Piers on Slip Road A	12	21JAN08	06FEB08	0	12															
IM3185	Monitoring @ Piers on Slip Road A	123*	21JAN08	17JUN08	0	123*															
IM3190	Install Instrumentation @ Piers on Slip Road B	12	21JAN08	06FEB08	0	12															
IM3195	Monitoring @ Piers on Slip Road B	123*	21JAN08	17JUN08	0	123*															
IM3200	Install Instrumentation @ Piers on Slip Road C	12	21JAN08	06FEB08	0	12															
IM3205	Monitoring @ Piers on Slip Road C	123*	21JAN08	17JUN08	0	123*															
IM3210	Install Instrumentation @ Piers on Slip Road D	12	21JAN08	06FEB08	0	12															
IM3215	Monitoring @ Piers on Slip Road D	123*	21JAN08	17JUN08	0	123*															
<b>Procurement</b>																					
<b>Signage</b>																					
SG2000	Signage - Award of Sub-contract (NOT USED)	0	21JAN08		0	0															
SG2010	Signage - Shop Drawings (NOT USED)	50	21JAN08	29JAN08	0	5															
SG2020	Signage - Rev & Appro of Shop Dwgs. (NOT USED)	24	30JAN08	26FEB08	0	24															
SG2030	Signage - Off-Site Fabr'n of Signs (NOT USED)	50	27FEB08	01APR08	0	30															
<b>High Mast Lighting (NOT USED)</b>																					
HM1000	High Mast Lighting -Foundation Design (NOT USED)	48	21JAN08	19MAR08	0	48															
HM1010	High Mast Lighting - Appr of Found'n (NOT USED)	24	20MAR08	17APR08	0	24															
HM1100	High Mast Lighting Design & Shop Dwgs (NOT USED)	48	21FEB08	17APR08	0	48															

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Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem .Durn.	2008														
							JAN		FEB			MAR				APR					
							21	28	4	11	18	25	3	10	17	24	31	7	14	21	
<b>Viaduct - Main Line - Piers PA to P6</b>																					
<b>Remaining Superstructure Finishing Works</b>																					
MF1050	PA to P6 - Top Rail to Parapets	24	21AUG07A	29JAN08	30	5	MF1050														
MF1060	PA to P6 - Flexible Pavement	12	14MAY07A	31JAN08	80	2	MF1060														
MF1080	PA to P6 - Road Marking & Traffic Signage	3	02FEB08	05FEB08	0	3	MF1080														
MF1090	P6 - Landscaping - Planting On Viaduct	10	17JAN08A	20FEB08	50	5	MF1090														
MF1100	P6 - Landscape Establishment Works on Viaduct	301	21FEB08	19FEB09	0	301															
<b>Viaduct - Slip Road A</b>																					
<b>Remaining Superstructure Finishing Works</b>																					
AF1060	Slip Rd. A - Flexible Pavement	18	19MAY07A	28JAN08	75	4	AF1060														
AF1070	Slip Rd. A - Viaduct Road Lighting (by Others)	12	21JAN08	06FEB08	0	12	AF1070														
AF1080	Slip Rd. A - Road Marking & Traffic Signage	8	29JAN08	06FEB08	0	8	AF1080														
<b>Viaduct - Slip Road B</b>																					
<b>Remaining Superstructure Finishing Works</b>																					
BF1070	Slip Rd. B - Flexible Pavement	4	14APR07A	29JAN08	75	1	BF1070														
BF1080	Slip Rd. B - Road Marking & Traffic Signage	4	06FEB08	09FEB08	0	4	BF1080														
BF1085	Slip Rd. B - Viaduct Road Lighting (by Others)	12	21JAN08	06FEB08	0	12	BF1085														
<b>At Grade Works - Lai Po Road</b>																					
<b>Lai Po Road (D3) Roadworks - Stage 1</b>																					
WR1250	Lai Po Rd N/B Ch.1+250-1+360 -Utilities NOT USED	12	21JAN08	06FEB08	0	12	WR1250														
<b>Lai Po Road (D3) Roadworks - Stage 4</b>																					
WR2145	Lai Po Rd S/B Ch.1+000 - 1+360 -Street Lighting	12	05DEC07A	28JAN08	70	4	WR2145														
WR2150	Lai Po Rd S/B Ch.1+000 - 1+360 -Marking & Signs	6	21JAN08	30JAN08	0	6	WR2150														
WR1030	Lai Po Rd N/B Ch.0+946 - 1+250- Utilities	26	21JAN08	22FEB08	0	26	WR1030														
WR1155	Lai Po Rd N/B Ch.0+946 - 1+360 - Street Lighting	18	09NOV07A	29JAN08	70	5	WR1155														
WR1160	Lai Po Rd N/B Ch.0+946 - 1+360 - Marking & Signs	12	31JAN08	13FEB08	0	12	WR1160														
<b>High Mast Lighting (NOT USED)</b>																					
WR3000	H/M Lighting (3 No. Mast) - Found's (NOT USED)	24	21JAN08	20FEB08	0	24	WR3000														
WR3010	H/MLighting (3 No. Mast) -Erect Masts (NOT USED)	12	21FEB08	05MAR08	0	12	WR3010														
<b>Lai Po Road Fire Hydrant Pump House</b>																					
WH1020	Lai Po Rd. F/H P/House -Waterproofing (NOT USED)	12	21JAN08	06FEB08	0	12	WH1020														
<b>Landscape Works</b>																					
WX1017	Landscaping - Dwarf Walls FW1 & FW2	36	03DEC07A	15FEB08	50	20	WX1017														
WX1000	Landscaping - Earthworks & Formation	140	10NOV07A	04JUN08	20	112															
WX1018	Landscaping - Paving	120	14NOV07A	16JUN08	10	107															
WX1020	Landscaping Irrigation System	24	29FEB08	27MAR08	0	24	WX1020														
WX1040	Landscaping - Planting	24	04JAN08A	19FEB08	3	23	WX1040														
WX1050	Landscape Establishment Works	298	20FEB08	14FEB09	0	298															
<b>Viaduct - Main Line - Piers P7 to P10</b>																					
<b>Remaining Superstructure Finishing Works</b>																					
MF2060	P7 to P10 - Flexible Pavement	9	30MAY07A	23JAN08	75	3	MF2060														
MF2080	P7 to P10 - Road Marking & Traffic Signage	8	15JAN08A	01FEB08	0	8	MF2080														
MF2090	P7 to P10 - Landscaping - Planting On Viaduct	6	05JAN08A	12FEB08	40	4	MF2090														
MF2091	P7 to P10 - Landscape Establish Works on Viaduct	301	13FEB08	11FEB09	0	301															
<b>At Grade Works - Lai Chi Kok Interchange</b>																					
<b>Temporary Traffic Management Schemes</b>																					
MT1440	3rd. TTMS Butterfly Valley Rd - Implementation	232*	03JUN07A	11MAR08	0	41*	MT1440														
MT2140	TTMS for Pier P8/L - Implementation	1,195*	23FEB04A	12FEB08	29	17*	MT2140														
MT3130	2nd. TTMS Kom Tsun Street - Site Preparation	6	21JAN08	30JAN08	0	6	MT3130														
MT3140	2nd. TTMS Kom Tsun Street - Implementation	172*	20SEP07A	17APR08	0	72*	MT3140														
MT3200	3rd. TTMS Kom Tsun Street - Prepare for Review	12	21JAN08	06FEB08	0	12	MT3200														
MT3210	3rd. TTMS Kom Tsun Street - CRE Endorsement	6	07FEB08	13FEB08	0	6	MT3210														
MT3220	3rd. TTMS Kom Tsun Street - Roadworks Advice	6	14FEB08	20FEB08	0	6	MT3220														

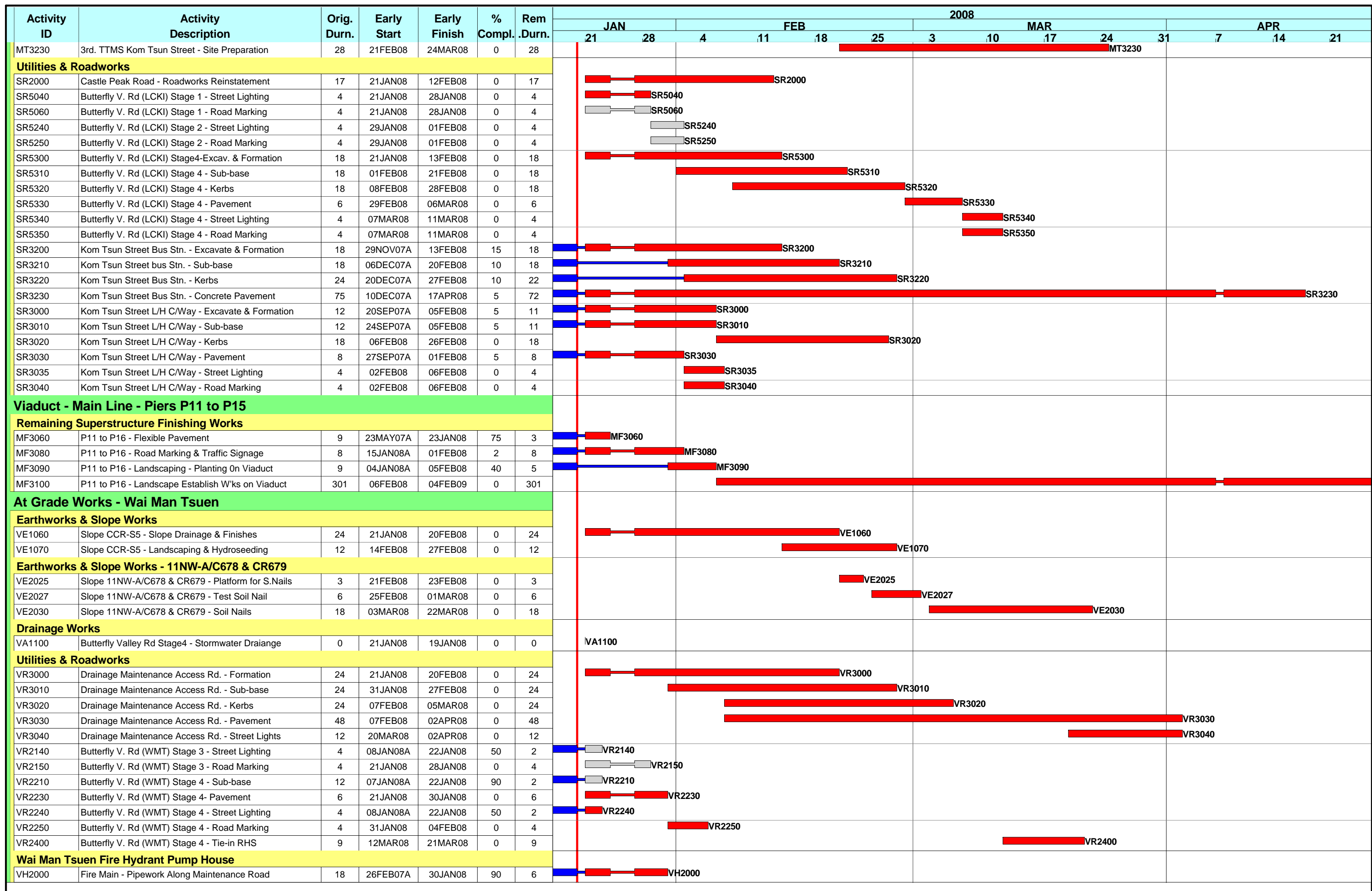
Start Date 23SEP03  
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							JAN		FEB			MAR			APR											
							21	28	4	11	18	25	3	10	17	24	31	7	14	21						
<b>Landscape Works</b>																										
VX1000	Landscaping - Earthworks & Formation	24	06MAR08	02APR08	0	24																		VX1000		
VX1040	Landscaping - Soiling & Planting	24	06MAR08	02APR08	0	24																		VX1040		
<b>Viaduct - Main Line - Piers P16 to P18</b>																										
<b>Remaining Superstructure Finishing Works</b>																										
MF4050	P16 to P18 - Top Rail to Parapets	12	30JUL07A	22JAN08	85	2																		MF4050		
MF4060	P16 to P18 - Flexible Pavement	9	02MAY07A	23JAN08	80	2																		MF4060		
MF4080	P16 to P18 - Road Marking & Traffic Signage	8	14JAN08A	29JAN08	40	5																		MF4080		
MF4090	P16 to P17 - Landscaping - Planting On Viaduct	25	04JAN08A	02FEB08	75	9																		MF4090		
MF4100	P16 to P17 - Landscape Establish W'ks on Viaduct	301	04FEB08	02FEB09	0	301																				
<b>Viaduct - Main Line - Piers 19 to Abutment M</b>																										
<b>Remaining Superstructure Finishing Works</b>																										
MF5050	P19 to Abut M - Top Rail to Parapets	12	26JUL07A	21JAN08	90	1																		MF5050		
MF5060	P19 to Abut M - Flexible Pavement	4	20APR07A	22JAN08	80	1																		MF5060		
MF5080	P19 to Abut M - Road Marking & Traffic Signage	8	14JAN08A	28JAN08	50	4																		MF5080		
<b>At Grade Works - Butterfly Valley</b>																										
<b>Earthworks &amp; Slope Works - 11NW-A/FR54 &amp; F55</b>																										
QE2002	Slope 11NW-A/FR54 & FR55 - Retaining Wall -Bases	36	03MAY07A	20FEB08	25	24																		QE2002		
QE2004	Slope 11NW-A/FR54 & FR55 - Retaining Wall -Walls	48	28MAY07A	05MAR08	25	36																		QE2004		
QE2010	Slope 11NW-A/FR54 & FR55 - Install Temp Works	36	21JAN08	05MAR08	0	36																		QE2010		
QE2020	Slope 11NW-A/FR54 & FR55 - Excavate & Rockfill	36	15OCT07A	19MAR08	20	29																		QE2020		
QE2030	Slope 11NW-A/FR54 & FR55 - Remove Temp. Works	18	20MAR08	10APR08	0	18																		QE2030		
<b>Utilities &amp; Roadworks</b>																										
QR1060	WSD Access Road - Permanent C/Way P18 to P19	36	20MAR08	02MAY08	0	36																				
<b>Landscape Works</b>																										
QX1100	Landscape Establishment Works	301	21JAN08	19JAN09	0	301																				
<b>Viaduct - Slip Road C</b>																										
<b>Remaining Superstructure Finishing Works</b>																										
CF1058	Slip Rd. C - Waterproofing of Deck (not used)	6	21JAN08	30JAN08	0	6																		CF1058		
CF1080	Slip Rd. C - Road Marking & Traffic Signage	8	12JAN08A	28JAN08	50	4																		CF1080		
<b>Viaduct - Slip Road D</b>																										
<b>Remaining Superstructure Finishing Works</b>																										
DF1050	Slip Rd. D - Top Rail to Parapets	21	08AUG07A	23JAN08	44	3																		DF1050		
DF1060	Slip Rd. D - Flexible Pavement	9	11JUL07A	23JAN08	89	1																		DF1060		
DF1080	Slip Rd. D - Road Marking & Traffic Signage	7	06FEB08	13FEB08	0	7																		DF1080		
<b>Lai Wan Road Overpass</b>																										
<b>Temporary Traffic Management Schemes</b>																										
LT3250	TTMS CC Rd (on Both Decks) - Implementation	148*	26AUG07A	23FEB08	0	27*																		LT3250		
LT3300	TTMS CC Rd (on Both Decks) - Prepare for Review	12	21JAN08	06FEB08	0	12																		LT3300		
LT3310	TTMS CC Rd (on Both Decks) - CRE Endorsement	6	07FEB08	12FEB08	0	6																		LT3310		
LT3320	TTMS CC Rd (on Both Decks) - Roadworks Advice	6	13FEB08	18FEB08	0	6																		LT3320		
LT3330	TTMS CC Rd (on Both Decks) - Site Preparation	4	19FEB08	22FEB08	0	4																		LT3330		
LT3340	Divert 1No. Lane to Each New Bridge	1	23FEB08	23FEB08	0	1																		LT3340		
LT3350	TTMS CC Rd (on Both Decks) - Implementation	0*	23FEB08	22FEB08	0	0*																		LT3350		
<b>West Bound - Superstructure Finishing Works</b>																										
LF1140	Lai Wan O/P W/B -Flange Stitch Connect NOT USED	38	21JAN08	07MAR08	0	38																		LF1140		
LF1160	Lai Wan O/Pass W/B - Remove Temporary Barriers	1	21JAN08	19JAN08	0	0																		LF1160		
<b>East Bound - Superstructure Finishing Works</b>																										
LF1050	Lai Wan O/P E/B - Flange Stitch Connect NOT USED	35	21JAN08	04MAR08	0	35																		LF1050		
LF1070	Lai Wan O/Pass E/B - Remove Temporary Barriers	6	21JAN08	30JAN08	0	6																		LF1070		
<b>Drainage Works</b>																										
LA1000	Area Under Overpass - Stormwater Drainage	48	28DEC07A	12MAR08	15	42																		LA1000		
LA1010	Area Under Overpass - S/W Drainage in Lai Wan Rd	36	13MAR08	24APR08	0	36																				

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Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem .Durn.	2008											
							JAN		FEB			MAR				APR		
							21	28	4	11	18	25	3	10	17	24	31	7
PT2280	TTMS CP Rd-KC S/B - Re-open Slip Road (NOT USED)	0		23FEB08	0	0					◇PT2280							
PT2288	TTMS CP Rd-KC N/B-Close Loop to CC Rd( NOT USED)	0		23FEB08	0	0					◇PT2288							
PT2290	TTMS CP Rd-KC N/B for CCR-R4 - Implem(NOT USED)	425*	21JAN08	17JUN09	0	425*												
PT1550	TTMS CP Rd-KC S/B for CCR-R5 - Implementation	1,114*	11JUN04A	25FEB08	15	28*												
PT2140	TTMS CP Rd-KC S/B for CCR-R6 - Implementation	1,355*	16DEC04A	17JUN09	0	425*												
PT2200	TTMS CP Rd-KC S/B for Paving -Prepare for Review	18	21JAN08	13FEB08	0	18												
PT2210	TTMS CP Rd-KC S/B for Paving - CRE Endorsement	6	14FEB08	19FEB08	0	6												
PT2220	TTMS CP Rd-KC S/B for Paving - Roadworks Advice	7	20FEB08	26FEB08	0	7												
PT2230	TTMS CP Rd-KC S/B for Paving - Site Preparation	6	27FEB08	04MAR08	0	6												
PT2240	TTMS CP Rd-KC S/B for Paving - Implementation	34*	14JAN08A	25FEB08	0	28*												
PT2300	TTMS CP Rd-KC N/B 11NW-A/C66-Prep Review (Del.)	16	21JAN08	11FEB08	0	16												
PT2310	TTMS CP Rd-KC N/B 11NW-A/C66-CRE Endorse (Del.)	6	12FEB08	17FEB08	0	6												
PT2320	TTMS CP Rd-KC N/B 11NW-AC66-Roadwk Advice (Del.)	7	18FEB08	24FEB08	0	7												
PT2330	TTMS CP Rd-KC N/B 11NW-A/C66-Site Prepare (Del.)	6	25FEB08	01MAR08	0	6												
PT2340	TTMS CP Rd-KC N/B 11NW-A/C66 - Implement (Del.)	144*	03MAR08	21AUG08	0	144*												
<b>Earthworks &amp; Slopeworks - 11NW-A/C66 (DELETED)</b>																		
PE2000	Slope 11NW-A/C66 - Hoardings / Fencing (Deleted)	6	03MAR08	08MAR08	0	6												
PE2010	Slope 11NW-A/C66 - Trim Slope (Deleted)	18	10MAR08	29MAR08	0	18												
<b>Utilities &amp; Roadworks</b>																		
PR3080	C.P.Rd. Loop to Slip Road C - Crash Barriers	18	21JAN08	13FEB08	0	18												
PR4010	C.P.Rd.-K.C. S/B L/H C/Way - Sub-base	9	13OCT07A	29JAN08	50	5												
PR4020	C.P.Rd.-K.C. S/B L/H C/Way - Kerbs	6	29DEC07A	28JAN08	25	4												
PR4030	C.P.Rd.-K.C. S/B L/H C/Way - Pavement	4	25OCT07A	22JAN08	50	2												
PR4100	C.P.Rd.-K.C. S/B R/H C/Way - Excavate & Format'n	9	14JAN08A	01FEB08	15	8												
PR4110	C.P.Rd.-K.C. S/B R/H C/Way - Sub-base	9	30JAN08	08FEB08	0	9												
PR4130	C.P.Rd.-K.C. S/B R/H C/Way - Pavement	4	09FEB08	13FEB08	0	4												
PR4135	C.P.Rd.-K.C. S/B - Street Lighting	12	07FEB08	20FEB08	0	12												
PR4140	C.P.Rd.-K.C. S/B - Road Markings & Signage	4	21FEB08	25FEB08	0	4												
PR4150	Castle Peak Road - Reinstate Junction	29	26JUL07A	25FEB08	45	16												
PR5050	C.P.Rd.-K.C. S/B to C.C.Rd E/B - Rd Marks & Signs	3	20JAN08	22JAN08	0	3												
PR5060	C.P.Rd.-K.C. S/B to C.C.Rd E/B - Re-open Road	0		23JAN08	0	0												
<b>Landscape Works</b>																		
PX1000	Landscaping - Earthworks & Formation	30	21JAN08	27FEB08	0	30												
PX1020	Landscaping - Paving	30	29JAN08	03MAR08	0	30												
PX1030	Landscaping - Irrigation System	24	07FEB08	05MAR08	0	24												
PX1040	Landscaping - Soiling & Planting	24	07FEB08	05MAR08	0	24												
PX1100	Landscape Establishment Works	302	06MAR08	06MAR09	0	302												

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**APPENDIX M  
COMPLAINT LOG**

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## Appendix M - Complaint Log

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
40318	Nob Hill	18 March 2004	<p>Kwai Tsing District Officer (KTDO) recently received a public noise complaint about construction noise generated from the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project, near Nob Hill, Lai Chi Kok. KTDO referred the complaint to the Highways Department (HyD) on the same day. HyD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 18 March 2004.</p> <p>The complaint was raised by the Citybase Property Management Ltd. (the management company of Nob Hill) and the Secretary of Nob Hill Owners Committee (Mr. Kevin Tse) about construction noise generated from the R8-LCKV Project at the work areas near Nob Hill. Mr. Kevin Tse mentioned that residents living in Nob Hill have greatly been affected by the noise impacts generating from the R8-LCKV construction works. He also requested relevant government departments to consider installing noise barrier along Ching Cheung Road and to work out possible measures to minimize the noise nuisances to the residents living in the vicinity.</p>	<p>Based on the information provided by the ER, the construction activities conducted in the vicinity of Nob Hill in the period between 2 and 18 March 2004 were:</p> <ul style="list-style-type: none"> <li>▪ Item 1 – Breaking off existing planter and excavate trial trench to expose underground utilities (using one to two backhoes)</li> <li>▪ Item 2 – Erect rock fall fence &amp; forming platform for pre-drilling (using one backhoe and occasionally one crane lorry)</li> <li>▪ Item 4 – Excavate further to expose all underground utilities (using hand tools)</li> <li>▪ Item 5 – Pre-drilling works (using one drilling rig)</li> </ul> <p>Considering the scale of work and the PMEs adopted, the ET believed that the construction noise impact at Nob Hill from the above construction activities of R8-LCKV was not significant.</p> <p>The bored piling work (Item 3) using one crawler crane and one oscillator was started on 19 March 2004, which was two days after the issue date of this complaint, so this activity was not considered in this report.</p> <p>According to the EM&amp;A Manuals, Nob Hill was not selected as Noise Monitoring Location (NML) for the Project. Therefore, no direct noise monitoring data could be provided for the complaint investigation. However, there was no noise level exceedance recorded at the nearby NML (NM4 – Mei Foo Sun Chuen, Phase 5) since the commencement of the project according to ET's inventory.</p> <p>During ET's weekly environmental site inspections on 3, 10, 17 March 2004, no serious noise nuisance induced by the Project works was observed at the sites near Nob Hill.</p> <p>Based on the joint site visit with the representative of HyD, IEC, RSS and ET to the Nob Hill on 30 March 2004, the major noise source at Nob Hill was identified as traffic noise on Ching</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>Cheung Road, which is located very close to this building, especially at or above the Podium Floor (i.e. 5/F).</p> <p>Based on the information obtained, this noise complaint is not considered due to the construction activities of the Project. Nevertheless, the Contractor was recommended to adopt good site practice to minimize the construction noise, such as:</p> <ul style="list-style-type: none"> <li>• To space out noisy equipment and position it as far away as possible from the sensitive receivers;</li> <li>• To avoid concurrent uses of noisy equipment near the sensitive area;</li> <li>• To ensure the equipment are maintaining in good operation condition; and</li> <li>• To turned off any idle equipment on site.</li> </ul> <p>Adding to that, ET is proposed to install one to two noise monitoring stations at Nob Hill in order to monitor the noise impact generated from the R8-LCKV Project to the resident of Nob Hill or the nearby buildings.</p>	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
40330	Site Areas near Nob Hill	30 March 2004	<p>Highways Department (HyD) recently received a public noise complaint about construction noise generated from the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project, near Nob Hill, Lai Chi Kok. HyD referred the complaint to the RSS and subsequently referred to the ET Leader of the Project on 30 March 2004.</p> <p>The complaint was raised by Mr. Yau, the Office of DCV Member Mr. Cheung Wing Shum, regarding the high pitch construction noise generated at the R8-LCKV site which cause serious nuisance to the residents at Mei Foo.</p>	<p>Based on the information provided by the RSS, the Contractor was not aware of any high pitched construction noise arising from plant employed for their works. The noise complaint referred to may be originated from the damage of a gas main valve on the afternoon of 29 March 2004 in the vicinity of the junction of Mai Lai Road with Lai King Hill Road. The high pitched whistle apparently resulted from the damage which was repaired by TownGas in that afternoon.</p> <p>Based on the information obtained, this noise complaint is considered not due to the construction activities of the Project. Nevertheless, the Contractor was recommended to adopt good site practice to minimize the construction noise, such as:</p> <ul style="list-style-type: none"> <li>• To space out noisy equipment and position it as far away as possible from the sensitive receivers;</li> <li>• To avoid concurrent uses of noisy equipment near the sensitive area;</li> <li>• To ensure the equipment are maintaining in good operation condition; and</li> <li>• To turned off any idle equipment on site.</li> </ul>	Closed
40402	Nob Hill	06 April 2004	<p>A public noise complaint was received by the Contractor (NECSO) on 02 April 2004 regarding the noise generated from the Ching Cheung Road Widening Works of the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project, near Nob Hill, Lai Chi Kok.</p> <p>NECSO referred the complaint to the RSS and subsequently referred to the ET Leader of the Project on 6 April 2004</p>	<p>The complaint was raised by Ms Wong, regarding the noise generated from the Ching Cheung Road Widening Works of the R8-LCKV Project, which cause serious nuisance to her.</p> <p>Based on the information provided by the RSS, the plants employed by the Contractor for carrying out bored piling works in front of Nob Hill should not generate excessive noise. The RSS had also checked against the site records that no piling works was in progress in front of Nob Hill on 1-3 April 2004.</p> <p>According to telephone communication between the complainant (Ms Wong) and the RSS on 8 April 2004, the RSS reported that Ms Wong was not complaining about the construction noise generated by the R8-LCKV Project. She was actually complaining about the traffic noise she anticipated to be generated after completion of widening work at Ching Cheung Road in front of Nob Hill.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>During ET's weekly environmental site inspections on 17, 24 &amp; 31 March 2004 and 7 April 2004, no serious noise nuisance induced by the Project works was observed at the construction sites near Nob Hill.</p> <p>Based on the joint site visit with the representative of HyD, IEC, RSS and ET to the Nob Hill on 30 March 2004, the major noise source at Nob Hill was identified as traffic noise on Ching Cheung Road, which is located very close to this building, especially at or above the Podium Floor (i.e. 5/F).</p> <p>Based on the information obtained, this noise complaint is considered not due to the construction activities of the Project.</p> <p>Nevertheless, the Contractor was recommended to adopt good site practice to minimize the construction noise, such as</p> <ul style="list-style-type: none"> <li>• To space out noisy equipment and position it as far away as possible from the sensitive receivers;</li> <li>• To avoid concurrent uses of noisy equipment near the sensitive area;</li> <li>• To ensure the equipment are maintaining in good operation condition; and</li> <li>• To turned off any idle equipment on site.</li> </ul>	
40710	Pier P7 in Portion E1	10 July 2004	<p>A public complaint was raised on 30<sup>th</sup> June 2004 regarding the washout of muddy water from the site area of the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project, at Pier P7 onto Lai Chi Kok Road.</p> <p>The complaint was referred to the RSS on 3<sup>rd</sup> July 2004 and subsequently referred to the ET Leader of the Project on 10<sup>th</sup> July 2004.</p> <p>The complaint was raised by Mr. Chan,</p>	<p>Based on the information provided by the RSS, the spillage of muddy water was in fact due to a burst in a temporary water pipe being utilized in the piling operations at Pier P7 in Portion E1.</p> <p>Emergency remedial works were undertaken preventing further spillage of muddy water. The remaining ponding water within the works area arising from the burst was all removed from the area on 5<sup>th</sup> July 2004.</p> <p>During ET's weekly environmental site inspection on 14<sup>th</sup> July 2004, no serious water quality nuisance induced by the Project works was observed at the construction sites near Pier P7. It was also noted that the back of profile barriers along the site boundary had been sealed up by cement as preventive measures.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>regarding the washout of muddy water from the works area of the R8-LCKV Project onto Lai Chi Kok Road. The washout caused nuisance to the drivers utilizing the road, and may also cause danger to the motorbikes.</p>	<p>During ET's weekly environmental site inspections on 17, 24 &amp; 31 March 2004 and 7 April 2004, no serious noise nuisance induced by the Project works was observed at the construction sites near Nob Hill.</p> <p>Based on the information obtained, the complaint is considered due to the construction activities of the Project. Emergency remedial works had been taken by the Contractor to rectify the situation and preventive measures had also been implemented.</p> <p>Nevertheless, the Contractor was recommended to adopt the following measures to avoid re-occurrence of similar incidents:</p> <ul style="list-style-type: none"> <li>• to enhance surface runoff control measures along the site boundary;</li> <li>• to provide adequate training to the frontline workers; and</li> <li>• to regularly inspect temporary water supply equipment, such as hose pipe to make sure the equipment is in good condition.</li> </ul>	
40809	Ching Cheung Road area near Nob Hill	<p>22-Jul-04 (by EPD)</p> <p>09-Aug-04 (by ET Leader)</p>	<p>EPD received a public noise complaint on 22 July 2004 about construction noise and dust generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project, at the Ching Cheung Road Area near Nob Hill. EPD subsequently referred the complaint to the ET Leader of the Project on 9 August 2004.</p> <p>The complaint was about the construction noise and dust observed at the Ching Cheung Road area near Nob Hill. The locations of the works areas being concerned by the complainant include:</p> <ol style="list-style-type: none"> <li>1. <b>Area A:</b> Works area between Nob Hill and Lai Chi Kok Park Swimming Pool</li> <li>2. <b>Area B:</b> Works area between Ching</li> </ol>	<p><b>Information Provided by RSS</b> Information (construction activities and equipment adopted) in a 2-week period before the date of complaint, i.e. 7 to 21 July 2004, was obtained from the Resident Site Staff.</p> <p><b>Area A:</b></p> <ul style="list-style-type: none"> <li>▪ Item 1 – Drainage works by using 1 x backhoe;</li> <li>▪ Item 2 – Bored piling works by using 1 x crawler crane, 1 x air compressor, 1 x reverse circulation drill and 1 x power pack;</li> <li>▪ Item 3 – Trial trench excavation by man power;</li> <li>▪ Item 4 – Gas main diversion by 1 x backhoe (performed by TGC's Contractor)</li> </ul> <p><b>Area B:</b> No construction activity was undertaken in the concerned period.</p> <p><b>Review of Environmental Monitoring Results</b> The routine monitoring stations, which are in the vicinity of the concerned works areas, include: <u>Noise Monitoring</u></p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>Cheung Road and Mei Lai Road / Lai Wan Road opposite to Mei Foo Sun Cheung (Phase 5) and Lai Chi Kok Public Library.</p>	<p>NM4: R/F of Mei Foo Sun Chuen (Phase 5)            NM8a: M/F of Nob Hill            NM8b: 3/F of Nob Hill  <u>Air Quality (1-hr TSP / 24-hr TSP) Monitoring</u>            AM2: R/F of Lai Chi Kok Sports Centre            No Action / Limit level exceedance was identified in July 2004.</p> <p><b>Environmental Site Inspection</b>            During the ET site inspections on 8<sup>th</sup>, 14<sup>th</sup> and 20<sup>th</sup> July 04, no major environmental deficiency with regard to noise and air quality was identified by the auditors.</p> <p><b>Conclusions</b>            Based on the RSS's information, environmental monitoring results as well as the observations made during site inspections, this complaint is considered to be invalid and not due to the construction activities of the Project. Nevertheless, the Contractor was recommended to adopt good site practice to minimize the construction noise and dust impacts, such as:</p> <ul style="list-style-type: none"> <li>• To space out noisy equipment and position it as far away as possible from the sensitive receivers;</li> <li>• To avoid concurrent uses of noisy equipment near the sensitive area;</li> <li>• To ensure the equipment are maintaining in good operation condition;</li> <li>• To turn off any idle equipment on site.</li> <li>• To cover excavated dusty materials by impervious sheeting;</li> <li>• To provide water spray for haul roads, loading/unloading and concrete breaking operations;</li> <li>• To perform wheel wash for every vehicle immediately before leaving the site.</li> </ul>	
50215	Mei Foo Sun Chuen, Phase 5 (Retaining Wall CC-R3)	15-Feb-05 (by ET Leader)	A public complaint was raised on 8 <sup>th</sup> Feb 2005 regarding construction noise from the site area of the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project	<p><b>Construction Activities</b></p> <p>During the weekly site inspection on 17 Feb 05, piling work was being conducted at the concerned. The major powered</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>near Mei Foo Sun Chuen. The complaint was referred to the Resident Site Staff on 14<sup>th</sup> Feb 2005 and subsequently referred to the ET Leader of the Project on 15<sup>th</sup> Feb 2005.</p> <p>The complaint was raised by a resident in Mei Foo Sun Chuen, regarding the noise generation from the piling work at Retaining Wall CC-R3, adjacent to Po Leung Kuk Tong Nai Kan College.</p>	<p>mechanical equipment (PME) in operation included a mobile crane, an air compressor, a reverse circulation drill and a generator.</p> <p>In view of the separation of the site area and the residential building (around 40 m) and also the high traffic noise from Ching Cheung Road as well as Mei Lai Road, the noise generated from the operation of the PME was believed to be insignificant.</p> <p><b>Environmental Monitoring</b></p> <p>The noise monitoring results at Station NM4 (Mei Foo Sun Chuen, Phase 5) for the last 3 months were reviewed in order to evaluate the noise impact from the Project on the noise sensitive receiver. The measured noise levels in last three months were ranged from 70.8 to 75.8 dB(A). It was observed that the measured noise levels were well within the range of baseline noise levels (69.2 to 75.8 dB(A)).</p> <p>The corrected construction noise levels were found to be ranged from 63.5 to 71.5 dB(A), which were well below the noise criterion of 75 dB(A).</p> <p><b>Conclusions</b></p> <p>Based on the information obtained and the noise monitoring results, this complaint is considered to be invalid and not due to the construction activities of the Project.</p> <p>Nevertheless, the Contractor was recommended to adopt good site practice to minimize the construction noise impacts.</p>	
50322	Seung Lai House, Wah Lai Estate (Slope S1)	<p>11-Mar-05 (by EPD)</p> <p>22-Mar-05 (by ET Leader)</p>	Environmental Protection Department (EPD) received a public noise complaint on 11 Mar 05 about daytime construction noise generation from R8-LCKV. EPD subsequently referred the	<p><b>Construction Activities</b></p> <p>As advised by the RSS, the major construction work during 25 Feb 05 to 11 Mar 05 (2 weeks before the date of complaint) in the vicinity of Wah Lai Estate included excavation work, soil</p>	Closed



Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>complaint to the Environmental Team (ET) Leader of the Project on 22 Mar 05.</p> <p>The complaint was raised by a resident of Seung Lai House of Wah Lai Estate, regarding the daytime (0800-1800 hrs) construction noise generated from the slope work and road work of R8-LCKV Project. As advised by EPD, the complainant is living on 20/F or above in Seung Lai House.</p>	<p>nail work and installation of u-channel and manholes. The major powered mechanical equipment included excavators, drilling machine and air compressor.</p> <p>In view of the separation of the site area (Slope S1) and the Seung Lai House (around 140 m) and also the traffic noise from Ching Cheung Road, the noise generated from the construction activities at Slope S1 was believed to be insignificant.</p> <p><b>Environmental Monitoring</b></p> <p>Ad-hoc noise measurement was conducted at Seung Lai House on 30<sup>th</sup> Mar 05 and the measured noise level (Leq-30min) was 66.9 dB(A), which was well below the criterion for daytime construction noise of 75 dB(A). The construction noise level (with reduction of background noise level) is expected to be even lower.</p> <p><b>Conclusion</b></p> <p>Based on the information obtained and the noise measurement results, this complaint is considered not justifiable. Nevertheless, the Contractor was recommended to adopt good site practice to minimize the construction noise impact.</p>	
50330, 50331, 50404 & 50407	Wah Lai Estate	30-Mar-05, 31-Mar-05, 4-Apr-05 & 7-Apr-05 (by ET Leader via RSS)	Four public complaints were lodged by the residents of Wah Lai Estate regarding the construction noise from the site area of the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project near Wah Lai Estate. The complaints were	<p><b>Construction Activities</b></p> <p>The site of concern was likely to be Slope S1, which is around 140 m away from Wah Lai Estate. The major construction work at Slope S1 included trimming of slope, soil nail work and erection of u-channels and step channels.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>referred by the Resident Site Staff to the Environmental Team (ET) Leader on 30<sup>th</sup>, 31<sup>st</sup> March, 4<sup>th</sup> and 7<sup>th</sup> April 2005, respectively.</p>	<p><b><i>Environmental Monitoring</i></b></p> <p>Ad-hoc noise measurement was conducted at Seung Lai House on 30<sup>th</sup> Mar 05 and 7<sup>th</sup> Apr 05 and the measured noise levels (Leq-30min) were ranged from 66.9 to 69.1 dB(A), which were well below the criterion for daytime construction noise of 75 dB(A). The construction noise level (with reduction of background noise level) is expected to be even lower.</p> <p><b><i>Conclusion</i></b></p> <p>Based on the results of the ad-hoc noise measurements at Wah Lai Estate, no exceedance of daytime noise criterion of 75 dB(A) was recorded. The complaints lodged are therefore considered not justifiable.</p> <p><b><i>Mitigation</i></b></p> <p>The Contractor agreed to arrange the noisy activities to commence after 8:00 am. This arrangement could effectively reduce the disturbance to the residents within the more sensitive time period (7:00 am to 8:00 am).</p>	
50404-v2	Mei Foo Sun Chuen	4-Apr-05 (by ET Leader via RSS)	<p>A public complaint was raised on 1<sup>st</sup> April 2005 regarding construction noise from the site area of the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project near Mei Foo Sun Chuen. The complaint was referred to the Resident Site Staff and the ET Leader on 4<sup>th</sup></p>	<p><b><i>Construction Activities</i></b></p> <p>The site of concern was likely to Retaining Wall CC-R3, adjacent to Po Leung Kuk Tong Nai Kan College. The major construction works at this area included bored piling works and excavation works.</p>	Closed

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			April 2005.	<p><b><i>Environmental Monitoring</i></b></p> <p>According to the EM&amp;A Manual, Mei Foo Sun Chuen, Phase 5 (NM4) is designated as one of the noise monitoring stations.</p> <p>Since the commencement of the impact monitoring programme, the construction noise levels recorded at this station were all below the noise criterion.</p> <p><b><i>Conclusion</i></b></p> <p>Based on the noise monitoring results at Station NM4 (Mei Foo Sun Chuen), no exceedance of daytime noise criterion of 75 dB(A) was recorded since the commencement of the impact monitoring programme. The complaint lodged is therefore considered not justifiable.</p> <p><b><i>Mitigation</i></b></p> <p>The Contractor has agreed to arrange the noisy activities to commence after 8:00 am. This arrangement could effectively reduce the disturbance to the residents within the more sensitive time period (7:00 am to 8:00 am). The Contractor also agreed to provide some temporary noise barriers for the noisy machinery if found necessary.</p>	
50613	Mei Foo Sun Chuen	<p>7-Jun-05 (by EPD)</p> <p>13-Jun-05 (by ET Leader)</p>	According to EPD, the complaint was raised by a resident of Mei Foo Sun Chuen (Block 7, Phase 5) on 7 June 2005. It was about construction dust emitted intermittently from the slope works undertaken on the other side of Mei Lai Road.	<p><b><i>Site Activities</i></b></p> <p>The site of concern was likely to be CCR-R3. Bored piling works and demolition of existing retaining walls were undertaken at this area in the period between 1 and 7 June 2005. It was believed that the demolition of existing retaining wall, which involved concrete breaking, was the activity of concern.</p>	Closed

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			<p>The complainant was particularly concerned about the fugitive dust emission during rock / concrete breaking activities.</p>	<p><i>Observations</i></p> <p>On 1 Jun 05, one of the environmental deficiencies noted by the ET was about fugitive dust emission from breaking activities at CCR-R3. The Contractor was reminded to provide sufficient dust mitigation measures for the breaking works. Immediate action was taken by the Contractor to apply water spray for the works as observed during the audit session.</p> <p>On 9 Jun 05, the breaking works were still being taken at CCR-R3. Water spray as a dust mitigation measure was being adopted by the Contractor during the audit. No observable dust emission was noted from the breaking works or other site activities.</p> <p>On 15 Jun 05, the same area was re-inspected due to the receipt of the complaint from EPD. The demolition works had been finished and no other dust emissive activity was being taken. No other dust source from the construction site was observed during the inspection.</p> <p><i>Conclusion</i></p> <p>Based on the observations noted during our site inspections, this complaint is considered to be valid and related to the construction activities of the Project.</p> <p>However, corrective action had been taken by the Contractor and the situation was found improved during the follow-up inspections.</p>	
50721	Hei Lai House, Wah Lai Estate	21-Jul-05 (by ET Leader)	<p>The complaint was lodged by a resident of Hei Lai House of Wah Lai Estate through a Legislative Council member. The complaint was about construction noise nuisance caused by rock breaking work, which claimed to be started from 8:30am daily, carried out at Ching Cheung Road near Wah Lai Estate.</p>	<p><i>Site Activities</i></p> <p>The slope work at Slope S1 was likely to be the activity of concern. The work at Slope S1 recently included the operation of excavator mounted breakers, excavators and dump trucks.</p> <p>The time period of concern was within normal working hours (7am to 7pm) on a weekday not being a public holiday. The noise criterion is 75 dB(A) for domestic premises.</p>	Closed

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			<p>The complainant hoped that the rock breaking work could start later i.e. be carried out from noon to afternoon and the site could be fully enclosed.</p> <p>The Environmental Team (ET) of the Project received the complaint on 21 July 2005 and forwarded it to the Resident Site Staff (RSS) to obtain necessary information.</p>	<p><i>Noise Measurement</i></p> <p>Ad-hoc measurements were carried out on the roof of Hei Lai House on 25 July 2005.</p> <p>The results show that the measured noise level is well below the noise criterion of 75 dB(A). The construction noise level (with reduction of background noise) is expected to be even lower.</p> <p><i>Conclusion</i></p> <p>Since the noise measurement results at Wah Lai Estate were below 75 dB(A), the complaint was considered not justifiable.</p> <p>Nevertheless, noise mitigation measures have been implemented by the Contractor to minimize the noise impact arising from the breaking activities:</p> <ol style="list-style-type: none"> <li>1. Employment of silenced-type breakers;</li> <li>2. Temporary noise barriers, attached with sound adsorption materials, were erected to screen the site of breaking from sensitive receivers</li> <li>3. While the permitted hours for construction works are 7am to 7pm on non-holidays, the Contractor has commenced the rock breaking activity after 8:30am.</li> </ol>	
51107	Ching Cheung Road near Mei Foo Sun Chuen	7-Nov-05 (by the ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about environmental nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 7 November 2005.</p> <p>According to EPD, the complaint was</p>	<p>The site of concern was likely to be CCR-S4 and CCR-R3. According to RSS's records, bored piling works and soil nail drilling at CCR-R3, excavation works at CCR-S4 in the concerned period.</p> <p><i>Site Inspection</i></p> <p>After receipt of the complaint, an ad-hoc site inspection was carried by ET on 9 November 2005 and the following</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>raised by a resident of Mei Foo Sun Chuen. The complaint was about dark smoke, dust and noise nuisance caused by the construction work of R8-LCKV near Mei Foo Sun Chuen.</p>	<p>observations were made:</p> <ol style="list-style-type: none"> <li>1. Breaking activities were undertaken at CCR-R2 and R3. Continuous water spray was applied by the workers for dust suppression. Movable noise barriers were erected to alleviate the noise impact.</li> <li>2. The haul roads and exposed works areas were observed wet. A water sprinkler was installed at the CCR-S4 for water spraying.</li> <li>3. Most of the slope was shot-creted to avoid wind erosion.</li> <li>4. Bored piling work was carried out near the site exit of CCR-R3. Since bored piling mainly involves handling of wet materials, dust nuisance causing by this type of work is not anticipated. Gas exhaust from the machines was visually clear and no dark smoke was identified.</li> </ol> <p><i>Environmental Monitoring</i></p> <p>Air quality monitoring was conducted at Lai Chi Kok Sports Centre and noise monitoring is conducted at Mei Foo Sun Chuen. No exceedance was recorded for both monitoring.</p> <p><i>Conclusion</i></p> <p>Based on the ad-hoc site inspection and the environmental monitoring results, this complaint was considered not justifiable.</p>	
60118	Lai Po Road near Hoi Lai Estate	18-Jan-06 (by the ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about environmental nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 18 January 2006.</p> <p>According to EPD, the complaint was lodged by a resident of Hoi Ming</p>	<p><i>Site Activities</i></p> <p>According to the RSS's records, night works were carried out by the Contractor between 2000 hrs on 14 January 2006 and 0530 hrs on 15 January 2006:</p> <ul style="list-style-type: none"> <li>• Delivery of segment from storage yard near Pier P5/L to Pier 15 for erection;</li> <li>• Stressing to temporary PT bars of segments at Pier B3.</li> </ul> <p>The above night works, which involved operation of tractor,</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>House of Hoi Lai Estate. The complaint was about construction noise nuisance caused by construction work of R8-LCKV carried out at Lai Po Road near Hoi Lai Estate. The noise nuisance was noted since 14 January 2006 during the periods from 2330 hrs to 0600 hrs.</p>	<p>mobile crane, lifting frame and generator, were undertaken under the two construction noise permits CNP no. GW-RW0739-05 and GW-RW0740-05.</p> <p><b>Environmental Monitoring</b></p> <p>In order to evaluate the noise impact onto the residents of Hoi Lai Estate, nighttime noise monitoring was carried out on 18 January 2006 at 23:00. The above monitoring results revealed that the measured noise levels were close to the reference background levels. After correction of the mean background level, all corrected noise levels were below the noise criterion of 55 dB(A).</p> <p><b>Conclusion</b></p> <p>Based on the information collected and the monitoring results, the complaint is considered not justifiable.</p> <p>Nevertheless, the Contractor was reminded to take sufficient noise mitigation measures to minimize the environmental impact on the nearby community.</p>	
60119	Mei Foo Sun Chuen (Phase 5)	18-Jan-06 (by the ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about environmental nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 19 January 2006.</p> <p>According to EPD, the complaint was raised by a resident of Mei Foo Sun Chuen via a Sham Shui Po District</p>	<p><b>Site Activities</b></p> <p>The site of concern was likely to be CCR-S4, CCR-R2 and CCR-R3. According to RSS's records, site activities included:</p> <ul style="list-style-type: none"> <li>• Trimming of existing rock slope at CCR-S4;</li> <li>• Excavation and rock dowel installation at CCR-R2; and</li> <li>• Construction of cable trough at CCR-R3 by CLP's contractor.</li> </ul> <p><b>Site Inspection</b></p> <p>After receipt of the complaint, an ad-hoc site inspection was carried by ET on 19 January 2006. No environmental deficiency</p>	Closed

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			<p>Council Member's Office. The complaint mentioned that residents of Mei Foo Sun Chuen Stage 5 were adversely affected by construction dust caused by the Route 8 work carried out at the slopes adjacent to Ching Cheung Road.</p>	<p>regarding construction dust was identified during the inspection.</p> <p><b>Environmental Monitoring</b></p> <p>All monitoring results in Jan 06 revealed that no exceedance was recorded for the air quality (1-hr and 24-hr TSP) criteria.</p> <p><b>Contractor's Action</b></p> <p>The Contractor of R8-LCKV had implemented several dust mitigation measures:</p> <ul style="list-style-type: none"> <li>• Haul roads, exposed slope surface and soil stockpiles were watered regularly by hose pipes and sprinklers;</li> <li>• Idled exposed slope were shot-creted; and</li> <li>• Watering was applied for the dust emissive activities, such as loading and unloading of dusty materials, excavation and breaking works.</li> </ul> <p><b>Conclusion</b></p> <p>Based on the ad-hoc site inspection and the environmental monitoring results, this complaint was considered not justifiable. Nevertheless, the Contractor was reminded to keep on the dust mitigation measures being implemented and step up the measures if necessary.</p>	
<p>60213 60216 60220 60222</p>	<p>Hoi Lai Estate (Lai Po Road)</p>	<p>13-Feb-06 16-Feb-06 20-Feb-06 22-Feb-06</p> <p>(by the ET Leader)</p>	<p>Four environmental complaints were received in this reporting month. Three of them were referred by EPD on 13<sup>th</sup>, 20<sup>th</sup> and 22<sup>nd</sup> Feb 06 and the other one was referred by HyD via MHJV on 16<sup>th</sup> Feb 06.</p> <p>All about construction noise due to night works at Lai Po Road near Hoi Lai Estate.</p>	<p><b>Site Activities</b></p> <p>Since around mid-January 2006, segments were transported to Piers P15 and B4, under the permission of construction noise permit (CNP).</p> <p>It was suspected that the sound of concern was generated from tractors for precast segment transportation. In view of the safety of workers, an alert sound and flashing are maintained during backing action of the tractors.</p> <p><b>Site Inspection</b></p>	<p>Closed</p>



Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>Environmental Protection Department (EPD) received a public complaint about environmental nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. EPD subsequently referred the complaint to the ET Leader on 20 April 2006.</p> <p>The complaint is about construction noise nuisance caused by construction work of night works at location near both Hoi Lai Estate and West Kowloon Highway between 14 and 17 April 2006.</p>	<p>An ad-hoc inspection was carried out by the ET on 16 Feb 06 from 00:30 to 02:30 am. Noise measurement was carried out during the inspection to evaluate the noise impact onto the residents of Hoi Lai Estate. During the monitoring, the major noise source identified was the road traffic noise from Sham Mong Road and Lai Po Road. No alarm sound or alike from the construction equipment was noted. The above monitoring results revealed that the measured noise levels were close to the reference baseline level. After correction of the mean background level, most of data were below the noise criterion of 55 dB(A).</p> <p><i>Conclusion</i></p> <p>Based on the information collected and the monitoring results, the complaints are considered not justifiable.</p> <p>It was suspected that the nuisance was caused by the alert sound of tractors during backward movement which serves as a safety measure. However, the RSS and the Contractor are considering the possibility of lowering the alert sound level or replacing by a less disturbing pitch in order to minimize the noise nuisance to residents of Hoi Lai Estate.</p> <p><i>Site Activities</i></p> <p>According to the Resident Site Staff (RSS)'s records, the construction works were carried out by the Contractor from daytime to 2230 hours on 14 April and from 2000 hours to 0600 hours 16 April 2006.</p> <p>The construction activities near Hoi Lai estate included: -</p> <ul style="list-style-type: none"> <li>• Erecting segments at column PA/R;</li> <li>• Stressing of top tendon wires of segments and erecting segments at column P1/R; and</li> <li>• Transporting segments to storage yard.</li> </ul>	

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60420	Near both Hoi Lai Estate and West Kowloon Highway	20-Apr-06  (by the ET Leader)		<p>The above construction activities were undertaken under a construction noise permit CNP no. GW-RW0172-06.</p> <p>Base on the RSS's preliminary investigation, it was suspected that the noise nuisance of concern was caused by loading and unloading of materials, hammering and/or dropping of materials on ground during the stressing works and transportation of precast segment by tractors.</p> <p><b>Contractor's Action</b></p> <p>The Contractor had implemented a short term mitigation measures:-</p> <ul style="list-style-type: none"> <li>• Turned off the alert sound of tractors during backward movement in order to reduce the potential for noise impact;</li> <li>• Strengthened their management on worker's working manner such as avoid dropping of material on ground, wrapping up of hammering equipment and etc.; and</li> <li>• Conducted training of worker in order to reducing noise nuisance during the night works.</li> </ul> <p><b>Conclusion</b></p> <p>Based on the information collected and the monitoring results, the complaints are considered not justified.</p> <p>It was suspected that the nuisance was caused by loading and unloading of materials, hammering and/or dropping of materials on ground during the stressing works and transportation of precast segment by tractors.</p> <p>The Contractor has strictly complied with PME allowed in the CNP No. GW-RW0172-06. Besides, night work at the concerned location was completed. No further construction work at night at this location is anticipated.</p>	Close

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60428	Between Ching Cheung Road and Mei Lai Road (near Phase 5 of Mei Foo Sun Chuen)	28-Apr-06  (by the ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about tree cutting in the area between Ching Cheung Road and Mei Lai Road (near Phase 5 of Mei Foo Sun Chuen). EPD subsequently referred the complaint to the ET Leader on 28 April 2006.</p> <p>The complaint was about the Contractor cut trees in the area between Ching Cheung Road and Mei Lai Road (near Phase 5 of Mei Foo Sun Chuen). This had removed the traffic noise barrier effect of the trees and hence made the residents of Mei Foo Sun Chuen becoming being seriously affected by the traffic noise nuisance.</p>	<p><b>Site Activities</b></p> <p>According to the Resident Site Staff (RSS)'s records, current construction activities included segment erection works for Slip Road D, excavation works for cut slope CCR-S4 and retaining wall construction at CCR-R2 and CCR-R3.</p> <p>Since excavation for cut slopes and construction of slip road D are required at this area, tree cutting is unavoidable. Tree felling application was approved by DLO/KW.</p> <p><b>Contractor Action</b></p> <p>Under the EP condition and EIA, there is no need for this project to mitigate the traffic noise barrier effect due to the removal of trees.</p> <p>No follow up action was required for this complaint.</p> <p><b>Conclusion</b></p> <p>Under the EP conditions and EIAO, there is no need for this project to mitigate the traffic noise barrier effect due to the removal of trees.</p> <p>Based on the information collected, the complaint is considered not justifiable.</p> <p>Since excavation for cut slopes and construction of slip road D are required at this area, tree cutting is unavoidable. Tree felling application was approved by DLO/KW.</p> <p>Compensatory planting will be provided at the concerned area after completion of the construction works in order to improve the landscape and visual impacts.</p> <p>No follow up action will be required for this complaint.</p>	Close

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60522	Hoi Lai Estate (Hoi Fai House)	22-May-06 (by ET Leader)	<p>Environmental Protection Department (EPD) received a public complaints about noise nuisance generated from Route 8 – Lai Chi Kok Viaduct Project. EPD subsequently referred the complaint to ET Leader on 22 May 2006.</p> <p>The complaint was concerned about the noise produced from construction work during the period between 2300 hours and 0100 hours every night since 3 weeks ago. The complaint described the noise being like sound of poring concrete.</p>	<p><b>Site Activities</b></p> <p>According to the RSS’s records, only precast segment transportation works at the concerned area which was used as the segment storage yard near Pier P5L to Piers near Mui Kong Tsuen.</p> <p>No concreting activities were carried out at the abovementioned area between 2300 hours and 0100 hours every night in concerned period. In addition, the transportation works were usually carried out from 2000 hours to 0300 hours (or before 0300 hours).</p> <p><b>Contractor Action</b></p> <p>The idle and backup equipments such as tractors has turned off or throttled down in order to reduce the noise impact since the last complaint on this issue near Hoi Lai Estaet. Besides, the above night works were undertaken with three construction noise permits.</p> <p><b>Site Inspection</b></p> <p>An ad-hoc inspection was carried out by the ET at 2300 on 26 May 2006. During the inspection, no construction activities were carried out at the concerned area, where the tractor and mobile crane were throttled down.</p> <p><b>Conclusion</b></p> <p>According to RSS’s information, no concreting activities were carried out at the concerned area. Therefore, the major noise nuisance (pouring concrete) might not be generated from the abovementioned area. Besides, the Contractor strictly complied with PME allowed in the CNP No. GW-RW0172-06. In addition, the Contractor had turned off the alert sound of tractors during backward movement.</p> <p>Based on the information collected, the complaint is considered</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>not justifiable.</p> <p>However, the Contractor was reminded to continuously implement their practice to prevent noise nuisance generation due to the construction works. The site situation will be continuously reviewed by ET and RSS also.</p>	
60609	Near Phase 5 of Mei Foo Sun Chuen	9-Jun-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint about environment nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LVKC). Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 9 June 2006.</p> <p>The complaint was about the noise generated from rock excavation work from 9 a.m. to 6 p.m. at the area between Ching Cheung Road and Mei Lai Road (near Phase 5 of Mei Foo Sun Cheun).</p>	<p><b>Site Activities</b></p> <p>As advised by the RSS, the site of concerned area was likely to be CCR-S4.</p> <p>According to the RSS's records, 1 number of excavator mounted breaker was used to carry out rock breaking work at CCR-S4 during the period between 9 a.m. and 6 p.m.</p> <p>The excavation and rock breaking activities at the concerned area will likely be completed by end of September 2006.</p> <p><b>Contractor Action</b></p> <p>The silent rock breaking equipment has been used and noise barriers were erected to minimize the noise impact generated from the breaking activity.</p> <p><b>Site Inspection and Environmental Monitoring</b></p> <p>An ad-hoc inspection was carried out by ET on 14 June 2006 from 1:30 p.m. to 4:30 p.m. and 16 June 2006 from 4:00 p.m. to 4:45 p.m.</p> <p>During the inspections, the construction activities at CCR-S4 included handheld breaking, excavation and rock breaking activities were carried out at CCR-S4. However, the temporary noise barriers were erected at the abovementioned location as same as RSS's mentioned.</p> <p>Noise measurement was carried out during the inspection to</p>	Closed

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				<p>evaluate the noise impact onto the residents of Mei Foo Sun Chuen. The monitoring location was original monitoring location NM4 (Mei Foo Sun Chuen Phase 5).</p> <p>The measured monitoring results were close to the reference baseline level. After correction of the mean background level, the monitoring data were below the noise criterion of 75 dB(A).</p> <p><b>Conclusion</b></p> <p>Base on the information collection and the monitoring result, the complaint was considered not justifiable.</p> <p>The Contractor had implemented noise mitigation measures to minimize the noise impact. Besides, the monitoring result were below the noise criteria of 75dB(A). However, the Contractor was still reminded to continuously implement their practice to prevent noise nuisance generation from the construction works.</p> <p>The environmental conditions of the site will be continuously reviewed by the RSS and the ET.</p>	
60626	Near Phase 5 of Mei Foo Sun Chuen	26-Jun-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through a facsimile on 12 June 2006 about an environmental nuisance generated from Route 8 – Lai Chi Kok Viaduct 9R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 26 June 2006.</p> <p>According to the explanation from the RSS, this complaint was indeed the same as that received by the ET on 9 June 2006. The complaint initiated the complaint verbally to the ICC on 8 June 2006 and then also issued a facsimile to the ICC. The facsimile was transferred to the RSS on 12 June 06</p>	<p><b>Site Activities</b></p> <p>As advised by the RSS, the site of concerned area was likely to be CCR-S4.</p> <p>According to the RSS's records, 1 number of excavator mounted breaker was used to carry out rock breaking work at CCR-S4 during the period between 9 a.m. and 6 p.m.</p> <p>The excavation and rock breaking activities at the concerned area will likely be completed by end of September 2006.</p> <p><b>Contractor Action</b></p> <p>The silent rock breaking equipment has been used and noise barriers were erected to minimize the noise impact generated from the breaking activity.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>and eventually reached the ET on 26 June 2006.</p> <p>The complaint was about the noise generated from rock excavation work from 9 a.m. to 6 p.m. at the area between Ching Cheung Road and Mei Lai Road (near Phase 5 of Mei Foo Sun Cheun).</p> <p>This complaint was made by the same complainant to the ICC through two different channels (by phone and by facsimile) and the ET of the Project was firstly notified on 9 June 2006. A complaint investigation report was issued on 22 June 06.</p> <p>As the ET received this separate complaint after the issue of the complaint investigation report and considered the nature of the complained event (general construction during daytime but not single event at a particular moment), the complaint investigation procedures were initiated.</p>	<p><b>Site Inspection and Environmental Monitoring</b></p> <p>As the complaint was identical to the one received on 9 June 06 by the ET, the ad-hoc inspections carried out on 14 June 2006 from 1:30 p.m. to 4:30 p.m. and 16 June 2006 from 4:00 p.m. to 4:45 p.m. were still applicable to this report. In addition, further ad-hoc inspections were carried out on 28 June 2006 from 1:30 p.m. to 4 :00 p.m. and 3 July 2006 from 9:30 a.m. to 11:30 a.m.</p> <p>During the aforesaid inspections, the construction activities at CCR-S4 included handheld breaking, excavation and rock breaking activities were carried out at CCR-S4. However, the temporary noise barriers were erected at the abovementioned location.</p> <p>In addition to the noise measurement conducted on 14 and 16 June 2006, further noise measurement was carried out on 30 June 2006 to evaluate the noise impact onto the residents of Mei Foo Sun Chuen. The monitoring location was original monitoring location NM4 (Mei Foo Sun Chuen Phase 5).</p> <p>Noise measurement carried out on 30 June 06, after correction of the mean background level, the monitoring data were below the noise criterion of 75 dB(A)</p> <p><b>Conclusion</b></p> <p>This complaint was identical to the one received by the ET on 9 June 06 because the complainant addressed the complaint to the ICC through two different channels (by phone and by facsimile). The facsimile was transferred to the RSS on 12 June 06 and eventually reached the ET on 26 June 06.</p> <p>Base on the information collection and the monitoring result, the complaint was considered not justifiable.</p> <p>The Contractor had implemented noise mitigation measures to minimize the noise impact. Besides, the monitoring result were</p>	

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				<p>below the noise criteria of 75dB(A). However, the Contractor was still reminded to continuously implement their practice to prevent noise nuisance generation from the construction works.</p> <p>The environmental conditions of the site will be continuously reviewed by the RSS and the ET.</p>	
60830	Near Mei Foo and Lai King Hill Road	30-Aug-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint on 25 August 2006 about an environmental nuisance generated from Route 8 – Lai Chi Kok Viaduct 9R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 30 August 2006.</p> <p>The complaint was concerned about dust generated from the rock drilling works affected the nearby ASRs. The complaint described that spraying of water during rock drilling works was not implemented.</p>	<p><b>Site Activities</b></p> <p>According to RSS's record, rock dowel installation for slope stabilization at CCR-S1 was commenced on 22 August 2006 and would likely last for at least 6 months.</p> <p><b>Contractor Action</b></p> <p>After receiving the complaint, the Contractor has further enhanced the dust mitigation measures as follows:-</p> <ul style="list-style-type: none"> <li>• Enclosing the rock dowel drilling work on three sides, i.e. top, back and the left hand side, with tarpaulin sheets;</li> <li>• Spraying of water at the hole during drilling;</li> <li>• Wrapping the head of the drilling rig with a wet thick towel.</li> </ul> <p><b>Site Inspection and Environmental Monitoring</b></p> <p>During the monthly site inspection on 4th September 2006, rock drilling at the slope CCR-S1 was carrying out. The ET observed that the work area was enclosed by tarpaulin sheets at three sides. Water was sprayed continuously at the drilling hole and head of the drilling rig was enclosed with a wet thick towel. All the mitigation measures mentioned by the RSS were implemented.</p> <p><b>Conclusion</b></p> <p>Base on the information collected and the monitoring results, the complaints are considered not justifiable.</p> <p>It was because there was no exceedance of the air quality</p>	Closed



Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>monitoring results and dust mitigation measures were implemented by the Contractor during the rock drilling works.</p> <p>However, the Contractor was still reminded to take sufficient dust mitigation measures to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> <li>• Enclose dusty activity such as rock drilling with tarpaulin sheet;</li> <li>• Apply water spraying for any dust emissive activities, such as breaking, excavation, loading and unloading of dusty materials;</li> <li>• Cover long-term idle exposed slope surfaces and stockpiles with tarpaulin sheets.</li> </ul> <p>The environmental conditions of the site will be continuously reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.</p>	
60831	Between Lai Wan Road and Lai King Hill Road	31-Aug-06 (by ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about environment nuisance generated from Route 8 – Lai Chi Kok Viaduct Project. EPD subsequently referred the complaint to ET Leader on 31 August 2006.</p> <p>The complaint was concerned about construction noise, dust and waste water generated from the construction work affect the nearby NSRs after 19.00 hrs, the nearby ASRs and discharged to exiting road respectively</p>	<p><b>Site Activities</b></p> <p>According to RSS's record, rock dowel installation for slope stabilization at CCR-S1 was commenced on 22 August 2006 and would likely last for at least 6 months.</p> <p><b>Contractor Action</b></p> <p>With reference to RSS's site diary, all site activities including drilling works at the concerned area were conducted between 8:00 and 18:00 daily. Ad hoc site observation carried out by the RSS confirmed that no construction activity was carried out after 18:00.</p> <p>As advised by the RSS, tarpaulin sheet covering and water spraying were provided by the Contractor to mitigate the dust nuisance generated from the rock drilling works. On 31 August 2006, the Contractor was further enhanced the dust mitigation measures as follows:-</p> <ul style="list-style-type: none"> <li>• Enclosing the rock dowel drilling work on three sides, i.e.</li> </ul>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>top, back and the left hand side (LHS) with tarpaulin sheets;</p> <ul style="list-style-type: none"> <li>• Spraying water at the hole during drilling;</li> <li>• Wrapping the head of the drilling rig with a wet thick towel.</li> </ul> <p><b><i>Site Inspection and Environmental Monitoring</i></b></p> <p>During the monthly site inspection on 4<sup>th</sup> September 2006, rock drilling at the slope CCR-S1 was carrying out. The ET observed that the work area was enclosed by tarpaulin sheets at three sides. Water was sprayed continuously at the drilling hole and head of the drilling rig was enclosed with a wet thick towel. All the mitigation measures mentioned by the RSS were implemented.</p> <p><b><i>Conclusion</i></b></p> <p>Base on the information collected and the monitoring results, the complaint was considered not justifiable.</p> <p>It was because there was no exceedance of the air quality monitoring results and dust mitigation measures were implemented by the Contractor during the rock drilling works. No construction activities were carried after 18:00 in the period mentioned by the complainant. In addition, no wastewater discharge was observed.</p> <p>However, the Contractor was still recommended to take the following mitigation measures to minimize the environmental impact on the nearby community:</p> <p><b><u>Dust Nuisance</u></b></p> <ul style="list-style-type: none"> <li>• Enclose dusty activity such as rock drilling by tarpaulin sheet;</li> <li>• Apply water spraying for any dust emissive activities, such as breaking, excavation, loading and unloading of dusty materials;</li> <li>• Cover long-term idle exposed slope surfaces and stockpiles with tarpaulin sheets.</li> </ul>	

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				<p><u>Construction Noise</u></p> <p>The Contractor was reminded that construction activities during restricted hours could only be carried out with a valid Construction Noise Permit (CNP). In addition, appropriate noise mitigation measures described in the CNP should be implemented in order to minimize the noise impact on the nearby noise sensitive receivers.</p> <p><u>Wastewater Discharge</u></p> <ul style="list-style-type: none"> <li>• Fill up the gaps under the footings of hoarding fence along Lai King Hill Road so as to prevent spillage of muddy water during heavy rain onto the existing road.</li> </ul> <p>The environmental conditions of the site will be continuously reviewed by the Resident Site Staff and the Environmental Team through site inspections and monitoring exercises.</p>	
60925	Near Ching Cheung Road, Nob Hill and Mei Lai Road	25-Sep-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint on 25 September 2006 about the an environmental nuisance generated from Route 8 – Lai Chi Kok Viaduct 9R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 25 September 2006.</p> <p>The complaint was concerned about the noise generated from the construction works after 19:00 at the area near Ching Cheung Road, Nob Hill and Mei Lai Road</p>	<p><b><i>Site Activities</i></b></p> <p>According to RSS’s record, rock dowel installation for slope stabilization at the Slope CCR-S1 was commenced on 22 August 2006 and would last for at least 6 months and the first batch of rock drilling works at the Slope CCR-S4 was commenced on 19 September 2006 and completed on 23 September 2006.</p> <p><b><i>Contractor Action</i></b></p> <p>After receiving the complaint, the Contractor has further enhanced the noise mitigation measures as follows:-</p> <ul style="list-style-type: none"> <li>• Placing of a wooden box to cover the head of drilling;</li> <li>• Spraying of water at the hole during drilling and erecting of nylon sheets;</li> <li>• Providing silent type drilling rigs for the drilling works at both Slopes CCR-S1 and CCR-S4</li> </ul> <p><b><i>Site Inspection and Environmental Monitoring</i></b></p>	Closed

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				<p>During the weekly site inspection on 27 September 2006, rock drilling at the Slope CCR-S1 was not carrying out. The ET observed that the work area was enclosed by tarpaulin sheets at three sides. Temporary noise barrier was erected at the working platform of the Slope CCR-S1.</p> <p>The ET also undertook an ad hoc site inspection at the concerned areas after 19:00 on 27 September 2006. No construction activities were observed and noise monitoring was not conducted.</p> <p><b>Conclusion</b></p> <p>Base on the information collected and the monitoring results, there was no exceedance of the noise monitoring results and noise mitigation measures were implemented by the Contractor during the rock drilling works.</p> <p>However, the Contractor was still reminded to carry out construction activities only within the permitted working hours (i.e. 07:00 – 19:00 on weekday) and to take sufficient noise mitigation measures to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> <li>• Provide silent type drilling rigs for the drilling works;</li> <li>• Placing of wooden box to cover the head of drilling;</li> <li>• Apply water spraying for at the hole during drilling;</li> </ul> <p>The environmental conditions of the site will be continuously reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.</p>	
61025	Lai Chi Kok Road Flyover near PCCW building	25-Oct-06 (by ET Leader)	The Integrated Complaint Centre (ICC) of HKSAR received a public complaint on 25 <sup>th</sup> October 2006 regarding noise nuisance generated from Route 8 – Lai Chi Kok Viaduct R8-LCKV) Project. Resident Site Staff (RSS) subsequently	<p><b>Site Activities:</b></p> <p>According to RSS's record, installation of catchfan at Pier P5/L to P6 near PCCW was carried out at around 0115 to 0500 at both nights of 19<sup>th</sup> and 20<sup>th</sup> October 2006. The construction equipment used in both nights included one mobile crane, one crane lorry and one generator.</p>	Closed

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			<p>referred the complaint to the ET Leader on 25<sup>th</sup> October 2006.</p> <p>The complaint was concerned about the noise nuisance generated from workers and construction vehicles during the mid-night between 0100 and 0200 on both 19<sup>th</sup> and 20<sup>th</sup> October 2006 at Lai Chi Kok Road Flyover near PCCW building.</p>	<p><b>Contractor Action</b> According to RSS' record, acoustic material wrapping the head of chain blocks and hessian bags placing on ground around catchfans to suppress noise generation when hand tools were dropped onto ground.</p> <p><b>Environmental Monitoring</b> An ad-hoc site observation and noise monitoring at Hoi Fai House of Hoi Lai Estate were conducted by the Contractor on 26<sup>th</sup> October 2006 between 0100 and 0130. The ET also carried out an ad-hoc inspection on 28<sup>th</sup> October 2006 from 0100 to 0200. During the inspection, segment erection work was carried out at Pier P5 to P6, which involved the operation of mobile crane and movement of lorry and trucks.</p> <p>During the monitoring, the major noise source identified was the road traffic noise. The monitoring results revealed that the measured noise levels were close to the reference background levels. After correction of the mean background level, all corrected noise levels were below the noise criterion of 55 dB (A) which consists with the noise monitoring results from the Contractor.</p> <p><b>Conclusion</b> Based on the information collected, the complaint is considered justifiable although the monitoring results complied with the noise criteria.</p> <p>Nevertheless, the Contractor was reminded to take sufficient noise mitigation measures to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> <li>• To strengthen management on worker's working manner, such as avoiding dropping materials on ground;</li> <li>• No hammering is allowed during restricted hours; and</li> <li>• To provide adequate training to workers working, esp. for night works.</li> </ul> <p>The environmental conditions of the site will be continuously</p>	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				reviewed by the Resident Site Staff and the Environmental Team.	
61103	Pier C13 and C14 at Lai Wan Road Overpass	3-Nov-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint on 28<sup>th</sup> October 2006 regarding noise nuisance generated from Route 8 – Lai Chi Kok Viaduct R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 3<sup>rd</sup> November 2006.</p> <p>The complaint was concerned about noise generated from the general cleaning work of deck surface using water jet between Pier C13 and C14 at Lai Wan Road Overpass, at the evening of 28<sup>th</sup> October 2006.</p>	<p><b>Site Activities</b></p> <p>According to the RSS's record, there is a CNP (CNP no. GW-RW0563-06) at the concerned location. Construction activities were allowed to be carried out between 19:00hr and 23:00hr (any day not being a general holiday) under the CNP.</p> <p><b>Environmental Monitoring</b></p> <p>During the weekly site inspections in October 2006, no non-compliance or observation on noise was recorded. Accordance to the EM&amp;A program, two noise monitoring stations at Nob Hill, namely (NM8a and NM8b), have been set up in order to monitor the noise level generated from the construction activities. The Station (NM8b) is strongly influenced by road traffic noise from Ching Cheung Road. The measurement at this station is for reference purpose, but not for compliance check for construction noise. All measured value were lower than the noise criterion of 75 dB(A). No exceedance of noise level has been recorded in October 2006. Moreover, based on our site observation record during monitoring, road traffic noise from Ching Cheung Road was the major noise source.</p> <p><b>Conclusion</b></p> <p>Based on the information collected, the complaint is considered not justifiable.</p> <p>Nevertheless, the Contractor was reminded to take sufficient noise mitigation measures to minimize the environmental impact on the nearby community:</p> <p>As the general cleaning work could be carried out during normal working hours (i.e. 07:00 to 19:00hr) instead as the work was not critical. RSS would remind the Contractor to programme their works better in order to minimize nuisance to nearby residents.</p> <p>The environmental conditions of the site will be continuously reviewed by the Resident Site Staff and the Environmental</p>	Closed

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61121-1	Area near Lai Chi Kok Swimming Pool	21-Nov-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 18<sup>th</sup> November 2006 regarding noise nuisance generated from Route 8 – Lai Chi Kok Viaduct R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 21<sup>st</sup> November 2006.</p> <p>The complaint was concerned about noise generated from the construction works between 09:00 and 18:30 at the area near Lai Chi Kok Swimming Pool.</p>	<p>Team.</p> <p><b>Site Activities</b> According to RSS's record, rebar fixing, formwork erection, placing concrete and preparation work for construction joint were carried out at the concerned site during the period of 13<sup>th</sup> to 18<sup>th</sup> November 2006 and the construction works within the mentioned period were occasionally finished at 18:30.</p> <p>As advised by the RSS, the RSS has recommended the Contractor to finish the construction works at the concerned areas before 18:00 in order to minimize the noise nuisance to the public.</p> <p><b>Environmental Monitoring</b> During the weekly site inspections in November 2006, no non-compliance or observation on noise was recorded.</p> <p>Accordance to the EM&amp;A programme, one noise monitoring station at Mei Foo Sun Chuen, Phase 5 (NM4) and two noise monitoring stations at Nob Hill, namely (NM8a and NM8b), were set up in order to monitor the noise level generated from the construction activities. The Station (NM8b) is strongly influenced by road traffic noise from Ching Cheung Road. The measurement at this station is for reference purpose, but not for compliance check for construction noise.</p> <p>The noise monitoring results in the period between 1<sup>st</sup> and 21<sup>st</sup> November 2006 at the M/F of Nob Hill and at Mei Foo Sun Chuen, Phase 5 are all lower than or equal to the noise criterion of 75 dB(A). No exceedance of noise level has been recorded in the above mentioned period. Moreover, based on our site observation record during monitoring, road traffic noise from Ching Cheung Road was the major noise source.</p> <p><b>Conclusion</b> Base on the information collected and the monitoring results, the complaint was considered not justifiable.</p> <p>However, the Contractor was still reminded to finish the</p>	Closed

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				<p>construction works at the concerned areas before 18:00 and to carry out construction activities only within the permitted working hours (i.e. 07:00 – 19:00 on weekday).</p> <p>The environmental conditions of the site will be continuously reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.</p>	
61121-2	Construction works opposite Tong Nai Kan College	21-Nov-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 17<sup>th</sup> November 2006 regarding dust and noise nuisance generated from Route 8 – Lai Chi Kok Viaduct R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 21<sup>st</sup> November 2006.</p> <p>The complaint was concerned about dust and noise generated from the construction works opposite Tong Nai Kan College in the past years.</p>	<p><b>Site Activities</b> According to RSS's record, construction works adjacent to Tong Nai Kan College in the past years included the construction of Retaining Wall CCR-R3 and Slip Road D.</p> <p>As advised by the RSS, noise and dust mitigation measures such as provision of noise barriers and acoustic materials at drill pit, dust suppression system and water browser were provided in order to minimize the noise and dust nuisance generated from the above mentioned construction activities.</p> <p><b>Environmental Monitoring</b> During the weekly site inspections in November 2006, no non-compliance or observation on noise and air at the concerned site was recorded.</p> <p>Accordance to the EM&amp;A programme, one noise monitoring station at Mei Foo Sun Chuen, Phase 5 (NM4) and one air monitoring station at Lai Chi Kok Sports Centre (AM2), were set up in order to monitor the noise and dust level generated from the construction activities.</p> <p>The monitoring results revealed that no exceedance was recorded for the noise and air quality (1-hr and 24-hr TSP).</p> <p><b>Conclusion</b> Base on the information collected and the monitoring results, the complaint was considered not justifiable.</p> <p>However, the Contractor was still reminded to continuously implement their practice, such as providing noise barrier with</p>	Closed



Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>acoustic materials at drill pit and applying water spraying for any dust emissive activities to minimize the noise and dust nuisance generated from these construction activities.</p> <p>The environmental conditions of the site will be continuously reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.</p>	
61205	Banyan Garden	5 <sup>th</sup> December 2006 (by ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about environment nuisance generated from Route 8 – Lai Chi Kok Viaduct Project. EPD subsequently referred the complaint to ET Leader on 5<sup>th</sup> December 2006.</p> <p>The complaint was concerned construction noise near Banyan Garden within the period of 01:00 – 02:00hr on 29<sup>th</sup> November 2006.</p>	<p><b>Site Activities</b> According to RSS's record, a catchfan was moved from bay (AL-62) to (AL-58) from 22:00 to 02:00hr. Installation of catchfan at parapet bay (MS-R-74) was carried out from 00:00 to 04:00hr on 29<sup>th</sup> November 2006.</p> <p>As advised by the RSS, the Contractor has been requested to:</p> <ul style="list-style-type: none"> <li>- Wrapping of tools with acoustic material</li> <li>- Erection of noise barrier (mill barrier with acoustic material) adjacent to isolated noise source</li> <li>- Placing of hessin bags on ground to mitigate noise generated as a result of the dropping of tools on ground.</li> </ul> <p>According to the RSS, there is no evidence of hammering of metals on site.</p> <p><b>Conclusion</b> Based on the information collected, the complaint is considered unjustifiable.</p> <p>Nevertheless, the Contractor was reminded to take sufficient noise mitigation measures to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> <li>- To strengthen management on worker's working manner, such as avoiding dropping materials on ground;</li> <li>- No hammering is allowed during restricted hours; and</li> <li>- To provide adequate training to workers working, esp. for night works.</li> </ul> <p>The environmental conditions of the site will be continuously reviewed by the Resident Site Staff and the Environmental Team.</p>	Closed

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70117-1	P6 – P8 near Lai Chi Kok Road Interchange	17 <sup>th</sup> January 2007 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 16<sup>th</sup> January 2007 regarding noise nuisance generated from Route 8 – Lai Chi Kok Viaduct R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 17<sup>th</sup> January 2007.</p> <p>The complaint was concerned about noise generated from the P6 – P8 near Lai Chi Kok Road Interchange in the past months.</p>	<p><b>Site Activities</b> According to RSS's record, the construction activities at the concerned area was mainly central stitch construction and parapet erection and similar works will be carried out in the concerted site in coming one month.</p> <p>The equipment used on site during the complaint period was covered under the construction noise permit (CNP) no. GW-RW0624-06.</p> <p>Based on the RSS's record of PME used in the concerned area from 15 November 2006 to 30 December 2006, the construction works complied with the CNP no. GW-RW0624-06.</p> <p><b>Conclusion</b> Based on the information collected, the complaint is considered unjustifiable as the equipment used complied with the CNP conditions.</p> <p>Nevertheless, the Contractor was recommended to take further noise mitigation measures to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> <li>- To strengthen management on worker's working manner, such as avoiding dropping materials on ground;</li> <li>- No hammering is allowed during restricted hours; and</li> <li>- To provide adequate training to workers working, esp. for night works.</li> </ul>	Closed
70117-2	P3 – P6 near Banyan Garden	17 <sup>th</sup> January 2007 (by ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about environment nuisance generated from Route 8 – Lai Chi Kok Viaduct Project. EPD subsequently referred the complaint to ET Leader on 17<sup>th</sup> January 2007.</p> <p>The complaint was concerned construction noise near Banyan Garden within the period of 01:00 – 02:00hr on 11<sup>th</sup> January 2007.</p>	<p><b>Site Activities</b> According to RSS's record, the construction activities at the concerned area was mainly central stitch construction and parapet erection and similar works will be carried out in the concerned site in coming one month.</p> <p>The equipment used on site during the complaint period was covered under the construction noise permit (CNP) no. GW-RW0624-06.</p> <p>Based on the RSS's record of PME used in the concerned area from 1<sup>st</sup> December 2006 to 13<sup>th</sup> January 2007, the construction</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>works complied with the CNP no. GW-RW0624-06.</p> <p><i>Conclusion</i> Based on the information collected, the complaint is considered unjustifiable as the equipment used complied with the CNP conditions.</p> <p>Nevertheless, the Contractor was recommended to take further noise mitigation measures to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> <li>- To strengthen management on worker's working manner, such as avoiding dropping materials on ground;</li> <li>- No hammering is allowed during restricted hours; and</li> <li>- To provide adequate training to workers working, esp. for night works.</li> </ul>	
70723	Construction site near Mei Lai Road and Tong Nai Kan College	17 <sup>th</sup> July 2007 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 21 July 2007 about an environment nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 23 July 2007.</p> <p>The complaint was concerned about noise generated from the construction works near Mei Lai Road and Tong Nai Kan College.</p>	<p><i>Site Activities</i> The concerned site was likely the Slope CCR-S4 near Ching Cheung Road. A location plan is provided in Appendix A and the work programme near Slope CCR-S4 from February 2007 to September 2007 is provided in Appendix B.</p> <p>According to RSS's record and the above mentioned work programme, excavation and rock breaking works for slope stabilization near the Slope CCR-S4 was begun on early of July 2007 and to be completed on early of August 2007.</p> <p>As advised by the RSS, noise mitigation measures implemented at the concerned site include:</p> <ul style="list-style-type: none"> <li>- installing a line of noise barriers formed by acoustic materials in front of the noise sources;</li> <li>- warping the breaker with acoustic material; and</li> <li>- deploying silence type of breaker.</li> </ul> <p><i>Environmental Monitoring</i> During the weekly site inspections in July 2007, no non-compliance or observation on noise was recorded.</p> <p>Accordance to the EM&amp;A programme, one noise monitoring station at Mei Foo Sun Chuen, Phase 5 (NM4) was set up in</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>order to monitor the noise level generated from the construction activities.</p> <p>The noise monitoring results in the period between 3<sup>rd</sup> and 23<sup>rd</sup> July 2007 at Mei Foo Sun Chuen, Phase 5 are all lower than or equal to the noise criterion of 75 dB(A). No exceedance of noise level has been recorded in the above mentioned period.</p> <p><i>Conclusion</i> Base on the information collected and the monitoring result, the complaints are considered not justifiable.</p> <p>It was suspected that the nuisance was caused by the breaking activities. However, the Contractor has implemented the mitigation measures to minimize the noise generation from construction activities.</p>	
71003	Construction site near Ching Cheung Road and Tong Nai Kan College	3 <sup>rd</sup> October 2007 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 1 October 2007 about an environment nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 3 October 2007</p> <p>The complaint was concerned construction noise near Tong Nai Kan College and Ching Cheung Road during public holiday on 1<sup>st</sup> October 2007.</p>	<p><i>Site Activities</i> According to RSS's record, approximately 100m long asphalt material on carriageway was removed on 30<sup>th</sup> September and 1<sup>st</sup> October 2007.</p> <p>The equipment used on site during the complaint period was covered under the construction noise permit (CNP) no. GW-RW0469-07.</p> <p><i>Environmental Monitoring</i> During the weekly site inspections in September 2007, no non-compliance or observation on noise was recorded.</p> <p>Accordance to the EM&amp;A programme, one noise monitoring station at Mei Foo Sun Chuen, Phase 5 (NM4) was set up in order to monitor the noise level generated from the construction activities. The noise monitoring results on 25 September 2007 and 2 October 2007 at Mei Foo Sun Chuen, Phase 5 are all lower than the noise criterion of 75 dB(A). No exceedance of noise level has been recorded in the above mentioned period</p>	Closed

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				<p><b>Conclusion</b> Based on the information collected, the complaint is considered unjustifiable as the equipment used complied with the CNP conditions.</p> <p>Nevertheless, the Contractor was recommended to implement a good sit practice and mitigation measures to prevent noise nuisance generated from the construction work to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> <li>- wrapping the breaker with acoustic material; and</li> <li>- deploying silence type of breaker.</li> </ul>	
71119	Construction site near Nob Hill	19 <sup>th</sup> November 2007 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 16 November 2007 about a noise nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 19 November 2007</p> <p>The complaint was concerned the noise generated from breaking the footpath on King Lai Path opposite to Nob Hill on 16 November 2007</p>	<p><b>Site Activities</b> According to the RSS, footpath breaking by hand-held breaker was carried out on 16 November 2007.</p> <p><b>Environmental Monitoring</b> During the weekly site inspections on November 2007, no non-compliance or observation on noise was recorded.</p> <p>Accordance to the EM&amp;A programme, noise monitoring was conducted at Nob Hill M/F of Car Park (NM8a) and 3/F of Car Park (NM8b) in order to monitor the noise level generated from the construction activities. There was no Action/Limit Level exceedance identified, except the noise monitoring conducted at Station NM8b on 12 November 2007, which is strongly influenced by the road traffic noise from Ching Cheung Road. The measurements at these two stations are for reference purpose but not for compliance check for construction noise.</p> <p><b>Conclusion</b> Base on the information collected and the monitoring result, the complaints are considered not justifiable.</p> <p>Nevertheless, the Contractor was recommended to implement a good sit practice and mitigation measures to prevent noise nuisance generated from the construction work to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> <li>- wrapping the breaker with acoustic material; and</li> <li>- deploying silence type of breaker.</li> </ul>	Closed

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71121	Construction site at Lai Wan Road opposite to the Lai Chi Kok Park Sports Centre	21 <sup>st</sup> November 2007 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 21<sup>st</sup> November 2007 about the construction dust nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 21<sup>st</sup> November 2007</p> <p>The complaint was raised by a resident via the ICC hotline and EPD about the construction dust generated from the lorry (JA2315) leaving the works site opposite to Lai Chi Kok Park Sports Centre at 8.35am on 21<sup>st</sup> November 2007</p>	<p><b>Site Activities</b> According to the information provided by RSS, the site of the concern was likely to be the site access at R2 opposite to Lai Chi Kok Park Sports Centre. The construction works at the sports centre included the masonry on retaining wall, surface drain along slope toe, road work at the footpath, street furniture and reinstatement the pavement.</p> <p><b>Environmental Monitoring</b> During the weekly site inspection on 21 November 2007, no non-compliance or major dust generation construction activity was recorded.</p> <p>Accordance to the EM&amp;A programme, the air monitoring station at Lai Chi Kok Sports Centre (AM2), was set up in order to monitor the dust level generated from the construction activities. There was no exceedance of the air quality monitoring results and dust mitigation measures were implemented by the Contractor.</p> <p><b>Conclusion</b> Base on the information collected and the monitoring results, the complaints are considered not justifiable.</p> <p>It was because there was no exceedance of the air quality monitoring results. After receiving the complaint, the Contractor has further enhanced the dust mitigation measures as follows:-</p> <ul style="list-style-type: none"> <li>• Spraying of water for any dust emissive activities;</li> </ul> <p>The environmental conditions of the site will be continuously reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.</p>	Closed
80103	Construction dust of slope works near the junction of King Lai Path and Lai Wan Road	3 <sup>rd</sup> January 2008 (by ET Leader)	Environmental Protection Department (EPD) received a public complaint about the construction dust generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project near the Junction	<p><b>Site Activities</b> Based on the information provided by the ER, the construction site was likely to be the slope CCR-S1 between Lai Wan Road and Lai King Hill Road. According to RSS's record, rock slope stabilization measures was carried on at batter 8 of slope CCR-S1. Rock drilling for installation of rock dowels (6m long) at</p>	Closed

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			<p>of King Lai Path and Lai Wan Road. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 3 January 2008</p> <p>The complaint was raised by a resident via the EPD about the construction dust of slope works near the junction of King Lai Path and Lai Wan Road on 3rd January 2008.</p>	<p>CCR-S1 was commenced on 20 December 2007 and would likely last up to the 2 February 2008</p> <p><b>Environmental Monitoring</b> During the ET's weekly environmental site inspection on 28 December 2007 and 9 January 2008 and the monthly site inspection on the 2 January 2008. There was no serious dust nuisance induced by the Projects at slope CCR-S1 while rock drilling was carrying out at the slope.</p> <p>As advised by the RSS, a three side's tarpaulin covering sheets were provided by the Contractor to suppress the dust nuisance generated from the rock drilling works. On 5 January 2008, the drilling rig was wrapped with a we thick towel and the speed of the drill was controlled. Besides, there was no Action/Limit Level exceedance for both 1-hr and 24-hr TSP identified during the period in between the 20 December2007 and 9 January 2008.</p> <p><b>Conclusion</b> Base on the information collected and the monitoring results, the complaint was considered not justifiable. It was because there was no exceedance of the air quality monitoring results and dust mitigation measures were implemented by the Contractor during the rock drilling works. After receiving the complaint, the Contractor has further enhanced the dust mitigation measures as follows:-</p> <ul style="list-style-type: none"> <li>• Apply water spraying for any dust emissive activities, such as breaking, excavation, loading and unloading of dusty materials</li> <li>• Cover long-term idle exposed slope surfaces and stockpiles with tarpaulin sheets;</li> </ul> <p>The environmental conditions of the site will be continuously reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.</p>	
80121	Construction Noise and Dust	21st January 2008	The Resident Site Staff (RSS) received	<p><b>Site Activities</b> According to RSS's record, rock dowel installation for slope</p>	Closed

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	near Nob Hill	(by ET Leader)	<p>a verbal complaint from a Legislative Council member, Mr. Cheung, on 21 January 2008. The complaint was about the construction noise and dust generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project near Nob Hill. The RSS subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on the same day</p> <p>The complaint was raised by a Legislative Council member, Mr. Cheung, via the RSS about the construction noise and dust nuisances generated near Nob Hill on 21st January 2008.</p>	<p>stabilization at CCR-S1 was commenced on 20 December 2007 and would likely last up to the 2 February 2008.</p> <p><b>Contractor Action</b> As advised by the RSS, tarpaulin covering, water spraying and temporary noise absorbent materials were provided by the Contractor to suppress the dust and noise nuisance generated from the rock drilling works. Besides, the working hours was lie in between the normal working hours from 7am to 7pm</p> <p><b>Environmental Monitoring</b> Weekly site inspection was performed by ET on 28<sup>th</sup> December 2007, 2<sup>nd</sup>, 9<sup>th</sup>, 16<sup>th</sup>, 23<sup>rd</sup> January 2008. A joint environmental site audit was also conducted on 2<sup>nd</sup> January 2008 with the representatives of IEC, RSS, the Contractor and ET. There was no non-compliance or observation with regard to noise and dust nuisance at the concerned site was recorded by the auditors during the site inspections carried out in December and January 2008.</p> <p><b>Review of Environmental Monitoring Results</b> The routine monitoring stations, which are in the vicinity of the concerned works areas, include: <u>Noise Monitoring</u> NM8a: M/F of Nob Hill NM8b: 3/F of Nob Hill <u>Air Quality (1-hr TSP / 24-hr TSP) Monitoring</u> AM2: R/F of Lai Chi Kok Sports Centre No Action / Limit level exceedance was identified in the period between 20<sup>th</sup> December 2007 and 24 January 2008.</p> <p><b>Conclusion</b> Based on the RSS's information, environmental monitoring results as well as the observations made during site inspections, this complaint is considered to be invalid and not due to the construction activities of the Project.</p> <p>It was because there was no exceedance of the air quality monitoring results and dust mitigation measures were</p>	



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				<p>implemented by the Contractor during the rock drilling works.</p> <p>However, the Contractor was still recommended to take the following mitigation measures to minimize the environmental impact on the nearby community:</p> <p><u>Dust Nuisance</u></p> <ul style="list-style-type: none"> <li>• To cover excavated dusty materials by impervious sheeting;</li> <li>• To provide water spray for haul roads, loading/unloading and concrete breaking operations;</li> <li>• To perform wheel wash for every vehicle immediately before leaving the site;</li> <li>• Apply water spraying for any dust emissive activities, such as breaking, excavation, loading and unloading of dusty materials; and</li> <li>• Cover long-term idle exposed slope surfaces and stockpiles with tarpaulin sheets.</li> </ul> <p><u>Construction Noise</u></p> <ul style="list-style-type: none"> <li>• To space out noisy equipment and position it as far away as possible from the sensitive receivers;</li> <li>• To avoid concurrent uses of noisy equipment near the sensitive area;</li> <li>• To ensure the equipment are maintaining in good operation condition;</li> <li>• To turn off any idle equipment on site;</li> <li>• Silence-type breakers were employed for the rock breaking work close to the sensitive receivers;</li> <li>• To wrap the breaker with acoustic material; and</li> <li>• While the permitted hours for construction works are 7am to 7pm on non-holidays, the Contractor has commenced the rock breaking activity after 8:30am. This arrangement could effectively reduce the disturbance to the residents within the more sensitive time period (7:00 am to 8:30 am).</li> </ul> <p>The environmental conditions of the site will be continuously</p>	

<b>Log Ref.</b>	<b>Location</b>	<b>Received Date</b>	<b>Details of Complaint</b>	<b>Investigation/Mitigation Action</b>	<b>Status</b>
				reviewed by the Resident Site Staff and the Environmental Team through site inspections and monitoring exercises.	