

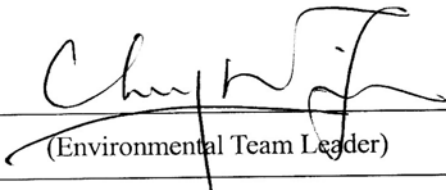
# Highways Department

**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)**

December 2006

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.

CINOTECH accepts no responsibility for changes made to this report by third parties.

**CINOTECH CONSULTANTS LTD**

Room 1602-1610, Delta House,  
3 On Yiu Street,

Shatin, NT, Hong Kong

Tel: (852) 2151 2083 Fax: (852) 3107 1388

Email: [info@cinotech.com.hk](mailto:info@cinotech.com.hk)

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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 37<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 December 2006 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:

- Rock dowel installation at slope CCR-S1 & CCR-S4.
- Bulk excavation works at slope CCR-S4, CCR-R6 and LCK-R3.
- Retaining wall construction at CCR-R1 to CCR-R6 and LCK-R2 to LCK-R3.
- Drainage works at Lai Po Road, Castle Peak Road and Butterfly Valley Road.
- Offsite fabrication of parapet and noise barrier.
- Cast in-situ of slip roads C and D.
- Parapet installation for Main Viaduct and slip roads A to D.
- Erection of noise barrier at slip roads A, B C, D and Main Viaduct.
- Construction of Wai Man Tsuen pump house & Irrigation Pump House near Pier C14 and kiosk at CCR-S1.
- Hydroseeding for Slope CCR-S1 & S3.

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

- Cable-laying at Section A.

### 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	N/A

## **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). Total of 3 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	1	Noise	Complaint investigation	Investigation report was 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:

- Rock dowel installation at slope CCR-S1 & CCR-S4.
- Bulk excavation works at slope CCR-S4 and LCK-R3.
- Retaining wall construction at CCR-R1 to CCR-R6 and LCK-R2 to LCK-R3.
- Underground Drainage works at Slip Road C & D, Lai Po Road, Castle Peak Road and Butterfly Valley Road.
- Offsite fabrication of parapet and noise barrier.
- Cast in-situ of slip roads C and D. Parapet installation for Main Viaduct and slip roads A to D.
- Erection of noise barrier at slip roads A, B, C, D and Main Viaduct.
- Construction of Wai Man Tsuen pump house & Irrigation Pump House near Pier C14 and kiosk at CCR-S1.
- Hydroseeding for Slope CCR-S1 & S3.
- Roadworks at Lai Po Road and Butterfly Valley Road.

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

- Cable-laying at Sections A and B.
- Field equipment installation at Sections A and B.

The anticipated environmental issues will be mainly on dust impact from bulk excavation works and noise nuisance from construction of Wai Man Tsuen Pump House and Irrigation Pump House near Pier C14.

## 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 August 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. David YEUNG of CH2M HILL Hong Kong Ltd. was appointed as the IEC under Condition 2.1 of the EP. This is the 37<sup>th</sup> monthly EM&A report summarizing the EM&A works for the Project in December 2006.

### **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 Kong 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:
- Rock dowel installation at slope CCR-S1 & CCR-S4.
  - Bulk excavation works at slope CCR-S4, CCR-R6 and LCK-R3.
  - Retaining wall construction at CCR-R1 to CCR-R6 and LCK-R2 to LCK-R3.
  - Drainage works at Lai Po Road, Castle Peak Road and Butterfly Valley Road.
  - Offsite fabrication of parapet and noise barrier.
  - Cast in-situ of slip roads C and D.
  - Parapet installation for Main Viaduct and slip roads A to D.
  - Erection of noise barrier at slip roads A, B C, D and Main Viaduct.
  - Construction of Wai Man Tsuen pump house & Irrigation Pump House near Pier C14 and kiosk at CCR-S1.
  - Hydroseeding for Slope CCR-S1 & S3.

- 1.12 The site activities for TCSS works undertaken in the reporting month included:
- Cable-laying at Section A.

**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. Henry Liu	SRE	2991 1068	
Mr. Joseph Chi	RE	2991 1034			
Cinotech	Environmental Team	Dr. Priscilla Choy	ET Leader	2151 2089	3107 1388
		Mr. Jesse Yuen	Project Manager	2151 2091	
		Mr. Mitch Law	Project Coordinator	2151 2095	
		Mr. Ray Yan	Audit Team Leader	2947 8682	
		Mr. Henry Leung	Monitoring Team Leader	2151 2087	
CH2M	Independent Environmental Checker	Mr. David Yeung	Independent Environmental Checker	2872 2934	2507 2293
		Mr. Billy Yu	Assistant Independent Environmental Checker	2872 2949	
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. Joseph Chow	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*	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 No Limit Level exceedance was recorded in the reporting month and 1 Action Level exceedance was triggered due to receiving a noise complaint.
- 3.16 The complaint was referred by EPD on 5<sup>th</sup> December 2006 construction noise near Banyan Garden within the period of 01:00 – 02:00hr on 29<sup>th</sup> November 2006. The complaint was considered unjustifiable and the complaint investigation report was submitted to EPD on 12<sup>th</sup> December 2006.
- 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 5<sup>th</sup>, 13<sup>th</sup>, 20<sup>th</sup> and 27<sup>th</sup> December 2006 by ET. Site audits for TCSS contract were conducted on 20<sup>th</sup> and 27<sup>th</sup> December 2006 by 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 permits/licenses obtained for the Project are summarized in **Table 4.1**. Total of 3 new CNPs was 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>(c) 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-RW0311-06	6/6/06	5/12/06	<p><i>Location:</i> Butterfly Valley near O Pui Shan Boys' Home</p> <p><i>Time Period:</i> General holiday (including Sundays) between 0700-2300 hours and any day not being a general holiday between 1900-2300 hours.</p>	Expired
GW-RW0381-06	17/7/06	16/12/06	<p><i>Location:</i> Kwai Chung Road near Lai Chi Kok Interchange</p> <p><i>Time Period:</i> Any day not being a general holiday between 2100-2400 (immediately following a general holiday) and 2100-0700 (not immediately following a general holiday).</p>	Expired
GW-RW0393-06	27/7/06	25/1/07	<p><i>Location:</i> Lai Wan Road</p> <p><i>Time Period:</i> Any day not being a general holiday between 2100-2400 (immediately following a general holiday) and 2100-0700 (not immediately following a general holiday).</p>	Valid
GW-RW0408-06	02/8/06	30/12/06	<p><i>Location:</i> Lai Po Road near Hoi Lai Estate</p> <p><i>Time Period:</i> Any day not being a general holiday between 2100-2400 (immediately following a general holiday) and 2100-0700 (not immediately following a general holiday).</p>	Expired

Permit No.	Valid Period		Details	Status
	From	To		
GW-RW0421-06	3/8/06	2/1/07	<i>Location:</i> Lai Po Road near Sham Mong Road <i>Time Period:</i> Any day not being a general holiday between 19:00 - 07:00 and 00:00 - 24:00 (general holiday including Sundays).	Valid
GW-RW0468-06	7/9/06	5/2/07	<i>Location:</i> Ching Cheung Road near Castle Peak Road <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid
GW-RW0498-06	16/9/06	15/3/07	<i>Location:</i> Butterfly Valley <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid
GW-RW0508-06	13/9/06	12/3/07	<i>Location:</i> Butterfly Valley Interchange <i>Time Period:</i> Any day not being a general holiday between 2100-2400 hours (immediately following a general holiday) and between 2100-0700 hours (not immediately following a general holiday).	Valid
GW-RW0509-06	13/9/06	12/3/07	<i>Location:</i> Castle Peak Road and Butterfly Valley Road <i>Time Period:</i> Any day not being a general holiday between 2100-2400 hours (immediately following a general holiday) and between 2100-0700 hours (not immediately following a general holiday).	Cancelled on 9 <sup>th</sup> Oct 2006
GW-RW0513-06	17/9/06	11/3/07	<i>Location:</i> Junction of Castle Peak Road and Ching Cheung Road <i>Time Period:</i> 0900-1900 (general holiday including Sundays).	Valid
GW-RW0515-06	24/9/06	26/12/06	<i>Location:</i> Ching Cheung Road near Butterfly Valley <i>Time Period:</i> 0900-2100 (general holiday including Sundays) and 2100-0700 (any day not being a general holiday).	Expired
GW-RW0558-06	1/10/06	31/3/07	<i>Location:</i> Butterfly Valley Road <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid
GW-RW0563-06	2/10/06	1/4/07	<i>Location:</i> Ching Cheung Road – Lai Wan Road Overpass near Nob Hill <i>Time Period:</i> 0900-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid
GW-RW0565-06	4/10/06	3/4/07	<i>Location:</i> Castle Peak Road near Ching Cheung Road <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid
GW-RW0580-06	9/10/06	9/3/07	<i>Location:</i> Castle Peak Road and Butterfly Road <i>Time Period:</i> Any day not being a general holiday for 2100-2400 (immediately following a general holiday) and 2100-0700 hours (not immediately following a general holiday).	Valid



Permit No.	Valid Period		Details	Status
	From	To		
GW-RW0581-06	7/10/06	6/4/07	<i>Location:</i> Junction of Ching Cheung Road and Castle Peak Road <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid
GW-RW0582-06	9/10/06	8/3/07	<i>Location:</i> Butterfly Valley Interchange <i>Time Period:</i> Any day not being a general holiday for 2100-2400 (immediately following a general holiday) and 2100-0700 hours (not immediately following a general holiday).	Valid
GW-RW0596-06	17/10/06	16/3/07	<i>Location:</i> Ching Cheung Road near Butterfly Valley <i>Time Period:</i> Any day not being a general holiday for 2100-2400 (immediately following a general holiday) and 2100-0700 hours (not immediately following a general holiday).	Cancelled on 24 Nov 06
GW-RW0608-06	26/10/06	19/4/07	<i>Location:</i> Ching Cheung Road near Butterfly Valley <i>Time Period:</i> 0000-2400 (general holiday including Sundays) and 1900-0700 (any day not being a general holiday).	Cancelled on 8 Nov 06
GW-RW0624-06	27/10/06	26/4/07	<i>Location:</i> Kwai Chung Road near Lai Chi Kok Interchange <i>Time Period:</i> Any day not being a general holiday for 2100-2400 (immediately following a general holiday) and 2100-0700 hours (not immediately following a general holiday).	Valid
GW-RW0625-06	31/10/06	28/4/07	<i>Location:</i> Butterfly Valley Road near Lai Chi Kok Reception Centre <i>Time Period:</i> Any day not being a general holiday for 2100-2400 (immediately following a general holiday) and 2100-0700 hours (not immediately following a general holiday).	Valid
GW-RW0642-06	13/11/06	11/4/07	<i>Location:</i> Butterfly Valley Road near Lai Chi Kok Interchange <i>Time Period:</i> Any day not being a general holiday between 2100-2400 hours (immediately following a general holiday) and between 0000-0700 hours & 2100-2400 hours (not immediately following a general holiday).	Valid
GW-RW0643-06	8/11/06	7/5/07	<i>Location:</i> Ching Cheung Road near Butterfly Valley <i>Time Period:</i> 0000-2400 (general holiday including Sundays) and 0000-0700 & 1900-2400 (any day not being a general holiday).	Valid
GW-RN0662-06	24/11/06	19/5/07	<i>Location:</i> Ching Cheung Road near Butterfly Valley <i>Time Period:</i> Any day not being a general holiday for 2100-2400 (immediately following a general holiday) and 2100-0700 hours (not immediately following a general holiday).	Valid
GW-RN0701-06	15/12/06	14/5/07	<i>Location:</i> Lai Po Road near Sham Mong Road <i>Time period:</i> 0000-2400 (general holiday including Sundays) and 0000-0700 & 1900-2400 (any day not being a general holiday).	Valid (New)

Permit No.	Valid Period		Details	Status
	From	To		
GW-RN0728-06	27/12/06	27/1/07	<i>Location: King Lam Street J/O Kom Tsun Street</i> <i>Time period: Any day not being a general holiday for 2100-2400 (immediately following a general holiday) and 2100-0700 hours (not immediately following a general holiday).</i>	Valid (New)
GW-RN0729-06	27/12/06	26/1/07	<i>Location: Ching Cheung Road near Butterfly Valley</i> <i>Time period: 0900-2100 (general holiday including Sundays) and 2100-0700(any day not being a general holiday).</i>	Valid (New)

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

**Table 4.2 Observations and Recommendations of Site Audits for civil works**

Parameters	Date	Observations and Recommendations	Follow-up
<b>Waste/Chemical Management</b>	5-Dec-06	<p><i>Reminder</i> - Improper fuel storage was observed at construction site of Lai Po Road. The Contractor was reminded to remove the oil drum to the designated fuel storage area or provide the drip tray for the oil drum on site properly.</p> <p><i>Reminder</i> - Overloaded capacity of construction wastes were observed at site area of Lai Po Road. The Contractor was reminded to dispose of the wastes regularly on site.</p>	The situation was found improved / rectified during the audit on 13-Dec-06.

### Summary of Exceedances

#### 1-hr and 24-hr TSP Monitoring

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

#### Construction Noise Monitoring

- 4.8 No Limit Level exceedance was recorded in the reporting month and 1 Action Level exceedance was triggered due to receiving a noise complaint.

### Implementation Status of Event Action Plans

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

### Summary of Complaint and Prosecution

- 4.10 Total of 1 complaint was received in the reporting month.
- 4.11 No prosecution was received in the reporting month.
- 4.12 There were 35 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 excavation works, construction of pump station, rock dowel installation and retaining wall at CCR-R1 to CCR-R6 and LCK-R2 to LCK-R3;
- Surface runoff generated at the areas CCR-S1, CCR-S4 and LCK-R3; and
- Dust generation from stockpiles of dusty materials, exposed retaining wall and bulk excavation works and haul road.

### 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:

- Rock dowel installation at slope CCR-S1 & CCR-S4.
- Bulk excavation works at slope CCR-S4 and LCK-R3.
- Retaining wall construction at CCR-R1 to CCR-R6 and LCK-R2 to LCK-R3.
- Underground Drainage works at Slip Road C & D, Lai Po Road, Castle Peak Road and Butterfly Valley Road.
- Offsite fabrication of parapet and noise barrier.
- Cast in-situ of slip roads C and D. Parapet installation for Main Viaduct and slip roads A to D.
- Erection of noise barrier at slip roads A, B, C, D and Main Viaduct.
- Construction of Wai Man Tsuen pump house & Irrigation Pump House near Pier C14 and kiosk at CCR-S1.
- Hydroseeding for Slope CCR-S1 & S3.
- Roadworks at Lai Po Road and Butterfly Valley 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:

- Cable-laying at Sections A and B.
- Field equipment installation at Sections A and B.

## 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 No Limit Level exceedance was recorded in the reporting month and 1 Action Level exceedance was triggered due to receiving a noise complaint.
- 6.4 Total of 1 complaint was 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 and implement temporary drainage system for the upcoming wet season.
- 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 rock dowel installation.
- 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 soil nail installation, loading and unloading of soil materials, excavation works and rock dowel installation.
- 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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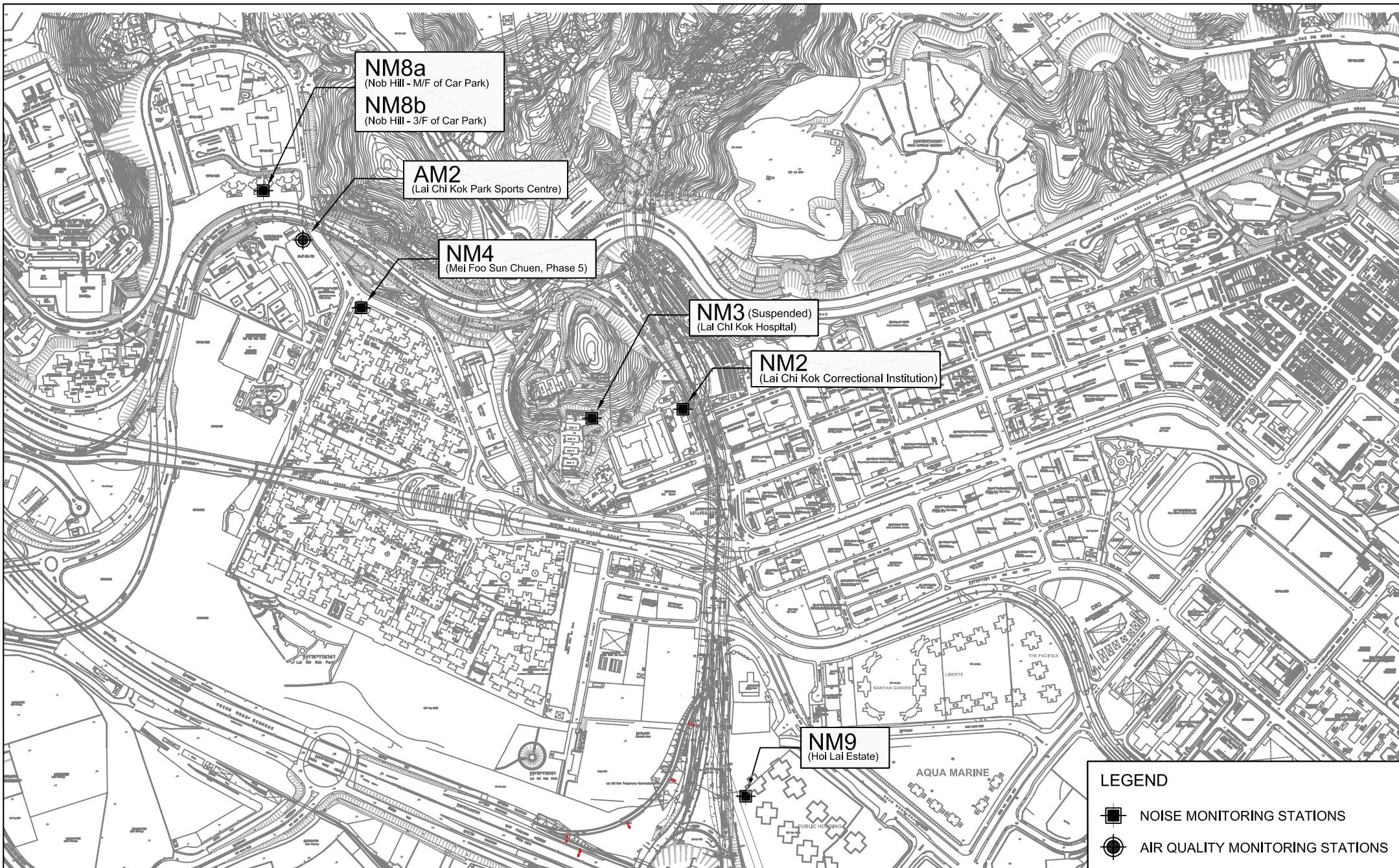
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## FIGURES

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LEGEND	
	NOISE MONITORING STATIONS
	AIR QUALITY MONITORING STATIONS

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)	Project No.	MA3024
Date	2006	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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# 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/06/60502
Date of Issue:	2006-05-02
Date Received:	2006-05-01
Date Tested:	2006-05-01
Date Completed:	2006-05-02

**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 : 66%  
Pressure : 1018.4 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**  
Laboratory Manager



TISCH ENVIROMENTAL, INC.  
 145 SOUTH MIAMI AVE.  
 VILLAGE OF CLEVELS, 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 13, 2006 Rootsmeter S/N 9833620 Ta (K) - 294  
 Operator Tisch Orifice I.D. - 0993 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

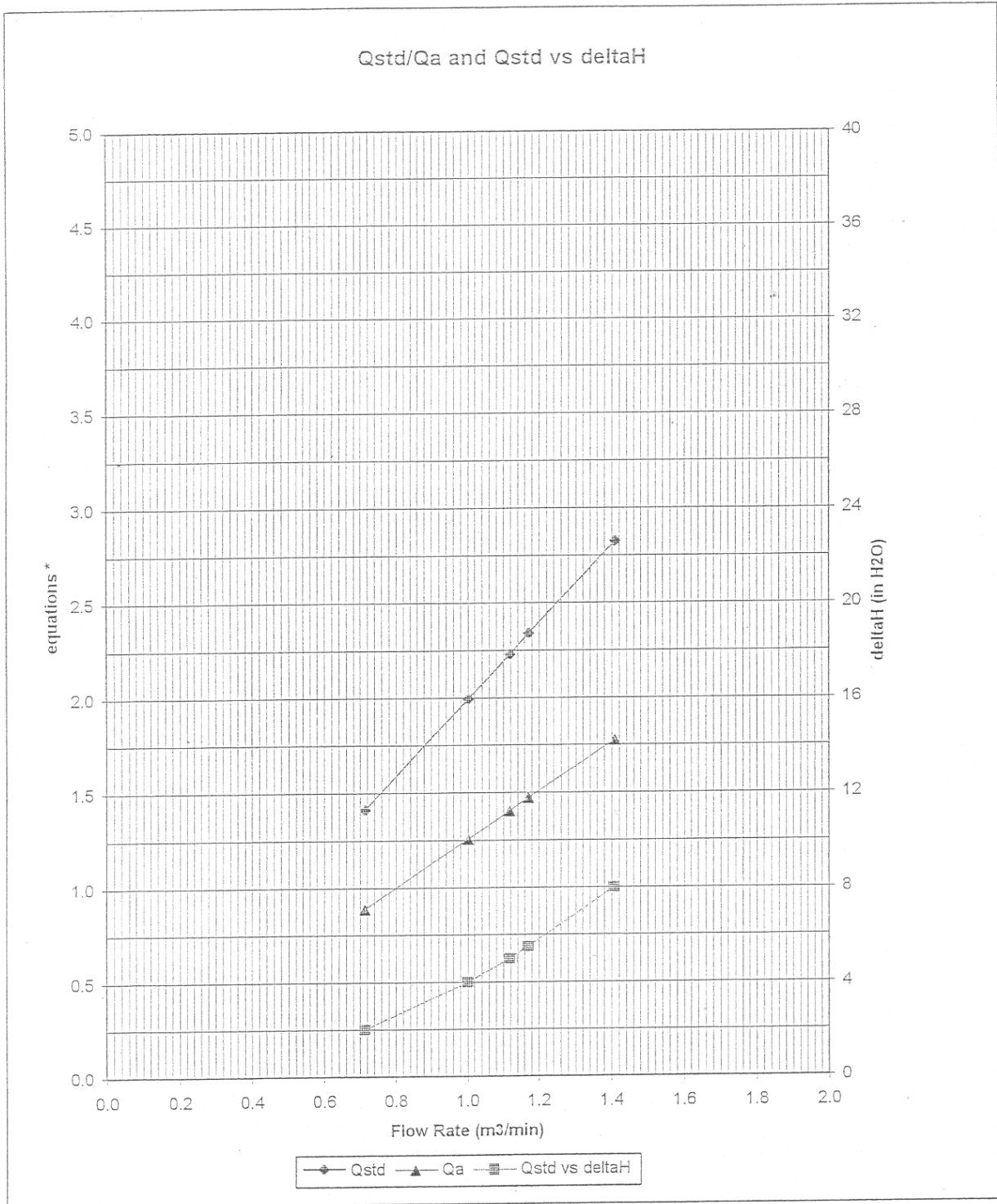
For subsequent flow rate calculations:

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.  
 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



\* y-axis equations:

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

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

#0993

# 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/N/51216/1
Date of Issue:	2005-12-16
Date Received:	2005-12-15
Date Tested:	2005-12-15
Date Completed:	2005-12-16
Next Due Date:	2006-12-15

**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.	: 2337665
Microphone No.	: 2289749
Equipment No.	: N-01-01

#### Test conditions:

Room Temperature	: 20 degree Celsius
Relative Humidity	: 63%

#### 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**  
Operation Manager



# 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/N/61215/1
Date of Issue:	2006-12-15
Date Received:	2006-12-14
Date Tested:	2006-12-15
Date Completed:	2006-12-15
Next Due Date:	2007-12-14

**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.	: 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**  
Operation Manager



# 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/N/61116/1
Date of Issue:	2006-11-16
Date Received:	2006-11-15
Date Tested:	2006-11-15
Date Completed:	2006-11-16
Next Due Date:	2007-11-15

**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**

Operation Manager

# 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  
1601-1610 Delta House,  
3 On Yiu Street,  
Shatin, N.T.

Test Report No.:	C/N/60904-1
Date of Issue:	2006-09-04
Date Received:	2006-09-02
Date Tested:	2006-09-02
Date Completed:	2006-09-04
Next Due Date:	2007-09-03

**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	: 23 degree Celsius
Relative Humidity	: 64%

#### 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*

**PATRICK TSE**  
*Laborary Manager*

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# 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/N/60904-2
Date of Issue:	2006-09-04
Date Received:	2006-09-02
Date Tested:	2006-09-02
Date Completed:	2006-09-04
Next Due Date:	2007-09-03

**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	: 23 degree Celsius
Relative Humidity	: 63%
Pressure	: 1006.5hPa

#### 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**

Operation Manager

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# 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/N/61014/1
Date of Issue:	2006-10-14
Date Received:	2006-10-13
Date Tested:	2006-10-14
Date Completed:	2006-10-14
Next Due Date:	2007-10-13

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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

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



**PATRICK TSE**

*Operation Manager*

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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/N/61116/2
Date of Issue:	2006-11-16
Date Received:	2006-11-15
Date Tested:	2006-11-15
Date Completed:	2006-11-16
Next Due Date:	2007-11-15

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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 .*

**PATRICK TSE**

*Operation Manager*

# 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/06/60304
Date of Issue:	2006-03-04
Date Received:	2006-03-03
Date Tested:	2006-03-03
Date Completed:	2006-03-04
Next Due Date:	2007-03-04

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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	: 71%
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

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



**PATRICK TSE**

Operation Manager



# WELLAB LTD.

606 - 608 Cornell Centre,  
50 Wing Tai Road,  
Chai Wan, Hong Kong.  
Tel: (852) 2898 7388  
Fax: (852) 2898 7076

## TEST REPORT

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

Test Report No.:	C/N/60904-3
Date of Issue:	2006-09-04
Date Received:	2006-09-02
Date Tested:	2006-09-02
Date Completed:	2006-09-04
Next Due Date:	2007-09-03

**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	: 23 degree Celsius
Relative Humidity	: 63%
Pressure	: 1020.1hPa

### 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**  
Operation Manager

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**APPENDIX C  
ENVIRONMENTAL MONITORING AND  
AUDIT SCHEDULE**

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**Environmental Monitoring for Lai Chi Kok Viaduct  
Air Quality and Noise Monitoring Schedule for December 2006**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>26-Nov</b>	27-Nov	28-Nov	29-Nov	30-Nov	1-Dec	2-Dec
	24 hr TSP	1 hr TSP	1 hr TSP Noise		1 hr TSP	24 hr TSP
<b>3-Dec</b>	4-Dec	5-Dec	6-Dec	7-Dec	8-Dec	9-Dec
	1 hr TSP	1 hr TSP Noise		1 hr TSP	24 hr TSP	
<b>10-Dec</b>	11-Dec	12-Dec	13-Dec	14-Dec	15-Dec	16-Dec
	1 hr TSP			1 hr TSP Noise 24 hr TSP	1 hr TSP	
<b>17-Dec</b>	18-Dec	19-Dec	20-Dec	21-Dec	22-Dec	23-Dec
		1 hr TSP	24 hr TSP	1 hr TSP Noise	1 hr TSP	
<b>24-Dec</b>	<b>25-Dec</b>	<b>26-Dec</b>	27-Dec	28-Dec	29-Dec	30-Dec
			1 hr TSP 24 hr TSP	1 hr TSP Noise	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 January 2007**

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

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

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## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
1-Dec-2006	00:00	2.7	W
1-Dec-2006	01:00	2.5	W
1-Dec-2006	02:00	1.7	WNW
1-Dec-2006	03:00	2.0	W
1-Dec-2006	04:00	2.0	W
1-Dec-2006	05:00	2.0	WSW
1-Dec-2006	06:00	2.2	WSW
1-Dec-2006	07:00	1.9	SW
1-Dec-2006	08:00	2.0	SW
1-Dec-2006	09:00	1.9	SW
1-Dec-2006	10:00	1.4	WSW
1-Dec-2006	11:00	2.3	W
1-Dec-2006	12:00	2.1	WNW
1-Dec-2006	13:00	2.2	W
1-Dec-2006	14:00	2.3	W
1-Dec-2006	15:00	2.2	W
1-Dec-2006	16:00	3.0	W
1-Dec-2006	17:00	2.5	WNW
1-Dec-2006	18:00	2.3	WNW
1-Dec-2006	19:00	1.7	WNW
1-Dec-2006	20:00	1.4	SW
1-Dec-2006	21:00	1.5	SSW
1-Dec-2006	22:00	2.0	SW
1-Dec-2006	23:00	2.3	SW
2-Dec-2006	00:00	2.3	SW
2-Dec-2006	01:00	1.9	SW
2-Dec-2006	02:00	2.6	SW
2-Dec-2006	03:00	2.3	W
2-Dec-2006	04:00	2.5	WSW
2-Dec-2006	05:00	2.0	W
2-Dec-2006	06:00	1.9	W
2-Dec-2006	07:00	1.9	W
2-Dec-2006	08:00	1.4	WNW
2-Dec-2006	09:00	1.3	W
2-Dec-2006	10:00	1.3	W
2-Dec-2006	11:00	1.8	W
2-Dec-2006	12:00	1.8	SSW
2-Dec-2006	13:00	2.2	SW
2-Dec-2006	14:00	2.1	WSW
2-Dec-2006	15:00	2.5	W
2-Dec-2006	16:00	2.3	WNW
2-Dec-2006	17:00	1.7	W
2-Dec-2006	18:00	1.7	WNW
2-Dec-2006	19:00	0.9	SSW
2-Dec-2006	20:00	0.9	WNW
2-Dec-2006	21:00	1.7	SW
2-Dec-2006	22:00	2.0	WNW
2-Dec-2006	23:00	1.8	WSW
3-Dec-2006	00:00	2.0	WSW
3-Dec-2006	01:00	2.5	W
3-Dec-2006	02:00	2.5	WSW
3-Dec-2006	03:00	2.2	W
3-Dec-2006	04:00	2.5	W
3-Dec-2006	05:00	2.9	SW

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
3-Dec-2006	06:00	2.4	WNW
3-Dec-2006	07:00	2.5	WSW
3-Dec-2006	08:00	2.0	WSW
3-Dec-2006	09:00	2.6	W
3-Dec-2006	10:00	2.2	WSW
3-Dec-2006	11:00	2.2	WSW
3-Dec-2006	12:00	2.0	W
3-Dec-2006	13:00	2.2	WNW
3-Dec-2006	14:00	2.1	WNW
3-Dec-2006	15:00	2.5	WNW
3-Dec-2006	16:00	2.1	WNW
3-Dec-2006	17:00	1.9	WNW
3-Dec-2006	18:00	0.8	WNW
3-Dec-2006	19:00	0.4	WNW
3-Dec-2006	20:00	0.2	WSW
3-Dec-2006	21:00	0.1	SSW
3-Dec-2006	22:00	0.2	SW
3-Dec-2006	23:00	0.3	WNW
4-Dec-2006	00:00	1.6	WNW
4-Dec-2006	01:00	2.6	WNW
4-Dec-2006	02:00	3.1	WNW
4-Dec-2006	03:00	2.7	WNW
4-Dec-2006	04:00	2.1	WSW
4-Dec-2006	05:00	2.2	SSW
4-Dec-2006	06:00	1.9	SW
4-Dec-2006	07:00	2.1	WNW
4-Dec-2006	08:00	2.2	WNW
4-Dec-2006	09:00	2.9	WNW
4-Dec-2006	10:00	3.7	WNW
4-Dec-2006	11:00	3.4	WNW
4-Dec-2006	12:00	4.2	WNW
4-Dec-2006	13:00	4.1	WNW
4-Dec-2006	14:00	3.8	WNW
4-Dec-2006	15:00	2.5	WSW
4-Dec-2006	16:00	2.4	SW
4-Dec-2006	17:00	2.1	SW
4-Dec-2006	18:00	1.6	S
4-Dec-2006	19:00	0.6	S
4-Dec-2006	20:00	0.5	SSW
4-Dec-2006	21:00	0.5	SW
4-Dec-2006	22:00	0.6	SW
4-Dec-2006	23:00	0.4	SW
5-Dec-2006	00:00	0.8	WSW
5-Dec-2006	01:00	0.9	WSW
5-Dec-2006	02:00	1.1	WNW
5-Dec-2006	03:00	1.5	WNW
5-Dec-2006	04:00	1.8	WNW
5-Dec-2006	05:00	1.7	WNW
5-Dec-2006	06:00	1.4	W
5-Dec-2006	07:00	1.4	W
5-Dec-2006	08:00	1.6	WNW
5-Dec-2006	09:00	1.8	W
5-Dec-2006	10:00	1.9	WSW
5-Dec-2006	11:00	1.7	W

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
5-Dec-2006	12:00	2.2	WSW
5-Dec-2006	13:00	2.3	SW
5-Dec-2006	14:00	2.1	SW
5-Dec-2006	15:00	2.1	SW
5-Dec-2006	16:00	1.9	WSW
5-Dec-2006	17:00	1.9	SW
5-Dec-2006	18:00	1.3	SW
5-Dec-2006	19:00	0.9	SW
5-Dec-2006	20:00	0.9	SW
5-Dec-2006	21:00	0.9	WSW
5-Dec-2006	22:00	0.9	WSW
5-Dec-2006	23:00	0.0	---
6-Dec-2006	00:00	0.0	---
6-Dec-2006	01:00	0.0	---
6-Dec-2006	02:00	0.0	---
6-Dec-2006	03:00	0.0	---
6-Dec-2006	04:00	0.0	---
6-Dec-2006	05:00	0.0	---
6-Dec-2006	06:00	1.3	WNW
6-Dec-2006	07:00	1.0	WSW
6-Dec-2006	08:00	1.2	WSW
6-Dec-2006	09:00	1.1	WNW
6-Dec-2006	10:00	1.3	WNW
6-Dec-2006	11:00	2.0	WNW
6-Dec-2006	12:00	2.4	W
6-Dec-2006	13:00	2.3	WSW
6-Dec-2006	14:00	2.1	WSW
6-Dec-2006	15:00	2.7	SW
6-Dec-2006	16:00	1.8	SW
6-Dec-2006	17:00	1.4	WNW
6-Dec-2006	18:00	1.8	WNW
6-Dec-2006	19:00	1.4	WNW
6-Dec-2006	20:00	1.4	WNW
6-Dec-2006	21:00	1.4	WSW
6-Dec-2006	22:00	0.9	WSW
6-Dec-2006	23:00	0.8	WNW
7-Dec-2006	00:00	0.7	WSW
7-Dec-2006	01:00	1.0	WSW
7-Dec-2006	02:00	1.0	WSW
7-Dec-2006	03:00	0.8	W
7-Dec-2006	04:00	1.1	SW
7-Dec-2006	05:00	1.0	WNW
7-Dec-2006	06:00	1.1	WSW
7-Dec-2006	07:00	1.3	WSW
7-Dec-2006	08:00	1.2	WSW
7-Dec-2006	09:00	1.2	WSW
7-Dec-2006	10:00	1.2	SW
7-Dec-2006	11:00	1.0	WSW
7-Dec-2006	12:00	1.7	WSW
7-Dec-2006	13:00	2.1	SW
7-Dec-2006	14:00	1.5	W
7-Dec-2006	15:00	2.1	SW
7-Dec-2006	16:00	1.9	WNW
7-Dec-2006	17:00	1.2	WSW



## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
7-Dec-2006	18:00	1.4	WSW
7-Dec-2006	19:00	1.5	W
7-Dec-2006	20:00	0.0	---
7-Dec-2006	21:00	0.0	---
7-Dec-2006	22:00	0.0	---
7-Dec-2006	23:00	1.8	WNW
8-Dec-2006	00:00	1.4	WNW
8-Dec-2006	01:00	1.3	WNW
8-Dec-2006	02:00	1.2	WNW
8-Dec-2006	03:00	1.5	W
8-Dec-2006	04:00	1.6	WNW
8-Dec-2006	05:00	2.0	WNW
8-Dec-2006	06:00	1.5	W
8-Dec-2006	07:00	1.8	W
8-Dec-2006	08:00	2.2	W
8-Dec-2006	09:00	1.5	W
8-Dec-2006	10:00	1.6	WNW
8-Dec-2006	11:00	2.1	WNW
8-Dec-2006	12:00	2.5	WNW
8-Dec-2006	13:00	2.5	W
8-Dec-2006	14:00	2.4	W
8-Dec-2006	15:00	1.5	WSW
8-Dec-2006	16:00	1.8	WSW
8-Dec-2006	17:00	1.3	WSW
8-Dec-2006	18:00	1.0	S
8-Dec-2006	19:00	0.0	S
8-Dec-2006	20:00	0.5	S
8-Dec-2006	21:00	0.8	S
8-Dec-2006	22:00	0.8	WSW
8-Dec-2006	23:00	0.7	WSW
9-Dec-2006	00:00	0.7	S
9-Dec-2006	01:00	1.0	S
9-Dec-2006	02:00	1.1	S
9-Dec-2006	03:00	1.3	S
9-Dec-2006	04:00	1.2	SW
9-Dec-2006	05:00	0.9	SW
9-Dec-2006	06:00	0.9	WSW
9-Dec-2006	07:00	0.8	SW
9-Dec-2006	08:00	0.4	S
9-Dec-2006	09:00	1.0	WSW
9-Dec-2006	10:00	2.1	SW
9-Dec-2006	11:00	1.5	SW
9-Dec-2006	12:00	1.6	W
9-Dec-2006	13:00	1.4	W
9-Dec-2006	14:00	1.8	W
9-Dec-2006	15:00	1.5	WSW
9-Dec-2006	16:00	1.4	SW
9-Dec-2006	17:00	1.5	W
9-Dec-2006	18:00	1.1	SW
9-Dec-2006	19:00	1.5	SW
9-Dec-2006	20:00	1.4	W
9-Dec-2006	21:00	1.3	WSW
9-Dec-2006	22:00	1.3	WSW
9-Dec-2006	23:00	1.3	WSW

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
10-Dec-2006	00:00	1.5	NW
10-Dec-2006	01:00	1.0	N
10-Dec-2006	02:00	1.0	WNW
10-Dec-2006	03:00	0.8	W
10-Dec-2006	04:00	0.7	WSW
10-Dec-2006	05:00	0.5	SW
10-Dec-2006	06:00	0.8	W
10-Dec-2006	07:00	0.5	WSW
10-Dec-2006	08:00	0.7	WSW
10-Dec-2006	09:00	0.6	WSW
10-Dec-2006	10:00	1.1	WNW
10-Dec-2006	11:00	0.6	WNW
10-Dec-2006	12:00	0.8	NE
10-Dec-2006	13:00	0.9	NE
10-Dec-2006	14:00	1.0	NE
10-Dec-2006	15:00	2.2	WNW
10-Dec-2006	16:00	1.8	NW
10-Dec-2006	17:00	1.3	E
10-Dec-2006	18:00	0.4	E
10-Dec-2006	19:00	0.0	ESE
10-Dec-2006	20:00	0.0	ESE
10-Dec-2006	21:00	0.0	ESE
10-Dec-2006	22:00	0.0	ESE
10-Dec-2006	23:00	1.4	SE
11-Dec-2006	00:00	0.0	SE
11-Dec-2006	01:00	0.0	---
11-Dec-2006	02:00	0.0	W
11-Dec-2006	03:00	0.0	---
11-Dec-2006	04:00	0.0	---
11-Dec-2006	05:00	0.0	---
11-Dec-2006	06:00	0.0	WSW
11-Dec-2006	07:00	0.0	WSW
11-Dec-2006	08:00	0.0	WNW
11-Dec-2006	09:00	0.0	---
11-Dec-2006	10:00	0.4	W
11-Dec-2006	11:00	0.4	WNW
11-Dec-2006	12:00	0.9	N
11-Dec-2006	13:00	0.2	N
11-Dec-2006	14:00	1.3	W
11-Dec-2006	15:00	0.9	W
11-Dec-2006	16:00	0.3	WSW
11-Dec-2006	17:00	0.1	WSW
11-Dec-2006	18:00	1.3	WSW
11-Dec-2006	19:00	1.8	WSW
11-Dec-2006	20:00	1.8	WSW
11-Dec-2006	21:00	2.7	WSW
11-Dec-2006	22:00	2.2	SW
11-Dec-2006	23:00	2.7	WSW
12-Dec-2006	00:00	3.1	SW
12-Dec-2006	01:00	2.9	W
12-Dec-2006	02:00	1.8	W
12-Dec-2006	03:00	2.7	W
12-Dec-2006	04:00	2.7	W
12-Dec-2006	05:00	3.1	SW

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
12-Dec-2006	06:00	2.6	SW
12-Dec-2006	07:00	4.0	WSW
12-Dec-2006	08:00	3.6	WSW
12-Dec-2006	09:00	4.0	WNW
12-Dec-2006	10:00	5.4	WNW
12-Dec-2006	11:00	4.9	WNW
12-Dec-2006	12:00	5.8	WNW
12-Dec-2006	13:00	5.9	WNW
12-Dec-2006	14:00	4.9	WNW
12-Dec-2006	15:00	4.0	WNW
12-Dec-2006	16:00	3.0	WSW
12-Dec-2006	17:00	3.5	WSW
12-Dec-2006	18:00	2.7	WNW
12-Dec-2006	19:00	1.5	WNW
12-Dec-2006	20:00	0.9	WNW
12-Dec-2006	21:00	0.4	WNW
12-Dec-2006	22:00	0.9	WNW
12-Dec-2006	23:00	1.3	WNW
13-Dec-2006	00:00	4.0	WNW
13-Dec-2006	01:00	4.9	W
13-Dec-2006	02:00	4.5	WSW
13-Dec-2006	03:00	3.1	WNW
13-Dec-2006	04:00	3.6	WNW
13-Dec-2006	05:00	3.6	W
13-Dec-2006	06:00	3.6	WNW
13-Dec-2006	07:00	3.4	WNW
13-Dec-2006	08:00	3.6	WNW
13-Dec-2006	09:00	3.8	W
13-Dec-2006	10:00	3.1	WNW
13-Dec-2006	11:00	1.3	WNW
13-Dec-2006	12:00	2.7	WNW
13-Dec-2006	13:00	2.8	WNW
13-Dec-2006	14:00	3.1	W
13-Dec-2006	15:00	3.6	WNW
13-Dec-2006	16:00	2.7	WNW
13-Dec-2006	17:00	2.8	WNW
13-Dec-2006	18:00	2.8	W
13-Dec-2006	19:00	2.8	W
13-Dec-2006	20:00	2.7	WNW
13-Dec-2006	21:00	1.8	SW
13-Dec-2006	22:00	1.8	SSW
13-Dec-2006	23:00	2.5	SSE
14-Dec-2006	00:00	2.5	NNE
14-Dec-2006	01:00	2.6	NNE
14-Dec-2006	02:00	2.9	NNE
14-Dec-2006	03:00	2.9	N
14-Dec-2006	04:00	3.4	N
14-Dec-2006	05:00	3.4	WSW
14-Dec-2006	06:00	4.5	W
14-Dec-2006	07:00	4.5	W
14-Dec-2006	08:00	4.6	W
14-Dec-2006	09:00	4.6	N
14-Dec-2006	10:00	3.5	N
14-Dec-2006	11:00	3.8	N

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
14-Dec-2006	12:00	5.0	WNW
14-Dec-2006	13:00	5.0	WNW
14-Dec-2006	14:00	3.1	WNW
14-Dec-2006	15:00	4.0	WNW
14-Dec-2006	16:00	4.0	WNW
14-Dec-2006	17:00	4.5	WNW
14-Dec-2006	18:00	4.6	W
14-Dec-2006	19:00	4.5	WSW
14-Dec-2006	20:00	3.3	SW
14-Dec-2006	21:00	2.9	WSW
14-Dec-2006	22:00	2.3	WNW
14-Dec-2006	23:00	2.4	WNW
15-Dec-2006	00:00	2.1	WNW
15-Dec-2006	01:00	2.3	WNW
15-Dec-2006	02:00	2.4	WNW
15-Dec-2006	03:00	3.1	WNW
15-Dec-2006	04:00	3.9	WNW
15-Dec-2006	05:00	3.6	W
15-Dec-2006	06:00	3.7	WNW
15-Dec-2006	07:00	4.1	WSW
15-Dec-2006	08:00	2.8	SW
15-Dec-2006	09:00	2.3	WNW
15-Dec-2006	10:00	2.8	WNW
15-Dec-2006	11:00	1.9	WNW
15-Dec-2006	12:00	2.3	WSW
15-Dec-2006	13:00	3.2	WSW
15-Dec-2006	14:00	3.2	WNW
15-Dec-2006	15:00	3.7	WNW
15-Dec-2006	16:00	3.2	WSW
15-Dec-2006	17:00	1.0	WSW
15-Dec-2006	18:00	1.9	SW
15-Dec-2006	19:00	1.9	SW
15-Dec-2006	20:00	2.8	SW
15-Dec-2006	21:00	3.2	WSW
15-Dec-2006	22:00	3.2	WNW
15-Dec-2006	23:00	3.7	WNW
16-Dec-2006	00:00	3.7	WNW
16-Dec-2006	01:00	3.2	WNW
16-Dec-2006	02:00	4.1	WSW
16-Dec-2006	03:00	1.4	WSW
16-Dec-2006	04:00	0.0	---
16-Dec-2006	05:00	0.0	E
16-Dec-2006	06:00	0.0	---
16-Dec-2006	07:00	0.0	---
16-Dec-2006	08:00	0.0	---
16-Dec-2006	09:00	0.0	---
16-Dec-2006	10:00	0.0	---
16-Dec-2006	11:00	0.0	---
16-Dec-2006	12:00	0.0	E
16-Dec-2006	13:00	0.0	W
16-Dec-2006	14:00	0.5	WNW
16-Dec-2006	15:00	0.0	WNW
16-Dec-2006	16:00	0.0	SW
16-Dec-2006	17:00	0.0	SSW

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
16-Dec-2006	18:00	1.4	SSW
16-Dec-2006	19:00	1.0	SW
16-Dec-2006	20:00	1.4	W
16-Dec-2006	21:00	1.0	WNW
16-Dec-2006	22:00	2.3	SW
16-Dec-2006	23:00	1.9	SW
17-Dec-2006	00:00	1.0	SW
17-Dec-2006	01:00	3.3	WSW
17-Dec-2006	02:00	1.9	WSW
17-Dec-2006	03:00	1.5	WNW
17-Dec-2006	04:00	1.9	WNW
17-Dec-2006	05:00	0.6	WNW
17-Dec-2006	06:00	1.5	WNW
17-Dec-2006	07:00	4.2	WNW
17-Dec-2006	08:00	4.2	WNW
17-Dec-2006	09:00	3.3	WNW
17-Dec-2006	10:00	1.5	WNW
17-Dec-2006	11:00	1.5	WNW
17-Dec-2006	12:00	0.3	WNW
17-Dec-2006	13:00	1.0	WSW
17-Dec-2006	14:00	1.0	WNW
17-Dec-2006	15:00	0.6	WNW
17-Dec-2006	16:00	0.3	WNW
17-Dec-2006	17:00	0.5	WNW
17-Dec-2006	18:00	0.0	W
17-Dec-2006	19:00	0.0	W
17-Dec-2006	20:00	0.0	W
17-Dec-2006	21:00	0.0	W
17-Dec-2006	22:00	0.0	W
17-Dec-2006	23:00	1.7	WSW
18-Dec-2006	00:00	1.7	WSW
18-Dec-2006	01:00	1.7	WSW
18-Dec-2006	02:00	2.2	WSW
18-Dec-2006	03:00	2.6	WSW
18-Dec-2006	04:00	1.7	WSW
18-Dec-2006	05:00	2.6	WSW
18-Dec-2006	06:00	2.2	SW
18-Dec-2006	07:00	1.3	WSW
18-Dec-2006	08:00	0.4	WSW
18-Dec-2006	09:00	0.4	WSW
18-Dec-2006	10:00	1.3	WSW
18-Dec-2006	11:00	1.3	WSW
18-Dec-2006	12:00	1.3	WSW
18-Dec-2006	13:00	1.3	WNW
18-Dec-2006	14:00	1.3	W
18-Dec-2006	15:00	0.8	WSW
18-Dec-2006	16:00	0.4	W
18-Dec-2006	17:00	0.5	WNW
18-Dec-2006	18:00	0.4	W
18-Dec-2006	19:00	0.4	W
18-Dec-2006	20:00	0.4	W
18-Dec-2006	21:00	2.6	WNW
18-Dec-2006	22:00	4.4	WNW
18-Dec-2006	23:00	5.3	W

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
19-Dec-2006	00:00	3.5	WSW
19-Dec-2006	01:00	4.0	WNW
19-Dec-2006	02:00	4.0	WNW
19-Dec-2006	03:00	2.2	WNW
19-Dec-2006	04:00	3.1	WNW
19-Dec-2006	05:00	3.1	SW
19-Dec-2006	06:00	3.5	WSW
19-Dec-2006	07:00	2.6	SW
19-Dec-2006	08:00	2.1	WSW
19-Dec-2006	09:00	3.0	WNW
19-Dec-2006	10:00	2.1	WNW
19-Dec-2006	11:00	2.1	WNW
19-Dec-2006	12:00	2.5	WSW
19-Dec-2006	13:00	2.5	WNW
19-Dec-2006	14:00	4.8	WNW
19-Dec-2006	15:00	3.4	WNW
19-Dec-2006	16:00	3.0	WNW
19-Dec-2006	17:00	2.1	WNW
19-Dec-2006	18:00	3.4	W
19-Dec-2006	19:00	0.7	WSW
19-Dec-2006	20:00	1.2	WSW
19-Dec-2006	21:00	0.3	SW
19-Dec-2006	22:00	1.6	SW
19-Dec-2006	23:00	2.1	SW
20-Dec-2006	00:00	2.1	SW
20-Dec-2006	01:00	2.5	NW
20-Dec-2006	02:00	2.1	WNW
20-Dec-2006	03:00	2.1	WNW
20-Dec-2006	04:00	3.4	WNW
20-Dec-2006	05:00	1.6	WNW
20-Dec-2006	06:00	2.2	WNW
20-Dec-2006	07:00	2.2	WNW
20-Dec-2006	08:00	2.2	W
20-Dec-2006	09:00	2.6	W
20-Dec-2006	10:00	1.7	WSW
20-Dec-2006	11:00	2.2	WSW
20-Dec-2006	12:00	1.7	WNW
20-Dec-2006	13:00	2.6	WNW
20-Dec-2006	14:00	3.1	W
20-Dec-2006	15:00	3.1	WNW
20-Dec-2006	16:00	3.5	WNW
20-Dec-2006	17:00	0.0	ENE
20-Dec-2006	18:00	0.0	---
20-Dec-2006	19:00	0.0	---
20-Dec-2006	20:00	0.0	---
20-Dec-2006	21:00	0.0	---
20-Dec-2006	22:00	0.0	---
20-Dec-2006	23:00	3.9	WSW
21-Dec-2006	00:00	3.5	W
21-Dec-2006	01:00	3.5	WSW
21-Dec-2006	02:00	3.5	WNW
21-Dec-2006	03:00	3.5	WNW
21-Dec-2006	04:00	4.0	WNW
21-Dec-2006	05:00	3.1	WNW

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
21-Dec-2006	06:00	2.6	WNW
21-Dec-2006	07:00	2.6	WNW
21-Dec-2006	08:00	2.2	WNW
21-Dec-2006	09:00	0.8	SW
21-Dec-2006	10:00	0.8	SW
21-Dec-2006	11:00	0.4	SSW
21-Dec-2006	12:00	0.8	WSW
21-Dec-2006	13:00	1.7	WSW
21-Dec-2006	14:00	1.7	WSW
21-Dec-2006	15:00	1.3	WSW
21-Dec-2006	16:00	2.6	WSW
21-Dec-2006	17:00	2.2	WSW
21-Dec-2006	18:00	2.2	WSW
21-Dec-2006	19:00	2.2	WSW
21-Dec-2006	20:00	2.2	WSW
21-Dec-2006	21:00	2.2	WSW
21-Dec-2006	22:00	2.2	SW
21-Dec-2006	23:00	3.1	WSW
22-Dec-2006	00:00	2.6	WSW
22-Dec-2006	01:00	2.6	SW
22-Dec-2006	02:00	2.6	WSW
22-Dec-2006	03:00	2.6	WSW
22-Dec-2006	04:00	3.5	SW
22-Dec-2006	05:00	2.6	WSW
22-Dec-2006	06:00	1.7	WSW
22-Dec-2006	07:00	0.8	WSW
22-Dec-2006	08:00	3.0	WNW
22-Dec-2006	09:00	1.7	WSW
22-Dec-2006	10:00	1.7	W
22-Dec-2006	11:00	1.3	WSW
22-Dec-2006	12:00	0.4	WNW
22-Dec-2006	13:00	0.8	W
22-Dec-2006	14:00	0.4	WNW
22-Dec-2006	15:00	1.7	WNW
22-Dec-2006	16:00	2.6	W
22-Dec-2006	17:00	2.6	SSW
22-Dec-2006	18:00	3.1	SSW
22-Dec-2006	19:00	3.1	SSW
22-Dec-2006	20:00	1.7	SSW
22-Dec-2006	21:00	2.2	SSW
22-Dec-2006	22:00	2.2	SW
22-Dec-2006	23:00	1.7	SW
23-Dec-2006	00:00	1.3	SW
23-Dec-2006	01:00	0.8	WSW
23-Dec-2006	02:00	0.0	---
23-Dec-2006	03:00	0.0	---
23-Dec-2006	04:00	0.0	---
23-Dec-2006	05:00	0.0	---
23-Dec-2006	06:00	0.0	---
23-Dec-2006	07:00	0.0	---
23-Dec-2006	08:00	0.0	WSW
23-Dec-2006	09:00	0.0	---
23-Dec-2006	10:00	0.0	---
23-Dec-2006	11:00	0.0	---

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
23-Dec-2006	12:00	1.7	WNW
23-Dec-2006	13:00	1.3	WNW
23-Dec-2006	14:00	1.7	WNW
23-Dec-2006	15:00	1.3	WNW
23-Dec-2006	16:00	4.0	WNW
23-Dec-2006	17:00	6.2	WNW
23-Dec-2006	18:00	6.2	WNW
23-Dec-2006	19:00	5.8	WNW
23-Dec-2006	20:00	5.3	WNW
23-Dec-2006	21:00	5.3	WNW
23-Dec-2006	22:00	4.9	WNW
23-Dec-2006	23:00	3.1	SSW
24-Dec-2006	00:00	2.2	WSW
24-Dec-2006	01:00	1.7	W
24-Dec-2006	02:00	2.6	WSW
24-Dec-2006	03:00	2.6	WNW
24-Dec-2006	04:00	3.5	W
24-Dec-2006	05:00	4.0	WNW
24-Dec-2006	06:00	5.3	WNW
24-Dec-2006	07:00	2.0	WNW
24-Dec-2006	08:00	0.7	SSW
24-Dec-2006	09:00	1.6	WNW
24-Dec-2006	10:00	2.0	WNW
24-Dec-2006	11:00	2.0	WNW
24-Dec-2006	12:00	1.1	W
24-Dec-2006	13:00	2.0	WNW
24-Dec-2006	14:00	2.5	W
24-Dec-2006	15:00	2.5	SW
24-Dec-2006	16:00	2.0	W
24-Dec-2006	17:00	1.6	ESE
24-Dec-2006	18:00	2.5	SSE
24-Dec-2006	19:00	3.4	WSW
24-Dec-2006	20:00	3.4	SW
24-Dec-2006	21:00	2.9	W
24-Dec-2006	22:00	5.2	W
24-Dec-2006	23:00	4.7	WNW
25-Dec-2006	00:00	4.3	WNW
25-Dec-2006	01:00	3.4	W
25-Dec-2006	02:00	1.1	SSW
25-Dec-2006	03:00	0.7	SW
25-Dec-2006	04:00	0.7	SW
25-Dec-2006	05:00	3.4	SSW
25-Dec-2006	06:00	3.8	SW
25-Dec-2006	07:00	2.5	WSW
25-Dec-2006	08:00	3.8	WSW
25-Dec-2006	09:00	3.8	WNW
25-Dec-2006	10:00	4.3	WNW
25-Dec-2006	11:00	4.3	W
25-Dec-2006	12:00	2.9	W
25-Dec-2006	13:00	2.0	WNW
25-Dec-2006	14:00	0.0	---
25-Dec-2006	15:00	0.0	---
25-Dec-2006	16:00	0.0	---
25-Dec-2006	17:00	0.0	---



## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
25-Dec-2006	18:00	0.0	---
25-Dec-2006	19:00	0.0	ESE
25-Dec-2006	20:00	0.0	---
25-Dec-2006	21:00	1.2	
25-Dec-2006	22:00	1.6	SSW
25-Dec-2006	23:00	0.5	ESE
26-Dec-2006	00:00	0.3	ESE
26-Dec-2006	01:00	0.4	ESE
26-Dec-2006	02:00	0.5	W
26-Dec-2006	03:00	3.9	WNW
26-Dec-2006	04:00	4.3	WNW
26-Dec-2006	05:00	4.3	WNW
26-Dec-2006	06:00	3.4	W
26-Dec-2006	07:00	1.6	SSW
26-Dec-2006	08:00	1.2	WNW
26-Dec-2006	09:00	1.6	WNW
26-Dec-2006	10:00	3.4	WNW
26-Dec-2006	11:00	2.5	WNW
26-Dec-2006	12:00	3.4	WNW
26-Dec-2006	13:00	3.4	WNW
26-Dec-2006	14:00	3.4	WNW
26-Dec-2006	15:00	2.5	WNW
26-Dec-2006	16:00	2.2	WNW
26-Dec-2006	17:00	2.1	WNW
26-Dec-2006	18:00	1.9	WNW
26-Dec-2006	19:00	0.8	WNW
26-Dec-2006	20:00	0.8	WNW
26-Dec-2006	21:00	0.8	W
26-Dec-2006	22:00	1.2	W
26-Dec-2006	23:00	1.0	WNW
27-Dec-2006	00:00	1.3	WNW
27-Dec-2006	01:00	1.3	W
27-Dec-2006	02:00	1.2	WNW
27-Dec-2006	03:00	2.5	WNW
27-Dec-2006	04:00	3.1	WSW
27-Dec-2006	05:00	2.0	SW
27-Dec-2006	06:00	3.6	WSW
27-Dec-2006	07:00	2.6	W
27-Dec-2006	08:00	2.7	WSW
27-Dec-2006	09:00	2.2	WNW
27-Dec-2006	10:00	2.8	W
27-Dec-2006	11:00	3.8	SW
27-Dec-2006	12:00	2.8	WSW
27-Dec-2006	13:00	1.9	W
27-Dec-2006	14:00	1.3	WSW
27-Dec-2006	15:00	1.3	WNW
27-Dec-2006	16:00	1.1	W
27-Dec-2006	17:00	1.0	WNW
27-Dec-2006	18:00	0.9	W
27-Dec-2006	19:00	0.7	WNW
27-Dec-2006	20:00	0.8	W
27-Dec-2006	21:00	0.6	WNW
27-Dec-2006	22:00	1.8	WNW
27-Dec-2006	23:00	1.8	W

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
28-Dec-2006	00:00	2.1	WNW
28-Dec-2006	01:00	2.5	W
28-Dec-2006	02:00	2.6	W
28-Dec-2006	03:00	2.5	WNW
28-Dec-2006	04:00	2.7	WNW
28-Dec-2006	05:00	2.7	WNW
28-Dec-2006	06:00	2.5	WNW
28-Dec-2006	07:00	4.7	WNW
28-Dec-2006	08:00	2.9	WNW
28-Dec-2006	09:00	1.5	WNW
28-Dec-2006	10:00	2.0	W
28-Dec-2006	11:00	2.0	W
28-Dec-2006	12:00	2.4	WNW
28-Dec-2006	13:00	1.1	WNW
28-Dec-2006	14:00	0.2	WNW
28-Dec-2006	15:00	0.2	WNW
28-Dec-2006	16:00	0.6	WNW
28-Dec-2006	17:00	2.0	W
28-Dec-2006	18:00	0.2	SW
28-Dec-2006	19:00	0.2	SW
28-Dec-2006	20:00	0.6	WSW
28-Dec-2006	21:00	2.0	SW
28-Dec-2006	22:00	2.0	WSW
28-Dec-2006	23:00	0.6	SW
29-Dec-2006	00:00	3.3	W
29-Dec-2006	01:00	2.4	W
29-Dec-2006	02:00	1.8	W
29-Dec-2006	03:00	1.6	W
29-Dec-2006	04:00	1.8	WNW
29-Dec-2006	05:00	2.1	WNW
29-Dec-2006	06:00	2.6	WNW
29-Dec-2006	07:00	2.5	WSW
29-Dec-2006	08:00	2.2	SW
29-Dec-2006	09:00	2.9	SW
29-Dec-2006	10:00	3.1	SW
29-Dec-2006	11:00	3.5	WSW
29-Dec-2006	12:00	3.2	WSW
29-Dec-2006	13:00	4.1	WNW
29-Dec-2006	14:00	4.2	SW
29-Dec-2006	15:00	3.3	WNW
29-Dec-2006	16:00	2.5	W
29-Dec-2006	17:00	2.8	WNW
29-Dec-2006	18:00	2.4	W
29-Dec-2006	19:00	2.1	W
29-Dec-2006	20:00	1.9	W
29-Dec-2006	21:00	1.8	SW
29-Dec-2006	22:00	1.2	SW
29-Dec-2006	23:00	1.2	WSW
30-Dec-2006	00:00	0.9	W
30-Dec-2006	01:00	0.9	WSW
30-Dec-2006	02:00	2.1	SW
30-Dec-2006	03:00	1.5	WSW
30-Dec-2006	04:00	2.6	SW
30-Dec-2006	05:00	3.2	SSW

## Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
30-Dec-2006	06:00	3.2	SSW
30-Dec-2006	07:00	2.8	SW
30-Dec-2006	08:00	1.8	SW
30-Dec-2006	09:00	0.0	WSW
30-Dec-2006	10:00	0.0	---
30-Dec-2006	11:00	0.0	---
30-Dec-2006	12:00	0.0	---
30-Dec-2006	13:00	0.0	---
30-Dec-2006	14:00	0.0	---
30-Dec-2006	15:00	0.0	---
30-Dec-2006	16:00	0.0	---
30-Dec-2006	17:00	2.7	SW
30-Dec-2006	18:00	2.2	SSW
30-Dec-2006	19:00	3.0	WSW
30-Dec-2006	20:00	3.1	W
30-Dec-2006	21:00	1.4	W
30-Dec-2006	22:00	1.2	W
30-Dec-2006	23:00	1.7	W
31-Dec-2006	00:00	3.2	SW
31-Dec-2006	01:00	3.2	WSW
31-Dec-2006	02:00	4.1	WSW
31-Dec-2006	03:00	4.6	SW
31-Dec-2006	04:00	5.9	WSW
31-Dec-2006	05:00	5.0	WSW
31-Dec-2006	06:00	5.0	WSW
31-Dec-2006	07:00	4.6	WSW
31-Dec-2006	08:00	4.6	WSW
31-Dec-2006	09:00	4.1	WSW
31-Dec-2006	10:00	4.1	WSW
31-Dec-2006	11:00	3.7	WNW
31-Dec-2006	12:00	3.2	WNW
31-Dec-2006	13:00	3.7	SW
31-Dec-2006	14:00	3.7	WSW
31-Dec-2006	15:00	4.1	WSW
31-Dec-2006	16:00	3.7	WSW
31-Dec-2006	17:00	2.8	WSW
31-Dec-2006	18:00	2.8	WSW
31-Dec-2006	19:00	2.1	WSW
31-Dec-2006	20:00	2.5	W
31-Dec-2006	21:00	2.6	WSW
31-Dec-2006	22:00	2.6	WNW
31-Dec-2006	23:00	2.7	WNW

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

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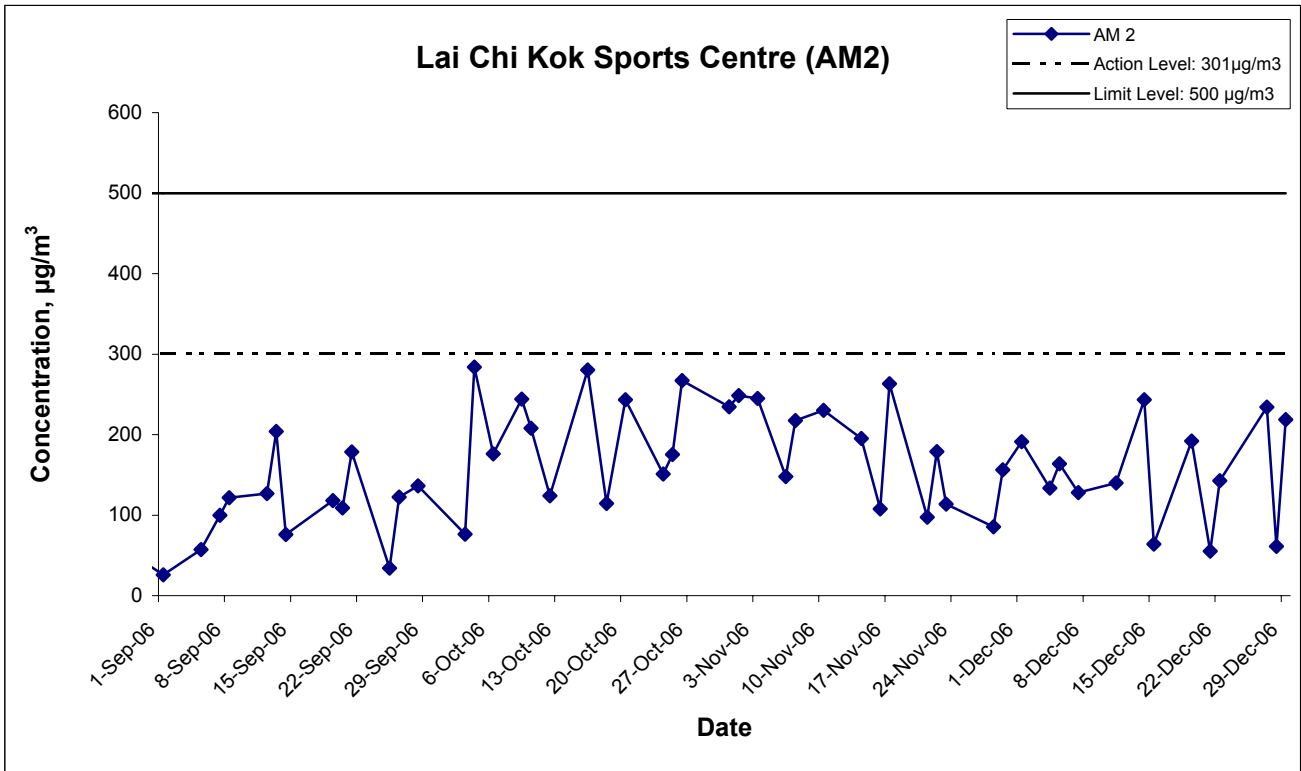
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## Appendix E - 1-hour TSP Monitoring Results

### 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							
1-Dec-06	Sunny	2.8676	2.8817	1.23	1.23	5161.1	5162.1	291.0	766.2	0.0141	1.23	73.8	1.0	191.1
4-Dec-06	Sunny	2.8791	2.8889	1.22	1.22	5186.1	5187.1	295.3	766.9	0.0098	1.22	73.4	1.0	133.6
5-Dec-06	Sunny	2.8332	2.8453	1.23	1.23	5187.1	5188.5	292.0	769.1	0.0121	1.23	73.8	1.4	163.9
7-Dec-06	Sunny	2.8766	2.8860	1.22	1.22	5188.1	5189.1	294.6	765.8	0.0094	1.22	73.4	1.0	128.1
11-Dec-06	Sunny	2.8679	2.8782	1.23	1.23	5213.1	5214.1	293.2	765.2	0.0103	1.23	73.5	1.0	140.1
14-Dec-06	Cloudy	2.8822	2.9002	1.23	1.23	5214.1	5215.1	289.3	765.7	0.0180	1.23	74.0	1.0	243.3
15-Dec-06	Rainy	2.8662	2.8709	1.22	1.22	5239.1	5240.1	292.9	763.3	0.0047	1.22	73.5	1.0	64.0
19-Dec-06	Sunny	2.8611	2.8754	1.24	1.24	5240.1	5241.1	286.9	770.9	0.0143	1.24	74.4	1.0	192.1
21-Dec-06	Sunny	2.8760	2.8801	1.24	1.24	5265.1	5266.1	288.9	769.5	0.0041	1.24	74.2	1.0	55.3
22-Dec-06	Sunny	2.8978	2.9083	1.24	1.24	5266.1	5267.1	288.1	769.1	0.0105	1.24	73.5	1.0	142.9
27-Dec-06	Sunny	2.8691	2.8864	1.23	1.23	5267.1	5268.1	290.7	766.0	0.0173	1.23	73.8	1.0	234.3
28-Dec-06	Sunny	2.8523	2.8568	1.23	1.23	5292.1	5293.1	293.7	765.9	0.0045	1.23	73.5	1.0	61.2
29-Dec-06	Windy	2.8769	2.8932	1.24	1.24	5293.1	5294.1	286.0	771.3	0.0163	1.24	74.6	1.0	218.6
													Min	55.3
													Max	243.3
													Average	151.4

# 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	Project No. MA3024	
	Date Dec 06	Appendix E	

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

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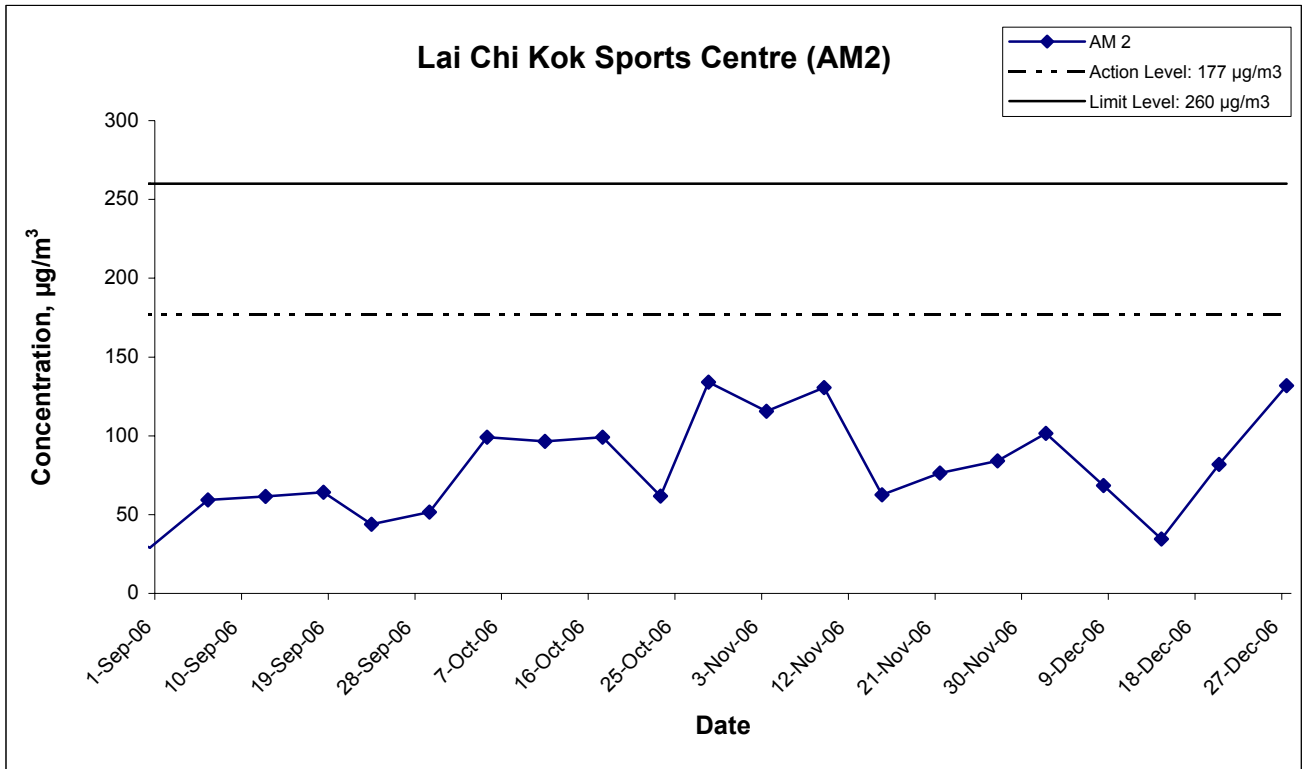
## Appendix F - 24-hour TSP Monitoring Results

### 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							
2-Dec-06	Sunny	2.8753	3.0559	1.23	1.23	5162.1	5186.1	288.8	766.9	0.1806	1.23	1777.7	24.0	101.6
8-Dec-06	Sunny	2.9013	3.0216	1.22	1.22	5189.1	5213.1	295.6	766.1	0.1203	1.22	1759.3	24.0	68.4
14-Dec-06	Rainy	2.8639	2.9253	1.23	1.23	5215.1	5239.1	289.8	765.2	0.0614	1.23	1773.4	24.0	34.6
20-Dec-06	Sunny	2.8820	3.0280	1.24	1.24	5241.1	5265.1	288.6	770.8	0.1460	1.24	1784.3	24.0	81.8
27-Dec-06	Sunny	2.8958	3.1290	1.23	1.23	5268.1	5292.1	291.4	765.4	0.2332	1.23	1769.4	24.0	131.8
													Min	34.6
													Max	131.8
													Average	83.6



## 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	<b>CINOTECH</b>
	Date Dec 06	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>
5-Dec-06	09:00	Sunny	62.5	65.2	58.7	68.4	62.5, Measured ≤ Baseline	Resumed since September 2006
14-Dec-06	13:15	Cloudy	65.8	68.0	60.5		65.8, Measured ≤ Baseline	
21-Dec-06	09:05	Sunny	66.9	68.7	64.2		66.9, Measured ≤ Baseline	
28-Dec-06	09:05	Sunny	64.5	67.7	60.7		64.5, Measured ≤ Baseline	

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>
5-Dec-06	09:50	Sunny	75.1	77.5	71.5	73.8	69.2	Road traffic noise from Ching Cheung Road was identified as the major noise source.
14-Dec-06	10:00	Cloudy	73.7	76.0	65.5		73.7, Measured ≤ Baseline	
21-Dec-06	09:55	Sunny	74.2	77.0	71.0		63.6	
28-Dec-06	09:50	Sunny	74.1	77.0	70.5		62.3	

Location NM8a - M/F of Nob Hill							
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks	
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>		
			5-Dec-06	10:45	Sunny		74.7
14-Dec-06	10:50	Cloudy	72.6	75.5	64.0		
21-Dec-06	10:40	Sunny	74.4	77.0	70.5		
28-Dec-06	13:00	Sunny	73.2	75.5	70.0		

Location NM8b - 3/F of Nob Hill							
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks	
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>		
			5-Dec-06	11:25	Sunny		75.3
14-Dec-06	11:30	Cloudy	75.2	77.0	68.5		
21-Dec-06	11:20	Sunny	75.2	77.5	72.5		
28-Dec-06	13:40	Sunny	75.8	78.5	71.5		

Location NM9 - Hoi Lai Estate							
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks	
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>		
			5-Dec-06	13:00	Sunny		71.3
14-Dec-06	14:30	Cloudy	72.1	74.5	63.5		
21-Dec-06	13:00	Sunny	71.7	74.0	67.5		
28-Dec-06	14:40	Sunny	72.3	75.5	70.0		

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

\*Bolted value indicated limit level exceedance

## Appendix G - Noise Monitoring Results

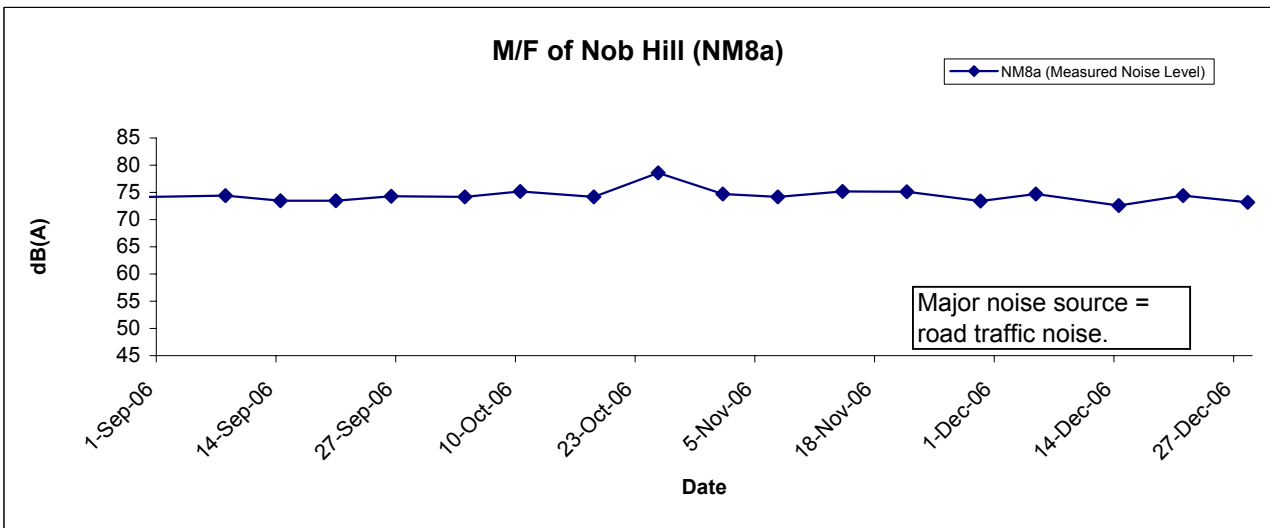
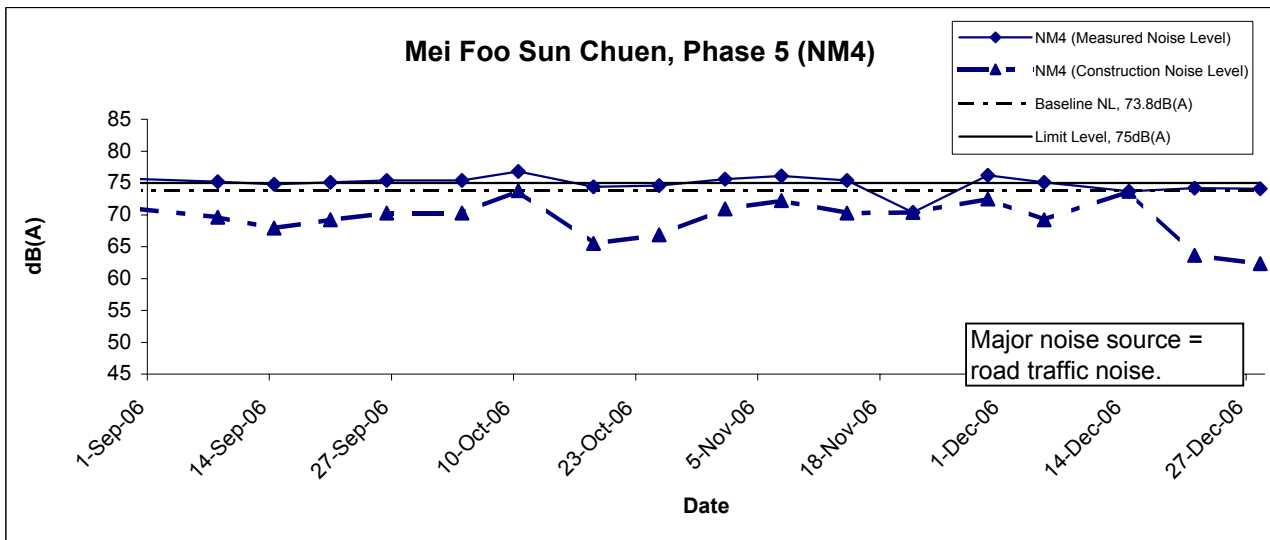
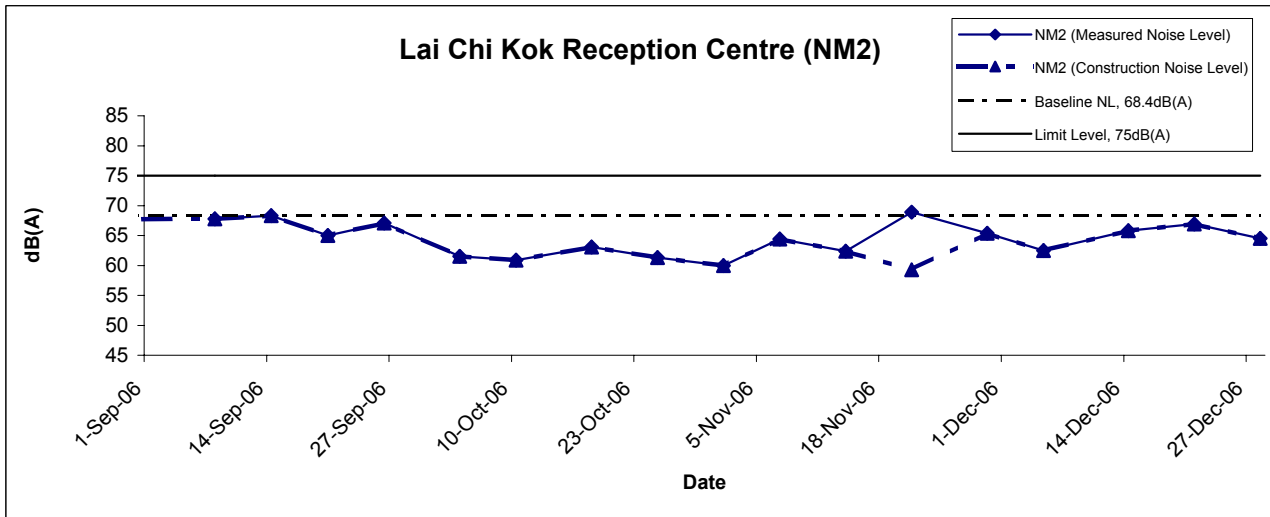
### Restricted Hours - 19:00 to 23:00 on normal weekdays

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>
8-Dec-06	19:00	Fine	65.3	68.5	61.5	65.0
	19:05		64.8	68.0	61.5	
	19:10		65.0	68.5	61.5	
12-Dec-06	19:00	Fine	65.7	68.0	62.5	65.2
	19:05		64.9	68.0	62.0	
	19:10		65.1	68.0	62.0	
22-Dec-06	19:00	Fine	63.7	65.5	60.0	64.0
	19:05		64.2	66.5	60.0	
	19:10		64.1	66.5	60.0	
29-Dec-06	19:00	Fine	65.8	68.0	62.5	65.3
	19:05		64.8	67.5	62.0	
	19:10		65.1	67.5	62.0	

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

\*Bolted value indicated limit level exceedance

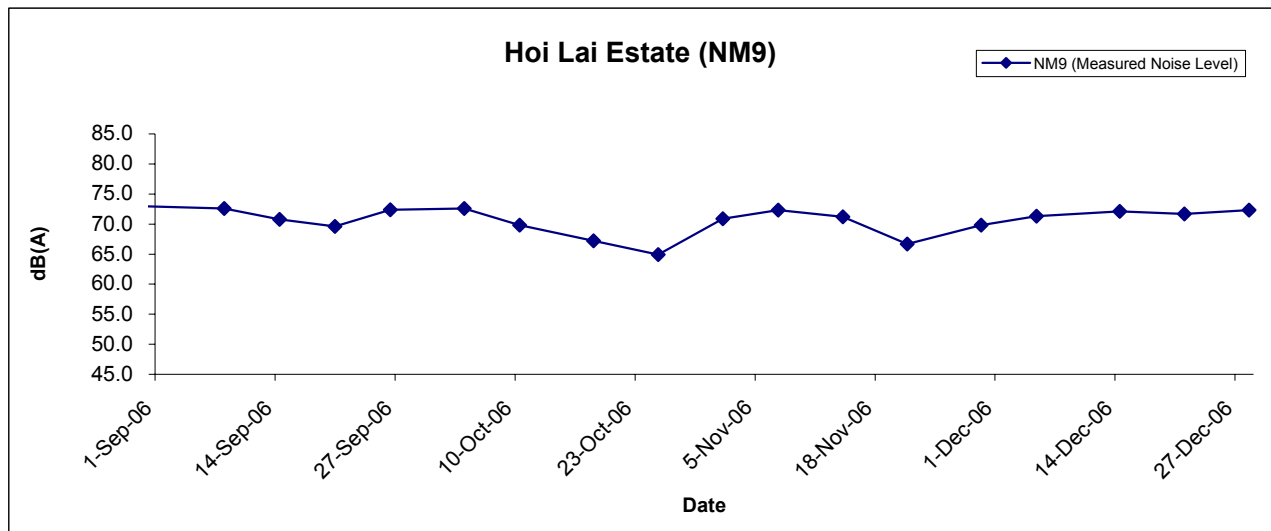
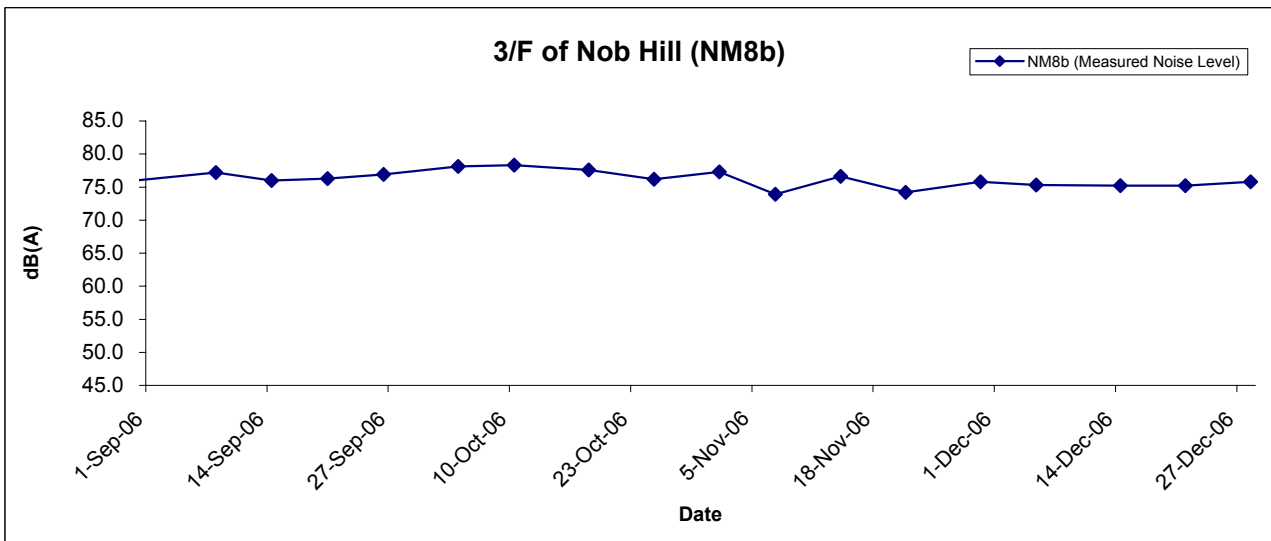
## Noise Levels



\* 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)

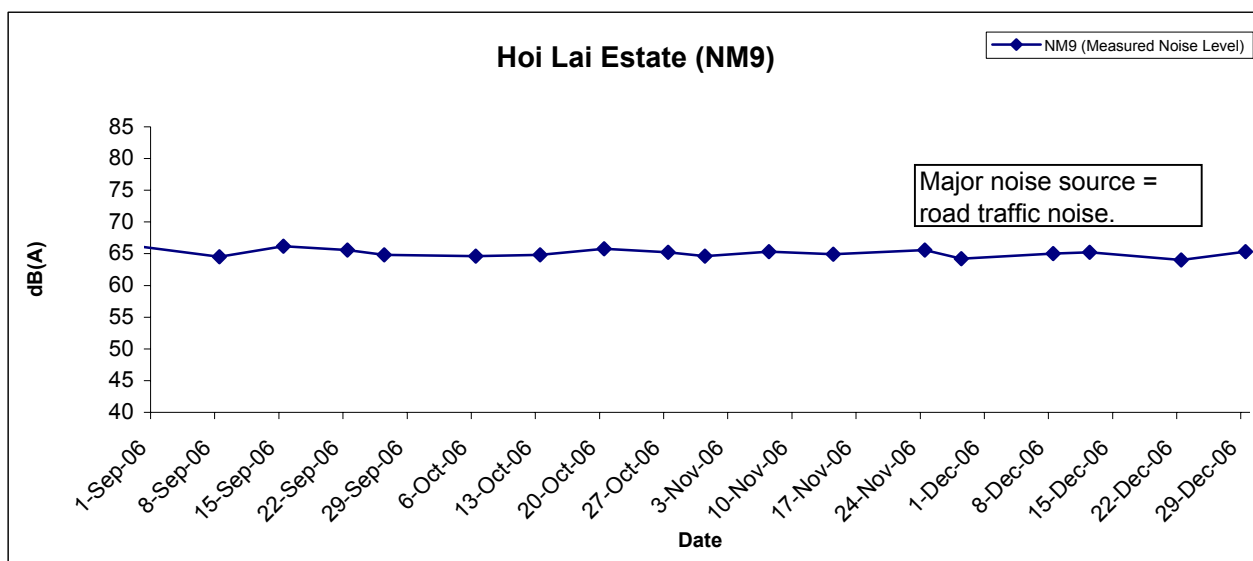
Title Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin Contract HY/2003/01 - Lai Chi Kok Viaduct  Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. MA3024	CINOTECH
	Date Dec 06	Appendix G	

## 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 Dec 06	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 Dec 06	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 (NIL)***

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

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

- One Action Level exceedances was recorded due to noise complaint received on 5<sup>th</sup> December 2006.
- No Limit Level exceedance was recorded in the reporting month.

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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**

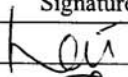

**Weekly Site Inspection Record Summary**

**Inspection Information**

Checklist Reference Number	61205-LCKV
Date	05 December 2006 (Tue)
Time	13:45 – 15:15 p.m.

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

Ref. No.	Remarks/Observations	Related Item No.
61205L-R01	<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>Improper fuel storage was observed at construction site of Lai Po Road. The Contractor was reminded to remove the oil drum to the designated fuel storage area or provide the drip tray for the oil drum on site properly.</li> </ul>	E2 i
61205L-R02	<ul style="list-style-type: none"> <li>Overloaded capacity of construction wastes were observed at site area of Lai Po Road. The Contractor was reminded to dispose of the wastes regularly on site.</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.: 61128-LCKV), all environmental deficiencies were improved/ rectified by the Contractor.</li> </ul>	E1 iii

	Name	Signature	Date
Recorded by	Jason Lai		5 December 2006
Checked by	Dr. Priscilla Choy		5 December 2006

**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**

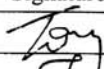

**Weekly Site Inspection Record Summary**

**Inspection Information**

Checklist Reference Number	61213-LCKV
Date	13 December 2006 (Wed)
Time	13:30 – 15:30

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 on previous audit (Ref. No.: 61205-LCKV), all environmental deficiencies were improved/rectified by the Contractor.</li> </ul>	

	Name	Signature	Date
Recorded by	Tommy Ho		19 December 2006
Checked by	Dr. Priscilla Choy		19 December 2006

**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	61220-LCKV
Date	20 December 2006 (Wed)
Time	13:00 – 15:30

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 on previous audit (Ref. No.: 61213-LCKV), no environmental deficiency was identified during the site inspection.</li> </ul>	

	Name	Signature	Date
Recorded by	Tommy Ho		21 December 2006
Checked by	Dr. Priscilla Choy		21 December 2006

**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**


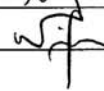
**Weekly Site Inspection Record Summary**

**Inspection Information**

Checklist Reference Number	61227-LCKV
Date	27 December 2006 (Wed)
Time	13:30 – 15:45

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 on previous audit (Ref. No.: 61220-LCKV), no environmental deficiency was identified during the site inspection.</li> </ul>	

	Name	Signature	Date
Recorded by	Tommy Ho		27 December 2006
Checked by	Dr. Priscilla Choy		27 December 2006

**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	61220-LCKV-TCSS
Date	20 December 2006 (Wed)
Time	13:00 – 15:30

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>No environmental deficiency was identified during the site inspection.</li> </ul>	

	Name	Signature	Date
Recorded by	Tommy Ho		21 December 2006
Checked by	Dr. Priscilla Choy		21 December 2006

**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	61227-LCKV-TCSS
Date	27 December 2006 (Wed)
Time	13:30 – 15:45

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>No environmental deficiency was identified during the site inspection.</li> </ul>	

	Name	Signature	Date
Recorded by	Tommy Ho		27 December 2006
Checked by	Dr. Priscilla Choy		27 December 2006



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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 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 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>	^

Types of Impacts	Mitigation Measures	Status
Water Quality	<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



Types of Impacts	Mitigation Measures	Status
	<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 in the greatest).</li> </ul>	<p style="text-align: center;">^</p> <p style="text-align: center;">^</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 style="text-align: center;">^</p> <p style="text-align: center;">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 style="text-align: center;">^</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 style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p>
	<ul style="list-style-type: none"> <li>• Maintain records of the quantities of wastes generated, recycled and disposed.</li> </ul>	<p style="text-align: center;">^</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 style="text-align: center;">^</p>
<i>Construction and Demolition (C&amp;D) Waste</i>		

Types of Impacts	Mitigation Measures	Status
	<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> <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> <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>	<p style="text-align: center;">^</p> <p style="text-align: center;">N/A</p> <p style="text-align: center;">^</p>
	<p><i>Chemical Waste</i></p> <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>	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p>
	<p><i>General Refuse</i></p> <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>	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p>

Types of Impacts	Mitigation Measures	Status
Ecology	<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> </ul>	N/A
	<ul style="list-style-type: none"> <li>• Conduct a tree survey before commencement of the construction work.</li> </ul>	^
	<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> </ul>	^
	<ul style="list-style-type: none"> <li>• Loss of the adjacent woodland due to temporary land take shall be returned to the original status immediately.</li> </ul>	N/A
	<ul style="list-style-type: none"> <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
Landscape and Visual Impact	<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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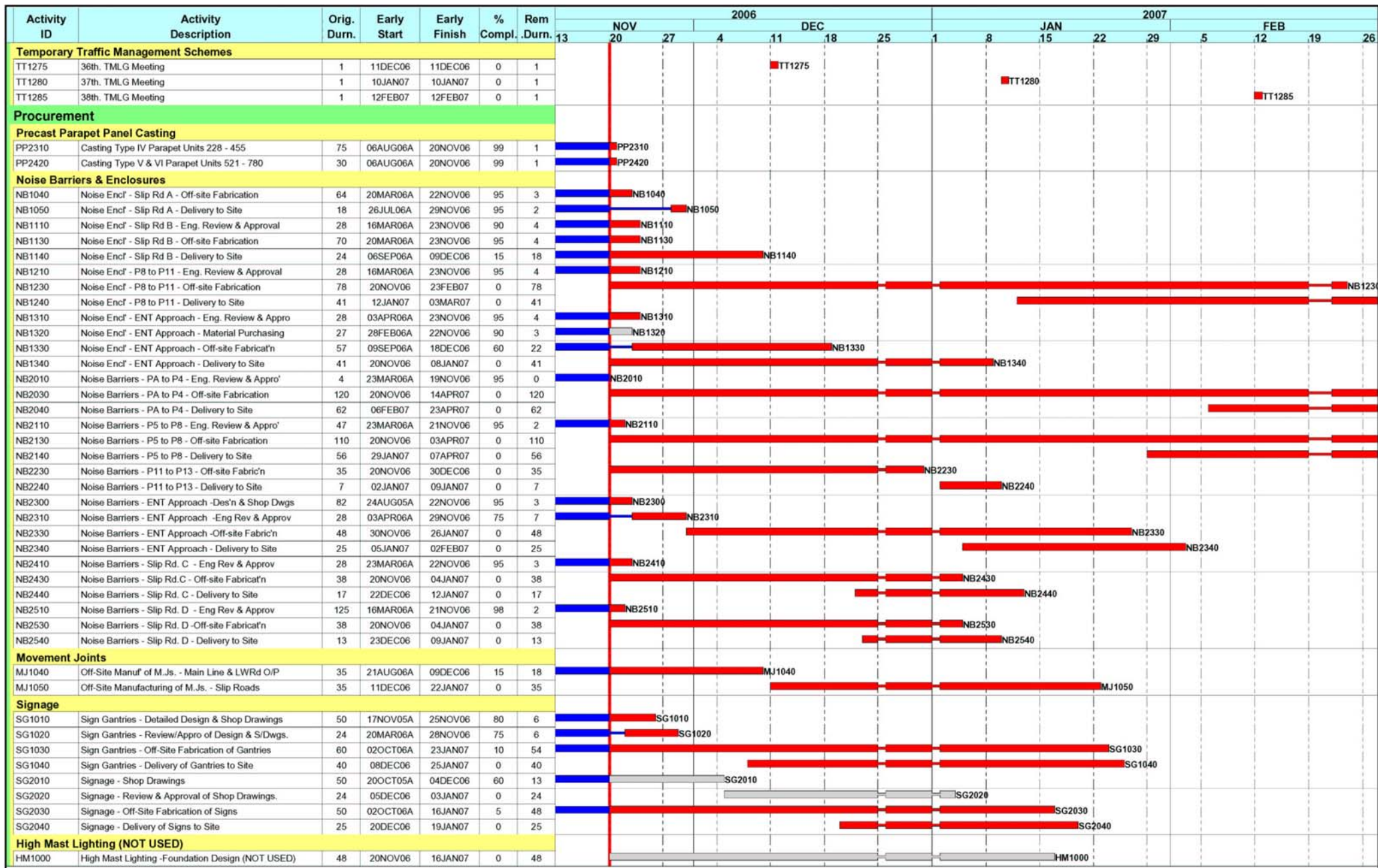
**APPENDIX L**  
**CONSTRUCTION PROGRAMME**

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Start Date: 23SEP03  
 Finish Date: 13SEP08  
 Data Date: 20NOV06

P3 File : LU38

Highways Department Contract No. HY/2003/01  
 Route 8 - Lai Chi Kok Viaduct  
 3 Month Rolling Programme  
 from 20 November 2006

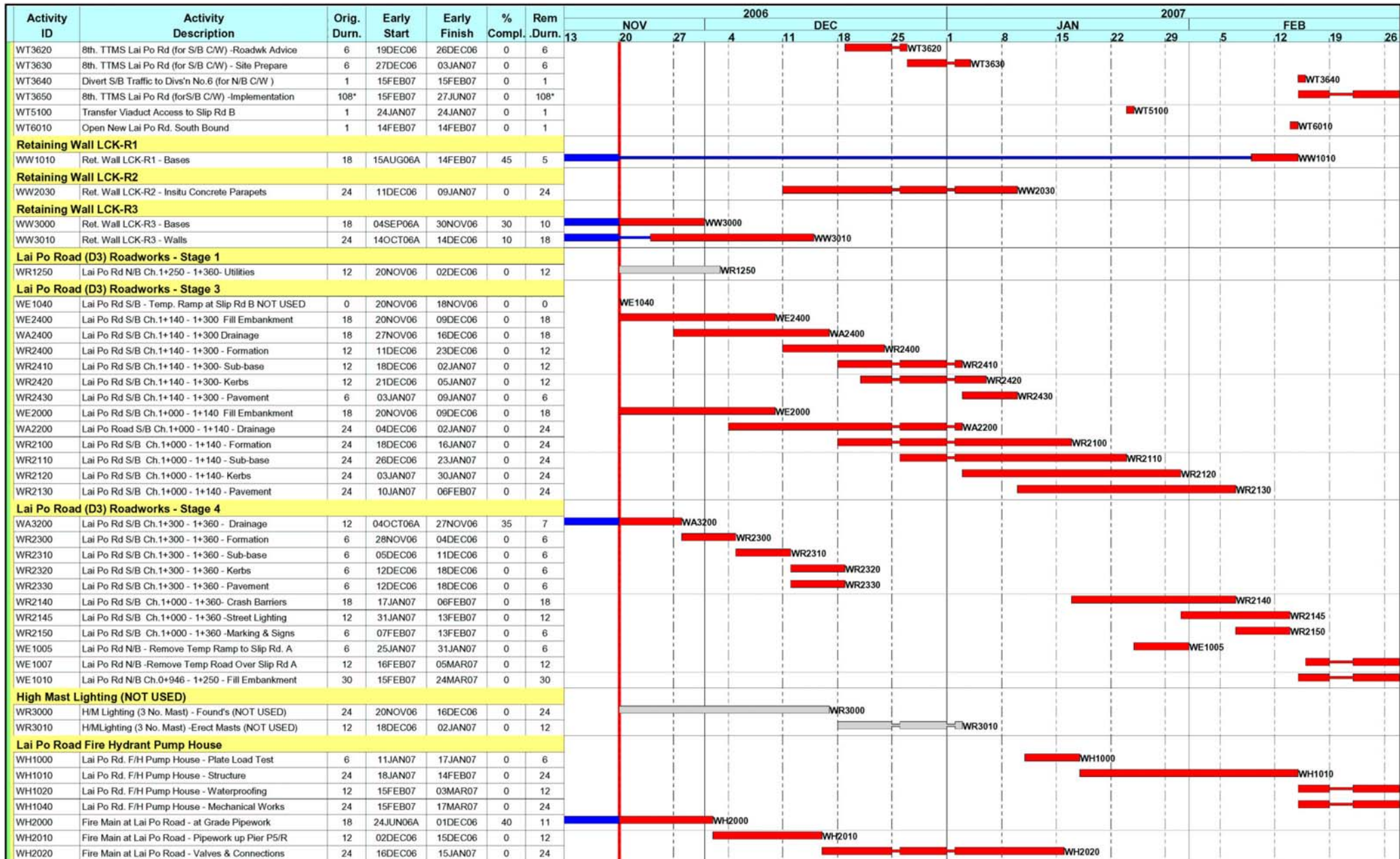
Sheet 2 of 14











Start Date 23SEP03  
 Finish Date 13SEP08  
 Data Date 20NOV06

P3 File : LU38

Highways Department Contract No. HY/2003/01  
 Route 8 - Lai Chi Kok Viaduct  
 3 Month Rolling Programme  
 from 20 November 2006





Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem. Durn.	2006															
							13	NOV			DEC			JAN			2007					
								20	27	4	11	18	25	1	8	15	22	29	5	12	19	26
SR5300	Butterfly V. Rd (LCKI) Stage4-Excav. & Formation	18	20NOV06	09DEC06	0	18																
SR5310	Butterfly V. Rd (LCKI) Stage 4 - Sub-base	18	28NOV06	18DEC06	0	18																
SR5320	Butterfly V. Rd (LCKI) Stage 4 - Kerbs	18	05DEC06	26DEC06	0	18																
SR5330	Butterfly V. Rd (LCKI) Stage 4 - Pavement	6	27DEC06	03JAN07	0	6																
SR5340	Butterfly V. Rd (LCKI) Stage 4 - Street Lighting	4	04JAN07	08JAN07	0	4																
SR5350	Butterfly V. Rd (LCKI) Stage 4 - Road Marking	4	04JAN07	08JAN07	0	4																
SR3200	Kom Tsun Street Bus Stn. - Excavate & Formation	18	11DEC06	02JAN07	0	18																
SR3210	Kom Tsun Street bus Stn. - Sub-base	18	18DEC06	09JAN07	0	18																
SR3220	Kom Tsun Street Bus Stn. - Kerbs	24	26DEC06	23JAN07	0	24																
SR3230	Kom Tsun Street Bus Stn. - Concrete Pavement	75	03JAN07	04APR07	0	75																
SR3000	Kom Tsun Street L/H C/Way - Excavate & Formation	12	04JAN07	17JAN07	0	12																
SR3010	Kom Tsun Street L/H C/Way - Sub-base	12	18JAN07	31JAN07	0	12																
SR3020	Kom Tsun Street L/H C/Way - Kerbs	18	01FEB07	24FEB07	0	18																
<b>Viaduct - Main Line - Piers P11 to P15</b>																						
<b>Superstructure Finishing Works Required for TCSS</b>																						
MF3000	P11 to P16 - Parapet Panels P10 to P12	30	06JUN06A	23NOV06	85	4																
MF3000A	P11 to P16 - Parapet Insitu Concrete P10 to P12	30	08AUG06A	02DEC06	60	12																
MF3005	P11 to P16 - Parapet Panels P12 to P14	24	25MAY06A	21NOV06	99	2																
MF3005A	P11 to P16 - Parapet Insitu Concrete P12 to P14	32	04SEP06A	28NOV06	75	8																
MF3010	P11 to P16 - Parapet Panels P14 to P16	24	30MAY06A	25NOV06	75	6																
MF3010A	P11 to P16 - Parapet Insitu Concrete P14 to P16	33	25SEP06A	29NOV06	80	7																
MF3015	P11 to P15 - Insitu Slab to Under Median Barrier	72	02AUG06A	12DEC06	70	20																
MF3017	P11 to P15 - Median Barrier (incl earthing)	54	11OCT06A	06JAN07	5	40																
MF3020	P11 to P16 - Provision for E & M and TCSS	24	08AUG06A	02DEC06	50	12																
<b>Remaining Superstructure Finishing Works</b>																						
MF3050	P11 to P16 - Top Rail to Parapets	18	08DEC06	29DEC06	0	18																
MF3055	P11 to P16 - Install Movement Joint at P12	12	08JAN07	20JAN07	0	12																
MF3058	P11 to P16 - Waterproofing of Deck	10	24JAN07	03FEB07	0	10																
MF3060	P11 to P16 - Flexible Pavement	9	09FEB07	22FEB07	0	9																
MF3090	P11 to P16 - Landscaping - Planting On Viaduct	25	13FEB07	16MAR07	0	25																
<b>Remaining Noise Barriers &amp; Enclosures</b>																						
MN8030	Viaduct - 3m Reflective Barrier S/B Ch. 1181-1302	75	10JAN07	11APR07	0	75																
MN8070	Viaduct - 5m Reflective Barrier N/B Ch. 1181-1302	75	10JAN07	11APR07	0	75																
<b>At Grade Works - Wai Man Tsuen</b>																						
<b>Realigned Channel at Wai Man Tsuen</b>																						
VC3000	Channel - Modifications to Channel Floor - VO 299	12	30NOV05A	23NOV06	95	4																
<b>Earthworks &amp; Slope Works</b>																						
VE1060	Slope CCR-S5 - Slope Drainage & Finishes	24	20NOV06	16DEC06	0	24																
VE1070	Slope CCR-S5 - Landscaping & Hydroseeding	12	11DEC06	23DEC06	0	12																
<b>Earthworks &amp; Slope Works - 11NW-A/C678 &amp; CR679</b>																						
VE2025	Slope 11NW-A/C678 & CR679 - Platform for S.Nails	3	18DEC06	20DEC06	0	3																
VE2027	Slope 11NW-A/C678 & CR679 - Test Soil Nail	6	21DEC06	28DEC06	0	6																
VE2030	Slope 11NW-A/C678 & CR679 - Soil Nails	18	29DEC06	19JAN07	0	18																
VE2000	Slope 11NW-A/C678 & CR679 - Remove Temp Platform	6	20JAN07	26JAN07	0	6																
VE2020	Slope 11NW-A/C678 & CR679 - Trim Original Slope	6	27JAN07	02FEB07	0	6																
VE2050	Slope 11NW-A/C678 & CR679-Landscape & Hydroseed	6	03FEB07	09FEB07	0	6																
<b>Drainage Works</b>																						
VA1000	Butterfly Valley Rd Stage3 - Stormwater Drainage	24	01FEB07	03MAR07	0	24																
<b>Utilities &amp; Roadworks</b>																						
VR3000	Drainage Maintenance Access Rd. - Formation	24	18DEC06	16JAN07	0	24																
VR3010	Drainage Maintenance Access Rd. - Sub-base	24	26DEC06	23JAN07	0	24																
VR3020	Drainage Maintenance Access Rd. - Kerbs	24	03JAN07	30JAN07	0	24																
VR3030	Drainage Maintenance Access Rd. - Pavement	48	03JAN07	02MAR07	0	48																

Start Date: 23SEP03  
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Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem. Durn.	2006																	
							NOV			DEC			JAN			FEB								
							13	20	27	4	11	18	25	1	8	15	22	29	5	12	19	26		
VR3040	Drainage Maintenance Access Rd. - Street Lights	12	14FEB07	02MAR07	0	12																		
<b>Wai Man Tsuen Fire Hydrant Pump House</b>																								
VH1010	Wai Man Tsuen F/H Pump House - Structure	48	06SEP06A	16DEC06	50	24																		
VH1020	Wai Man Tsuen F/H Pump House - Waterproofing	12	18DEC06	02JAN07	0	12																		
VH1030	Wai Man Tsuen F/H Pump House - Building Works	24	03JAN07	30JAN07	0	24																		
VH1035	Wai Man Tsuen F/H P/H - Provide for E & M Contr'	0		16JAN07	0	0																		
VH1040	Wai Man Tsuen F/H Pump House - Mechanical Works	24	18DEC06	16JAN07	0	24																		
VH1050	Wai Man Tsuen F/H Pump House - Electrical Work	24	29DEC06	26JAN07	0	24																		
VH1060	Wai Man Tsuen F/H Pump House - FS Installation	24	11DEC06	09JAN07	0	24																		
VH1070	Wai Man Tsuen F/H Pump House - Plumb & Drains	24	10JAN07	08FEB07	0	24																		
VH2000	Fire Main - Pipework Along Maintenance Road	18	18DEC06	09JAN07	0	18																		
VH2005	Fire Main - Pipework to Piers P10/R & P14	18	18DEC06	09JAN07	0	18																		
VH2010	Fire Main - Valves & Connections	18	10JAN07	30JAN07	0	18																		
<b>Landscape Works</b>																								
VX1000	Landscaping - Earthworks & Formation	24	31JAN07	02MAR07	0	24																		
VX1040	Landscaping - Soiling & Planting	24	31JAN07	02MAR07	0	24																		
<b>Viaduct - Main Line - Piers P16 to P18</b>																								
<b>Superstructure Finishing Works Required for TCSS</b>																								
MF4000	P16 to P19 - Parapet Panels at P16 - P18	6	09OCT06A	20NOV06	98	1																		
MF4000A	P16 to P19 - Parapet Insitu Concrete at P16 - P18	8	11NOV06A	23NOV06	5	4																		
MF4005	P16 to P18 - Insitu Slab Under Median Barrier	26	07NOV06A	12DEC06	5	20																		
MF4007	P16 to P18 - Median Barrier (incl earthing)	24	29NOV06	27DEC06	0	24																		
MF4010	P16 to P19 - Sign Gantry DS1 at P18/R	53	08DEC06	09FEB07	0	53																		
MF4020	P16 to P19 - Provision for E & M and TCSS	46	16DEC06	09FEB07	0	46																		
<b>Remaining Superstructure Finishing Works</b>																								
MF4040	P16 to P18 - Deck Drainage	48	28DEC06	26FEB07	0	48																		
MF4050	P16 to P18 - Top Rail to Parapets	12	24NOV06	07DEC06	0	12																		
MF4055	P16 to P18 - Install Movement Joints at P16/L&R	12	28DEC06	11JAN07	0	12																		
MF4058	P16 to P18 - Waterproofing of Deck	10	12JAN07	23JAN07	0	10																		
MF4060	P16 to P18 - Flexible Pavement	9	29JAN07	07FEB07	0	9																		
MF4070	P16 to P18 - Viaduct Road Lighting	18	08FEB07	03MAR07	0	18																		
MF4080	P16 to P18 - Road Marking & Traffic Signage	12	08FEB07	24FEB07	0	12																		
<b>Viaduct - Main Line - Piers 19 to Abutment M</b>																								
<b>Substructure</b>																								
MS5177	P21 - Slope Reinstatement	24	25OCT06A	21NOV06	95	2																		
MS5225	Abutment M - Slope Reinstatement	24	31OCT06A	25NOV06	75	6																		
<b>Superstructure Finishing Works Required for TCSS</b>																								
MF5000A	P19 to Abut M - Parapet Insitu Conc P18 - Abut M	20	25OCT06A	22NOV06	90	2																		
MF5005	P19 to Abut M - Insitu Slab Under Median Barrier	20	07NOV06A	07DEC06	15	16																		
MF5007	P19 to Abut M - Median Barrier (incl earthing)	18	29NOV06	19DEC06	0	18																		
MF5010	P19 to Abut M - Sign Gantry FADS1at Abutment M	50	08DEC06	06FEB07	0	50																		
MF5020	P19 to Abut M - Provision for E & M and TCSS	46	13DEC06	08FEB07	0	46																		
<b>Remaining Superstructure Finishing Works</b>																								
MF5040	P19 to Abut M - Deck Drainage	18	06DEC06	27DEC06	0	18																		
MF5050	P19 to Abut M - Top Rail to Parapets	12	20NOV06	02DEC06	0	12																		
MF5055	P19 to Abut M - Install Movement Joint at Abut M	4	18DEC06	21DEC06	0	4																		
MF5058	P19 to Abut M - Waterproofing of Deck	4	21DEC06	26DEC06	0	4																		
MF5060	P19 to Abut M - Flexible Pavement	4	27DEC06	30DEC06	0	4																		
MF5070	P19 to Abut M - Viaduct Road Lighting	18	12DEC06	03JAN07	0	18																		
MF5080	P19 to Abut M - Road Marking & Traffic Signage	4	02JAN07	05JAN07	0	4																		

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Activity ID	Activity Description	Orig. Durm.	Early Start	Early Finish	% Compl.	Rem Durm.	2006																					
							NOV 13	NOV 20	NOV 27	NOV 4	NOV 11	NOV 18	NOV 25	NOV 1	NOV 8	NOV 15	NOV 22	NOV 29										
<b>Viaduct - Main Line - Tunnel Approaches</b>																												
<b>Noise Barriers &amp; Encl' (Sec.10 Excision)</b>																												
MN6100	Semi Enclosure S/B Ch.2005 - 2200 - Frame	60	23NOV06	02FEB07	0	60																						
MN6110	Semi Enclosure S/B Ch.2005 - 2200 - Panels	68	20JAN07	13APR07	0	68																						
<b>Remaining Noise Barriers &amp; Enclosures</b>																												
MN8080	At Grade - 7m Reflective Barrier S/B Ch1789-1989	75	09JAN07	10APR07	0	75																						
MN8100	At Grade - 5.5m Reflective Barrier Ch1799-1997	75	09JAN07	10APR07	0	75																						
<b>At Grade Works - Butterfly Valley</b>																												
<b>Earthworks &amp; Slope Works - 11NW-A/FR54 &amp; F55</b>																												
QE2000	Slope 11NW-A/FR54 & FR55 - Remove Temp. Platform	18	20NOV06	09DEC06	0	18																						
QE2002	Slope 11NW-A/FR54 & FR55 - Retaining Wall -Bases	36	11DEC06	23JAN07	0	36																						
QE2004	Slope 11NW-A/FR54 & FR55 - Retaining Wall -Walls	48	10JAN07	09MAR07	0	48																						
QE2010	Slope 11NW-A/FR54 & FR55 - Install Temp Works	48	18DEC06	13FEB07	0	48																						
QE2020	Slope 11NW-A/FR54 & FR55 - Excavate & Rockfill	36	14FEB07	30MAR07	0	36																						
<b>Landscape Works</b>																												
QX1020	Landscaping - Soiling & Planting on Slope CCR-S6	75	20NOV06*	16FEB07	0	75																						
QX1100	Landscape Establishment Works	301	17FEB07	20FEB08	0	301																						
<b>Viaduct - Slip Road C</b>																												
<b>Superstructure Finishing Works Required for TCSS</b>																												
CF1010	Slip Rd. C - Parapet Panels C2 to C4	6	12SEP06A	20NOV06	99	1																						
CF1010A	Slip Rd. C - Parapet Insitu Concrete C2 to C4	12	04OCT06A	27NOV06	98	1																						
CF1015	Slip Rd. C - Parapet Panels C4 to C6	9	05OCT06A	20NOV06	98	1																						
CF1015A	Slip Rd. C - Parapet Insitu Concrete C4 to C6	12	11OCT06A	27NOV06	98	1																						
CF1000	Slip Rd. C - Parapet Panels - Abut. C to C2	6	10SEP06A	21NOV06	90	2																						
CF1000A	Slip Rd. C - Parapet Insitu Conc - Abut. C to C2	6	03OCT06A	28NOV06	85	3																						
CF1020	Slip Rd. C - Provision for E & M and TCSS	12	21NOV06	04DEC06	0	12																						
<b>Remaining Superstructure Finishing Works</b>																												
CF1040	Slip Rd. C - Deck Drainage	50	20NOV06	18JAN07	0	50																						
CF1050	Slip Rd. C - Top Rail to Parapets	18	29NOV06	19DEC06	0	18																						
CF1053	Slip Rd. C - Movement Joint at Abut. C	6	29NOV06	05DEC06	0	6																						
CF1055	Slip Rd. C - Movement Joint at C2	6	23JAN07	29JAN07	0	6																						
CF1057	Slip Rd. C - Movement Joint at C6	6	27JAN07	02FEB07	0	6																						
CF1058	Slip Rd. C - Waterproofing of Deck	6	03FEB07	09FEB07	0	6																						
CF1060	Slip Rd. C - Flexible Pavement	4	10FEB07	14FEB07	0	4																						
CF1070	Slip Rd. C - Viaduct Road Lighting	24	15FEB07	17MAR07	0	24																						
CF1080	Slip Rd. C - Road Marking & Traffic Signage	18	15FEB07	10MAR07	0	18																						
<b>Remaining Noise Barriers &amp; Enclosures</b>																												
CN1000	Slip Rd. C - 3m Absorptive Barriers Ch.665 - 730	52	05JAN07	09MAR07	0	52																						
<b>Viaduct - Slip Road D</b>																												
<b>Superstructure Finishing Works Required for TCSS</b>																												
DF1005	Slip Rd. D - Parapet Panels D4 to Abut D	42	26JUL06A	21NOV06	95	2																						
DF1005A	Slip Rd. D - Parapet Insitu Concrete D4 to Abut D	42	15AUG06A	24NOV06	90	4																						
DF1007	Slip Rd. D - Parapet Panels D4 to D8	18	06SEP06A	21NOV06	88	2																						
DF1007A	Slip Rd. D - Parapet Insitu Concrete D4 to D8	16	09SEP06A	28NOV06	80	3																						
DF1000	Slip Rd. D - Parapet Panels D10 to D8	24	09OCT06A	27NOV06	70	7																						
DF1000A	Slip Rd. D - Parapet Insitu Concrete D10 to D8	24	16OCT06A	04DEC06	65	8																						
DF1009	Slip Rd. D - Sign Gantry ADS4 at D6	12	08DEC06	21DEC06	0	12																						
DF1010	Slip Rd. D - Provision for E & M and TCSS	12	29NOV06	12DEC06	0	12																						
<b>Remaining Superstructure Finishing Works</b>																												
DF1040	Slip Rd. D - Deck Drainage	24	01SEP06A	02DEC06	50	12																						
DF1050	Slip Rd. D - Top Rail to Parapets	18	20DEC06	11JAN07	0	18																						
DF1053	Slip Rd. D - Movement Joint at Abut D.	6	31JAN07	06FEB07	0	6																						

Start Date: 23SEP03  
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Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem. Durn.	2006												2007											
							NOV			DEC			JAN			FEB			5		12			19		26				
							13	20	27	4	11	18	25	1	8	15	22	29	5	12	19	26								
DF1055	Slip Rd. D - Movement Joint at D6	6	03FEB07	09FEB07	0	6																								
DF1057	Slip Rd. D - Movement Joint at D9	6	07FEB07	13FEB07	0	6																								
<b>Remaining Noise Barriers &amp; Enclosures</b>																														
DN1000	Slip Rd. D - 3.5m Reflective Barrier Ch.805-881	36	28DEC06	08FEB07	0	36																								
DN1010	Slip Rd. D - 3m Reflective Barriers Ch.680 - 805	36	10JAN07	23FEB07	0	36																								
<b>Lai Wan Road Overpass</b>																														
<b>Temporary Traffic Management Schemes</b>																														
LT2140	TTMS LW Rd (for W/B Deck) - Implementation	145*	03JUL06A	22DEC06	0	29*																								
LT2240	TTMS LW Rd (for E/B Deck) - Implementation	325*	24NOV05A	22DEC06	0	29*																								
LT3000	TTMS CC Rd (on W/B Deck) - Prepare for Review	12	20NOV06	02DEC06	0	12																								
LT3010	TTMS CC Rd (on W/B Deck) - CRE Endorsement	6	12DEC06	17DEC06	0	6																								
LT3020	TTMS CC Rd (on W/B Deck) - Roadworks Advice	6	18DEC06	23DEC06	0	6																								
LT3030	TTMS CC Rd (on W/B Deck) - Site Preparation	6	26DEC06	02JAN07	0	6																								
LT3050	TTMS CC Rd (on W/B Deck) - Implementation	72*	06JAN07	04APR07	0	72*																								
LT3100	TTMS CC Rd (on E/B Deck) - Prepare for Review	12	20NOV06	02DEC06	0	12																								
LT3110	TTMS CC Rd (on E/B Deck) - CRE Endorsement	6	12DEC06	17DEC06	0	6																								
LT3120	TTMS CC Rd (on E/B Deck) - Roadworks Advice	6	18DEC06	23DEC06	0	6																								
LT3130	TTMS CC Rd (on E/B Deck) - Site Preparation	6	26DEC06	02JAN07	0	6																								
LT3140	Divert 1No. Lane to New East Bound Bridge	1	22DEC06	22DEC06	0	1																								
LT3145	Divert 1No. Lane to New West Bound Bridge	1	01FEB07	01FEB07	0	1																								
LT3150	TTMS CC Rd (on E/B Deck) - Implementation	50*	22DEC06	23FEB07	0	50*																								
LT3200	TTMS CC Rd (on Both Decks) - Prepare for Review	12	11JAN07	24JAN07	0	12																								
LT3210	TTMS CC Rd (on Both Decks) - CRE Endorsement	6	13FEB07	18FEB07	0	6																								
LT3220	TTMS CC Rd (on Both Decks) - Roadworks Advice	6	19FEB07	24FEB07	0	6																								
LT3300	TTMS CC Rd (on Both Decks) - Prepare for Review	12	13FEB07	01MAR07	0	12																								
<b>West Bound - Insitu Deck</b>																														
LD1056	Lai Wan O/pass W/B - Span St.3 - 1st. Pour	20	15SEP06A	24NOV06	70	5																								
LD1058	Lai Wan O/pass W/B - Span St.3 - 2nd. Pour	12	25NOV06	08DEC06	0	12																								
LD1059	Lai Wan O/pass W/B - Span St.3 - Stressing	6	09DEC06	15DEC06	0	6																								
LD1060	Lai Wan Overpass W/B - Parapet Panels	9	03JAN07	12JAN07	0	9																								
LD1060A	Lai Wan Overpass W/B - Parapet Insitu Concrete	12	06JAN07	19JAN07	0	12																								
LD1065	Lai Wan Overpass W/B - Movement Joints at DA1&2	6	20JAN07	26JAN07	0	6																								
LD1067	Lai Wan Overpass W/B - Flexible Pavement	4	27JAN07	31JAN07	0	4																								
LD1080	Lai Wan Overpass WB - Demolish Existing Flanges	24	02FEB07	05MAR07	0	24																								
LD1090	Lai Wan Overpass W/B - Construct New Flanges	36	16FEB07	03APR07	0	36																								
<b>East Bound - Insitu Deck</b>																														
LD2059	Lai Wan O/Pass E/B - Span St.3 - Stressing	6	20NOV06	25NOV06	0	6																								
LD2060	Lai Wan O/Pass E/B - Parapet Panels	6	27NOV06	02DEC06	0	6																								
LD2060A	Lai Wan O/Pass E/B - Parapet Insitu Concrete	12	30NOV06	13DEC06	0	12																								
LD2065	Lai Wan O/Pass E/B - Movement Joints at CA1&2	6	11DEC06	16DEC06	0	6																								
LD2067	Lai Wan O/Pass E/B - Flexible Pavement	4	18DEC06	21DEC06	0	4																								
LD2080	Lai Wan O/Pass E/B - Demolish Existing Flanges	24	23DEC06	22JAN07	0	24																								
LD2090	Lai Wan O/Pass E/B - Construct New Flanges	36	09JAN07	22FEB07	0	36																								
<b>East Bound - Superstructure Finishing Works</b>																														
LF1040	Lai Wan O/Pass E/B - 6 Months Wait for Stitches	176	18JAN07	18AUG07	0	176																								
<b>At Grade Works - Ching Cheung Road at LCK Park</b>																														
<b>Temporary Traffic Management Schemes</b>																														
NT2050	2nd. TTMS CC Rd (E/B C/Way) - Prepare for Review	12	12DEC06	26DEC06	0	12																								
NT2060	2nd. TTMS CC Rd (E/B C/Way) - CRE Endorsement	6	11JAN07	16JAN07	0	6																								
NT2070	2nd. TTMS CC Rd (E/B C/Way) - Roadworks Advice	6	17JAN07	22JAN07	0	6																								
NT2080	2nd. TTMS CC Rd (E/B C/Way) - Site Preparation	6	23JAN07	29JAN07	0	6																								
NT2100	3rd. TTMS CC Rd (E/B C/Way) - Prepare for Review	12	11JAN07	24JAN07	0	12																								
NT2110	3rd. TTMS CC Rd (E/B C/Way) - CRE Endorsement	6	13FEB07	18FEB07	0	6																								





Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem Durn.	2006											2007								
							NOV			DEC			JAN		FEB			JAN		FEB						
							13	20	27	4	11	18	25	1	8	15	22	29	5	12	19	26				
<b>Retaining Wall CCR-R3 Type A</b>																										
RW3040	Ret. Wall CCR-R3A - Backfill & Form Platform	18	20NOV06	09DEC06	0	18																				
<b>Retaining Wall CCR-R3 Type B</b>																										
RW4040	Ret. Wall CCR-R3B - Backfill & Form Platform	18	20NOV06	09DEC06	0	18																				
<b>Retaining Wall CCR-R3 Type C</b>																										
RW5010	Ret. Wall CCR-R3C - Temporary Works & Excavation	24	25JAN06A	21NOV06	95	2																				
RW5020	Ret. Wall CCR-R3C - Bases	18	20NOV06	09DEC06	0	18																				
RW5030	Ret. Wall CCR-R3C - Walls	24	04DEC06	02JAN07	0	24																				
RW5040	Ret. Wall CCR-R3C - Backfill & Remove Temp Works	12	03JAN07	16JAN07	0	12																				
<b>Slope Works Above Retaining Walls CCR-R3D, E &amp; F</b>																										
RE4107	Slope above CCR-R3D-Excavate Slope	12	25SEP06A	25NOV06	50	6																				
RE4110	Slope above CCR-R3D- Filter - Bottom to 1st Berm	6	11DEC06	16DEC06	0	6																				
RE4111	Slope above CCR-R3D- Filling - B'm to 1st Berm	12	18DEC06	02JAN07	0	12																				
RE4113	Slope above CCR-R3D- Filter - 1st Berm to F/Path	6	03JAN07	09JAN07	0	6																				
RE4114	Slope above CCR-R3D - Filling-1st Berm to F/Path	12	10JAN07	23JAN07	0	12																				
RE4115	Slope above CCR-R3D- Filter - F/Path to 3rd Berm	6	24JAN07	30JAN07	0	6																				
RE4116	Slope above CCR-R3D - Filling-F/Path to 3rd Berm	12	31JAN07	13FEB07	0	12																				
RE4119	Slope above CCR-R3D- Filter - 3rd Berm to Top	6	14FEB07	23FEB07	0	6																				
RE4205	Slope above CCR-R3E&F -Remove Piling Platform	6	20NOV06	25NOV06	0	6																				
RE4207	Slope above CCR-R3E&F -Excavate Slope	12	27NOV06	09DEC06	0	12																				
RE4210	Slope above CCR-R3E&F- Filter - Btm. to 1st Berm	6	11DEC06	16DEC06	0	6																				
RE4211	Slope above CCR-R3E&F - Filling-B'm to 1st Berm	12	18DEC06	02JAN07	0	12																				
RE4213	Slope above CCR-R3E&F -Filter-1st Berm to +24mPD	6	03JAN07	09JAN07	0	6																				
RE4214	Slope above CCR-R3E&F-Filling- 1st Berm to +24mPD	12	10JAN07	23JAN07	0	12																				
RE4214A	Slope above CCR-R3E&F- Form Crane Platform	6	24JAN07	30JAN07	0	6																				
RE4215	Slope above CCR-R3E&F-Filter- +24mPD to 3rd Berm	6	24JAN07	30JAN07	0	6																				
RE4216	Slope above CCR-R3E&F -Filling-+24mPD to 3rd Berm	12	31JAN07	13FEB07	0	12																				
RE4219	Slope above CCR-R3E&F- Filter - 3rd Berm to Top	6	14FEB07	23FEB07	0	6																				
RE4410	Slope Above CC Rest Garden - Excavate Slope	12	14JUL06A	21NOV06	80	2																				
RE4420	Slope Above CC Rest Garden - Benching	12	30SEP06A	25NOV06	50	6																				
RE4430	Slope Above CC Rest Garden - Rock Filling	12	27NOV06	09DEC06	0	12																				
RE4440	Slope Above CC Rest Garden - Slope Drainage	18	11DEC06	02JAN07	0	18																				
RE4450	Slope Above CC Rest Garden - Slope Finishes	12	26DEC06	09JAN07	0	12																				
<b>Earthworks &amp; Slope Works - CCR-S4</b>																										
RE4268	Slope CCR-S4 - Excavate & Bench Upper Slope	48	03JAN06A	24NOV06	88	5																				
RE4280	Slope CCR-S4 - Fill and Compact	24	23FEB06A	02DEC06	50	12																				
RE4285	Slope CCR-S4 - Form New Access Road at Footpath	12	04DEC06	16DEC06	0	12																				
RE4290	Slope CCR-S4 - Upper Slope Drainage	18	18DEC06	09JAN07	0	18																				
RE4300	Slope CCR-S4 - Upper Slope Finishes	18	10JAN07	30JAN07	0	18																				
RE4310	Slope CCR-S4 - Excavate Lower Slope	24	01MAR06A	22NOV06	90	3																				
RE4320	Slope CCR-S4 - Lower Slope Drainage	18	23NOV06	13DEC06	0	18																				
RE4330	Slope CCR-S4 - Lower Slope Finishes	24	14DEC06	12JAN07	0	24																				
<b>Ching Cheung Road NTMM Retaining Wall A</b>																										
RW6020	NNTM Wall A - Drainage & Fill Behind Walls	12	21JUN06A	25NOV06	50	6																				
RW6030	NNTM Wall A - Excavate to +20.5mPD	12	21JUN06A	25NOV06	50	6																				
RW6040	NNTM Wall A - Debris Collection Area Drainage	12	27NOV06	09DEC06	0	12																				
RW6050	NNTM Wall A - Debris Collection Area Access Ramp	12	11DEC06	23DEC06	0	12																				
RW6060	NNTM Wall A - Debris Collection Area Finishes	24	26DEC06	23JAN07	0	24																				
<b>Drainage Works</b>																										
RR2000	Ching Cheung Rd. W/B - Stormwater in New C/way	36	18DEC06	30JAN07	0	36																				
RR3100	Ching Cheung Rd. E/B -S/Water S300-01 to S300-07	60	18DEC06	09FEB07	0	45																				
RR3110	Ching Cheung Rd. E/B -S/Water S300-07 to S300-12	60	17OCT06A	12JAN07	25	45																				

Start Date 23SEP03  
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Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem Durn.	2006																
							NOV	NOV	NOV	NOV	NOV	NOV	NOV	NOV	NOV	NOV	NOV	NOV					
PW2140	Ret. Wall CCR-R5 - Complete Fill Behind Wall	12	25NOV06	08DEC06	0	12																	
PW2230	Ret. Wall CCR-R5 - Slope Works Behind Wall	36	09DEC06	22JAN07	0	36																	
<b>Retaining Wall CCR-R6 (Value Engineering Design)</b>																							
PW3250	Ret. Wall CCR-R6 - Bases to R.C. Walls	48	22AUG06A	24NOV06	90	5																	
PW3260	Ret. Wall CCR-R6 - R.C. Walls	48	28OCT06A	06JAN07	20	40																	
PW3070	Ret. Wall CCR-R6 - Fill Behind Ret Wall	36	15DEC06	27JAN07	0	36																	
<b>Drainage Works</b>																							
PA1200	C.P.Rd Loop to Slip Road C - Stormwater Drainage	18	03OCT06A	04DEC06	30	13																	
PA2000	C.P.Rd-K.C. S/B - Stormwater Drainage	24	31JAN07	02MAR07	0	24																	
PA3000	C.P.Rd.-K.C S/B to C.C. Rd E/B - Storm Drainage	36	16DEC06	29JAN07	0	36																	
<b>Utilities &amp; Roadworks</b>																							
PR1117	New CLP 11kV Cable Laying in front of CCR-R5	18	04JAN07	24JAN07	0	18																	
PR3000	C.P.Rd. Loop to Slip Road C - Formation	13	27NOV06	11DEC06	0	13																	
PR3010	C.P.Rd. Loop to Slip Road C - Sub-base	12	05DEC06	18DEC06	0	12																	
PR3020	C.P.Rd. Loop to Slip Road C - Kerbs	18	12DEC06	03JAN07	0	18																	
PR3040	C.P.Rd. Loop to Slip Road C - Pavement	6	04JAN07	10JAN07	0	6																	
PR3050	C.P.Rd. Loop to Slip Road C - Street Lighting	12	11JAN07	24JAN07	0	12																	
PR3080	C.P.Rd. Loop to Slip Road C - Crash Barriers	18	11JAN07	31JAN07	0	18																	
PR5000	C.P.Rd-K.C. S/B to C.C.Rd E/B - Excavate Road	18	25NOV06	15DEC06	0	18																	
PR5010	C.P.Rd-K.C. S/B to C.C.Rd E/B - Formation	12	30JAN07	12FEB07	0	12																	
PR5020	C.P.Rd-K.C. S/B to C.C.Rd E/B - Sub-base	12	08FEB07	24FEB07	0	12																	
PR5030	C.P.Rd-K.C. S/B to C.C.Rd E/B - Kerbs	18	16FEB07	12MAR07	0	18																	
PR5100	C.C. Rd. W/B - Sign Gantry FADS7 at P15-P16	18	16DEC06	08JAN07	0	18																	
<b>Kiosk at Slip Road C</b>																							
PK1000	Kiosk at Slip Rd. C - Structure	24	17OCT06A	15DEC06	5	23																	
PK1010	Kiosk at Slip Rd. C - Building Finishes	24	16DEC06	15JAN07	0	24																	
PK1015	Kiosk at Slip Rd. C - Provision for E & M Contr'	0		15JAN07	0	0																	
PK1020	Kiosk at Slip Rd. C - MVAC Installations	24	16DEC06	15JAN07	0	24																	
PK1030	Kiosk at Slip Rd. C - Electrical Works	24	02JAN07	29JAN07	0	24																	
PK1035	Kiosk at Slip Rd. C - FS Installation	24	02JAN07	29JAN07	0	24																	
PK1040	Kiosk at Slip Rd. C - Drainage Works	24	16JAN07	12FEB07	0	24																	

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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 data-bbox="1227 225 1845 284">Cheung Road, which is located very close to this building, especially at or above the Podium Floor (i.e. 5/F).</p> <p data-bbox="1227 316 1883 432">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 data-bbox="1227 437 1917 644" style="list-style-type: none"> <li data-bbox="1227 437 1917 491">• To space out noisy equipment and position it as far away as possible from the sensitive receivers;</li> <li data-bbox="1227 496 1917 550">• To avoid concurrent uses of noisy equipment near the sensitive area;</li> <li data-bbox="1227 555 1917 609">• To ensure the equipment are maintaining in good operation condition; and</li> <li data-bbox="1227 614 1917 644">• To turned off any idle equipment on site.</li> </ul> <p data-bbox="1227 676 1890 788">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
			Cheung Road and Mei Lai Road / Lai Wan Road opposite to Mei Foo Sun Cheung (Phase 5) and Lai Chi Kok Public Library.	<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)	11-Mar-05 (by EPD) 22-Mar-05 (by ET Leader)	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>Environmental Monitoring</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>Conclusion</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>Mitigation</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>Site Activities</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 Estae. 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

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				<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>	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<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

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				<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><u>Dust Nuisance</u></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

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<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

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				<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