

Highways Department

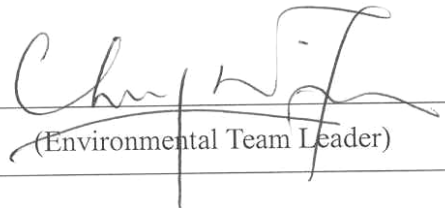
Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin

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 1.1)

October 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.

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
Introduction.....	1
Environmental Monitoring and Audit Works	1
Environmental Licenses and Permits	1
Key Information in the Reporting Month	2
1. INTRODUCTION	3
Background	3
Project Organizations	4
Construction Programme	4
Summary of EM&A Requirements.....	5
2. AIR QUALITY	6
Monitoring Requirements	6
Monitoring Locations.....	6
Monitoring Equipment.....	6
Monitoring Parameters, Frequency and Duration.....	6
Monitoring Methodology and QA/QC Procedure	7
Results and Observations	8
3. NOISE.....	9
Monitoring Requirements	9
Monitoring Locations.....	9
Monitoring Equipment.....	10
Monitoring Parameters, Frequency and Duration.....	10
Monitoring Methodology and QA/QC Procedures.....	10
Maintenance and Calibration	11
Results and Observations	11
4. ENVIRONMENTAL AUDIT	12
Site Audits.....	12
Review of Environmental Monitoring Procedures	12
Status of Environmental Licensing and Permitting	12
Implementation Status of Environmental Mitigation Measures	12
Summary of Exceedances	18
Implementation Status of Event Action Plans	18
Summary of Complaint and Prosecution	18
5. FUTURE KEY ISSUES	20
Key Issues for the Coming Month	20
Monitoring Schedule for the Next Month.....	20
Construction Program for the Next Month	20
6. CONCLUSIONS AND RECOMMENDATIONS	21
Conclusions.....	21
Recommendations	21

LIST OF TABLES

Table I	Summary Table for Events Recorded in the Reporting Month
Table II	Summary Table for Key Information in the Reporting Month
Table 1.1	Key Project Contacts
Table 2.1	Locations for Air Quality Monitoring
Table 2.2	Air Quality Monitoring Equipment
Table 2.3	Impact Dust Monitoring Parameters, Frequency and Duration
Table 3.1	Noise Monitoring Stations
Table 3.2	Noise Monitoring Equipment
Table 3.3	Noise Monitoring Parameters, Frequency and Duration
Table 4.1	Summary of Environmental Licensing and Permit Status
Table 4.2	Observations and Recommendations of Site Audit

LIST OF FIGURES

Figure 1	Locations of Monitoring Stations
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LIST OF APPENDICES

A	Action and Limit Levels for Air Quality and Noise
B	Copies of Calibration Certificates
C	Environmental Monitoring Schedules
D	Wind Data
E	1-hour TSP Monitoring Results and Graphical Presentations
F	24-hour TSP Monitoring Results and Graphical Presentations
G	Noise Monitoring Results and Graphical Presentations
H	Summary of Exceedance
I	Site Audit Summary
J	Event Action Plans
K	Environmental Mitigation Implementation Schedule (EMIS)
L	Construction Programme
M	Complaint Log

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 thirty-fifth 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 October 2006 for Contract No. HY/2003/01, Lai Chi Kok Viaduct (the Project).
- The major site activities undertaken in the reporting month included:
 - Rock dowel installation;
 - Bulk excavation works;
 - Retaining wall construction;
 - Drainage works;
 - Offsite fabrication of parapet and noise barrier;
 - Parapet installation;
 - Erection of noise barrier;
 - Construction of Wai Man Tsuen Pump House & Irrigation Pump House; and
 - Hydroseeding for slopes

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	1	Complaint Investigation Report was submitted

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 sixteen new CNPs was 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	Closed	---
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 the coming month include:

- 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, C and D
- 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 anticipated environmental impacts will be mainly on air impact from bulk excavation works and noise impact 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 15th 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 thirty-fifth monthly EM&A report summarizing the EM&A works for the Project in October 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.
- 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 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, C and D
 - Construction of Wai Man Tsuen Pump House & Irrigation Pump House near Pier C14 and kiosk at CCR-S1
 - Hydroseeding for Slope CCR-S1 & S3

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. D.F. Lilliman	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. Edmond Wu	Project Coordinator	2151 2092	
		Mr. Ray Yan	Audit Team Leader	2151 2083	
		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		
24-hour Emergency Hotline				2370 9200	-

Summary of EM&A Requirements

1.12 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.

1.13 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 4 of this report.

1.14 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 m³/min. and 1.4 m³/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 15th 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 8th 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 30th 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 ₁₀ (30 min.)dB(A) L ₉₀ (30 min.)dB(A) L _{eq} (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 but 1 Action Level was triggered due to receiving a complaint.
- 3.16 One complaint was referred by the RSS on 25th October 2006 about construction noise generated from workers and construction vehicles between 01:00 am and 02:00 am at Lai Chi Kok road Flyover near PCCW Building on the nights of 19th and 20th October 2006.
- 3.17 The complaint was considered justifiable and the complaint investigated report was submitted to Highways Department on 4th November 2006.
- 3.18 At Stations NM8a and NM8b, the major noise source identified during the monitoring exercises was mainly the road traffic noise.
- 3.19 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 were conducted on 4th, 11th, 18th and 25th October 2006 by ET. The audit session on 4th October 2006 was conducted with the representatives of HyD, IEC, ER, the Contractor and ET.

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 sixteen 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		
Environmental Permit (EP)				
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&M works (including ventilation, Traffic Control & 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
Registration of Chemical Waste Producer				
WPN 5213-261-N2413-04	17/11/03	N/A	N/A	Valid
Water Discharge Licence				
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
Construction Noise Permit (CNP)				
GW-RW0192-06	7/4/06	6/10/06	<p><i>Location:</i> Junction of Ching Cheung Road and Castle Peak Road</p> <p><i>Time Period:</i> General holidays (including Sundays) between 0700-2300 hours and any other days between 1900-2300 hours</p>	Expired
GW-RW0257-06	4/5/06	3/10/06	<p><i>Location:</i> Castle Peak Road near Ching Cheung Road</p> <p><i>Time Period:</i> General holiday (includes Sundays) between 0700-2300 hours and any day not being a general holiday between 1900-2300 hours.</p>	Expired
GW-RW0258-06	5/5/06	4/10/06	<p><i>Location:</i> Butterfly Valley</p> <p><i>Time Period:</i> General holiday (includes Sundays) between 0000-2400 hours and any day not being a general holiday between 1900-0700 hours.</p>	Cancelled on 16 th Sep 2006
GW-RW0269-06	15/5/06	14/11/06	<p><i>Location:</i> Lai Po Road near Yuet Lun Street</p> <p><i>Time Period:</i> General holiday (includes Sundays) between 0000-2400 hours and any day not being a general holiday between 1900-0700 hours.</p>	Valid

Permit No.	Valid Period		Details	Status
	From	To		
GW-RW0270-06	15/5/06	14/11/06	<i>Location:</i> Lai Po Road near Hoi Lai Estate <i>Time Period:</i> General holiday (includes Sundays) between 0000-2400 hours and any day not being a general holiday between 1900-0700 hours.	Valid
GW-RW0271-06	15/5/06	10/11/06	<i>Location:</i> Ching Cheung Road near 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).	Valid
GW-RW0276-06	15/5/06	11/11/06	<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 2100-0700 hours (not immediately following a general holiday).	Valid
GW-RW0319-06	30/5/06	26/11/06	<i>Location:</i> Ching Cheung Road near Butterfly Valley Road <i>Time Period:</i> General holiday (includes Sundays) between 0000-2400 hours and any day not being a general holiday between 1900-0700 hours.	Valid
GW-RW0311-06	6/6/06	5/12/06	<i>Location:</i> Butterfly Valley near O Pui Shan Boys' Home <i>Time Period:</i> General holiday (including Sundays) between 0700-2300 hours and any day not being a general holiday between 1900-2300 hours.	Valid
GW-RW0381-06	17/7/06	16/12/06	<i>Location:</i> Kwai Chung Road near Lai Chi Kok Interchange <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).	Valid
GW-RW0393-06	27/7/06	25/1/07	<i>Location:</i> Lai Wan Road <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).	Valid
GW-RW0408-06	02/8/06	30/12/06	<i>Location:</i> Lai Po Road near Hoi Lai Estate <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).	Valid
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

Permit No.	Valid Period		Details	Status
	From	To		
GW-RW0508-06	13/9/06	12/3/07	<i>Location: Butterfly Valley Interchange</i> <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: Castle Peak Road and Butterfly Valley Road</i> <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 th Oct 2006
GW-RW0498-06	16/9/06	15/3/07	<i>Location: Butterfly Valley</i> <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid
GW-RW0513-06	17/9/06	11/3/07	<i>Location: Junction of Castle Peak Road and Ching Cheung Road</i> <i>Time Period:</i> 0900-1900 (general holiday including Sundays).	Valid
GW-RW0515-06	24/9/06	26/12/06	<i>Location: Ching Cheung Road near Butterfly Valley</i> <i>Time Period:</i> 0900-2100 (general holiday including Sundays) and 2100-0700 (any day not being a general holiday).	Valid
GW-RN0555-06	3/10/06	17/10/06	<i>Location: Butterfly Valley Road near Lai Chi Kok Reception Centre</i> <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).	Expired (New)
GW-RN0556-06	3/10/06	17/10/06	<i>Location: Lai Po Road near Yuet Lun Street</i> <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).	Expired (New)
GW-RW0557-06	29/9/06	13/10/06	<i>Location: Kwai Chung Road near Lai Chi Kok Interchange</i> <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).	Expired
GW-RW0516-06	30/9/06	2/10/06	<i>Location: Lai Po Road near Ho Lai Estate</i> <i>Time Period:</i> 0900-2100 (general holiday including Sundays) and 1900-2100 (any day not being a general holiday).	Expired
GW-RW0519-06	30/9/06	31/10/06	<i>Location: Lai Po Road near Sham Mong Road</i> <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Expired
GW-RW0558-06	1/10/06	31/3/07	<i>Location: Butterfly Valley Road</i> <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid (New)

Permit No.	Valid Period		Details	Status
	From	To		
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 (New)
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 (New)
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 (New)
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 (New)
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 (New)
GW-RW0593-06	17/10/06	28/10/06	<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 0000-0700 hours and 2100-2400 (not immediately following a general holiday).	Expired (New)
GW-RW0594-06	13/10/06	27/10/06	<i>Location:</i> Kwai Chung Road near Lai Chi Kok Inerchange, Kowloon. <i>Time Period:</i> Any day not being a general holiday for 2100-2400 (immediately following a general holiday) and 0000-0700 hours and 2100-2400 (not immediately following a general holiday).	Expired (New)
GW-RW0595-06	17/10/06	28/10/06	<i>Location:</i> Lai Po Road near Yuet Lun Street, Kowloon. <i>Time Period:</i> Any day not being a general holiday for 2100-2400 (immediately following a general holiday) and 0000-0700 hours and 2100-2400 (not immediately following a general holiday).	Expired (New)
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).	Valid (New)
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).	Valid (New)

Permit No.	Valid Period		Details	Status
	From	To		
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 (New)
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 (New)
GW-RW0626-06	31/10/06	14/11/06	<i>Location:</i> Lai Po Road near Yuet Lun Street <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 (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

Parameters	Date	Observations and Recommendations	Follow-up
<i>Water Quality</i>	11-Oct-06	<i>Observation</i> - A browser was observed improperly pouring significant amount of water onto soil surface of bare ground near S3, which led to the generation and discharging of muddy runoff directly into the constructed storm water drainage channel. <i>Reminder</i> - The Contractor was reminded to pay attention to the stagnant water at site office area and R3.	The situation was found improved / rectified during the audit on 18-Oct-06.
	25-Oct-06	<i>Reminder</i> - Standing water was observed at the holes on the Bridge Deck.	The situation was found improved / rectified during the audit on 1-Nov-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 1 Action Level (noise complaint) exceedance was recorded on 25th October 2006. No Limit Level exceedance was recorded in the reporting month.

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 One public complaint was received in the reporting month.
- 4.11 One complaint was referred by the RSS on 25th October 2006 about construction noise generated from workers and construction vehicles between 01:00 am and 02:00 am at Lai Chi Kok road Flyover near PCCW Building on the nights of 19th and 20th October 2006.
- 4.12 The complaint was considered justifiable and the complaint investigated report was submitted to Highways Department on 4th November 2006.
- 4.13 No prosecution was received in the reporting month.
- 4.14 There were 31 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-S4, CCR-R3, CCR-R6 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 in the coming month include:

- 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, C and D
- Construction of Wai Man Tsuen Pump House & Irrigation Pump House near Pier C14 and kiosk at CCR-S1
- Hydroseeding for Slope CCR-S1 & S3

5.4 The tentative construction program for the Project is provided in **Appendix L**.

6. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- 6.1 Environmental monitoring works were conducted in the reporting month and all monitoring results were checked and reviewed.
- 6.2 No Action/Limit Level exceedance for both 1-hour TSP and 24-hours TSP was recorded in the reporting month.
- 6.3 One Action Level (noise complaint) exceedance was recorded on 25th October 2006. No Limit Level exceedance was recorded in the reporting month.
- 6.4 1 complaint was received in the reporting month. No prosecution was received in the reporting month.

Recommendations

- 6.5 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.

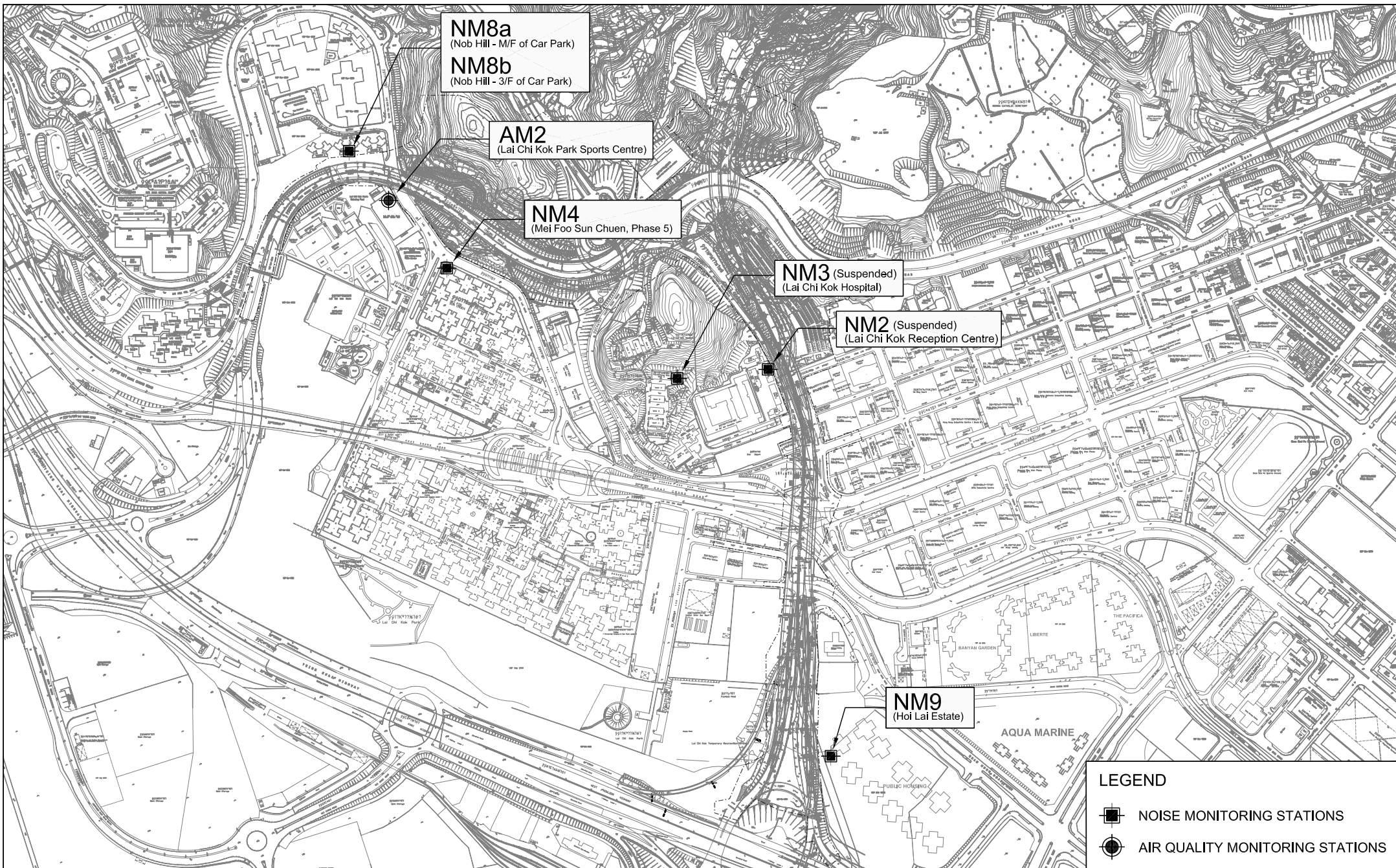
Dust Impact

- 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.

FIGURES



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

LOCATIONS OF MONITORING STATIONS

Scale
1 : 8000 (A4)
Date
2006

LEGEND	
	NOISE MONITORING STATIONS
	AIR QUALITY MONITORING STATIONS
Project No.	MA3024
Figure No.	1



**APPENDIX A
ACTION AND LIMIT LEVELS**

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.

**APPENDIX B
COPIES OF CALIBRATION
CERTIFICATES**

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 ENVIRONMENTAL, INC.
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 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

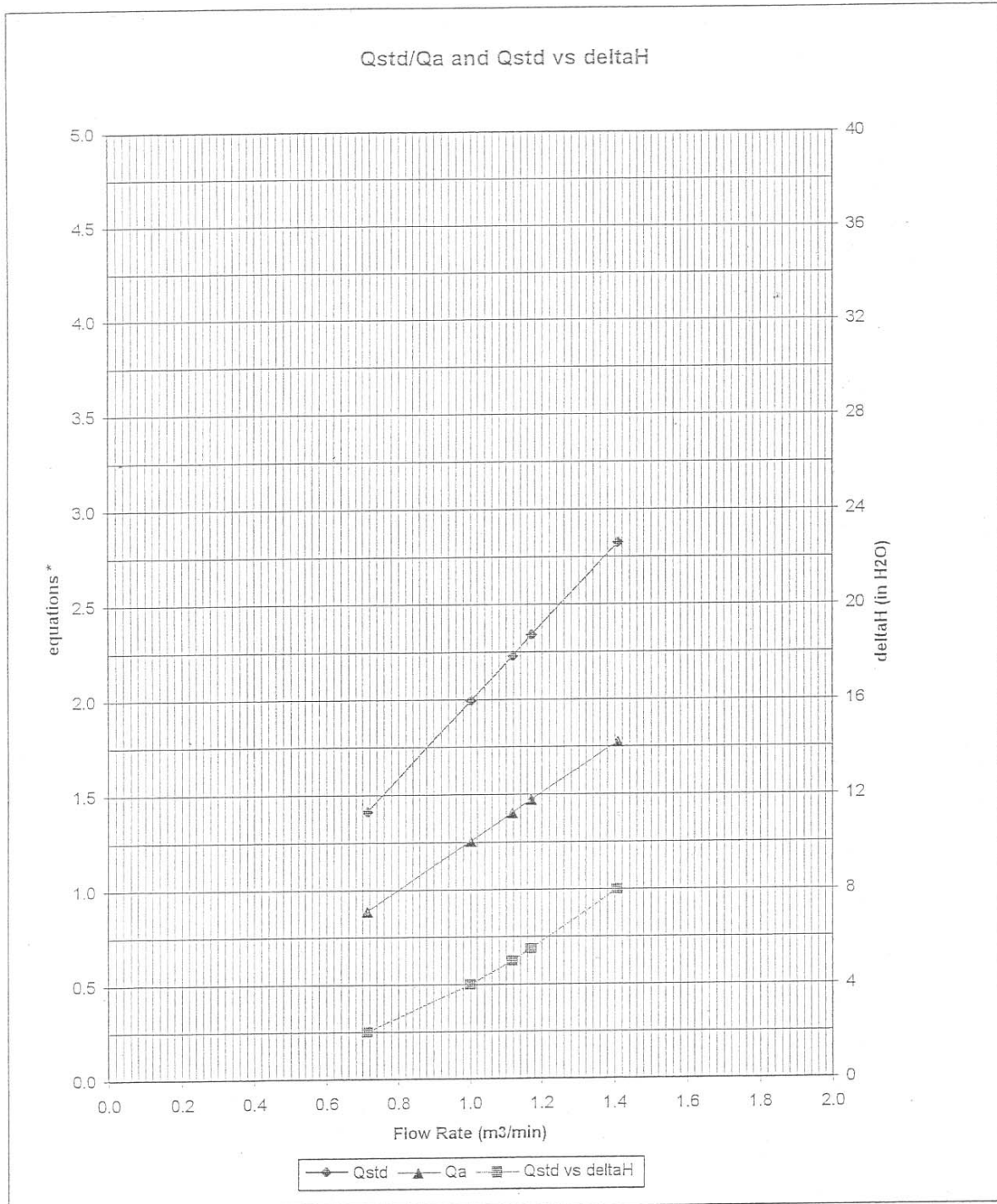
For subsequent flow rate calculations:

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



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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
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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
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TEST REPORT

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

Test Report No.:	C/N/51116/1
Date of Issue:	2005-11-16
Date Received:	2005-11-15
Date Tested:	2005-11-15
Date Completed:	2005-11-16
Next Due Date:	2006-11-15

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	: 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

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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 TSE

Laborary Manager

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WELLAB LTD.

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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/51015/1
Date of Issue:	2005-10-15
Date Received:	2005-10-13
Date Tested:	2005-10-14
Date Completed:	2005-10-15
Next Due Date:	2006-10-14

ATTN: Mr. Henry Leung

Page: 1 of 1

Certificate of Calibration

Item for calibration:

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

Test conditions:

Room Temperature	: 22 degree Celsius
Relative Humidity	: 65%

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
Operation Manager

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13-15 Yuen Shun Circuit,
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Tel: (852) 2898 7388
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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

ATTN: Mr. Henry Leung

Page: 1 of 1

Certificate of Calibration

Item for calibration:

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

Test conditions:

Room Temperature	: 21 degree Celsius
Relative Humidity	: 60%

Test Specifications:

Performance checking at 94 and 114 dB

Methodology:

In-house method, according to manufacturer instruction manual

Results:

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

PREPARED AND CHECKED BY:

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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/05/1115-1
Date of Issue:	2005-11-15
Date Received:	2005-11-14
Date Tested:	2005-11-15
Date Completed:	2005-11-15
Next Due Date:	2006-11-14

ATTN: Mr. Henry Leung

Page: 1 of 1

Item for calibration:

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

Test conditions:

Room Temperature	: 20 degree Celsius
Relative Humidity	: 65%
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

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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

ATTN: Mr. Henry Leung

Page: 1 of 1

Item for calibration:

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

Test conditions:

Room Temperature	: 20 degree Celsius
Relative Humidity	: 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

PREPARED AND CHECKED BY:

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



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606 - 608 Cornell Centre,
50 Wing Tai Road,
Chai Wan, Hong Kong.
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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

**APPENDIX C
ENVIRONMENTAL MONITORING AND
AUDIT SCHEDULE**

Environmental Monitoring for Lai Chi Kok Viaduct
Tentative Air Quality and Noise Monitoring Schedule for October 2006

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

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

AM2 Lai Chi Kok Sports Centre
 NM2 Lai Chi Kok Correction Institution
 NM4 Mei Foo Sun Chuen, Phase 5
 NM8a M/F of Nob Hill
 NM8b 3/F of Nob Hill

Environmental Monitoring for Lai Chi Kok Viaduct
Tentative Air Quality and Noise Monitoring Schedule for November 2006

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

APPENDIX D
WIND DATA

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
1-Oct-2006	00:00	0.1	SE
1-Oct-2006	01:00	0.1	SE
1-Oct-2006	02:00	0.1	SE
1-Oct-2006	03:00	0.1	SE
1-Oct-2006	04:00	0.1	SE
1-Oct-2006	05:00	0.1	---
1-Oct-2006	06:00	0.1	---
1-Oct-2006	07:00	0.1	---
1-Oct-2006	08:00	0.1	---
1-Oct-2006	09:00	0.1	ESE
1-Oct-2006	10:00	0.7	WNW
1-Oct-2006	11:00	0.7	WNW
1-Oct-2006	12:00	0.7	WNW
1-Oct-2006	13:00	2.0	WNW
1-Oct-2006	14:00	4.0	WNW
1-Oct-2006	15:00	4.0	NNE
1-Oct-2006	16:00	3.3	NNE
1-Oct-2006	17:00	2.0	NE
1-Oct-2006	18:00	1.4	NE
1-Oct-2006	19:00	0.1	NE
1-Oct-2006	20:00	0.7	NE
1-Oct-2006	21:00	0.1	NE
1-Oct-2006	22:00	0.7	NE
1-Oct-2006	23:00	0.7	NE
2-Oct-2006	00:00	0.7	ENE
2-Oct-2006	01:00	0.1	E
2-Oct-2006	02:00	0.1	---
2-Oct-2006	03:00	0.1	E
2-Oct-2006	04:00	0.1	ENE
2-Oct-2006	05:00	0.1	ENE
2-Oct-2006	06:00	1.4	E
2-Oct-2006	07:00	0.1	E
2-Oct-2006	08:00	0.1	E
2-Oct-2006	09:00	0.1	N
2-Oct-2006	10:00	1.4	N
2-Oct-2006	11:00	2.0	NE
2-Oct-2006	12:00	4.6	NE
2-Oct-2006	13:00	4.0	NE
2-Oct-2006	14:00	3.3	NE
2-Oct-2006	15:00	1.4	NE
2-Oct-2006	16:00	1.4	ENE
2-Oct-2006	17:00	2.7	SSW
2-Oct-2006	18:00	1.4	N
2-Oct-2006	19:00	1.4	E
2-Oct-2006	20:00	0.1	---
2-Oct-2006	21:00	0.1	E
2-Oct-2006	22:00	0.1	---
2-Oct-2006	23:00	0.1	---
3-Oct-2006	00:00	0.1	---
3-Oct-2006	01:00	0.1	---
3-Oct-2006	02:00	0.1	E
3-Oct-2006	03:00	0.1	E
3-Oct-2006	04:00	0.1	SW
3-Oct-2006	05:00	0.1	E

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
3-Oct-2006	06:00	0.1	ENE
3-Oct-2006	07:00	0.7	WSW
3-Oct-2006	08:00	1.4	WSW
3-Oct-2006	09:00	2.0	WSW
3-Oct-2006	10:00	2.7	WSW
3-Oct-2006	11:00	2.0	SW
3-Oct-2006	12:00	2.0	W
3-Oct-2006	13:00	2.0	SSW
3-Oct-2006	14:00	2.0	S
3-Oct-2006	15:00	2.0	S
3-Oct-2006	16:00	2.0	WSW
3-Oct-2006	17:00	5.3	W
3-Oct-2006	18:00	2.0	SSW
3-Oct-2006	19:00	3.3	SW
3-Oct-2006	20:00	3.3	SW
3-Oct-2006	21:00	4.0	SW
3-Oct-2006	22:00	4.6	SW
3-Oct-2006	23:00	4.0	SW
4-Oct-2006	00:00	4.0	SW
4-Oct-2006	01:00	4.6	SW
4-Oct-2006	02:00	3.3	SW
4-Oct-2006	03:00	3.3	SSW
4-Oct-2006	04:00	2.7	SSW
4-Oct-2006	05:00	1.4	SW
4-Oct-2006	06:00	2.0	SW
4-Oct-2006	07:00	1.4	SW
4-Oct-2006	08:00	3.3	W
4-Oct-2006	09:00	4.6	WSW
4-Oct-2006	10:00	4.6	WNW
4-Oct-2006	11:00	5.3	W
4-Oct-2006	12:00	5.3	WNW
4-Oct-2006	13:00	3.3	WNW
4-Oct-2006	14:00	4.0	WNW
4-Oct-2006	15:00	4.0	WNW
4-Oct-2006	16:00	3.3	SW
4-Oct-2006	17:00	2.7	S
4-Oct-2006	18:00	2.0	S
4-Oct-2006	19:00	0.7	S
4-Oct-2006	20:00	0.7	S
4-Oct-2006	21:00	2.7	S
4-Oct-2006	22:00	3.3	SSW
4-Oct-2006	23:00	2.7	S
5-Oct-2006	00:00	2.7	SSW
5-Oct-2006	01:00	2.7	SSW
5-Oct-2006	02:00	3.3	SSW
5-Oct-2006	03:00	5.3	WNW
5-Oct-2006	04:00	4.0	W
5-Oct-2006	05:00	3.3	W
5-Oct-2006	06:00	0.7	WNW
5-Oct-2006	07:00	1.4	WNW
5-Oct-2006	08:00	2.7	WNW
5-Oct-2006	09:00	3.3	WNW
5-Oct-2006	10:00	6.7	WNW
5-Oct-2006	11:00	5.3	WNW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
5-Oct-2006	12:00	5.9	WNW
5-Oct-2006	13:00	5.9	WNW
5-Oct-2006	14:00	2.0	W
5-Oct-2006	15:00	0.7	N
5-Oct-2006	16:00	1.4	NNE
5-Oct-2006	17:00	0.1	WNW
5-Oct-2006	18:00	0.1	SE
5-Oct-2006	19:00	0.1	SE
5-Oct-2006	20:00	0.7	ESE
5-Oct-2006	21:00	0.1	ESE
5-Oct-2006	22:00	0.1	ESE
5-Oct-2006	23:00	0.7	W
6-Oct-2006	00:00	2.7	SSW
6-Oct-2006	01:00	1.4	SSW
6-Oct-2006	02:00	0.7	S
6-Oct-2006	03:00	0.1	S
6-Oct-2006	04:00	2.7	S
6-Oct-2006	05:00	2.0	S
6-Oct-2006	06:00	4.0	WNW
6-Oct-2006	07:00	3.3	SW
6-Oct-2006	08:00	3.3	SW
6-Oct-2006	09:00	5.9	SW
6-Oct-2006	10:00	4.0	SW
6-Oct-2006	11:00	3.3	SW
6-Oct-2006	12:00	2.7	SW
6-Oct-2006	13:00	4.0	WNW
6-Oct-2006	14:00	5.9	WNW
6-Oct-2006	15:00	5.3	WNW
6-Oct-2006	16:00	3.3	WNW
6-Oct-2006	17:00	4.6	WNW
6-Oct-2006	18:00	4.6	WNW
6-Oct-2006	19:00	2.7	WNW
6-Oct-2006	20:00	2.7	SSW
6-Oct-2006	21:00	2.0	SSW
6-Oct-2006	22:00	0.1	SW
6-Oct-2006	23:00	1.4	SW
7-Oct-2006	00:00	2.0	SW
7-Oct-2006	01:00	2.0	SSW
7-Oct-2006	02:00	0.7	SSW
7-Oct-2006	03:00	2.0	SSW
7-Oct-2006	04:00	2.7	SSW
7-Oct-2006	05:00	2.7	SSW
7-Oct-2006	06:00	2.0	WNW
7-Oct-2006	07:00	1.4	SSW
7-Oct-2006	08:00	2.7	WNW
7-Oct-2006	09:00	4.0	WNW
7-Oct-2006	10:00	4.0	WNW
7-Oct-2006	11:00	3.3	W
7-Oct-2006	12:00	6.7	WNW
7-Oct-2006	13:00	5.9	WNW
7-Oct-2006	14:00	5.3	W
7-Oct-2006	15:00	4.0	W
7-Oct-2006	16:00	4.6	W
7-Oct-2006	17:00	4.6	W

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
7-Oct-2006	18:00	4.6	W
7-Oct-2006	19:00	4.6	SW
7-Oct-2006	20:00	4.0	SW
7-Oct-2006	21:00	4.0	SW
7-Oct-2006	22:00	4.6	WSW
7-Oct-2006	23:00	5.9	WSW
8-Oct-2006	00:00	6.7	WSW
8-Oct-2006	01:00	6.7	WSW
8-Oct-2006	02:00	5.3	WSW
8-Oct-2006	03:00	5.3	SW
8-Oct-2006	04:00	2.7	W
8-Oct-2006	05:00	4.0	W
8-Oct-2006	06:00	4.6	W
8-Oct-2006	07:00	4.0	W
8-Oct-2006	08:00	4.0	W
8-Oct-2006	09:00	4.6	W
8-Oct-2006	10:00	5.3	W
8-Oct-2006	11:00	8.0	WNW
8-Oct-2006	12:00	9.3	WNW
8-Oct-2006	13:00	8.0	WNW
8-Oct-2006	14:00	7.2	WNW
8-Oct-2006	15:00	6.7	W
8-Oct-2006	16:00	4.6	SW
8-Oct-2006	17:00	4.0	SW
8-Oct-2006	18:00	4.6	WSW
8-Oct-2006	19:00	5.9	WSW
8-Oct-2006	20:00	6.7	WSW
8-Oct-2006	21:00	6.7	WSW
8-Oct-2006	22:00	5.3	SW
8-Oct-2006	23:00	5.9	WSW
9-Oct-2006	00:00	5.9	WSW
9-Oct-2006	01:00	4.6	WSW
9-Oct-2006	02:00	5.3	SW
9-Oct-2006	03:00	3.3	SW
9-Oct-2006	04:00	4.6	WSW
9-Oct-2006	05:00	4.6	WSW
9-Oct-2006	06:00	3.3	SW
9-Oct-2006	07:00	5.9	SW
9-Oct-2006	08:00	5.9	SW
9-Oct-2006	09:00	8.0	SW
9-Oct-2006	10:00	5.9	SW
9-Oct-2006	11:00	5.3	SW
9-Oct-2006	12:00	4.6	WSW
9-Oct-2006	13:00	4.6	WSW
9-Oct-2006	14:00	3.3	SSW
9-Oct-2006	15:00	4.6	SW
9-Oct-2006	16:00	5.3	SW
9-Oct-2006	17:00	4.0	SW
9-Oct-2006	18:00	3.3	SW
9-Oct-2006	19:00	4.6	SW
9-Oct-2006	20:00	4.0	SW
9-Oct-2006	21:00	5.3	WSW
9-Oct-2006	22:00	5.3	WSW
9-Oct-2006	23:00	4.6	WSW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
10-Oct-2006	00:00	5.9	WSW
10-Oct-2006	01:00	4.6	SW
10-Oct-2006	02:00	5.3	WSW
10-Oct-2006	03:00	5.9	SW
10-Oct-2006	04:00	4.0	SW
10-Oct-2006	05:00	2.7	SSW
10-Oct-2006	06:00	3.3	SSW
10-Oct-2006	07:00	4.0	SW
10-Oct-2006	08:00	4.6	SW
10-Oct-2006	09:00	4.0	SW
10-Oct-2006	10:00	5.3	WSW
10-Oct-2006	11:00	4.0	SW
10-Oct-2006	12:00	3.3	W
10-Oct-2006	13:00	2.7	SW
10-Oct-2006	14:00	4.0	SW
10-Oct-2006	15:00	3.3	SW
10-Oct-2006	16:00	3.3	SW
10-Oct-2006	17:00	4.0	W
10-Oct-2006	18:00	3.3	W
10-Oct-2006	19:00	3.3	W
10-Oct-2006	20:00	3.3	W
10-Oct-2006	21:00	3.3	WNW
10-Oct-2006	22:00	3.3	WNW
10-Oct-2006	23:00	3.3	WNW
11-Oct-2006	00:00	4.6	WNW
11-Oct-2006	01:00	4.6	WNW
11-Oct-2006	02:00	3.3	WNW
11-Oct-2006	03:00	4.0	WNW
11-Oct-2006	04:00	5.3	WNW
11-Oct-2006	05:00	5.3	W
11-Oct-2006	06:00	5.3	W
11-Oct-2006	07:00	5.9	WNW
11-Oct-2006	08:00	5.3	W
11-Oct-2006	09:00	5.3	W
11-Oct-2006	10:00	3.3	SW
11-Oct-2006	11:00	4.0	SW
11-Oct-2006	12:00	4.0	W
11-Oct-2006	13:00	5.3	W
11-Oct-2006	14:00	5.3	W
11-Oct-2006	15:00	4.6	W
11-Oct-2006	16:00	5.3	W
11-Oct-2006	17:00	5.9	WNW
11-Oct-2006	18:00	3.3	WSW
11-Oct-2006	19:00	4.0	W
11-Oct-2006	20:00	2.7	WNW
11-Oct-2006	21:00	3.3	WNW
11-Oct-2006	22:00	2.0	W
11-Oct-2006	23:00	4.0	W
12-Oct-2006	00:00	4.0	WSW
12-Oct-2006	01:00	4.0	WSW
12-Oct-2006	02:00	4.0	WSW
12-Oct-2006	03:00	4.6	WSW
12-Oct-2006	04:00	3.3	WSW
12-Oct-2006	05:00	2.7	W

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
12-Oct-2006	06:00	3.3	W
12-Oct-2006	07:00	4.0	WNW
12-Oct-2006	08:00	3.3	WNW
12-Oct-2006	09:00	3.3	W
12-Oct-2006	10:00	4.0	WNW
12-Oct-2006	11:00	3.3	WNW
12-Oct-2006	12:00	3.3	WNW
12-Oct-2006	13:00	1.4	WNW
12-Oct-2006	14:00	2.7	WNW
12-Oct-2006	15:00	2.7	W
12-Oct-2006	16:00	2.0	W
12-Oct-2006	17:00	1.4	W
12-Oct-2006	18:00	0.7	W
12-Oct-2006	19:00	0.1	W
12-Oct-2006	20:00	0.1	SSW
12-Oct-2006	21:00	0.1	S
12-Oct-2006	22:00	1.4	SSW
12-Oct-2006	23:00	0.7	W
13-Oct-2006	00:00	0.1	SSW
13-Oct-2006	01:00	0.1	S
13-Oct-2006	02:00	0.1	S
13-Oct-2006	03:00	0.1	S
13-Oct-2006	04:00	0.1	S
13-Oct-2006	05:00	0.1	S
13-Oct-2006	06:00	0.1	---
13-Oct-2006	07:00	0.1	SSE
13-Oct-2006	08:00	0.7	WNW
13-Oct-2006	09:00	4.0	WNW
13-Oct-2006	10:00	3.3	W
13-Oct-2006	11:00	4.0	WNW
13-Oct-2006	12:00	3.3	W
13-Oct-2006	13:00	3.3	WNW
13-Oct-2006	14:00	2.0	WNW
13-Oct-2006	15:00	1.4	N
13-Oct-2006	16:00	1.4	NNE
13-Oct-2006	17:00	0.7	NE
13-Oct-2006	18:00	0.7	ESE
13-Oct-2006	19:00	0.1	E
13-Oct-2006	20:00	0.1	---
13-Oct-2006	21:00	0.1	E
13-Oct-2006	22:00	0.1	E
13-Oct-2006	23:00	0.1	E
14-Oct-2006	00:00	0.1	E
14-Oct-2006	01:00	0.1	E
14-Oct-2006	02:00	0.1	E
14-Oct-2006	03:00	0.1	E
14-Oct-2006	04:00	0.1	---
14-Oct-2006	05:00	0.1	---
14-Oct-2006	06:00	0.1	---
14-Oct-2006	07:00	0.1	---
14-Oct-2006	08:00	0.1	---
14-Oct-2006	09:00	0.1	N
14-Oct-2006	10:00	4.6	W
14-Oct-2006	11:00	5.3	WNW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
14-Oct-2006	12:00	3.3	WNW
14-Oct-2006	13:00	3.3	WNW
14-Oct-2006	14:00	3.3	W
14-Oct-2006	15:00	4.6	W
14-Oct-2006	16:00	4.6	WNW
14-Oct-2006	17:00	4.6	W
14-Oct-2006	18:00	3.3	W
14-Oct-2006	19:00	2.0	W
14-Oct-2006	20:00	0.1	W
14-Oct-2006	21:00	0.1	W
14-Oct-2006	22:00	0.1	W
14-Oct-2006	23:00	0.1	W
15-Oct-2006	00:00	0.1	W
15-Oct-2006	01:00	0.1	W
15-Oct-2006	02:00	0.1	---
15-Oct-2006	03:00	0.1	---
15-Oct-2006	04:00	0.1	---
15-Oct-2006	05:00	0.1	---
15-Oct-2006	06:00	0.1	---
15-Oct-2006	07:00	0.7	SSW
15-Oct-2006	08:00	4.0	WNW
15-Oct-2006	09:00	5.3	W
15-Oct-2006	10:00	5.9	WNW
15-Oct-2006	11:00	5.3	WNW
15-Oct-2006	12:00	5.9	WNW
15-Oct-2006	13:00	5.3	WNW
15-Oct-2006	14:00	3.3	W
15-Oct-2006	15:00	2.7	SW
15-Oct-2006	16:00	2.0	SW
15-Oct-2006	17:00	0.7	SW
15-Oct-2006	18:00	0.1	SW
15-Oct-2006	19:00	0.1	ENE
15-Oct-2006	20:00	0.1	---
15-Oct-2006	21:00	0.1	---
15-Oct-2006	22:00	0.1	---
15-Oct-2006	23:00	0.1	SSW
16-Oct-2006	00:00	2.7	SW
16-Oct-2006	01:00	2.7	SW
16-Oct-2006	02:00	3.3	SSW
16-Oct-2006	03:00	2.7	SSW
16-Oct-2006	04:00	2.7	SSW
16-Oct-2006	05:00	1.4	SSW
16-Oct-2006	06:00	0.7	SSW
16-Oct-2006	07:00	0.1	SSW
16-Oct-2006	08:00	0.1	SSW
16-Oct-2006	09:00	4.0	WNW
16-Oct-2006	10:00	4.0	WNW
16-Oct-2006	11:00	4.0	WNW
16-Oct-2006	12:00	3.3	W
16-Oct-2006	13:00	1.4	W
16-Oct-2006	14:00	0.7	WSW
16-Oct-2006	15:00	1.4	WSW
16-Oct-2006	16:00	2.7	WSW
16-Oct-2006	17:00	2.7	WSW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
16-Oct-2006	18:00	0.7	ENE
16-Oct-2006	19:00	0.1	ENE
16-Oct-2006	20:00	0.1	ENE
16-Oct-2006	21:00	0.1	ENE
16-Oct-2006	22:00	0.1	ENE
16-Oct-2006	23:00	0.1	ENE
17-Oct-2006	00:00	0.1	---
17-Oct-2006	01:00	0.1	---
17-Oct-2006	02:00	0.1	---
17-Oct-2006	03:00	0.1	---
17-Oct-2006	04:00	0.1	---
17-Oct-2006	05:00	0.1	ENE
17-Oct-2006	06:00	0.1	---
17-Oct-2006	07:00	0.7	WSW
17-Oct-2006	08:00	2.0	SSW
17-Oct-2006	09:00	2.0	SW
17-Oct-2006	10:00	2.7	SW
17-Oct-2006	11:00	2.0	W
17-Oct-2006	12:00	4.0	W
17-Oct-2006	13:00	3.3	W
17-Oct-2006	14:00	2.7	W
17-Oct-2006	15:00	2.7	W
17-Oct-2006	16:00	3.3	W
17-Oct-2006	17:00	2.7	W
17-Oct-2006	18:00	2.0	WNW
17-Oct-2006	19:00	2.0	WNW
17-Oct-2006	20:00	2.0	WNW
17-Oct-2006	21:00	2.7	WNW
17-Oct-2006	22:00	2.7	WNW
17-Oct-2006	23:00	2.0	W
18-Oct-2006	00:00	3.3	W
18-Oct-2006	01:00	3.3	WNW
18-Oct-2006	02:00	2.7	W
18-Oct-2006	03:00	2.7	W
18-Oct-2006	04:00	3.3	WNW
18-Oct-2006	05:00	2.7	WNW
18-Oct-2006	06:00	2.7	WNW
18-Oct-2006	07:00	2.7	W
18-Oct-2006	08:00	3.3	WNW
18-Oct-2006	09:00	2.7	WNW
18-Oct-2006	10:00	3.3	WNW
18-Oct-2006	11:00	4.6	SW
18-Oct-2006	12:00	5.3	SW
18-Oct-2006	13:00	5.3	SW
18-Oct-2006	14:00	5.9	SW
18-Oct-2006	15:00	4.6	SW
18-Oct-2006	16:00	4.6	SW
18-Oct-2006	17:00	5.3	WNW
18-Oct-2006	18:00	3.3	WNW
18-Oct-2006	19:00	3.3	W
18-Oct-2006	20:00	3.3	W
18-Oct-2006	21:00	3.3	W
18-Oct-2006	22:00	4.6	WNW
18-Oct-2006	23:00	3.3	WNW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
19-Oct-2006	00:00	4.0	WNW
19-Oct-2006	01:00	5.3	WNW
19-Oct-2006	02:00	5.3	WNW
19-Oct-2006	03:00	4.6	WNW
19-Oct-2006	04:00	4.0	W
19-Oct-2006	05:00	4.6	W
19-Oct-2006	06:00	4.0	SW
19-Oct-2006	07:00	4.0	WSW
19-Oct-2006	08:00	4.6	SW
19-Oct-2006	09:00	5.3	SW
19-Oct-2006	10:00	5.3	WNW
19-Oct-2006	11:00	6.7	WNW
19-Oct-2006	12:00	5.3	WNW
19-Oct-2006	13:00	5.3	WNW
19-Oct-2006	14:00	5.3	NW
19-Oct-2006	15:00	4.6	WNW
19-Oct-2006	16:00	5.9	W
19-Oct-2006	17:00	6.7	WNW
19-Oct-2006	18:00	2.7	WNW
19-Oct-2006	19:00	2.7	W
19-Oct-2006	20:00	2.7	WSW
19-Oct-2006	21:00	2.0	WNW
19-Oct-2006	22:00	4.6	WNW
19-Oct-2006	23:00	4.0	WNW
20-Oct-2006	00:00	4.6	WNW
20-Oct-2006	01:00	5.3	WNW
20-Oct-2006	02:00	4.6	WNW
20-Oct-2006	03:00	4.6	W
20-Oct-2006	04:00	3.3	WSW
20-Oct-2006	05:00	3.3	SW
20-Oct-2006	06:00	3.3	WSW
20-Oct-2006	07:00	0.7	SW
20-Oct-2006	08:00	0.7	W
20-Oct-2006	09:00	4.0	WSW
20-Oct-2006	10:00	5.3	SW
20-Oct-2006	11:00	7.2	WNW
20-Oct-2006	12:00	5.3	WNW
20-Oct-2006	13:00	5.3	W
20-Oct-2006	14:00	5.3	W
20-Oct-2006	15:00	5.3	W
20-Oct-2006	16:00	4.0	W
20-Oct-2006	17:00	2.0	WNW
20-Oct-2006	18:00	1.4	WNW
20-Oct-2006	19:00	1.4	W
20-Oct-2006	20:00	3.3	W
20-Oct-2006	21:00	2.0	WNW
20-Oct-2006	22:00	2.7	W
20-Oct-2006	23:00	4.6	WNW
21-Oct-2006	00:00	4.0	W
21-Oct-2006	01:00	4.0	WNW
21-Oct-2006	02:00	2.7	W
21-Oct-2006	03:00	2.0	WSW
21-Oct-2006	04:00	4.0	SW
21-Oct-2006	05:00	2.7	SW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
21-Oct-2006	06:00	0.7	SW
21-Oct-2006	07:00	0.1	SW
21-Oct-2006	08:00	0.1	SW
21-Oct-2006	09:00	4.0	SW
21-Oct-2006	10:00	4.6	SW
21-Oct-2006	11:00	2.7	SW
21-Oct-2006	12:00	4.6	W
21-Oct-2006	13:00	4.6	W
21-Oct-2006	14:00	5.3	WNW
21-Oct-2006	15:00	5.3	WNW
21-Oct-2006	16:00	3.3	SW
21-Oct-2006	17:00	2.0	SSW
21-Oct-2006	18:00	0.1	SW
21-Oct-2006	19:00	0.1	WSW
21-Oct-2006	20:00	0.1	WSW
21-Oct-2006	21:00	0.1	---
21-Oct-2006	22:00	0.1	---
21-Oct-2006	23:00	0.1	---
22-Oct-2006	00:00	0.1	---
22-Oct-2006	01:00	0.1	---
22-Oct-2006	02:00	0.1	SSW
22-Oct-2006	03:00	4.0	SW
22-Oct-2006	04:00	3.3	SW
22-Oct-2006	05:00	4.0	SW
22-Oct-2006	06:00	4.0	SW
22-Oct-2006	07:00	4.0	WSW
22-Oct-2006	08:00	5.3	WSW
22-Oct-2006	09:00	6.7	WSW
22-Oct-2006	10:00	6.7	W
22-Oct-2006	11:00	9.9	W
22-Oct-2006	12:00	6.7	W
22-Oct-2006	13:00	5.3	W
22-Oct-2006	14:00	5.9	W
22-Oct-2006	15:00	4.6	W
22-Oct-2006	16:00	5.3	WNW
22-Oct-2006	17:00	4.6	WNW
22-Oct-2006	18:00	3.3	SSW
22-Oct-2006	19:00	4.6	SW
22-Oct-2006	20:00	6.7	SW
22-Oct-2006	21:00	6.7	W
22-Oct-2006	22:00	4.6	WSW
22-Oct-2006	23:00	4.0	WSW
23-Oct-2006	00:00	4.0	W
23-Oct-2006	01:00	4.6	WSW
23-Oct-2006	02:00	4.6	WNW
23-Oct-2006	03:00	4.0	SW
23-Oct-2006	04:00	3.3	WSW
23-Oct-2006	05:00	3.3	WSW
23-Oct-2006	06:00	3.3	SW
23-Oct-2006	07:00	3.3	SW
23-Oct-2006	08:00	4.0	SW
23-Oct-2006	09:00	5.9	WNW
23-Oct-2006	10:00	8.0	WNW
23-Oct-2006	11:00	8.5	WNW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
23-Oct-2006	12:00	7.2	WNW
23-Oct-2006	13:00	7.2	WNW
23-Oct-2006	14:00	5.9	W
23-Oct-2006	15:00	5.3	WNW
23-Oct-2006	16:00	6.7	WNW
23-Oct-2006	17:00	4.6	SW
23-Oct-2006	18:00	4.0	SW
23-Oct-2006	19:00	4.0	SSW
23-Oct-2006	20:00	3.3	SSW
23-Oct-2006	21:00	4.0	SSW
23-Oct-2006	22:00	2.7	SSW
23-Oct-2006	23:00	2.7	SSW
24-Oct-2006	00:00	2.7	SSW
24-Oct-2006	01:00	2.7	SSW
24-Oct-2006	02:00	2.7	SSW
24-Oct-2006	03:00	2.0	SW
24-Oct-2006	04:00	4.0	SW
24-Oct-2006	05:00	3.3	SW
24-Oct-2006	06:00	2.7	SW
24-Oct-2006	07:00	3.3	SW
24-Oct-2006	08:00	3.3	SW
24-Oct-2006	09:00	5.3	WNW
24-Oct-2006	10:00	6.7	WNW
24-Oct-2006	11:00	5.9	WNW
24-Oct-2006	12:00	4.6	WNW
24-Oct-2006	13:00	3.3	WNW
24-Oct-2006	14:00	2.7	WNW
24-Oct-2006	15:00	3.3	WNW
24-Oct-2006	16:00	2.0	WNW
24-Oct-2006	17:00	2.7	W
24-Oct-2006	18:00	1.4	W
24-Oct-2006	19:00	0.1	W
24-Oct-2006	20:00	0.1	W
24-Oct-2006	21:00	0.1	---
24-Oct-2006	22:00	0.1	---
24-Oct-2006	23:00	0.1	---
25-Oct-2006	00:00	0.1	---
25-Oct-2006	01:00	0.1	---
25-Oct-2006	02:00	0.1	ESE
25-Oct-2006	03:00	0.1	ESE
25-Oct-2006	04:00	0.1	ESE
25-Oct-2006	05:00	0.1	ESE
25-Oct-2006	06:00	0.7	ESE
25-Oct-2006	07:00	3.3	SW
25-Oct-2006	08:00	4.0	WSW
25-Oct-2006	09:00	3.3	WSW
25-Oct-2006	10:00	4.0	WSW
25-Oct-2006	11:00	3.3	WSW
25-Oct-2006	12:00	3.3	WNW
25-Oct-2006	13:00	3.3	W
25-Oct-2006	14:00	2.0	SW
25-Oct-2006	15:00	3.3	WNW
25-Oct-2006	16:00	2.0	W
25-Oct-2006	17:00	3.3	WNW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
25-Oct-2006	18:00	2.0	W
25-Oct-2006	19:00	2.0	W
25-Oct-2006	20:00	1.4	SSW
25-Oct-2006	21:00	0.7	S
25-Oct-2006	22:00	0.1	S
25-Oct-2006	23:00	0.1	---
26-Oct-2006	00:00	0.1	---
26-Oct-2006	01:00	0.1	SSW
26-Oct-2006	02:00	0.1	SW
26-Oct-2006	03:00	0.1	---
26-Oct-2006	04:00	0.1	---
26-Oct-2006	05:00	0.1	---
26-Oct-2006	06:00	0.1	---
26-Oct-2006	07:00	0.1	SW
26-Oct-2006	08:00	0.1	---
26-Oct-2006	09:00	2.0	WNW
26-Oct-2006	10:00	2.7	W
26-Oct-2006	11:00	4.6	W
26-Oct-2006	12:00	4.6	W
26-Oct-2006	13:00	4.6	W
26-Oct-2006	14:00	5.3	W
26-Oct-2006	15:00	5.9	WNW
26-Oct-2006	16:00	4.6	W
26-Oct-2006	17:00	4.0	WNW
26-Oct-2006	18:00	4.0	W
26-Oct-2006	19:00	2.7	WNW
26-Oct-2006	20:00	2.7	WNW
26-Oct-2006	21:00	2.7	NW
26-Oct-2006	22:00	2.0	W
26-Oct-2006	23:00	2.7	W
27-Oct-2006	00:00	4.0	WNW
27-Oct-2006	01:00	4.0	WNW
27-Oct-2006	02:00	4.0	WNW
27-Oct-2006	03:00	4.6	WNW
27-Oct-2006	04:00	3.3	WNW
27-Oct-2006	05:00	4.0	WNW
27-Oct-2006	06:00	3.3	WNW
27-Oct-2006	07:00	4.6	WNW
27-Oct-2006	08:00	5.3	WNW
27-Oct-2006	09:00	5.3	WNW
27-Oct-2006	10:00	5.9	W
27-Oct-2006	11:00	7.2	W
27-Oct-2006	12:00	4.6	W
27-Oct-2006	13:00	3.3	W
27-Oct-2006	14:00	5.3	WNW
27-Oct-2006	15:00	2.7	WNW
27-Oct-2006	16:00	4.6	WNW
27-Oct-2006	17:00	4.0	WNW
27-Oct-2006	18:00	4.0	WNW
27-Oct-2006	19:00	4.0	WNW
27-Oct-2006	20:00	4.0	W
27-Oct-2006	21:00	4.0	W
27-Oct-2006	22:00	4.0	W
27-Oct-2006	23:00	5.3	W

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
28-Oct-2006	00:00	4.0	W
28-Oct-2006	01:00	3.3	WNW
28-Oct-2006	02:00	3.3	WNW
28-Oct-2006	03:00	5.3	WNW
28-Oct-2006	04:00	2.7	WNW
28-Oct-2006	05:00	2.7	SSW
28-Oct-2006	06:00	2.7	SW
28-Oct-2006	07:00	2.7	SW
28-Oct-2006	08:00	3.3	SW
28-Oct-2006	09:00	3.3	WNW
28-Oct-2006	10:00	3.3	WNW
28-Oct-2006	11:00	3.3	WNW
28-Oct-2006	12:00	4.6	NW
28-Oct-2006	13:00	5.9	WNW
28-Oct-2006	14:00	5.3	WNW
28-Oct-2006	15:00	4.6	WNW
28-Oct-2006	16:00	5.3	WNW
28-Oct-2006	17:00	4.0	W
28-Oct-2006	18:00	3.3	W
28-Oct-2006	19:00	3.3	WSW
28-Oct-2006	20:00	0.1	N
28-Oct-2006	21:00	1.4	SSW
28-Oct-2006	22:00	1.4	S
28-Oct-2006	23:00	1.4	S
29-Oct-2006	00:00	0.1	S
29-Oct-2006	01:00	0.1	S
29-Oct-2006	02:00	0.1	W
29-Oct-2006	03:00	0.7	WSW
29-Oct-2006	04:00	0.1	WNW
29-Oct-2006	05:00	0.1	SSW
29-Oct-2006	06:00	2.0	SSW
29-Oct-2006	07:00	3.3	SW
29-Oct-2006	08:00	5.9	W
29-Oct-2006	09:00	7.2	WNW
29-Oct-2006	10:00	7.2	WNW
29-Oct-2006	11:00	5.3	WNW
29-Oct-2006	12:00	8.0	WNW
29-Oct-2006	13:00	8.0	WNW
29-Oct-2006	14:00	5.3	W
29-Oct-2006	15:00	5.9	W
29-Oct-2006	16:00	4.0	WSW
29-Oct-2006	17:00	3.3	SW
29-Oct-2006	18:00	4.6	WSW
29-Oct-2006	19:00	3.3	SW
29-Oct-2006	20:00	3.3	SW
29-Oct-2006	21:00	5.3	W
29-Oct-2006	22:00	3.3	WSW
29-Oct-2006	23:00	2.7	SW
30-Oct-2006	00:00	3.3	WSW
30-Oct-2006	01:00	4.0	SW
30-Oct-2006	02:00	4.6	WNW
30-Oct-2006	03:00	5.3	WNW
30-Oct-2006	04:00	4.0	SW
30-Oct-2006	05:00	3.3	SW

Appendix D - Wind Data

Date	Time	Wind Speed m/s	Direction
30-Oct-2006	06:00	4.0	SW
30-Oct-2006	07:00	5.3	SW
30-Oct-2006	08:00	3.3	SW
30-Oct-2006	09:00	3.3	SW
30-Oct-2006	10:00	5.3	SW
30-Oct-2006	11:00	5.3	SW
30-Oct-2006	12:00	7.2	WNW
30-Oct-2006	13:00	6.7	WNW
30-Oct-2006	14:00	7.2	WNW
30-Oct-2006	15:00	5.9	WNW
30-Oct-2006	16:00	5.9	W
30-Oct-2006	17:00	4.6	WNW
30-Oct-2006	18:00	2.7	SSW
30-Oct-2006	19:00	3.3	SSW
30-Oct-2006	20:00	5.9	WNW
30-Oct-2006	21:00	5.9	WNW
30-Oct-2006	22:00	5.9	WNW
30-Oct-2006	23:00	7.2	WNW
31-Oct-2006	00:00	5.3	WNW
31-Oct-2006	01:00	6.7	WNW
31-Oct-2006	02:00	5.3	WSW
31-Oct-2006	03:00	4.6	WSW
31-Oct-2006	04:00	5.3	WSW
31-Oct-2006	05:00	5.9	WSW
31-Oct-2006	06:00	6.7	WSW
31-Oct-2006	07:00	5.9	SW
31-Oct-2006	08:00	5.9	SW
31-Oct-2006	09:00	5.9	WSW
31-Oct-2006	10:00	5.9	SW
31-Oct-2006	11:00	5.9	SW
31-Oct-2006	12:00	6.7	SW
31-Oct-2006	13:00	5.3	WSW
31-Oct-2006	14:00	4.6	SW
31-Oct-2006	15:00	4.6	SW
31-Oct-2006	16:00	4.0	SW
31-Oct-2006	17:00	2.0	SSW
31-Oct-2006	18:00	1.4	WNW
31-Oct-2006	19:00	2.0	SSW
31-Oct-2006	20:00	3.3	WNW
31-Oct-2006	21:00	3.3	WNW
31-Oct-2006	22:00	4.6	W
31-Oct-2006	23:00	5.3	W

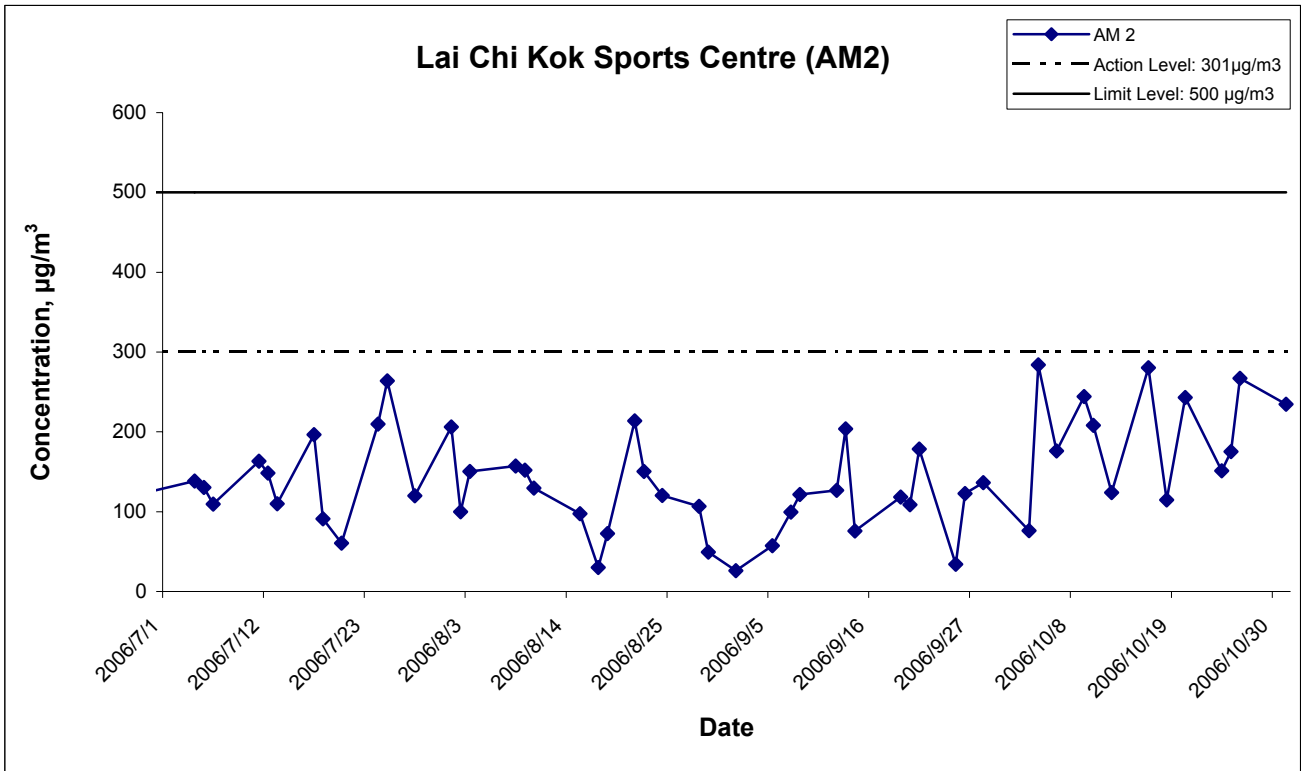
**APPENDIX E
1-HOUR TSP MONITORING RESULTS
AND GRAPHICAL PRESENTATION**

Appendix E - 1-hour TSP Monitoring Results

Location AM 2 - Lai Chi Kok Sports Centre

Date	Weather Condition	Filter Weight (g)		Flow Rate (m ³ /min.)		Elapse Time		Air Temp. (K)	Atmospheric Pressure(Pa)	Particulate weight(g)	Av. flow (m ³ /min)	Total vol. (m ³)	Sampling Time(hrs.)	Conc. (µg/m ³)
		Initial	Final	Initial	Final	Initial	Final							
3-Oct-06	Sunny	2.8289	2.8345	1.22	1.22	4895.1	4896.1	300.3	760.7	0.0056	1.22	73.3	1.0	76.4
4-Oct-06	Sunny	2.8911	2.9119	1.22	1.22	4896.1	4897.1	300.3	759.9	0.0208	1.22	73.3	1.0	283.9
6-Oct-06	Cloudy	2.7894	2.8023	1.22	1.22	4921.1	4922.1	300.9	760.1	0.0129	1.22	73.2	1.0	176.2
9-Oct-06	Cloudy	2.8201	2.8382	1.22	1.22	4922.1	4923.1	299.8	762.4	0.0181	1.22	74.2	1.0	244.1
10-Oct-06	Cloudy	2.8200	2.8353	1.23	1.23	4923.1	4924.1	299.3	764.0	0.0153	1.23	73.6	1.0	208.0
12-Oct-06	Sunny	2.8553	2.8644	1.22	1.22	4948.1	4949.1	300.5	764.8	0.0091	1.22	73.5	1.0	123.9
16-Oct-06	Sunny	2.8501	2.8707	1.23	1.23	4949.1	4950.1	299.5	763.7	0.0206	1.23	73.5	1.0	280.2
18-Oct-06	Sunny	2.8751	2.8835	1.22	1.22	4974.1	4975.1	300.1	763.9	0.0084	1.22	73.5	1.0	114.6
20-Oct-06	Sunny	2.8683	2.8862	1.23	1.23	4975.1	4976.1	299.4	765.4	0.0179	1.23	73.6	1.0	243.2
24-Oct-06	Cloudy	2.8392	2.8503	1.22	1.22	5000.1	5001.1	303.1	763.9	0.0111	1.22	73.5	1.0	151.1
25-Oct-06	Sunny	2.8812	2.8941	1.23	1.23	5001.1	5002.1	299.3	765.7	0.0129	1.23	73.6	1.0	175.2
26-Oct-06	Sunny	2.8861	2.9060	1.23	1.23	5002.1	5003.1	298.2	766.0	0.0199	1.23	74.5	1.0	267.2
31-Oct-06	Sunny	2.8984	2.9156	1.22	1.22	5027.1	5028.1	300.7	762.3	0.0172	1.22	73.3	1.0	234.6
													Min	76.4
													Max	283.9
													Average	198.4

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 Oct 06	Appendix E	

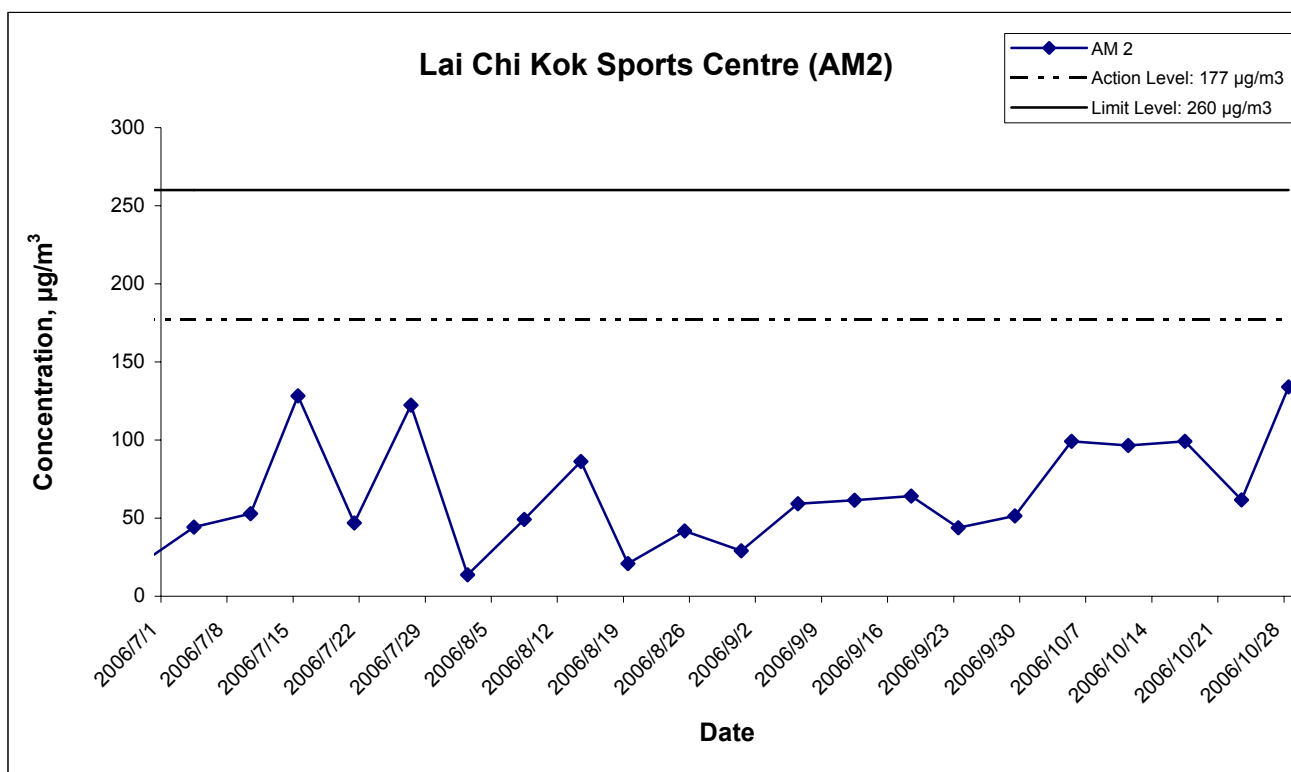
**APPENDIX F
24-HOUR TSP MONITORING RESULTS
AND GRAPHICAL PRESENTATION**

Appendix F - 24-hour TSP Monitoring Results

Location AM 2 - Lai Chi Kok Sports Centre

Date	Weather Condition	Filter Weight (g)		Flow Rate (m ³ /min.)		Elapse Time		Air Temp. (K)	Atmospheric Pressure(Pa)	Particulate weight(g)	Av. flow (m ³ /min)	Total vol. (m ³)	Sampling Time(hrs.)	Conc. (µg/m ³)
		Initial	Final	Initial	Final	Initial	Final							
5-Oct-06	Sunny	2.8736	3.0481	1.22	1.22	4897.1	4921.1	299.9	759.9	0.1745	1.22	1759.5	24.0	99.2
11-Oct-06	Sunny	2.8675	3.0378	1.22	1.22	4924.1	4948.1	300.1	764.2	0.1703	1.22	1763.3	24.0	96.6
17-Oct-06	Sunny	2.8442	3.0191	1.23	1.23	4950.1	4974.1	299.8	764.0	0.1749	1.23	1763.9	24.0	99.2
23-Oct-06	Sunny	2.9146	3.0233	1.22	1.22	4976.1	5000.1	300.1	763.9	0.1087	1.22	1763.0	24.0	61.7
28-Oct-06	Sunny	2.8637	3.0996	1.22	1.22	5003.1	5027.1	301.4	764.5	0.2359	1.22	1760.3	24.0	134.0
													Min	61.7
													Max	134.0
													Average	98.1

24-hr TSP Levels



Title Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/01 - Lai Chi Kok Viaduct Graphical Presentation of 24-hour TSP Impact Monitoring Results	Scale N.T.S	Project No. MA3024	
	Date Oct 06	Appendix F	

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

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 _{eq}	L ₁₀	L ₉₀	L _{eq}		L _{eq}
4-Oct-06	16:00	Sunny	61.5	63.7	57.7	68.4	61.5, Measured ≤ Baseline	Resumed since September 2006
10-Oct-06	11:25	Fine	60.9	63.7	56.2		60.9, Measured ≤ Baseline	
18-Oct-06	15:00	Sunny	63.1	65.7	60.7		63.1, Measured ≤ Baseline	
25-Oct-06	13:49	Sunny	61.3	63.2	57.7		61.3, 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 _{eq}	L ₁₀	L ₉₀	L _{eq}		L _{eq}
4-Oct-06	10:00	Sunny	75.4	77.5	70.5	73.8	70.3	Road traffic noise from Ching Cheung Road was identified as the major noise source.
10-Oct-06	10:30	Cloudy	76.8	78.0	72.0		73.8	
18-Oct-06	11:02	Sunny	74.4	76.5	71.0		65.5	
25-Oct-06	10:12	Sunny	74.6	77.0	69.5		66.9	

Location NM8a - M/F of Nob Hill							
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks	
			L _{eq}	L ₁₀	L ₉₀		
			4-Oct-06	11:00	Sunny		74.2
10-Oct-06	13:20	Cloudy	75.2	77.5	70.5		
18-Oct-06	13:19	Sunny	74.2	77.0	73.0		
25-Oct-06	11:00	Sunny	78.6	80.0	73.5		

Location NM8b - 3/F of Nob Hill							
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks	
			L _{eq}	L ₁₀	L ₉₀		
			4-Oct-06	13:00	Sunny		78.1
10-Oct-06	14:05	Fine	78.3	80.0	74.0		
18-Oct-06	14:04	Sunny	77.6	79.5	74.0		
25-Oct-06	11:36	Sunny	76.2	79.5	70.0		

Location NM9 - Hoi Lai Estate							
Date	Time	Weather	Unit: dB (A) (30-min)			Remarks	
			L _{eq}	L ₁₀	L ₉₀		
			4-Oct-06	14:15	Sunny		72.6
10-Oct-06	15:00	Fine	69.8	71.5	65.0		
18-Oct-06	16:16	Sunny	67.2	68.5	64.0		
25-Oct-06	13:02	Sunny	64.9	66.5	59.0		

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

*Bolted value indicated limit level exceedance

Appendix G - Noise Monitoring Results

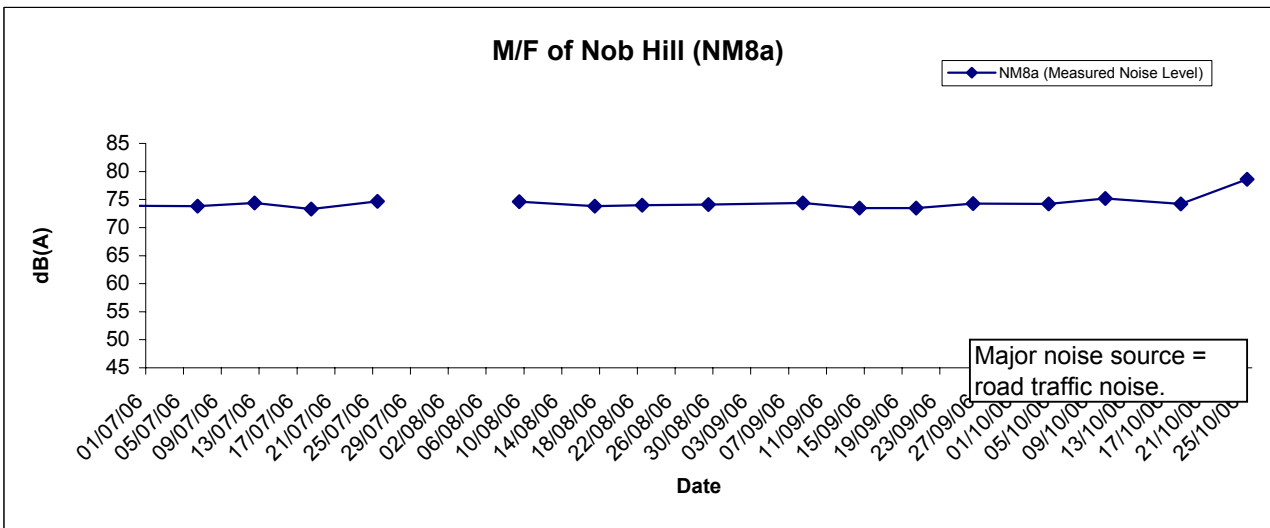
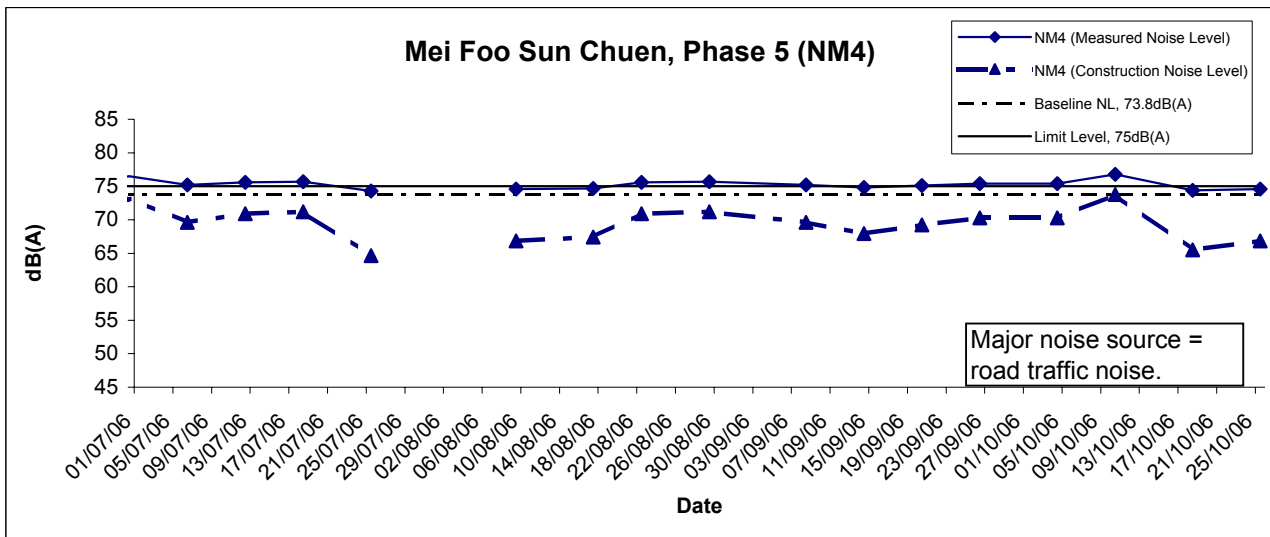
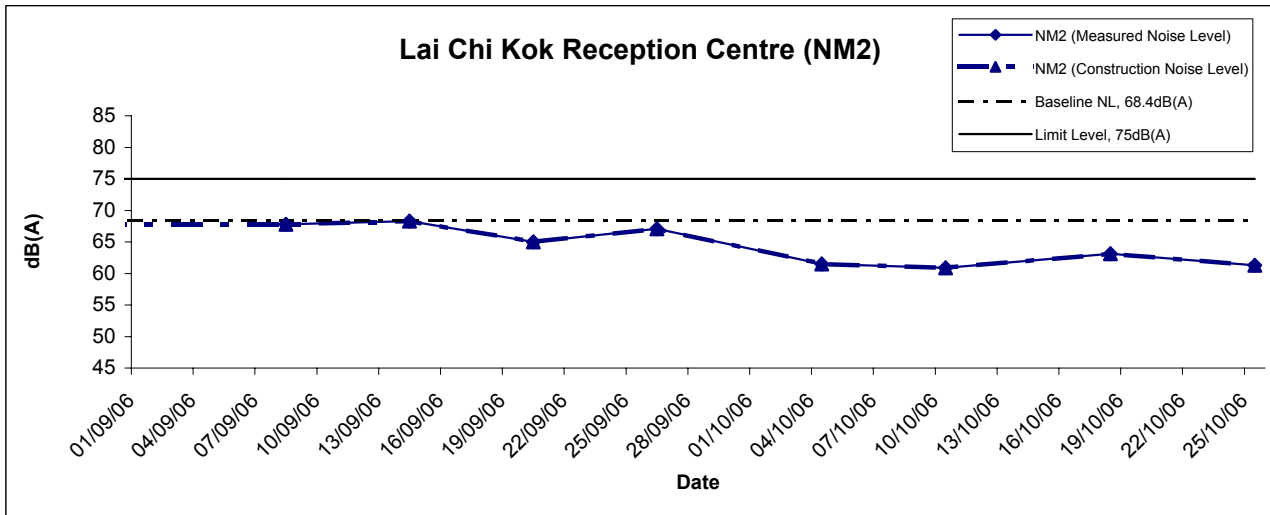
Restricted Hours - 19:00 to 23:00 on normal weekdays

Location NM9 - Hoi Lai Estate						
Date	Time	Weather	dB (A) (5-min)			
			L _{eq}	L ₁₀	L ₉₀	Average L _{eq}
6-Oct-06	19:00	Cloudy	64.7	67.0	61.5	64.6
	19:05		64.3	67.5	61.5	
	19:20		64.8	67.5	61.0	
13-Oct-06	19:10	Cloudy	64.7	67.0	615.0	64.8
	19:15		65.3	67.5	61.5	
	19:20		64.4	67.0	61.5	
20-Oct-06	19:00	Cloudy	66.2	68.5	62.0	65.8
	19:05		65.4	68.5	62.0	
	19:10		65.7	69.0	62.5	
27-Oct-06	19:15	Cloudy	65.7	68.5	61.5	65.2
	19:20		64.8	68.0	61.5	
	19:25		65.2	68.0	61.0	
31-Oct-06	19:00	Cloudy	64.7	67.0	61.0	64.6
	19:05		64.5	67.0	61.0	
	19:10		64.7	67.5	61.0	

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

*Bolted value indicated limit level exceedance

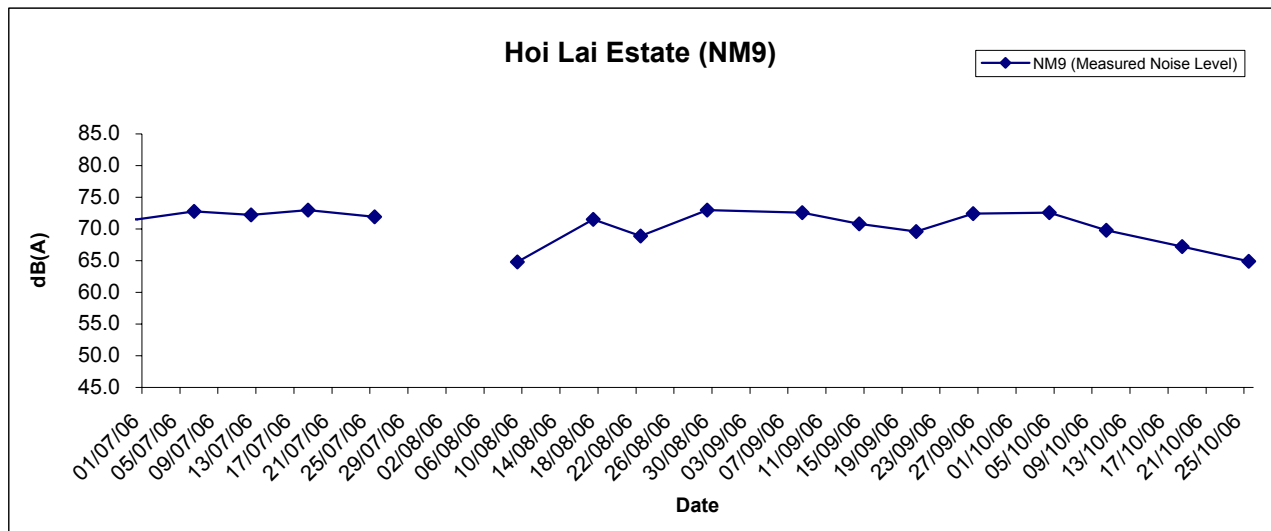
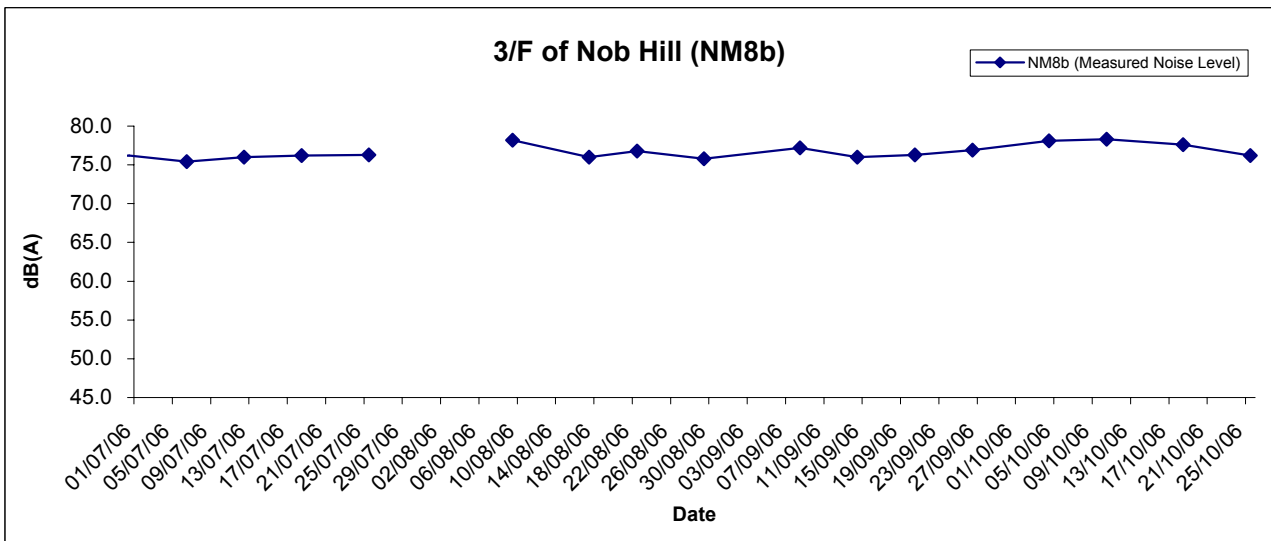
Noise Levels



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

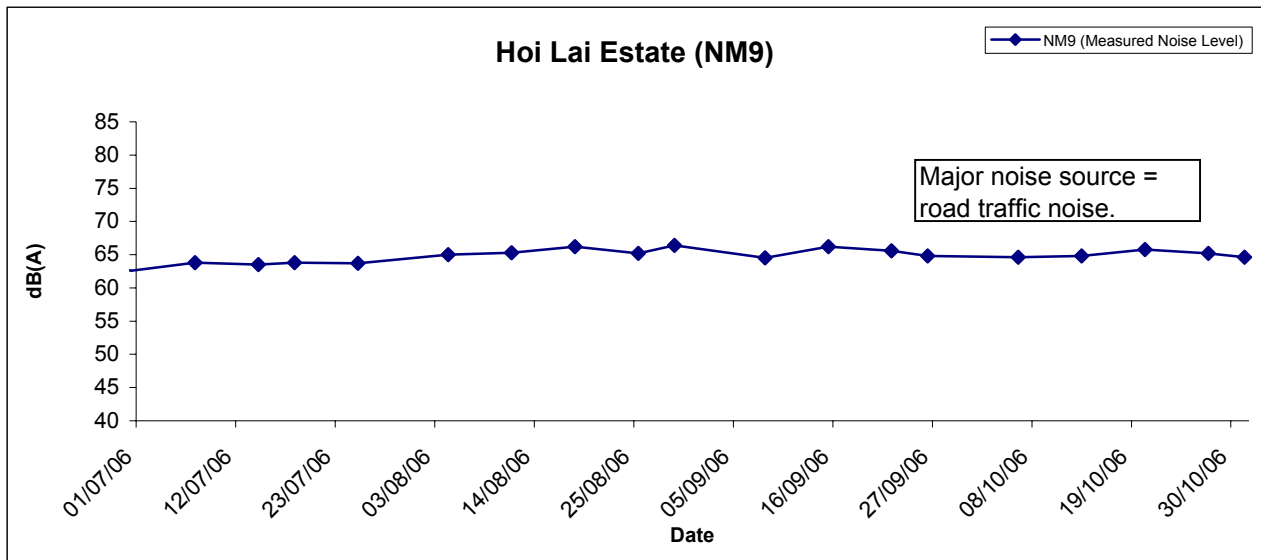
Title Route 8 (previously known as Route 9) between Cheung Sha Wan and Sha Tin Contract HY/2003/01 - Lai Chi Kok Viaduct Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. MA3024	
	Date Oct 06	Appendix G	

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 Oct 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 Oct 06	Appendix G	

APPENDIX H
SUMMARY OF EXCEEDANCE

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 exceedance was recorded due to noise complaints received on 25th October 2006.
- No Limit Level exceedance was recorded in the reporting month.

**APPENDIX I
SITE AUDIT SUMMARY**

*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*

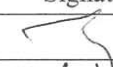
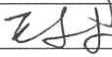
Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	61004-LCKV
Date	4 October 2006 (Wed)
Time	13:30-15:30

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

Ref. No.	Remarks/Observations	Related Item No.
	<p>A. Water Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>B. Air Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>C. Noise</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>D. Waste / Chemical Management</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>E. Permit / Licenses</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>F. Others</p> <ul style="list-style-type: none"> The environmental deficiency identified in last audit (ref. 60927-LCKV) 27 September 2006, was rectified/improved by the Contractor. 	

	Name	Signature	Date
Recorded by	Tommy Ho		4 October 2006
Checked by	Edmond Wu		4 October 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	61011-LCKV
Date	11 October 2006 (Wed)
Time	09:30-11:30

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

Ref. No.	Remarks/Observations	Related Item No.
61011L-01O	<p>A. Water Quality</p> <ul style="list-style-type: none"> A water browser was observed improperly pouring significant amount of water onto soil surface of bare ground near S3, which led to the generation and discharging of muddy runoff directly into the constructed storm water drainage channel. The contractor should prevent the reoccurrence of this practice and rectify the situation a.s.a.p., including the cleaning up of sand and grit deposit at the concerned drainage channel and catchpit. 	B9
61011L-02R	<ul style="list-style-type: none"> The contractor was reminded to pay attention to the stagnant water at site of site office and R3. <p>B. Air Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>C. Noise</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>D. Waste / Chemical Management</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>E. Permit / Licenses</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>F. Others</p> <ul style="list-style-type: none"> The environmental deficiency identified in last audit (ref. 61004-LCKV) 4 October 2006, was rectified/improved by the Contractor. 	G5

	Name	Signature	Date
Recorded by	Tommy Ho		11 October 2006
Checked by	Edmond Wu		11 October 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*

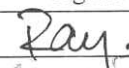
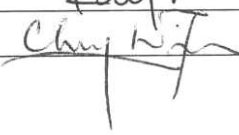
Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	61018-LCKV
Date	18 October 2006 (Wed)
Time	13:40 – 15:05

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

Ref. No.	Remarks/Observations	Related Item No.
	<p>A. Water Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>B. Air Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>C. Noise</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>D. Waste / Chemical Management</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>E. Permit / Licenses</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>F. Others</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. All environmental deficiencies identified during last audit (Ref. No.: 61011-LCKV) on 11 October 2006 were rectified by the Contractor. 	

	Name	Signature	Date
Recorded by	Ray Yan		20 October 2006
Checked by	Dr. Priscilla Choy		20 October 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

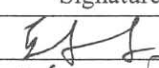
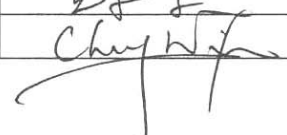
Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	61025-LCKV
Date	25 October 2006 (Wed)
Time	13:30 – 15:45

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

Ref. No.	Remarks/Observations	Related Item No.
61025L-01R	<p>A. Water Quality</p> <ul style="list-style-type: none"> Standing water was observed at the holes on the Bridge Deck. The Contractor was reminded to fill up the holes on the Bridge Deck once the method for filling the holes is finalized. <p>B. Air Quality</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>C. Noise</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>D. Waste / Chemical Management</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>E. Permit / Licenses</p> <ul style="list-style-type: none"> No environmental deficiency was identified during the site inspection. <p>F. Others</p> <ul style="list-style-type: none"> No environmental deficiency was identified during last audit (Ref. No.: 61018-LCKV) on 18 October 2006. 	B14

	Name	Signature	Date
Recorded by	Edmond Wu		26 October 2006
Checked by	Dr. Priscilla Choy		26 October 2006

APPENDIX J
EVENT ACTION PLANS

Appendix J - Event Action Plans

Event/Action Plan for Air Quality

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

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

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

Appendix K - Summary of Environmental Mitigation Implementation Schedule

Types of Impacts	Mitigation Measures	Status
Construction Dust	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> A stockpile of dusty materials should not extend beyond the pedestrian barriers, fencing or traffic cones. 	^
	<ul style="list-style-type: none"> Vehicle washing facilities should be provided at every exit point. 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> Every main haul road should be sprayed with water or a dust suppression chemical so as to maintain the entire road surface wet. 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> Every vehicle should be washed to remove any dusty materials from its body and wheels immediately before leaving a construction site. 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. 	^
Construction Noise	<ul style="list-style-type: none"> Only well-maintained plant should be operated on –site and plant should be serviced regularly during the construction works. 	^
	<ul style="list-style-type: none"> Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum. 	^
	<ul style="list-style-type: none"> Plant known to emit noise strongly in one direction, should where possible, be orientated to direct noise away from the NSRS. 	^
	<ul style="list-style-type: none"> Mobile plant should be sited as far away from NSRs as possible. 	^
	<ul style="list-style-type: none"> Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. Use quiet plant and Working Method 	^
	<ul style="list-style-type: none"> Reduce the number of plant operating in critical areas close NSRs. Construct temporary and movable noise barriers 	^

Types of Impacts	Mitigation Measures	Status
Water Quality	<i>Construction Runoff and Drainage</i>	
	<ul style="list-style-type: none"> Use of sediment traps and the adequate maintenance of drainage systems to prevent flooding and overflow. 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> 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 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> 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. 	N/A
	<ul style="list-style-type: none"> Catchpits and perimeter channels shall be constructed in advance of site formation works and earthworks. 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> 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. 	^
	<ul style="list-style-type: none"> 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. 	^
	<i>Tunnelling Work</i>	
	<ul style="list-style-type: none"> 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. 	N/A
	<ul style="list-style-type: none"> 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. 	N/A
	<ul style="list-style-type: none"> Spend 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. 	N/A

Types of Impacts	Mitigation Measures	Status
	<i>General Construction Activities</i>	
	<ul style="list-style-type: none"> • Debris and rubbish on site should be collected, handled and disposed of properly to avoid entering the water column and cause water quality impacts. • 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). 	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p>
	<i>Sewage Effluent</i>	
	<ul style="list-style-type: none"> • 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. • 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. 	<p style="text-align: center;">^</p> <p style="text-align: center;">N/A</p>
Waste	<i>General</i>	
	<ul style="list-style-type: none"> • 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. 	<p style="text-align: center;">^</p>
	<i>Storage, Collection and Transportation of Waste</i>	
	<ul style="list-style-type: none"> • Wastes shall be handled and stored in a manner to ensure that they are held securely without loss or leakage. • Authorised or licensed waste hauliers shall be used and they shall only collect wastes prescribed by their permits. • Waste shall be removed on a daily basis. • Waste storage area shall be maintained and cleaned on a daily basis. • Windblown litter and dust during transportation shall be minimised by either covering trucks or transporting wastes in enclosed containers. • Obtain necessary waste disposal permits from the appropriate authorities if they are required. • Wastes shall be disposed of at licensed waste disposal facilities. • 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. 	<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"> • Maintain records of the quantities of wastes generated, recycled and disposed. 	<p style="text-align: center;">^</p>
	<i>Surplus Excavated Materials</i>	
	<ul style="list-style-type: none"> • 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. 	<p style="text-align: center;">^</p>
<i>Construction and Demolition (C&D) Waste</i>		

Types of Impacts	Mitigation Measures	Status
	<ul style="list-style-type: none"> • Careful design, planning and good site management shall be adopted to minimise over-ordering and generation of waste materials such as concrete grouts. • 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. • Construction and demolition (C&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. 	<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"> • 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. • Containers used for the storage of chemical wastes should: <ul style="list-style-type: none"> a. Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; b. Have a capacity of less than 450 litres unless the specifications have been approved by the EPD; c. Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Chemical Waste Regulations. • The storage area for chemical wastes should: <ul style="list-style-type: none"> a. Be clearly labelled and used solely for the storage of chemical waste; b. Be enclosed on at least 3 sides; 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; d. Have adequate ventilation; e. Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary); f. Be arranged so that incompatible materials are adequately separated. • 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). 	<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"> • General refuse generated on-site shall be stored in enclosed bins or compaction unit separate from C&D and chemical wastes. A reputable waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&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. • Reusable rather than disposable dishware shall be used if feasible. 	<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"> • A sediment barrier shall be erected to minimize stream sedimentation at downstream of the project boundary of the Toll Plaza. 	N/A
	<ul style="list-style-type: none"> • Conduct a tree survey before commencement of the construction work. 	^
	<ul style="list-style-type: none"> • 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. 	^
	<ul style="list-style-type: none"> • Loss of the adjacent woodland due to temporary land take shall be returned to the original status immediately. 	N/A
	<ul style="list-style-type: none"> • Wild and uncontrolled fire shall be strictly prohibited • 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. 	^ N/A
Landscape and Visual Impact	<ul style="list-style-type: none"> • 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. 	^
	<ul style="list-style-type: none"> • 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. 	^
	<ul style="list-style-type: none"> • Measurement of vibration would also be carried out on a need basis during the piling work 	^

Remarks:

^

Compliance of mitigation measure;

X

Non-compliance of mitigation measure;

N/A

Not Applicable;

•

Non-compliance but rectified by the contractor

APPENDIX L
CONSTRUCTION PROGRAMME

Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem Durn.	2006							2007							
							OCT			NOV			DEC			JAN					
							16	23	30	6	13	20	27	4	11	18	25	1	8	15	22
Preliminaries & General Requirments																					
Portion Access Dates																					
PD1140	Access to Portion F1 (NOT USED)	0	20OCT06*		0	0	◆ PD1140														
Design of Temporary Works																					
TW1370	Design of Temp Works for Feature 11NW-A/C66	24	21OCT06	17NOV06	0	24	TW1370														
TW1380	Design of Temp Works for Feature 11NW-A/FR54&55	24	21OCT06	17NOV06	0	24	TW1380														
Monitoring & Instrumentation - New Works																					
IM3010	Install Instrumentation @ Cut Slope CCR-S1	12	21OCT06	03NOV06	0	12	IM3010														
IM3015	Monitoring @ Cut Slope CCR-S1	287*	21OCT06	03OCT07	0	287*	IM3015														
IM3020	Install Instrumentation @ Cut Slope CCR-S2	12	18NOV06	01DEC06	0	12	IM3020														
IM3025	Monitoring @ Cut Slope CCR-S2	263*	18NOV06	03OCT07	0	263*	IM3025														
IM3030	Install Instrumentation @ Cut Slope CCR-S3	12	21OCT06	03NOV06	0	12	IM3030														
IM3035	Monitoring @ Cut Slope CCR-S3	287*	21OCT06	03OCT07	0	287*	IM3035														
IM3040	Install Instrumentation @ Cut Slope CCR-S4	12	20NOV06	02DEC06	0	12	IM3040														
IM3045	Monitoring @ Cut Slope CCR-S4	262*	20NOV06	03OCT07	0	262*	IM3045														
IM3050	Install Instrumentation @ Cut Slope CCR-S5	12	21OCT06	03NOV06	0	12	IM3050														
IM3055	Monitoring @ Cut Slope CCR-S5	287*	21OCT06	03OCT07	0	287*	IM3055														
IM3060	Install Instrumentation @ Cut Slope CCR-S6	12	21OCT06	03NOV06	0	12	IM3060														
IM3065	Monitoring @ Cut Slope CCR-S6	287*	21OCT06	03OCT07	0	287*	IM3065														
IM3080	Install Instrumentation @ Slope 11NW-A/C26	12	21OCT06	03NOV06	0	12	IM3080														
IM3085	Monitoring @ Slope 11NW-A/C26	287*	21OCT06	03OCT07	0	287*	IM3085														
IM3120	Install Instrumentation @ Slip Road B Embankment	12	11NOV06	24NOV06	0	12	IM3120														
IM3125	Monitoring @ Slip Road B Embankment	269*	11NOV06	03OCT07	0	269*	IM3125														
IM3130	Install Instrumentation @ Piers P1 to P6	12	21OCT06	03NOV06	0	12	IM3130														
IM3135	Monitoring @ Piers P1 to P6	287*	21OCT06	03OCT07	0	287*	IM3135														
IM3140	Install Instrumentation @ Piers P7 to P10	12	21OCT06	03NOV06	0	12	IM3140														
IM3145	Monitoring @ Piers P7 to P10	287*	21OCT06	03OCT07	0	287*	IM3145														
IM3150	Install Instrumentation @ Piers P11 to P15	12	21OCT06	03NOV06	0	12	IM3150														
IM3155	Monitoring @ Piers P11 to P15	287*	21OCT06	03OCT07	0	287*	IM3155														
IM3160	Install Instrumentation @ Piers P16 to P18	12	21OCT06	03NOV06	0	12	IM3160														
IM3165	Monitoring @ Piers P16 to P18	287*	21OCT06	03OCT07	0	287*	IM3165														
IM3170	Install Instrumentation @ Piers P19 to Abut. M	12	21OCT06	03NOV06	0	12	IM3170														
IM3175	Monitoring @ Piers P19 to Abut. M	287*	21OCT06	03OCT07	0	287*	IM3175														

Start Date
Finish Date
Data Date

23SEP03
25AUG08
20OCT06

P3 File : LU37

Sheet 1 of 15

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 Month Rolling Programme
from 21 October 2006



Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem .Durn.	2006														
							OCT			NOV				DEC			2007				
							16	23	30	6	13	20	27	4	11	18	25	1	8	15	22
IM3180	Install Instrumentation @ Piers on Slip Road A	12	21OCT06	03NOV06	0	12															
IM3185	Monitoring @ Piers on Slip Road A	287*	21OCT06	03OCT07	0	287*															
IM3190	Install Instrumentation @ Piers on Slip Road B	12	21OCT06	03NOV06	0	12															
IM3195	Monitoring @ Piers on Slip Road B	287*	21OCT06	03OCT07	0	287*															
IM3200	Install Instrumentation @ Piers on Slip Road C	12	21OCT06	03NOV06	0	12															
IM3205	Monitoring @ Piers on Slip Road C	287*	21OCT06	03OCT07	0	287*															
IM3210	Install Instrumentation @ Piers on Slip Road D	12	21OCT06	03NOV06	0	12															
IM3215	Monitoring @ Piers on Slip Road D	287*	21OCT06	03OCT07	0	287*															
Temporary Traffic Management Schemes																					
TT1275	36th. TMLG Meeting	1	22NOV06	22NOV06	0	1															
Procurement																					
Precast Parapet Panel Casting																					
PP2040	Casting Type I & VII Parapet Units 751 - 977	40	11SEP06A	25OCT06	90	4															
PP2130	Casting Type II Parapet Units 766 - 1099	60	11JUN06A	25OCT06	92	4															
PP2310	Casting Type IV Parapet Units 228 - 455	75	06AUG06A	28OCT06	90	7															
PP2420	Casting Type V & VI Parapet Units 521 - 780	30	06AUG06A	23OCT06	96	2															
Noise Barriers & Enclosures																					
NB1040	Noise Encl' - Slip Rd A - Off-site Fabrication	64	20MAR06A	30OCT06	88	8															
NB1050	Noise Encl' - Slip Rd A - Delivery to Site	18	26JUL06A	06NOV06	40	10															
NB1070	Erection of Noise barrier Mock Up Sample	18	26JUL06A	03NOV06	30	12															
NB1110	Noise Encl' - Slip Rd B - Eng. Review & Approval	28	16MAR06A	23OCT06	90	4															
NB1130	Noise Encl' - Slip Rd B - Off-site Fabrication	70	20MAR06A	27NOV06	84	32															
NB1210	Noise Encl' - P8 to P11 - Eng. Review & Approval	28	16MAR06A	23OCT06	95	4															
NB1230	Noise Encl' - P8 to P11 - Off-site Fabrication	78	21OCT06	22JAN07	0	78															
NB1310	Noise Encl' - ENT Approach - Eng. Review & Appro	28	03APR06A	23OCT06	95	4															
NB1320	Noise Encl' - ENT Approach - Material Purchasing	27	28FEB06A	03NOV06	90	12															
NB1340	Noise Encl' - ENT Approach - Delivery to Site	41	13NOV06	30DEC06	0	41															
NB2010	Noise Barriers - PA to P4 - Eng. Review & Appro'	4	23MAR06A	19OCT06	95	0															
NB2030	Noise Barriers - PA to P4 - Off-site Fabrication	120	21OCT06	15MAR07	0	120															
NB2110	Noise Barriers - P5 to P8 - Eng. Review & Appro'	47	23MAR06A	23OCT06	95	4															
NB2130	Noise Barriers - P5 to P8 - Off-site Fabrication	110	21OCT06	03MAR07	0	110															
NB2230	Noise Barriers - P11 to P13 - Off-site Fabric'n	35	21OCT06	30NOV06	0	35															
NB2300	Noise Barriers - ENT Approach -Des'n & Shop Dwgs	82	24AUG05A	27OCT06	95	6															

Start Date
Finish Date
Data Date

23SEP03
25AUG08
20OCT06

P3 File : LU37

Sheet 2 of 15

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 Month Rolling Programme
from 21 October 2006



Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem .Durn.	2006														
							OCT			NOV				DEC					2007		
							16	23	30	6	13	20	27	4	11	18	25	1	8	15	22
NB2310	Noise Barriers - ENT Approach -Eng Rev & Approv	28	03APR06A	06NOV06	75	18	[Gantt bar for NB2310: 03APR06A to 06NOV06]														
NB2330	Noise Barriers - ENT Approach -Off-site Fabric'n	48	07NOV06	03JAN07	0	48	[Gantt bar for NB2330: 07NOV06 to 03JAN07]														
NB2410	Noise Barriers - Slip Rd. C - Eng Rev & Approv	28	23MAR06A	25OCT06	95	6	[Gantt bar for NB2410: 23MAR06A to 25OCT06]														
NB2430	Noise Barriers - Slip Rd.C - Off-site Fabricat'n	38	21OCT06	04DEC06	0	38	[Gantt bar for NB2430: 21OCT06 to 04DEC06]														
NB2440	Noise Barriers - Slip Rd. C - Delivery to Site	17	23NOV06	12DEC06	0	17	[Gantt bar for NB2440: 23NOV06 to 12DEC06]														
NB2510	Noise Barriers - Slip Rd. D - Eng Rev & Approv	125	16MAR06A	25OCT06	95	6	[Gantt bar for NB2510: 16MAR06A to 25OCT06]														
NB2530	Noise Barriers - Slip Rd. D -Off-site Fabricat'n	38	21OCT06	04DEC06	0	38	[Gantt bar for NB2530: 21OCT06 to 04DEC06]														
NB2540	Noise Barriers - Slip Rd. D - Delivery to Site	13	24NOV06	08DEC06	0	13	[Gantt bar for NB2540: 24NOV06 to 08DEC06]														
Movement Joints																					
MJ1040	Off-Site Manuf of M.Js. - Main Line & LWRd O/P	35	21AUG06A	10NOV06	15	18	[Gantt bar for MJ1040: 21AUG06A to 10NOV06]														
MJ1050	Off-Site Manufacturing of M.Js. - Slip Roads	35	11NOV06	21DEC06	0	35	[Gantt bar for MJ1050: 11NOV06 to 21DEC06]														
Signage																					
SG1010	Sign Gantries - Detailed Design & Shop Drawings	50	17NOV05A	27OCT06	80	6	[Gantt bar for SG1010: 17NOV05A to 27OCT06]														
SG1020	Sign Gantries - Review/Appro of Design & S/Dwgs.	24	20MAR06A	03NOV06	50	12	[Gantt bar for SG1020: 20MAR06A to 03NOV06]														
SG1040	Sign Gantries - Delivery of Gantries to Site	40	13NOV06	29DEC06	0	40	[Gantt bar for SG1040: 13NOV06 to 29DEC06]														
SG2010	Signage - Shop Drawings	50	20OCT05A	17NOV06	50	24	[Gantt bar for SG2010: 20OCT05A to 17NOV06]														
SG2020	Signage - Review & Approval of Shop Drawings.	24	18NOV06	15DEC06	0	24	[Gantt bar for SG2020: 18NOV06 to 15DEC06]														
SG2040	Signage - Delivery of Signs to Site	25	21NOV06	19DEC06	0	25	[Gantt bar for SG2040: 21NOV06 to 19DEC06]														
High Mast Lighting (NOT USED)																					
HM1000	High Mast Lighting -Foundation Design (NOT USED)	48	21OCT06	15DEC06	0	48	[Gantt bar for HM1000: 21OCT06 to 15DEC06]														
HM1100	High Mast Lighting Design & Shop Dwgs (NOT USED)	48	18NOV06	15JAN07	0	48	[Gantt bar for HM1100: 18NOV06 to 15JAN07]														
Kiosk at Slip Road C																					
EM1010	Procurement & Delivery of Electrical Switchboard	48	14JUN06A	10NOV06	75	18	[Gantt bar for EM1010: 14JUN06A to 10NOV06]														
EM1030	Procurement & Delivery of Fire AFA System	48	31JUL06A	10NOV06	75	18	[Gantt bar for EM1030: 31JUL06A to 10NOV06]														
EM1040	Submission & Approval for Air Conditioner Unit	24	21OCT06	10NOV06	0	18	[Gantt bar for EM1040: 21OCT06 to 10NOV06]														
EM1050	Procurement & Delivery of Air Conditioner Unit	12	11NOV06	21NOV06	0	9	[Gantt bar for EM1050: 11NOV06 to 21NOV06]														
EM1060	Submission & Approval for Sanitary Wear	24	21OCT06	10NOV06	0	18	[Gantt bar for EM1060: 21OCT06 to 10NOV06]														
EM1070	Procurement & Delivery of Sanitary Wear	12	11NOV06	21NOV06	0	9	[Gantt bar for EM1070: 11NOV06 to 21NOV06]														
Lai Po Road Fire Hydrant Pump House																					
EM2010	Procurement & Delivery of Pumps Valves	48	31JUL06A	24NOV06	80	30	[Gantt bar for EM2010: 31JUL06A to 24NOV06]														
EM2020	Submission & Approval for Pump Control Panel	24	18AUG06A	31OCT06	80	9	[Gantt bar for EM2020: 18AUG06A to 31OCT06]														
EM2030	Procurement & Delivery of Pump Control Panel	48	01NOV06	27DEC06	0	48	[Gantt bar for EM2030: 01NOV06 to 27DEC06]														
EM2050	Procurement & Delivery of Electrical Switchboard	48	14JUN06A	10NOV06	80	18	[Gantt bar for EM2050: 14JUN06A to 10NOV06]														

Start Date
Finish Date
Data Date

23SEP03
25AUG08
20OCT06

P3 File : LU37

Sheet 3 of 15

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 Month Rolling Programme
from 21 October 2006



Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem. Durn.	2006												2007				
							OCT			NOV				DEC			JAN						
							16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	
EM2070	Procurement & Delivery of Fire AFA System	48	31JUL06A	10NOV06	80	18																	
EM2110	Submission & Approval for Air Conditioner Unit	24	21OCT06	10NOV06	0	18																	
EM2120	Procurement & Delivery of Air Conditioner Unit	12	11NOV06	24NOV06	0	12																	
Wai Man Tsuen Fire Hydrant Pump House																							
EM3010	Procurement & Delivery of Pumps Valves	48	31JUL06A	24NOV06	80	30																	
EM3020	Submission & Approval for Pump Control Panel	24	18AUG06A	31OCT06	80	9																	
EM3030	Procurement & Delivery of Pump Control Panel	48	01NOV06	27DEC06	0	48																	
EM3050	Procurement & Delivery of Electrical Switchboard	48	14JUN06A	10NOV06	80	18																	
EM3070	Procurement & Delivery of Fire AFA System	48	31JUL06A	10NOV06	80	18																	
EM3110	Submission & Approval for Air Conditioner Unit	24	21OCT06	10NOV06	0	18																	
EM3120	Procurement & Delivery of Air Conditioner Unit	12	11NOV06	24NOV06	0	12																	
Lai Wan Overpass Irrigation Pump House																							
EM4010	Procurement & Delivery of Pumps Valves	48	31JUL06A	24NOV06	80	30																	
EM4020	Submission & Approval for Pump Control Panel	24	18AUG06A	31OCT06	80	9																	
EM4030	Procurement & Delivery of Pump Control Panel	48	01NOV06	27DEC06	0	48																	
EM4050	Procurement & Delivery of Electrical Switchboard	48	14JUN06A	10NOV06	80	18																	
EM4070	Procurement & Delivery of Fire AFA System	48	31JUL06A	24NOV06	80	30																	
EM4080	Submission & Approval for GRP Water Tank	24	23JUN06A	03NOV06	50	12																	
EM4090	Procurement & Delivery of FGRP Water Tank	48	04NOV06	30DEC06	0	48																	
EM4110	Submission & Approval for Air Conditioner Unit	24	21OCT06	10NOV06	0	18																	
EM4120	Procurement & Delivery of Air Conditioner Unit	12	11NOV06	24NOV06	0	12																	
Viaduct - Main Line - Piers PA to P6																							
Superstructure Finishing Works Required for TCSS																							
MF1000	PA to P6 - Parapet Panels PA/L to P3/L	48	14APR06A	21OCT06	98	1																	
MF1000A	PA to P6 - Parapet Insitu Concrete PA/L to P3/L	48	06MAY06A	28OCT06	85	7																	
MF1005	P3L to P6 - Parapet Panels P3/L to P7/L	48	22APR06A	01NOV06	80	10																	
MF1005A	P3L to P6 - Parapet Insitu Concrete P3/L to P7/L	48	11MAY06A	28NOV06	30	33																	
MF1010	PA to P6 - Parapet Panels PA/R to P3/R	48	19JUN06A	21OCT06	98	1																	
MF1010A	PA to P6 - Parapet Insitu Concrete PA/R to P3/R	48	05AUG06A	25OCT06	96	2																	
MF1012	PA to P6 - Parapet Panels P3/R to P7/R	48	03JUL06A	30OCT06	90	5																	
MF1012A	PA to P6 - Parapet Insitu Concrete P3/R to P7/R	48	10AUG06A	02NOV06	80	10																	
MF1015	PA to P6 - Insitu Slab to Under Median Barrier	32	02SEP06A	02NOV06	65	11																	
MF1017	PA to P6 - Median Barrier (incl earthing)	45	21OCT06	12DEC06	0	45																	

Start Date
Finish Date
Data Date

23SEP03
25AUG08
20OCT06

P3 File : LU37

Sheet 4 of 15

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 Month Rolling Programme
from 21 October 2006



Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem Durn.	2006							2007							
							OCT		NOV			DEC		JAN							
							16	23	30	6	13	20	27	4	11	18	25	1	8	15	22
MF1020	PA to P6 - Sign Gantry DS2 at P5/R-B4	46	13NOV06	06JAN07	0	46															
Remaining Superstructure Finishing Works																					
MF1050	PA to P6 - Top Rail to Parapets	24	29NOV06	27DEC06	0	24															
MF1090	P6 - Landscaping - Planting On Viaduct	25	03NOV06*	01DEC06	0	25															
Noise Barriers & Encl' (Sec.15 Excision)																					
MN1000	Viaduct - 3m Absorptive Barriers N/B Ch.407-670	75	29NOV06	01MAR07	0	75															
Viaduct - Slip Road A																					
Superstructure Finishing Works Required for TCSS																					
AF1010	Slip Rd.A to P7 -Parapet Panels East Face	60	06JAN06A	24OCT06	98	3															
AF1010A	Slip Rd.A to P7 -Parapet Insitu Concrete E. Face	60	20JAN06A	27OCT06	90	6															
AF1020	Slip Rd.A to P7- Parapet Panels West Face	60	17JAN06A	23OCT06	90	2															
AF1020A	Slip Rd.A to P7-Parapet Insitu Concrete W. Face	60	20FEB06A	26OCT06	90	2															
AF1030	Slip Rd. A - Provision for E & M and TCSS	24	31OCT06	27NOV06	0	24															
AF1035	Slip Rd. B - Sign Gantry DS13 at Roundabout	12	14NOV06	27NOV06	0	12															
Viaduct - Slip Road B																					
Superstructure Finishing Works Required for TCSS																					
BF1010	Slip Rd.B to P7 - Parapets Panels East Face	60	04MAY06A	25OCT06	94	4															
BF1010A	Slip Rd.B to P7 -Parapet Insitu Concrete E. Face	60	17MAY06A	28OCT06	70	7															
BF1015	Slip Rd.B to P7 - Parapets Panels West Face	60	04MAY06A	24OCT06	95	3															
BF1015A	Slip Rd.B to P7 -Parapet Insitu Concrete W. Face	60	12MAY06A	27OCT06	92	4															
BF1040	Slip Rd. B - Provision for E & M and TCSS	12	18SEP06A	07NOV06	50	6															
Remaining Superstructure Finishing Works																					
BF1050	Slip Rd. B - Deck Drainage	60	21OCT06	30DEC06	0	60															
Remaining Noise Barriers & Enclosures																					
BN1000	Slip Road B - Full Enclosure Ch.1038 - Pier B2	48	21OCT06	15DEC06	0	48															
BN1005	Slip Road B - Full Enclosure Pier B2 - Ch. 1258	48	18NOV06	15JAN07	0	48															
BN1010	Slip Road B - Semi Enclosures Ch.1258 - 1318	48	25NOV06	22JAN07	0	48															
At Grade Works - Lai Po Road																					
Temporary Traffic Management Schemes																					
WT3350	5th. TTMS Lai Po Rd (for N/B&S/B) -Implementation	53*	18AUG06A	21OCT06	0	1*															
WT3420	6th. TTMS Lai Po Rd (for S/B C/W) -Roadwk Advice	6	21OCT06	27OCT06	0	6															
WT3430	6th. TTMS Lai Po Rd (for S/B C/W) - Site Prepare	6	28OCT06	03NOV06	0	6															

Start Date 23SEP03
 Finish Date 25AUG08
 Data Date 20OCT06

P3 File : LU37

Sheet 5 of 15

Highways Department Contract No. HY/2003/01
 Route 8 - Lai Chi Kok Viaduct
 3 Month Rolling Programme
 from 21 October 2006



Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem Durn.	2006												2007				
							OCT			NOV				DEC			JAN						
							16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	
WT3450	Divert N/B Traffic to Divs'n No.4 (for S/B C/W)	1	21OCT06	21OCT06	0	1	WT3450																
WT3460	6th. TTMS Lai Po Rd (for S/B C/W) -Implementation	43*	21OCT06	09DEC06	0	43*	WT3460																
WT3520	7th. TTMS Lai Po Rd (for S/B C/W) -Roadwk Advice	6	21OCT06	27OCT06	0	6	WT3520																
WT3530	7th. TTMS Lai Po Rd (for S/B C/W) - Site Prepare	6	28OCT06	03NOV06	0	6	WT3530																
WT3600	8th. TTMS Lai Po Rd (for S/B C/W)-Prepare Review	18	21OCT06	19OCT06	0	0	WT3600																
WT3610	8th. TTMS Lai Po Rd (for S/B C/W) - CRE Endors't	6	23NOV06	29NOV06	0	6	WT3610																
Retaining Wall LCK-R2																							
WW2030	Ret. Wall LCK-R2 - Insitu Concrete Parapets	24	11NOV06	08DEC06	0	24	WW2030																
Retaining Wall LCK-R3																							
WW3000	Ret. Wall LCK-R3 - Bases	18	04SEP06A	03NOV06	30	12	WW3000																
WW3010	Ret. Wall LCK-R3 - Walls	24	14OCT06A	17NOV06	10	21	WW3010																
Lai Po Road (D3) Roadworks - Stage 1																							
WR1250	Lai Po Rd N/B Ch.1+250 - 1+360- Utilities	12	21OCT06	03NOV06	0	12	WR1250																
Lai Po Road (D3) Roadworks - Stage 3																							
WE1040	Lai Po Rd S/B - Temp. Ramp at Slip Rd B NOT USED	0	21OCT06	19OCT06	0	0	WE1040																
WE2400	Lai Po Rd S/B Ch.1+140 - 1+300 Fill Embankment	18	21OCT06	10NOV06	0	18	WE2400																
WA2400	Lai Po Rd S/B Ch.1+140 - 1+300 Drainage	18	28OCT06	17NOV06	0	18	WA2400																
WR2400	Lai Po Rd S/B Ch.1+140 - 1+300 - Formation	12	11NOV06	24NOV06	0	12	WR2400																
WR2410	Lai Po Rd S/B Ch.1+140 - 1+300- Sub-base	12	18NOV06	01DEC06	0	12	WR2410																
WR2420	Lai Po Rd S/B Ch.1+140 - 1+300- Kerbs	12	22NOV06	05DEC06	0	12	WR2420																
WE2000	Lai Po Rd S/B Ch.1+000 - 1+140 Fill Embankment	18	21OCT06	10NOV06	0	18	WE2000																
WA2200	Lai Po Road S/B Ch.1+000 - 1+140 - Drainage	24	04NOV06	01DEC06	0	24	WA2200																
WR2100	Lai Po Rd S/B Ch.1+000 - 1+140 - Formation	24	18NOV06	15DEC06	0	24	WR2100																
WR2110	Lai Po Rd S/B Ch.1+000 - 1+140 - Sub-base	24	25NOV06	22DEC06	0	24	WR2110																
Lai Po Road (D3) Roadworks - Stage 4																							
WA3200	Lai Po Rd S/B Ch.1+300 - 1+360 - Drainage	12	04OCT06A	30OCT06	30	8	WA3200																
WR2300	Lai Po Rd S/B Ch.1+300 - 1+360 - Formation	6	31OCT06	06NOV06	0	6	WR2300																
WR2310	Lai Po Rd S/B Ch.1+300 - 1+360 - Sub-base	6	07NOV06	13NOV06	0	6	WR2310																
WR2320	Lai Po Rd S/B Ch.1+300 - 1+360 - Kerbs	6	14NOV06	20NOV06	0	6	WR2320																
WR2330	Lai Po Rd S/B Ch.1+300 - 1+360 - Pavement	6	14NOV06	20NOV06	0	6	WR2330																
High Mast Lighting (NOT USED)																							
WR3000	H/M Lighting (3 No. Mast) - Found's (NOT USED)	24	21OCT06	17NOV06	0	24	WR3000																
WR3010	H/M Lighting (3 No. Mast) -Erect Masts (NOT USED)	12	18NOV06	01DEC06	0	12	WR3010																

Start Date
Finish Date
Data Date

23SEP03
25AUG08
20OCT06

P3 File : LU37

Sheet 6 of 15

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 Month Rolling Programme
from 21 October 2006



Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem .Durn.	2006						2007															
							OCT	NOV	DEC	JAN																		
							16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29						
Landscape Works																												
WX1010	Landscaping - Dwarf Walls FW8, FW10 & FW13	54	23OCT06	23DEC06	0	54																WX1010						
WX1011	Landscaping - Dwarf Walls FW4 & FW6	41	14NOV06	02JAN07	0	41																WX1011						
Viaduct - Main Line - Piers P7 to P10																												
Superstructure Finishing Works Required for TCSS																												
MF2000	P7 to P10 - Parapet Panels P7 to P8	22	30AUG06A	10NOV06	20	18																MF2000						
MF2002	P7 to P10 - Parapet Panels P8 to P10	36	02JUN06A	10NOV06	50	18																MF2002						
MF2002A	P7 to P10 - Parapet Insitu Concrete P8 to P10	36	14AUG06A	28NOV06	5	33																MF2002A						
MF2005	P7 to P10 - Insitu Slab to Under Median Barrier	50	14NOV06	18DEC06	0	30																MF2005						
MF2007	P7 to P10 - Median Barrier (incl earthing)	46	28NOV06	22JAN07	0	46																MF2007						
At Grade Works - Lai Chi Kok Interchange																												
Temporary Traffic Management Schemes																												
MT1400	3rd TTMS Butterfly Valley Rd -Prepare for Review	12	21OCT06	03NOV06	0	12																MT1400						
MT1410	3rd. TTMS Butterfly Valley Rd - CRE Endorsement	6	23NOV06	29NOV06	0	6																MT1410						
MT2140	TTMS for Pier P8/L - Implementation	818*	23FEB04A	09NOV06	29	17*																MT2140						
MT3100	2nd. TTMS Kom Tsun Street - Prepare for Review	12	21OCT06	03NOV06	0	12																MT3100						
MT3110	2nd. TTMS Kom Tsun Street - CRE Endorsement	6	23NOV06	29NOV06	0	6																MT3110						
MT3200	3rd. TTMS Kom Tsun Street - Prepare for Review	12	21OCT06	03NOV06	0	12																MT3200						
MT3210	3rd. TTMS Kom Tsun Street - CRE Endorsement	6	23NOV06	29NOV06	0	6																MT3210						
Drainage Works																												
SA5100	Butterfly Valley Rd Stage2 - Stormwater Drainage	36	21SEP06A	28OCT06	80	7																SA5100						
SA5300	Butterfly Valley Rd Stage4 - Stormwater Drainage	12	21SEP06A	26OCT06	60	5																SA5300						
Utilities & Roadworks																												
SR2000	Castle Peak Road - Roadworks Reinstatement	17	21OCT06	09NOV06	0	17																SR2000						
SR5000	Butterfly V. Rd (LCKI) Stage1-Excav. & Formation	36	19SEP06A	10NOV06	50	18																SR5000						
SR5010	Butterfly V. Rd (LCKI) Stage 1 - Sub-base	36	21OCT06	01DEC06	0	36																SR5010						
SR5020	Butterfly V. Rd (LCKI) Stage 1 - Kerbs	24	18NOV06	15DEC06	0	24																SR5020						
SR5300	Butterfly V. Rd (LCKI) Stage4-Excav. & Formation	18	21OCT06	10NOV06	0	18																SR5300						
SR5310	Butterfly V. Rd (LCKI) Stage 4 - Sub-base	18	30OCT06	18NOV06	0	18																SR5310						
SR5320	Butterfly V. Rd (LCKI) Stage 4 - Kerbs	18	06NOV06	25NOV06	0	18																SR5320						
SR5330	Butterfly V. Rd (LCKI) Stage 4 - Pavement	6	27NOV06	02DEC06	0	6																SR5330						
SR3200	Kom Tsun Street Bus Stn. - Excavate & Formation	18	11NOV06	01DEC06	0	18																SR3200						

Start Date
Finish Date
Data Date

23SEP03
25AUG08
20OCT06

P3 File : LU37

Sheet 7 of 15

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 Month Rolling Programme
from 21 October 2006



Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem Durn.	2006														
							OCT			NOV			DEC			2007					
							16	23	30	6	13	20	27	4	11	18	25	1	8	15	22
MF4005	P16 to P18 - Insitu Slab to Under Median Barrier	26	21OCT06	20NOV06	0	26															
MF4007	P16 to P18 - Median Barrier (incl earthing)	24	07NOV06	04DEC06	0	24															
MF4010	P16 to P19 - Sign Gantry DS1 at P18/R	53	18NOV06	20JAN07	0	53															
MF4020	P16 to P19 - Provision for E & M and TCSS	46	27NOV06	20JAN07	0	46															
Remaining Superstructure Finishing Works																					
MF4050	P16 to P18 - Top Rail to Parapets	12	31OCT06	13NOV06	0	12															
Viaduct - Main Line - Piers 19 to Abutment M																					
Substructure																					
MS5177	P21 - Slope Reinstatement	24	07NOV06	04DEC06	0	24															
MS5230	Abutment M - Install Bearings	6	21OCT06	27OCT06	0	6															
MS5290	Abutment M - Remove Ground Support For PC Segs	6	21SEP06A	23OCT06	80	2															
MS5225	Abutment M - Slope Reinstatement	24	24OCT06	20NOV06	0	24															
Superstructure Finishing Works Required for TCSS																					
MF5000	P19 to Abut M -Parapet Panels P18 to Abut M	22	13OCT06A	10NOV06	20	18															
MF5000A	P19 to Abut M -Parapet Insitu Conc P18 - Abut M	20	21OCT06	15NOV06	0	22															
MF5005	P19 to Abut M - Insitu Slab Under Median Barrier	20	01NOV06	23NOV06	0	20															
MF5007	P19 to Abut M - Median Barrier (incl earthing)	18	11NOV06	01DEC06	0	18															
MF5010	P19 to Abut M - Sign Gantry FADS1at Abutment M	50	18NOV06	17JAN07	0	50															
MF5020	P19 to Abut M - Provision for E & M and TCSS	46	23NOV06	17JAN07	0	46															
Remaining Superstructure Finishing Works																					
MF5040	P19 to Abut M - Deck Drainage	18	18NOV06	08DEC06	0	18															
MF5050	P19 to Abut M - Top Rail to Parapets	12	13NOV06	25NOV06	0	12															
MF5070	P19 to Abut M - Viaduct Road Lighting	18	24NOV06	14DEC06	0	18															
Viaduct - Main Line - Tunnel Approaches																					
Noise Barriers & Encl' (Sec.10 Excision)																					
MN6100	Semi Enclosure S/B Ch.2005 - 2200 - Frame	60	16NOV06	26JAN07	0	60															
At Grade Works - Butterfly Valley																					
Earthworks & Slope Works - 11NW-A/FR54 & F55																					
QE2000	Slope 11NW-A/FR54 & FR55 - Remove Temp. Platform	18	21OCT06	10NOV06	0	18															
QE2002	Slope 11NW-A/FR54 & FR55 - Retaining Wall -Bases	36	11NOV06	22DEC06	0	36															
QE2010	Slope 11NW-A/FR54 & FR55 - Install Temp Works	48	18NOV06	15JAN07	0	48															

Start Date 23SEP03
 Finish Date 25AUG08
 Data Date 20OCT06

P3 File : LU37 Sheet 9 of 15

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 Month Rolling Programme
from 21 October 2006



Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem Durn.	2006												2007			
							OCT	NOV	DEC	JAN												
							16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29
Landscape Works																						
QX1020	Landscaping - Soiling & Planting on Slope CCR-S6	75	21OCT06*	18JAN07	0	75	[Gantt bar for QX1020]															
Viaduct - Slip Road C																						
Substructure																						
CS1555	C6/R & C6/L - Install Bearings on Portal Frame	6	21OCT06	27OCT06	0	6	[Gantt bar for CS1555]															
Superstructure Finishing Works Required for TCSS																						
CF1010	Slip Rd. C - Parapet Panels C2 to C4	6	12SEP06A	24OCT06	50	3	[Gantt bar for CF1010]															
CF1010A	Slip Rd. C - Parapet Insitu Concrete C2 to C4	12	04OCT06A	01NOV06	20	10	[Gantt bar for CF1010A]															
CF1015	Slip Rd. C - Parapet Panels C4 to C6	9	05OCT06A	26OCT06	50	5	[Gantt bar for CF1015]															
CF1015A	Slip Rd. C - Parapet Insitu Concrete C4 to C6	12	11OCT06A	02NOV06	20	9	[Gantt bar for CF1015A]															
CF1000	Slip Rd. C - Parapet Panels - Abut. C to C2	6	10SEP06A	25OCT06	30	4	[Gantt bar for CF1000]															
CF1000A	Slip Rd. C - Parapet Insitu Conc - Abut. C to C2	6	27OCT06A	01NOV06	10	5	[Gantt bar for CF1000A]															
CF1020	Slip Rd. C - Provision for E & M and TCSS	12	27OCT06	09NOV06	0	12	[Gantt bar for CF1020]															
Remaining Superstructure Finishing Works																						
CF1040	Slip Rd. C - Deck Drainage	50	21OCT06	18DEC06	0	50	[Gantt bar for CF1040]															
CF1050	Slip Rd. C - Top Rail to Parapets	18	03NOV06	23NOV06	0	18	[Gantt bar for CF1050]															
CF1053	Slip Rd. C - Movement Joint at Abut. C	6	03NOV06	09NOV06	0	6	[Gantt bar for CF1053]															
Viaduct - Slip Road D																						
Superstructure Finishing Works Required for TCSS																						
DF1005	Slip Rd. D -Parapet Panels D4 to Abut D	42	26JUL06A	27OCT06	90	6	[Gantt bar for DF1005]															
DF1005A	Slip Rd. D -Parapet Insitu Concrete D4 to Abut D	42	15AUG06A	31OCT06	85	6	[Gantt bar for DF1005A]															
DF1007	Slip Rd. D -Parapet Panels D4 to D8	18	06SEP06A	26OCT06	70	5	[Gantt bar for DF1007]															
DF1007A	Slip Rd. D -Parapet Insitu Concrete D4 to D8	16	09SEP06A	02NOV06	65	6	[Gantt bar for DF1007A]															
DF1000	Slip Rd. D - Parapet Panels D10 to D8	24	09OCT06A	03NOV06	30	12	[Gantt bar for DF1000]															
DF1000A	Slip Rd. D - Parapet Insitu Concrete D10 to D8	24	16OCT06A	10NOV06	10	14	[Gantt bar for DF1000A]															
DF1009	Slip Rd. D - Sign Gantry ADS4 at D6	12	13NOV06	25NOV06	0	12	[Gantt bar for DF1009]															
DF1010	Slip Rd. D - Provision for E & M and TCSS	12	06NOV06	18NOV06	0	12	[Gantt bar for DF1010]															
Remaining Superstructure Finishing Works																						
DF1040	Slip Rd. D - Deck Drainage	24	01SEP06A	03NOV06	50	12	[Gantt bar for DF1040]															
DF1050	Slip Rd. D - Top Rail to Parapets	18	24NOV06	14DEC06	0	18	[Gantt bar for DF1050]															
Remaining Noise Barriers & Enclosures																						
DN1000	Slip Rd. D - 3.5m Reflective Barrier Ch.805-881	36	28NOV06	10JAN07	0	36	[Gantt bar for DN1000]															

Start Date 23SEP03
 Finish Date 25AUG08
 Data Date 20OCT06

P3 File : LU37

Sheet 10 of 15

Highways Department Contract No. HY/2003/01
 Route 8 - Lai Chi Kok Viaduct
 3 Month Rolling Programme
 from 21 October 2006



Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem Durn.	2006												2007					
							OCT			NOV				DEC					JAN					
							16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29		
Lai Wan Road Overpass																								
Temporary Traffic Management Schemes																								
LT3000	TTMS CC Rd (on W/B Deck) - Prepare for Review	12	21OCT06	03NOV06	0	12	[Bar from 21 Oct to 03 Nov]													LT3000				
LT3010	TTMS CC Rd (on W/B Deck) - CRE Endorsement	6	23NOV06	28NOV06	0	6														LT3010				
LT3020	TTMS CC Rd (on W/B Deck) - Roadworks Advice	6	29NOV06	04DEC06	0	6														LT3020				
LT3100	TTMS CC Rd (on E/B Deck) - Prepare for Review	12	21OCT06	03NOV06	0	12	[Bar from 21 Oct to 03 Nov]													LT3100				
LT3110	TTMS CC Rd (on E/B Deck) - CRE Endorsement	6	23NOV06	28NOV06	0	6														LT3110				
LT3120	TTMS CC Rd (on E/B Deck) - Roadworks Advice	6	29NOV06	04DEC06	0	6														LT3120				
West Bound - Insitu Deck																								
LD1056	Lai Wan O/pass W/B - Span St.3 - 1st. Pour	20	15SEP06A	01NOV06	50	10	[Bar from 15 Sep to 01 Nov]													LD1056				
LD1058	Lai Wan O/pass W/B - Span St.3 - 2nd. Pour	12	02NOV06	15NOV06	0	12	[Bar from 02 Nov to 15 Nov]													LD1058				
LD1059	Lai Wan O/pass W/B - Span St.3 - Stressing	6	16NOV06	22NOV06	0	6	[Bar from 16 Nov to 22 Nov]													LD1059				
East Bound - Insitu Deck																								
LD2056B	Lai Wan O/Pass E/B - Span St.3B - 1st. Pour	20	09SEP06A	25OCT06	80	4	[Bar from 09 Sep to 25 Oct]													LD2056B				
LD2058B	Lai Wan O/Pass E/B - Span St.3B - 2nd. Pour	10	26OCT06	06NOV06	0	10	[Bar from 26 Oct to 06 Nov]													LD2058B				
LD2059	Lai Wan O/Pass E/B - Span St.3 - Stressing	6	07NOV06	13NOV06	0	6	[Bar from 07 Nov to 13 Nov]													LD2059				
LD2060	Lai Wan O/Pass E/B - Parapet Panels	6	16NOV06	22NOV06	0	6	[Bar from 16 Nov to 22 Nov]													LD2060				
LD2060A	Lai Wan O/Pass E/B - Parapet Insitu Concrete	12	20NOV06	02DEC06	0	12	[Bar from 20 Nov to 02 Dec]													LD2060A				
LD2065	Lai Wan O/Pass E/B - Movement Joints at CA1&2	6	27NOV06	02DEC06	0	6	[Bar from 27 Nov to 02 Dec]													LD2065				
At Grade Works - Ching Cheung Road at LCK Park																								
Temporary Traffic Management Schemes																								
NT2050	2nd. TTMS CC Rd (E/B C/Way) - Prepare for Review	12	23NOV06	06DEC06	0	12	[Bar from 23 Nov to 06 Dec]													NT2050				
Retaining Wall CCR-R1 West Bound																								
NW1152	W/B Ret. Wall CCR-R1B - Parapet on Wall	18	21OCT06	10NOV06	0	18	[Bar from 21 Oct to 10 Nov]													NW1152				
NW1240	W/B Ret. Wall CCR-R1A West - Parapet on Wall	18	11NOV06	01DEC06	0	18	[Bar from 11 Nov to 01 Dec]													NW1240				
Retaining Wall CCR-R1 East Bound																								
NW2240	W/B Ret. Wall CCR-R1E - Parapets on Wall	24	21OCT06	03NOV06	0	12	[Bar from 21 Oct to 03 Nov]													NW2240				
Drainage Works																								
NA2010	C.C. Rd. W/B in New C/way - S/water Drainage E3	75	21OCT06	18JAN07	0	75	[Bar from 21 Oct to 18 Jan 2007]													NA2010				
NA2020	C.C. Rd. W/B in New C/way - S/water Drainage J2	66	21OCT06	08JAN07	0	66	[Bar from 21 Oct to 08 Jan 2007]													NA2020				
NA3000	C.C. Rd. E/B in New C/way - Stormwater Drainage	75	21OCT06	18JAN07	0	75	[Bar from 21 Oct to 18 Jan 2007]													NA3000				

Start Date
Finish Date
Data Date

23SEP03
25AUG08
20OCT06

P3 File : LU37

Sheet 11 of 15

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 Month Rolling Programme
from 21 October 2006



Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem Durn.	2006												2007							
							OCT			NOV				DEC			JAN									
							16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29				
Utilities & Roadworks																										
NR1090	C.C. Rd. W/B - Foundations & Sign Gantry ADS3	24	13NOV06	09DEC06	0	24																				
NR3030	C.C. Rd. E/B - E & M and TCSS Provision	36	04NOV06	15DEC06	0	36																				
At Grade Work - Ching Cheung Road - Main Section																										
Temporary Traffic Management Schemes																										
RT2240	3rd. TTMS CC Rd (Slewing) - Implementation	562*	28DEC04A	10NOV06	0	18*																				
Earthworks & Slope Works - CCR-S1, S2 & S3																										
RE1700	Slope CCR-S1E - Finish Seed & Planting +62.3mPD	6	21OCT06*	27OCT06	0	6																				
RE1710	Slope CCR-S1E - Finish Seed & Planting +54.8mPD	12	28OCT06	10NOV06	0	12																				
RE1720	Slope CCR-S1E - Finish Seed & Planting +47.3mPD	12	11NOV06	24NOV06	0	12																				
RE1710A	Slope CCR-S1C- Finish Seed & Planting +54.9mPD	12	21OCT06	03NOV06	0	12																				
RE1720A	Slope CCR-S1C - Finish Seed & Planting +47.3mPD	12	04NOV06	17NOV06	0	12																				
RE1840	Slope CCR-S1E&C- Rock Stabilisation to +25.4mPD	48	24OCT05A	23OCT06	85	2																				
RE1860	Slope CCR-S1E&C- Finish Seed & Planting to +25.4	24	21OCT06	17NOV06	0	24																				
RE1720B	Slope CCR-S1W - Seed & Planting to +39.95mPD	24	21OCT06	17NOV06	0	24																				
RE1560	Slope CCR-S1W - Rock Stabilisation to 19.0mPD	48	10MAY06A	01NOV06	80	10																				
RE1660	Slope CCR-S1W - Drainage to Level +19.0mPD	24	21OCT06	17NOV06	0	24																				
RE16604	Slope CCR-S1W - Drainage to Level +16.8mPD	18	18NOV06	08DEC06	0	18																				
RE1665	Slope CCR-S1W - Seed & Planting to +32.4mPD	24	21OCT06	17NOV06	0	24																				
RE1670	Slope CCR-S1W - Seed & Planting to +24.9mPD	24	18NOV06	15DEC06	0	24																				
RE2000	Slope CCR-S2 -Excavate Rock to Formation	24	21OCT06	17NOV06	0	24																				
RE2100	Slope CCR-S2 - Drainage	42	18NOV06	08JAN07	0	42																				
Slope Works Above Retaining Wall CCR-R2																										
RE4000	Ch 00.00 to 78.27 - Excavate in Benches	36	04SEP06A	18NOV06	30	25																				
RE4010	Ch 00.00 to 78.27 - Filter Layer	36	23OCT06	02DEC06	0	36																				
RE4020	Ch 02.13 to 41.71 - General Filling & Compaction	24	13NOV06	09DEC06	0	24																				
RE4022	Ch 50.71 to 78.27 - General Filling & Compaction	36	06NOV06	16DEC06	0	36																				
RE4024	Ch 41.71 to 50.71 - General Filling & Compaction	6	21OCT06	27OCT06	0	6																				
RE4025	Ch 00.00 to 2.13 - General Filling & Compaction	6	21OCT06	27OCT06	0	6																				
RE4027	Excavate & Demolish Existing Retaining Wall	12	28OCT06	10NOV06	0	12																				
RE4028	Fill & Compact to Form Toe of Berm	6	11NOV06	17NOV06	0	6																				
Retaining Wall CCR-R3 Type A																										
RW3040	Ret. Wall CCR-R3A - Backfill & Form Platform	18	21OCT06	10NOV06	0	18																				

Start Date 23SEP03
 Finish Date 25AUG08
 Data Date 20OCT06

P3 File : LU37

Sheet 12 of 15

Highways Department Contract No. HY/2003/01
 Route 8 - Lai Chi Kok Viaduct
 3 Month Rolling Programme
 from 21 October 2006



Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem Durn.	2006												2007				
							OCT	NOV	DEC	JAN													
							16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	
Retaining Wall CCR-R3 Type B																							
RW4040	Ret. Wall CCR-R3B - Backfill & Form Platform	18	21OCT06	10NOV06	0	18																	
Retaining Wall CCR-R3 Type C																							
RW5010	Ret. Wall CCR-R3C - Temporay Works & Excavation	24	25JAN06A	23OCT06	95	2																	
RW5020	Ret. Wall CCR-R3C - Bases	18	21OCT06	10NOV06	0	18																	
RW5030	Ret. Wall CCR-R3C - Walls	24	04NOV06	01DEC06	0	24																	
Slope Works Above Retaining Walls CCR-R3D, E & F																							
RE4107	Slope above CCR-R3D-Excavate Slope	12	25SEP06A	30OCT06	30	8																	
RE4110	Slope above CCR-R3D- Filter - Bottom to 1st Berm	6	11NOV06	17NOV06	0	6																	
RE4111	Slope above CCR-R3D- Filling - Bt'm to 1st Berm	12	18NOV06	01DEC06	0	12																	
RE4205	Slope above CCR-R3E&F -Remove Piling Platform	6	21OCT06	27OCT06	0	6																	
RE4207	Slope above CCR-R3E&F -Excavate Slope	12	28OCT06	10NOV06	0	12																	
RE4210	Slope above CCR-R3E&F- Filter - Btm. to 1st Berm	6	11NOV06	17NOV06	0	6																	
RE4211	Slope above CCR-R3E&F - Filling-Bt'm to 1st Berm	12	18NOV06	01DEC06	0	12																	
RE4410	Slope Above CC Rest Garden - Excavate Slope	12	14JUL06A	27OCT06	50	6																	
RE4420	Slope Above CC Rest Garden - Benching	12	30SEP06A	31OCT06	20	9																	
RE4430	Slope Above CC Rest Garden - Rock Filling	12	01NOV06	14NOV06	0	12																	
RE4440	Slope Above CC Rest Garden - Slope Drainage	18	15NOV06	05DEC06	0	18																	
RE4450	Slope Above CC Rest Garden - Slope Finishes	12	29NOV06	12DEC06	0	12																	
Earthworks & Slope Works - CCR-S4																							
RE4268	Slope CCR-S4 - Excavate & Bench Upper Slope	48	03JAN06A	28OCT06	85	7																	
RE4280	Slope CCR-S4 - Fill and Compact	24	23FEB06A	04NOV06	50	12																	
RE4285	Slope CCR-S4 - Form New Access Road at Footpath	12	06NOV06	18NOV06	0	12																	
RE4290	Slope CCR-S4 - Upper Slope Drainage	18	20NOV06	09DEC06	0	18																	
RE4310	Slope CCR-S4 - Excavate Lower Slope	24	01MAR06A	24OCT06	90	3																	
RE4320	Slope CCR-S4 - Lower Slope Drainage	18	25OCT06	14NOV06	0	18																	
RE4330	Slope CCR-S4 - Lower Slope Finishes	24	15NOV06	12DEC06	0	24																	
Ching Cheung Road NTMM Retaining Wall A																							
RW6020	NNTM Wall A - Drainage & Fill Behind Walls	12	21JUN06A	27OCT06	50	6																	
RW6030	NNTM Wall A - Excavate to +20.5mPD	12	21JUN06A	27OCT06	50	6																	
RW6040	NNTM Wall A - Debris Collection Area Drainage	12	28OCT06	10NOV06	0	12																	
RW6050	NNTM Wall A - Debris Collection Area Access Ramp	12	11NOV06	24NOV06	0	12																	
RW6060	NNTM Wall A - Debris Collection Area Finishes	24	25NOV06	22DEC06	0	24																	

Start Date
Finish Date
Data Date

23SEP03
25AUG08
20OCT06

P3 File : LU37

Sheet 13 of 15

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 Month Rolling Programme
from 21 October 2006



Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem Durn.	2006												2007			
							OCT	NOV			DEC			JAN								
							16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29
Drainage Works																						
RR2000	Ching Cheung Rd. W/B - Stormwater in New C/way	36	27NOV06	09JAN07	0	36																
RR3100	Ching Cheung Rd. E/B -S/Water S300-01 to S300-07	60	18NOV06	29JAN07	0	60																
Utilities & Roadworks																						
RA2000	Lai Wan Road - Footpath below Slope CCR-S4	24	21OCT06	17NOV06	0	24																
RA3003	Ching Cheung Rd. W/B New C/Way - Filling	36	21OCT06	01DEC06	0	36																
RA3070	Ching Cheung Rd. New E/B -Sign Gantry DS3 Founds	18	19OCT06A	09NOV06	5	17																
RA4000	Ching Cheung Rd. New E/B Slip Road - E&M +TCSS	36	23OCT06	02DEC06	0	36																
RA4040	Ching Cheung Rd. New E/B - Fill Behind N/B Base	48	21OCT06	15DEC06	0	48																
RA7000	Lai Wan Road - Watermains & Hydrants FH4 & FH5	24	21OCT06	17NOV06	0	24																
Lai Wan Overpass Irrigation Pump House																						
RI1010	Lai Wan O/pass Irig Pump House - Structure	36	18SEP06A	02NOV06	70	11																
RI1020	Lai Wan O/pass Irig Pump House - Waterproofing	12	03NOV06	16NOV06	0	12																
RI1030	Lai Wan O/pass Irig Pump House - Building Works	75	21OCT06	18JAN07	0	75																
At Grade Works - Butterfly Valley Interchange																						
Temporary Traffic Management Schemes																						
PT2250	TTMS CP Rd-KC N/B for CCR-R4 -Prepare (NOT USED)	16	21OCT06	08NOV06	0	16																
PT2260	TTMS CP Rd-KC N/B for CCR-R4 - CRE End(NOT USED)	6	20OCT06	25OCT06	0	6																
PT2270	TTMS CP Rd-KC N/B for CCR-R4 - R/A (NOT USED)	7	26OCT06	01NOV06	0	7																
PT2280	TTMS CP Rd-KC S/B - Re-open Slip Road (NOT USED)	0		01NOV06	0	0																
PT2288	TTMS CP Rd-KC N/B-Close Loop to CC Rd(NOT USED)	0		01NOV06	0	0																
PT2290	TTMS CP Rd-KC N/B for CCR-R4 - Implem(NOT USED)	557*	21OCT06	25AUG08	0	557*																
PT2200	TTMS CP Rd-KC S/B for Paving -Prepare for Review	18	23NOV06	13DEC06	0	18																
PT2300	TTMS CP Rd-KC N/B for 11NW-A/C66-Prep for Review	16	21OCT06	08NOV06	0	16																
PT2310	TTMS CP Rd-KC N/B for 11NW-A/C66 - CRE Endorse	6	23NOV06	28NOV06	0	6																
PT2320	TTMS CP Rd-KC N/B for 11NW-AC66 - Roadwks Advice	7	29NOV06	05DEC06	0	7																
Retaining Wall CCR-R5 (Pre-bored "H" Piles)																						
PW2220	Ret. Wall CCR-R5 - Coping & Facing to Ret Wall	90	05SEP05A	10NOV06	80	18																
PW2225	Ret. Wall CCR-R5 - Complete Coping & Facing	12	27APR06A	31OCT06	30	9																
PW2140	Ret. Wall CCR-R5 - Complete Fill Behind Wall	12	01NOV06	14NOV06	0	12																
PW2230	Ret. Wall CCR-R5 - Slope Works Behind Wall	36	15NOV06	27DEC06	0	36																
Retaining Wall CCR-R6 (Value Engineering Design)																						
PW3250	Ret. Wall CCR-R6 - Bases to R.C. Walls	48	24AUG06A	23NOV06	40	29																

Start Date
Finish Date
Data Date

23SEP03
25AUG08
20OCT06

P3 File : LU37

Sheet 14 of 15

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 Month Rolling Programme
from 21 October 2006



Activity ID	Activity Description	Orig. Durn.	Early Start	Early Finish	% Compl.	Rem Durn.	2006												2007	
							OCT			NOV			DEC			JAN				
							16	23	30	6	13	20	27	4	11	18	25	1	8	15
PW3260	Ret. Wall CCR-R6 - R.C. Walls	48	27OCT06	21DEC06	0	48	[Gantt bar for PW3260: 27 OCT to 21 DEC]													
Drainage Works																				
PA1200	C.P.Rd Loop to Slip Road C - Stormwater Drainage	18	03OCT06A	04NOV06	30	13	[Gantt bar for PA1200: 03 OCT to 04 NOV]													
PA3000	C.P.Rd.-K.C S/B to C.C. Rd E/B - Storm Drainage	36	22NOV06	04JAN07	0	36	[Gantt bar for PA3000: 22 NOV to 04 JAN]													
Utilities & Roadworks																				
PR3000	C.P.Rd. Loop to Slip Road C - Formation	13	28OCT06	11NOV06	0	13	[Gantt bar for PR3000: 28 OCT to 11 NOV]													
PR3010	C.P.Rd. Loop to Slip Road C - Sub-base	12	06NOV06	18NOV06	0	12	[Gantt bar for PR3010: 06 NOV to 18 NOV]													
PR3020	C.P.Rd. Loop to Slip Road C - Kerbs	18	13NOV06	02DEC06	0	18	[Gantt bar for PR3020: 13 NOV to 02 DEC]													
PR5000	C.P.Rd-K.C. S/B to C.C.Rd E/B - Excavate Road	18	01NOV06	21NOV06	0	18	[Gantt bar for PR5000: 01 NOV to 21 NOV]													
PR5100	C.C. Rd. W/B - Sign Gantry FADS7 at P15-P16	18	22NOV06	12DEC06	0	18	[Gantt bar for PR5100: 22 NOV to 12 DEC]													
Kiosk at Slip Road C																				
PK1000	Kiosk at Slip Rd. C - Structure	24	17OCT06A	16NOV06	5	23	[Gantt bar for PK1000: 17 OCT to 16 NOV]													
PK1010	Kiosk at Slip Rd. C - Building Finishes	24	17NOV06	14DEC06	0	24	[Gantt bar for PK1010: 17 NOV to 14 DEC]													
PK1020	Kiosk at Slip Rd. C - MVAC Installations	24	22NOV06	19DEC06	0	24	[Gantt bar for PK1020: 22 NOV to 19 DEC]													

Start Date
Finish Date
Data Date

23SEP03
25AUG08
20OCT06

P3 File : LU37

Sheet 15 of 15

Highways Department Contract No. HY/2003/01
Route 8 - Lai Chi Kok Viaduct
3 Month Rolling Programme
from 21 October 2006



**APPENDIX M
COMPLAINT LOG**

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"> ▪ Item 1 – Breaking off existing planter and excavate trial trench to expose underground utilities (using one to two backhoes) ▪ Item 2 – Erect rock fall fence & forming platform for pre-drilling (using one backhoe and occasionally one crane lorry) ▪ Item 4 – Excavate further to expose all underground utilities (using hand tools) ▪ Item 5 – Pre-drilling works (using one drilling rig) <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&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</p>	Closed

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

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
40330	Site Areas near Nob Hill	30 March 2004	<p>Highways Department (HyD) recently received a public noise complaint about construction noise generated from the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project, near Nob Hill, Lai Chi Kok. HyD referred the complaint to the RSS and subsequently referred to the ET Leader of the Project on 30 March 2004.</p> <p>The complaint was raised by Mr. Yau, the Office of DCV Member Mr. Cheung Wing Shum, regarding the high pitch construction noise generated at the R8-LCKV site which cause serious nuisance to the residents at Mei Foo.</p>	<p>Based on the information provided by the RSS, the Contractor was not aware of any high pitched construction noise arising from plant employed for their works. The noise complaint referred to may be originated from the damage of a gas main valve on the afternoon of 29 March 2004 in the vicinity of the junction of Mai Lai Road with Lai King Hill Road. The high pitched whistle apparently resulted from the damage which was repaired by TownGas in that afternoon.</p> <p>Based on the information obtained, this noise complaint is considered not due to the construction activities of the Project. Nevertheless, the Contractor was recommended to adopt good site practice to minimize the construction noise, such as:</p> <ul style="list-style-type: none"> • To space out noisy equipment and position it as far away as possible from the sensitive receivers; • To avoid concurrent uses of noisy equipment near the sensitive area; • To ensure the equipment are maintaining in good operation condition; and • To turned off any idle equipment on site. 	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</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>Road in front of Nob Hill.</p> <p>During ET's weekly environmental site inspections on 17, 24 & 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"> • To space out noisy equipment and position it as far away as possible from the sensitive receivers; • To avoid concurrent uses of noisy equipment near the sensitive area; • To ensure the equipment are maintaining in good operation condition; and • To turned off any idle equipment on site. 	
40710	Pier P7 in Portion E1	10 July 2004	<p>A public complaint was raised on 30th 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 3rd July 2004 and subsequently referred to the ET Leader of the Project on 10th July 2004.</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 5th July 2004.</p> <p>During ET's weekly environmental site inspection on 14th July 2004, no serious water quality nuisance induced by the Project works was observed at the construction sites near Pier P7. It was</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>The complaint was raised by Mr. Chan, 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>also noted that the back of profile barriers along the site boundary had been sealed up by cement as preventive measures.</p> <p>During ET's weekly environmental site inspections on 17, 24 & 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"> • to enhance surface runoff control measures along the site boundary; • to provide adequate training to the frontline workers; and • to regularly inspect temporary water supply equipment, such as hose pipe to make sure the equipment is in good condition. 	
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> <p>1. Area A: Works area between Nob</p>	<p>Information Provided by RSS 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>Area A:</p> <ul style="list-style-type: none"> ▪ Item 1 – Drainage works by using 1 x backhoe; ▪ 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; ▪ Item 3 – Trial trench excavation by man power; ▪ Item 4 – Gas main diversion by 1 x backhoe (performed by TGC's Contractor) <p>Area B: No construction activity was undertaken in the concerned period.</p> <p>Review of Environmental Monitoring Results</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>Hill and Lai Chi Kok Park Swimming Pool</p> <p>2. Area B: Works area between Ching Cheung Road and Mei Lai Road / Lai Wan Road opposite to Mei Foo Sun Cheung (Phase 5) and Lai Chi Kok Public Library.</p>	<p>The routine monitoring stations, which are in the vicinity of the concerned works areas, include:</p> <p><u>Noise Monitoring</u> NM4: R/F of Mei Foo Sun Chuen (Phase 5) NM8a: M/F of Nob Hill NM8b: 3/F of Nob Hill</p> <p><u>Air Quality (1-hr TSP / 24-hr TSP) Monitoring</u> AM2: R/F of Lai Chi Kok Sports Centre</p> <p>No Action / Limit level exceedance was identified in July 2004.</p> <p>Environmental Site Inspection During the ET site inspections on 8th, 14th and 20th July 04, no major environmental deficiency with regard to noise and air quality was identified by the auditors.</p> <p>Conclusions 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"> • To space out noisy equipment and position it as far away as possible from the sensitive receivers; • To avoid concurrent uses of noisy equipment near the sensitive area; • To ensure the equipment are maintaining in good operation condition; • To turn off any idle equipment on site. • To cover excavated dusty materials by impervious sheeting; • To provide water spray for haul roads, loading/unloading and concrete breaking operations; • To perform wheel wash for every vehicle immediately before leaving the site. 	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50215	Mei Foo Sun Chuen, Phase 5 (Retaining Wall CC-R3)	15-Feb-05 (by ET Leader)	<p>A public complaint was raised on 8th Feb 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 on 14th Feb 2005 and subsequently referred to the ET Leader of the Project on 15th 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>Construction Activities</p> <p>During the weekly site inspection on 17 Feb 05, piling work was being conducted at the concerned. The major powered 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>Environmental Monitoring</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 threes 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>Conclusions</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>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50322	Seung Lai House, Wah Lai Estate (Slope S1)	11-Mar-05 (by EPD) 22-Mar-05 (by ET Leader)	<p>Environmental Protection Department (EPD) received a public noise complaint on 11 Mar 05 about daytime construction noise generation from R8-LCKV. EPD subsequently referred the 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>Construction Activities</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 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>Environmental Monitoring</p> <p>Ad-hoc noise measurement was conducted at Seung Lai House on 30th 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>Conclusion</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>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50330, 50331, 50404 & 50407	Wah Lai Estate	30-Mar-05, 31-Mar-05, 4-Apr-05 & 7-Apr-05 (by ET Leader via RSS)	<p>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 referred by the Resident Site Staff to the Environmental Team (ET) Leader on 30th, 31st March, 4th and 7th April 2005, respectively.</p>	<p>Construction Activities</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> <p>Environmental Monitoring</p> <p>Ad-hoc noise measurement was conducted at Seung Lai House on 30th Mar 05 and 7th 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>Conclusion</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>Mitigation</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>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50404-v2	Mei Foo Sun Chuen	4-Apr-05 (by ET Leader via RSS)	A public complaint was raised on 1 st 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 th April 2005.	<p>Construction Activities</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> <p>Environmental Monitoring</p> <p>According to the EM&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>Conclusion</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>Mitigation</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>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50613	Mei Foo Sun Chuen	7-Jun-05 (by EPD) 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> <p>The complainant was particularly concerned about the fugitive dust emission during rock / concrete breaking activities.</p>	<p><i>Site Activities</i></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> <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>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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>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>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> <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"> 1. Employment of silenced-type breakers; 2. Temporary noise barriers, attached with sound adsorption materials, were erected to screen the site of breaking from sensitive receivers 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. 	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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 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>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>Site Inspection</p> <p>After receipt of the complaint, an ad-hoc site inspection was carried by ET on 9 November 2005 and the following observations were made:</p> <ol style="list-style-type: none"> 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. 2. The haul roads and exposed works areas were observed wet. A water sprinkler was installed at the CCR-S4 for water spraying. 3. Most of the slope was shot-creted to avoid wind erosion. 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. <p>Environmental Monitoring</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>Conclusion</p> <p>Based on the ad-hoc site inspection and the environmental monitoring results, this complaint was considered not justifiable.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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 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>Site Activities</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"> • Delivery of segment from storage yard near Pier P5/L to Pier 15 for erection; • Stressing to temporary PT bars of segments at Pier B3. <p>The above night works, which involved operation of tractor, 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>Environmental Monitoring</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>Conclusion</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>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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 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>Site Activities</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"> • Trimming of existing rock slope at CCR-S4; • Excavation and rock dowel installation at CCR-R2; and • Construction of cable trough at CCR-R3 by CLP’s contractor. <p>Site Inspection</p> <p>After receipt of the complaint, an ad-hoc site inspection was carried by ET on 19 January 2006. No environmental deficiency regarding construction dust was identified during the inspection.</p> <p>Environmental Monitoring</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>Contractor’s Action</p> <p>The Contractor of R8-LCKV had implemented several dust mitigation measures:</p> <ul style="list-style-type: none"> • Haul roads, exposed slope surface and soil stockpiles were watered regularly by hose pipes and sprinklers; • Idled exposed slope were shot-creted; and • Watering was applied for the dust emissive activities, such as loading and unloading of dusty materials, excavation and breaking works. <p>Conclusion</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>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
60213 60216 60220 60222	Hoi Lai Estate (Lai Po Road)	13-Feb-06 16-Feb-06 20-Feb-06 22-Feb-06 (by the ET Leader)	<p>Four environmental complaints were received in this reporting month. Three of them were referred by EPD on 13th, 20th and 22nd Feb 06 and the other one was referred by HyD via MHJV on 16th Feb 06.</p> <p>All about construction noise due to night works at Lai Po Road near Hoi Lai Estate.</p>	<p>Site Activities</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>Site Inspection</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>Conclusion</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>	Closed

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60420	Near both Hoi Lai Estate and West Kowloon Highway	20-Apr-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 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>Site Activities</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"> • Erecting segments at column PA/R; • Stressing of top tendon wires of segments and erecting segments at column P1/R; and • Transporting segments to storage yard. <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>Contractor's Action</p> <p>The Contractor had implemented a short term mitigation measures:-</p> <ul style="list-style-type: none"> • Turned off the alert sound of tractors during backward movement in order to reduce the potential for noise impact; • Strengthened their management on worker's working manner such as avoid dropping of material on ground, wrapping up of hammering equipment and etc.; and • Conducted training of worker in order to reducing noise nuisance during the night works. 	Close

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				<p>Conclusion</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>	
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>Site Activities</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>Contractor Action</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>Conclusion</p> <p>Under the EP conditions and EIAO, there is no need for this</p>	Close

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>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>	
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>Site Activities</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>Contractor Action</p> <p>The idle and backup equipments such as tractors has turned off or throttled down in order to reduce the noise impact since the last complaint on this issue near Hoi Lai Estaet. Besides, the above night works were undertaken with three construction noise permits.</p>	Closed

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				<p>Site Inspection</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>Conclusion</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 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</p>	<p>Site Activities</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>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			Cheun).	<p>Contractor Action</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>Site Inspection and Environmental Monitoring</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 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>Conclusion</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>	

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				The environmental conditions of the site will be continuously reviewed by the RSS and the ET.	
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 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><i>Site Activities</i></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><i>Contractor Action</i></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><i>Site Inspection and Environmental Monitoring</i></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</p>	Closed

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			<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>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>Conclusion</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 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</p>	<p>Site Activities</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>Contractor Action</p> <p>After receiving the complaint, the Contractor has further enhanced the dust mitigation measures as follows:-</p>	Closed

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			<p>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>	<ul style="list-style-type: none"> • Enclosing the rock dowel drilling work on three sides, i.e. top, back and the left hand side, with tarpaulin sheets; • Spraying of water at the hole during drilling; • Wrapping the head of the drilling rig with a wet thick towel. <p>Site Inspection and Environmental Monitoring</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>Conclusion</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 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"> • Enclose dusty activity such as rock drilling with tarpaulin sheet; • Apply water spraying for any dust emissive activities, such as breaking, excavation, loading and unloading of dusty materials; • Cover long-term idle exposed slope surfaces and stockpiles with tarpaulin sheets. <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 RSS and the Environmental Team through site inspections and monitoring exercises.	
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>Site Activities</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>Contractor Action</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"> • Enclosing the rock dowel drilling work on three sides, i.e. top, back and the left hand side (LHS) with tarpaulin sheets; • Spraying water at the hole during drilling; • Wrapping the head of the drilling rig with a wet thick towel. <p>Site Inspection and Environmental Monitoring</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>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>Conclusion</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"> • Enclose dusty activity such as rock drilling by tarpaulin sheet; • Apply water spraying for any dust emissive activities, such as breaking, excavation, loading and unloading of dusty materials; • Cover long-term idle exposed slope surfaces and stockpiles with tarpaulin sheets. <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"> • 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. 	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				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.	
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>Site Activities</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>Contractor Action</p> <p>After receiving the complaint, the Contractor has further enhanced the noise mitigation measures as follows:-</p> <ul style="list-style-type: none"> • Placing of a wooden box to cover the head of drilling; • Spraying of water at the hole during drilling and erecting of nylon sheets; • Providing silent type drilling rigs for the drilling works at both Slopes CCR-S1 and CCR-S4 <p>Site Inspection and Environmental Monitoring</p> <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>Conclusion</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<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"> • Provide silent type drilling rigs for the drilling works; • Placing of wooden box to cover the head of drilling; • Apply water spraying for at the hole during drilling; <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)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint on 25th 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 25th 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 19th and 20th October 2006 at Lai Chi Kok Road Flyover near PCCW building.</p>	<p>Site Activities: 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 19th and 20th October 2006. The construction equipment used in both nights included one mobile crane, one crane lorry and one generator.</p> <p>Contractor Action 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>Environmental monitoring An ad-hoc site observation and noise monitoring at Hoi Fai House of Hoi Lai Estate were conducted by the Contractor on 26th October 2006 between 0100 and 0130. The ET also carried out an ad-hoc inspection on 28th October 2006 from 0100 to</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>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><i>Conclusion</i> 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"> • To strengthen management on worker's working manner, such as avoiding dropping materials on ground; • No hammering is allowed during restricted hours; and • To provide adequate training to workers working, esp. for night works. <p>The environmental conditions of the site will be continuously reviewed by the Resident Site Staff and the Environmental Team.</p>	