

Highways Department

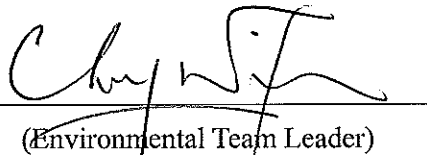
**Route 8 (previously known as Route 9) between
Cheung Sha Wan & Sha Tin**

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

**Final EM&A Review Report
Part I – Lai Chi Kok Viaduct (Version 1.0)**

August 2009

Approved By



(Environmental Team Leader)

REMARKS:

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

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ABBREVIATION AND ACRONYM

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

EXECUTIVE SUMMARY

Introduction

This is the Final Environmental Monitoring and Audit (EM&A) Review 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 the entire construction period for Contract No. HY/2003/01, Lai Chi Kok Viaduct (the Project). The construction phase environmental monitoring and audit (EM&A) was ceased on 1 January 2009.

The major site activities for civil works undertaken in the entire construction period included:

- Site investigation, Surface blasting, Cable-laying, Site Acceptance Tests and Reinstatement of footpath;
- Cast in-situ of slip roads;
- Hydro seeding and tree planting for slope;
- Slope cutting and stabilization works;
- Installation of E&M works, Field Equipment, Equipment Cabinet, MCB, Parapet, Roadwork, Soil nail and Rock dowel;
- Minor rectification works to field equipment;
- Bulk and Trial trench excavation;
- Utility detection and diversion in advance of piling works and Bored piling works;
- Drainage works, Pre-boring works and Pre-drilling works;
- Piling works, Blasting works and Launching gantry works;
- Movement joints construction work; and
- Construction of Open channel, Stepped channel, Pier, Haul road, retaining wall, box culvert, Pile cap, abutment, column, Buttress wall and noise barrier.

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. The summary of the non-compliance of the entire construction period is tabulated Table I.

Table I Summary Table for Non-compliance Recorded in the Construction Period

Parameters		No of Exceedances		Action Taken	Results of Action Taken	Remarks
		Action Level	Limit Level			
Air Quality	1-hr TSP	1	0	Investigations were taken and environmental monitoring was repeated when necessary	---	---
	24-hr TSP	---	---		---	---
Noise		33	2		---	---

Air Quality

1. Baseline and impact air quality monitoring works were conducted in accordance with the Manual.
2. A total of 1 action level exceedances for 1-hr TSP and no action level and limit level exceedances for 24-hr TSP were recorded during the construction period. Investigations were taken and air quality monitoring was repeated when necessary. Parts of the exceedances were identified due to the Project works and follow-up mitigation measures were implemented by the Contractor for these exceedances.

Construction Noise

3. Baseline and impact noise monitoring works were conducted in accordance with the Manual.
4. A total of 33 Action Level and 2 Limit Level exceedances for noise level were recorded during the construction period. Investigations were taken and noise monitoring was repeated when necessary. Parts of the exceedances were identified due to the Project works and follow-up mitigation measures were implemented by the Contractor for these exceedances.

Complaints and Prosecutions

5. 45 environmental complaints and 1 prosecution were received in the construction period. Details of the complaints were shown in **Appendix E**.
6. No notification of summon was received throughout the whole Project.

1. INTRODUCTION

Background

- 1.1 Route 9 (Kowloon Section) (R9K) (hereinafter call the R9K-Project) forms part of the Route 9 between Cheung Sha Wan and Sha Tin (R9-CSWST) project, which will be a new expressway connecting West Kowloon and Sha Tin. It will be the fourth external link between Sha Tin and Kowloon and will form an important link between the northeast New Territories and the west Kowloon, Lantau Island and the western New Territories. R9K is being managed and implemented by the Highways Department (HyD).
- 1.2 The engineering design of R9K is covered under Agreement No. CE 50/98 "Route 9 between Cheung Sha Wan and Sha Tin – Design Construction Assignment". The main consultant engaged under Agreement No. CE 50/98 is Maunsell Hyder Joint Venture (MHJV), who will act as the Engineer for the construction contracts. The works of R9K mainly comprise a 1.4km dual 3-lane Lai Chi Kok Viaduct from Lai Wan Interchange to Butterfly Valley; 0.5 km of dual 3-lane at-grade carriageway linking to the 2.1 km dual 3-lane twin-bore Eagle's Nest Tunnel with associated portal buildings; a toll plaza with an administration building located with the Sha Tin valley woodland; a ventilation building and an adit; associated noise barriers, noise enclosures, drainage, slope and landscape works; and electrical and mechanical works for the whole R9-CSWST. The remainder of the R9-CSWST forms the Sha Tin Section (R9S) of the project and is being managed and implemented separately by the Civil Engineering and Development Department (CEDD).
- 1.3 The R9-CSWST project is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO). An environmental impact assessment (EIA) report has been prepared in 1998 for the R9-CSWST project (1998 R9 EIA) to consider the key issues of noise, air quality, water quality, ecological, construction waste, landscape and visual, land use and cultural impacts, and identify possible mitigation measures.
- 1.4 An Updated Final EIA report was subsequently completed in September 1999 for the R9-CSWST project (1999 R9 EIA), to cater for some changes in R9K portion as mentioned in paragraph 1 in the report. The 1999 R9 EIA was endorsed by Environmental Protection Department (EPD) in November 1999. The 1998 R9 EIA and the 1999 R9 EIA (R9 EIA Reports) were included in the EIA register under the EIAO as report no. EIA-135/BC and AEIAR-022/1999 respectively. Environmental Monitoring and Audit (EM&A) Manuals for each of the R9 EIA Reports (EM&A Manuals) were also included as part of the EIA reports in the register.
- 1.5 Subsequent to the endorsement of the R9 EIA Reports by EPD in November 1999, the project programme was deferred to start in 2002/2003 for completion by 2006/07. The implementation of the project was then separated into the R9S and R9K portion. An Environmental Permit (EP) No. EP-103/2001 was issued on 17 September 2001 for R9K to the HyD as Permit Holder and a varied EP No. EP-103/2001/D was subsequently issued on 19 March 2008.
- 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. Damien Ku of CH2M HILL Hong Kong Ltd. was appointed as the IEC under Condition 2.1 of the EP. This is the Final EM&A Review Report summarizing the EM&A works for the Project in the entire construction period between December 2003 and December 2008.

Project Organizations

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

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	
		Mr. George Law	E4/R8K	2762 3675	--
MHJV	Engineer	Mr. Conrad Ng	Project Manager	2605 6262	2691 2649
	Engineer's Representative	Mr. Patrick Lee	CRE	2959 0010	2959 0290
		Mr. Alex Tam	RE	9856 0199	
Mr. Alan Chan	IOW	9860 8791			
Cinotech	Environmental Team	Dr. Priscilla Choy	ET Leader	2151 2089	3107 1388
		Mr. Robert Tsang	Project Coordinator & Audit Team Leader	2151 2099	

Party	Role	Name	Position	Phone No.	Fax No.
		Mr. Henry Leung	Monitoring Team Leader	2151 2087	
CH2M	Independent Environmental Checker	Mr. Damien Ku	IEC	2872 2921	2507 2293
		Mr. Edward Yip	Assistant to IEC	2872 2951	
Acciona	Contractor	Mr. William D. Payne	Project Director	2956 3300	2956 3331
		Mr. Lawrence Kwok	QA/E Manager		
ARUP	Engineer's Representative (TCSS)	Mr. Donald Leung	RE	2436 7489	2436 1803
		Mr. Daniel So	ARE	2436 7435	
DIGJV	Contractor (TCSS)	Ms. Joyce Chan	Quality Manager	2123 0845	2123 0889
24-hour Emergency Hotline				2370 9200	-

Construction Programme

1.11 The site activities for civil works undertaken in the construction period included:

- Site investigation, Surface blasting, Cable-laying, Site Acceptance Tests and Reinstatement of footpath;
- Cast in-situ of slip roads;
- Hydro seeding and tree planting for slope;
- Slope cutting and stabilization works;
- Installation of E&M works, Field Equipment, Equipment Cabinet, MCB, Parapet Roadwork, Soil nail and Rock dowel;
- Minor rectification works to field equipment;
- Bulk and Trial trench excavation;
- Utility detection and diversion in advance of piling works and Bored piling works;
- Drainage works, Pre-boring works and Pre-drilling works;
- Piling works, Blasting works and Launching gantry works;
- Movement joints construction work; and
- Construction of Open channel, Stepped channel, Pier, Haul road, retaining wall, box culvert, Pile cap, abutment, column, Buttress wall and noise barrier.

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 construction period.

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 Parameters, Frequency and Duration

- 2.3 **Table 2.2** summarizes the monitoring parameters and frequencies of impact dust monitoring for the whole construction period.

Table 2.2 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

- 2.4 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

2.5 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.

2.6 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.

2.7 For TSP sampling, fiberglass filters (G810) were used.

2.8 The power supply was checked to ensure the sampler worked properly.

2.9 On sampling, the sampler was operated for 5 minutes to establish thermal equilibrium before placing any filter media at the designated air monitoring station.

2.10 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.

2.11 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.

2.12 The shelter lid was closed and secured with the aluminum strip.

2.13 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).

2.14 After sampling, the filter was removed and sent to the laboratory for weighing. The elapsed time was also recorded.

2.15 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

2.16 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.

Reviews of Results and Observations

- 2.17 In the all TSP monitoring during the construction period, 1 Action Level and no Limit Level exceedance for 1-hour and no Action/Limit exceedance for 24-hour TSP were recorded. Investigations were taken and air quality monitoring was repeated when necessary. Parts of the exceedances were identified due to the Project works and follow-up mitigation measures were implemented by the Contractor for these exceedances.
- 2.18 The monitoring data and graphical presentations of 1-hour and 24-hour TSP monitoring results for the construction period are shown in **Appendices B** and **C**, 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 L10 and L90 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 ⁽¹⁾	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. 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.

- 3.6 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 Parameters, Frequency and Duration

- 3.7 **Table 3.2** summarizes the monitoring parameters, frequency and total duration of monitoring.

Table 3.2 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

- B&K Model 2238 Integrating Sound Level Meters were employed for noise monitoring. It met all the requirements in Sections 3.3 of the EM&A Manual (1999).
- 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}, L₉₀ and L₁₀ 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

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

Reviews of Results and Observations

- 3.10 Noise monitoring was performed at the five designated locations (NM2, NM4, NM8a, NM8b and NM9) in the construction period.
- 3.11 Noise monitoring results and graphical presentations are shown in **Appendix D**.
- 3.12 Total 33 Action level and 2 Limit Level exceedance was recorded in the construction period. Investigations were taken and noise monitoring was repeated when necessary. Parts of the exceedances were identified due to the Project works and follow-up mitigation measures were implemented by the Contractor for these exceedances.
- 3.13 At Stations NM8a and NM8b, the major noise source identified during the monitoring exercises was mainly the road traffic noise.
- 3.14 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. SUMMARY RECORD OF NON-COMPLIANCE, COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

Summary of Exceedance

1-hr and 24-hr TSP Monitoring

- 4.1 Total 1 Action Level exceedance for 1-hour TSP and no Action/Limit Level exceedance for 24-hour TSP were recorded in the construction period.

Construction Noise Monitoring

- 4.2 Total 33 Action level and 2 Limit Level exceedances were recorded in the construction period.

Non-Compliance

- 4.3 There was no non-compliance received during the construction period.

Summary of Complaint, Notification Summons and Prosecution

- 4.4 There were in total 45 environmental complaints and 1 prosecution referred to the ET since the commencement of the Project. The Complaint Log is attached in **Appendix E**. There were also no notification of summon received since the commencement of the Project
- 4.5 Further to incident of mosquito larvae being identified in a plant pot drip tray on 21 July 2005 during FEHD's site inspection, the Contractor was prosecuted under the Public Health and Municipal Services Ordinance (Cap.132). After the hearing on 6 December 2005, the Contractor was fined \$5,000 by the Kowloon City magistrate's court.

Implementation Status of Event Action Plans

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

Implementation Status of Environmental Mitigation Measures

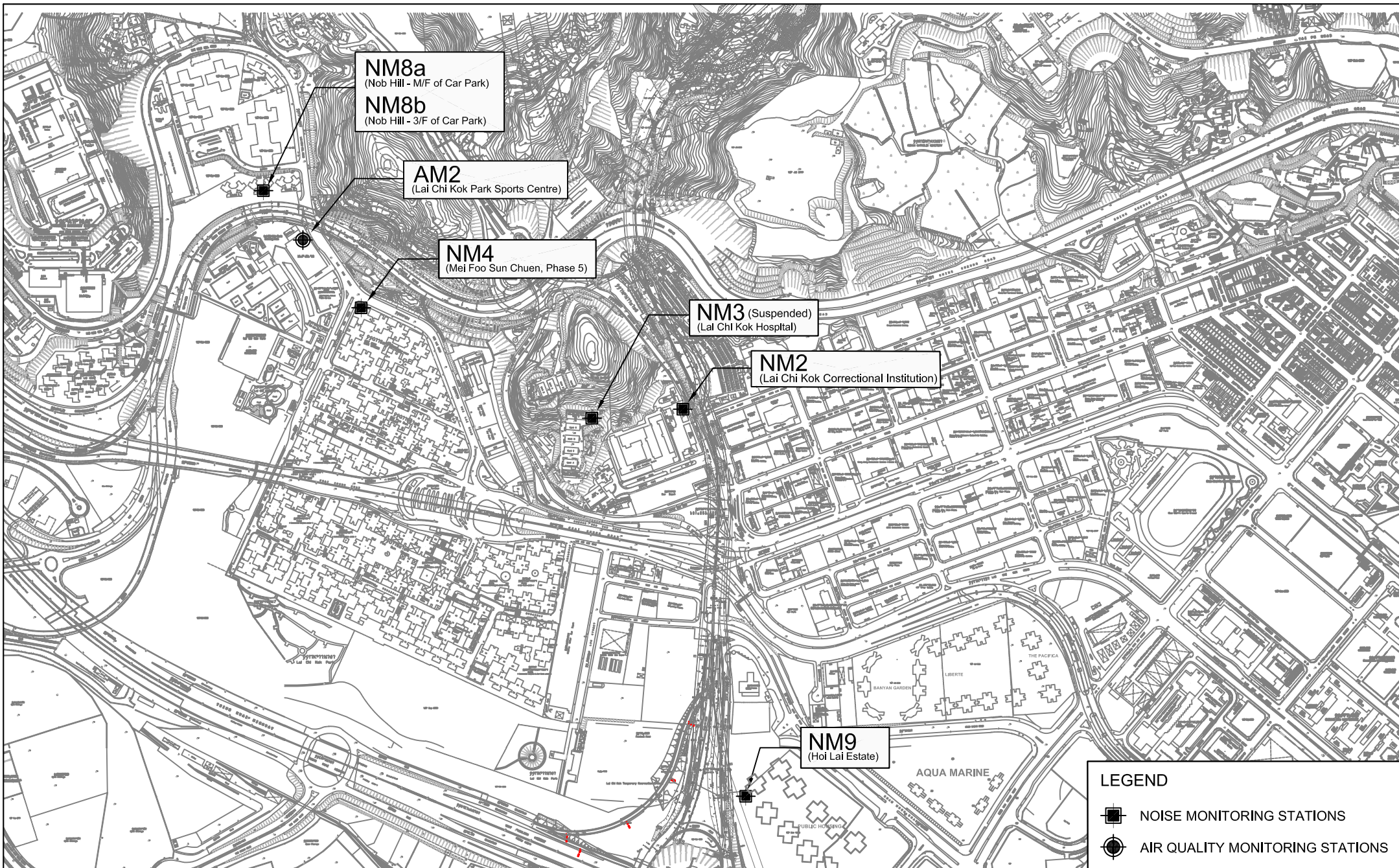
- 4.7 According to the Environmental Permit and the EM&A Manuals, the mitigation measures detailed in the documents are required to be implemented. The summary of the EMIS is provided in **Appendix G**.

5. CONCLUSIONS

Conclusions

- 5.1 Environmental monitoring works were conducted in the construction period and all monitoring results were checked and reviewed.
- 5.2 Total 1 Action Level exceedance for 1-hour and no Action/Limit Level exceedance for 24-hour TSP were recorded in the construction period.
- 5.3 Total 33 Action level and 2 Limit Level exceedances were recorded in the construction period.
- 5.4 There was no non-compliance received during the construction period.
- 5.5 45 environmental complaints and 1 prosecution were received in the construction period. Details of the complaints were shown in **Appendix H**.
- 5.6 No notification of summon were received throughout the whole Project.
- 5.7 Considering the substantial completion of the Project civil works, the Construction Phase EM&A Program for the Project has been ceased since 1st January 2009 to tie in with the expiry of the remaining Construction Noise Permits and Water Discharge licenses.

FIGURES



LEGEND	
	NOISE MONITORING STATIONS
	AIR QUALITY MONITORING STATIONS

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

LOCATIONS OF MONITORING STATIONS

Scale	1 : 8000 (A4)	Project No.	MA3024
Date	2006	Figure No.	1



**APPENDIX A
ACTION AND LIMIT LEVELS**

Appendix A - Action and Limit Levels

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

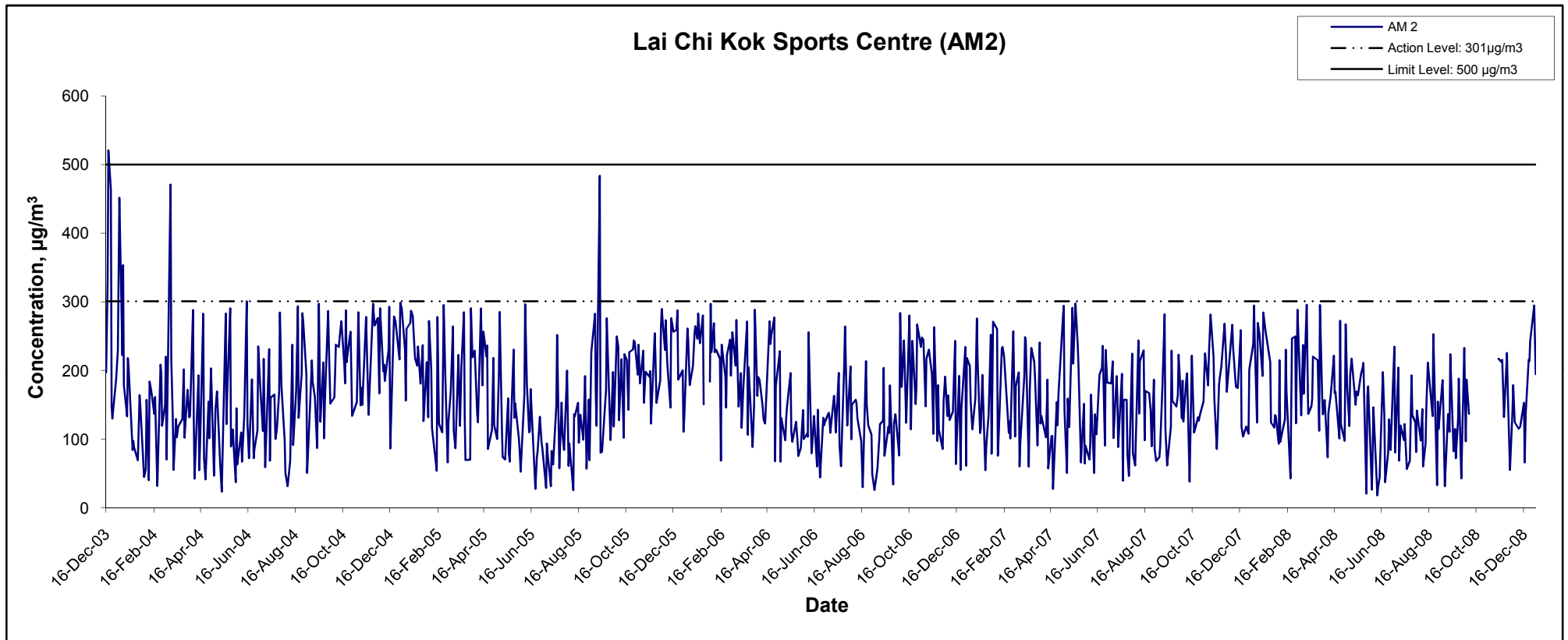
Construction Noise

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
GRAPHICAL PRESENTATION OF 1-
HOUR TSP IMPACT MONITORING
RESULTS**

1-hr TSP Levels



Title

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

Scale

N.T.S

Date

Dec-08

Project

No. MA3024

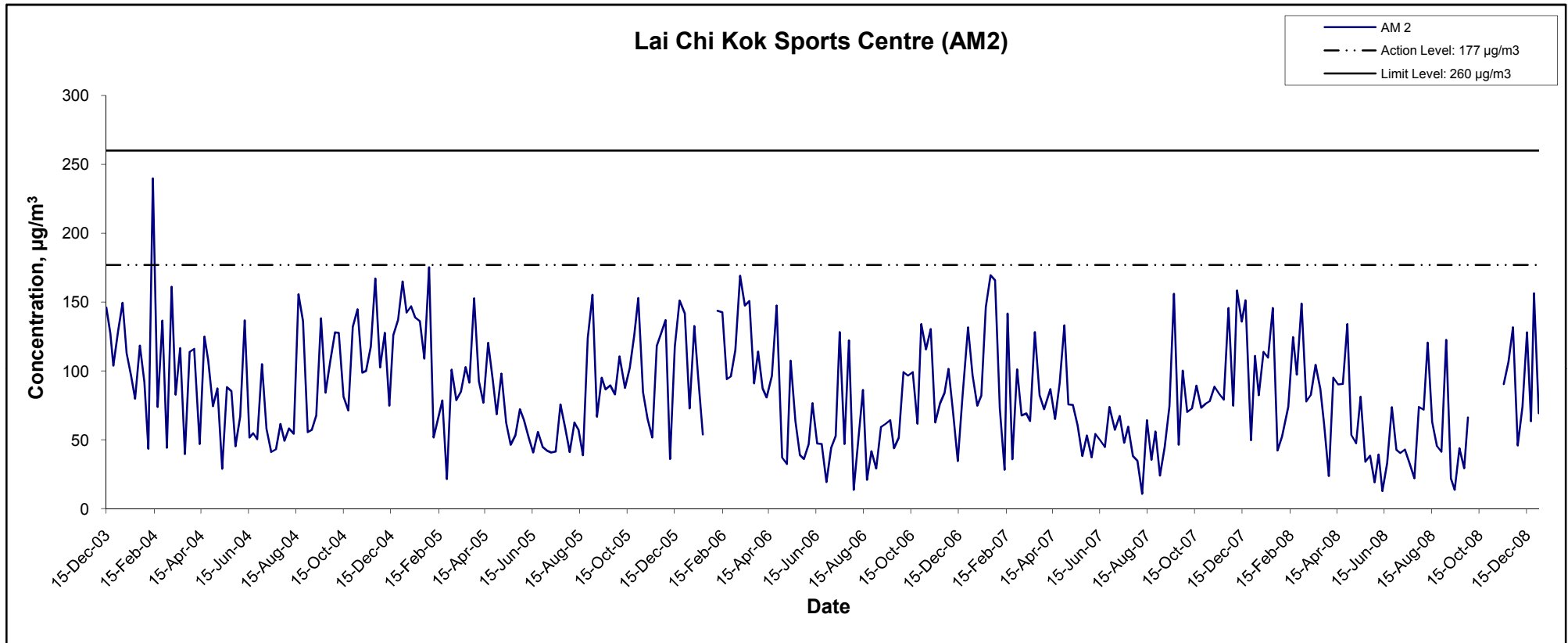
Appendix

B

CINOTECH

**APPENDIX C
GRAPHICAL PRESENTATION OF 24-
HOUR TSP IMPACT MONITORING
RESULTS**

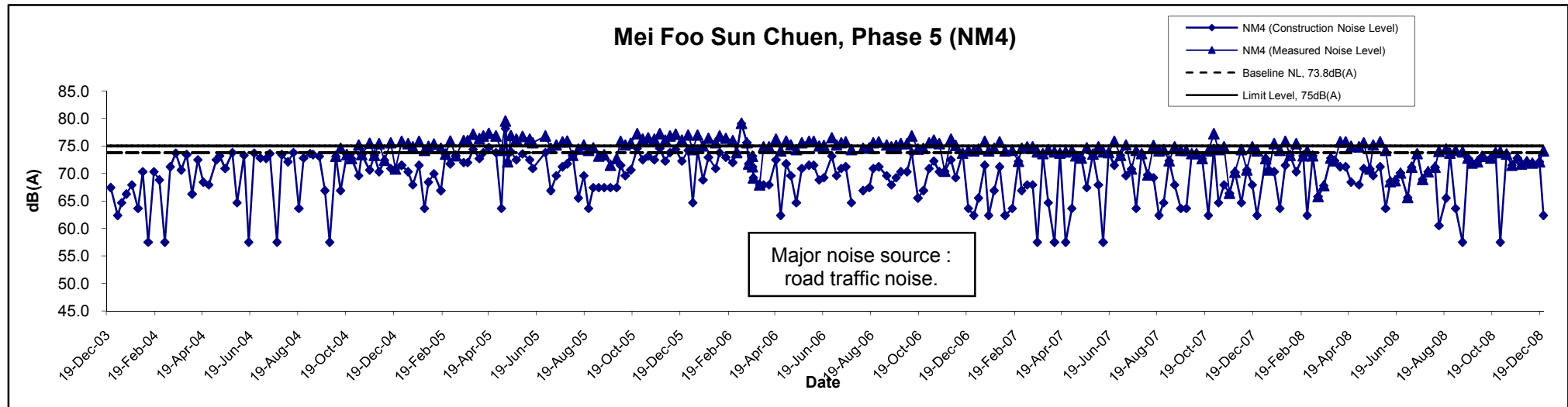
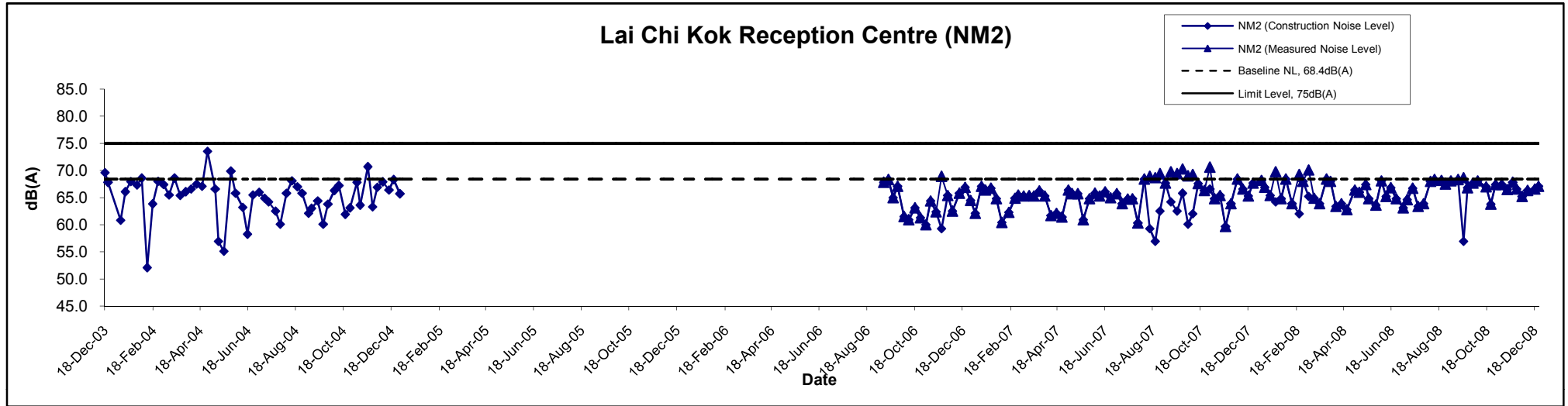
24-hr TSP Levels



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

**APPENDIX D
GRAPHICAL PRESENTATION OF
CONSTRUCTION NOISE MONITORING
RESULTS**

Noise Levels

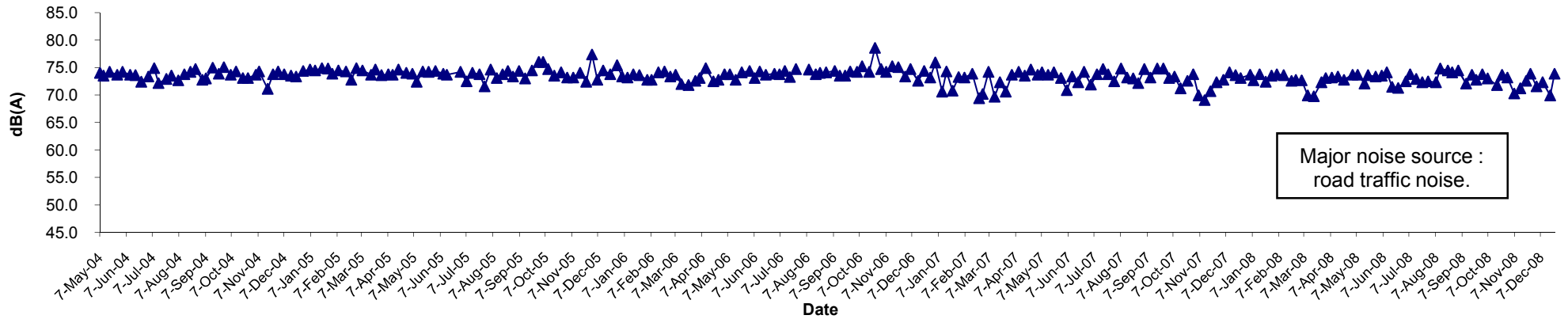


Title Contract HY/2003/01 - Lai Chi Kok Viaduct Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Graphical Presentation of Construction Noise Monitoring Results	Scale	N.T.S	Project No.	MA3024
	Date	Dec-08	Appendix	D

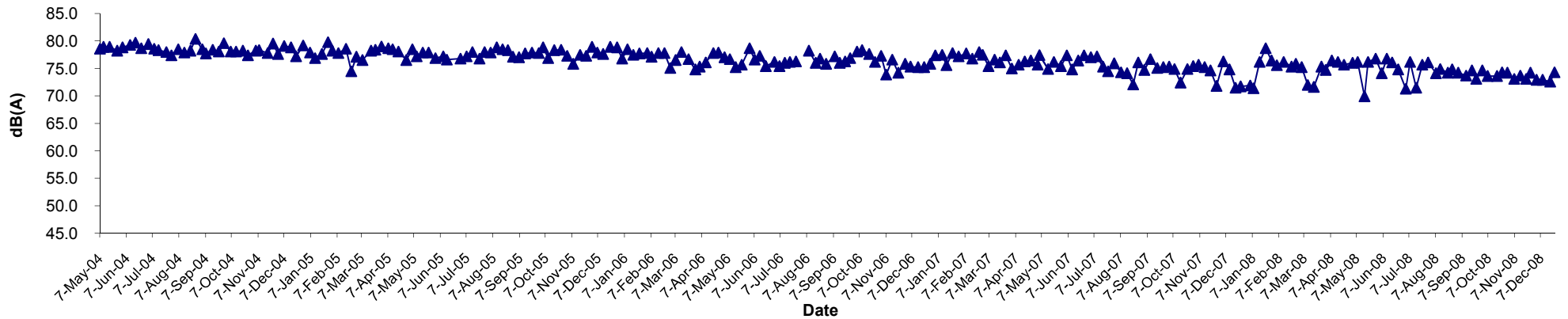
CINOTECH

Noise Levels

M/F of Nob Hill (NM8a)



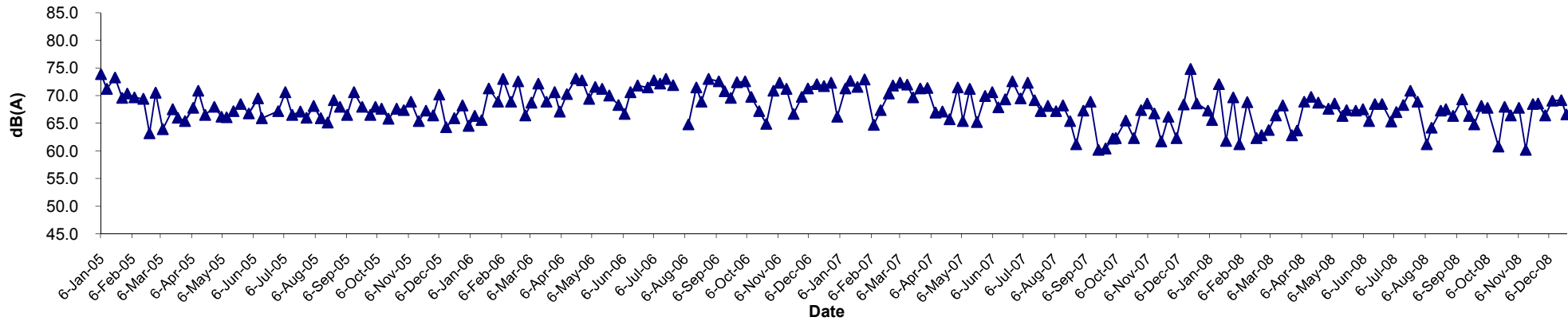
3/F of Nob Hill (NM8b)



Title <p style="text-align: center;">Contract HY/2003/01 - Lai Chi Kok Viaduct Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin</p> <p style="text-align: center;">Graphical Presentation of Construction Noise Monitoring Results</p>	Scale	N.T.S	Project No.	MA3024	CINOTECH
	Date	Dec-08	Appendix	D	

Noise Levels

Hoi Lai Estate (NM9)



Title

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

Scale

N.T.S

Date

Dec-08

Project

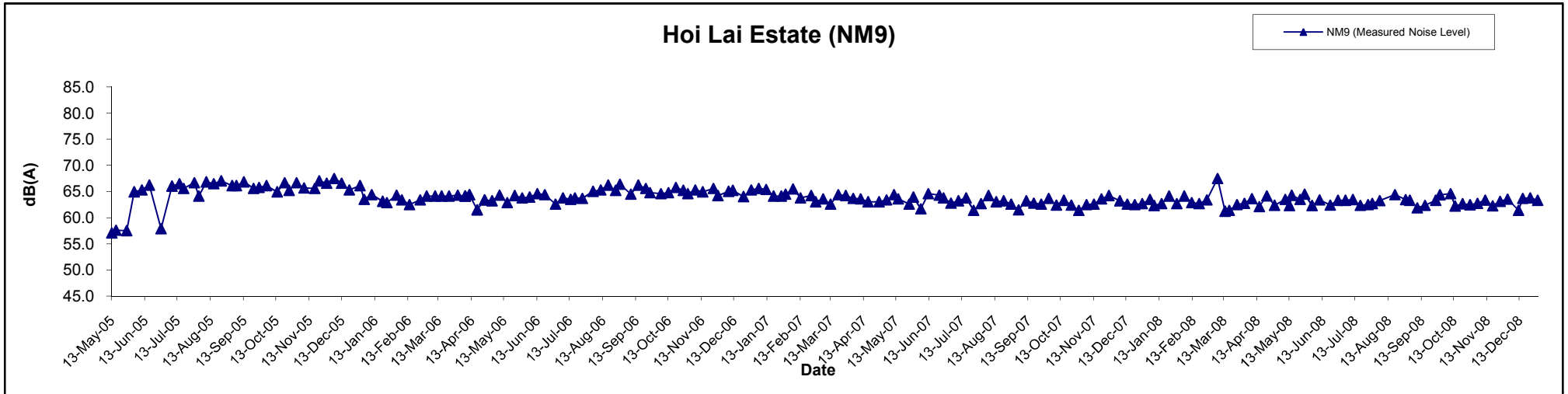
No. MA3024

Appendix

D

CINOTECH

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



Title

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

Scale

N.T.S

Date

Dec-08

Project

No. MA3024

Appendix

D

CINOTECH

**APPENDIX E
COMPLAINT LOG**

APPENDIX E- 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 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>	Closed

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

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
40402	Nob Hill	06 April 2004	<p>A public noise complaint was received by the Contractor (NECSO) on 02 April 2004 regarding the noise generated from the Ching Cheung Road Widening Works of the Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project, near Nob Hill, Lai Chi Kok.</p> <p>NECSO referred the complaint to the RSS and subsequently referred to the ET Leader of the Project on 6 April 2004</p>	<p>The complaint was raised by Ms Wong, regarding the noise generated from the Ching Cheung Road Widening Works of the R8-LCKV Project, which cause serious nuisance to her.</p> <p>Based on the information provided by the RSS, the plants employed by the Contractor for carrying out bored piling works in front of Nob Hill should not generate excessive noise. The RSS had also checked against the site records that no piling works was in progress in front of Nob Hill on 1-3 April 2004.</p> <p>According to telephone communication between the complainant (Ms Wong) and the RSS on 8 April 2004, the RSS reported that Ms Wong was not complaining about the construction noise generated by the R8-LCKV Project. She was actually complaining about the traffic noise she anticipated to be generated after completion of widening work at Ching Cheung Road in front of Nob Hill.</p> <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. 	Closed

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

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
40809	Ching Cheung Road area near Nob Hill	22-Jul-04 (by EPD) 09-Aug-04 (by ET Leader)	<p>EPD received a public noise complaint on 22 July 2004 about construction noise and dust generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project, at the Ching Cheung Road Area near Nob Hill. EPD subsequently referred the complaint to the ET Leader of the Project on 9 August 2004.</p> <p>The complaint was about the construction noise and dust observed at the Ching Cheung Road area near Nob Hill. The locations of the works areas being concerned by the complainant include:</p> <ol style="list-style-type: none"> 1. Area A: Works area between Nob Hill and Lai Chi Kok Park Swimming Pool 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>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 The routine monitoring stations, which are in the vicinity of the concerned works areas, include: <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 <u>Air Quality (1-hr TSP / 24-hr TSP) Monitoring</u> AM2: R/F of Lai Chi Kok Sports Centre No Action / Limit level exceedance was identified in July 2004.</p> <p>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; 	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<ul style="list-style-type: none"> • 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. 	
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 months were ranged from 70.8 to 75.8 dB(A). It was observed that the measured noise levels were well within the range of baseline noise levels (69.2 to 75.8 dB(A)).</p> <p>The corrected construction noise levels were found to be ranged from 63.5 to 71.5 dB(A), which were well below the noise criterion of 75 dB(A).</p> <p>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>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				Nevertheless, the Contractor was recommended to adopt good site practice to minimize the construction noise impacts.	
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)	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 30 th , 31 st March, 4 th and 7 th April 2005, respectively.	<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	<p>7-Jun-05 (by EPD)</p> <p>13-Jun-05 (by ET Leader)</p>	<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><i>Site Inspection</i></p> <p>After receipt of the complaint, an ad-hoc site inspection was carried by ET on 9 November 2005 and the following 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><i>Environmental Monitoring</i></p> <p>Air quality monitoring was conducted at Lai Chi Kok Sports Centre and noise monitoring is conducted at Mei Foo Sun Chuen. No exceedance was recorded for both monitoring.</p> <p><i>Conclusion</i></p> <p>Based on the ad-hoc site inspection and the environmental monitoring results, this complaint was considered not justifiable.</p>	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
<p>60213 60216 60220 60222</p>	<p>Hoi Lai Estate (Lai Po Road)</p>	<p>13-Feb-06 16-Feb-06 20-Feb-06 22-Feb-06 (by the ET Leader)</p>	<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><i>Site Activities</i></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><i>Site Inspection</i></p> <p>An ad-hoc inspection was carried out by the ET on 16 Feb 06 from 00:30 to 02:30 am. Noise measurement was carried out during the inspection to evaluate the noise impact onto the residents of Hoi Lai Estate. During the monitoring, the major noise source identified was the road traffic noise from Sham Mong Road and Lai Po Road. No alarm sound or alike from the construction equipment was noted. The above monitoring results revealed that the measured noise levels were close to the reference baseline level. After correction of the mean background level, most of data were below the noise criterion of 55 dB(A).</p> <p><i>Conclusion</i></p> <p>Based on the information collected and the monitoring results, the complaints are considered not justifiable.</p> <p>It was suspected that the nuisance was caused by the alert sound of tractors during backward movement which serves as a safety measure. However, the RSS and the Contractor are considering the possibility of lowering the alert sound level or replacing by a less disturbing pitch in order to minimize the noise nuisance to residents of Hoi Lai Estate.</p>	<p>Closed</p>

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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. <p>Conclusion</p> <p>Based on the information collected and the monitoring results, the</p>	Closed

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

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

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>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 Cheun).</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> <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>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<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> <p>The environmental conditions of the site will be continuously reviewed by the RSS and the ET.</p>	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
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 Chuen).</p> <p>This complaint was made by the same complainant to the ICC through two different channels (by phone and by facsimile) and the ET of the Project was firstly notified on 9 June 2006. A complaint investigation report was issued on 22 June 06.</p> <p>As the ET received this separate complaint after the issue of the complaint investigation report and considered the nature of the complained event (general construction during daytime but not single event at a particular moment), the complaint</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> <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>As the complaint was identical to the one received on 9 June 06 by the ET, the ad-hoc inspections carried out on 14 June 2006 from 1:30 p.m. to 4:30 p.m. and 16 June 2006 from 4:00 p.m. to 4:45 p.m. were still applicable to this report. In addition, further ad-hoc inspections were carried out on 28 June 2006 from 1:30 p.m. to 4 :00 p.m. and 3 July 2006 from 9:30 a.m. to 11:30 a.m.</p> <p>During the aforesaid inspections, the construction activities at CCR-S4 included handheld breaking, excavation and rock breaking activities were carried out at CCR-S4. However, the temporary noise barriers were erected at the abovementioned location.</p> <p>In addition to the noise measurement conducted on 14 and 16 June 2006, further noise measurement was carried out on 30 June 2006 to evaluate the noise impact onto the residents of Mei Foo Sun Chuen. The monitoring location was original monitoring location NM4 (Mei Foo Sun Chuen Phase 5).</p> <p>Noise measurement carried out on 30 June 06, after correction of the mean background level, the monitoring data were below the noise criterion of 75 dB(A)</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>investigation procedures were initiated.</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>	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
60830	Near Mei Foo and Lai King Hill Road	30-Aug-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint on 25 August 2006 about an environmental nuisance generated from Route 8 – Lai Chi Kok Viaduct 9R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 30 August 2006.</p> <p>The complaint was concerned about dust generated from the rock drilling works affected the nearby ASRs. The complaint described that spraying of water during rock drilling works was not implemented.</p>	<p>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> <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; 	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<ul style="list-style-type: none"> • 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 reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.</p>	
60831	Between Lai Wan Road and Lai King Hill Road	31-Aug-06 (by ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about environment nuisance generated from Route 8 – Lai Chi Kok Viaduct Project. EPD subsequently referred the complaint to ET Leader on 31 August 2006.</p> <p>The complaint was concerned about construction noise, dust and waste water generated from the construction work affect the nearby NSRs after 19.00 hrs, the nearby ASRs and discharged to exiting road respectively</p>	<p>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</p>	Closed

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

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

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

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>Conclusion</p> <p>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>	
61103	Pier C13 and C14 at Lai Wan Road Overpass	3-Nov-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint on 28th 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 3rd November 2006.</p> <p>The complaint was concerned about noise generated from the general cleaning work of deck surface using water jet between Pier C13 and C14 at Lai Wan Road Overpass, at the evening of 28th October 2006.</p>	<p>Site Activities</p> <p>According to the RSS's record, there is a CNP (CNP no. GW-RW0563-06) at the concerned location. Construction activities were allowed to be carried out between 19:00hr and 23:00hr (any day not being a general holiday) under the CNP.</p> <p>Environmental Monitoring</p> <p>During the weekly site inspections in October 2006, no non-compliance or observation on noise was recorded. Accordance to the EM&A program, two noise monitoring stations at Nob Hill, namely (NM8a and NM8b), have been set up in order to monitor the noise level generated from the construction activities. The Station (NM8b) is strongly influenced by road traffic noise from Ching Cheung Road. The measurement at this station is for reference purpose, but not for compliance check for construction noise. All measured value were lower than the noise criterion of 75 dB(A). No exceedance of noise level has been recorded in October 2006. Moreover, based on our site observation record during monitoring, road traffic noise from Ching Cheung Road was the major noise source.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>Conclusion</p> <p>Based on the information collected, the complaint is considered not justifiable.</p> <p>Nevertheless, the Contractor was reminded to take sufficient noise mitigation measures to minimize the environmental impact on the nearby community:</p> <p>As the general cleaning work could be carried out during normal working hours (i.e. 07:00 to 19:00hr) instead as the work was not critical. RSS would remind the Contractor to programme their works better in order to minimize nuisance to nearby residents.</p> <p>The environmental conditions of the site will be continuously reviewed by the Resident Site Staff and the Environmental Team.</p>	
61121-1	Area near Lai Chi Kok Swimming Pool	21-Nov-06 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 18th November 2006 regarding noise nuisance generated from Route 8 – Lai Chi Kok Viaduct R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 21st November 2006.</p> <p>The complaint was concerned about noise generated from the construction works between 09:00 and 18:30 at the area near Lai Chi Kok Swimming Pool.</p>	<p>Site Activities</p> <p>According to RSS's record, rebar fixing, formwork erection, placing concrete and preparation work for construction joint were carried out at the concerned site during the period of 13th to 18th November 2006 and the construction works within the mentioned period were occasionally finished at 18:30.</p> <p>As advised by the RSS, the RSS has recommended the Contractor to finish the construction works at the concerned areas before 18:00 in order to minimize the noise nuisance to the public.</p> <p>Environmental Monitoring</p> <p>During the weekly site inspections in November 2006, no non-compliance or observation on noise was recorded.</p> <p>Accordance to the EM&A programme, one noise monitoring station at Mei Foo Sun Chuen, Phase 5 (NM4) and two noise monitoring stations at Nob Hill, namely (NM8a and NM8b), were set up in order to monitor the noise level generated from the construction activities. The Station (NM8b) is strongly influenced by road traffic noise from Ching Cheung Road. The measurement at this station is for reference purpose, but not for compliance check for construction noise.</p> <p>The noise monitoring results in the period between 1st and 21st November 2006 at the M/F of Nob Hill and at Mei Foo Sun Chuen, Phase 5 are all lower than or equal to the noise criterion of 75 dB(A).</p>	Closed

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

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>Conclusion Base on the information collected and the monitoring results, the complaint was considered not justifiable.</p> <p>However, the Contractor was still reminded to continuously implement their practice, such as providing noise barrier with acoustic materials at drill pit and applying water spraying for any dust emissive activities to minimize the noise and dust nuisance generated from these construction activities.</p> <p>The environmental conditions of the site will be continuously reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.</p>	
61205	Banyan Garden	5 th December 2006 (by ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about environment nuisance generated from Route 8 – Lai Chi Kok Viaduct Project. EPD subsequently referred the complaint to ET Leader on 5th December 2006.</p> <p>The complaint was concerned construction noise near Banyan Garden within the period of 01:00 – 02:00hr on 29th November 2006.</p>	<p>Site Activities According to RSS's record, a catchfan was moved from bay (AL-62) to (AL-58) from 22:00 to 02:00hr. Installation of catchfan at parapet bay (MS-R-74) was carried out from 00.00 to 04:00hr on 29th November 2006.</p> <p>As advised by the RSS, the Contractor has been requested to:</p> <ul style="list-style-type: none"> - Wrapping of tools with acoustic material - Erection of noise barrier (mill barrier with acoustic material) adjacent to isolated noise source - Placing of hessin bags on ground to mitigate noise generated as a result of the dropping of tools on ground. <p>According to the RSS, there is no evidence of hammering of metals on site.</p> <p>Conclusion Based on the information collected, the complaint is considered unjustifiable.</p> <p>Nevertheless, the Contractor was reminded to take sufficient noise mitigation measures to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> - To strengthen management on worker's working manner, such as avoiding dropping materials on ground; - No hammering is allowed during restricted hours; and 	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>- To provide adequate training to workers working, esp. for night works.</p> <p>The environmental conditions of the site will be continuously reviewed by the Resident Site Staff and the Environmental Team.</p>	
70117-1	P6 – P8 near Lai Chi Kok Road Interchange	17 th January 2007 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 16th January 2007 regarding noise nuisance generated from Route 8 – Lai Chi Kok Viaduct R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the ET Leader on 17th January 2007.</p> <p>The complaint was concerned about noise generated from the P6 – P8 near Lai Chi Kok Road Interchange in the past months.</p>	<p>Site Activities According to RSS’s record, the construction activities at the concerned area was mainly central stitch construction and parapet erection and similar works will be carried out in the concerted site in coming one month.</p> <p>The equipment used on site during the complaint period was covered under the construction noise permit (CNP) no. GW-RW0624-06.</p> <p>Based on the RSS’s record of PME used in the concerned area from 15 November 2006 to 30 December 2006, the construction works complied with the CNP no. GW-RW0624-06.</p> <p>Conclusion Based on the information collected, the complaint is considered unjustifiable as the equipment used complied with the CNP conditions.</p> <p>Nevertheless, the Contractor was recommended to take further noise mitigation measures to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> - 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. 	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
70117-2	P3 – P6 near Banyan Garden	17 th January 2007 (by ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about environment nuisance generated from Route 8 – Lai Chi Kok Viaduct Project. EPD subsequently referred the complaint to ET Leader on 17th January 2007.</p> <p>The complaint was concerned construction noise near Banyan Garden within the period of 01:00 – 02:00hr on 11th January 2007.</p>	<p>Site Activities According to RSS’s record, the construction activities at the concerned area was mainly central stitch construction and parapet erection and similar works will be carried out in the concerned site in coming one month.</p> <p>The equipment used on site during the complaint period was covered under the construction noise permit (CNP) no. GW-RW0624-06.</p> <p>Based on the RSS’s record of PME used in the concerned area from 1st December 2006 to 13th January 2007, the construction works complied with the CNP no. GW-RW0624-06.</p> <p>Conclusion Based on the information collected, the complaint is considered unjustifiable as the equipment used complied with the CNP conditions.</p> <p>Nevertheless, the Contractor was recommended to take further noise mitigation measures to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> - 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. 	Closed
70723	Construction site near Mei Lai Road and Tong Nai Kan College	17 th July 2007 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 21 July 2007 about an environment nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 23 July 2007.</p> <p>The complaint was concerned about noise generated from the construction works near Mei Lai Road and Tong Nai</p>	<p>Site Activities The concerned site was likely the Slope CCR-S4 near Ching Cheung Road. A location plan is provided in Appendix A and the work programme near Slope CCR-S4 from February 2007 to September 2007 is provided in Appendix B.</p> <p>According to RSS’s record and the above mentioned work programme, excavation and rock breaking works for slope stabilization near the Slope CCR-S4 was begun on early of July 2007 and to be completed on early of August 2007.</p> <p>As advised by the RSS, noise mitigation measures implemented at the concerned site include:</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			Kan College.	<ul style="list-style-type: none"> - installing a line of noise barriers formed by acoustic materials in front of the noise sources; - warping the breaker with acoustic material; and - deploying silence type of breaker. <p>Environmental Monitoring</p> <p>During the weekly site inspections in July 2007, no non-compliance or observation on noise was recorded.</p> <p>Accordance to the EM&A programme, one noise monitoring station at Mei Foo Sun Chuen, Phase 5 (NM4) was set up in order to monitor the noise level generated from the construction activities.</p> <p>The noise monitoring results in the period between 3rd and 23rd July 2007 at Mei Foo Sun Chuen, Phase 5 are all lower than or equal to the noise criterion of 75 dB(A). No exceedance of noise level has been recorded in the above mentioned period.</p> <p>Conclusion</p> <p>Base on the information collected and the monitoring result, the complaints are considered not justifiable.</p> <p>It was suspected that the nuisance was caused by the breaking activities. However, the Contractor has implemented the mitigation measures to minimize the noise generation from construction activities.</p>	
71003	Construction site near Ching Cheung Road and Tong Nai Kan College	3 rd October 2007 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 1 October 2007 about an environment nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 3 October 2007</p> <p>The complaint was concerned construction noise near Tong Nai Kan</p>	<p>Site Activities</p> <p>According to RSS's record, approximately 100m long asphalt material on carriageway was removed on 30th September and 1st October 2007.</p> <p>The equipment used on site during the complaint period was covered under the construction noise permit (CNP) no. GW-RW0469-07.</p> <p>Environmental Monitoring</p> <p>During the weekly site inspections in September 2007, no non-compliance or observation on noise was recorded.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>College and Ching Cheung Road during public holiday on 1st October 2007.</p>	<p>Accordance to the EM&A programme, one noise monitoring station at Mei Foo Sun Chuen, Phase 5 (NM4) was set up in order to monitor the noise level generated from the construction activities. The noise monitoring results on 25 September 2007 and 2 October 2007 at Mei Foo Sun Chuen, Phase 5 are all lower than the noise criterion of 75 dB(A). No exceedance of noise level has been recorded in the above mentioned period</p> <p>Conclusion Based on the information collected, the complaint is considered unjustifiable as the equipment used complied with the CNP conditions.</p> <p>Nevertheless, the Contractor was recommended to implement a good sit practice and mitigation measures to prevent noise nuisance generated from the construction work to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> - wrapping the breaker with acoustic material; and - deploying silence type of breaker. 	
71119	Construction site near Nob Hill	19 th November 2007 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 16 November 2007 about a noise nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 19 November 2007</p> <p>The complaint was concerned the noise generated from breaking the footpath on King Lai Path opposite to Nob Hill on 16 November 2007</p>	<p>Site Activities According to the RSS, footpath breaking by hand-held breaker was carried out on 16 November 2007.</p> <p>Environmental Monitoring During the weekly site inspections on November 2007, no non-compliance or observation on noise was recorded.</p> <p>Accordance to the EM&A programme, noise monitoring was conducted at Nob Hill M/F of Car Park (NM8a) and 3/F of Car Park (NM8b) in order to monitor the noise level generated from the construction activities. There was no Action/Limit Level exceedance identified, except the noise monitoring conducted at Station NM8b on 12 November 2007, which is strongly influenced by the road traffic noise from Ching Cheung Road. The measurements at these two stations are for reference purpose but not for compliance check for construction noise.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>Conclusion Base on the information collected and the monitoring result, the complaints are considered not justifiable.</p> <p>Nevertheless, the Contractor was recommended to implement a good sit practice and mitigation measures to prevent noise nuisance generated from the construction work to minimize the environmental impact on the nearby community:</p> <ul style="list-style-type: none"> - wrapping the breaker with acoustic material; and - deploying silence type of breaker. 	
71121	Construction site at Lai Wan Road opposite to the Lai Chi Kok Park Sports Centre	21 st November 2007 (by ET Leader)	<p>The Integrated Complaint Centre (ICC) of HKSAR received a public complaint through telephone on 21st November 2007 about the construction dust nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project. Resident Site Staff (RSS) subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 21st November 2007</p> <p>The complaint was raised by a resident via the ICC hotline and EPD about the construction dust generated from the lorry (JA2315) leaving the works site opposite to Lai Chi Kok Park Sports Centre at 8.35am on 21st November 2007</p>	<p>Site Activities According to the information provided by RSS, the site of the concern was likely to be the site access at R2 opposite to Lai Chi Kok Park Sports Centre. The construction works at the sports centre included the masonry on retaining wall, surface drain along slope toe, road work at the footpath, street furniture and reinstatement the pavement.</p> <p>Environmental Monitoring During the weekly site inspection on 21 November 2007, no non-compliance or major dust generation construction activity was recorded.</p> <p>Accordance to the EM&A programme, the air monitoring station at Lai Chi Kok Sports Centre (AM2), was set up in order to monitor the dust level generated from the construction activities. There was no exceedance of the air quality monitoring results and dust mitigation measures were implemented by the Contractor.</p> <p>Conclusion Base on the information collected and the monitoring results, the complaints are considered not justifiable.</p> <p>It was because there was no exceedance of the air quality monitoring results. After receiving the complaint, the Contractor has further enhanced the dust mitigation measures as follows:-</p> <ul style="list-style-type: none"> • Spraying of water for any dust emissive activities; <p>The environmental conditions of the site will be continuously reviewed by the RSS and the Environmental Team through site</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
80103	Construction site near the junction of King Lai Path and Lai Wan Road	3 rd January 2008 (by ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint about the construction dust generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project near the Junction of King Lai Path and Lai Wan Road. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 3 January 2008</p> <p>The complaint was raised by a resident via the EPD about the construction dust of slope works near the junction of King Lai Path and Lai Wan Road on 3rd January 2008.</p>	<p>inspections and monitoring exercises.</p> <p>Site Activities Based on the information provided by the ER, the construction site was likely to be the slope CCR-S1 between Lai Wan Road and Lai King Hill Road. According to RSS's record, rock slope stabilization measures was carried on at batter 8 of slope CCR-S1. Rock drilling for installation of rock dowels (6m long) at CCR-S1 was commenced on 20 December 2007 and would likely last up to the 2 February 2008</p> <p>Environmental Monitoring During the ET's weekly environmental site inspection on 28 December 2007 and 9 January 2008 and the monthly site inspection on the 2 January 2008. There was no serious dust nuisance induced by the Projects at slope CCR-S1 while rock drilling was carrying out at the slope.</p> <p>As advised by the RSS, a three side's tarpaulin covering sheets were provided by the Contractor to suppress the dust nuisance generated from the rock drilling works. On 5 January 2008, the drilling rig was wrapped with a we thick towel and the speed of the drill was controlled. Besides, there was no Action/Limit Level exceedance for both 1-hr and 24-hr TSP identified during the period in between the 20 December 2007 and 9 January 2008.</p> <p>Conclusion Base on the information collected and the monitoring results, the complaint was considered not justifiable. It was because there was no exceedance of the air quality monitoring results and dust mitigation measures were implemented by the Contractor during the rock drilling works. After receiving the complaint, the Contractor has further enhanced the dust mitigation measures as follows:</p> <ul style="list-style-type: none"> • 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 reviewed by the RSS and the Environmental Team through site inspections and monitoring exercises.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
80121	Construction site near Nob Hill	21st January 2008 (by ET Leader)	<p>The Resident Site Staff (RSS) received a verbal complaint from a Legislative Council member, Mr. Cheung, on 21 January 2008. The complaint was about the construction noise and dust generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project near Nob Hill. The RSS subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on the same day</p> <p>The complaint was raised by a Legislative Council member, Mr. Cheung, via the RSS about the construction noise and dust nuisances generated near Nob Hill on 21st January 2008.</p>	<p>Site Activities According to RSS's record, rock dowel installation for slope stabilization at CCR-S1 was commenced on 20 December 2007 and would likely last up to the 2 February 2008.</p> <p>Contractor Action As advised by the RSS, tarpaulin covering, water spraying and temporary noise absorbent materials were provided by the Contractor to suppress the dust and noise nuisance generated from the rock drilling works. Besides, the working hours was lie in between the normal working hours from 7am to 7pm</p> <p>Environmental Monitoring Weekly site inspection was performed by ET on 28th December 2007, 2nd, 9th, 16th, 23rd January 2008. A joint environmental site audit was also conducted on 2nd January 2008 with the representatives of IEC, RSS, the Contractor and ET. There was no non-compliance or observation with regard to noise and dust nuisance at the concerned site was recorded by the auditors during the site inspections carried out in December and January 2008.</p> <p>Review of Environmental Monitoring Results The routine monitoring stations, which are in the vicinity of the concerned works areas, include: <u>Noise Monitoring</u> NM8a: M/F of Nob Hill NM8b: 3/F of Nob Hill <u>Air Quality (1-hr TSP / 24-hr TSP) Monitoring</u> AM2: R/F of Lai Chi Kok Sports Centre No Action / Limit level exceedance was identified in the period between 20th December 2007 and 24 January 2008.</p> <p>Conclusion Based on the RSS's information, environmental monitoring results as well as the observations made during site inspections, this complaint is considered to be invalid and not due to the construction activities of the Project.</p> <p>It was because there was no exceedance of the air quality monitoring results and dust mitigation measures were implemented by the Contractor during the rock drilling works.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<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"> • 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; • Apply water spraying for any dust emissive activities, such as breaking, excavation, loading and unloading of dusty materials; and • Cover long-term idle exposed slope surfaces and stockpiles with tarpaulin sheets. <p><u>Construction Noise</u></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; • Silence-type breakers were employed for the rock breaking work close to the sensitive receivers; • To wrap the breaker with acoustic material; and • While the permitted hours for construction works are 7am to 7pm on non-holidays, the Contractor has commenced the rock breaking activity after 8:30am. This arrangement could effectively reduce the disturbance to the residents within the more sensitive time period (7:00 am to 8:30 am). <p>The environmental conditions of the site will be continuously reviewed by the Resident Site Staff and the Environmental Team through site inspections and monitoring exercises.</p>	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
80229	Ching Cheung Road near Nob Hill	29 th February 2008 (by ET Leader)	<p>The Highways Department (HyD) received a public complaint through telephone on 29 February 2008 about the noise nuisance generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project near Nob Hill. The Resident Site Staff (RSS) subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on the same day.</p> <p>The complaint was concerned the noise nuisance generated when vehicles passing over the movement joints at both bound of the Ching Cheung Road carriageway at night.</p>	<p>Information from RSS According to RSS's record, the movement joints have been installed for about half year under the Project design and satisfactory procedures.</p> <p>Environmental Monitoring The recent weekly site inspection was performed by ET on 27th February 2008. No abnormal noise nuisance was noticed during the site inspection. The major noise source was identified to be traffic noise.</p> <p>Review of Environmental Monitoring Results Regular construction noise monitoring works were performed by ET, in accordance with the EM&A Manual. The monitoring stations, which are in the vicinity of the concerned works areas, include: <u>Noise Monitoring Stations</u> NM8a: M/F of Nob Hill NM8b: 3/F of Nob Hill</p> <p>The time period of construction noise monitoring was within normal working hours (7am to 7pm) on a weekday not being a public holiday. There is no control of construction noise based on the Noise Control Ordinance within this time period. However, according to the EM&A Manual of the Project, the criterion of construction noise in term of Leq-30min within this period is 75 dB(A) for domestic premises.</p> <p>Stations NM8a and NM8b were newly 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.</p> <p>The monitoring result for NM8a in the period between 3rd January 2007 and 26th February 2008 are summarized quarterly as below:</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status																																																																								
				<p data-bbox="1238 164 1908 188">Table 1 – Noise Monitoring Results at NM8a, Nob Hill</p> <table border="1" data-bbox="1238 188 1908 1010"> <thead> <tr> <th data-bbox="1238 188 1413 316">Date</th> <th data-bbox="1413 188 1599 316">Measured Noise Level, dB(A)</th> <th data-bbox="1599 188 1771 316">Date</th> <th data-bbox="1771 188 1908 316">Measured Noise Level, dB(A)</th> </tr> </thead> <tbody> <tr><td>3-Jan-07</td><td>75.9</td><td>2-Oct-07</td><td>73.1</td></tr> <tr><td>11-Jan-07</td><td>70.6</td><td>8-Oct-07</td><td>73.4</td></tr> <tr><td>16-Jan-07</td><td>74.3</td><td>15-Oct-07</td><td>71.2</td></tr> <tr><td>23-Jan-07</td><td>70.8</td><td>23-Oct-07</td><td>72.6</td></tr> <tr><td></td><td></td><td>30-Oct-07</td><td>73.8</td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td>2-Apr-07</td><td>73.7</td><td>4-Jan-08</td><td>73.7</td></tr> <tr><td>10-Apr-07</td><td>74.2</td><td>8-Jan-08</td><td>72.7</td></tr> <tr><td>17-Apr-07</td><td>73.5</td><td>15-Jan-08</td><td>73.8</td></tr> <tr><td>24-Apr-07</td><td>74.6</td><td>22-Jan-08</td><td>72.4</td></tr> <tr><td></td><td></td><td>29-Jan-08</td><td>73.5</td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td>3-Jul-07</td><td>71.9</td><td>4-Feb-08</td><td>73.8</td></tr> <tr><td>10-Jul-07</td><td>73.8</td><td>12-Feb-08</td><td>73.6</td></tr> <tr><td>17-Jul-07</td><td>74.7</td><td>21-Feb-08</td><td>72.6</td></tr> <tr><td>23-Jul-07</td><td>73.8</td><td>26-Feb-08</td><td>72.8</td></tr> <tr><td>30-Jul-07</td><td>72.5</td><td></td><td></td></tr> </tbody> </table> <p data-bbox="1200 1043 1939 1225">The results show that the measured noise levels were mostly below the criterion for daytime construction noise of 75 dB(A) and the high measured noise levels were mainly due to traffic noise instead of construction noise. No obvious increase of measured noise level was observed after the installation of the movement joints at Ching Cheung Road near Nob Hill.</p> <p data-bbox="1200 1262 1939 1409">Conclusion 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 abnormal functioning of the movement joints of the Project.</p>	Date	Measured Noise Level, dB(A)	Date	Measured Noise Level, dB(A)	3-Jan-07	75.9	2-Oct-07	73.1	11-Jan-07	70.6	8-Oct-07	73.4	16-Jan-07	74.3	15-Oct-07	71.2	23-Jan-07	70.8	23-Oct-07	72.6			30-Oct-07	73.8					2-Apr-07	73.7	4-Jan-08	73.7	10-Apr-07	74.2	8-Jan-08	72.7	17-Apr-07	73.5	15-Jan-08	73.8	24-Apr-07	74.6	22-Jan-08	72.4			29-Jan-08	73.5					3-Jul-07	71.9	4-Feb-08	73.8	10-Jul-07	73.8	12-Feb-08	73.6	17-Jul-07	74.7	21-Feb-08	72.6	23-Jul-07	73.8	26-Feb-08	72.8	30-Jul-07	72.5			
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Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>It was because there was no obvious difference on the measured noise level before and after the installation of movement joints at the concerned area.</p> <p>The noise nuisance should be only comparatively noisy due to the silent background at night instead of abnormal functioning of the movement joints.</p> <p>Nevertheless, the Contractor was recommended to adopt good site practice to minimize the noise generated from the movement joints, such as:</p> <ul style="list-style-type: none"> • Check and maintain the movement joints regularly to ensure they are functioning well; • Provide lubricant oil to the movement joints to minimize noise nuisance when necessary; • Provide noise absorbent (e.g. sponge) as a damper within the movement joints to reduce noise nuisance when necessary. <p>The environmental conditions of the site will be continuously reviewed by the Resident Site Staff and the Environmental Team through site inspections and monitoring exercises.</p>	
80411	Ching Cheung Road near Lai Chi Lok Park, Kowloon.	11 th Apr 2008	<p>Environmental Protection Department (EPD) received a public complaint from Sham Shui Po DC member's Office about the construction noise generated from Route 8 – Lai Chi Kok Viaduct (R8-LCKV) Project around Widening of Ching Cheung Road near Lai Chi Lok Park, Kowloon. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 11 April 2008.</p> <p>The complaint was concerned the construction noise occurring on public holidays and at early morning on</p>	<p>Information from RSS</p> <p>The major works around Widening of Ching Cheung Road near Nob Hill in the past three months included laying of bituminous paving; installation of gully pot & grating; modification of central median; installation of road marking; road studs; parapet top rails at Lai Wan Overpass; and traffic signs & modification of gantry sign face. All the above-mentioned works have been completed for Route 8 opening on 21 March 2008. The Contractor has obtained the Construction Noise Permits (GW-RW0478-07), (GW-RW0656-07), (GW-RW0669-07), (GW-RW0723-07), (GW-RW0111-08) for carrying out the construction activities during restricted hour on normal weekdays or general holidays including Sundays at the concerned area.</p> <p>Environmental Monitoring</p> <p>Weekly site inspections were performed by ET on every Wednesday</p>	

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status																																																																																
			weekdays.	<p>morning in the past three months. A recent joint environmental site audit was also conducted on 9th April 2008 with the representatives of IEC, RSS, the Contractor and ET. No abnormal noise nuisance was noticed during the site inspection.</p> <p><i>Review of Environmental Monitoring Results</i> Regular construction noise monitoring works were performed by ET, in accordance with the EM&A Manual. The monitoring stations, which are in the vicinity of the concerned works areas, include: <u>Noise Monitoring Stations</u> NM4: Mei Foo Sun Chuen, Phase 5 NM8a: M/F of Nob Hill Car Park</p> <p>The monitoring results at NM4 and NM8a from January to March 2008 are summarized as below.</p> <p><u>Noise Monitoring Results at NM4 and NM8a</u></p> <table border="1" data-bbox="1200 715 1944 1334"> <thead> <tr> <th>Date</th> <th>Measured Leq-30min, dB(A)</th> <th></th> <th>Date</th> <th>Measured Leq-30min, dB(A)</th> </tr> </thead> <tbody> <tr> <td>4-Jan-08</td> <td>72.7</td> <td></td> <td>4-Jan-08</td> <td>73.7</td> </tr> <tr> <td>8-Jan-08</td> <td>70.6</td> <td></td> <td>8-Jan-08</td> <td>72.7</td> </tr> <tr> <td>15-Jan-08</td> <td>70.3</td> <td></td> <td>15-Jan-08</td> <td>73.8</td> </tr> <tr> <td>22-Jan-08</td> <td>63.6</td> <td></td> <td>22-Jan-08</td> <td>72.4</td> </tr> <tr> <td>29-Jan-08</td> <td>71.5</td> <td></td> <td>29-Jan-08</td> <td>73.5</td> </tr> <tr> <td colspan="5"> </td> </tr> <tr> <td>4-Feb-08</td> <td>73.3</td> <td></td> <td>4-Feb-08</td> <td>73.8</td> </tr> <tr> <td>12-Feb-08</td> <td>70.3</td> <td></td> <td>12-Feb-08</td> <td>73.6</td> </tr> <tr> <td>21-Feb-08</td> <td>73.2</td> <td></td> <td>21-Feb-08</td> <td>72.6</td> </tr> <tr> <td>26-Feb-08</td> <td>62.3</td> <td></td> <td>26-Feb-08</td> <td>72.8</td> </tr> <tr> <td colspan="5"> </td> </tr> <tr> <td>4-Mar-08</td> <td>73.2</td> <td></td> <td>4-Mar-08</td> <td>72.7</td> </tr> <tr> <td>11-Mar-08</td> <td>65.8</td> <td></td> <td>11-Mar-08</td> <td>69.9</td> </tr> <tr> <td>18-Mar-08</td> <td>67.8</td> <td></td> <td>18-Mar-08</td> <td>69.8</td> </tr> <tr> <td>27-Mar-08</td> <td>72.8</td> <td></td> <td>27-Mar-08</td> <td>72.3</td> </tr> </tbody> </table>	Date	Measured Leq-30min, dB(A)		Date	Measured Leq-30min, dB(A)	4-Jan-08	72.7		4-Jan-08	73.7	8-Jan-08	70.6		8-Jan-08	72.7	15-Jan-08	70.3		15-Jan-08	73.8	22-Jan-08	63.6		22-Jan-08	72.4	29-Jan-08	71.5		29-Jan-08	73.5						4-Feb-08	73.3		4-Feb-08	73.8	12-Feb-08	70.3		12-Feb-08	73.6	21-Feb-08	73.2		21-Feb-08	72.6	26-Feb-08	62.3		26-Feb-08	72.8						4-Mar-08	73.2		4-Mar-08	72.7	11-Mar-08	65.8		11-Mar-08	69.9	18-Mar-08	67.8		18-Mar-08	69.8	27-Mar-08	72.8		27-Mar-08	72.3	
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Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>There was no Action/Limit Level exceedance identified. Road traffic noise from Ching Cheung Road was identified as the major noise source in the morning at station NM4 and NM8a.</p> <p><i>Conclusion</i> Based on the information collected and the monitoring results, the complaint was considered not justifiable as no Action/Limit Level exceedance on construction noise monitoring was identified as well as construction activities were carried out with Construction Noise Permit at night and during public holidays.</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; • To turn off any idle equipment on site; • Wrapping of tools with acoustic material as far as possible; • Erection of mill barriers with acoustic material adjacent to noise source; and • Laying of hessian bags on ground to absorb noise generated due to accidental falling of hand tools on ground. <p>The environmental conditions of the site will be continuously reviewed by the Resident Site Staff and the Environmental Team.</p>	

APPENDIX F
EVENT ACTION PLANS

Appendix F - 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 G
SUMMARY OF ENVIRONMENTAL
MITIGATION IMPLEMENTATION
SCHEDULE**

Appendix G - Summary of Environmental Mitigation Implementation Schedule

Types of Impacts	Mitigation Measures	Status
<p>Construction Dust</p>	<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. 	^
<p>Construction Noise</p>	<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. 	^
	<ul style="list-style-type: none"> 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 	^

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	

	<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>^</p> <p>^</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>^</p> <p>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. 	^
	<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>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p> <p>^</p>
	<ul style="list-style-type: none"> • Maintain records of the quantities of wastes generated, recycled and disposed. 	^
	<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. 	^
	<i>Construction and Demolition (C&D) Waste</i>	
	<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. 	^

	<ul style="list-style-type: none"> • 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>N/A</p> <p>^</p>
<i>Chemical Waste</i>		
	<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>^</p> <p>^</p> <p>^</p> <p>^</p>
<i>General Refuse</i>		
	<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>*</p> <p>^</p>

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. • Conduct a tree survey before commencement of the construction work. 	N/A ^
	<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. • Loss of the adjacent woodland due to temporary land take shall be returned to the original status immediately. • 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 ^ 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 |