

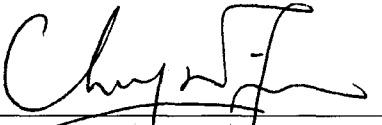
Highways Department

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

Quarterly EM&A Report Part II – Eagle's Nest Tunnel and Associated Works (Version 1.0)

September to November 2007

Approved By 
(Environmental Team Leader)

REMARKS:

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

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

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EXECUTIVE SUMMARY

- This is the 16th Quarterly Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for the “Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin, Lai Chi Kok Viaduct & Eagle’s Nest Tunnel”. This summary report documents the findings of EM&A works performed in the period between September and November 2007 for Contract No. HY/2003/02, Route 8 – Eagle’s Nest Tunnel and Associated Works (the Project).

- The major site activities undertaken in the reporting quarter included:
 - Cladding , Hand Rail, Mesh Panel, Lift and Toll Collection System Installation;
 - Tunnel Ventilation System (T&C);
 - Plumbing & Drainage;
 - Slope Stabilization;
 - Mechanical Ventilation Air Conditioning and T&C;
 - Road works;
 - Metal curtain wall;
 - Metal meshing and curtain wall;
 - Haul road diversion;
 - Painting (parapet wall);
 - Earth work;
 - Tiles covering;
 - Works on U-channel and recreated stream at Butterfly Valley; and
 - Cut/ fill slope at SP-S2.

- The major site activities for Traffic Control and Surveillance System (TCSS) works undertaken in the reporting quarter included:
 - Cable Laying;
 - Field Equipment Installation;
 - System Equipment Installation;
 - Antenna Installation;
 - SCT and SAT.
 - Equipment Cabinet Installation
 - Equipment Cabinet Termination
 - MCBs Installation
 - PA Installation; and
 - Cable Termination for Field Equipment

Environmental Monitoring Works

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

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

Table I Summary Table for Events Recorded in the Reporting Quarter

<i>Parameter</i>	<i>No. of Events</i>		<i>No. of Events Due to the Project</i>	<i>Action Taken</i>
	<i>Action Level</i>	<i>Limit Level</i>		
<i>September 2007</i>				
1-hr TSP	0	0	0	N/A
24-hr TSP	0	0	0	N/A
Noise	0	0	0	N/A
<i>October 2007</i>				
1-hr TSP	0	0	0	N/A
24-hr TSP	0	0	0	N/A
Noise	0	0	0	N/A
<i>November 2007</i>				
1-hr TSP	0	0	0	N/A
24-hr TSP	0	0	0	N/A
Noise	0	0	0	N/A

Environmental Licensing and Permitting

- Licenses/Permits granted to the Project include the Environmental Permit (EP) for the Project, Construction Noise Permits (CNPs) and Water Discharge Licenses (WDLs). The Contractor had also registered as a Chemical Waste Producer.

Key Information in the Reporting Quarter

- Summary of key information in the reporting quarter is tabulated in **Table II**.

Table II Summary Table for Key Information in the Reporting Quarter

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	0	---	N/A	N/A	---
Changes to the assumptions and key construction / operation activities recorded	0	---	N/A	N/A	---
Status of submissions under EP	0	---	N/A	N/A	---
Notifications of any summons & prosecutions received	0	---	N/A	N/A	---
<p><u>Future Key Issues:</u></p> <p>Major site activities for civil works in the coming months include:</p> <ul style="list-style-type: none"> • Cladding and Hand Rail Installation; • Tunnel Ventilation System and Lighting (T&C); • Plumbing & Drainage; • Mechanical Ventilation Air Conditioning and T&C; • Road and drainage works; • Metal curtain and mesh cladding; • Cat ladder for vent shaft; • Upper roof railing; • Fencing at Ventilation Building; • Testing on fire services and lighting; • Metal cladding on footbridge, painting, fire services, carpet file false and external metal ceiling and signages at Toll Plaza's structures & Administration Building; and • Haul road diversion, step channel, fill slope at SP-S2, irrigation pipe and system (T&C), u-channel and lighting for noise enclosure at Butterfly Valley <p>Major site activities for TCSS works in the coming months include:</p> <ul style="list-style-type: none"> • Equipment Cabinet Installation; • SAT for TCSS equipment; and • Remedial works for TCSS equipment. <p>The anticipated environmental issues will be mainly on dust from stockpiles, road works, fill slope and earth works, noise impact from road works and waste/ chemical management from finishing the construction activities.</p>					

1. INTRODUCTION

- 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. 449) (EIAO). An environmental impact assessment (EIA) report has been prepared in 1998 for the R9-CSWST project (1998 R9 EIA) to consider the key issues of noise, air quality, water quality, ecological, construction waste, landscape and visual, land use and cultural impacts, and identify possible mitigation measures.
- 1.4 An Updated Final EIA report was subsequently completed in August 1999 for the R9-CSWST project (1999 R9 EIA), to cater for some changes in R9K portion as mentioned in paragraph 1 in the report. The 1999 R9 EIA was endorsed by Environmental Protection Department (EPD) in November 1999. The 1998 R9 EIA and the 1999 R9 EIA (R9 EIA Reports) were included in the EIA register under the EIAO as report no. EIA-135/BC and AEIAR-022/1999 respectively. An 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. A revised EP No. EP-103/2001/A was issued on 20 May 2003 for R9K (R9K EP) to HyD as Permit Holder. A varied EP-103/2001/C was recently issued on 22 July 2005.

- 1.6 The major construction activities of two civil contracts of the R9K project, Contract No. HY/2003/01 entitled "Route 9 – Lai Chi Kok Viaduct" and Contract No. HY/2003/02 entitled "Route 9 – Eagle's Nest Tunnel and Associated Works", were commenced in 15th December 2003 for completion in April 2007.
- 1.7 "Route 9" was recently re-titled as "Route 8 (previously known as Route 9)". Cinotech Consultants Limited (Cinotech) was commissioned by HyD to undertake the Environmental Monitoring and Audit works for "Route 8 (previously known as Route 9) 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 was appointed as the ET Leader under Condition 2.2 of the EP. Mr. Kenneth LUK of CH2M HILL Hong Kong Ltd. was appointed as the IEC under Condition 2.1 of the EP. This is the 16th quarterly EM&A report summarizing the EM&A works for the ENT Project between September and November 2007.

2 PROJECT CHARACTERISTICS

Project Organization and Contacts of Key Management

- 2.1 An organization structure and the line of communication were set up for the Project between the Project Proponent, Engineer's Representative (ER), Independent Environmental Checker (IEC), the Contractor and Environmental Team (ET). The organization chart and contact details are shown in **Appendix A** and **Figure 2**.

Construction Programme and Synopsis of Work

- 2.2 The construction programme is presented in **Appendix B**.

- 2.3 The site activities for Civil Works undertaken in the reporting quarter included:

ENT Tunnel

- T&C for Tunnel Ventilation System, fire services, Road Work for SB and NB and road marking for NB and SB.

Butterfly Valley

- Haul road diversion, recreated stream, slope stabilization for BV-S1 hydro mulching, u-channel, irrigation pipe & system, road works, WSD access, cut/fill slope (SP-S2 & SP-S3), high mask lighting, lighting for noise enclosure and drainage/culvert desilting.

South Portal Building

- Tunnel ventilation system (T&C), Mechanical ventilation air conditioning and T&C, aluminum cladding installation, plumbing & drainage, metal mesh cladding, painting at parapet wall, fire services and cat ladder for vent shaft.

North Portal Building

- Plumbing & drainage, tunnel ventilation system and T&C, mechanical ventilation air conditioning and T&C, metal mesh cladding, painting (parapet wall), aluminum cladding installation and cat ladder for vent shaft.

Toll Plaza's Structures and Administration Building

- Road works (including EVA road & loop road No.2), Footbridge (metal cladding), tiles (external wall & internal floor), false and external metal ceiling, mechanical ventilation air conditioning and T&C, plumbing & drainage, lift installation, fire services, skirting and rubber & vinyl flooring, metal curtain, mesh cladding, window water testing, signages, lift installation and testing, roof tiles, metal curtain wall, mesh panel installation, sanitary fittings to toilet, roof tiles, drainage/ culvert desilting, hand rail installation and installation of toll collection system.

Ventilation Building

- Utility, mechanical ventilation air conditioning and T&C, tunnel ventilation system and T&C, T&C for electrical equipment, earth works, cladding and Hand Rail Installation, drainage/culvert desilting and plumbing & drainage.

SHT – South Portal Building

- Aluminum cladding installation, mechanical ventilation air conditioning and T&C, Tunnel Ventilation System, plumbing & drainage, painting (parapet wall), mesh cladding and cat ladder for vent shaft.

SHT – North Portal Building

- Mechanical ventilation air conditioning and T&C, Tunnel Ventilation System and T&C, plumbing and drainage, painting (parapet wall), aluminum cladding installation, cat ladder for vent shaft, mesh cladding and plumbing & drainage.

SHT Tunnel & Remaining SHT/T3 Area

- Lighting testing, tunnel ventilation system and T&C and fire services.

LCKV Area

- E&M work in pump house, Lighting for noise enclosure.

2.4 The site activities for TCSS works undertaken in the reporting quarter included:

- Cable laying and termination for field equipment, field equipment installation, equipment cabinet termination, system acceptance test and SCT for TCSS equipments at Tunnel.
- Cable laying, field equipment installation, equipment cabinet termination, SCT for TCSS equipment, cable termination for field equipment, equipment cabinet installation and SAT at Butterfly Valley.
- MCBs installation, SCT for cables, installation of equipment cabinet, SAT at Kiosk K3, K4.
- SCT for cables and in-house equipments in ELV room, SCT for TCSS equipments in whole building and SAT at South Portal Building.
- SCT for cables and in-house equipments in ELV room, SCT for TCSS equipments in whole building and SAT at North Portal Building.
- SCT for PA, PA installation and SAT at Toll Plaza.
- SCT for cables and in-house equipments, equipment installation, SCT for TCSS equipment and SAT at Administration Building.
- SCT for cables and in-house equipments in ELV room and TBE room, SCT for TCSS equipments in whole building and SAT at Ventilation Building

3 ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS

Monitoring Parameters and Monitoring Locations

- 3.1 The EM&A Manual designated locations for the ET to monitor environmental impacts in terms of noise and air quality due to the Project. The monitoring locations are depicted in **Figures 1a** and **1b**. **Appendix C** gives details of monitoring requirements.

Monitoring Methodology and Calibration Details

- 3.2 Monitoring works/equipments were conducted/calibrated regularly in accordance with the EM&A Manual. Copies of calibration certificates are attached in the appendices of the Monthly EM&A Reports.

Environmental Quality Performance Limits (Action and Limit Levels)

- 3.3 The environmental quality performance limits, i.e. Action and Limit Levels were derived from the baseline monitoring results. Should the measured environmental quality parameters exceed the Action/Limit Levels, the respective Event Action Plans would be implemented. The Action/Limit Levels for each environmental parameter are provided in **Appendix D**.

Environmental Mitigation Measures

- 3.4 Relevant mitigation measures as recommended in the project EIA report have been stipulated in the EM&A Manuals for the Contractor to implement. A list of mitigation measures is given in **Appendix G**.

4 MONITORING RESULTS

Weather Conditions

- 4.1 The weather during monitoring sessions was mainly sunny and fine. The weather conditions for each individual monitoring session were presented in the field record sheets.

Air Quality

1-hr TSP Monitoring

- 4.2 All 1-hour TSP monitoring was conducted as scheduled during the reporting quarter.
- 4.3 No Action/Limit Level exceedance was recorded in this reporting quarter.

24-hr TSP Monitoring

- 4.4 All 24-hr TSP monitoring was conducted as scheduled in this reporting quarter.
- 4.5 No Action / Limit Level exceedance was recorded in the reporting quarter.
- 4.6 The monitoring data of 1-hr and 24-hr TSP Levels are attached in the appendices of the Monthly Reports for September to November 2007. The graphical presentations of the monitoring results are shown in **Appendix E**.

Construction Noise

- 4.7 Noise monitoring was performed at the four designated locations during the daytime period (0700-1900 hours) on normal as scheduled in this reporting quarter. Restricted-hour monitoring was also conducted at NM5, NM6 and NM7.
- 4.8 No Action/Limit Level exceedance was recorded in the reporting quarter.
- 4.9 All the Construction Noise Levels (CNLs) reported in this report were adjusted with the corresponding baseline level (i.e. Measured Leq – Baseline Leq = Measured CNL), in order to facilitate the interpretation of the noise exceedance.
- 4.10 The monitoring data of construction noise are attached in the appendices of the Monthly Reports for September to November 2007. The graphical presentations of the monitoring results are shown in **Appendix F**.
- 4.11 Construction noise exceedances recorded in the reporting quarter and the associated actions taken are summarized in **Appendix J**.

5 ENVIRONMENTAL AUDIT

Implementation Status of Environmental Mitigation Measures

- 5.1 According to the Environmental Permit and the EM&A Manuals, the mitigation measures detailed in the documents are required to be implemented. An updated summary of the Environmental Mitigation Implementation Status (EMIS) is provided in **Appendix G**.

Site Audit Summary

- 5.2 ET's weekly site audits for Civil works were conducted on 4th, 12th, 19th and 27th September 2007, 3rd, 9th, 17th, 24th and 31st October 2007, 7th, 14th, 21st and 28th November 2007.
- 5.3 The joint site audit for Civil works was conducted on 4th September 2007, 9th October 2007 and 7th November 2007 with representatives from IEC, ER, the Contractor and ET. The TCSS works was conducted on 4th September 2007, 9th October 2007 and 7th November 2007 with representatives from IEC, ER, the Contractor and ET.
- 5.4 During site inspections in the reporting period, no non-conformance was identified. The observations and recommendations are summarized in **Table 5.1**.

Table 5.1 Observations and Recommendations of the Site Audits

Parameters	Date	Observations / Recommendations	Remedial Actions
<i>Water Quality</i>	04/09/07	<ul style="list-style-type: none"> <i>Reminder</i> - Partial exposed slope was observed at the natural stream (SPS3) near the south portal building. The Contractor was reminded to provide mitigation measure to stop any silt running down to the stream 	Rectification / improvement were observed during the site inspection on 12/09/07
	19/09/07	<ul style="list-style-type: none"> <i>Reminder</i> - Silt was observed in the U-channel and catchpit at Butterfly Valley. The Contractor was reminded to clear them 	Rectification / improvement were observed during the site inspection on 27/09/07
	03/10/07	<ul style="list-style-type: none"> <i>Reminder</i> - Runoff wasn't treated properly before discharging into the channel due to the broken down of the AquaSed. The Contractor was advised to provide a backup treatment system in order to ensure the discharge treated properly. 	Rectification / improvement were observed during the site inspection on 09/10/07
	09/10/07	<ul style="list-style-type: none"> <i>Reminder</i> - Exposed stockpile was observed standing in front of the Ventilation Building without cover. The Contractor reported that the stockpile has been covered straight after the site inspection. 	Rectification / improvement were observed during the site inspection on 17/10/07

Parameters	Date	Observations / Recommendations	Remedial Actions
	31/10/07	<ul style="list-style-type: none"> Desilting channel bed was undergoes at Butterfly Valley. Runoff has been diverted to a catchpit at downstream. However the catchpit was observed without an adequate capacity so that the silty water has been discharging into the water course. The Contractor was advised to provide mitigation measure to settle runoff before discharging into the water course to stop the silty water running out from the site 	Runoff has been observed settled before discharging during the site inspection on 7/11/07
<i>Air Quality</i>	12/09/07	<ul style="list-style-type: none"> <i>Reminder</i> - Potential fugitive dust emission was observed from shotcreting activity beside ENT North Portal Building. The Contractor was reminded to provide adequate measures such as water spray or tarpaulin cover for cement stockpile while carrying out the work 	Rectification / improvement were observed during the site inspection on 27/09/07.
	19/09/07	<ul style="list-style-type: none"> <i>Reminder</i> - Shotcreting activity was in progress beside ENT North Portal Building. The Contractor was reminded to prevent dust emission by spraying water or covering tarpaulin on the stockpile while carrying out the work 	Rectification / improvement were observed during the site inspection on 27/09/07
<i>Waste/Chemical Management</i>	04/09/07	<i>Reminder</i> - General refuse was observed at the catchpit out of the ventilation building. The Contractor was reminded to clean it up	Rectification / improvement were observed during the site inspection on 12/09/07

Status of Environmental Licensing and Permitting

5.5 Environmental licenses and permits including the Environmental Permit for the Project were in place and valid during the reporting quarter. The status of these licenses and permits obtained for the Project is summarized in **Appendix H**.

6 NON-COMPLIANCE (EXCEEDANCES) OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS (ACTION AND LIMIT LEVELS)

Summary of Exceedances

Air Quality

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

Construction Noise Monitoring

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

Review of the Reasons for and the Implications of Non-compliance

- 6.3 There was no non-compliance from the site audits in the reporting quarter. As mentioned previously in the Section 5.2 of this report, the observations and recommendations made in each individual site audit session were presented.

7 ENVIRONMENTAL COMPLAINTS

- 7.1 No environmental complaints were received in the reporting quarter.
- 7.2 The details of the complaints, the investigation results and the mitigation actions are summarized in **Appendix I**. There were 22 environmental complaints received since the Project commencement.

8 NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

- 8.1 No notification of summon or successful prosecution was recorded in this reporting quarter.
- 8.2 There was no notification of summon or successful prosecution received since the Project commencement.

9 COMMENTS, CONCLUSIONS AND RECOMMENDATIONS

9.1 Major site activities for Civil works in the coming months include:

ENT Tunnel

- T&C for Tunnel ventilation lighting.

Butterfly Valley

- Haul road diversion, road works, step channel works, fill slope at SP-S2, u-channel, T&C on irrigation pipe & system and lighting for noise enclosure.

South Portal Building

- Metal meshing cladding, Cat Ladder for vent shaft, upper roof railing, plumbing & drainage (T&C), tunnel ventilation system (T&C), mechanical ventilation air condition and T&C.

North Portal Building

- Metal meshing cladding, cat ladder for vent shaft, upper roof railing, plumbing & drainage, tunnel ventilation system (T&C), mechanical ventilation air condition and T&C.

Toll Plaza's Structures and Administration Building

- Road works (including EVA Road & Loop Road No.2), Footbridge (metal cladding), roof tiles, metal curtain mesh cladding, mechanical ventilation air condition and T&C, false & external metal ceiling, plumbing and drainage (T&C), external hand rail installation, skirting and rubber & vinyl flooring, signage, carpet file, fire services and painting of wall.

Ventilation Building

- Cladding & hand rail installation, drainage works, fencing, mechanical ventilation air conditioning and T&C, plumbing & drainage, Tunnel Ventilation System and T&C.

SHT – South Portal Building

- Cat Ladder for vent shaft, mesh cladding, plumbing & drainage (T&C), upper roof railing, mechanical ventilation air conditioning and T&C, tunnel ventilation system (T&C).

SHT – North Portal Building

- Cat Ladder for vent shaft, mesh cladding, upper roof railing, plumbing & drainage, mechanical ventilation air conditioning and T&C, tunnel ventilation system (T&C).

SHT Tunnel & Remaining SHT/T3 Area

- Lighting testing, tunnel ventilation system (T&C) and fire services (T&C).

9.2 The major site activities for TCSS works in the coming months include:

SAT for TCSS equipment at Tunnel, Butterfly Valley, Kiosk K3 & K4, South Portal Building, Toll Plaza, Administration Building and Ventilation Building.

9.3 The anticipated environmental issues will be mainly on dust from slope work, haul roads and stockpiles, and noise impact from road works and system testing.

9.4 According to the environmental audit performed in the reporting quarter and anticipated environmental issues, the following recommendations were made:

Water Impact

- To review and implement temporary drainage system especially for the areas at Butterfly Valley and Toll Plaza.
- To closely monitor the capacity of existing de-silting facility on site, especially for the discharge at the site in Butterfly Valley and Toll Plaza.
- To keep the sedimentation facilities well maintained and perform de-silting regularly.
- To avoid accumulation of stagnant water on site.

Dust Impact

- To ensure that adequate water spray or other dust suppression measures are applied for slope cutting and the haul roads and stockpile on site.
- To cover idle soil slope surface and stockpile of dusty materials to prevent wind erosion.
- To ensure that all vehicles carrying dusty materials are properly covered before leaving the site.

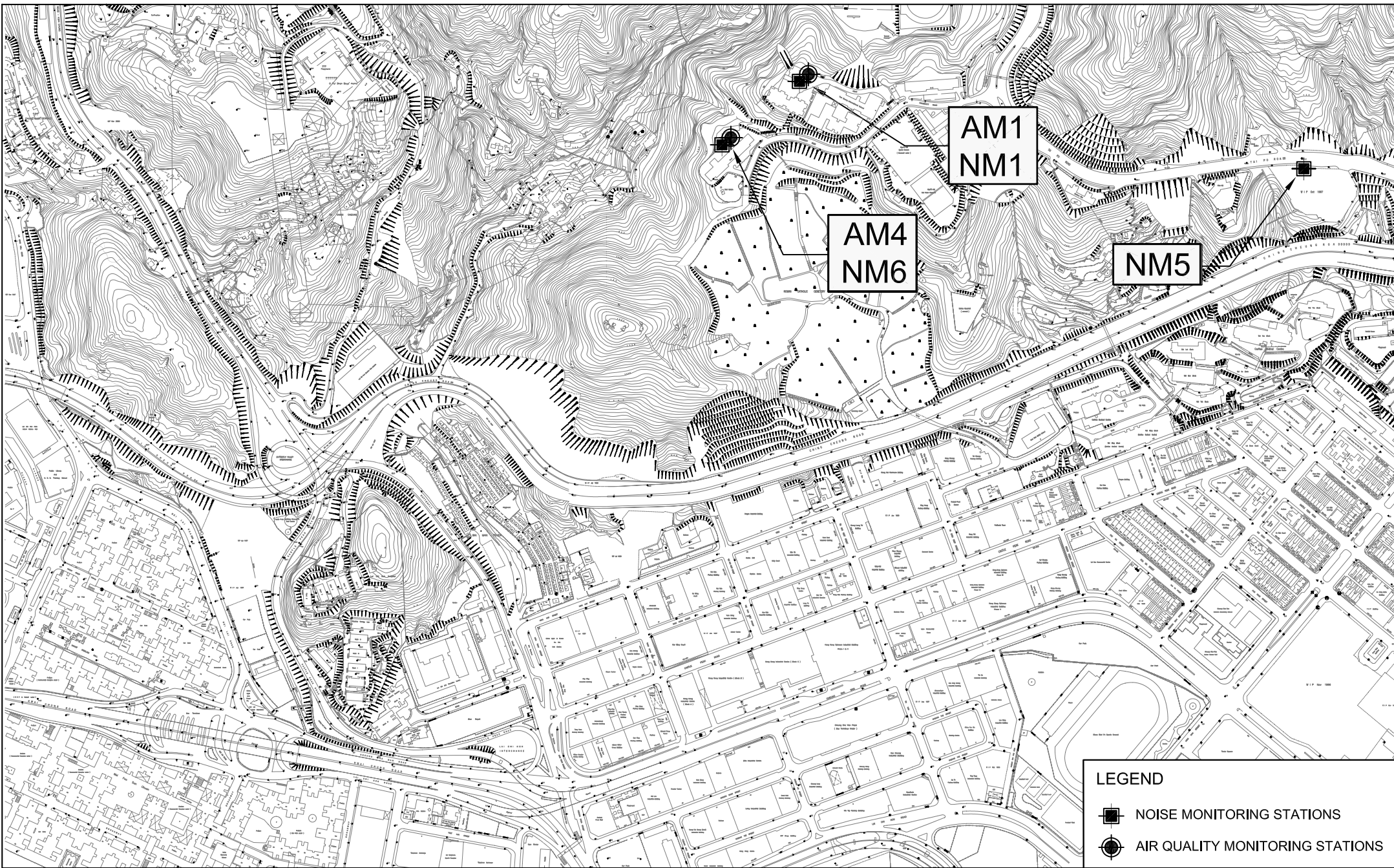
Noise Impact

- To provide temporary noise barriers for noisy activities (such as breaking works).
- To reduce the number of noisy equipment in concurrent operation.

Waste/Chemical Management

- To ensure proper storage of chemical and chemical waste on site.
- To check for any accumulation of waste materials or rubbish on site.
- To avoid any discharge or accidental spillage of chemical waste or oil directly.

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 NO. HY/2003/02 - EAGLE'S NEST TUNNEL AND ASSOCIATED WORKS

LOCATIONS OF MONITORING STATIONS

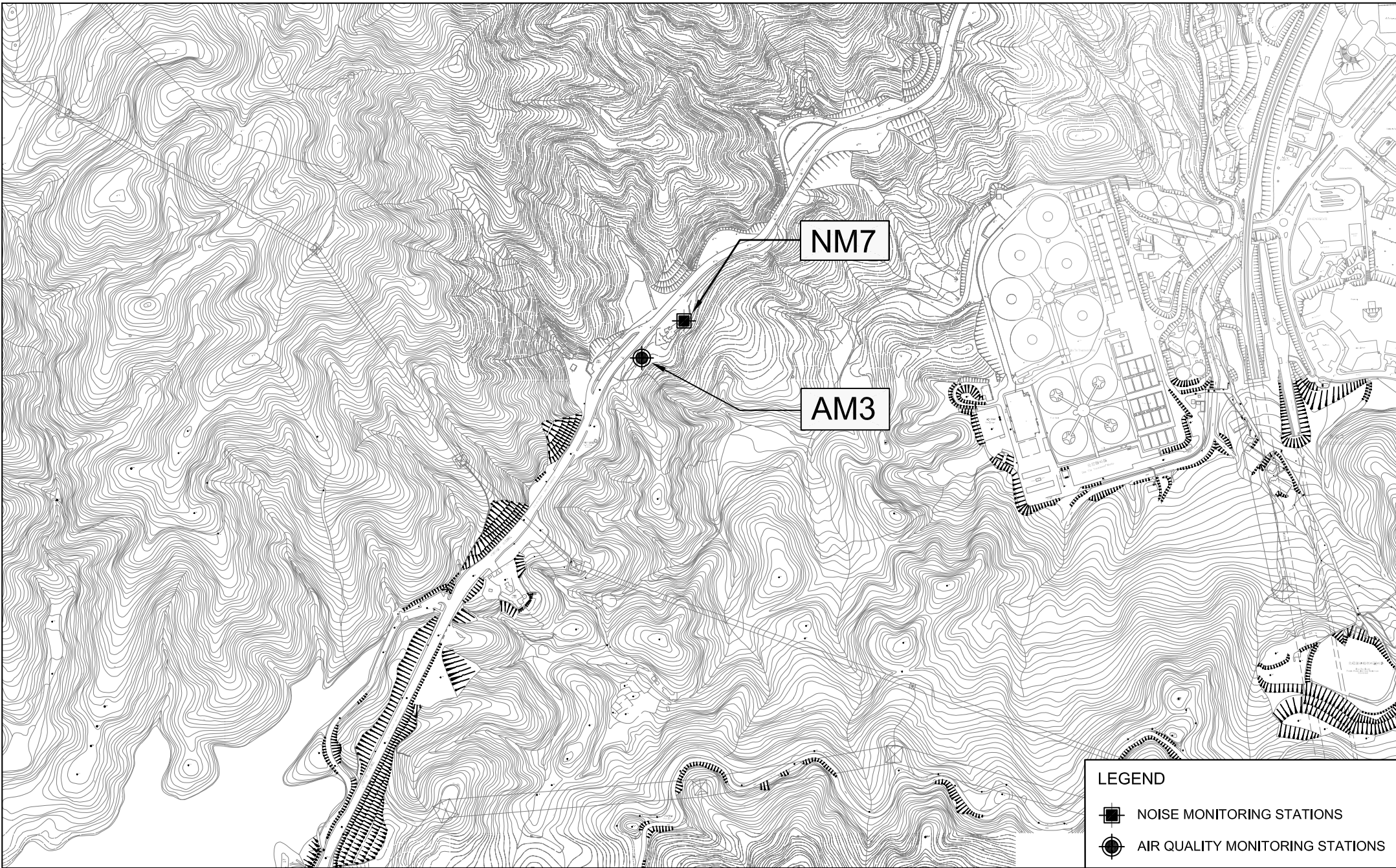
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Project No.
 MA3024

Figure No.
 1a





LEGEND	
	NOISE MONITORING STATIONS
	AIR QUALITY MONITORING STATIONS

Title

ROUTE 8 (PREVIOUSLY KNOWN AS ROUTE 9) BETWEEN CHEUNG SHA WAN AND SHA TIN
 CONTRACT NO. HY/2003/02 - EAGLE'S NEST TUNNEL AND ASSOCIATED WORKS

LOCATIONS OF MONITORING STATIONS

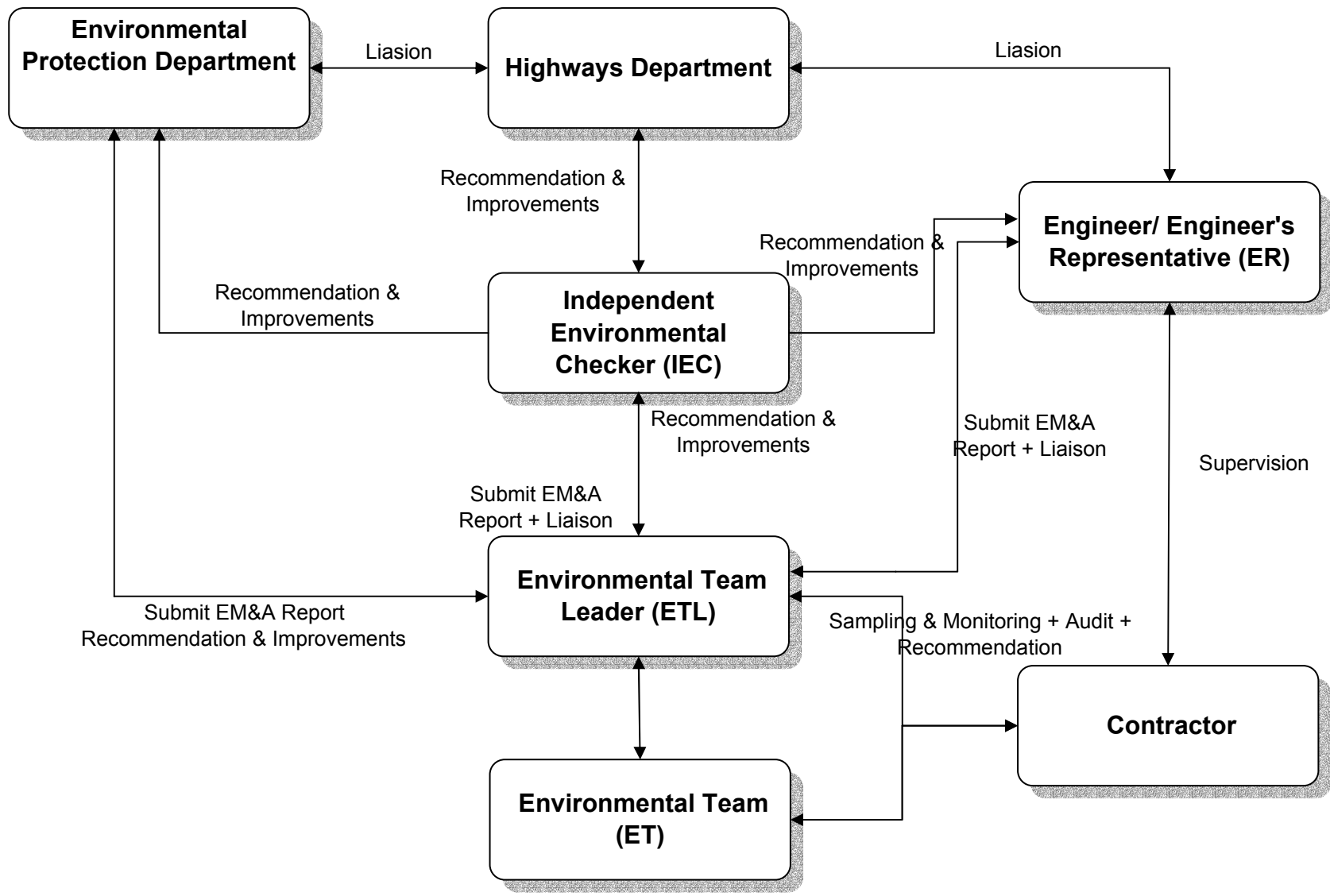
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 2006

Project No.
 MA3024

Figure No.
 1b





Title ROUTE 8 (PREVIOUSLY KNOWN AS ROUTE 9) BETWEEN CHEUNG SHA WAN AND SHA TIN
 CONTRACT NO. HY/2003/02 - EAGLE'S NEST TUNNEL AND ASSOCIATED WORKS

Environmental Monitoring and Audit Organization Chart

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Date 2006

Project No. MA3024

Figure 2



**APPENDIX A
CONTACT DETAILS OF THE PROJECT
ORGANISATION**

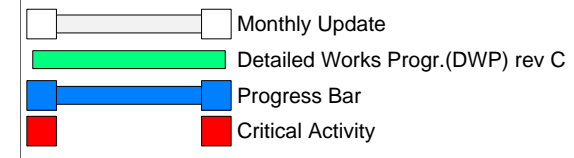
Appendix A - Contact Details of the Project Organisation (ENT)

Party	Role	Name	Position	Phone No.	Fax No.
HyD	Permit Holder	Mr. Kroc Leung	SE2/R8K	2762 3662	2714 5198
		Mr. George Law	E4/R8K	2762 3675	
MHJV	Engineer	Mr. Conrad Ng	Project Manager	2605 6262	2691 2649
	Engineer's Representative	Mr. Peter Poon	CRE	3552 2500	2743 9200
		Mr. Eric Wong	RE (S & EP)	3552 2551	
Ms. Sammie Chan	TO (EN)	3552 2605			
Cinotech	Environmental Team	Dr. Priscilla Choy	ET Leader	2151 2089	3107 1388
		Ms. Grace Wong	Audit Team Leader	2151 2091	
		Mr. Henry Leung	Monitoring Team Leader	2151 2087	
CH2M	Independent Environmental Checker	Mr. Kenneth Luk	Independent Environmental Checker	2507 2209	2507 2293
		Mr. Roy Leung	Assistant Independent Environmental Checker	2872 2931	
LKJV	Contractor	Mr. Ray Brewster	Project Director	9092 6128	2743 1600
		Mr. Danny Cheng	QA/E Manager	3552 2113	
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
Enquiries Hotline				3552 2226	-
Complaint Hotline				3552 2380	-

APPENDIX B
CONSTRUCTION PROGRAMME

Data Date 20SEP07
Run Date 24SEP07 11:18

3 MONTH ROLLING PROGRAMME



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUL		AUG			SEP			OCT			NOV			DEC			JAN	
										46	23	30	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19
GENERAL																												
Contract defined dates, stages and sections																												
Sections of the Works																												
KD12	KD12 - Complete all Toll Plaza Works	0		29SEP07	0	0	0	-214	-247																			
KD14	KD14 - Compl the Works in Portions J2 & J3 (SHT)	0		29SEP07	0	0	0	-309	-242																			
KD15	KD15 - Complete E&M Works in Portions M1,M2&M3	0		29SEP07	0	0	0	-29	-313																			
KD09	KD09 - Complete All BV (Ex KD17 & 20) (25Nov06)	0		05OCT07	0	0	0	-177	-300																			
KD10	KD10 - Complete All Works in F2	0		05OCT07	0	0	0	-253	-238																			
KD11	KD11 - Complete All Works in F3,F5,G and H4)	0		11OCT07	0	0	0	-320	-276																			
KD25	KD25 - Complete E&M in Semi Enclosure C3,C4&I2	0		16OCT07	0	0	0	-325	-297																			
KD17	KD17 - Complete All E&M	0		23OCT07	0	0	0	-214	-223																			
KD23	KD23 - Complete E&M in noise enclosure M1	0		04NOV07	0	0	0	-65	-316																			
Submittals & Approvals																												
+ Drawing Submittal & Approval																												
		957	04AUG04A	03NOV07	22	32	36	18	-412																			
Testing & Commissioning																												
EM5090	completion of Issues from first FSD Inspections	26	02MAY07A	23OCT07	40	0	26	-172	0																			
EM5050	FSD Cert (Form 172) Issued for Entire Project	0		21SEP07	0	0	0	-244	-156																			
EM5080	ENT Tunnel Issue, endorse & submit Form 501 to F	3	28SEP07	02OCT07	0	0	3	45	0																			
LAI CHI KOK VIADUCT																												
Construction Works																												
LCK Viaduct Noise Enclosure 1																												
8332	LckVd NE1-Elect Works 2nd Fix	30	07AUG07A	10SEP07A	100	0	0		-338																			
8352	LckVd NE1 Elect Works Fin Fix	18	07AUG07A	12SEP07A	100	0	0		-322																			
8362	LckVd NE1 Ready for Energization	0		15SEP07A	100	0	0		-243																			
LCK Viaduct Noise Enclosure 2																												
7410	LckVd NE2-Elect Works 2nd Fix	30	30JUL07A	10SEP07A	100	0	0		-338																			
7430	LckVd NE2 Elect Works Fin Fix	18	30JUL07A	12SEP07A	100	0	0		-322																			
7440	LckVd NE2 Ready for Energization	0		15SEP07A	100	0	0		-243																			
LCK Viaduct Noise Enclosure 3																												
6737	LckVd NE3 & Elect Works 1st Fix	36	28AUG07A	24SEP07	95	0	4	50	-344																			
6747	LckVd NE3 Elect Works 2nd Fix	30	07SEP07A	29SEP07	70	0	8	46	-324																			
6767	LckVd NE3 Elect Works Fin Fix	18	07SEP07A	29SEP07	60	0	8	-53	-310																			
6777	LckVd NE3 Ready for Energization	0		29SEP07	0	0	0	-53	-254																			
Testing & Commissioning																												
LCK Viaduct Structure																												
Statutory Inspections																												
106741	LckVd-E&M Statutory Insp. LCK Noise Enclosures	12	24OCT07	04NOV07	0	0	12	-65	-316																			



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LEIGHTON - KUMUGAI JV
R8 - EAGLES' NEST TUNNEL
CONTRACTORS TARGET PROGRAMME REV.1

Proj. Name: W35E
Layout: 3 MONTHS ROLLING PROGRAMME
Filter: 3 MONTH ROLLING PROGRAMME
Current Proj: W35E
Target 1 Proj: BE02
Sheet 1 of 7

LKVJ/ENT/DWP/B			
Date	Revision	Checked	Approved
20FEB07	Prog update Feb 07	GW	RB

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUL		AUG				SEP				OCT				NOV				DEC				JAN																		
										46	23	30	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14														
Test on Completion																																																		
106740	LckVd NE 2 - Elect T&C	18	20SEP07	07OCT07	0	0	18	-49	-303																																									
108344	LckVd NE 1 (Excision) - Elect T&C	18	20SEP07	07OCT07	0	0	18	-49	-303																																									
106750	LckVd NE 3 - Elect T&C	18	02OCT07	23OCT07	0	0	18	-53	-254																																									
BUTTERFLY VALLEY																																																		
Contract Key Dates & Milestones																																																		
Area Access & Vacation Dates																																																		
ACS_A	Access to Portions - A	0	20OCT03A		100	100	0		-504																																									
Construction Works																																																		
BUTTERFLY VALLEY 3RD PARTY WORKS																																																		
Noise Barrier Works by ACCIONA																																																		
S2562	Access for 7m N.B. Works by Acciona at BV South	77	23JUN06A	13OCT07	30	0	19	35	-320																																									
S2662	Access for 5m N.B. Works by Acciona at BV South	90	27SEP06A	08NOV07	0	0	40	14	-296																																									
BUTTERFLY VALLEY E&M WORKS																																																		
Noise Enclosure 6 at South Portal Area																																																		
8372	LckVd NE6 - Elect Works 1st Fix	30	10JUL07A	20SEP07	99	0	1	-264	-261																																									
8382	LckVd NE6 - Elect Works 2nd Fix	24	01AUG07A	28SEP07	99	0	1	-264	-261																																									
8402	LckVd NE6 - Elect Works Fin Fix	12	15AUG07A	28SEP07	99	0	1	-264	-255																																									
8412	LckVd NE6 - Ready for Energization	0		29SEP07	0	0	0	-264	-255																																									
108347	NE 6 (Excision) - Elect T&C	18	29SEP07	16OCT07	0	0	18	-325	-314																																									
Butterfly Valley Miscellaneous E&M Works																																																		
8410	Butterfly valley - Elect Works Fin Fix	24	22JAN07A	29SEP07	98	0	8	46	-266																																									
8420	Butterfly Valley - Cabling	24	25JAN07A	29SEP07	98	0	8	46	-266																																									
EARTHWORKS & SLOPEWORKS																																																		
SLOPE SP-S2 & SP-S3																																																		
S2370	Remaining Works to Slopes SP-S3 & SP-S2	24	19JUL06A	05OCT07	25	0	12	-146	-382																																									
SLOPE SP-S1																																																		
SURFACE DRAINAGE																																																		
103711	Sp-S1/4 Surface Drainage	7	06JUL04A	29SEP07	95	40	8	-142	-413																																									
ROADWORKS - North End of BV																																																		
Road Pavement & Associated Work																																																		
S2920	Road Works to East Loop Rd Typ III (EVA)	13	15FEB07A	29SEP07	50	0	8	-142	-371																																									
S3010	Installation of Road Signage (Sign Plates Only)	11	20SEP07	04OCT07	0	0	11	-103	-260																																									
S2900	Road Marking & White Lining (Staged for Access)	18	02OCT07*	23OCT07	0	0	18	28	-275																																									
S3660	NEW ACTIVITY - Road Pavement Friction Course	6	31JUL07A	27SEP07	50	0	6	-142	0																																									
Miscellaneous Works																																																		
S2690	Installation of Drip Feed Irrigation System	12	24MAR07A	20SEP07	98	0	1	-135	-256																																									
S3000	Construct Recreated Stream	25	01JUN07A	29SEP07	40	0	8	-142	-333																																									
ROADWORKS - South End of BV																																																		
Road Pavement & Associated Work																																																		
S3190	Installation of Road Signage (Sign Plates Only)	11	20SEP07	04OCT07	0	0	11	-103	-246																																									
S2990	Road Marking & White Lining (Staged Access)	18	02OCT07*	23OCT07	0	0	18	28	-261																																									
S3670	NEW ACTIVITY - Road Pavement Friction Course	2	28SEP07*	29SEP07	0	0	2	-142	0																																									
DSD MAINTENANCE ROAD																																																		
DSD Maintenance Rd DSD1-1 (Acciona Interface)																																																		
S3570	WSD Slope Reinstatement	18	08JUN07A	29SEP07	0	0	8	-142	-360																																									
DSD Maintenance Rd DSD1 (Parallel to Channel)																																																		
S2730	Construct Recreated Stream	45	27MAR07A	29SEP07	90	0	8	-142	-267																																									
S2700	Access rd DSD1 -barrier footings	6	20SEP07	27SEP07	0	0	6	-144	-363																																									
S2720	Access rd DSD1 - Barriers	6	26SEP07	03OCT07	0	0	6	-144	-355																																									

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUL		AUG				SEP				OCT			NOV				DEC			JAN							
										46	16	23	30	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14
										52																											
ARCHITECTURAL																																					
2043	VA Bldg. - Initial deliv exp metal mesh cladding	0	08SEP07A		100	0	0		-317																												
CONSTRUCTION WORKS																																					
EXTERNAL WORKS																																					
Drainage																																					
S1970	Storm Drain & Gullies at Access Apron	24	14APR07A	29SEP07	80	0	8	46	-355																												
Ducting & Drawpits																																					
S1980	HGC Ducting & Drawpits	18	16APR07A	29SEP07	80	0	8	-247	-295																												
Watermain Works																																					
S1990	Irrigation Pipework	14	21MAY07A	21AUG07A	100	0	0		-280																												
Road Pavement & Associated Work																																					
S1920	Preparation and Block Paving	22	13JUN07A	06OCT07	60	0	13	-258	-252																												
S1930	Signage, furniture and finishes	24	20JUL07A	22OCT07	50	0	11	-258	-240																												
VENTILATION BUILDING																																					
VA Building - ABWF																																					
VA Building - External Finishes																																					
T3120	VA Bldg. - Alum Comp Panel Cladding to Ext Walls	60	21FEB07A	23AUG07A	100	0	0		-247																												
T2140	VA Bldg. - Aluminium/Slate Cladding	32	18JUL07A	05OCT07	80	0	12	42	-295																												
T3100	VA Bldg. - Balustrades	11	20AUG07A	04OCT07	0	0	11	-246	-325																												
T2110	VA Bldg. - Expanded metal cladding to Ext Walls	18	20SEP07	12OCT07	0	0	18	36	-323																												
E & M WORKS																																					
Statutory Inspection & Issued Certificates																																					
EM3001	Submit Form WWO46 for Water Supply to WSD	30	17MAR07A	21SEP07	50	0	2	52	-215																												
EM3003	Water Supply Certificate issued	0		21SEP07	0	0	0	52	-215																												
EXTERNAL AREAS																																					
LANDSCAPING & ESTABLISHMENT WORKS																																					
T3180	Planting Works	18	02SEP06A	29SEP07	95	0	8	-250	-295																												
T3200	Establishment Works	365	30SEP07	28SEP08	0	0	365	-309	-365																												
ENT NORTH PORTAL VENTILATION BUILDING																																					
PROCUREMENT - MATERIAL																																					
ABWF WORKS																																					
1981	NP.Bldg. - Procure expanded metal cladding	180	06JUN05A	11SEP07A	100	50	0		-396																												
2066	NP.Bldg. - Initial deliv expanded metal cladding	0	11SEP07A		100	0	0		-319																												
CONSTRUCTION																																					
North Portal Bldg. - CIVIL & ABWF WORKS																																					
ABWF WORKS																																					
NP Bldg - Roofing & External Facade																																					
T1800	Ent NPB - Roof Waterproofing & Test	12	20OCT06A	19SEP07A	100	0	0		-374																												
T1790	Ent NPB - GMS,S/S Channel, Balustrade & Railing	24	05MAR07A	29SEP07	85	0	8	-175	-328																												
T1780	Ent NPB - Slate replacement cladding above NB/SB	36	09JUL07A	29SEP07	95	0	8	46	-325																												
T1770	Ent NPB - Expanded metal cladding to Ext Walls	18	12SEP07A	05OCT07	15	0	12	42	-303																												
TOLL PLAZA & ANCILLIARY STRUCTURES																																					
Construction Works																																					
TOLL PLAZA EAST SIDE																																					
S1420	Road Pavement Surfacing (Flex & Rigid)	56	18OCT06A	29SEP07	87	0	8	-175	-279																												
K1192	East Loop Road - Formation & Roadworks	36	12JAN07A	29SEP07	95	0	8	-175	-254																												
S1140	Furniture, signage (face only), white lining	18	02OCT07	23OCT07	0	0	18	-151	-279																												
TOLL PLAZA WEST SIDE																																					
S1310	Road Pavement Surfacing	57	07MAR07A	29SEP07	90	0	8	-175	-246																												
K1171	West Loop road - Roadworks	36	12MAR07A	29SEP07	95	0	8	-175	-345																												

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUL							AUG							SEP							OCT							NOV							DEC							JAN						
										46			47				48				49				50					51					52																							
										16	23	30	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14																						
Admin Bldg (2/F) - Internal Work @ Grid 1 to 18																																																										
T3065	AB 2/F (Corridor & Cont Rm) - Ceiling Panels	18	10JUL07A	05SEP07A	100	0	0		-258																																																	
T2028	AB 2/F (Grid 1-18) - Proprietary Toilet Cubicle	10	20SEP07A	20SEP07	50	0	1	-168	-361																																																	
T2068	AB 2/F (Grid 1-18) - Floor Carpets	12	20SEP07	05OCT07	0	0	12	-137	-300																																																	
T3068	AB 2/F (Corridor & Cont Rm) - Floor Carpets	12	20SEP07	05OCT07	0	0	12	42	-288																																																	
Admin Bldg (Roof/Flr) - Inter Works Grid 3 to 16																																																										
T2235	AB R/F (Grid 3-16) - Door Leaf & Final Paints	6	22DEC06A	20AUG07A	100	0	0		-307																																																	
Admin Bldg - Upper Roof & External Facade																																																										
T2340	AB Ext (GL 11-21) - Slate R replacement Cladding	30	03APR06A	05OCT07	70	30	12	42	-403																																																	
T2860	AB Ext (GL 11-21)- Install Louvres & Wdw Glazing	60	03APR06A	10SEP07A	100	70	0		-386																																																	
T2230	AB Ext (GL 6-11) - Curtain Wall & Glass Canopy	30	03JUL06A	10SEP07A	100	0	0		-332																																																	
T2330	AB Ext (GL 1-11) - Slate replacement Cladding	45	15OCT06A	05OCT07	70	0	12	42	-358																																																	
T2900	AB Ext UR/LR - Insulation & Conc Roof Tile	30	06NOV06A	29SEP07	70	0	8	-129	-336																																																	
T2350	AB Ext (GL 1-11) - Ceramic Wall Tiles	30	18DEC06A	05SEP07A	100	0	0		-329																																																	
T2830	AB Ext (GL 11-21) - Ceramic Wall Tiles	30	20MAR07A	05SEP07A	100	0	0		-359																																																	
T2270	AB Ext (GL 3-11) - Expanded metal mesh cladding	18	20SEP07*	12OCT07	0	0	18	-167	-310																																																	
T2280	AB Ext (GL 11-16) - Expanded metal mesh cladding	18	20SEP07*	12OCT07	0	0	18	-167	-334																																																	
T2915	AB Ext UR/LR- Install GMS, Balustrades & Railing	18	20SEP07	12OCT07	0	0	18	-143	-307																																																	
BUILDING SERVICES																																																										
Admin Bldg (Int. & Ext. Roof Lvl) - E & M Works																																																										
EM3600	BS Works in R/F	78	06JUN06A	22SEP07	98	1	3	51	-342																																																	
EM3190	Admin Bldg - Lift Installation	72	19JUN06A	20AUG07A	100	0	0		-230																																																	
Admin Bldg - Statutory Inspection and Handover																																																										
EM3370	Admin Bldg - Lift Commissioning	24	01SEP07A	12SEP07A	100	0	0		-226																																																	
SHATIN HEIGHTS SOUTH PORTAL BUILDING																																																										
CONTRACT DEFINED DATES & SECTIONS																																																										
AREA ACCESS & VACATION DATES																																																										
ACS_J2	Access to - J2 (T.Plate & above) SH-S.Vent.Bldg.	0	10DEC05A		100	100	0		-504																																																	
ACS_D8	Access to Portion - D8	0	03JAN06A		100	100	0		-504																																																	
CONSTRUCTION																																																										
CIVIL & ABWF WORKS																																																										
ABWF																																																										
ABWF at 4F and above																																																										
AB6004	Initial Finishes to 4/F and above	24	13APR06A	29SEP07	95	10	8	46	-385																																																	
Roof & External Facade																																																										
AB6077	Sht SPB - Alum. composite cladding to ext walls	60	07AUG06A	29SEP07	98	0	8	-250	-278																																																	
AB6047	Sht SPB - GMS, S/S Channel, Balustrade & Railing	18	14AUG06A	27SEP07	95	0	6	48	-338																																																	
AB6007	Sht SPB - Slate Cladding above NB/SB Carriageway	36	12FEB07A	29SEP07	90	0	8	46	-346																																																	
AB6034	Sht SPB - Expanded metal cladding to ext walls	18	20SEP07*	12OCT07	0	0	18	-218	-328																																																	
SHT TUNNEL																																																										
STATUTORY INSPECTIONS																																																										
FSD INSPECTIONS																																																										
EM5040	SHT Tunnel FSD Insp.	3	15AUG07A	21SEP07	100	0	2		-222																																																	
SHT NORTH PORTAL BUILDING																																																										
CONSTRUCTION																																																										
CIVIL & ABWF WORKS																																																										
ABWF Works																																																										
Roofing & External Facade																																																										
AB7280	Sht NPB - Alum. composite cladding to ext walls	60	16OCT06A	27SEP07	98	0	6	-248	-276																																																	
AB7270	Sht NPB - Roof Waterproofing & Test	12	22DEC06A	30AUG07A	100	0	0		-368																																																	

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUL			AUG				SEP			OCT			NOV				DEC			JAN	
										46	47		48		49			50				51			52						
										,16	23	30	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	3	10
Roofing & External Facade																															
AB7310	Sht NPB - Slate Cladding above NB/SB Carriageway	36	12FEB07A	29SEP07	90	0	8	-218	-337																						
AB7250	Sht NPB - GMS, S/S Channel, Balustrade & Railing	18	16APR07A	27SEP07	95	0	6	48	-317																						
AB7220	Sht NPB - Expanded metal cladding to Ext Walls	18	20SEP07*	12OCT07	0	0	18	-218	-328																						
SHT RC ENCLOSURE & T3 UNDERPASS																															
CONSTRUCTION WORKS																															
SHT RC FULL ENCLOSURE / T3 UNDERPASS																															
STN RC FULL ENCLOSURE (North Bound) - E&M WORKS																															
MVAC / Tunnel Ventillation System																															
280006	RCFE NB - Cabling, wiring and termination	24	25NOV06A	20AUG07A	100	0	0		-297																						
Fire Protection System																															
280026	RCFE NB - FS Conduit, Hose Reel Cabinets & Eqpt.	16	31JUL06A	20AUG07A	100	0	0		-310																						
280030	RCFE NB - FS Wiring & Termination	24	28FEB07A	20AUG07A	100	0	0		-282																						
280032	RCFE NB - FS Testing and T&C	12	25MAY07A	20AUG07A	100	0	0		-209																						
280029	RCFE NB - Install Smoke detector @ N1-N3	10	01AUG07A	20AUG07A	100	0	0		-300																						
Electrical Works																															
280040	RCFE NB - Install Power Distn Panels & Test	30	13MAR07A	20AUG07A	100	0	0		-284																						
STN RC FULL ENCLOSURE (South Bound) - E&M WORKS																															
MVAC / Tunnel Ventillation System																															
280088	RCFE SB - Cabling, wiring and termination	24	21FEB07A	20AUG07A	100	0	0		-297																						
Fire Protection System																															
280096	RCFE SB - FS Conduit, Hose Reel Cabinets & Eqpt.	16	01NOV06A	20AUG07A	100	0	0		-347																						
280102	RCFE SB - FS Wiring & Termination	24	28FEB07A	20AUG07A	100	0	0		-319																						
280104	RCFE SB - FS Testing and T&C	12	25MAY07A	20AUG07A	100	0	0		-209																						
Electrical Works																															
280114	RCFE SB - Install Power Distn Panels & Test	30	10MAR07A	20AUG07A	100	0	0		-284																						
T&C and Inspections																															
SHT RC Full Enclosure / T3 Underpass																															
Statutory Inspection and Certs.																															
EM5070	FSD insp. (SHT RC Enclosure & T3)	2	15AUG07A	23AUG07A	100	0	0		-142																						



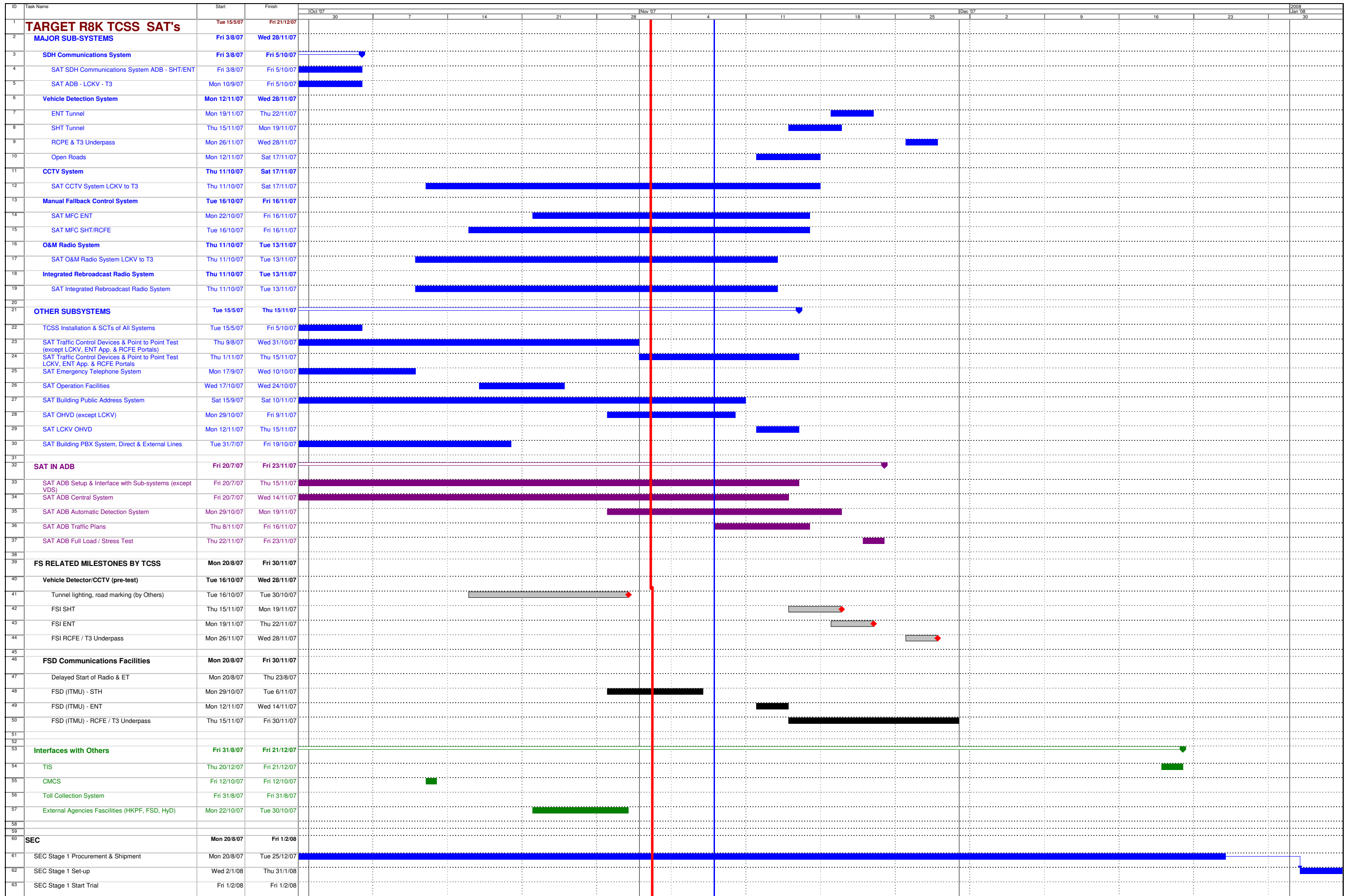
5-week Rolling Programme of Site Works
Rev: 0

Table with columns for Item No., Civil Area, Portion, Work Area, Activity, [8]Type of major equipment / plant to be used, and a weekly grid for activities from Sep-07 to Oct-07. Activities include Pesticide spraying, Material preparation, Routine Checkings, Cable laying, and various equipment installations.

Legend:
Planned activity (blue)
Work Done (yellow)
Public Holiday (orange)
R - Re-scheduled
N - New activity
A - Awaiting spatial co-ordination for TCSS installation

Note:
[1] Works depends on spatial co-ordination among related Main Contractor and TCSS.
[2] Works Subject to Traffic Tube arrangement
[3] Works subject to condition of site access & civil provision.
[4] Works depend on Civil Contractor to complete / rectify their provision

Distribution: Arup-Johnny Mac, Hara,Alex C, Franco L, Hamlyn K, Joseph C, KT Chan, Patrick L, Simon Cheung, Philip C, PF Li, Sharon H, Tony C, Wilson W, Winnie M, Donald L, Johnny L, Kenny C, Thomas Wong, Andy Wong
Remark: 1) The schedule only shows the anticipated works planned and shall be subject to changes which will be reported by daily labour forecast on ad-hoc bases.
2) Should it have any query on the above activity, please approach the following personnel.
R8K : KY Chan / J. Lam / A. Luk ; R8T: KY Chan / A. Kan / CK Fung / A. Luk
R8K / R8T - SCT / SAT: KY Chan / YS Ma / HF Leung



APPENDIX C
MONITORING REQUIREMENTS

Appendix C - Environmental Impact Monitoring Requirements for Eagle's Nest Tunnel and Associated Works

Type of Monitoring	Parameter	Frequency	Location	Measurement Conditions
Air Quality	1-hour TSP	3 times every 6 days	<ul style="list-style-type: none"> AM1⁽³⁾ (Yew Chung Internation School / PLK Choi Kai Yau School) AM3⁽⁴⁾ (Garden Villa) AM4 (Government Quarters) 	<ul style="list-style-type: none"> AM1 – Rooftop⁽³⁾ AM3 – On ground AM4 – Ground floor close to the refuse collection station of Government Quarters
	24-hour TSP	Once every 6 days		
Noise	L _{eq} , L ₉₀ & L ₁₀ at 30 minute intervals during (0700 to 1900 on normal weekdays)	Once per week	<ul style="list-style-type: none"> NM1⁽³⁾ (Yew Chung Internation School / PLK Choi Kai Yau School) NM5 (Villa Carlton) NM6 (Government Quarters) NM7 (Garden Villa) 	<ul style="list-style-type: none"> NM1 – Rooftop (Façade measurement)⁽³⁾ NM5 – Ground Floor⁽²⁾ - (Façade measurement) NM6 – Rooftop of Refuse Collection Station (Free field measurement) NM7 – Rooftop (Façade measurement)
	L _{eq} , L ₉₀ & L ₁₀ at 5 minute intervals during (1900 to 2300) ⁽¹⁾	Once per week (include 3 consecutive 5-min measurements)		
	L _{eq} , L ₉₀ & L ₁₀ at 5 minute intervals during (2300 to 0700 of next day) ⁽¹⁾	Once per week (include 3 consecutive 5-min measurements)		
	L _{eq} , L ₉₀ & L ₁₀ at 5 minute intervals during (0700 to 1900 on holidays) ⁽¹⁾	Once per week (include 3 consecutive 5-min measurements)		

⁽¹⁾ – Conduct noise monitoring only when construction work is carried out.

⁽²⁾ – The measurement was taken at 2.3 m above ground floor of Villa Carlton, where has a line of sight of the construction site in the opposite.

⁽³⁾ – Yew Chung International School / PLK Choi Kai Yau School (Station AM1 and NM1) had ceased operated and been demolished since February 2007. The monitoring at AM1 and NM1 has been suspended since February 2007, as approved by EPD on 26th April 2007.

⁽⁴⁾ – Station AM3 was relocated from Garden Villa to the nearby slope no. 07SW-D/FR4 and the monitoring was resumed on 14 February 2005.

**APPENDIX D
ENVIRONMENTAL QUALITY
PERFORMANCE (ACTION/LIMIT)
LEVELS**

Appendix D - Action and Limit Levels (ENT)

1-Hour TSP

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM1	296	500
AM3	350	
AM4	294	

24-Hour TSP

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM1	168	260
AM3	200	
AM4	170	

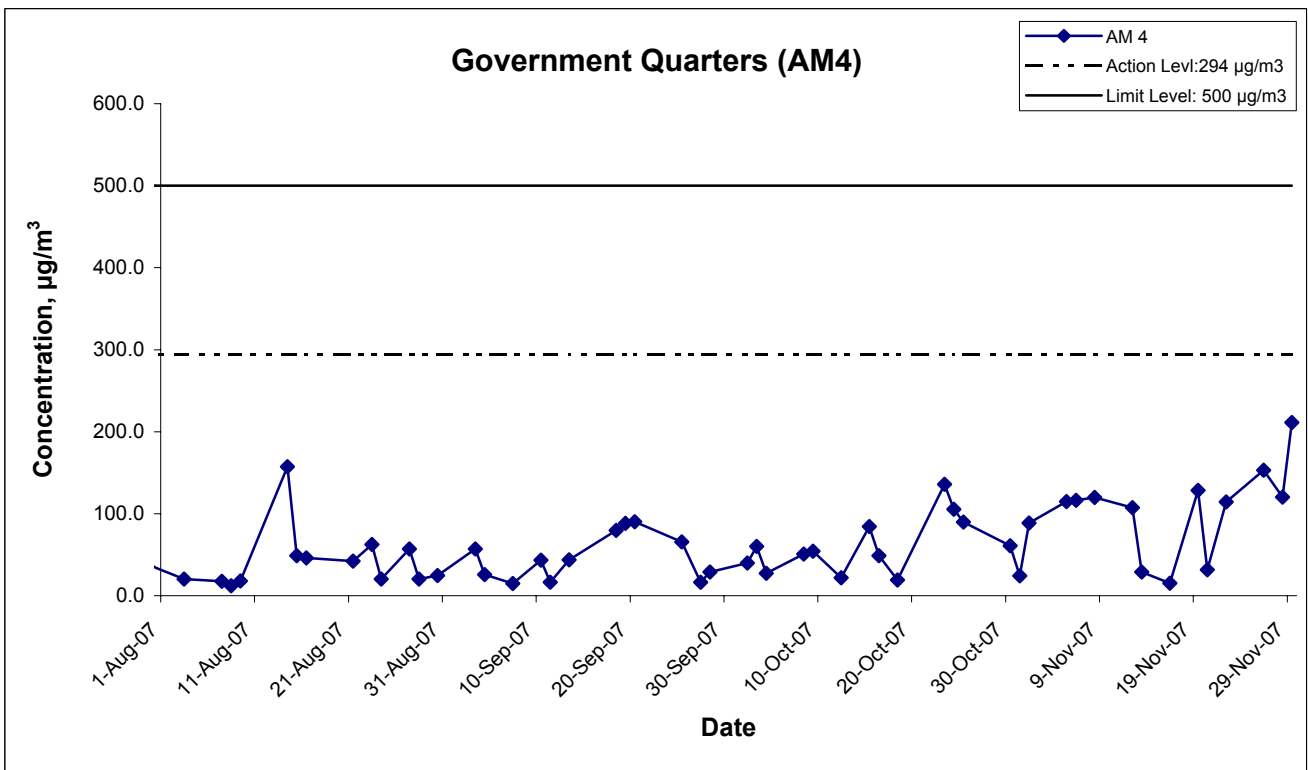
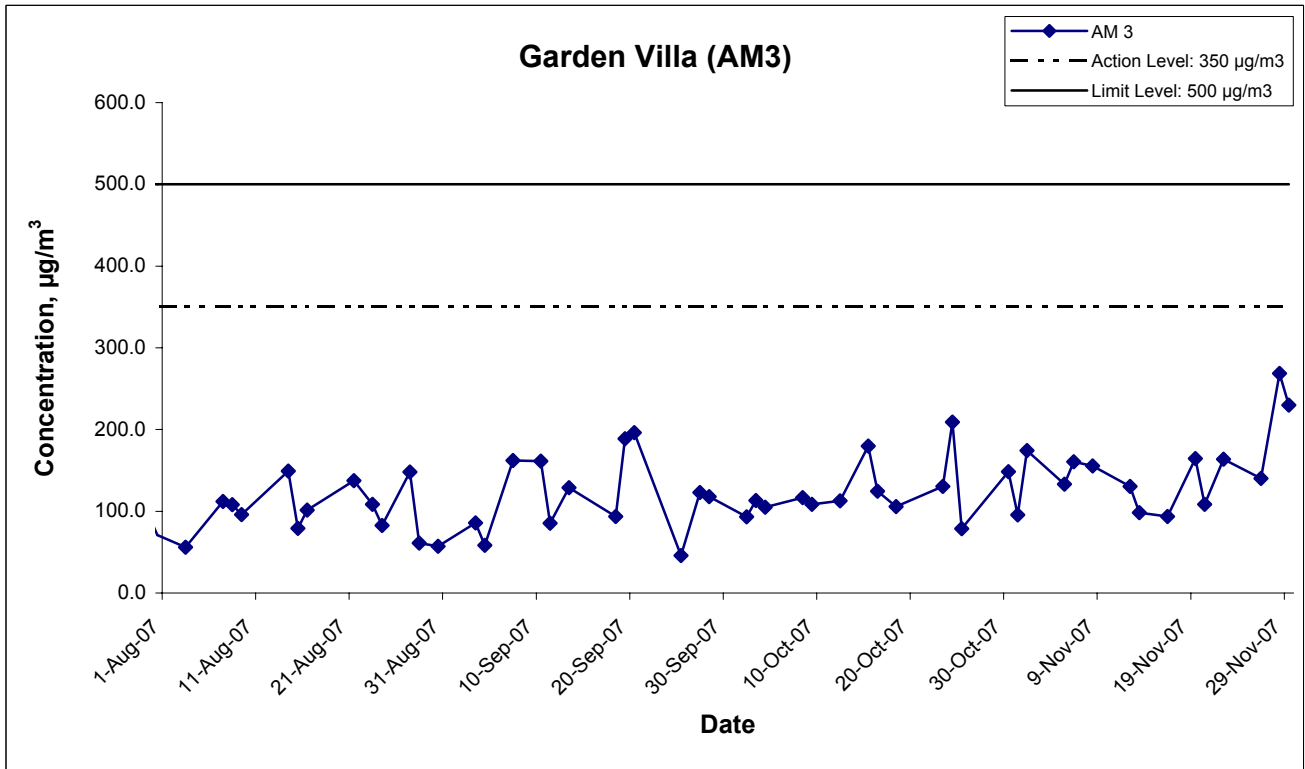
Construction Noise

Period	Action Level	Limit Level, dB(A)			
	for all stations	NM1	NM5	NM6	NM7
0700-1900 hrs on normal weekdays	When one documented complaint is received	70/65*	75	75	75
0700-2300 hrs on holidays & 1900-2300 hrs on all other days		-	70	65	60
2300-0700 hrs of next day		-	55	50	45

- (*) Since NM1 is an educational institution, the noise Limit Level (0700-1900 hrs on normal days) is taken as 70 dB(A). The Limit Level will be reduce to 65 dB(A) during school examination periods.

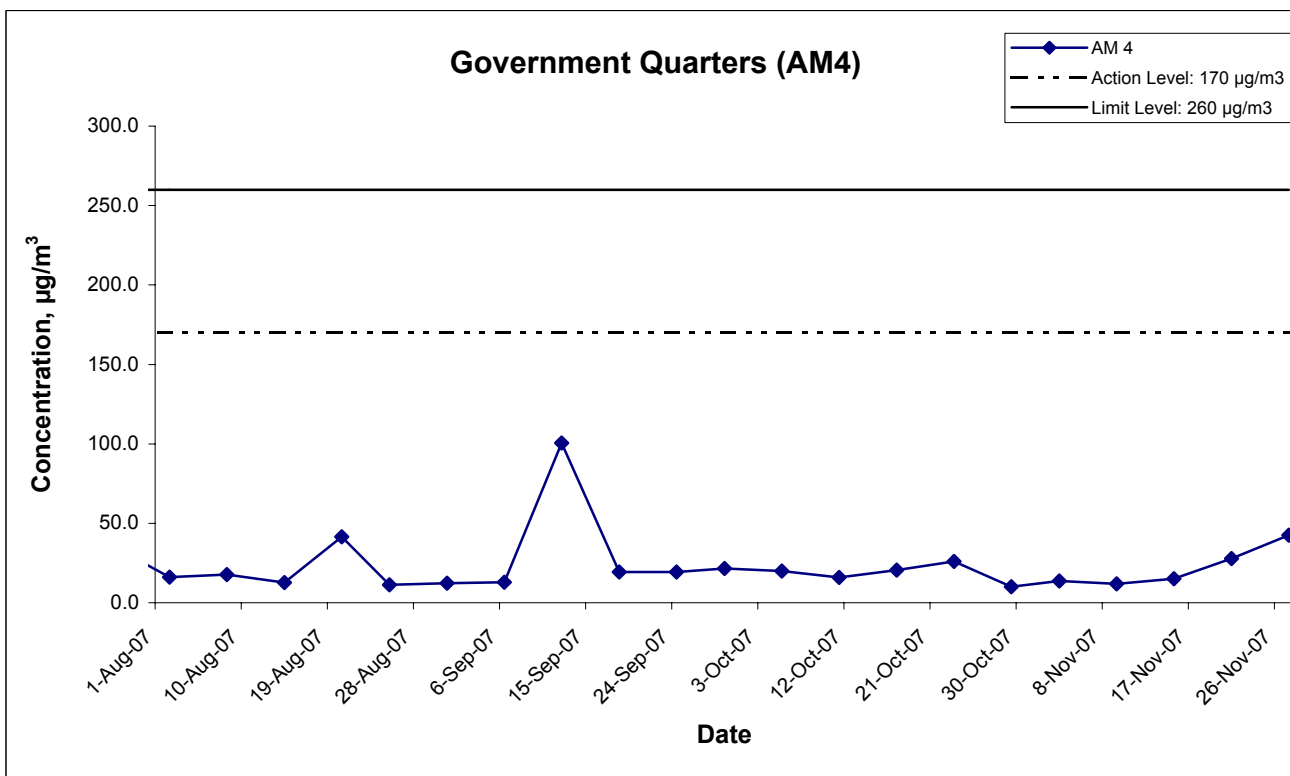
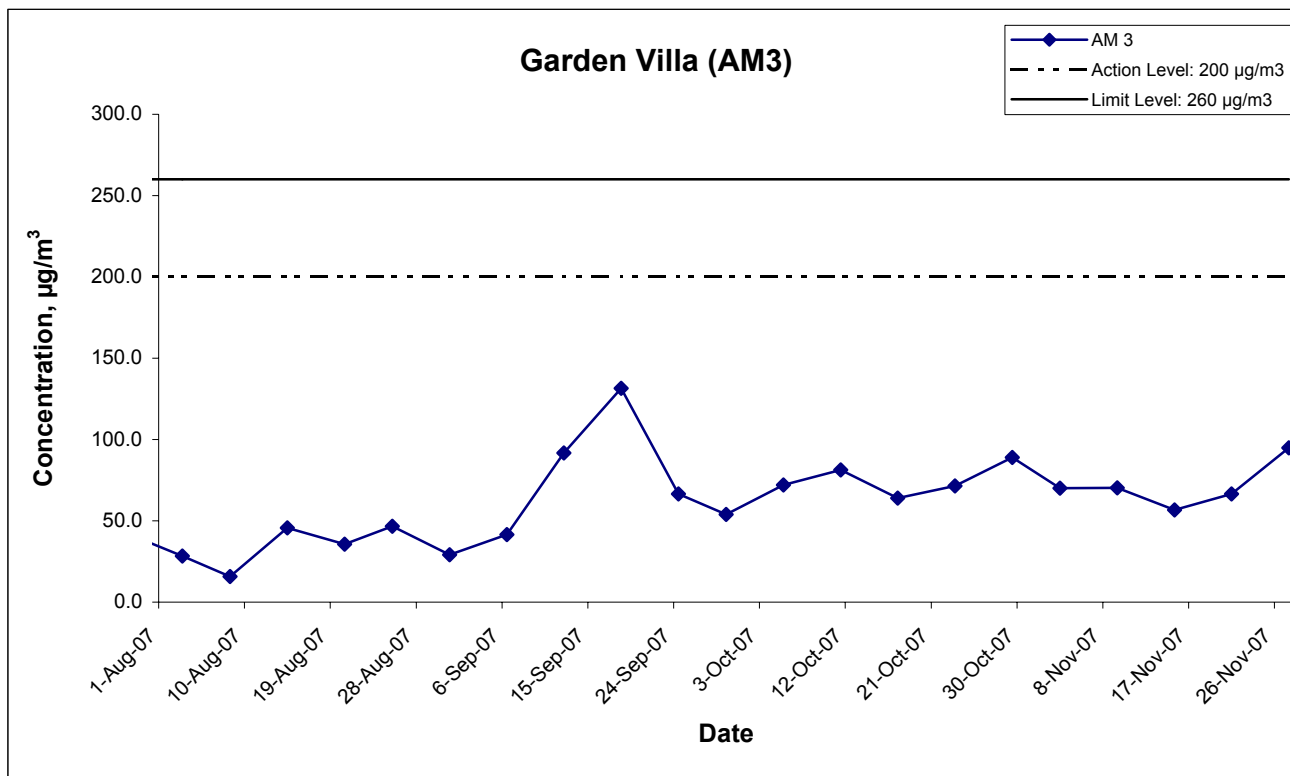
**APPENDIX E
GRAPHICAL PRESENTATION OF AIR
QUALITY MONITORING RESULTS**

1-hr TSP Levels



Title Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/02 - Eagle's Nest Tunnel and Associated Works Graphical Presentation of 1-hour TSP Impact Monitoring Results	Scale N.T.S	Project No. MA3024	
	Date Nov 07	Appendix E	

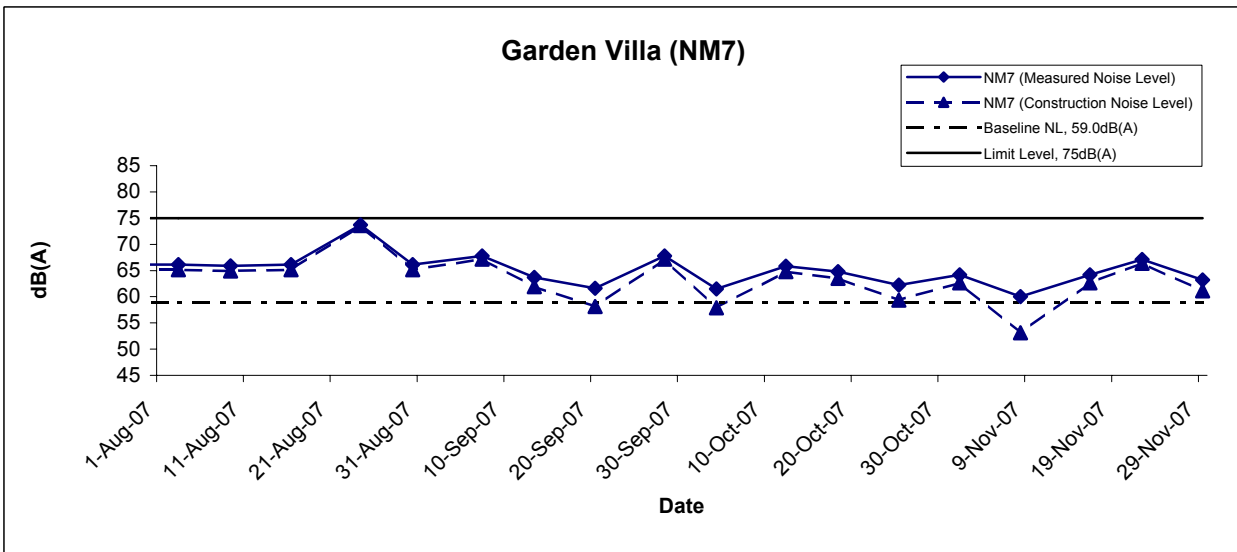
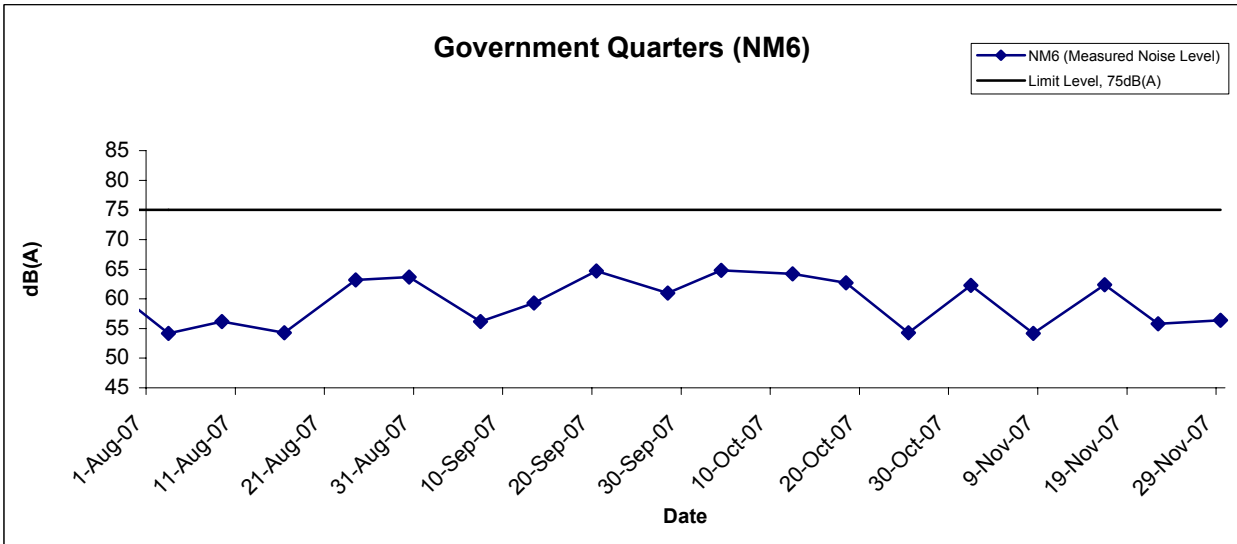
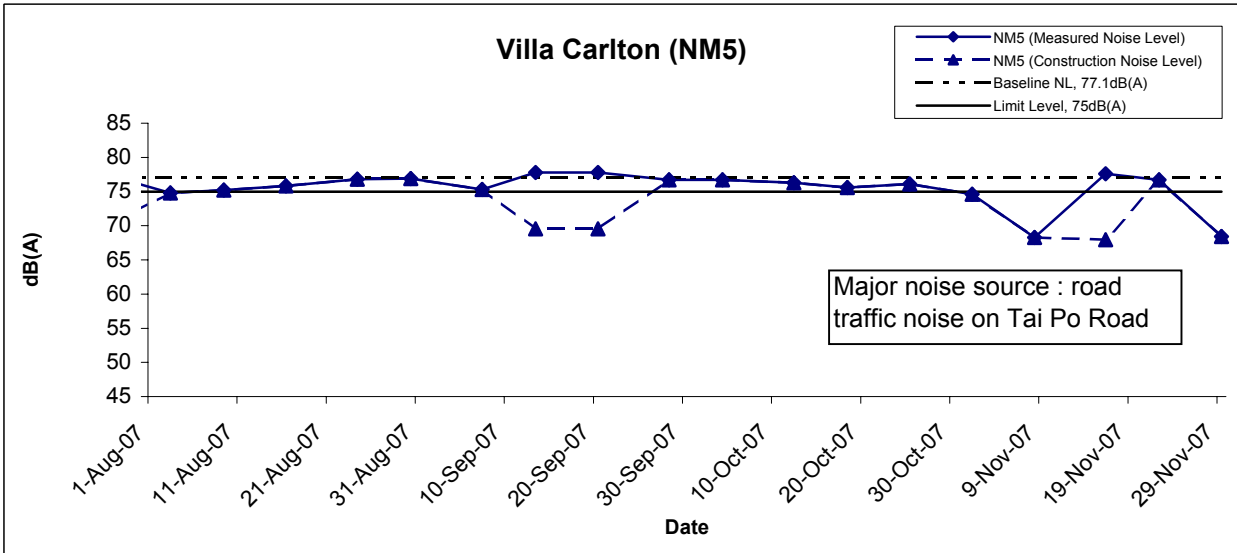
24-hr TSP Levels



Title Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/02 - Eagle's Nest Tunnel and Associated Works Graphical Presentation of 24-hour TSP Impact Monitoring Results	Scale N.T.S	Project No. MA3024	CINOTECH
	Date Nov 07	Appendix E	

**APPENDIX F
GRAPHICAL PRESENTATION OF
NOISE MONITORING RESULTS**

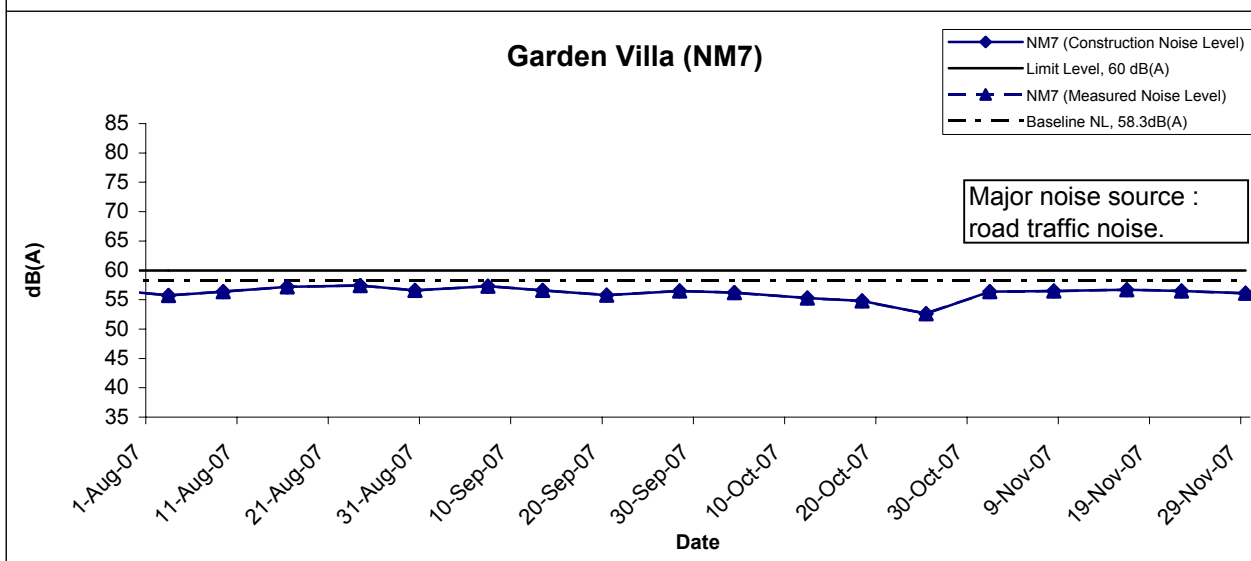
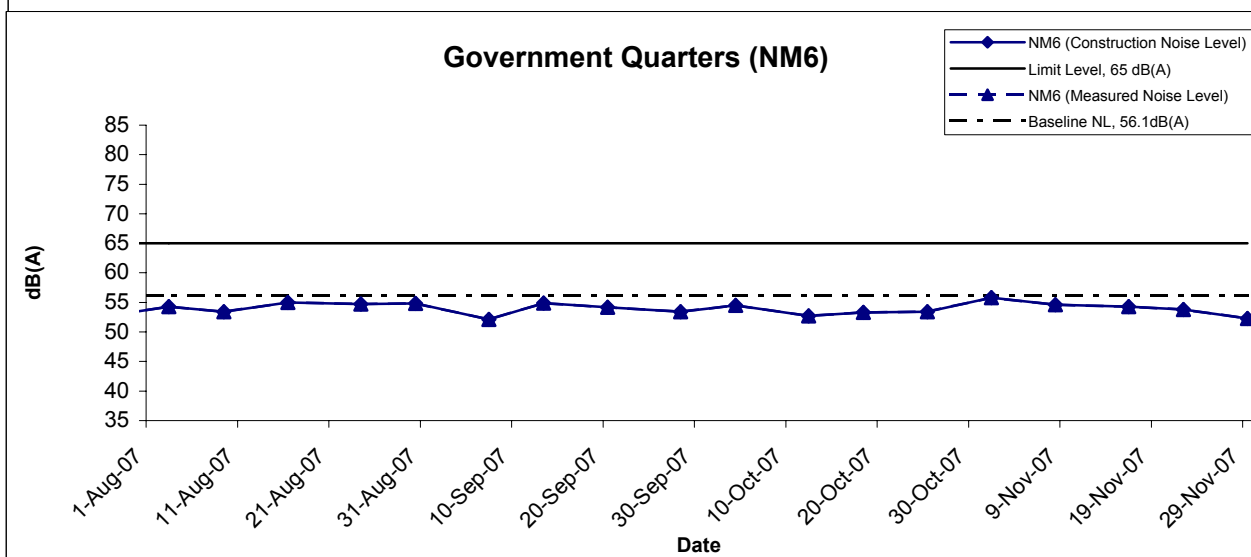
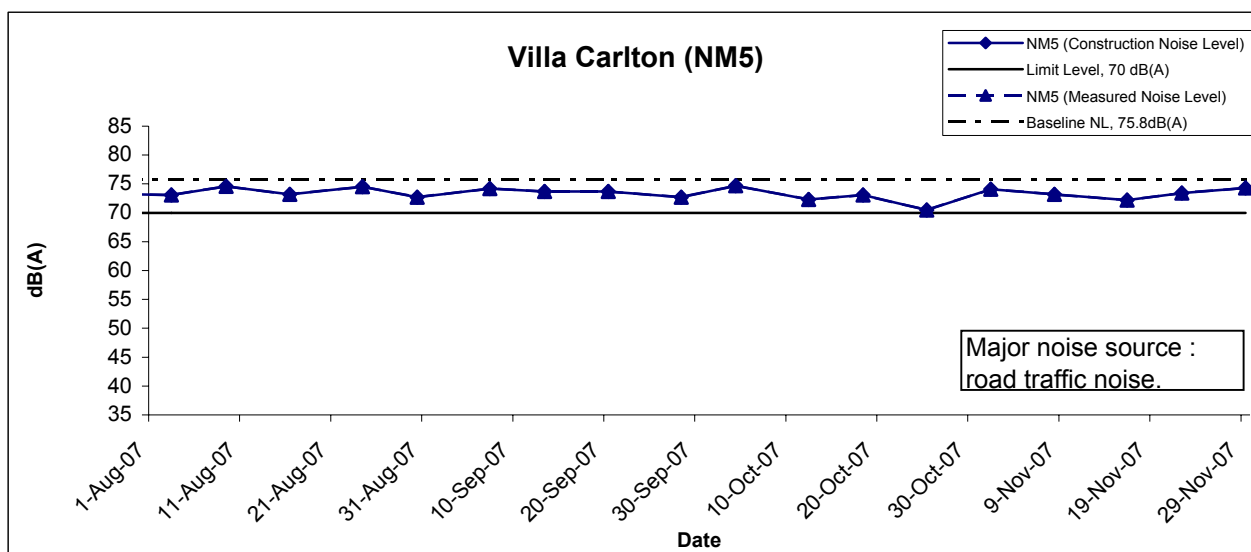
Noise Levels



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

Title Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/02 - Eagle's Nest Tunnel and Associated Works Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. MA3024	
	Date Nov 07	Appendix F	

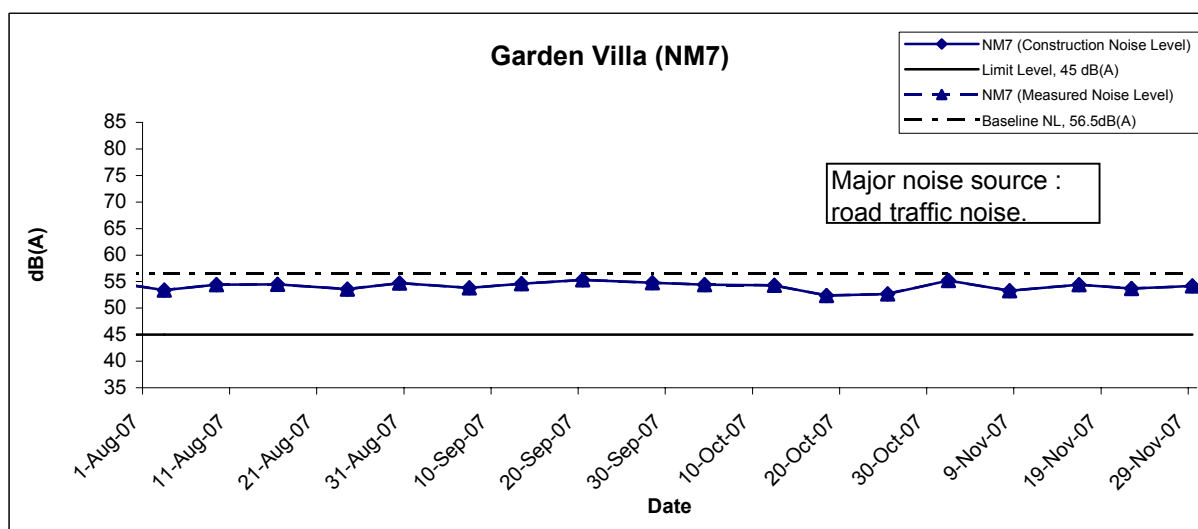
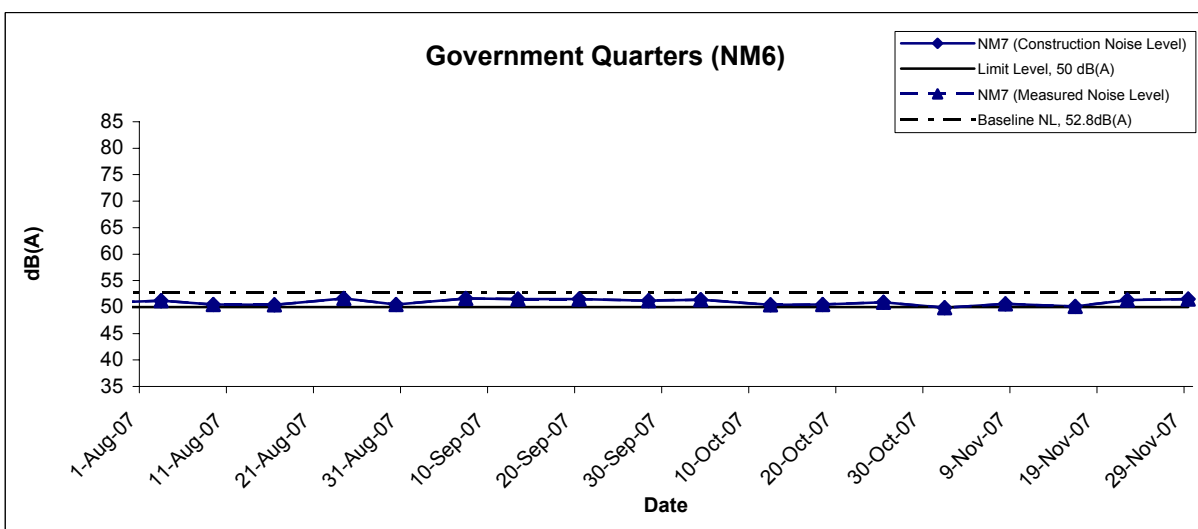
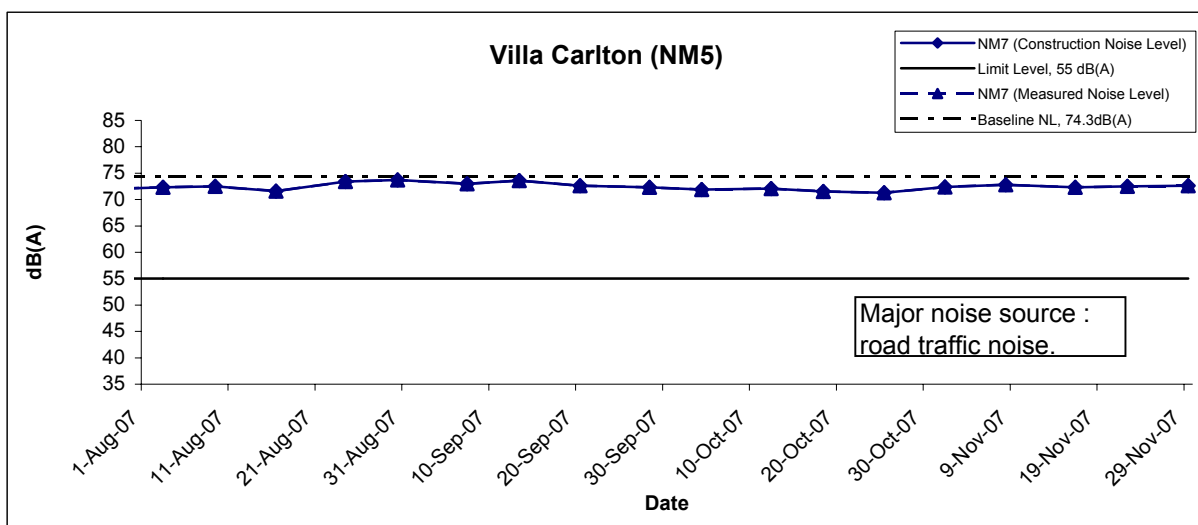
Restricted Hours (19:00 to 23:00) - Noise Levels



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

Title Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/02 - Eagle's Nest Tunnel and Associated Works Graphical Presentation of Construction Noise Monitoring Results	Scale	Project No.	CINOTECH
	N.T.S	MA3024	
	Date	Appendix	
	Nov 07	F	

Restricted Hours (23:00 to 07:00) - Noise Levels



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

Title Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin Contract HY/2003/02 - Eagle's Nest Tunnel and Associated Works Graphical Presentation of Construction Noise Monitoring Results	Scale N.T.S	Project No. MA3024	CINOTECH
	Date Nov 07	Appendix F	

**APPENDIX G
IMPLEMENTATION SCHEDULE OF
ENVIRONMENTAL MITIGATION
MEASURES (EMIS)**

Appendix G - Summary of Environmental Mitigation Implementation Schedule

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

Types of Impacts	Mitigation Measures	Status
	<ul style="list-style-type: none"> 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. 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. 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 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. 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. Catchpits and perimeter channels shall be constructed in advance of site formation works and earthworks. 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. 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. 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. 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. 	^ ^

Types of Impacts	Mitigation Measures	Status
	<ul style="list-style-type: none"> Spent grouts used in diaphragm wall construction should be collected in a separate slurry collection system, reconditioned and reused wherever practicable. The disposal of used grouting materials will only be permitted if it is treated to the TM standards before discharge to the storm drains or disposal to landfill. 	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). 	^ ^
	<i>Sewage Effluent</i>	
Waste	<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. 	^ N/A
	<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. 	^ ^ ^ ^ ^ ^ ^ ^
	<ul style="list-style-type: none"> Maintain records of the quantities of wastes generated, recycled and disposed. 	^
<i>Surplus Excavated Materials</i>		

Types of Impacts	Mitigation Measures	Status
	<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. 	N/A
	<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. 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. 	^ N/A ^
	<i>Chemical Waste</i>	
	<ul style="list-style-type: none"> Chemical waste that is produce during construction shall be handled in accordance with the Code 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). 	^ ^ ^ ^
	<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. 	^

Types of Impacts	Mitigation Measures	Status
	<ul style="list-style-type: none"> Reusable rather than disposable dishware shall be used if feasible. 	N/A
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. 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. 	<p>N/A</p> <p>^</p> <p>N/A</p> <p>N/A</p> <p>^</p> <p>N/A</p>
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. 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. Measurement of vibration would also be carried out on a need basis during the piling work 	<p>N/A</p> <p>N/A</p> <p>N/A</p>

Remarks:

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

**APPENDIX H
SUMMARY OF ENVIRONMENTAL
LICENCES AND PERMITS**

Appendix H - Summary of Environmental Licensing and Permit Status (ENT)

Permit No.	Valid Period		Details	Status
	From	To		
Environmental Permit (EP)				
EP-103/2001/C	22/07/05	N/A	<p><u>Construction and operation of</u></p> <p>(a) All civil works (including highways, traffic, geotechnical, drainage, structural, architectural and landscaping works) for the Lai Chi Kok Viaduct, the interchange with Ching Cheung Road, the main road within Butterfly Valley and the Eagle's Nest Tunnel;</p> <p>(b) All E&M works (including ventilation, Traffic Control & Surveillance System (TCSS), toll collection system and lighting) for the whole Route 9 between Cheung Sha Wan and Sha Tin;</p> <p>(c) The permanent slope works above the northern portal of the Eagle's Nest Tunnel;</p> <p>(d) The architectural works (including fitting out and furnishings) of the portal buildings of the Sha Tin Heights Tunnel.</p>	Valid
Registration of Chemical Waste Producer				
WPN 5213-761-L2595-01	26/01/04	N/A	Regulation for disposal of spent oil and waste batteries arising from construction activities in all project areas.	Valid
Water Discharge Licence				
EP482/261/0327/I	03/05/04	31/05/09	Discharge of industrial trade effluent and effluent arising from construction activities at the construction site at Ventilation Adit on Tai Po Road (behind Shell Filling Station) opposite Pinehill Development Highways.	Valid
EP482/261/0326/I	01/04/04	30/04/09	Discharge of industrial trade effluent and effluent arising from construction activities at the construction site at Mui Kong Tsuen, Butterfly Valley, Lai Chi Kok, Kowloon.	Valid
No. 3156	23/02/04	22/02/09	Discharge of industrial trade effluent and all other wastewater arising from the works areas at North Portal of Route 9 – Eagle's Nest Tunnel and Associated Works (Contract HY/2003/02).	Valid
Construction Noise Permit (CNP)				
GW-RW0082-07	20/3/07	19/9/07	<p><i>Location:</i> Mui Kong Tsuen</p> <p><i>Time Period:</i> 0700-2400 (general holiday including Sundays) and 1900-2400 (any day not being a general holiday).</p>	Expired
GW-RW0089-07	25/3/07	24/9/07	<p><i>Location:</i> SHT-North Portal</p> <p><i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).</p>	Expired
GW-RN0102-07	9/4/07	8/10/07	<p><i>Location:</i> SHT-North Portal near Garden Villa</p> <p><i>Time Period:</i> Any day between 2300-0700 on next day</p>	Expired
GW-RN0104-07	9/4/07	8/10/07	<p><i>Location:</i> ENT-South Portal at Butterfly Valley</p> <p><i>Time Period:</i> Any day between 2300-0700 on next day</p>	Expired

Permit No.	Valid Period		Details	Status
	From	To		
GW-RN0103-07	10/4/07	9/10/07	<i>Location:</i> ENT-South Portal at Butterfly Valley <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday)	Expired
GW-RN0105-07	10/4/07	9/10/07	<i>Location:</i> SHT-North Portal near Garden Villa <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday)	Expired
GW-RN0185-07	11/5/07	10/11/07	<i>Location:</i> Tunnel North Portal site near Garden Villa <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Expired
GW-RN0230-07	06/06/07	05/12/07	<i>Location:</i> SHT-South Portal near Garden Villa <i>Time Period:</i> Any day between 2300-0700 on next day	Valid
GW-RN0231-07	06/06/07	05/12/07	<i>Location:</i> SHT-North Portal near Tai Po Road and Keng Hau Road <i>Time Period:</i> Any day between 2300-0700 on next day	Valid
GW-RN0252-07	18/06/07	17/12/07	<i>Location:</i> SHT-South Portal near Garden Villa <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid
GW-RN0380-07	27/07/07	26/01/08	<i>Location:</i> Butterfly Valley, Lai Chi Kok <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid
GW-RN0514-07	30/11/07	29/05/08	<i>Location:</i> SHT-North Portal near Tai Po Road and Keng Hau Road <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid
GW-RN0515-07	30/11/07	29/05/08	<i>Location:</i> Tunnel North Portal Site near Garden Villa <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid
GW-RN0513-07	30/11/07	29/05/08	<i>Location:</i> Tunnel South Portal Site at Butterfly Valley <i>Time Period:</i> 0700-2300 (general holiday including Sundays) and 1900-2300 (any day not being a general holiday).	Valid

**APPENDIX I
COMPLAINT LOG**

Appendix I - Complaint Log

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
40426	Butterfly Valley	26 April 2004	<p>A public noise complaint was recently received by EPD. The complaint was related to the noise generated from the Route 8 – ENT site near Butterfly Valley at the night time on 21 April 2004. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 23 April 2004.</p>	<p><u>Noise at night time</u> The information provided by the RSS indicated that no works were undertaken by the Contractor during the concerned period. The concerned noise might probably be due to a burglary case occurred at same night.</p> <p><u>Noise during day-time</u> It is believed that the day-time noise complaint was due to the site formation works of the Project. Considering the powered mechanical equipment used at the Butterfly Valley and the echo effect of the valley, ET believe that the day-time construction noise from the site at Butterfly Valley might cause nuisance to the nearby resident to some extent, though there was no noise level exceedance at the Government Quarters during our routine monitoring in last three months.</p> <p>The Contractor agreed to implement mitigation measures, including good site practices, selecting quieter plant and working methods and reduction in numbers of noisy plant operating currently, in order to mitigate noise impacts at the NSRs.</p>	Closed
40914	Garden Villa	<p>13-Sep-04 (by EPD)</p> <p>14-Sep-04 (by ET Leader)</p>	<p>Environmental Protection Department (EPD) received a public noise complaint on 13 September 2004 about construction noise generated from the Route 8 – Eagle’s Nest Tunnel and Associated Works (R8-ENT) Project, nearby by Garden Villa at Tai Po Road, Sha Tin. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 14 September 2004.</p> <p>The complaint was about general construction noise generated from a construction site nearby Garden Villa at Tai Po Road, Sha Tin. As informed by EPD,</p>	<p><u>Environmental Permits</u> A Construction Noise Permit (No. GW-RN0405-04) was obtained by the Contractor for the use of powered mechanical equipment (PME) in the concerned works area and use of TAR no.1 during restricted hours.</p> <p><u>Blasting Works</u> According to the information provided by the Resident Site Staff (RSS), for carrying out blasting works, a blasting permit should be issued by the Mines Division of Civil Engineering and Development Department (CEDD), but not under the jurisdiction of EPD. The CNP issued by EPD only specified the use of PME but not the blasting works during restricted hours.</p>	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
			<p>the complainant was particularly concerned of two issues:</p> <ol style="list-style-type: none"> 1. The complainant was informed by the Contractor (Leighton – Kumagai Joint Venture) that blasting works would be conducted during restricted hours. He worried about the noise nuisance would be induced by the blasting works. 2. Noise nuisance from some site vehicles traveling on the Temporary Access Road (TAR no.1) near Garden Villa was noted by the complainant during restricted hours. 	<p>As advised by the RSS, the Contractor did intend to apply for a permit to the Mines Division of CEDD for blasting works during restricted hours. However, up to the time of preparation of this report, the Contractor still had not obtained the approval from the Mines Division and therefore, no blasting works were performed by the Contractor during restricted hours.</p> <p><u>Use of TAR no.1</u> According to Condition 3d of the above-mentioned CNP, there was restriction on the use of site vehicles traveling on TAR no.1.</p> <p>The usage of site vehicles on TAR no.1 in a 2-week period before the date of complaint, i.e. 30th August to 12th September 2004 showed that the only vehicle type using TAR no.1 for the concerned period was concrete truck and the number of vehicle pass was limited to 4 times per hour, which was in compliance with the above CNP's conditions.</p> <p>Regular noise monitoring was undertaken by ET at Garden Villa on 30th August and 6th September 2004 during restricted hours (1900 – 2300 hours). The monitoring results were 58.7 dB(A) and 58.6 dB(A), respectively, which were below the noise limit level of 60 dB(A). However, it should be noted that site vehicles were not used by the Contractor on TAR no.1 during restricted hours on these two monitoring day.</p> <p>Based on the information obtained, the validity for the noise complaint in associated with night-time blasting works could not be concluded under ET's investigation, since no blasting works had been performed by the Contractor during restricted hours at the time of the report preparation. Also, it should be highlighted that for carrying out blasting works, permission should be obtained by Mines Division of CEDD, but not under the control of EPD.</p> <p>For the use of TAR no.1, the RSS's records showed that the number of vehicle pass in the period between 30th August and 12th September 2004 was complied with the CNP's conditions. It should be noted that only a maximum of 3 concrete trucks</p>	

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>passing the site entrance was recorded. Therefore, it was considered that the nuisance noted by the complainant was not due to the site vehicles adopted by the Contractor (LKJV).</p> <p>Nevertheless, the Contractor was reminded to ensure the compliance of the CNP conditions and adopt good site practice to minimize the construction noise.</p>	
41021	Garden Villa	<p>09-Oct-04 (by EPD)</p> <p>21-Oct-04 (by ET Leader)</p>	<p>Environmental Protection Department (EPD) received a public noise complaint on 9 October 2004 about construction noise generated from the Route 8 – Eagle’s Nest Tunnel and Associated Works (R8-ENT) Project, nearby by Garden Villa at Tai Po Road, Sha Tin. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 21 October 2004.</p> <p>The complaint was about nighttime construction noise generated from a construction site nearby Garden Villa at Tai Po Road, Sha Tin. As informed by EPD, the complainant was particularly concerned of two issues:</p> <ul style="list-style-type: none"> • Construction works undertaken by the Contractor (Leighton–Kumagai Joint Venture) were noted after 2300 hour. • Some workers were noted leaving the site through Temporary Access Road (TAR) no.1 at around 2 am, causing nuisance to the residents in Garden Villa. 	<p>According to the information provided by the RSS, no construction activity was undertaken in the nighttime period (2300 – 0700 hours) at the concerned site area.</p> <p>LKJV did admit that some vehicles had been operating at midnight for transporting LKJV’s survey workers from the site. Inconsiderate behaviors were noted causing nuisance to Garden Villa residents:</p> <ol style="list-style-type: none"> 1. Driving the vehicles too fast, which generated excessive engine noise; 2. Noise inside the vehicles (such as staff talking or radios) escaping through the open vehicle windows; and 3. Vehicle beeping horn to request the guards to open the gate. <p>In order to rectify the situation, LKJV had notified the relevant staff with the receipt of the complaint and urged them to take appropriate measures when using TAR1 at night:</p> <ol style="list-style-type: none"> 1. to drive slowly in order to reduce the engine noise, especially when approaching Garden Villa; 2. to roll up the vehicle windows to contain any noise from talking or radios; and 3. to prohibit beeping the vehicle horn for gate opening; instead, to park the car and approach the guard on foot. 	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
41023	Government Quarters (Butterfly Valley)	20-Oct-04 (by MHJV) 23-Oct-04 (by ET Leader)	A public complaint was received by the Engineer's Representative (ER) of Route 8 – Eagle's Nest Tunnel and Associated Works (R8-ENT) Project on 20 th October 2004. The complaint was raised by a resident of the Government Quarters at Caldecott Road, concerning dust generation as a result of the construction activities at Butterfly Valley. The ER subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 23 rd October 2004.	<p>The complaint was considered valid based on:</p> <ol style="list-style-type: none"> 1. ER's site observations; 2. ET's weekly site audit; and 3. 1-hr TSP exceedance record. <p>Also, the sources of dust generation were identified as</p> <ol style="list-style-type: none"> 1. 2 portions of the haul roads, one at Slope BV-S2 and one linking between South Portal Tunnel to Mui Kong Tsuen, were found to be dry. 2. Dust impact due to the haulage of excavated materials at the South Portal. <p>Enhanced dust suppression measures had been implemented by the Contractor:</p> <ul style="list-style-type: none"> • added rockfill to the haul road between South Portal Tunnel and the Gully fill area; • maintained watering to haul road at Slope BV-S2; • requested the fill material supplier to ensure the material was in a damp condition before leaving quarry; • provided for material not dampened at the Quarry to be directed to the wheel wash for water spray before entering the site; • when cleaning drill holes along slope BV-S4 to ensure adequate water was available for flushing to suppress dust emission; AND • provided damper stockpiles of cleared material at BV-S2 before loading. <p>Based on ER's site observations, most of the above mitigation measures have been implementing by the Contractor. Also, an additional water browser was delivered to site on 29th Oct 04. No significant fugitive dust emission has been found.</p> <p>During ET's site inspections on 27th Oct and 3rd Nov 2004, the situation was found improved. No deficiency relating to air quality impact was noted by ET during the two audit sessions.</p> <p>The results of air quality monitoring (1-hr and 24-hr TSP) in the period between 21st Oct and 2nd Nov 2004 were all found to be complied with the Action / Limit Levels.</p>	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
41124	Government Quarters (Butterfly Valley)	21-Nov-04 (by LKJV) 24-Nov-04 (by ET Leader)	A public complaint was received by the Contractor of Route 8 – Eagle’s Nest Tunnel and Associated Works (R8-ENT) Project on 21 st November 2004 (Sunday). The complaint was concerned about excessive noise generation from construction machinery at Butterfly Valley on the same day. The Engineer’s Representative (ER) subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 24 th November 2004.	According to the ER, the only construction activity at Butterfly Valley undertaken on 21 st Nov 04 was formation of access road near Slope BV-S2. The activity only involved operations of 1 no. of excavator and 1 no. of dump truck with grab, which complied with the condition stipulated in a valid CNP GW-RW0484-04, which was hold by the Contractor. Routine noise monitoring was conducted on 21 st and 28 th Nov 2004 at NM6. All the measured noise levels (48.5 to 56.4 dB(A)) were well below the noise limit level. In addition, the measurement results were within the baseline noise level. Therefore, the complaint was considered to be invalid. Nevertheless, the Contractor was reminded to ensure the compliance of the conditions stipulated in CNP. The Contractor was also recommended to adopt good site practice in order to minimize the construction noise.	Closed
41201	Government Quarters (Butterfly Valley)	01-Dec-04 (by MHJV & ET Leader)	A public complaint was received by the Engineer’s Representative (ER) of Route 8 – Eagle’s Nest Tunnel and Associated Works (R8-ENT) Project on 1 st December 2004. The complaint was raised by a resident of the Government Quarters at Caldecott Road, concerning dust generation at Butterfly Valley. The Environmental Team (ET) of the Project was informed with the complaint on the same day. The resident complained that a large portion of the excavated slopes was not properly covered, which caused dust nuisance to her.	The complaint was considered valid based on: 1. ER’s site observations; 2. ET’s weekly site audit Upon receipt of the complaint, a series dust control measures had been implemented by the Contractor, such as covering of the exposed slopes with appropriate sheeting, regular watering to the haul roads and excavated slope faces, etc. During the ET’s weekly site audit on 08-Dec-04 together with the representative of HyD, IEC, ER and the Contractor, the above mitigation measures were observed. The idle slopes at BVS2 had been covered by tarpaulin sheeting and erosion mat. The left exposed slope surfaces at BVS2 were under excavation, thus being unable to be covered. According to the ER, the complainant has expressed his satisfaction to the site condition on 07-Dec-04, after the implementation of dust mitigation measures by the	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>Contractor.</p> <p>However, owing to the prevailing of the dry season, the Contractor was reminded to ensure the dust control measures are effectively implemented.</p>	
50125	Garden Villa (North Portal)	<p>21-Jan-05 (by EPD)</p> <p>25-Jan-05 (by ET Leader)</p>	<p>Environmental Protection Department (EPD) received a public noise complaint on 21 January 2005 about construction noise and dust generated from the Route 8 – Eagle’s Nest Tunnel and Associated Works (R8-ENT) Project, nearby by Garden Villa at Tai Po Road, Sha Tin. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 25 January 2005.</p> <p>The complaint was about construction noise and dust generated from a construction site nearby Garden Villa at Tai Po Road, Sha Tin. The complainant was particularly concerned of two issues:</p> <ol style="list-style-type: none"> 1. Noise from tunnel blasting work carrying out at around 7:30am and 10:00pm; and 2. Dump trucks without covering of canvas when leaving the construction site. 	<p><u>Noise from blasting</u> For carrying out the blasting, the Contractor had obtained the permit from relevant authority. The ET’s noise monitoring results did not show any exceedance for the measurement taken when blasting was in place. It should be highlighted that for carrying out blasting works, permission should be obtained by Mines Division of CEDD, but not under the control of EPD. In order to minimize the nuisance from the works, the Contractor was recommended:</p> <ul style="list-style-type: none"> • To inform the residents around the area about the time of blasting in advance; and • To re-schedule the blasting time table, if possible, in order to avoid nuisance. <p><u>Uncovered dump trucks</u> In order to evaluate the situation, two inspections were carried out by the ET at Garden Villa on 27-Jan and 28-Jan-05 to identify the dump trucks leaving the site with uncovered load. On 27-Jan-05, 3 nos. of trucks, which were working for ENT Project, was noted by-passing Garden Villa without proper cover.</p> <p>Enhanced control (penalty system) was implemented by the Contractor after the inspection on 27-Jan. During the inspection on 28-Jan-05, 24 nos. of dump trucks for ENT Project were found leaving the site. No non-compliance was noted for the trucks working for ENT Project.</p> <p>LKJV was reminded to keep closely monitoring on the condition and the effectiveness of the proposed control measures.</p>	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50308	Garden Villa (North Portal)	05-Mar-05 (by EPD) 08-Mar-05 (by ET Leader)	<p>EPD received a public complaint on 5 March 2005 about construction noise and dust generated from the construction sites of Route 8 – Eagle’s Nest Tunnel and Associated Works (R8-ENT) and Route 8 - Sha Tin Heights Tunnel and Approaches (R8-SHT), nearby by Garden Villa at Tai Po Road, Sha Tin. EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 8 March 2005.</p> <p>The complaint was about construction noise and dust generated from the construction sites nearby Garden Villa at Tai Po Road, Sha Tin. The complainant was particularly concerned of the following issues:</p> <ol style="list-style-type: none"> 1. Nighttime & Sunday construction noise 2. Noise from tunnel blasting at early morning and nighttime 3. Dust from construction activities 	<p><i>Nighttime & Sunday construction noise</i></p> <ul style="list-style-type: none"> • no exceedance for noise monitoring • restricted hour works were found complied with the CNPs • records of vehicular trips on TAR1 did not show non-compliance of CNP conditions <p><i>Noise from tunnel blasting at early morning and nighttime</i></p> <ul style="list-style-type: none"> • no exceedance for noise monitoring • valid blasting permit had been obtained from CEDD • blasting work is not under the jurisdiction of EPD <p><i>Dust from construction activities</i></p> <ul style="list-style-type: none"> • dump trucks with uncovered / inadequately covered materials were observed leaving site • no exceedance for TSP monitoring • enhanced dust suppression measures had been implemented by the Contractor <p><u>Conclusions</u> The complaint against the dust issue (uncovered / inadequately covered dump trucks) was considered justifiable. The Contractor was reminded to review the current checking system. Continuous spot checks would be performed by ET and RSS.</p>	Closed
50330	Garden Villa (TAR1)	30-Mar-05 (by EPD & ET Leader)	<p>Environmental Protection Department (EPD) received a public complaint on 30th March 2005 about construction noise from the sites of Route 8 – Eagle’s Nest Tunnel and Associated Works (R8-ENT) near Garden Villa at Tai Po Road, Sha Tin.</p> <p>The complaint, which was lodged by a resident of Garden Villa on 29th March 2005, was about the noise generated by heavy vehicles traveling in and out of the construction site near Garden Villa. According to the complaint, the noise was made from 7am onwards.</p>	<p>The site of concern was likely to be the Temporary Access Road no.1 (TAR1) connecting Tai Po Road and the construction sites of R8-ENT and Route 8 - Sha Tin Heights Tunnel and Approaches (R8-SHT).</p> <p>The time period of concern was within normal working hours (7am to 7pm) on a weekday not being holidays. According to the EM&A Manual, the criterion of construction noise in term of $L_{eq-30min}$ within this period is 75 dB(A) for domestic premises.</p> <p>Since the commencement of the Project, no exceedance of daytime noise criterion of 75 dB(A) was recorded at Station AM3 (Garden Villa). During the 2-hour measurement period of the ad-hoc monitoring (0700-0900 hrs), all the measured noise levels ($L_{eq-30min}$) were below the daytime noise</p>	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p>criterion of 75 dB(A).</p> <p>Based on the results of routine noise monitoring and the ad-hoc measurement on 1st April 2005 at Garden Villa, no exceedance of daytime noise criterion of 75 dB(A) was recorded. The complaint lodged is therefore considered not justifiable.</p> <p>In order to minimize the nuisance generated by the vehicle use at Garden Villa, the Contractor has proposed to limit the frequency of trucks existing from TAR1 at a rate of one truck per minute during the time period of concern (7am to 8:30am).</p>	
50415	Government Quarters	<p>09-Apr-05 (by EPD)</p> <p>15-Apr-05 (by ET Leader)</p>	<p>The complaint, which was lodged by a resident of 7/F, 38B, 8-10 Caldecott Road (Governmental Quarters) on 9th April 2005, was about the noise generated by the construction works at the Butterfly Valley during daytime. The complainant mentioned that the instant noise level taken by himself was 78 to 82 dB(A).</p> <p>EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 15th April 2005.</p> <p>The time period of concern was within normal working hours (7am to 7pm) on a weekday not being public holidays. According to the EM&A Manual, the criterion of construction noise in term of L_{eq}-30min within this period is 75 dB(A) for domestic premises.</p>	<p>Governmental Quarters (Station NM6) is one of the designated noise monitoring stations in the EM&A programme. Routine monitoring is undertaken on a weekly basis in accordance with the EM&A Manual.</p> <p>Since the commencement of the Project, no exceedance of daytime noise criterion of 75 dB(A) was recorded at this station.</p> <p>Ad-hoc measurement was conducted at the complainant's premises on 22 Apr 05. The measured noise level was 69.0 dB(A), which was well below the daytime noise criterion of 75 dB(A).</p> <p>Based on the results of routine noise monitoring and the ad-hoc measurements conducted in the complainant premises, no exceedance of daytime noise criterion of 75 dB(A) was recorded. The complaint lodged is therefore considered not justifiable.</p>	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50419	Government Quarters	<p>15-Apr-05 (by EPD)</p> <p>19-Apr-05 (by ET Leader)</p>	<p>The complaint was lodged by a resident of 8-10 Caldecott Road (Government Quarters) on 15th April 2005 to EPD as well as the Chief Resident Engineer of the Project.</p> <p>EPD subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 19th April 2005.</p> <p>The complainant mentioned that they had experienced quite a lot of noise emanating from the tunnel drilling area after 11pm over several nights and most particularly at the night of 14th April 2005 and at 4am on 15th April 2005.</p>	<p>The site of concern was likely to be the South Portal. For carrying out construction works at this area during restricted hours, two Construction Noise Permits (CNPs no. GW-RW0085-05 and GW-RW0086-06) were obtained by the Contractor in accordance with the requirements stipulated in Noise Control Ordinance.</p> <p>According to the information provided by the Resident Site Staff and the Contractor, the construction activities undertaken in the period between 11th and 15th April 2005 from 1900 to 0700 hours included drilling, breaking, trimming, set up of rock drill, installation of arch-rib and grouting.</p> <p>The powered mechanical equipment (PME) involved in the above works included backhoe, rock drill, loader, dumper, shot-crete machine, group pump, mobile platform and grout machine, which were covered by the CNPs.</p> <p>According to the routine monitoring results, for the time period between 2300-0700 hours, the measured noise levels exceeded the corresponding noise Limit Level of 50dB(A). However, the measured levels were found within the range of baseline level and below the average baseline level.</p> <p>Based on the routine noise monitoring results at Station NM6, the measured noise levels for the period between 2300-0700 hours were below the baseline noise level, which was comparable to the ambient level. According to the RSS's record, the PME items operated during the concerned period were found covered by the 2 CNPs hold by the Contractor.</p> <p>Based on the available information, there is not enough evidence to prove whether the complaint against nighttime construction noise generated in the concerned period (11th to 15th April 2005) is justifiable or not.</p>	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50512	Yew Chung International School	12-May-05	<p>On 11 May 05, a notice was sent to Yew Chung International School (YCIS) by the Contractor, providing their tentative blasting schedule on 12 May 05. It was shown that one of the blasting operations was scheduled at 09:30am, at when an examination was being held in YCIS.</p> <p>Upon receipt of the notice, a representative of YCIS lodged a complaint to the Contractor via the Project's hotline at 07:40 on 12 May 2005. The complainant expressed her objection to the blasting operation taken at 09:30am when the examination was taken place.</p> <p>The Contractor then agreed on one occasion only to delay the tunnel blast planned for 9:30am until 9:50am (i.e. 5 min after the examination). The complainant satisfied but did expect no future blasting during the examination period. According to the Engineer's Representative, the Contractor did not wish to make any commitment to ensure no blasting would be taken within the examination period.</p>	<p>A 1-day continuous noise measurement was conducted by the Environmental Team at Station NM1 on 26 May 05. According to the ER's record, two blasting operations were taken in the vicinity of YCIS on 26 May 05. One surface blast was taken at Butterfly Valley at 15:42 and one tunnel blasting was taken at South Portal at 16:56.</p> <p>The measurement results showed that the noise impact in term of Leq-5min and Leq-30min arising from the blasting operations was insignificant. No exceedance of construction noise criterion for examination period was recorded (Leq-30min < 65dB(A)).</p> <p>The complaint lodged was therefore considered not justifiable.</p> <p>However, in order to minimize the potential nuisance arising from the blasting noise and the siren sounds prior to blasting, the Contractor was recommended to consider scheduling the blasting operations beyond the examination periods.</p>	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50610	Government Quarters	10-Jun-05	<p>On 10 June 2005, the Resident Site Staff (Maunsell-Hyder Joint Venture) received a complaint from a resident of the Government Quarters at Caldecott Road. The complaint was concerned about the construction dust generation as a result of the construction activities of the Project at Butterfly Valley.</p> <p>The complainant had not specified which construction activities had contributed to the dust generation.</p>	<p><i>Site Observations</i></p> <p>According to the RSS's preliminary investigation, it was considered that soil nailing at Slope BV-S2 was the dominant dust source and was likely to be the activity of concern. The dust suppression measures taken were found inadequate to control the dust dispersion from the works. Noticeable dust dispersion from the soil nailing work could be observed.</p> <p><i>Corrective Actions</i></p> <p>After the Contractor was notified by the RSS of the complaint, immediate action was taken by the Contractor on the same day (10 June 2005).</p> <p>The dust mitigation measures for the soil nailing were enhanced. An additional thicker cover was used. Also, continuous water spray was applied to suppress the dust emission.</p> <p><i>Environmental Outcome</i></p> <p>The RSS made a response to the complainant on 10 June 2005. The complainant was informed of the rectification actions taken by the Contractor. No further adverse comment was received from the complainant.</p> <p><i>Conclusions</i></p> <p>Based on the RSS's information, this complaint is considered to be valid and related to the construction activities of the Project. However, corrective action had been taken by the Contractor immediately and the situation was found improved.</p>	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50712	A scattered house near South Portal and Tai Po Road Water Treatment Works Staff Quarters	12-Jul-05	<p>On 12 July 2005, a resident, whose house is located near South Portal and Tai Po Road Water Treatment Works Staff Quarters, lodged a complaint to the Contractor via the Project's hotline at 11:40am. The complainant expressed his concern on the nuisance caused by the blasting works at early morning (before 07:00 hours) and late night (after 23:00 hours).</p>	<p><i>Site Activity</i></p> <p>According to the information provided by the RSS, tunnel blasting works have been taken place in the concerned period in north bound tunnel from the Ventilation Adit towards the direction of the South Portal.</p> <p><i>Environmental Requirements</i></p> <p>In the EP, the EM&A Manual of the Project and the NCO, no requirement is specified for the control of blasting operation and the associated environmental impact, such as blasting noise.</p> <p>It should be highlighted that for carrying out blasting works, permission should be obtained by Mines Division of CEDD, but not under the jurisdiction of EPD.</p> <p>For carrying out the above-mentioned blasting operations, the Contractor has obtained a valid blasting permit from CEDD under the Dangerous Goods Ordinance (Cap. 295). Under this permit, the Contractor is allowed to carry out 24-hour blasting works within the designated area.</p> <p><i>Contractor's Actions</i></p> <p>Though the blasting noise is not under the control of any environmental related regulation and the Contractor is allowed to carry out 24-hour blasting, the Contractor would try to keep the blasts of concern undertaken between 07:00 to 23:00 hours. This arrangement could effectively reduce the potential nuisance to the residents within the more sensitive time period (23:00 to 07:00 on next day).</p> <p><i>Conclusions</i></p> <p>The subjected blasting operations were carried out by the Contractor under a valid blasting permit. The complaint lodged is therefore considered not justifiable.</p>	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50809	Government Quarters (8-10 Caldecott Road)	09-Aug-05	<p>On 9 August 2005, a resident of 8-10 Caldecott Road (Government Quarters) lodged a complaint to the Contractor via the Project's hotline at 14:30. The complainant expressed her concern on the nuisance caused by the blasting works undertaken at Butterfly Valley.</p> <p>Noise impact arising from the blasting works was one of the issues raised by the complainant.</p>	<p><i>Ad-hoc Noise Measurement</i></p> <p>An ad-hoc noise measurement was carried out on the roof of Government Quarters during a surface blast on 16 August 2005. According to the record of the RSS and the site observation, a surface blasting was undertaken at Butterfly Valley at around 15:38 on the monitoring day.</p> <p>The results show that the measured noise level in term of Leq-30min, i.e. 69.1 dB(A) during the surface blasting was well below the daytime construction noise criterion of 75 dB(A).</p> <p><i>Conclusion and Recommendation</i></p> <p>According to the results of ad-hoc noise measurement taken at Government Quarters on 16 August 2005, the measured noise levels (Leq-30min) did not exceed the noise criterion of 75 dB(A). In addition, the subjected blasting operations were carried out by the Contractor under a valid blasting permit. For the concern of noise impact, the complaint was considered not justifiable.</p>	Closed
50830	Government Quarters (8-10 Caldecott Road)	30-Aug-05	<p>The RSS received a public complaint from a resident of Government Quarters addressing two noise issues:</p> <ol style="list-style-type: none"> 1. Noise nuisance caused by drilling works at Butterfly Valley; 2. Noise nuisance due to blasting 0045 hrs of 28 August 2005. 	<p><i>Noise Measurement</i></p> <p>No exceedance was recorded for the routine noise monitoring at NM6 (Government Quarters). Ad-hoc noise measurement was conducted on 1 and 2 Sept 05. All measured noise levels complied with the noise criteria.</p> <p><i>Conclusion</i></p> <p>The complaint was considered not justifiable. However, the Contractor had taken proactive actions in order to minimize the nuisance of the residents, (1) to stop the rock breaking works at BVS2 and (2) to install temporary noise barriers for drilling works.</p>	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
50928	Government Quarters (8-10 Caldecott Road)	28-Sept-05	A resident of Government Quarters complaint about a blast undertaken at 0215hr on 28 Sept 05.	<p><i>Environmental Monitoring</i></p> <p>After receiving the complaint, the ET carried out a continuous noise measurement at Station NM6 (Government Quarters) from 29 to 30 September 2005. All the measured noise levels in term of Leq-5min are close to the baseline noise level. The noise levels after correction of baseline levels were all below the noise criterion of 50 dB(A).</p> <p><i>Conclusion</i></p> <p>The subjected blasting operations were carried out by the Contractor under a valid blasting permit. In addition, no noise exceedance was recorded for the ad-hoc noise monitoring. The complaint lodged is therefore considered not justifiable.</p>	Closed
51025	Caldecott Hill (2 Caldecott Road)	25-Oct-05	<p>A public complaint was received by the MWPMO of Highways Department on 25 October 2005. The complaint was subsequently refereed to the RSS and Environmental Team of Route 8 – Eagle’s Nest Tunnel and Associated Works (R8-ENT) Project.</p> <p>The complaint was lodged by the management company of Caldecott Hill (No.2 Caldecott Road). It was about dust generation when construction vehicles, particularly dump trucks and concrete trucks, traveling along the Water Treatment Works (WTW) access road and its junction with Caldecott Road.</p> <p>According to the photos provided by the complainant, noticeable dust generation was observed during construction vehicles movement on the roads of concern.</p>	<p><i>Site Observations</i></p> <p>Ad-hoc site inspections were carried out on 25 and 26 Oct 05. On 26 Oct 05, the WTW access road was observed dry. Deposition of dusty materials was noted. Significant dust generation was identified during vehicle movement.</p> <p><i>Contractor’s Actions</i></p> <p>Mitigation actions were taken by the Contractor:</p> <ol style="list-style-type: none"> 1. One labour was appointed to water spray the concerned road junction and clear up of dusty materials deposited on the WTW access road. 2. Regular watering on access road by hose pipe was performed to keep the road wet. 3. All vehicles would be wheel-washed and loads of dusty materials would be covered before leaving the site. <p><i>Conclusions</i></p> <p>Based on the site observations, this complaint was considered to be valid and related to the Project works. However, enhanced dust mitigation measures were taken by the Contractor and the situation was found improved.</p>	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
51031	Po Leung Kuk Choi Kai Yau School	31-Oct-05	The resident site staff (MHJV) of R8-ENT received a complaint from the Principal of PLKCKY School. She commented that the blasting noise (nighttime and daytime) at Butterfly Valley became louder than before.	An ad-hoc noise measurement was taken by ET on 5 Nov 05 to evaluate the noise impact due to daytime surface blasting at the BV. The measurement results revealed that there has been no exceedance of noise level criteria. The complaint was therefore considered not justifiable.	Closed
51101	Butterfly Valley (Government Quarters)	1-Nov-05	<p>On 1 Nov 05, the Resident Site Staff received a complaint from a resident of the Government Quarters. On 2 Nov 05, a complaint of similar natures and same location was received by the Environmental Protection Department.</p> <p>The complainant was concerned about the following environmental issues:</p> <ol style="list-style-type: none"> 1. Noise nuisance due to tunnel blasting works undertaken at midnights and in early mornings (3am to 5am); 2. Noise nuisance due to operation of a generator after 11pm; 3. Construction dust and daytime noise due to processing and stockpiling of crushed rocks at Butterfly Valley; 4. Noise nuisance due to works outside tunnel in the early morning of 2 Nov 05. 	<p><u>Item 1: Noise nuisance due to tunnel blasting</u> For carrying out the above-mentioned blasting operations, the Contractor has obtained a valid blasting permit from CEDD. Under this permit, the Contractor is allowed to carry out 24-hour blasting works. As advised by the Contractor, all the blasting operations had been completed by 12 Nov 05.</p> <p><u>Item 2: Noise due to operation of a generator after 11pm</u> According to the Construction Noise Permit issued by EPD, one generator was allowed to be operated after 11pm at South Portal area outside the tunnel. In view of the provision of acoustic enclosure and the separation distance from the generator to Government Quarters (around 300m), the noise impact arising from this generator onto the residents of the Quarters was believed to be insignificant. During the ET's investigation on 11 Nov 05, no engine-like noise generated from the construction site could be identified.</p> <p><u>Item 3: Dust and noise due to handling of crushed rocks</u> No noise exceedance was recorded. During the weekly site inspections, deficiencies regarding inadequate dust mitigation measures for the crushed rock processing and stockpiling were occasionally observed. Dry / uncovered stockpiles and dust emissions from crushed rocks handling were sometimes noted.</p> <p><u>Item 4: Noise from works out of tunnel in morning of 2 Nov 05</u> According to the RSS's site records, there has been no activity outside the tunnel in the early morning of 2 November 2005. Work was undertaken deep inside the tunnel during the concerned period. The mentioned noise nuisance might not be related to R8-ENT Project. An ad-hoc noise measurement was carried out by ET from 8 to 10 November 2005 in order to evaluate the noise at Quarter's residents and no exceedance was recorded.</p>	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
				<p><u>Conclusion</u></p> <p>Based on the information obtained, environmental monitoring results and site observations, this complaint was considered not justifiable, except for the concern of dust nuisance due to crushed rock processing.</p>	
51205	Caldecott Road junction	5-Dec-05	<p>The complaint was lodged by the management company of Villa Carlton. The complainant mentioned that several complaints from the occupants of Villa Carlton were received, against the dust emission when they drove to Kowloon via the Caldecott Road Junction. She also considered that the amount of water spraying by the Contractor was insufficient to suppress dust emission at Caldecott Road Junction.</p>	<p><u>Complaint Record</u></p> <p>A similar complaint (Log no. 51025) was received on 25 Oct 05 from Caldecott Hill. Significant dust emission was noted when construction vehicles traveling along the WTW access road and its junction with Caldecott Road.</p> <p>With implementation of enhanced dust mitigation measures, the situation was found improved and satisfactory.</p> <p><u>Site Observations</u></p> <p>Since Nov 05, in order to observe the Contractor's actions taken for the above-mentioned complaint, the area of interest was included during the weekly environmental audit. No deficiency had been noted at this area during the audit.</p> <p>After receiving this new complaint (Log no.51205), several ad-hoc site inspections were carried out on 6, 8 and 14 Dec 05. In addition, the RSS of the Project had carried out daily checking of the condition of the Caldecott Road Junction.</p> <p>Sufficient dust mitigation measures had been implemented by the Contractor. The condition was found satisfactory. Therefore, this complaint was considered not justifiable.</p> <p>However, it is noted that the Contractor had stepped up dust mitigation measures to further improve the condition at Caldecott Road junction.</p>	Closed

Log Ref.	Location of Concern	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
60204	Garden Villa	4-Jan-06 (by ETL)	<p>A public complaint was received by the Environmental Protection Department on 3 January 2006. The complaint was subsequently referred to the Environmental Team of Route 8 – Eagle’s Nest Tunnel and Associated Works (R8-ENT) Project on 4 January 2006.</p> <p>According to EPD’s information, the complaint was lodged by a complainant, who walked along Tai Po Road on 1-2 January 2006. The following information was given by EPD for our investigation:</p> <ul style="list-style-type: none"> • Time of concern: 1-2 January 2006 (Daytime) • Suspected site area of concern: ENT’s Toll Plaza and Administration Building. • Dust and noise nuisance was noted by the complainant when he passed Garden Villa. • Noise from wood saw and crane or alike was noted. 	<p>A. Construction Noise Impact</p> <p>According to the Contractor’s information, construction activities were carried out on 1 and 2 Jan 06, including:</p> <ul style="list-style-type: none"> • Erection and dismantling of formwork • Fixing water pipe <p>All the equipment operated by the Contractor on 1-2 Jan 06 complied with the permissible equipment stated in the CNP.</p> <p>On 1 Jan 06, noise monitoring was carried out. All the results complied with the noise criterion.</p> <p>B. Construction Dust Impact</p> <p>Erection and dismantling of formwork and fixing water pipe were considered not dust emissive in nature.</p> <p>For stockpiles of materials in Toll Plaza area, dust mitigation measures had been implementing by the Contractor. The condition in term of dust control was found satisfactory during the audit sessions on 4 and 11 Jan 06.</p> <p>Since December 2005, all TSP monitoring results complied with the Action / Limit Level.</p> <p>Conclusion</p> <p>Based on the information given, site observations and environmental monitoring results, this complaint was considered not justifiable.</p> <p>Nevertheless, the Contractor was reminded to adopt good site practice to minimize the environmental impacts at the nearby sensitive receivers</p>	Closed

APPENDIX J
SUMMARY OF EXCEEDANCES

Summary of exceedances recorded in the reporting quarter

- a) Exceedance Report for 1-hr TSP (NIL)*
- b) Exceedance Report for 24-hr TSP (NIL)*
- c) Exceedance Report for Construction Noise (NIL)*