

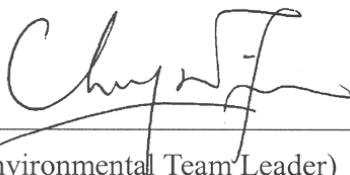
Highways Department

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)

June to August 2006

Approved By 
(Environmental Team Leader)

REMARKS:

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

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

CINOTECH CONSULTANTS LTD

Room 1602-1610, Delta House,
3 On Yiu Street,
Shatin, NT, Hong Kong
Tel: (852) 2151 2083 Fax: (852) 3107 1388
Email: info@cinotech.com.hk

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EXECUTIVE SUMMARY

- This is the eleventh 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 June and August 2006 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 period included soil nailing/ rock dowel, retaining wall, drainage work, road works, cut slope, haul road and noise barrier foundation.

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>June 2006</i>				
1-hr TSP	0	0	0	N/A
24-hr TSP	0	0	0	N/A
Noise	0	0	0	N/A
<i>July 2006</i>				
1-hr TSP	0	0	0	N/A
24-hr TSP	0	0	0	N/A
Noise	0	0	0	N/A
<i>August 2006</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 this 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 the coming month include:</p> <ul style="list-style-type: none"> • Cut slope and haul road; • Drainage works; • Soil nailing/rock dowel; • Footbridge and toll collector construction; • Watermains crossing Tai Po Road; • Concreting of block wall; • Duct works; • Louvre & door installation; • Plumbing & drainage; • Noise barrier foundation; • E&M cabling; • Concreting of staircase and wing wall; and • Box culvert/open channel & culvert A (railing installation) <p>The anticipated environmental impacts will be mainly on surface runoff during rainy season, dust from slope work, haul roads and stockpiles, noise impact from soil nailing and rock dowel installation.</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. David YEUNG of CH2M-HILL Hong Kong Ltd. was appointed as the IEC under Condition 2.1 of the EP. This is the eleventh quarterly EM&A report summarizing the EM&A works for the ENT Project between June and August 2006.

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**. The site activities during the reporting period include:
- Soil nailing, box culvert/open channel (railing installation), retaining wall and water-main works, at Butterfly Valley;
 - Cut Slope, mini-piles and haul road construction at Butterfly Valley;
 - Noise barrier foundation road works and rock dowel at Butterfly Valley;
 - Drainage works at Butterfly Valley, Toll Plaza and SHT-North Portal Building;
 - Utility (Draw pit/Ducting) at Butterfly Valley and Toll Plaza;
 - E&M Cabling and dampers at ENT Tunnel;
 - Asphalts pavement construction and VE panel at ENT Tunnel;
 - Concreting of columns, walls & slab at South Portal Building, Ventilation Building and Toll Plaza – workshop;
 - HV cable trough sand backfilling activities and VE panel at ENT Tunnel;
 - Plastering, painting, rendering and plumbing & drainage a all buildings;
 - Screeding at South Portal Building and North Portal Building;
 - Metal door installation at South Portal Building;
 - Footbridge and Toll Collector construction at Toll Plaza;
 - Louver installation at North Portal Building, Administration Building, Ventilation Building, SHT- South Portal Building and SHT – North Portal Building;
 - Concreting of wing walls & staircase at Ventilation Building;
 - Fire services at Toll Plaza, SHT – South Portal Building, SHT – North Portal Building

and SHT Tunnel & Remaining SHT/T3 Area;

- Concreting of block wall, switch board installation and CLP room at SHT – South Portal Building and SHT – North Portal Building; and
- Cladding, tunnel ventilation works and duct works at SHT Tunnel & Remaining SHT/T3 Area.
- Switch board installation and CLP room at SHT – South Portal Building and SHT – North Portal Building; and
- E&M installation work on site, except Ventilation Building and Butterfly Valley.

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 fine, sunny or cloudy. 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 June to August 2006. 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 month. 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 June to August 2006. 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 were conducted on 5, 14, 21 and 28 June 2006, 3, 12, 19 and 26 July 2006, 2, 7, 16, 23 and 30 August 2006. IEC's monthly site audits were conducted on 5 June 2006, 3 July 2006 and 7 August 2006 together with ET.
- 5.3 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>	5-Jun-06	Sediment and sand accumulation were observed inside the trench adjacent to the South Portal Wheel Washing Bay and inside the temporary silt pond at manhole 15 (R900-15) of Butterfly Valley. The Contractor was reminded to clean up the sediment and sand regularly. Besides, the capacity of the catchpit and silt pond should be sufficient capacity to treat the wastewater at the abovementioned locations.	Rectification / improvement was observed during the site inspection on 14 June 06.
	5-Jun-06	The wastewater facilities on-site were found but not fully reflected in the latest Drainage Management Plan. The Contractor was advised to update the Drainage Management Plan. In addition, the Contractor should demonstrate the wastewater treatment and drainage facilities on-site were adequacy capacity.	Rectification / improvement was observed during the site inspection on 14 June 06.
	5-Jun-06	The Contractor was reminded to spray larvicide on stagnant water/water pond to prevent mosquito from breeding.	Rectification / improvement was observed during the site inspection on 14 June 06.
	14-Jun-06	Yellow water discharged from the water pump to outside site boundary was observed at apartment M. It was due to the water-trap no enough. Stop water pump was the immediately action by contractor. However, the water pond should be filled or other measures provided to avoid yellow water provided.	Rectification / improvement was observed during the site inspection on 21 June 06.
	3-Jul-06	Accumulation of stagnant water was observed at the area of Portion D4, Toll Plaza. The Contractor was reminded to spray larvicide or fill up with soil/sand onto stagnant water to prevent mosquito from breeding.	Rectification / improvement was observed during the site inspection on 12 July 06.

Parameters	Date	Observations / Recommendations	Remedial Actions
	19-Jul-06	The contractor was reminded to clean up the sand if available in step channel at Mui Kong Tsuen.	Rectification / improvement was observed during the site inspection on 26 July 06.
	19-Jul-06	The contractor was reminded to provide completely cover for the open slope and open stockpiles in BVS3.	Rectification / improvement was observed during the site inspection on 26 July 06.
	7-Aug-06	Accumulation of silt was observed at the area near by all Aquased System, at Toll Plaza. The Contractor was reminded to remove silt regularly and to maintain the efficiency of the sedimentation system.	Rectification / improvement was observed during the site inspection on 16 August 06.
	7-Aug-06	Stagnant water was observed at the area near to Storage Area of Toll Plaza. The Contractor was reminded to remove/spray larvicide onto the stagnant water preventing mosquitoes from breeding.	Rectification / improvement was observed during the site inspection on 16 August 06.
	16-Aug-06	Stagnant water was observed on the ground floor of S.H.T. South Portal Building. The Contractor was reminded to remove/spray larvicide onto the stagnant water preventing mosquitoes from breeding.	Rectification / improvement was observed during the site inspection on 23 August 06.
Noise Quality	19-Jul-06	No door for operating generator was observed at Mui Kong Tsuen.	Rectification / improvement was observed during the site inspection on 26 July 06.
Chemical and Waste Management	14-Jun-06	Sorting should be provided for the waste accumulated, e.g. construction waste and general refuse, at 1/F Shatin Height Portal Building. The Contractor was also reminded to clean up more frequently to avoid accumulation.	Rectification / improvement was observed during the site inspection on 21 June 06.
	3-Jul-06	Chemical drums and generator were placed on bare ground at the area of Portion D4 of Toll Plaza, DN200 of Portion E5 and Ventilation Adit. The Contractor was reminded to provide drip trays preventing oil/chemical from leakage.	Rectification / improvement was observed during the site inspection on 12 July 06.
	19-Jul-06	No drip tray for a drum of admixture was observed at administration building.	Rectification / improvement was observed during the site inspection on 26 July 06.
	26-Jul-06	No drip tray for a drum of diesel oil was observed at BVS2. A drip tray should be provided to prevent spillage.	Rectification / improvement was observed during the site inspection on 2 August 06.
	7-Aug-06	General refuses were scattered on the ground at the area of Storage Area, at Toll Plaza. The Contractor was reminded to clean up the refuses and keep site area tidiness.	Rectification / improvement was observed during the site inspection on 16 August 06.
	23-Aug-06	Some domestic waste was observed on bared ground at south portal building. It should be cleaned up and placed in suitable receptacle.	Rectification / improvement was observed during the site inspection on 30 August 06.

Status of Environmental Licensing and Permitting

- 5.4 Environmental licenses and permits including the Environmental Permit for the Project were in place and valid during the reporting quarter. The status of all 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 coming months include:

ENT Tunnel

- HV cable trough sand backfilling activities, VE Panel, E&M cabling and dampers.

Butterfly Valley

- Cut slope and haul road, box culvert/ open channel & Culver A (railing installation), soil nailing/rock dowel, drainage works, DN200 & DN200 twin water-main, noise barrier foundation, utility (Draw pit/ Ducting) and road works.

South Portal Building

- Louvre installation, rendering, screeding, plumbing and drainage.

North Portal Building

- Louvre installation, plastering, painting, rendering, plumbing and drainage.

Toll Plaza's Structures and Administration Building

- Footbridge and Tool Collector construction, utility (draw pit/ ducting), drainage works, louvre, curtain wall & door installation, plastering, rendering, Mechanical Ventilation Air Condition, plumbing & drainage and fire services.

Ventilation Adit Tunnel and Building

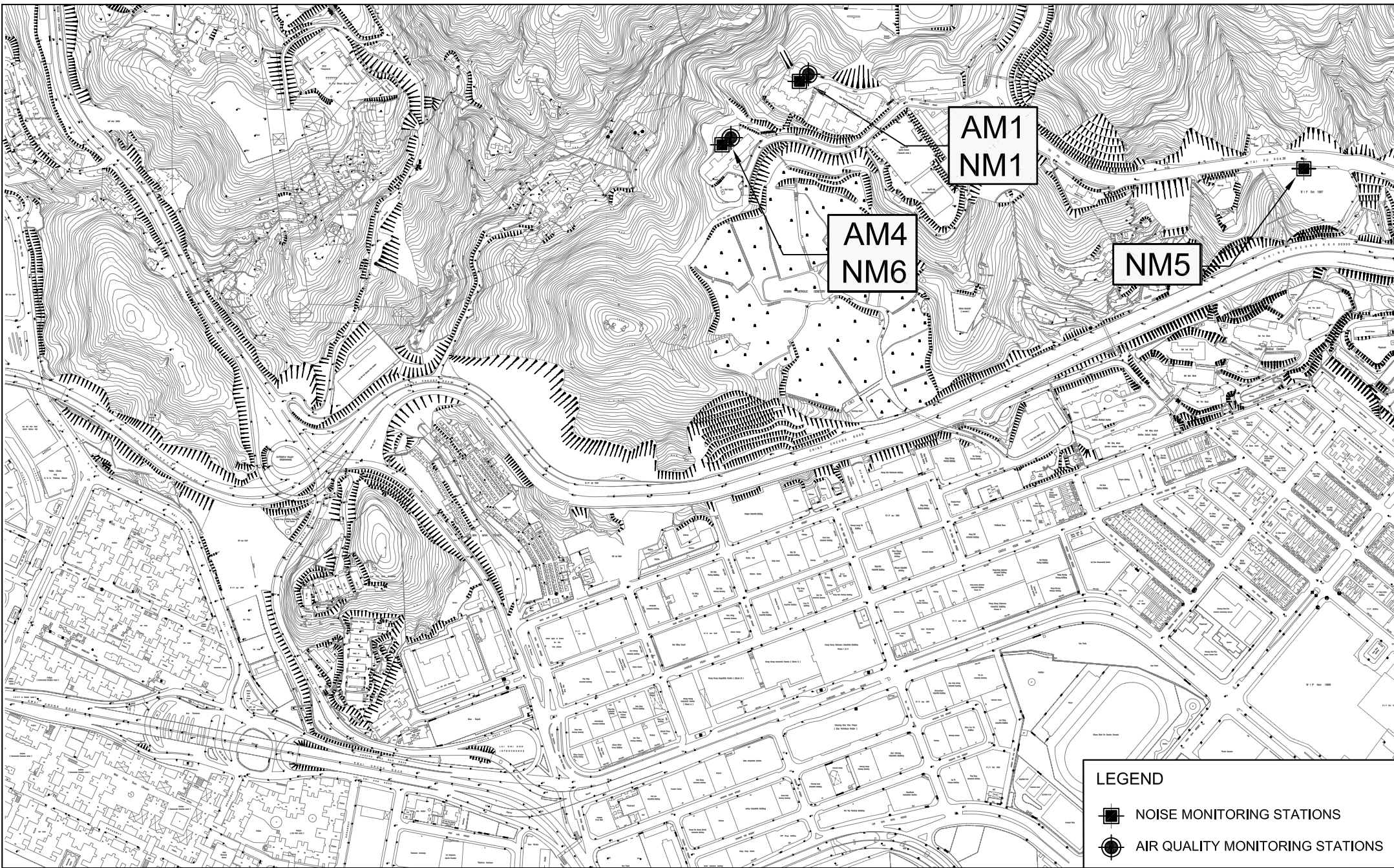
- Concreting of wing wall, louvre door wall & cladding installation, plastering, painting, rendering and watermain crossing Tai Po Road.

Other Works Areas

- E&M installation works within SHT/T3 works area.

- 9.2 The anticipated environmental impacts will be mainly on surface runoff during rainy season, dust from slope work, haul roads and stockpiles, noise impact from soil nailing and rock dowel installation.

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

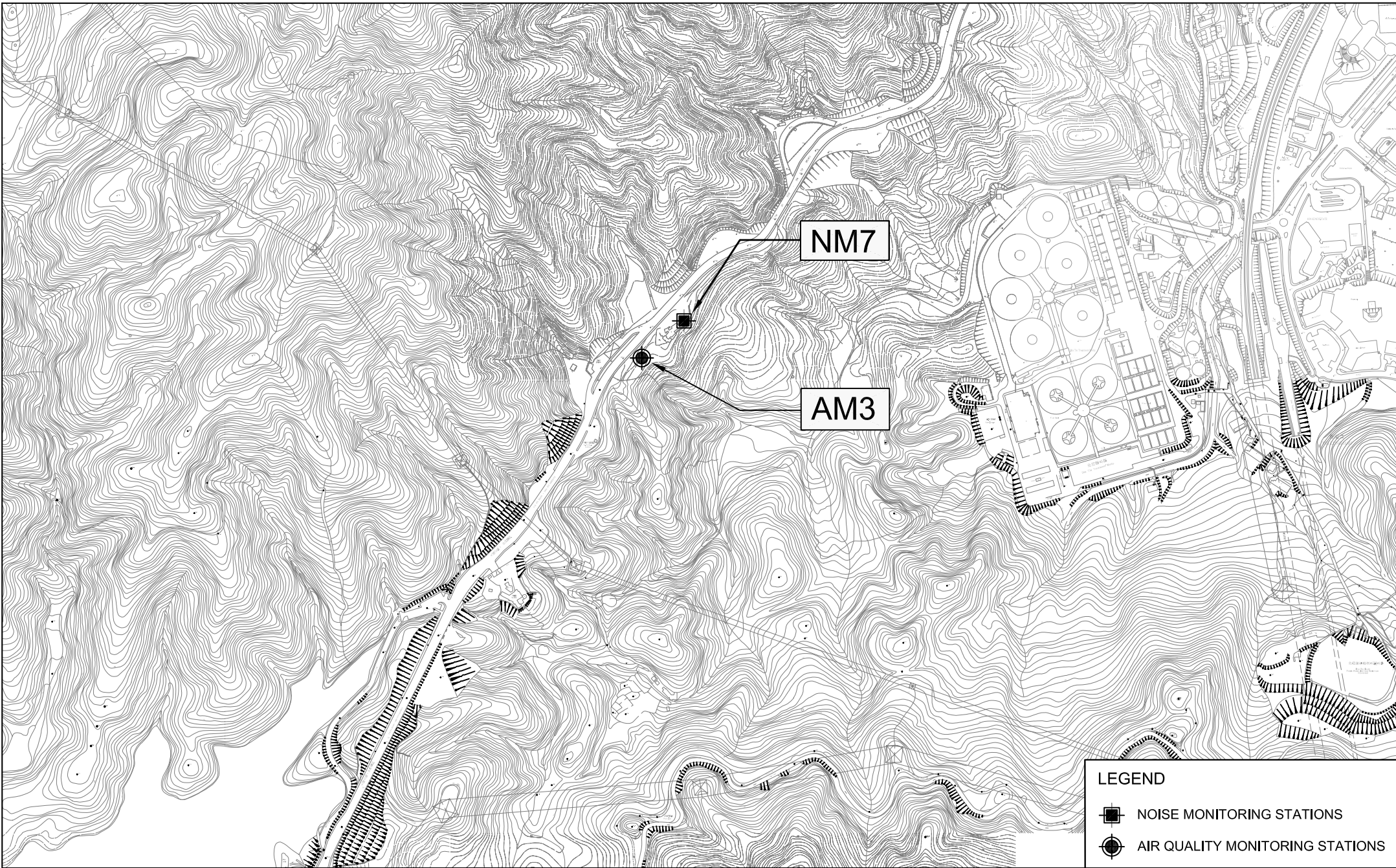
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Date
2006

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

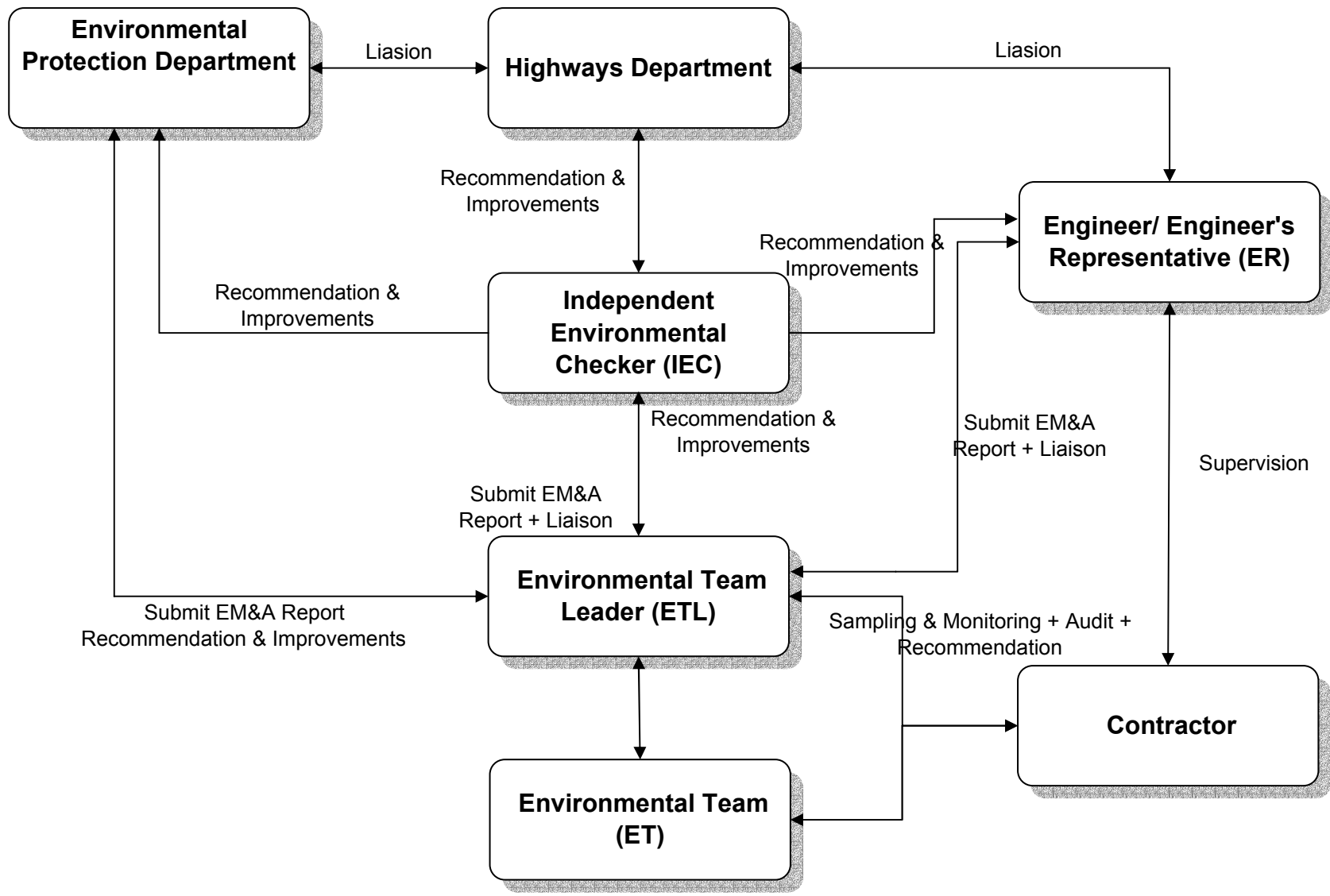
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Date
 2006

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

Scale N.T.S

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 3684	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	The ET Leader	2151 2089	3107 1388
		Mr. Edmond Wu	Audit Team Leader	2151 2092	
		Mr. Henry Leung	Monitoring Team Leader	2151 2087	
CH2M-HILL	Independent Environmental Checker	Mr. David Yeung	Independent Environmental Checker	2507 2203	2507 2293
		Mr. Billy Yu	Assistant Independent Environmental Checker	2872 2949	
LKJV	Contractor	Mr. Ray Brewster	Project Director	9092 6128	2743 1600
		Mr. Kevin Harman	QA/E Manager	3352 2128	
Enquiries Hotline				3552 2226	-
Complaint Hotline				3552 2380	-

APPENDIX B
CONSTRUCTION PROGRAMME

Data Date Run Date	20AUG06 25AUG06 16:04	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	Gantt Chart																	
										JUN 33	JUN 12	JUN 19	JUN 26	JUN 3	JUL 10	JUL 17	JUL 24	JUL 31	AUG 7	AUG 14	AUG 21	AUG 28	SEP 4	SEP 11	SEP 18	SEP 25	OCT 2
GENERAL																											
Contract defined dates, stages and sections																											
Stages of the Works																											
KD05A2	KD-05A Proposed - TCSS Access BV West (15May06)	0		05SEP06	0	0	0	-113	-36	[Gantt bar with red diamond]																	
KD05C1	KD-5C TCSS Access Toll Plaza East(30Jun06)	0		17OCT06	0	0	0	-109	-89	[Gantt bar with red diamond]																	
KD05C2	KD-5C TCSS Access Toll Plaza West(15Aug06)	0		17OCT06	0	0	0	-63	-42	[Gantt bar with red diamond]																	
KD06V	KD-6V TCSS Acc to Adit - incl VB & CP7 (12Jun06)	0		24AUG06	0	0	0	-73	-70	[Gantt bar with red diamond]																	
KD07A	KD-7 TCSS Access Toll Plaza east (30.Jun.06)	0		17OCT06	0	0	0	-109	-89	[Gantt bar with red diamond]																	
KD08A	KD-8 TCSS Access Toll Plaza West (15.Aug.06)	0		17OCT06	0	0	0	-63	-42	[Gantt bar with red diamond]																	
Submittals & Approvals																											
Drawing Submittal & Approval																											
8034	Prep. & Sub. Independ't Serv. Dwgs for SHT&T3&LCK	48	04AUG04A	02SEP06	98	98	12	336	-90	[Gantt bar]																	
8024	Engineer Comment / Approve ENT ISD Submissions	18	06AUG04A	29AUG06	85	85	8	14	-90	[Gantt bar]																	
8030	Res-sub. & Approv of ENT ISD	24	06SEP04A	02SEP06	70	70	12	14	-90	[Gantt bar]																	
8035	Engineer Comment / Approve SHT&T3LCK ISD Sub.	24	13SEP04A	30SEP06	85	85	36	336	-90	[Gantt bar]																	
8032	Engineer Comment / Approve SHT&T3&LCK CSD Sub.	18	25OCT04A	06SEP06	90	90	15	336	-90	[Gantt bar]																	
8036	Re-sub. & Approv of SHT & T3 & LCK ISD	36	31MAR05A	30SEP06	70	70	36	336	-90	[Gantt bar]																	
8033	Re-sub. & Approv. of SHT & T3 & LCK CSD	24	28JUN05A	16SEP06	60	60	24	336	-90	[Gantt bar]																	
8022	Engineer Comment / Approve ENT CSD Submissions	12	21AUG06	02SEP06	0	0	12	336	-90	[Gantt bar]																	

	LEIGHTON - KUMUGAI JV R8 - EAGLES'S NEST TUNNEL CONTRACTORS TARGET PROGRAMME REV.1	Proj. Name: W22E Layout: 3 MONTHS ROLLING PROGRAMME Filter: 3 MONTH ROLLING PROGRAMME Current Proj: W22E Target 1 Proj: BE02 Sheet 1 of 47	LKJV/ENT/DWP/B <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Date</th> <th>Revision</th> <th>Checked</th> <th>Approved</th> </tr> <tr> <td>20AUG06</td> <td>Prog update Aug 06</td> <td>GW</td> <td>RB</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	Date	Revision	Checked	Approved	20AUG06	Prog update Aug 06	GW	RB								
Date	Revision	Checked	Approved																
20AUG06	Prog update Aug 06	GW	RB																

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN				JUL				AUG				SEP				OCT				NOV				DEC								
										33	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	4	11	18	25	2	9	16	23
Construction Works																																										
BUTTERFLY VALLEY 3RD PARTY WORKS																																										
TCSS at Butterfly valley Approach																																										
S2462	TCSS Access to Gantry MLS-CAP13 (NB) (15MAY06)	0		28AUG06	0		0	-88	-82																																	
S2602	TCSS Access to Gantry MLS-CAP11 (NB) (15MAY06)	0		28AUG06	0		0	-88	-82																																	
S2622	TCSS Access to Gantry MLS-CAP12 (SB) (11JUN06)	0		28AUG06	0		0	-66	-92																																	
S2632	TCSS Access to VMS MLS-CAP 14, 15 (11JUN06)	0		29AUG06	0		0	-67	-82																																	
S2592	TCSS Access to Duct & D.Pit West BV (15MAY06)	0		05SEP06	0		0	-95	-31																																	
S2392	TCSS Access to Duct & D.Pit East BV (11JUN06)	0		30SEP06	0		0	-95	-19																																	
Noise Barrier Works by ACCIONA																																										
S2662	Access for 7m N.B. Works by Acciona at BV South	77	21AUG06	21NOV06	0		0	77	-34	-56																																
S2612	Access for S-Enclosure Works (Primary Elements)	90	21AUG06	06DEC06	0		0	90	-153	-48																																
S2662	Access for 5m N.B. Works by Acciona at BV South	90	18SEP06	06JAN07	0		0	90	258	-48																																
BUTTERFLY VALLEY E&M WORKS																																										
Noise Enclosure 6 at South Portal Area																																										
8372	LckVd NE6 - Elect Works 1st Fix	30	25NOV06*	02JAN07	0		0	30	-68	-48																																
Butterfly Valley Miscellaneous E&M Works																																										
8440	Butterfly Valley - Elect Works 1st Fix	42	21SEP06	11NOV06	0		0	42	17	-17																																
8430	Butterfly Valley - Elect Works 2nd Fix	36	06OCT06	18NOV06	0		0	36	17	-17																																
8410	Butterfly valley - Elect Works Fin Fix	24	28OCT06	25NOV06	0		0	24	17	-17																																
8420	Butterfly Valley - Cabling	24	28OCT06	25NOV06	0		0	24	17	-17																																
MAJOR DRAINAGE DIVERSIONS																																										
Filling																																										
S2680	Fill on top of Box Culvert 45 & culvert A	9	11SEP06	09OCT06	0		0	9	331	-89																																
Box Culvert																																										
S2710	Box Cul. Final Structure (Strip, Clean & Fill)	12	21AUG06	09OCT06	0		0	12	331	-119																																
S2800	Culvert A Structure & connection to Bay 45	18	21AUG06	09SEP06	0		0	18	345	-75																																

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL			AUG			SEP			OCT			NOV			DEC							
										33	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20
EARTHWORKS & SLOPEWORKS																																		
BV-R1 Remaining Works																																		
S3240	BV-R1 - Construction of Lagging Wall	91	20MAR06A	23SEP06	60		5	30	-10	-45																								
S2120	Retaining Wall BV-R1 Structure (Wall)	87	13FEB06A	25AUG06	92		70	5	-158	-71																								
S2360	BV-R1 - Backfill	48	10MAY06A	08SEP06	70		0	7	355	-35																								
SLOPE SP-S2 & SP-S3																																		
S2370	Remaining Works to Slopes SP-S3 & SP-S2	24	19JUL06A	02SEP06	5		0	8	69	-60																								
S2480	WSD Access Rd No Longer Available for Use	0		31OCT06*	0		0	0	0	0																								
SLOPE BV-S2																																		
SLOPE STABILISATION (SOIL NAILS, ROCK BOLTS ETC)																																		
102691	BV-S2/8 Inst Rock bolts & Test (60nr.w/3.rig)	22	15FEB06A	23AUG06	90		75	3	54	-87																								
102694	BV-S2/9 Inst Rock bolts & Test (4nr.w/1.rig)	5	28MAR06A	21AUG06	60		15	1	55	-89																								
20.600.130.180.035																																		
103811	BV-S2 Berm 9 hydro-seeding & tensar mat	12	01SEP06	14SEP06	0		0	12	47	-88																								
103812	BV-S2 Berm 10 hydro-seeding & tensar mat	12	18SEP06	30SEP06	0		0	12	45	-90																								
SURFACE DRAINAGE																																		
103696	BV-S2 Berm 9 Surface drainage	14	01MAR06A	31AUG06	30		30	10	45	-90																								
103697	BV-S2 Berm 10 Surface drainage	14	01SEP06	16SEP06	0		0	14	45	-90																								
SLOPE BV-S4																																		
S3680	Additional Soil Nails - Base of Pier 19	24	11SEP06	10OCT06	0		0	24	21	-90																								
S3050	Complete Outstanding Soil Nails for BVS4 (5No.)	10	18SEP06	28SEP06	0		0	10	12	-6																								
S3520	Remaining Raking Drains (11No.) & Hydroseeding	12	29SEP06	14OCT06	0		0	12	23	-6																								
SLOPE FINISHES																																		
102380	BV-S4/3a-4a & 5 hydro-seeding & tensarmat	12	12SEP05A	23SEP06	80		70	30	-133	-90																								
101139	11nw/434 BV-S4/1-2-3bod-4b Hydro-seed/Tensarmat	18	28AUG06	16SEP06	0		0	18	-127	-90																								
SURFACE DRAINAGE																																		
103705	BV-S4/3 Surface Drainage	8	17MAR05A	26AUG06	75		70	6	-133	-90																								
103706	BV-S4/4 Surface Drainage	12	07SEP05A	09SEP06	75		5	18	-133	-90																								

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	Gantt Chart												
										JUN 33	JUN 34	JUN 35	JUN 36	JUN 37	JUN 38	JUN 39	JUN 40	JUN 41	JUN 42	JUN 43	JUN 44	
SLOPE SP-S1																						
SURFACE DRAINAGE																						
103711	Sp-S1/4 Surface Drainage	7	06JUL04A	28AUG06	40	40	7	74	-90													
RC STRUCTURES																						
RETAINING WALL BV-R2																						
BACKFILLING																						
101126	BV-R2(C) Granular Drain & Compacted Backfill	6	21AUG06	26AUG06	0	0	6	62	-86													
ROADWORKS - North End of BV																						
Stormwater Drainage																						
S2440	Storm Drainage to Nrth Bnd (Nr. Typ C&E N.B.)	37	31DEC05A	06SEP06	95	40	10	-158	-36													
S3200	Storm Drainage to Sth Bnd (Nr. Typ D N.B.)	37	31DEC05A	28JUL06A	100	45	0		-54													
S2430	West Loop Rd. Drainage	20	19JAN06A	22SEP06	30	30	14	9	-62													
S3020	Storm Drainage to enable TCSS Works at Median	12	24FEB06A	22AUG06	50	50	2	-143	-90													
S3040	Storm Drainage to enable CLP Works	12	24FEB06A	22AUG06	50	50	2	-143	-90													
S2450	Storm Drainage to Sth Bnd (Nr. Typ B N.B.)	45	30JUN06A	09AUG06A	100	0	0		6													
S2420	Outstanding East Loop Rd. Drainage	28	21AUG06	05SEP06	0	0	14	-12	-86													
S2630	250mm pipe connect E./W. stream + 3No. Chamber	24	21AUG06	16SEP06	0	0	24	-167	-27													
Noise Barrier Footings & Sign Gantries																						
S3530	Base for HML 1	9	29JUL06A	30AUG06	50	0	9	-152	-82													
Ducting & Drawpits																						
S2570	Bv North - CLP Ducts near DSD Access Ramp	4	12JUL06A	02AUG06A	100	0	0		-39													
S3640	BV North - CLP Ducts at SP Bldg	4	02AUG06A	02AUG06A	100	0	0		-28													
S3630	BV North - CLP Ducts at Median	6	03AUG06A	05AUG06A	100	0	0		-24													
S2560	BV North - TCSS Ducting & Drawpits (West)	18	01APR06A	05SEP06	90	5	14	-95	-84													
S2680	BV North - TCSS Ducting & Drawpits (East)	18	27JUL06A	30SEP06	90	0	8	-95	-19													
S2770	BV North - LV Ducting & Drawpits	13	20APR06A	20SEP06	30	0	13	-102	-17													
Road Pavement & Associated Work																						
S2232	BV North - Subbase to Sth Bound Carriageway	40	18SEP06	06NOV06	0	0	40	-167	-27													

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL		AUG		SEP		OCT		NOV		DEC			
										33	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2
Road Pavement & Associated Work																									
S2222	BV North - Subbase to Nrth Bound Carriageway	43	25SEP06	16NOV06	0	0	43	-10	-20																
S2920	Road Works to East Loop Rd Typ III (EVA)	13	27SEP06	13OCT06	0	0	13	36	-86																
S2540	BV North - Kerbs & CPB to Nrth Bound Carriageway	36	11OCT06	27NOV06	0	0	36	-167	-27																
S2890	BV North - Kerbs & CPB to Sth Bound Carriageway	36	11OCT06	27NOV06	0	0	36	-19	-27																
S2242	BV North - Bitu. Pavement to Nrth Bnd Carrig'way	24	25OCT06	04DEC06	0	0	24	-19	-27																
S2252	BV North - Bitu Pavement to Sth Bnd Carrig'way	24	25OCT06	04DEC06	0	0	24	-19	-27																
S2262	BV North - Typ IV Pavement	40	25OCT06	15DEC06	0	0	40	-167	-27																
S2930	Road Works to West Loop Road Typ III (EVA)	13	01NOV06	16NOV06	0	0	13	9	-62																
S2900	Road Marking & White Lining (Staged for Access)	24	09NOV06	18DEC06	0	0	24	-19	-27																
S3010	Installation of Road Signage (Sign Plates Only)	24	09NOV06	18DEC06	0	0	24	-19	-27																
Miscellaenous Works																									
S3100	Erect HML 2	4	21AUG06	24AUG06	0	0	4	77	-90																
S3450	Erect HML 3	4	21AUG06	24AUG06	0	0	4	77	-39																
S2870	Erect HML 1	4	14SEP06	18SEP06	0	0	4	56	-82																
S2660	Construd Foul Holding Tank & Connections	24	23MAY06A	12AUG06A	100	0	0	0	-60																
S2910	Foul Drain Pipe Across SB Tube (3m Below FRL)	6	21AUG06	26AUG06	0	0	6	-149	-79																
S2670	Install Twin DN200 Pipes to SPB via E. Loop Rd	18	06SEP06	26SEP06	0	0	18	-12	-86																
S2590	Installation of DN200 Fire Hydrant Pipe and FH's	24	07SEP06	05OCT06	0	0	24	-158	-18																
S3400	Base for Kiosk K3	6	21SEP06	27SEP06	0	0	6	-102	-17																
S3000	Construd Recreated Stream	30	23SEP06	31OCT06	0	0	30	9	-62																
ROADWORKS - South End of BV																									
Stormwater Drainage																									
S2490	Storm Drainage to Nrth Bnd (Foot of BVS2)	41	11JUL06A	24AUG06	90	0	4	-172	-31																
Noise Barrier Footings & Sign Gantries																									
S2491	5.5m Barrier Footings Bay 1-2	14	11MAY06A	27JUL06A	100	0	0	0	-38																

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	Gantt Chart							
										JUN 33	JUL 34	AUG 35	SEP 36	OCT 37	NOV 38	DEC 39	
Noise Barrier Footings & Sign Gantries																	
S3330	Load Test for mini-piles	12	24JUL06A	04AUG06A	100	0	0		-35								
S2481	5.5m Barrier Footings Bay 15-17	24	21AUG06	16SEP06	0	0	24	-186	-48								
S2620	BV South - Sign / Lane Signal Gantry Bases (5no)	12	05JUL06A	24AUG06	80	0	4	-88	-82								
S2461	Sign gantry Installation MLS-CAP12	3	25AUG06	28AUG06	0	0	3	-66	-82								
S3370	Signal Gantry Installation MLS-CAP14 & 15	4	25AUG06	29AUG06	0	0	4	-67	-82								
S3380	Sign Gantry Installation MLS-CAP11,13	3	25AUG06	28AUG06	0	0	3	-88	-82								
S2250	Footing for CCTV mast	6	19SEP06	23SEP06	0	0	6	-186	-48								
Ducting & Drawpits																	
S2530	BV South - TCSS Ducts & Drawpits (East)	10	19APR06A	15AUG06A	100	10	0		-49								
S3350	BV South - TCSS Ducts & Drawpits (West)	10	01JUN06A	19AUG06	90	0	0	-81	-17								
S2740	BV South - LV Ducts & Drawpits	20	01JUN06A	26AUG06	10	0	6	-162	-13								
Road Pavement & Associated Work																	
S2940	BV Sth - Trim Formation & S'base - Sth Bnd	26	01AUG06A	18OCT06	25	0	19	-27	-30								
S2960	BV Sth - Kerbs & CPB to Sth Bound Carriageway	30	12AUG06A	09NOV06	25	0	22	-27	-26								
S2510	BV Sth - Trim Formation & S'base - Nth Bnd	35	14AUG06A	28OCT06	20	0	28	-186	-30								
S2950	BV Sth - Kerbs & CPB to Nth Bound Carriageway	30	11OCT06	20NOV06	0	0	30	-186	-30								
S2980	BV Sth - Bitu. Pavement to Nth Bnd Carrig'way	23	25OCT06	16DEC06	0	0	23	-186	-30								
S2970	BV Sth - Bitu. Pavement to Sth Bnd Carrig'way	20	22NOV06	14DEC06	0	0	20	-34	-33								
Miscellaneous Works																	
S2850	Erect HML9	4	21AUG06	24AUG06	0	0	4	77	-52								
S2790	Installation of DN 200 Fire Hydrant Pipe & FH's	12	25AUG06	07SEP06	0	0	12	-172	-31								
S3320	Base for kiosk K4	6	25AUG06	31AUG06	0	0	6	-97	-31								
S3340	Construction of Weighbridge Pit	10	25AUG06	05SEP06	0	0	10	61	-31								
LKJV Works at Abutment M																	
S3600	Storm Drainage (MH07 & MH04)	10	24JUN06A	20JUL06A	100	0	0		-38								

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN				JUL				AUG				SEP				OCT				NOV				DEC																								
										33	34	35	36	37	38	39	40	41	42	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31								
LKJV Works at Abutment M																																																										
S3430	Storm Drainage (MH02 & MH09 + 5 Gullies)	12	29JUN06A	26AUG06	50	0	6	15	-68																																																	
S3440	200mm Watermain, valve pit & FH-6	12	28AUG06	09SEP06	0	0	12	15	-64																																																	
S3470	Ducting & drawpits in Portion B	12	11SEP06	23SEP06	0	0	12	15	-64																																																	
S3420	Complete remaining roadworks within Portion B	36	25SEP06	08NOV06	0	0	36	15	-64																																																	
ACCIONA Works at Abutment																																																										
S3480	ACCIONA - Dismantle Launching Girder	24	09NOV06	06DEC06	0	0	24	282	-64																																																	
DSD MAINTENANCE ROAD																																																										
DSD Maintenance Rd DSD1-1 (Acciona Interface)																																																										
S3570	WSD Slope Reinstatement	18	11OCT06	01NOV06	0	0	18	21	-90																																																	
S2340	ACCIONA - Remove Crane Platform	18	21AUG06	09SEP06	0	0	18	21	-90																																																	
S2550	ACCIONA - Cure, Strip & Reinstale Area - Pier 21	62	26JUN06A	09SEP06	71	0	18	9	-6																																																	
S2330	Com DN200 Div along DSD1-1 - inc. Leak Collect	18	26JUN06A	19AUG06A	100	0	0	0	-72																																																	
S2410	LKJV Regain Access at Pier 21 for Remaining Work	0		09SEP06	0	0	0	9	-6																																																	
S2460	LKJV Regain Access at Pier 20	0		09SEP06	0	0	0	33	-90																																																	
S2390	Remaining DN200 Watermain at Pier 20 Access	6	11SEP06	16SEP06	0	0	6	33	-90																																																	
S3460	MH R400-05 & Drain from R400-04	12	11SEP06	23SEP06	0	0	12	9	-6																																																	
S2380	Complete DSD1-1 Surface Drainage & CP's	18	25SEP06*	17OCT06	0	0	18	9	-6																																																	
S3140	Complete Sub-base & kerbs at DSD1-1	12	18OCT06	01NOV06	0	0	12	9	-6																																																	
S3160	Complete Surfacing at DSD1-1 (Type IV)	8	02NOV06	10NOV06	0	0	8	13	-6																																																	
DSD Maintenance Rd DSD1 (Parallel to Channel)																																																										
S3210	2 No. Cross Rd Pipes & Roadside Gullies	12	01MAR06A	24AUG06	80	80	4	-53	-90																																																	
S2830	Twin DN200 Water Pipe	45	02MAY06A	11OCT06	10	1	40	-53	-90																																																	
S2700	Access rd DSD1 -barrier footings	12	12OCT06	25OCT06	0	0	12	14	-90																																																	
S3390	Complete Formation at DSD1	6	12OCT06	18OCT06	0	0	6	-53	-90																																																	
S3120	DN 200 Watermain Diversion EB18 - EB70	40	19OCT06	05DEC06	0	0	40	-53	-90																																																	

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL			AUG			SEP			OCT			NOV			DEC							
										33	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20
DSD Maintenance Rd DSD1 (Parallel to Channel)																																		
S3220	Subbase & Kerbs	18	18OCT06	08NOV06	0	0	18	9	-6																									
S2720	Access rd DSD1 - Barriers	12	26OCT06	09NOV06	0	0	12	14	-90																									
S3160	REINSTATE BV ACCESS	0		10NOV06	0	0	0	13	-6																									
S3230	Surfacing (Type IV)	12	02NOV06	16NOV06	0	0	12	9	-6																									
Works By CLP																																		
S3650	Lay CLP Cables Ch30 - Ch110	9	21AUG06	30AUG06	0	0	9	-95	-66																									
S2840	Lay CLP Cables Ch110 - Ch230	15	31AUG06	16SEP06	0	0	15	-95	-44																									
S2860	Lay CLP Cables Ch230 - Ch395 (SB Carriageway)	19	18SEP06	11OCT06	0	0	19	-95	-44																									
S2880	Lay Cable from Ch395 to S.Portal CLP Rm	12	12OCT06	25OCT06	0	0	12	-82	-44																									
Terrain Mitigation																																		
NTMM - BV-S2																																		
102350	NTMM - Afforestation of Area	60	22MAR06A	07SEP06	30		5	16	65	-80																								
Landscaping & Establishment																																		
101475	BV - Hard Landscaping	90	25SEP06	13JAN07	0		0	90	-133	-90																								
ENT SOUTH PORTAL VENTILATION BUILDING																																		
SUBMITTALS & APPROVALS																																		
E&M EQPT. & MATERIAL APPROVALS																																		
1919	SP Bldg. - Approve doors details	24	07MAY05A	25AUG06	80		80	5	-88	-86																								
PROCUREMENT - MATERIAL																																		
6011	EntSpBldg-Proc & Manuf. PD irrig. sys	120	05MAR05A	31AUG06	92		80	10	362	-91																								
6008	EntSpBldg-Proc & Manuf. LV power dist. equipt	180	21MAR05A	31AUG06	95		80	10	362	-75																								
6079	EntSpBldg-Proc & Manuf. FS AFA & FM200 sys	120	29MAR05A	15SEP06	80		90	23	349	-91																								
6009	EntSpBldg-Proc & Manuf. MVAC mech.vent. sys	120	06JAN06A	31AUG06	92		60	10	362	-65																								
6035	EntSpBldg-Proc & Manuf. MVAC Package AC Units	120	06JAN06A	31AUG06	92		60	10	362	-65																								
ABWF WORKS																																		
1951	SP Bldg. - Procure aluminium composite cladding	180	19APR05A	14SEP06	80		80	22	-78	-90																								

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL			AUG			SEP			OCT			NOV			DEC							
										33	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20
ABWF WORKS																																		
1979	SP Bldg. - Procure expanded metal mesh cladding	180	06JUN05A	30AUG06	80	80	9	-19	-90																									
2018	SP Bldg. - Initial deliver fall arrest roof syst	0	21AUG06*		0	0	0	38	-43																									
2019	SP Bldg. - Initial deliver of slate cladding	0	21AUG06*		0	0	0	14	-18																									
2030	SP Bldg. - Initial deliver balust & metal works	0	21AUG06*		0	0	0	38	-43																									
2025	SP Bldg- Initial deliver exp metal mesh cladding	0	28SEP06*		0	0	0	-19	-38																									
2029	SP Bldg. - Initial deliv alum composite cladding	0	11NOV06*		0	0	0	-78	-60																									
MAJOR EQUIPMENT DELIVERY																																		
6033	EntSpBldg-Del. PD pump & tank to G/F	48	06MAR06A	07SEP06	70	55	16	356	-96																									
6038	EntSpBldg-Del. FS pumps & tank to G/F	48	06MAR06A	07SEP06	70	55	16	356	-96																									
6050	EntSpBldg-Del. building vent. fans	64	06MAR06A	31AUG06	92	40	10	362	-65																									
6133	EntSpBldg-Del. Package AC Units	64	06MAR06A	31AUG06	92	40	10	362	-65																									
6037	EntSpBldg-Del. LV power dist. equip't to 3/F	48	21MAR06A	31AUG06	85	35	10	362	-75																									
6034	EntSpBldg-Del. PD irrig. pump & tank to G/F	48	02MAY06A	31AUG06	80	0	10	362	-52																									
6778	EntSpBldg-Del. ENT Tunnel (Hyd/HR) pumps to G/F	48	02MAY06A	31AUG06	80	0	10	362	-52																									
6163	EntSpBldg-Del. AFA & FM200 sys	48	15MAY06A	15SEP06	62	0	23	349	-43																									
6744	EntSpBldg-Del. MVAC MCC, & control sys to 3/F	48	15MAY06A	31AUG06	80	0	10	362	-42																									
6194	EntSpBldg-Del. CMCS & ELV equip't	48	01JUN06A	15SEP06	90	0	23	349	-26																									
CONSTRUCTION																																		
South Portal Bldg. - CIVIL & ABWF WORKS																																		
STRUCTURES																																		
T2920	Backfilling at South Portal Building	18	18APR06A	22AUG06	95	60	2	-172	-82																									
ABWF WORKS																																		
SB Bldg - Internal Works GF																																		
T2650	ABWF Initial finishes & Doors to CLP Rm & GF	18	06APR06A	23AUG06	95	5	3	51	-71																									
T3300	Complete Works to HV & LV Cable Risers	10	20JUL06A	31JUL06A	100	0	0		-20																									
T2760	GF - Paint touch up & Doors	12	08OCT06	17OCT06	0	0	12	33	-50																									

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL		AUG		SEP		OCT		NOV		DEC											
										33	34	35	36	37	38	39	40	41	42	43	44												
SP Bldg - Internal Works 1F & LP																																	
T2770	1F & LP - Paint touch up & Doors	12	11SEP06	23SEP06	0	0	12	51	-68																								
SP Bldg - Internal Works 2F																																	
T2780	2F - Paint touch up & Doors	12	07NOV06	20NOV06	0	0	12	5	-37																								
SP Bldg - Internal Works 3F																																	
T2680	ABWF Initial finishes 3F	18	15JUN06A	31JUL06A	100	0	0		-36																								
T2800	3F - Paint touch up & Doors	12	29SEP06	14OCT06	0	0	12	36	-45																								
SP Bldg - Internal Works 4F & Above																																	
T2690	ABWF Initial finishes 4F	18	20JUL06A	05SEP06	80	0	14	55	-33																								
T3170	Installation of Crane beam to underside of 4FL	12	24JUL06A	22AUG06	85	0	2	-88	-71																								
T3160	Installation of Crane beam to underside of 5FL	12	21AUG06	02SEP06	0	0	12	-92	-47																								
Roof & External Facade																																	
T2825	Ent SPB - Ext. Wall Waterproof Membrane	21	05JUL06A	29JUL06A	100	0	0		-8																								
T2820	Ent SPB - Ext. Wall Waterproof Render	18	20JUL06A	05SEP06	20	0	14	-16	-43																								
T2710	Ent SPB - Install Aluminum louvres & doors	90	26JUL06A	01DEC06	5	0	86	-88	-25																								
T2630	Ent SPB - Roof Waterproofing & Test	12	21AUG06	02SEP06	0	0	12	-4	-26																								
T2540	Ent SPB - Slate Cladding above NB/SB Carriageway	36	21AUG06	30SEP06	0	0	36	14	-18																								
T2410	Ent SPB - External Wall Painting	34	13SEP06	24OCT06	0	0	34	-16	-43																								
T2730	Ent SPB - 26hk Roof Sreed & Roofing Tiles	18	18SEP06	10OCT06	0	0	18	-4	-26																								
T2390	Ent SPB - Expanded metal cladding to Ext Walls	36	28SEP06	11NOV06	0	0	36	-19	-38																								
T2360	Ent SPB - GMS,S/S Channel, Balustrade & Railing	24	25OCT06	22NOV06	0	0	24	-16	-38																								
T2400	Ent SPB - Alum. Comp Panel Cladding to Ext Walls	60	11NOV06	23JAN07	0	0	60	-78	-60																								
ENT South Portal Bldg. - BUILDING SERVICES																																	
E & M WORKS																																	
ENT South Portal Bldg (G/F) - E & M Works																																	
EM1300	Installation of FS Pumps and Pipework at GF	18	21AUG06	09SEP06	0	0	18	51	-68																								
T2310	CLP work in CLP room	36	21AUG06	30SEP06	0	0	36	-63	-50																								
T2320	Installation of Earth Mat at SP Bldg	30	23AUG06	26SEP06	0	0	30	-58	-82																								

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	Gantt Chart																											
										JUN 33	JUL 34	AUG 35	SEP 36	OCT 37	NOV 38	DEC 39																					
ENT South Portal Bldg (1F/Lwr Plen) - E & M Work											JUN 12	JUN 19	JUN 26	JUN 3	JUN 10	JUN 17	JUN 24	JUN 31	JUN 7	AUG 14	AUG 21	AUG 28	SEP 4	SEP 11	SEP 18	SEP 25	SEP 2	OCT 9	OCT 16	OCT 23	OCT 30	NOV 6	NOV 13	NOV 20	NOV 27	DEC 4	DEC 11
T2610	NB carriageway OHVD slab + 74 / BB 1st fix	12	01JUN06A	31JUL06A	100	0	0		-58																												
T2630	SB Carriageway OHVD slab +74 / BB 1st Fix	12	01JUN06A	31JUL06A	100	0	0		-37																												
EM1310	Installation of Compressor	18	21AUG06	09SEP06	0	0	18	51	-68																												
ENT South Portal Bldg (2F/Silencer) - E & M Work																																					
EM1110	BS Works for Genset	18	24JUN06A	07SEP06	10	0	16	-60	-52																												
EM1140	E&M Works in Corridors 2/F	24	24JUN06A	31AUG06	60	0	10	-67	-28																												
EM1030	BS Works for HV Sw + Tx	12	12JUL06A	24AUG06	70	0	4	-96	-46																												
EM1160	E&M Works in Risers	48	31JUL06A	14SEP06	80	0	10	-67	-9																												
EM1120	Genset Installation	36	21AUG06	30SEP06	0	0	36	-60	-36																												
EM1175	BS Works for TVS Plenums	30	21AUG06	23SEP06	0	0	30	-98	-53																												
EM1040	HV Sw + Tx Installation	30	29SEP06	06NOV06	0	0	30	-126	-37																												
ENT South Portal Bldg (3F/ Fan Rm) - E & M Works																																					
EM1060	BS Works for LV Sw, MCC, UPS, LCC	12	31JUL06A	24AUG06	70	0	4	-91	-45																												
EM1150	E&M Works in Corridors 3/F	24	31JUL06A	28AUG06	70	0	7	-82	-24																												
EM1090	BS Works for 110V Charger Rm	12	01AUG06A	04SEP06	70	0	4	-82	-18																												
EM1170	Termination of overall Elect HV & LV Sys	30	21AUG06	06DEC06	0	0	30	-117	-33																												
EM1070	LV Sw, MCC, UPS, LCC Installation	30	26AUG06	28SEP06	0	0	30	-91	-45																												
ENT South Portal Bldg (4F/Upr Plen) - E & M Work																																					
EM1180	TVS Installation	100	04SEP06	04JAN07	0	0	100	-98	-45																												
Testing and Commissioning																																					
EM1100	110V Charger Rm Installation + T&C	12	05SEP06	18SEP06	0	0	12	-82	-18																												
EM1080	LV Sw, MCC, UPS, LCC Termination + T&C	30	29SEP06	06NOV06	0	0	30	-91	-27																												
EM1130	Genset Termination + T&C	12	03OCT06	17OCT06	0	0	12	-60	-36																												
EM1050	HV Sw + Tx Termination + T&C	30	07NOV06	11DEC06	0	0	30	-120	-37																												
Statutory Inspection & Issued Certificates																																					
EM1330	CLP Connect to its Transformer at SP Bldg	0		25OCT06	0	0	0	-82	-44																												

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL		AUG		SEP		OCT		NOV		DEC										
										33	12	34	10	35	7	36	4	37	2	38	6	39	4	40	11							
Statutory Inspection & Issued Certificates																																
EM1320	Submit Form WWO46 for Water Supply to WSD	30	12OCT06	16NOV06	0	0	30	-23	-90																							
EM1340	Water Supply Certificate issued	0		16NOV06	0	0	0	-23	-90																							
EAGLES NEST TUNNEL																																
Contract defined dates, stages & sections																																
Area access & vacation dates																																
ACS_F1	Access to Portions - F1 (U/Gnd Sth Portal)	0	20OCT03A		100	100	0		-108																							
ACS_F2	Access to Portions - F2 (U/Gnd Sth Tunnel)	0	20OCT03A		100	100	0		-108																							
Design & Engineering - Temporary Works																																
Permanent Works																																
Tunnel																																
1657	Design/ICE Check Tunnel Cladding	24	03JAN06A	31AUG06	70	60	10	-83	-94																							
1662	Design/ICE Check Niche Cabinets	48	21AUG06	17OCT06	0	0	48	-66	-90																							
1668	Eng Approve Dsg X-passage/Adit Fire Doors	12	21AUG06	02SEP06	0	0	12	310	-90																							
1669	Issue Constr Dwgs X-passage/Adit Fire Doors	0		02SEP06	0	0	0	310	-90																							
1663	Eng Approve Dsg Niche Cabinets	12	18OCT06	01NOV06	0	0	12	-66	-90																							
1664	Issue Constr Dwgs Niche Cabinets	0		09NOV06	0	0	0	-66	-90																							
Procurement - Material																																
Tunnelling Project Wide																																
1660	Order/Manufact/Del Tunnel Cladding	200	29DEC05A	20JUL06A	100	80	0		-39																							
1685	Order/Manufact/Del Fire Doors	50	04SEP06	03NOV06	0	0	50	310	-90																							
NB Tunnel																																
6883	EntRINb-Proc & Manuf. FS AFA & Linear sys	180	29MAR05A	15SEP06	87	90	23	349	-80																							
6887	EntRINb-Proc & Manuf. TVS control sys	180	01NOV05A	06NOV06	90	90	64	308	-148																							
SB Tunnel																																
6786	EntRtSb&VA-Proc & Manuf. FS AFA & Linear sys	180	29MAR05A	15SEP06	87	90	23	349	-80																							
6796	EntRtSb&VA-Proc & Manuf. TVS control sys	180	01NOV05A	06NOV06	90	90	64	308	-148																							

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL		AUG		SEP		OCT		NOV		DEC			
										33	12	3	10	17	24	31	7	14	21	28	4	11	18	25	2
Major Equipemnt Delivery																									
Tunnelling Project Wide																									
NB Tunnel																									
6891	EntRINb-Del. TVS control sys	48	14JAN06A	06NOV06	90	90	50	308	-148																
6888	EntRINb-Del. AFA & Linear sys	48	15MAY06A	15SEP06	62	0	23	349	-80																
6886	EntRINb-Del. CMCS & ELV sys	36	01JUN06A	15SEP06	90	0	23	349	-16																
SB Tunnel																									
6797	EntRISb&VA-Del. TVS control sys	48	14JAN06A	06NOV06	90	90	50	308	-148																
6787	EntRISb&VA-Del. AFA & Linear sys	48	15MAY06A	15SEP06	52	0	23	349	-32																
6801	EntRISb&VA-Del. CMCS & ELV sys	72	01JUN06A	30SEP06	90	0	36	336	-29																
Construction Works																									
Tunnel Drive North Bound																									
Tunnel Finishing Works																									
Bituminous Pavement																									
3599	NB Base Course - RHS 650m Ch 3030->2380	4	21AUG06	24AUG06	0	0	4	33	-74																
3600	NB Base Course - RHS 650m Ch 2380->1730	4	25AUG06	29AUG06	0	0	4	33	-74																
3601	NB Base Course - RHS 650m Ch 1730->1080	4	30AUG06	02SEP06	0	0	4	33	-74																
3603	NB Base Course - LHS 650m Ch 3030->2380	4	04SEP06	07SEP06	0	0	4	33	-74																
3604	NB Base Course - LHS 650m Ch 2380->1730	4	08SEP06	12SEP06	0	0	4	33	-74																
3605	NB Base Course - LHS 650m Ch 1730->1080	4	13SEP06	16SEP06	0	0	4	33	-74																
VE Panel Installation																									
3616	NB - VE Panel Sub-Frame Installation	60	20OCT06	02JAN07	0	0	60	-83	0																
3636	NB - VE Panel Installation	55	14NOV06	25JAN07	0	0	55	-83	0																
ENT NB TUNNEL - (E&M) BUILDING SERVICES																									
MVAC / Tunnel Ventilation Syst Above OHVD																									
277963	Ent NB - Install Motorised Smoke & Fire Dampers	72	04JAN06A	02SEP06	84	45	12	-116	-73																
277964	Ent NB - Comp Air Pipes/Condts to E/P16 to E/P21	36	10FEB06A	24AUG06	90	40	4	-116	-59																
277965	Ent NB - Comp Air Pipes/Condts to E/P15 to E/P8	36	27MAR06A	24AUG06	90	30	4	-116	-53																

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL			AUG			SEP		OCT			NOV		DEC
										33	30	27	24	21	18	15	12	9	6	3	31	28	25	22	19
MVAC / Tunnel Ventilation Syst Above OHVD																									
277966	Ent NB - Comp Air Pipes/ Conds to E/P1to E/P7	36	13JUN06A	02SEP06	90	0	4	-116	-25																
277967	Ent NB - Cabling, Wiring and Termination	72	21AUG06	15NOV06	0	0	72	-116	-49																
277968	Ent NB - MVAC Testing and T&C	42	16NOV06	06JAN07	0	0	42	-116	-49																
Fire Protection System																									
277993	Ent NB - 150d FS Main pipeworks / brackets @ G/L	72	23JAN06A	01AUG06A	100	36	0		-28																
277990	Ent NB - Install FS Conduit for Niches	54	07FEB06A	24AUG06	93	40	4	-103	-62																
277991	Ent NB - Install brkts for detection sys @ C/L	60	29JUL06A	22AUG06	98	0	1	-103	-32																
277994	Ent NB - Install Hose Reel Cabinets & Eqpt @ G/L	48	21AUG06	17OCT06	0	0	48	-98	-80																
277992	Ent NB - Install detection system @ Ceiling Lvl	42	26AUG06	16OCT06	0	0	42	-103	-35																
277995	Ent NB - 100d FH / HR Pipeworks & Fittings @ G/L	60	04SEP06	15NOV06	0	0	60	-98	-56																
277996	Ent NB - FS Wiring and Terminations	30	17OCT06	21NOV06	0	0	30	-103	-31																
277997	Ent NB - FS Testing and T&C	24	22NOV06	19DEC06	0	0	24	-103	-31																
Electrical Works Above OHVD																									
278000	Ent NB - HV & LV Mn/Submain Cables to CP21-CP11	72	22JUN06A	10OCT06	41	0	42	-117	-45																
278001	Ent NB - HV & LV Mn/Submain Cables to CP01-CP10	72	26JUN06A	05OCT06	46	0	39	-114	-20																
278002	Ent NB - E&M Inspn & Access for Sandfill	0		16SEP06	0	0	0	-68	-17																
278003	Ent NB - Placing Sandfill and PC Covers	36	18SEP06	01NOV06	0	0	36	-68	-17																
Electrical Works Below OHVD																									
278008	Ent NB - Brackets for Lightings @ Ceiling Level	96	07JAN06A	22AUG06	98	82	2	-53	-74																
278009	Ent NB - Conduit Works (Above & Below OHVD)	60	01MAR06A	29AUG06	86	30	8	-53	-56																
278010	Ent NB - Earthing & Lighting Fixture @ C/Lvl	72	02MAY06A	05SEP06	89	2	8	-53	-33																
278012	Ent NB - Cabling, Winings&Term @ Ceiling/ Grd Lvl	48	13JUN06A	19SEP06	69	0	15	-53	-8																
278011	Ent NB-Install CCTV, Camera, Eqpt @C/Lvl (By TCSS)	72	23AUG06	17NOV06	0	0	72	-29	-74																
278013	Ent NB - Lighting / Equipt Testing and T&C	24	20SEP06	19OCT06	0	0	24	-52	-8																
278083	Place Covers on C, Trough	18	20SEP06	12OCT06	0	0	18	13	-8																

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL		AUG		SEP		OCT		NOV		DEC	
										33	34	35	36	37	38	39	40	41	42	43	44	45	46
Tunnel Drive South Bound																							
Tunnel Finishing Works																							
VE Panel Installation																							
3623	SB - VE Panel Sub-Frame Installation	60	21JUL06A	19OCT06	17	0	50	-83	0														
3643	SB - VE Panel Installation	55	16AUG06A	13NOV06	3	0	52	-78	0														
3663	SB - Niche Cabinets	50	10NOV06	10JAN07	0	0	50	-66	0														
ENT SB TUNNEL - (E&M) BUILDING SERVICES																							
MVAC / Tunnel Ventilation System Above OHVD																							
278014	Ent SB - Install Motorised Smoke & Fire Dampers	72	31DEC06A	01SEP06	85	40	11	-106	-70														
278015	Ent SB - Comp Air Pipes/Conds to E/P16 to E/P21	36	27MAR06A	23AUG06	92	58	3	-98	-74														
278017	Ent SB - Comp Air Pipes/ Conds to E/P1 to E/P7	36	13JUN06A	01SEP06	90	0	4	-105	-34														
278018	Ent SB - Cabling, Wiring and Termination	60	02SEP06	14NOV06	0	0	60	-105	-34														
278019	Ent SB - MVAC Testing and T&C	36	10NOV06	21DEC06	0	0	36	-105	-34														
Fire Protection System																							
278033	Ent SB -Install FS Conduit for Niches	54	07FEB06A	01AUG06A	100	30	0		-36														
278034	Ent SB - Install brckts for detection sys @ C/L	60	29JUL06A	21AUG06	98	0	1	-98	-29														
278035	Ent SB - Install detection system @ Ceiling Lvl	42	21AUG06	10OCT06	0	0	42	-98	-46														
278037	Ent SB - Install Hose Reel Cabinets & Eqpt @ G/L	48	21AUG06	17OCT06	0	0	48	-98	-70														
278038	Ent SB - 100d FH / HR Pipeworks & Fittings @ G/L	60	04SEP06	15NOV06	0	0	60	-98	-70														
278039	Ent SB - FS Wiring and Terminations	30	11OCT06	15NOV06	0	0	30	-98	-40														
278040	Ent SB - FS Testing and T&C	24	16NOV06	13DEC06	0	0	24	-98	-40														
Electrical Works Above OHVD																							
278044	Ent SB - HV & LV Mn/submain Cables to CP01-CP10	72	09JUN06A	06OCT06	46	0	39	-114	-20														
278043	Ent SB - HV & LV Mn/Submain Cables to CP21-CP11	72	15JUN06A	06OCT06	46	0	39	-114	-45														
278046	Ent SB - Placing Sandfill and PC Covers	36	07JUL06A	18SEP06	30	0	25	-33	30														
Electrical Works Below OHVD																							
278051	Ent SB - Brackets for Lightings @ Ceiling Level	96	19DEC06A	22AUG06	98	62	2	-71	-56														
278052	Ent SB - Conduit Works (Above & Below OHVD)	60	01MAR06A	29AUG06	86	30	8	-65	-44														

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL			AUG			SEP			OCT			NOV			DEC							
										33	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20
Electrical Works Below OHVD																																		
278053	Ent SB - Earthing & Lighting Fixture @ C/Lvl	72	02MAY06A	12SEP06	76	2	20	-71	-32																									
278055	Ent SB - Cabling,Wirings&Term @ Ceiling/ Grd Lvl	48	07AUG06A	12OCT06	38	0	30	-71	-2																									
278064	Ent SB-Install CCTV,Camera,Eqpt @C/Lvl (by TCSS)	72	30AUG06	24NOV06	0	0	72	-35	-62																									
278066	Ent SB - Lighting / Eqipt Testing and T&C	24	13OCT06	10NOV06	0	0	24	-70	-2																									
278096	Place Covers on C. Trough	18	13OCT06	17NOV06	0	0	18	-23	-14																									
Vent Adit Tunnel / Cross Passage 7																																		
ENT CROSS PASSAGE CP07 - (E&M) BUILDING SERVICES																																		
MVAC / Tunnel Ventilation System Above OHVD																																		
278058	CP7 - Comp Air Pipes / Conduits to ENT NB & SB	30	15JUL06A	14AUG06A	100	0	0		-33																									
278069	CP7 - Cabling, Wiring, Termination & Test	18	25AUG06	14SEP06	0	0	18	-24	-42																									
Fire Protection System																																		
278061	CP7 - FS Conduit @ Ceiling Lvl	30	15JUL06A	14AUG06A	100	0	0		-33																									
278062	CP7 - Cabling, Wiring, FS detectn & Alarm Bell	48	21AUG06	17OCT06	0	0	48	-74	-38																									
278063	CP7 - FS Termination & Test	24	18OCT06	15NOV06	0	0	24	-74	-38																									
Electrical Works																																		
278086	HGC - Cabling	36	21AUG06	30SEP06	0	0	36	-62	-17																									
278065	CP7 - HV / LV Cable Brackets & Containment	30	03JUL06A	05AUG06A	100	0	0		-26																									
278066	CP7 - Install Conduit, lighting & switches @ C/L	48	03JUL06A	28SEP06	30	0	34	-60	-24																									
278088	HGC - Cable Containment	30	03JUL06A	05AUG06A	100	0	0		-26																									
278069	CP7 - HV/ LV Cabling, Wiring & Term to CP7 LV Rm	48	21AUG06	17OCT06	0	0	48	-74	-38																									
278067	CP7 - Cabling, Wiring & Termination and Test	24	03OCT06	01NOV06	0	0	24	-62	-26																									
278070	CP7 - HV / LV Cables Testing and T&C	24	18OCT06	15NOV06	0	0	24	-74	-38																									
ENT Cross Passages																																		
CROSS PASSAGES (CP1-CP6 & CP8-CP21) - (E&M) WORK																																		
Electrical Works																																		
278074	(CP1-CP21) - Cable Containment & Eqipt Support	60	07FEB06A	26AUG06	90	80	6	-92	-84																									
278077	(CP21-CP11) - MCCB/ MCB Brd ,CMCS, Busbar, Switches	72	03MAY06A	11SEP06	73	0	19	-84	-37																									

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN				JUL				AUG				SEP				OCT				NOV				DEC								
										33	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	4	11	18	25	2	9	16
Electrical Works																																										
279078	(CP1-CP10) - MCCB/ MCB Brd,CMCS, Busbar,Switches	72	03MAY06A	18SEP06	65	0	25	-84	-45																																	
279075	(CP1-CP21) - Conduit,light,Signage fixd,Switches	60	17JUL06A	17OCT06	20	0	48	-122	-78																																	
279079	(CP1-CP21) - HV & LV Cables Terminations & Test	60	08AUG06A	06DEC06	5	0	57	-117	-33																																	
279076	(CP1-CP21) - Cabling, Wiring, Termination & Test	36	18OCT06	29NOV06	0	0	36	-122	-78																																	
VENTILATION ADIT & BUILDING																																										
Submittals & Approvals																																										
ABWF & Builders Works																																										
1972	VA Bldg. - Approve door details	24	07MAY05A	30AUG06	70	70	9	-101	-90																																	
1988	VA Bldg. - Approve aluminium composite cladding	24	13DEC05A	01SEP06A	100	50	0		-79																																	
PROCUREMENT																																										
ARCHITECTURAL																																										
1995	VA Bldg. - Procure aluminium composite cladding	90	19APR05A	23SEP06	50	60	30	-78	-98																																	
2026	VA Bldg. - Procure expanded metal mesh cladding	60	06JUN05A	30AUG06	50	50	9	-43	-90																																	
2031	VA Bldg. - Initial delivery slate cladding	0	21AUG06*		0	0	0	-6	-5																																	
2034	VA Bldg. - Initial delivery fall arrest roof sys	0	21AUG06*		0	0	0	32	-36																																	
2035	VA Bldg. - Initial delivery balust & metal works	0	21AUG06*		0	0	0	32	-36																																	
2038	VA Bldg. - Initial delivery alum comp cladding	0	27OCT06*		0	0	0	-78	-64																																	
2043	VA Bldg. - Initial deliv exp metal mesh cladding	0	01NOV06*		0	0	0	-43	-64																																	
2032	VA Bldg. - Initial delivery doors	0	13NOV06*		0	0	0	-101	-87																																	
E&M MATERIALS																																										
6636	VaBldg-Proc & Manuf. FS AFA & FM200 sys	120	29MAR05A	15SEP06	80	90	23	349	-104																																	
6586	VaBldg-Proc & Manuf. FS wet sys	120	06JUN05A	31AUG06	90	95	10	362	-96																																	
6585	VaBldg-Proc & Manuf. PD fresh & flush water sys	120	30SEP05A	31AUG06	90	85	10	362	-95																																	
8516	VaBldg-Proc & Manuf. MVAC Package AC Units	120	16DEC05A	15SEP06	80	80	23	349	-104																																	
6588	VaBldg-Proc & Manuf. MVAC mech.vent. sys	180	06JAN06A	15SEP06	87	80	23	349	-104																																	

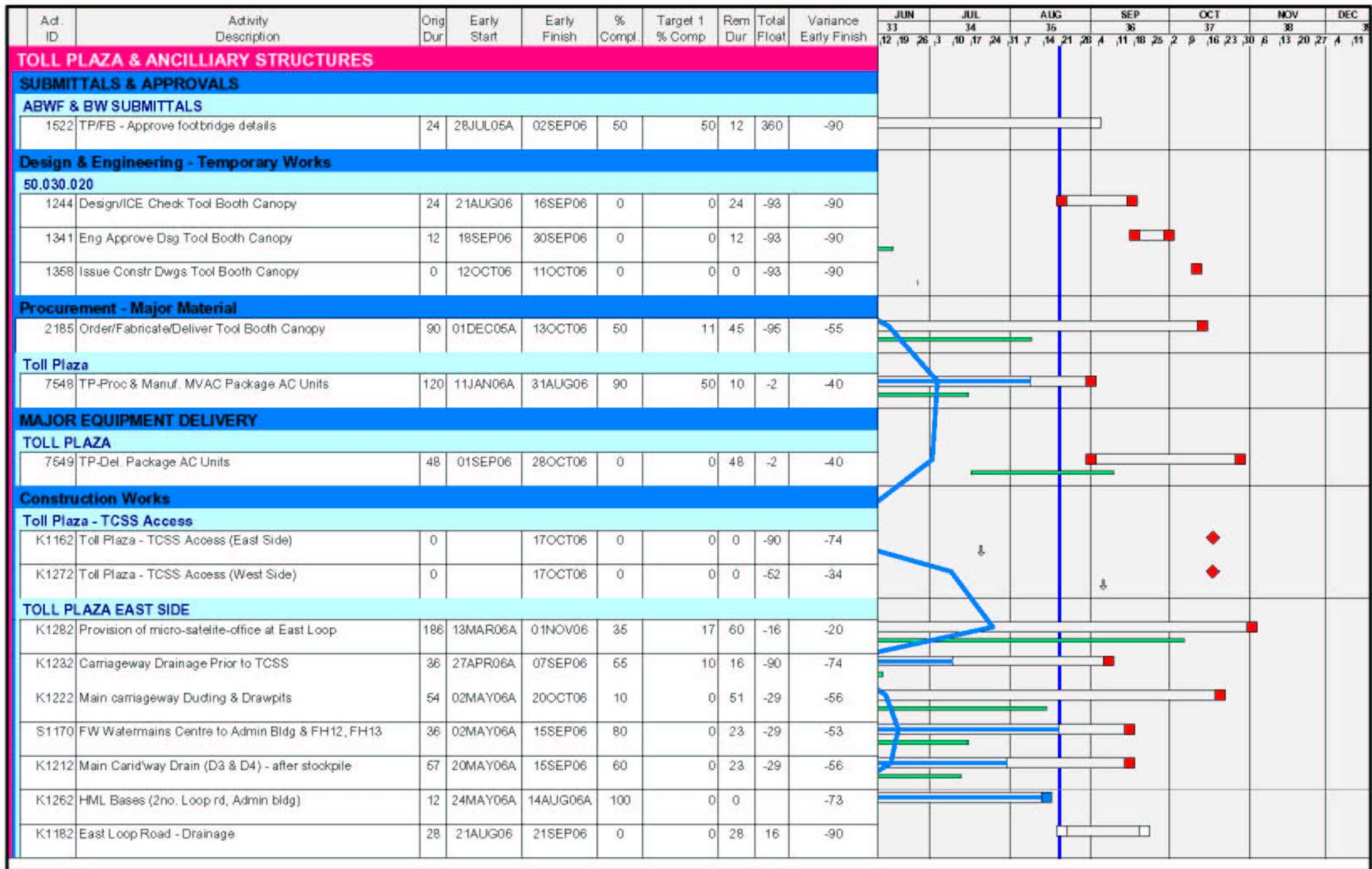
Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL			AUG			SEP			OCT			NOV			DEC	
										33	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9
MAJOR EQUIPMENT DELIVERY																												
7592	VaBldg-Del. PD irrig. pump & tank to G/F	48	07MAR06A	07SEP06	67	55	16	356	-97																			
6859	VaBldg-Del. MVAC /TVF pneumatic sys to 1/F	48	30MAR06A	15SEP06	52	0	23	349	-56																			
8517	VaBldg-Del. Package AC Units	48	30MAR06A	15SEP06	52	0	23	349	-56																			
6608	VaBldg-Del. PD pump & tank to G/F	48	02MAY06A	31AUG06	80	0	10	362	-47																			
6609	VaBldg-Del. FS pumps & tank to G/F	48	02MAY06A	31AUG06	80	0	10	362	-48																			
6619	VaBldg-Del. building vent. fans	48	15MAY06A	15SEP06	52	0	23	349	-56																			
6698	VaBldg-Del. AFA & FM200 sys	48	15MAY06A	15SEP06	52	0	23	349	-56																			
6666	VaBldg-Del. CMCS & ELV equip't	48	01JUN06A	15SEP06	90	0	23	349	-28																			
CONSTRUCTION WORKS																												
Vent Bldg & Adit TCSS Access																												
0295	Vent Bldg & Adt - TCSS Access	0		24AUG06	0	0	0	-62	-59																			
ADIT TUNNEL																												
Vent Adit																												
Type M																												
0325	Vent Adit - Cable Bracket Installation	12	08MAY06A	15AUG06A	100	0	0		-74																			
0379	Vent Adit - HGC Cable Containment	18	08MAY06A	15AUG06A	100	0	0		-68																			
EXTERNAL WORKS																												
Drainage																												
S1900	Petrol interceptor & Storm Drain at East Side	48	21AUG06	17OCT06	0	0	48	-82	-59																			
S1940	Foul Drain Pipe & Holding Tank	24	21AUG06	16SEP06	0	0	24	-58	-59																			
S1960	Storm Drain at West Side	24	21AUG06	16SEP06	0	0	24	-100	-73																			
S1970	Storm Drain & Gullies at Access Apron	24	18SEP06	17OCT06	0	0	24	-100	-73																			
Ducting & Drawpits																												
S1910	Ducting & Drawpits	18	09NOV06	29NOV06	0	0	18	-100	-67																			
Watermain Works																												
S1950	Watermain & Valve Chambers at Building Apron	24	18OCT06	15NOV06	0	0	24	-100	-73																			
S1990	Irrigation Pipework	18	16NOV06	06DEC06	0	0	18	-88	-73																			

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	Gantt Chart									
										JUN 33	JUL 34	AUG 35	SEP 36	OCT 37	NOV 38	DEC 39			
TTA for Tai Po Road											JUN 33	JUL 34	AUG 35	SEP 36	OCT 37	NOV 38	DEC 39		
SB3010	Apply for Excavation Permit	12	19JUL06A	10AUG06A	100	0	0		-27										
SB3030	Apply for Road Works Advice from RMO of HKPF	7	13AUG06A	26AUG06	0	0	7	-116	-36										
SB3060	TTM Scheme Implemented	0	05SEP06		0	0	0	-116	-45										
Construction of Watermains Across Tai Po Rd																			
SB3070	Stage 1 - Watermain Crossing Tai Po Rd	18	06SEP06*	25SEP06	0	0	18	-97	-38										
SB3080	Stage 2 - Watermain Crossing Tai Po Rd	18	26SEP06	18OCT06	0	0	18	-97	-38										
SB3090	Stage 3 - Watermain Crossing Tai Po Rd	19	19OCT06	10NOV06	0	0	19	-97	-38										
SB3100	Stage 4 - Watermain Crossing Tai Po Rd	49	11NOV06	10JAN07	0	0	49	-97	-38										
VENTILATION BUILDING																			
VA Building - Structure																			
T3330	Completion of Cable Riser at Grid D3	6	20JUL06A	26JUL06A	100	0	0		-46										
T2130	Installation of Exhaust Shaft Steelwork	18	21AUG06	09SEP06	0	0	18	-80	-76										
T3130	Installation of Earth mat	60	21AUG06	01NOV06	0	0	60	-58	-73										
VA Building - ABWF																			
T3190	Installation of Hoist Beam at 1/F	18	03JUL06A	28JUL06A	100	0	0		-52										
T2290	ABWF Initial Finishes Fan Rooms & Plenums	18	20JUL06A	24AUG06	80	0	4	-92	-59										
VA Building - External Finishes																			
T2050	VA Bldg. - Ext. Wall Waterproof Render	20	10JUL06A	02SEP06	30	0	12	-8	-65										
T3060	VA Bldg. - Ext. Wall Waterproof Membrane	21	25JUL06A	02SEP06	40	0	12	-34	-64										
T2140	VA Bldg. - Slate Cladding	44	04SEP06	26OCT06	0	0	44	-18	-17										
T3080	VA Bldg. - Roof Waterproofing & Test	12	04SEP06	16SEP06	0	0	12	-22	-64										
T3070	VA Bldg. - External Wall Painting	22	11SEP06	06OCT06	0	0	22	-8	-65										
T3110	VA Bldg. - Install Aluminum louvres & doors	60	11SEP06	16DEC06	0	0	60	-101	-87										
T3090	VA Bldg. - 26thk Roof Screed & Roofing Tiles	18	08OCT06	24OCT06	0	0	18	-22	-64										
T3100	VA Bldg. - GMS,S/S Channel, Balustrade & Railing	18	25OCT06	15NOV06	0	0	18	-22	-64										
T3120	VA Bldg. - Alum Comp Panel Cladding to Ext Walls	60	27OCT06	09JAN07	0	0	60	-78	-64										

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	Gantt Chart											
										JUN 33	JUL 34	AUG 35	SEP 36	OCT 37	NOV 38	DEC 39					
VA Building - External Finishes											JUN 12, 19	JUL 26, 3	AUG 14, 21	SEP 4, 11	OCT 18, 25	NOV 2, 9	DEC 16, 23				
T2110	VA Bldg. - Expanded metal cladding to Ext Walls	22	01NOV06	26NOV06	0	0	22	-43	-64												
E & M WORKS																					
Ventilation Adit Bldg (GF/Lwr Plen) - E & M Work																					
EM2040	BS Works for HV Sw + Tx	12	17JUL06A	26AUG06	50	0	6	-94	-68												
EM2200	BS Works for Genset	18	01AUG06A	05SEP06	20	0	14	-94	-58												
EM2260	E&M Works in Corridors G/F	24	01AUG06A	09SEP06	40	0	14	-66	-54												
EM2300	E&M Works in Risers	48	04AUG06A	28SEP06	30	0	34	-66	-24												
EM2310	BS Works in TVS Plenums	30	14AUG06A	16SEP06	20	0	24	-92	-49												
EM2220	Genset Installation	36	06SEP06	19OCT06	0	0	36	-94	-58												
EM2060	HV Sw + Tx Installation	30	07NOV06	11DEC06	0	0	30	-126	-95												
EM2050	HGC - Cable Containment	18	15AUG06A	30AUG06	50	0	9	-41	19												
Ventilation Adit Bldg (1F) - E & M Work																					
EM2100	BS Works for LV Sw, MCC, UPS, LCC	12	18JUL06A	26AUG06	50	0	6	-86	-66												
EM2280	E&M Works in Corridors 1/F	24	04AUG06A	08SEP06	30	0	17	-66	-55												
EM2160	BS Works for 110V Charger Rm	12	28AUG06	09SEP06	0	0	12	-80	-66												
EM2120	LV Sw, MCC, UPS, LCC Installation	30	19SEP06	25OCT06	0	0	30	-105	-70												
EM2340	Termination of overall Elect HV & LV Sys	30	17NOV06	21DEC06	0	0	30	-106	-63												
Ventilation Adit Bldg (2F/Upr Plen) - E & M Work																					
EM2320	TVS Installation	90	21AUG06	06DEC06	0	0	90	-92	-35												
Testing and Commissioning																					
EM2180	110V Charger Rm Installation + T&C	12	11SEP06	23SEP06	0	0	12	-80	-66												
EM2240	Genset Termination + T&C	12	20OCT06	03NOV06	0	0	12	-94	-58												
EM2140	LV Sw, MCC, UPS, LCC Termination + T&C	30	26OCT06	30NOV06	0	0	30	-105	-70												
ENT NORTH PORTAL VENTILATION BUILDING																					
SUBMITTALS & APPROVALS																					
ABWF & Builders Works																					
1954	NP Bldg. - Approve door details	24	06APR05A	30AUG06	80	80	9	-71	-90												

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL			AUG			SEP			OCT			NOV			DEC							
										33	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20
PROCUREMENT - MATERIAL																																		
ABWF WORKS																																		
1967	NP.Bldg. - Procure aluminium composite cladding	180	19APR05A	23SEP06	84	50	30	-80	-98																									
1981	NP.Bldg. - Procure expanded metal cladding	180	06JUN05A	30AUG06	50	50	9	-25	-90																									
2061	NP.Bldg. - Initial delivery slate cladding	0	21AUG06*		0	0	0	14	-31																									
2052	NP.Bldg. - Initial delivery balust & metal works	0	21AUG06*		0	0	0	26	-43																									
2053	NP.Bldg. - Initial delivery fall arrest roof sys	0	21AUG06*		0	0	0	26	-43																									
2039	NP.Bldg. - Initial delivery of doors	0	06OCT06*		0	0	0	-71	-82																									
2066	NP.Bldg. - Initial deliv expanded metal cladding	0	06OCT06*		0	0	0	-25	-44																									
2050	NP.Bldg. - Initial deliv alum composite cladding	0	14NOV06*		0	0	0	-80	-62																									
MAJOR EQUIPMENT DELIVERY																																		
ENT NORTH PORTAL BUILDING																																		
6231	EntNpBldg-Del. FS pumps & tank to G/F	48	06MAR06A	07SEP06	67	50	16	356	-96																									
6832	EntNpBldg-Del. MVAC /TVF pneumatic sys to 1/F	48	06APR06A	31AUG06	80	10	10	362	-65																									
6845	EntNpBldg-Del. ENT Tunnel (Hyd/HR) pumps to G/F	48	02MAY06A	31AUG06	80	0	10	362	-52																									
6242	EntNpBldg-Del. building vent. fans	48	10MAY06A	31AUG06	80	0	10	362	-47																									
6327	EntNpBldg-Del. Package AC Units	48	10MAY06A	31AUG06	80	0	10	362	-47																									
6229	EntNpBldg-Del. PD pump & tank to G/F	48	15MAY06A	31AUG06	80	0	10	362	-43																									
6359	EntNpBldg-Del. AFA & FM200 sys	48	15MAY06A	15SEP06	52	0	23	349	-43																									
6288	EntNpBldg-Del. CMCS & ELV equipt	48	01JUN06A	15SEP06	90	0	23	349	-26																									
CONSTRUCTION																																		
North Portal Bldg. - TCSS Access																																		
T1400	NP Bldg - TCSS Access within entire structure	0		20JUL06A	100	0	0		-49																									
North Portal Bldg. - CIVIL & ABWF WORKS																																		
STRUCTURE																																		
T1390	NP Bldg - Exhaust Shaft (+110.38mPD)	18	24MAY06A	29AUG06	80	0	8	-74	-72																									
S1370	Construt earth mat	36	21AUG06	30SEP06	0	0	36	-44	-82																									

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL			AUG			SEP			OCT			NOV			DEC							
										33	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20
ABWF WORKS																																		
T1360	BB Access 4th Floor/Roof - critical rooms	0		31JUL06A	100	0	0		-42																									
Internal Works GF																																		
T1650	GF ABWF Initial finishes	18	04MAR06A	22AUG06	90	28	2	0	-79																									
T1320	GF BB Access grd Floor	0		22AUG06*	0	0	0	0	-79																									
NP Bldg - Internal Works 2F																																		
T1600	2F ABWF Initial Finishes	18	06APR06A	25AUG06	95	28	5	-126	-93																									
NP Bldg Internal Works 3F																																		
T1880	3F - paint touch up & doors	12	23OCT06	06NOV06	0	0	12	16	-76																									
NP Building - Internal Works																																		
T1620	4F ABWF initial finishes	12	24JUL06A	12SEP06	95	0	1	352	-72																									
T2430	Installation of Crane beam to underside of 5FL	18	21AUG06	09SEP06	0	0	18	-34	-72																									
NP Bldg - Roofing & External Facade																																		
T2238	Ent NPB - Ext. Wall Waterproof Render	18	17JUL06A	05SEP06	20	0	14	-28	-78																									
T1740	Ent NPB - Install Aluminum louvres & doors	90	14AUG06A	15NOV06	20	0	72	-74	-46																									
T1780	Ent NPB - Slate cladding above NB/SB carriageway	36	21AUG06	30SEP06	0	0	36	14	-31																									
T1800	Ent NPB - Roof Waterproofing & Test	12	30AUG06	12SEP06	0	0	12	-24	-72																									
T1730	Ent NPB - External Wall Painting	34	13SEP06	24OCT06	0	0	34	-28	-78																									
T1700	Ent NPB - 25hk Roof Screed & Roofing Tiles	18	27SEP06	19OCT06	0	0	18	-24	-72																									
T1770	Ent NPB - Expanded metal cladding to Ext Walls	36	06OCT06	18NOV06	0	0	36	-25	-44																									
T1790	Ent NPB - GMS,S/S Channel, Balustrade & Railing	24	25OCT06	22NOV06	0	0	24	-28	-76																									
T1750	Ent NPB - Alum. Comp Panel Cladding to Ext Walls	60	14NOV06	25JAN07	0	0	60	-80	-62																									
ENT North Portal Bldg. - BUILDING SERVICES																																		
E & M WORKS																																		
ENT North Portal Bldg (G/F) - E & M Works																																		
T1720	Installation of FS Pumps & Pipework at GF	18	23AUG06	12SEP06	0	0	18	0	-79																									
ENT North Portal Bldg (1F/Lwr Plen) - E & M Work																																		
T1540	NP Bldg - OHVD Slab NB - BB 1st fix	12	01JUN06A	31JUL06A	100	0	0		-61																									
T1570	NP Bldg - OHVD Slab SB - BB 1st Fix	12	01JUN06A	31JUL06A	100	0	0		-61																									



Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	Gantt Chart												
										JUN 33	JUL 34	AUG 35	SEP 36	OCT 37	NOV 38	DEC 39						
TOLL PLAZA EAST SIDE																						
K1252	E&M / Lighting works	24	21AUG06	16SEP06	0	0	24	32	-78													
S1160	Installation of Ducting and Drawpits for TCSS	32	08SEP06	17OCT06	0	0	32	-90	-74													
K1242	Main carriageway - East Subbase and kerbs	53	16SEP06	20NOV06	0	0	53	-29	-40													
S1420	Road Pavement Surfacing (Flex & Rigid)	56	30SEP06	07DEC06	0	0	56	-29	-40													
K1192	East Loop Road - Formation & Roadworks	36	02NOV06	13DEC06	0	0	36	-16	-20													
S1190	HGC Ducting & Drawpits	24	08MAY06A	20OCT06	20	0	51	-29	-56													
TOLL PLAZA WEST SIDE																						
K1161	CSJV, Remove TAR1, drainage, formation (RE Wall)	56	24SEP05A	06SEP06	60	60	15	-81	-85													
K1231	CSJV Complete Drainage & Vacate part	24	31DEC05A	26AUG06	90	60	6	-90	-87													
K1181	Main Carriageway - West side drainage - NP-FB	42	20MAR06A	30SEP06	95	15	20	-90	-87													
K1191	Drawpits & Ducting (incl TCSS)	42	02MAY06A	17OCT06	75	5	15	-90	-34													
K1201	West Loop Drainage Works	38	15JUN06A	30SEP06	75	25	15	-67	-87													
K1241	Main Carriageway - West side drainage - FB-SHT	45	19JUN06A	20SEP06	75	0	15	-81	-52													
S1510	FW Watermain Centre to Admin Bldg & FH12, FH13	24	10JUL06A	17OCT06	8	0	21	-90	-67													
K1211	E&M / Lighting works	24	21AUG06	20DEC06	0	0	24	-46	-34													
K1171	West Loop road - Roadworks	36	03OCT06	15NOV06	0	0	36	-67	-87													
K1221	Main Carriageway - West Subbase & kerbs	54	18OCT06	20DEC06	0	0	54	-90	-34													
S1310	Road Pavement Surfacing	57	16NOV06	24JAN07	0	0	57	-67	-45													
TOLL PLAZA - works adjacent to building																						
S1415	SHT SPB - Drainage & Ducting	18	28FEB06A	29AUG06	90	90	8	72	-90													
S1427	Admin Bldg & Wshop - Drainage & ducting	36	07MAR06A	14SEP06	40	25	22	28	-95													
S1380	ENT NPB - Drainage & Ducting	18	01APR06A	24AUG06	80	25	4	76	-86													
S1390	ENT NPB - HML Base	8	08MAY06A	31JUL06A	100	0	0	0	-59													
S1416	SHT SPB - HML Base	8	20JUL06A	01AUG06A	100	0	0	0	-58													

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish		Gantt Chart																		
											JUN 33	JUN 34	JUN 35	JUN 36	JUN 37	JUN 38	JUN 39												
TOLL PLAZA - works adjacent to building																													
S1400	ENT NPB - Kerbs & Rwks & misc Finishes	12	21AUG06	02SEP06	0	0	12	68	-82																				
S1417	SHT SPB - Kerbs & Rwks & misc finishes	12	21AUG06	02SEP06	0	0	12	68	-80																				
S1440	Install Earth Mat for Admin Bldg & SHT NP Bldg	36	21AUG06	30SEP06	0	0	36	-44	-90																				
S1437	Admin Bldg & Wshop - kerbs, Rwks & misc finishes	30	21OCT06	26NOV06	0	0	30	-1	-85																				
TOLL PLAZA COLLECTOR'S SUBWAY																													
ABWF																													
101471	TP/CS - Internal Finishes Ptn A, B & C	24	21AUG06	16SEP06	0	0	24	-10	-76																				
101472	TP/CS - Internal Finishes Ptn D	12	19SEP06	30SEP06	0	0	12	-10	-76																				
S1290	Toll Subway - E&M	54	03OCT06	06DEC06	0	0	54	-10	-76																				
TOLL PLAZA FOOTBRIDGE																													
ABWF																													
S1264	Installation of Aluminium Cladding	38	21AUG06	04OCT06	0	0	38	-70	-82																				
S1260	Toll Ftbridge - Finishes	54	11NOV06	16JAN07	0	0	54	-42	-82																				
S1340	Toll Plaza - Erection of Lift Steel Work	24	30MAY06A	24AUG06	95	0	4	-20	-70																				
E & M WORKS																													
S1200	Toll Plaza Footbridge - Lift Installation	72	25AUG06	20NOV06	0	0	72	-20	-70																				
S1450	Toll Plaza Footbridge - Lift Commissioning	24	21NOV06	18DEC06	0	0	24	-20	-70																				
S1470	E&M Installation at Footbridge	30	06OCT06	10NOV06	0	0	30	-42	-82																				
S1500	E&M Footbridge T&C	18	11NOV06	01DEC06	0	0	18	-6	-82																				
TOLL PLAZA BOOTHS																													
S1210	Construct Toll Islands 17 No.	51	21AUG06	20OCT06	0	0	51	-76	-82																				
S1220	Construct Toll Booths - 22No.	88	14OCT06	29JAN07	0	0	88	-95	-55																				
ADMIN.BLDG. - WORKSHOP																													
S1260	Workshop - initial Finishes incl block walls	24	03JUL06A	11SEP06	25	0	19	25	-43																				
S1360	Workshop - External Finishes	60	21AUG06	01NOV06	0	0	60	20	-48																				
S1320	Workshop - Remaining internal Finishes	36	12SEP06	25OCT06	0	0	36	25	-43																				

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN			JUL			AUG			SEP			OCT			NOV			DEC						
										33	30	27	31	28	25	31	28	25	22	19	16	13	10	07	04	01	29	26	23	20	17	14	11	08
ADMIN.BLDG. - WORKSHOP																																		
S1280	Workshop - Install Roller Shutters	12	18SEP06	14OCT06	0	0	12	34	-48																									
ADMINISTRATION BUILDING																																		
SUBMITTALS & APPROVALS																																		
ABWF. MTRL SUBMITTALS																																		
1885	Admin.Bldg. - Prep & submit wood ceiling details	24	20NOV04A	02SEP06	50	50	12	312	-90																									
1881	Admin.Bldg. - Prep & sub GRP water tank details	24	12JAN05A	02SEP06	50	50	12	306	-90																									
1887	Admin.Bldg. - Prep & sub suspend ceiling details	24	12AUG05A	02SEP06	60	50	12	276	-90																									
1882	Admin.Bldg. - Approve GRP water tank details	24	04SEP06	30SEP06	0	0	24	306	-90																									
1886	Admin.Bldg. - Approve wood ceiling details	24	04SEP06	30SEP06	0	0	24	312	-90																									
1888	Admin.Bldg. - Approve suspended ceiling details	24	04SEP06	30SEP06	0	0	24	276	-90																									
E&M EQPT. / MTRL. SUBMITTALS																																		
8248	AdmBldg-Engineer to provide Cater'g equip detail	0	07APR05A		100	100	0		-90																									
DESIGN & ENGINEERING																																		
TEMPORARY WORKS																																		
1373	Design/ICE Temp False/Formwork Admin Bldg	48	21AUG06	17OCT06	0	0	48	324	-90																									
PROCUREMENT - MATERIAL																																		
ABWF WORKS																																		
1904	Admin.Bldg. - Procure wood ceiling	90	19JAN05A	02SEP06	87	87	12	310	-90																									
1902	Admin.Bldg. - Procure GRP water tank	90	16MAR05A	02SEP06	87	87	12	330	-90																									
1905	Admin.Bldg. - Procure suspended ceiling	120	09MAY05A	30SEP06	70	70	36	276	-90																									
1910	Admin.Bldg. - Procure expanded metal cladding	90	06JUN05A	12SEP06	87	87	20	-71	-90																									
1938	Admin.Bldg. - Initial delivery glass canopy	0	21AUG06*		0	0	0	11	-69																									
2056	Admin.Bldg. - Initial delivery sheet decking	0	21AUG06		0	0	0	372	-48																									
2069	Admin.Bldg. - Initial deliv fall arrest roof syst	0	21AUG06*		0	0	0	32	-43																									
2060	Admin.Bldg. - Initial deliver balust & metal wks	0	21AUG06*		0	0	0	32	-43																									
2058	Admin.Bldg. - Initial delivery wood ceiling	0	04NOV06		0	0	0	310	-90																									

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
										33 12, 19, 26, 3	34 10, 17, 24, 31	35 7, 14, 21, 28, 4	36 11, 18, 25, 2	37 9, 16, 23, 30	38 6, 13, 20, 27	39 4, 11	
ABWF WORKS																	
2063	Admin.Bldg. - Initial delivery GRP water tank	0	09NOV06		0	0	0	306	-90						◇		
2061	Admin.Bldg. - Initial del expanded metal cladding	0	14NOV06*		0	0	0	-71	-88						◆		
MAJOR EQUIPMENT DELIVERY																	
ADMINISTRATION BUILDING																	
6428	AdmBldg-Del. building vent. fans	48	06APR06A	31AUG06	80	20	10	362	-78	—	—	—	—	—	—	—	
6634	AdmBldg-Del. AFA & FM200 sys	48	15MAY06A	15SEP06	62	0	23	349	-32	—	—	—	—	—	—	—	
6476	AdmBldg-Del. CMCS, ELV & TCS equip†	72	01JUN06A	15SEP06	90	0	23	349	-27	—	—	—	—	—	—	—	
CONSTRUCTION																	
TCSS Access at Admin Bldg																	
T2910	TCSS Access at Administration Bldg (24JUN06)	0		04SEP06	0	0	0	-85	-54	—	—	—	—	—	—	—	
T3360	TCSS Works Within Admin Bldg / Tunnel & Ext	140	05SEP06	01MAR07	0	0	140	-85	-54	—	—	—	—	—	—	—	
CIVIL & ABWF WORKS																	
Substructure																	
106398	Admin.Bldg. - Earth Mat & Rods - All in ptn D4	36	07SEP06	20OCT06	0	0	36	-1	-85	—	—	—	—	—	—	—	
ABWF																	
Admin Bldg (G/F) - Internal Work @ Grid 1 to 21																	
T1682	AB (G/F to 1/F) - Staircase Finishing Works	30	18APR06A	01SEP06	65	5	11	-106	-73	—	—	—	—	—	—	—	
T1685	AB G/F (Grid 1-21) - Wall Plaster & Flr Screed	20	19APR06A	30AUG06	70	10	9	-104	-85	—	—	—	—	—	—	—	
T1680	AB G/F (Grid 1-21) - Windows & door frames	18	24APR06A	30AUG06	60	56	9	-104	-91	—	—	—	—	—	—	—	
T3245	Rm (G39/G40/G45/G46) - Wdws & door frames	8	24APR06A	24AUG06	50	70	4	-95	-92	—	—	—	—	—	—	—	
T1975	AB G/F (Grid 1-21) - Base Skirting	18	15JUN06A	16OCT06	20	0	15	27	-40	—	—	—	—	—	—	—	
T2995	AB G/F (Grid 1-21) - Wall & Ceiling Base Paint	30	02AUG06A	13SEP06	40	0	18	-101	-61	—	—	—	—	—	—	—	
T2990	AB G/F (Grid 1-21) - Tileworks & Sanitary Fixt	30	21AUG06	23SEP06	0	0	30	-101	-90	—	—	—	—	—	—	—	
T3255	Genset&Fuel Rm (G45/G46) - Floor Tiles	4	26AUG06	30AUG06	0	0	4	-104	-78	—	—	—	—	—	—	—	
T3275	AB G/F (Critical Rooms) - Access to E&M Works	0		30AUG06	0	0	0	-104	-78	—	—	—	—	—	—	—	
T1970	AB G/F (Grid 1-21) - Install Ceiling Grids	18	25SEP06	17OCT06	0	0	18	10	-70	—	—	—	—	—	—	—	

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL			AUG			SEP			OCT			NOV			DEC										
										33	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	4	11	
Admin Bldg (G/F) - Internal Work @ Grid 1 to 21																																					
T2160	AB G/F (Grid 1-21) - Install Ceiling Panels	10	18OCT06	28OCT06	0	0	10	10	-59																												
T2150	AB G/F (Grid 1-21) - Door Leaf & Final Paints	12	31OCT06	13NOV06	0	0	12	10	-57																												
T3285	Rm (G39/G40/G45/G46) - Door Leaf & Final Paints	4	06NOV06	09NOV06	0	0	4	13	-66																												
Admin Bldg (1/F) - Internal Work @ Grid 1 to 18																																					
T1982	AB (1/F to 2/F) - Staircase Finishing Works	30	18APR06A	30AUG06	70	5	9	-74	-71																												
T1985	AB 1/F (Grid 1-18) - Wall Plaster & Fir Screed	24	18APR06A	25AUG06	80	35	5	-65	-80																												
T1980	AB 1/F (Grid 1-18) - Wdws & Door Frames	18	24APR06A	28AUG06	60	56	7	-54	-88																												
T2165	AB 1/F (Grid 1-18) - Install Skirting	14	15JUN06A	20NOV06	60	0	6	4	-50																												
T2015	AB 1/F (Grid 1-18) - Wall & Ceiling Base Paint	30	10JUL06A	08SEP06	80	0	6	11	-55																												
T2010	AB 1/F (Grid 1-18) - Tileworks & Sanitary Fixt	21	21AUG06	13SEP06	0	0	21	-65	-90																												
T2012	AB 1/F (Grid 10-18) - Proprietary Toilet Cubicle	18	04SEP06	23SEP06	0	0	18	-65	-87																												
T3268	UPS&UPS Bat Rm (112/115) - Door Lf & Final Paint	6	08SEP06	14SEP06	0	0	6	58	-44																												
T3000	AB 1/F (Grid 1-18) - Install Ceiling Grids	18	25SEP06	17OCT06	0	0	18	-2	-58																												
T2185	AB 1/F (Grid 1-18) - Install Ceiling Panels	10	18OCT06	28OCT06	0	0	10	-2	-58																												
T3015	AB 1/F (Grid 1-18) - Floor Carpets	12	31OCT06	13NOV06	0	0	12	-2	-58																												
T2170	AB 1/F (Grid 1-18) - Door Leaf & Final Paints	12	14NOV06	27NOV06	0	0	12	-2	-58																												
Admin Bldg (2/F) - Internal Work @ Grid 1 to 18																																					
T2060	AB 2/F (Grid 1-18) - Wdws & Door Frames	12	11APR06A	24AUG06	70	50	4	-58	-88																												
T3012	AB 2/F (Tel, Comp, Cont Rm) - Wdws & door frames	8	11APR06A	23AUG06	70	70	3	-72	-90																												
T2062	AB (2/F to Rf/Lvl) - Staircase Finishing Works	30	18APR06A	01SEP06	65	5	11	-58	-73																												
T2065	AB 2/F (Grid 1-18) - Wall Plaster & Fir Screed	24	01JUN06A	22AUG06	95	0	2	-49	-68																												
T3025	AB 2/F (Tel, Comp, Cont Rm) - Plaster & Screed	12	01JUN06A	30AUG06	90	0	9	-72	-87																												
T2190	AB 2/F (Grid 1-18) - Base Skirting	21	03JUL06A	17NOV06	80	0	5	6	-19																												
T2025	AB 2/F (Grid 1-18) - Ceiling & Wall Base Paint	30	10JUL06A	12SEP06	95	0	2	0	-49																												

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL		AUG		SEP		OCT		NOV		DEC					
										33	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2
Admin Bldg (2/F) - Internal Work @ Grid 1 to 18																											
T1860	AB 2/F (Tel, Comp, Cont Rm) - Base Skirting	12	15JUL06A	08NOV06	50	0	48	14	-8																		
T3035	AB 2/F (Tel, Comp, Cont Rm)- Ceiling & Wall Paint	10	25JUL06A	08AUG06A	100	0	0		-52																		
T2020	AB 2/F (Grid 1-18) - Tileworks & Sanitary Fixt	18	23AUG06	12SEP06	0	0	18	-49	-68																		
T2035	AB 2/F (Non-Critical Room) - Access to E&M Works	0		30AUG06	0	0	0	363	-50																		
T3045	AB 2/F (Tel, Comp, Cont Rm) - Ceiling Grids	18	31AUG06	20SEP06	0	0	18	2	-26																		
T2028	AB 2/F (Grid 1-18) - Proprietary Toilet Cubicle	10	13SEP06	23SEP06	0	0	10	-49	-68																		
T2045	AB 2/F (Grid 1-18) - Install Ceiling Grids	18	13SEP06	04OCT06	0	0	18	0	-37																		
T3065	AB 2/F (Tel, Comp, Cont Rm) - Raised Floors	21	21SEP06	17OCT06	0	0	21	2	-14																		
T3065	AB 2/F (Corridor & Cont Rm) - Ceiling Panels	18	18OCT06	08NOV06	0	0	18	2	-14																		
T3068	AB 2/F (Corridor & Cont Rm) - Floor Carpets	12	18OCT06	01NOV06	0	0	12	8	-14																		
T2068	AB 2/F (Grid 1-18) - Install Ceiling Panels	18	20OCT06	10NOV06	0	0	18	0	-22																		
T2068	AB 2/F (Grid 1-18) - Floor Carpets	18	20OCT06	10NOV06	0	0	18	0	-34																		
T1865	AB 2/F (Tel, Comp, Cont) - Door Lf & Final Paint	12	09NOV06	22NOV06	0	0	12	2	-14																		
T2220	AB 2/F (Grid 1-18) - Door Leaf & Final Paints	12	11NOV06	24NOV06	0	0	12	0	-22																		
Admin Bldg (Roof/Ftr) - Inter Works Grid 3 to 16																											
T2985	AB R/F (Grid 3-16) - Window & door frames	6	28APR06A	23AUG06	50	35	3	-81	-87																		
T3280	AB R/F (Grid 3-16) - Wall Plaster & Flr Screed	18	28APR06A	21AUG06	95	50	1	-85	-82																		
T2250	AB R/F (Grid 3-16) - Ceiling & Wall Base Paint	12	15JUN06A	04SEP06	95	0	2	-85	-75																		
T2235	AB R/F (Grid 3-16) - Door Leaf & Final Paints	6	04NOV06	10NOV06	0	0	6	12	-79																		
Admin Bldg - Upper Roof & External Facade																											
T2890	AB Ext (GL 11-21) - Wall Waterproofing	18	28MAR06A	22AUG06	90	40	2	-39	-81																		
T2340	AB Ext (GL 11-21) - Slate Cladding	30	03APR06A	13SEP06	30	30	21	-25	-90																		
T2850	AB Ext (GL 11-21) - Install Louvres & Wdw Glazing	60	03APR06A	09SEP06	70	70	18	-23	-90																		
T2860	AB Ext (GL 11-21) - Install Louvres & Wdw Glazing	60	03APR06A	09SEP06	70	70	18	-17	-90																		

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	Gantt Chart							
										JUN 33	JUN 34	JUL 03	JUL 04	AUG 14	AUG 21	SEP 04	SEP 11
Admin Bldg - Upper Roof & External Facade																	
T2870	AB Ext UR/LR - Roof Screeding	18	30JUN06A	30AUG06	50	0	9	-37	-81								
T2230	AB Ext (GL 6-11) - Curtain Wall & Glass Canopy	30	03JUL06A	23SEP06	60	0	12	11	-48								
T2232	AB Ext (GL 11-18) - Curtain Wall Installation	21	03JUL06A	09SEP06	60	0	9	11	-66								
T2880	AB Ext (GL 1-11) - Wall Waterproofing	18	20JUL06A	07SEP06	90	0	16	-23	-88								
T2841	AB Ext UR/LR - Render&wall paint to Open Area Rf	12	25JUL06A	13SEP06	50	0	6	-37	-57								
T2830	AB Ext (GL 11-21) - Ceramic Wall Tiles	30	23AUG06	26SEP06	0	0	30	-39	-81								
T2840	AB Ext UR/LR - Roof Waterproofing & Test	24	31AUG06	27SEP06	0	0	24	-37	-81								
T2330	AB Ext (GL 1-11) - Slate Cladding	45	14SEP06	08NOV06	0	0	45	-25	-90								
T2350	AB Ext (GL 1-11) - Ceramic Wall Tiles	30	27SEP06	03NOV06	0	0	30	-39	-81								
T2900	AB Ext UR/LR - Insulation & Conc Roof Tile	30	06OCT06	11NOV06	0	0	30	-37	-75								
T2915	AB Ext UR/LR- Install GMS, Balustrades & Railing	21	13NOV06	06DEC06	0	0	21	-37	-57								
T2280	AB Ext (GL 11-16) - Expanded metal mesh cladding	24	14NOV06	11DEC06	0	0	24	-71	-88								
BUILDING SERVICES																	
Admin Bldg (G/F) - E & M Works																	
EM3540	BS Works in G/F	90	01JUN06A	09OCT06	70	12	41	-76	-52								
EM3620	E&M Works in Risers	90	12JUN06A	20SEP06	70	0	27	-62	-19								
EM3220	BS Works for HV Sw + Tx	12	14JUN06A	24AUG06	70	0	4	-104	-82								
EM3280	BS Works for LV Sw	12	14JUN06A	24AUG06	70	0	4	-104	-70								
EM3340	BS Works for 110V Charger Rm	12	14JUN06A	24AUG06	70	0	4	-81	-82								
EM3420	BS Works for Genset	12	14JUN06A	25AUG06	60	0	5	-104	-59								
EM3660	PAU in G/F	30	14JUL06A	01AUG06A	100	0	0		-44								
EM3440	Genset Installation	36	14AUG06A	18AUG06A	100	0	0		-17								
T1830	Bldg available for BB deliveries excl cont room	0		01SEP06	0	0	0	-106	-69								
EM3300	LV Sw Installation	30	02SEP06	09OCT06	0	0	30	-106	-69								

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	Gantt Chart							
										JUN 33	JUL 34	AUG 35	SEP 36	OCT 37	NOV 38	DEC 39	
Admin Bldg (G/F) - E & M Works																	
EM3240	HV Sw + Tx Installation	29	29SEP06	04NOV06	0	0	29	-128	-66								
Admin Bldg (1/F) - E & M Works																	
EM3560	BS Works in 1/F	90	08JUN06A	05OCT06	70	12	27	-74	-50								
EM3380	BS Works for LIPS Rm (2x)	12	03JUL06A	24AUG06	70	0	4	-93	-63								
EM3680	PAU in 1/F	30	14JUL06A	01AUG06A	100	0	0		-44								
EM3400	UPS (2x) Installation	30	15AUG06A	07SEP06	70	0	9	-93	-44								
Admin Bldg (2/F) - E & M Works																	
EM3580	BS Works in 2/F	90	08JUN06A	20SEP06	70	0	27	-62	1								
EM3700	PAU in 2/F	30	14JUL06A	01AUG06A	100	0	0		-16								
Admin Bldg (Int. & Ext. Roof Lvl) - E & M Works																	
EM3600	BS Works in R/F	78	06JUN06A	03NOV06	20	1	62	-97	-79								
EM3190	Admin Bldg - Lift Installation	72	19JUN06A	28AUG06	95	0	7	49	59								
EM3720	Chiller System in R/F (Inc. All AC Units)	72	20JUN06A	30SEP06	50	0	36	-35	30								
EM3480	BS Works for MCC	12	03JUL06A	21AUG06	90	0	1	-66	-51								
EM3500	MCC Installation	30	15AUG06A	23AUG06	98	0	1	-68	-23								
Admin Bldg - Testing and Commissioning																	
EM3520	MCC Termination + T&C	30	24AUG06	27SEP06	0	0	30	-68	-23								
EM3360	110V Charger Rm Installation + T&C	12	08SEP06	21SEP06	0	0	12	-93	-44								
EM3460	Genset Termination + T&C	12	22SEP06	06OCT06	0	0	12	-75	-44								
EM3320	LV Sw Termination + T&C	30	10OCT06	14NOV06	0	0	30	-106	-57								
EM3260	HV Sw + Tx Termination + T&C	30	06NOV06	09DEC06	0	0	30	-128	-66								
Admin Bldg - Statutory Inspection and Handover																	
EM3370	Admin Bldg - Lift Commissioning	24	29AUG06	25SEP06	0	0	24	49	59								

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL			AUG			SEP			OCT			NOV			DEC							
										33	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20
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		-108																									
ACS_D8	Access to Portion - D8	0	03JAN06A		100	100	0		-108																									
SUBMITTALS & APPROVALS																																		
ABWF & BW APPROVALS																																		
2000	SHT SPB - Approve doors details	24	07MAY05A	30AUG06	70	70	9	-39	-90																									
2074	SHT SPB - Approve aluminum composite cladding	24	13DEC05A	12SEP06	50	50	20	-18	-77																									
PROCUREMENT - MATERIAL																																		
ABWF WORKS																																		
2079	SHT SPB - Procure aluminum composite cladding	180	19APR05A	12SEP06	50	50	20	-18	-77																									
2077	SHT SPB - Procure expanded metal mesh cladding	180	06JUN05A	06SEP06	50	50	15	-45	-85																									
2082	SHT SPB - Initial delivery of slate cladding	0	21AUG06*		0	0	0	14	-52																									
2083	SHT SPB - Initial deliv fall arrest roof syst.	0	21AUG06*		0	0	0	38	-43																									
2084	SHT SPB - Initial delivery balustrd & metal work	0	21AUG06*		0	0	0	38	-43																									
2081	SHT SPB - Initial delivery of doors	0	04OCT06*		0	0	0	-39	-89																									
2085	SHT SPB - Initial deliv expanded metal cladding	0	08NOV06*		0	0	0	-45	-93																									
2086	SHT SPB - Initial deliv alum composite claddings	0	11NOV06*		0	0	0	-18	-76																									
MAJOR EQUIPMENT DELIVERY																																		
E&M WORKS																																		
7103	ShtSpBldg-Del. Package AC Units	48	27JAN06A	31AUG06	80	60	10	362	-78																									
7118	ShtSpBldg-Del. building vent. fans	48	27JAN06A	31AUG06	80	60	10	362	-78																									
7167	ShtSpBldg-Del. FS pumps & tank to G/F	48	06MAR06A	31AUG06	80	50	10	362	-91																									
7162	ShtSpBldg-Del. ENT Tunnel (Hyd/HR) pumps to G/F	48	06MAR06A	31AUG06	80	40	10	362	-73																									
7211	ShtSpBldg-Del. PD pump & tank to G/F	48	10APR06A	31AUG06	80	0	10	362	-43																									
7231	ShtSpBldg-Del. PD irrig. pump & tank to G/F	48	10APR06A	31AUG06	80	0	10	362	-43																									

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL			AUG			SEP			OCT			NOV			DEC							
										33	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20
E&M WORKS																																		
7207	ShtSpBldg-Del. AFA & FM200 sys	48	15MAY06A	15SEP06	62	0	23	349	-42																									
7087	ShtSpBldg-Del. CMCS & ELV equip't	48	01JUN06A	15SEP06	90	0	23	349	-28																									
CONSTRUCTION																																		
TCSS Access to SHT Sout Portal Bldg																																		
EM6702	TCSS Containment in 1/F	12	28JUL06A	15AUG06A	100	0	0		-57																									
EM6704	TCSS Containment in Lower Plenum	18	28JUL06A	15AUG06A	100	0	0		-68																									
EM6706	TCSS Containment in 2/F	18	28JUL06A	15AUG06A	100	0	0		-51																									
EM6708	TCSS Containment in 3/F and above	18	28JUL06A	15AUG06A	100	0	0		-51																									
EM6700	TCSS Containment in G/F	12	04SEP06	16SEP06	0	0	12	-161	-85																									
AB6024	TCSS ACCESS 4F (Room 402,403)	0		15AUG06A	100	0	0		-81																									
AB6044	TCSS ACCESS ROOF	0		15AUG06A	100	0	0		-86																									
EM6050	TCSS ACCESS 2F(Room 201-203,205,207,209,212)	0		15AUG06A	100	0	0		-83																									
EM6090	TCSS ACCESS 2F(Room 206,210)	0		15AUG06A	100	0	0		-51																									
EM6110	TCSS ACCESS 2F(Room 204)	0		15AUG06A	100	0	0		-69																									
EM6722	TCSS ACCESS 1F(Room 107)	0		15AUG06A	100	0	0		-57																									
EM6732	TCSS ACCESS 1F(Room 105)	0		15AUG06A	100	0	0		-57																									
EM6710	TCSS ACCESS GF (Room G01-G05, G08-G10)	0		02SEP06	0	0	0	-123	-85																									
EM6720	TCSS ACCESS GF(Room G07,G11,G12)	0		16SEP06	0	0	0	-161	-85																									
CIVIL & ABWF WORKS																																		
AB5983	U/G Drainages and Utilities under bldg	24	01APR06A	24AUG06	85	0	4	4	-70																									
AB5986	Backfill, G/F Slabs and Walls	24	20APR06A	07SEP06	85	0	4	4	-58																									
ABWF																																		
AB6022	Remedy SHT Contractor Defects	26	12DEC06A	23AUG06	90	90	3	-161	-88																									
ABWF at GF																																		
AB5989	Initial Finishes to G/F	18	11FEB06A	02SEP06	40	5	12	-161	-85																									

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL		AUG		SEP		OCT		NOV		DEC	
										33	34	35	36	37	38	39	40	41	42	43	44		
ABWF at GF																							
AB6042	G/F Paint Touch Up & Doors	12	13OCT06	26OCT06	0	0	12	24	-4														
ABWF at 1F & LP																							
AB5995	Initial Finishes to Lower Plenum	12	10APR06A	30AUG06	95	15	5	-46	-82														
AB6032	1F & LP Paint Touch Up & Doors	12	13OCT06	26OCT06	0	0	12	24	-4														
ABWF at 2F																							
AB5998	Initial Finishes to 2/F	18	11FEB06A	04AUG06A	100	15	0		-60														
AB6052	2/F Paint Touch Up & Doors	12	13OCT06	26OCT06	0	0	12	24	-4														
ABWF at 3F																							
AB6001	Initial Finishes to 3/F	18	10APR06A	04AUG06A	100	15	0		-60														
AB6062	3/F Paint Touch Up & Doors	12	13OCT06	26OCT06	0	0	12	24	-4														
ABWF at 4F and above																							
AB6004	Initial Finishes to 4/F and above	24	13APR06A	30AUG06	90	10	9	5	-64														
AB6072	4/F and above Paint Touch Up & Doors	12	13OCT06	26OCT06	0	0	12	24	-4														
Roof & External Facade																							
AB6018	Sht SPB - Ext. Wall Waterproof Render	21	02MAR06A	07SEP06	20	0	16	-14	-80														
AB6017	Sht SPB - Ext. Wall Waterproof Membrane	24	04MAR06A	05SEP06	90	90	14	-39	-90														
AB6067	Sht SPB - Install Aluminum louvres & doors	75	15MAR06A	03OCT06	80	0	37	-39	-51														
AB6077	Sht SPB - Alum. composite cladding to ext walls	60	07AUG06A	10NOV06	10	0	54	-18	-16														
AB6047	Sht SPB - GMS, S/S Channel, Balustrade & Railing	18	14AUG06A	10NOV06	25	0	14	-18	-78														
AB6037	Sht SPB - Roof Waterproofing & Test	12	21AUG06	19SEP06	0	0	14	-18	-90														
AB6007	Sht SPB - Slate Cladding above NB/SB Carriageway	36	06SEP06	19OCT06	0	0	36	0	-66														
AB6027	Sht SPB - External Wall Painting	30	15SEP06	21OCT06	0	0	30	-14	-80														
AB6067	Sht SPB - 26thk Roof Sareed & Roofing Tiles	18	06OCT06	26OCT06	0	0	18	-18	-90														
AB6034	Sht SPB - Expanded metal cladding to ext walls	30	08NOV06	12DEC06	0	0	30	-45	-83														

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN			JUL			AUG			SEP			OCT			NOV			DEC													
										33	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	4	11	18	25	31	
SHT South Portal Bldg. - BUILDING SERVICES																																									
E & M WORKS																																									
SHT South Portal Bldg (G/F) - E & M Works																																									
EM6065	Installation of FS Pumps & Pipework at GF	18	04SEP06	23SEP06	0	0	18	-32	-85																																
EM6063	E&M Access to G/F	0	04SEP06		0	0	0	-161	-85																																
SHT South Portal Bldg (2F/Silencer) - E & M Work																																									
EM6080	BS Works for HV Sw + Tx	12	17JUL06A	24AUG06	70	0	4	-66	-65																																
EM6300	E&M Works in Corridors 2/F	24	17JUL06A	22AUG06	90	0	2	-46	-39																																
EM6240	BS Works for Genset	18	01AUG06A	30AUG06	50	0	9	-44	-64																																
EM6260	Genset Installation	36	14AUG06A	21AUG06	98	0	1	-45	-20																																
EM6340	E&M Works in Risers (2F & 3F)	48	15AUG06A	06SEP06	90	0	5	-47	-16																																
EM6100	HV Sw + Tx Installation	30	06NOV06	09DEC06	0	0	30	-125	-124																																
SHT South Portal Bldg (3F/Fan Rm) - E & M Work																																									
EM6140	BS Works for LV Sw, MCC, UPS, LCC	12	12JUN06A	24AUG06	70	0	4	-74	-65																																
EM6200	BS Works for 110V Charger Rm	12	12JUN06A	26AUG06	50	0	6	-68	-67																																
EM6320	E&M Works in Corridors 3/F	24	14JUL06A	23AUG06	90	0	3	-47	-40																																
EM6160	LV Sw, MCC, UPS, LCC Installation	30	16AUG06A	16SEP06	20	0	24	-74	-55																																
SHT South Portal Bldg (4F/Upr Pln) - E & M Work																																									
EM6400	TVS Installation	100	12JUN06A	12OCT06	56	0	44	-46	-4																																
Testing and Commissioning																																									
EM6280	Genset Termination + T&C	12	22AUG06	04SEP06	0	0	12	-45	-20																																
EM6220	110V Charger Rm Installation + T&C	12	28AUG06	09SEP06	0	0	12	-68	-67																																
EM6180	LV Sw, MCC, UPS, LCC Termination + T&C	30	18SEP06	24OCT06	0	0	30	-74	-55																																
SHT TUNNEL																																									
MAJOR EQUIPMENT DELIVERY																																									
SHT TUNNEL NORTHBOUND																																									
7012	ShtRTNb-Del. TVS control sys	48	24MAR06A	06NOV06	90	60	64	308	-145																																
7024	ShtRTNb-Del. AFA & Linear sys	48	01JUN06A	15SEP06	52	0	23	349	-43																																

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL		AUG		SEP		OCT		NOV		DEC										
										33	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6
SHT TUNNEL SOUTH BOUND																																
6969	ShtRtSb-Del. TVS control sys	47	24MAR06A	06NOV06	90	40	64	308	-146																							
6947	ShtRtSb-Del. CMCS & ELV sys	72	01JUN06A	15SEP06	90	0	23	349	-25																							
6971	ShtRtSb-Del. AFA & Linear sys	48	01JUN06A	15SEP06	52	0	23	349	-43																							
CONSTRUCTION																																
SHT NORTHBOUND TUNNEL																																
(E & M) BUILDING SERVICES																																
MVAC / Tunnel Ventilation System Above OHVD																																
207004	Sht NB - Install Motorized Smoke & Fire Damper	48	22FEB06A	31AUG06	82	80	10	-87	-91																							
207006	Sht NB - Comp Air Pipes/Condts to E/P1 to E/P5	36	12APR06A	07SEP06	90	5	4	-87	-84																							
207005	Sht NB - Comp Air Pipes/Condts to E/P10 to E/P6	36	20JUN06A	14SEP06	90	0	4	-87	-54																							
207007	Sht NB - Cabling, wiring and termination	24	15SEP06	14OCT06	0	0	24	-87	-54																							
207008	Sht NB - MVAC Testing and T&C	12	16OCT06	28OCT06	0	0	12	-87	-54																							
Plumbing and Drainage																																
214030	Sht NB - Pipe Testing & T&C	12	15MAY06A	22AUG06	90	0	2	-22	-52																							
214028	Sht NB - Pipe Connedn, pumps, tanks to SP / NP	18	23AUG06	12SEP06	0	0	18	-22	-82																							
Fire Protection System																																
221054	Sht NB - Install FS Conduits for Niches	30	22MAR06A	22AUG06	95	20	2	-64	-68																							
221055	Sht NB - (150d) FS Main pipeworks @ G/L	34	06APR06A	22AUG06	97	10	2	-52	-62																							
221057	Sht NB - Hose Reel Cabinets & Equipts	40	08MAY06A	05SEP06	86	0	7	-52	-34																							
221058	Sht NB - (100d) FH / HR Pipeworks & Fittings	30	10MAY06A	31JUL06A	100	0	0		-1																							
221052	Sht NB - Install brkt for detection sys @ C/L	30	21AUG06	23SEP06	0	0	30	-92	-90																							
221053	Sht NB - Install detection system @ Ceiling Lvl	24	25SEP06	24OCT06	0	0	24	-92	-90																							
221059	Sht NB - FS wiring & termination	24	25OCT06	22NOV06	0	0	24	-92	-72																							
221061	Sht NB - FS Testing and T&C	12	23NOV06	06DEC06	0	0	12	-92	-72																							
Electrical Works Above OHVD																																
228105	Sht NB-HV&LV Mn/Submain Cable Pulling (CP5-CP1)	24	15AUG06A	21SEP06	10	0	22	-81	-49																							

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL			AUG			SEP			OCT			NOV			DEC																		
										33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52																
Electrical Works Above OHVD																																													
228108	Sht NB-HV&LV Mn/Submain Cable Pulling (CP10-CP6)	24	15AUG06A	21SEP06	10	0	22	-106	-73																																				
228109	E&M Inspection & Access to Civil Contractor	0		28SEP06	0	0	0	-81	-49																																				
Electrical Works Below OHVD																																													
235161	Sht NB - Conduits Works (Above & below OHVD)	48	01MAR06A	06SEP06	89	44	6	-62	-78																																				
235160	Sht NB - Brackets for Lightings @ Ceiling Level	48	14MAR06A	23AUG06	93	90	3	-66	-94																																				
235164	Sht NB - Tunnel Lightings Fixtures	60	26APR06A	20SEP06	84	5	10	-62	-60																																				
235165	Sht NB - Cabling, Wiring and Termination	36	30MAY06A	27SEP06	20	0	29	-62	-42																																				
235162	Sht NB - Tunnel Earthing to CP1-CP10	36	24AUG06	05OCT06	0	0	36	-66	-94																																				
235163	Stn NB Access to Civil Contractor for Rd Pavement	0	06OCT06		0	0	0	-66	-72																																				
235166	Sht NB - Lighting Test and T&C	12	06OCT06	20OCT06	0	0	12	-66	-48																																				
235167	Stn NB Access to Civil Contractor for Top Layer	0		20OCT06	0	0	0	-66	-48																																				
SHT SOUTHBOUND TUNNEL																																													
(E & M) BUILDING SERVICES																																													
MVAC / Tunnel Ventilation System Above OHVD																																													
242270	Sht SB - Install Motorized Smoke & Fire Damper	48	02MAR06A	01SEP06	77	74	11	-70	-89																																				
242272	Sht SB - Comp Air Pipes/Conds to E/P 1 to E/P5	36	08MAY06A	08SEP06	90	0	4	-70	-36																																				
242273	Sht SB - Cabling, wiring and termination	24	09SEP06	09OCT06	0	0	24	-70	-35																																				
242274	Sht SB - MVAC Testing and T&C	12	10OCT06	23OCT06	0	0	12	-66	-35																																				
Plumbing and Drainage																																													
249393	Sht SB - Pipe Testing and T&C	12	22JUN06A	23AUG06	76	0	3	-23	-29																																				
249392	Sht SB - Pipe Connectn, pumps, tanks to SP / NP	18	24AUG06	13SEP06	0	0	18	-23	-59																																				
Fire Protection System																																													
256516	Sht SB - Install FS Conduits for Niches	30	12JUN06A	28AUG06	77	0	7	-57	-13																																				
256518	Sht SB - Hose Reel Cabinets & Equipts	40	30JUN06A	11SEP06	60	0	16	-57	15																																				
256519	Sht SB - (100d) FH / HR Pipeworks & Fittings	30	03JUL06A	31JUL06A	100	0	0	0	53																																				
256514	Sht SB - Install brckt for detection sys @ C/L	30	21AUG06	23SEP06	0	0	30	-92	-90																																				

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	Gantt Chart							
										JUN 33	JUL 34	AUG 35	SEP 36	OCT 37	NOV 38	DEC 39	
Fire Protection System																	
256515	Sht SB - Install detection system @ Ceiling Lvl	24	25SEP06	24OCT06	0	0	24	-92	-90								
256520	Sht SB - FS Wiring & Termination	24	25OCT06	22NOV06	0	0	24	-92	-18								
256521	Sht SB - FS Testing and T&C	12	23NOV06	06DEC06	0	0	12	-92	-18								
Electrical Works Above OHVD																	
263655	Sht SB-HV&LV Mn/Submain Cable Pulling (CP6-CP10)	24	10AUG06A	14SEP06	8	0	22	-106	5								
263658	Sht SB-HV&LV Mn/Submain Cable Pulling (CP1-CP5)	24	10AUG06A	14SEP06	8	0	22	-105	-19								
263659	E&M Inspection & Access to Civil Contractor	0		21SEP06	0	0	0	-75	5								
Electrical Works Below OHVD																	
270799	Sht SB - Conduits Works (Above & below OHVD)	48	01MAR06A	26AUG06	82	42	6	-65	-68								
270798	Sht SB - Brackets for Lightings @ Ceiling Level	48	01JUN06A	26AUG06	87	0	6	-92	-71								
270802	Sht SB - Tunnel Lightings Fixtures	60	27JUN06A	09SEP06	85	0	9	-65	13								
270800	Sht SB - Tunnel Earthing to CP1-CP10	36	01AUG06A	20SEP06	24	0	27	-92	-56								
270803	Sht SB - Cabling, Wiring and Termination	36	21SEP06	04NOV06	0	0	36	-92	-26								
270801	Stn SB Access to Civil Contractr for Rd Pavement	0	06OCT06		0	0	0	-65	-68								
270804	Sht SB - Lighting Test and T&C	12	06NOV06	18NOV06	0	0	12	-89	-26								
270805	Stn SB Access to Civil Contractor for Top Layer	0		18NOV06	0	0	0	-89	-26								
SHT CROSS PASSAGES (CP1 to CP10)																	
(E & M) BUILDING SERVICES																	
Electrical Works																	
277957	(CP1-CP10) - Cable Containment & Eqipt Support	60	03MAY06A	26AUG06	90	2	6	-109	-38								
277959	(CP1-CP10) - MCCB / MCB Bd, CMCS, Busbar, Switches	72	13JUN06A	09SEP06	75	0	18	-77	7								
277960	(CP1-CP10) - Conduit, light Fixture, Swt & Test	36	15AUG06A	26SEP06	10	0	32	-109	-43								
277962	(CP1-CP10) - Switchboard, CMCS, Eqpt, Testing	48	25AUG06	17OCT06	0	0	22	-77	3								
277961	(CP1-CP10) - HV & LV Cables Termination & Test	48	27SEP06	24NOV06	0	0	48	-109	-29								

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL			AUG			SEP			OCT			NOV			DEC							
										33	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20
SHT NORTH PORTAL BUILDING																																		
SUBMITTALS & APPROVALS																																		
ABWF & BUILDERS WORKS																																		
2094	SHT NPB - Approve alum. composite claddings	24	13DEC05A	29AUG06	90	70	8	-62	-76																									
PROCUREMENT - MATERIAL																																		
ABWF WORKS																																		
2099	SHT NPB - Procure alum. composite claddings	180	19APR05A	09SEP06	60	50	18	-72	-86																									
2098	SHT NPB - Procure expanded metal claddings	180	06JUN05A	30AUG06	50	50	9	-61	-90																									
2101	SHT NPB - Initial delivery of doors	0	21AUG06*		0	0	0	38	-52																									
2102	SHT NPB - Initial delivery of slate claddings	0	21AUG06*		0	0	0	-16	-43																									
2104	SHT NPB - Initial deliv fall arrest roofing syst	0	21AUG06*		0	0	0	20	-36																									
2106	SHT NPB - Initial deliv alum. composite cladding	0	20OCT06*		0	0	0	-72	-58																									
2103	SHT NPB - Initial deliv expanded metal claddings	0	13NOV06*		0	0	0	-61	-87																									
MAJOR EQUIPMENT DELIVERY																																		
SHT NORTH PORTAL BUILDING																																		
7340	ShtNpBldg-Del. building vent. fans	48	27JAN06A	31AUG06	80	60	10	362	-65																									
7379	ShtNpBldg-Del. FS pumps & tank to G/F	48	06MAR06A	31AUG06	80	0	10	362	-43																									
7325	ShtNpBldg-Del. Package AC Units	48	10APR06A	31AUG06	80	0	10	362	-43																									
7433	ShtNpBldg-Del. PD pump & tank to G/F	48	10APR06A	31AUG06	80	0	10	362	-43																									
7429	ShtNpBldg-Del. AFA & FM200 sys	48	15MAY06A	15SEP06	52	0	23	349	-53																									
7309	ShtNpBldg-Del. CMCS & ELV equip†	48	01JUN06A	15SEP06	90	0	23	349	-26																									
CONSTRUCTION																																		
TCSS Access to SHT North Portal Bldg																																		
EM7286	TCSS Containment in 1/F	12	21AUG06	02SEP06	0	0	12	-143	-74																									
EM7289	TCSS Containment in Lower Plenum	18	21AUG06	09SEP06	0	0	18	-164	-69																									
EM7292	TCSS Containment in 2/F	18	21AUG06	09SEP06	0	0	18	-146	-74																									
EM7295	TCSS Containment in 3/F and above	18	21AUG06	09SEP06	0	0	18	354	-69																									

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	Gantt Chart							
										JUN 33	JUL 34	AUG 35	SEP 36	OCT 37	NOV 38	DEC 39	
TCSS Access to SHT North Portal Bldg																	
EM7283	TCSS Containment in G/F	12	30AUG06	12SEP06	0	0	12	-118	-77								
AB7190	TCSS ACCESS 4F (Room 401,402,403,404)	0		22AUG06	0	0	0	-130	-65								
EM7290	TCSS ACCESS - GF (Room G02-G03, G04-G08)	0		29AUG06	0	0	0	-114	-77								
EM7296	TCSS ACCESS - 1F (Room 107,109,104)	0		02SEP06	0	0	0	-143	-74								
EM7306	TCSS ACCESS - 1F (Room 108)	0		02SEP06	0	0	0	-118	-74								
EM7299	TCSS ACCESS LPL (Room L03)	0		05SEP06	0	0	0	-169	-83								
AB7150	TCSS ACC 2F(201,204,205,207-212,214,215,ST1,ST2)	0		09SEP06	0	0	0	-146	-74								
EM7309	TCSS ACCESS LPL (Room L04,L06)	0		09SEP06	0	0	0	-164	-69								
EM7293	TCSS ACCESS - GF (Room G09,G16)	0		12SEP06	0	0	0	-118	-77								
CIVIL & ABWF WORKS																	
AB7040	U/G Drainages and Utilities under bldg	24	20JUL06A	13SEP06	10	0	21	327	-87								
AB7060	Backfill, G/F Slabs and Walls	24	14SEP06	13OCT06	0	0	24	327	-87								
ABWF Works																	
AB7130	Remedy defects to SHT Buildings	24	17DEC06A	22AUG06	95	50	2	-169	-83								
ABWF at GF																	
AB7080	Initial Finishes to G/F	18	25APR06A	29AUG06	95	7	8	-118	-77								
AB7330	G/F paint Touch Up & Doors	12	20NOV06	02DEC06	0	0	12	-7	-14								
ABWF at 1F & LP																	
AB7100	Initial Finishes to 1/F	18	19APR06A	29JUL06A	100	10	0		-56								
AB7120	Initial Finishes to Lower Plenum	12	22APR06A	05SEP06	95	0	8	-169	-83								
AB7320	1F & LP Paint Touch Up & Doors	12	20NOV06	02DEC06	0	0	12	-7	-14								
ABWF at 2F																	
AB7140	Initial Finishes to 2/F	18	24APR06A	29JUL06A	100	10	0		-56								
AB7340	2/F Paint Touch Up & Doors	12	20NOV06	02DEC06	0	0	12	-7	-14								
ABWF at 3F																	
AB7160	Initial Finishes to 3/F	18	26APR06A	29JUL06A	100	10	0		-51								

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN			JUL			AUG			SEP			OCT			NOV			DEC																				
										33	30	27	31	28	25	30	27	24	31	28	25	30	27	24	31	28	25	30	27	24	31	28	25	30	27	24												
ABWF at 3F																																																
AB7350	3/F Paint Touch Up & Doors	12	20NOV06	02DEC06	0	0	12	-7	-14																																							
ABWF at 4F																																																
AB7180	Initial Finishes to 4/F and above	24	02MAY06A	29AUG06	90		0	8	-130	-65																																						
AB7360	4/F and above Paint Touch Up & Doors	12	20NOV06	02DEC06	0	0	12	-7	-14																																							
Roofing & External Facade																																																
B70205	Sht NPB - Ext. Wall Waterproof Render	21	04MAY06A	07SEP06	25		0	16	-14	-76																																						
AB7290	Sht NPB - Install Aluminum louvres & doors	75	06MAY06A	14SEP06	70		0	22	16	-36																																						
AB7270	Sht NPB - Roof Waterproofing & Test	12	23AUG06	05SEP06	0		0	12	-24	-77																																						
AB7310	Sht NPB - Slate Cladding above NB/SB Carrageway	36	23AUG06	04OCT06	0		0	36	-18	-45																																						
AB7260	Sht NPB - External Wall Painting	30	15SEP06	21OCT06	0		0	30	-14	-76																																						
AB7300	Sht NPB - 25hk Roof Screed & Roofing Tiles	18	20SEP06	12OCT06	0		0	18	-24	-77																																						
AB7250	Sht NPB - GMS, S/S Channel, Balustrade & Railing	18	13OCT06	03NOV06	0		0	18	-24	-51																																						
AB7280	Sht NPB - Alum. composite cladding to ext walls	60	20OCT06	02JAN07	0		0	60	-72	-58																																						
AB7220	Sht NPB - Expanded metal cladding to Ext Walls	30	13NOV06	16DEC06	0		0	30	-61	-87																																						
Sht North Portal Bldg. - BUILDING SERVICES																																																
E & M WORKS																																																
SHT North Portal Bldg (G/F) - E & M Works																																																
EM7280	E&M Access to G/F	0	30AUG06		0		0	0	-118	-77																																						
EM7281	Installation of FS Pumps & Pipework at GF	18	30AUG06	19SEP06	0		0	18	-28	-77																																						
SHT North Portal Bldg (2F/Silence) - E & M Work																																																
EM7600	BS Works for TVS Plenums	30	26JUN06A	30AUG06	70		0	9	-77	-48																																						
EM7460	BS Works for Genset	18	20JUL06A	07SEP06	10		0	16	-122	-72																																						
EM7240	E&M access to 2/F	0	31JUL06A		100		0	0		-56																																						
EM7300	BS Works for HV Sw + Tx	12	01AUG06A	24AUG06	70		0	4	-128	-66																																						
EM7520	E&M Works in Corridors 2/F	24	01AUG06A	31AUG06	70		0	7	-89	-48																																						
EM7560	E&M Works in Risers	48	15AUG06A	07SEP06	90		0	5	-89	-13																																						

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL		AUG		SEP		OCT		NOV		DEC		
										33	34	35	36	37	38	39	40	41	42					
SHT North Portal Bldg (2F/Silence) - E & M Work																								
EM7320	HV Sw + Tx Installation	30	26AUG06	28SEP06	0	0	30	-128	-66															
EM7480	Genset Installation	36	08SEP06	21OCT06	0	0	36	-122	-72															
SHT North Portal Bldg (3F/Fan Rm) - E & M Work																								
EM7360	BS Works for LV Sw, MCC, UPS, LCC	12	17JUL06A	24AUG06	70	0	4	-122	-61															
EM7540	E&M Works in Corridors 3/F	24	01AUG06A	31AUG06	90	0	3	-89	-43															
EM7420	BS Works for 110V Charger Rm	12	15AUG06A	26AUG06	50	0	6	-106	-63															
EM7380	LV Sw, MCC, UPS, LCC Installation	30	25AUG06	28SEP06	0	0	30	-122	-61															
EM7580	Termination of overall Elect HV & LV Sys	29	07NOV06	09DEC06	0	0	29	-122	-42															
SHT North Portal Bldg (4F/Up Plen) - E & M Work																								
EM7620	TVS Installation	100	17JUL06A	18NOV06	25	0	76	-77	-14															
Testing and Commissioning																								
EM7440	110V Charger Rm Installation + T&C	12	28AUG06	09SEP06	0	0	12	-106	-63															
EM7340	HV Sw + Tx Termination + T&C	30	29SEP06	06NOV06	0	0	30	-122	-66															
EM7400	LV Sw, MCC, UPS, LCC Termination + T&C	30	29SEP06	06NOV06	0	0	30	-122	-61															
EM7500	Genset Termination + T&C	12	23OCT06	06NOV06	0	0	12	-122	-72															
Statutory Inspection & Issued Certificates																								
EM7681	Power Supply Available (Arrange by SHT)	0		30SEP06*	0	0	0	-71	-27															
SHT RC ENCLOSURE & T3 UNDERPASS																								
MAJOR EQUIPMENT DELIVERY																								
SHT RC FULL ENCLOSURE / T3 UNDERPASS																								
7507	Sht-N.R9-Del. TVS control sys	48	27FEB06A	06NOV06	90	0	64	308	-67															
7519	Sht-N.R9-Del. AFA & Linear sys	48	15MAY06A	15SEP06	52	0	23	349	-56															
7606	Sht-N.R9-Del. LCC to S & N Sw/R	48	15MAY06A	31AUG06	80	0	10	362	-43															
7614	Sht-N.R9-Del. MCC, & control sys to S LV S/R	48	15MAY06A	29JUL06A	100	0	0		-15															
7496	Sht-N.R9-Del. CMCS & ELV sys	48	01JUN06A	15SEP06	90	0	23	349	-26															

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL			AUG			SEP			OCT			NOV		DEC			
										33	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16
INTERFACE DATES																													
SHT RC FULL ENCLOSURE / T3 UNDERPASS																													
EM4020	LKJV - Possession of T3 Underpass	0	21AUG06*		0	0	0	-106	-70																				
CONSTRUCTION WORKS																													
SHT RC FULL ENCLOSURE / T3 UNDERPASS																													
Kiosk S1 at Shatin North Control Point																													
EM3950	Kiosk S1 - Structure & Fittings	24	21AUG06	16SEP06	0	0	24	-106	-90																				
EM3960	Wighbridge S1 - Install	12	21AUG06	02SEP06	0	0	12	-100	-90																				
EM3970	Weighbridge S1 - Test and T&C	30	04SEP06	10OCT06	0	0	30	-100	-90																				
EM3952	Kiosk S1 - Install E&M Works	18	19SEP06	10OCT06	0	0	18	-106	-90																				
EM3954	Kiosk S1 - E&M Testing and T&C	6	11OCT06	17OCT06	0	0	6	-106	-90																				
RC Full Enclosure - LV Switch Room																													
280070	E&M Access to Southern LV Switch Room	0	21AUG06		0	0	0	-118	-90																				
280072	LV SW Rm - Cable Containment & Equip Supports	24	21AUG06	16SEP06	0	0	24	-118	-90																				
280074	LV SW Rm - SWGR, MCCB/ MCB Board, FS Panels	36	28AUG06	10OCT06	0	0	36	-118	-72																				
280076	LV SW Rm - Elect Lightings & Conduits	18	04SEP06	30SEP06	0	0	18	-100	-84																				
280079	LV SW Rm - MCCB, MCB, LV Sw, FS panels Term & Test	18	11SEP06	24OCT06	0	0	18	-118	-66																				
280080	LV SW Rm - Connect HV / LV Cables from SHT NPB	24	29SEP06	01NOV06	0	0	24	-118	-60																				
280078	LV SW Rm - Lightings wiring, term & test	6	03OCT06	10OCT06	0	0	6	-100	-84																				
STN RC FULL ENCLOSURE (North Bound) - E&M WORKS																													
MVAC / Tunnel Ventilation System																													
280000	RCFE NB - Ductworks Supports / Containment @ C/L	36	18FEB06A	30AUG06	75	30	9	-56	-82																				
280002	RCFE NB - MVAC Ducts, TVF & MSFD Units @ C/L	48	02MAR06A	06SEP06	75	25	9	-56	-70																				
280004	RCFE NB - MVAC Pipeworks & Conduits @ C/L	30	08AUG06A	20SEP06	40	0	18	-49	-52																				
280006	RCFE NB - Cabling, wiring and termination	24	21SEP06	20OCT06	0	0	24	-49	-52																				
Fire Protection System																													
280028	RCFE NB - (100d) FH / HR Pipeworks & Fittings	18	10JUL06A	09SEP06	65	0	6	-40	-28																				

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	Gantt Chart							
										JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Fire Protection System											JUN 33	JUL 34	AUG 35	SEP 36	OCT 37	NOV 38	DEC 39
280026	RCFE NB - FS Conduit, Hose Reel Cabinets & Eqpt.	16	31JUL06A	05SEP06	10	0	14	-40	-28	[Gantt bar from Jul 31 to Sep 5, 10% complete]							
280029	RCFE NB - Install Smoke detector @ N1-N3	10	06SEP06	16SEP06	0	0	10	-28	-28	[Gantt bar from Sep 6 to Sep 16, 0% complete]							
280030	RCFE NB - FS Wiring & Termination	24	11SEP06	10OCT06	0	0	24	-40	-28	[Gantt bar from Sep 11 to Oct 10, 0% complete]							
Electrical Works											[Gantt bars for various electrical activities]						
280044	RCFE NB - Brackets for Lightings @ Ceiling Level	60	30MAY06A	23SEP06	50	0	30	-92	-60	[Gantt bar from May 30 to Sep 23, 50% complete]							
280048	RCFE NB - Earthing, Lighting, Equipt. @ C/L	48	26JUN06A	10OCT06	50	0	24	-68	-24	[Gantt bar from Jun 26 to Oct 10, 50% complete]							
280034	RCFE NB - E&M Access to Southern LV Sw Room	0	21AUG06		0	0	0	-92	-54	[Milestone diamond at Aug 21]							
280038	RCFE NB - HV & LV Cabling Works @ C Trough	36	21AUG06	30SEP06	0	0	36	-92	-54	[Gantt bar from Aug 21 to Sep 30, 0% complete]							
280046	RCFE NB - Conduits Works @ Ceiling Level	36	25SEP06	08NOV06	0	0	36	-92	-60	[Gantt bar from Sep 25 to Nov 8, 0% complete]							
280040	RCFE NB - Install Power Distn Panels & Test	30	03OCT06	08NOV06	0	0	30	-92	-54	[Gantt bar from Oct 3 to Nov 8, 0% complete]							
280054	RCFE NB - Tunnel Signage, Wiring, Term & Test	40	09NOV06	27DEC06	0	0	40	-92	-30	[Gantt bar from Nov 9 to Dec 27, 0% complete]							
STN RC FULL ENCLOSURE (South Bound) - E&M WORKS											[Gantt bars for various E&M works]						
MVAC / Tunnel Ventilation System											[Gantt bars for various MVAC works]						
280082	RCFE SB - Ductworks Supports / Containment @ C/L	36	02MAR06A	30AUG06	75	30	9	-79	-82	[Gantt bar from Mar 2 to Aug 30, 75% complete]							
280084	RCFE SB - MVAC Ducts, TVF & MSFD Units @ C/L	48	02MAR06A	20SEP06	75	25	9	-79	-82	[Gantt bar from Mar 2 to Sep 20, 75% complete]							
280086	RCFE SB - MVAC Pipeworks & Conduits @ C/L	30	21SEP06	27OCT06	0	0	30	-79	-82	[Gantt bar from Sep 21 to Oct 27, 0% complete]							
280088	RCFE SB - Cabling, wiring and termination	24	28OCT06	26NOV06	0	0	24	-79	-82	[Gantt bar from Oct 28 to Nov 26, 0% complete]							
Fire Protection System											[Gantt bars for various fire protection works]						
280098	RCFE SB - (100d) FH / HR Pipeworks & Fittings	18	03JUL06A	11SEP06	47	0	10	-41	-66	[Gantt bar from Jul 3 to Sep 11, 47% complete]							
280096	RCFE SB - FS Conduit, Hose Reel Cabinets & Eqpt.	16	21AUG06	06SEP06	5	0	15	-41	-66	[Gantt bar from Aug 21 to Sep 6, 5% complete]							
280100	RCFE SB - Install Smoke detector @ S1-S4	10	07SEP06	18SEP06	0	0	10	-29	-66	[Gantt bar from Sep 7 to Sep 18, 0% complete]							
280102	RCFE SB - FS Wiring & Termination	24	12SEP06	11OCT06	0	0	24	-41	-66	[Gantt bar from Sep 12 to Oct 11, 0% complete]							
Electrical Works											[Gantt bars for various electrical works]						
280116	RCFE SB - Brackets for Lightings @ Ceiling Level	60	15AUG06A	24OCT06	10	0	54	-92	-84	[Gantt bar from Aug 15 to Oct 24, 10% complete]							
280110	RCFE SB - E&M Access to Southern LV Sw Room	0	21AUG06*		0	0	0	-92	-54	[Milestone diamond at Aug 21]							
280112	RCFE SB - HV & LV Cabling Works @ C Trough	36	21AUG06	30SEP06	0	0	36	-92	-54	[Gantt bar from Aug 21 to Sep 30, 0% complete]							

Act. ID	Activity Description	Orig Dur	Early Start	Early Finish	% Compl.	Target 1 % Comp	Rem Dur	Total Float	Variance Early Finish	JUN		JUL		AUG		SEP		OCT		NOV		DEC										
										33	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6
Electrical Works																																
280118	RCFE SB - Conduits Works @ Ceiling Level	36	29AUG06	08NOV06	0	0	36	-92	-60																							
280120	RCFE SB - Earthing, Lighting, Equipt. @ C/L	48	29AUG06	08NOV06	0	0	48	-92	-48																							
280114	RCFE SB - Install Power Distn Panels & Test	30	03OCT06	08NOV06	0	0	30	-92	-54																							
280124	RCFE SB - Tunnel Signage, Wiring, Term & Test	40	09NOV06	27DEC06	0	0	40	-92	-30																							
T3 UNDERPASS																																
Kiosks S2 at T3 Underpass Portal																																
EM3980	Kiosk S2 - Structure & Fittings	24	21AUG06	16SEP06	0	0	24	-106	-70																							
EM4000	Kiosk S2 - Install E&M Works	18	18SEP06	10OCT06	0	0	18	-106	-70																							
EM4002	Kiosk S2 - E&M Testing and T&C	6	11OCT06	17OCT06	0	0	6	-106	-70																							

**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 (Yew Chung International School / PLK Choi Kai Yau School) AM3 ⁽³⁾ (Garden Villa) AM4 (Government Quarters) 	<ul style="list-style-type: none"> AM1 – Rooftop 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 (Yew Chung International 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) 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⁾ – 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	

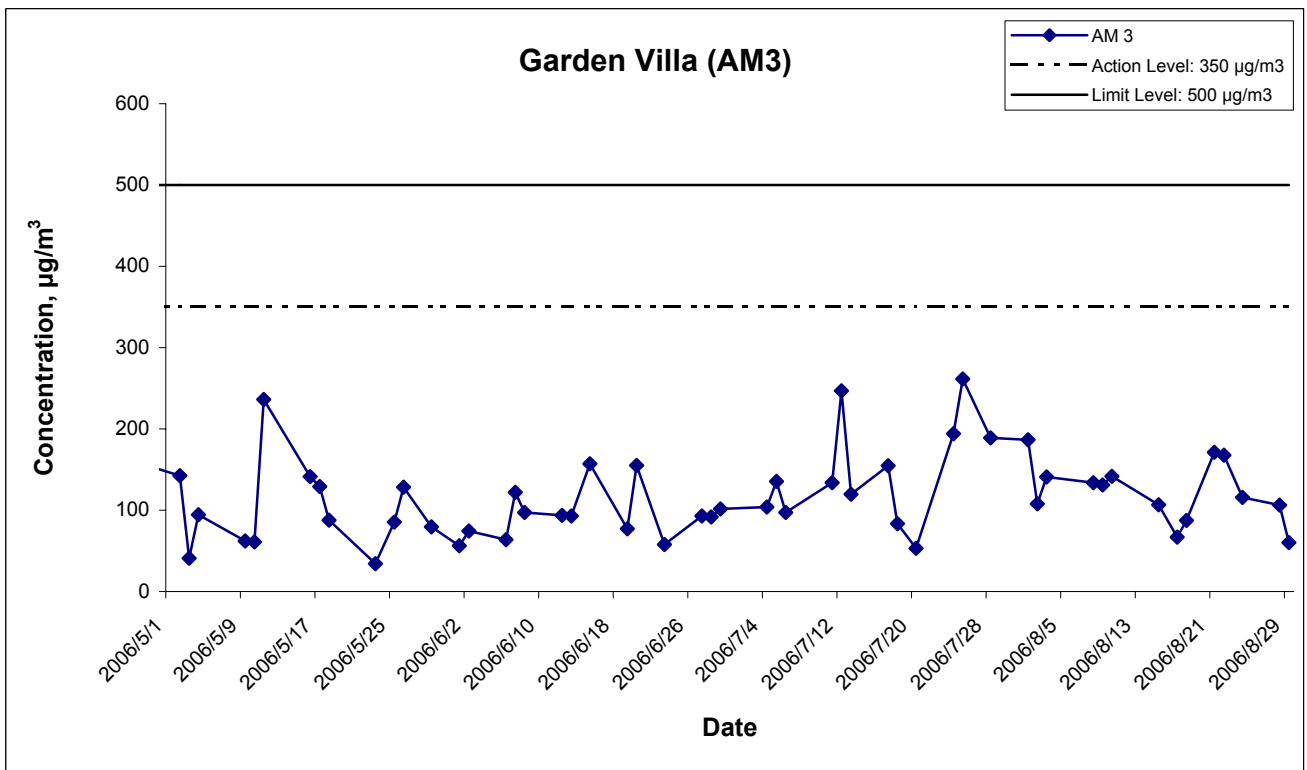
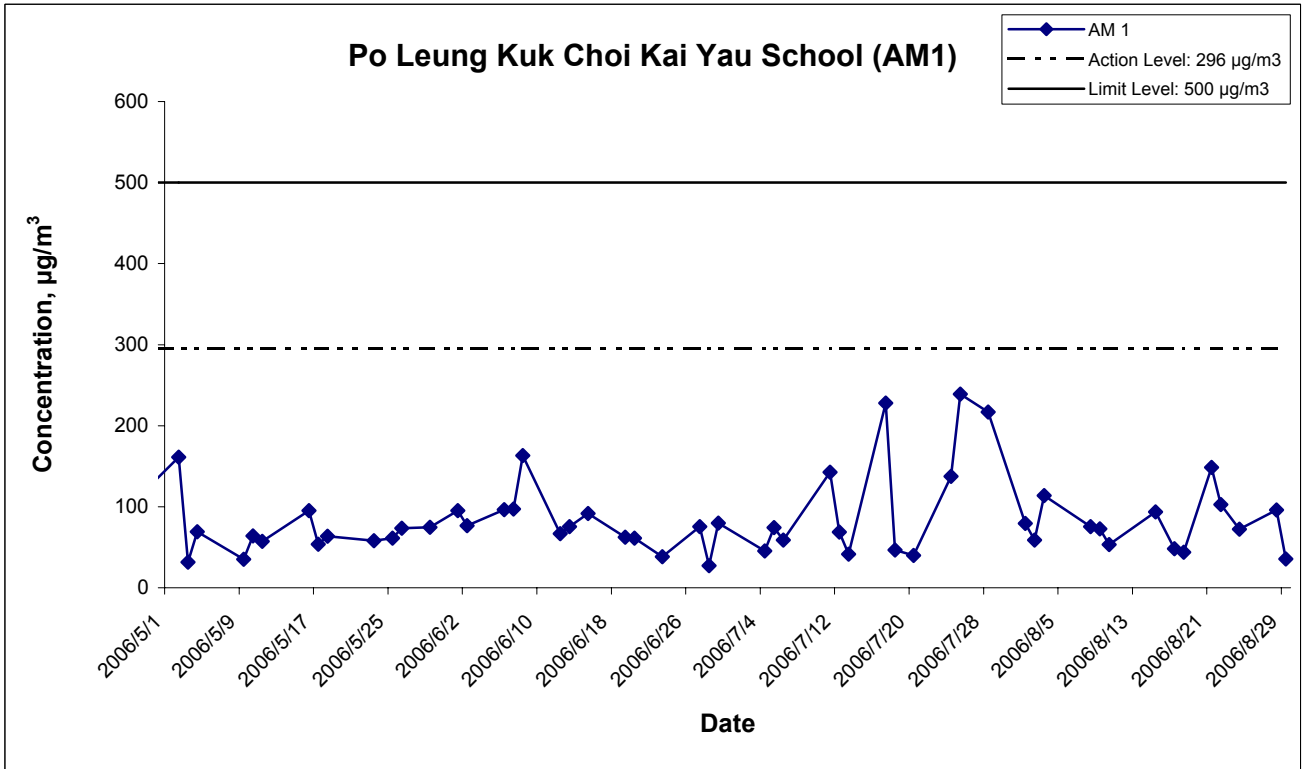
Construction Noise

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.

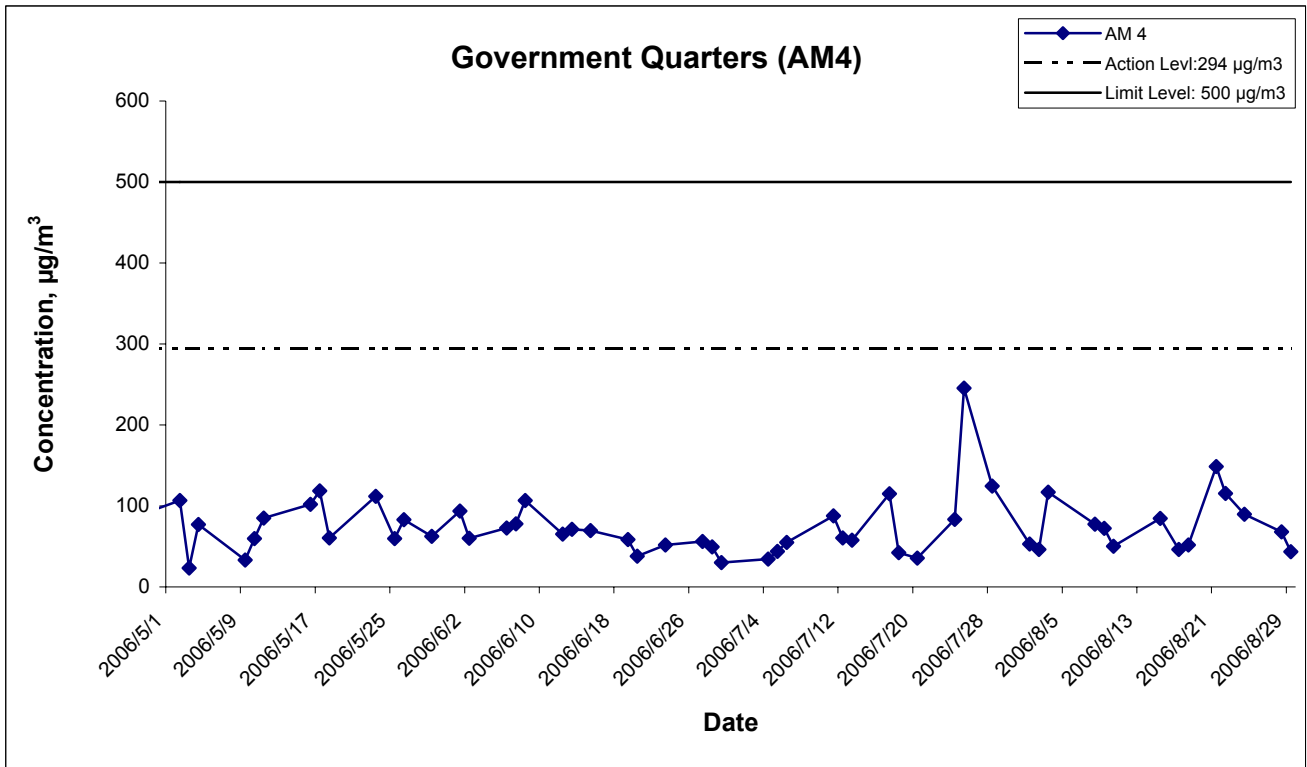
**APPENDIX E
GRAPHICAL PRESENTATION OF AIR
QUALITY MONITORING RESULTS**

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 Aug 06	Appendix E	

1-hr TSP Levels



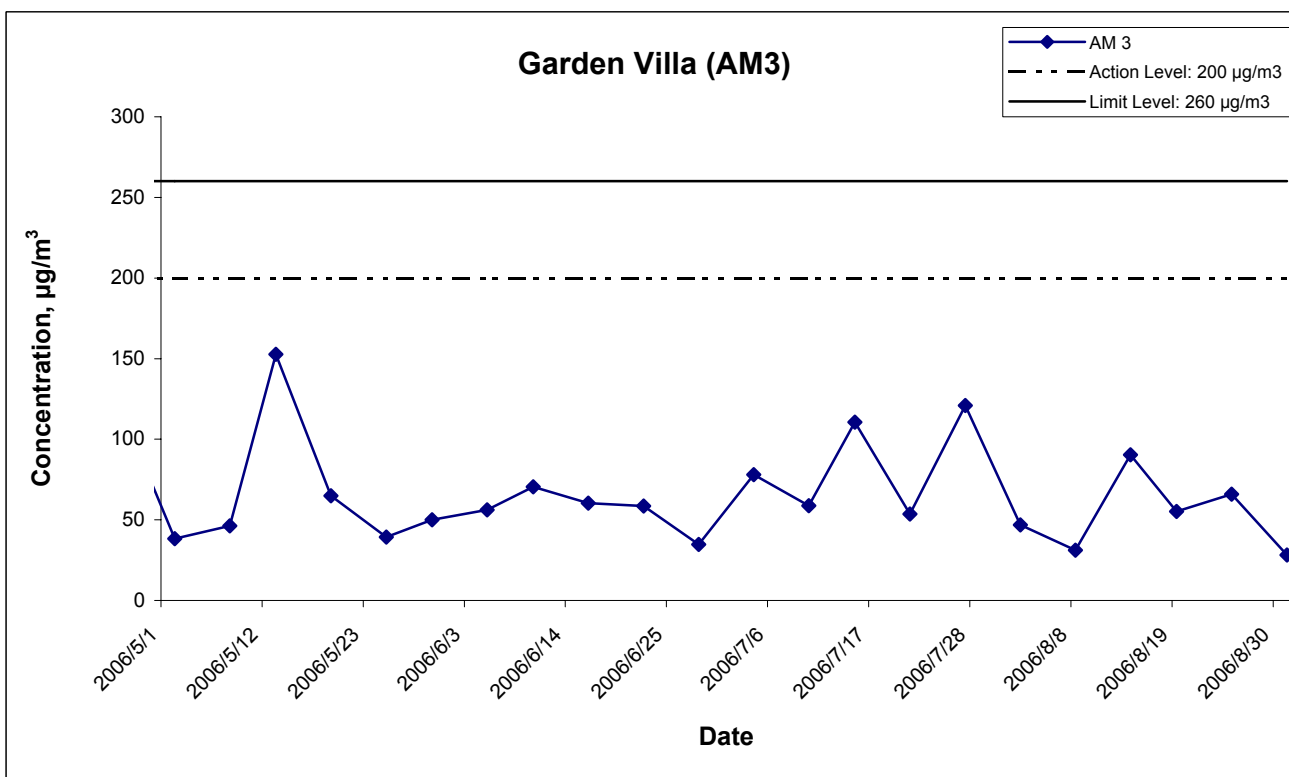
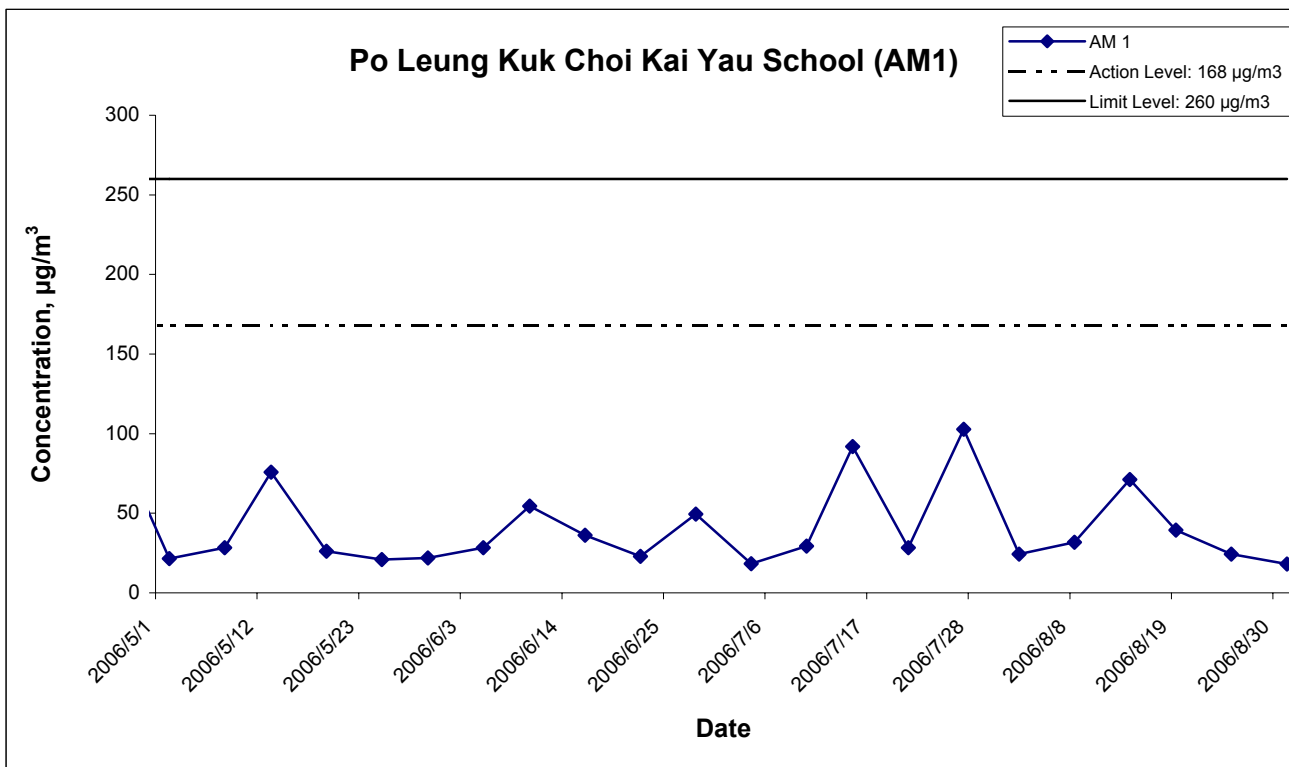
Title
 Route 8 (previously known as Route 9) between Cheung Sha Wan & Sha Tin
 Contract HY/2003/02 - Eagle's Nest Tunnel and Associated Works
 Graphical Presentation of 1-hour TSP Impact Monitoring
 Results

Scale
 N.T.S
 Date
 Aug 06

Project
 No. MA3024
 Appendix
 E

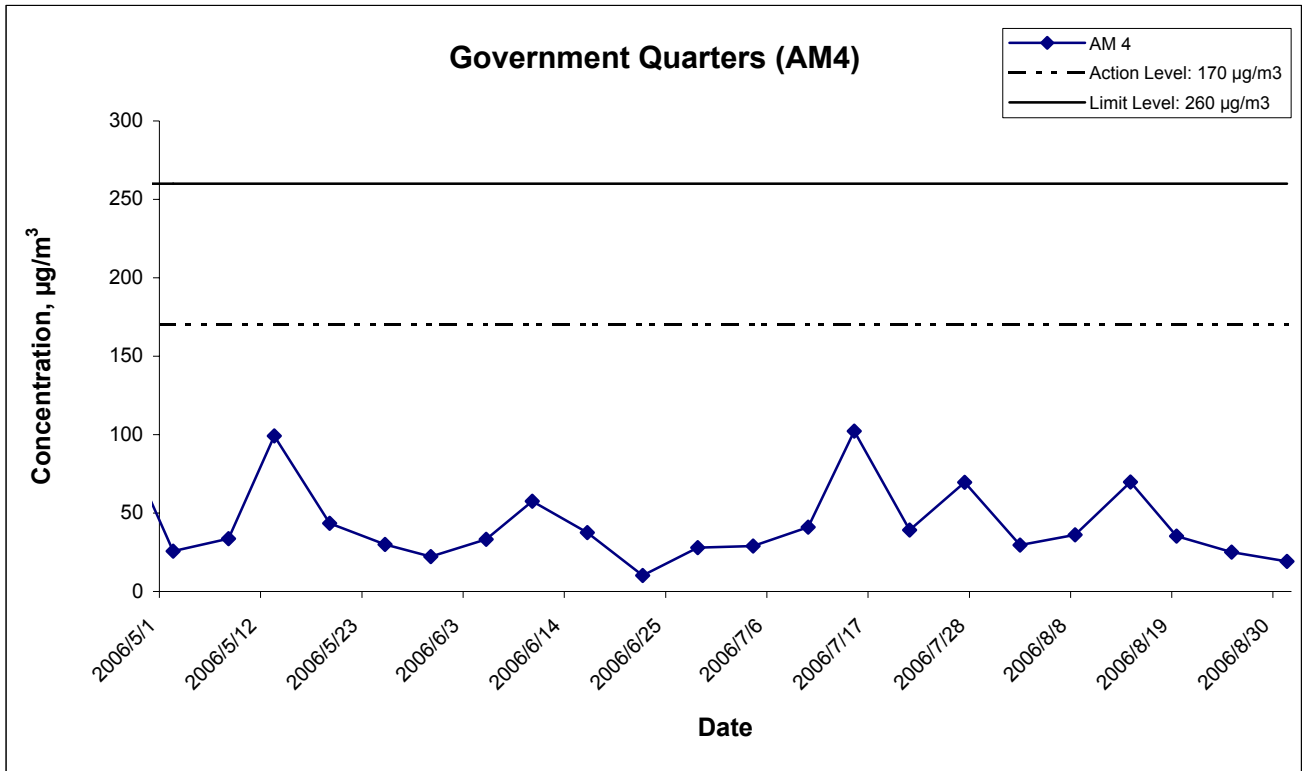


24-hr TSP Levels



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	
	Date Aug 06	Appendix E	

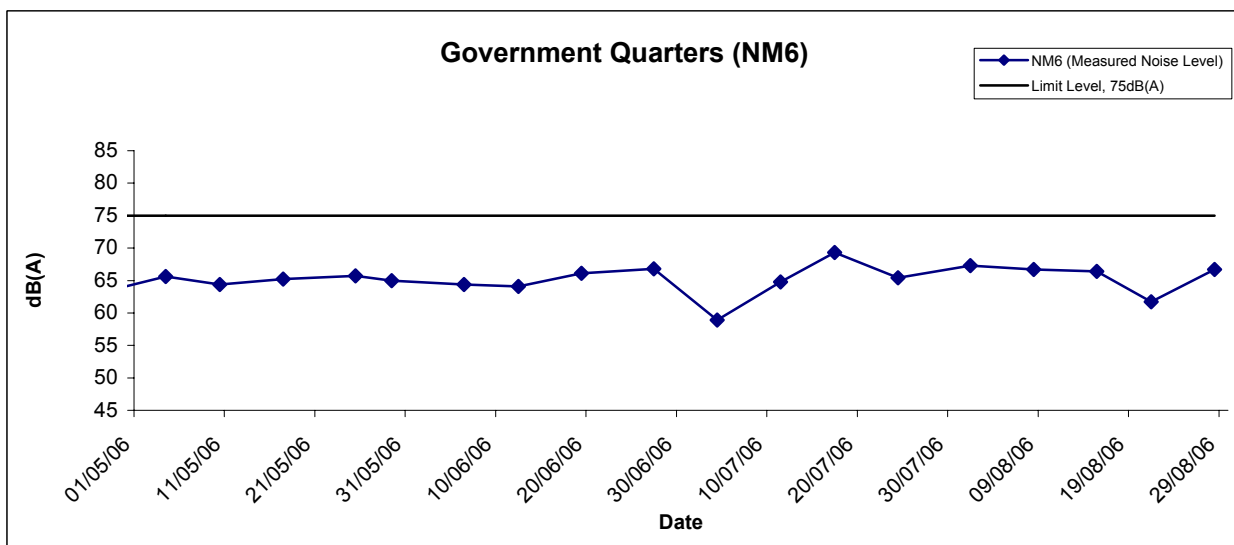
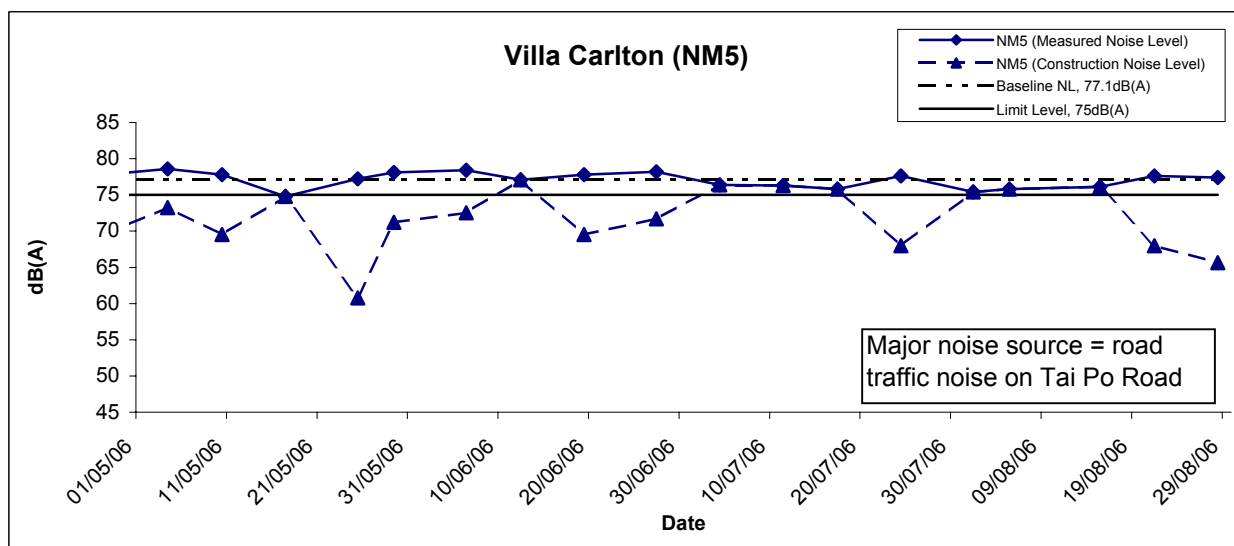
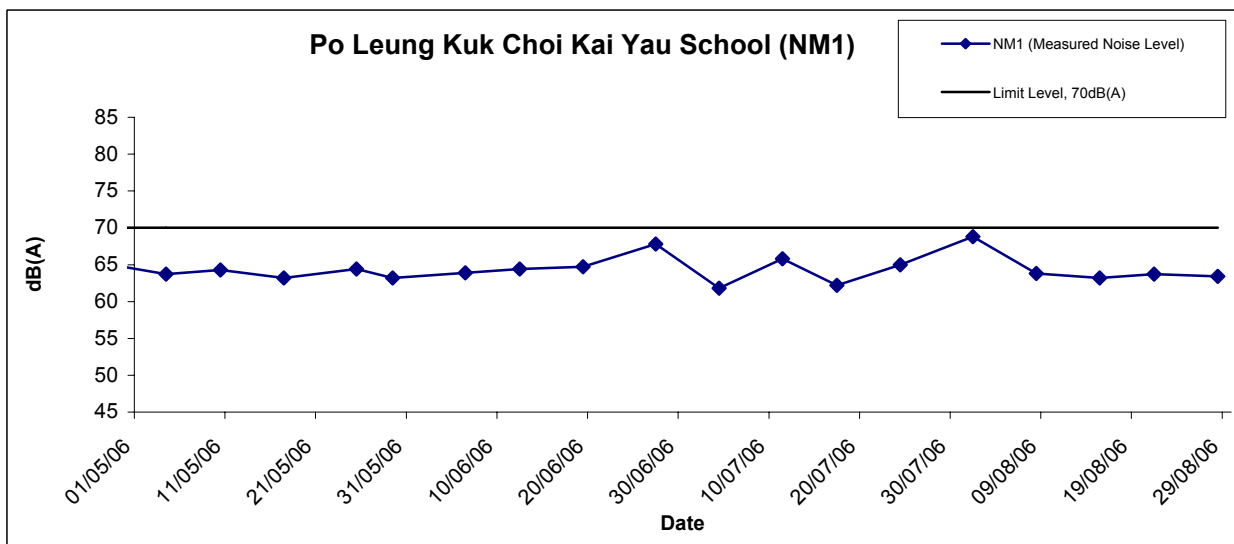
24-hr TSP Levels



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	
	Date Aug 06	Appendix E	

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

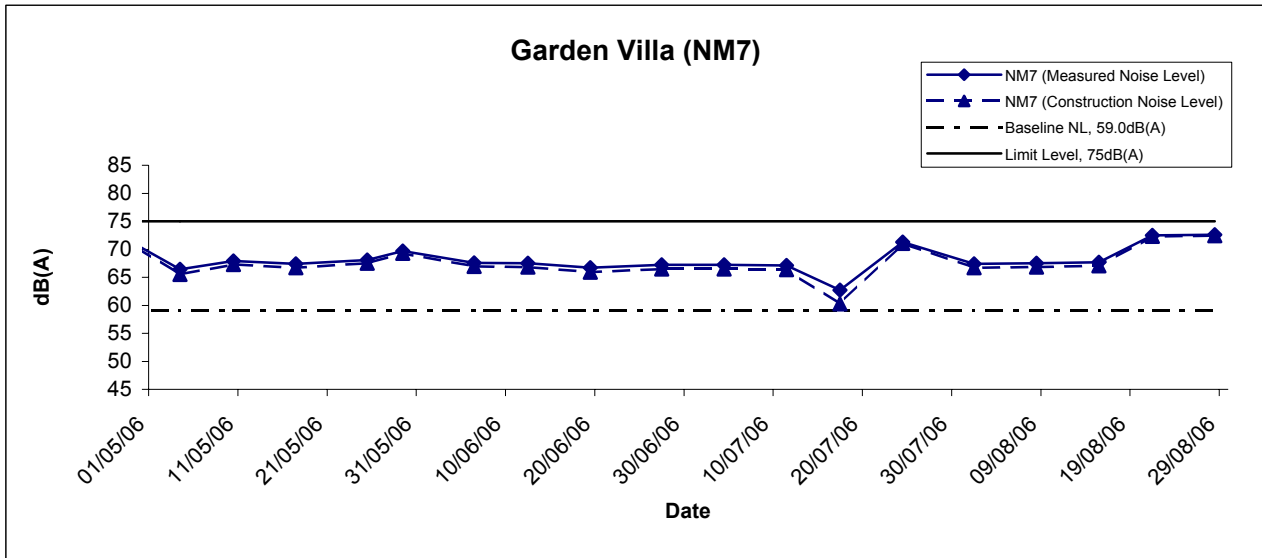
Noise Levels



* 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	CINOTECH
	Date Aug 06	Appendix F	

Noise Levels

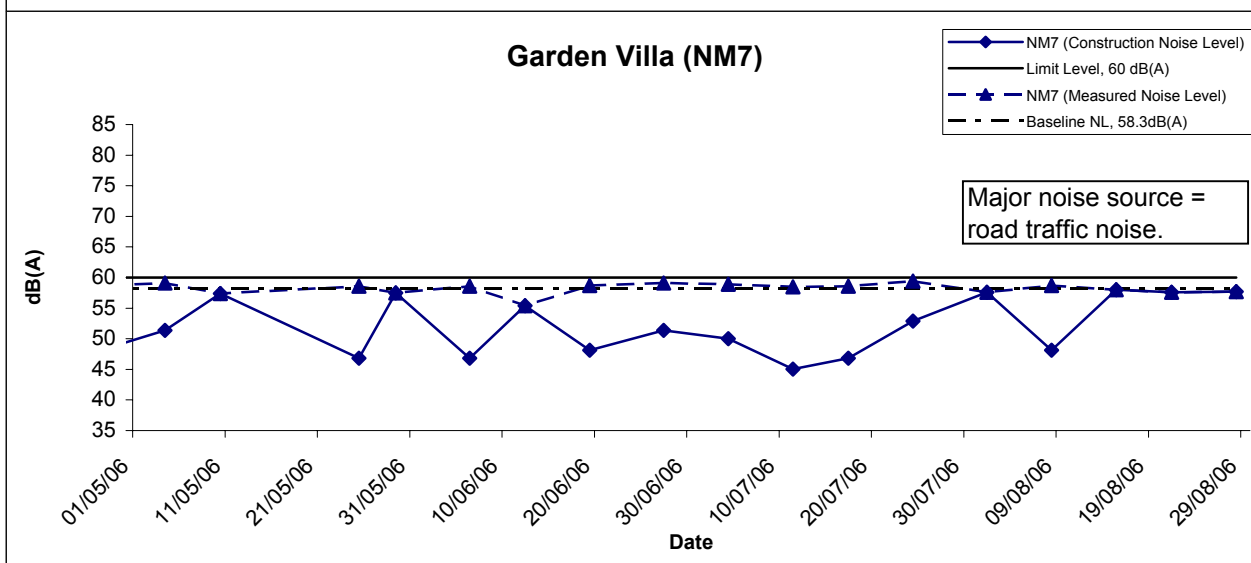
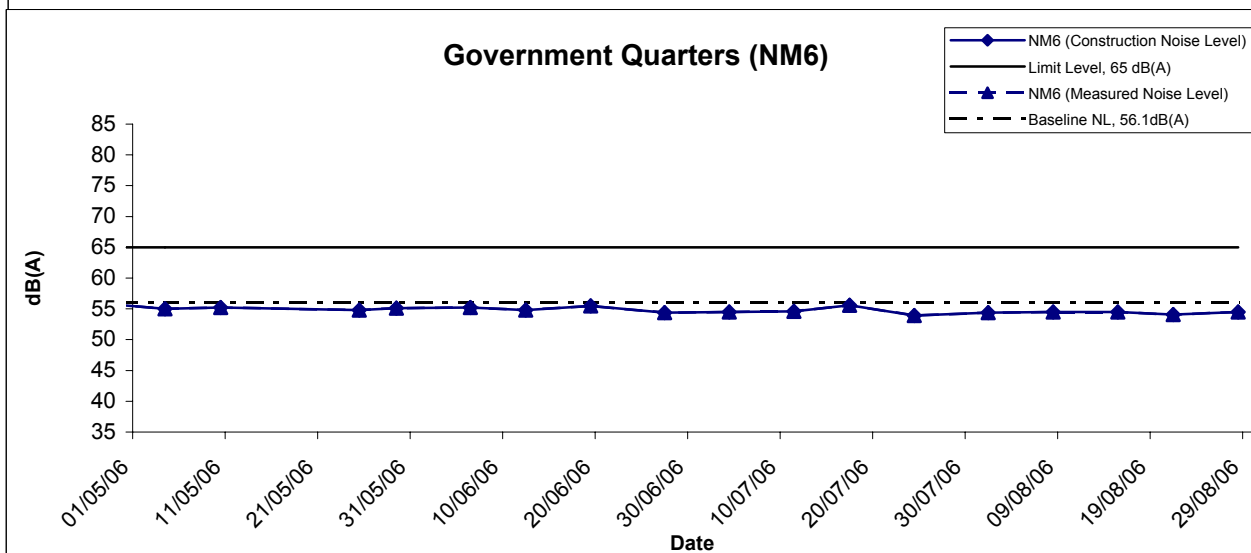
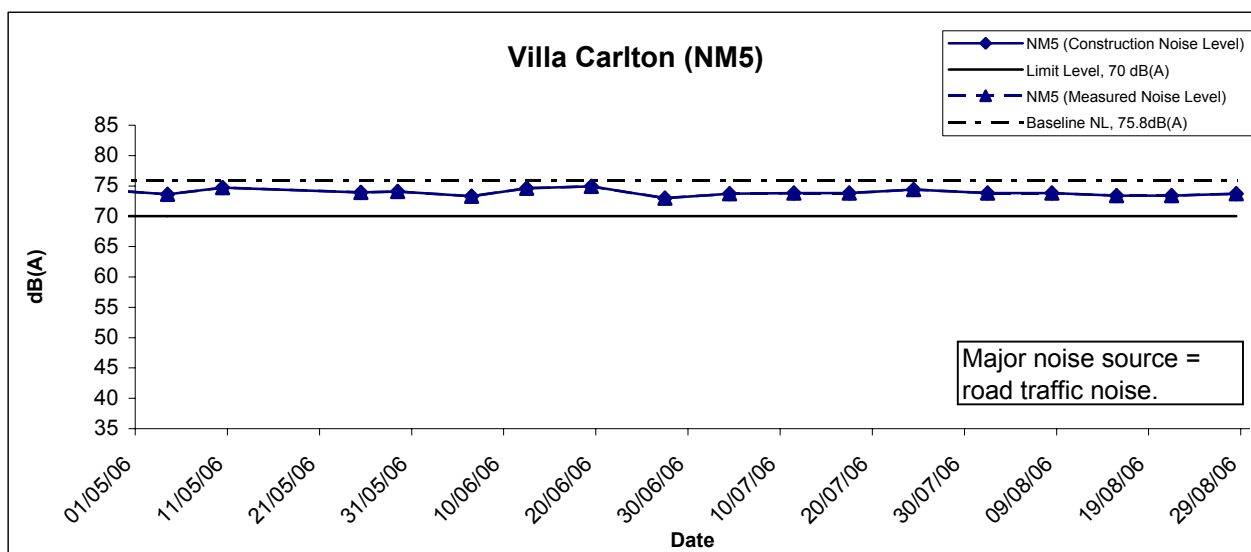


* Construction Noise Level = Measured Noise Level - Baseline Level

(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 Aug 06	Appendix F	

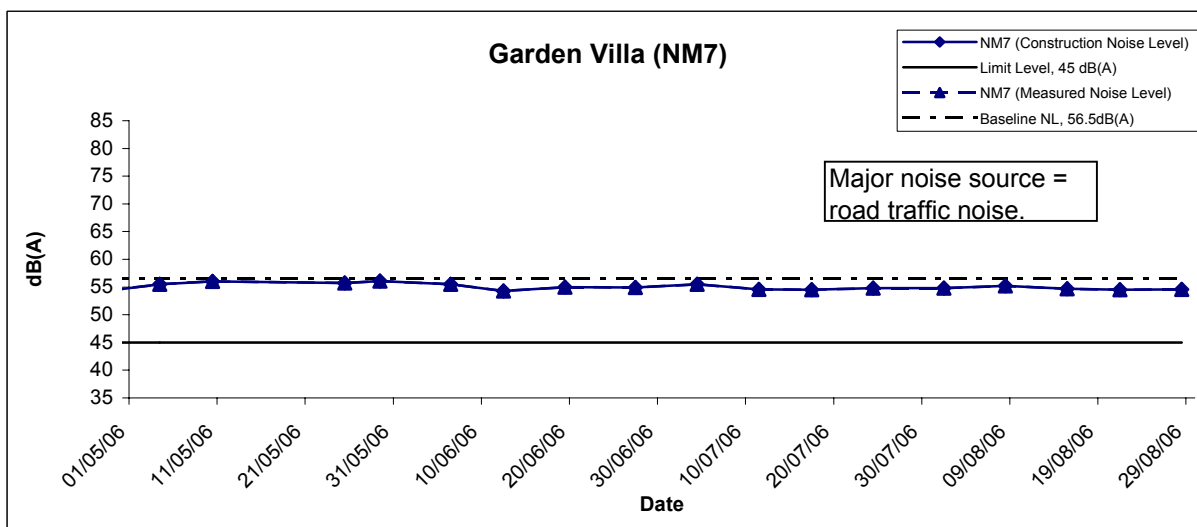
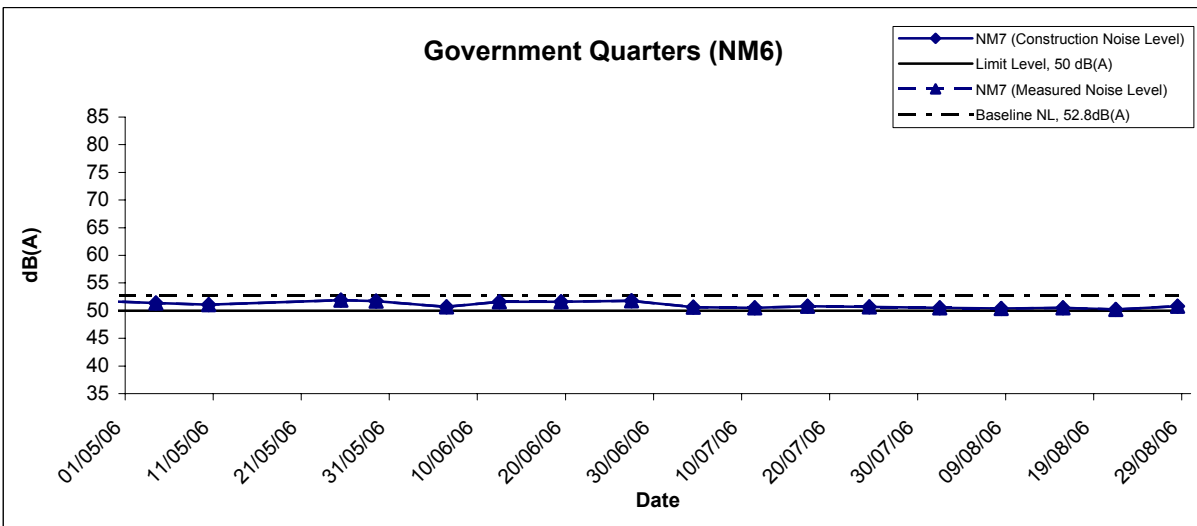
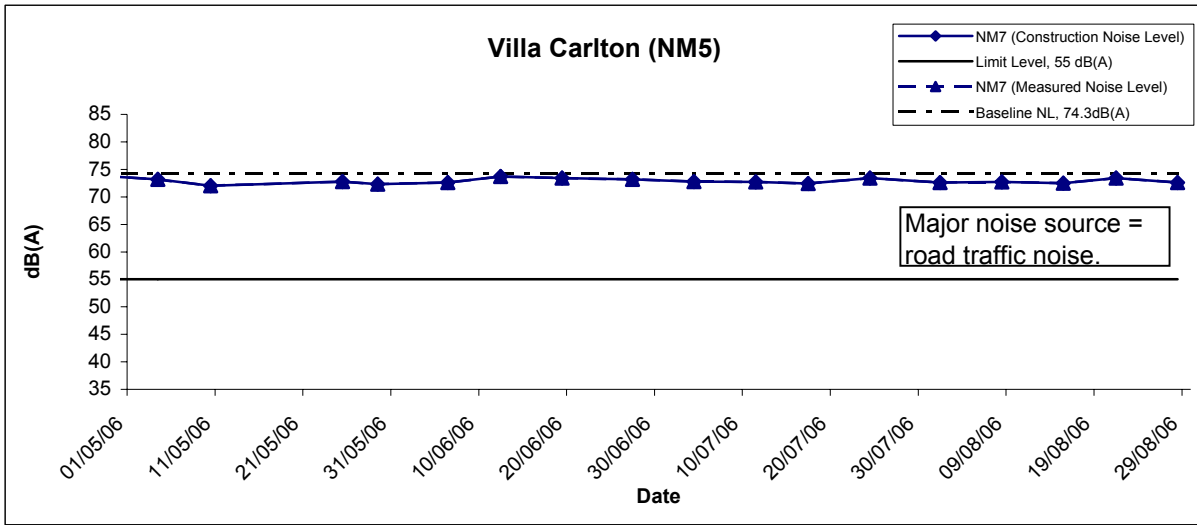
Restricted Hours (19:00 to 23:00) - Noise Levels



* 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 N.T.S	Project No. MA3024	CINOTECH
	Date Aug 06	Appendix 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 Aug 06	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. 	^ ^ ^ ^ ^ ^ ^ ^ ^ ^
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. 	^ ^ ^ ^ ^ ^

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. 	^
	<ul style="list-style-type: none"> The handling and disposal of bentonite slurries shall be undertaken in accordance with Practice Note for Professional Persons – Construction Site Drainage (ProPECC PN 1/94) on construction site drainage. 	N/A
	<ul style="list-style-type: none"> 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. 	^
	<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. 	^	
<ul style="list-style-type: none"> Containers used for the storage of chemical wastes should: <ol style="list-style-type: none"> Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; 	^	
<ol style="list-style-type: none"> Have a capacity of less than 450 litres unless the specifications have been approved by the EPD; 	^	
<ol style="list-style-type: none"> Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Chemical Waste Regulations. 	^	
<ul style="list-style-type: none"> The storage area for chemical wastes should: <ol style="list-style-type: none"> Be clearly labelled and used solely for the storage of chemical waste; 	^	
<ol style="list-style-type: none"> Be enclosed on at least 3 sides; 	^	
<ol style="list-style-type: none"> 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; 	^	
<ol style="list-style-type: none"> Have adequate ventilation; 	^	
<ol style="list-style-type: none"> Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary); 	^	
<ol style="list-style-type: none"> Be arranged so that incompatible materials are adequately separated. 	^	
<ul style="list-style-type: none"> 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	Construction and operation of (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; (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; (c) The permanent slope works above the northern portal of the Eagle's Nest Tunnel; (d) The architectural works (including fitting out and furnishings) of the portal buildings of the Sha Tin Heights Tunnel.	Valid
Registration of Chemical Waste Producer				
WPN 5213-761-L2595-01	26/01/04	N/A	N/A	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-RN0143-06	3/4/06	2/10/06	<i>Location:</i> ENT South Portal Site at Butterfly Valley <i>Time period:</i> any day between 2300 and 0700 on next day	Valid
GW-RN0150-06	4/04/06	3/10/06	<i>Location:</i> ENT Tunnel North Portal Site near Garden Villa <i>Time period:</i> Any day not being a general holiday including Sundays between 1900 and 2300	Valid
GW-RN0151-06	3/4/06	2/10/06	<i>Location:</i> ENT North Portal Site near Garden Villa <i>Time period:</i> Any day between 2300 and 0700 on next day	Valid

Permit No.	Valid Period		Details	Status
	From	To		
GW-RW0178-06	8/4/06	7/10/06	<i>Location: Butterfly Valley</i> <i>Time period: General holiday (including Sundays) between 0700 and 2300 and any day not being a general holiday between 1900 and 2300</i>	Valid
GW-RN0222-06	11/5/06	10/11/06	<i>Location: Toll Plaza Administration Building</i> <i>Time period: Normal weekdays between 1900 and 2300 and general holidays included Sunday between 0900 and 2300</i>	Valid
GW-RN0226-06	11/5/06	10/11/06	<i>Location: South Portal</i> <i>Time period: Normal weekdays between 1900 and 2300 and general holidays included Sunday between 0900 and 2300</i>	Valid
GW-RN0281-06	8/6/06	7/12/06	<i>Location: Tunnel North Portal near Tai Po Road and Keng Hau Road</i> <i>Time period: Any day between 2300 and 0700 on next day.</i>	Valid (new)
GW-RN0282-06	8/6/06	7/12/06	<i>Location: Tunnel South Portal near Garden Villa</i> <i>Time period: Any day between 2300 and 0700 on next day.</i>	Valid (new)
GW-RN0283-06	8/6/06	7/12/06	<i>Location: Tunnel South Portal near Garden Villa</i> <i>Time period: General holiday including Sundays between 0900 and 2300 and any day not being a general holiday including Sundays between 1900 and 2300.</i>	Valid (new)
GW-RN0284-06	8/6/06	7/12/06	<i>Location: Tunnel North Portal near Tai Po Road and Keng Hau Road</i> <i>Time period: General holiday including Sundays between 0900 and 2300 and any day not being a general holiday including Sundays between 1900 and 2300.</i>	Valid (new)
GW-RW0392-06	6/8/06	5/2/07	<i>Location: Tai Po Road Shell Petrol Filling Station and opposite to Villa Carlton</i> <i>Time Period: General holidays including Sundays between 0700-2300 and any day not being a general holiday between 1900-2300</i>	Valid (new)
GW-RW0422-06	4/8/06	3/2/07	<i>Location: Butterfly Valley</i> <i>Time Period: General holidays including Sundays between 0700-2300 and any day not being a general holiday between 1900-2300</i>	Valid (new)

**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

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				<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

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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

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				<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

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50419	Government Quarters	15-Apr-05 (by EPD) 19-Apr-05 (by ET Leader)	<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

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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

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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

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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

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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"> Noise nuisance due to tunnel blasting works undertaken at midnights and in early mornings (3am to 5am); Noise nuisance due to operation of a generator after 11pm; Construction dust and daytime noise due to processing and stockpiling of crushed rocks at Butterfly Valley; 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)*