

**Sha Tin New Town, Stage II Road D15 Linking Lok Shun Path and  
Tai Po Road (Contract No. ST 77/01)**

**Quarterly Environmental Monitoring & Audit Report –  
April to June 2003**

Checked in accordance with EML QP22  
Environmental Team Leader

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## EXECUTIVE SUMMARY

This quarterly environmental monitoring report was prepared by Environmental Management Limited (EML) for Environmental Monitoring & Audit (EM&A) Services of Sha Tin New Town, Stage II Road D15 Linking Lok Shun Path and Tai Po Road. This report summaries the EM&A carried out in the period from April to June 2003.

Environmental monitoring for this Project included both air quality and noise measurements. The parameters measured for air quality were 24-hour and 1-hour Total Suspended Particulate (TSP) while for noise monitoring, the A-weighted continuous sound pressure level ( $L_{eq}$ ) as well as percentile levels ( $L_{10}$  and  $L_{90}$ ) were measured.

Over the reporting period, there was no exceedance in Action and Limit Levels recorded for both impact air quality and noise monitoring data. Therefore no remedial actions as listed in Event and Action Plan in **Appendix C** were needed. No environmental complaints had been received against the construction site in this reporting quarter.

The regular site inspections had been conducted in this reporting period and the mitigation measures, as discussed in the relevant documents, were identified and implemented. The mitigation measures implemented in this quarter included aspects of noise, air, water, wastewater and land contamination.

During this quarter, it was observed that the regular cleaning of the public road outside the site entrance had been conducted and the wastewater generated from the cleaning had been properly treated before the discharge. Meanwhile, the oils leakage from the equipment had been fixed and more frequent water spraying had been carried out.

However, it was noted from site inspections that further improvements were needed in certain aspects. Stagnant water in the construction site should be removed, especially after rainstorm event, in order to prevent possible outbreak of Dengue disease while the chemicals contained drums should be properly stored in order to prevent possible land contamination. Any contaminated soil should be removed and treated if necessary.

## 1. INTRODUCTION

### 1.1 Background

Environmental Management Limited (EML) was appointed by Maunsell Consultants Asia Ltd. as the Environmental Specialist for the project *Sha Tin New Town, Stage II Road Linking Lok Shun Path and Tai Po road* (Agreement No. ST77/01).

The responsibilities of the Environmental Team included:

- Monitor the noise and air quality data as required in the Environmental Monitoring and Audit (EM&A) Manual;
- Analyse the monitoring data and review the success of EM&A program to cost effectively confirm the adequacy of mitigatory measures implemented and validity of the Environmental Impact Assessment Study predictions and to identify any adverse environmental impacts arising;
- Carry out site inspection to investigate and audit the Contractor's site practice, equipment and work methodologies with respect to pollution control and environmental mitigation, and anticipate environmental issues for proactive action before problems arise;
- Review the proposal for mitigation measures submitted by Contractor in accordance with Event and Action Plans.
- Propose any improvement or other alternative mitigation measures should Contractor's proposal be found to be inadequate;
- Adhere to the procedures for carrying out complaint investigation;
- Audit and prepare EM&A reports on environmental monitoring data and site environmental conditions;
- Report on EM&A results to Engineer, the ER and EPD;

This is the quarterly EM&A report for the period from April to June 2003. The report summarises the results of the impact air quality and noise monitoring in the reporting quarter as well as the environmental status and issues of the construction site for the Project. The remedial actions undertaken as a result of non-compliance with relevant environmental criteria or complaints related to the Project's construction works will also be discussed in the report.

The project area of the construction site for this Project is shown in **Figure 1.1** while the project organisation, contacts of key management for the project and EPD complaint hotline are shown in **Appendix D**.

### 1.2 Project Description

Road D15 Linking Lok Shun Path and Tai Po Road (hereinafter referred to as "Road D15") is part of the development of Sha Tin New Town, Stage II by NT East Development Office/Territory Development department. The project will provide a link between Lok Lo Ha Area (Planning Area 43 and 44) and Tai Po Road so as to relieve traffic congestion at the present access via Fo Tan Road. The construction of Road D15 includes the major components listed hereunder:

- (a) Construction of approximately 0.4km a single 2-lane carriageway forming part of Road D15 at Fo Tan. About 0.2km of road is on elevated structure.
- (b) Construction of vehicular bridge A, B and C with footpaths.

- (c) Construction of noise barriers.
- (d) Construction of associated footpaths, cycle tracks, drainage and workworks.
- (e) Construction of sewerage improvement works via Lok Lo Ha Village.
- (f) Slope works and landscaping works associated with the above roadworks.

### **1.3 Construction Activities During the Reporting Quarter**

The major activities performed during the reporting period include the following:

- Erection of fencing & hoarding;
- Drainage works;
- Fabrication precast beams;
- Construction of bridge A, B and C;
- Retaining wall and stairs construction;
- Noise barrier construction;
- Box culvert extension;
- Underground drainage and utilities.

The work program for the current and next quarter is attached in **Appendix F**.

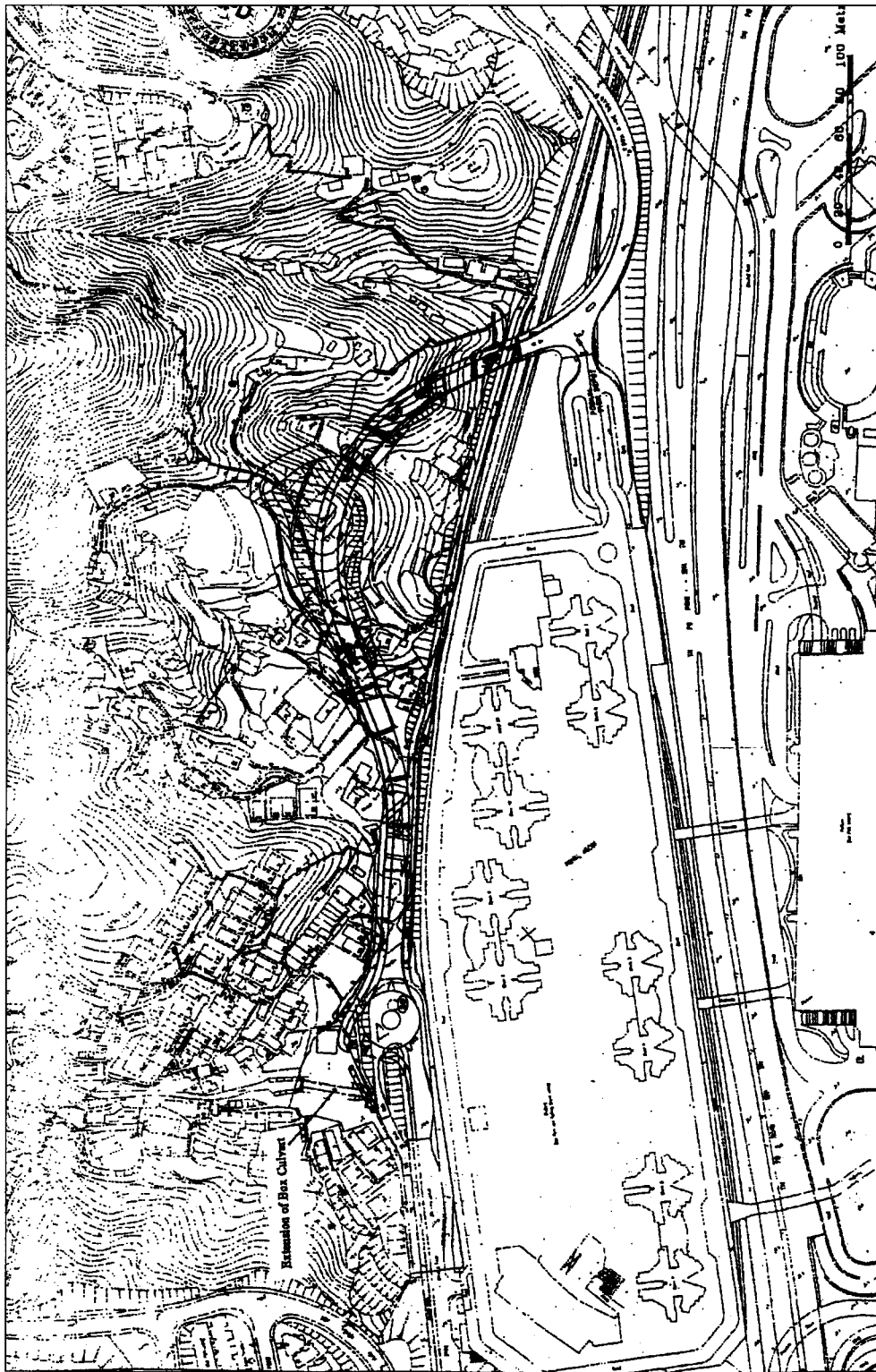


Figure 1.1 Project Area

## 2. ENVIRONMENTAL MONITORING & AUDIT REQUIREMENTS

### 2.1 Monitoring Parameters

Impact monitoring on the Road D15 Project involved both air quality and noise. For air impact monitoring, continuous 24-hour and 1-hour TSP levels were sampled. For 24-hour TSP, monitoring are performed once in every six days while for 1-hour TSP, monitoring are performed three times in every six days.

Meanwhile, for noise monitoring, the A-weighted equivalent continuous sound pressure level ( $L_{eq}$ ) was measured with a duration of 30 minutes. The measured  $L_{eq}$  was used to compare with the relevant noise criteria and the monitoring will be conducted once in every six days. As supplementary information for data auditing, statistical results, namely  $L_{10}$  and  $L_{90}$ , were also recorded for reference.

The monitoring parameters are summarised in Table 2.1 below.

**Table 2.1 Parameter, Frequency and Duration of Monitoring**

Monitoring Type	Parameter	Duration
Air Quality	24-hour TSP	24 hours
	1-hour TSP	1 hour within 0700-1900 on working days
Noise	$L_{eq}$ , $L_{10}$ , $L_{90}$	30 minutes

### 2.2 Environmental Quality Performance Limits (Action & Limit Levels)

The Action and Limit (AL) Levels set the air quality and noise criteria for construction works. For air quality, the AL levels for the parameters 24 and 1-hour TSP are shown in Table 2.2 below.

**Table 2.2 Action / Limit Levels for Air Quality**

Parameters	Action	Limit
24 Hour TSP Level in $\mu\text{g}/\text{m}^3$	For baseline level < $108 \mu\text{g}/\text{m}^3$ , Action Level = average of baseline level plus 30% and Limit level; For baseline level > $108 \mu\text{g}/\text{m}^3$ , and baseline level < $154 \mu\text{g}/\text{m}^3$ , Action Level = $200 \mu\text{g}/\text{m}^3$ ; For baseline level > $154 \mu\text{g}/\text{m}^3$ , Action Level = 130% of baseline level.	260
1 Hour TSP Level in $\mu\text{g}/\text{m}^3$	For baseline level < $154 \mu\text{g}/\text{m}^3$ , Action Level = average of baseline level plus 30% and Limit Level; For baseline level > $154 \mu\text{g}/\text{m}^3$ , and baseline level < $269 \mu\text{g}/\text{m}^3$ , Action Level = $350 \mu\text{g}/\text{m}^3$ ; For baseline level > $269 \mu\text{g}/\text{m}^3$ , Action Level = 130% of baseline level.	500

Meanwhile, for noise, the AL levels for the parameters  $L_{eq}$  are shown in Table 2.3 below:



**Table 2.3 Action / Limit Levels for Construction Noise**

Time Period	Action Level	Limit Level
0700-1900 hours on normal weekdays	When one documented complaint is received	75* dB(A)
0700-2300 hours on holidays; and 1900-2300 hours on all other days		60/65/70** dB(A)
2300- 0700 hours of next day		45/50/55** dB(A)

\*\* to be selected based on Area Sensitivity Rating

Note: If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.

From the baseline study carried out in the period from 9 to 27 August 2001, the AL levels for air quality as specified in **Table 2.2** were determined and are shown again in **Table 2.4** and **2.5** below. Details of the baseline study were provided in the '*Baseline Environmental Monitoring Report*' by Maunsell Environmental Management Consultants Ltd., carried out prior to this EM&A report.

**Table 2.4 Action and Limit Levels for 24-hour TSP**

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
A1	156	260
A2	155	
A3	153	

**Table 2.5 Action and Limit Levels for 1-hour TSP**

Location	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
A1	371	500
A2	378	
A3	368	

### 2.3 Environmental Mitigation Measures During Construction Phase

In order to minimise adverse environmental impacts to the surrounding area, the environmental impact assessment report and environmental review had recommended a number of mitigation measures on the Road D15 Project. These mitigation measures cover aspect in air, water and noise and the some of the mitigation measures are listed below:

#### *Air*

- Effective dust suppression equipment and other measures should be installed to ensure the concentration of air borne dust at the site boundary and any nearby sensitive receiver are within the established standard
- Wheel washing facilities should be installed and used by all vehicles leaving the construction site.
- All motorised vehicles should be restricted to a maximum speed of 8 km/h. Haulage and delivery vehicles should be confined to designated roadway inside the site
- In the process of material handling, any material which has the potential to create dust should be treated with water or sprayed with wetting agent.

#### *Noise*

- Temporary purposed-built barrier must be installed around heavy noise generated equipment. The design of the temporary barrier must meet the requirements specified in the *Technical*

*Memorandum on Noise from Construction Works'* and provide reduction of noise level to at least 10 dB(A).

- The arrangement of the number of equipment, procedure and sequence of construction should be arranged such that the noise levels generated from the plants are kept to the minimum.
- Quieted equipment shall be used for the construction works
- A noise mitigation proposal describing the above measures must be submitted to the EPD with prior verification from the Environmental Team (ET)

*Water*

- Temporary barrier shall be provided in order to protect the water quality of the stream course located in the site. The barrier shall be installed at the stream bank to prevent accidental dumping or spillage of materials into the stream course during construction.
- Proper mitigation measures as described in **Annex A** of the Environmental Permit will need to be implemented to mitigate environmental impacts due to site runoff and other potential water pollution caused by construction activities. A copy of **Annex A** are attached in **Appendix A** of this report.

### 3. ENVIRONMENTAL STATUS

#### 3.1 Air Quality

##### 3.1.1 *Monitoring Requirements*

In accordance with the EM&A Manual, air quality impact monitoring was conducted in terms of 1-hour and 24-hour TSP at the designated monitoring locations.

Continuous 24-hour TSP monitoring was performed once in every six days while 1-hour TSP monitoring was performed 3 times in every 6 days. The Action and Limit levels for air quality are discussed in **Section 2** of this report.

##### 3.1.2 *Monitoring Locations*

The designated impact air quality monitoring stations are listed in **Table 3.1** and are shown in **Figure 3.1**.

**Table 3.1 Air Quality Monitoring Locations**

Monitoring Station	Location
A1	Village house at Lok Lo Ha Village
A2	Lok Lo Ha Village House No. 104
A3	Village House near Tsun King Road

##### 3.1.3 *Summary of Monitoring Results*

The monitoring results obtained in this quarter are summarised in **Table 3.2** below. The graphical plots of the trends of 24-hour and 1-hour TSP in the quarter are presented in **Figure 3.2** and **3.3** respectively. Meanwhile, **Appendix B** shows the meteorological conditions during the monitoring days.

**Table 3.2 Summary of 24 and 1-hour TSP Monitoring Results**

Parameter	Monitoring Location	Mean TSP Levels ( $\mu\text{g}/\text{m}^3$ )	Range ( $\mu\text{g}/\text{m}^3$ )	No. of Exceedance	
				Action Level	Limit Level
24 – hour TSP	A1	65.75	40 – 130	0	0
	A2	73.63	43 – 144	0	0
	A3	63.94	40 – 142	0	0
1 – hour TSP	A1	163.1	63 – 345	0	0
	A2	159.6	78 – 341	0	0
	A3	147.1	53 – 321	0	0



**Figure 3.1 Air Quality Monitoring Locations**

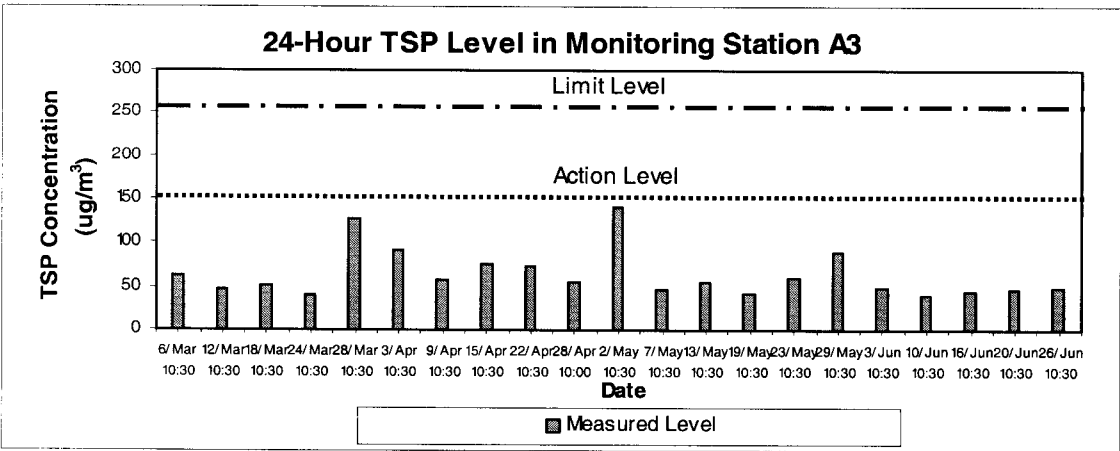
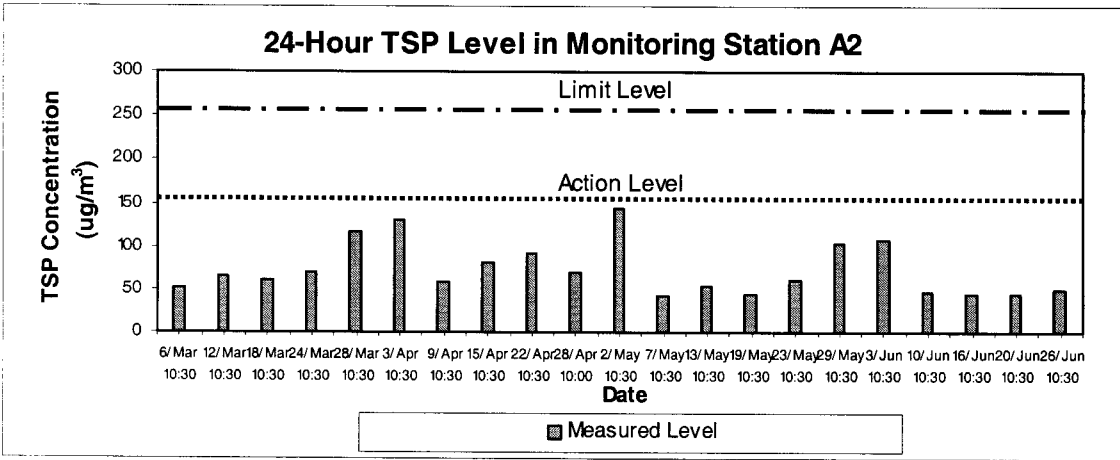
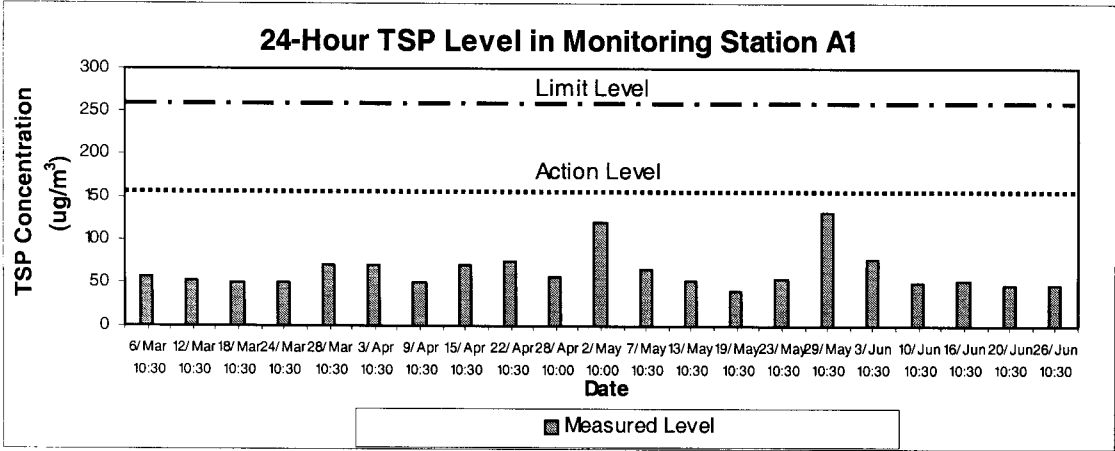


Figure 3.2 Plots of 24-hour TSP Concentration

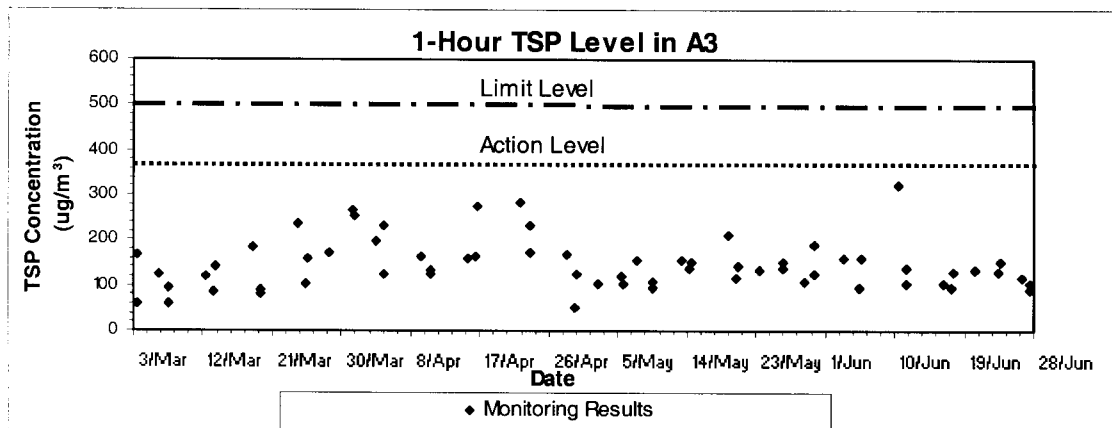
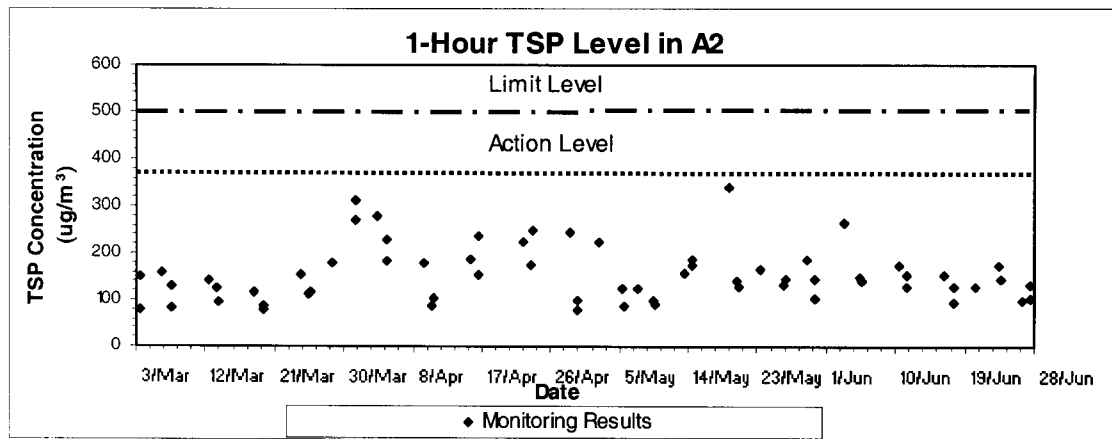
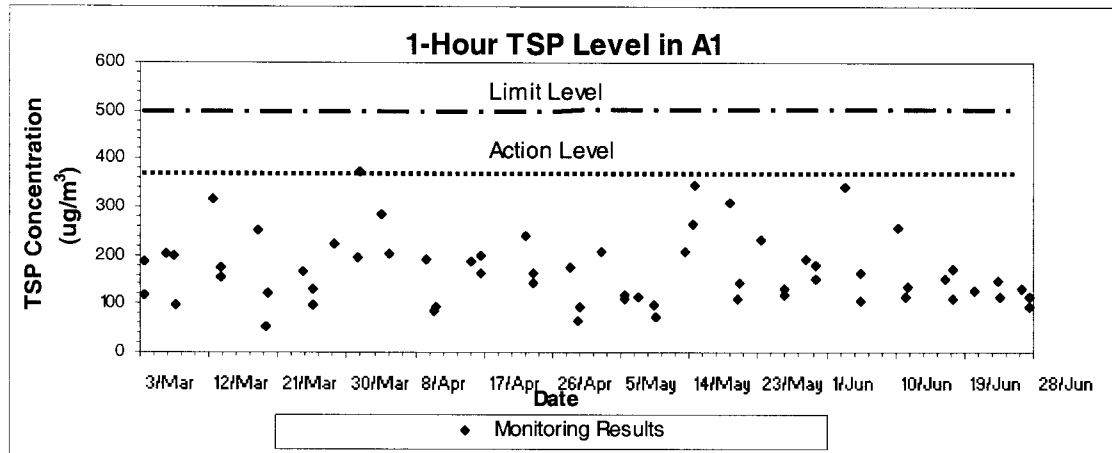


Figure 3.3 Plots of 1-hour TSP Concentrations

## 3.2 Noise

### 3.2.1 Monitoring Requirements

Impact noise monitoring was conducted once in every six days at the five designated monitoring locations in accordance with specifications in the EM&A Manual. The duration of sampling was 30 minutes in the reporting period. The Action and Limit levels for noise are discussed in **Section 2** of this report.

### 3.2.2 Monitoring Locations

The impact noise monitoring locations are presented in **Table 3.3** and shown in **Figure 3.4**.

**Table 3.3 Noise Monitoring Locations**

Monitoring Location	Measurement	Location
N1	Façade	Lok Lo Ha Village House No. 3B
N2	Façade	Lok Lo Ha Village House No. 32A
N3	Façade	Royal Ascot Block 9, Flat C
N4	Façade	Lok Lo Ha Village House No. 97
N5	Façade	Village near Royal Ascot

### 3.2.3 Summary of Monitoring Results

The monitoring results obtained in this quarter are summarised in **Table 3.4** below. Graphical plots of the noise level trends in the quarter are presented in **Figure 3.5** below. Meanwhile, **Appendix B** shows the meteorological conditions during the monitoring days.

**Table 3.4 Summary of Noise Monitoring Results**

Parameter	Monitoring Location	Range of Results dB(A)	No. of Exceedance	
			Action Levels	Limit Levels
30-minute Noise Measurement ( $L_{eq}$ )	N1	61.0 – 72.3	0	0
	N2	61.5 – 73.2	0	0
	N3	56.5 – 62.7	0	0
	N4	56.8 – 72.7	0	0
	N5	58.4 – 63.9	0	0



**Figure 3.4 Noise Monitoring Locations**



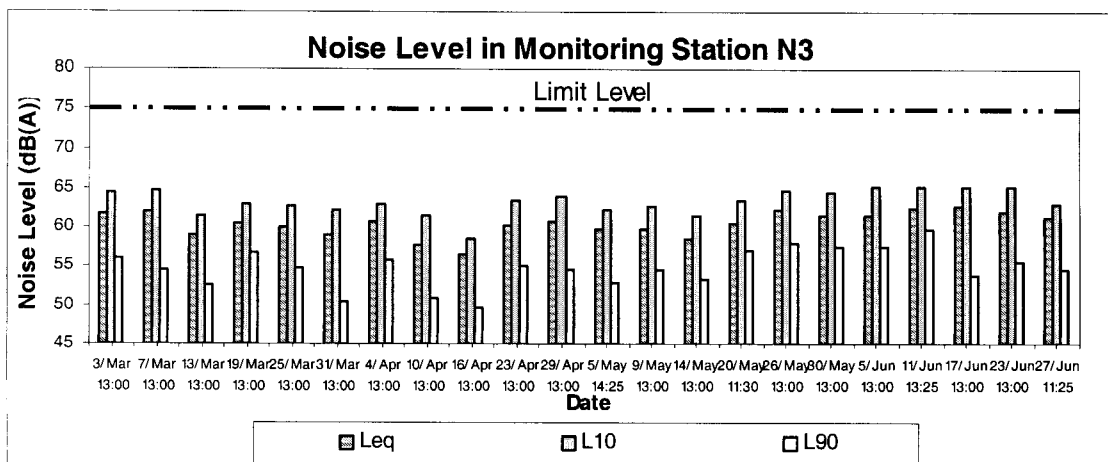
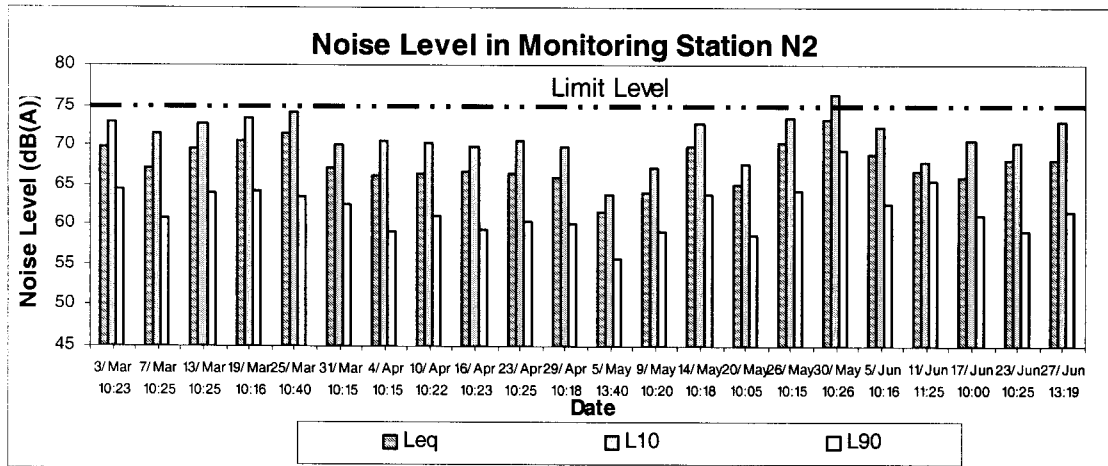
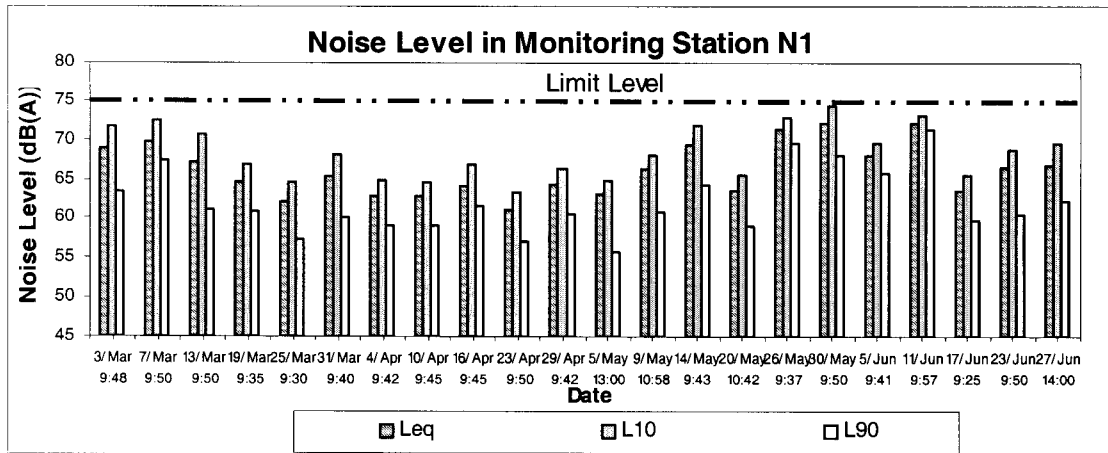


Figure 3.5 Plots of Noise Levels

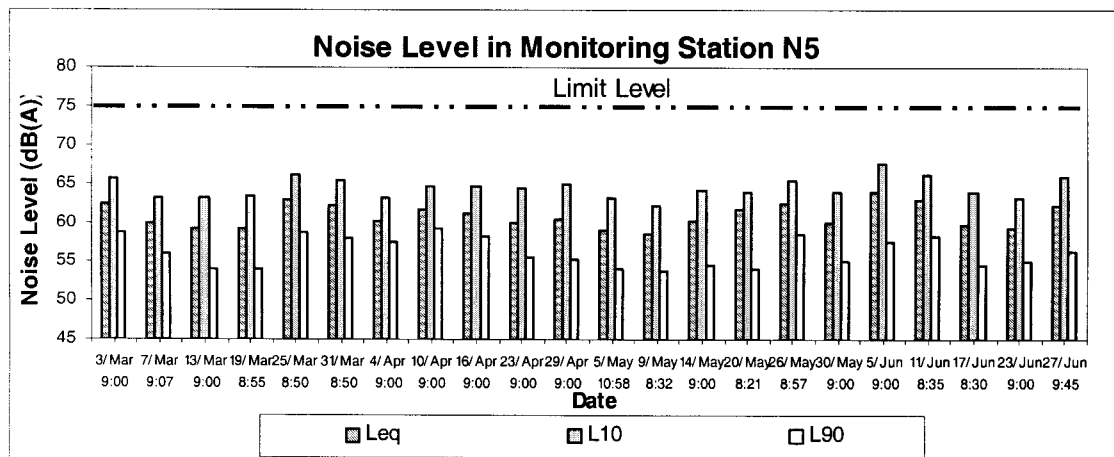
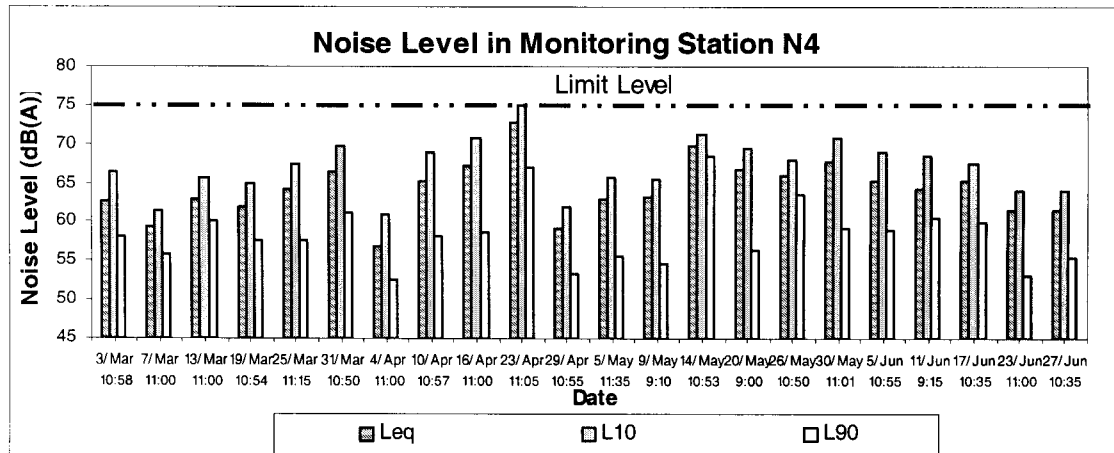


Figure 3.5 Plots of Noise Levels (con't)

## 4. ENVIRONMENTAL AUDIT

### 4.1 Summary of Environmental Monitoring Results

The monitoring work undertaken in this reporting quarter is summarised in the following table.

**Table 4.1 Summary of Environmental Monitoring**

Item	Parameter	Monitoring Period	Total No. of Samples Taken (on all stations)	No. of Exceedance	
				Action Levels	Limit Levels
1	24 – hour TSP	01/04/03 to 30/06/03	48	0	0
2	1 – hour TSP	01/04/03 to 30/06/03	144	0	0
3	30-minute Noise Measurement (Leq)	01/04/03 to 30/06/03	80	0	0

In this reporting quarter, all measured 24-hour TSP, 1-hour TSP and noise ( $L_{eq}(5min)$ ) monitoring data were below Action and Limit Levels and no remedial actions as listed in the Event and Action Plan in **Appendix C** were needed.

### 4.2 Environmental Complaints

No environmental complaints had been received against the construction site in this reporting quarter. **Table 4.2** shows the complaint summary record for this reporting quarter while **Table 4.3** summarises the complaint statistics from the commencement of the project to date.

**Table 4.2 Environmental Complaints / Enquiry Received in the Reporting Quarter**

Complaint No.	Received date & Time	Description (inc. location/ nature of complaint)	Follow-up Action Taken	Recommended Mitigation Measures	Status/ Remarks
N/a	N/a	N/a	N/a	N/a	N/a

**Table 4.3 Summary of Total Number of Complaints Received to date**

Total No. of Complaints to date	No. of Complaints in this reporting period	No. of Active Complaints	No. of Inactive/Closed Complaints
2	N/a	N/a	2

### 4.3 Assessment of Mitigation Measures

The mitigation measures listed in **Table 4.4** below had been implemented in this reporting period.

**Table 4.4 Summary of Major Mitigation Measures at the Site**

Type	Mitigation Measure	Comments
Noise	Temporary purposed-built Noise Barrier	<ul style="list-style-type: none"> <li>Constructed based on the design in the Construction Noise Mitigation Proposal.</li> </ul>
Water	Wheel Washing Facility	<ul style="list-style-type: none"> <li>Installed and in operation.</li> </ul>
	Sand/Silt Removal Facilities	<ul style="list-style-type: none"> <li>A larger wastewater treatment system had been installed to treat site-runoffs and water from piling works north-east of Lok Shun Path Roundabout.</li> <li>Another treatment system was installed to treat wastewater from piling works near Bridge C.</li> </ul>
	Measures along stream-banks north-east of Lok Shun Path Roundabout	<ul style="list-style-type: none"> <li>Concrete, sandbags, sump pits and pumps were placed/installed along the banks to prevent construction debris and site run-off from entering the stream untreated.</li> </ul>
	Diversion of Stream Course via drainage pipe	<ul style="list-style-type: none"> <li>Installed at the existing concrete channel.</li> </ul>
Wastewater	Water Reuse at wheel washing facility and site investigation drilling works.	Implemented
Land Contamination	Metal trays are placed underneath stationary machines where there are potential of oil leakage	Implemented
Air	Provide plastic sheeting covers on exposed soils	Satisfactory
	Regular water spraying on areas where there is likely generation of dust	Satisfactory
	Additional impervious sheeting placed around working area near monitoring stations.	Satisfactory

During this quarter, it was observed that the regular cleaning of the public road outside the site entrance had been conducted and the wastewater generated from the cleaning had been properly treated before the discharge. Meanwhile, the oils leakage from the equipment had been fixed and more frequent water spraying had been carried out.

However, it was noted from site inspections that further improvements were needed in certain aspects. Stagnant water in the construction site should be removed, especially after rainstorm, in order to prevent possible outbreak of Dengue disease while the chemicals contained drums should be properly stored to prevent possible land contamination. Any contaminated soil should be removed and treated if necessary.

## 5. COMMENTS & CONCLUSION

Weekly site inspection has been carried out in this quarter in order to investigate the implementation and effectiveness of the mitigation measures. The major mitigation measures were identified and are implemented as indicated in **Table 4.4**.

In respect to environmental monitoring for both air quality and noise, there were no exceedance in Action and Limit Levels recorded in this reporting period. Therefore no remedial actions as listed in the Event and Action Plan in **Appendix C** were needed.

No environmental complaints on the construction site were received in this reporting period.

The updated work program for the current and next quarters are attached in **Appendix F**.

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**APPENDIX A:**

**Water Mitigation Measures –  
Extract from Annex A of the  
Environmental Permit**

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EIAO V.L.  
EPD

Environmental Permit No. EP-092/2001/A  
環境許可證編號 EP-092/2001/A

**Annex A (as referred to in Condition 3.3)**

**Measures to Mitigate Environmental Impacts due to Site Run-off and Other Potential Water Pollution During Construction**

**(a) Surface Runoff**

- (i) Surface run-off from the construction site shall be directed into adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins before discharge into storm drains. Channels, earth bunds or sand bag barriers shall be provided on site to properly direct stormwater to such silt removal facilities.
- (ii) Catchpits and perimeter channels shall be constructed in advance of site formation works and earthworks.
- (iii) 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.
- (iv) 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.
- (v) Open stockpiles of construction materials (e.g. aggregates and sand) on site shall be covered with tarpaulin or similar fabric during rainstorms. Measures such as providing sand bag barriers shall be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.
- (vi) 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.

**(b) General Construction Activities**

At all parts of all works areas and construction sites, and throughout the full duration of the construction contract(s), debris and rubbish on site shall be handled and disposed of to avoid entering the water column and causing water quality impacts. Temporary on-site storage of excavated materials from construction works shall be covered with tarpaulin or similar fabric during rainstorms. Any washout of construction or excavated materials should be diverted to the drainage system via sediment traps. Stockpiling of the excavated material shall be minimised by scheduling the construction programme in a way that one section of the alignment can be constructed and completed before the excavation works of the next section commence.

To mitigate environmental impacts from wastewater due to construction activities, water used for water testing, boring, drilling works, concrete batching and precast concrete casting shall be

EIAO V.L.  
EPD

Environmental Permit No. EP-092/2001/A

環境許可證編號 EP-092/2001/A

recirculated and reused; wastewater from concrete batching and precast concrete casting shall be treated for pH adjustment and silt removed prior to discharge into stormwater drains and washwater from wheel washing facilities shall have sand, silt or other materials removed before discharge into stormwater drains; the access road sections between site exits and the public roads shall be paved with backfill to prevent site run-off from entering the public roads.



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**APPENDIX B:**

**Weather Conditions During  
Monitoring Periods**

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**Weather Condition During Monitoring Period  
(From 1 April to 30 June 2003)**

Date	Weather	Mean Air Temperature (°C)	Wind Speed (m/s)	Mean Relative Humidity (%)
3-Apr-03	Cloudy - Trace Rain	26.2	0.5	88
4-Apr-03	Cloudy - Trace Rain	23.7	0.5	86
9-Apr-03	Cloudy	19.1	0.5 - 1.0	87
10-Apr-03	Cloudy	18.8	1.0	94
15-Apr-03	Cloudy	21.4	0.9 - 1.0	80
16-Apr-03	Cloudy	21.6	1.0	80
22-Apr-03	Fine	24.5	0.5 - 1.0	77
23-Apr-03	Fine	25.8	0.7	77
28-Apr-03	Fine	25.3	1.0	80
29-Apr-03	Fine	26.1	1.0	83
2-May-03	Fine	24.1	0.8 - 1.0	82
5-May-03	Cloudy	24.9	0.5	93
7-May-03	Fine	28.5	0.5	83
9-May-03	Cloudy	25.5	1.2	83
13-May-03	Fine	27.2	1.0	85
14-May-03	Fine	28.0	1.0	80
19-May-03	Cloudy	25.4	0.5	84
20-May-03	Fine	26.9	0.5	80
23-May-03	Fine	28.0	1.0	80
26-May-03	Fine	27.1	1.0	79
29-May-03	Cloudy	26.4	1.0	82
30-May-03	Fine	28.1	1.0	77
3-Jun-03	Fine	27.4	0.7 - 1.0	68
5-Jun-03	Fine	27.7	0.7	78
10-Jun-03	Trace rain	25.9	0.2 - 0.9	95
11-Jun-03	Trace rain	25.7	0.8 - 0.9	91
16-Jun-03	Cloudy	25.2	0.6 - 1.0	93
17-Jun-03	Cloudy	27.0	1.0	68
20-Jun-03	Cloudy	28.2	0.5	86
23-Jun-03	Fine	28.9	0.7	79
26-Jun-03	Trace rain	29.6	0.7 - 1.0	79
27-Jun-03	Cloudy	29.5	1.0	78

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**APPENDIX C:**

**Event and Action Plan for Air  
Quality and Noise**

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## Event / Action Plan for Air Quality

EVENT	ACTION		
	ET	Engineer	CONTRACTOR
<b>ACTION LEVEL</b>			
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform the Engineer and Contractor;</li> <li>3. Repeat measurement to confirm finding; and</li> <li>4. Increase monitoring frequency to daily.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor; and</li> <li>2. Check monitoring data and Contractor's working methods.</li> </ol>	<ol style="list-style-type: none"> <li>1. Rectify any unacceptable practice, if any; and</li> <li>2. Amend working methods if appropriate.</li> </ol>
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform the Engineer and Contractor;</li> <li>3. Repeat measurement to confirm findings;</li> <li>4. Increase monitoring frequency to daily.</li> <li>5. Discuss with Engineer for remedial actions required;</li> <li>6. If exceedance continues, arrange meeting with the engineer; and</li> <li>7. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Check monitoring data and Contractor's working methods;</li> <li>4. Discuss with ET and Contractor on potential remedial actions; and</li> <li>5. Ensure remedial measures properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit proposals for mitigation measures to the Engineer within 3 working days of notification;</li> <li>2. Implement the agreed proposals; and</li> <li>3. Amend proposal if appropriate.</li> </ol>
<b>LIMIT LEVEL</b>			
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform the Engineer and Contractor;</li> <li>3. Repeat measurement to confirm findings;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Assess effectiveness of Contractor's remedial actions and keep EPD and the Engineer informed of results.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Check monitoring data and Contractor's working methods;</li> <li>4. Discuss with ET and Contractor on potential remedial actions; and</li> <li>5. Ensure remedial action properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to the Engineer within 3 working days of notification;</li> <li>3. Implement the agreed proposals; and</li> <li>4. Amend proposal if appropriate.</li> </ol>
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform the Engineer and Contractor;</li> <li>3. Repeat measurement to confirm findings;</li> <li>4. Increase monitoring frequency to daily.</li> <li>5. Investigate the causes of exceedance;</li> <li>6. Arrange meeting with EPD and the Engineer to discuss the remedial actions to be taken;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep EPD and the Engineer informed of the results; and</li> <li>8. If exceedance stops, cease additional monitoring</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>4. Discuss among ET and Contractor on potential remedial actions;</li> <li>5. Review Contractor's remedial action whenever necessary to assure their effectiveness; and</li> <li>6. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to the Engineer within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Resubmit proposals if problem still not under control;</li> <li>5. Stop the relevant portion of works as determined by the Engineer until the exceedance is abated.</li> </ol>

**Event / Action Plan for Construction Noise**

EVENT	ACTION	
	ET	Contractor
Action Level	<ol style="list-style-type: none"> <li>1. Notify the Engineer and Contractor;</li> <li>2. Analyze investigation;</li> <li>3. Require Contractor to propose measures for the analyzed noise problem; and</li> <li>4. Increase monitoring frequency to check mitigation effectiveness.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to Environmental Team and the Engineer; and</li> <li>2. Implement noise mitigation proposals.</li> </ol>
Limit Level	<ol style="list-style-type: none"> <li>1. Notify the Engineer and Contractor;</li> <li>2. Notify EPD; and</li> <li>3. Require Contractor to implement mitigation measures; and increase monitoring frequency to check mitigation effectiveness.</li> </ol>	<ol style="list-style-type: none"> <li>1. Implement mitigation measures; and</li> <li>2. Prove to Environmental Team and the Engineer effectiveness of measures applied.</li> </ol>

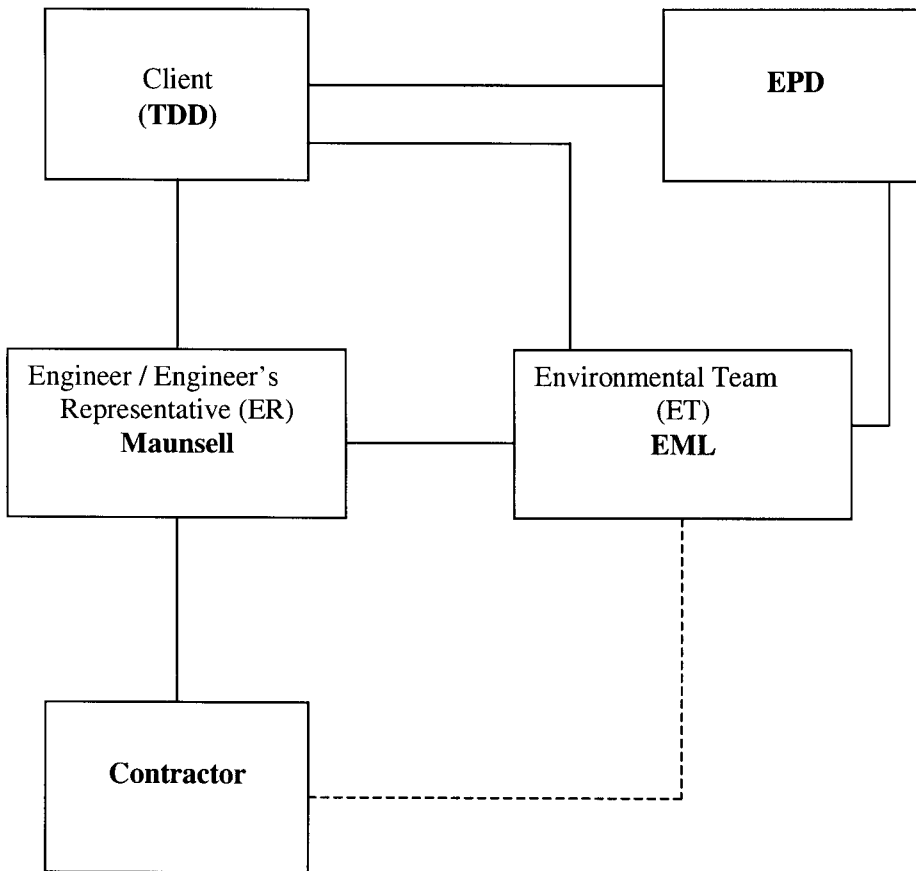
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**APPENDIX D:**

**Project Organisation and  
Contacts of Key Personnel**

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**Figure D.1: Project Management Structure**



**Contacts of Key Personnel:**

Organisation	Nature of Duty	Contact Personnel	Contact Number	
			Telephone	Fax
Territory Development Department (TDD)	Client	Mr. Stephen Wong	2301-1376	2721-8630
Maunsell Consultants Asia Ltd. (MCAL)	Engineer	Mr. Alan Kwong	2602-3433	2691-2649
Environmental Management Ltd. (EML)	Environmental Team	Mr. Lawrence Tso	2890-1090	2890-6901
EPD Complaint Hotline	24-hour Complaint Hotline	-	1823	

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**APPENDIX E:**

**Summary Record of  
Complaints Received**

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Complaint No.	Received date & Time	Description (inc. location/ nature of complaint)	Follow-up Action Taken	Recommended Measures	Mitigation	Status/ Remarks
C02-N1	Morning, 29/7/2002	Around 9:30am on 29/7/02, police came on site to investigate a complaint of noise pollution emitted during rock breaking which carried out by the Contractor near the Site Office (near the box culvert and north Lok Shun Path Roundabout). The Contractor immediately halted the activity in response to police's advice	<ul style="list-style-type: none"> <li>Ad hoc site inspection was carried out on 31/7/02, jointly with the Engineer and Contractor</li> <li>The complaint log sheet, the investigation findings and recommendations on mitigation measures were submitted to the Engineer and Contractor.</li> <li>A letter, addressing to the complainant, will be sent to the police.</li> </ul>	<p>Mitigation actions:</p> <ul style="list-style-type: none"> <li>Excavator-mounted breaker shall not be carried out within 125m from any nearby noise sensitive receivers and;</li> <li>Temporary purpose built barrier should be installed whenever there are high noise level construction activities.</li> </ul>	The complaint was considered as ad hoc rather than continuous. It is therefore considered not necessary to increase the noise monitoring frequency  File Closed.	
C02-N2	Night-time, 7 August, 2002	<ul style="list-style-type: none"> <li>Nearby residents complained to police that a generator in Road D15 Site was operating in night-time near Lok Lo Ha Village.</li> <li>Police came to the site to investigate the complaint and inform watchmen to turn off the operating generator at around 8:30pm.</li> <li>The complaint was valid as it concerned with construction noise during the restricted hours.</li> </ul>	<ul style="list-style-type: none"> <li>Ad hoc site inspection was carried out on 8 August 02, jointly with the Engineer and Contractor and ET.</li> <li>The complaint log sheet, the investigation findings and recommendations on mitigation measures were submitted to the Engineer and Contractor.</li> <li>A letter in both English and Chinese, addressing to the complainant, has been sent to the police.</li> </ul>	<p>Mitigation actions:</p> <ul style="list-style-type: none"> <li>Under the Noise Control Ordinance, the carrying out of general construction work using powered mechanical equipment (including generators) during the restricted hours (between 7 p.m. and 7 a.m. or at any time on a general holiday (including Sunday) is prohibited unless a valid Construction Noise Permit is in force;</li> <li>A watchmen or site staff should be employed to check daily that all generators and plats are switched off after the permissible working hours.</li> </ul>	File Closed.	

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**APPENDIX F:**

**Construction Program for  
Current and Next Quarter**

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ID	Task Name	Duration	04 '03	05 '03	06 '03	07 '03	08 '03
0	<b>Road D15 Construction Programme</b>	1113 days					09 '03
1	1.1 Works in Section I (345 days)	345 days					
2	1.2 Works in Section IA (475 Days)	475 days					
3	1.2 Works in Section II (622 days)	622 days					
4	1.3 Landscape Work in Section III (1187 Days)	1187 days					
5	2.1 Section I Extension of Time	240.5 days					
6	2.1 Section IA Extension of Time	0 days					
7	2.1 Section II Extension of Time	162 days					
8	2.1 Section III Extension of Time	162 days					
9	<b>3 Preliminary &amp; Site Establishment</b>	600 days					
10	3.1 Waste Mgt & Environmental Control Manual for EPD approval	600 days					
11	3.2 Submission of mitigation proposal	600 days					
12	3.3 Method Statement / ICE/Material Submission & Approval	600 days					
13	3.4 Site clearance including existing asbestos houses at Bridge A	57 days					
14	3.5 Site clearance including existing houses at Bridge C	61 days					
15	3.6 Utilities undertakers Co-ordination	650 days					
16	3.6 Fabrication / Erection of RE Office	90 days					
17	3.9 Condition Survey / Defect Survey	60 days					
18	<b>3.10 Erection of Fencing &amp; Hoarding</b>	414 days					
19	3.10.1 Site Hoarding and Fence	60 days					
20	3.10.2 Relocation of existing fence at House 658	79 days					
21	3.10.3 Re-provision of Existing KCR Fence	40 days					
22	<b>3.12 Form Temporary Site Access</b>	161 days					
23	3.12.1 Form Bridge A to Bridge B	45 days					
24	3.12.2 Form Bridge B to Bridge C	18 days					
25	3.12.3 Form Bridge A to C2	40 days					
26	<b>4 Earthworks</b>	445 days					
27	4.1 Forming access to Main Cutting CH 300-400	50 days					
28	4.2 Slope Work / Drainage At CH 300-400	59 days					
29	4.3 Forming access to CH 400-500	19 days					
30	4.4 Remaining Slope Cutting at RW7 & CH300	20 days					
31	4.5 Remove Temporary Access road to RW7	8 days					
32	<b>5 Entrailment Works (Section I &amp; IA)</b>	394 days					
33	5.1 Section I	389 days					
34	5.1.1 General Clearance & Tilt Pit Excavation	27 days					
35	5.1.2 Drainage Works (1.019-1.024, 7.022 & 15.000)	114 days					
36	5.1.3 Drainage Works (pipelines 1.024-1.026)	260 days					
37	5.1.4 Drainage Works (pipeline 1.011-1.013)	70 days					
38	5.1.5 Drainage Works (pipeline 1.014-1.016)	150 days					
39	5.1.6 Drainage Works (1.000-1.004, 2.000-2.001, 3.000-3.001, 3.1)	120 days					
40	<b>5.2 Section IA</b>	40 days					
41	5.2.1 Drainage Works (pipeline 3.002-3.004)	40 days					
42	<b>6 Bridge A &amp; General</b>	787 days					
43	6.1 Design Submission of Alternative Design (1 beam)	180 days					
44	6.2 Procurement, manufacturing and testing of bridge bearing	63.2 days					
45	6.3 Engineer's Approval of Off Site Casting Yard	180 days					
46	6.4 Fabrication precast beams	150 days					
47	6.5 Fabrication PC panel permanent formwork	100 days					
48	6.6 Ground Investigation	66 days					
49	<b>6.7 Piling Works at A1 to A5</b>	76 days					
50	6.7.1 A1 Piling Work	52 days					
51	6.7.2 A2 Piling Work	45 days					

4.4 Remaining Slope Cutting at RW7 &

Task Progress  
 Critical Task Progress  
 Task  
 Critical Task  
 Milestone  
 Summary  
 Rolled Up Task  
 Rolled Up Critical Task  
 Rolled Up Milestone  
 Rolled Up Progress  
 External Tasks  
 Project Summary

Sha Tin New Town Stage II Contract No. ST17/01 Road D15 Linking Lok Shun Path and Tai Po Road

MASTER PROGRAMME (ST17/01/MP/10)

ID	Task Name	Duration	04 '03	05 '03	06 '03	07 '03	08 '03	09 '03
52	6.7.3 A3 Piling Work	34 days						
53	6.7.4 A4 Piling Work	26 days						
54	6.7.5 A5 Piling Work	35 days						
55	6.8 Pile Caps Construction A1 to A5	304 days						
56	6.8.1 A1 Pile Cap	50 days						
57	6.8.2 A2 Pile Cap	24 days						
58	6.8.3 A3 Pile Cap	22 days						
59	6.8.4 A4 Pile Cap	24 days						
60	6.8.5 A5 Pile Cap	182 days						
61	6.8.5.1 A5 Pile Cap (1st Portion)	60 days						
62	6.8.5.2 A5 Pile Cap (2nd Portion)	50 days						
63	6.9 Abutment Wall A1 to A5	310 days						
64	6.9.1 A1 Abutment Wall	200 days						
65	6.9.1.2 A1 (1st portion to allow site access to C2)	30 days						
66	6.9.1.2 A1 (2nd portion After Bridge C Beams Complete)	30 days						
67	6.9.2 A2 Pier & Cross Head	212 days						
68	6.9.2.1 Pier only to allow access to C2	22 days						
69	6.9.2.2 A2 Crashhead	24 days						
70	6.9.3 A3 Pier & Cross Head	30 days						
71	6.9.4 A4 Pier & Cross Head	12 days						
72	6.9.5 A5 Abutment Wall	182 days						
73	6.9.5.1 A5 Abutment wall (portion 1 to allow site access)	60 days						
74	6.9.5.2 A5 Abutment wall (Portion 2)	40 days						
75	6.10 install bridge bearings A1 to A5	276 days						
76	6.10.1 A1 - A2 Bridge Bearings	6 days						
77	6.10.2 A2 - A3 Bridge Bearings	6 days						
78	6.10.3 A3 - A4 Bridge Bearings	6 days						
79	6.10.4 A4 - A5 Bridge Bearings	6 days						
80	6.11 install Precast Beams A1 to A5	330 days						
81	6.11.1 A1 to A2 PC Beams	6 days						
82	6.11.2 A2 to A3 PC Beams	6 days						
83	6.11.3 A3 to A4 PC Beams	3 days						
84	6.11.4 A4 to A5 PC Beams	6 days						
85	6.12 Bridge Deck Construction A1 to A5	366 days						
86	6.12.1 A1 to A2 Bridge Deck	40 days						
87	6.12.2 A2 to A3 Bridge Deck	40 days						
88	6.12.3 A3 to A4 Bridge Deck	60 days						
89	6.12.4 A4 to A5 Bridge Deck	40 days						
90	6.13 Bridge Deck Drainage	83 days						
91	6.13.1 A1 to A2 Drainage Pipe, M/H cover & Gully	18 days						
92	6.13.2 A2 to A3 Drainage Pipe, M/H cover & Gully	18 days						
93	6.13.3 A3 to A4 Drainage Pipe, M/H cover & Gully	18 days						
94	6.13.4 A4 to A5 Drainage Pipe, M/H cover & Gully	18 days						
95	6.14 Bridge Deck Parapet & Curb	103 days						
96	6.14.1 A1 to A2 Parapet & Curb	24 days						
97	6.14.2 A2 to A3 Parapet & Curb	24 days						
98	6.14.3 A3 to A4 Parapet & Curb	24 days						
99	6.14.4 A4 to A5 Parapet & Curb	20 days						
100	7 Bridge B	508 days						
101	7.1 Ground Investigation	36 days						
102	7.2 Pre Bore H-Piles	192 days						
103	7.3.1 B1 H-Piles	29 days						

12/09/2003

16/05/2003

31/05/2003

20/05/2003

06/09/2003

Date: 1/4/2003

Task Progress:  Critical Task Progress:  Milestone Summary:  Rolled Up Milestone:  Rolled Up Critical Task:  Project Summary:

Split:  External Task:

MASTER PROGRAMME (S17701/MP/10)  
 Sha Tin New Town Stage II Contract No. S17701, Road D15 Linking Lok Shun Path and Tai Po Road

ID	Task Name	Duration	04/03	05/03	06/03	07/03	08/03	09/03
104	7.3.2 B2 H Piles	36 days						
105	7.3 Pile Cap & Abutment Wall B1 & B2	101 days						
106	7.4.1 B1 Pile Cap & Abutment	50 days						
107	7.4.2 B2 Pile Cap & Abutment	40 days						
108	7.4 Install Bridge Bearings	57 days						
109	7.4.1 B1 Bridge Bearings	6 days						
110	7.4.2 B2 Bridge Bearings	6 days						
111	7.5 Install Precast Beams B1 To B2	6 days						
112	7.6 Bridge Deck Construction B1 To B2	40 days						
113	7.7 Bridge deck Drainage B1 To B2	19 days						
114	7.8 Bridge Deck Parapet & Curb B1 To B2	16 days						
115	7.9 Remove Temp Platform(Underneath Bridge Deck)	60 days						
116	7.10 Reinstate Exg Valley	60 days						
117	8 Bridge C	504 days						
118	8.1 Ground Investigation	62 days						
119	8.2 Pre Bore H-Piles	174 days						
120	8.2.1 C1 H Piles	36 days						
121	8.2.2 C2 H Piles	52 days						
122	8.3 Pile Cap & Abutment Wall C1 & C2	149 days						
123	8.3.1 C1 Pile Cap & Abutment Wall	55 days						
124	8.3.2 C2 Pile Cap & Pier	50 days						
125	8.4 Install Bridge Bearings	327.8 days						
126	8.4.1 C1 Bridge Bearings	6 days						
127	8.4.2 C2 Bridge Bearings	6 days						
128	8.4.3 C3 Bridge Bearings	6 days						
129	8.5 Install Precast Beams B1 To B2	98 days						
130	8.5.1 C1 to C2 PC Beams	6 days						
131	8.5.2 C2 to C3 PC Beams	6 days						
132	8.6 Bridge Deck Construction C1 to C3	132 days						
133	8.6.1 C1 to C2 Bridge Deck	40 days						
134	8.6.2 C2 to C3 Bridge Deck	40 days						
135	8.7 Bridge deck Drainage C1 to C3	36 days						
136	8.7.1 C1 to C2 Drainage Pipe, M/H cover & Gully	18 days						
137	8.7.2 C2 to C3 Drainage Pipe, M/H cover & Gully	18 days						
138	8.8 Bridge Deck Parapet & Curb C1 to C3	76 days						
139	8.8.1 C1 to C2 Parapet & Curb	36 days						
140	8.8.2 C2 to C3 Parapet & Curb	40 days						
141	8.9 Bridge A, B & C Movement Joint Installation	96 days						
142	9 Road works, Pavement & Cycle Track	286 days						
143	9.1 Drainage to on Grade Road	75 days						
144	9.2 Utilities at on Grade Road	75 days						
145	9.3 Carriage way Weeding Course	6 days						
146	9.4 Road Marking & road furniture	6 days						
147	9.5 Foot path	150 days						
148	9.6 Cycle Track	90 days						
149	9.7 Light Poles	150 days						
150	9.8 Road Work Finishing	120 days						
151	10 Retaining Walls	691 days						
152	10.1 RW1	90 days						
153	10.1.1 RW1 Bay 1	40 days						
154	10.1.2 RW1 Bay 2	40 days						
155	10.1.3 RW1 Bay 3	40 days						

Date: 1/4/2003

Task Progress:  Task:  Milestone:  Summary:

Critical Task Progress:  Critical Task:  Milestone:  Summary:

Roll Up Task:  Roll Up Milestone:  Roll Up Progress:

Roll Up Critical Task:  Roll Up Milestone:  Roll Up Progress:

Split:  External Task:

Project Summary:

MASTER PROGRAMME (ST77/01/MP7/10)  
 Sha Tin New Town Stage II Contract No. ST77/01, Road D15 Linking Luk Shun Path and Tai Po Road

ID	Task Name	Duration	04 '03	05 '03	06 '03	07 '03	08 '03	09 '03	10
156	10.1.4 RW1 Bay 4	30 days							10.1.4 RW1 Bay 4
157	10.1.5 RW1 Bay 5	30 days							
158	10.1.6 RW1 Bay 6	30 days							
159	10.2 RW2	217 days							
160	10.2.1 RW2 Bay 1	40 days							
161	10.2.2 RW2 Bay 2	40 days							
162	10.2.3 RW2 Bay 3	40 days							
163	10.2.4 RW2 Bay 4	30 days							
164	10.2.5 RW2 Bay 5	30 days							
165	10.2.6 RW2 Bay 6	30 days							
166	10.2.7 RW2 Bay 7	30 days							
167	10.3 RW3	185 days							
168	10.3.1 RW3 Bay 4	30 days							
169	10.3.2 RW3 Bay 5	50 days							
170	10.3.3 RW3 Bay 6	120 days							
171	10.3.4 RW3 Bay 7	120 days							
172	10.3.5 RW3 Bay 8	40 days							
173	10.3.6 Dwarf Wall	40 days							
174	10.4 RW4	177 days							
175	10.4.1 RW4 Bay 1	100 days							
176	10.4.2 RW4 Bay 2	100 days							
177	10.4.3 RW4 Bay 3	100 days							
178	10.5 RW5	50 days							
179	10.6 RW6	90 days							
180	10.6.1 Steel pile walls	12 days							
181	10.6.2 Excavation to +1.65	12 days							
182	10.6.3 Bay 1	24 days							
183	10.6.4 Bay 2	24 days							
184	10.6.5 Backfill to +2.2	12 days							
185	10.6.6 Remove sheet piles	6 days							
186	10.7 RW7	465 days							
187	10.7.1 Pre-drill holes (21 nos)	47 days							
188	10.7.2 Forming working platform	24 days							
189	10.7.3 Install bored pile (2 nos)	443 days							
190	10.7.3.0 Completed Bore Piles	183 days							
191	10.7.3.1 B4 Bore Pile	6 days							
192	10.7.3.2 B1(B1),B1(B1),B1(B1)	50 days							
193	10.7.4 Bore Pile Sonic Test	12 days							
194	10.7.5 Bore Pile Core Test	30 days							
195	10.7.5 Construct logging/concrete decorative wall	60 days							
196	10.7.6 Construct extension section above bored pile	60 days							
197	10.7.7 Construct Capping Beam	40 days							
198	10.8 RW8	325 days							
199	10.8.1 RW8 Bay 1	120 days							
200	10.8.2 RW8 Bay 2	100 days							
201	10.8.3 RW8 Bay 3	100 days							
202	10.8.4 RW8 Bay 4	80 days							
203	10.8.5 RW8 Bay 5	80 days							
204	10.9 RW9	222 days							
205	10.9.1 Alternative Design & Approval	90 days							
206	10.9.2 Construct RW11	100 days							
207	10.10 RW12	78 days							

Date: 1/4/2003

Task Progress: Critical Task Progress:

Milestone Summary:

Roll Up Task: Roll Up Milestone:

Roll Up Critical Task: External Tasks:

Split: Project Summary:

She Tin New Town Stage II Contract No. S177/01, Road D15 Linking Lok Shun Path and Tai Po Road

MASTER PROGRAMME (S177/01/MP/10)

Task Name	Duration	04.03	05.03	06.03	07.03	08.03	09.03	10.03	11.03	12.03
208 10.10.1 RW12 Bay 1	30 days									
209 10.10.2 RW12 Bay 2	30 days									
210 10.10.3 RW12 Bay 3	30 days									
211 11.0 Noise Barriers Preliminary	782 days									
212 11.1 Temporary Work Submission & Approval	300 days									
213 11.2 Noise Barrier Structures	408 days									
214 11.2.1 Noise Barrier No. 1	408 days									
215 11.2.1.1 Site investigation	30 days									
216 11.2.1.2 Traffic Diversion at Lok Shun Path	30 days									
217 11.2.1.3 Demolish Existing Retaining Wall Footing	60 days									
218 11.2.1.4 Temporary earth platform for Bore Pile Equipment	18 days									
219 11.2.1.4 Bore Piles SP1 to SP4	60 days									
220 11.2.1.5 Bore Piles Coring Test	18 days									
221 11.2.1.6 Temporary Shoring & Excavation	30 days									
222 11.2.1.7 Construct Pile Caps	60 days									
223 11.2.1.8 RW Panel 1	40 days									
224 11.2.1.9 RW Panel 2	40 days									
225 11.2.1.10 RW Panel 3	40 days									
226 11.2.1.11 RW Panel 4	30 days									
227 11.2.1.12 RW Panel 5	24 days									
228 11.2.1.13 RW Panel 6	24 days									
229 11.2.1.14 RW Panel 7	24 days									
230 11.2.2 Noise Barrier No. 4B	148 days									
231 11.2.2.1 Sheet pile wall	18 days									
232 11.2.2.2 Excavation	12 days									
233 11.2.2.3 Construct Footing and Walls	40 days									
234 11.2.2.4 Backfill and remove sheet piles	18 days									
235 11.2.2.5 Granite Cladding	60 days									
236 11.2.3 Noise Barrier No. 5	100 days									
237 11.2.3.1 Excavation	18 days									
238 11.2.3.2 Construct Footing and Walls	70 days									
239 11.2.3.3 Backfill	12 days									
240 11.3 Noise Barrier Steel Post & Panels	762 days									
241 11.3.1 Procurement and Fabrication of Noise Barrier	150 days									
242 11.3.2 Design Submission for approval	250 days									
243 11.3.3 Fabrication and Delivery	200 days									
244 11.3.4 Noise Barrier Installation	158 days									
245 11.3.4.1 Noise Barrier No.1	60 days									
246 11.3.4.2 Noise Barrier No. 2	60 days									
247 11.3.4.3 Noise Barrier No. 3	60 days									
248 11.3.4.4 Noise Barrier No. 4A	60 days									
249 11.3.4.5 Noise Barrier No. 4B	60 days									
250 11.3.4.6 Noise Barrier No. 4C	30 days									
251 11.3.4.7 Noise Barrier No. 5	60 days									
252 12 Box Culvert Extension	618 days									
253 12.1 Remove existing inlet, water diversion	158 days									
254 12.2 Box culvert	150 days									
255 12.3 Flood Wall	29 days									
256 12.4 Construct 1400 box culvert	70 days									
257 12.5 Construct 1500 pipe	373 days									
258 12.5.1 Construct 1500 pipe CH10 to CH30	100 days									
259 12.5.2 Construct 1300 pipe CH30 to CH62	44 days									

Date: 1/4/2003

Task Progress:  Task Progress

Task:  Task

Critical Task Progress:  Critical Task Progress

Milestone Summary:  Milestone Summary

Rollled Up Critical Task:  Rollled Up Critical Task

Rollled Up Milestone:  Rollled Up Milestone

External Tasks:  External Tasks

Project Summary:  Project Summary

Sha Tin New Town Stage II Contract No. ST7701, Road D15 Linking Lok Shun Path and Tai Po Road

MASTER PROGRAMME (ST7701/MP/10)

ID	Task Name	Duration	04 '03	05 '03	06 '03	07 '03	08 '03	09 '03
260	12.6.3 Construct 1500 pipe CH 40 to CH R2	70 days						
261	12.6 Construct CP15	40 days		13/09/2003				
262	12.7 Construct MH131	60 days						
263	12.8 Construct 1200 U Channel	50 days						20/05/2003
264	13.0 Underground Drainage & Utilities	422 days						
265	13.1 Drainage works at Lok Ho Lo roundabout	100 days						20/05/2003
266	13.1.1 Drainage works at stage 2 of TM	44 days						
267	13.1.2 Drainage works at stage 3 of TM	40 days						
268	13.1.3 Drainage works at stage 4 of TM	40 days						
269	13.1.4 Drainage works at stage 5 of TM	40 days						
270	13.1.5 Drainage works at stage 6 of TM	40 days						
271	13.2 CLP Cable Ducts	30 days						
272	13.3 Water pipes and associated Works	369 days						
273	13.3.1 Water Mains for irrigation system	120 days						
274	13.3.2 Fire Service Pipe & Hydrant	60 days						
275	13.3.3 Water Main Diversion (400 Box Culvert)	70 days						20/05/2003
276	13.4 Telephone Ducts	40 days						
277	13.5 Existing Utilities Diversion	266 days						
278	13.5.1 RW1, RW2 and 1400 Box Culvert	72 days						
279	13.5.2 Abutment A1 to RW11	120 days						
280	13.5.3 RW11 to C2	100 days						
281	13.5.4 A1 Lok King Street	100 days						
282	14 Staircases	463 days						
283	14.1 Stair 1 (NB 4C)	12 days						14.1 Stair 1 (NB 4C) 25/08/2003
284	14.2 Stair 2 (RW8)	40 days						14.2 Stair 2 (RW8) 05/08/2003
285	14.3 Stair 3 (RW3)	50 days						
286	14.4 Stair 4 (RW11)	30 days						
287	14.5 Stair 5 (RW5)	30 days						14.5 Stair 5 (RW5) 04/09/2003
288	14.6 Stair 6 (Abutment B1)	24 days						14.6 Stair 6 (Abutment B1) 30/08/2003
289	14.7 Stair 7 (RW7)	12 days						
290	14.8 Stair 8 (Level +39)	100 days						
291	14.9 Stair 9 (CH300)	12 days						
292	14.10 Stair 10 (RW12)	18 days						
293	14.11 Stair 11 (Abutment A5)	12 days						14.11 Stair 11 (Abutment A5) 26/08/2003
294	14.12 Stair 12 (house 102)	6 days						
295	14.13 Stair 13 (Slope CH350 - 400)	18 days						
296	15 Standard Release Collect on Point	60 days						
297	16 Rain Shelter no 1&2	60 days						
298	17 Landscaping	108 days						
299	17.1 Tree Planting	60 days						
300	17.2 Tinting	30 days						
301	18 Project Completion & Handover	694 days						
302	18.1 Section I Completion	0 days						
303	18.2 Section IA Completion	0 days						
304	18.3 Section II Completion	0 days						
305	18.4 Section III Completion	0 days						

18 Project Completion & Handover  
 18.1 Section I Completion ▼ 14/05/2003  
 18.2 Section IA Completion ▼ 15/05/2003

Date: 14/2003

Task Progress: [Progress Bar]

Critical Task Progress: [Progress Bar]

Milestone Summary: [Progress Bar]

Rolled Up Task Progress: [Progress Bar]

Rolled Up Milestone Progress: [Progress Bar]

Split External Tasks: [Progress Bar]

Project Summary: [Progress Bar]