



**BARBICAN CONSTRUCTION  
CO., LTD**

**Contract No. HY/2001/18**

**Sai Sha Road Widening  
between Kam Ying Road and  
Future Trunk Road T7 Junction**

**ANNUAL ENVIRONMENTAL  
MONITORING & AUDIT REPORT  
REPORT NO. 3**

**(OCT 2004 – SEP 2005)**


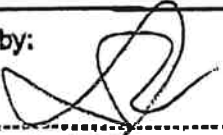
**No. R/2563/052 Issue 1  
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**Contract No. HY/2001/16  
Sai Sha Road Widening between Kam Ying Road and  
Proposed Road T7 Junction**

**Annual Environmental Monitoring & Audit Report  
Report No. 3**

Approved for Issue by:	
	
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Position:	..... Environmental Team Leader .....
Date:	..... 30 November 2005 .....
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**CONTRACT NO. HY/2001/18**  
**SAI SHA ROAD WIDENING BETWEEN KAM YING ROAD**  
**AND FUTURE TRUNK ROAD T7 JUNCTION**

**ANNUAL ENVIRONMENTAL MONITORING & AUDIT REPORT**  
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**REPORT NO. 03**

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## **EXECUTIVE SUMMARY**

This is the third Annual EM & A Report for the project of Sai Sha Road Widening between Kam Ying Road and Future Trunk Road T7 Junction.

This report mainly presents the EM & A works undertaken for the above project from 1 October 2004 to 30 September 2005 in accordance with the EM & A Manual under Appendix H.3 of the Particular Specification.

### **Noise Level**

During the year,  $L_{eq(30min)}$  noise level measurement was performed at CNM 1 and CNM 2. CNM 1 is for noise sensitive receivers (NSRs 1 & 2) Wu Kwai Sha New Village. CNM 2 is for (NSRs 3 & 4) Kam Lung Court/ Lee On Estate. The noise limit level for all the noise sensitive receivers is 75 dB(A).

Owing to the absence of any noise sensitive receiver at the moment, the noise monitoring work at station CNM 3, Wu Kwai Sha DD 206, had been suspended since 1 August 2003. In case there is any new noise sensitive receiver(s) established at Wu Kwai Sha DD 206 during the remaining construction period, the monitoring work will be immediately resumed and conducted in accordance with the requirements set out in the Environmental Monitoring and Audit Manual.

### **Complaint log**

No complaint was received during the year.

No notifications of summons, no successful prosecutions were received during the year.

### **Review & Comments**

#### *Noise Impact Mitigation Measures*

The mitigation measures mentioned in the EIA Report generally help the Contractor reduce the noise level.

#### *Landscape Impact Mitigation Measures*

The mitigation measures mentioned in the EIA Report generally help the Contractor protect the environment especially for the trees mentioned in the EIA Report to be retained.

## **1.0 PROJECT INFORMATION**

### **1.1 Background**

Babtie Asia Ltd was employed by the Contractor to act as the Environmental Team for this project. The Independent Environmental Checker is BMT Asia Pacific Ltd.

The purpose of this report is to document the Environmental Monitoring & Audit (EM & A) works undertaken for the period between 1 October 2004 and 30 September 2005.

### **1.2 Contact Details of Key Personnel**

Titles, names and contact telephone numbers of the key personnel of the captioned project are shown in Appendix H.

### **1.3 Construction Programme**

The construction programme has been recently revised and is subject to continuous refinement. The latest construction programme is attached in Appendix A.

### **1.4 Site Management Structure**

The site organization chart is shown in Appendix B.

### **1.5 Synopsis of Works undertaken during the Year**

The works for this project are divided into three sections: Section 1, Section 2 and Section 3.

Section 1 comprises all the works for the completion of the subway system connecting the existing vacant subway barrel across Sai Sha Road adjacent to Kam Ying Road and the local widening of northern Kam Ying Road and all associated landscaping works.

Section 2 comprises all construction works including the new carriageways, two footbridges and all footpath, cycle tracks, subways, village access road, noise barriers, roundabout and associated works comprising drainage works, E&M works, traffic signs and aids, slope works, embankments, retaining walls, subway wing walls, cycle parks, fencing, street lighting and all associated landscaping works, except Section 1 and Section 3.

Section 3 comprises all the works for the new access road to Whitehead and all the works except Section 1 and 2.

The works undertaken during the year were as follows:

- Drainage works
- Road works
- Construction of cycle track
- Retaining wall construction
- Noise Barrier construction
- Installation of Noise Barrier panel

- Installation of Noise Barrier panel
- Landscaping works

## **1.6 Project Area, Sensitive Receivers & Monitoring Locations**

The drawings showing the project area, noise sensitive receivers (NSRs) and the locations of the monitoring stations are shown in Appendix D.

The construction noise monitoring stations are CNM 1 and CNM 2.

CNM 1 is for noise sensitive receivers (NSRs 1 & 2) Wu Kwai Sha New Village. CNM 2 is for (NSRs 3 & 4) Kam Lung Court/ Lee On Estate.

It is noted that the locations of the monitoring stations are the same as those adopted in the Noise Baseline Monitoring.

## **1.7 Summary of EM & A Requirements**

The summary of the EM & A Requirements is shown in Appendix C.

## 2.0 IMPLEMENTATION STATUS

According to the EIA report, the following schedule should be implemented during the construction phase for this year.

Location	Reference Section	Environmental Protection Measures	Agent	Timing
<b><i>Construction Noise Mitigation</i></b>				
Wu Kwai Sha New Village (1)	EIA 3.5.25	Mitigation Option 2	Contractor	Quarter 9-12
Wu Kwai Sha New Village (2)	EIA 3.5.23	Mitigation Option 1	Contractor	Quarter 9-12
Lok Wo Sha (1)	EIA 3.5.23	Mitigation Option 1	Contractor	Quarter 9-12
Lok Wo Sha (2)	EIA 3.5.23	Mitigation Option 1	Contractor	Quarter 9-12
Kam Lung Court (1)	EIA 3.5.25	Mitigation Option 2	Contractor	Quarter 9-12
Kam Lung Court (2)	EIA 3.5.25	Mitigation Option 2	Contractor	Quarter 9-12
Lee On Estate (1)	EIA 3.5.25	Mitigation Option 2	Contractor	Quarter 9-12
Lee On Estate (2)	EIA 3.5.25	Mitigation Option 2	Contractor	Quarter 9-12
Residential Development STTL446	EIA 3.5.23	Mitigation Option 1	Contractor	Quarter 9-12
Residential Development at Wu Kai Sha DD206	EIA 3.5.23	Mitigation Option 1	Contractor	Quarter 9-12

- Note: The locations of the noise assessment points are shown in the Figure 7 of the EIA Report.



Location	Reference Section	Environmental Protection Measures	Agent & Timing
<b><i>Construction Phase Landscape and Visual Mitigation Measures</i></b>			
All Scheme Roads	EIA 4.5.1	<ul style="list-style-type: none"> <li>• Conservation of topsoil;</li> <li>• Screening of site construction works by use of hoardings;</li> <li>• Surface treatment of site hoardings to enhance visual interest and harmony with surrounding landscape / townscape;</li> <li>• Locating site offices and other temporary buildings in least visually prominent locations;</li> <li>• Efficient programming of construction works to reduce duration of construction works;</li> <li>• Staging of construction works to minimise areas requiring site hoardings which creates visual intrusion;</li> <li>• Re-routing of pedestrian routes away from the work site where possible;</li> <li>• Retaining existing trees and minimising damage to vegetation where possible. Care shall be taken not to damage those trees identified in the Tree Survey Report to be retained during the construction phase; and</li> <li>• Careful and efficient transplanting of existing vegetation carried out under the supervision of a professional landscape architect</li> </ul>	Contractor

## 2.1 Summary of the Implementation Status of Environmental Protection & Pollution Control / Mitigation Measures

### 2.1.1 Construction Noise Mitigation Measures

The construction noise mitigation measures were mainly achieved by carrying out good site practice by the Contractor during the construction works and the operation of powered mechanical equipment and machines.

The following is the summary of the mitigation measures employed during the year.

#### Mitigation Option 1

- Plant operated on site kept well maintained;
- Machines and plant that were in intermittent use shut down or throttled down to a minimum between work periods;
- Simultaneous noisy activities near sensitive receivers were avoided;
- Plant known to emit noise strongly in one direction was orientated to direct noise away from nearby sensitive receivers;
- The Contractor devised and arranged methods of working in such a manner so as to minimize noise impacts on the surrounding environments; and
- Certain types of powered mechanical equipment, such as generators and compressors, were completely enclosed.

#### Mitigation Option 2

- The number of bulldozers, compressors and lorries was reduced to one during site clearance stage;
- The excavator, bulldozer, scraper and motor grader were not being operated simultaneously;
- The individual tasks (i.e. ground, reinforcement, concreting and backfilling activities) were separated for pile capping;
- The backhoe and excavator were not being operated simultaneously;
- The asphalt paver and road roller were not being operated simultaneously during paving the new access road;
- All sub-tasks (i.e. levelling of new road, laying base and sub-base, kerbing and laying new surface) were separated for road construction.
- Simultaneous operation of the following items of plant was avoided: grader and bulldozer; dumper truck and roller; asphalt paver and road roller.
- All sub-tasks (i.e. excavation of trench and placement of pipes) were separated for drainage works;
- Since the commencement of this project was on October 2002, the mitigation measure that the construction of road furniture should be rescheduled to avoid the period of fourth quarter of 2002 could be easily satisfied;
- Likewise, the construction schedule could fulfill the mitigation that the road alignment construction in the vicinity (within 40m of Lee Wing house (Lee on Estate) did not coincide with the construction of the footbridge and the elevated section of Ma On Shan Railway (within 40m of Lee Wing House).

### 2.1.2 Landscape and Visual Mitigation Measures

The following is the summary of the mitigation measures employed during the year.

- Conservation of topsoil was implemented;
- The pedestrian routes were re-routed away from the work site;
- The existing trees were retained and damage to vegetation minimized especially for those trees identified in the Tree Survey Report to be retained during the construction phase; and
- Transplanting of existing vegetation was carried out in an efficient and careful manner under the supervision of a professional landscape architect.

### 2.1.3 Others

The following is the summary of the mitigation measures employed during the year.

- Discharge of accumulated stagnant rain water;
- Regularly watered the haul road;
- General refuse cleared regularly
- Surface run off directed to the existing desilting facilities before being discharged;
- Machines and plant shut down or throttled them down to a minimum between work periods.
- All vehicles cleaned before they leave the site to ensure that no earth, mud & debris deposited by them on roads.
- All operated plants well maintained during the construction works;
- Sand heap covered with impervious tarpaulin
- Working area kept wet when the concrete breaking work was taking place.
- Clean the sediments inside the U-channel
- Site access roads were watered purpose of dust suppression

## 2.0 IMPLEMENTATION STATUS

According to the EIA report, the following schedule should be implemented during the construction phase for this year.

Location	Reference Section	Environmental Protection Measures	Agent	Timing
<b>Construction Noise Mitigation</b>				
Wu Kwai Sha New Village (1)	EIA 3.5.25	Mitigation Option 2	Contractor	Quarter 9-12
Wu Kwai Sha New Village (2)	EIA 3.5.23	Mitigation Option 1	Contractor	Quarter 9-12
Lok Wo Sha (1)	EIA 3.5.23	Mitigation Option 1	Contractor	Quarter 9-12
Lok Wo Sha (2)	EIA 3.5.23	Mitigation Option 1	Contractor	Quarter 9-12
Kam Lung Court (1)	EIA 3.5.25	Mitigation Option 2	Contractor	Quarter 9-12
Kam Lung Court (2)	EIA 3.5.25	Mitigation Option 2	Contractor	Quarter 9-12
Lee On Estate (1)	EIA 3.5.25	Mitigation Option 2	Contractor	Quarter 9-12
Lee On Estate (2)	EIA 3.5.25	Mitigation Option 2	Contractor	Quarter 9-12
Residential Development STTL446	EIA 3.5.23	Mitigation Option 1	Contractor	Quarter 9-12
Residential Development at Wu Kai Sha DD206	EIA 3.5.23	Mitigation Option 1	Contractor	Quarter 9-12

- Note: The locations of the noise assessment points are shown in the Figure 7 of the EIA Report.
- The Environmental mitigation implementation schedule of EIA Report covers only Quarter 1 to Quarter 9. Thus, period after Quarter 9 is scheduled following the previous quarter.

## 2.1 Summary of the Implementation Status of Environmental Protection & Pollution Control / Mitigation Measures

### 2.1.1 Construction Noise Mitigation Measures

The construction noise mitigation measures were mainly achieved by carrying out good site practice by the Contractor during the construction works and the operation of powered mechanical equipment and machines.

The following is the summary of the mitigation measures employed during the year.

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- The Contractor devised and arranged methods of working in such a manner so as to minimize noise impacts on the surrounding environments; and
- Certain types of powered mechanical equipment, such as generators and compressors, were completely enclosed.

#### Mitigation Option 2

- The number of bulldozers, compressors and lorries was reduced to one during site clearance stage;
- The excavator, bulldozer, scraper and motor grader were not being operated simultaneously;
- The individual tasks (i.e. ground, reinforcement, concreting and backfilling activities) were separated for pile capping;
- The backhoe and excavator were not being operated simultaneously;
- The asphalt paver and road roller were not being operated simultaneously during paving the new access road;
- All sub-tasks (i.e. levelling of new road, laying base and sub-base, kerbing and laying new surface) were separated for road construction.
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- Since the commencement of this project was on October 2002, the mitigation measure that the construction of road furniture should be rescheduled to avoid the period of fourth quarter of 2002 could be easily satisfied;
- Likewise, the construction schedule could fulfill the mitigation that the road alignment construction in the vicinity (within 40m of Lee Wing house (Lee on Estate) did not coincide with the construction of the footbridge and the elevated section of Ma On Shan Railway (within 40m of Lee Wing House).

### 2.1.2 *Landscape and Visual Mitigation Measures*

The following is the summary of the mitigation measures employed during the year.

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- The pedestrian routes were re-routed away from the work site;
- The existing trees were retained and damage to vegetation minimized especially for those trees identified in the Tree Survey Report to be retained during the construction phase; and
- Transplanting of existing vegetation was carried out in an efficient and careful manner under the supervision of a professional landscape architect.

### 2.1.3 *Others*

The following is the summary of the mitigation measures employed during the year.

- Discharge of accumulated stagnant rain water;
- Regularly watered the haul road;
- General refuse cleared regularly
- Surface run off directed to the existing desilting facilities before being discharged;
- Machines and plant shut down or throttled them down to a minimum between work periods.
- All vehicles cleaned before they leave the site to ensure that no earth, mud & debris deposited by them on roads.
- All operated plants well maintained during the construction works;
- Sand heap covered with impervious tarpaulin
- Working area kept wet when the concrete breaking work was taking place.
- Clean the sediments inside the U-channel
- Site access roads were watered purpose of dust suppression

### **3.0 MONITORING RESULTS**

#### **3.1 Graphical Plots & Statistical Analysis of the monitored parameters**

The graphical plots of the trends of the monitored parameters over the past 12 months for representative monitoring stations are shown in Appendix F.

The statistical analysis is also enclosed in the Appendix F.

#### **3.2 Major Activities during the Year**

Major activities during the year include the followings:

- Drainage works
- Road works
- Construction of cycle track
- Retaining wall construction
- Noise Barrier construction
- Installation of Noise Barrier panel
- Landscaping works

#### **3.3 Weather Conditions**

Only one event of monitoring on 23 June 05 was cancelled due to heavy rain, with the remaining carried out in sunny days. The weather conditions during the period are shown in the Appendix E.

#### **3.4 Influencing Factors**

The other contractor site area near Lee On Estate slightly affected the noise monitoring results especially for CNM 2. The traffic noise from Sai Sha Road significantly contributed to the noise pollution.

**4. SUMMARY OF NON-COMPLIANCE OF THE ACTION AND LIMIT LEVELS, COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS**

**4.1 Non-compliance of the Action and Limit Levels**

*4.1.1 Summary Record & Follow-up Actions*

During the year, there was no noise limit level exceedance.

*4.1.2 Review of the reasons for and the implications of non-compliance*

The following table summarizes the reasons leading to the non-compliance during the year.

<b>DATE</b>	<b>STATION (NOISE LEVEL)</b>	<b>REASONS FOR NON-COMPLIANCE &amp; FOLLOW-UP ACTIONS</b>
N/A	N/A	N/A

**4.2 Written Complaints and Verbal Complaints**

*4.2.1 Summary Record of All Complaints Received*

During the year, there was no complaint received.

In addition, the complaint log is documented by the ET and is shown in Appendix F for reference.

The following table shows the summary for all the complaints received since the commencement of the Contract.

<b>TOTAL NO. OF COMPLAINT</b>	<b>NO. OF COMPLAINT RECEIVED WITHIN REPORTING PERIOD</b>	<b>NO. OF COMPLAINT THAT IS STILL UNDER INVESTIGATION</b>	<b>NO. OF CLOSED COMPLAINT</b>
1	0	0	1

**4.3 Notifications of summons and successful prosecutions for breaches**

*4.3.1 Summary Record*

During the year, there were no notifications of summons and successful prosecutions for breaches of any environmental laws.



## **5.0 REVIEW & COMMENTS**

### **5.1 Validity of EIA Report Predictions & Its Shortcomings in Recommendations**

#### *General*

The EIA study and report was conducted in July 1999 and the envisaged construction programme started in January 2001. Most predictions and recommendations were made based on this construction programme. However, the actual construction commencement date was on 15 August 2003 and some predictions and recommendations were not up to date.

#### *Noise Sensitive Receiver*

During the EIA study, because of the imminent population growth and rapid residential development at Wu Kai Sha area, some potential noise sensitive receivers were depicted and included in the noise impact analysis. One predicted sensitive receiver was Residential Development at Wu Kai Sha DD206. It was found that it would be adversely affected by the construction noise during the construction phase and the subsequent noise monitoring was required as stipulated in the EM & A Manual.

However, the area delineated for Residential Development at Wu Kai Sha DD206 is now still an open car park. This is not considered to be a noise sensitive receiver by the ET Leader. With the agreement among the IEC, EPD, ER and the Contractor, the noise monitoring works was temporarily suspended since 1 August 2003. In case there are any new noise sensitive receiver(s) established at Wu Kwai Sha DD 206 during the remaining construction period, the monitoring work will be immediately resumed and conducted in accordance with the requirements set out in the Environmental Monitoring and Audit Manual.

#### *Noise Impact Mitigation Measures*

The prediction that the nearby residents are very sensitive to construction noise is still valid. It is also anticipated that cumulative effects may occur where noisy construction processes take place during the construction phase of the Ma On Shan Rail alignment. Such anticipation is valid during the first quarter of the construction phase. In fact, the combined noise resulted in noise limit level exceedance.

Generally speaking, the noise impact mitigation measures recommended by the EIA Report were implemented through good site practice.

#### *Landscape & Visual Impact Mitigation Measures*

According to the EIA Report, during the construction phase, the proposed works would have a significant adverse impact to the landscape and visual environment due to the construction activities, loss of open area and removal of trees within the project area, including all the temporary works area which would be located within the project site. This prediction is valid this year.

There were some mitigation measures recommended by the EIA Report in this aspect and most of them were implemented during the year. For example, during tree transplanting, the ET requested the Contractor to carry out the works under the supervision of a professional landscape architect.

#### *Shortcomings in Recommendations*

It is stated in the EIA Report and the EM & A Manual that temporary movable noise barriers in the form of site hoardings will be employed for reducing the construction noise. However, since the criteria for providing the temporary movable noise barrier is not clearly specified in the report and the manual, the Contractor has not provided it. It is then recommended that the future EM & A Manual of other projects should clearly specify under which circumstances the temporary movable noise barrier should be adopted.

## **5.2 Effectiveness & Efficiency**

#### *Noise Impact Mitigation Measures*

The mitigation measures mentioned in the EIA Report generally help the Contractor reduce the noise level. It is satisfactory to see that the noisy air compressors were completely enclosed, which significantly reduces the equipment noise. Through weekly site environmental audit, it was observed that the construction activities were not very noisy.

Only one noise limit level exceedance was recorded during the year. The mitigation measures in the form of good site practice implementation have been generally effective in minimising the noise impact. The Contractor was constantly reminded to frequently review the construction works and prevent simultaneous operation of noisy plant and equipment to prevent intolerable disturbance to the sensitive receivers.

#### *Landscape Impact Mitigation Measures*

The mitigation measures mentioned in the EIA Report generally help the Contractor protect the environment especially the trees mentioned in the EIA Report to be retained. The trees transplanted during the year were generally in good condition. This complies with the recommendations of the EIA Report.

## **5.3 EM & A Programme**

The EM & A programme follows the recommended schedule shown in Annex A of the EIA Report

The timing is specified by construction phase quarter. Different construction noise mitigation options will be applied to different sensitive receivers for different construction phase quarter.

Since the mitigation measures for construction phase are implemented through good site practice whenever site activities are carried out, the EM & A programme is in general considered to be successful.

**Appendix A**  
**CONSTRUCTION PROGRAMME**



**Appendix B**  
**SITE ORGANIZATION CHART**

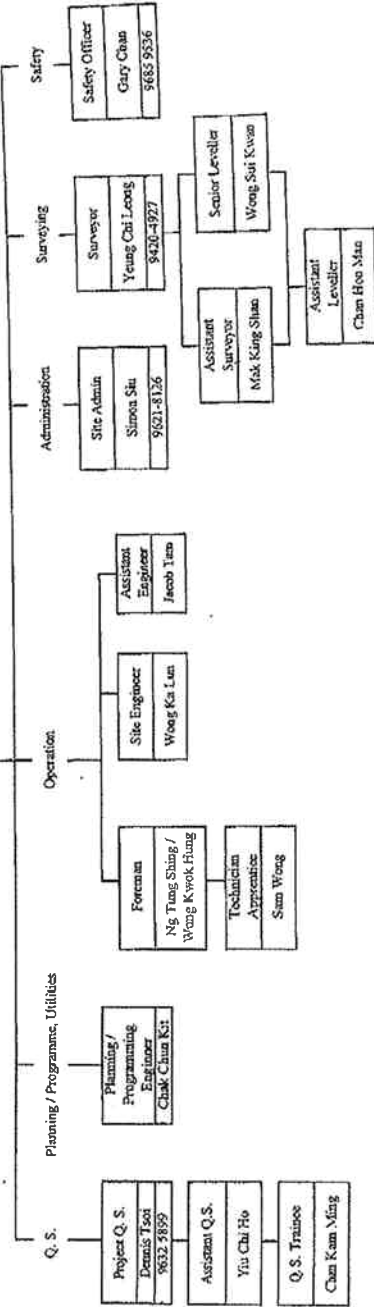
Date: 1st September 2004  
Rev: K

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Contract No.: HY/2001/18  
Sai Sha Road Widening between Kam Ying Road and Future Trunk Road T7 Junction  
**Project Organization Chart**  
The most updated Project Organization Chart is always maintained by PM/SA at File 10.01  
The O-chart in this appendix is just for record purpose



Position	Name	Contact Telephone
Project Q. S.	Dennis Tsot	8632 5859
Assistant Q. S.	Yu Chi Ho	
Q. S. Trainee	Chan Kam Ming	



**Appendix C**

**SUMMARY OF EM&A REQUIREMENT**

## SUMMARY OF EM & A REQUIREMENTS

### Noise Monitoring Parameters

According to Section 2.2.1 of the *EM & A Manual*, the noise monitoring parameters are:

- 1) A-weighted equivalent continuous sound pressure level  $L_{Aeq (30min)}$  for the time period between 0700 and 1900 hours on normal weekdays. For all other time periods,  $L_{Aeq (5min)}$  shall be employed for comparison with the Noise Control Ordinance (NCO) criteria
- 2)  $L_{A10}$  and  $L_{A90}$ , defined as the levels that have been exceeded the 10% and 90% of the measurement time in decibels respectively

### Action and Limit Noise Levels

According to Section 2.7 of the *EM & A Manual*, the Action and Limit Noise Levels are summarised in the following table:

Time Period	Action	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		70 dB(A)
2300-0700 hours of next day		55 dB(A)

### Event and Action Plan for Construction Noise

Should any non-compliance of the action and limit noise level criteria stipulated in Section 2.7 of the *EM & A Manual* occurs, the ET Leader, the IC(E), the ER (Engineer's Representative) and the Contractor shall undertake relevant actions in accordance with the Event and Action Plan for noise tabulated below:

EVENT	ACTION	
	ET Leader	IC(E)
Action Level	<ol style="list-style-type: none"> <li>1. Notify IC(E) and Contractor</li> <li>2. Carry out investigation</li> <li>3. Report the results of investigation to the IC(E) and Contractor</li> <li>4. Discuss with the Contractor and formulate remedial measures</li> <li>5. Increase monitoring frequency to check mitigation effectiveness</li> </ol>	<ol style="list-style-type: none"> <li>1. Review the analysed results submitted by the ET</li> <li>2. Review the proposed remedial measures by the Contractor and advise the ER accordingly</li> <li>3. Supervise the implementation of remedial measures</li> </ol>



EVENT	ACTION	
	ET Leader	IC(E)
Limit Level	<ol style="list-style-type: none"> <li>1. Notify IC(E), ER, EPD and Contractor;</li> <li>2. Identify source</li> <li>3. Repeat measurement to confirm findings</li> <li>4. Increase monitoring frequency</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented</li> <li>6. Inform IC(E), ER and EPD the causes &amp; actions taken for the exceedances</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results</li> <li>8. If exceedance stops, cease additional monitoring</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET and Contractor on the potential remedial actions</li> <li>2. Review Contractor' remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>

EVENT	ACTION	
	ER	Contractor
Action Level	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing</li> <li>2. Notify Contractor</li> <li>3. Require Contractor to propose remedial measures for the analysed noise problem</li> <li>4. Ensure remedial measures are properly implemented</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IC(E)</li> <li>2. Implement noise mitigation proposals</li> </ol>
Limit Level	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing</li> <li>2. Notify Contractor</li> <li>3. Require Contractor to propose remedial measures for the analysed noise problem</li> <li>4. Ensure remedial measures are properly implemented</li> <li>5. If exceedance continues, consider what portion of work is responsible and instruct the Contractor to stop that 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 IC(E) 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 ER until the exceedance is abated</li> </ol>

## **Environmental Mitigation Measures for Noise Impact**

Noise emissions from construction sites can be minimised through good site practice, selecting quiet plant and quiet working methods and through the use of temporary barriers. These methods are discussed in the following paragraphs.

### *Good Site Practice*

Good site practice and noise management can considerably reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during each phase of construction:

- 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 nearby NSRs;
- Silencers or mufflers on construction equipment should be utilised and should be properly maintained during the construction works;
- Mobile plant should be sited as far away from NSRs as possible; and
- Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.

### *Selecting Quieter Plant and Working Methods*

The Contractor may be able to obtain particular models of plant that are quieter than standard types given in the GW-TM. The benefits achievable in this way will depend on the details of the Contractors' chosen methods of working, and it is considered too restrictive to specify that a Contractor has to use specific items of plant for the construction operations. It is therefore both preferable and practical to specify an overall plant noise performance specification to apply to the total SWL of all plant on the site so that the Contractor is allowed some flexibility to select plant to suit his needs.

It should be noted that various types of silenced equipment can be found in Hong Kong. However, the EPD, when processing a CNP application, will apply the noise levels contained in the relevant statutory TM unless the noise emission of a particular piece of equipment can be validated by certificate or demonstration.

### *Temporary Noise Barriers*

In general, noise barriers located between noisy construction activities and NSRs could give up to 5 dB(A) reduction from screening (estimated in accordance with TM). It would be possible for the Contractor to provide barriers, in the form of site hoardings, to achieve this level of reduction. Certain types of PME, such as generators and compressors, can be completely enclosed giving a total noise reduction of 10 dB(A) or more. Movable vertical barriers that can be located close to noisy plant can also be very effective at screening NSRs from particular plant.

By considering the above methods of mitigation it is possible to develop a

mitigation package, which can be adopted to minimise potential noise impacts. Two mitigation options are considered in this assessment.

#### *Mitigation Option 1*

Mitigation Option 1 utilises quiet plant, where appropriate, and movable noise barriers.

#### *Mitigation Option 2*

In areas where mitigation option 1 is not sufficient to protect NSRs from noise impacts further mitigation will be required. This will necessitate restricting the construction activities which can operate simultaneously as well as the number of plant used to carry out the specific activities. The necessary measures are:

- Site Clearance – reduce the number of bulldozers/rippers, compressors and lorries to one and ensure that the excavator, bulldozer, scraper and motor grader do not operate simultaneously.
- Pile Capping – separate the individual tasks (i.e. ground, reinforcement, concreting and backfilling activities) and ensure that the backhoe and excavator do not operate simultaneously.
- In-situ Superstructure – formwork and reinforcement to be carried out separately from concreting.
- Paving – ensure the asphalt paver and road roller do not operate simultaneously.
- Drainage – separate all sub-tasks (i.e. excavation of trench and placement of pipes).
- Road Construction – separate all sub-tasks (i.e. levelling of new road, laying base and sub-base, kerbing and laying new surface). In addition, it will be necessary to avoid simultaneously operation of the following items of plant: grader and bulldozer; dumper truck and roller; asphalt paver and road roller.
- Fourth quarter of 2001 – reschedule construction of utilities services and road furniture to avoid this period.
- Fourth quarter of 2002 – reschedule construction of road furniture to avoid this period.

The residual noise impacts at Lee On Estate are, in general, dominated by construction of the main alignment, footbridge and MOS Rail. It is recommended that the construction of the alignment in the vicinity (within 40 m) of Lee Wing House (Lee On Estate) is scheduled so it will not coincide with the construction of the footbridge and the elevated

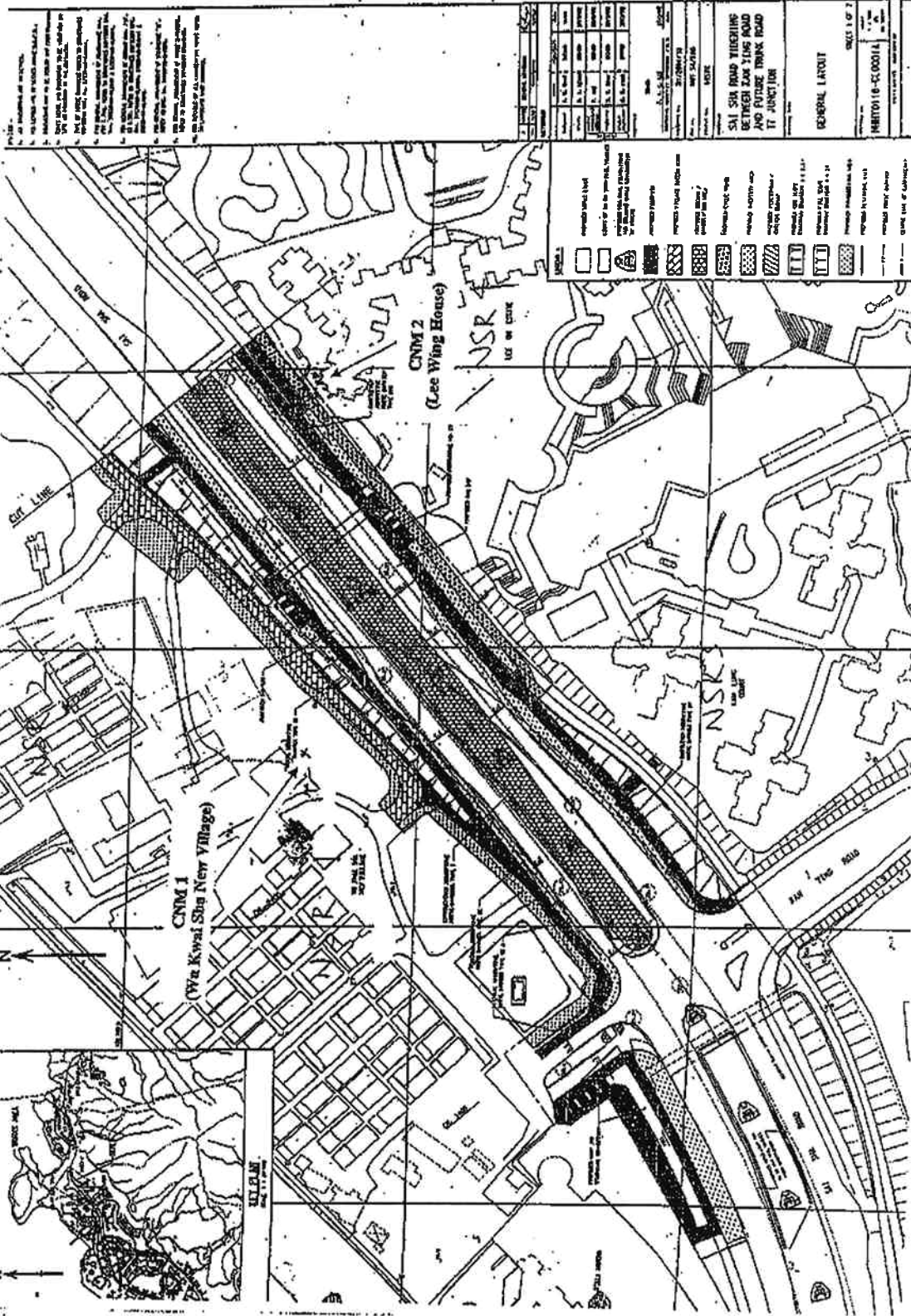
## **Environmental Mitigation Measures for Landscape & Visual Impact**

Mitigation of temporary visual and landscape impacts during the construction stage can be achieved through the implementation of the following recommended measures within the project site:

- Conservation of topsoil;
- Screening of site construction works by use of hoardings;
- Surface treatment of site hoardings to enhance visual interest and harmony with surrounding landscape / townscape;
- Locating site offices and other temporary building in least visually prominent locations;
- Efficient programming of construction works to reduce duration of construction works;
- Staging of construction works to minimise areas requiring site hoardings which create visual intrusion;
- Re-routing of pedestrian routes away from the work site where possible;
- Retaining existing trees and minimising damage to vegetation where possible. Care shall be taken not to damage those trees identified in the Tree Survey Report to be retained during the construction phase; and
- Careful and efficient transplanting of existing vegetation carried out under the supervision of a professional landscape architect.

**Appendix D**

**THE PROJECT AREA, ENVIRONMENTAL SENSITIVE  
RECEIVERS AND THE LOCATIONS OF THE MONITORING  
STATIONS**



- NOTES:
1. All dimensions are in meters.
  2. All levels are in meters above sea level.
  3. All levels are in meters above sea level.
  4. All levels are in meters above sea level.
  5. All levels are in meters above sea level.
  6. All levels are in meters above sea level.
  7. All levels are in meters above sea level.
  8. All levels are in meters above sea level.
  9. All levels are in meters above sea level.
  10. All levels are in meters above sea level.
  11. All levels are in meters above sea level.
  12. All levels are in meters above sea level.
  13. All levels are in meters above sea level.
  14. All levels are in meters above sea level.
  15. All levels are in meters above sea level.
  16. All levels are in meters above sea level.
  17. All levels are in meters above sea level.
  18. All levels are in meters above sea level.
  19. All levels are in meters above sea level.
  20. All levels are in meters above sea level.

NO.	DESCRIPTION	UNIT	QUANTITY
1	...	...	...
2	...	...	...
3	...	...	...
4	...	...	...
5	...	...	...
6	...	...	...
7	...	...	...
8	...	...	...
9	...	...	...
10	...	...	...
11	...	...	...
12	...	...	...
13	...	...	...
14	...	...	...
15	...	...	...
16	...	...	...
17	...	...	...
18	...	...	...
19	...	...	...
20	...	...	...

SAI SZE ROAD WIDENING BETWEEN HING ROAD AND BUENING TRUNK ROAD AT JUNCTION

GENERAL LAYOUT

MB10116-510001A

SCALE: 1:500

DATE: 10/10/2011

PROJECT: SAI SZE ROAD WIDENING BETWEEN HING ROAD AND BUENING TRUNK ROAD AT JUNCTION

DESIGNER: [Name]

CHECKED: [Name]

DATE: 10/10/2011



Monitoring Point CNM 1 – Wu Kwai Sha New Village  
On Estate



Monitoring Point CNM 2 – Lee Wing House of Lee

**Appendix E**

**WEATHER CONDITION DURING THE MONITORING PERIOD**



**Contract No. HY/2001/18****Sai Sha Road Widening between Kam Ying Road  
and Future Trunk Road T7 Junction****Major Activity and Weather Condition During Baseline Monitoring****Monitoring Location: Wu Kwai Sha New Village (CNM 1)**

<b>Date</b>	<b>Start Time</b>	<b>Weather Condition</b>	<b>Major Activities</b>	<b>Other Activities</b>
10/07/04	10:30	Sunny	Nil	Traffic , Pedestrian
10/14/04	11:50	Sunny	Nil	Traffic , Pedestrian
10/21/04	12:00	Sunny	Nil	Traffic , Pedestrian
10/28/04	12:15	Sunny	Nil	Traffic , Pedestrian
11/04/04	11:50	Sunny	Nil	Traffic , Pedestrian
11/11/04	11:50	Sunny	Nil	Traffic , Pedestrian
11/18/04	11:50	Sunny	Nil	Traffic , Pedestrian
11/25/04	11:20	Sunny	Nil	Traffic , Pedestrian
12/04/04	11:00	Sunny	Nil	Traffic , Pedestrian
12/09/04	10:35	Sunny	Nil	Traffic , Pedestrian
12/16/04	11:40	Sunny	Nil	Traffic , Pedestrian
12/23/04	10:50	Sunny	Nil	Traffic , Pedestrian
12/30/04	11:40	Sunny	Nil	Traffic , Pedestrian
01/13/05	11:10	Sunny	Nil	Traffic , Pedestrian
01/20/05	11:05	Sunny	Nil	Traffic , Pedestrian
01/27/05	10:50	Sunny	Nil	Traffic , Pedestrian
02/03/05	11:05	Sunny	Nil	Traffic , Pedestrian
02/17/05	11:10	Sunny	Nil	Traffic , Pedestrian
02/24/05	11:05	Sunny	Nil	Traffic , Pedestrian
03/03/05	11:05	Sunny	Nil	Traffic , Pedestrian
03/10/05	11:10	Sunny	Nil	Traffic , Pedestrian
03/17/05	11:05	Sunny	Nil	Traffic , Pedestrian
03/24/05	11:00	Sunny	Nil	Traffic , Pedestrian
03/31/05	11:10	Sunny	Nil	Traffic , Pedestrian
04/07/05	11:00	Sunny	Nil	Traffic , Pedestrian
04/14/05	11:15	Sunny	Nil	Traffic , Pedestrian
04/21/05	11:15	Sunny	Nil	Traffic , Pedestrian
04/28/05	11:00	Sunny	Nil	Traffic , Pedestrian

05/05/05	11:00	Sunny	Nil	Traffic , Pedestrian
05/12/05	11:10	Sunny	Nil	Traffic , Pedestrian
05/19/05	11:05	Sunny	Nil	Traffic , Pedestrian
05/26/05	11:10	Sunny	Nil	Traffic , Pedestrian
06/02/05	11:05	Sunny	Nil	Traffic , Pedestrian
06/09/05	11:00	Sunny	Nil	Traffic , Pedestrian
06/16/05	11:05	Sunny	Nil	Traffic , Pedestrian
06/23/05*	-	Heavy Rain	N/A	N/A
06/30/05	11:10	Sunny	Nil	Traffic , Pedestrian
07/07/05	10:45	Sunny	Nil	Traffic , Pedestrian
07/14/05	10:40	Sunny	Nil	Traffic , Pedestrian
07/21/05	10:50	Sunny	Nil	Traffic , Pedestrian
07/28/05	10:55	Sunny	Nil	Traffic , Pedestrian
08/04/05	10:45	Sunny	Nil	Traffic , Pedestrian
08/11/05	10:40	Sunny	Nil	Traffic , Pedestrian
08/18/05	10:50	Sunny	Nil	Traffic , Pedestrian
08/25/05	10:50	Sunny	Nil	Traffic , Pedestrian
09/01/05	10:30	Sunny	Nil	Traffic , Pedestrian
09/06/05	10:55	Sunny	Nil	Traffic , Pedestrian
09/22/05	10:45	Sunny	Nil	Traffic , Pedestrian
09/29/05	10:50	Sunny	Nil	Traffic , Pedestrian

\*The monitoring activity was cancelled due to rainy conditions.

**Contract No. HY/2001/18**

**Sai Sha Road Widening between Kam Ying Road  
and Future Trunk Road T7 Junction**

**Major Activity and Weather Condition During Baseline Monitoring**

**Monitoring Location: Kam Lung Court (CNM 2)**

<b>Date</b>	<b>Start Time</b>	<b>Weather Condition</b>	<b>Major Activities</b>	<b>Other Activities</b>
10/07/04	11:00	Sunny	Nil	Traffic , Pedestrian
10/14/04	11:15	Sunny	Nil	Traffic , Pedestrian
10/21/04	11:20	Sunny	Nil	Traffic , Pedestrian
10/28/04	11:40	Sunny	Nil	Traffic , Pedestrian
11/04/04	11:15	Sunny	Nil	Traffic , Pedestrian
11/11/04	11:10	Sunny	Nil	Traffic , Pedestrian
11/18/04	11:10	Sunny	Nil	Traffic , Pedestrian
11/25/04	11:55	Sunny	Nil	Traffic , Pedestrian
12/04/04	11:40	Sunny	Nil	Traffic , Pedestrian
12/09/04	10:00	Sunny	Nil	Traffic , Pedestrian
12/16/04	11:00	Sunny	Nil	Traffic , Pedestrian
12/23/04	11:30	Sunny	Nil	Traffic , Pedestrian
12/30/04	11:00	Sunny	Nil	Traffic , Pedestrian
01/13/05	11:50	Sunny	Nil	Traffic , Pedestrian
01/20/05	11:45	Sunny	Nil	Traffic , Pedestrian
01/27/05	11:50	Sunny	Nil	Traffic , Pedestrian
02/03/05	11:45	Sunny	Nil	Traffic , Pedestrian
02/17/05	11:45	Sunny	Nil	Traffic , Pedestrian
02/24/05	11:40	Sunny	Nil	Traffic , Pedestrian
03/03/05	11:45	Sunny	Nil	Traffic , Pedestrian
03/10/05	11:40	Sunny	Nil	Traffic , Pedestrian
03/17/05	11:40	Sunny	Nil	Traffic , Pedestrian
03/24/05	11:50	Sunny	Nil	Traffic , Pedestrian
03/31/05	11:45	Sunny	Nil	Traffic , Pedestrian
04/07/05	11:35	Sunny	Nil	Traffic , Pedestrian
04/14/05	11:50	Sunny	Nil	Traffic , Pedestrian
04/21/05	11:55	Sunny	Nil	Traffic , Pedestrian
04/28/05	11:35	Sunny	Nil	Traffic , Pedestrian

05/05/05	11:40	Sunny	Nil	Traffic , Pedestrian
05/12/05	11:50	Sunny	Nil	Traffic , Pedestrian
05/19/05	11:40	Sunny	Nil	Traffic , Pedestrian
05/26/05	11:45	Sunny	Nil	Traffic , Pedestrian
06/02/05	11:40	Sunny	Nil	Traffic , Pedestrian
06/09/05	11:50	Sunny	Nil	Traffic , Pedestrian
06/16/05	11:40	Sunny	Nil	Traffic , Pedestrian
06/23/05*	-	Heavy Rain	N/A	N/A
06/30/05	11:45	Sunny	Nil	Traffic , Pedestrian
07/07/05	10:10	Sunny	Nil	Traffic , Pedestrian
07/14/05	10:00	Sunny	Nil	Traffic , Pedestrian
07/21/05	10:10	Sunny	Nil	Traffic , Pedestrian
07/28/05	10:10	Sunny	Nil	Traffic , Pedestrian
08/04/05	10:10	Sunny	Nil	Traffic , Pedestrian
08/11/05	10:05	Sunny	Nil	Traffic , Pedestrian
08/18/05	10:20	Sunny	Nil	Traffic , Pedestrian
08/25/05	10:10	Sunny	Nil	Traffic , Pedestrian
09/01/05	9:55	Sunny	Nil	Traffic , Pedestrian
09/06/05	10:05	Sunny	Nil	Traffic , Pedestrian
09/22/05	10:05	Sunny	Nil	Traffic , Pedestrian
09/29/05	10:10	Sunny	Nil	Traffic , Pedestrian

\*The monitoring activity was cancelled due to rainy conditions.

**Appendix F**

**GRAPHICAL PLOTS OF TRENDS OF MONITORED PARAMETERS**

**Contract No. HY/2001/18**  
**Sai Sha Road Widening between Kam Ying Road**  
**and Future Trunk Road T7 Junction**  
**Monitoring Location: Wu Kwai Sha New Village (CNM 1)**  
**Time Period 7:00-19:00**

Period: Oct 2004 to Sep 2005

Date	Start Time	Duration (min)	Measurement Results								
			L <sub>90</sub> (dB(A))	L <sub>10</sub> (dB(A))	L <sub>eq</sub> (dB(A)) (5 mins)						L <sub>eq</sub> (dB(A)) (30 mins)
10/07/04	10:30	30	55.9	66.4	63.9	63.1	62.5	60.2	65.6	65.7	63.5
10/14/04	11:50	30	51.0	59.4	57.9	56.5	58.3	57.3	56.4	55.6	57.0
10/21/04	12:00	30	53.2	63.1	61.1	60.0	60.2	60.5	61.7	55.9	59.9
10/28/04	12:15	25	47.4	56.5	54.7	53.7	52.6	53.4	55.5	-	54.0
11/04/04	11:50	30	50.2	61.6	57.8	66.3	62.2	56.6	52.9	55.2	58.5
11/11/04	11:50	30	49.3	60.0	71.2	60.9	67.0	66.7	73.9	54.6	65.7
11/18/04	11:50	30	48.9	60.9	59.3	58.6	60.3	53.9	53.6	53.2	56.5
11/25/04	11:20	30	52.9	60.8	57.8	59.4	58.2	58.5	57.5	59.6	58.5
12/04/04	11:00	30	53.1	63.6	54.7	59.0	62.4	61.0	64.8	60.1	60.3
12/09/04	10:35	30	52.2	59.1	57.3	59.6	58.1	56.6	56.1	-	57.5
12/16/04	11:40	30	51.9	66.4	59.2	63.4	67.9	63.9	58.0	56.2	61.4
12/23/04	10:50	30	48.9	56.7	52.5	56.7	57.7	54.7	61.2	59.8	57.1
12/30/04	11:40	30	59.2	64.6	72.4	61.1	62.7	64.0	66.7	65.4	65.4
01/13/05	11:10	30	53.3	64.6	57.6	58.3	60.2	64.3	63.8	65.8	61.7
01/20/05	11:05	30	57.2	67.7	60.2	59.2	60.1	59.2	61.1	68.6	61.4
01/27/05	10:50	30	53.7	65.6	59.3	60.2	59.7	59.4	64.4	66.7	61.6
02/03/05	11:05	30	57.3	65.6	61.1	63.8	61.3	64.6	61.2	61.4	62.2
02/17/05	11:10	30	44.7	61.8	60.5	51.6	53.5	58.6	65.1	58.9	58.0
02/24/05	11:05	30	50.9	61.4	62.3	57.7	60.3	64.1	59.4	57.9	60.3
03/03/05	11:05	30	59.7	64.9	60.6	60.5	60.4	61.4	62.0	62.1	61.2
03/10/05	11:10	30	57.0	69.2	70.5	68.7	64.1	63.1	63.5	61.2	65.2
03/17/05	11:05	30	55.9	64.0	58.6	58.5	58.3	58.6	58.6	58.6	58.5
03/24/05	11:00	30	57.5	63.6	60.6	62.0	60.5	62.0	61.4	61.3	61.3
03/31/05	11:10	30	54.3	61.8	60.6	58.9	59.7	59.3	58.9	60.0	59.6
04/07/05	11:00	30	57.2	63.6	59.6	58.5	57.9	58.5	60.2	60.4	59.2
04/14/05	11:15	30	48.1	56.3	58.7	52.0	53.2	51.2	51.8	52.7	53.3
04/21/05	11:15	30	46.0	59.7	57.4	50.3	53.9	53.0	59.0	61.9	55.9
04/28/05	11:00	30	53.5	62.8	61.3	57.1	60.5	61.5	60.9	58.5	60.0
05/05/05	11:00	30	54.1	63.2	61.5	60.2	60.9	60.4	61.5	56.7	60.2
05/12/05	11:10	30	51.4	61.5	53.4	54.6	58.4	54.6	56.8	52.7	55.1
05/19/05	11:05	30	46.0	59.2	57.3	59.1	54.1	53.0	59.0	60.1	57.1
05/26/05	11:10	30	45.9	54.2	49.2	47.7	53.6	49.9	51.3	50.2	50.3
06/02/05	11:05	30	48.6	57.3	59.1	52.1	53.6	50.9	51.5	53.7	53.5
06/09/05	11:00	30	55.7	61.4	58.4	56.8	55.1	54.6	59.8	58.7	57.2
06/16/05	11:05	30	46.2	59.5	57.1	59.2	55.0	54.1	58.7	60.1	57.4
06/30/05	11:10	30	53.0	62.1	62.4	55.1	58.4	59.7	60.7	61.1	59.6
07/07/05	10:45	30	49.8	73.0	54.6	55.7	69.2	72.6	74.4	67.0	65.6
07/14/05	10:40	30	51.3	64.4	55.7	56.1	60.8	71.1	55.5	53.1	58.7
07/21/05	10:50	30	56.1	65.0	67.3	62.2	60.5	60.0	58.0	57.1	60.9
07/28/05	10:55	30	58.3	75.6	74.6	70.4	75.0	72.5	71.8	61.3	70.9
08/04/05	10:45	30	49.0	64.7	59.3	61.1	62.4	68.8	60.8	53.5	61.0
08/11/05	10:40	30	49.0	61.5	61.3	56.3	55.8	52.9	56.6	59.9	57.1
08/18/05	10:50	30	55.2	72.5	61.7	61.2	72.2	71.1	72.6	73.7	68.8
08/25/05	10:50	30	47.7	56.5	57.0	54.1	52.4	53.3	54.5	52.5	54.0
09/01/05	10:30	30	47.0	57.0	55.0	56.6	51.9	52.6	53.8	57.5	54.6
09/06/05	10:55	30	52.4	61.6	56.5	54.6	59.3	58.1	56.5	60.7	57.6
09/22/05	10:45	30	48.1	57.6	57.6	52.4	57.1	52.3	51.7	52.8	54.0
09/29/05	10:50	30	47.6	57.4	54.2	55.8	53.7	52.4	52.7	53.8	53.8

Mean(L<sub>eq</sub>(30))= 59.2  
Maximum(L<sub>eq</sub>(30))= 70.9  
Minimum(L<sub>eq</sub>(30))= 50.3

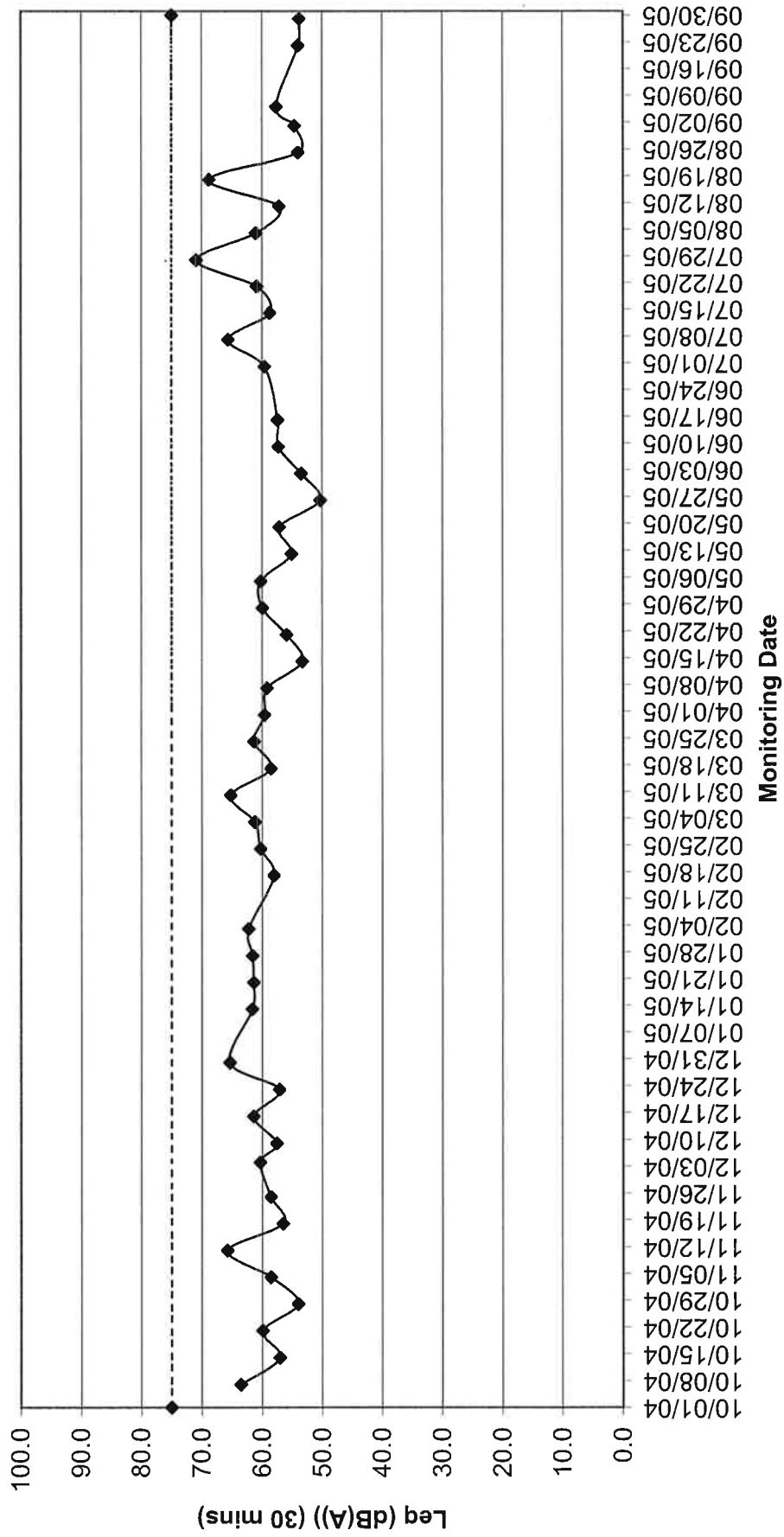
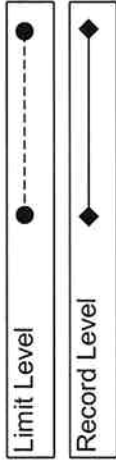
**Contract No. HY/2001/18**  
**Sai Sha Road Widening between Kam Ying Road**  
**and Future Trunk Road T7 Junction**  
**Monitoring Location: Kam Lung Court (CNM 2)**  
**Time Period 7:00-19:00**

Period: Oct 2004 to Sep 2005

Date	Start Time	Duration (min)	Measurement Results								
			L <sub>90</sub> (dB(A))	L <sub>10</sub> (dB(A))	L <sub>eq</sub> (dB(A)) (5 mins)						L <sub>eq</sub> (dB(A)) (30 mins)
10/07/04	11:00	30	60.2	66.6	64.4	65.7	65.1	63.7	63.5	62.9	64.2
10/14/04	11:15	30	59.5	67.0	66.8	65.3	63.6	64.4	64.8	62.5	64.6
10/21/04	11:20	30	62.8	69.6	66.8	68.7	65.9	66.0	68.0	65.6	66.8
10/28/04	11:40	30	51.3	67.6	68.2	64.3	63.2	58.0	55.8	56.3	61.0
11/04/04	11:15	30	63.8	73.3	70.9	74.2	68.6	69.5	68.7	66.3	69.7
11/11/04	11:10	30	63.2	68.6	67.4	67.4	68.1	67.3	66.0	66.2	67.1
11/18/04	11:10	30	61.7	67.5	64.9	66.3	65.0	64.9	64.5	65.7	65.2
11/25/04	11:55	30	55.6	66.2	67.4	61.5	62.1	73.7	61.7	61.1	64.6
12/04/04	11:40	30	59.0	66.4	68.3	63.3	63.5	63.2	63.6	65.5	64.6
12/09/04	10:00	30	65.8	70.7	71.2	67.0	68.6	68.8	69.0	68.5	68.9
12/16/04	11:00	30	59.9	67.7	65.2	65.0	66.3	64.7	64.4	65.1	65.1
12/23/04	11:30	30	59.9	69.0	63.3	64.9	66.9	70.4	65.0	66.1	66.1
12/30/04	11:00	30	63.9	69.0	65.8	68.4	67.9	66.9	66.6	66.1	67.0
01/13/05	11:50	30	56.9	65.8	62.2	63.2	62.6	61.6	66.4	61.5	62.9
01/20/05	11:45	30	59.3	65.6	62.0	64.1	63.8	63.3	63.6	63.2	63.3
01/27/05	11:50	30	62.5	65.3	65.1	64.5	63.6	63.3	63.6	64.3	64.1
02/03/05	11:45	30	55.5	69.2	62.8	59.8	59.4	65.1	68.8	69.6	64.3
02/17/05	11:45	30	55.6	65.2	59.0	61.8	65.0	61.7	63.2	60.9	61.9
02/24/05	11:40	30	54.5	59.5	58.7	56.5	56.7	57.0	58.1	57.9	57.5
03/03/05	11:45	30	55.9	69.4	61.8	60.8	59.9	65.7	69.8	68.9	64.5
03/10/05	11:40	30	56.4	65.0	60.3	60.1	60.5	63.5	64.1	69.8	63.1
03/17/05	11:40	30	55.6	64.8	59.1	59.3	59.0	58.1	64.2	64.9	61.1
03/24/05	11:50	30	55.2	61.7	59.0	58.1	58.4	59.7	60.8	58.3	59.1
03/31/05	11:45	30	60.3	65.3	63.5	64.6	64.2	62.0	62.9	61.9	63.2
04/07/05	11:35	30	55.5	67.0	61.1	59.4	59.9	63.6	66.6	67.0	62.9
04/14/05	11:50	30	53.0	60.4	58.3	57.4	56.9	57.4	58.0	56.9	57.5
04/21/05	11:55	30	51.9	58.5	58.8	56.5	55.3	56.9	56.9	55.3	56.9
04/28/05	11:35	30	45.8	63.7	54.5	63.7	67.6	58.1	53.8	48.8	57.8
05/05/05	11:40	30	54.9	66.8	60.0	59.6	60.2	59.8	64.8	66.1	61.8
05/12/05	11:50	30	55.9	68.4	57.6	59.6	63.5	62.7	66.5	63.1	62.2
05/19/05	11:40	30	58.1	69.4	63.8	64.9	64.1	63.5	68	59.8	64.0
05/26/05	11:45	30	44.9	64.7	59.4	63.1	62.7	59.6	58.6	56.1	59.9
06/02/05	11:40	30	54.8	65.7	60.8	59.4	64.8	62.0	57.1	56.8	60.2
06/09/05	11:50	30	57.8	68.8	61.8	63.8	64.4	61.0	59.7	63.9	62.4
06/16/05	11:40	30	60.1	69.2	64.8	66.9	67.1	65.9	63.7	64.5	65.2
06/30/05	11:45	30	56.7	68.7	61.4	59.8	58.8	59.6	62.5	62.8	60.8
07/07/05	10:10	30	56.9	65.5	65.4	64.1	62.2	61.8	62.0	61.2	62.8
07/14/05	10:00	30	58.3	65.9	62.3	62.6	64.8	63.2	63.6	63.4	63.3
07/21/05	10:10	30	61.9	70.8	65.8	68.2	71.7	68.8	67.2	66.5	67.3
07/28/05	10:10	30	64.8	73.7	69.3	68.0	69.7	73.7	70.2	69.7	70.1
08/04/05	10:10	30	59.7	65.4	62.9	63.0	61.7	65.3	63.1	62.9	63.2
08/11/05	10:05	30	60.5	71.1	65.0	74.0	71.0	65.2	62.8	64.2	67.0
08/18/05	10:15	30	62.1	69.8	65.2	65.8	65.4	65.5	73	70.8	68.1
08/25/05	10:10	30	59.8	66.0	66.8	64.5	63.3	63.4	62.3	61.4	63.6
09/01/05	9:55	30	58.8	66.8	64.0	64.5	65.0	62.0	63.8	64.1	63.9
09/06/05	10:05	30	57.3	69.6	72.5	64.1	62.6	60.9	67.0	61.6	64.8
09/22/05	10:05	30	57.6	70.4	63.4	62.8	64.5	63.5	67.7	67.9	65.1
09/29/05	10:10	30	59.8	66.0	66.8	64.5	63.3	63.4	62.3	61.4	63.6

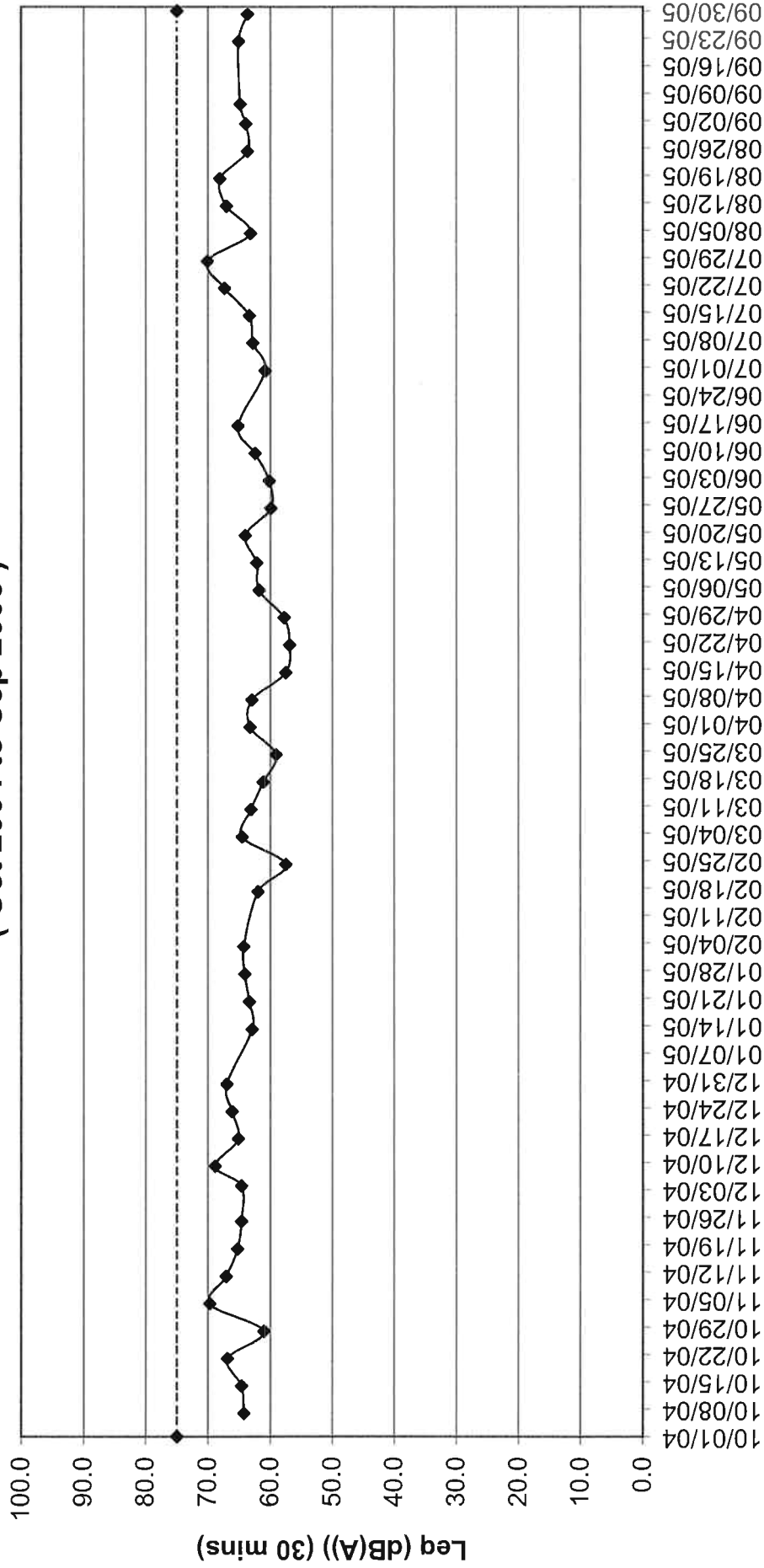
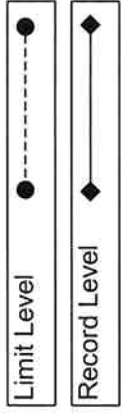
Mean(L<sub>eq</sub>(30))= 63.6  
Maximum(L<sub>eq</sub>(30))= 70.1  
minimum(L<sub>eq</sub>(30))= 56.9

**Construction Noise Monitoring Results  
Wu Kwai Sha New Village (CNM 1)  
( Oct 2004 to Sep 2005 )**





**Construction Noise Monitoring Results  
Kam Lung Court (CNM 2)  
( Oct 2004 to Sep 2005 )**



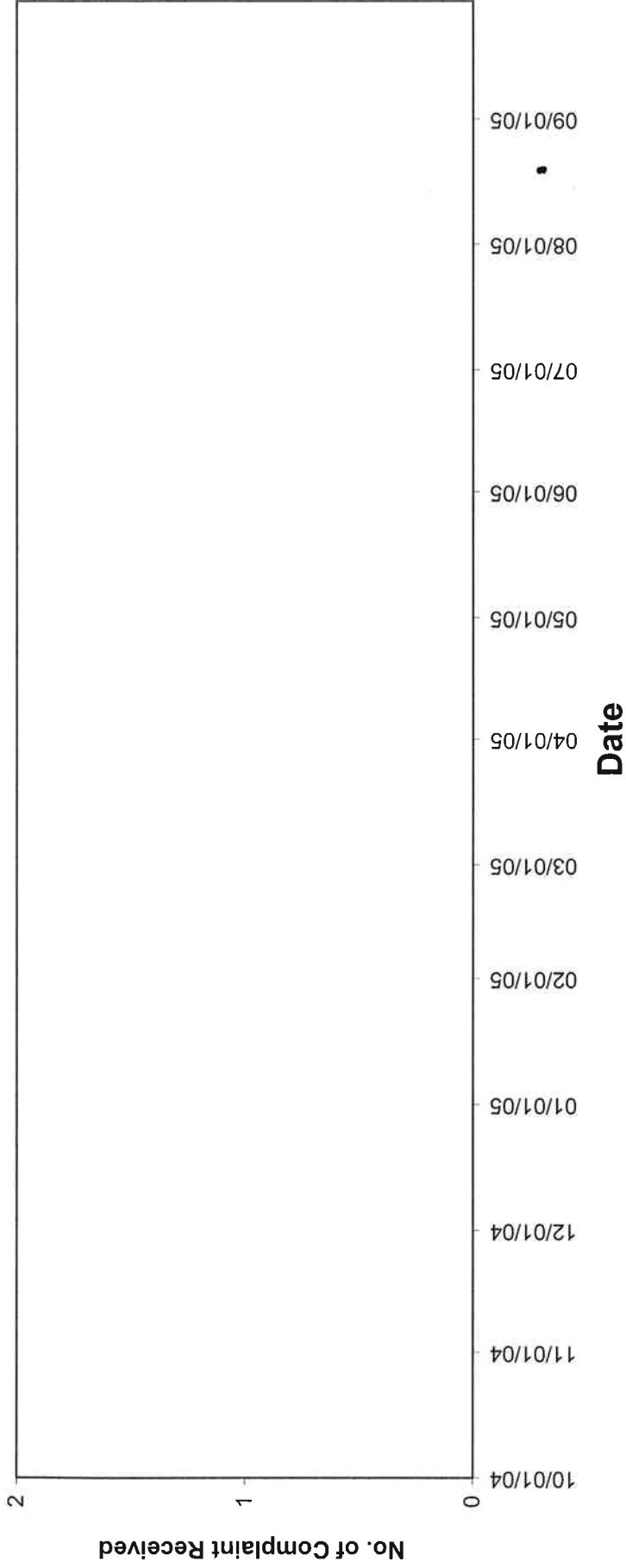
Monitoring Date

**Appendix G**

**STATISTICS FOR ENVIRONMENTAL COMPLAINTS**

**Contract No. HY/2001/18  
Sai Sha Road Widening between Kam Ying Road  
and Future Trunk Road T7 Junction**

**Statistic for Environmental Complaint During the Year  
October 2004 - September 2005**



**Appendix H**  
**CONTACT DETAILS & HOTLINE**

## Contact Details of Key Personnel

<b>Title</b>	<b>Name</b>	<b>Contact Number</b>
Engineer's Representative (Highways Department)	Mr. Greg Leung	2716 1043
EPD	Mr. Simon Hui	2835 1105
Project Director (Contractor)	Mr. David Kong	2137 5522
Project Manager (Contractor)	Mr. Alan Tam	9161 2991
Project Manager (Contractor)	Mr. Alan Tam	9161 2991
Environmental Team Leader (Babtie Asia Limited)	Mr. Mark Cheung	2738 3803
Independent Environmental Checker (BMT Asia Pacific Ltd)	Ms. Lyn Ip	2241 9812