

Mass Transit Railway Corporation Limited

Contract 5032 - Mong Kok Station New Integrated Entrance
C3

Environmental Monitoring and Audit Report

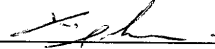
(September 2003)

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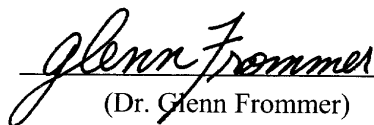
Environmental Monitoring and Audit Report

(September 2003)

Certified: 
(Dr. Kam Chan)

Position: Environmental Team Leader

Date: 14 OCT 2003

Verified: 
(Dr. Glenn Frommer)

Position: Independent Environmental Checker

Date: 14 OCT 2003

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EXECUTIVE SUMMARY

This is the 6th report prepared to document the environmental monitoring and audit works conducted for the modification works of Mong Kok Station under Contract 5032. Monitoring works for noise impact from the construction works were carried out during the period of September 2003. During this period, the major civil construction activities, including existing box culvert removal, utility diversion, installation of pump wells, sheetpile installation, king post installation and temporary road deck placing were carried out.

With reference to the collected monitoring data and by field observation, environmental conditions of the construction site were said to be satisfactory in general. There were no limit level exceedance recorded in regular construction noise monitoring at the agreed sensitive receivers. Two formal public complaints on construction noise and black smoke were received in this reporting period. The Contractor have provided reasonable effort to control the environmental impacts generated from the construction activities to the nearby surrounding.

As the concerned construction site is located in an urban area of Mong Kok, the noise and dust level are significantly affected by the busy traffic on Argyle Street and Portland Street and the works activities performed on the adjacent URA K2 Development site.

1 INTRODUCTION

1.1 Scope of the Report

The Environmental Team lead by the ET leader Dr. Kam Chan was responsible to provide baseline and impact environmental monitoring services for the Project and advise ER to supervise Contractor's performance on site environmental matters in order to comply with the requirements of the Project Profile, EM&A Manual and Environmental Permit approved by the Environmental Protection Department of HKSAR.

This is the 6th impact monitoring report to cover the environmental monitoring works in the period of September 2003.

1.2 Structure of the Report

The structure of the report is as follows:

- Section 1: Introduction – details the scope and structure of the report.
- Section 2: Project Information – summarizes the scope of the construction activities in this monitoring reporting period and the coming month.
- Section 3: Impact Noise Monitoring – summarizes the monitoring programme, locations and results.
- Section 4: Compliance checking which compares the impact monitoring results with the A/L Levels to determine whether the construction activities have any adverse impacts on the environment and gives comment in order to alleviate those impacts.
- Section 5: Actions taken in events of noise level exceedance.
- Section 6: Construction wastes disposal.
- Section 7: Record of complaints from public & EPD.
- Section 8: Status of permits and licences obtained.
- Section 9: Action items for site audits recorded.
- Section 10: Conclusion.

2 PROJECT INFORMATION

2.1 Construction Programme

The construction for modifications to the existing Mongkok Station are scheduled to commence in April 2003 and to be completed in early 2005. MTRCL is responsible for overall programming of the construction works. It is recommended that the programming is such that environmental impacts are reduced as far as possible. Site location plan is shown on Appendix A EMOKC3-001.

2.2 Construction Activities

Major site activities carried out by the Contractor during this reporting period include the following:-

Stage 2 TTM Construction

- Pump well installation completed.
- Placing temporary road deck panels commenced.
- Trench for excavation existing utility exposure/diversion commenced.
- Breaking existing road slab substantially completed.
- Implementation of TTM Stage 2 traffic diversion ongoing.
- Sheetpiling for underground construction continued.
- King post installation continued.
- Removal of existing box culvert substantially completed.

Scheduled major site activities carried out by the Contractor in the next reporting period are as follows:-

Stage 2 TTM Construction

- Continue implementation of TTM Stage 2 traffic diversion.
- Continue trench excavation for utility exposure/diversion.
- Continue placing of temporary road deck panels.
- Continue king post installation.

Stage 3 TTM Construction

- Preparation for TTM Stage 3 traffic diversion.
- Road Slab breaking for temporary road decks construction.

3 **IMPACT NOISE MONITORING**

3.1 **Monitoring Parameters**

During this monitoring period, regular noise monitoring were made once a week at logging interval of 5 minutes in 30 minutes. 6 sets of 5 minutes average of Leq, L10 and L90 (in A-Weighting) were taken at N1MOKC3 and N2MOKC3. (one additional set taken due to receiving the public noise complaint via EPD on 27 September 2003)

3.2 **Monitoring Locations**

Noise

Noise monitoring was undertaken at the following locations:

N1MOKC3 Residential Building at 43-49A Argyle Street (Argyle House)
N2MOKC3 Residential Building at 35-37A Argyle Street

Location of the above agreed monitoring stations are shown on Appendix A Figure EMOKC3-001.

3.3 **Monitoring Time, Frequency, Duration and Weather**

Noise

Noise monitoring was performed once on normal weekdays i.e. Monday to Saturday (refer to Item 5.5.2 of the approved EM&A Manual March 2003). Below is the time schedule that the noise monitoring was performed in this monitoring period.

Location	Date and Time of Monitoring		Climate
N1MOKC3 (Argyle House)	4/9/03	3:41pm	Cloudy
	11/9/03	3:20pm	Clear
	16/9/03	3:30pm	Clear
	23/9/03	10:30am	Clear
	27/9/03	2:45pm	Clear
	30/9/03	4:56pm	Clear
N2MOKC3 (Residential Bldg 35-37A Argyle Street)	4/9/03	2:48pm	Cloudy
	9/9/03	10:50am	Fine
	16/9/03	2:45pm	Fine
	23/9/03	11:02am	Fine
	27/9/03	2:27pm	Fine
	30/9/03	4:39pm	Fine

3.4 *Monitoring Schedule for Next Month*

Noise monitoring at N1MOKC3 and N2MOKC3 will be performed on 6, 13, 20 and 27 October 2003.

3.5 *Monitoring Results*

Noise

A summary of the results (Leq30min) recorded during this monitoring period is shown in following table. Relevant details of the noise monitoring results and graphic plots are presented in Appendix B. Having compared the results with the limit levels, no exceedance were found.

Summary of Noise Monitoring Results measured in 30 minutes and dBA

Location	N1MOKC3 (Argyle House)					
Date	Leq (30 min)	Leq corrected (30 min)	L10(30min)	L90(30min)	Allowable limit (30min)	Exceedance
4/9/03	76.1	74.2	79.2	70.3	75	N
11/9/03	75.2	72.3	76.9	72.1	75	N
16/9/03	75.1	72.6	76.4	72.9	75	N
23/9/03	73.9	69.2	75.8	71.4	75	N
27/9/03	73.1	66.6	-	-	75	N
30/9/03	73.5	69.3	-	-	75	N
	N2MOKC3 (Residential Building at 35-37A Argyle Street)					
4/9/03	78.0	73.8	80.1	74.2	75	N
9/9/03	75.8	62.3	77.5	71.5	75	N
16/9/03	78.2	74.3	79.1	74.9	75	N
23/9/03	75.7	****	77.3	73.2	75	N
27/9/03	78.6	75.2	-	-	75	N
30/9/03	77.5	73.3	-	-	75	N

Note:- **** measured noise level Leq(30min) less than or equal to background noise.
 Leq(30min) corrected Measured noise level Leq(30min) with background correction.
 Y Exceedance caused by Contractor's works activities.
 N No exceedance caused by Contractor's works activities.

4 ASSESSMENT AND AUDIT RESULTS

With reference to the monitoring results obtained, there was no exceedance of limit level occurred in noise monitoring taken during this reporting period. Levels of the construction noise recorded at the agreed NSRs in this reporting period are lower than the allowable limit. One additional noise monitoring was taken on 27/9/03 due to the noise complaint from public via EPD received on 26/9/03. By site observations, the major noise sources mainly came from the busy traffic on Argyle Street and Portland Street, the construction activities in URA K2 Development site and the Project construction activities. The Contractor have provided reasonable monitoring and supervision to control the noise generated from the construction site.

5 ACTION TAKEN IN EVENT OF CONSTRUCTION NOISE LEVEL EXCEEDANCE

There was no exceedance recorded during regular noise monitoring recorded at the agreed NSRs during this reporting period.

6 CONSTRUCTION WASTE DISPOSAL

Certain amount of excavated material and concrete debris were generated from the construction activities during this reporting period. The Contractor have set up implementation of the delivery trip ticket system for waste disposal.

	Amount of Construction Wastes Disposed		
	Inert Waste (to PPE) (m ³)	Non-inert waste (to Landfill) (m ³)	Chemical waste (trip)
April 2003	0	0	0
May 2003	78	0	0
June 2003	148	0	0
July 2003	46	0	0
August 2003	184	0	0
September 2003	152	0	0
Accumulated total since April 2003	608	0	0

7 RECORD OF COMPLAINTS FROM PUBLIC & EPD

Two public complaints from EPD, one on construction noise and one on black smoke, were received on 26 and 30 September 2003 respectively. The required complaint investigation and follow up actions have been taken as appropriate as per EM&A Manual Item 8.2. Relevant complaint reports have been sent to EPD on 9/10/03.

Formal complaint				
	Air	Noise	Water	Others
April 2003	0	0	0	0
May 2003	0	0	0	0
June 2003	0	0	0	0
July 2003	0	0	0	0
August 2003	0	0	0	0
September 2003	0	1	0	1
Accumulated total since April 2003	0	1	0	1

8 STATUS OF PERMITS AND LICENCES OBTAINED

Approval letter from EPD for allocation of landfill area for non-inert waste dumping received on 16/9/03.

Type	Reference No.	Commencement Date	Expired Date	Remarks
Chemical waste disposal	WPN5117-229-K2801-01	29/4/03	end of the Project	
Site water disposal	EP482/229/0302/1	30/4/03	31-5-2008	
Public fill disposal	CED's letter ref. (8) in PW PF/GEN/01 pt.26 dated 30/7/03	30/7/03	end of the project unless advised	
Landfill disposal	EPD's letter ref. EPD195/01/24/0614/2003 dated 16/9/03	16/9/03	end of the project unless advised	

9 ACTION ITEMS FOR SITE AUDITS IN PAST MONTH

During this monitoring period, regular weekly joint site audits lead by the senior of MTRC and the Contractor were taken. The Contractor's performance on the environmental matters were assessed. Status of required actions taken by the Contractor can be summarised as follows.

	Description	Status
1.	The Contractor reminded to have regular check on site to ensure the compliance of relevant environmental regulations, permits and licence.	On going
2.	The Contractor reminded to remove the accumulated construction debris off site as soon as practical.	On going
3.	The Contractor reminded to place the movable noise barrier as close as possible to the noisy activities carried out on site.	Done
4.	The Contractor reminded to have regular check to prevent black smoke generated from the working plant.	On going
5.	The Contractor reminded to clean up the rain water collected inside the oil drip tray in order prevent mosquito bleeding.	Done
6.	The Contractor reminded not to use high speed drilling for king post installation.	On going
7.	The Contractor reminded not to generate significant vibration during sheetpiling..	Done
8.	The Contractor reminded to provide chemical waste collection store asap.	On going

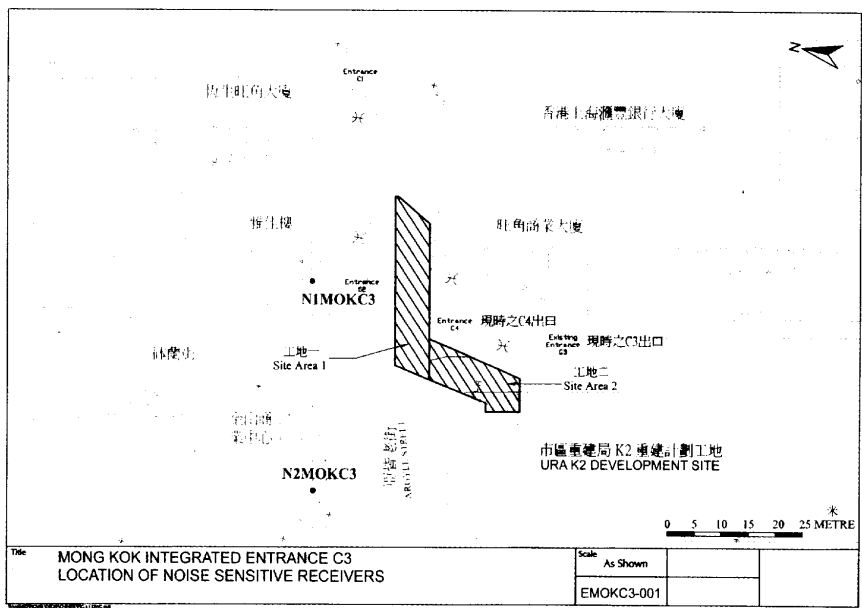
10 CONCLUSION

Major civil activities including existing box culvert removal, utility diversion, pump well installation, sheetpiling, king post installation and placing temporary road deck were carried out by the Contractor during this reporting period. Regular meetings and joint site audits lead by the senior were held to resolve the site environmental problems.

By field observation, the environmental pollution control measures provided by the Contractor were generally acceptable. The construction noise levels recorded during the reporting period were below the allowable limits. Although two formal public complaints were obtained in this monitoring period, ER/ET/Contractor have taken prompt response as appropriate to minimize the effect to the public.

Appendix A

- Reference Figures
- Complaint Reports



Title: MONG KOK INTEGRATED ENTRANCE C3
LOCATION OF NOISE SENSITIVE RECEIVERS

Scale	As Shown	
	EMOKC3-001	

Complaint Form



Mass Transit Railway Corporation EQPMS

Site: MOK
Complaint Number: MOK/1001

Complaint Received

Date: 26/09/2003
Time: 05:15:00 PM
By Whom: CW Chan
By: MTRCL
Organization:

Complainant

Name: Mr. KL Lai - EPD LCO (urban east)
Tel no.
Home: Work: 21508013
Address: EPD LCO at 8/F CSW Govt., Office

Nature of Complaint:

Date of Complaint: 24/09/2003
Time of Complaint:
Media: Noise Dust Water Other

Description: A public noise complaint was made to EPD on 24/9/03. After a complaint investigation by EPD at about 4:00pm on 26/9/03, they noted that the complaint noise was generated from MTRCL C5032 construction site.
A phone message for action dealing with the complaint was passed by EPD to MTRCL on 26/9/03.

To Be Completed By Site

Response by: An immediate site meetings for sorting out the public noise complaint among ER/ ET/ The Contractor Kier was held on site on 27/9/03.

Review: From the site investigation taken by ER/ET/The Contractor during the above site meeting, it was believed the noise level generated from the working drill rig for kingpost installation at Portland Street works area is rather high when penetrating through some underground hard material.

Response: A site meetings for sorting out the public noise complaint among ER/ ET/ EPD/ The Contractor Kier were held on 2/10/03. The followings are the required actions agreed to be taken :-

Construction noise from the working drill rig for king post installation

- Extend length of the installed noise barrier and locate it as close as possible to the working drill rig for king post installation.
- For quick response and consultation of annoyance from the construction site, a direct contact line to MTRCL Project Construction staff to be provided to the complainant via EPD.
- Don't use high speed drilling operation when penetrating through hard material or boulders in order to reduce the noise level.
- By considering site safety and operation feasibility. if possible, the Contractor to provide a top noise cover to the working drill rig.
- ET to increase frequency of the noise level monitoring at NSRs

Construction noise from sheetpiling works

- Sheeting operation to be stopped when hitting rock bed or hard stratum in order to prevent significant vibration.

The above agreed mitigation measures have been fully implemented one day after the site meeting with EPD on 2/10/03. The noise measurements taken at the two NSRs on 27/9, 30/9 and 6/10 are found acceptable with no exceedance in allowable daytime construction noise limit.

Recommendations:

Entered By: William Chan
Edited By: William Chan

On: 07/10/2003 03:10:56 PM
On: 08/10/2003 10:27:54 AM

Complaint Form



Mass Transit Railway Corporation EQPMS

Site: MOK
Complaint Number: MOK/1002

Complaint Received

Date: 30/09/2003
Time: 03:30:00 PM
By Whom: CW Chan
By: MTRCL
Organization:

Complainant

Name: Mr. KL Lai EPD LCO (Urban East) - Public Complaint
Tel no.
Home: Work: 21508013
Address EPD LCO (Urban East) at 8/F CSW Govt . Office
:

Nature of Complaint:

Date of Complaint: 29/09/2003
Time of Complaint:
Media: Noise Dust Water Other

Description: A public complaint on black smoke generated from MTRCL C 5032 construction site was made to EPD on 29/9/03. EPD informed MTRCL by phone for action on 30/9/03.

To Be Completed By Site

Response by: An immediate site meeting for sorting out the problem among ER /ET /The Contractor was held on 30/9/03

Review:

From site investigation taken by ER/ET/The Contractor during the above site meeting, short period of black smoke emission was generated from some working plants during carrying out the site activities ...

Response: A site meeting for sorting out the problem among ER/ET/EPD/ The Contractor were held on 2/10/03. The following are actions agreed to be taken made during the meetings :-

- a) The Contractor to check machine condition of the working air compressor and drill rig for kingpost installation at the Portland Street works to prevent black smoke emission during operation .
- b) The Contractor have to check working condition of the newly arrived construction plants before carrying out any site activities in future, including black smoke and diesel fume check .

The above mitigation measures have been implemented on site one day after the meeting with EPD on 2/10/03.

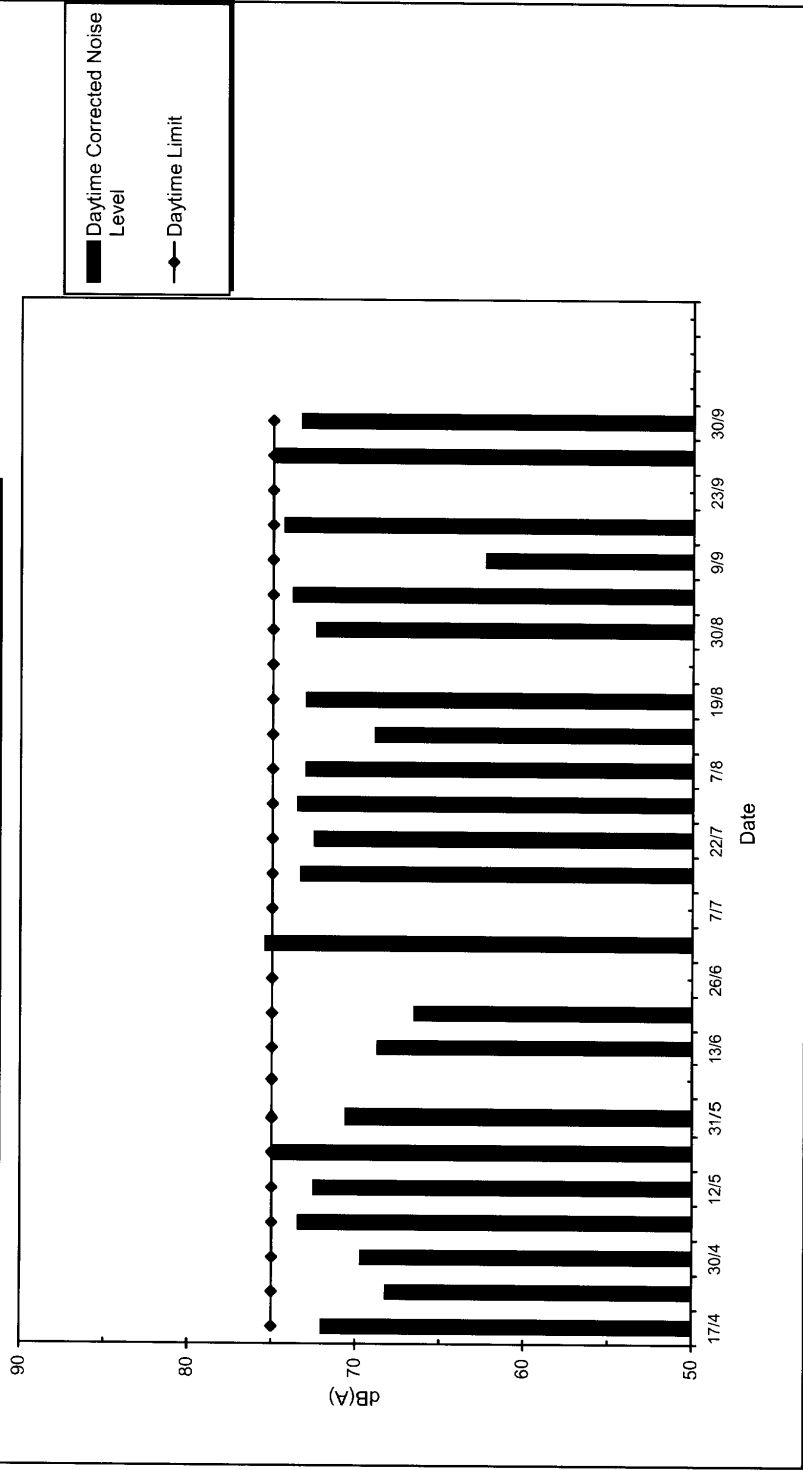
Recommendations :

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Edited By: William Chan On: 08/10/2003 10:09:40 AM

Appendix B

- Environmental Monitoring
Data

C5032 - Noise Level at Monitoring Station N2MOKC3 (September 03)



C5032- Noise Level at Monitoring Station N1MOKC3 (September 03)

