

Kowloon-Canton Railway Corporation

# KCRC East Rail Extensions Sheung Shui to Lok Ma Chau

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Monthly EM&A Report –  
June 2004

July 2004

Report no: EA00761/R144/1



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**Report no:** EA00761/R144/1

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## EXECUTIVE SUMMARY

### INTRODUCTION

This Report (in HTML format) is the twenty-fourth Monthly EM&A Report for the Sheung Shui to Lok Ma Chau Spur Line and includes the Monthly EM&A Reports for construction contracts LDB201, LCC202 and LCC300. This Report and all monitoring data collected under the EM&A Programme are available on the KCRC East Rail Extensions Environmental Monitoring and Audit Website at [www.env-ere.kcrc.com](http://www.env-ere.kcrc.com).

Further to the application of Variation of Environmental Permit (VEP) in December 2003, the Environmental Permit No. EP-129/2002/B was issued on 15 January 2004.

### LDB201 Sheung Shui to Chau Tau Tunnels

The construction works for LDB201 commenced in late November 2002. This Report presents the EM&A findings in the period from 26 May to 25 June 2004. The main construction activities undertaken during the reporting month include:

- East Approach Area – San Wan Road & East Rail Area: Backfilling and remaining structure for 900mm diameter watermain diversion stage 2, predrilling of mini piles for retaining wall RW1 and RW5, constructing retaining wall from CH30+200 to CH30+600;
- Cut and cover cofferdam (near Sheung Shui Launching Shaft Area): Construction of tunnel structures at boxes D & E, excavation and strutting in Cut & Cover Tunnel boxes D, C1, B & A cofferdams, pile caps for ventilation building;
- TBM Works area: Tunnel boring and lining, and regular maintenance of TBM;
- East EAP (EAP 2): Rock excavation and rock dowel installation and shotcreting;
- West EAP (EAP 5): Excavation to –10.5mPD, installation of 6<sup>th</sup> layer waling and strutting completed, and fabrication of 7<sup>th</sup> layer waling and strutting completed;
- Future Kwu Tung Station Enabling Works Area: Cut & cover box column and middle roof slab construction, Ho Sheung Heung Road utilities diversion; and
- West Approach Area: Construct temporary base slab, excavation and lateral support of cofferdam at boxes B & C1, construction of tunnel box at boxes A & C, CTVB lower plant room and temporary working platform for TBM extraction.

LDB201 conducted the routine monitoring works at these monitoring locations: AM1, AM2 and AM3 for air quality, NM1, NM2, NM3, NM4, NM5, NM6, NM7, NM8, NM9, NM10, NM11 and NM12 for noise, and URS, SR1, URB, RB1, UCTC and CTC1 for water quality, during this reporting month.

24-hour TSP monitoring was conducted once every six days and three sets of 1-hr TSP monitoring were conducted once every six days at the monitoring locations. No exceedance was recorded during the reporting month.

Noise monitoring of  $L_{eq(30min)}$  was conducted once every six days during non-restricted hours at the identified monitoring locations. There was no exceedance recorded during the reporting month.

Water quality monitoring was conducted at the identified water quality monitoring locations. There was no exceedance recorded during the reporting month.

The excavated spoil was mainly generated from the shaft excavation at East EAP, West EAP, TBM excavation, jet grouting works at Cross Passages and excavation at both East and West Cut & Cover Tunnels. These excavated spoils were disposed of to Kai Tak Public Filling Barging Point and Tuen Mun Area 38. Some of the excavated spoils were transferred to alternative sites for reuse including the works area under the EPD's Project of Development and Management of WENT Landfill, Contract LCC300 – Lok Ma Chau Terminus and Associated Works, DSD Contract DC/2002/12 – Village Flood Protection Works for Shui Pin Wai and Ma Tin Tsuen and RPIS Drainage Improvement Works for San Hing Tsuen and Wing Ning Wai, and DSD Contract DC/2002/06 – Construction of the Yuen Long Bypass Floodway. All the disposal and transportation of waste were recorded under the four-page trip ticket system. Delivery and arrival time of the trucks were also recorded.

No warning or prosecution was received during the reporting month. One complaint from public was received regarding the dust generation from the loading/unloading of spoil at the temporary spoil basin adjacent to Hi-tech Centre. Corrective actions were taken place including paying attention to the operation frequency of the water sprinklers and the implementation of manual water spraying on the area to reduce dust emission. Additional water sprinklers will be installed and the site-in-charge will ensure the proper operation of water sprinklers especially during dry weather.

There were weekly site inspections carried out by the CET Leader and an IEC monthly site audit on 24 June. The Contractor has proposed mitigation measures to rectify the environmental deficiencies or improve the environmental performance in response to the observations raised by the CET Leader during weekly site inspection and the IEC during the monthly site audit. The proposed measures include strengthening the anti-mosquito inspection and control, the provision of drip tray, cleaning up drainage channels and cleaning up sedimentation tank. The implementation and effectiveness of the corrective actions will be assessed during the next site audit.

### **LCC202 West Section Alignment and Associated Works**

The commencement date for LCC202 started on 26 March 2003. This Report presents the EM&A works during the period from 25 May to 24 June 2004. During the reporting month, the major construction works included ground beam construction at P3, viaduct erection at W34-40, column construction at W61-65 as well as parapet erection at W52-54 and W56-58.

LCC202 conducted the routine monitoring works at these monitoring locations: AM4 for air quality, and NM15 for noise in this reporting month. Water monitoring was not undertaken at USTR and STR1 at San Tin River in the reporting month. As the section of San Tin River where the water monitoring locations were temporarily rendered for New Boundary Bridge (NBB) construction works, the water monitoring at the River was suspended during the monitoring period. As FP1 and FP2 were found dry and FP3 was already filled for reedbed construction, no water quality monitoring was conducted at these locations.

24-hour TSP monitoring was conducted once every six days and three sets of 1-hr TSP monitoring were conducted once every six days at the monitoring location. There was no exceedance recorded during the reporting month.

Noise monitoring of  $L_{eq(30min)}$  was conducted once every six days during non-restricted hours at the identified monitoring location. There was no exceedance recorded during the reporting month.

About 400m<sup>3</sup> of excavated material were delivered to the Government public fill barging point and about 480m<sup>3</sup> were reused on Contract LFCC-007 for filling. About 24.4m<sup>3</sup> of general refuse was collected by a licensed collector for disposal in the reporting month. All the disposal and transportation of waste were recorded under a trip ticket system.

No notification of summons or complaint was received during the reporting month.

The CET Leader carried out weekly site inspections and an IEC monthly site audit was conducted on 24 June. In response to the observations raised by the ET Leader and the IEC, the Contractor has proposed mitigation measures including more frequent disposal of general refuse, repairing desilting system and trapezoidal channel lined with filtering material, and applying larvicide to water tank and stagnant water. The implementation and effectiveness of the corrective actions will be assessed during the next site audit.

### **LCC300 Lok Ma Chau Station and Associated Works**

The EM&A programme for LCC300 commenced in mid-December 2002. This report summarises the EM&A works conducted during the period from 26 May to 25 June 2004. During the reporting month, the principal work activities included earth works for surcharge areas in terminus and along station access road, construction of superstructure works at station and immigration hall, electrical/mechanical works inside the station area, western drainage channel diversion, temporary works for the construction of permanent sewage treatment plant, pile testing and coring, and the construction of retaining structure of Ha Wan Channel bridge and station access road. In accordance with the new EP conditions, acoustic panels as specified in the Construction Noise Impact Assessment report under the EP should be provided. The installation of the acoustic panels was commenced in early February 2004.

LCC300 conducted the routine monitoring works at these monitoring locations: AM4 for air quality, NM13, NM14 and NM15 for noise, and two alternative water quality monitoring locations, namely, FPBBL1 and FPBBL2 for water quality, in this reporting month. As FP3 was filled and no construction works of this contract is likely affecting the San Tin River, these alternative water quality monitoring locations which are located to the south of the terminus site were identified to replace FP3, STR1 and USTR. The proposal of the alternative water quality monitoring location was accepted by EPD.

24-hour TSP monitoring was conducted once every six days and three sets of 1-hr TSP monitoring were conducted once every six days at the monitoring location. No exceedance was recorded during the reporting month.

Noise monitoring of  $L_{eq(30min)}$  was conducted once every six days during non-restricted hours at the identified monitoring locations. There was no exceedance recorded during the reporting month.

Water quality monitoring was conducted at the approved alternative monitoring locations. The action and limit levels were under review.

521m<sup>3</sup> of inert C&D materials were disposed of to Public Filling Barging Point at Kai Tak and 103m<sup>3</sup> of non-inert C&D materials were disposed of to NENT landfill. Recycling of used paper, and the reuse of aluminium cans and plastic bottles were implemented on site. The aluminium cans and plastic bottles were reused for capping the steel bars for the sake of safety. Surplus material was imported from LDB201 for reuse.

No notification of summons was received during the reporting month. However, two complaints from KCRC and one verbal complaint from EPD were received. The complaints from KCRC were related to the accumulation of muddy water in front of the access of Gate 1 at the border road. Actions including sweeping were taken to clean up the road. EPD made verbal comments on the missing of acoustic panels to an asphalt paver, a road roller and an excavator working along the road section where required noise mitigation measures under the VEP. Contractor has reinstalled the acoustic panels on to the asphalt paver and road roller, and stopped the excavator working along that road section.

The CET Leader and the Engineer conducted regular site inspections and the IEC conducted a monthly site audit on 16 June. In response to the NC and the observations raised by the IEC during the site audit, the Contractor has instigated an action plan to rectify the inadequacies. The remedial actions included relocating and installing acoustic panels to the excavator, cleaning the road, backfilling of materials, and cleaning up the rubbish. The implementation and effectiveness of the corrective actions will be assessed during the next site audit.

# 1 Introduction

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Hyder has been commissioned by KCRC as the IEC for the East Rail Extensions, which include the Ma On Shan to Tai Wai Rail, the Hung Hom to Tsim Sha Tsui Extension and the Lok Ma Chau Spur Line. A requirement of the Contract is for the IEC to prepare a combined EM&A Report on a monthly basis for each of the above rail lines. The combined report combines the Monthly EM&A Reports for each of the construction contracts within each rail line. This Report (in HTML format) is the twenty-fourth IEC Monthly EM&A Report for the Sheung Shui to Lok Ma Chau Spur Line and includes the Monthly EM&A Reports for construction contracts LDB201, LCC202 and LCC300 and a summary of the reports. It also includes a brief summary of the IEC Site Audits and information supplied by KCRC on Public Consultation activities. Non-compliances and observations issued by the IEC are based on the requirements of KCRC's Environmental Management System.

## 2 IEC monthly site audits

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IEC monthly site audits were conducted for LDB201 and LCC202 on 24 June, and LCC300 on 16 June. Special concern on the mosquito control was also paid during the site audits. All three contracts have implemented mosquito control measures and recorded the implementation status. The environmental performance of each Contract was maintained at an acceptable level in general.

### 2.1 Contract LDB201

The IEC site audit for LDB201 was undertaken on 24 June. The main construction activities undertaken in the reporting month include:

- East Approach Area – San Wan Road & East Rail Area: Backfilling and remaining structure for 900mm diameter watermain diversion stage 2, predrilling of mini piles for retaining wall RW1 and RW5, constructing retaining wall from CH30+200 to CH30+600;
- Cut and cover cofferdam (near Sheung Shui Launching Shaft Area): Construction of tunnel structures at boxes D & E, excavation and strutting in Cut & Cover Tunnel boxes D, C1, B & A cofferdams, pile caps for ventilation building;
- TBM Works area: Tunnel boring and lining, and regular maintenance of TBM;
- East EAP (EAP 2): Rock excavation and rock dowel installation and shotcreting;



- West EAP (EAP 5): Excavation to –10.5mPD, installation of 6<sup>th</sup> layer waling and strutting completed, and fabrication of 7<sup>th</sup> layer waling and strutting completed;
- Future Kwu Tung Station Enabling Works Area: Cut & cover box column and middle roof slab construction, Ho Sheung Heung Road utilities diversion; and
- West Approach Area: Construct temporary base slab, excavation and lateral support of cofferdam at boxes B & C1, construction of tunnel box at boxes A & C, CTVB lower plant room and temporary working platform for TBM extraction.

Environmental permits, licences and records including the trip-ticket system were inspected. Four observations were raised during the site audit:

#### Observations

##### Kwu Tung

1. Drip tray was not provided to the oil drum near the stockpiling area.
2. Mud was accumulated in a surface channel near KCRC inspector office.

##### EAP2

3. Stagnant water near the sedimentation tank was observed. Cleaning up and applying larvicide are recommended.

##### West Tunnel Approach

4. Floating objects was observed in the final sedimentation tank. Proper removal is necessary.

As a result of the observations raised by the IEC the contractor has proposed some mitigation measures which include strengthening the anti-mosquito inspection and control, the provision of drip tray, cleaning up drainage channels and cleaning up sedimentation tank. The implementation and effectiveness of the corrective actions will be assessed during the next site audit.

## 2.2 Contract LCC202

The IEC site audit for LCC202 was undertaken on 24 June 2004. The major construction works include ground beam construction at P3, viaduct erection at W34-40, column construction at W61-65 as well as parapet erection at W52-54 and W56-58.

Environmental permits, licences and records including the trip-ticket system were inspected. Two observations were raised during the site audit:

### Observations

#### Area P3

1. Unused tank was observed near the site entrance. It is recommended that unused tank / container should be removed from site to avoid breeding of mosquitoes in stagnant water.

#### Viaduct

2. Water accumulated in the holes along the viaduct was observed. The holes should be filled or covered to avoid the accumulation of water. Larvicide should be applied and more frequent cleaning up of water is recommended.

As a result of the observation raised by the IEC, the contractor has proposed to apply larvicide to water tank and stagnant water. The implementation and effectiveness of the corrective actions will be assessed during the next site audit.

## 2.3 Contract LCC300

The IEC site audit was conducted on 16 June 2004. The major construction works include earth works for surcharge areas in terminus and along station access road, construction of superstructure works at station and immigration hall, electrical/mechanical works inside the station area, western drainage channel diversion, temporary works for the construction of permanent sewage treatment plant, pile testing and coring, and the construction of retaining structure of Ha Wan Channel bridge and station access road.

Environmental permits, licences and records including the trip-ticket system were inspected. One non-compliance and three observations were raised during the site audit:

### Non-compliance

#### Lok Ma Chau Road

1. Acoustic panels were not provided to the excavator operating opposite to the police check point.

### Observations

#### Lok Ma Chau Road

2. Soil and silty trails were observed.
3. Stockpiles were not covered (near old site office).

### RSS site office

4. Rubbish (e.g. bottles and cigarette buds) was observed near the parking space.

In response to the non-compliance and the observations raised by the IEC, the Contractor has proposed some improvement measures including relocating and installing acoustic panels to the excavator, cleaning the road, backfilling of materials, and cleaning up the rubbish. The implementation and effectiveness of these measures will be assessed and verified during the next site audit.

### 3 Public Consultation

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No public consultation was conducted during the reporting month.

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