

Kowloon-Canton Railway Corporation

KCRC East Rail Extensions Sheung Shui to Lok Ma Chau

Monthly EM&A Report –
January 2005

February 2005

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Author: Claudine Lee

Checker: Sharifah Or

Approver: Gui Yi Li

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EXECUTIVE SUMMARY

INTRODUCTION

This Report (in HTML format) is the thirty-first 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.

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 December 2004 to 25 January 2005. The main construction activities undertaken during the reporting month include:

- San Wan Road and East Approach Area: Construction of abutment and piers for San Wan Road Foot Bridge at works area S3.2 and at Choi Fat Street, backfilling around abutment and caps, up track platform trimming work at Sheung Shui station north, dismantling of protective frames, installation of noise barrier and acoustic panels, installation of OHL mast, drainage work for permanent track drains at WSD reserved area near launching shaft;
- Cut and cover cofferdam (near TBM Launching Shaft and inside WSD reserved area): Launching shaft construction of wall for D/T Ch30+985 to Ch31+042, breaking of concrete walers and diaphragm wall at Ch30+985 in launching shaft, construction of Sheung Shui Ventilation Building ground beam, slab and walls, backfilling in box E under watermain trough, backfilling between sheet pile and tunnel walls, application of waterproofing at tunnel walls and roof in Box D, construction of base slab and walls at tunnel Box C2, excavation of additional cross passage at Ch30+660;
- TBM Works area: Refurbishment and reinstatement of TBM, Tunnel boring and lining, and regular maintenance of TBM;
- East EAP (EAP 2): Substructures construction - rebar fixing, formwork erection, cast-in conduit fixing and concreting, and waterproofing installation;
- West EAP (EAP 5): Rebar fixing, formwork shuttering and concreting of substructure, and grouting works by the sub-contractor, IJBV;
- Future Kwu Tung Station Enabling Works Area: Cut & cover box north platform wall construction, EAP 3 & 4 construction, and construction of new drain pipe across Ho Sheung Heung Road; and
- West Approach Area: Construct tunnel box at Boxes A0 and E, excavation and lateral support at Box A2, sand backfilling tunnel Box A0, construction CTVB superstructure, CTVB internal finishing, construct Chau Tau Channel retaining wall, construct Chau Tau Bypass Channel, LMC Road diversion TTMS51 stage 5, driving sheet pile at Box E, reconstruction of LMC road, installing new water pipe, new utilities and drainage works.

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-hour TSP monitoring were conducted once every six days at the monitoring locations. There were two action level and one limit level exceedances of the 1-hour TSP, and seven action level and two limit level exceedances of the 24-hour TSP during the reporting month. These exceedances were likely due to the dry and hazy weather.

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

Water quality monitoring was conducted at the water quality monitoring locations. Although there were several exceedances of turbidity and SS recorded during the reporting month, they are considered not related to the construction activities.

The excavated spoil was mainly generated from the shaft excavation at East EAP, excavation at both East Approach and West Approach Cut & Cover Tunnels and tunnel excavation using TBM. 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 and NENT landfills. 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, prosecution or complaint was received during the reporting month.

There were weekly site inspections carried out by the CET Leader and an IEC monthly site audit on 13 January 2005. 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 the removal of general refuse after work every day, minimising the use of water for moistening the steel bridge over the Chau Tau Bypass Channel, regular cleaning of retention tank, notifying the sub-contractor to stop using machine with dark smoke emission, and improving the housekeeping on site. 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 December 2004 to 24 January 2005. During the reporting month, the major construction works included ramp wall, backfilling, in-situ deck slab and in-situ parapets construction at P3, reinstatements works, buildings and staircase construction at EAP7 and drainage works at W38-39, W49-53 and W55-66.

LCC202 conducted the routine monitoring works at these monitoring locations: AM4 for air quality, and NM15 for noise during this reporting month. Water monitoring was not undertaken at USTR and STR1 at San Tin River during the reporting month as the section of San Tin River, in where the water monitoring locations locate, were temporarily rendered for New Boundary Bridge Crossing (NBB) construction works. As FP1 and FP2 were maintained dry to satisfy DSD flood storage criteria 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-hour 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 monitoring location. There was no exceedance recorded during the reporting month.

102m³ of excavated materials were delivered to the approved public filling barging point, and 193m³ were delivered to CEDD Contract YL/53/02 for reuse. 15 tonnes of C&D waste were delivered to NENT landfill. About 30m³ of general refuse was collected by a licensed collector for disposal during 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 26 January 2005. In response to the observations raised by the ET Leader and the IEC, the Contractor has proposed mitigation measures including pumping away stagnant water, handling concrete loading carefully, cleaning up concrete residue and proper segregation of waste. 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 December 2004 to 25 January 2005. During the reporting month, the principal work activities included the earthworks for surcharge removal in the terminus, the construction of superstructure works for station, immigration hall and overrun rail track, the electrical/mechanical work and fitting-out work inside station and immigration hall, the construction of permanent sewage treatment plant and western channel diversion, the construction of reed bed base structure, the construction of Ha Wan Channel bridge and stone column for station access road, and trench excavation for utility works along the station access road. In accordance with the 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, and NM13, NM14 and NM28 for noise. Water quality impact on the monitoring locations, FPBBL1 and FPBBL2, were found insignificant and the monitoring works were suspended starting from 20 October 2004. The site condition will be reviewed and the monitoring work will be resumed if necessary.

24-hour TSP monitoring was conducted once every six days and three sets of 1-hour TSP monitoring were conducted once every six days at the monitoring location. Three action level exceedances of 24-hour TSP and one action level exceedance of 1-hour TSP were reported during the reporting month. The exceedances were likely due to the hazy weather.

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.

There were 604m³ of inert C&D materials disposed of to Public Filling Barging Point at Kai Tak. Some inert C&D materials were reused at other sites including 2,013m³ at LDB201, 185m³ at Highways Department Contract HY/2001/21, 362m³ at Drainage Services Department (DSD) Contract DC/2002/16 and 1,120 m³ at DSD Contract YL/57/04. 2,509 m³ of pond materials were reused at LFCC007, and 381m³ 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.

No notification of summons or prosecution was received.

The CET Leader and the Engineer conducted regular site inspections and the IEC conducted a monthly site audit on 20 January 2005. In response to the observations raised by the IEC, the Contractor has proposed remedial actions including cleaning and watering of the verge, cleaning up of oil spill, providing adequate number of drip trays for chemical storage area, and prompt removal of waste. The implementation and effectiveness of the corrective actions will be assessed during the next site audit.

1 Introduction

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 thirty-first 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

IEC monthly site audits were conducted for LDB201 on 13 January 2005, LCC202 on 26 January 2005 and LCC300 on 20 January 2005. Special concern on the mosquito control was expressed 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 13 January 2005. The main construction activities undertaken in the reporting month include:

- San Wan Road and East Approach Area: Construction of abutment and piers for San Wan Road Foot Bridge at works area S3.2 and at Choi Fat Street, backfilling around abutment and caps, up track platform trimming work at Sheung Shui station north, dismantling of protective frames, installation of noise barrier and acoustic panels, installation of OHL mast, drainage work for permanent track drains at WSD reserved area near launching shaft;
- Cut and cover cofferdam (near TBM Launching Shaft and inside WSD reserved area): Launching shaft construction of wall for D/T Ch30+985 to Ch31+042, breaking of concrete walers and diaphragm wall at Ch30+985 in launching shaft, construction of Sheung Shui Ventilation Building ground beam, slab and walls, backfilling in box E under watermain trough, backfilling between sheet pile and tunnel walls, application of waterproofing at tunnel walls and roof in Box D,

construction of base slab and walls at tunnel Box C2, excavation of additional cross passage at Ch30+660;

- TBM Works area: Refurbishment and reinstatement of TBM, Tunnel boring and lining, and regular maintenance of TBM;
- East EAP (EAP 2): Substructures construction - rebar fixing, formwork erection, cast-in conduit fixing and concreting, and waterproofing installation;
- West EAP (EAP 5): Rebar fixing, formwork shuttering and concreting of substructure, and grouting works by the sub-contractor, IBJV;
- Future Kwu Tung Station Enabling Works Area: Cut & cover box north platform wall construction, EAP 3 & 4 construction, and construction of new drain pipe across Ho Sheung Heung Road; and
- West Approach Area: Construct tunnel box at Boxes A0 and E, excavation and lateral support at Box A2, sand backfilling tunnel Box A0, construction CTVB superstructure, CTVB internal finishing, construct Chau Tau Channel retaining wall, construct Chau Tau Bypass Channel, LMC Road diversion TTMS51 stage 5, driving sheet pile at Box E, reconstruction of LMC road, installing new water pipe, new utilities and drainage works.

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

Observations

Chau Tau Bypass Channel

1. There was silty discharge observed at the channel. The contractor should investigate the source and implement mitigation measures.

Area P3

2. The discharge point was foamy at the channel. The Contractor should investigate the cause and implement mitigation measures as necessary. Sedimentation tank should be desilted.
3. Dark smoke emission from an excavator was observed at the stockpiling area.

Chau Tau Ventilation Building

4. General refuse was placed next to construction materials. The housekeeping needs to be improved.

Kwu Tung and Access No. 3

5. General refuse was piled up on site. Prompt removal is necessary.

As a result of the observations raised by the IEC the contractor has proposed some mitigation measures which include the removal of general refuse after work every day, minimising the use of water for moistening the

steel bridge over the Chau Tau Bypass Channel, regular cleaning of retention tank, notifying the sub-contractor to stop using machine with dark smoke emission, and improving the housekeeping on site. 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 26 January 2005. The major construction works include ramp wall, backfilling, in-situ deck slab and in-situ parapets construction at P3, reinstatement works, buildings and staircase construction at EAP7 and drainage works at W38-39, W49-53 and W55-66.

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

Observation

Tributary A

1. Stagnant water from the upstream was smelly and black. Direct pumping to downstream to avoid passing through the site should be conducted promptly.

W26-31

2. Concrete residue was observed on site. Designated area should be provided. The contractor should manage the workers to wash the concrete lorry at proper wheel washing area.

Pond18 (Pond7) and W30-31

3. There was no segregation of pond mud and soil at Pond 18. Proper segregation should be performed. Mix of steel, soil, rock and woodstrips was observed at the site near W30-31.

As a result of the observations raised by the IEC, the contractor has proposed mitigation measures including pumping away stagnant water, handling concrete loading carefully, cleaning up concrete residue and proper segregation of waste. 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 20 January 2005. The major construction works include the earthworks for surcharge removal in the terminus, the construction of superstructure works for station, immigration hall and overrun rail track, the electrical/mechanical work and fitting-out work inside station and immigration hall, the construction of permanent sewage treatment plant and western channel diversion, the construction of reed bed base structure, the construction of Ha Wan Channel bridge and

stone column for station access road, and trench excavation for utility works along the station access road.

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

Observations

LMC Road

1. The verge was dry. Water spraying is needed.

Station perimeter

2. There were several chemical containers without provision of drip tray near the chemical storage area. The drip tray in the chemical store was accumulated with oil. Prompt cleaning up is necessary.
3. Construction waste and general refuse were piled up on site.

In response to the observations raised by the IEC, the Contractor has proposed some improvement measures including cleaning and watering of the verge, cleaning up of oil spill, providing adequate number of drip trays for chemical storage area, and prompt removal of waste. The implementation and effectiveness of these measures will be assessed and verified during the next site audit.

3 Public Consultation

There was no public consultation held in January 2005.
