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**ACE-EIA Paper 2/2012**  
***For advice on 9 January 2012***

**Environmental Impact Assessment Ordinance (Cap. 499)**  
**Environmental Impact Assessment Report**  
**Shatin to Central Link – Mong Kok East to Hung Hom Section**

## **PURPOSE**

This paper presents the key findings and recommendations of the Environmental Impact Assessment (EIA) report for the proposed Shatin to Central Link – Mong Kok East to Hung Hom Section (SCL(MKK-HUH)) (hereafter known as “the Project”) submitted under section 6(2) of the Environmental Impact Assessment Ordinance (EIAO) (Application No. EIA-198/2011). The MTR Corporation Limited (the applicant), and their consultants will present the report at the meeting of EIA Subcommittee if necessary.

## **ADVICE SOUGHT**

2. Members’ views are sought on the findings and recommendations of the EIA report.

## **BACKGROUND**

3. The applicant has submitted a total of five EIA reports for the SCL project:

- (i) SCL Protection works at Causeway Bay Typhoon Shelter;
- (ii) SCL – Tai Wai to Hung Hom Section (SCL(TAW-HUH));

- (iii) SCL – Mong Kok East to Hung Hom Section (SCL(MKK-HUH));
- (iv) SCL – Hung Hom to Admiralty Section (SCL(HUH-ADM)); and
- (v) SCL – Stabling Sidings at Hung Hom Freight Yard (SCL(HHS)).

4. The EIA report for the “SCL Protection works at Causeway Bay Typhoon Shelter” was submitted on 30 September 2010; discussed at ACE EIA Subcommittee meeting on 24 January 2011; endorsed by ACE without condition via letter dated 23 February 2011; and approved by the Director of Environmental Protection without condition under EIAO on 25 February 2011. The Environmental Permit was granted on 4 April 2011 and construction commenced on 21 November 2011.

5. The other four EIA reports were submitted in one go on 12 October 2011. They have been scheduled for discussion at the ACE EIA Subcommittee meeting on 9 January 2012.

## **NEED FOR THE PROJECT**

6. The EIA report states that the Shatin to Central Link (SCL) is a strategic rail corridor for forming an expanded railway network in Hong Kong that will bring various benefits to the community. The Project, SCL(MKK-HUH), is to realign the existing East Rail Line from the tunnel portal near Oi Man Estate to the Hung Hom Station (HUH), connecting the extension from HUH to Admiralty Station (ADM) across Victoria Harbour.

## **DESCRIPTION OF THE PROJECT**

7. SCL(MKK-HUH) is to realign approximately 1.2km of the East Rail Line from the tunnel portal near Oi Man Estate (Portal 1A) to the new North Ventilation Building (NOV) in HUH. (see **Figure 1**). This section of the SCL alignment will be running both underground and at grade. Other associated above-ground structures also include the noise mitigation measures at Portal 1A, realigned Cheung Wan Road (CWR), ventilation shafts and cooling tower.

8. The Project includes the following eight key elements, namely:

- (i) Realignment of approximately 1.2 km of railway from the tunnel

portal near Oi Man Estate (Portal 1A) to the new NOV in HUH;

- (ii) North Side Ventilation Shafts and South Side Ventilation Shafts at HUH;
- (iii) Noise Mitigation Measures at Portal 1A;
- (iv) Cooling Tower at the south of HUH;
- (v) Demolition of existing CWR viaduct and construction of new realigned CWR;
- (vi) New platforms underneath the existing HUH;
- (vii) Realignment of the existing rail tracks and relocation of the crossings at Homantin Siding; and
- (viii) Slightly modification of the office/store layout of the current freight yards underneath Mong Kok East Station (MKK) podium.

9. The Project covers the following designated project (DP) elements under Part I, Schedule 2 of the EIAO:

- (i) A railway and its associated stations (HUH) under Item A.2;
- (ii) A railway tunnel more than 800m in length between portals under Item A.7; and
- (iii) A road which is an expressway, trunk road, primary distributor road or district distributor road including new roads, and major extensions or improvements to existing road under Item A.1.

## **VIEWS OF THE DIRECTOR AND RELEVANT AUTHORITIES**

10. The Director of Environmental Protection (DEP), in conjunction with the relevant authorities, considers that the EIA report meets the requirements of the EIA Study Brief and the Technical Memorandum on EIA Process (TM) and hence is ready for purpose of public inspection. Comments from the public and the Advisory Council on the Environment will be taken into account by DEP in deciding whether or not to approve the EIA report under the EIAO.

## **CONSIDERATION OF ALTERNATIVE OPTIONS**

11. Chapter 2 of the EIA report presents considerations given on options/alternatives with respect to railway alignment, location of station/platforms, location of ventilation shafts, train system, locomotive sidings and construction methods. The preferred options have taken into account environmental factors as well as other considerations such as engineering feasibility, site constraints, programme and disruption to the community.

## **SPECIFIC ENVIRONMENTAL ASPECTS TO HIGHLIGHT**

### **Noise Impact**

12. The EIA report assessed both air-borne noise impact and ground-borne noise impact arising from the implementation of the Project.

#### **Air-borne noise impact**

13. For air-borne construction noise, the EIA predicted that with the implementation of a series of mitigation measures including usage of quieter plant, movable noise barriers, noise enclosure / acoustic shed for air compressors and generators and noise insulating fabric for piling rig, the noise levels due to the Project itself at all representative Noise Sensitive Receivers (NSRs) will range from 56 to 73 dB(A), meeting the TM noise criterion. However, when considering the cumulative air-borne construction noise level contributed by other concurrent projects in the vicinity, including Kwun Tong Line Extension (KTE), SCL(TAW-HUH) and SCL(HUH-ADM), there would be exceedance of up to 4 dB(A) above the criterion (i.e. 65 dB(A) during examination) at Carmel Secondary School (which has already been noise insulated with air-conditioners) during examination period for 5 months and exceedance of up to 3 dB(A) above the criterion (i.e. 75 dB(A) for residential use) at Wing Fung Mansion for 1 to 8 months, even with the mitigation measures in place. About 100 flats would be affected. Review of further mitigation measures has been conducted. In accordance with Section (c) of Annex 5 of the TM, "*noise criteria ... for construction .., shall be met as far as practicable. All practicable mitigation measures shall be exhausted and the residual impacts are minimised*". Because of the constraints due to close proximity between the affected NSRs and works site boundary, the review concluded that all practical measures have been exhausted and residual impacts have

been minimised as far as practicable. To address the residual noise impacts during the construction period, the Project Proponent will set up a liaison mechanism to facilitate communications with concerned parties during the construction period on the conduct of work with a view to reducing the impacts and inconvenience to the absolute minimum. Noise monitoring would be carried out during construction to ensure the nuisance to residents would have been kept minimised.

14. The unmitigated operational noise from trains is predicted to be 1-4 dB(A) above the criterion of 60 dB(A) during night-time. With the provision of a 150 m long natural ventilated absorptive noise enclosure extending from Portal 1A, the mitigated operational train noise will be reduced to 50 dB(A), which fully complies with the relevant criteria.

15. The potential air-borne operational noise from fixed plant noise sources including cooling towers, louvers of ventilation building, ventilation shafts and plant buildings were assessed in the EIA. No exceedance was anticipated in the EIA with proper selection of plant and adoption of acoustic treatment.

### Ground-borne noise impact

16. Potential ground-borne operational noise at representative NSRs have been assessed in the EIA. The predicted night-time noise levels ( $Leq_{(30mins)}$ ) at all representative NSRs would be less than 20 dB(A) which is well below the criterion of 45 dB(A) for residential developments. Potential cumulative ground-borne noise impacts from the operation of other planned rail lines (i.e. SCL(TAW-HUH) and KTE) were also considered in the EIA and the predicted cumulative ground-borne noise would be 9 dB(A) below the criterion of 45 dB(A).

### Landscape and Visual Impacts

17. Approximately 640 number of trees of common species will be affected by the Project, of which 30 trees would be transplanted. Subject to approval of the Tree Removal Application by Lands Department, 610 trees would be felled. None of the affected trees are Registered Old and Valuable Trees on the records of Leisure and Cultural Services Department.

18. To mitigate landscape and visual impact, aesthetically pleasing design would be adopted for the above-ground structures. Compensatory tree planting at a ratio of 1:1 in quantity is proposed. Due to limited available space, horizontal greening such as green roof and vertical greening such as climbers are also proposed

as alternative compensatory planting. The EIA considered that the residual landscape and visual impacts of the Project are acceptable with the implementation of the proposed mitigation measures during construction and operation phases.

### **Waste Management**

19. The EIA anticipated that the Project would generate 99,200m<sup>3</sup> of excavated sediment, of which 62,200m<sup>3</sup> is suitable for Type 1 - Open Sea Disposal and 37,000m<sup>3</sup> requires Type 2 - Confined Marine Disposal.

20. The EIA also estimated that the Project would generate about 386,000m<sup>3</sup> of inert Construction and Demolition (C&D) materials. The Project would minimise the generation of C&D materials and maximise the reuse. Surplus inert C&D materials would be delivered to Public Fill Reception Facilities or other concurrent projects including the Hong Kong-Zhuhai-Macau Bridge, Hong Kong Boundary Crossing Facilities, Tuen Mun-Chek Lap Kok Link, Wan Chai Development Phase II and Central-Wan Chai Bypass, etc., and outside Hong Kong at Taishan, China as the last resort. The Project would make use of the existing barging point at Hung Hom for handling C&D materials.

21. About 8,000 m<sup>3</sup> of non-inert C&D materials would be generated and would be reused and recycled as much as possible before disposal at North East New Territories Landfill.

22. With the implementation of the recommended mitigation measures, no adverse waste management implications would be expected.

### **Other Environmental Impacts**

23. Other impacts including construction dust, water quality and land contamination have also been addressed in the EIA report. With the implementation of recommended mitigation measures, the Project will comply with the relevant requirements under the TM.

## **ENVIRONMENTAL MONITORING AND AUDIT**

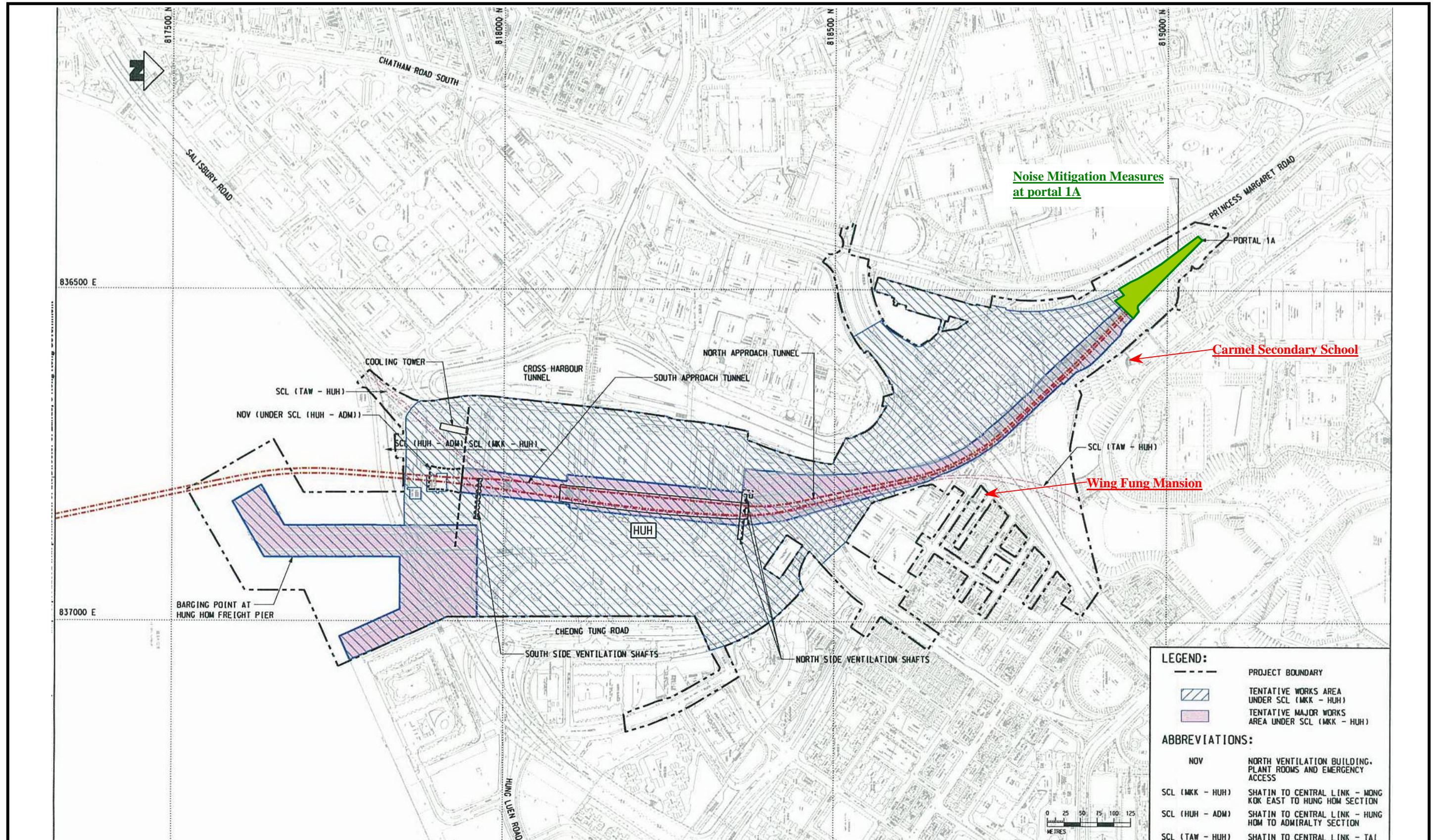
24. The EIA report includes an Environmental Monitoring and Audit (EM&A) Manual which recommends an EM&A programme during the construction and operation phases of the Project. Key recommended EM&A requirements cover

construction phase air-borne noise and dust monitoring; and operation phase air-borne and ground-borne noise monitoring.

## **PUBLIC CONSULTATION**

25. The applicant has made the EIA report, EM&A Manual and Executive Summary available for public inspection under the EIAO from 24 November 2011 to 23 December 2011. Members will be informed of any public comments received by the Environmental Protection Department.

**December 2011**  
**Environmental Assessment Division**  
**Environmental Protection Department**



**Figure 1: Overall View of Alignment & Works Sites**



Project Title: Shatin Central Link – Mong Kok East to Hung Hom Section

Note: This figure is extracted from the EIA Report