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**ACE-EIA Paper 4/2012**
***For advice on 9 January 2012***

**Environmental Impact Assessment Ordinance (Cap. 499)**
**Environmental Impact Assessment Report**
**Shatin to Central Link – Stabling Sidings at Hung Hom Freight Yard**

## PURPOSE

This paper presents the key findings and recommendations of the Environmental Impact Assessment (EIA) report for the proposed Shatin to Central Link – Stabling Sidings at Hung Hom Freight Yard (SCL(HHS)) (hereafter known as "the Project") submitted under section 6(2) of the Environmental Impact Assessment Ordinance (EIAO) (Application No. EIA-197/2011). 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 SCL is a strategic rail corridor for forming an expanded railway network in Hong Kong that will bring various benefits to the community. A stabling siding is an essential element for the operation of the SCL. Either the proposed siding in this Project or the proposed Diamond Hill Stabling Siding (DHS) covered in the SCL(TAW-HUH) EIA would be needed to accommodate trains for deployment to meet the demand during morning peak hours. During non-operational hours, the siding would be used for train stabling.

## DESCRIPTION OF THE PROJECT

7. SCL(HHS) is a proposed stabling siding at the former Hung Hom Freight Yard. If SCL(HHS) is to be implemented, the proposed DHS described in the SCL(TAW-HUH) EIA will not be pursued. The pursue of the SCL(HHS) will require changes to the design of SCL(TAW-HUH) and SCL(MKK-HUH) at Hung Hom Station (HUH), Kai Tak Station (KAT) and Diamond Hill Station (DIH). (see **Figure 1 to Figure 3**)

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

(i) A stabling siding at the former Hung Hom Freight Yard underneath the existing podium structure of HUH, the launching/retrieval and emergency tracks and the shunt neck extending outside the podium;

(ii) Modified North Side Ventilation Shafts and South Side Ventilation Shafts at HUH;

(iii) Noise Mitigation Measures at fan area to the north of HUH;

(iv) China Light & Power Transformer Plant at the north of HUH;

(v) Trackside Ventilation Plant at the north of HUH;

(vi) Modified station, entrance and ventilation shafts at KAT;

(vii) Underground refuge sidings of about 300m in length as part of the KAT;

(viii) Modified station, entrance and ventilation shafts at DIH;

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 under Item A.2; and

(ii) A railway siding under Item A.4.

## 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 the various options and alternatives of

stabling sidings locations considered and selection of the preferred scheme for the SCL, taking into account the operational requirements and environmental implications. Investigation has been conducted for using existing train depots, including Tai Wai Depot and Pat Heung Depot, Ho Tung Lau Depot and Kowloon Bay Depot, for the proposed SCL(TAW-HUH). Feasibility of a new stabling siding at various locations including Shatin Pass Quarry, Hin Keng, Tai Shui Hang, Wu Kai Sha CDA sites, Kai Tak, Diamond Hill CDA site and the former Hung Hom Freight Yard has also been investigated.

## 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, large full enclosure to screen all plant and temporary noise barriers for Powered Mechanical Equipment such as pipe pile rigs, the resulting noise levels due to the Project itself at all representative Noise Sensitive Receivers (NSRs) will range from 55 to 75 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), SCL(MKK-HUH) and SCL(HUH-ADM), there would be 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. 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 NSR 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 that the nuisance to residents would have been kept minimised.

14. With the implementation of noise mitigation measures including a 7 m high semi-enclosure extending from the edge of the podium to the realigned Cheong Wan Road (CWR) bridge, a 5 m high noise barrier extending from CWR approximately 35 m towards the north and a 5m high noise barrier of approximately 45 m long near Chatham Road North (see **Figure 1**), the mitigated cumulative operational train noise is predicted to be 48 dB(A) during night-time, which complies with the criteria of 60 dB(A).

15. The potential air-borne operational noise from fixed plant noise sources including ventilation shafts and plants have been assessed in the EIA. No exceedance is anticipated in the EIA with proper selection of plant and adoption of acoustic treatment.

Ground-borne noise impact

16. The predicted operation ground-borne noise levels at all representative NSRs were also within the criteria. For example, the predicted night-time noise levels ($Leq_{(30mins)}$) would range from less than 20 to 40 dB(A) which comply with 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), SCL(MKK-HUH) and KTE) were also considered in the EIA and the predicted cumulative ground-borne noise would be 38 dB(A), complying with the criterion of 45 dB(A).

**Landscape and Visual Impacts**

17. Approximately 405 number of trees of common species will be affected by the Project, of which 45 trees would be transplanted and 360 trees would be felled, subject to future approval of the Tree Removal Application by the Lands Department. The affected trees vary from small to mature size but none of these are Registered Old and Valuable Trees on the records of the Leisure and Cultural Services Department.

18. Due to the limited space available for tree planting within the Project boundary, compensatory tree planting of approximately 193 trees is proposed.

Other greenery such as green roof and shrub planting are also proposed to compensate for the loss of existing trees in the Diamond Hill Study area. Aesthetically pleasing design would be adopted for the above-ground structures. 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 45,250$m^3$ land-base sediment. The sediment quality assessment and disposal will be implemented under the SCL(TAW-HUH) EIA.

20. The EIA has also estimated that the Project would generate about 1,413,590$m^3$ 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 Boundary Crossing Facilities, and outside Hong Kong at Taishan, China as the last resort.

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

**Other Environmental Impacts**

22. Other impacts including construction dust, cultural heritage, ecology, land contamination and water quality 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

23. 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

24. 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**

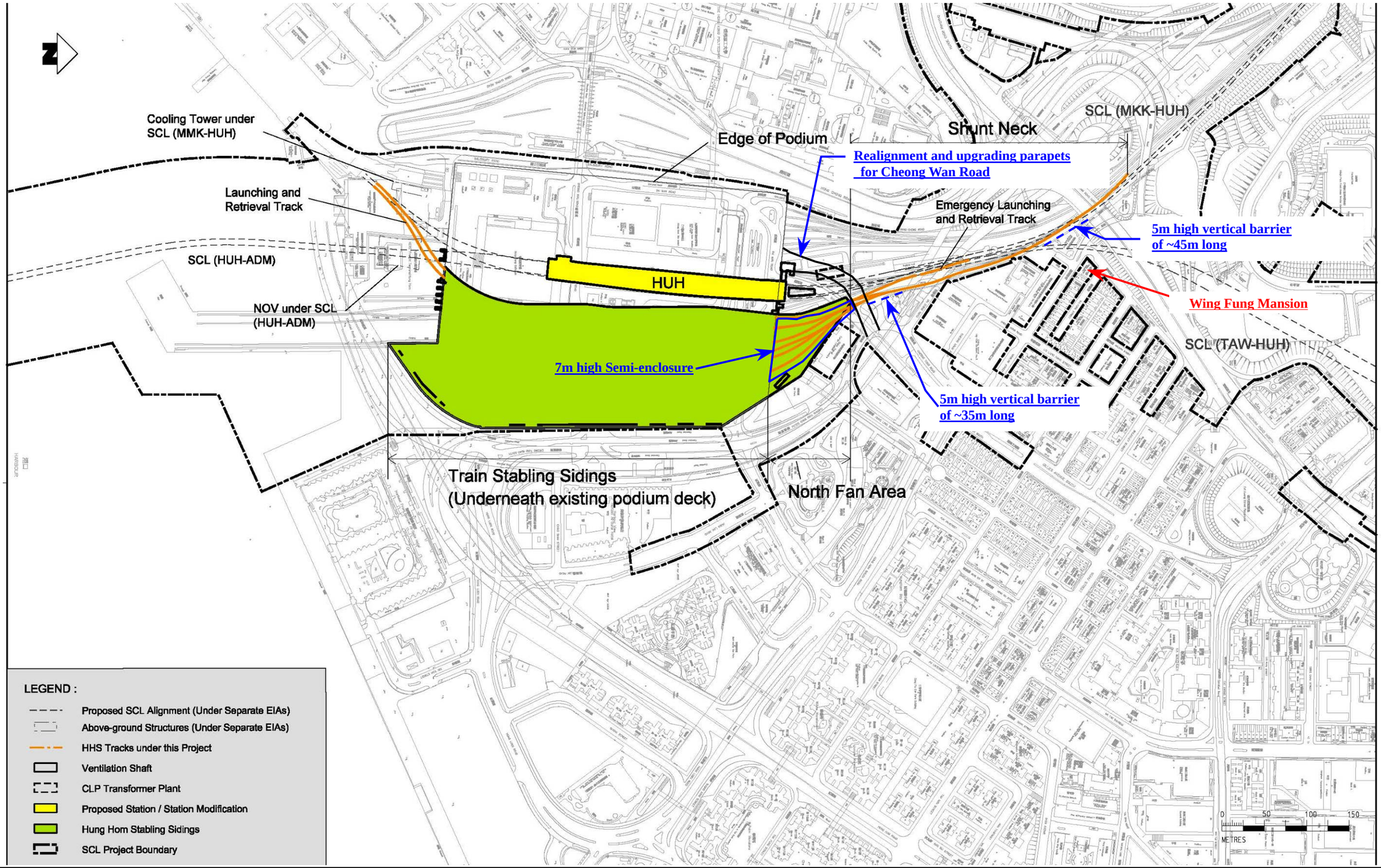


**Figure 1: Overall View of Alignment & Works Sites (Hung Hom)**

Project Title: Shatin Central Link – Stabling Sidings at Hung Hom Freight Yard

Note: This figure is extracted from the EIA Report

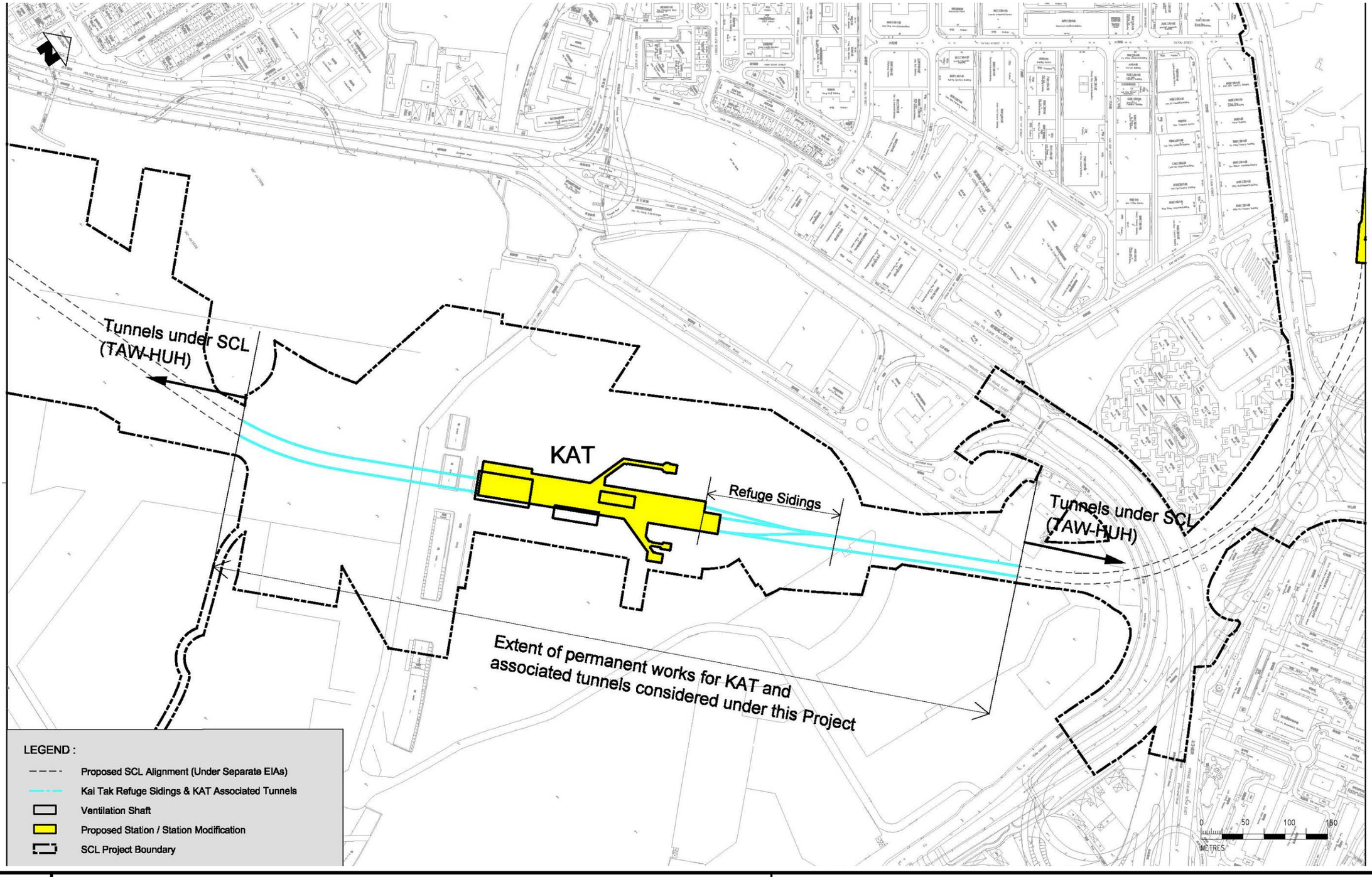


**Figure 2: Overall View of Alignment & Works Sites (Kai Tak)**

Project Title: Shatin Central Link – Stabling Sidings at Hung Hom Freight Yard

Note: This figure is extracted from the EIA Report

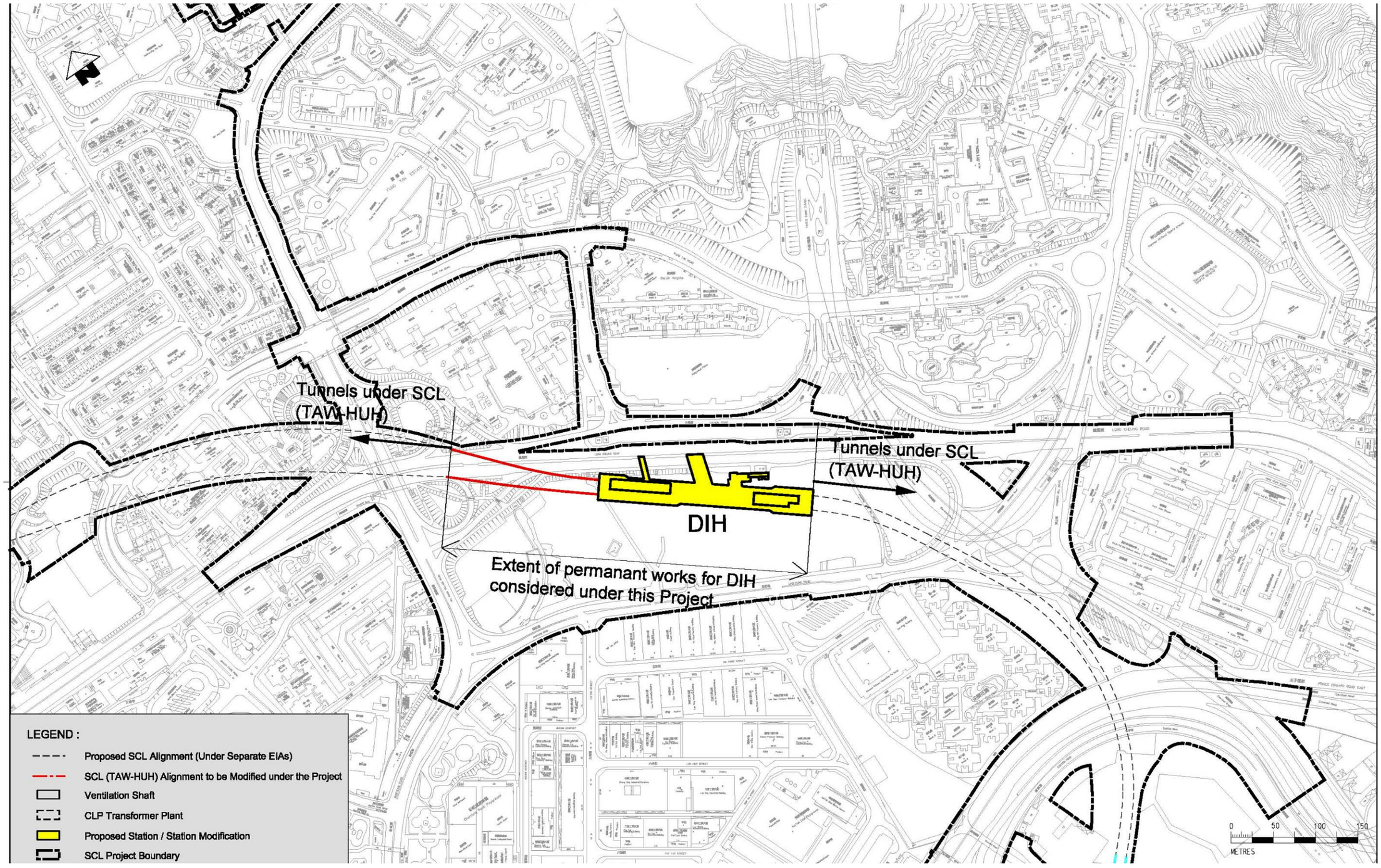


**Figure 3: Overall View of Alignment & Works Sites (Diamond Hill)**

Project Title: Shatin Central Link – Stabling Sidings at Hung Hom Freight Yard

Note: This figure is extracted from the EIA Report