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**ACE-EIA Paper 3/2022**  
***For advice on 11 April 2022***

**Environmental Impact Assessment Ordinance (Cap. 499)**  
**Environmental Impact Assessment Report**

**Tung Chung Line Extension**

**PURPOSE**

This paper presents the key findings and recommendations of the Environmental Impact Assessment (EIA) report on “Tung Chung Line Extension” (hereafter known as “the Project”) submitted under Section 6(2) of the Environmental Impact Assessment Ordinance (EIAO) (Application No. EIA-277/2021). The Project is a Designated Project (Item A.2 and A.7, Part I, Schedule 2) under the EIAO, as it will involve construction and operation of a railway and its associated station; and a railway tunnel more than 800 m in length. MTR Corporation Limited (MTRC) (the Applicant) and its consultants will present the report at the meeting of the EIA Subcommittee.

**ADVICE SOUGHT**

2. Members’ views are sought on the findings and recommendations of the EIA report. The Director of Environmental Protection (DEP) will take into account the comments from the public and the Advisory Council on the Environment (ACE) in deciding whether or not to approve the EIA report under Section 8(3) of the EIAO.

**BACKGROUND**

3. The Tung Chung Line Extension (TCLE) project was first announced in Railway Development Strategy 2014 to support the future land supply and housing development at Lantau North. It aims to provide a convenient transportation mode to serve the existing and planned population in Tung Chung East (TCE) and Tung Chung West (TCW). The Schedule 3 EIA for the Tung Chung New Town Extension (TCNTE) approved in 2016 has allowed for the TCLE Project. This separate

Schedule 2 EIA study is conducted by MTRC, the rail operator, to assess the environmental impact of TCLE project taking into account its latest design.

4. The Applicant submitted the EIA report for the Project under Section 6 of the EIAO. DEP, in consultation with relevant authorities, considered that the EIA report has met the requirements in the EIA Study Brief and the Technical Memorandum on EIA Process (TM), for the purpose of its exhibition for public inspection under Section 7(4) of the EIAO.

## **NEED FOR THE PROJECT**

5. Under the TCNTE project, the TCE and TCW would be further developed to accommodate additional population of more than 140,000 and 35,000 respectively. The Project with the new stations added at TCE and TCW will provide a convenient and direct transport means to the existing and planned populations to get to other parts of Hong Kong without relying on road-based vehicles or without the need for taking connecting buses to the existing Tung Chung station first.

## **ENVIRONMENTAL BENEFITS**

6. As stated in the EIA report, the Project will bring about the following potential environmental benefits to the area:

- (i) **Reduce the reliance on road-based vehicles:** With the introduction of the two new train stations at TCE and TCW areas, all the planned population and neighbouring existing population would have the choice to get access to this electrified train system instead of relying on road-based vehicles; and
- (ii) **Reduce the road traffic noise and vehicular emission:** Implementing the Project would help control the increase of road traffic noise and vehicular emission throughout the new town extension process.

## **DESCRIPTION OF THE PROJECT**

7. The Project can be broadly divided into two parts, i.e. modification to the existing at-grade railway section running along the southern edge of the newly reclaimed area in TCE; and provision of a new underground railway section extending the Tung Chung Line from the existing Tung Chung station to TCW. The layout plan of the Project is shown in **Figure 1**.

8. The Project comprises the following major elements:
- (i) A new at grade station at the newly reclaimed TCE area and diversion of approximately 1.2 km of the existing Tung Chung Line for connecting to the new TCE station;
  - (ii) A new section of railway tunnel of approximately 1.3 km extending from the existing overrun tunnel of Tung Chung station to the new TCW Station to the west of Yat Tung Estate;
  - (iii) A new underground TCW Station and an approximately 95 m long overrun tunnel; and
  - (iv) Associated facilities including Emergency Access Point/Emergency Egress Point (EAP/EEP) building, entrances, ventilation shaft structures, etc.

## **CONSIDERATION OF ALTERNATIVE OPTIONS**

9. The EIA report has considered alternative options on the railway alignment, siting of EAP/EEP building, project design and construction methods to avoid and minimise the potential environmental impacts. The recommended scheme has taken into account environmental considerations, site constraints, construction and operational requirements and comments received during public inspection of the Project Profile and the Applicant's engagement exercise with local village, district council and green groups. The key approaches that have been adopted by the Applicant to avoid or minimise environmental impacts are summarised below:

- (i) sensitive marine and terrestrial ecological habitats including Wong Lung Hang estuary, mangroves and mudflats at Ma Wan Chung and Tung Chung Bay, Lantau (North) Country Park, Tai Ho Stream Site of Special Scientific Interest and Tai Ho Priority Site have been avoided by selecting the proposed alignment and sites for the above ground structures and works areas;
- (ii) marine works and the associated direct impacts on the important marine/intertidal ecological resources in the vicinity such as Tung Chung River and Ma Wan Chung have been avoided by adopting Tunnel Boring Machine (TBM) tunneling method instead of open cut method;
- (iii) to avoid impact upon the secondary woodland at Tung Chung Road North, the EAP/EEP building will be located at the artificial slope west of Shun Tung Road;
- (iv) to prevent illegal dumping of construction and demolition (C&D) materials especially to the ecological sensitive areas in Lantau, all dump trucks to be deployed for C&D materials transportation would be

equipped with Global Positioning System (GPS) for tracking their locations; and

- (v) special considerations have been given to the construction works sequence to minimize the construction noise and dust impacts upon the nearby sensitive receivers at Ma Wan Chung Village, Yat Tung Estate and Tung Chung Crescent, such as advancing the construction of station slab for TCW station box, and providing a temporary enclosure at the TBM launching site as soon as practicable to shield the underground construction works.

## **SPECIFIC ENVIRONMENTAL ASPECTS TO HIGHLIGHT**

### **Noise Impact**

10. The works sites at the TCW and near the existing Tung Chung station are close to existing residential developments. To reduce the construction noise impacts, mitigation measures including the planning of work sequence, use of quiet powered mechanical equipment, movable noise barriers / enclosures to shield the powered mechanical equipment, and noise barrier along site boundary to protect the affected Ma Wan Chung village house are proposed in the EIA. With the noise measures in place, the mitigated noise level at the nearest residential units at Yat Tung Estate, Ma Wan Chung Village and Tung Chung Crescent would be reduced to 75 dB(A), 73 dB(A) and 74 dB(A) respectively, meeting the laid down noise standard of 75dB(A) for domestic premises.

11. With the implementation of appropriate mitigation measures, e.g. noise barriers along the realigned open tracks, impacts from rail noise and fixed plant noise sources during operational phase are predicted to be within respective criteria.

### **Ecology**

12. Apart from reviewing past ecological information, a 7-month ecological field survey covering both wet and dry seasons was conducted to identify habitats and species of conservation interest within the 500 m Study Area of each work site. While two butterfly species of conservation importance, Tiny Grass Blue and Rounded 6-line Blue, were recorded within the Study Area, they were only found in low abundance within the aboveground works area of the TCW station box. There are other habitat types, located within the Study Area and not directly affected by the Project, where the Tiny Grass Blue was more commonly recorded. The larval feeding habitat for Rounded 6-line blue is also well available elsewhere within the Study Area. As such, direct impact to the two butterfly species is considered minor. A single individual of Great Egret, an avifauna species of conservation importance, was also sighted within the aboveground Project Site near the channelized Wong Lung Hang section. Given the low abundance and transient record of Great Egret

within the Project Site, impact to this species is considered minor. Regarding potential impacts on flora, two individual flora species of conservation importance, *Aquilaria sinensis* (牙香樹) and *Canthium dicoccum* (魚骨木), were identified within EAP/EEP works site. They will be avoided and protected by setting up of tree protection zones.

13. Given that marine works have been avoided through the design of the Project, there will be no direct impact to marine ecological resources.

### **Water Quality**

14. Noting the sensitivity of the nearby water bodies such as Tung Chung Bay and Ma Wan Chung, through the alignment selection, adoption of TBM and special barging point design, marine works have been avoided entirely for the Project.

### **Air Quality Impact**

15. Due to the proximity of the works sites from nearby air sensitive receivers, quantitative construction dust impact assessment has been conducted. With the adoption of recommended mitigation measures including frequent watering and installation of cover/screens at the mucking out of the underground station and TBM launching/ retrieval shaft works areas, the predicted air quality impacts will comply with the respective Air Quality Objectives. Operational air quality impact is not envisaged.

### **Other Environmental Impacts**

16. Other environmental impacts including cultural and heritage, landscape and visual, waste management, land contamination, fisheries and hazard to life have either been avoided through option selection or assessed to be relatively minor and have been satisfactorily addressed in the EIA report. With the implementation of the recommended mitigation measures, the Project will comply with the relevant requirements under the TM.

## **ENVIRONMENTAL MONITORING AND AUDIT**

17. The EIA report has included 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 air quality, noise, water quality, waste management, ecology, landscape and visual and cultural heritage aspects.

## **PUBLIC CONSULTATION**

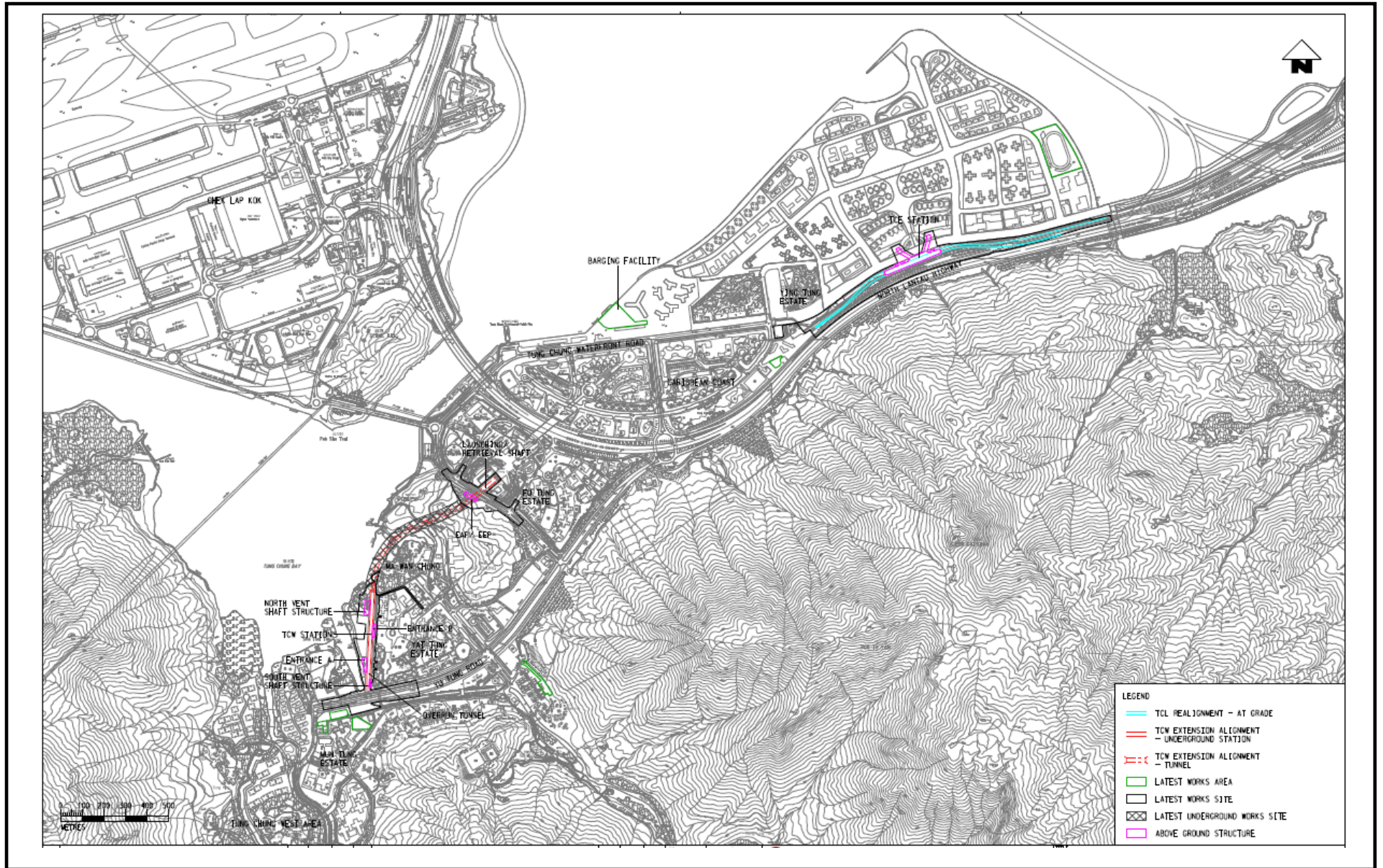
18. The Applicant has made the EIA report, EM&A Manual and Executive Summary available for public inspection under the EIAO from 10 February to 11 March 2022. During the public inspection period, a member of the public expressed that he could not get timely response through the Applicant's hotline due to the work from home arrangement exercised by the Applicant. As such, the Applicant was required under s.7(3) of the EIA Ordinance to extend the public inspection period for another ten days from 23 March to 1 April 2022. A summary of all public comments received by EPD during the public inspection period and a gist of the main concerns raised in the public comments will be provided separately.


**March 2022**

**Environmental Assessment Division**

**Environmental Protection Department**





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| <b>Project Title:</b> | <b>Tung Chung Line Extension</b>  | <b>EIA Application No.:</b> |  |
| <b>Figure 1</b>       | <b>Project Layout Plan</b><br>[Remarks: This figure is prepared based on Figure 1.1 of the EIA Executive Summary] | <b>EIA - 277/2021</b>       |   |