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ACE-EIA Paper 3/2011
For advice on 24 January 2011

Environmental Impact Assessment Ordinance (Cap. 499)
Environmental Impact Assessment Report
Shatin to Central Link
Protection Works at Causeway Bay Typhoon Shelter

PURPOSE

This paper summarizes the key findings and recommendations of the Environmental Impact Assessment (EIA) report on the "Shatin to Central Link Protection Works at Causeway Bay Typhoon Shelter" (hereafter known as "the Project"), submitted under section 6(2) of the Environmental Impact Assessment Ordinance (EIAO). The EIA report will be presented by the applicant, MTR Corporation Limited, and their consultants at the meeting if necessary.

ADVICE SOUGHT

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

NEED FOR THE PROJECT

3. The applicant's EIA report states that the Shatin to Central Link (SCL) is strategically important for connecting the existing railway lines into an

integrated rail network, which will facilitate a direct link between Mainland China and Hong Kong Island. As the future SCL (Hung Hom to Admiralty Section) project will interface with Central-Wanchai Bypass (CWB) project at the Causeway Bay Typhoon Shelter (CBTS), to make optimum use of the reclamation provided by CWB for the construction of SCL, this project will avoid additional future reclamation due to SCL works in the interfacing region and thus minimize impacts on the users of the CBTS.

DESCRIPTION OF THE PROJECT

4. The scope of the Project consists of a temporary reclamation of 0.4 ha, dredging of around 1 ha at the southeast corner of the CBTS, construction of a section of tunnel structure (approximately 160 m long) above the proposed CWB, relocation of the temporary Royal Hong Kong Yacht Club jetty and removal of the temporary reclamation. Though intended for use by the future SCL, the project would be entrusted to the CWB project and carried out by the CWB Contractor. The Project is a designated project under Item C.12 (b), Part I of Schedule 2 of EIAO - A dredging operation which is less than 100 m from a seawater intake point.

5. The Project is limited to civil and structural elements of the protection works and cannot serve to function for any railway service or operation. The Project location is shown in the attached **Figure**.

VIEWS OF THE DIRECTOR AND RELEVANT AUTHORITIES

6. 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). 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.

ALTERNATIVES/OPTIONS

7. Chapter 2 of the EIA report presents the consideration of alternatives/options for the Project, including the "No Reclamation" options (such as "Bridge Option", "Deep Tunnel Boring Machine (TBM) Tunnel Option" and "Shallow TBM Tunnel Option") and the "Reclamation" Options (such as "Immersed Tube Tunnel (IMT) Eastern Corridor Option" and "IMT Western Corridor Option"). The preferred options/designs have taken into account environmental factors such as impacts arising from different construction methods; alternatives to reclamation including Bridge and TBM options mentioned above; engineering practicability such as the use of pipe piled cofferdams without the need for reclamation and temporary seawalls, and the extension of IMT tunnel from SCL (Hung Hom to Admiralty Section) to CBTS; construction risk associated with future construction of SCL tunnel above the CWB tunnel; and programme requirements to ensure the integration with the CWB project to minimize the extent and duration of reclamation.

SPECIFIC ENVIRONMENTAL ASPECTS TO HIGHLIGHT

Water Quality

8. The EIA report has identified the increase in suspended solids (SS) level caused by dredging works as the major water quality impact under the Project. With the implementation of mitigation measures, including dredging rate control of 6,000 m^3 per day in CBTS, confining bulk filling works and demolition of temporary reclamation behind completed seawall, use of silt curtains, silt screen and closed grab dredger, etc., the maximum SS levels at Water Sensitive Receivers, including Water Supplies Department (WSD) flushing water intakes and other cooling water intakes, would be 9.77 and 29.8 mg/l respectively, meeting the relevant criteria. There would be no unacceptable water quality impacts due to this Project and due to cumulative effects from concurrent marine construction activities under other projects, in particular the CWB project.

9. Reclamation works under the Project would result in a temporary embayment area at the southwest corner of CBTS, lowering the flushing capacity and decreasing the Dissolved Oxygen (DO) level, with a potential

associated risk of odour issue. The water modeling assessment results, taking into account concurrent reclamation works under the CWB, indicate that the minimum DO level during the construction phase would still be over 5 mg/l, meeting the TM criteria.

Construction Noise

10. The assessment results indicate that with mitigation measures implemented, the noise levels due to this Project and the cumulative noise impacts from concurrent projects in the assessment area at all representative Noise Sensitive Receivers (NSRs) are predicted to range from 64 to 75 dB(A), meeting the TM noise criteria. The mitigation measures proposed include good site practice, quieter powered mechanical equipment (PME) and movable noise barrier. The representative NSRs include Mayson Garden, Belle House, Hoi Deen Court, Hoi Kung Court, Elizabeth House and Macro Polo Mansion, which located at about 76 to 282 m away from the nearest noise sources.

Construction Dust

11. Potential sources of dust impact arising from the Project include temporary seawall construction, filling, installation of diaphragm walls, excavation, placing a reinforced concrete tunnel box structure and removal of temporary reclamation. With the implementation of dust mitigation measures, the predicted cumulative maximum hourly Total Suspended Particulates (TSP) levels (range from 163 to 417 $\mu g/m^3$), daily TSP levels (range from 119 to 247 $\mu g/m^3$) and annual TSP levels (range from 76.7 to 78.9 $\mu g/m^3$) at all representative Air Sensitive Receivers (ASRs) would comply with the TM criteria. The mitigation measures proposed include watering once every working hour on temporary reclamation area of the Project, covering/paving the retained area at the southwest corner of temporary reclamation and the implementation of good site practice. Representative ASRs include World Trade Centre, Sino Plaza, Highland Mansion, Royal Hong Kong Yacht Club, Police Officers Club and Riviera Mansion, which located at about 20 to 150 m away from the nearest dust emission sources.

Waste Management Implications

12. The Project would generate about 14,400 m^3 of inert construction and

demolition (C&D) materials. Similar to other projects, the C&D materials would be reused by other concurrent projects as far as practicable before off-site disposal at the two Civil Engineering and Development Department's Public Fill Reception Facilities. The EIA report also estimates that about 38,200 m^3 of sediment would be dredged under the Project. Among them, about 10,500 m^3 requires special treatment/disposal using the same method as the CWB project, i.e. sealed in geosynthetic containers for disposal at designated contaminated mud pit for fully confined mud disposal.

ENVIRONMENTAL MONITORING AND AUDIT

13. The EIA report includes an Environmental Monitoring and Audit (EM&A) Manual which recommends an EM&A programme during the construction phase of the Project, covering water quality impact monitoring for SS, turbidity, DO and odour during dredging and temporary reclamation works, as well as noise and dust impact monitoring and waste management implication.

PUBLIC CONSULTATION

14. The applicant has made the EIA report, EM&A Manual and Executive Summary available for public inspection under the EIAO from 8 December 2010 to 6 January 2011. Members will be informed of any public comments received by the Environmental Protection Department.

January 2011
Environmental Assessment Division
Environmental Protection Department

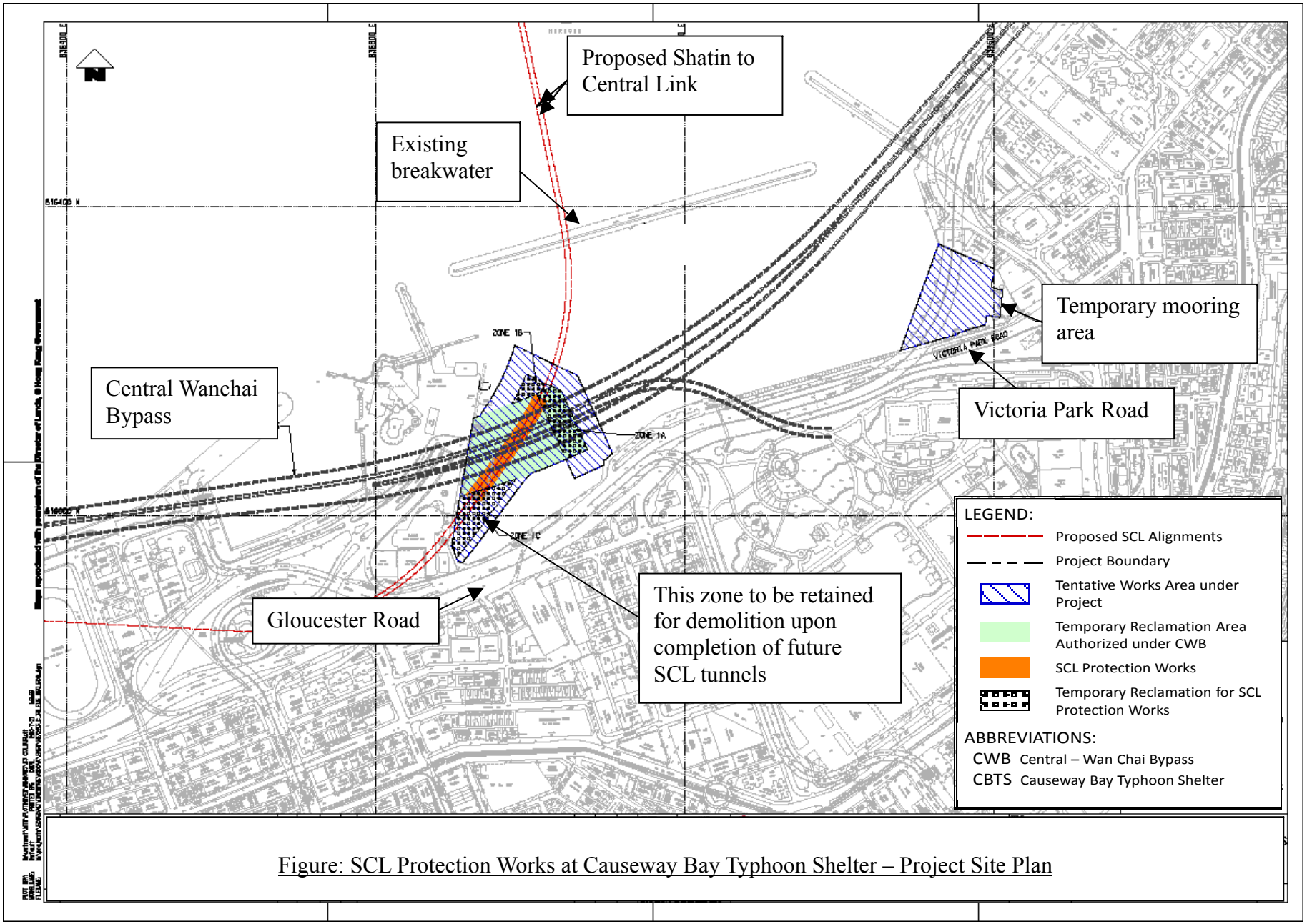

Figure: SCL Protection Works at Causeway Bay Typhoon Shelter – Project Site Plan