

Task Force on Harbourfront Developments on Hong Kong Island

For discussion

on 30 October 2012

TFHK/11/2012

Central - Wan Chai Bypass and Island Eastern Corridor Link (“CWB”)

Appearance of CWB Noise Mitigation Measures at the Harbour-front of North Point

PURPOSE

This paper aims to brief Members on the aesthetic and greening design (“the Design”) of the CWB noise mitigation measures to be implemented at the future Island Eastern Corridor Link (IECL) in North Point.

BACKGROUND

2. CWB is a strategic highway running along the northern part of Hong Kong Island connecting the existing Rumsey Street Flyover in Central and the Island Eastern Corridor in North Point. The construction of CWB has commenced in stages since December 2009 under various contract packages for commissioning in 2017. To mitigate traffic noise nuisance arising from the future CWB eastern tunnel portal and IECL in North Point, a package of noise mitigation measures ¹, comprising noise barriers and noise semi-enclosures, will be provided under the CWB Contract HY/2009/19 “Tunnel (North Point Section) and Island Eastern Corridor Link” (“the Contract”) commenced in January 2011.

¹ The concerned noise mitigation measures form part of the road scheme of the CWB project which was gazetted under Roads (Works, Use and Compensation) Ordinance (Chapter 370) in 2007. The CWB Project was authorized in 2009.

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3. As defined in the Gazette Plan no. 92995/GAZ/1007 for the road scheme of CWB project, we will provide a 270 meter long at-grade section of noise semi-enclosure with landscaped deck above the eastern tunnel portal, a 580 meter long section of noise barriers² on the new eastbound slip road bridge and another section of 730 meter long noise semi-enclosures³ on the elevated bridge structure of the future IECL. The concerned Gazette Plan is shown at **Annex 1**.

AESTHETIC AND GREENING DESIGN OF THE CWB NOISE MITIGATION MEASURES

4. The CWB eastern tunnel portal and IECL are located at the harbour-front in North Point. This location inevitably makes the landscaped deck and noise barriers/semi-enclosures to be built thereon dominant visual elements to the sea view, both from the perspective of the nearby residences and from other parts of Hong Kong looking from a distance. We have engaged professional architect to develop the aesthetic and greening design for these noise mitigation measures, seeking to soften the rigid line of the new road, and more importantly for it to serve as a green backdrop to enhance the harbour view and bring visual proximity of the harbour front to nearby residences.

5. Inspired by the form of ocean waves in Victoria Harbour, the professional architect has developed and adopted “Urban Floating Oasis” as the driving concept and vision for the Design of the CWB noise mitigation measures. The cover of the at-grade noise semi-enclosure above the eastern tunnel portal takes form of an integrated landscape deck climbing up in steps from the CWB tunnel in the west to merge with the green roof of the elevated

² The proposed noise barriers comprise three successive portions, as follows:

- i. a portion of about 135 meter long, 5.5 meter high barrier with 4.5 meter cantilever length at 45 degrees to the horizontal;
- ii. a portion of about 95 meter long, 5.5 meter high barrier with 1 meter cantilever length and 45 degrees to the horizontal; and
- iii. a portion of about 350 meter long, 3.5 meter high vertical barrier.

³ The proposed noise semi-enclosures on the future IECL comprise two successive portions, as follows:

- i. a portion of about 500 meter long single noise semi-enclosure of 6.9 meter to 9.5 meter high on the reconstructed westbound carriageway of the IECL bridge
- ii. a portion of about 230 meter long double noise semi-enclosure covering both the east bound and west bound carriageway of the IECL bridge

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semi-noise enclosure on the IECL in the east. Trees and palms are introduced to the lower part of the landscape deck to provide more vertical variations and seasonal changing scenery. A gradual reduction of trees to shrubs and ground cover is adopted when the landscape deck rises to make a natural transition to the green roof. Wavy pattern is implemented on plantation to embrace waves of the Victoria Harbour as well as symbolising and echoing with the dynamics and vibrancy of the harbour-front. The wavy pattern carries throughout the landscape deck and green roof of semi-noise enclosures, likens a weaving ribbon of greeneries floating on the sky --- an “Urban Floating Oasis” hovering above the Victoria Harbour (see photomontages at **Annex 2**).

6. To minimize visual obstruction to the neighbouring residents, the noise semi-enclosures are designed at minimum height, with structural steel frames of fine size in light grey colour and vertical sound insulation panels of a high level of transparency to enhance visual permeability. Echoing the colours of the sky and sea, the roof of the noise semi-enclosure is fitted with translucent panels coloured in green and sky blue whilst the vertical side facing residents are fitted with transparent panels in pale blue colour. For the sections of noise semi-enclosure fronting non-residential zones, the vertical panels are in jumble colour pattern to add vibrancy to the structures.

7. A variety of plants are chosen for the landscape deck, and they are all tolerant of wind, salt-spray and drought. Visual variations and seasonal changes are offered through flower and foliage color. Plants with drooping quality and fine texture are planted along viaduct planters outside the bridge parapet to represent dynamic, fluid, romantic motion of the harbour. The layout plan and pattern of landscape deck and green roof are shown at **Annex 3**. On the whole, the Design responds to the public aspirations for a vibrant harbour-front, softens the rigid and bulkiness of the bridge and associated structures and allows smooth integration with the future harbour-front open space development.

PUBLIC ENGAGEMENT

8. From November 2011 to January 2012, we conducted a series of public engagement exercises comprising focus group discussions with neighbouring

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residents and a community forum for members of public from the North Point and other parts of Hong Kong to solicit public views on the Design of the CWB noise mitigation measures. In March 2012, we presented the Design to the Eastern District Council (EDC). Feedbacks on the Design, which met the expectations of neighboring residents and EDC members for an appealing landscape deck and noise semi-enclosure with optimal transparency and minimal height, received through the above public engagement exercises were positive. EDC members also expressed appreciation towards our initiative to communicate interactively with neighbouring residents and stakeholders on the Design through the public engagement exercises. **Annex 4** provides a summary of public engagement exercises on the Design of the CWB noise mitigation measures.

WAY FORWARD

9. In the light of the views collected in the public engagement exercises, the Contractor is working with the project architect to refine the Design where appropriate. Fabrication of the structural components is being arranged and construction of the landscape deck and noise barriers and noise semi-enclosures will commence in phases from 2013 onwards to tie in with the construction works for CWB tunnel and IECL bridge structures.

ADVICE SOUGHT

10. We welcome Members to offer views on the aesthetic and greening design of the CWB noise mitigation measures for our reference in the refinement process currently under way.

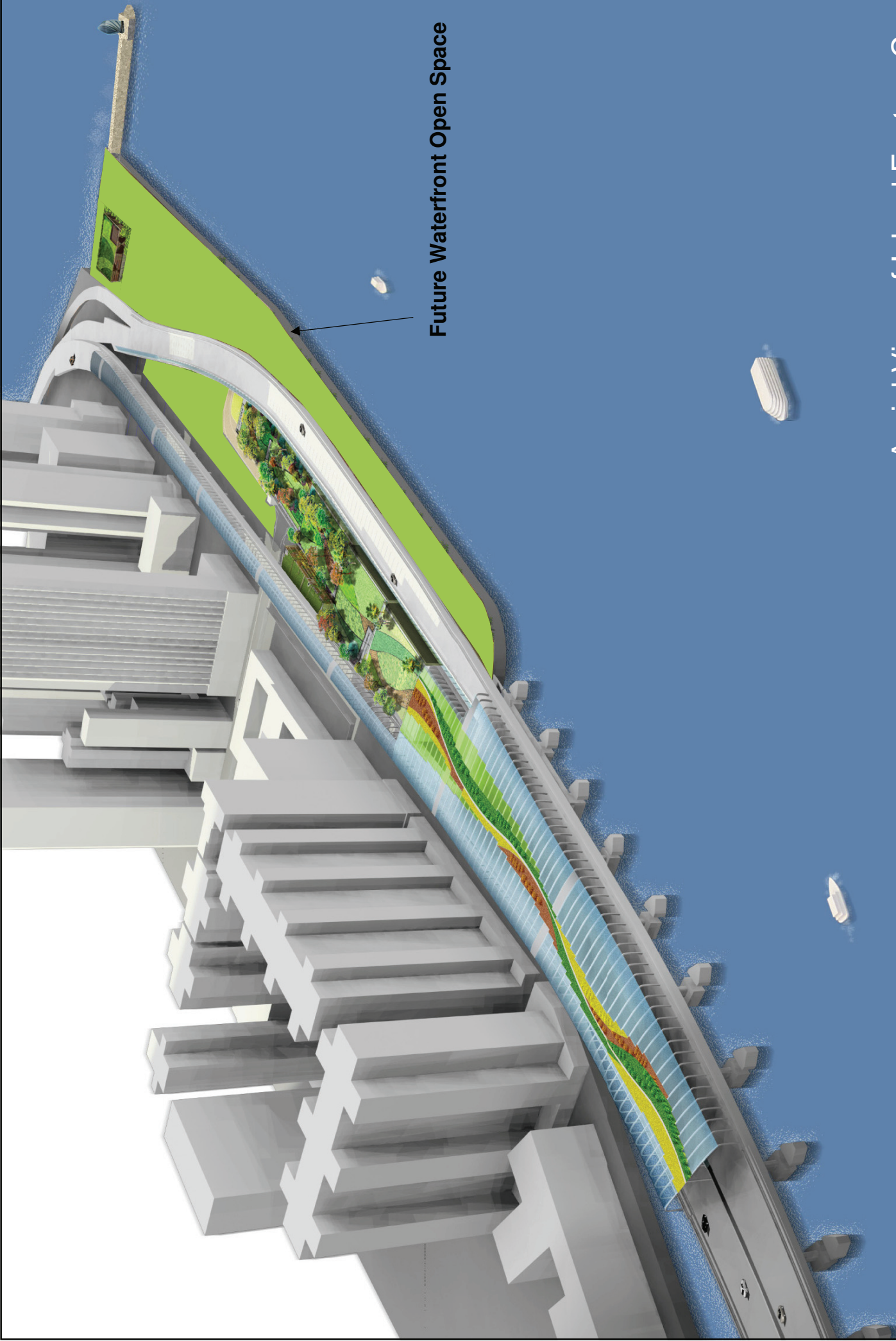
Highways Department
October 2012

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ANNEXES

- Annex 1 Gazette Plan no. 92995/GAZ/1007
- Annex 2 Design Concept plan of “Urban Floating Oasis”
- Annex 3 Layout plan and pattern of landscape deck and green roof
- Annex 4 Summary of public engagement exercises on the Design of the
CWB noise mitigation measures



Future Waterfront Open Space

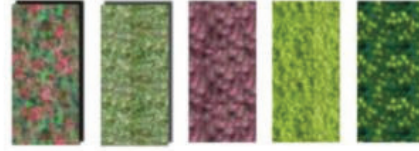
Aerial View of Island Eastern Corridor

Future Waterfront Open Space

Future Waterfront Open Space



Shrubs



Groundcover



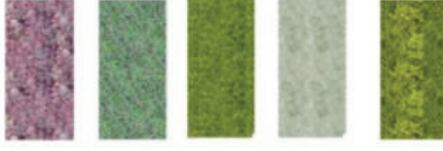
Trees



Palm Trees



Groundcover



Layout Plan and Pattern of Landscape Deck and Green Roof

Annex 4

Summary of public engagement exercises on the Design of the CWB noise mitigation measures

Activity	Date & Venue	Participants	Result
Briefing Session for City Garden	29 November 2011 Club House, City Garden	City Garden - Management Office - Owners' Committee/ residents	Supportive
Focus Group Meeting for Victoria Centre	1 December 2011 CWB North Point Community Liaison Centre	Victoria Centre - Management Office - Owners' Committee/ residents	Supportive
Focus Group Meeting for Harbour Heights	7 December 2011 CWB North Point Community Liaison Centre	Harbour Heights - Management Office - Owners' Committee/ residents	Supportive
Community Forum	15 January 2012 Causeway Bay Community Centre	Public members in North Point District and other parts of the territories	Supportive
Meeting with Eastern District Council	1 March 2012	Eastern District Council members	Supportive