Task Force on Harbourfront Developments on Hong Kong Island

For discussion
on 28 November 2025

TFHK/04/2025

Latest Development of Airport Railway Extended Overrun Tunnel Project

PURPOSE

This paper seeks Members' views on the latest scheme under the Airport Railway Extended Overrun Tunnel (ARO) project.

BACKGROUND AND JUSTIFICATIONS

2. The ARO project refers to the construction of a tunnel of around 460 metres long beneath Lung Wo Road to the east of Hong Kong Station. Such arrangement is necessary to allow trains to turn around at the back of the Hong Kong Station, so as to enhance the train operation efficiency and enable the attainment of the maximum designed carrying capacity of the railway lines. The timely completion of the ARO project is important to support the increasing transport demand from the developments in Lantau including those arising from the new population at Tung Chung New Town Extension[1]. To support the operation needs for tunnel ventilation and evacuation in compliance with the associated Fire Strategy requirements, a ventilation cum emergency access building (ARB) has to be provided above-ground, which must be located close to the ARO tunnel beneath Lung Wo Road.

[1] The Tung Chung New Town Extension is one of the Government's major development projects to increase land and housing supply. It will cover areas on the eastern and western flanks of the existing Tung Chung New Town. Upon full development, TCNTE will provide 64 800 public/private housing units and 877 000 square meters of commercial floor space, accommodating a population of about 182 000. [Source: The discussion paper for Legislative Council Panel on Development Meeting on 26 November 2024 on "Funding Application for Tung Chung New Town Extension – Site Formation and Infrastructure Works (Second Phase); and Report on Progress of work by the Sustainable Lantau Office in taking forward initiatives on Lantau Island"]

While most of the facilities will be constructed underground, the tunnel ventilation system and emergency access must extend from the tunnel to above-ground at the ARB to fulfil operational and fire safety requirements.

PAST HKTF CONSULTATION

3. The ARO project was discussed at the 45th Task Force on Harbourfront Developments on Hong Kong Island (HKTF) meeting on 25 April 2023. The previous scheme under the ARO project presented at the aforesaid 45th HKTF meeting featured an ARB within the Central Harbourfront Event Space (CHES) and a relatively extensive temporary occupation of the CHES based on a more traditional design and construction arrangement (hereafter referred to as "the 2023 Scheme"). Following the meeting, MTR Corporation Limited (MTRCL) has employed immense effort and has devised innovations in the review and made adjustments to the design and construction arrangement of the ARO project in consideration of the comments raised by Members, with a view to minimising the extent of occupation of the CHES, as well as the height and the above-ground footprint of the ARB. The subsequent sections outline the updates of the project.

VENTILATION CUM EMERGENCY ACCESS BUILDING (ARB)

4. Under the latest scheme, the ARB will be located at the east of Yiu Sing Street near Lung Wo Road with no permanent occupation of the ground level of the CHES. The footprint area of the ARB will be significantly reduced from 2 500 square metres (m^2) in the CHES to less than 630m^2 (approximately 12 metres (m) wide by 52m long). Compared with the 2023 Scheme, the ARB under the latest scheme would not require permanent occupation within the CHES. Upon completion, the carriageways of Yiu Sing Street will be realigned and the same number of traffic lanes will be provided as today. The updated layout plan of ARO is attached in **Appendix A**.

5. The height of the above-ground structure of the ARB is also substantially reduced from approximately a uniform 18m above the existing ground level to a cascade from as low as 3m to a maximum of 9m. To achieve the above changes, MTRCL has innovatively explored the use of underground space such that most facilities are now relocated underground; only key facilities such as ventilation shafts, fire control rooms, emergency accesses and transformer rooms which cannot be arranged underground shall remain at ground level. Even though this design involves more difficult regular maintenance, MTRCL considers it worth pursuing in view of its much smaller footprint and lower height. MTRCL will continue to explore opportunities to further optimise the size and the height of the ventilation building in the next detailed design stage.

6. In order to blend in with the adjacent harbourfront setting, green elements such as trellis system and timber façade will establish harmony with nature and integrate with the vibes of the nearby lush environment. Modern features of artwork façade with digital screen element will demonstrate intersection of art and technology and resonate with the vibrant Victoria Harbour and nearby developments to foster an engaging connection for enjoyment of the community along the harbourfront. Greening can be provided at the roof of the ARB to promote sustainability as well as to create an aesthetic appeal to nearby buildings. In the next detailed design stage, we will incorporate Members' comments on the façade design of the ventilation building and will further engage nearby stakeholders for an integration with the nearby developments in the vibrant Central Harbourfront area. References of the potential façade treatment of ARB are attached in **Appendix B**.

7. Furthermore, to enhance the ARO project's environmental, social and governance (ESG) value, green walls and natural material cladding such as timber cladding and low-volatile organic compounds (VOC) textured paints will be incorporated into the design of the ARB

to minimize visual impact. Aligning with our governance commitment to community integration, there will not be hard fencing enclosing the proposed ARB to allow integration and connection with adjacent waterfront promenades, running tracks, boardwalks and facilities.

TEMPORARY LAND OCCUPATION IN THE HARBOURFRONT AREA

8. In response to Members' concerns regarding the extent and duration of temporary occupation of the CHES, MTRCL has reviewed the arrangement for the temporary works areas, including moving the temporary traffic arrangement completely outside the CHES. The latest scheme involves temporarily occupying a narrow strip of less than 10m wide (which is not more than about 10% of the CHES area) mainly along the southern and western boundary of the CHES, so that the majority of the site area of CHES can continue to be utilized effectively by event organisers during construction period. The updated temporary works sites and works areas are shown in **Appendix C**. Depending on the works progress, other than reducing the extent, the duration of the temporary occupation will also be shortened from 8 years to within 5 years upon the commencement of construction. During the construction stage, MTRCL and the contractor will use the proposed works area of about 5 100 m^2 in Wan Chai North which is necessary for backing and supporting the construction works of the project including tunnelling and building activities.

9. For the proposed temporary works sites and works area outside CHES, a substantial part of Lung Wo Road and Yiu Sing Street is required for temporary traffic management to maintain both the traffic and pedestrian flow during the construction stage. In addition, to enable the construction of tunnel and the ARB, part of these works sites and works areas are essential for the supporting facilities for these large-scale construction activities.

10. Some underground utilities provisions within the CHES which would be affected by the ARO project will be reinstated and returned to the Government after the completion of ARO. In general, these reinstatement works will follow a "like-for-like" principle, aiming to restore the utilities to their original conditions.

CONSTRUCTION METHOD

11. MTRCL is actively exploring different construction methods to build the overrun tunnel with the aim to minimise the impact to the harbourfront during construction. To facilitate the tunnelling works, Lung Wo Road and Yiu Sing Street will be realigned in stages, targeting to maintain the same number of traffic lanes and to preserve pedestrian connectivity between the harbourfront and the hinterland. During construction stage, MTRCL will develop detailed temporary traffic management schemes and consult nearby stakeholders as well as submit the schemes for endorsement by relevant authorities.

COMMUNITY LIAISON WORKS

12. During the construction stage, MTRCL will closely supervise its contractors and ensure proper site management, including implementing noise/dust mitigation measures, maintaining drainage system in site areas and providing sufficient signages on walkways for clear indication of nearby point of interests including the CHES and other key harbourfront destinations nearby.

13. MTRCL will coordinate with the operator of CHES to facilitate their operation. The vehicular and pedestrian access to the CHES at Lung Wo Road will be prudently reviewed according to the temporary traffic arrangement on Lung Wo Road, while entrances/exits to the CHES will be maintained. If necessary, other alternative entrances and exits to the CHES will be provided after liaison with the

operator of CHES and relevant government departments. MTRCL will especially pay attention to mega events like outdoor concerts and will suitably organise construction works to collaborate with the event organisers.

INITIATIVES IN ENHANCING PUBLIC ENJOYMENT

14. In the previous HKTF meeting, Members raised suggestions on enhancement of public enjoyment at the harbourfront. MTRCL is supportive of enhancing the vibrancy of the harbourfront and has organized several events for public enjoyment at the CHES in the past two years after the meeting such as the "Green T Baby Fun Day" and the MTR 45th Anniversary Carnival "Chill Fun Trainival". MTRCL will continue to positively explore the possibility of holding community activities at the harbourfront subject to suitability and availability of the venue.

HARBOUR PLANNING PRINCIPLES

15. The updated proposal of the ARO project is considered in line with the Harbour Planning Principles in the following aspects:

a) Preserving Victoria Harbour

The proposal will not involve any reclamation nor disruption to the Victoria Harbour. The ARB façade design will imitate the genre of the nearby developments, the existing waterfront promenades, running tracks, boardwalks, and facilities. This preserves the existing visual characters of Victoria Harbour in order to maintain its economic and social values.

b) Stakeholder Engagement

Engagement meetings with nearby stakeholders along the ARO proposed alignment have commenced since 2022. We have consulted the nearby stakeholders such as the CHES, Site 3 Developer, and concerned Government bureaux/departments. Stakeholders had no objection to the latest scheme and we will continue to closely liaise with the stakeholders in the detailed design and construction stages. Furthermore, MTRCL will prudently arrange and implement site control measures to minimize as much as possible any impacts on the community.

c) Sustainable Development

The planning of the ARO project embraces the principle of sustainable development by balancing the economic and environmental needs in the vicinity. The exterior design of the ARB will also include green walls and natural material cladding such as timber cladding and low-VOC textured paints to minimize visual impact.

d) Integrated Planning, Vibrant Harbour and Public Enjoyment

The ARB building has been designed to minimize its massing in order to integrate with adjacent waterfront promenades, public open spaces, buildings/structures and other facilities. The design of ARB follows the design principle with respect to the Harbour Planning Guidelines for Victoria Harbour and its Harbourfront Areas. The exterior design of the ARB will harmonize and complement the existing and future waterfront developments. The proposed ventilation building is located at the southbound of Yiu Sing Street. It is not situated at the six view corridors recommended in the "Urban Design Study for the New Central Harbourfront" (the Study) including the View

Corridor 3 from HSBC Headquarters and Statue Square to the harbour, which preserves the visual linkage with the harbour.

e) Accessible Harbour

The new promenade on Hong Kong Island North is being developed with more leisure space along the waterfront of Victoria Harbour which will enrich the experience and enjoyment of the general public. The ARO will enhance the train operation efficiency, adding an incentive for the general public from Lantau and Kowloon to visit and enjoy the Victoria Harbour for recreation and relaxation.

During the construction stage, temporary traffic management schemes will be developed on Lung Wo Road and Yiu Sing Street. The operation of the nearby developments, the Hong Kong City Hall, the Hong Kong Observation Wheel and the Central & Western District Promenade at the Central Harbourfront will not be affected. Pedestrian connectivity between the harbourfront and the hinterland will also be maintained as far as practicable during the construction stage.

PROGRAMME

16. According to the latest programme, construction of the main works is targeted for completion by 2032.

WAY FORWARD

17. After consulting Harbourfront Commission, MTRCL will continue engaging with nearby stakeholders and optimizing the scheme in the next detailed design stage, and will proceed with relevant statutory processes, such as application for gazettal of railway scheme amendment under the Railways Ordinance.

ADVICE SOUGHT

18. Members are invited to provide comments on the above latest scheme under the ARO project.

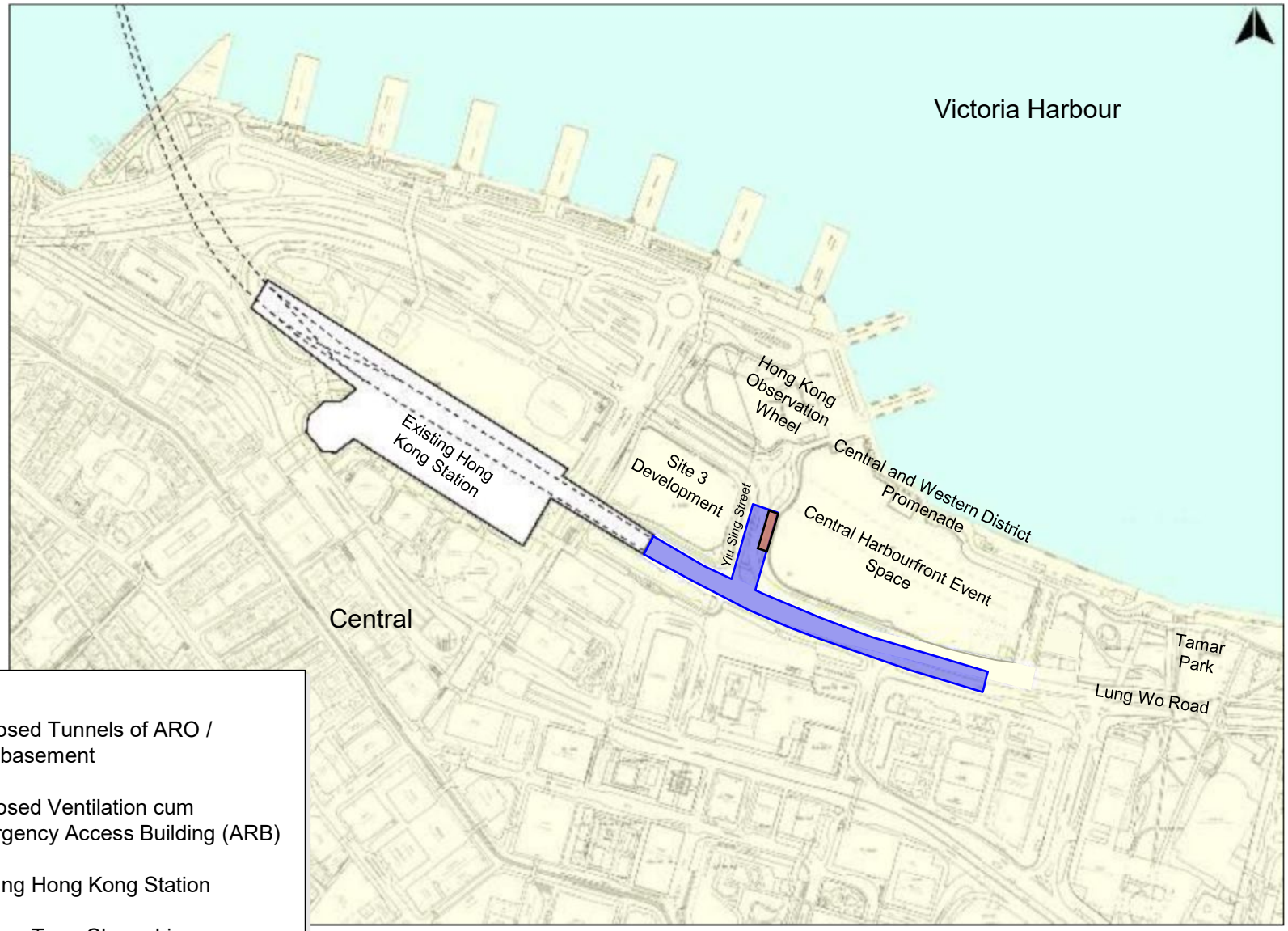
MTR Corporation Limited
November 2025

ATTACHMENTS

Appendix A: Updated Layout Plan of ARO
Appendix B: ARB Façade Design Reference
Appendix C: Updated Temporary Works Sites and Works Areas of ARO

Airport Railway Extended Overrun Tunnel (ARO)
Updated Layout Plan of ARO

Appendix A



Legend

- Proposed Tunnels of ARO / ARB basement
- Proposed Ventilation cum Emergency Access Building (ARB)
- Existing Hong Kong Station
- Existing Tung Chung Line and Airport Express Line

Airport Railway Extended Overrun Tunnel (ARO)
ARB Façade Design Reference

Appendix B

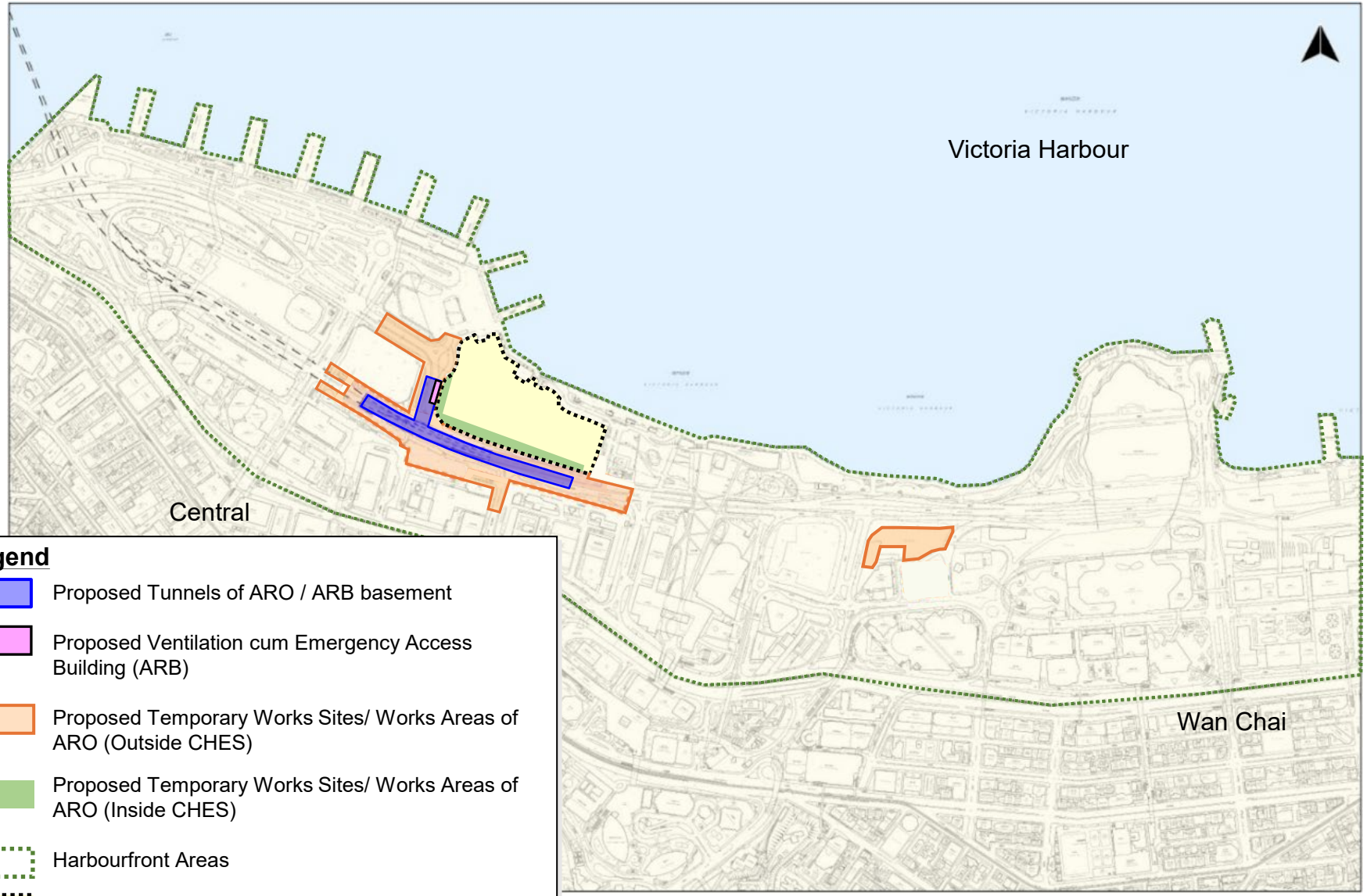
Green Facades – Trellis System

Kengo Kuma: Japan House, Sao Paulo
Timber façade to express a forest in the city
https://www.archdaily.com/923091/japan-house-sao-paulo-kengo-kuma-and-associates-plus-fgmf

Reference of digital screen façade
https://www.wsj.com/articles/times-square-landlords-cash-in-as-led-billboards-go-big-1416192206?tesla=y&mod=WSJ_IndustrialGoodsServices_leftHeadlines&mg=reno64-wsj

Airport Railway Extended Overrun Tunnel (ARO)
Updated Temporary Works Sites and Works Areas of ARO

Appendix C



*The above temporary works sites / works areas of ARO would be subject to availability.