



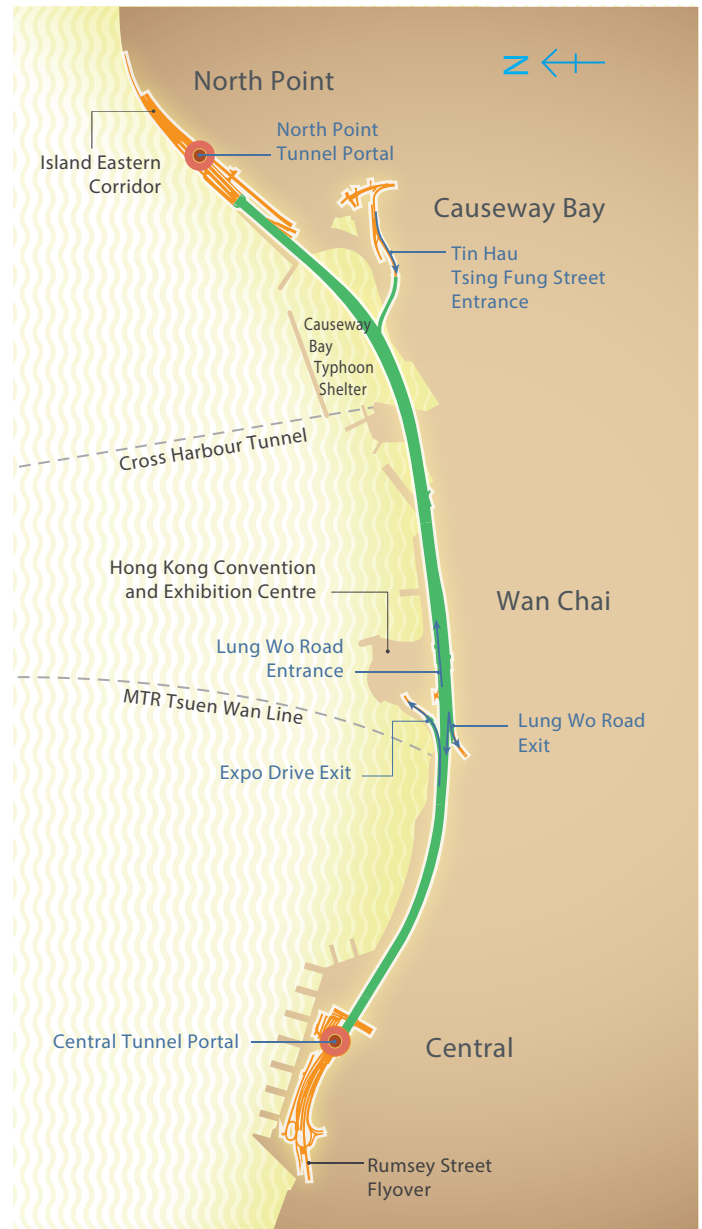
# Central - Wan Chai Bypass and Island Eastern Corridor Link



The Central - Wan Chai Bypass and Island Eastern Corridor Link (CWB) is a 4.5km long dual three-lane highway with a 3.7km long tunnel section which forms part of the east-west strategic route along the northern shore of Hong Kong Island. The commissioning of CWB has alleviated the traffic congestion at Connaught Road Central / Harcourt Road / Gloucester Road, and the journey between Central and North Point has been reduced to around 5 minutes.

To connect the CWB with the Island Eastern Corridor (IEC), some sections of the IEC had been modified to provide space for constructing the North Point Tunnel Portal. In order to maintain traffic of IEC during the construction of CWB, the modification works were carried out in stages with suitable temporary traffic arrangements implemented. By using precast construction method, the modification of IEC was successfully completed in around 2 years time.

The CWB has to pass under the Causeway Bay Typhoon Shelter (CBTS). To protect and preserve the Victoria Harbour, temporary reclamation was adopted for constructing the under-water tunnel in CBTS. The tunnel construction started with removal of the marine deposits at the seabed. Seawall blocks were then installed along the perimeter of the temporary reclamation area and filling materials deposited to form a temporary working platform. Subsequently, diaphragm walls were constructed followed by excavation for construction of the tunnel structure. Temporary reclamation was implemented in phases to reduce the occupied area of sea so as to maintain sufficient berthing spaces for around 400 vessels inside the typhoon shelter.



Length of Tunnel	3.7 km
Pre-cast Bridge Segments	650 pcs
Volume of Concrete Cast	686,000 m <sup>3</sup>
Tonnage of Steel Reinforcement	203,000 tonnes
Length of Noise Enclosure	730 m
Length of Noise Barrier	580 m
Greening Area	4.2 ha



The Central Tunnel Portal / West Ventilation Building



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*Air Purification System in CWB*

Air Purification System (APS) was introduced to CWB for premier use in road tunnels in Hong Kong. Its scale is also the largest of its kind in the world. It is designed to remove 80% of respirable suspended particulates and nitrogen dioxide from the tunnel exhaust. The APS plants are situated in the three tunnel buildings and can handle up to 5.4 million cubic meters of tunnel exhaust per hour.

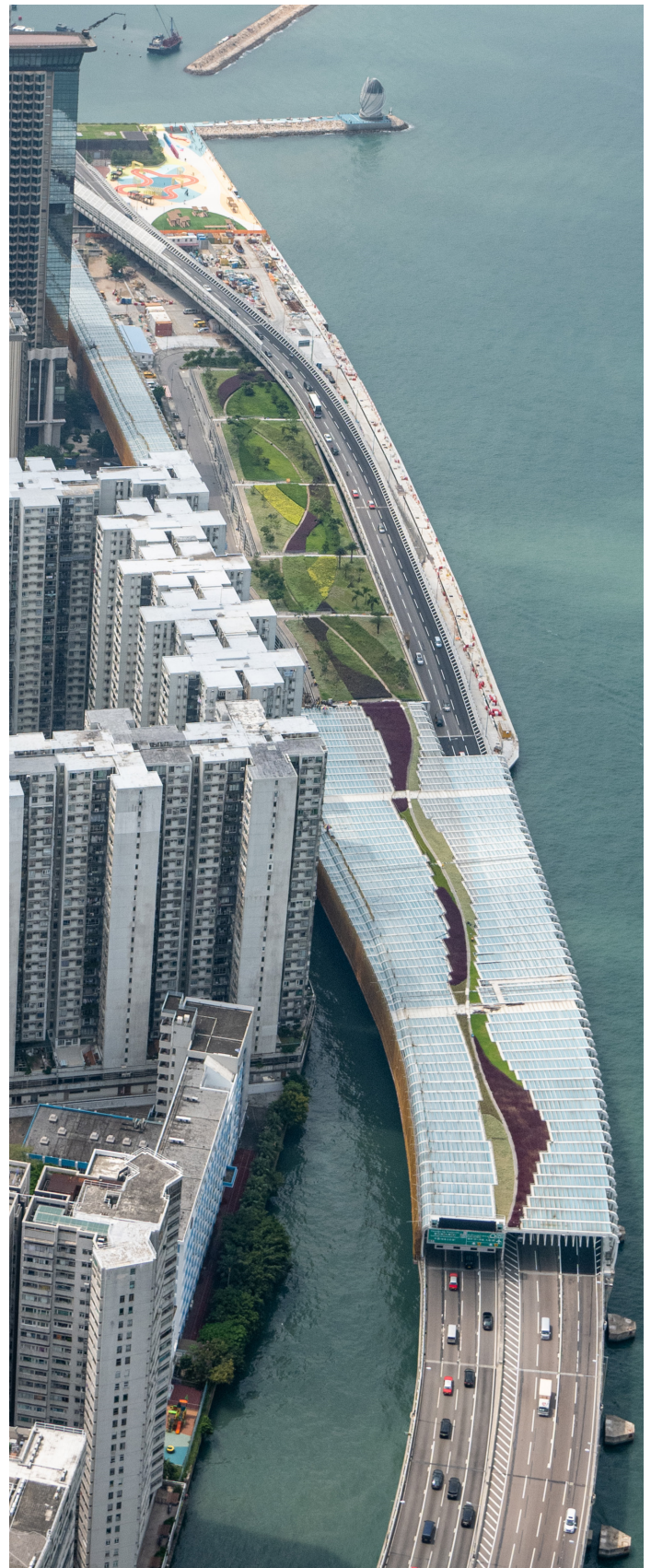
Extensive noise enclosure of 730m long and noise barrier of 580m long have been erected along the North Point section of IEC to mitigate traffic noise impact of CWB for the benefits of nearby households.

Greening elements are added to the walls and roofs of CWB tunnel buildings. The roof of the North Point Tunnel Portal is developed into a landscape deck to beautify the urban environment and mitigate the heat island effect. Large number of vegetation is planted at many locations along CWB, providing a total of about 4.2 hectares of greening area for environmental and aesthetic purposes.

Construction of the CWB commenced in December 2009 and was fully commissioned on 24 February 2019.



*The East Vent Shaft located at the Eastern Breakwater of Causeway Bay Typhoon Shelter*



*Noise enclosure / noise barrier along the Island Eastern Corridor and landscaped deck located on the roof of the North Point Tunnel Portal*