

**Civil Engineering and Development Department The Government of the Hong Kong Special Administrative Region** 



# **Provision of Land and Infrastructure**



## **INTRODUCTION**

Provision of land and infrastructure is one of the major service areas of the Civil Engineering and Development Department (CEDD). In the past, we carried out new town development to cope with the increase in population and to improve the living environment by decentralising the population from the over-crowded urban districts. Now, while we would continue to improve the new towns, we are developing New Development Areas (NDAs) and exploring new strategies to enhance land supply. We are also providing or upgrading infrastructure to support the development. The basic concept for developing a new town is to provide a balanced and self-contained community as far as possible in terms of the provision of infrastructure and community facilities. For major developments, new land will be formed and infrastructure will be provided to allow population growth, to decant existing population and to provide or upgrade facilities to enable the redevelopment of deserted areas. The functional, environmental and aesthetic aspects of the developments are given priority consideration.

#### **NEW TOWN DEVELOPMENT**

Hong Kong has developed 9 new towns since the initiation of its New Town Development Programme in 1973. The target at the commencement of the New Town Development Programme was to provide housing for about 1.8 million people in the first 3 new towns, namely, Tsuen Wan, Sha Tin and Tuen Mun. The population of Hong Kong at that time was about 4.2 million. It is now about 7.4 million.

The 9 new towns can be divided into three generations. The first (Tsuen Wan, Sha Tin and Tuen Mun) started works in the early 1970s, then the second (Tai Po, Fanling/ Sheung Shui and Yuen Long) in the late 1970s, and the third (Tseung Kwan O, Tin Shui Wai and Tung Chung) in the 1980s and 1990s. The current population of these 9 new towns is about 3.56 million and is expected to rise to 3.67 million in 2024.

All the new towns accommodate public and private housing supported by essential infrastructure and community facilities. External transport links were developed with all new towns now served by rail links to the urban area and road links to the adjacent districts. Further enhancement of road links is ongoing.



9 new towns

*Tung Chung:* We plan to extend the existing Tung Chung New Town into a distinct community to meet housing, social, economic and local needs, and develop the Tung Chung New Town Extension (TCNTE) into a smart and low-carbon community. The TCNTE, comprising developments in Tung Chung East (TCE) and Tung Chung West, will be implemented in phases. We have handed over land parcels obtained from the reclamation works in TCE to relevant departments for development in phases starting from March 2020. The reclamation works concerned is anticipated for substantial completion in early 2023. The first phase of infrastructure works commenced in May 2021. The full development of TCNTE is scheduled for completion by 2030. *Tseung Kwan O:* Further development includes residential developments at Town Centre South with open parks, recreational facilities and a vibrant waterfront.



Tseung Kwan O - Lam Tin Tunnel and Cross Bay Link

To relieve the traffic load of Tseung Kwan O Tunnel and to cope with the traffic demand from further developments in Tseung Kwan O, the Tseung Kwan O – Lam Tin Tunnel (TKO-LTT) and Cross Bay Link (CBL), commenced in July 2016 and July 2018 respectively. Both projects are planned to commission in tandem in 2022.



Cross Bay Link

The planning and engineering study for replanning of Tseung Kwan O Area 137 commenced in December 2016. We consider that it is suitable to develop Tseung Kwan O Area 137 primarily for housing purpose to establish a new community, which will be supported by commercial and community facilities as well as infrastructure, in the long term.

Tung Chung New Town

#### **NEW DEVELOPMENT AREAS**

*New Development Areas in the New Territories:* Previous planning and development studies established the feasibility of developing NDAs in the New Territories, including Kwu Tung North, Fanling North, Ping Che/Ta Kwu Ling (NENT NDAs) and Hung Shui Kiu/Ha Tsuen (HSK/HT NDA).

To formulate proposals for the development and to work out an implementation strategy, a further planning and engineering study on the NENT NDAs commenced in 2008 and was completed in 2013. The development proposals of Kwu Tung North and Fanling North NDA were promulgated to the public in 2013 while Ping Che/Ta Kwu Ling NDA would be re-planned together with other development opportunities in New Territories North.



Kwu Tung North and Fanling North New Development Areas

The Kwu Tung North and Fanling North Outline Zoning Plans were approved in 2015 to provide a statutory framework for the development. The detailed design for the first phase works (i.e. the advance and first stage works) of the Kwu Tung North and Fanling North NDA commenced in 2014 and was substantially completed in 2019. The scope of the first stage works primarily comprises the site formation and engineering infrastructure works at the NDA, to enable construction of housing and community facilities and to provide environmental mitigation measures as pre-requisites for the NDA remaining phase. Construction of the first phase works commenced since September 2019 for first population intake by 2023, and the detailed design for the remaining phase works is in progress.

The site formation and engineering infrastructure works for the First Phase development as well as the detailed design for the works for the Second Phase development of HSK/HT NDA commenced progressively since July 2020 onwards. The first population intake is expected to be in 2024. As regards the expansion of HSK/HT NDA to cover Lau Fau Shan, Tsim Bei Tsui and Pak Nai areas as proposed under the Northern Metropolis Development Strategy, the relevant study will commence within 2022.

Hung Shui Kiu/Ha Tsuen New Development Area



**Potential Development Areas in the New Territories:** Yuen Long South Development will serve as one of the major sources of land supply to help meet the medium to long-term housing needs. The site formation and infrastructure works for the First Phase Development are anticipated to commence in phases from the third quarter of 2022 onwards and the first population intake is expected to be in 2028-29. The detailed design of the Second Phase Development and the intensification review for the Third Phase Development are also anticipated to commence in the third quarter of 2022.

We have completed the study for the first phase development of New Territories North (NTN) – San Tin/Lok Ma Chau Development Node, and commenced its subsequent investigation and design as well as the planning and engineering study for the remaining phase development of NTN including the NTN New Town (covering Heung Yuen Wai, Ping Che/Ta Kwu Ling, Hung Lung Hang and Queen's Hill) and Man Kam To in October 2021. Both studies expanded to cover the adjoining additional areas as recommended in the Northern Metropolis Development Strategy.

The advance works for Kam Tin South Development commenced in July 2018 while the site formation and infrastructure works for Phase 1 of the public housing developments commenced in June 2021.

The technical study on partial development of Fanling Golf Course site to the east of Fan Kam Road was substantially completed in 2022 and the statutory environmental impact assessment and planning procedures for the proposed development are ongoing.

We also commenced the land use review study for Ngau Tam Mei area in November 2021 with a view to exploring to unleash the potential development opportunities brought about by the Northern Link.

*Lok Ma Chau Loop:* With an area of about 87 ha, the Lok Ma Chau Loop (the Loop) will be developed as the Hong Kong-Shenzhen Innovation and Technology Park (the Park). The scope of the advance works of the Loop primarily comprises land decontamination within the Loop, provision of temporary construction access and creation of ecological area to pave way for the subsequent construction works for the Loop development as well as ground treatment works within the Loop to enable provision of the first batch of land parcels for development of buildings and associated facilities for Phase 1 of the Park. The construction of the advance works was completed in December 2021.

The scope of the Main Works Package 1 primarily comprises construction of the infrastructure within the Loop (including site formation and infrastructural facilities) for the development of Phase 1 of the Park and the provision of supporting infrastructural facilities outside the Loop for the development of the Loop and its surrounding areas. The construction of Main Works Package 1 commenced in July 2021.



Kai Tak Sky Garden

### **URBAN DEVELOPMENT AREAS**

**Boardwalk underneath Island Eastern Corridor:** The Boardwalk of about 2 km in length connecting Causeway Bay and Quarry Bay is one of the projects under the \$6.5 billion dedicated funding for harbourfront enhancement. With the completion of the Boardwalk, the harbourfront of the northern shore of Hong Kong Island stretching from Western District to Shau Kei Wan will be fully connected, providing a continuous promenade of some 12 km long for public enjoyment. The construction works commenced at the end of 2021 for completion in phases between end 2024 and end 2025.



Photomontage of the Boardwalk

*Kai Tak Development:* This is a highly complex development project covering an area of over 320 hectares. Forming part of the Energizing Kowloon East initiative, Kai Tak Development (KTD) plays an important role not only to help sustain Hong Kong's economic growth, but also stimulate regeneration of the adjacent old districts including Kowloon City, Wong Tai Sin and Kwun Tong.

Given its scale and complexity, KTD is being implemented in phases. Projects including the Kai Tak Cruise Terminal and its two berths, two public housing estates, two primary schools and one secondary school, Kai San Road and other roads, footbridges and subways infrastructure, the Trade and Industry Tower, the Kowloon East Regional Headquarters and Operational Base cum Ngau Tau Kok Divisional Police Station, Hong Kong Children's Hospital (HKCH), early phases of the District Cooling System, Kai Tak Runway Park, Kai Tak River, improvement of the Kai Tak Approach Channel and Kwun Tong Typhoon Shelter, the Kwun Tong Promenade, the waterfront promenade adjacent to HKCH and Kai Tak Sky Garden, Inland Revenue Centre, Government Flying Service Kai Tak Division, the Avenue Park and Phase 1 of Kai Tak Station Square, have been progressively completed since 2013. Kai Tak Station and Sung Wong Toi Station of the Tuen Ma Line, which are within KTD, commenced their operation in February 2020 and June 2021 respectively.

To provide more green open space along the former runway, an innovative application of "Single Site, Multiple Use" model has been adopted by designing the roof of the semi-enclosed noise barriers above the carriageways of Shing Fung Road as a landscaped deck, named Kai Tak Sky Garden, being the first large garden built on noise barriers and carriageways in Hong Kong. The 2-ha garden was opened in May 2021 for public enjoyment.

Major public works items currently under construction include the New Acute Hospital, a portion of Central Kowloon Route, Trunk Road T2 and Cha Kwo Ling Tunnel, further phases of the District Cooling System, Kai Tak Sports Park, Phase 2 of Kai Tak Station Square and various other major infrastructure works.

Trunk Road T2 and Cha Kwo Ling Tunnel is the middle section of the strategic Route 6, connecting the Central Kowloon Route on the west and the TKO-LTT on the east. Construction works commenced in November 2019 and are scheduled for completion in 2026.

For enhancing the overall pedestrian connectivity of Kowloon East, we commenced the investigation and design of Travellators Network linking up the Former Runway of Kai Tak, Kowloon Bay Action Area and Kwun Tong Action Area in June 2022.



Development of Anderson Road Quarry Site: Anderson Road Quarry (ARQ) is located at the southwest ridge of Tai Sheung Tok in East Kowloon occupying some 86 ha of land. The quarry operation ceased in end July 2017. The completion of site formation works could provide a platform of about 40 ha for development of housing, open space, schools, and associated government, institution and community facilities. The project also involves the off-site pedestrian connectivity facilities and road improvement works to cope with the traffic demand from ARQ development. The site formation of all housing development sites has been completed since commencement of works in end 2016. The off-site pedestrian connectivity facilities and road improvement works also commenced in March 2017 and May 2018 respectively. The construction works are completed in phases from 2021 to tie in with the first population intake from 2023/24 onwards.

West Kowloon Cultural District: The West Kowloon Cultural District (WKCD) project involves the development of a prime waterfront site of about 40 ha, located at the southern tip of West Kowloon Reclamation, into a world class integrated arts and cultural district. The Xiqu Centre, Freespace, M+ and Hong Kong Palace Museum were opened in January 2019, June 2019, November 2021 and July 2022 respectively. The WKCD Authority targets to complete Lyric Theatre Complex in 2024/25. In parallel, CEDD is collaborating with the WKCD Authority to implement the integrated basement and public infrastructure works, which are essential for the WKCD development in stages. In the past few years, we completed the integrated basement of M+ and Lyric Theatre Complex, Museum Drive, MTR Austin Station pedestrian linkage system and Artist Square Bridge etc. The remaining integrated basement and Southern Landing Facility commenced construction in August 2020 and September 2022 for substantial completion in phase in 2028/29 and 2025 respectively. We are planning for the implementation of the public infrastructure works near the toll plaza of the Western Harbour Crossing to support the future development of WKCD thereat.



*Site Formation and Associated Infrastructural Works for Development of Columbarium at Sandy Ridge Cemetery:* The Sandy Ridge Cemetery is one of the potential sites for developing columbarium. The site formation works for the columbarium commenced in December 2017 and were substantially completed in 2021.

*Cycle Track Network in the New Territories:* To improve the quality of living for the public, we have been making efforts in implementing the cycle track network in the New Territories, composing two backbone sections. The 60-kilometre backbone section between Ma On Shan and Tuen Mun was opened to the public use in September 2020. For the 20-kilometre backbone section between Tsuen Wan and Tuen Mun, the cycle track from Tsuen Wan Riviera Park to Bayview Garden (Tsuen Wan waterfront section) was opened in July 2021. The remaining cycle track sections between Bayview Garden in Tsuen Wan and Tuen Mun are being implemented by phases. In addition, the construction of a branching off section at Sam Mun Tsai of about 900-metre in length from the backbone section commenced in November 2020 for completion in end 2022.



New cycle track adding vibrancy to the Tsuen Wan waterfront



Photomontage of the WKCD

### LAND SUPPLY

*Kau Yi Chau Artificial Islands:* The Study commissioned by us and the Planning Department in June 2021 mainly comprises a planning and engineering study on the development of about 1 000 hectares (ha) Kau Yi Chau Artificial Islands (KYCAI) and a technical feasibility study on strategic road and rail connecting the artificial islands.

With its strategic position within the expanded Harbour Metropolis, the KYCAI will provide land to develop a core area of a new generation with a view to increasing public and private housing supply, while at the same time further enhancing Hong Kong's economic competitiveness through the development of a third Central Business District (CBD3). Besides, the proposed strategic transport infrastructure for supporting the artificial islands (Including 13 km Hong Kong Island West – Northeast Lantau Link and 30 km Hong Kong Island West - Hung Shui Kiu Rail Link), will significantly enhance the connection between the Harbour Metropolis and the Northern Metropolis, reinforce Lantau's edge as "Double Gateway" to the world and other Greater Bay Area (GBA) cities, and further refine Hong Kong's overall transportation network. Situated not far from the existing urban area, the KYCAI can offer decanting spaces to support the chain flows arising from the redevelopment of old urban districts of Hong Kong Island and Kowloon.

Based on three major planning objectives of Prosperous and diverse, Green and liveable, Forward-looking and innovative, we preliminarily propose 1 000 ha of KYCAI which comprises three islands. It is preliminarily proposed providing 190 000 to 210 000 residential flats on the KYCAI of 1 000 ha by adopting a public to private housing ratio of 70:30 in the planning study for accommodating a population of 500 000 to 550 000 and providing 270 000 employment opportunities (including about 200 000 in CBD3). We use 15-minute neighbourhood concept to create liveable living communities and adopt smart, green and resilient city strategy to achieve the carbon neutrality target.

Part of the land of the KYCAI (about 300 out of the 1 000 ha) has been included as one of the supply sources of the 3 280 ha of developable land in the entire territory in the coming 10 years.

Near-shore Reclamation Outside Victoria Harbour: Government plans to revive the Ma Liu Shui reclamation project to provide land for innovation and technology development. The Government commenced the Engineering Study for Ma Liu Shui reclamation in July 2022 to establish the reclamation extent and recommend the necessary works required for re-provisioning of facilities affected by the proposed reclamation. Under the preliminary proposals for the Kau Yi Chau Artificial Islands announced in late 2022, part of the Sunny Bay reclamation area will be reserved for the depot of the proposed Hong Kong Island West - Hung Shui Kiu Rail Link. Following the infrastructureled approach, the Government plans to commence the engineering feasibility study on Sunny Bay reclamation in the second quarter of 2023. The Government plans to commence the planning and engineering study on Lung Kwu Tan reclamation to establish the reclamation extent, land uses and technical feasibility, etc. The study on Lung Kwu Tan reclamation will also re-plan the development of land in the Tuen Mun West area (including the River Trade Terminal and its coastal area). Besides, the investigation study and the preliminary design of Road P1 (Tai Ho – Sunny Bay Section) has commenced in June 2021.

*Rock Cavern Development:* Following the promulgation of Cavern Master Plan of 48 Strategic Cavern Areas (SCVAs) and the updated Geoguide 4 - Guide to Cavern Engineering, we commenced a planning and engineering feasibility study on development of selected SCVAs in 2019 to facilitate territory-wide cavern development in Hong Kong which is anticipated to complete by 2024.

Subsequent to the completion of feasibility study, we commenced the investigation and design of relocating the Public Works Central Laboratory from Kowloon Bay to caverns in Anderson Road Quarry site and constructing a Government Records Service's Archives Centre in caverns in December 2021. The construction work is expected to commence in 2023.

**Underground Space Development:** We are undertaking a Pilot Study on Underground Space Development in Selected Strategic Urban Areas (SUAs) to explore the potential for underground space development in suitable densely built urban environment. A conceptual scheme at Kowloon Park in Tsim Sha Tsui has been proposed to offer solution space for addressing the imminent local and district needs.

**Proposed Multi-storey Buildings (MSBs) for Brownfield Operations:** The feasibility studies on proposed multi-storey buildings for brownfield operations commenced in mid-2016. The studies cover the conceptual design, planning, engineering, environmental and financial assessments, as well as exploring possible modes of operation and management of the proposed multi-storey buildings. The Government has engaged a consultancy firm to conduct a market sounding exercise to gauge market interest. With the benefit of this exercise, the Government initially tends to identify sites in Hung Shui Kiu and Yuen Long for the development of multi-storey industrial buildings by leveraging market forces. These buildings will be mainly used by logistics and automobile repairing industries and will provide space for other appropriate uses including brownfield site business operators affected by land resumption.

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