

Chapter 15

Planning, Land and Development

The Development Bureau is committed to creating strong impetus for growth and enhancing Hong Kong's liveability and competitiveness through effective supply, planning and use of land, investment in infrastructure and implementation of strategic development blueprints.

It is the government's priority to expedite land supply to meet housing and development needs. To enhance transparency and accountability, the government formulated and published in October the first ever forecast of developable land to be available in 10 years. Supply of developable land will reach 3,280 hectares in the next decade, with around 1,300 coming from the Northern Metropolis and about 300 from the Kau Yi Chau artificial islands.

The development of the Northern Metropolis is proceeding at full steam. Large-scale New Development Areas are under construction, and studies for new land development projects have commenced with proposals to be formulated in 2024 or earlier. The target in the short to medium term is to commence land resumption procedures for all development projects within five years, and to form 40 per cent of the new development land and complete 40 per cent of the new residential flats within 10 years. Upon completion, the entire Northern Metropolis is expected to accommodate a residential population of around 2.5 million and provide about 650,000 jobs.

The government is expediting developmental studies for the Kau Yi Chau artificial islands, which will become the third central business district with more than 200,000 jobs and home to some half a million people. The islands will also provide the opportunity to enhance Hong Kong's strategic transport infrastructure through a fourth road harbour crossing and its connectivity with other cities in the Guangdong-Hong Kong-Macao Greater Bay Area.

To speed up land production, the bureau introduced a bill in December aiming to streamline development-related statutory procedures covering town planning, land resumption, reclamation, and roads and railway works. During the year, it also extended the arrangement for charging land premium at standard rates to land exchange applications in New Development Areas, and enhanced the ex gratia compensation and allowance arrangements for landowners and business undertakings. These measures can help smooth the resumption and clearance of private land for development.

During the fifth wave of the COVID-19 epidemic, with support from the Mainland and in collaboration with the industry, the government completed the construction of multiple community isolation and treatment facilities, providing about 40,000 beds, within a few months. In particular, the first such facility in Tsing Yi with 3,900 beds was built in just seven days.

The government advocates innovation, professionalisation and revitalisation in the construction sector. In 2022, it injected an additional \$1.2 billion into the Construction Innovation and Technology Fund to further incentivise the industry in wider adoption of innovation and technology and providing related training. The Construction Industry Council was allocated \$1 billion for supporting some 27,000 training places in six years.

The Development Bureau consists of two policy branches: the Planning and Lands Branch and the Works Branch.

The Planning and Lands Branch draws up policies on planning, development, land use and supply, urban renewal, building safety and land registration. Its policy objectives are to facilitate Hong Kong's development through effective planning and use of land, a steady and sufficient supply of land, a facilitative building plan approval system, efficient registration of land, promotion and regulation of building safety and timely maintenance, expediting urban renewal, harbourfront enhancement, and revitalising existing built-up areas.

The Works Branch formulates public works policies and coordinates and monitors public works projects. It also oversees policies on increasing land supply through reclamation outside Victoria Harbour, and rock cavern and underground space development; the development of Lantau and a second central business district in Kowloon East; greening and tree management; water supply; slope safety; lift and escalator safety; flood prevention; the promotion of professional services; the construction industry; and heritage conservation.

The bureau oversees the Land Registry and the departments of Architectural Services, Buildings, Civil Engineering and Development, Drainage Services, Electrical and Mechanical Services, Lands, Planning, and Water Supplies.

Planning

Developable Land Supply Forecast

In October, the government published its first 10-year forecast of developable land supply. It estimated that 3,280 hectares of developable land will be made available in the next decade. Sites already earmarked for housing can produce about 493,000 housing units, and sites earmarked for economic uses can provide a gross floor area of about 10,330,000 square metres. Over this period, land supply will be on an upward trend, from 110 hectares in the first year to 480 hectares in 2032-33, reversing the situation of stringent supply in the past.

Streamlining Development Procedures

To streamline development processes and expedite land supply, the Development Bureau introduced a bill into the Legislative Council in December seeking to amend development-related statutory procedures for town planning, land resumption, reclamation, and roads and railway works. Upon implementation of the proposed measures, the time required for transforming a piece of 'primitive land' into a 'spade-ready' site for an average typical project will be reduced from at least six years to four years, while for large-scale projects such as New Development Areas (NDAs), the time required can be compressed from 13 years to seven years.

Major Land Creation Initiatives

The government is pursuing the following studies to look into various development opportunities:

- studies on the Kau Yi Chau artificial islands, which total some 1,000 hectares;

- studies on development opportunities under the Northern Metropolis Development Strategy, released in October 2021;
- studies on near-shore reclamation projects, including Lung Kwu Tan (together with replanning of the River Trade Terminal site and coastal areas of Tuen Mun West), Ma Liu Shui, Sunny Bay and Road P1 (Tai Ho-Sunny Bay Section);
- studies on rezoning 255 hectares of green belt land with potential for housing development;
- studies on providing a new Pak Shek Kok Station on the East Rail Line to unlock the development potential of land and improve connections to the Science Park; and
- cavern and underground space development.

Major Land Supply Initiatives in Short to Medium Term

In the short to medium term, the most effective way of augmenting land supply is to make better use of developed sites in urban areas and new towns, and land in the vicinity of infrastructure, by increasing development intensity and changing land use.

The Planning Department has identified more than 210 sites with housing development potential in the short to medium term. These sites are capable of providing over 310,000 flats in total, some 70 per cent of which will be public housing.

As at the year end, 169 potential housing sites had been zoned or rezoned for housing to provide about 240,100 public and 47,300 private housing flats. Statutory rezoning procedures are being carried out for another four sites estimated to provide about 5,700 public housing flats.

Of around 1,600 hectares of brownfield sites in the New Territories, about 60 per cent will gradually be developed into high-density housing and other uses. Redevelopment of these sites helps make better use of precious land resources and enhance land use efficiency. The government will continue to assist displaced brownfield operations to relocate their business.

Under the Land Sharing Pilot Scheme, the development potential of private land will be unleashed through the provision or upgrading of infrastructure, and the successful applicants, in return, are required to hand over part of their land to the government for public housing or Starter Home development. As at year end, the Land Sharing Office had received five applications involving about 39 hectares of land. Three of these applications have been endorsed in principle by the Chief Executive-in-Council and are able to provide a total of about 21,600 housing units, including about 15,100 public housing units.

The government also facilitates development and redevelopment on existing land. The Planning and Lands Branch has consolidated and rationalised standards and definitions adopted by its three departments in scrutinising development proposals, in order to streamline the approval process.

The parallel processing of lease modification applications with rezoning applications approved by the Town Planning Board has also been implemented.

Major Land Supply Initiatives in Medium to Long Term

In the medium to long term, the government is taking forward large-scale land supply projects including the Kau Yi Chau artificial islands, developments in the Northern Metropolis and Tung Chung New Town Extension. These involve releasing large plots of brownfield sites and deserted agricultural land as well as reclamation in environmentally less sensitive waters.

Kau Yi Chau Artificial Islands

The government is pressing ahead with studies related to Kau Yi Chau artificial islands in the Central Waters to explore options for the provision of a new reclaimed area of about 1,000 hectares to accommodate 190,000 to 210,000 housing units and 5 million sq m of commercial gross floor area. The islands will accommodate a population of 500,000 to 550,000, with some 270,000 employment opportunities, including 200,000 in the third central business district.

In addition, the islands will provide an opportunity to enhance Hong Kong's strategic transport infrastructure including a fourth road harbour crossing. The proposed infrastructure will enhance connections between the Harbour Metropolis and the Northern Metropolis and reinforce Lantau's edge as a 'double gateway' to the world and other cities in the Guangdong-Hong Kong-Macao Greater Bay Area (GBA).

The government targets to start reclamation in 2025 and road link works in 2026 for the first population intake in 2033.

Northern Metropolis

The development of the Northern Metropolis includes a number of major projects.

Kwu Tung North/Fanling North NDA

The NDA will provide about 86,200 new flats, nearly 70 per cent of which will be public housing, to accommodate an additional population of 226,000. It will also generate about 53,100 new jobs. Development works started in 2019 for phased completion by 2031. The intake for private housing started in end-2022 and the bulk intake for public housing is expected in 2026.

Ma Tso Lung Area and Other Sites in Kwu Tung North NDA

The Northern Metropolis Development Strategy recommended that the agricultural land and slope areas in Ma Tso Lung to the north of Kwu Tung North NDA can be included within the NDA to provide an additional 12,000 to 13,500 residential units. The area can also link up the NDA and the Hong Kong-Shenzhen Innovation and Technology Park, providing innovation and technology (I&T) enterprises with community service and daily life support.

Hung Shui Kiu/Ha Tsuen NDA

The Hung Shui Kiu/Ha Tsuen NDA will provide about 61,500 new flats for an additional population of 176,000, along with 150,000 new jobs. First phase development works

commenced in 2020. The first dedicated rehousing estate is expected to start intake in 2024. A land-use review study on the Lau Fau Shan, Tsim Bei Tsui and Pak Nai areas, as an extension of the Hung Shui Kiu/Ha Tsuen NDA, was commissioned in August.

Yuen Long South

The Yuen Long South Development will provide about 32,900 new flats to house an additional population of 98,700 and produce about 13,600 jobs. Site formation and infrastructure works of the first phase development commenced in August. The first population intake is targeted for 2029.

Lok Ma Chau Loop

The 87-hectare Lok Ma Chau Loop will be developed into the Hong Kong-Shenzhen Innovation and Technology Park. The first batch of land parcels was provided at end-2021 for superstructure development and three buildings are being built for completion from end-2024 onwards.

San Tin Technopole

The government is carrying out an investigation study for the San Tin Technopole, which includes the additional area identified in the Northern Metropolis Development Strategy, with a view to increasing the land supply for I&T. Together with the Hong Kong-Shenzhen Innovation and Technology Park, 300 hectares of land will be made available for I&T development, providing the space for Hong Kong to become an international I&T hub and create synergy with developments in Shenzhen.

New Territories North New Town and Lo Wu/Man Kam To

The planning and engineering study for the New Territories North New Town and Man Kam To was commissioned in 2021. It aims to formulate the land use proposals for the new town (covering the rural areas in Heung Yuen Wai, Ta Kwu Ling, Ping Che, Hung Lung Hang and Queen's Hill) and Lo Wu/Man Kam To proposed under the Northern Metropolis Development Strategy.

Ngau Tam Mei

The government began a study in 2021 on the land uses in Ngau Tam Mei. It aims to make better use of the existing brownfield cluster and unleash the area's development potential created by the proposed Ngau Tam Mei Station of the Northern Link.

Tung Chung New Town Extension

The Tung Chung New Town Extension will provide about 62,100 flats and a commercial hub with a gross floor area of about 877,000 sq m for office, retail and hotel use along with about 40,000 new jobs. Reclamation works were substantially completed in Tung Chung East and the first phase of site formation and infrastructure works started in May 2021. The first population intake is expected in 2024.

Tseung Kwan O

The government proposed developing Tseung Kwan O Area 137 into a new community primarily for housing, providing about 50,000 units for a population of 135,000. It will be served

by new rail and road links, namely the Tseung Kwan O Line Southern Extension and Tseung Kwan O-Yau Tong Tunnel, recommended under the Strategic Studies on Railways and Major Roads beyond 2030.

Cavern Development

The government is taking forward a number of projects for relocating government facilities to caverns so as to release land for housing and other beneficial uses. The main cavern construction works for the relocation of Sha Tin Sewage Treatment Works is under way. The construction works for the relocation of Diamond Hill Fresh Water and Salt Water Service Reservoirs commenced in December.

Studies on investigation and design for the relocation of the Public Works Central Laboratory and the accommodation of the Archives Centre, and the relocation of Yau Tong Group Fresh Water and Salt Water Service Reservoirs and Tsuen Wan No 2 Fresh Water Service Reservoir; and feasibility studies on relocating Tuen Mun Water Treatment Works, Tsing Yi East Group Fresh Water and Salt Water Service Reservoirs, and Shau Kei Wan Low Level Salt Water Service Reservoir are all under way.

Underground Space Development

The government continues its pilot study on underground space developments in Tsim Sha Tsui West, Causeway Bay, Happy Valley and Admiralty/Wan Chai.

Revitalisation of Industrial Buildings

In 2022, the Town Planning Board approved 13 applications for the redevelopment of industrial buildings. It allowed the plot ratios of most of these applications to increase by up to 20 per cent to optimise the use of land resources, having confirmed the technical feasibility of the proposed increases in development density.

Land Disposal

Land Sale Programme

Government land is usually disposed of through public sale for private residential, commercial and other developments. The annual Land Sale Programme includes sites with potential for sale in that year. The government announces quarterly sites to be tendered to provide transparency and certainty for the market.

In 2022, eight residential sites, three commercial sites, one industrial site, one logistics services site and two telecommunication station sites, totalling about 14.8 hectares, were sold for about \$29 billion. These sites were expected to provide about 4,700 private residential flats and up to about 315,300 sq m of gross floor area for commercial, industrial or other economic uses.

Sites for Economic Uses

On the supply of sites for economic uses, the Development Bureau put forth a proposal in November to develop multi-storey buildings for modern industries. It aims to promote the upgrading of industries and accommodate brownfield operations in a land-efficient manner. The first batch of sites is expected to tender in 2023.

Land Exchange

Private landowners may apply to the Lands Department for a lease modification or land exchange so as to, for instance, redevelop the site based on the town plan. The department acts as a private landlord in considering such applications. Approvals are subject to terms and conditions that may include the payment of premiums and administrative fees.

In 2022, the department concluded 108 such transactions, involving about 343 hectares and about \$29.4 billion in land premiums. These transactions are expected to provide about 16,900 residential flats and up to 339,500 sq m of gross floor area for commercial or other economic uses.

Major Planning Studies and Development Projects

Kowloon East

Kowloon East, comprising the Kai Tak Development and the Kwun Tong and Kowloon Bay business areas, has a total area of about 488 hectares and a working population of about 280,000. Under the Energizing Kowloon East initiative, the area is being transformed into the second central business district to sustain Hong Kong's economic development.

By facilitating conversion or redevelopment of existing industrial buildings, as well as taking forward new development projects, commercial floor space in Kowloon East had increased by about 90 per cent from 1.7 million sq m in 2012 to 3.2 million sq m in 2022, and will further increase to over 4 million sq m in the next few years.

Island South

The bureau's Invigorating Island South Office promulgated its second conceptual master plan in March, covering Wong Chuk Hang, Aberdeen and Ap Lei Chau. Various proposals are being implemented to enhance connectivity and walkability, improve public spaces, consolidate community facilities, and enliven the areas. A public engagement exercise ended in December, having collected views on the proposed improvements to traffic and the pedestrian and urban environment in the areas.

Harbourfront Enhancement

In 2022, the government continued to connect sections of promenade and provide public space along both sides of Victoria Harbour. Through collaboration with the Harbourfront Commission, 23 harbourfront sites had been opened from October 2020 to end-2022, extending the promenade along Victoria Harbour to more than 25km. The longest continuous stretch, from Kennedy Town to Fortress Hill, was extended from 5.5km to 8.7km.

The government also worked to offer new and diverse user experiences at the harbourfront. Following the introduction of the first ‘harbour steps’, with a fence-free stepped down water edge design, in Wan Chai in late-2021, another set of harbour steps opened in September in the Revitalised Typhoon Shelter Precinct in Causeway Bay, enabling visitors to sit by the sea and enjoy an unobstructed view of the harbour. New catering facilities are provided at the newly opened Water Sports and Recreation Precinct (Phase 3) and water sports and recreational activities have been held at different harbourfront sites.

Kai Tak

The government is providing essential infrastructure to serve the phased implementation of the Kai Tak Development, which covers the former airport precinct and the adjoining areas and has a footprint of about 320 hectares.

Hong Kong Boundary Crossing Facilities Island of Hong Kong-Zhuhai-Macao Bridge

The government has accepted a number of proposals by the Airport Authority Hong Kong for the development on the Hong Kong Boundary Crossing Facilities Island, including commissioning automated car parks for transfer passengers and visitors using the Hong Kong-Zhuhai-Macao Bridge, building the Airport City Link connecting it to the airport’s Skycity, and constructing the Hong Kong International Aviation Academy’s campus and dormitory.

Cycle Track Network in New Territories

A cycle track network is being developed that will eventually connect Ma On Shan in the east to Tuen Mun and Tsuen Wan in the west. The Tuen Mun to Ma On Shan section and the Tsuen Wan waterfront section, totalling 62km, opened in 2020 and 2021 respectively. A 1km extension to Sam Mun Tsai is expected to commission in the first half of 2023. The design of the remaining 20km section between Tsuen Wan Bayview Garden and Tuen Mun is under way.

Urban Renewal

Urban renewal improves living conditions in old urban areas, primarily through redevelopment and rehabilitation of dilapidated buildings. The Development Bureau formulates policy on urban renewal and oversees the work of the Urban Renewal Authority (URA). The URA provides financial assistance and technical support to building owners for building rehabilitation and repair.

In 2022, the bureau worked with the relevant government departments and the URA to take forward in phases the recommendations of the District Study on Yau Ma Tei and Mong Kok to incentivise private redevelopment. The bureau is also working with the URA to conduct two district planning studies on Tsuen Wan and Sham Shui Po.

Building Development

Private Sector

In 2022, superstructural works started at 82 sites, covering a gross floor area of 0.76 million sq m. A total of 523 buildings, with a gross floor area of 3.16 million sq m, were completed at a cost of \$164.4 billion.

Public Sector

The Architectural Services Department provides architectural and associated professional and project management services for the design, construction and upkeep of government buildings and public facilities, except public housing. It applies innovative building solutions and inclusive and green building design to provide a more sustainable, resilient and human-centric built environment.

In 2022, the department started construction on 30 projects and completed 32 projects. During the fifth wave of the COVID-19 epidemic, it completed multiple community isolation and treatment facilities providing about 40,000 beds in total.

Built Heritage Conservation

The government's heritage conservation policy is to protect, conserve and revitalise as appropriate historical and heritage sites and buildings through sustainable approaches for the benefit of present and future generations. Due regard is given to development needs in the public interest, respect for private property rights, budget considerations, cross-sectoral collaboration and the engagement of stakeholders and the public.

Eleven projects under the Revitalising Historic Buildings Through Partnership Scheme of the bureau's Commissioner for Heritage's Office (CHO) are in operation, while another project will start trial operation in the first quarter of 2023. Revitalisation works for three other projects are expected to complete in phases from the fourth quarter of 2023. Revitalisation proposals have been selected for another five historic buildings and pre-works preparation of these projects has started.

The Built Heritage Conservation Fund operates two funding schemes to support public engagement and research. By the year end, more than 16,100 participants had joined the fund's events since 2018. Research reports of six thematic research projects supported by the fund were completed in 2022.

In the private domain, the CHO and the Antiquities and Monuments Office monitor any works on or development of declared monuments, proposed monuments, graded historic buildings or buildings proposed to be graded and discuss preservation options with the owners concerned. The CHO approved grants for maintenance works at nine historic buildings under the Financial Assistance for Maintenance Scheme on Built Heritage in 2022.

During the year, restoration and repair works were conducted at Morrison Building in Tuen Mun, Watch Towers of Kun Lung Wai in Fanling, and Liu Man Shek Tong Ancestral Hall in Sheung Shui. Archaeological investigations were conducted in Tuen Mun, Ma Wan and Sha Tsui Tau on Lantau Island.

The Antiquities Advisory Board advises the government on antiquities and monuments. As at end-2022, grading assessment of the heritage value of 1,634 buildings had been completed to provide an objective basis for guiding conservation efforts. During the year, Jamia Mosque and Hong Kong City Hall in Central and Lui Seng Chun in Mong Kok were declared as monuments.

Development Framework

Town Planning Board

The Town Planning Board is a statutory body established under the Town Planning Ordinance to oversee the preparation and review of statutory plans and consider planning applications. In 2022, it amended 17 statutory Outline Zoning Plans and prepared one new plan. The board also promulgates guidelines for statutory planning. It has 32 sets of guidelines.

Hong Kong Planning Standards and Guidelines

The Hong Kong Planning Standards and Guidelines provide criteria for determining the scale, location and site requirements of various land uses and facilities applicable to planning studies, town plans and development control. These are reviewed from time to time by relevant bureaux and departments to take account of changes in government policies, demographic characteristics, and social and economic trends. In 2022, amendments were made to planning standards and guidelines for rehabilitation services for persons with disabilities and electric vehicle charging stations converted from existing petrol filling stations.

Planning Control and Enforcement

The Planning Authority tackles unauthorised developments in development permission areas. It may serve statutory notices on landowners, occupiers or responsible persons requiring them to stop or discontinue an unauthorised development within a specified time. A further statutory notice may be served to require reinstatement of the land. Non-compliance is a statutory offence.

In 2022, the authority discovered 308 new unauthorised developments, and issued 1,886 warning letters or reminders involving 342 cases, 1,625 enforcement notices involving 274 cases, 490 reinstatement notices involving 89 cases and 2,296 compliance notices involving 340 cases. A total of 89 defendants in 46 cases were convicted. The enforcement and prosecution actions resulted in the discontinuation of 291 unauthorised developments on 62.63 hectares of land, while another 32 occupying 7.7 hectares of land later obtained planning permission.

Land Control and Lease Enforcement

The Lands Department carries out squatter control work. There are about 378,000 surveyed squatter structures throughout the territory, and they are tolerated until they cease to exist or are to be cleared for development, environmental improvement or safety reasons.

In 2022, the department demolished 280 illegal unauthorised squatter structures that were in breach of the squatter control policy, in addition to unauthorised structures cleared in the context of land control and lease enforcement. It also handled about 14,600 cases of reported unlawful occupation of government land and about 1,700 cases involving breaches of lease conditions.

The department keeps a register of man-made slopes which records their maintenance responsibility. It inspects and maintains about 17,500 registered man-made slopes regularly, and carried out maintenance works on about 7,200 of them in 2022.

During the year, the department provided advice for about 1,290 development control submissions relating to trees and landscape on leased land and about 1,450 cases of tree issues on unmanaged government land. It also conducted ad hoc vegetation maintenance work in about 22,500 cases.

Small House Policy Administration

The Lands Department administers the small house policy for indigenous villagers in the New Territories and the rebuilding of old village houses. In 2022, the department approved 523 applications to build small houses and 218 applications to rebuild old village houses. The department also processes rent exemption requisitions for indigenous villagers' rural properties according to the exemption criteria listed in the Government Rent (Assessment and Collection) Ordinance.

Land Conveyancing

The Lands Department's Legal Advisory and Conveyancing Office provides legal advice and conveyancing services for government land transactions. It drafts all government land disposal and lease modification documents, checks titles in land acquisitions, administers the Lands Department Consent Scheme, approves Deeds of Mutual Covenant, processes apportionments of premiums and government rents, and recovers arrears of government rents by taking re-entry or vesting action. In 2022, it approved 38 applications for the sale of about 21,000 residential flats under construction and approved 43 Deeds of Mutual Covenant in respect of residential development.

Land Resumption

Private land may be resumed for public purposes through resumption under relevant ordinances which provide for compensation for the property's value and business losses. If the amount of compensation cannot be agreed, either party may seek determination by the Lands Tribunal. The Lands Department is involved in resuming land for public works, urban renewal and railway development projects under the Lands Resumption Ordinance and other legislation. In 2022, some 220,000 sq m of private land were resumed and about \$4.97 billion of compensation was paid for resumptions supporting public works projects, including public housing development; \$178 million compensation was paid to owners of 40 resumed properties affected by 18 urban renewal projects; and \$11.5 million of compensation was paid in resumptions supporting railway projects.

Optimising Use of Vacant Government Sites under Short-term Tenancy

The Development Bureau launched a scheme in 2019 to fund non-governmental organisations (NGOs) to carry out one-off, basic and essential restoration works on vacant government sites and school premises fit for community, institutional or other non-profit-making use. As at end-2022, funding had been approved for NGOs to take forward community projects at 24 vacant sites or premises.

Land Registration

The Land Registry registers land-related documents and keeps land records in electronic format for public search. Major types of documents include sale and purchase agreements,

assignments, and mortgages and legal charges. More than 3 million land registers and 26 million land-related documents can be retrieved electronically. In 2022, 422,005 land-related documents were lodged for registration. The registry also provides an email notification service, Property Alert, to help property owners monitor any documents delivered for registration against their properties.

Hong Kong runs a deeds registration system. To enhance title certainty and simplify conveyancing procedures, this system should be replaced with a title registration system. The Land Registry has forged consensus with key stakeholders on first implementing title registration on newly granted land, meaning land granted by the government after a specific date, and is working on the amendment legislation, with a view to introducing the relevant bill in 2024.

Survey, Mapping and Geospatial Information Service

The Lands Department's Survey and Mapping Office provides geospatial information to promote the wider use of spatial data and locational information. It formulates and implements survey, mapping and geospatial data policies and standards; maintains a data bank of geospatial and land cadastral data; supports the implementation of the Common Spatial Data Infrastructure (CSDI); and develops 3D digital maps and a Building Information Modelling-Geographic Information System Data Repository. In 2022, the office made about 400 open spatial datasets available for free download. It also carries out geodetic, mapping and land boundary surveys and provides cartographic and reprographic services to support land and building developments.

The office updates digital and paper maps, maintains the Land Information System, integrates geospatial data and provides free web maps, map application programming interfaces, dashboards and mobile applications to the public.

The office also maintains the geodetic survey control network and the Satellite Positioning Reference Station Network System, which form the positioning infrastructure for Hong Kong.

Development of Common Spatial Data Infrastructure

The government launched the CSDI portal in 2022 for free government and public use, with over 500 spatial datasets from more than 50 departments, covering different aspects such as planning, lands, buildings, works, population and transport. The Geospatial Lab in Kwun Tong organises various activities, such as competitions, workshops and talks, to harness the creation, analysis and applications of spatial data.

Building Safety and Maintenance

The Development Bureau works with the Architectural Services Department, the Buildings Department and partner organisations to enhance building safety.

Building inspections and maintenance of government buildings and public facilities (except public housing) are mainly the responsibilities of the Architectural Services Department. In 2022, the total expenditure on maintenance works and refurbishment and improvement works was \$1,028.6 million and \$3,556.4 million respectively, involving an aggregate building floor area of 33.6 million sq m.

The Buildings Department enforces the Mandatory Building Inspection Scheme and Mandatory Window Inspection Scheme to tackle building decay at its root by requiring owners of target buildings to inspect and repair their buildings and windows. In 2022, the department issued statutory notices to 608 buildings for building inspections and 624 buildings for window inspections under these schemes.

The government, in partnership with the URA, supports building owners in need to carry out repairs and maintenance. In 2022, subsidies and loans exceeding \$680 million were granted to eligible property owners through assistance schemes, such as Operation Building Bright 2.0, the Building Maintenance Grant Scheme for Needy Owners and the Building Drainage System Repair Subsidy Scheme. As at the year end, around 2,800 applications had been approved to join the 'Smart Tender' Building Rehabilitation Facilitating Services scheme at a concessionary rate, since the scheme was launched in 2016 to provide technical support to building owners in procuring services for repair works.

To tackle unauthorised building works, the Buildings Department accords priority to enforcement actions against such works that are new or under construction, and those which constitute an obvious hazard or imminent danger to life and property. The department also removes unauthorised building works that have been erected on building exteriors, including rooftops, podiums and yards; are associated with subdivided units; are found in New Territories exempted houses; or are unauthorised signboards. In 2022, the department served 16,308 statutory removal orders and removed 25,239 unauthorised building works. It also instigated 3,612 prosecution cases and secured 1,995 convictions in court for failure to comply with the orders, resulting in fines totalling \$13.6 million. The department launched various publicity campaigns to promote a culture of building safety.

Lifts and Escalators

The Electrical and Mechanical Services Department carries out regular inspections and updates codes of practice relating to the design, construction and works of lifts and escalators. In 2022, the department continued its \$4.5 billion Lift Modernisation Subsidy Scheme with the URA to enhance the safety of old lifts. The scheme aims to subsidise the modernisation of about 8,000 old lifts.

Infrastructure

Infrastructure Investment

The government builds new infrastructure and improves existing facilities to meet economic development needs and enhance the living environment. Annual capital works expenditure is expected to exceed \$100 billion in coming years.

Project Strategy and Governance

The bureau's Project Strategy and Governance Office has been devising and implementing initiatives to strengthen the gateway process for cost management, enhance project delivery capability, lead strategic developments to improve cost-effectiveness, and enhance collaboration with international counterparts and local industry stakeholders.

'Construction 2.0'

The government implements the 'Construction 2.0' initiative to lead the construction industry to reform and upgrade by advocating innovation, professionalisation and revitalisation. It also promotes the application of innovation and technology, including modular integrated construction (MiC), digital works supervision systems, Building Information Modelling and the Smart Site Safety System. It coordinates works departments' efforts for promoting applied research and development in public works projects to raise productivity, strengthen works supervision and quality assurance, and improve site safety.

The adoption of MiC enabled the speedy completion of a large number of community isolation and treatment facilities during the epidemic in 2022. Apart from mandating designated government buildings in capital works projects to adopt MiC, the government also promotes its adoption in private residential, public housing, social welfare and hospital projects.

Construction Industry

Construction Industry Council

The Construction Industry Council supports the development of the construction industry, in particular by training construction workers. The council was allocated \$1 billion in 2022 to increase the number of training places and the amount of allowance of its training programmes, with a view to attracting more new blood to join the construction industry and upskilling and retaining in-service workers. The funding supports the provision of about 27,000 training places in the coming six years.

Among about 609,000 registered construction workers, 241,000 were semi-skilled or skilled workers. The government works with the council to monitor the construction industry's manpower supply and demand.

The government also works with the council to operate the Construction Innovation and Technology Fund. As at December, about \$800 million had been approved since the fund's launch in 2018, subsidising about 1,000 enterprises to adopt technologies and supporting about 15,000 technology training places.

The council administers and promotes the Registered Specialist Trade Contractors Scheme to build up the capability of contractors in 11 specialist trades. The scheme imposes registration requirements on safety, management, job experience, execution, finance and integrity management to uplift professionalism of the industry.

Promotion of Professional Services

The Interim Guidelines for the Management of Hong Kong Engineering Construction Consultant Enterprises and Professionals Starting Business and Practising in the GBA Cities promulgated by the Guangdong Province enable consultant firms from five sectors, namely engineering, architecture, surveying, planning and landscape architecture, on two government lists¹ and their professional employees registered with the relevant registration boards in Hong

¹ The two government lists are the List of Consultants of Architectural and Associated Consultants Selection Board and the List of Consultants of Engineering and Associated Consultants Selection Board.

Kong to obtain equivalent qualifications in the Mainland through a simple registration system. Upon successful registration, they can provide services in the nine Mainland cities of the GBA.

Pier Improvement Programme

Among the 10 public piers covered by the first phase of the Pier Improvement Programme, construction works of Pak Kok Pier on Lamma Island were completed for commissioning in November; construction works for seven piers are under way; and the improvement works for two piers are under detailed design. Of the 13 public piers covered by the second phase, construction works for Sam Mun Tsai Village Pier in Tai Po and Ma Wan Chung Pier on Lantau Island commenced in August, and engineering feasibility studies for most of the remaining piers are under way.

Drainage Services

The Drainage Services Department manages about 2,810km of storm water drains and watercourses and 27 village flood pumping schemes. It carries out drainage improvement works to cater for local developments and address probable effects of climate change.

In 2022, the department commenced the underground storm water storage tank works at Chatham Road South in Tsim Sha Tsui and Sau Nga Road Playground in Kwun Tong, with a view to relieving flooding risks.

The department inspects, clears and repairs drainage systems regularly. In 2022, it inspected about 2,300km and cleared about 810km of drains and watercourses.

Slope Safety

The Civil Engineering and Development Department improves slope safety by adopting high standards and advanced technology, ensuring all new man-made slopes meet safety standards, improving the safety of existing man-made slopes, and mitigating natural terrain landslide risks. The department also operates a landslip warning system and provides information, education and community advisory services on slope safety.

Under the Landslip Prevention and Mitigation Programme, the department upgraded 158 substandard government man-made slopes and mitigated the landslide risk of 36 natural hillside catchments in 2022. It also conducted safety screening studies for 100 private man-made slopes.

Water Supplies

Water from Guangdong

Since 1965, Hong Kong has been importing raw water from the Dongjiang River. The Dongjiang water supply agreement maintains flexibility in the daily supply rate, ensuring a reliable source of supply and avoiding wastage of precious water resources. In 2022, the city imported about 810 million cubic metres of Dongjiang water.

Water Storage and Consumption

Full water supply was maintained throughout the year, during which 2,205 millimetres of rainfall was recorded. Storage reservoirs held some 365 million cubic metres of water at the end of 2022.

There were about 3.2 million water customer accounts as at the year end. Some 1,066 million cubic metres of fresh water was consumed in 2022, with an average daily supply of about 2.92 million cubic metres. Another 319 million cubic metres of sea water was supplied in 2022 for toilet flushing.

Total Water Management

The government's Total Water Management Strategy focuses on containing the growth of fresh water demand and building resilience in fresh water supply with diversified water resources to cater for the extreme effects of climate change.

To enhance resilience in fresh water supply, the Water Supplies Department is constructing the first stage of the Tseung Kwan O Desalination Plant for commissioning in 2023.

Waterworks

The main works for the in-situ reprovisioning of Sha Tin Water Treatment Works (South Works) and Siu Ho Wan Water Treatment Works extension are being carried out for completion in 2026 and 2027 respectively.

Drinking Water Safety

The government tests water samples collected from the supply and distribution systems, as well as consumers' taps, to monitor the quality of drinking water.

The Water Supplies Department collaborated with the URA to include the Water Safety Plan Subsidy Scheme in the latter's all-in-one application platform, the Integrated Building Rehabilitation Assistance Scheme, for eligible owners to apply for subsidies to implement water safety plans in their buildings.

To pave the way for the registered plumbing contractor system, the department has implemented a voluntary scheme requiring provisional registered plumbing contractors undertaking large-scale plumbing works to provide a site supervision team to enhance the quality of works.

Greening, Landscape and Tree Management

The bureau's Greening, Landscape and Tree Management Section is the central authority with overall policy responsibility in formulating and coordinating landscape and tree management strategies and initiatives. It promotes a holistic approach to landscape and tree management, advocating adequate space allocation for new planting, proper selection of plant species, good landscape design and planting practices, and proper tree maintenance, with public safety as a paramount consideration.

The Study Sponsorship Scheme and Trainee Programme under the Urban Forestry Support Fund, launched in 2020, encourages youngsters to join the arboriculture industry. By end-2022, sponsorship applications from about 600 students involving around \$8 million had been approved under the scheme and around 150 arborist and tree climber trainees had participated in the programme.

Since the launch of the Registration Scheme for Tree Management Personnel in December 2020, around 650 applicants have registered as tree management personnel. The government has been employing registered personnel in new construction and maintenance contracts to enhance the quality of tree management.

Around 200,000 labels with QR codes have been placed on trees along roadsides, parks and gardens easily reached by the public to facilitate tree management and provide the community with educational information about trees.

The second International Urban Forestry Conference was held online on 2 to 3 March, with about 1,200 participants.

Websites

Architectural Services Department: www.archsd.gov.hk

Civil Engineering and Development Department: www.cedd.gov.hk

Construction 2.0 – Time to Change: www.psgo.gov.hk/assets/pdf/Construction-2-0-en.pdf

Development Bureau: www.devb.gov.hk

Drainage Services Department: www.dsd.gov.hk

Electrical and Mechanical Services Department: www.emsd.gov.hk

Lands Department: www.landsd.gov.hk

Planning Department: www.pland.gov.hk

Water Supplies Department: www.wsd.gov.hk