

Chapter 13

Planning, Land and Infrastructure

To meet the needs of the community and maintain Hong Kong's leading edge as a financial and business centre both globally and within the region, the government invests in infrastructure development and is committed to providing a better living environment through effective land use planning, urban renewal, greening and heritage conservation.

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 governing planning, development, land use and supply, urban renewal, building safety and land registration. Its policy objectives are to facilitate Hong Kong's continual 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, and expedition of urban renewal.

The Works Branch formulates public works policies and coordinates and monitors public works projects. It also oversees policy on a range of other matters, including increasing land supply through reclamation outside Victoria Harbour, and rock cavern and underground space development; the development of Lantau and a second core business district (CBD2) 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

Strategic Planning

The government is updating the territorial development strategy under the study titled 'Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030' to guide planning, land

and infrastructure development and the shaping of the built and natural environment beyond 2030. In doing so, the government is taking account of various considerations, including the public's views, technical assessments, the Task Force on Land Supply's recommendations, and the Lantau Tomorrow Vision.

Land Supply Strategy and Priority Options

Following its acceptance of the Task Force on Land Supply's recommendations in 2019, the government has been pursuing the task force's eight recommended land supply options to achieve a sustained and sufficient supply of land for Hong Kong's long-term housing, economic and social development. These options are:

- expediting brownfield development;
- unleashing the development potential of private agricultural land;
- developing 32 hectares of land east of Fan Kam Road of the Fanling Golf Course for housing development and starting a detailed technical study;
- expediting studies on the Kau Yi Chau artificial islands, which total some 1,000 hectares;
- expediting studies on near-shore reclamation projects, including Lung Kwu Tan, Sunny Bay and Road P1 (Tai Ho-Sunny Bay Section);
- continuing cavern and underground space development and studies;
- pressing ahead with New Development Area (NDA) projects; and
- commencing studies on replanning the River Trade Terminal site and coastal areas of Tuen Mun.

Major Land Supply Initiatives in Short to Medium Term

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

Through ongoing land use reviews in the last few years, 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 31 December, 139 potential housing sites had been zoned or rezoned for housing to provide about 154,400 public and 43,700 private housing flats. Statutory rezoning procedures are being carried out for another 12 sites estimated to provide about 10,800 public and 1,700 private housing flats upon successful rezoning.

Of the roughly 1,500 hectares of brownfield sites in the New Territories, more than half (about 800 hectares) are covered by NDAs or known development projects. Of the remaining 700 hectares of brownfield sites outside the conservation-related zones, the Planning Department has started to review 450 hectares with higher possible development potential. Eight clusters have been shortlisted so far for public housing development in the 160 hectares closest to major infrastructure.

The Land Sharing Pilot Scheme was launched in May to boost public and private housing supply in the short and medium term. In essence, through the government facilitating the provision or upgrading of infrastructure, the development potential of successful application sites could be unleashed. The successful applicants, in return, are required to hand over part of their land to the government for public housing or Starter Home development.

The government also facilitates development and redevelopment on existing land. The Planning and Lands Branch is undertaking an exercise to consolidate and rationalise standards and definitions adopted by its three departments (Buildings, Lands and Planning) in scrutinising development proposals, to streamline the approval process without prejudicing statutory procedures and technical requirements. In 2020, consolidated standards and definitions on design and disposition clauses under lease were promulgated, and more will be promulgated in other areas as the exercise continues.

Major Land Supply Initiatives in Medium to Long Term

In the medium to long term, the government is taking forward land supply projects including the Kwu Tung North/Fanling North NDA, Tung Chung New Town Extension, Hung Shui Kiu/Ha Tsuen NDA and Yuen Long South Development. These involve releasing large tracts of brownfield sites and deserted agricultural land as well as reclamation in environmentally less sensitive waters.

Lantau Tomorrow Vision

In December, the government obtained Legislative Council funding approval for studies related to artificial islands in the Central Waters proposed under the Lantau Tomorrow Vision. The government anticipates that the artificial islands near Kau Yi Chau could provide about 1,000 hectares of new land that could accommodate 150,000 to 260,000 housing units, 70 per cent of which would be public housing. According to the plan, the artificial islands will be developed into a third core business district (CBD3), which can provide some 200,000 jobs and promote Hong Kong's long-term economic growth. The development of the artificial islands could also optimise Hong Kong's transport network and help relieve the traffic congestion in the northwest New Territories by providing road and rail links connecting Hong Kong Island, North Lantau and the coastal areas of Tuen Mun.

In addition, the government plans to carry out studies for reclamation at various sites, including Road P1 (Tai Ho-Sunny Bay Section), Lung Kwu Tan and Sunny Bay.

Cavern Development

The government continues a planning and engineering feasibility study on development of selected caverns. In 2020, construction continued in preparation for the relocation of Sha Tin

Sewage Treatment Works to caverns, and the investigation and design study for the planned relocation of Diamond Hill Service Reservoirs to caverns was under way. Upon relocation of these facilities, 32 hectares of land (28 hectares in Sha Tin and four hectares in Diamond Hill) can be released for other uses. The government also established the feasibility of relocating the Public Works Central Laboratory in Kowloon Bay to caverns, and feasibility studies were under way to move other government facilities to caverns.

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.

New Territories North New Development Area

The government continues to study the first-phase development of the New Territories North NDA, covering San Tin/Lok Ma Chau.

Housing Land Supply

Public housing land supply comes from new government housing sites and redevelopment of existing public housing estates. Private housing land supply comes from various sources, including the disposal of government sites for private residential development through the Land Sale Programme, railway property development, urban renewal and private development or redevelopment projects.

Commercial and Industrial Land Supply

Measures to increase the supply of commercial/business sites include putting up new commercial and industrial sites for sale; converting government properties and government, institution or community (GIC) sites in CBDs for commercial use; providing commercial space at the Central Harbourfront upon completion of works; transforming Kowloon East into CBD2; and earmarking land for commercial and industrial use in new development projects, including the development of CBD3 on the Kau Yi Chau artificial islands proposed under the Lantau Tomorrow Vision.

Review of Government, Institution or Community Sites

The government is reviewing about 40 GIC sites with joint use potential to put forward proposals that optimise their use, including the development of multi-purpose buildings.

Revitalisation of Industrial Buildings

In 2020, the Town Planning Board approved 31 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

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

transparency and certainty for the market, and may add sites for sale in the course of a quarter in response to changing market conditions.

In 2020, 10 residential sites, one industrial site and four sites for petrol stations, totalling about 9.8 hectares, were sold for about \$38.8 billion. These sites were expected to provide about 4,920 private residential flats and up to 87,321 square metres of gross floor area for industrial or other economic uses.

Lessees of leased land, commonly known as 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 2020, the department concluded 68 such transactions, involving about 391.1 hectares and about \$8.7 billion in land premiums, expected to provide 5,811 private housing flats and up to 120,337 sq m of gross floor area for commercial or other economic uses.

The Pilot Scheme for Arbitration on Land Premium, launched in 2014, seeks to facilitate early agreement on land premiums payable for lease modifications and land exchange transactions. Measures were introduced in October to promote the scheme's use to boost land supply. The scheme was also extended to October 2022.

Harbourfront Enhancement

In 2020, the government continued its efforts to link up sections of promenade, and provide public space, along the waterfront of Victoria Harbour. Sections connected in 2020 included those between Expo Drive East and the former Wan Chai Public Cargo Working Area, extending the longest stretch of promenade in Hong Kong to 5.5 kilometres.

In October, the Belcher Bay harbourfront open space in Kennedy Town opened, along with the first phase of 'K-Farm', an urban leisure farm combining hydroponics, aquaponics and organic farming.

As regards public works projects under the \$6.5 billion dedicated harbourfront funding, public engagement was organised on the design of the harbourfront park in Sai Ying Pun in August, and works were gazetted for the proposed boardwalk under the Island Eastern Corridor in December.

Kowloon East

Kowloon East covers the Kai Tak Development Area and the Kwun Tong and Kowloon Bay business areas, and is being gradually transformed into CBD2. About 0.6 million sq m of commercial and office floor space will be provided in the next two years in addition to its existing supply of 2.9 million sq m.

Ongoing work includes improving the pedestrian environment and traffic conditions, enhancing the environment, increasing commercial land supply, and promoting vibrancy in the district through a 'place-making' approach. Kowloon East is also the pilot area for smart city

development in Hong Kong. Similar strategies have been applied to the adjoining San Po Kong Business Area.

Major Planning Studies and Development Projects

Kwu Tung North/Fanling North New Development Area

The Kwu Tung North/Fanling North outline zoning plans provide the land use framework for the NDA to meet the city's medium to long-term housing, social and economic needs. The NDA will provide about 71,800 new flats, with nearly 70 per cent being public housing, to accommodate an additional population of about 188,100. It will also generate about 40,100 new jobs. Development works started in 2019 for phased completion by 2031, with the first batch of residents expected to move in to private and public housing starting from 2023 and 2026 respectively.

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 uses along with about 40,000 new jobs. Reclamation works are ongoing in Tung Chung East. The first parcel of reclaimed land was handed over in March for public housing development, with the earliest population intake expected in 2024.

Hung Shui Kiu/Ha Tsuen New Development Area

The Hung Shui Kiu/Ha Tsuen NDA will provide about 61,000 new flats to accommodate an additional population of about 176,000, most of whom will begin moving in around 2030. It will produce about 150,000 new jobs. First phase development works commenced in July. The first batch of sites earmarked for the development of multi-storey buildings accommodating logistics and other businesses are expected to be formed in 2023, while the first local rehousing estate is expected to start population intake in 2024.

Yuen Long South

The Yuen Long South Development will provide about 32,850 new flats to house an additional population of about 98,700 and will produce about 13,600 jobs. Statutory planning procedures for stages 1 and 2 developments began in July. The first population intake is targeted for 2028.

Lok Ma Chau Loop

The 87-hectare Lok Ma Chau Loop Area will be developed into the Hong Kong-Shenzhen Innovation and Technology Park. Advance infrastructural works are ongoing, so that the first batch of land parcels can be provided in 2021 for superstructural development of the park. Detailed design of the main infrastructural works is also in progress.

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. Under the approved Kai Tak Outline Zoning Plan, the development can provide about 50,000 flats and 2.28 million sq m of commercial floor space.

The government has substantially completed a detailed feasibility study on a proposed environment-friendly linkage system for Kowloon East. The study suggested implementing a 'multi-modal' environment-friendly linkage system to enhance the transport connectivity of the area and facilitate the transformation of Kowloon East into CBD2.

Tseung Kwan O

A study is examining the feasibility of replanning Tseung Kwan O Area 137 to optimise its use for residential, commercial and other purposes. Preliminary development options are being formulated.

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 development of the Hong Kong Boundary Crossing Facilities Island, including commissioning automated car parks there for visitors using the Hong Kong-Zhuhai-Macao Bridge, connecting the airport's SKYCITY to the island, and constructing the Hong Kong International Aviation Academy's campus on the island.

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. In September, the 60-km section from Tuen Mun to Ma On Shan was fully opened. Construction of the 1-km extension at Sam Mun Tsai commenced in November, while the 2-km section from Tsing Tsuen Bridge to Bayview Garden in Tsuen Wan will be completed in 2021. The remaining 20-km section between Tsuen Wan and Tuen Mun is under design.

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 various aspects of building rehabilitation and repair.

In 2020, the URA commenced two Civil Servants' Cooperative Building Society Scheme redevelopment pilot projects in Kowloon City and continued a district planning study on Yau Ma Tei and Mong Kok.

Building Development

Private Sector

In 2020, superstructural works started at 105 sites, covering a gross floor area of 1.63 million sq m, and a total of 636 buildings, with a gross floor area of 2.05 million sq m, were completed at a cost of \$82.7 billion, compared with 665 buildings completed in 2019, with a gross floor area of 2.03 million sq m built at a cost of \$72.9 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 high-quality built environment. In 2020, the department started construction on 29 projects and completed 31 projects.

Regional and international awards won by the department in 2020 included those from the Institution of Civil Engineers, the Asia Pacific Federation of Project Management, the Hong Kong Institute of Project Management, the Hong Kong Institute of Architects and the Hong Kong Institute of Architectural Conservationists.

Built Heritage Conservation

The government's heritage conservation policy is to protect, conserve and revitalise as appropriate historical and heritage sites and buildings through relevant and 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.

Ten projects under the Revitalising Historic Buildings Through Partnership Scheme of the bureau's Commissioner for Heritage's Office (CHO) are in operation, while works for three other revitalisation projects are in progress and scheduled for completion in 2021. Preparatory works, including detailed design, for another three projects are under way. Proposals in respect of a new batch of four historic buildings were invited in December 2019 and a fifth building was added in August 2020. Results of the assessment of proposals will be announced by mid-2022.

The Built Heritage Conservation Fund operates two funding schemes to support public engagement and research. Public engagement activities conducted under the fund in 2020 included a creative competition and an exhibition. By 31 December, there had been more than 15,500 participants in the fund's events since 2018.

In the private domain, the CHO and the Antiquities and Monuments Office monitor any works on, or development of, declared monuments and graded historic buildings and discuss preservation options with owners of historic buildings. The CHO approved grants for maintenance works at seven historic buildings under the Financial Assistance for Maintenance Scheme on Built Heritage in 2020.

In 2020, restoration and repair works were conducted at Tang Chung Ling Ancestral Hall in Fanling and Liu Man Shek Tong Ancestral Hall in Sheung Shui. Archaeological investigations were conducted in North District, Tai Po, Lamma Island and Tuen Mun.

The Antiquities Advisory Board advises the government on antiquities and monuments. As at 31 December, it had confirmed the gradings of 1,550¹ historic buildings to provide an objective basis for guiding conservation efforts. In 2020, a masonry bridge at Pok Fu Lam Reservoir, Tung Wah Coffin Home in Pok Fu Lam, and Tin Hau Temple and the adjoining buildings in Yau Ma Tei were declared monuments in accordance with the Antiquities and Monuments Ordinance.

Development Framework

Town Planning Board

As a statutory body established under the Town Planning Ordinance, the Town Planning Board (TPB) oversees the preparation and review of statutory plans and considers planning applications. In 2020, it amended 11 statutory plans. The board also promulgates guidelines for statutory planning. It has 32 sets of guidelines.

Anyone may submit views on draft statutory plans to the TPB. In 2020, the board examined 2,092 such submissions. It also considered 69 applications for amendments to statutory plans, 1,021 for planning permission, 1,498 for amendments to the approved schemes and 53 to review the decisions of its planning committees.

Applicants aggrieved by the TPB's decisions may lodge appeals with the independent Town Planning Appeal Board. In 2020, the appeal board heard five cases.

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 government bureaus and departments to take account of changes in government policies, demographic characteristics, and social and economic trends. In 2020, amendments to the standards and guidelines covered aided child care centres and biodiversity considerations.

Planning Control and Enforcement

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

In 2020, the Planning Authority discovered 344 new UD, and issued 1,782 warning letters or reminders involving 436 cases, 1,576 enforcement notices involving 336 cases, 43 stop notices involving three cases, 1,137 reinstatement notices involving 221 cases and 2,721 compliance notices involving 478 cases. A total of 286 defendants in 118 cases were convicted. The enforcement and prosecution actions resulted in the discontinuation of 365 UD on 58 hectares

¹ This figure comprises items on the list of 1,444 historic buildings and new items proposed for grading.

of land, while another eight UD's occupying two hectares of land later obtained planning permission.

Land Control and Lease Enforcement

The Lands Department carries out squatter control work. There are 381,768 surveyed squatter structures throughout the territory. These structures are tolerated until they cease to exist or are to be cleared for development, environmental improvement or safety reasons.

In 2020, the department demolished 184 illegal structures and extensions, in addition to unauthorised structures cleared in the context of land control and lease enforcement. It also handled about 14,500 cases of reported unlawful occupation of government land and about 950 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, carrying out maintenance works on about 7,000 of them in 2020.

In 2020, the department provided in-house advice in about 1,700 development control submissions relating to trees and landscape on leased land and about 1,380 cases of tree issues on unmanaged government land. The department also conducted ad hoc vegetation maintenance work in about 22,330 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 2020, it approved 278 applications to build small houses and 268 applications to rebuild old village houses. The department 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 2020, it approved 33 applications for the sale of 12,898 units under construction and approved 36 Deeds of Mutual Covenant in respect of residential development.

Land Acquisition

Private land may be acquired for public purposes through resumption under the ordinances which provide for compensation for the property's value and business losses. If the payment amount cannot be agreed, either party may seek adjudication at 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 2020,

some 238,100 sq m of private land were acquired and \$3,429.5 million compensation was paid for acquisitions supporting public works projects (including public housing development), \$521.5 million compensation was paid to owners of 59 resumed properties affected by 22 urban renewal projects, and \$0.17 million compensation was paid in acquisitions 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. Such works may include slope upgrading, site formation, installation of temporary structures such as those using modular integrated construction methods, provision of sewerage and drainage access or pedestrian and vehicular access, renovation of dilapidated premises, and installation of fire safety equipment or barrier-free facilities. Costs incurred in relation to consultancy services commissioned to determine the technical feasibility or parameters of the proposed works may also be subsidised. As at 31 December, funding had been approved for NGOs to take forward community projects at 16 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 three million land registers and 24 million land-related documents can be retrieved electronically. In 2020, 421,485 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 currently adopts a deeds registration system. To enhance title certainty and simplify conveyancing procedures, the Land Titles Ordinance has been enacted to provide for a title registration system which will come into effect after a comprehensive review is completed and the necessary amending legislation is passed. The registry has forged consensus with key stakeholders on implementing title registration on newly granted land first, meaning land granted by the government after the start of the ordinance, and is working with them to address outstanding issues required for the preparation of the proposed legislation.

Survey, Mapping and Geospatial Information Service

The Lands Department's Survey and Mapping Office provides survey, mapping and geospatial services to support land administration and infrastructure development, and develops maps in digital and printed formats to meet public needs. It carries out land boundary surveys and photogrammetric and aerial surveys. The office is developing the existing 2D digital maps into 3D digital maps and operates the Land Information System to maintain updated digital maps and databases of land information and geospatial data. It also provides support to the Land Survey Authority in administering the Land Survey Ordinance governing the registration and conduct of authorised land surveyors and land boundary survey standards.

The office provides free web maps and mobile applications to the public. Since December, Map Application Programming Interface services, the 3D Pedestrian Network dataset and 3D Visualisation Maps providing photorealistic 3D models of the built environment have been made available to the public free of charge.

The office's Hong Kong GeoData Store, an alpha version of the Common Spatial Data Infrastructure (CSDI) portal, made about 200 open spatial datasets available for free download by the public. The office also maintains the Satellite Positioning Reference Station Network System, which forms the essential positioning infrastructure in Hong Kong for mapping, construction, navigation, land use planning and research. It has been upgraded to support the navigation satellite systems of the Mainland and Europe.

Development of Common Spatial Data Infrastructure

CSDI facilitates the development of smart applications using standardised spatial data. To showcase CSDI, an Interactive Map Dashboard of COVID-19 and three Map Application Programming Interface services were rolled out to the public in February and December respectively.

Building Safety and Maintenance

Ensuring the safety of Hong Kong's ageing building stock is one of the bureau's key duties. It works with the Buildings Department and partner organisations to enhance building safety.

Applying the principle that prevention is better than cure, 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 2020, the department issued statutory notices to 403 buildings for building inspections and 488 for window inspections under these schemes.

The Buildings Department, URA and the Hong Kong Housing Society support building owners in carrying out repairs and maintenance. In 2020, subsidies and loans exceeding \$130 million were granted to eligible property owners. In addition, a further \$3 billion was injected into Operation Building Bright 2.0 and \$2 billion into the Building Maintenance Grant Scheme for Needy Owners.

The URA's 'Smart Tender' Building Rehabilitation Facilitating Services scheme provides technical support to building owners in carrying out repairs and maintenance to reduce the risk of bid rigging during procurement. Eligible building owners may participate at a concessionary rate. As at 31 December, some 1,300 applications had been approved since the scheme began in 2016.

On enforcement, the Buildings Department acts against unauthorised building works (UBWs). It takes priority enforcement against UBWs that are new or under construction, and those which constitute an obvious hazard or imminent danger to life and property. UBWs are to be removed according to the department's enforcement policy if they 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 signboards. In 2020, the department

served 8,150 statutory removal orders and removed 19,499 UBWs. It also instigated 2,773 prosecution cases and secured 1,556 convictions in court for failure to comply with the orders, resulting in fines totalling \$10.89 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, as well as revisions to the Code of Practice on the Design and Construction of Lifts and Escalators to enhance the safety of lifts and escalators. In 2020, the department continued its Lift Modernisation Subsidy Scheme together with the URA. With an additional \$2 billion (\$4.5 billion in total) allocated by the government, the scheme will assist the modernisation of about 8,000 old lifts.

Infrastructure

'Construction 2.0'

The government has been implementing the 'Construction 2.0' initiative since 2018 to lead the construction industry to reform and upgrade by advocating 'innovation', 'professionalisation' and 'revitalisation'. At the same time, the government promotes the application of innovation and technology, including modular integrated construction, digital works supervision systems and building information modelling, to raise productivity, strengthen works supervision and quality assurance, and improve site safety.

The speedy completion of the quarantine centre at Lei Yue Mun Park and Holiday Village amid the COVID-19 pandemic with the use of modular integrated construction has been acclaimed by the Institution of Civil Engineers of the United Kingdom.

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 grow from the current \$70 billion level to more than \$100 billion in the next few 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.

Drainage Services

The Drainage Services Department manages about 2,790km of drains and watercourses and 27 village floodwater pumping schemes. It carries out drainage improvement works to cater for local developments and address probable effects of climate change. The estimated cost of drainage improvement works in the planning, design and construction stages in 2020 totalled about \$37.8 billion.

The department commenced revitalisation works of Jordan Valley Nullah in March and of Tsui Ping River in July. Other than improving the flood protection capability of the watercourse, the latter project will revitalise about 1km of the existing nullah and create a green and vibrant river channel.

The department inspects, clears and repairs drainage systems regularly. In 2020, it inspected about 2,339km and cleared about 839km of drains and watercourses.

Slope Safety

The Civil Engineering and Development Department improves slope safety by adopting better standards and 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 issues landslip warnings and provides information, education and community advisory services on slope safety.

Under the Landslip Prevention and Mitigation Programme, the department spent \$1.12 billion in 2020 to upgrade 166 substandard government man-made slopes and to mitigate the landslide risk of 35 natural hillside catchments. It also conducted safety screening studies for 100 private man-made slopes.

Drinking Water Safety

The Water Supplies Department (WSD) collects and tests water samples from the consumers' taps of randomly selected premises to monitor the quality of drinking water. In 2020, the test results all complied with the Hong Kong Drinking Water Standards.

The WSD's performance in respect of drinking water quality is monitored by the bureau's Drinking Water Safety Unit. The unit examines the results of the department's water quality monitoring and engages external auditors to audit the department's Drinking Water Quality Management System.

The quality of drinking water could be affected by a building's internal plumbing. In July, the government launched the \$440 million Water Safety Plan Subsidy Scheme to subsidise the systematic assessment, management and maintenance of internal plumbing of eligible private buildings.

Water Supplies

Water from Guangdong

Since 1965, Hong Kong has been importing raw water from the Dongjiang River, now the city's major source of raw water. 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 2020, the city imported 802 million cubic metres of Dongjiang water, and in December a new three-year agreement was signed.

Water Storage and Consumption

Full supply was maintained throughout the year, during which 2,395 millimetres of rainfall was recorded. Storage reservoirs held some 388 million cubic metres of water at the end of 2020.

There were about three million water customer accounts as at 31 December. Some 1,027 million cubic metres of fresh water was consumed in 2020, with an average daily supply of about 2.81 million cubic metres. Another 318 million cubic metres of sea water was supplied in 2020 for toilet flushing.

Total Water Management

The government's updated Total Water Management Strategy focuses on containing the growth of fresh water demand and building resilience in fresh water supply to cater for extreme effects of climate change with diversified water resources. The key initiatives of containing fresh water demand growth include further promoting water conservation, managing water loss and expanding the use of lower-grade water for non-potable uses.

Infrastructural works to supply reclaimed water to the northeastern New Territories for non-potable uses and preparations for the associated legislation are in progress. The first stage of Tseung Kwan O Desalination Plant is under construction, for commissioning in 2023. The government will continue to monitor water demand and supply and take action to ensure a reliable and sustainable water supply in Hong Kong.

Water Works

The main works for the in-situ reprovisioning of Sha Tin Water Treatment Works (South Works) commenced in August, for completion in 2026.

Liantang/Heung Yuen Wai Boundary Control Point

The Liantang/Heung Yuen Wai Boundary Control Point is a cross-boundary infrastructural project carried out jointly by the HKSAR Government and the Shenzhen Municipal People's Government. It is designed to offer direct access by passengers and vehicles. The control point's cargo clearance facilities were opened for cross-boundary goods vehicles in August.

Pier Improvement Programme

Construction works for Pak Kok Pier on Lamma Island, one of the 10 public piers covered by the first phase of the Pier Improvement Programme, started in April. Another 13 public piers have been identified for the second phase, and procurement of the engineering feasibility study consultancies is under way.

Construction Industry

Construction Industry Council

The Construction Industry Council supports the development of the construction industry, in particular by training construction workers. An additional \$200 million was allocated to the council in May, for purposes including increasing the training allowance for trainees of specified programmes of the Hong Kong Institute of Construction, expanding the Approved Technical

Talents Training Programme to cover trades in high demand, and offering incentives for in-service general workers to upgrade their skills.

Among a total of about 545,000 registered construction workers, the number of registered semi-skilled/skilled workers has increased to about 242,000. The government continues to work with the council to monitor the construction industry's manpower supply and demand.

The government also works with the council to operate the \$1 billion Construction Innovation and Technology Fund. As at December, over \$360 million had been approved since the fund was launched in 2018, subsidising enterprises to adopt technologies and supporting over 8,000 technology training places.

To help the construction industry cope with the impact brought about by the COVID-19 pandemic, from February the bureau disbursed subsidies through the council from the Anti-epidemic Fund. As at 31 December, around \$6.3 billion had been disbursed to some 500,000 workers, 21,000 enterprises, and 1,700 employers who had employed casual employees on a long-term basis.

The council continues to promote the Registered Specialist Trade Contractors Scheme to build up the capability of specialist trade contractors. The government supports the scheme and requires contractors to engage registered specialist trade contractors for public works contracts.

In relation to building information modelling, the council publishes standards and guidelines, provides training, and certifies managers and coordinators to help the industry adopt this technology in their construction projects.

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 Guangdong-Hong Kong-Macao Greater Bay Area Cities' were promulgated by the Department of Housing and Urban-Rural Development in Guangdong Province in November. When implemented, they will help Hong Kong enterprises and professionals to start businesses and practise in the nine cities of the Guangdong-Hong Kong-Macao Greater Bay Area (GBA). Consultant firms on the two government lists², as well as their professionals registered with relevant registration boards in Hong Kong, will be allowed to provide services directly in the GBA by obtaining equivalent qualifications in the Mainland through a registration system.

Similar measures were also promulgated in September by the Authority of Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone of Shenzhen.

² 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.

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.

In 2020, the government launched the Study Sponsorship Scheme and Trainee Programme under the newly established Urban Forestry Support Fund to encourage youngsters to join the arboriculture industry. The government also implemented the Registration Scheme for Tree Management Personnel to improve arboriculture standards and the quality of tree management work.

Funding for greening master plans for the southwest and northeast New Territories was approved in 2020. The Civil Engineering and Development Department commenced works in December to plant about 1,850 trees and 830,000 shrubs in the Kwai Tsing, Tsuen Wan, Islands, North and Tai Po districts to enhance the overall quality of the environment.

Websites

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

Development Bureau: www.devb.gov.hk

GeoInfo Map: www.map.gov.hk

Hong Kong GeoData Store: geodata.gov.hk

MyMapHK: www.landsd.gov.hk/mapping/en/MyMapHK/index.htm

VoiceMapHK: www.landsd.gov.hk/mapping/en/VoiceMapHK/index.htm