



2023 Environmental Report

Development Bureau

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1. INTRODUCTION

This report covers the Year 2023 on the environmental performance of the Planning and Lands Branch (PLB) and Works Branch (WB) of the Development Bureau (DEVB).

The Secretary for Development (SDEV) is the head of the Bureau, with the support of the Permanent Secretary for Development (Planning and Lands) and the Permanent Secretary for Development (Works). PLB oversees the operation of four departments, namely Planning Department (PlanD), Buildings Department (BD), Lands Department (LandsD) and Land Registry; while WB oversees the operation of five departments, namely Architectural Services Department (ArchSD), Civil Engineering and Development Department (CEDD), Drainage Services Department (DSD), Electrical and Mechanical Services Department (EMSD) and Water Supplies Department (WSD).



2. KEY RESPONSIBILITIES

The major areas of policy responsibilities of DEVB include:

- To facilitate Hong Kong's continual development through effective land use planning as well as a steady and sufficient supply of land;
- To achieve the optimum use of land resources and maintain an effective land administration system;
- To manage an efficient system for registration of land;
- To promote and ensure building safety and timely maintenance;
- To implement urban renewal in a holistic manner by improving the built environment of older urban areas and the living condition of residents therein;
- To ensure effective planning, management and implementation of public infrastructure development and works programmes in a safe, environmentally responsible, timely and cost-effective manner and maintain high quality and standards;
- To ensure the provision of a reliable, adequate and quality water supply and an efficient water supply service;
- To protect, conserve and revitalise historical and heritage sites and buildings through sustainable approaches for the benefit and enjoyment of present and future generations;
- To uplift the quality of the living environment by promoting sustainable urban landscape and tree management; and
- To strengthen and promote Kowloon East as the second Core Business District of Hong Kong.

3. ENVIRONEMENTAL GOAL



The Government has pledged to achieve carbon neutrality before 2050. In 2021, the Government announced Hong Kong's Climate Action Plan 2050, which outlined four major decarbonisation strategies viz. net-zero electricity generation, energy saving and green buildings, green transport and waste reduction. In supporting Government's environmental goal, DEVB is committed to ensuring that our policies are environmental friendly and all projects/programmes and operations under our purview are conducted in an environmentally responsible manner; and that the environmentally responsible culture among staff is inculcated.

4. CONTRIBUTIONS IN MEETING THE ENVIRONMENTAL GOAL

Green Buildings

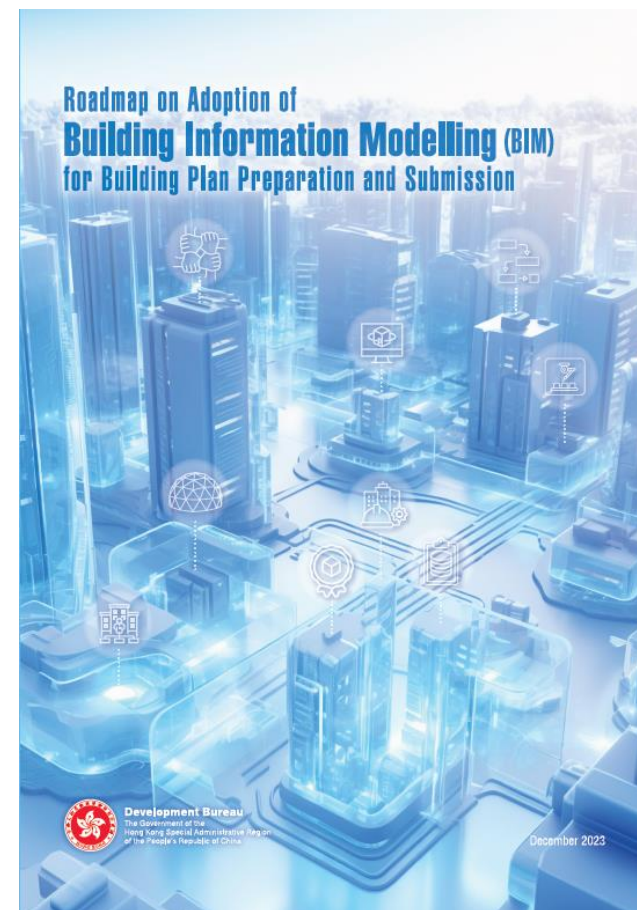
■ *Government Buildings*

- ◆ Green buildings use less energy and reduce water and material usages than conventional buildings which in turn limit greenhouse gas emissions. The Government is determined to promote green building movement in Hong Kong through public projects. Since the launch of the Building Environmental Assessment Method (BEAM) Plus New Buildings Assessment Tool v2.0 in September 2019, new government buildings shall embrace an enhanced approach to green design with greater emphasis on health and wellbeing. To further enhance the performance on green government buildings, we shall review the advancement of various green performance targets on Green Government Buildings.
- ◆ Since the launch of BEAM Plus green building label in 2010, over 500 government buildings have already attained BEAM Plus Gold or above rating.
- ◆ With an aim to improve energy efficiency in government buildings, new Green Energy Target was set in 2019 to further enhance the Government's energy performance by 6% under similar operating conditions in the next five years ending in 2025, using the financial year of 2018-19 as the base. As of 2023, the overall Government's energy performance was 6.4% (with 5.5% contributed by energy saving and 0.9% in renewable energy generation).

■ *Private Buildings*

- ◆ In response to rising public concerns over the impact of building bulk and height on the built environment, we introduced in April 2011 an enhanced package of measures to foster a quality and sustainable built environment. Since its implementation, over 1 260 new building projects approved by BD have registered for the BEAM Plus assessment under the new Gross Floor Area (GFA) concessions policy as at the end of 2023.
- ◆ To further promote a quality and sustainable built environment, BD has promulgated the new performance-based GFA concession mechanism in September 2023 for implementation starting from June 2024. Under the new mechanism, new private development proposals are required to achieve anticipated Gold rating under BEAM Plus to qualify for GFA concession for green and amenity features. Projects achieving lower ratings have to demonstrate compliance with one or more specific standards covering enhanced greenery provision, features that promote health and well-being, enhanced natural ventilation for residential buildings, adoption of Building Information Modelling (BIM) and Multi-trade integrated Mechanical, Electrical, and Plumbing (MiMEP) in building services.
- ◆ To minimise deep underground carpark construction with bulk excavation, and save energy for long-term management and maintenance of such carparks, the Government has implemented an enhanced GFA concession mechanism for ancillary and public carparks in December 2023. Under the enhanced arrangement, not more than one aboveground carparking floor may be 100% disregarded from GFA calculation if a minimum of two underground carparking floors which fully utilise the site are provided.
- ◆ To promote the wider adoption of BIM in private development projects, we promulgated the Roadmap on Adoption of BIM for Building Plan Preparation and Submission in December 2023. BD has also started developing automated compliance checking tools by phases and commissioned a consultancy study to formulate a technical framework for the full adoption of BIM by the private sector for preparation of plans for statutory submissions and approval under the Buildings Ordinance.

- ◆ Further to the amendments of the Building (Minor Works) Regulation (B(MW)R) in 2020 to allow the installation of designated greening features, such as planters, ponds or fountains, trellises and metal frames for growing of plants in existing private buildings under the simplified requirements of Minor Works Control System (MWCS) aiming at promoting a green and quality built environment, BD amended the B(MW)R in 2021 to expand the validation scheme of MWCS to allow the continued use of existing unauthorised minor amenity features that were relatively small in scale with less potential risk (e.g. solid fence wall, mesh fence, canopy, retractable awning and trellis, etc.; as long as they meet the prescribed descriptions and requirements and were erected before 1 September 2020), so as to meet the genuine needs of the building occupants and avoid wastage.



Roadmap on Adoption of BIM for Building Plan Preparation and Submission

■ ***Green buildings under Energizing Kowloon East***

- ◆ On promoting green buildings under Energizing Kowloon East, apart from adopting low-carbon and sustainable design principles in government projects, we also advocate such principles to the private sector. For example, the lease of land sale sites in Kowloon East include a requirement for the development to obtain BEAM Plus Provisional Gold or above rating. As at the end of 2023, a total of 73 buildings in Kowloon East Core Business District have achieved such rating, which were shown in the Green Map on Energizing Kowloon East Office's website. Opportunities haven been taken to investigate novel green measures in the comprehensive development of the two action areas in Kowloon Bay Business Area and Kwun Tong Business Area, as well as the former Kai Tak Runway Tip area. Concepts of sustainable development, green mobility, smart city initiatives and resilient design are proposed for incorporation into these developments.



Kai Tak Sports Park (BEAM Rating: Provisional Platinum)

■ ***Green Buildings under Urban Renewal Authority (URA)***

- ◆ The URA has incorporated various environmental provisions in its redevelopment projects, seeking to improve energy efficiency of buildings, reduce water consumption and waste generation, and minimize environmental nuisances during construction and demolition. By end 2023, URA had received 18 final BEAM Platinum/BEAM Plus Platinum ratings, 17 final BEAM Plus Gold ratings and 9 provisional BEAM Plus ratings for projects at the design and construction stages.



Building-integrated photovoltaics (BIPV) panels on 3/F Covered Walkway



Waste and Recycle Collection Data



Green Measures for Land Development

- Our efforts are illustrated in the following projects as examples.
 - ◆ The planning and design for the Kwu Tung North (KTN) and Fanling North (FLN) New Development Areas (NDAs) advocates a sustainable development approach, with emphasis on urban design, respecting the existing natural landscape and encouraging the adoption of environmental friendly and energy saving measures. In response to the public aspirations for a quality living environment, the final development proposals as reflected on the approved statutory plans for the NDAs have accorded high priority to “green” and “sustainable” design. Taking the example in KTN NDA, about 37 hectares are designated for Long Valley Nature Park to protect and enhance existing wetland habitats for the benefit of the local ecology and promotion of conservation and education. The Park will be managed by the Agriculture, Fisheries and Conservation Department and is targeted to open in late 2024.
 - ◆ The Hung Shui Kiu/Ha Tsuen (HSK/HT) NDA is also designed to be a green city with sustainable and energy saving strategies in respect of town planning, urban design, green transportation and infrastructure to achieve environmental efficiency, carbon emission reduction and sustainable living. In terms of green mobility, for example, a Green Transit Corridor comprising a highly efficient Smart and Green Mass Transit System (SGMTS), pedestrian walkways and cycle tracks is planned. The Civil Engineering and Development Department will kick-start the investigation and design works for the Phase 1 road works of SGMTS in 2024.
 - ◆ The Yuen Long South (YLS) NDA aims at achieving a balance under a Smart, Green and Resilient (SGR) approach, transforming the degraded brownfield land in YLS to a sustainable, green and livable community, connecting man and nature and integrating the natural and built environment through a biophilic design. In particular, it caters for a blue-green concept integrating with various natural landscape features and water bodies. Besides, the SGMTS mentioned under HSK/HT NDA above will also run through YLS NDA.



The Future San Tin Technopole



Artistic Impression of Revitalised Drainage Channel with Blue-green Initiative

■ ***Green Measures for Development in the New Territories***

- ◆ The Government has been adhering to the vision of “Co-existence of Development and Conservation” in planning San Tin Technopole. Within the area, the river/drainage channels, retention ponds, wetland, open space and knolls are knitted closely together to create a blue-green network, creating ecological linkages to enhance biodiversity. Besides, the Government will establish the Sam Po Shue Wetland Conservation Park of 338 hectares adjoining San Tin Technopole, preserving the fishponds or wetland in-situ and enhancing their ecological value through active conservation. San Tin Technopole will become a modern NDA that integrates industry development, ecological conservation and a livable environment.
- ◆ Other smart initiatives, such as District Cooling System, electric vehicle charging facilities etc., are also taken forward in the abovementioned developments and Tung Chung East New Town Extension (TCNTE), where applicable. In TCNTE, water intelligent network and automatic meter reading for water supply system, common utility tunnels etc. are also being incorporated in planning.

Minimising Environmental Impact by Public Works Policies

■ Overall strategy

- ◆ We have implemented a range of environmental improvement measures in public works, including the introduction of a systematic environmental management process, the promotion of reduction, reuse and recycling of surplus construction and demolition materials, temporary storage of the surplus construction and demolition materials in the two temporary fill banks for later reuse, etc.

■ Project proponents/contractors management

- ◆ Project proponents are required to prepare a Construction and Demolition Materials Management Plan for identifying and implementing measures to minimise generation of construction and demolition materials and maximise their reuse/recycling through proper planning and design.
- ◆ Public works contractors are required to prepare and implement an Environmental Management Plan setting out effective measures, apart from controlling nuisances such as air, noise and water pollution, to minimize generation of construction and demolition materials.
- ◆ We have been monitoring and assessing the environmental performance of public works contractors. Contractors with repeated convictions in environment-related offences or poor site hygiene may be suspended from tendering.

■ *Adoption of Modular Integrated Construction Method*

- ◆ The Government had been promoting the wider adoption of Modular integrated Construction (MiC) method in Hong Kong. Apart from enhanced productivity, reduced excessive manpower requirement on site, shortened construction time and improved site safety, the adoption of MiC could also achieve reduction of waste, electricity consumption and water usage on site. MiC has been or will be adopted in over 70 local construction projects including staff quarters, hostels, residential care homes, schools, office buildings, medical facilities and transitional housing. The Government also promote the application of high productivity concept in building services works, viz. MiMEP. DEVB will continue to collaborate with Works Departments to adopt MiMEP widely in their upcoming public works.

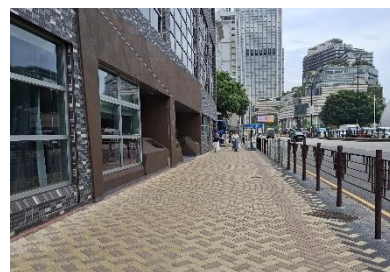


Modular Integrated Construction Method

- ◆ To facilitate the adoption of MiC, the pre-acceptance mechanism for granting in-principle acceptance (IPA) to individual MiC systems or components had been in place since 2017. Besides, in July 2022, BD, PlanD and LandsD jointly promulgated enhanced facilitation measures for new building developments adopting MiC, including the GFA concession policy in allowing 10% of the MiC floor area to be exempted from GFA calculation, and that 10% of the MiC floor area at each floor level could be exempted from site coverage calculation. Minor relaxation of building height restriction would also be supported. The measures took effect from 1 August 2022.
- ◆ By 31 December 2023, BD had received 205 IPA applications with 93 IPAs, including 56 steel and 37 concrete MiC systems, granted to 55 MiC manufacturers inscribed on BD's List of Accepted MiC Systems. Also, 19 private MiC development projects were completed with occupation permit granted.
- ◆ URA has adopted the Concrete MiC method in the construction of a URA's redevelopment project, namely SSP-015 at Tonkin Street/Fuk Wing Street, Sham Shui Po.

■ *Green procurement/material for reducing carbon emission*

- ◆ A sub-group on Green Procurement in Public Works Projects under the Inter-departmental Working Group on Green Government Procurement set up by the former Environmental Bureau, identifies and monitors the use of green materials in public works projects and formulates guidelines, policies and strategies to promote their use.
- ◆ Works departments as well as Highways Department have been using paving blocks with recycled waste glass as constituent material (eco-pavers) in road maintenance contracts and selected housing projects. From 2016 to end 2023, about 834 000 m² of eco-pavers have been laid in both public works projects and housing projects.
- ◆ We will continue to promote the use of green materials as well as good waste management practices and measures in public works projects. We will also review and refine the operation of environmental management measures on public works sites as well as strengthen and enhance the “trip ticket” system etc.



Eco-pavers

- ◆ The green site measures for reducing carbon emissions in public works projects continued in 2023. With the promulgation in March 2016, the use of B5 diesel (i.e. a blend of 95% Euro V diesel and 5% biodiesel) in all non-road based construction machinery in public works contracts has become mandatory.

■ *Use of vehicles*

- ◆ Electric vehicles have been used in public works contracts as far as practicable. 285 electric vehicles were in service under the on-going public works contracts by end of 2023. About 70 more electric vehicles are expected to be procured progressively under various works contracts in 2024.

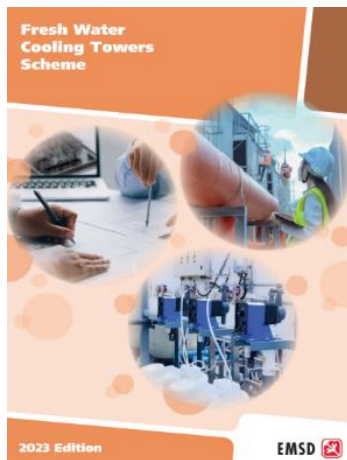


Electric vehicle used in public works contracts

Energy and Water Conservation

■ ***Water-cooled Air-conditioning Systems***

- ◆ The Fresh Water Cooling Towers (FWCT) Scheme, launched in 2000, has been targeting at the non-domestic buildings to encourage a wider use of fresh water cooling towers for energy-efficient air-conditioning. As at the end of December 2023, the EMSD had received 1 381 applications since the introduction of FWCT Scheme. Amongst them, 3 200 FWCTs have been completed and put into operation. It is estimated that these successful installations could save up to about 732 million kWh electricity annually, which is equivalent to around 512 000 tonnes of carbon reduction.



Fresh Water Cooling Towers Scheme

■ ***Water Conservation***

- ◆ We have been implementing the Total Water Management (TWM) Strategy through adoption of a two-pronged approach with emphasis on containing fresh water demand and building resilience in the fresh water supply catering for extreme effects of climate change with diversified water resources.
- ◆ The three major water demand management initiatives under TWM include water conservation, water loss management, and expansion of the use of lower grade water (viz. seawater and recycled water) for non-potable purposes.
- ◆ To promote community-wide awareness and action on water conservation, the H2O Public Education (H2OPE) Centre at Tin Shui Wai resumed normal service in 2022-2023 to hold exhibitions regarding global issues on water resources and features exhibits and interactive games to provide visitors with an enjoyable learning environment. A number of public engagement activities were also hosted to promote water conservation.

■ *Water Conservation (con't)*

- ◆ We have been progressively establishing about 2 400 District Metering Areas (DMAs) of the Water Intelligent Network (WIN) with monitoring and sensing equipment installed in the fresh water distribution network across the territory to continuously monitor water loss for early identification of water leaks and carrying out timely repair works of water mains. The DMAs of WIN are scheduled to be completed in the 1st quarter of 2025.
- ◆ To expand the use of lower grade water (viz. seawater and recycled water) for non-potable purposes, in 2023, we continued expansion works of the salt water supply system to Tung Chung New Town and its extension. We also continued construction of the Shek Wu Hui Water Reclamation Plant and centralised grey water recycling system in the Anderson Road Quarry Development for supplying recycled water to the public in phases starting from 2024.



H2OPE Centre



*Public Engagement Activities -
Cherish Water Ambassador Scheme*



Shek Wu Hui Water Reclamation Plant

Other Environmental Friendly Measures

■ ***Conservation of Rural Lantau***

- ◆ While pressing ahead with development projects, the Government is committed to conserving the rural Lantau. A Lantau Conservation Fund (LCF) was set up in 2020 to support non-government organizations, local communities and land owners, etc., to carry out conservation and related projects on rural environment in Lantau. 44 LCF projects covering research, education and engagement and management agreement, involving a total grant of about \$124 million were approved from 2020 to 2023. Besides, eleven government minor improvement works in support of conservation with an amount of about \$75 million were approved under LCF from 2020 to 2023.



■ ***Measures for Promoting Urban Forestry and Tree Management***

- ◆ Urban forests are pivotal in building the resilience of our cities in face of extreme weather and enhancing urban liveability. They serve as valuable green assets in providing sustainable solutions to global environmental challenges.
- ◆ We organised seminars and field demonstrations for private property owners, property management personnel and the public to explain tree care work and proper ways to conduct tree risk assessment. In 2023, over 1 300 participants attended public seminars, webinars and workshops on such topics. Besides, we participated in the Hong Kong Flower Show 2023 to promote public appreciation of greening and the Education and Careers Expo 2023 to publicise the Urban Forestry Support Fund and encourage young people to join the arboriculture and horticulture industry.

■ **Measures for Promoting Urban Forestry and Tree Management (con't)**

- ◆ Newsletter “Verdure”, aiming at bringing the information on greening, landscaping, and tree care to the public, was released since June 2023.
- ◆ Instagram account *@hk.trees.landscape*, actively promoting different green attractions in Hong Kong and other latest public activities related to landscape design, arboriculture and urban forestry, was launched in April 2023.
- ◆ Online platform “See GREEN, Go GREEN” in DEVB’s Greening website (www.greening.gov.hk), which continued in providing greening information including green attractions, activities and new developments from government departments.
- ◆ Public guided tour “See GREEN, Go GREEN. Little Trip” was first launched in December 2023, taking around 300 members from the public and schools to Jordan Valley Channel to learn more about benefits of urban forestry and blue green infrastructure in Hong Kong.

- ◆ Pamphlet on “Tree Care” was released in October 2023 to promote the proper life cycle management of urban forest and appropriate tree maintenance measures to the public.



2023 pamphlet on “Tree Care”

■ *Housekeeping Measures within this Bureau*

Energy Saving

- ◆ DEVB, with its offices mostly located in Central Government Offices (CGO) at Tamar, has adopted the following energy saving measures –
 - Installation of LED lighting, motion sensors and auto timers for offices;
 - Setting indoor air-conditioned temperature at 25.5 °C in summer season; and
 - Setting office equipment in power-saving mode/standby mode when they are not in use for over 15 minutes.

Green Transport

- ◆ To improve roadside air quality and reduce greenhouse gas emission, DEVB is now arranging procurement of electric vehicles with a view to replacing conventional vehicles in the government fleet for its daily business use in 2025/26.

Waste Reduction – Paper conservation

- ◆ We have adopted the following arrangements to reduce use of paper –
 - Sending electronic greeting cards to government contacts and posting on DEVB's website to deliver festive greetings;
 - Collect plastics, metals, waste paper, glass bottles and rechargeable batteries by setting up recycling boxes at pantries/common areas;
 - Electronic Filing System (ERKS) is scheduled for implementation in 2024. With the implementation of ERKS, filing of paper records will be reduced; and
 - In 2023, we consumed 12 383 reams of paper, which recorded an increase of about 11% against the consumption in 2022. We will continue our best endeavours to ensure the most efficient use of resources in the years ahead.

Carbon Management

- ◆ Annual carbon audit exercise is required to be conducted for government buildings with annual electricity consumption over 500 000 kilowatt hour. For DEVB, annual carbon audit was conducted for the Hong Kong Heritage Discovery Centre in 2023. The amounts of greenhouse gas emissions for the Centre was around 563 tonnes of CO₂-e; and
- ◆ We have also reminded our staff to be more prudent in the use of energy, and will continue the endeavors to work towards a low carbon and greener working environment.

Other Green Performance – Green purchasing

- ◆ “Green” stationery items supplied by the Government Logistics Department, such as clutch pencils, refillable ball pens, recycled pencils and furniture made of chip board, are now widely used in DEVB. Other green items e.g. box files made of recycled paper are also ordered from contractors for office use;
- ◆ It has all along been our practice to purchase only office equipment such as photocopiers, fax machines and printers with Energy Efficiency labels;
- ◆ Option of trade-in has been prioritized when procuring store items for replacement; and

Other Green Performance – Green purchasing (con’t)

- ◆ The support and cooperation from staff members are always the key to the success of our green office management. Apart from regular re-circulation of relevant guidelines on paper and energy saving, we have from time to time actively encouraged our staff to support green activities organised by other government departments and organisations.

We will continue with our efforts in fostering a green culture and ensuring that our offices operate in an environmentally responsible manner.



5. VIEWS AND SUGGESTIONS

If you have any views and suggestions in connection with this Environmental Report, you are welcome to contact us via e-mail at devbenq@devb.gov.hk or by fax on 2523 5327 or write to us at 15/F, West Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong.

Development Bureau