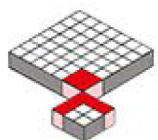


環保報告 ENVIRONMENTAL REPORT 2023



Government Property Agency

The Government of the Hong Kong Special Administrative Region
of the People's Republic of China

1. Introduction

This report sets out the work of the Government Property Agency (the Agency) in environmental protection in 2023 and the results. As the steward of government properties, we would continue to proactively subject all our activities to the closest environmental scrutiny.

2. The Agency's Environmental Policy

- Contributing to environmental conservation by adopting sustainable designs, building materials and installations in new joint-user general office buildings (JUBs) and quarters, and in fitting-out and refurbishment projects;
- Managing government properties under our purview in an environmentally responsible manner;
- Implementing green office management through effective housekeeping; and
- Promoting awareness and participation among staff in environmental protection, reducing pollution and enhancing energy conservation and efficiency

For information about the Agency's profile, please visit our website at <https://www.gpa.gov.hk/en/about-us.html>.

3. Highlights of the Year

Contributions to Environmental Goal	Government's	Overall
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Developing Renewable Energy

A total of 10 JUBs, 8 quarters and 1 Boundary Control Point (BCP) had been equipped with renewable energy (RE) systems.

(Part 4.1)

Energy Saving in Government Buildings

In FY2022/23, an overall 5.05% energy saving in our buildings compared with energy consumption in FY2018/19 was achieved.

(Part 4.2.1)

Greater Use of Energy Management Tools

Energy audits were conducted in a total of 17 JUBs and 15 quarters, and retro-commissioning of building services systems was completed in 12 buildings.

(Part 4.2.3 & 4.2.4)

Enhancing Energy Efficiency Performance of Buildings

Newly completed Treasury Building attained a Gold rating under BEAM Plus, indicating high level of sustainability and energy efficiency features.

(Part 4.2.6)



West Kowloon Government Offices



Treasury Building

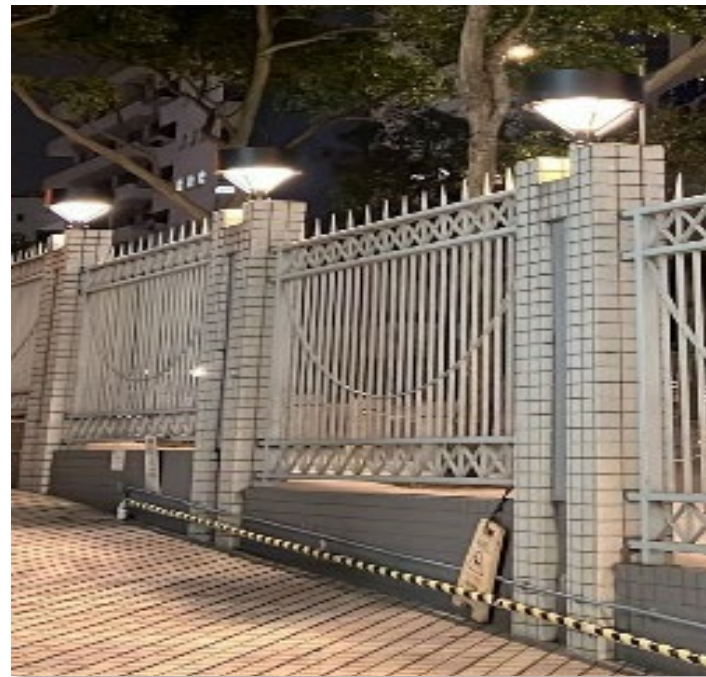


Trade and Industry Tower

4. Performance and Progress on Key Environmental Reporting Areas

4.1 Net Zero Electricity Generation

We worked with Architectural Services Department (ArchSD) and Electrical and Mechanical Services Department (EMSD) to explore opportunities for installing RE systems at our buildings.



Solar lamp poles at Shun Lee Disciplined Services Quarters



Light pipes at West Kowloon Government Offices



Solar hot water heating system at Heung Yuen Wai Boundary Control Point (HYW BCP)



Photovoltaic panel system at North District Government Offices

4.2 Energy Saving and Green Buildings

4.2.1 Energy Consumption and Saving, and RE Generation

Energy Consumption and Saving, and RE Generation in FY2022/23

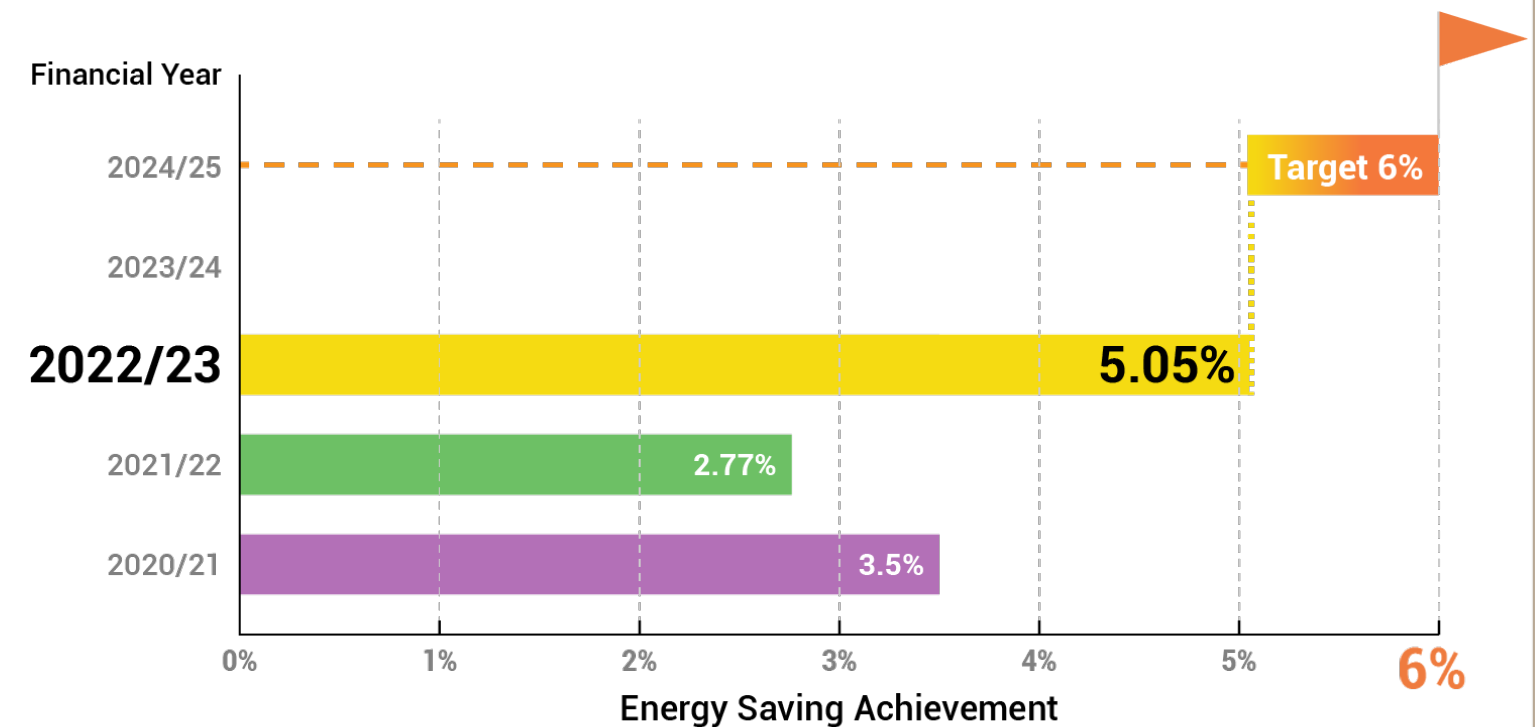
Energy Consumption *	RE Generation	Energy Saving**
244,975,931 kWh	118,368 kWh	13,022,189 kWh

* Energy consumption in JUBs and quarters under comparable operating conditions in FY2018/19

** Compared with energy consumption in FY2018/19

Energy Saving Target

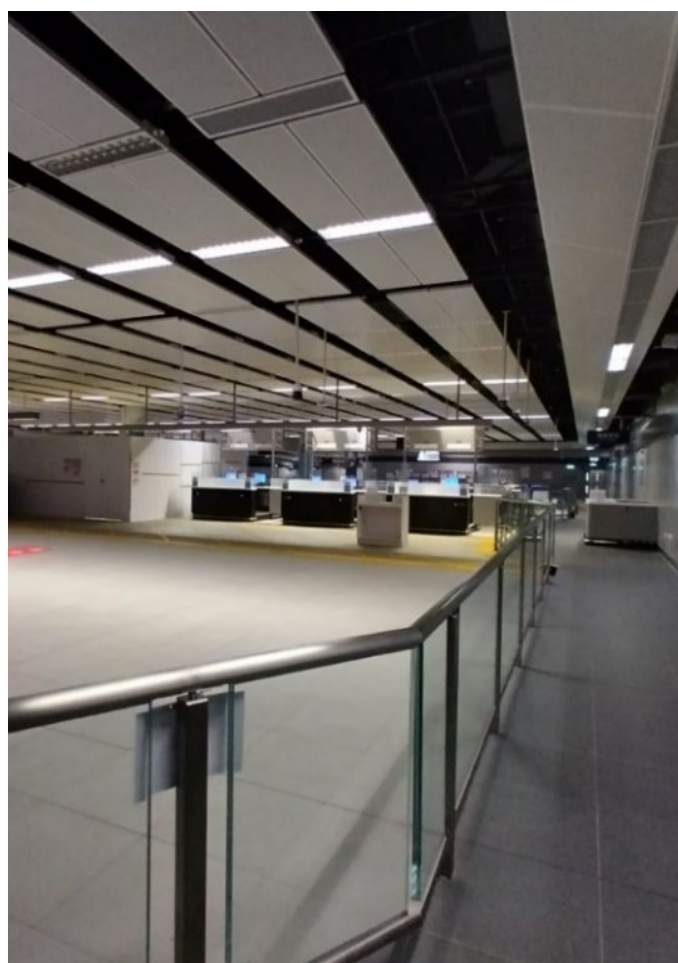
The Government had set a 6% energy saving target for government buildings from FY2020/21 to FY2024/25, adopting FY2018/19 as the base year. The following diagram displays our energy saving progress for JUBs and quarters towards the target.



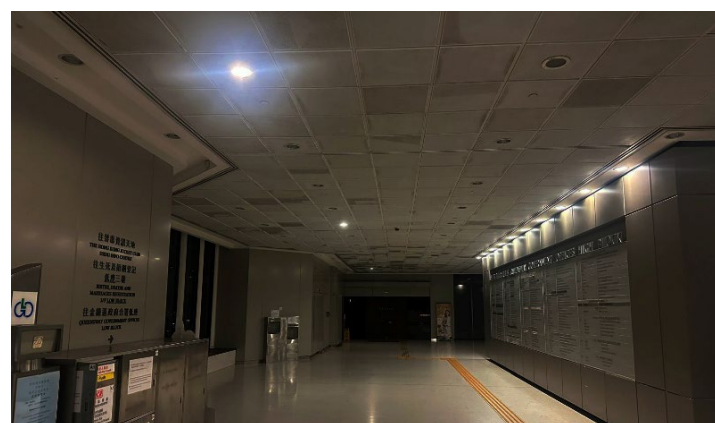
4.2.2 Energy Efficiency Management

In managing our properties, we enhanced energy efficiency through -

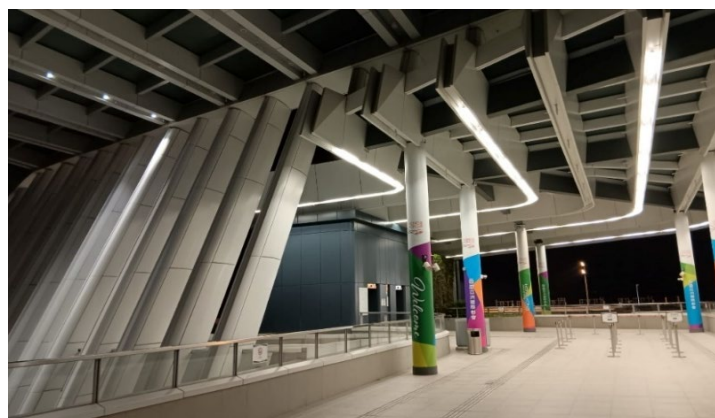
- adopting core air-conditioning hours in JUBs;
- setting air-conditioned temperature at 25.5°C in summer;
- reducing excessive lighting fittings and minimising the illumination level during off-peak hours in the common areas without adversely affecting normal operation;



Switching off unused lightings at Passenger Terminal Building in HYW BCP

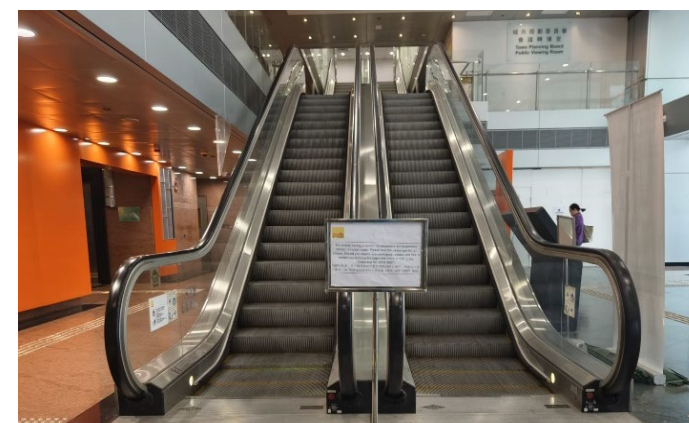


Switching off unused lightings at Queensway Government Offices during non-operating hours



Switching off external lightings at HYW BCP during non-operating hours

- optimising operating hours of lifts and escalators;
- monitoring energy consumption by local meters; and
- monitoring energy consumption in JUBs on a monthly basis to plan for energy saving strategies



Optimising operating hours of escalators at North Point Government Offices



Optimising operating hours of lifts at Tai Hing Government Offices

4.2.3 Energy Audit

In 2023, we worked with EMSD to conduct energy audits in selected JUBs and quarters to identify and seize energy saving opportunities in energy saving and RE projects. ([Part 4.1](#) & [4.2.4](#))

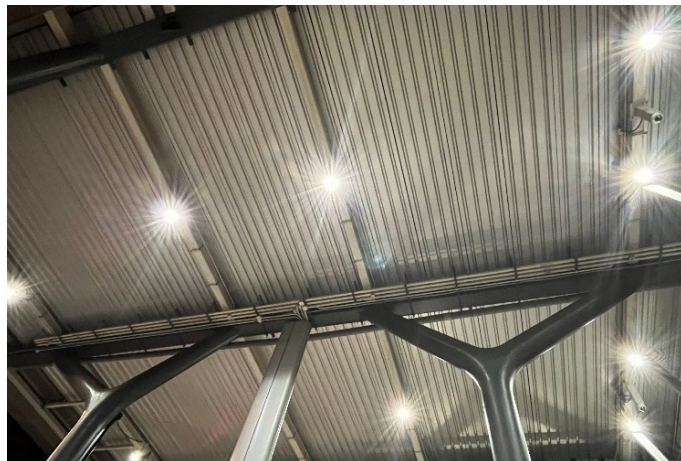
Other recommended energy saving measures in property management had already been implemented. ([Part 4.2.2](#))

4.2.4 Improvement of Energy Performance

Energy Saving Projects

We strove to reduce energy consumption, and closely worked with EMSD to explore energy saving measures on actual operation requirements and implement energy saving projects in our existing buildings, including -

- replacing existing plant and equipment with more energy-efficient alternatives;
- upgrading central control and monitoring system for energy management;
- installing motion sensor for lighting devices in common areas; and
- replacing lighting fittings with LED lights



LED lamps replacement at kiosks of Vehicle Clearance Plaza in Hong Kong-Zhuhai-Macao Bridge Hong Kong Port (HZMB HKP)



Replacement of variable speed drive chiller units at Tsuen Wan Government Offices

Retro-commissioning (RCx)

To achieve the optimal operational efficiency, we worked with EMSD to arrange RCx for building services systems in JUBs with annual energy consumption greater than 1,000,000 kWh.

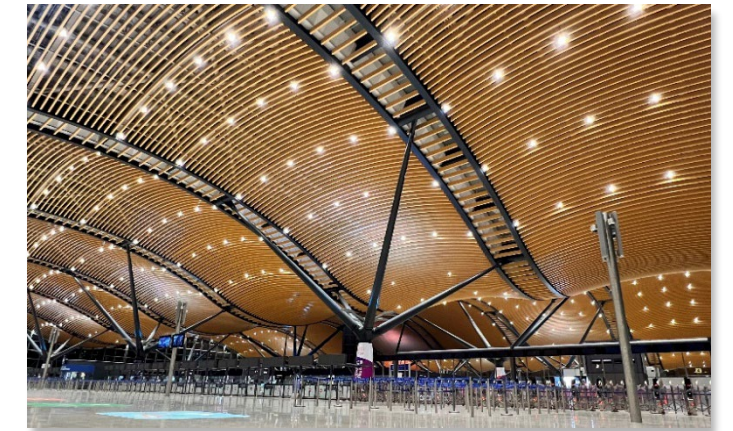
We had implemented the energy saving opportunities identified during RCx process, including adjustment of temperature set point for air conditioning system to improve energy efficiency and performance.

Energy-efficient Features and Technologies

We adopted various energy-efficient features and technologies in JUBs and BCPs, including -



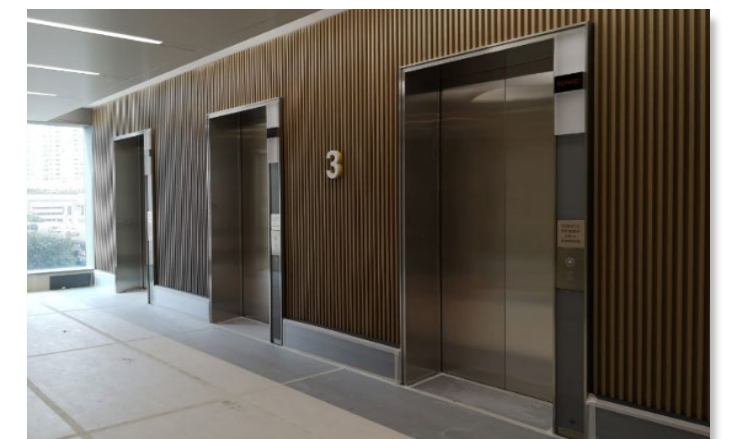
External sun shading devices at Treasury Building



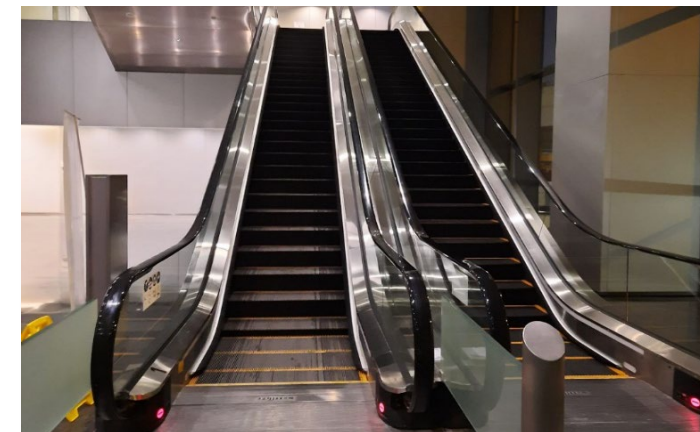
LED lightings at Departure Hall of Passenger Clearance Building in HZMB HKP



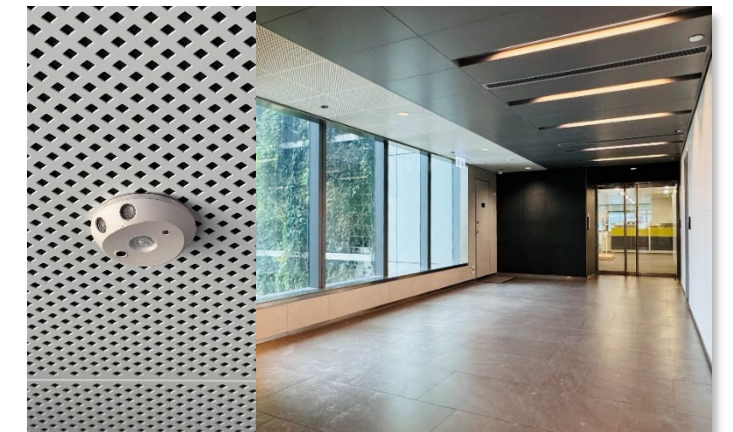
Seawater-cooled chillers at HZMB HKP



Power regenerative lifts at Treasury Building



Service-on-demand escalators at West Kowloon Government Offices



Occupancy sensor for lighting control at West Kowloon Government Offices

4.2.5 Low Carbon Construction and Materials

In newly completed Treasury Building, we adopted a low carbon construction approach to minimise construction waste, such as -

- precast concrete staircases; and
- multi-trade integrated mechanical, electrical and plumbing modules for air-conditioning system

4.2.6 Green Building Recognition



Treasury Building

- Gold rating under BEAM Plus New Buildings Version 1.2
- About 29.11% (office) and 12.87% (carpark) reduction of energy consumption



West Kowloon Government Offices

- Platinum rating under BEAM Plus New Buildings Version 1.2
- About 41.9% (office) and 47.2% (carpark) reduction of energy consumption

4.2.7 Greening and Landscaping

We adopted landscaping at pedestrian level, roof gardens, podium gardens and vertical green system at façades in our new buildings for environmental and amenity benefits.



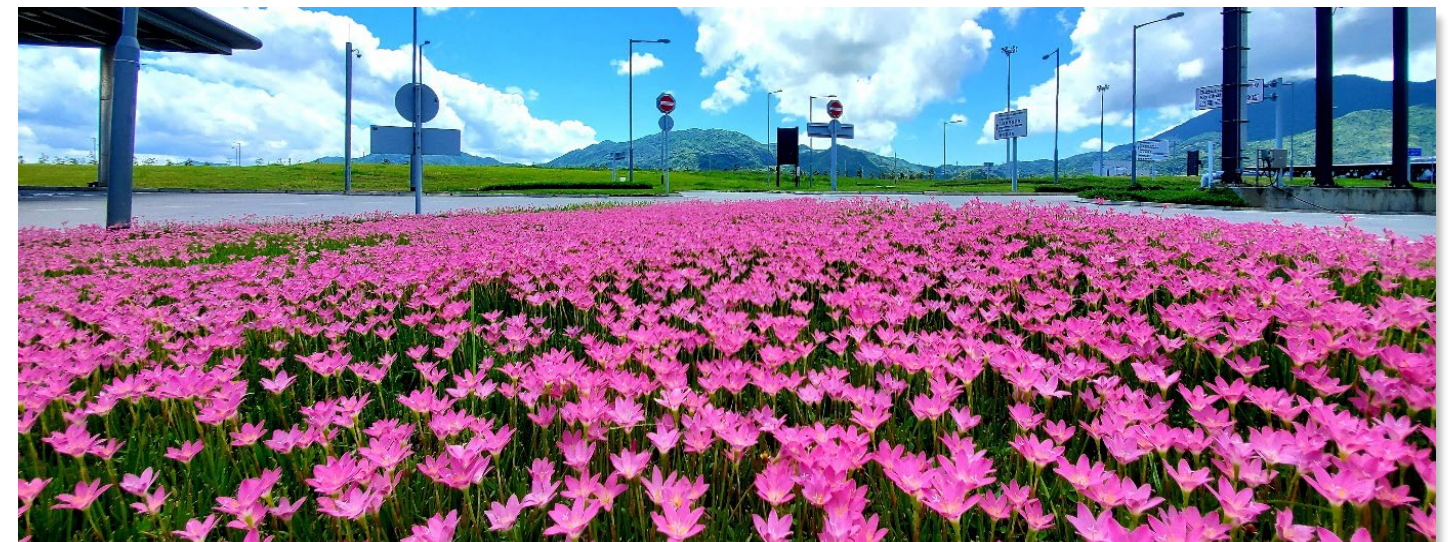
Vertical greening at West Kowloon Government Offices



Landscaping at Treasury Building



Roof garden at Trade and Industry Tower



Landscaping at HZMB HKP

4.3 Green Transport

4.3.1 Electric Vehicle (EV) Charging Facilities

EV charging facilities had been installed in selected car parking spaces at new JUBs and BCPs.



EV chargers at HYW BCP public car park



EV chargers at Treasury Building car park

4.3.2 Adoption of EVs in the Government Fleet

We planned to replace the conventional fuel-propelled departmental vehicles by electric vehicles or other environmentally friendly vehicles.

4.4 Carbon Management

In 2023, we conducted carbon audits for 45 JUBs, 60 quarters and 1 BCP with annual electricity consumption above 500,000 kWh. We had implemented carbon reduction measures in various areas recommended in the audits as normal practice.

Carbon Audit Results in FY 2022/23

1. Scope of reporting	Tonnes of CO ₂ -e
Sub-total scope 1 : direct greenhouse gas (GHG) emissions	1,973.92
Sub-total scope 2 : indirect GHG emissions	140,907.54
Sub-total scope 3 : other GHG emissions	1,980.36
Total GHG emissions :	144,861.82

2. GHG reduction measures implemented in the reporting period

Energy saving	Replacement of chillers and pumps with more energy-efficient alternatives
Paper saving	Use of 100% recycled paper and double-sided printing
Water saving	Installation of water saving devices such as self-closing or sensor water taps and dual flush toilet cisterns
Recycling activities	Collection boxes in place for different recyclable items

4.5 Waste Reduction and Recycling

4.5.1 Waste Disposal and Recovery

We implemented waste separation and recycling programmes for JUBs, quarters and BCPs and recorded waste quantities monthly for performance monitoring.

Waste Quantities in 2023

Recyclable wastes	JUBs	Quarters	BCPs
Paper (kg)	434,618	425,544	24,580
Metal (kg)	2,085	33,601	15
Plastic (kg)	4,941	29,586	380
Glass (kg)	580	58,798	0
Waste disposed (L)	48,314,640	103,807,440	13,108,386

4.5.2 Separation, Storage and Collection of Recyclables

We continued to provide waste separation bins for paper, plastic and metal in JUBs, quarters and BCPs. Other waste recycling for glass bottles, electronic equipment, red pockets and mooncake boxes had also been carried out.



Waste separation bins at HZMB HKP



Recycle bins at West Kowloon Government Offices

4.5.3 Food Waste Reduction and Recycling

We participated in Environmental Protection Department (EPD)'s pilot scheme on point-to-point food waste collection for 2 government quarters -

- Kwai Yung Court; and
- West Kowloon Disciplined Services Quarters



Food waste bins at Kwai Yung Court

4.5.4 Achievements in Waste Management in JUBs and quarters

- Awards (Bronze Award and Certificate of Merit) issued by EPD in the Commendation Scheme on Source Separation of Commercial and Industrial Waste
- Certificates of Merit issued by EPD in the Commendation Scheme on Source Separation of Domestic Waste
- Friends of EcoPark Certificates of Appreciation issued by Environment and Ecology Bureau (EEB) for sustaining the support given to recycling business in EcoPark
- Appreciation awards and certificates for participation in various programmes organised by EEB and EPD -
 - Rechargeable Battery Recycling Programme;
 - Fluorescent Lamp Recycling Programme; and
 - Peach Blossom Trees Recycling Programme



- Wastewi\$e Certificates (Good and Basic Levels) issued by Environmental Campaign Committee in the Hong Kong Green Organisation Certification



4.6 Other Green Performance

4.6.1 Indoor Air Quality

Our premises obtained Excellent Class and Good Class in EPD's Indoor Air Quality Certification Scheme in 2023 -

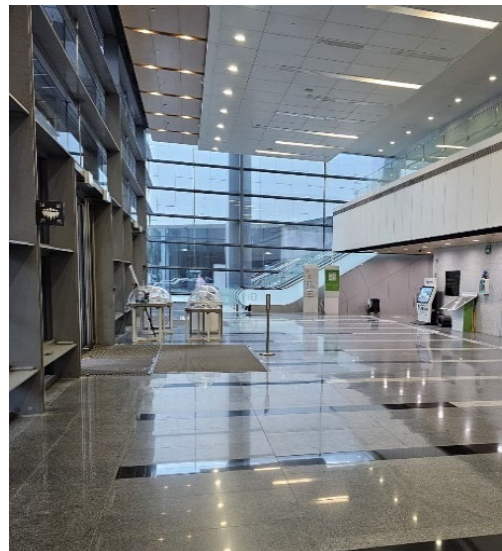
Excellent Class

- North Point Government Offices
- Trade and Industry Tower
- Treasury Building
- Tuen Mun Government Offices
- West Kowloon Government Offices
- HZMB HKP
 - Passenger Clearance Building;
 - Arrival and Departure Private Car Passenger Clearance Annexure; and
 - Immigration Building (Arrival and Departure)
- HYW BCP
 - Passenger Terminal Building



Good Class

- All other JUBs suitable for IAQ monitoring



Trade and Industry Tower under IAQ certification scheme



HYW BCP under IAQ certification scheme

4.6.2 Water Management

We worked closely with ArchSD to enhance the water supply systems of our premises, including -

- installing water saving devices, such as sensor water taps and dual flush toilet cisterns, whenever feasible in renovation and maintenance projects;
- installing flow controllers to water taps of toilets and pantries in all existing JUBs whenever feasible; and
- placing posters in prominent places to encourage water saving

Rainwater harvesting systems for irrigation were installed in newly completed buildings e.g. Treasury Building and HYW BCP. In HZMB HKP, wastewater is treated through reclaimed water pumping station for flushing purpose.



Irrigation by rainwater harvest system at HZMB HKP



Rainwater harvesting system and reclaimed water pumping station at HZMB HKP

4.6.3 Green Operation in Commercialised/ Leased-out Premises

For premises leased out to private tenants, we incorporated green requirements in the tenancy agreements, including -

Waste Reduction

- prohibiting use of disposable tableware in government canteen;
- avoiding provision of plastic bottled water in food and catering premises; and
- prohibiting sale of plastic bottled water measuring 1 litre or less through automatic vending machines

Energy Saving in Lighting

- lights out for external signs from 10p.m. to 7a.m. in new licence agreement of advertising areas

We encouraged new tenants of street-facing retail shops to sign up EPD's "Charter on External Lighting" to minimise light nuisance and energy wastage since December 2017.

4.7 Housekeeping Measures in the Agency's Offices

4.6.4 Fitting-out Recycling and Reusing

We encouraged recycling and reusing fittings to help waste reduction in office and surplus quarters renovations.

Moving to Leased-in Offices

- liaised with landlords to waive the reinstatement requirement; and
- encouraged departments to adopt the existing fitting-out in newly leased offices

In 2023, some landlords agreed to waive the reinstatement liability in the lease. Some departments agreed to wholly or partly adopt the existing fitting-out of the newly leased offices.

Vacating Leased-in Offices

(leases with reinstatement liability clause)

- negotiated with landlords to repossess the property in its "as-is" condition

In 2023, we successfully persuaded some landlords to accept our proposal that the future tenant could make use of our existing fittings in a number of office de-leasing cases.

Leased-out Surplus Quarters

- leased out surplus quarters on an "as-is" basis; and
- adopted a flexible approach in requiring tenants to fulfil their reinstatement obligation

We retained the outgoing tenants' fittings and fixtures which were in good condition on a case-by-case basis.

4.7.1 Paper Consumption

Paper Consumption in the Agency's Offices in 2023

Paper size	Reams (approximate)
A4	3,300
A3	140

To reduce paper consumption, we implemented various saving measures -

- using 100% recycled paper;
- double-sided printing;
- collecting used paper for recycling; and
- distributing documents in digital format

4.7.2 Green Procurement

We followed the list of products with green specifications promulgated by EPD.

In 2023, the Agency spent approximately \$4 million on purchasing various products and services from the list, including -

- toner cartridges;
- network products, e.g. LAN switches, routers, etc.; and
- refrigerators

4.7.3 Green Housekeeping

We assigned a Green Manager and an Energy Warden to implement green housekeeping in the Agency's offices.

Reducing paper consumption	(Part 4.7.1)
Reducing electricity consumption	<ul style="list-style-type: none"> ● switched off lights and electrical equipment when not required; ● set room temperature at 25.5°C in summer; and ● issued regular reminders to all staff
Using environmentally friendly office appliances	<ul style="list-style-type: none"> ● used recycled toner cartridges for printers
Reducing water consumption	<ul style="list-style-type: none"> ● used self-closing or sensor water taps in toilets; and ● posted notices in pantries and toilets to remind staff of reducing water consumption

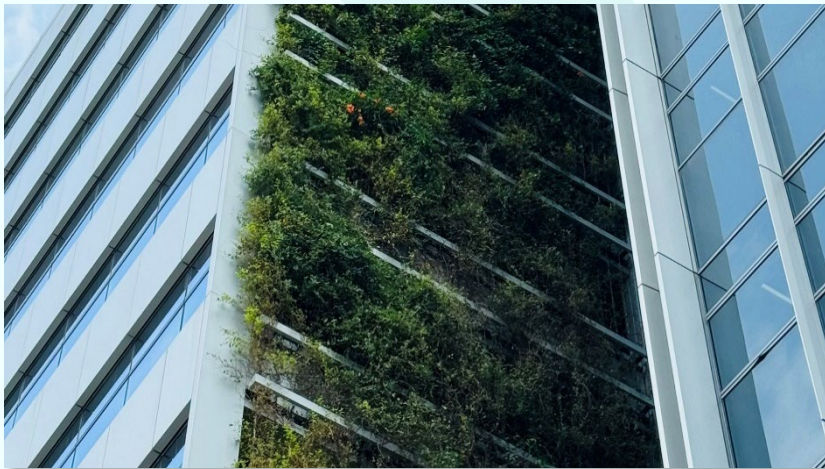
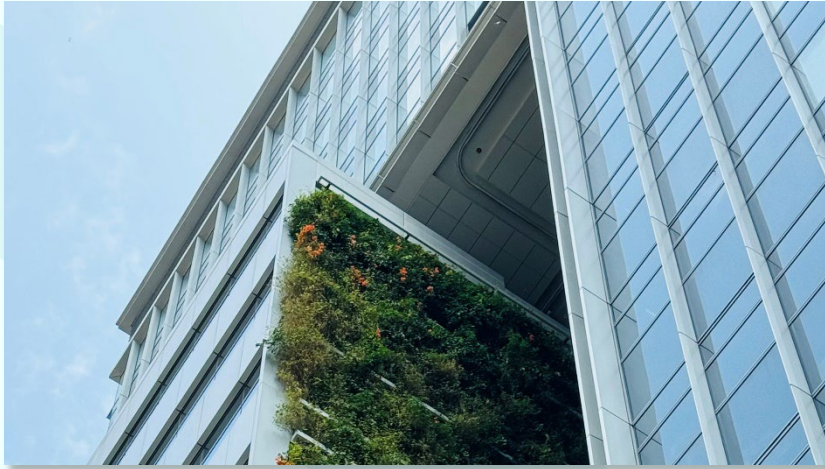
4.7.4 Green Activity

In May 2023, we visited Y-Park, which is a yard waste recycling centre, to raise staff awareness on low carbon living.



Y-Park in Tsang Tsui, Tuen Mun

5. Environmental Targets 2024 onwards



In the coming years, we would persistently implement the following measures at our premises for continuous improvement in environmental protection -

- incorporating sustainable features in new JUBs and renovation projects;
- adopting energy-efficient and RE technologies in existing properties where practicable;
- reducing electricity consumption in common areas of our premises;
- monitoring energy consumption in JUBs;
- reducing GHG emissions;
- maintaining greening and landscaping;
- reducing waste and facilitating waste collection and recycling programme;
- raising energy saving awareness of JUBs and BCPs users and quarters residents;
- monitoring indoor air quality;
- promoting environmentally friendly operations by tenants;
- facilitating waste reduction at source and updating green measures through tenancy agreements; and
- keeping up green housekeeping measures

Comments and Suggestions

We welcome views and suggestions on this report. You may contact us by -

Email : enquiry@gpa.gov.hk

Telephone : 3842 6812 or 3842 6788