## **BUILDINGS DEPARTMENT ENVIRONMENTAL REPORT 2015**





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## **FOREWORD**

Ensuring building safety depends on all of us. We will continue to work with building owners and all stakeholders concerned to sustain a safe, healthy and quality built environment for our future generations.

I am pleased to present our seventeenth Environmental Report which showcases our sustainable development initiatives and achievements in 2015.

To improve energy performance of our buildings, the new Residential Thermal Transfer Value (RTTV) standards became applicable all new residential to developments in 2015. At the same time, the Overall Thermal Transfer Value (OTTV) standards firstly introduced in 1995 to cover and hotel buildings commercial extended to residents' recreational facilities. These standards will help reduce energy demand by reducing the heat transfer through building envelopes. A Technical Committee on Design and Construction Requirements for Energy Efficiency of Buildings has been formed to review these standards on a regular basis.

For our existing buildings, we continued the implementation of the Mandatory Building and Window Inspection Schemes (MBIS and MWIS) to arrest problems associated with building dilapidation. To enhance building owners' understanding of the requirements and to seek their cooperation, we produced two short films ("Modern Owners" and "Window 85") with clips that answer frequently asked questions in a lively manner. We also launched the Buildings Safety Certificate Course targeting building owners in particular members of the Owners' Corperations or Management Committees to equip them with practical knowledge on



building safety and to assist them to handle problems relating to building dilapidation and alterations. Further to the launching of the mobile application on the Minor Works Control System, we are developing another mobile application to provide a quick and easy channel for the public to access useful information concerning MBIS and MWIS.

In 2015, we organized the Building Safety Week which was a large scale public education and publicity event to draw the attention of the general public, students and the building industry the importance of building safety and the need to foster a building safety culture. The numerous workshops and seminars attracted more than 2,500 participants and over 14,800 people visited the exhibition or joined various activities.

Ensuring Building Safety is not just the work of the Buildings Department. It depends on all of us and we all have a role to play. We will continue to work with building owners and all stakeholders concerned to sustain a safe, healthy and quality built environment for our future generations.

**HUI Siu-wai, JP** Director of Buildings

#### BUILDINGS DEPARTMENT AND THE ENVIRONMENT

Our Vision: To make the built environment safe and healthy for our

community.

**Our Mission:** To set and enforce safety, health and environmental

standards for private buildings and sustainable

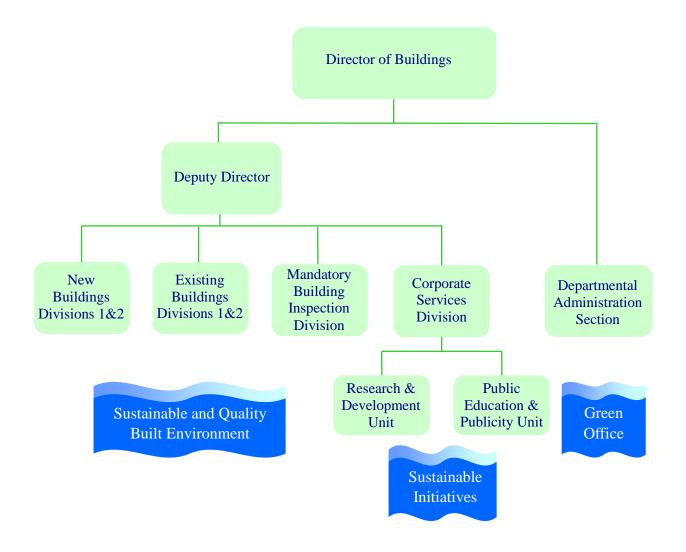
building development.

**Our Culture:** To go the extra mile in serving our customers and the

community as a harmonising regulator.

Under the ambit of the Buildings Ordinance (BO) and its subsidiary legislation, we are devoted to providing services to the public in facilitating and promoting the construction and maintenance of quality buildings in the private sector. We also take a proactive role in supporting the Government's objective of creating a better and sustainable living environment in Hong Kong.

#### 1.1. Organisation Chart



#### 1.2. Management Commitment

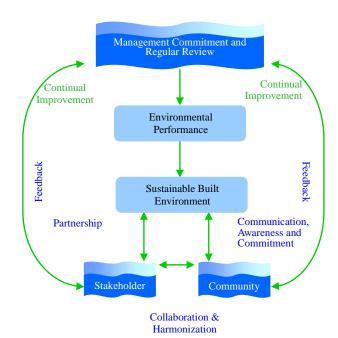
Our commitment and approach to environmental management stemmed from our determination towards a sustainable environment.

We continue to review our policies and strategies to identify any potential impacts to our environment and seek continual improvement in our environmental performance.

Through administering and enforcing the BO, we aim to ensure building safety; we set and enforce building standards, and aim to improve the quality of private building developments. We are committed to:

- (a) taking an active role in partnership with the building industry and other government departments or agencies to promote a sustainable built environment in Hong Kong;
- (b) ensuring that all services and operations developed and are conducted in environmentally an responsible manner, meeting the commitments of the Clean Air Charter:
- (c) implementing good practices of green management in our workplace; and
- (d) raising the awareness of both the public and our staff of the importance of a sustainable environment in our community.

We have joined the Hong Kong Green Building Council (HKGBC) as an Associate Member since 2010 and have been taking part in its Committee work to promote environmental performance assessment.



The most important ingredients of sustainable developments are all levels of commitment and the continual development in harmony.



#### PROMOTING A SUSTAINABLE BUILT ENVIRONMENT

It is our strategy to set out our statutory requirements as well as administrative guidelines to support the development of a sustainable built environment and to facilitate the adaptive re-use of heritage buildings with a view to providing a quality living and built environment for both the present and future generations of Hong Kong.

#### 2.1 Modernising Building Design Standards

As an ongoing initiative of enhancing sustainable development, we continue our review of the BO and allied regulations.

Towards	Douboumon on in 001E
Targets  Review of the Building (Construction) Regulations and Building (Planning) Regulations	Performance in 2015
To review the Building (Planning) Regulations (B(P)R) and the Building (Construction) Regulations (B(C)R) by including <b>performance-based requirements</b> in addition to the prescriptive standards, where appropriate.	♦ The proposed amendments to B(C)R were being further refined to take into account the views from stakeholders. We planned to introduce the proposed legislative amendments to the B(C)R to the Legislative Council (LegCo) in 2016/2017.
	The consultancy study to comprehensively review the B(P)R to facilitate modern and innovative building design with a view to developing a performance-based regulatory system was in progress. The Consultant's recommendations were being refined for consultation with stakeholders.

#### Targets Performance in 2015

 Review of the sanitary fitments, plumbing and drainage provisions for buildings

To amend the prescriptive requirements in the **current plumbing and drainage standards** for private buildings by adopting performance-based requirements taking account of the need for environmental protection and material conservation, as well as advancement in environmental science and technologies.

 New design and construction requirements for energy efficiency of residential buildings

To implement a set of design and construction guidelines for improving energy efficiency in residential buildings.



♦ The proposed amendments to the drainage regulations and the draft Code of Practice have taken into account of the views from stakeholders. The Stage 1 amendments updating the standards for the provision of sanitary fitments in buildings were implemented on 14 December 2015 whilst the Stage 2 amendments will be introduced to the LegCo in 2016/17.

- The new Residential Thermal Transfer Value (RTTV) standard for residential buildings and the corresponding "Guidelines on Design and Construction Requirements for Energy Efficiency of Residential Buildings" (EE Guidelines) were promulgated in September 2014. Compliance with the EE Guidelines is a pre-requisite for the granting of Gross Floor Area (GFA) concessions for green/amenity features and non-mandatory/non-essential plant rooms and services of all new residential developments with first building plans or major revisions of the building plans submitted on or after 1 April 2015.
- ♦ Furthermore, the mandatory Overall Thermal Transfer Value (OTTV) standard applicable to commercial and hotel buildings were extended to cover residents' recreational facilities in residential developments on 1 April 2015.

Committee on

Requirements

Efficiency of Buildings (TC) with members

from the concerned government departments,

construction methods, and latest relevant

Design and

Energy

for

#### **Targets**

#### Performance in 2015

## Review of the Building (Energy Efficiency) Regulation

To keep under regular review of the use of the Code of Practice for Overall Thermal Transfer Value (OTTV Code) under the Building (Energy Efficiency) Regulations on the energy efficiency of buildings as well as the EE Guidelines.



professional institutions and universities was formed in September 2015.
 The TC will collect views and consider comments or feedback arising from the use of the OTTV Code, EE Guidelines, relevant advancement in design, technologies and

overseas regulatory control and standards.

A Technical

Construction

♦ The TC will also review the standards on OTTV and RTTV in accordance with the schedule suggested in the Energy Saving Plan for Hong Kong's Built Environment 2015 ∼ 2025+ published by the Environment Bureau in May 2015.

 Consultancy study on introducing seismic-resistant building design standards in Hong Kong

To formulate a Code of Practice on Seismic-resistant Design Standards for Buildings in Hong Kong.

We commissioned a consultancy study to formulate Code a of Practice on Seismic-resistant Design Standards for Buildings in Hong Kong. This Code will provide technical guidelines for determining seismic actions on buildings and the corresponding design and construction of seismic-resistant buildings in Hong Kong. The consultancy was commenced in February 2015 and would last for three years. extant BO and its subsidiary Regulations would be reviewed and corresponding legislative amendments would be proposed, if necessary, to introduce the new design standards.

#### 2.2. Promoting Green and Sustainable Building Developments

Since 2001, we have introduced, jointly with the Planning Department and the Lands Department, incentives for developers to provide green features in new

building developments for promoting green and innovative buildings and quality living space. To respond to the global Social agenda on carbon emission reductions and address local concerns about the negative impact of excessive building bulk on the environment and premised on the Bearable Equitable recommendations of the Council for Sustainable Sustainable Environment Economic Viable

Development based on its public engagement exercise, we have implemented a policy to foster a quality and sustainable built environment through building design since April 2011.

#### **Targets**

#### Promulgating sustainable practices

To update Practice Notes for Authorized Persons, Registered Structural Engineers Engineer Registered Geotechnical (PNAP) for promulgating building design guidelines in order to improve the standards of living space.





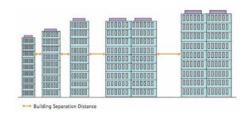
#### Performance in 2015

- PNAP APP-130 was revised in February 2015 with another step forward to setting performance-based standards in meeting the statutory natural lighting and ventilation (L&V) requirements. Guidelines on the use of Computational Fluid Dynamics assessment to determine the ventilation performance of windows were provided. How a typical window designed to mitigate the impact of external noise could meet the prescriptive requirements on L&V was also explained.
- PNAP APP-2 was revised in March 2015 to limit the external reflectance of the glass used in curtain wall systems, in order to minimize glare to its surroundings.

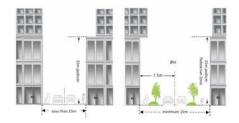
#### Performance in 2015

## Promoting sustainable building design

To monitor the implementation of the GFA concessions policy under PNAP APP-151 and the Sustainable Building Design Guidelines (SBD Guidelines) to promote building separation, building setback and site coverage of greenery of buildings as promulgated in PNAP APP-152.



**Building Separation** 

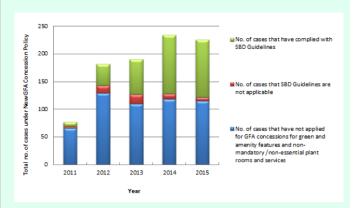


**Building Set Back** 



**Site Coverage of Greenery** 

- ♦ Under the GFA concessions policy which sets a cap of 10% of the total GFA of the development, compliance with SBD Guidelines is one of the prerequisites for granting GFA concessions for green / amenity features and non-mandatory / non-essential plant rooms and services in building projects.
- ♦ Since the implementation of the new GFA concessions policy on 1 April 2011 and up to 31 December 2015, we have approved **909** new development proposals and **371** of them were granted with GFA concessions.
- ♦ Out of these **371** approved proposals, **320** proposals were in compliance with the SBD Guidelines whereas the SBD Guidelines were not applicable to **51** proposals. The other **538** approved proposals did not apply for GFA concessions for green / amenity features and non-mandatory /non-essential plant rooms and services.
- ♦ The statistics from 2011 to 2015 are as follows:



With experience gained in the implementation of the SBD Guidelines, we proposed refinements to clarify some interpretations and requirements under the SBD Guidelines. Consultation with relevant stakeholders was carried out and we target to promulgate the refined SBD Guidelines in early 2016.



Targets	Performance in 2015
	♦ Various refresher seminars and experience sharing sessions with the building professionals and stakeholders were held in 2015.
<ul> <li>Wider adoption of green features</li> <li>(a) To monitor the implementation of Joint Practice Notes 1 and 2 (JPNs 1 and 2) aiming to promote green and innovative buildings.</li> </ul>	◆ To promote the construction of green and sustainable buildings, certification by BEAM Plus that certain green standards are achieved has been one of the prerequisites for granting GFA concessions for certain green / amenity features in building projects.
(b) To promote better understanding on environmental performance of buildings through <b>BEAM Plus</b> Assessment conferred by the HKGBC.	◆ There were 111 building projects registered for the BEAM Plus certification in 2015, amounting to nearly 50% of the cases approved in the year.

#### 2.3. Facilitating Conservation of the Built Heritage



Green Hub (Old Tai Po Police Station)

We take a proactive and pragmatic approach to support the Government's initiative to revitalise public historic buildings through a partnership scheme and facilitate the adaptive re-use of private historic buildings.

#### **Target**

#### Performance in 2015

## • Enhancing heritage conservation

To offer technical advice for facilitating the adaptive re-use of and alteration and addition works to historic buildings for compliance with the building safety and health requirements under the BO.



Blue House Cluster

- The dedicated Heritage Units continued to work in partnership with the stakeholders to offer technical advice and pre-submission enquiry service to facilitate approval of building plan submissions involving adaptive re-use of and alteration and addition works to historic buildings.
- The Technical Committee on Building Safety and Health Requirements for Historic Buildings held regular meetings to collect comments and feedback on the use of the Practice Guidebook on Compliance with Building Safety and Health Requirements under the Buildings Ordinance for Adaptive Re-use of and Alteration and Addition Works Heritage (the **Buildings Practice** to Guidebook) for future refinement and to share experience on successful revitalisation projects.
- Pursuant to the earlier policy review conducted by the Antiquities Advisory Board on the conservation of built heritage, we engaged the concerned stakeholders to update and enrich the relevant PNAP APP-69 and the Practice Guidebook with a view to providing more guidelines and examples of successful cases to encourage and facilitate building practitioners and private owners to adaptively re-use historic buildings.



#### Performance in 2015

The refined PNAP APP-69 would be promulgated in early 2016. Updating of the Practice Guidebook would be completed in phases in 2016.

#### 2.4. Reducing Construction and Demolition Wastes

Landfills take up a lot of valuable space in Hong Kong. The existing landfills will be exhausted by 2020. We have continued our efforts to review the current building and construction practices, and to encourage stakeholders to minimise construction and demolition wastes.

#### Target

#### Minimising construction and demolition wastes

We will continue to collaborate with the stakeholders on the review of the use of environmentally friendly construction methods with a view to minimising construction and demolition wastes.

#### Performance in 2015

- The use of precast concrete construction could reduce construction wastes generated on construction site. We processed a total of 38 plan submissions adopting precast concrete construction in 2015.
- The Code of Practice for Precast Concrete Construction was being updated taking into account the advancement design, technologies and construction of precast concrete works. This revised Code aims at facilitating and enhancing the design and construction of precast concrete works.
- We continued to operate the validation scheme for unauthorised household minor works to reduce the need for removal of such unauthorised structures. Unauthorised signboards had also been included in a similar validation scheme as further discussed below.



#### 2.5. Improving Environmental Hygiene



In response to the public concerns on the possible dire consequences of building neglect and the perennial environmental hygiene problems, the BD has continued to participate in improving environmental conditions of some identified black spots through large-scale operations.

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#### Performance in 2015

#### • Rectifying drainage defects

To work in collaboration with the Home Affairs Department and other relevant government departments to **improve environmental conditions** of identified blackspots under the Hygiene Blackspots Clearance programme.

#### Handling water seepage problems

To continue the operation of the **Joint**Office (JO) with the Food and

Environmental Hygiene Department

(FEHD) in handling public reports about water seepage problems.

#### Promulgating guidelines to facilitate operation and maintenance

To issue / update practice notes and circular letters to promulgate operation and maintenance guidelines in order to improve the **environmental hygiene** and in turn the **standards of living**.

The Hygiene Blackspots Clearance programme (Phase IV) under the Team Clean Operation continued in 2015. Under this programme, a total of **235** buildings were involved and some **457** unauthorised building works (UBW) were removed.

The operation of the JO had been made permanent since April 2014 and conversion of the existing non-civil service positions to civil service posts was being implemented in phases. The consultancy study to explore the latest technologies for the investigation of water seepage in buildings commissioned in Oct 2014 was in progress.

Two circular letters were issued in April 2015 to remind the practitioners (a) to review, strengthen where appropriate, and take anti-mosquito measures for the construction site and (b) to take preventive measures proactively to ensure that no adverse drainage impacts would be caused by the construction sites on the public stormwater drainage systems.



Targets	Performance in 2015
	♦ PNAP APP-130 was revised in February 2015 to provide guidelines on the use of acoustic windows and computational fluid dynamics in assessing the ventilation performance of windows.
	♦ PNAP APP-2 was revised in March 2015 to specify the maximum external reflectance of the glass used in the curtain wall system in order to minimise glare.
	◆ Updating relevant PNAP to promote suitable provisions in building designs to facilitate external inspection and maintenance of buildings was being considered.

#### 2.6. Promoting Timely Maintenance and Building Repair

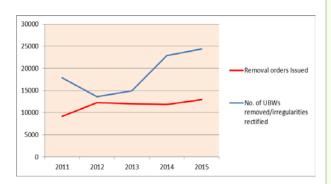
We have put in place a holistic strategy to tackle the long-standing building dilapidation problems. The Mandatory Building Inspection Scheme (MBIS) and the Mandatory Window Inspection Scheme (MWIS) was fully implemented on 30 June 2012 as the long-term measure to address the building neglect problems, foster a building care culture in the community and contribute to a sustainable living environment.

To achieve the dual objectives of creating more job opportunities for construction sector as well as promoting building safety and improving the cityscape and living environment, in collaboration with the Hong Kong Housing Society (HKHS) and the Urban Renewal Authority (URA), we have continued the Operation Building Bright (OBB) program to provide subsidies and technical assistance to help owners of old and dilapidated buildings carry out repair and maintenance works.

#### Performance in 2015

#### Tackling UBW and rectifying building dilapidation

(a) To continue the clearance of UBW in target buildings through large scale operations in one go, and to rectify identified building dilapidations including drainage defects.



▶ 12,918 removal orders related to UBW were issued and 24,362 UBW were removed or irregularities rectified.





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(b) To continue the **clearance operation** of **UBW** in buildings along **pedestrian streets** against unauthorised large glass panels, advertisement signboards and TV displays on the external walls.



(c) To continue the enforcement action against abandoned/dangerous signboards.

- ◆ In 2015, we continued to take follow-up enforcement actions of the outstanding orders issued against large unauthorised glass panels, advertisement signboards and TV displays on the external wall of 393 target buildings under the clearance operations in the preceding years.
- ♦ At the end of 2015, majority of these orders had been complied with. We would continue to step up efforts in clearing the remaining 24 outstanding orders.
- ♦ In 2015, we removed/repaired a total of 1,500 abandoned/dangerous signboards.

#### Targets Performance in 2015

#### Clearance Operation on Unauthorised Roof Structures Ensemble

To continue the clearance operation to assist building owners to improve the conditions of their buildings by carrying out clearance of UBW on rooftops, flat roofs, yards and lanes constituting safety hazard or environmental nuisance. ♦ In 2015, 190 domestic/composite buildings were targeted in the operation. Since the launch of the operation in late 2009 and up to the end of 2015, 810 industrial buildings and 1,711 domestic/composite buildings had been targeted with a total of 22,612 removal orders and 102 repair/investigation orders issued. Among these orders, 8,392 had been complied with.

## • Large Scale Operation on inspection of sub-divided flats

To continue the Large Scale Operation on inspection of sub-divided flats in target buildings and rectification of irregularities of building works associated with the sub-divided flats.

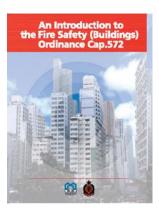


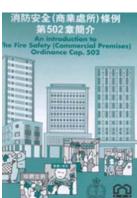
◆ In 2015, 210 domestic/composite/industrial buildings were targeted for the operation. A total of 3,466 sub-divided flats were inspected under the Large Scale Operation and arising from individual reports on sub-divided flats, irregularities of 207 sub-divided flats were rectified.

#### Performance in 2015

#### Improving fire safety measures in certain existing buildings and premises

To improve the existing fire safety measures in **prescribed commercial premises**, (i.e. banks, off course betting centres, jewellery shops, supermarkets and shopping arcades), as well as **pre-1987 commercial buildings** and composite buildings.





- ♦ In 2015, 50 prescribed commercial premises, 20 specified commercial buildings and 400 composite buildings were inspected for enforcement action under the Fire Safety (Commercial Premises) Ordinance Cap. 502 and the Fire Safety (Buildings) Ordinance Cap. 572.
- ♦ In 2015, a total of 6,238 fire safety directions were issued to require improvement of the fire safety construction in such premises/buildings.

#### Establishing long-term measures to tackle building maintenance problems

To tackle the building maintenance problems in buildings aged 30 or above, the MBIS commenced in 2012. Details will be discussed below.

To tackle the building maintenance problems in buildings aged below 30 years, another special operation was launched in April 2011. The operation would include enforcement action on actionable UBW identified during the inspections.

♦ In 2015, 2,160 repair/investigation/removal orders were issued to the target buildings of this special operation.



#### Performance in 2015

#### Providing financial assistance to building owners

To continue administering the **Building Safety Loan Scheme** to provide loans to private building owners for the carrying out of repair works or removal of UBW.

♦ A total amount of loan of about HK\$ 42.8M was committed in 2015.



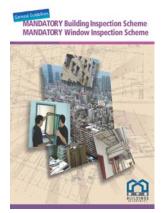
#### Performance in 2015

#### Mandating building inspection and maintenance

To continue the implementation of the **MBIS** and the **MWIS** and enhance support to the owners and stakeholders as well as fine-tuning the modus operandi in the light of experience gained and feedback from stakeholders and the community.













- ♦ 650 buildings were targeted for implementation of MBIS and MWIS concurrently in 2015.
- ♦ Each quarter, district briefing sessions would be conducted at various districts for the owners of targeted buildings under the MBIS and MWIS. Since June 2012, we had conducted a total of 209 district briefing sessions (40 sessions were held in 2015) in various districts to explain the details of the two schemes and, with the participation of URA/HKHS, the assistance packages available to eligible building owners.
- In addition, we attended upon invitation 165 briefing sessions and seminars since June 2013 (30 sessions were held in 2015) for building owners, owners' corporations and the industry to promote the schemes in the community.
- Two short films ("Modern Owners" and "Window 85") were released in 2015 to help the public better understand the requirements and their responsibilities under the MBIS and MWIS.
- ♦ Pamphlet on "Window inspection and repair, choose with extra care" was released in February 2015; and pamphlet on "Important notes about window safety" was updated in December 2015.
- ◆ General Guidelines on MBIS and MWIS were updated in March 2015.
- ◆ To provide members of the public some market information for window inspection and repair works under the MWIS, the cost information for window works was published in BD's website and would be updated every half-yearly.



Ottor I Bar B	Buildings Department Environmental Report 2015
Targets	Performance in 2015
• Operation Building Bright (OBB)  To assist owners of target dilapidated buildings who are having difficulties in coordinating repair works, the BD in exercise of its statutory power serves repair order in respect of common parts of the target buildings and arranges to carry out the repair works in default of the building owners who are eligible to a grant under the OBB.	♦ In 2015, we continued to engage consultants and contractors to carry out repair works for OBB target buildings in default of the owners. Since the launching of the Operation, we had engaged consultants and contractors to carry out repair works in default of the owners for 1,224 target buildings and the repair works for 1,109 of them had been completed.
<ul> <li>Removal of abandoned/ dangerous signboards</li> <li>To continue the enforcement action against abandoned/dangerous signboards.</li> </ul>	◆ In 2015, we removed/repaired a total of 1,500 abandoned/dangerous signboards.
• Minor Works Control System  To continue the implementation of the minor works control system (MWCS). The MWCS provides a lawful, simple, safe as well as convenient means for building owners to carry out small-scale building works in order to improve safety standard of building works and facilitate compliance.	♦ In 2015, we received about 116,000 minor works (MW) submisssions. MW relating to (i) windows; (ii) rendering & tiling; and (iii) repair of structural elements were three main areas of works which amounted to around 31%, 20% and 14% respectively of the total submissions in 2015.
Household Minor Works	

## Household Minor Works Validation Scheme

To continue implementation of the Household Minor Works Validation Scheme which facilitate members of the public to retain, after validation, minor household installations including air-conditioner supporting frames, drying racks and small canopies constructed without the prior approval of plans from the Building Authority before the date of commencement of operation of the Scheme.

♦ In 2015, 109 minor household installations were validated. MW submissions related to air-conditioner supporting frames, drying racks and small canopies amounted to around 8%, 0.3% and 0.4% respectively of the total MW submissions in 2015.

#### Targets Performance in 2015

 Validation Scheme for unauthorised signboards under the Signboard Control System

To continue implementation of the Validation Scheme for Unauthorised Signboards (VS) to enhance the safety of the existing unauthorised signboards. Eligible unauthorised signboards that existed before the date of implemenation of the VS may be retained for continued use after inspection, strengthening (if required) and submission of certification of the structural safety by prescribed building professional and/or registered contractor to the Buildings Department (BD).

The Validation Scheme for Unauthorised Signboards was launched on 2 September 2013. Up to end of 2015, we received a total of 400 submissions of certification under the Out of these 400 submissions, 143 submissions involving the validation of 118 signboards were acknowledged, 138 submissions could not be processed as incorrect or incomplete information was found, and 20 submissions were withdrawn by the applicants. The remaining 99 submissions were being processed.



#### IMPLEMENTATION OF GREEN OFFICE MANAGEMENT

It is our continuous target to ensure effective implementation of in-house green measures in all our offices, and to increase the awareness of our staff on green office management. We strive to fulfil the commitments set out in the Clean Air Charter to make sustained improvement to air quality.

#### 3.1 Accomplishing the Clean Air Charter



In November 2006, the Government signed the Clean Air Charter launched by the Hong Kong General Chamber of Commerce and the Hong Kong Business Coalition on the Environment, to join forces with the business sector and the community to foster the improvement of air quality in Hong Kong. We strive to fulfil the six commitments in the Charter to implement environmentally friendly measures in our daily operations.

#### Commitments Performance in 2015 In our operation, we continued to observe and comply (1) Operate by a recognised world with the ordinances and regulations on environmental class standard, or the standards protection related to our operation, where applicable. established by the Hong Kong/Guangdong governments on emission of air pollutants. (2)UseThis commitment was not applicable to our operation continuous emissions which was mainly office-based and would not monitors at significant sources. generate significant air emission.

#### Commitments

(3) Publish information on energy and fuel use, as well as total emission of air pollutants annually and timely, if emissions are significant.

#### Performance in 2015

- ♦ The source of energy and fuel consumption related to our operation included the **Use of Electricity** and **Vehicle Fleet.** Such sources produce air pollutant emission of sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NOx) and respirable suspended particulates (RSP).
- ♦ Our total electricity consumption in 2015 was 3,208,603 kWh, which was 87,789 kWh or 2.81% more than that consumed in 2014. The main reason for the rise was due to the departmental manpower growth of 1.77% and the conduct of the large scale operations of the department.

#### Estimation of the air pollutant emission:



♦ We owned a fleet of 35 vehicles, 6 of them were Hybrid Electric Vehicles and 8 of them were Electric Vehicles. The 35 vehicles travelled 473,329 km in 2015 and the total fuel consumption was 44,360.4 litres of petroleum. The consumption of fuel per km was 0.56% less than that in 2014 which was due to the increase in the use of electric/hybrid electric vehicles..

#### **Estimation of the air pollutant emission:**



- (4) Undertake to adopt energy-efficient measures in our operations.
- We continued to adopt the following energy-efficient measures in our office-based and transportation operation to minimise energy consumption through:
  - Maintaining the air-conditioning temperature at 25.5°C and monitoring the room temperature regularly.



Commitments	Performance in 2015
	<ul> <li>Encouraging our staff to dress casual and smart in summers and lightly in winters to minimise the use of air-conditioning.</li> </ul>
	<ul> <li>Installing high output, energy-saving lighting fixtures (T5 fluorescent lamps) in our offices.</li> </ul>
	<ul> <li>Reminding our staff to turn off lights, air-conditioners and office equipment while they were not in use by affixing "Energy Saving" stickers on power switches.</li> </ul>
	<ul> <li>Enabling the hibernation mode or standby mode setting of office equipment and turning them off when they were not in use.</li> </ul>
	<ul> <li>Using timer-switches on electric equipment and office appliances in various sections to save electricity in stand-by mode.</li> </ul>
	<ul> <li>Appointing energy wardens in all divisions to ensure implementation of energy saving measures and arranging last-man-out to check and turn off all air-conditioning, lighting and office equipment.</li> </ul>
	<ul> <li>Adopting other energy saving practices such as encouraging our staff to use staircases for inter-floor traffic, controlling the use of personal electrical appliances in office, and circulating guidelines on energy saving and green tips.</li> </ul>
	<ul> <li>Encouraging our staff to walk or use public transport whenever possible.</li> </ul>
	<ul> <li>Promoting shared-use of pool cars in order to fully utilise each government vehicle.</li> </ul>
	<ul> <li>Reminding motor drivers to switch off idling engines in compliance with the Motor Vehicles Idling (Fixed Penalty) Ordinance.</li> </ul>
	<ul> <li>Requesting motor drivers to drive at a steady speed and avoid sudden braking.</li> </ul>

Commitments		Performance in 2015
(5) Identify and encourage business-relevant measures to be taken in days when air pollution is high.	f	We continued to encourage our staff to adopt the following measures in our general office and ransportation operation:  - Sharing pool cars or using public transport where possible.
	-	<ul> <li>Combining trips to maximise the use of departmental vehicles and planning routes to minimise the journey distance and time.</li> <li>Avoiding the use of products with high Volatile Organic Compound content by incorporating such requirements in procurement contracts.</li> </ul>
(6) Share air quality expertise in business with others.	F I	We shared our experience on energy saving and collution reduction by publishing our Environmental Report on our website. Interested parties are welcome to contact us if they wish to obtain further information or details.
(7) Promote environmentally friendly practices in office refurbishment or relocation work	r t r I e f	In 2015, we commenced preparations to relocate our New Building Divisions (comprising some 4,000 sqm) from Pioneer Centre (PC) to City Plaza 3 and relocate various sections from Heng Seng 113 offices to the vacated offices in PC. We also embarked on a refurbishment project to improve our facilities at the Building Information Centre in PC. We would adopt environmentally friendly practices such as reuse old furnitures, recycle and use energy efficient light fittings, etc, while improving the general office environment for staff and visitors.



#### 3.2 Moving towards a Paperless Office

We are taking advantage of the information technology to move towards a paperless office by introducing computerised management systems and encouraging communication within the workplace as well as with our stakeholders and public via electronic means.

#### Targets

#### On public front

(a) To disseminate information to the public via **the BD's website and the thematic website** as our communication platform.



Homepage of BD Website

#### Performance in 2015

The BD's website continued to provide information on the functions and services of the Department including among others, the following:

#### **Publications Notices Publicity Monthly Digest Codes of Pamphlets** Consultancy Practice & **Press Release** and Contract **Design Manual Tender Notices Practice Notes & Announcements** Recruitment of Public **Circular Letters Interest** AP/RSE/RGE/RI/ OP/RC

- ♦ The BD Websites Editorial Board was set up in February 2014 to review the contents of both websites so that the information would be presented in a succinct and coherent manner and that they would be up-to-date and easily accessible. The first phase of enhancing webpages of BD's website, including revamping the "Homepage", "MBIS and MWIS" and a new webpage on "Legal matters" was launched on 1 January 2015. The revamping of other webpages was scheduled to be completed in 2016
- ◆ To put Green Culture in action, an "e-Briefcase" containing electronic format of all PNAP and other useful materials was continuously updated for use by Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (AP/RSE/RGE).



Homepage of Thematic Website

#### Performance in 2015

- We continued to inform all AP/RSE/RGE via email of any new/revised Code of Practice, Design Manual, PNAP, PNBI and/or circular letters which can also be downloaded from our web-site.
- We continued to inform all Registered Contractors (RC) via email or Short Message Service (SMS) of any new/revised Code of Practice, Practice Notes for Registered Contractors (PNRC), PNBI and/or circular letters which can also be downloaded from our web-site.
- ♦ We continued to inform all Registered Inspectors (RI) and Qualified Persons (QP) via email or SMS of any new/revised Code of Practice, PNBI and/or circular letters which can also be downloaded from our web-site.
- ♦ The thematic website "Care for Your Building" continued to provide building safety information in a fun and easy to understand way to attract younger people to help them understand their roles and responsibilities towards a safe and sustainable built environment.

`argets	Perf	formance in 2015

- (b) To launch mobile application for the general public to have a quick and easy communication platform to access information.
- ♦ We had launched the mobile application on the MWCS "Quick Guide for Minor Works" since September 2014 providing a convenient means for the public to view useful information regarding MWCS. As at end of 2015, the download rate was 3,645 for Android version and 2,178 for IOS version.



♦ We commissioned a contractor to develop another mobile application to provide a quick and easy channel for the public to access useful information concerning the Mandatory Building Inspection Scheme and the Mandatory Window Inspection Scheme.

## Targets Performance in 2015

- (c) To simplify the viewing and copying of building records through the implementation of Buildings Records Access and Viewing On-line (BRAVO) system over the Internet.
- The BRAVO system offers round-the-clock service which allows members of public to view building records through the Internet anytime and anywhere in Hong Kong.
- ♦ In 2015, we handled 84,951 applications for viewing electronic records (include minor works records), out of which 64,231 were processed by the BRAVO system over the Internet



- (d) To accept submission of documents in electronic format.
- By virtue of the Electronic Transactions Ordinance, we continued to accept simple electronic submissions under the BO through our Lotus Notes email system.
- ♦ According to the recommendations of the feasibility study on the implementation of an Electronic Submission System completed in October 2013, a full E-forms Submission System (EFSS) should be implemented to facilitate, among others, the online submission of forms. The development of the EFSS started in March 2015 and is scheduled to be put into operation in June 2016.

Besides, as the feasibility study revealed that it would be difficult and not cost effective for the BD to set up a portal on its own to receive electronic plans, BD is liaising with the Development Bureau to explore whether it would be possible to set up a cross-departmental portal to receive electronic plans in the future.

### Targets Performance in 2015

#### In our work place

- (a) To disseminate information and to introduce more green measures through increasing usage of **LAN** as a communication platform.
- We continued to disseminate information through electronic notice board, our Local Area Network (LAN) and emails. In-house surveys via electronic facilitated the collection questionnaires compilation of information in an environmentally friendly manner. Discussion forums were set up for knowledge sharing among our staff in a paperless environment. Our email system was provided with advance functions to improve collaboration of work via the email network. The web-based photo library system continued to facilitate the sharing of site inspection photos among sections/units for better co-ordination of work.
- ♦ Mobile and Cloud Computing technology were adopted for reporting dangerous/abandoned signboards through mobile environment.
- ♦ Mobile devices deployed to colleagues had been provided with add-on feature "Junos Pulse", to facilitate access to BD Handbook and Instructions as well as internal manuals in lieu of paper copies.
- Mobile devices had been deployed for use in Registration Committee meetings for members to view softcopies of registration application documents in lieu of paper copies.

#### **Electronic Notice Board**

# Notices Circulars Newsletters

#### **Our LAN**

Office Instructions
Office Manuals
Discussion forums
Questionnaires
Site inspection photos

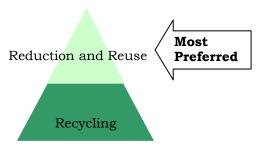


	Targets		Performance in 2015
(b)	To implement the Accessibility Program to provide all staff with email address.	•	All our staff were provided with email addresses for communication. LAN Link speed in all BD offices were upgraded to further improve the efficiency for dissemination of information. Open Source Departmental Portal Solution had been implemented since July 2014 to improve the stability and efficiency of the Departmental Portal with more e-services hosted under single-sign-on functionalities.
(c)	To implement the electronic leave system (e-Leave).	•	E-Leave continued to provide speedy and paperless leave application and processing services for all our staff.
(d)	Green Management of Data Centre and Green IT Measures	<ul><li>*</li><li>*</li><li>*</li></ul>	Server virtualization technology was used to reduce the number of physical servers required thereby cutting down electricity power consumption.  Unless overridden by users still working in the office, their computers were turned off automatically at a preset time to reduce unnecessary power consumption.  All new printers were equipped with EcoPrint or Energy Saving Mode with Duplex Printing feature.  All servers, printers and desktop personal computers were Energy Star & Restriction of Hazardous Substances (RoHS) Compliant.  Network backup had been used to gradually replace manual backup thereby reducing transportation and storage of tapes.  Electronic devices were provided to Chief Officers and above to facilitate paperless meetings.  Notifications to registered professionals and contractors were made via bulk SMS and emails instead of paper.



Targets			Performance in 2015
(e)	Electronic Information Management (EIM) Strategy Study and Electronic Document Management System	•	EIM Strategy Study conducted by the Efficiency Unit (EU) was endorsed in November 2014. The study would assist us to formulate the standards and roadmap for the implementation of the Electronic Document Management System. Such a system would help us reduce the use of paper and proper
			keeping of records in accordance with the requirements of the Government Records Service. Funding application for the development of an Electronic Document and Knowledge Management System (eDKMS) was submitted in July 2015.

#### 3.3 Saving Resources

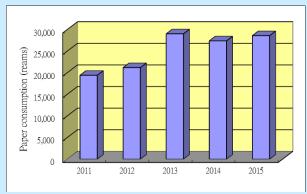


The best approach to manage waste is "reduction" at source. We adhere to the principles of "Reduction, Reuse and Recycling" in the Department to minimise waste produced from our office operation. BD Administration Circular No. 3/2015 "Green Practices and Avoidance" has reminded all staff to set a green example by adopting green practices and waste avoidance measures and reducing consumption of energy and paper.

## Targets Reduction ◆

#### Performance in 2015

- Our total paper consumption in 2015 was 28,591 reams, which was 4.43% higher than that in 2014 which was mainly due to the launch of some operations and more publicity activities.
- We would continue our efforts to minimise the use of paper by:



- Adopting double-sided printing and photocopying, and printing of multiple pages into one page.
- Using emails instead of paper memos and faxes for internal and external communications.
- Minimising the production of hardcopies of documents.
- Sending e-cards.
- Using iPad in all Professional Registration Committee meetings.
- Avoiding use of fax leader page.



## Targets Reduction ◆

#### Performance in 2015

Recycled paper in lieu of virgin paper had continuously been used in the Department. In 2015, 44.99% of the total amount of paper consumed was recycled paper. The proportion had increased by 2% when compared to the year 2014. A total of 994,200 nos. of envelopes were consumed in 2015 which was 23.56% more than that consumed in 2014. This was mainly due to the launch of some operations and publicity activities.

#### Reuse

- We promoted the reuse of resources by:
  - encouraging our staff to use the blank side of used paper for drafting, filing and printing.
  - reusing envelopes for internal circulation.
  - using ball pens with refills.
  - placing used paper with a blank side near high paper usage equipment e.g. photocopier, to facilitate reuse.
  - encouraging staff to use their own cups instead of paper cups.

#### Recycling

- We collected recyclable waste materials by:
  - placing collection bags in offices for recycling of waste paper.
  - placing paper recycling collection boxes near high paper usage equipment in our workplaces.
  - requesting our staff to return used printer cartridges to the Supplies Unit.





With the support from our staff, in 2015, we collected a total of 137,705 kg waste paper and 438 units of used printer cartridges for recycling which were almost an increase of 25% and 31% respectively when compared to the figures in 2014;

#### 3.4 Procuring Green Products

We purchased green products to show our responsibility to save the Earth and support for the recycling industry.



Pencils made of recycled materials



T5 Fluorescent tube



Recycled paper



Rechargeable batteries

#### 3.5 Knowledge Management System

#### Targets Performance in 2015

To develop a knowledge management system for better sharing of information and knowledge.

- EIM strategy study conducted by the Efficiency Unit (EU) was endorsed in November 2014. The study cover Contents Management, Record Management and Knowledge Management for all Divisions/Sections of the department. As short-term measures for sharing of information and knowledge, we set up a database called "BD Knowledge Hub" under the Lotus Notes platform to centrally store the knowledge-based information for staff reference. Research & Development Unit collects, uploads and updates all useful information to the Hub periodically. We keep to review documents that are worth scanning and can be uploaded to the Hub before storing in BD Library from time to time.
- ♦ As a long-term strategy, we would develop a Knowledge Management and Departmental collaboration platform to facilitate collaborative effort within/across divisions for better sharing of information and knowledge. Funding application for the development of Electronic Document and Knowledge Management System (eDKMS) was submitted in July 2015.



## **EDUCATION AND TRAINING**

It is our belief that the success of moving towards sustainability depends upon the degree of all levels of commitment across the community.

## 4.1. Educating and Engaging the Public on Sustainability

To enhance the awareness of the community on the importance of building safety and timely maintenance, the Public Education and Publicity Unit had held a series of seminars, roadshows, exhibitions and a large scale public education and publicity event: the Building Safety Week. Furthermore, the Building Safety Pioneer Programme (BSPP) for secondary school students was launched to help promote building safety to our younger generation.

To convey building safety messages to the public, the Information Unit had arranged the production of a wide range of publicity materials, including newspaper supplements, Announcements in the Public Interest (APIs), leaflets, and outdoor advertising items such as posters, banners, etc.

#### Target

(a) To promote and publicize all initiatives of the department to the public and educate the general public and the stakeholders in the building/construction fields on the importance of building safety and timely maintenance of buildings.

#### Performance in 2015

We conducted a large scale public education and publicity event - the Building Safety Week 2015 to convey building safety messages to the public through a series of activities and seminars.



**Opening Ceremony** 

## Performance in 2015



Student Drama Competition

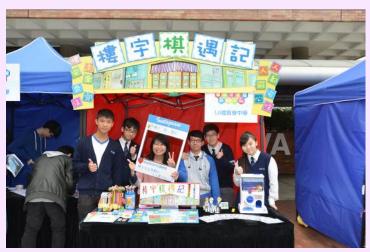


3D Mapping



Exhibition

## Performance in 2015



Game booths

♦ We set up an exhibition booth at the "2015 Eco Expo Asia 2015" in October 2015. The major topic in our exhibition was "Promoting Green and Sustainable Building Developments".



# Performance in 2015

• We launched the Building Safety Certificate Course for building owners. Three classes were organized in 2015 and the response was very good.



• We organized 86 talks for schools and universities.





## Performance in 2015

• We organized 76 talks for Owners' Corporations, building owners, property management companies and stakeholders in the industry.



♦ We continued the Building Safety Pioneer Programme (BSPP) for secondary school students.





#### Performance in 2015

♦ To enhance communication with property management agents, we launched the Building Safety Quarterly and sent this newsletter to all property management companies via email and through them, to reach the hands of building owners and tenants. Two issues were published in 2015.





♦ We organized the Comic Drawing Competition 2015 for primary & secondary school students and showcased the winning entries in various venues to promote building safety.



#### Performance in 2015

- ♦ We published newspaper supplements in 9 local newspapers to promote window safety during Chinese New Year, and the potential dangers of subdivided flats in industrial buildings.
- ♦ We arranged the broadcast of APIs on different public transport and in different office buildings to promote building safety.



- ♦ We issued letters to Owners' Corporations and Mutual Aid Committees to remind them of window safety during Chinese New Year.
- We produced posters namely "Safety First when Choosing Subdivided Flats" and "Don't Rent Subdivided Flats in Industrial Buildings" for display at public transport and outdoor facilities including bus shelters and parks under the Leisure and Cultural Services Department.



#### Performance in 2015



♦ We produced pamphlets and in-train banners to remind the public to choose Qualified Persons with extra care for window inspection and repair under the Mandatory Window Inspection Scheme.







#### Performance in 2015

♦ We displayed posters against UBW in village houses at bus shelters in New Territories.



(b) To promote and publicise building safety information to the public and younger people through electronic means

♦ We continued to disseminate information relating to building safety to the public and younger people through our thematic website (<a href="www.careyourbuilding.com">www.careyourbuilding.com</a>). Youtube channel (BDGOVHK) and Facebook fan page (Building Safety Express).



**BDGOVHK** 



**Building Safety Express** 



## 4.2. Training our Staff

Our training and development programmes place great emphasis on equipping our staff to play appropriate roles in facilitating sustainable developments by offering a variety of training courses on the subject.

The Environmental Protection Department delivered a green talk on "Food Wise, Hong Kong" in December 2015 to equip our staff with useful knowledge of green policies and practical tips which helped raise their awareness and develop good habits on environmental protection.

As at 2015, there was a total of 221 professional officers who attended the BEAM Professionals (BEAM Pro) Training organised by HKGBC.

#### **Target**

# To provide more than 40 nos of local seminars/ courses/ conferences and site visit on topics related to green building and sustainability in 2015.

#### Performance in 2015

- ♦ 48 local seminars/courses/conferences on environmental and heritage conservation issues, and 4 site visits to environmentally friendly and innovative buildings were organised in 2015.
- ♦ A total of 421 training man-days were organised on topics related to green building and sustainability.

## WAY FORWARD

We are committed to continually improving our green performance. Major activities including the review of various regulations and guidelines will set direction for the construction of more environmental friendly buildings.

We will take effective enforcement actions against unauthorised building works and improper use of buildings while promoting timely inspection and maintenance of existing buildings to make our built environment more sustainable.

Looking ahead, we will continue to:

- Review and upgrade the building design standards to achieve more positive environmental outcomes
- Promote green, eco-efficient and sustainable building designs and developments which reduce environmental impacts in terms of energy, carbon, waste and water
- Facilitate preservation of identity and culture of the built heritage
- Promote building hygiene and preventive maintenance of buildings
- Implement green office management
- Educate our staff and the public in social responsibility and practices to contribute towards sustainability

## FEEDBACK

Your views and suggestions are most welcome. It will help formulate our sustainable policies and strategies and support our continual improvement. For any suggestions/views in connection with this report, please contact us by:

**Online Electronic Feedback Form** 

Email: enquiry@bd.gov.hk

Website: http://www.bd.gov.hk/

Hotline: 1823 Fax: 2537 4992

Mail: 12/F Pioneer Centre, 750 Nathan Road, Mongkok, Kowloon, Hong Kong

# **Feedback**

We value your feedback on our Environmental Report to help us make improvements in the coming year. You may click here to complete and submit the following form (Question 1 to Question 5) online. Thank you in advance for your views.

Question 1. Which sector of the community are you from?	
	Youth/Student Building professional General public
Question 2. How do you rate the readability of the Report?	
0	Good Average Poor  stion 3. Further information you would suggest for inclusion in the Popert?
Question 3. Further information you would suggest for inclusion in the Report?	
	Charts Tables Hyperlinks to other information Others, please specify
Question 4. How do you rate the Report's contribution to your understanding of our environmental performance?	
	Good Average Poor
Question 5. Which part of the Report are you most interested in?	
Othe	Buildings Department and the environment  Promoting a sustainable built environment  Implementation of green office management  Education and training er comments and suggestions:

The data collected by this feedback form is solely for statistic analysis purpose to help us make improvements in the coming year. Individual views/feedbacks will not be disclosed.