

Buildings

Department

Controlling Officer's Environmental Report

2002





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I am pleased to present our fourth Environmental Report covering the period from 1 January 2002 to 31 December 2002 inclusive.

As you can see from the Report, by following our environmental policy, we have been in active pursuit of achieving our targets and objectives. The Report also lists out our new directions and measures in furthering the course of sustainability.

We reckon that the concept of sustainability must permeate the entire community. Our effort will come to no avail if not supported by the construction industry as well as the public. The construction industry must keep the momentum by applying their expertise to the best advantage of the community. The public need to understand and appreciate the importance of sustainability which can be manifested in timely maintenance of their buildings, adequate protection of the built environment and creation of a market demand for environmentally friendly buildings.

Let us join hands to show our care for both the community and the future generations by transforming our cityscape into a sustainable and quality living environment.

Marco M H WU
Director of Buildings

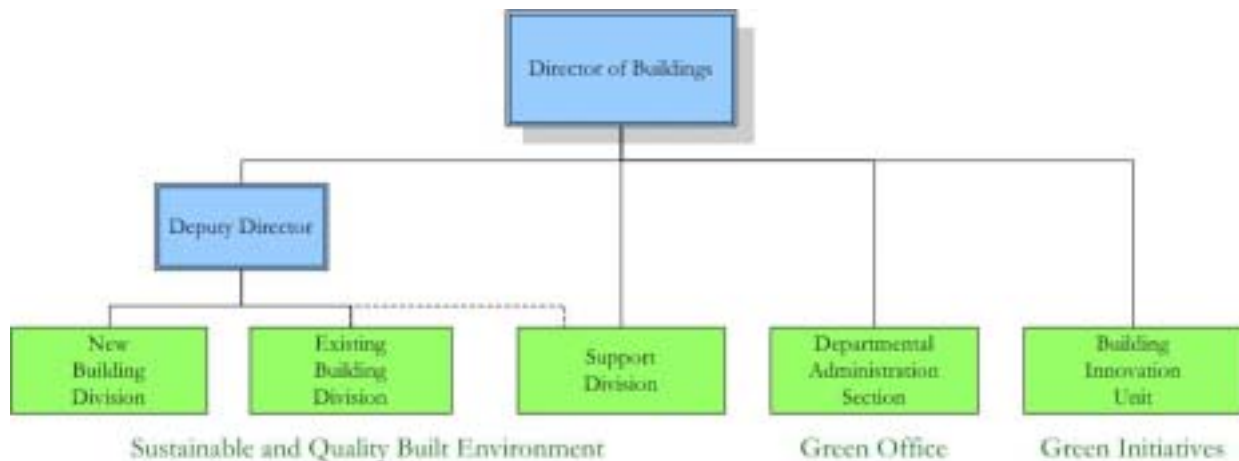
Buildings Department takes a proactive role to support the Government's objective of achieving a sustainable environment in Hong Kong.

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.

Our Culture To go the extra mile in serving our customers and the community in general.

Organization Chart



Environmental Policy

The Buildings Department (BD), through administering and enforcing the Buildings Ordinance (BO), has the responsibility to promote building safety, set and enforce building standards as well as improve the quality of private building developments. We are committed to :-

- (a) take a leading role and advocate a joint effort with the building industry and other government departments or agencies to promote a sustainable built environment in Hong Kong;
- (b) implement good practices of green management in our workplace; and
- (c) raise the awareness of both the public and our staff of the importance of a sustainable environment in our community.

Management Commitment

We continue to adhere to our Environmental Policy and ensure that our staff as well as the Working Groups, Steering Committee or Task Force Units with representatives from the construction industry and academia formed under BD for each environmental target are fully aware of our policy's intentions and principles so that any decisions made and plans implemented will be environmentally friendly.

We aim to bring enhancement to the built environment in Hong Kong by formulating policies and introducing more green initiatives to encourage sustainable building developments. Internally, a Green Manager has been designated to take charge of green office operations.

In 2002, the major activities carried out by BD which bore significant environmental impact on our built environment are as follows:-

- Conducting review on the BO and allied regulations to facilitate the improvement of environmental performance of buildings;
- Promoting environmentally friendly buildings by introducing green initiatives and benchmarking the green buildings;
- Conducting review on building and construction practices in terms of construction efficiency and waste control to explore means to enable the construction activities be carried out in an environmentally responsive manner;
- Adopting sustainable practices in office management;
- Raising staff's awareness on the latest development of sustainability and their responsibility towards a sustainable built environment by providing training opportunities; and
- Educating the public on the importance of sustainable and quality living environment by organizing seminars and open days.

The following chapters provide an overview of the activities mentioned above, their environmental performance in 2002 and targets in 2003, and the continual improvement as our way forward.

This chapter provides a summary of the activities related to sustainable development, as well as their Environmental Performances in 2002 and Future Targets.

PROMOTING A SUSTAINABLE BUILT ENVIRONMENT

It is our strategy to set in motion a trend for a sustainable built environment and create a supportive environment for that to happen and gain momentum.

1. *Modernizing the Legislation*

A comprehensive review of the Buildings Ordinance (BO) began in 2000. One of the targets is to facilitate environmentally friendly and responsive design. In addition, modernizing the building standards with a performance-based approach would encourage more efficient and economic use of building materials/achieve a more rational and economical design.

Performance in 2002

- We continued the exercise on the comprehensive review of the BO.
- With a view to replacing the prescriptive requirements by performance-based standards, where possible, we commenced the review on the Building (Planning) Regulations, Building (Construction) Regulations, fire safety standards in buildings and the related Code of Practices.

Target in 2003

- The proposed amendments to the BO as a result of the review will be introduced to the Legislative Council.
- The following draft Codes of Practices will be prepared for consultation:
 - Dead and Imposed Loads for Buildings 2003
 - Wind Effects Hong Kong 2003
 - Performance Based Fire Code
 - Structural use of Concrete and Steel Using Limit State Approach

2. *Review of Lighting and Ventilation Requirements for Buildings*

A consultancy study has been commissioned to establish a new set of performance standards which will adequately protect the health of occupants and ensure satisfactory quality of the indoor environment for all types of buildings in Hong Kong. The consultant has been requested to consider the integration of lighting and ventilation requirements with building form to enhance energy efficiency and reduce external environmental impact.

Performance in 2002

- The consultant has completed 50% of the consultancy study and formulated technical guidelines for consultation.
- Consultation with the key stakeholders in construction industry on the technical guidelines were made in mid 2002. Briefing sessions, open to all stakeholders in the industry, were held in late 2002 for wider consultation.

Target in 2003

- We will issue a Practice Note for Authorized Persons and Registered Structural Engineers (PNAP) to promulgate the new performance requirements.

3. *Review of Sanitary Fitments, Plumbing and Drainage Provisions for Buildings in Hong Kong*

A consultancy study has been commissioned in 2001 to review the current plumbing and drainage standards for buildings, taking cognizance of the built environment, environmental and material conservation, environmental sciences and technology.

Performance in 2002

- At the end of 2002, the consultant has completed 50% of the consultancy study.

Target in 2003

- It is expected that the consultancy study will be completed and a Code of Practice (CoP) will be published to set out the minimum standards and good practices on the subject in mid 2004.

4. *Promoting a Sustainable Built Environment*

The Building Innovation Unit (BIU) was set up to conduct research worldwide and make recommendations to the Interdepartmental Working Group comprising representatives from Lands Department (LandsD) and Planning Department (PlanD) with a view to advocating the following green objectives: -

- (a) Adopting a holistic life cycle approach to planning, design, construction and maintenance;
- (b) Maximizing the use of natural renewable resources and recycled/green building material;
- (c) Minimizing the consumption of energy, in particular those non-renewable types; and
- (d) Reducing construction and demolition waste.

Performance in 2002

- Following the success of Joint Practice Note (JPN) 1 in 2001, BD, in collaboration with LandsD and PlanD, issued a JPN 2 in February 2002 to provide more incentives in the form of exemption from Gross Floor Area and/or Site Coverage calculations for the provision of green features including non-structural prefabricated external walls, utility platforms, mail delivery rooms, noise barriers, and communal sky gardens for non-residential buildings.
- By the end of 2002, the total number of building projects that have been approved with one or more green features was 115 buildings.
- The total exempted Gross Floor Area (GFA) of green features approved amounted to 132,604 sq m.
- The total GFA of projects approved with green features amounted to 3.92 million sq m.

Target in 2003

- BIU will continue to explore more green initiatives and find ways to encourage the adoption of environmentally friendly design and construction activities.

5. *Benchmarking the Green Buildings*

In order to provide impetus to the promotion of green buildings and entice the industry and building owners to upgrade the environmental performance of their buildings, BD intends to establish a Comprehensive Environmental Performance Assessment Scheme (CEPAS). This green labelling system will be applicable to all types of new and existing building developments.

Performance in 2002

- A consultancy study on the subject commenced in August 2002.
- The main objective of the study was to prepare a user-friendly CEPAS for buildings in Hong Kong together with proposed systems and strategies of implementation.

Target in 2003

- Consultation with the concerned parties such as green groups and academia in the form of questionnaire survey and discussion forum will be conducted in 2003.
- Wider consultation will be carried out upon completion of the CEPAS report.

6. *Reducing Construction and Demolition Wastes*

The Working Group on Construction Efficiency and Environment, chaired by the Director of Buildings and with members comprising building professionals, developers, contractors and government officials from various departments, was established to review building and construction practices so as to identify opportunities to reduce construction and demolition wastes, and to protect the environment through enhancement of construction efficiency.

Its sub-group on 'Lean Construction' recommended that prefabrication and precast construction being environmentally friendly, should be promoted in the private sector as an alternative to the conventional in-situ construction.

Performance in 2002

- A consultancy study on precast concrete construction was commissioned in January 2002. As a result of the study, the consultant produced a draft Code of Practice (CoP) on Precast Concrete Construction which was circulated to key parties in the industry and other relevant government departments for consultation in late 2002.

Target in 2003

- The draft CoP will be finalized taking into account the various views and comments received from stakeholders. It is expected to be published in late 2003.

7. *Recycling of Construction and Demolition Wastes*

In order to minimize the waste generated from the construction and demolition sites, BD is finding ways to promote the use of recycled aggregates.

Performance in 2002

- We agreed to lend support to wider use of recycled aggregates in the private building developments as advocated by the Environment, Transport and Works Bureau.

Target in 2003

- A Practice Note for Authorized Persons and Registered Structural Engineers (PNAP) will be issued to promulgate the technical guidelines on the use of recycled aggregates in concrete in the private sector.

IMPLEMENTING GREEN OFFICE MANAGEMENT

In 2002, we made continuous efforts to introduce in-house green measures and increase the awareness of our staff on green management.

1. *Minimizing energy consumption by using electrical appliances and installations which are energy efficient*

Performance in 2002

- We installed high output energy saving lighting fixtures (T5 fluorescent tubes) in our new office at 113 Argyle Street, which amounted to 14% of the total fluorescent tubes at all BD premises. Posters on energy conservation were put up in the notice board on each floor as a reminder.
- Apart from the above, a number of energy saving measures were implemented, including controlling the use of personal electric appliances in office and setting the office equipment to energy saving mode during office hours etc.

Target in 2003

- In 2002, the power consumption was 2,312,957 kWh. We target to cut down power consumption (in kWh) by 1.5% in 2003-04.

2. *Moving towards a paperless office by introducing in-house computerized management system and wider use of e-mails*

Performance in 2002

- We commenced the installation of *Electronic Filing System* (EFS) which would allow direct storage of e-mails and other e-documents into the relevant file binders. More than one user could retrieve documents from their computers simultaneously, thus minimizing the need of duplicating paper documents.
- We also commenced the installation of an *Integrated Fax Solution* (IFS) which would allow users to send and receive fax messages from their desktop PC. This system, in combination with the EFS, would further reduce paper consumption.
- We launched the *Building Condition Information System* (BCIS) which included a document management system for minimizing the need of duplicating paper documents.

- Effective use of the local area network of the Department (BD LAN) for posting of notices and circulars was adopted to save paper. Office instructions and manuals were also uploaded to the BD LAN to reduce large-scale printing. Reference materials such as minutes of various committee meetings, practice notes of allied departments were also uploaded to the BD LAN.

Target in 2003

- The EFS and IFS are scheduled to operate in 2003.
- We will strive to introduce more green office measures by increasing the use of BD LAN as communication platform, such as a *Computerized Training and Development System* and an *Electronic Leave Application System* to streamline the processing of administrative procedures.

3. *Saving resources by recycling, reusing and reducing the use of materials*

Performance in 2002

(a) Recycle:

- Waste paper recycling boxes were placed near to the source of high paper usage such as photocopiers and fax machines on each floor. A total of 9 160 kg of paper was collected for recycling.
- 1 400 nos. of recyclable printer cartridges were collected.

(b) Reuse:

- Staff members were encouraged to use the blank side of used paper for drafting or filing, and used envelope for internal circulation.

(c) Reduce:

- We reduced the use of paper-based products such as greeting cards. Staff members were encouraged to use double-sided printing and photocopying, and minimize the use of hardcopies of documents.

Target in 2003

In 2002, the paper consumption was 24,659 reams. We target to cut down photocopying paper consumption (in ream) by 2.5%.

EDUCATION AND TRAINING

Apart from the hardware, we see the importance in providing the necessary software in fostering an awareness of sustainability across the community.

1. *Educating the Public on Sustainability*

On the public front, the concept of timely maintenance of existing buildings and green buildings are promulgated in our publicity programmes.

Performance in 2002

- In January 2002, the first of its kind - Open Day of BD was organized with display panels and games to raise the public awareness on green buildings and timely maintenance of existing buildings.
- In July 2002, BD published the “Building Maintenance Guidebook”. It was the first comprehensive guidebook on building maintenance in Hong Kong, in which general knowledge and standards relating to this topic for the reference of building owners, contractors and consultants were given.
- For enhancing the life expectancy of existing buildings with a view to achieving sustainability and better quality living environment, 16 exhibitions in shopping arcades and MTR stations, as well as 59 public seminars were organized to inculcate the culture of timely maintenance of buildings in the public.

Target in 2003

- Road shows and seminars will be launched on the topic of effective maintenance of buildings.

2. *Training our Staff*

Internally, our training and development programme puts great emphasis on equipping our staff to play the appropriate and facilitating role in sustainability development by offering a variety of training on the subject.

Performance in 2002

- Thirty-six local seminars/courses/conferences on environmental issues were arranged to provide 379 training man-days to our colleagues. These included “International Symposium on Sustainable Development, Sustainability and the City - Towards a Better Quality of Life”, “Joint Symposium 2002 Achieving Sustainable Performance in Built Environment”, “Conference on Partnership for Green Construction – a New Era of Hong Kong Development” and “Environmental Awareness Workshop on Green Office and Waste Reduction”.
- Three site visits to environmentally friendly buildings were organized.
- Five overseas duty visits for attending international conferences on sustainable development and studying environmentally friendly building designs in other countries (e.g. Australia, Malaysia, Korea) were arranged. Post-visit experience-sharing seminars were also organized and well received by staff members.

Target in 2003

- For our Training and Development Plan 2003-04, we will target to achieve more than 800 training man-days on green building issues and building repairs for the upkeep of the built environment.



Chapter 3 Way Forward

BD is tasked to act in concert with the rest of the community in bringing about a sustainable environment.

On the public front, we will sustain the momentum of out-reaching to the public to nurture the culture of timely maintenance of the existing buildings and the development of green buildings.

On the professional front, it will continue to be one of our priorities to help improve the built environment by introducing more initiatives to encourage environmentally friendly building design and facilitating their smooth passage from inception to completion. We will also continue to find ways to encourage environmentally responsive construction activities.

In our workplace, we will strive to minimize any adverse environmental impact arising out of our daily office operation and harness the advancement in the information technology with a view to moving towards a truly paperless office. We will keep our staff abreast of the latest development in sustainability to enable them to assume their environmental responsibility in a capable manner.

Last but not least, our door will be open to both the public and our staff for suggestions on green or sustainable measures for improving the environment within our workplace, and more importantly, the society as a whole.

WELCOME YOUR FEEDBACK

Thank you for reading our report.

This Report is also available for viewing at our website

http://www.info.gov.hk/bd/english/organisation/index_env.html (English version) or

http://www.info.gov.hk/bd/chinese/organisation/index_env.html

(Chinese version). For any suggestions, please call us through the hotline, or write to us either by e-mail or post at the following address:

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