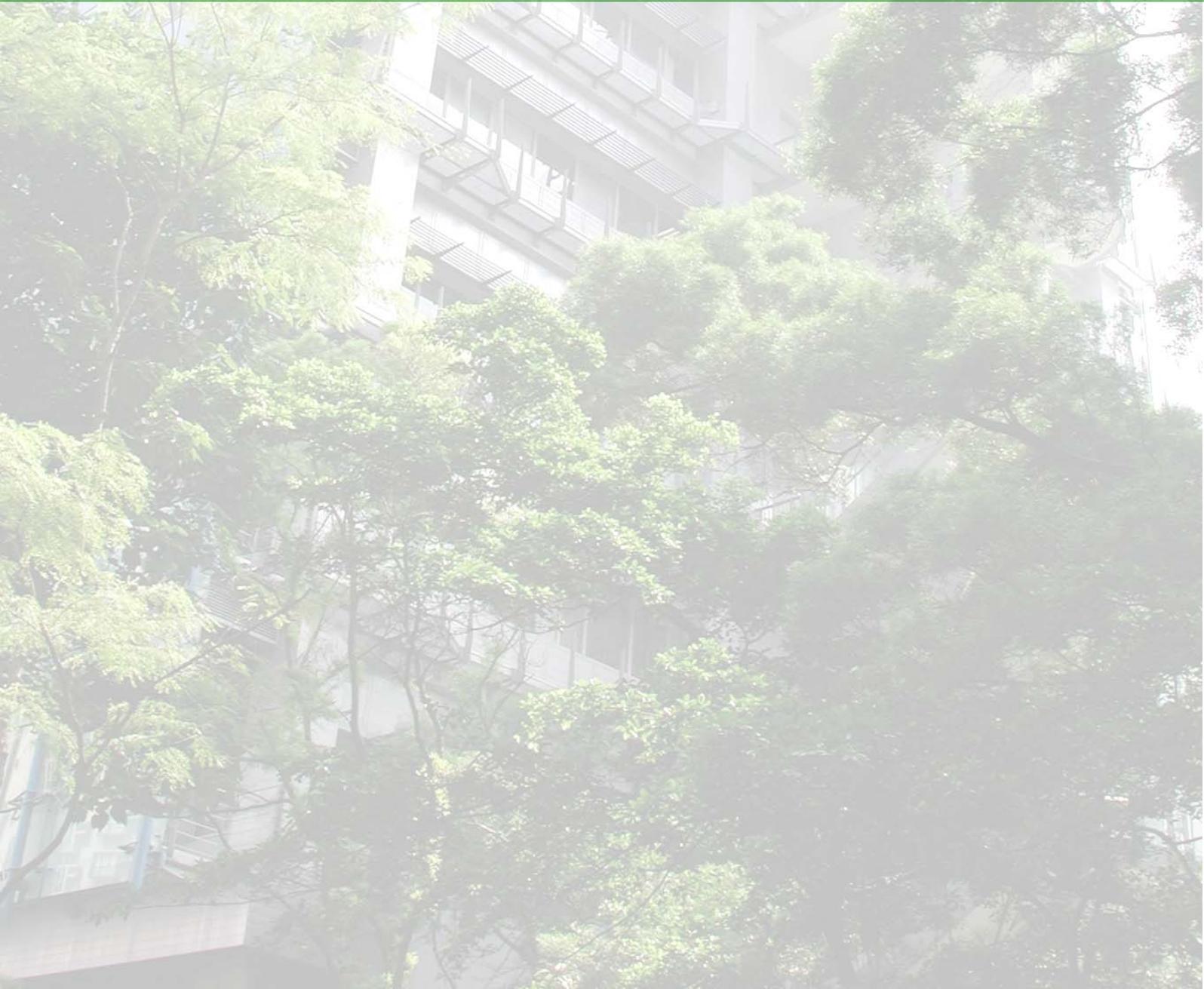




**Buildings Department**

*Environmental Report*

**2003**



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I am pleased to present our fifth Environmental Report covering the period from 1 January 2003 to 31 December 2003.

In line with our belief of the importance of contributing towards a sustainable environment, we continue to promote environmentally friendly buildings. Our ultimate goal is to encourage upgrading of the built environment for both new and existing buildings, and to create a market demand for environmentally friendly buildings.

In 2003, Hong Kong faced a critical challenge with the outbreak of the Severe Acute Respiratory Syndrome (SARS). We, together with other members of Team Clean, had taken a series of step-up actions to enhance environmental hygiene in Hong Kong.

In addition to the Team Clean Operation, we maintained our pace towards attaining a sustainable and quality built environment. As you can see in this Report, our continuous effort towards our targets and objectives has been rewarded with a satisfactory performance in 2003.

Your response to and advice on this report are welcomed. Let's join hands to transform Hong Kong into a sustainable and quality living environment.

Marco M H WU  
Director of Buildings

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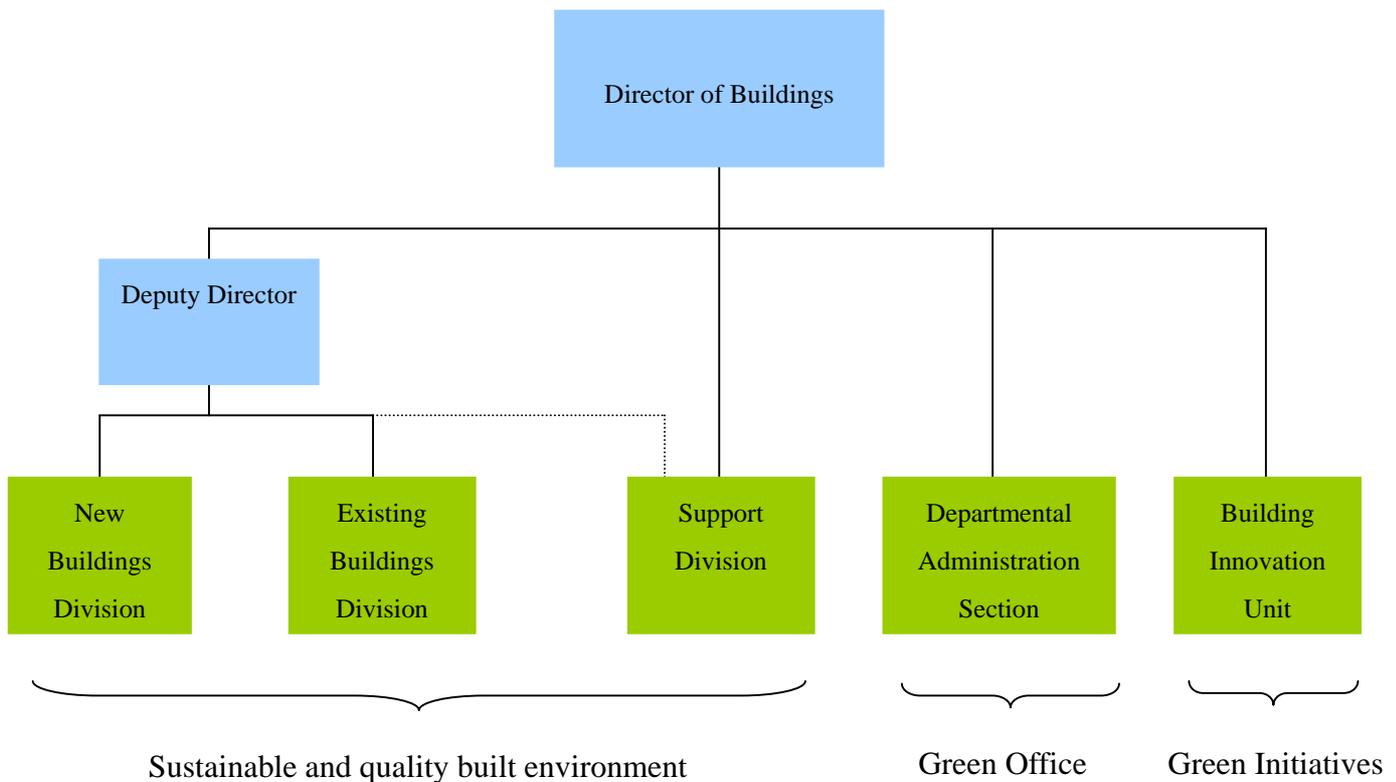
The Buildings Department takes a proactive role in supporting the Government’s objective of achieving a sustainable environment in Hong Kong. Our strive to make the built environment safe and healthy is reflected in our vision and mission.

**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**

Through administering and enforcing the Buildings Ordinance, we have the responsibility to promote building safety, set and enforce building standards as well as to improve the quality of private building developments. We are committed to:

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

### **Management Commitment**

As the government department responsible for the standards and safety of private buildings, we have a major role to play in maintaining and improving the quality of the built environment. We take pride in adhering to our environmental policy and have been evolving from a regulator to a facilitator to assist the building industry in pursuit of a sustainable and quality built environment in Hong Kong. To this end, we have undertaken a series of measures including laying down new standards; issuing guidelines and advisory notes, researching on better building design, and introducing green initiatives to encourage sustainable building developments. In the course of formulating and implementing these measures, we invite the stakeholders to participate in various dedicated working groups or steering committees and ensure that the intention of our environmental policy is embraced in the work of these dedicated groups.

We have been promoting green office operations, and a Green Manager has been designated to oversee all the associated steps and necessary actions. Moreover, we



continue to raise the environmental awareness of our staff via internal seminars and circulars.

In 2003, we have conducted the following activities, which have significant impact in improving the built environment:



<b>Environmental goal</b>	<b>Activities</b>
Facilitate improvement in environmental performance of buildings	Review the Buildings Ordinance and its subsidiary regulations
Promote environmentally friendly buildings	Continue green initiatives and carry out study on benchmarking of green buildings
Reduce construction and demolition waste	Promote precast concrete construction by issuing the “Code of Practice for Precast Concrete Construction 2003”. Issue practice notes to encourage the use of recycled aggregates.
Improve environmental hygiene	Motivate building owners to inspect the drainage systems of their buildings and require them to rectify defective drains and clear hygiene black spots
Migrate towards a paperless and energy efficient office	Implement green office management



<b>Environmental goal</b>	<b>Activities</b>
Raise staff's awareness of sustainable built environment	Provide training opportunities on latest development in sustainable built environment to raise awareness and instil sense of responsibility towards sustainable built environment
Educate public	Organise and participate in forums and seminars to disseminate the message of importance of sustainability and quality of the living environment



The following chapters provide an overview of the activities mentioned above, their environmental performance in 2003 and targets in 2004 as well as our way forward.



This Chapter provides a summary of measures we have undertaken in relation to sustainable development, as well as their environmental performance in 2003 and future targets.

### **(A) 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 its continual development.

#### **1. Modernising the Legislation**

A comprehensive review of the Buildings Ordinance (BO) began in 2000 and continued in 2003. One of the objectives of this review is to facilitate environmentally friendly and responsive building design. As part of the review, we have been modernising a series of building standards to adopt performance-based approach with the aim to encouraging more efficient and economic use of building materials, and achieving more rational and economical design.

#### **Performance in 2003**

- The proposed amendments to the BO as a result of the review were introduced in the Buildings (Amendment) Bill 2003 to the Legislative Council in April 2003.
- We continued, in stages, the exercise to carry out a comprehensive review of the BO including providing performance-based requirements in addition to the prescriptive standards, where possible, under the Building (Planning) Regulations and the Building (Construction) Regulations. In this connection, we also continued our review of fire safety standards in buildings and related codes of practice.



### **Performance in 2003**

- We prepared draft of the following codes of practice, which incorporated performance-based approach, for consultation of the stakeholders:
  - Dead and Imposed Loads for Buildings;
  - Wind Effects on Buildings;
  - Structural Use of Concrete Using Limit State Approach; and
  - Foundations

### **Targets in 2004**

- The Buildings (Amendment) Bill 2003 was enacted as the Buildings (Amendment) Ordinance 2004 in June 2004 and is expected to commence operation within 2004.
- The proposals for amendment to the BO and Regulations as identified in the review will be prepared for consultation, including the amendments to the Building (Planning) Regulations and the Building (Construction) Regulations.
- We intend to prepare a draft code of practice for Structural Use of Steel Using Limit State Approach, which incorporates performance-based approach, for consultation of the stakeholders.



### Targets in 2004

- We intend to issue the following codes of practice:
  - Dead and Imposed Loads for Buildings;
  - Wind Effects on Buildings;
  - Structural Use of Concrete Using Limit State Approach; and
  - Foundations
  
- The review on fire safety standards in buildings and related codes of practice will be continued for the preparation of the draft Performance Based Fire Code.

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

A consultancy study was carried out to establish a new set of performance standards which would adequately protect the health of occupants and ensure satisfactory indoor environment for buildings in Hong Kong. Based on the findings of the consultancy study, we now accept performance standards on lighting and ventilation as an alternative to the prescriptive requirements set out in the current regulations.

### Performance in 2003

- We issued a Practice Note to Authorized Persons and Registered Structural Engineers (PNAP) for promulgation of the performance based requirements on the provision of natural lighting and ventilations to habitable rooms, kitchens and office accommodations.



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

A consultancy study was commissioned in 2001 to review the current plumbing and drainage standards for buildings, taking cognisance of the built environment, environmental and material conservation, and environmental science and technologies.

#### Performance in 2003

- The consultant had been preparing recommendations on the revised regulations and was drafting a code of practice on the minimum standards.
- The study was 75% complete by the end of 2003.

#### Targets in 2004

- We will consult the stakeholders on the consultant's recommendations on the revised regulations and the draft code of practice.





### 4. Promoting Environmentally Friendly Buildings

We set up the Building Innovation Unit (BIU) in 2000 to conduct research and make recommendations on the promotion of environmentally friendly buildings. In collaboration with the Lands Department and Planning Department, we issued Joint Practice Notes No. 1 & No. 2 in 2001 and 2002 respectively to encourage the incorporation of green building features, including balconies; wider common corridors and lift lobbies; communal sky gardens; communal podium gardens; acoustic fins; sunshades and reflectors; wing wall, wind catchers and funnels; non-structural prefabricated external walls; utility platforms; mail delivery rooms with mailboxes; and noise barriers in new private building developments.

#### Performance in 2003

- Since the issue of the first Joint Practice Note to the end of 2003, a total of 129 building projects were approved with one or more green features.
- The total gross floor area (GFA) of building projects approved with green features amounted to 4.43 million sq. m.
- The total exempted GFA of green features approved amounted to 155,347 sq. m.



Balconies



Non-structural Prefabricated  
External Walls



### Targets in 2004

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

## 5. Benchmarking Green Buildings

To provide impetus to the promotion of green buildings, a consultancy study was commissioned in 2002 to compile a Comprehensive Environmental Performance Assessment Scheme (CEPAS) for new and existing buildings. The main objective of the study is to entice the industry and building owners to upgrade the environmental performance of buildings.

### Performance in 2003

- A research was carried out on existing local and overseas assessment schemes to ensure that CEPAS would encapsulate the forefront sustainability assessment principles.
- A questionnaire survey and a discussion forum were held to solicit views from over 100 stakeholders organizations and building user groups.



**Discussion Forum**



### **Performance in 2003**

- A preliminary framework was derived based on research and consultation findings.

### **Targets in 2004**

- The consultant will formulate a user-friendly assessment scheme and compile a CEPAS Report in 2004.
- We will consult the stakeholders on the assessment scheme.

## **6. Reducing Construction and Demolition Wastes**

As the landfill sites in Hong Kong are being filled up at an alarming rate, we have been exploring ways to reduce construction and demolition waste to alleviate the pressure on the landfill sites.

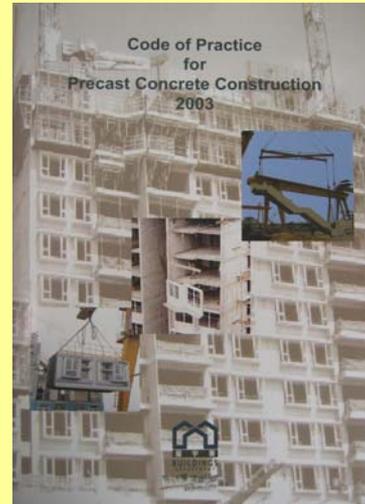
### **Performance in 2003**

- We issued a PNAP to promulgate technical guidelines on the use of recycled aggregates in concrete in private building works.



### Performance in 2003

- We issued the “Code of Practice for Precast Concrete Construction 2003” to further promote the use of prefabrication and precast construction. This method of construction is environmentally friendly and reduces construction waste.



## 7. Environmental Hygiene

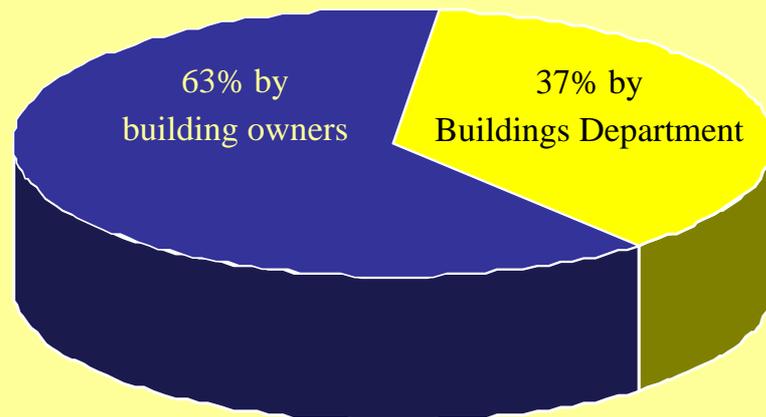
In the aftermath of SARS, both the Government and the community realize that we have to tackle the perennial environmental hygiene problems in Hong Kong. We need to establish and promote a sustainable and cross-sectional approach to improve the situation. As a core member of the Team Clean, the Buildings Department has conducted a territory-wide survey of private buildings on defective drains and participated in improving environmental blackspots.

In the process of formulating various measures to improve the built environment and environmental hygiene, we have set up working groups to work out practical proposals for enhancement of the built environment and environmental hygiene. In this regard, two dedicated working groups have been set up to address the building design issues and leakage problems.



### Performance in 2003

- We issued advisory letters with maintenance guidelines to all owners' corporations, mutual-aid committees and management companies to remind and facilitate them to maintain their drainage systems.
- We mobilized owners' corporations and management companies of some 18,000 private buildings to inspect the drainage systems of their buildings. About 63% carried out the inspection voluntarily. For the remaining 37%, we carried out the inspection of the external drains.



#### **Drainage Inspection for Buildings with Owners' Corporations and Management Companies**

- For the 11,000 private buildings without owners' corporation or management company, we completed the survey of these buildings on defective drains.



### Performance in 2003

- Apart from proactive inspection, we also mobilized building owners to rectify defective drains to improve environmental hygiene. Besides, we also took enforcement action where appropriate. For target backlanes and hygiene blackspots involving about 900 buildings, we issued advisory letters and statutory orders requesting building owners to rectify defective drains and remove unauthorized structures affecting the backlanes.



**Before**



**After**



**Before**



**After**



### **Performance in 2003**

- We set up the Working Group on Building Design for Clean and Healthy Environment to review building design issues. Based on the findings of the Working Group, we issued a practice note on the quality of cast iron pipes for drainage works.
- We also set up a Working Group on Building Quality to address the problem of water leakage in buildings.

### **Targets in 2004**

- We will continue to mobilize owners to rectify defective drains and target completion of all repair works of defective external drain pipes and removal of unauthorised structures identified in 2003.
- We will provide advice on the following matters in 2004:
  - Ventilation in hotel buildings;
  - Ventilation of common corridors and lift lobbies in buildings;
  - Mechanical ventilation in bathrooms and lavatories of domestic buildings; and
  - Planning and design of drainage works, including access for maintenance.
- We intend to draft guidelines to provide advice on prevention of water leakage in 2004.



## (B) IMPLEMENTING GREEN OFFICE MANAGEMENT

In 2003, we made continuous efforts to introduce in-house green measures and to increase the awareness of our staff on green management.

### 1. Minimise Energy Consumption

We minimised energy consumption by using energy-efficient electric appliances and installations and issuing regular reminders to our staff.

#### Performance in 2003

- We installed high output energy saving lighting fixtures (T5 fluorescent tubes) in various offices at Pioneer Center, 113 Argyle Street, 410 Kwun Tong Road and Mongkok Government Offices, which amounted to 23% of the total fluorescent tubes on all our premises.



- We affixed “Energy Saving” stickers on the light and air-conditioner switches; and office equipment to remind colleagues to save energy.



- Other energy saving measures were also undertaken. They included controlling the use of electric appliances in office, setting office equipment to energy saving mode, and issuance of guidelines on energy saving, etc.



### Performance in 2003

- In 2003, although professional and technical grades staff increased by 18 % to implement some time-limited projects, e.g. Team Clean initiatives, our electricity consumption had only increased by 11% from 2,312,957 kWh in 2002 to 2,576,388 kWh in 2003.

### Targets in 2004

- We aim to confine the increase in energy consumption to lower than the increase in number of staff.
- We will promote setting PCs to hibernation mode or standby mode.

## 2. Moving towards a Paperless Office

We continue to migrate towards a paperless office by introducing in-house computerised management system and encouraging communication via electronic means.

### Performance in 2003

- The Electronic Filing System (EFS) and the Integrated Fax Solution (IFS), which were introduced in 2002, were completed. Users can send and receive fax as well as file and retrieve their emails and other e-documents including e-fax from their desktop computers. As an e-document can be shared among the EFS users at the same time, the need for duplicating paper documents is minimized.



### Performance in 2003

- The computerized Training and Development System (TDS) was also completed in 2003. The TDS streamlines the nomination and enrolment process for training courses and has replaced the paper-based system since its implementation.
- We continued to make use of information technology for information dissemination. Posting of notices, circulars and newsletters on electronic notice boards was adopted to save paper. Office instructions and manuals were also uploaded to our Local Area Network (the 'BD LAN') to reduce large-scale printing. Reference materials such as minutes of various committee meetings, practice notes of allied departments were uploaded to the BD LAN. Instead of sending out paper-based PNAP and Practice Notes for Registered Contractors, these documents were posted on our website for reference by the relevant readers with email notification for updates.
- The pilot project for the conversion of building records into electronic images, covering Tsim Sha Tsui, Yau Ma Tei, Mongkok and Wanchai districts and setting up of a small-scale Building Records Management System (BRMS) to store and retrieve these electronic records were completed in May 2003. The building records in electronic format are available for concurrent access by both the public at our Building Information Centre and by our staff via the BD LAN, thus minimizing the need for duplicating paper documents.





### Performance in 2003

- The implementation of the Electronic Leave System (E-leave) was underway. The system will streamline the process of leave application and processing which will also reduce paper consumption.

### Targets in 2004

- We aim to complete the E-Leave system in 2004.
- We will commence the image conversion exercise for the full scale BRMS covering the entire territory.
- We will strive to introduce more greenhouse measures by increasing the use of LAN as a communication platform.

## 3. Saving Resources

We endeavoured to save resources by recycling, reusing and reducing the use of materials

### Performance in 2003

- To encourage recycling, we placed waste paper recycling boxes near high paper usage equipment such as photocopiers and fax machines. We also collected 1,375 nos. of recyclable printer cartridges.





#### Performance in 2003

- We encouraged staff to use the blank side of used paper for drafting or filing, and used envelope for internal circulation.
- To reduce the use of paper, we encouraged staff to adopt double-sided printing and photocopying, and to minimize producing hardcopies of documents. In addition, we reduced the use of paper-based products such as greeting cards.



- Recovery of waste paper for recycling increased by 27%, from 9,160 kg in 2002 to 11,678 kg in 2003. This reflected the increase of environmental awareness of our colleagues.
- While our professional and technical grades staff increased by 18 % in 2003, with the concerted efforts of our colleagues, our paper consumption had decreased by 0.2% from 24,659 reams in 2002 to 24,612 reams in 2003.

#### Targets in 2004

- Although our staff strength will further increase in 2004, we target to maintain the level of paper usage as that in 2003.



## (C) EDUCATION AND TRAINING

Apart from the hardware, we believe it is important to provide the necessary software in fostering an awareness of sustainability across the community.

### 1. Educating the Public on Sustainability

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

#### Performance in 2003

- We organised 22 Road Shows, which were kicked off by a grand variety show. 30 public seminars were also organised in various districts to inculcate the culture of timely maintenance of buildings to the public.



- On-air promotion on timely maintenance of buildings was made through radio prior to and during the period of the Road Shows.

#### Targets in 2004

- Roving exhibition and advertisements on mass media will be launched to promote the importance of timely 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 2003

- 41 local seminars/courses/conferences on environmental issues and building repairs were arranged to provide 619.5 training man-days to our colleagues. These included “The Third China Urban Housing Conference”, “Sustainable Environment: Quality Urban Living”, “Symposium on Sustainable Construction”, “Symposium on Green Building Labeling”, “United Nations Asia-Pacific Leadership Forum - Sustainable Development for Cities”, “Environmental Seminar on Green Consumerism and Eco-labeling & Environmental Pollution and Protection in Hong Kong”, “Seminar on Developing Scientific Simulation Framework to Evaluate the Ventilation of Re-entrant Areas”, “Symposium on Sustainable Construction Materials”, “International Conference on Pollution in the Metropolitan and Urban Environment” and “Seminar on Quality Drainage Design & Maintenance to Prevent Spread of SARS”.
- In addition, 6 site visits to environmentally friendly buildings were organized to provide 184.5 training man-days.
- 6 overseas duty visits for attending international conferences on sustainable development and innovative/advanced building technologies in other cities were arranged. Post-visit experience-sharing seminars were also organized and well received by staff members.



### **Targets in 2004**

- For our Training and Development Plan 2004-05, we will target to achieve more than 650 training man-days on green building issues and building repairs for the upkeep of the built environment.



We are fully aware of the importance of a sustainable environment to the community as well as our next generations, and are committed to collaborate with the community to take proactive measures in achieving this ultimate goal.

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

For industry stakeholders, we will continue to explore new ways to encourage sustainable buildings whilst maintaining the current initiatives to encourage the design and construction of environmentally friendly buildings.

In our workplace, we will strive to minimize the adverse environmental impact arising from our daily office operation and endeavour to move towards a paperless office. We will carry out review on a regular basis to minimize materials and energy consumption. We will also continue to keep our staff abreast of the latest development in sustainability to enable them to assume their environmental responsibility.

We sincerely invite you to provide us your views and suggestions, which are important to the continuous improvement and development of our measures towards a sustainable environment.



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

or

[http://www.info.gov.hk/bd/chineseT/organisation/index\\_env.html](http://www.info.gov.hk/bd/chineseT/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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