



*Buildings Department
Controlling Officer's
Environmental Report*

2004



	Page
Foreword	1
Chapter 1 Buildings Department and the Environment	
Organisation Chart	2
Environmental Policy	3
Management Commitment	3
Chapter 2 Environmental Performance Analysis and Future Targets	
<i>(A) Promoting a Sustainable Built Environment</i>	
1. Modernising the Legislation	5
2. Review of Lighting and Ventilation Requirements for Buildings	7
3. Review of Sanitary Fitments, Plumbing and Drainage Provisions for Buildings in Hong Kong	7
4. Promoting Environmentally Friendly Buildings	8
5. Benchmarking Green Buildings	10
6. Reducing Construction and Demolition Wastes	11
7. Enhancing Environmental Hygiene	11
<i>(B) Implementing Green Office Management</i>	
1. Minimizing Energy Consumption	15
2. Moving towards a Paperless Office	16
3. Saving Resources	18
<i>(C) Education and Training</i>	
1. Educating the Public on Sustainability	20
2. Training Our Staff	20
Chapter 3 Way Forward	22
Chapter 4 Feedback	23



I am glad to present our sixth Environmental Report covering the period from 1 January 2004 to 31 December 2004.

The lessons learnt from the outbreak of the Severe Acute Respiratory Syndrome (SARS) in 2003 and the evolving public desire for a better quality living and working environment have heightened our aspirations in pursuit of a balance in maximizing social-economic benefits and minimizing adverse environmental impact.

We reckon that quality buildings are essential ingredients in shaping Hong Kong as a prosperous and modern world city. The sustainable development concept continues to be a core principle of our strategy in promoting the construction and maintenance of quality buildings and upgrading the built environment.

We attach special importance to building up Hong Kong a safer and cleaner city through our professionalism, continual dedication and responsiveness. In achieving a sustainable environment, we are fully aware of the importance to maintain a strong partnership between the Government and individual party who have their role to play. We look forward to working with you to turn Hong Kong into a sustainable and quality living and working environment now and in the future.

Marco M H WU
Director of Buildings



Chapter 1

Buildings Department and the Environment

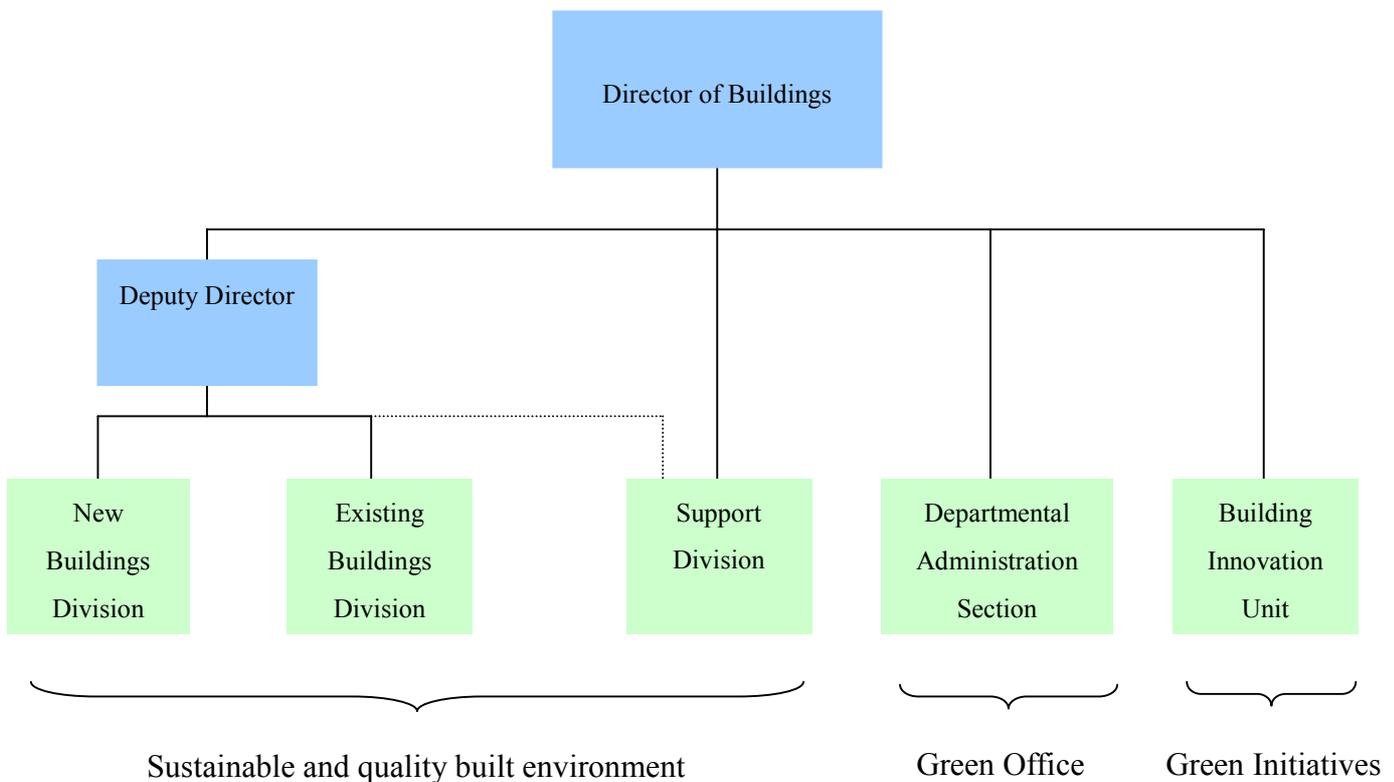
Buildings Department (BD) takes a pro-active role in supporting the Government's objective of achieving a sustainable environment in Hong Kong. The principles of sustainability are underpinned by our vision and mission set.

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

We have been evolving from a pure regulator to a facilitating regulator in enhancing Hong Kong's long-term sustainable development. In addressing the issue of sustainability, we promote the concept of shared responsibility, cooperation and concerted action.

By adhering to the environmental policy, we place strong emphasis on a partnership-based approach in drawing up a series of measures including, among others, issue of guidelines, codes of practice and practice notes. Representatives from the stakeholders and academia, who are fully aware of our environmental policy, are invited to participate in the various working groups or steering committees and tender their advice in the course of our formulating the relevant measures. In order to bring about a real change in mindset of the importance of sustainability, we take steps to engage the public support and build up social awareness through open consultation.



Chapter 1

Buildings Department and the Environment

Internally, we maintain a consistent approach by promoting green office operations, and a Green Manager is designated to oversee the implementation and related support measures.

In 2004, we have conducted the following activities, which have significant bearing on improving the sustainability of the built environment:-

- reviewing the Buildings Ordinance and allied regulations to enhance the environmental performance of building developments.
- promoting green buildings by providing incentives and formulating benchmarking scheme.
- working in partnership with the stakeholders to carry out reviews on building and construction practices with the aim of establishing environmentally friendly, responsive, and considerate practices.
- implementing green office operations, taking steps towards a paperless office and building staff's awareness to take account of sustainability considerations in all practices.
- encouraging the public to offer support in maintaining a sustainable and more pleasant built environment.

In the following chapters, we will provide details of the activities mentioned above, their environmental performance in 2004 and targets in 2005 as well as our way forward.

This Chapter provides an overview of the measures we have implemented in relation to sustainable development, as well as their environmental performance in 2004 and future targets.

(A) PROMOTING A SUSTAINABLE BUILT ENVIRONMENT

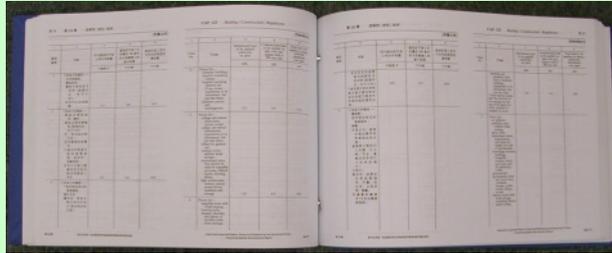
It is our strategy to set in motion a trend for developing a sustainable built environment and creating a field conducive to its continual development.

1. Modernising the Legislation

Having commenced in 2000, the comprehensive review of the Buildings Ordinance (BO) continued its progress in 2004. One of the objectives of this review is to facilitate environmentally friendly and responsive building design. Along with the above, the migration from prescriptive standards to performance-based requirements facilitates modern and innovative building design and encourages more efficient and economic use of building materials, with a view to achieving more rational and economical design.

Performance in 2004

- The Buildings (Amendment) Ordinance 2004 incorporating the proposed amendments to BO as a result of the comprehensive review was passed by the Legislative Council and published in the Gazette on 2 July 2004. Majority of the provisions of the amendment ordinance came into operation on 31 December 2004 and the remaining provisions would come into operation on 31 December 2005.
- We continued with the comprehensive review of the BO in stages, including the provision of performance-based requirements in addition to the prescriptive standards, where appropriate, under the Building (Planning) Regulations and the Building (Construction) Regulations. We also continued with our review of fire safety standards in buildings and their related codes of practice.



- We issued the following codes of practice (CoP) in 2004
- CoP for Demolition of Buildings;
 - CoP for Foundations;
 - CoP for Structural Use of Concrete 2004; and
 - CoP on Wind Effects in Hong Kong 2004.



Targets in 2005

- The proposals for amendments to the BO and Regulations as identified in the review will be prepared for consultation, in particular amendments to the Building (Construction) Regulations.
- We intend to issue the CoP for the Structural Use of Steel in 2005.
- We will continue with the review on fire safety standards in buildings and their related codes of practice for the preparation of a 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 building design in respect of lighting and ventilation provisions based on performance standards as an alternative to the prescriptive requirements set out in the current regulations.

Performance in 2004

- We explored the application of computational simulations for assessment of the performance standards in lighting and ventilation with a view to promoting its application. We were drafting a supplement to the Practice Note for Authorized Persons and Registered Structural Engineers (PNAP) 278 on the application of the computational simulations.

Targets in 2005

- We will issue the revised PNAP 278 for reference of authorized persons.

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 2004

- We consulted the stakeholders on the consultant's recommendations on the revised regulations and the draft code of practice. The consultant was revising their recommendations taking into account the comments received.
- The study was 90% complete by the end of 2004.

Targets in 2005

- We will further consult the stakeholders on the consultant's revised recommendations.
- We will initiate action for the implementation of the recommendations made in the consultancy study.

4. Promoting Environmentally Friendly Buildings

We set up the Building Innovation Unit (BIU) in 2000 to conduct research and make recommendations on ways to promote the construction of environmentally friendly buildings. In collaboration with the Lands Department and Planning Department, we issued Joint Practice Notes No. 1 and No. 2 in 2001 and 2002 respectively to encourage the provision of green 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, by giving incentives in the form of exemption of the green features from gross floor area (GFA) and/or site coverage calculations. We advocate the wide adoption of green features in building developments with a view to minimizing the energy consumption, construction and demolition wastes; and maximizing the use of natural renewable resources and recycled building materials.

Performance in 2004

- Since the issue of the first Joint Practice Note in 2001 to the end of 2004, a total of 188 building projects with one or more green features were approved by BD.
- The total GFA of building projects approved with green features amounted to 6.211 million sq.m.
- The total exempted GFA of green features approved amounted to 296,274 sq.m.



Non-structural prefabricated external wall



Balcony

Targets in 2005

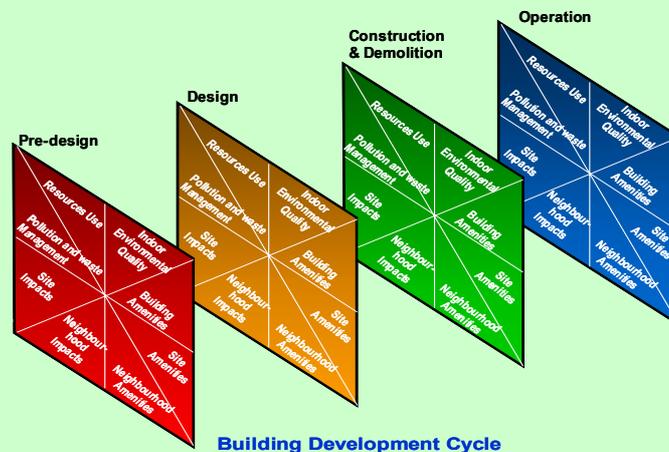
- An interdepartmental working group will be set up to review the effectiveness of the green incentives promulgated under Joint Practice Note No. 1 and No. 2, and to formulate the way forward in promoting the construction of green and environmentally friendly buildings.

5. Benchmarking Green Buildings

As part of a holistic approach to provide impetus to the promotion of green buildings, a consultancy study was commissioned to devise a Comprehensive Environmental Performance Assessment Scheme (CEPAS) for new and existing buildings. The main objective of the study is to find ways to entice the industry and building owners to upgrade the environmental performance of buildings by making reference to a standard yardstick to be formulated under CEPAS.

Performance in 2004

- The Consultant submitted the CEPAS report, which provided details of the proposed assessment scheme including the assessment criteria and scoring method.



- Expert panels on specific fields relating to the core aspects of sustainability were formed to scrutinize the proposed scheme.

Targets in 2005

- We will finalize the CEPAS report and consult the stakeholders on the proposed scheme.

6. Reducing Construction and Demolition Wastes

In order to minimize the waste generated from the construction and demolition sites, we continue to solicit views from the stakeholders and review the current building and construction practices to find ways in reducing construction and demolition wastes.

Performance in 2004

- We formed a dedicated team to review the current practice note on hoardings and covered walkways, aiming to propose some design examples which could incorporate the environmentally friendly measures and reduce the construction cost without compromising the public safety.

Targets in 2005

- We will issue the revised practice note on hoarding and covered walkway design for the practitioners to follow.
- We will continue to work with the stakeholders to identify any installation of items or fixtures on site not forming the requisite for the issue of occupation permit under the BO to avoid wastage. The seats in cinemas may be one of the options.

7. Enhancing Environmental Hygiene

In the wake of the outbreak of the SARS in early 2003, there have been soaring concerns across the community at the possible dire consequences of building neglect and the perennial environmental hygiene problems. A sustainable and cross-sectional solution is required to tackle the problem.

BD as a core member of Team Clean has conducted a territory-wide survey to

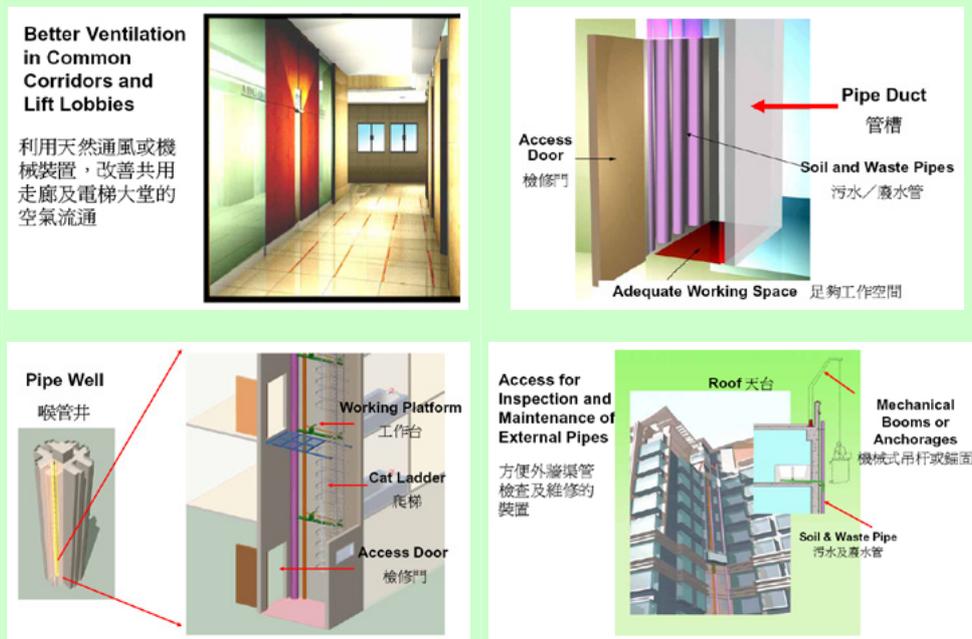
all private buildings on defective drains and participated in improving environmental conditions of some identified blackspots. Furthermore, we have set up two dedicated working groups to work out practical proposals for enhancement of the built environment and environmental hygiene, like the building design issues and leakage problems respectively.

Performance in 2004

- We mobilized owners of some 5200 buildings to complete the drainage rectification works.
- For the target backlanes and hygiene blackspots involving about 900 buildings under Phase I and II Team Clean Operations, about 800 drainage defects and some 2100 unauthorized building works (UBW) were rectified and removed respectively.



- We issued an advisory letter on ventilation in hotels to the building professionals, aiming to provide good design practices for ventilation systems in hotel buildings.
- We issued practice notes on ventilation of common corridors and lift lobbies in buildings, planning and design of drainage works, facilities for external inspection and maintenance of buildings, and extractor fans in bathrooms and lavatories in domestic buildings.



- We consulted the stakeholders on the recommendations of the Working Group on Building Quality on ways to tackle water seepage for the issue of guidelines.
- We issued practice notes to practitioners aiming to help combat mosquito breeding by taking into account records of repeated conviction under the Public Health and Municipal Services Ordinances when considering contractors' registration under the BO.

Targets in 2005

- We will carry out verification check on the condition of drainage system for some 12,000 buildings with voluntary inspection reports furnished by Owners' Corporations or Management Companies.
- We will continue to monitor the progress of remaining rectification works by building owners on defective drains and removal of UBW as identified under Phase III Hygiene Blackspots Clearance.
- We will issue guidelines on good practice in prevention of water seepage to practitioners for reference.
- We will make preparation for the commissioning of a consultancy study to review and rationalize the building design requirements for improvement of the environmental hygiene.
- Following the public consultation on Building Management and Maintenance by Housing, Planning and Lands Bureau in 2004, we will work out and promote an effective building inspection and maintenance scheme taking into account the positive feedback received. The scheme is targeted to help prolong the useful life of buildings and improve the quality of the living environment.



(B) IMPLEMENTING GREEN OFFICE MANAGEMENT

It is our target to ensure the proper introduction and conduction of in-house green measures and to increase the awareness of our staff on green office management.

1. Minimising Energy Consumption

We aim to minimize energy consumption by using energy-efficient electric appliances and installations, adopting other energy saving measures and issuing regular reminders to our staff.

Performance in 2004

- We installed high output energy saving lighting fixtures (T5 fluorescent tubes) in various offices, which amounted to 23% of the total fluorescent tubes on all our workplace.
- We affixed “Energy Saving” stickers on the light and air-conditioner switches; and office equipment to remind colleagues to save energy.
- We set air conditioning temperature at 25.5°C.
- We appointed energy wardens in all Divisions to remind colleagues of the energy saving measures.
- We promoted setting our computers to hibernation mode or standby mode during office hours.



We installed T5 fluorescent tubes at office.



We set air conditioning temperature at 25.5°C.

- Other energy saving measures were also undertaken. They included controlling the use of personal electric appliances in office, encouraging staff to use staircase for inter-floor traffic, and circulation of guidelines on energy saving and other green tips, etc.
- We took 2002-03 fiscal year as the base year for comparison of our electricity consumption. From 2002-03 to 2004-05, due to significant increase in staff strength by about 19% and full operation of our newly leased office at 410 Kwun Tong Road, our electricity consumption had increased by 22% from 2,406,762 kWh in 2002-03 to 2,945,925 kWh in 2004-05.

Targets in 2005

- Although our staff strength may further increase in 2005-06, we target to maintain the energy consumption at similar level as that in 2004-05.
- We will continue to urge all officers to closely monitor their electricity consumption and adopt green measures.

2. Moving towards a Paperless Office

We are moving towards a paperless office by introducing in-house computerized management system and encouraging the communication via electronic means.

Performance in 2004

- The implementation of the Electronic Leave System (E-leave) in 2004 streamlined the leave application and processing process. All staff could now enjoy the speedy service through a paperless environment.

- We continued to make use of Information Technology for information dissemination platform. Posting of notices, circulars and newsletters on electronic notice boards was adopted to save paper. Office instructions and manuals were also uploaded to BD's Local Area Network (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 Practice Notes to Authorized Persons, Registered Structural Engineers and Registered Contractors, these documents were posted on BD's Website for reference by the relevant readers who would receive email notifications for updates.
- Having reviewed the results of the pilot project for the conversion of some of the building records into electronic images, we decided to extend the Building Records Management System (BRMS) to cover all building records of private buildings over the whole territory of Hong Kong. The contract for full scale BRMS was commenced in April 2004 and would last for about 2 years. Building records covering the whole Hong Kong Island had been converted into electronic format in 2004. These records together with those of Tsim Sha Tsui, Yau Ma Tei and Mongkok areas converted earlier had been made available for concurrent access by both the public at the Building Information Centre of BD and by our staff via the BD LAN, thus minimizing the need for duplicating paper documents.

Targets in 2005

- We will continue the image conversion exercise for the full scale BRMS to cover the building records in the remaining districts of Kowloon and the New Territories.
- We will implement a Training Administration System to facilitate the data exchange of training records between BD and the Civil Service Bureau, thus reducing paper consumption in the information compilation and submission process.

- We will introduce more green house measures by increasing the use of LAN as a communication platform.

3. Saving Resources

We have made endeavour to save resources by the principle of recycling, reusing and reducing the use of materials.

Performance in 2004

- To encourage recycling, we placed waste paper recycling boxes near high paper usage equipment such as photocopiers and fax machines. In 2004, we collected 10,991kg waste paper for recycling and 1,982 nos. of recyclable printer cartridges.
- To reduce the use of paper, we encouraged staff to :-
 - use the blank side of used paper for drafting or filing, and used envelope for internal circulation.
 - adopt double-sided printing and photocopying, and to minimize producing hardcopies of documents.
 - use recycled paper for photocopying.
 - reduce the use of paper-based products such as greeting cards.



We collected recyclable printer cartridges.



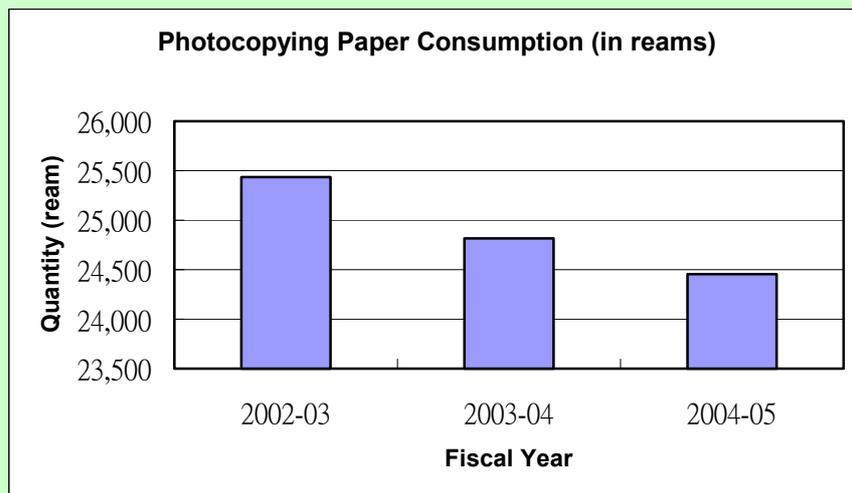
We placed used paper with a blank side near the photocopier to facilitate reuse by colleagues.



We ordered recycled paper for office photocopying use.

Performance in 2004

- We took 2002-03 fiscal year as the base year for comparison of our paper consumption. While the number of our staff had increased by about 19 % from 2002-03 to 2004-05, with the concerted efforts of our colleagues, we succeeded in reducing the paper consumption from 25,437 reams in 2002-03 to 24,445 reams in 2004-05, i.e. a decrease of about 4% in total paper consumption.



Targets in 2005

- Although our staff strength may further increase in 2005-06, we target to maintain the level of paper usage as that in 2004-05.
- We will increase the use of recycled paper.

(C) EDUCATION AND TRAINING

The success of implementation of policies in relation to sustainability depends on the level of commitment and dedication to the next generation. Apart from the hardware, we believe that it is important to provide the necessary software in fostering an awareness of sustainability across the community.

1. Educating the Public on Sustainability

In addition to engaging the community in the process of formulating strategies in relation to sustainable development, we in parallel instil the concept of timely maintenance of existing buildings and green buildings into the public through our publicity programmes.

Performance in 2004

- 38 roving exhibitions were organized in various districts to inculcate the culture of timely maintenance of buildings to the public.

Targets in 2005

- We will launch/arrange advertisements on mass media 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 2004

- We invited the Environmental Protection Department to deliver a talk on “Green Office” in our registry meeting. Practical green measures were proposed for implementation in office.
- We arranged 36 local seminars/courses/conferences on environmental issues and building repairs providing 714 training man-days to our colleagues. These included “BuiltExpo 2004 CPD Seminar on Future Developments of the Construction and Real Estate Industries in Hong Kong”, “Conference on Designing Hong Kong Harbour District”, “Quality Building Award (QBA) 2004 Presentation Conference”, “Technologies and Eco-Buildings for the 21st Century - New Business Opportunities for Sustainable Environment”, “Heritage Conservation: Opportunities and Challenges”, “International Conference of Intelligent Systems, Structures & Facilities (ISSF 2005)”, “The HKIE Building Division 4th Annual Seminar, Quality Building - A Culture or a Myth?”, “International Workshop on Integrated Life-Cycle Management of Infrastructures”, and in-house programmes such as “Seminar on the Use of Rubber Soil in Private Slope Stabilization Works”, “Workshop on Daylighting” & “Training Course on Electronic Filing System”
- We organized 6 site visits to environmentally friendly or innovative buildings providing 102 training man-days to our colleagues.
- We arranged 4 overseas duty visits for our colleagues to attend international conferences on sustainable development and innovative/advanced building technologies in other cities.

Targets in 2005

- For our Training and Development Plan 2005-06, we will target to achieve more than 500 training man-days on green building issues and building repairs for the upkeep of the built environment.

We recognize that our Earth is finite. We are dedicated to seek opportunities to enhance environmental quality and minimize the unwanted side effects of building developments, all for the sake of improving the well being of our present and future generations. To ensure the viability of creating a sustainable environment, we call for partnership, responsibility, unity and continuity throughout the community.

On the public front, we will continue to organize a variety of publicity events to instil a sustainable development mindset and to ensure its momentum; to post all the relevant updated guidelines on BD website to boost the public awareness on the benefits of proper maintenance and management of buildings and the built environment; and to engage the community prior to putting in place any legislative framework.

For industry stakeholders, we will continue to work in partnership with them to advocate the design and construction of environmentally friendly buildings. We will work in a bid to ensure that economic growth can develop hand in hand with social progress and upgrading of our built environment.

In our workplace, we will strive to promote green purchasing practice, avoid unnecessary wastage, promote recycling and energy efficiency, and make endeavour to move towards a paperless office. We will also continue to keep our staff abreast of the latest development in sustainability and to minimize adverse environmental impact arising from our daily office operation.

Further extending the partnership and cooperation with different parties within the community will help forge a sustainable future in which everyone will prosper. We sincerely invite you to provide us with your views and suggestions, which are vital for bringing our policies and practices towards a sustainable development.



Thank you for reading our report.

This report is also available for viewing at our website

http://www.bd.gov.hk/english/documents/index_env.html (English version)

or

http://www.bd.gov.hk/chineseT/documents/index_env.html (Chinese version).

For any suggestions, please call us through the hotline, or write to us either by e-mail or post to the following address:

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* (BD hotline is handled by '1823 Citizen's Easy Link' of the Government)