

Buildings Department Environmental Report 2000

1. Environmental Policy

1.1 The Buildings Department's primary responsibility is to promote building safety, enforce building standards and improve the quality of private building development. The Director of Buildings is the Building Authority responsible for the administration and enforcement of the Buildings Ordinance.

1.2 In support of the Government's objective to achieve the sustainable development of Hong Kong, the Buildings Department (BD) is committed to playing a leading role to promote a green built environment in Hong Kong, in addition to enforcing the required minimum safety and health standards. Internally, we promote the practice of green management in our workplace.

2. Green Measures Adopted in 2000

2.1 Working Group on Construction Efficiency and Environment

- (a) In October 1999, we set up a Working Group on Construction Efficiency and Environment 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.

The Working Group was chaired by the Director of Buildings and comprised building professionals, developers, contractors and government officials from various departments.

A working sub-group on 'Lean Construction' was also formed with the following 'Terms of Reference' : -

- (i) To put forward recommendations to BD on promoting the use of precast construction and system formwork to enhance construction efficiency and minimize construction waste.
- (ii) To make recommendation to BD on any necessary amendments or modification of the Buildings Ordinance and regulations to facilitate the use and specify technical standards for pre-cast construction and system formwork. The Working Group will also propose guidelines and Practice Notes for Authorized Persons and Registered Contractors for the use of the recommended methods and systems of construction.
- (iii) To explore as appropriate the adoption of Life Cycle costing for construction.

It is anticipated that the group will draft a Practice Note on 'Precast Concrete Construction' in 2001 and make other recommendations to the main Working Group.

- (b) We issued a Practice Note for Authorized Persons and Registered Structural Engineers (PNAP) in July 2000 on ways to encourage 'Waste Minimization' in 'The Provision of Fitments and Fittings in New Buildings'.

This Practice Note allows developers, under specified circumstances and conditions, to install certain sanitary fitments after the issue of Occupation Permit. This arrangement should reduce the number of fitments being discarded when new owners fit-out their premises.

The Practice Note also encourages developers to offer choices of doors and partitioning as well as floor and wall finishes.

- (c) We also promoted the minimization of construction and demolition waste through the issue of a PNAP in June 2000 encouraging building professionals to identify opportunities to prevent waste via planning and design, as well as construction and site management.

2.2 Provision of Floor Space for Material Recovery in New Buildings

The recovery rate for reusable and recyclable materials is low, especially in the domestic sector where it is only 8%. One reason for this low rate is that there is insufficient space within refuse storage chambers of most buildings for the separation and storage of such materials to permit recovery.

We proposed in 1999 to introduce an amendment to the Building (Refuse Storage Chambers and Chutes) Regulations making provision for material recovery chambers in new buildings. We also proposed that the space necessary to meet the requirements for refuse storage chambers and material recovery chambers will be disregarded from Gross Floor Area calculations for the purpose of the Building (Planning) Regulations.

The amendment regulation came into force in November 2000.

2.3 Consultancy Study on Lighting and Ventilation Requirements

In July 1999, we appointed a consultant to conduct a study on the lighting and ventilation requirements of buildings. The aim of the study is to formulate a new set of standard, which would adequately protect the health of occupants and ensure satisfactory quality of the indoor environment of all types of buildings in Hong Kong and yet would allow sufficient flexibility for functional and architectural design and allow for the optimum use of modern technology.

The consultant completed the very important part of the study in 2000 - data collection, which includes on-site survey (for residential buildings), opinion survey and international code comparison. The consultant had commenced to compile a Review Report to summarize and analyze the relevant findings. We estimate the consultancy study will be completed by the end of 2001.

2.4 Consultancy Study on Sanitary Fitments, Plumbing and Drainage Provisions for Buildings

This consultancy study aims to identify deficiencies in areas where improvements to the existing regulations on the design, construction, operation and maintenance of the sanitary fitments, plumbing and drainage provisions for buildings in Hong Kong. The review will take cognizance of the built environment, special local factors, environmental and material conservation, life styles, environmental sciences, building services engineering, human

behaviour and technology in the study.

We started the tendering for a suitable consultant in 2000. It is expected that a consultant would be appointed for the consultancy study by middle of 2001.

2.5 Green Buildings

As pledged in last year's report, a task force to promote the concept of green buildings, the 'Building Innovation Unit' was set up in July 2000. The objective of the unit is to encourage the design and construction of buildings that encompass the following features: -

- (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.

To encourage the adoption of green features in buildings, incentives such as exclusion from Gross Floor Area and/or Site Coverage calculations would be granted. Such features include balconies, wider common corridors and lift lobbies, communal sky gardens, podium gardens, acoustic fins, sunshades and reflectors, wing walls, wind catchers and wind funnels.

A Practice Note to promulgate the incentive scheme was scheduled to be issued in early 2001.

2.6 Review of OTTV Control

Control on the overall thermal transfer value (OTTV) of the envelope of a building will help to reduce electricity demand from air-conditioning and thus the emission of greenhouse gases from power generation.

In 2000, OTTV control under the Building (Energy Efficiency) Regulations continued to be

our key aim in achieving the Government's aim to help reducing energy consumption of a building.

In respect of the review on OTTV control mentioned in last year's report, we had completed the consultation with relevant stakeholders on the recommendations of the review in early 2000. The Code of Practice on OTTV was revised in June 2000 to promote further reduction of heat transfer through building envelope by tightening up the OTTV values.

2.7 Comprehensive review of the Buildings Ordinance

In order to facilitate innovative and environmentally friendly design and technology, we commenced a comprehensive review of the Buildings Ordinance and Regulations in 2000 with a view to modernising the legislation. Where possible prescriptive requirements will be replaced by performance-based requirements, allowing flexibility to achieve the requisite building safety and environmental standards.

2.8 In-house green measures

During 2000, continued efforts were made to save paper through placing recycle paper boxes on each floor, circulating information/documents on-line, printing on both sides of paper, minimizing use of hardcopies of document, reducing use of greeting cards etc. We completed the Phase I of the Government Office Automation programme in June 2000 with an office automation network connecting all directorate/senior professional officers, their personal secretaries and heads of functional units in the department. The system is also connected to the Government Communication Network to enable email communication with other policy bureaux and departments. In addition, we had implemented a computer program for booking of meeting rooms, eliminating the use of paper for booking and statistical purposes.

Increase in staff awareness on green management had also led to a more economical use of resources, as evidenced by a 12.6% decrease in envelope consumption in 2000. We had reduced our consumption on the hard copy of some publications. For example, the number of Government Telephone Directory and Government Gazette ordered was reduced by around 6% and 88% respectively.

3. Way Forward

3.1 In the coming year, we will continue to introduce more green initiatives in the building industry. To promote the construction of green and innovative building, we will introduce further incentives for developers and continue the comprehensive review of the Buildings Ordinance.

3.2 Internally, we will continue to do our best to improve the green environment in our workplace. Increased use of computers as an internal communication mean will further reduce our consumption of paper. We plan to install a computer system, the Building Condition Information System, which will include a document management system to minimize the need of duplicating paper documents and to pave the way for implementing a paperless office. In addition, we plan to implement a computer program for booking of vehicles so as to reduce paper consumption. We will also encourage our staff to initiate and/or support green campaigns.

Buildings Department

August 2001