2007 Environmental Report

Transport Branch
Transport and Housing Bureau

CONTENTS

INTRODUCTION

Transport and Housing Bureau (THB) is responsible for policy matters in two portfolios, viz., Transport and Housing, handled by the Transport Branch (TB) and the Housing Department (HD) respectively. This environmental report covers the environmental performance of TB of THB. On the part of the environmental performance of HD, please visit its website at http://www.housingauthority.gov.hk/en/aboutus/resources/publications/.

The Secretary for Transport and Housing is the head of the Bureau. She is assisted by the Permanent Secretary for Transport and Housing (Transport) and the Permanent Secretary for Transport and Housing (Housing) / Director of Housing. In addition, TB oversees the operation of their executive departments, namely, the Civil Aviation Department, Highways Department, Marine Department and Transport Department.

KEY RESPONSIBLITIES OF THE TRANSPORT BRANCH

We are responsible for the formulation of policies matters relating to the development of transport infrastructure, provision of transport services, traffic management, maritime transport and logistics, and air services. In the process of policy-formulation, sustainability is also a key consideration in the development.

The major areas of policy responsibilities include –

➢ to plan for and implement the construction and improvement of our transport infrastructure, with emphasis on railways;

➢ to further promote the usage of public transport services by improving their quality and co-ordination;

➢ to effectively manage road use, reduce traffic congestion and promote road safety;

➢ to continue to support environmental improvement measures in transport-related areas;

➢ to enhance and promote Hong Kong as an international and regional transportation and logistic hub;

➢ to enhance, in partnership with the Airport Authority, the competitiveness of Hong Kong International Airport and promote Hong Kong as an international and regional aviation centre; and

➢ to enhance the competitiveness of the Hong Kong Port and to strengthen Hong Kong's position as an international shipping and maritime centre.

ENVIRONMENTAL GOALS OF THE TRANSPORT BRANCH

We are committed to –

- ➢ ensuring that our policies are environmentally friendly;

- ➢ ensuring that all programmes and operations under our purview are conducted in an environmentally responsible manner; and

- ➢ enhancing staff's environmental awareness.

To achieve the above committed environmental goals, we give effect through pursuit of the following objectives -

LAND AND WATERBORNE TRANSPORT

- ➢ We will continue to providing transport infrastructure and services in an environmentally friendly manner.

CIVIL AVIATION

- ➢ We aim to ensure that the legislative framework and administrative measures are effective in minimizing the environmental impact of aircraft operations.

- ➢ We will continue to work with Airport Authority (AA), the competitiveness of to ensure that the environmental impacts of airport development and operations are minimized and that AA and Civil Aviation Department are pro-active in minimizing pollution and disturbance from activities at Hong Kong International Airport.

PORT AND MARITIME SERVICES

➢ We aim to ensure that our legislative framework and administrative measures are effective in minimising the environment impact of shipping and port operations.

➢ We will continue to work, in conjunction with the Environmental Protection Department and the port and maritime community, to ensure that the environmental impact of port development and operations is minimized.

LOGISTICS

➢ We will continue to work with the logistics community to promote measures to protect the environment and to ensure that the environmental impact of logistics operations is minimised.

ENVIRONMENTAL MANAGEMENT AND PERFORMANCE

LAND AND WATERBORNE TRANSPORT

Hong Kong is one of the most densely populated cities in the world. A safe, efficient, reliable and environmentally friendly transport system is important to the sustainable development of the city. On environmental management, we will continue to press ahead with the following initiatives -

- ➢ priority for efficient and environmentally friendly transport modes;

- ➢ reduction in traffic congestion and better inter-modal co-ordination;

- ➢ greater emphasis on pedestrian facilities; and

- ➢ application of Information Technology (IT) to transport management.

☐ *Priority for efficient and environmentally friendly transport modes*

Railways are environmentally friendly, safe and efficient mass carriers in Hong Kong, carrying about 35% of our public transport passengers. With the commissioning of the Sheung Shui to Lok Ma Chau Spur Line in August 2007, the total length of our railway under operation is about 212 km. The railway network will be further expanded to about 219 km through the addition of the Kowloon Southern Link and Tseung Kwan O South Line in 2009.

Railway Development Strategy 2000 has recommended the implementation of a number of new passenger lines, as follows -

- ➢ Kowloon Southern Link;

- ➢ West Island Line (WIL);

- ➢ Shatin to Central Link (SCL);

- ➤ Hong Kong section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL);

- ➤ South Island Line (SIL);

- ➤ Northern Link (NOL); and

- ➤ North Hong Kong Island Line (NIL).

The MTR Corporation Limited (MTRCL) is working on the detailed design of WIL and the construction works for this railway project is expected to commence in the coming year. The MRTCL is also carrying out the preliminary planning and design of four other railway projects, namely SCL, XRL, SIL and the extension of the existing Kwun Tong Line to Whampoa as Kwun Tong Line Extension.   The NOL and NIL are under review in light of future demands.

To ensure that resources for railway projects are effectively invested, the Government reviews from time to time the priority of the railway projects on the drawing board taking into account changes in the community's transport needs, population projection and land use planning.

With our policy for better use of railways as the backbone of the passenger transport system, the Government will continue with its efforts to enhance the co-ordination between railway and other public transport modes to avoid wasteful duplication of public transport resources and alleviate traffic congestion. Railway developments and supportive infrastructure will be designed and built to better serve community needs.   The provision of the new interchange subway system between the East Tsim Sha Tsui Station and the Tsim Sha Tsui Station is a case in point.

☐ ***Reduction in traffic congestion and better inter-modal co-ordination***

To reduce traffic in busy areas and hence the impact on the environment, we have taken the following measures -

- ➤ implementation of more bus-bus, bus-rail and green minibus-rail interchange schemes;

- ➤ rationalization of bus routes and stops; and

- ➤ introduction of Park-and-Ride schemes by railway corporations.

Bus-bus interchange schemes

Bus-bus interchange schemes are pursued as one of the measures to achieve more efficient use of bus resources, relieve congestion, minimize environmental impact on busy corridors, and reduce the need for long-haul point-to-point bus routes.

Up to end 2007, a total of 228 bus-bus interchange schemes offering fare concessions of $0.1 to $28 to passengers had been implemented. Through the provision of fare discount incentives and selection of convenient interchanging locations, the implementation of these schemes is well received by the public. On average, some 120,000 passengers use these interchanges everyday. The schemes have also improved the bus network and facilitated inter-district travel whilst minimizing the need for introducing additional bus routes.

Bus-rail and green minibus-rail interchange schemes

To promote the interchange between rail and other public transport modes, interchange discount concessions in the form of bus-rail interchange (BRI) and green minibus-rail interchange (GRI) schemes have been introduced. As at end 2007, three franchised bus routes, one cross-boundary bus route and 55 green minibus routes were offering fare concessions to passengers involved in the BRI (ranged $1.0 to $5.0) and GRI (ranged $0.3 to $3.5) schemes for the MTR.

Rationalization of bus routes and stops

To improve the efficiency of bus operation and to alleviate their traffic and environmental impact, the Government has been working together with the franchised bus companies to rationalize bus services and improve bus stopping arrangement.

Through route amalgamation, truncation, modification and frequency adjustment, about 50 bus trips passing through Central and 10 bus trips passing through Yee Wo Street per day were removed in 2007. On the Kowloon side, about 210 bus trips were removed from Nathan Road.

Since January 2002, bus companies have deployed only Euro II and Euro III buses on Yee Wo Street to help enhance the environment in the pedestrian-busy corridor. The Government has been working with franchised bus companies on deployment of more Euro II and above buses on other busy corridors including Hennessy Road, Queensway, Des Voeux Road Central and Nathan Road. As at end

2007, about 87% of the buses deployed on the above busy corridors were Euro II and above buses.

Park-and-Ride schemes

Park-and-Ride (PnR) facilities are usually provided at public transport hubs strategically located on the fringe of busy business/urban areas so that motorists can leave their cars behind and use public transport to complete their trips.

PnR schemes have been operating at Hong Kong, Kowloon and Tsing Yi Stations of Airport Express, at Choi Yuen Road near East Rail's Sheung Shui Station, at West Rail Kam Sheung Road Station, at Choi Hung Station and some commercial carparks located near Olympic Station of the Tung Chung Line and Hang Hau Station of the Tseung Kwan O Line.

PnR facilities will also be provided in the future property developments at Tsuen Wan West Station, Tuen Mun Station and Tin Shui Wai Station of West Rail, and Wu Kai Sha Station of Ma On Shan Rail. In planning future rail stations and major transport interchanges, especially those on the fringe of the urban area, PnR facilities will be developed wherever appropriate.

Park-and-Ride Facilities

☐ **Greater emphasis on pedestrian facilities**

Promoting better pedestrian environment is one of the means to enhance the quality of life. We continued to implement additional pedestrian schemes in 2007. In Mong Kok, the trial part-time pedestrian scheme at Sai Yeung Choi Street South, Nelson Street, Soy Street and Tung Choi Street has been implemented.

Sai Yeung Choi Street South
(part-time pedestrian scheme)

Footpath widening is an effective means to improve pedestrian environment. We are making good progress on footpath widening works and landscaping works in various districts, including Nathan Road (between Mody Road and Granville Road) in Tsim Sha Tsui; Shanghai Street and Saigon Street in Jordan; Pei Ho Street, Nam Cheong Street, and Yu Chau Street and Fuk Wing Street in Sham Shui Po.
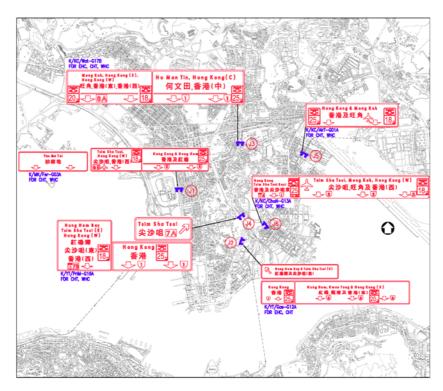
The comprehensive study jointly commissioned by Transport Department (TD) and Planning Department for Tsim Sha Tsui with the objectives of beautifying the district and improving the pedestrian environment has completed in 2007. A series of improvement schemes will be implemented after consulting the relevant stakeholders.

☐ *Application of IT to transport management*

We are continuing to promote the deployment of advanced information and telecommunication technologies to enhance the performance of the transport system in Hong Kong, thus reducing fuel consumption, vehicle emissions and travelling time. We enhanced the Journey Time Indication System and the Traffic Condition Service on the Internet, and continued to expand the Area Traffic Control system to other districts.

Journey Time Indication System

In the light of the satisfactory performance of the Journey Time Indication System on Hong Kong Island, we will expand the system to Kowloon side. The system will provide the latest traffic situation for motorists crossing the harbour from Kowloon side so that they can make informed choices of the route and avoid

congested tunnels. The journey time and average vehicle speed along major tunnel approach roads in Kowloon will also be shown on TD's website. The project will commence in late 2008 for completion in mid 2010.

Proposed Locations of Journey Time Indicators in Kowloon

Traffic Condition Service on the Internet

Since 1999, images captured from the closed-circuit television (CCTV) cameras at various strategic locations on the road network have been broadcast to the public via the Internet. The service is well received by the public. In 2006, the number of CCTV images available on the Internet has been increased to 120. Since 2007, the CCTV images have been disseminated through additional channels such as mobile phones and fixed telecommunication network telephones.

Area Traffic Control system

In view of the significant benefits of the Area Traffic Control (ATC) system in optimizing the utilization of road capacity, minimising traffic delay and reducing vehicle emission, the system was expanded to Tai Po and North districts in 2005 and will be further expanded to Tuen Mun and Yuen Long districts in 2008. In 2006, we have replaced the ATC system on Hong Kong Island with a new state-of-the-art system to enhance performance. Similarly, the replacement of existing ATC system in Kowloon,

Sha Tin and Tsuen Wan districts and expansion of the system to Tseung Kwan O have commenced and is expected to complete in 2011.

CIVIL AVIATION

Airport Authority (AA) and Civil Aviation Department (CAD) have implemented a range of initiatives to safeguard the environment.   The former is responsible for the operation and development of Hong Kong International Airport (HKIA) and the latter is the regulator for civil aviation and provider of air traffic control services.

While it is AA's guiding principle to ensure that the environmental challenges created by the airport are understood, managed effectively and minimised, business partners are also required to adopt the same responsible approach in all aviation related activities at the airport.

While increasing passenger and cargo volumes, AA managed to maintain the overall energy consumption level by implementing various initiatives.   Variable frequency motors and more efficient refrigerants for the cooling system are used to improve cooling efficiency.   In addition, less efficient lighting was replaced by energy efficient alternatives, such as T5 fluorescent tubes and Light Emitting Diode (LED), during regular maintenance cycles.

Significant energy saving was achieved in 2007 -

➢ 15% saving on the lighting system by optimising the lighting level against operational schedules;

➢ 10% saving on the air-conditioning system by optimising the system against operational schedules for Terminal 2, Hong Kong International Airport Tower and Airport World Trade Centre.

AA made a public commitment to minimising air pollutant emissions at HKIA by signing the Hong Kong General Chamber of Commerce's 'Clean Air Charter' in May 2007.   Our efforts to minimise air pollutants generated by the airport include -

➢ encouraging the use of Fixed Ground Power System instead of auxiliary power units during aircraft turnarounds;

➢ requiring all new airside restricted area vehicles to be fuel efficient;

➢ providing the cleanest diesel and gasoline in the airfield area;

➢ replacing AA's vehicle fleet in phases with fuel efficient/hybrid vehicles;

➢ conducting trial use of biodiesel (from used cooking oil) in AA's diesel vehicles.

CAD implemented a series of aircraft noise mitigation measures and closely monitored their implementation.   Such measures include noise abatement departure procedures, the Continuous Descent Approach procedure to reduce aircraft noise experienced by residents in Sai Kung and Ma On Shan, and use of flight paths over water to avoid overflying residential areas whenever possible.

CAD requires all airlines to adopt the noise abatement departure procedures stipulated by the International Civil Aviation Organization for aircraft departing to the northeast of the airport.

In 2007, CAD recorded that 85.3% of arriving aircraft were able to land from the southwest of HKIA (i.e. over water) between midnight and 7 am; and 99.3% of aircraft departing to the northeast of the airport were able to take the southbound route over the West Lamma Channel between 11 pm and 7 am.

Older and noisier aircraft stipulated in Chapter 2 of Annex 16 Volume I Part II of the Convention on International Civil Aviation are banned from operating at HKIA.   All aircraft operating at HKIA meet stringent noise standards -

➢ CAD provides periodic reports on aircraft noise measurements, performance of noise mitigation measures, and means to enhance the noise mitigation measures.   CAD also meets members of the public and maintains a hotline to handle enquiries or complaints on aircraft noise issues.

➢ CAD works closely with Environmental Protection Department (EPD) and helicopter operators to ensure that the development proposal comply with all relevant environmental standards.   It also consults the public on these proposals.

PORT AND MARITIME SERVICES

The Marine Department (MD), which is responsible for maritime and navigational safety matters within the waters of Hong Kong, has implemented various initiatives to protect and improve the environment -

➢ MD operates a fleet of patrol vessels to ensure compliance with marine regulations against offences such as littering, illegal transfer or discharge of oil, and smoke emission by ships in Hong Kong waters.

➢ MD monitors the exhaust of vessels and conducts spot checks on vessels within Hong Kong waters. On receipt of complaint and sufficient evidence of excessive dark smoke emission causing nuisance, MD will initiate prosecution.

➢ MD adopts performance-based contracts for the scavenging of floating refuse and collection of refuse from ships and boats to ensure the effectiveness and efficiency of the marine cleansing services.

➢ MD maintains a Maritime Oil Spill Response Plan to co-ordinate departmental actions for handling oil pollution incidents in Hong Kong waters and continues to fulfill the pledge to respond on site within two hours of reported oil spillage inside harbour limits.

➢ MD maintains energy saving plans to minimize energy consumption in the China Ferry Terminal and the Macau Ferry Terminal by economising on the use of lighting and air conditioning.

➢ MD has adopted green measures on all fronts in the operation of the Government Dockyard, including annual review and upgrading of facilities with environmentally friendly products, regular noise surveys and measurements for plant equipment, etc.

➢ MD implements relevant international conventions on marine pollution prevention through the enactment and enforcement of legislation. These conventions include the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78), the International Convention on Oil Pollution Preparedness Response and Co-operation 1990 and the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters. These conventions apply to all ships in Hong Kong waters and Hong Kong registered ships anywhere in the world.

➢ MARPOL 73/78 has six Annexes to prevent or minimize pollution from ship operations in respect of (I) oil; (II) noxious liquid substances; (III) harmful substances in packaged form; (IV) sewage; (V) garbage; and (VI) emissions into the atmosphere. All six Annexes have been extended to Hong Kong Special Administrative Region.

➢ We also work closely with operators of container terminals, mid-stream and river trade operators to preserve a clean and safe environment for sea transport.   We encourage the application of Information Technology (IT) in port operations.   For example, MD has established an "Extensible Markup Language Dangerous Goods System" to facilitate the direct system-to-system submission of dangerous goods manifests by shipping operators.   As to the provision of e-business service, the Electronic Business System has provided features such as online issuance of permits, online payment, auto-approval of applications and other related services. Port operators have widely adopted the Electronic Data Interchange for exchanging information in day-to-day operation.   The above measures have vastly enhanced the efficiency and competitiveness of the port as well as reduced the consumption of paper.

➢ Container terminal operators have also implemented other measures, such as the use of energy saving equipment, reduction of unnecessary light fittings, installation of grease traps and oil interceptors in workshops and kitchens, engaging specialized contractors to handle waste disposal, and the use of liquefied petroleum gas shuttle buses to reduce air pollution.

➢ The Ecology Study on northern Lantau was completed in late 2007, which indicates that large scale reclamation required for the development thereat would cause habitat loss for Chinese White Dolphins.   Given the ecological concern, the Government decides to actively study the southwest Tsing Yi site for the development of Container Terminal 10.

➢ We recognize that the protection of the marine environment is not only important in its own right but also instrumental in enhancing Hong Kong's position as a world-class port.   In the course of port planning and development, we will continue to work with EPD and the Sustainable Development Unit to comply with relevant environmental impacts and sustainability assessment requirements.

LOGISTICS

A detailed feasibility study has been commissioned for the Lantau Logistics Park is underway.   The study aims to ensure compliance with the relevant statutory environmental impact and sustainability assessment requirements.

We encourage the use of paperless exchange of information in the logistics industry through the promotion of wider use of IT along the supply chain.   For example, the On-board Trucker Information System (OBTIS) pilot study was launched in 2007.   OBTIS provides an information and technology platform for enhanced efficiency in fleet management and better communication between truckers and stakeholders of the supply chain.

GREEN OFFICE MANAGEMENT

MANAGING PAPER AND ENERGY CONSUMPTION

It is our mission to improve and conserve our environment, and to optimize the use of resources to reduce pollution and waste. We strive to implement various green housekeeping measures in daily office operations with a view to maintaining a green workplace. Our main focus of the green office management is on reducing paper and energy consumption.

With the advocacy of environmental conservation over the past few years, staff awareness in this respect has been highly enhanced and staff members have developed good habits practices by adopting of the following green initiatives -

☐   *On Paper Consumption*

➢   to use recycled paper in office operations;

➢   to print and photocopy on both sides of paper;

➢   to reuse single-side used paper for drafting, printing and receiving fax;

➢   to reuse envelopes and loose minute jackets for internal transmission of documents and correspondence;

➢   to communicate and disseminate information by electronic means within bureaux/departments as well as with members of the public;

➢   to avoid printing or photocopying documents unless hard copy is absolutely necessary;

➢   to distribute softcopies by emails, diskettes or CD-ROMs instead of print-outs; and

➢   to upload reports, circulars and other publicity materials on e-bulletin board, intranet and internet website for general reference.

☐ *On Energy Consumption*

➢ to turn off some lighting when the occupancy is low, e.g. during lunch and after office hours;

➢ to switch off unnecessary lighting in public communal areas, such as reception counters, corridors, lift lobbies, etc., during lunch and after normal office hours;

➢ to reduce the use of high power incandescent lamps;

➢ to switch on air-conditioning for pre-cooling no earlier than 15 minutes before conference rooms are to be occupied and switch off as soon as the room is unoccupied;

➢ to activate the standby mode or hibernation mode features of personal computers;

➢ to switch off personal computers (including both monitor and computer processing unit) after office hours;

➢ to switch off non-essential servers at night, on Saturday and public holidays;

➢ to appoint energy wardens and assign last-man-out to check the effectiveness of energy saving measures; and

➢ to encourage staff to walk up or down one or two storeys rather than using the lift.

GREEN PURCHASING

"Green" stationery items supplied by the Government Logistics Department, such as clutch pencils, refillable ball pens, recycled pencils and furniture made of chip board, are now widely used in THB. Other green items e.g. recyclable laser printer toner cartridges and box files made of recycled paper are also ordered from contractors for office use.

It has all along been our practice to purchase only office equipment such as photocopiers and printers with Energy Efficiency label. We also use e-tender whenever applicable.

STAFF AWARENESS

The support and cooperation of from staff members are always the key to the success of our green office management.   For the years to come, we will continue to work closely with our staff with a view to fostering a green culture and ensuring that our offices operate in an environmentally responsible manner.

VIEWS AND SUGGESTIONS

If you have any views and suggestions in connection with this Environmental Report, you are welcome to contact us via email at thbenq@thb.gov.hk or by fax on 2868 4643 or write to us at 15/F., Murray Building, Garden Road, Central, Hong Kong.