

# FRED KAN & CO.

Solicitors & Notaries

## URBAN PLANNING AND ENVIRONMENTAL LAW QUARTERLY

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### 簡家驄律師行 . 城規環保簡訊

*In this edition we consider - in the context of water, waste and air - whether Hong Kong has improved in its commitment and ability to provide effective protection of the environment from pollution.*

#### The Editors

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### Ten Years On: Have We Improved Environmental Protection in Hong Kong?

In the editors' archives we came across a Hong Kong Government Information Services Publication, *Hong Kong: the Facts – Environmental Protection*, issued in September 1991. Today, more than ten years later, it is interesting to compare some of the objectives for more effective environmental protection set out in this publication with the reality of the quality of our environment today. Space does not permit an in-depth analysis, and so we restrict our comments to just several aspects of environmental concerns in 1991 and the extent to which these have been addressed in the ten years since.

In *Environmental Protection* the primary environmental problems were summarized as follows:-

*Aspects that have given rise to public concern, or are considered by the Government to require particular attention, include: pollution of streams in the New Territories by livestock wastes; smoke emissions from diesel-engined vehicles; various water pollution black spots; and the continuing need to dispose, in an*

*environmentally satisfactory manner, of the large amount of sewage and wastes generated by the community.*

The author then states that in response to these environmental concerns:

*A comprehensive and closely integrated programme for the protection of Hong Kong's environment has been developed over the past decade. It comprises four complementary elements: environmental planning to avoid creating new problems in the future; legislation to ensure adherence to pollution controls; facilities and services to provide for the collection and disposal of the wastes generated by the community; and consultation and monitoring activities to support policy development and other aspects of the programmes.*

#### Ten years on...

#### *Institutional changes*

The former Secretary for Planning, Environment and Lands became, on 1 January 2000, the Secretary for Environment and Food in charge of the Environment and Food Bureau. This was seen by the government as a "first step in implementing an ambitious

environmental agenda set out in the Chief Executive's policy address in October 1999".+

The Director of Environmental Protection continues to be responsible for technical direction and efficient management of the Environmental Protection Department (EPD) within the Environment and Food Bureau. The EPD's responsibilities include policy-making, monitoring environmental quality, management of waste disposal facilities (including transfer depots), advising on specific development projects in respect of their environmental implications and, most importantly, enforcement of our environmental legislation. The EPD has a central office plus six Local Control Offices employing more than 1,300 staff.

In 1991 the principal advisory body to the government on environmental issues, other than the EPD itself, was the Environmental Pollution Advisory Committee. This has since been replaced by the Advisory Committee on the Environment. Additionally, Legco has established a Panel on Environmental Affairs which conducts regular hearings concerning Hong Kong's more serious environmental problems.

The Environmental Campaign Committee, which was formed in 1990, continues its work which is primarily in the field of public education on environmental matters.

Various non-government organisations (NGOs) have also played their part during the previous ten years (and before then) to attempt to reform Hong Kong's attitude and standards in respect of caring for our environment. The most prominent of these NGOs have been operating in Hong Kong for longer than ten years. For example, The Conservancy Association was founded in 1968, and the Friends of the Earth in 1983. Other, more specifically focused NGOs which contribute to limiting Hong Kong's environmental degradation, include The Green Lantau Association and The Hong Kong Marine Conservation Society (established 1989 and 1991 respectively).

### **Air Quality**

Among the many environmental problems we have, Hong Kong's generally poor air quality probably causes most public concern. The *Air Pollution Control Ordinance* (Cap. 311) was enacted in 1983 to impose wide-ranging controls on industry and other sectors in order to reduce emissions of air-pollutants. As is the case with most of our legislation for the protection of the environment, the detail of protection measures is found more in subsidiary legislation and technical memoranda than the ordinance itself.

In 1987 regulations were enacted establishing Air Quality Objectives (AQOs) for Hong Kong. The AQOs reference

seven common air-pollutants, which remain the basic guide to our air quality today.

Perhaps the most significant step forward in improving air quality has been the introduction of regulations requiring the use of lead-free petrol, imposing vehicle emission limits, and more recently (2001), requiring new taxis to use liquefied petroleum gas (LPG) rather than traditional diesel fuel.

Unleaded petrol became available in Hong Kong in April 1991. This enabled the government to introduce emission limits for vehicles. The first of these regulations was proclaimed in early 1992. Since then, stricter standards have been imposed from time to time. In 2001 Euro III standards were imposed on vehicles of various categories. LPG is now also widely available in Hong Kong.

These and other air pollution control measures have arguably resulted in some degree of improvement in overall air quality, although frequent readings above the World Health Authority maximum of 100 taken from various air quality monitoring

stations in urban Hong Kong might suggest otherwise. The most dramatic improvement is in vehicle emission levels which now, for both petroleum and diesel vehicles, are a fraction of the levels of 1990/91. Improved statistics correspond with the introduction of restrictions on vehicle emissions. In 2000, on-the-spot fines for smoky vehicles were increased from \$450 to \$1,000. In the same year, 64,000 vehicles were reported and tested by EPD.

Statistics published in 2001 by EPD

indicate that, broadly speaking, Hong Kong is achieving its AQOs, although there are monitoring centres where this is not always the case.

### **Water Quality**

By 1991 six Water Control Zones had been established pursuant to subsidiary legislation under the *Water Pollution Ordinance* (Cap. 358). By 1995 the entire territory of Hong Kong had been divided into water control zones which form the basis for the government's efforts to improve the quality of Hong Kong's marine waters.

Hong Kong's streams and rivers were in a seriously degraded condition in 1991, largely due to indiscriminate and irresponsible disposal of livestock and other agricultural wastes. Since then, controls (the Livestock Waste Control System) have been introduced with the aim of prohibiting disposal, directly and indirectly, of livestock wastes in rivers and streams. In some areas the keeping of livestock is prohibited altogether to try to ensure that this objective is met.

Nevertheless, although since 1991 several of the worst-case rivers and streams have had their pollution levels reduced significantly, such as Shing Mun River (e.g. 47.4% of rivers

*Among the many ecological problems we have, Hong Kong's generally poor air quality probably causes most public concern.*

in 2000 were classified “excellent” as against 19.7% in 1990), pollution of inland waters remains a serious and difficult problem. The government has now conducted a study of options as alternatives to legislative controls with the aim of further improving agricultural practices so as to reduce the pollutant loads which many streams and rivers continue to bear.

In terms of marine waters, direct discharge of untreated sewage and other wastes into Victoria Harbour (and other coastal-waters) remains a significant cause of poor water quality. Certainly some improvements have occurred since 1991, but today we still dump approximately 1.5 million tonnes of untreated sewage into Victoria Harbour alone each day.

A master sewage treatment plan for urban and New Territories areas has long been in place but is under review now because international experts in 2000 suggested that the plan could be improved on. By the end of 2001 70% of waste water generated from urban area surrounding Victoria Harbour will be collected and treated before discharge, which is likely to result in a significant improvement in the Harbour’s water quality over time. This is the result of one of several expensive sewerage disposal schemes undertaken by the government during the last ten years. Billions of dollars have been spent, with many more billions still to be spent. There is hope that the result eventually will be a considerably higher level of marine water quality. By way of comparison, in 1991 HK\$3.4 billion was spent on sewerage infra-structure works, but in 2000 the figure was HK\$19.5 billion. However, most of Hong Kong’s 700 villages still rely on antiquated septic systems for disposal of sewage.

In view of our close proximity to southern mainland China, it has been recognised since 1990 that Hong Kong and the Chinese authorities, particularly Guangdong Province, need to implement co-operative programs if regional marine water quality is to be improved at all.

EPD and Guangdong officials have met regularly since 1990 to monitor regional pollution and discuss co-operative programmes for addressing pollution,

particularly in the environmentally sensitive areas of Deep Bay and Mirs Bay. For example, the EPD has recently participated in China’s *State Oceanic Administration’s Second National Marine Pollution Baseline Survey* with particular reference to preparation of the *South China Sea Regional Report*. EPD has also joined China’s *National Marine Environmental Monitoring Network*.

To assist regional co-operation, monitoring stations have been established since 1990 at strategic points throughout Hong Kong. In all there are 75 marine and 82 river sampling stations. Data from these are used by EPD to assess the attainment of water quality objectives in both inland and marine waters. Most recent statistics published by EPD indicate that with reference to the medium of total inorganic nitrogen, for example, Hong Kong’s marine water quality standards have not significantly improved since 1990.

#### **Waste Disposal**

As well as the serious problem of environmentally responsible disposal of sewage, Hong Kong constantly has battled with handling various kinds of wastes, including domestic waste, commercial and construction wastes and special category wastes, such as medical and chemical wastes.

In 1991 the *Waste Disposal Ordinance* (Cap. 354) was the principal legislation controlling the collection, treatment and disposal of wastes. Since 1991, numerous sets of regulations have been enacted to deal with specific aspects of waste disposal. We have mentioned already the regulation controlling or prohibiting the disposal of livestock waste as one example.

Probably the most immediate beneficial environmental effect resulted from implementation of the *Waste Disposal (Chemical Waste) (General) Regulations* of 1992. These regulations control all aspects of the handling of toxic chemicals. Through this legislation the government has imposed a “cradle to grave” regime for more environmentally responsible (and safer) collection, storage, transport and handling,

treatment and final disposal of chemicals. Strict controls and licensing provisions are imposed by the regulations.

However, to its credit the government did not rely simply on imposing regulatory controls when addressing what was, in 1991, the top priority waste disposal problem. In 1993 the Tsing Yi Chemical Waste Treatment Centre, built at a cost of HK\$1.3 billion, was commissioned. Today, most chemical wastes are disposed of through this high temperature incinerator, although some are still dumped in Hong Kong’s three main landfills. Once the centre was established the statistics for responsible disposal of chemicals improved dramatically. In 1991 most chemical wastes were dumped in unofficial landfills or in Victoria Harbour. In 1990 approximately 20,000 tonnes were accepted in official landfills (where, presumably, safeguards were taken to render them harmless and to prevent damage from leachates). In 2000 over 100,000 tonnes of wastes were disposed of at the Tsing Yi centre, with a small additional quantity continuing to be disposed of in landfills for reasons which are not clear.

There was a problem in 1991 (and there continues to be a problem) with providing sufficient landfills for the huge volume of wastes – more than 18,000 tonnes per day – generated in Hong Kong. Three large landfills were built in the Northern Territories during the 1990s at a cost of HK\$6 billion but these will be filled within the next 10-15 years.

With the introduction of the three major landfills and the establishment of seven supporting waste - transfer stations throughout the islands and territories of Hong Kong, plus the very important steps taken to deal with disposal of chemical wastes, environmental damage from inappropriate waste disposal has been reduced since 1991. However, there is still a very long way to go before it can be said that Hong Kong is disposing of its vast volumes of waste in an environmentally effective manner.

There are two other very important aspects associated with waste treatment

and disposal: waste reduction and the re-use/recycling of waste materials.

Unfortunately, our per head rate of generation of waste has increased quite significantly since 1991, despite public education campaigns run by the government and the work of the Waste Reduction Committee since its establishment in 1999. In 1990 Hong Kong had a population of 5.6 million which generated municipal solid wastes of approximately 7,100 tonnes per day. In 2000 more than 9,000 tonnes per day of municipal wastes were generated by 6.8 million people, an increase of 32%.

Recycling of wastes has been a little more encouraging. Presently Hong Kong recycles about 35% of its municipal waste (mainly commercial and industrial wastes) which the government aims to increase to approximately 60% by 2007. In *Environmental Protection* recycling of waste did not get a mention. So in this regard, at least, we have as a community moved forward.

Recently the government has made available areas of low-cost land to help private recyclers establish facilities. For a long time recyclers had complained that it has been impossible commercially to procure conveniently situated land for collection depots. Commercial recycling of waste already earns Hong Kong significant export income (HK\$2.2 billion in 2000). A mix of market forces and government assistance should continue the improvement in our rate of recycling in the future, although this would be more dramatic if the government introduced additional financial incentives for recycling beverage (and other) containers and imposed financial disincentives for over-use of consumer goods packaging. It is perplexing that a government facing waste disposal problems on a scale greater than most other countries still refuses to introduce compulsory deposits on beverage containers, or require supermarkets to charge for plastic bags, for example

### **Conclusion**

Even a brief overview of the facilities, practices and legislation put in place in Hong Kong since 1991 put indicates that

environmental protection has generally improved. Nevertheless, the improvement could and should have been much more dramatic. Undoubtedly, a major reason this has not been the case is the continuing apathy of Hong Kong people toward environmental issues. But also there is a general lack of political will in respect of a fundamental element of effective environmental protection, namely enforcement of our environmental legislation. Too few are prosecuted, and when they are convicted, penalties imposed by our courts are, on average, demonstrably inadequate in the context of the possible maximum penalties provided for under the legislation, and, more importantly, the enormous cost – in terms of dollars and lifestyle – Hong Kong suffers from pollution. In 2000, fines imposed for approximately 1800 convictions under all environmental legislation - with many being repeat offenders - totalled only HK\$20.42 million. Possible maximum fines for individual second (and further) offences exceed HK\$2 million under key legislation.

As well, the EPD has never sought to recover clean-up costs from a convicted polluter, although there is provision to do so in the *Water Pollution Control Ordinance*.

Experience in other jurisdictions indicates that prosecuting and penalising repeat offenders robustly is the surest way of changing community and business attitudes toward environmental pollution. If the government and judiciary reflected this experience in dealing with polluters, we could expect much greater improvement in environmental quality over the next ten years than we have had over the last decade.

[<sup>+</sup> This quote and statistics quoted in this article are from the EPD's most recent report on the state of the environment in Hong Kong, *Environment Hong Kong 2001*.]

## **LEGISLATION DIGEST**

### **ANIMALS AND PLANTS (PROTECTION OF ENDANGERED SPECIES) (EXEMPTION) (AMENDMENT) ORDER 2001**

**(Made under section 18 of the Animals and Plants (Protection of Endangered Species) Ordinance (Cap.187) after consultation with the Executive Council)  
(L.N.236 of 2001/L.S. No.2 to Gazette No.45 of 2001)**

[This Order shall come into operation on the day appointed for the commencement of the Animals and Plants (Protection of Endangered Species) Ordinance (Amendment of Schedule) Notice 2001 (L.N.237 of 2001).]

The Animals and Plants (Protection of Endangered Species) Ordinance (Cap.187) ("Ordinance") imposes restrictions on the importation, exportation and possession of certain endangered animals and plants and parts of such animals and plants for their protection. Endangered (i) animals, (ii) animal parts, (iii) plants, and (iii) highly endangered species are specified Schedules 1, 2, 3 and 6 respectively.

Section 18 of the Ordinance allows the Chief Executive to exempt, by order published in the Gazette, certain animals, plants etc. from the restrictions. By virtue of this section, the Animals and Plants (Protection of Endangered Species) (Exemption) Order (Cap.187 sub. leg.) ("Exemption Order") was made. The above Order amends the Exemption Order:-

#### **Exemption in respect of possession or control of skin, corals, etc.**

Hwamei or Melodious Laughing Thrush, Asian Box Turtles, the root of Asian Ginseng, the root of Desert-living Cistanche and Spring Adonis are added to this paragraph which specifies various exempted species.

**Exemption in respect of import, export, possession or control of certain scheduled plants**

This new paragraph provides that certain, artificially propagated plants such as Easter Cactus, Christmas Cactus etc. are excluded from importation, exportation, possession or control restrictions imposed by the Ordinance.

**HONG KONG BRIEFING**

*Future of unique Long Valley wetland still far from secure*

Following a decision by the Director of Environmental Protection not to issue an environmental permit for the Lok Ma Chau line, the KCRC lodged an appeal but lost its case in July. It was hailed as a victory for green groups and the environment.

However, the truth is that victory for the environment is still far from sight, and the sensitive ecology of Long Valley remains in danger. The central issue, often lost sight of, is the conservation of Long Valley, the largest privately owned freshwater wetland in Hong Kong.

During the next decade the valley will gradually be surrounded by built-up areas, such as Kwu Tung New Town. It is conceivable that the owners of Long Valley will one day exert enough pressure on the government to have the current land-use designation changed to allow development. This has occurred at other ecologically sensitive sites in the past.

It is obvious that the long term conservation of Long Valley has to involve a transfer of its ownership from private to public hands. A preliminary estimate of the funds required to acquire the whole of Long Valley is substantially less than HK\$2 billion. The most important community consensus emerging out of the Long Valley debate is that conservation of the natural environment is a worthwhile cause, and is worth paying for.

Green groups maintain that Long Valley must be acquired by the government to ensure its conservation, with its ownership either transferred to the government or to an independently managed nature conservation trust directly accountable to the public. During the past year, the community has clearly demonstrated its will to conserve Long Valley, and any solution falling short of an ownership change is no solution at all.

There is also a need to remove unnecessary uncertainties for developers if and when they make their best efforts to put up sustainable development solutions. To this end, early dialogue among all stakeholders would be helpful.

At a recent seminar hosted by the Conservancy Association, on one point consensus was reached by all speakers, including representatives from the KCRC, developers, the legal profession and green groups. All are in favour of a clear and explicit conservation policy which sets out no-go areas and priority sites for conservation. In this way, both developers and conservationists can most likely achieve what they want without incurring avoidable social costs.

[SCMP, 7 December 2001]

***Light buses using cleaner fuel***

The government has proposed an incentive scheme to encourage existing diesel public light bus owners to replace their vehicles early with ones which are run on liquefied petroleum gas (LPG) or electricity. The proposal is an offer of a one-off grant of HK\$60,000 if owners choose to replace their diesel light buses with LPG ones, or a one-off grant of HK\$80,000 if they choose to replace them with electric ones.

To encourage early replacement, owners of buses 10 years or more old at the time of replacement would have until the end of 2003 to apply for the grant. The deadline for applications from owners of buses below 10 years of age at the time of replacement would be the end of 2004.

At present, electric vehicles, including electric light buses, are already exempt from the payment of First Registration

Tax (FRT). Under the proposed incentive scheme, owners of existing diesel private light buses who replace their vehicles with LPG ones will also be exempted from FRT payment for the new LPG light buses, with the same deadlines for applications as for the public bus one-off grants. The current FRT for a light bus is four per cent of its taxable value.

The Secretary for the Environment and Food, Mrs. Lily Yam, pointed out that currently there are 4,350 public light buses in Hong Kong and approximately 2,000 private light buses. It is envisaged that replacing all diesel light buses with LPG ones will reduce the particulate and nitrogen oxide emissions from motor vehicles by four per cent and two per cent respectively.

The government plan is to reduce 80 per cent of the particulate and 30 per cent of the nitrogen oxides emissions from motor vehicles by end-2005. Measures implemented so far already have achieved more than 60 per cent of the planned emission reductions. The government expects further improvement with the on-going and new initiatives, including the replacement of diesel light buses with LPG or electric ones.

[[http://www.info.gov.hk/efb/news/air\\_pre ss.html](http://www.info.gov.hk/efb/news/air_pre ss.html)]

**Tung Ping Chau Marine Park**

Coastal land and sea area around Tung Ping Chau was designated as a marine park on 16 November 2001. The Designation Order and map of the marine park were gazetted on 5 October 2001.

A spokesman for the Agriculture, Fisheries and Conservation Department (AFCD) said that designation of the proposed marine park would enable the ecologically important marine water at Tung Ping Chau to be protected under the Marine Parks Ordinance. The marine park covers 270 hectares of coastal and sea area around Tung Ping Chau in Mirs Bay. The area contains extensive coral communities and rich growth of seaweed.

The fringing coral formation, measuring 1.8 square kilometres, is one of the largest in Hong Kong. It supports about 124 species of reef fish. Sedimentary rock formations and geological features along the coastline are also of high scientific and educational value.

The department will manage the area for purposes of nature conservation, education and research. Educational programmes on the abundance and diversity of marine resources within the marine park will be organised by the department.

[<http://www.afcd.gov.hk/web/epress/pr238.htm>]

## HONG KONG DISNEYLAND UPDATE

### *Disneyland construction and landscaping projects*

During the current economic downturn, construction projects to be undertaken by Disneyland will help alleviate unemployment problems. It is anticipated that plans for more than 30 construction projects will be finalized before March 2002 and nearly 3,000 jobs will be created as a result. In the next five years the Department of Civil Engineering will also award about 160 contracts with a value of \$20 billion, creating 7,000 jobs.

A series of infrastructure projects are in negotiation, with some contracts already awarded. On 22<sup>nd</sup> October 2001, a contract worth \$2.8 billion was awarded to a consortium comprising China State Construction Engineering Corporation, Maunsell Consultants Asia and Earthasia to design, build and monitor the infrastructure around Disneyland at Penny's Bay. Another contract awarded on that date involves construction of roads leading to the theme park and part of a water recreation centre as well as hard and soft landscape work. These works are expected to be completed by 2005. The Mass Transit Railway Corporation is also involved in constructing the Penny's Bay rail link, which will be 3.2 km long. Other projects include reclamation of land, landslip prevention work and similar projects.

All these projects should be advantageous to the economy of Hong Kong. Yet, from the environmental point of view, mass reclamation of land and huge infrastructure projects could be a nightmare. Already fishermen have complained to the Department of Civil Engineering that the Disneyland reclamation work has killed fish in Ma Wan and Cheung Sha Wan culture zones. Apart from that, construction of Disneyland, including all its huge mechanical infrastructure, may also mean that many trees and rare plants will need to be removed from northeast Lantau.

To minimize damage to the environment, the department has set up an environmental protection office and appointed independent experts to monitor the cumulative impact of the construction work on the environment of northeast Lantau. It has also appointed experts from universities to investigate the marine situation in Ma Wan and Cheung Sha Wan culture zones.

One of the projects which will be awarded before the end of the year concerns protecting a 100-year-old banyan tree in Lantau. Additionally, there is a \$200 million landscaping budget for the planting of more than seven million trees and shrubs in and around Disneyland. A man-made lake and park will be constructed and its verges planted with dense vegetation, creating a warm and welcoming feeling. There will be approximately 250,000 palms and other trees planted, with the balance made up of shrubs, ground cover, bamboo and water plants.

One of the more remarkable vegetating projects involves shipping some 100 10-metre tall palms, which are 70-80 years old, from Australia. They will be planted to decorate the entry road as a welcome to Disneyland visitors. A vast area of the park will also be planted with a special species of tree from the South Africa, which will close its leaves when it rains. Other similar works are planned to create an environment where people can relax and have close contact with nature.

All these projects are intended to have a secondary purpose of balancing, to some

extent, the impact to the environment by Disneyland's huge infrastructure projects. Ironically though, fears have been expressed by one NGO, Green Power, that the impact of so many trees on the SAR ecosystem may not be positive. In order to balance every environmental aspect, further monitoring will be extremely important.

[SCMP, 9 October 2001 & 12 October 2901]

## ADVISORY COUNCIL ON THE ENVIRONMENT (ACE)

### *Report of the 62<sup>nd</sup> Environmental Impact Assessment Subcommittee (EIA) Meeting (ACE Paper 35/2001)*

At its meeting on 3 September 2001, EIA considered the following project:

Comprehensive Feasibility Study of the Revised Scheme of South East Kowloon Development (SEKD):

The SEKD involves a new development area of 413 hectares, comprising the former Kai Tak Airport Apron and Runway and a reclamation area of 133 hectares, including reclamation at Kai Tak Approach Channel and Kwun Tong Typhoon Shelter, Kowloon Bay Reclamation and construction of Cruise Terminal and other marine and waterfront facilities. Construction of the infrastructure will start in 2003 to allow first population intake in 2005.

EIA members' discussion focused on the following issues:-

#### *Tunnel and depressed roads*

On members' comments that the percentage of tunnels and depressed roads should be increased, the project proponent pointed out that this was constrained by the presence of underground drainage and sewage systems, as well as traffic safety considerations. It was also necessary to cater for the need to provide roads for emergency services, loading and

unloading activities, etc. Though the use of environmental friendly transport is the main theme of transport design in SEKD, it was still necessary to allow for other forms of transportation.

*Handling of contaminated sediments*

The consultants had compared a number of options and preferred the Fenton's Reagent method for cleaning contaminated mud. The effectiveness of this method in cleaning up to 99% of the pollutants was based on the experience of overseas clean-up projects. The proponent would provide necessary contingency measures as fallback options.

*Height of buildings*

EIA members expressed concern for the preservation of the skyline in SEKD. The project proponent pointed out that the height of buildings along the waterfront area would be restricted and that the landmarks in SEKD would include a combination of low, moderate and high-rise buildings. The layout and disposition of the landmark developments would be subject to approval by the Town Planning Board.

***Promoting Prevention and Recovery of Domestic Waste (ACE Paper 36/2001)***

At present, about 6.5 million tonnes of wastes are disposed of in the three landfills at Tseung Kwan O, Nim Wan and Ta Kwu Ling. These landfills are expected to serve Hong Kong's needs possibly until 2020. However, the quantity of waste continues to rise as our population increases. In 1998 it was projected that the landfills would last only until 2015. The projection concluded that another 860 hectares of land will be needed for new landfills between 2016 and 2045.

The Environment and Food Bureau (EFB) urges that the government and the community should take action to reduce and recover domestic waste, and have set the following targets:-

- i. to limit the quantity of municipal solid waste requiring disposal to 3.4 million tonnes in 2004, and 3.7 million tonnes in 2007;

- ii. to raise the overall waste recovery rate from 34% in 2000 to 36% in 2004 and 40% in 2007; and
- iii. to raise the domestic waste recovery rate to 14% in 2004 and 20% in 2007.

EFB has decided to implement the following to promote waste reduction:-

*Making available land for waste recovery and processing operations*

Recognizing that long-term sites for primary processing of recovered materials will facilitate waste reduction and recycling, EFB plans to set up a Recovery Park, for which 20 hectares of industrial land at Tuen Mum Area 38 have already been set aside. The first phase of the Park is expected to be in operation in early 2004.

*Enhancing public education and community involvement*

Overseas experience shows that it takes a long time to establish a habit of waste prevention and recovery in the community. A long-term public education and community involvement programme is thus needed to ensure sustained participation of the public in waste prevention and recovery.

EFB plans to inject \$100 million into the Environment and Conservation Fund, primarily to support community-based waste prevention and recovery programmes. The Fund accepts applications from district groups, green groups and other organisations to carry out waste reduction work and activities.

A cartoon figure known as "Recycling Kid" and a special theme van publicizing waste problems will visit schools, shopping centers and housing estates to spread the message of waste prevention and recovery.

***Strengthening support for waste separation and recycling***

In order to develop further existing community involvement efforts, the number of waste separation bins will be increased from 8,000 to 16,000. These will be installed in parks, leisure venues, government buildings, housing estates

and all primary and secondary schools. Collection services will also be arranged for all schools and public venues to ensure delivery of recyclable materials to processors or recyclers.

*Government leadership*

The government has been making progress in waste reduction, e.g., overall paper consumption has been reduced by 8.3% between 1999 and 2000. EFB plans to develop a government procurement guideline that encourages waste prevention and recycling. Particular emphasis will be on reducing overall consumption of paper and phasing out the use of non-recycled paper.

*Producer responsibility schemes*

The business sector has a significant role to play in reducing and recycling municipal solid waste. However, there has been no significant progress in developing producer responsibility schemes. EFB will continue to adopt a voluntary approach, but would consider the need for mandatory schemes if such voluntary schemes are unsuccessful.

In order to provide economic incentive for waste producers, particularly developers and contractors, to reduce waste, EFB has been consulting the relevant trades on a proposed landfill charging scheme, which will be presented for consultation in due course.

***Shenzhen Western Corridor and Deep Bay Link (ACE Paper 37/2001)***

The public has raised concerns about the frequent occurrence of traffic congestion at the vehicle boundary crossings at Lok Ma Chau, Man Kam To and Sha Tau Kok. The Shenzhen Authority considers a fourth land boundary crossing – Shenzhen Western Corridor (SWC) – should be built as soon as possible. On Hong Kong's part, the "Feasibility Study for Additional Cross-border Links" confirmed the need for constructing SWD together with the connecting road, Deep Bay Link (DBL) in Hong Kong.

An agreement has been reached with the Shenzhen Authority that each side will finance and manage its portion of SWC,

whilst the construction of the bridge will be a joint effort. Transport Bureau proposes to commence detailed design for SWC and DBL in early 2002.

Preliminary findings based on a broad environmental assessment carried out under the Feasibility Study for Additional Cross-border Links commissioned in 1995 are highlighted below:-

- i. The endangered species Black-faced Spoonbill have been identified by the World Wild Fund on the mudflats within the area concerned. Possible mitigation measures include realigning the crossing to avoid areas of high ecological value, minimizing the number and size of supporting piers, providing compensatory planting using native species, habitat creation and keeping construction activities confined.
- ii. Chinese White Dolphins were seldom found within the affected area. Nevertheless, submarine noise during construction of bridge piers might be potentially disturbing to dolphins, should they be within range. Possible mitigation measures include providing bubble curtains to mitigate impacts on dolphins, and providing artificial reefs to create new habitats around the bridge piers.
- iii. Deterioration in water quality could be a direct result of reduction in tidal flows under the bridge. Possible mitigation measures include local dredging, appropriate realignment of bridge piers and widening of space between bridge piers.

According to an environmental assessment carried out under the Feasibility Study for Additional Cross-border Links, DBL would unlikely cause insurmountable adverse impact on the ecological and water quality of the environment. The proposed DBL alignment avoids burial grounds and significant graves to avoid encroaching on traditions and culture of indigenous villagers.

## TOWN PLANNING

### *Wan Chai office proposal scrapped*

The Government has scrapped an office redevelopment proposal for a Wan Chai waterfront site in favour of exhibition and entertainment use, following strong protests from councillors and landlords. The proposed development scale of the 2.5-hectare site has been almost halved and the building height substantially reduced in the revised blueprint, but this was still opposed.

Some key office buildings in the neighbourhood, including Sun Hung Kai Centre, Great Eagle Centre and Harbour Centre, will now retain most of their sea views under the new plans.

The waterfront site, occupied by a bus terminus and indoor gymnasium, would under the revised proposal presented to Eastern District Council on 20 November 2001, be redeveloped as an exhibition and entertainment tower up to 80 metres high. The site, at the junction of Harbour Road, Fleming Road and Convention Avenue, can provide a floor area of about 1.74 million square feet with a proposed plot ratio of 6.5.

In the original scheme revealed in September, the site was to be redeveloped as a 3.36 million sq ft project for office and hotel use, with a plot ratio of 12.5. The building height limit was 211 metres.

The proposal was part of the Wan Chai Reclamation Phase Two Study Report, jointly conducted by the Territory Development Department and the Hong Kong District Planning Department.

District planning officer, Ling Kar-kan, said yesterday the changes were in response to objections raised by district councillors. He did not say whether there had been pressure from developers and landlords in the area. Many members of the Eastern District Council strongly criticised the scheme, saying it ignored the need for public facilities. Analysts also said the original proposal was not well planned in view of the weak demand in the office market, and the global economic downturn.

[SCMP, 21 November 2001]

### *Tung Tau rezoning plan opens door to commercial development*

The Town Planning Board has decided to rezone the Tung Tau Industrial Area - home to most of Yuen Long's factories and warehouses - for business use to enable commercial development. A new zoning plan covering Yuen Long was gazetted on 9 November 2001, with 11.63 hectares of industrial land in Tung Tau being turned into a 'business zone'.

A Planning Board spokesman said one reason behind changing the land use was to accommodate a decision the Board made in September aimed at giving more flexibility to industrial lots. This decision allowed industrial buildings to be converted en bloc for education purposes. The Board also noted that most of the buildings in the Tung Tau Industrial Area were not conventional factories but warehouses, the spokesman said.

In June, Kerry Properties applied to build residential properties on a 1.4-hectare site at the northern fringe of the industrial area, covering two company-owned godown projects, government land and another vacant godown. However, the proposal was rejected, with the Board saying Tung Tau was to be retained for industrial purposes. Kerry Properties may now redevelop its godown projects as commercial properties, analysts said.

In March, the Planning Board rejected Lai Sun Development's application to redevelop its Lai Sun Yuen Long Industrial Centre, also in Tung Tau, as an entertainment centre. The Board said the conversion was not in line with the planning strategy. Entertainment centres would be allowed in the new 'business zone'. The developer had proposed converting the 10-storey, 352,000-square-foot factory into a centre to accommodate entertainment activities such as karaoke, a disco and a bowling alley.

Last year an industrial land-use report from the Planning Department recommended retaining Tung Tau as an industrial zone. The Town Planning

Board spokesman said on 9 November 2001 it had endorsed the report's general recommendation to introduce the business zone, which enabled flexible commercial and clean industrial use of properties. However, the Board had not given its immediate endorsement to rezoning proposals for individual areas. Instead, it allowed planning officers to assess and make recommendations later.

[SCMP, 10 November 2001]

### *The transformation of Industrial Zones in Hong Kong*

The government intends to test the possibility of developing our old industrial buildings into residential 'lofts'. Loft-style residences have grown rapidly in popularity and have become an integral part of the regeneration of run-down industrial areas in many cities, said the Secretary for Planning and Lands, Mr John C Tsang, on November 30.

Mr Tsang said that it was quite commonplace to find in overseas cities old industrial buildings and godowns that have been converted into up-market residential uses, such as loft apartments and studio flats. Addressing the Annual Dinner of the Hong Kong Institution of Engineers at the Furama Hotel, Mr Tsang said he was looking to effect a quiet change in mind-set in the process of redeveloping the many under-used industrial buildings in our community.

"As the Mainland began to implement the open door policy, our labour intensive industries further relocated their production facilities to the Pearl River Delta region where the prices are competitive," he said. "As a result, a large amount of industrial premises have been made surplus and redundant. It would, indeed, be a big waste of scarce resources if they were simply left idle."

He said that over the past few years the government has also cut down considerably the scale of reclamation for our development projects, adding that new land would be harder to come by in future. In Hong Kong, obsolete industrial buildings are often located in the midst of other industrial buildings still in active use. This is because the transformation process is continuing, and mixed uses in the meantime create a number of inter-

face issues. In considering how we could better manage the process of transformation of our industrial areas, Mr Tsang said the government would adhere to three guiding principles.

First, the government should seek to minimize disruption to established economic activities and employment in the industrial areas. Secondly, the process of transformation must be market driven. Thirdly, the government should take up the role of a pro-active facilitator by removing institutional barriers and creating an environment that is conducive to the transformation.

Referring to the development of lofts, he pointed out that there were many institutional barriers, besides the interface issue, rendering it difficult to realize the concept in Hong Kong in the near term.

We need to resolve issues like: differences in permissible plot ratios between domestic and non-domestic buildings, land premium, building and fire safety requirements and more. These are all important aspects that should be examined further in detail, Mr Tsang added.

[<http://www.plb.gov.hk/press>, 30 November 2001]

### *Further incentives for Green buildings being considered*

Hong Kong is unique in having a high density and high intensity environment. With rapid developments in the past few decades, many urban areas and even some new towns in the New Territories are now facing problems of overcrowding, premature aging and air pollution.

As the Chief Executive announced in his Policy Address in October 2001, one of government's major tasks is to enhance the quality of our living environment and to provide Hong Kong people with clean and comfortable living conditions. In the past, we have not paid enough attention to this aspect of livelihood. But in recent years, the public has been demanding improved standards in our surroundings. In response to these new calls, Hong Kong has adopted a series of initiatives to improve our living environment. One of these initiatives is

to encourage the development of "Green Buildings".

A multi-disciplinary working group, comprising representatives from different departments, including the Buildings Department, the Lands Department and the Planning Department, was established in 2000. The objective of this group is to promote the design and construction of green and innovative buildings. There are four principal features to their approach -

1. To adopt a holistic life-cycle approach to planning, design, construction and maintenance
2. To maximize the use of "green" building materials, including natural renewable resources and recycled materials
3. To minimize the consumption of energy, in particular non-renewable energy
4. To reduce construction and demolition waste.

Earlier this year, a first joint Practice Note, setting out specific incentives to encourage the design and construction of greener and more innovative buildings, was issued. These incentives take the form of permitting green features to be exempted from gross floor area and/or site coverage calculations. Some of these green features are:

- Balconies
- Wider common corridors and lift lobbies
- Acoustic fins
- Sunshades and reflectors
- Wing walls
- Wind catchers
- Funnels
- Communal sky gardens
- Communal podium gardens.

The aim is to encourage private developers to include suitable "green features" in their new development projects. Results so far have been highly promising. A total of 65 building plans, bearing one or more of the green features, have already been approved over the past six months. This is a clear demonstration that "green buildings" can be commercially-viable.

[<http://www.plb.gov.hk/press>, 16 November 2001]

## REGIONAL & INTERNATIONAL

### PHILIPPINES

#### *Nuclear plant to become garbage dump*

The rubbish problem of Manila became a crisis after residents living around a temporary dump in Rizal province called for its closure this year. Rubbish dumped at a temporary dump was originally supposed to be shipped to an abandoned copper mine in the central Philippines, but the plan fell through after residents living nearby the mine protested. As a result, one million tonnes of garbage from the temporary dump have been left at the port of Manila awaiting resolution of the problem.

In order to resolve the situation, the Filipino government has decided to use its unused nuclear power station as a rubbish dump for tonnes of the capital's garbage. However, the decision encountered opposition from the Senate opposition leader who was of the view that the power station should be converted into a coal-fired or some other form of power facility. But it is likely that the power station, which has been declared to be unsafe to operate without expensive upgrades, will now house non-nuclear but highly polluting waste from Manila and its 16 suburban cities and towns. The amount of waste generated by these communities is estimated to be 7,000 metric tonnes daily.

Environmental officials said that the rubbish would not smell offensively because it would be contained in sealed containers. Government officials also reassured people that the complex would be used only on a temporary basis.

[SCMP, 7 November 2001]

### VIETNAM

#### *Greens on road to defeat over park highway*

Established in 1962, Cuc Phuong national park is Vietnam's first and best-known national park. It is home for several critically endangered species, such as

Delacour's langurs, Owston's palm civets and a handful of leopards.

Plans to plough a north-south highway through the national park have drawn strong criticism from environmentalists who believe that construction of the highway will have a tremendous impact on fauna and flora in the park. However, those trying to protect the national park from devastation appear to be close to defeat in the face of implacable government forces who put "progress" before environmental protection. One environmentalist concedes that though lively debate was sparked by the controversy, there is a lack of sufficient laws to allow people safely to rally against and criticise government initiatives.

The Vietnam government is expected to conclude the deal for the construction of the highway by the end of this year. If this occurs, construction crews will build an elevated section of road over a Cuc Phuong river bed, including a scenic waterfall, effectively slicing off the north fifth of the park. The highway will expose areas of the Park to increased levels of exploitation from all types of environmentally damaging occupations such as hunters, wildlife traders and timber harvesters.

[SCMP, 1 November 2001]

### BRITAIN

#### *Air pollution poses threat to crop yields*

Low level ozone, caused by the action of sunlight on car and factory emissions, has long been a problem in Europe. Some time ago, there was initiated a successful programme of reducing emissions which caused dangerous peaks of pollution in the summer. But while these problems have been tackled, the general background levels of ozone have continued to rise.

Traffic fumes and industrial pollution from as far away as the US, China and India threaten to push ozone levels in the lower atmosphere over the danger limit. Within a few years the levels of ozone could be permanently above levels harmful to people's lungs and likely to cause crop damage. Staple crops, such as wheat, potatoes, peas and beans are all

vulnerable to 20% declines in yield at relatively low levels of ozone exposure.

On the other hand, the good news is that acid rain, which is caused partly by sulphur dioxide emissions from power stations, has been cut by 50%. For the first time, some of the lakes and rivers in Wales, the Pennines, southwest Scotland and parts of the Highlands are showing signs of recovery.

[*The Guardian*, 11 December 2001]

### SAN FRANCISCO

#### *Drive on soot could slow global warming*

Greenhouse gases are blamed by many scientists for contributing to global warming, but one researcher says the real key to modifying world temperatures is diesel soot.

Soot, produced by burning diesel fuels, coal and wood and made up primarily of black carbon, warms the air by absorbing sunlight and radiating the heat into the air. Greenhouse gases, by contrast, do not absorb sunlight but create warming by absorbing Earth's heat and then radiating it back into the earth's environment.

It is widely believed that soot has a much more severe impact on the environment relative to its mass than greenhouse gases, such as carbon dioxide and methane, and is the most significant cause of global warming after carbon dioxide. Controlling soot emissions could, therefore, have a more immediate effect on temperatures, because soot does its damage to the environment during the relatively brief time it remains in the air.

According to an environmental scholar, controlling fossil-fuel soot will not only slow down global warming but also improve human health. Eliminating all fossil-fuel soot, which is about 5 million tons per year worldwide, could cut net global warming by 40 percent in three to five years. Controls could be improved by tightening standards on particulate emissions, requiring industry to devise better particle traps, and switching from diesel fuel to gasoline or hydrogen fuel cells. [Reuters, 11 December 2001]

**This Quarterly Report does not constitute legal advice given on any particular matter. Whilst all effort has been made to ensure completeness and accuracy at the time of publication, no responsibility is accepted for errors and omissions. Further information and enquiries in respect of this quarterly should be directed to Fred Kan & Co. or any of our following associate firms:**

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**Convictions under environmental legislation: October – December 2001**

The EPD's summary of conviction recorded and fines imposed during the period October to December 2001 is as follows:

***October 2001***

A total of 45 convictions were recorded in October for breaching anti-pollution legislation enforced by the Environmental Protection Department.

Among them, 18 were convictions made under the Noise Control Ordinance, 11 under the Air Pollution Control Ordinance, nine under the Waste Disposal Ordinance, six under the Water Pollution Control Ordinance, and one under the Dumping At Sea Ordinance.

The heaviest fine in October was \$100,000. A company was fined \$100,000 for using powered mechanical equipment without a valid construction-noise permit.

***November 2001***

A total of 74 convictions were recorded in November for breaching anti-pollution legislation enforced by the Environmental Protection Department.

Among them, 28 under the Waste Disposal Ordinance, 18 under the Air Pollution Control Ordinance, 14 made under the Noise Control Ordinance, 13 under the Water Pollution Control Ordinance and one under the Dumping At Sea Ordinance.

The heaviest fine in October was \$140,000 for contravention of the provisions of a licence.

***December 2001***

A total of 64 convictions were recorded last December for breaching anti-pollution legislation enforced by the Environmental Protection Department.

Among them, 24 were convictions made under the Waste Disposal Ordinance, 14 under the Noise Control Ordinance, 13 under the Air Pollution Control Ordinance, seven under the Water Pollution Control Ordinance, and six under the Dumping At Sea Ordinance. The heaviest fine was \$50,000.

A company was fined \$50,000 each for using powered mechanical equipment not in accordance with the conditions of a construction noise permit and for carrying out prescribed construction works not in accordance with the conditions of a construction noise permit. Another company was fined \$50,000 for using powered mechanical equipment not in accordance with the conditions of a construction noise permit.

**Note: The above changed format reflects the EPD's new style of publishing environmental offences data. Details of all offences are available from EPD's Media Relations Unit.**

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