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共建持續好家園
Sustainable Housing Today and Tomorrow

2004/05 環保、健康和安​​全報告
 Environmental, Health and Safety Report 2004/05

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Environmental Performance in 2004/05

During 2004/05, we set 36 environmental targets and initiatives. Of these, 31 were fully achieved. Together with another four targets with substantial progress, we have fully or nearly met 97% of our ultimate environmental targets and initiatives.

The only target being deferred was on water saving taps, which was due to lack of competitive resource supply in the market.

There were four convictions against our works contractors (eight convictions in previous year) due to environmental non-compliance: three under the Air Pollution Control Ordinance, and one under the Noise Control Ordinance. No conviction associated with water pollution was recorded.

Encouraging Our Residents to Reduce and Recycle Household Waste

- We had 151 estates participating in the Waste Recycling Campaign. Records of domestic waste generated in our estates indicated a 4.9% reduction in 2004/05.
- Our waste recovery rates for paper and aluminium cans were 14.4% and 23% respectively, with paper recovery slightly lower than the previous year (16% in 2003/04). Plastic bottle recovery rate showed an increase from 1.4% in 2003/04 to 2% in 2004/05.
- We have worked together with charity organizations to promote used clothing recovery within all public rental housing estates and collected 533.5 tonnes used clothing in 2004/05.

Reducing Construction and Demolition Waste

- We derived a definition for the Construction Waste Index which helps us to effectively carry out quarterly surveys to determine volumes of waste generated by each project.
- Our piling and demolition works had an approximate decrease of 77% inert Construction and Demolition (C&D) material and 73% non-inert C&D material from volumes generated in 2003/04.
- We conducted a study on an innovative concept in revitalizing old housing estates and established the Enhanced Precast and Prefabrication System (EPPS), which allows for structural wall and volumetric precasting.

Enhancing Energy Efficiency

- There was a 3.6% reduction in our total energy consumption compared with last year.
- We reduced energy consumption by 2.6% (10.7% reduction compared with 2002/03) at our Headquarters and

3.59% in public areas of our housing estates.

- To improve long-term energy efficiency, a new Design Guide was endorsed providing guidelines on design of energy saving equipment.
- Nine more of our public rental housing blocks were certified under the Electrical and Mechanical Services Department's Energy Efficiency Registration Scheme.
- We have conducted pilot studies on new energy saving initiatives including installation of nano-reflectors, installation of light emitting diode and self-luminous exit/directional signs and research study on lift energy conservation and environmentally responsive façade.

Managing Materials and Handling Hazardous Materials in an Environmentally Friendly and Safe Manner

- We derived a Life Cycle Assessment (LCA) and Life Cycle Costing (LCC) decision-making tool to better comprehend the ranking of materials according to their environmental and economic impacts.
- We continued to use recycled aggregates in new construction projects and pulverized fuel ash in foundation and superstructure works to support waste reduction.
- We adopted the EPPS for the redevelopment of Kwai Chung Flatted Factory.
- We have carried out the Asbestos Abatement Programme to remove another 2% of asbestos material from our buildings and the Collection and Recycling of Spent Fluorescent Tube Scheme, under which more than 100 000 tubes were collected from 64 participating estates since 2002.

Enhancing the Living Environment through Estate Landscaping and Greening

- We planted about 6 100 trees, 632 200 shrubs and 32 800 annuals. Of this new vegetation, about 96 500 and 574 600 plants were added to new and existing estates respectively.
- We exceeded our target and upgraded almost 113 000 square metres of landscape features for 18 selected public rental housing estates and implemented 6 000 square metres of new planting areas at 22 estates through partnership with our Estate Management Advisory Committees.
- We developed theme gardens in two estates including a Palm and Terminalia Garden at Sun Chui Estate and a Camellia Garden at Yau Oi Estate.
- We organized tree planting days with community participation at three estates.
- We issued the revised External Works Design Guide, which aimed at maximizing greening measures in our Estate Landscape Master Plans.
- We applied "softening" techniques such as hydro-seeding, planting and colour treatment to all new and 10 existing slopes of up to a total area of 15 300 square metres.
- We won the Champion Award for Design Excellence at the 2005 Hong Kong Flower Show.

Safeguarding Water Quality for Our Residents and Reducing Water Wastage

- We continued to replace all old-style galvanized steel potable water supply pipes with copper and ductile iron pipes in 19 public rental housing blocks (a total of 713 blocks replumbed so far).
- We obtained certification for 365 public rental housing blocks under the Fresh Water Plumbing Quality Maintenance Recognition Scheme (over 460 blocks certified so far).
- We conducted a trial installation of dual-flush fittings in washrooms at our Headquarters.
- We continued to adopt water recycling facilities for all large-diameter bored piling works and planned to stipulate the use of water recycling facilities as a mandatory specification for all new contracts.
- We reduced water consumption in estates by 0.43% year-on-year. This was marginally below the saving target of 0.5% due to high water demand for our intensive cleaning programme.

Enhancing Air Quality

- We introduced the EPPS to reduce air pollution on construction sites.
- We managed odour nuisance at estates by installing over 50 biotechnological equipment items at refuse collection points and 200 packaged deodorizers in the refuse rooms of our public housing estates.
- We installed gas desiccant dehumidification system and adopted ultra-violet air purifier unit to disinfect airborne bacteria to improve air quality in markets.

Reducing Noise Nuisance at Our Construction Sites and in Estates

- We have completed the pilot testing on hydraulic pile-jacking and will consider its application in noise sensitive projects.
- We continued to adopt the use of prefabricated building elements such as precast façades, staircases and EPPS.
- Subsequent to the successful trial on the use of hydraulic concrete crushers to reduce noise and dust, we had

prepared and uploaded a technical guide on our website for public access.

- We published the Specifications and Guidelines to facilitate the use of self-compacting concrete in appropriate projects.
- We replaced 27 quieter water pumps in our estates with a total of 172 replacements since 2000/01.

Health, Safety and Social Performance in 2004/05

In 2004/05, three targets were included in the health and safety initiatives. All these targets were fully achieved in the reporting period.

The total number of accidents in our new works and maintenance works contracts has steadily dropped in recent years. Last year we had a total of 160 accidents, compared with 255 accidents in 2003, 390 accidents in 2002 and 875 in 2001.

Promoting a Healthy and Hygienic Living Environment

- We updated our Specification Library to incorporate changes in specification and testing requirements in all new contracts regarding drainage design of our standard harmony blocks.
- We tested the use of common w-trap in drainage systems with results accepted by the Buildings Department and the Independent Checking Unit of our Department and planned to adopt it for new public rental housing domestic flats.
- We endorsed the installation of two new refuse handling systems, the Central Compactor System and the Distributed Compactor System in newly constructed housing estates.
- The recent Public Housing Recurrent Survey reported a trend of increasing satisfaction (64% compared with 62% and 52% in 2004 and 2003 respectively) amongst our tenants on the cleanliness and environmental hygiene conditions in common areas of our public rental housing estates.
- Under the Drainage Ambassador Scheme, we performed inspections for some 430 000 flats and completed all drainage repairs identified.
- We completed the replacement of seriously corroded cast iron drainage stacks inside flats in nine estates.

Undertaking Anti-mosquito Measures

- We established Anti-mosquito Special Cleansing Squads in each housing estate and Special Task Force Teams to monitor the situation in construction sites.
- Over 9 500 inspections were conducted in our estates and construction sites with spraying of larvicidal oil at more than 72 500 potential breeding grounds. The clearance of clogged drains was sped up by carrying out over 700 desilting operations.
- We co-operated with primary schools and estate management companies to launch a number of anti-mosquito educational campaigns.
- We planned to take enforcement action under the Marking Scheme against households where stagnant water is found to have mosquito breeding.

Ensuring Healthy and Hygienic Living Environment

- Since the stepped up actions in June 2003, we have issued a total of 7 192 fixed penalty notices to offenders against spitting and littering.
- We devised a new Factory Marking Scheme with more stringent and objective measures to deal with irregularities generally found in factory estates.
- We conducted 216 joint operations against illegal cooked food hawkers in housing estates together with the Food, Environment and Health Department and the Police.

Ensuring High Safety Standard in Our Buildings and Workplace

- We adopted UK's Construction (Design and Management) Regulations in our project design.
- We installed Digital Falling Object Monitoring System and Closed Circuit Television System to detect and gather evidence on tenants throwing objects from height. Up to the end of March 2005, we identified 41 households throwing objects from height.
- We conducted the Estate Fire Safety Family Day Camp with the participation of 75 primary school students and parents from 25 families to receive intensive fire safety training.
- We continued to promote fire safety awareness through radio segments and activities such as the Estate Fire Safety Ambassador Scheme, Estate Fire Safety Education Paths, road shows and training programmes. We planned to set up a web-based resource centre on estate fire safety on our website.
- The accident rate per 1 000 construction workers on our construction sites declined from 37.8 in 2002 to 32.8 in 2003 and further to 29.2 in 2004. It is far lower than that recorded for the Hong Kong construction industry

(60.3 in 2004). Unfortunately, there was one fatality among all HA's contracts in 2004.

- We undertook quarterly safety audits under the Housing Authority Safety Audit Scheme for over 30 construction contracts.
- We introduced the Safe Working Cycle as a mandatory requirement and issued the Guidelines on Hard Paved Construction aiming to minimize dust generation and reduce material damage and contamination during transportation.

Enhancing Neighbourhood Development

- We conducted integrated planning for physical facilities within the public rental housing and undertook retail assessment to determine the need for shopping facilities.
- We provided a wide range of community facilities in meeting the needs of our residents and the public including welfare, sports and recreational, educational and commercial facilities.
- A joint task force was set up, comprising our housing managers and building professionals together with representatives from the Social Welfare Department, the Kowloon Hospital and non-Government organizations, to provide a barrier-free living environment in a supportive community for physically-challenged persons.
- We invited relevant stakeholders to express their views on planning for our public rental housing and the neighbourhood in the redevelopment of Ngau Tau Kok Estate.
- We continued to work hand-in-hand with the community and organized a number of waste reduction scheme including the Green Property Management Award, the Mooncake Box Recycling Campaign, the Waste Reduction Credit Scheme and the Environmental Household Products Design Competition.

Stakeholders Engagement

Raising Awareness among Residents and the Community

- We continued our engagement with local communities throughout the year in organizing and participating in various events such as the Waste Reduction and Recycling on World Environment Day, Mural Painting, Estate Green Fun Day, Green Carnival, Green Trail Walk, Anti-Mosquito Campaign, Public Housing Estate Cleanliness Incentive Scheme and Estate Fire Safety Campaign.
- We recruited "Junior Mosquito Inspectors" and "Fire Safety Families" from our estates to promote awareness.
- We co-operated with some 65 800 tenants in the quarterly "Operation Tai Ping Tei" and various cleaning activities.

Fostering Business Partnerships

- The HD Architects Association hosted a leading academic researchers forum on innovative technologies for sustainable housing development.
- We operated the Counterparty Management Information System as a web-based information portal to manage business opportunities and procurement issues with our partners.
- We maintained details of procurement principles and business resources for our partners on our website.
- As of March 2005, we had one civil engineering, five piling and seven building contracts implemented the Integrated Pay for Safety, Environment & Hygiene Scheme.
- We planned to issue new specifications and guidelines on "hard-paved construction".
- 19 public housing estates were commended in the Green Property Management Award.
- We conducted a number of awareness raising events such as a bimonthly environmental forum with industry representatives and the Environmental Protection Department and the third Quality Public Housing Construction and Maintenance Awards.

Raising Awareness among HA Staff

- We joined hands with the Social Welfare Department and launched a series of activities to help reduce, recycle and reuse waste.
- We provided 32 training courses and seminars on various occupational health and safety topics, which were attended by over 960 staff members.
- We provided special training courses on handling telephone complaints, techniques in interviewing and preparing replies to complainants and other customer services.
- We published a biweekly electronic newsletter *Housing Dimensions* to update our staff on the latest information about HA and the Department as well as environmental and safety messages.
- We launched a Health Portal under our e-Learning Portal and attracted more than 7 600 hits.
- Six classes focusing on work-life balance topics were arranged with some 500 participants in total.
- We maintained a counselling hotline for our staff. In 2004/05, the hotline handled 83 cases, of which 47%

were work-related and the remaining 53% cases were of personal problems.

- We formed a Housing Department Volunteer Corps to carry out volunteer work for our housing tenants.
- We held various sports and recreational activities and interest group classes for our staff.

Looking Ahead

At present, both the Government and the community at large have high aspiration for a sustainable society. In the provision of public housing, HA has demonstrated its efforts to bring forward a range of initiatives aiming at addressing the social, economic and environmental needs of its tenants. Over the past year, we managed to accomplish tasks as scheduled through wider application of site oriented design, green measures at operation and estate management, as well as establishing closer dialogues and partnership with green groups, professional bodies, government departments, tenants and the community.

Working towards the goal of sustainable development in public housing, in addition to the various green measures initiated, we will continue in the years ahead to:

- apply micro-climate studies to enhance environmental performance in design and planning of all new housing projects. These studies make use of the natural environment to optimize and balance the wind environment, natural ventilation, daylight, solar heat gain and road traffic noise to create a healthier, more energy efficient and quality living environment;
- minimize environmental impacts while applying LCA and LCC to maximize building life cycle cost effectiveness;
- actively partner with Public Rental Housing residents to separate waste at source;
- improve construction safety;
- promote environmental and safety awareness of stakeholders and build in sustainability element in residential estate programmes wherever practical through closer partnership with green groups and professional parties; and
- maintain closer liaison with the Government, the Council for Sustainable Development and others alike for synchronized alignment in sustainable development framework.

A summary of our focuses for 2005/06 and beyond is listed below:

To reduce environmental risks, we will

- maintain a clean and healthy environment through continued implementation of various schemes and measures;
- complete our asbestos survey and abatement programme;
- replace cast galvanized steel water pipes for estates with undesirable water quality and participate in the Fresh Water Plumbing Quality Maintenance Recognition Scheme; and
- strengthen the green practices in our offices.

To continue our efforts in waste management, we will

- increase the estate domestic waste recovery rates for recyclable materials and extend the “waste separation at source” scheme to all estates by phases;
- continue our recovery of spent fluorescent tubes and used rechargeable batteries; and
- reduce construction and demolition waste through the development of a waste index, along with the new and revised waste management guidelines.

To further improve energy efficiency and encourage innovation, we will

- extend the micro-climate studies to all building projects;
- encourage the application of the LCA/LCC Study in procurement of building materials;
- explore the adoption of additional energy efficient equipment in a pilot project, and seek to improve our building services design guidelines; and
- continue to reduce energy consumption in our Headquarters and office premises, and to extend the same concerns to properties under the management of The Link Management Limited.

To conserve natural resources, we will

- use water recycling systems in all large diameter bored piling works;
- identify a pilot scheme in our estates to test on reducing the flushing water consumption; and

- revise construction specifications to adopt sustainable timber doors in pilot projects.

To reduce noise nuisance, we will

- replace more water pumps with quieter ones in our housing estates; and
- explore quieter construction equipment and technology.

To enhance greening and landscaping, we will

- provide and improve landscaping in new and existing estates; and
- promote residents' involvement in estate greening.

To improve our safety performance, we will

- reduce the accident rate for new works to below 25 per 1 000 workers; and
- continue to partner with industry stakeholders to promote construction safety awareness through a territory-wide publicity campaign.

To continue the promotion of EHS awareness, we will

- extend the "Green Delight in Estates" partnering programme with green groups and other educational activities to our estates; and
- enhance staff awareness and knowledge on EHS issues through training.



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Message from the Chairman


Message from the Chairman

At the Housing Authority, we fully appreciate the bonding among good building design, quality construction and proper estate management and maintenance for a sustainable living environment. There is no shortcut if we want to achieve a high quality living and working environment for our community and our staff.

We have been exploring ways to advance our environmental, health and safety standards and performance by aligning clear initiatives and measures with our policy objectives on environmental and social responsibilities. This year we have again achieved these targets through the enthusiastic participation of our residents and the diligence and professionalism of our business partners and our colleagues.

We also continue to improve the construction quality and functionality of our new developments using the latest building planning and design technologies, with feedback from local and international experts in building research.

Looking ahead, we are confident that we can rely on the continued active commitment of all stakeholders as we strive for a greener, cleaner and safer environment. This report presents our ongoing efforts for a sustainable housing.




Message from the Director

Message from the Director

Our very first report on Environmental, Health and Safety published last year marked a milestone in our continued efforts towards the creation of a sustainable living environment. I take pride in presenting our report for 2004/05 under the same holistic approach.

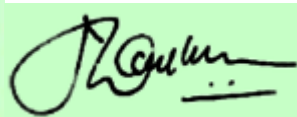
During 2004/05, we continued our efforts on establishing best practices, exploring local and international innovations, promulgating green management measures and engaging relevant stakeholders in our business activities. We were pleased to have completed our extensive research on Life Cycle Assessment and Life Cycle Costing last year, with a view to developing a decision making tool for building construction as well as maintenance projects. Our overall construction safety record continued to improve during the year.

Meanwhile, we have focused much of our work on promoting the practice of sustainable living within our public housing community and the results were encouraging. As part of our commitment to promote healthy living, we have upgraded more than 110 000 square metres of landscape features at 18 estates. This programme will roll on to benefit more of our estates. Through various campaigns at our housing estates, we were able to raise the awareness of our tenants on waste recovery, recycling and reuse. We achieved notable year-on-year reduction in domestic waste. For the first time, we launched a Household Products Design Competition to encourage innovative reuse of household items and received over 550 creative entries.

The lesson from SARS, the threat of bird flu and other diseases transmitted by mosquitoes have brought out a clear message that a clean environment is essential to healthy living. We have introduced Anti-mosquito Special Cleaning Squads in each estate to undertake daily inspections and to eradicate mosquito breeding black spots. A Junior Mosquito Inspectors programme was also introduced as part of our educational programme. By translating our initiatives into everyday practice, we hope to nurture a sense of ownership amongst the public housing community towards the creation of a healthy and pleasant living environment.

Today, we are working on new and ongoing programmes to maintain this positive momentum and look forward to reporting our progress again next year.

In closing, I would like to express my heartfelt gratitude to our colleagues for their concerted efforts and perpetual commitment in fulfilling the vision in creating a better living and working environment for our community.

About this Report



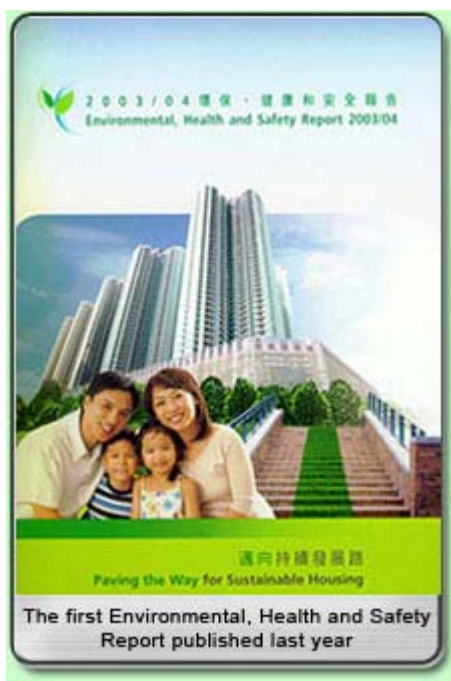
About this Report

Report Scope and Approach

We have been reporting on our environmental performance since 1999/2000. We expanded the scope to include health and safety performance last year when we published our first environmental, health and safety (EHS) report. This year, in our second EHS Report, "Sustainable Housing: Today and Tomorrow", we focus on our EHS performance and initiatives. For the first time in our reporting, we have highlighted the neighbourhood development aspects of our activities. These include the provision of community facilities in all our estates to encourage social cohesion and ultimately assist in the development of a vibrant neighbourhood. The report timeframe is from 1 April 2004 to 31 March 2005 unless otherwise specified.

In line with international reporting best practices, we have, in preparing this report, made reference to:

- the Global Reporting Initiative's Sustainability Reporting Guidelines;
- the Association of Chartered Certified Accountants' reporting criteria; and
- the Environmental Protection Department's benchmark for environmental performance reports.



We understand the vital importance of partnering with the community as a basis for identifying and advancing sustainable development initiatives. As such, this report is prepared with all our stakeholders in mind. They are:

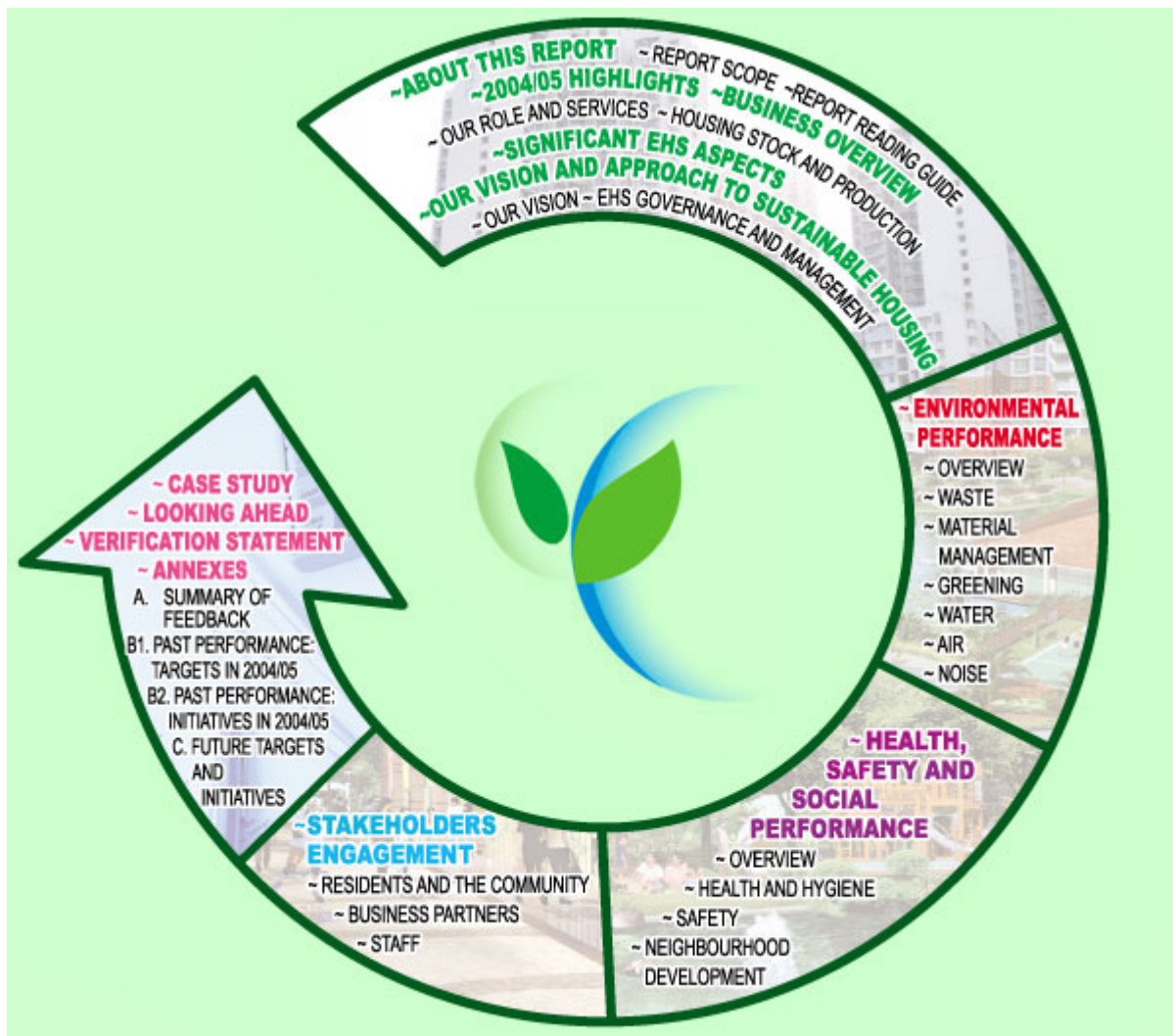
- residents in our estates;
- business partners;
- our staff;
- other government colleagues;
- green groups;
- educational institutions; and
- the media.

Comments on our EHS Report 2003/04 from stakeholders and the verifier were also reviewed and addressed where appropriate as part of the reporting process. The feedback is summarized in Annex A. As readers comments form an important chain in our reporting process, we once again earnestly invite your [feedback](#) on this year's report.

Report Reading Guide

Building on our previous EHS report, this expanded report includes social information as well as key information relating to our operations, vision, policies, management governance and future objectives and targets. The Reading Guide below illustrates the report structure and summarizes our EHS initiatives and performance.

[Reading Guide](#)





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2004/05 Highlights

2004/05 Highlights

To the Hong Kong population, 2004 marked a speedy recovery from SARS and the return to normality. At the Housing Authority (HA), 2004 was the year to launch a new range of sustainability initiatives on top of our continued SARS-initiated programmes.

In August 2004, the Housing Department Environmental Committee was restructured to be headed by the Permanent Secretary for Housing, Planning and Lands (Housing) (PSH) cum Director of Housing (DoH). This reinforced HA's commitment to sustainability and environmental protection.

Where practicable, neighbourhood development aspects were built in our works, and we have a successful year getting many residents and related parties actively involved in most environmental, health and safety (EHS) initiatives. This not only increased residents' EHS awareness but also helped them build up stronger sense of belonging and ownership in their community.

A snapshot of our achievements for some essential environmental initiatives during the reporting period is outlined below:

- We set 36 environmental targets and initiatives in 2004/05. Of these, 31 were fully achieved. Together with the four targets with substantial progress, we have fully or nearly met 97% of our planned environmental targets and initiatives.
- A continued focus was set on waste reduction, recovery, recycling and reuse in both our management of domestic waste and construction and demolition (C&D) waste, the two main sources of solid waste in Hong Kong. Through launching of waste reduction campaigns and other initiatives at our housing estates, we achieved a significant reduction of domestic waste in our estates — 24% less than the daily average generated by the Hong Kong population in 2004. We also introduced two new refuse handling systems to prevent overpacking of storage bins and spillage, thereby improving hygiene. With the use of new construction and improved demolition techniques coupled with the reduction in redevelopment projects, we recorded a significant decrease of 77% and 73% in inert C&D waste and non-inert C&D waste respectively from volumes generated in the previous year.
- Our total energy consumption was reduced by 3.6% compared with last year. We reduced electricity consumption by 2.6% (10.7% reduction compared with 2002/03) at our Headquarters and 3.95% in public areas of housing estates .
- We completed our extensive research on Life Cycle Assessment (LCA) and Life Cycle Costing (LCC), culminating in the development of an LCA/LCC decision-making tool.
- We adopted the Enhanced Precast and Prefabrication System (EPPS) to yield beneficial reduction in potential material damage and waste generation as well as a reduction in construction impacts (such as noise, air, nuisance, etc).
- We have collected more than 100 000 spent fluorescent tubes from 64 estates for recycling since 2002.
- Through installation of self-stopping water taps and replumbing to reduce water bursting and leakage, we reduced water consumption by 0.43% compared with 2003/04.
- To mitigate odour nuisance at our estates, we installed over 50 biotechnological equipment items at refuse collection points and 200 packaged deodorizers in the refuse rooms of our public housing estates.
- In September 2004, we collected some 28 000 tin boxes, as part of our extended support of the Friends of the Earth (HK) mooncake-box recycling campaign.

- In November 2004, we launched a Household Products Design Competition to encourage tenants to make use of old household items rather than dispose of them. The competition was extremely successful with 550 entrants and more than 30 winners.
- We planted about 6 100 trees, 632 200 shrubs and 32 800 annuals to enhance the landscaping of our estates. Almost 113 000 square metres of landscape features at 18 selected estates were upgraded under the Landscape Improvement Programme. We won the Champion Award for Design Excellence at the 2005 Hong Kong Flower Show.

We progressed further in social performance as well as health and safety performance through our main initiatives:

- Cleanliness and hygiene continued to be critical objectives at all housing estates. Our recent Public Housing Recurrent Survey 2005 reports a trend of increasing satisfaction amongst our tenants on the cleanliness and environmental hygiene conditions in common areas of our public rental housing (PRH) estates: 64% compared with 62% and 52% in 2004 and 2003 respectively. The number of complaints on cleaning and hygiene received also dropped significantly, from 2 123 in 2003/04 to 1 577 (by 25.7%) in 2004/05.
- Over 9 500 inspections were conducted in our estates and construction sites with spraying of larvicidal oil at more than 72 500 potential mosquito breeding grounds. The clearance of choked drains was sped up by carrying out over 700 desilting operations.
- Under the “Drainage Ambassador Scheme”, we have performed inspections for some 430 000 flats, and completed all drainage repairs identified.
- In February 2005, the first severely physically-challenged person was rehoused in our PRH estate equipped with appropriate supporting facilities.
- We continued to carry out joint enforcement with the Food, Environment and Health Department and the Police against illegal cooked food hawkers in housing estates. In 2004/05, a total of 216 joint operations were carried out.
- To further enhance communication with our tenants, in September 2004, we established the Housing Channel on liquid crystal display monitors installed in the ground floor lobby of public rental housing blocks.
- In relation to complaints handling, the Housing Department received the Ombudsman Award for the third time in August 2004 for its positive approach to handling complaints.
- We undertook quarterly safety audits under the Housing Authority Safety Audit Scheme for over 30 construction contracts.
- Regarding construction, our overall safety record further improved. Our contractors won a total of 14 awards including the Hong Kong Construction Industry Safety Awards and the Considerate Contractors Site Awards.
- The accident rate per 1 000 construction workers on the HA sites declined from 37.8 in 2002 to 32.8 in 2003 and further to 29.2 in 2004.
- We continued to place great emphasis on promoting a hygienic, healthy and safe working environment for all our staff. We have provided 32 training courses and seminars on various occupational health and safety topics, which were attended by over 960 staff members.



Additional details of the initiatives and other activities to enhance environmental, health, safety and social performance are provided in the rest of this report.

Business Overview


Business Overview

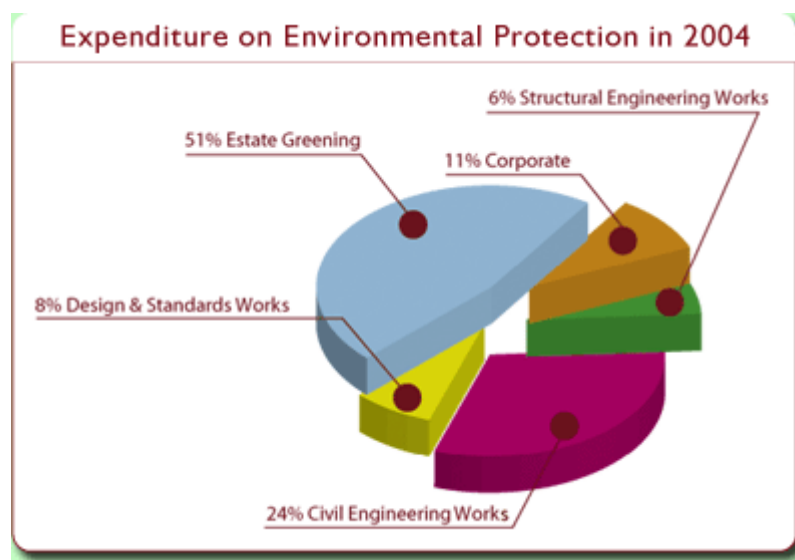
Our Role and Services

In a territory of 1 102 square kilometres, Hong Kong houses about 6.8 million people – a resident population concentrated in less than 19% of the land area. Population densities in urban areas are on average over 36 000 persons per square kilometre [source: Environment, Transport and Works Bureau's Environmental Report 2004]. With population densities several times higher than in cities such as London, New York and Tokyo, addressing the public housing needs of the population is challenging.

At the end of March 2005, about 50% of the total population was living in public housing, which includes rental and subsidized-sale flats of both the Housing Authority (HA) and the Housing Society.

In HA, we formulate housing development strategies and oversee strategic planning and implementation of public housing programmes. Apart from planning and building public housing, we also manage public rental housing (PRH) estates, interim housing estates, transit centres, flatted factories and associated amenities such as shopping centres, car parks and recreational facilities.

In carrying out the works devoted to environmental protection, we estimated an allocation of approximately HK\$38.5 million in 2004. The breakdown is set out below.



Housing Stock and Production

At the end of March 2005, Hong Kong had about 2 407 600 residential flats. Of these, over 45% (1 095 800 flats) were of public housing, of which 95% were under the management of the HA.

In 2004/05, HA produced 24 700 PRH flats and we estimate the production of another 17 200 PRH flats in 2005/06. As a reference, the data from the Rating and Valuation Department (RVD) indicated that about 26 000 private residential flats were completed in 2004. Apart from domestic premises, HA owns about 1.1 million square metres of internal floor area retail premises and operates approximately 104 500 car park spaces. RVD data estimated the area of private sector retail gross floor area in Hong Kong at the end of 2004 to be about 9.4 million square metres.


[source : Rating and Valuation Department's website]

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Significant Environmental, Health and Safety (EHS) Aspects 



Significant Environmental, Health and Safety (EHS) Aspects

We recognize that our daily operations and activities in estate management and building construction will have a number of potential significant environmental, health and safety (EHS) aspects on the environment and the community. Through regular management reviews of our operations, we identified the significant EHS aspects in the relevant areas (see diagram below) and endeavour to adopt measures to control and improve these aspects throughout the life cycle of our operations, from initial planning and design to final demolition. These measures include the implementation of a comprehensive EHS management system within the Housing Authority (HA) and the application of our Integrated Pay for Safety, Environment and Hygiene Scheme to all HA construction and engineering contracts.

HA is gearing towards sustainable housing through proper management and monitoring of all potential EHS aspects. Major potential EHS aspects related to various stages of HA activities and operations are identified next in this report.

Life Cycle Stages of the Housing Authority Business and Their Significant EHS Aspects

Energy, Resources and Other Material Inputs



Office Construction Management and Maintenance Demolition



Significant Environmental Aspects


Site Identification and Land Use				
Liquid Effluent				
Air Emissions				
Noise Emissions				
Energy Efficiency				
Materials Selection and Usage				
Hazardous Materials				
Waste Management				
Estate Greening				

Significant Health and Safety Aspects

Indoor Air Quality				
Environmental Hygiene				
Building Accessibility				
Occupational Hazards and Risks				
Ergonomics				
Other Health and Safety Concerns				



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Our Vision and Approach to Sustainable Housing 



Our Vision and Approach to Sustainable Housing

Our Vision

The vision of the Housing Authority (HA) for sustainable housing is to progressively achieve sustainable development in public housing that balances social, economic and environmental needs contributing to healthy living, sustainable construction and enhancement of the total urban environment. We aim to provide quality public housing in the most cost-effective way and strengthen partnering with all stakeholders in the community. Through continued enhancement to our service quality, we will manage and maintain our properties with a view to maximizing their economic life and contribution and make full use of human, financial, and new technology resources in achieving sustainable development.

At present, we are committed to adopting planning, design, construction and maintenance practices that effectively address environmental, health and safety (EHS) issues. We endeavour to assess the future needs of our residents and to work with interested parties from all sectors of the economy including our partners in planning and development. We aim to contribute to the development of a vibrant urban environment with sustainability at its core.

To demonstrate this commitment, we provided a snapshot of our existing practices and initiatives in this report.

Environmental, Health and Safety Policy

We strive to prevent and minimize environmental impacts and to safeguard the health and safety of our residents, employees and relevant stakeholders. By providing a cleaner, safer and greener environment for our tenants, we build a healthy community with healthy citizens.

To achieve this, we have established two distinct sets of Environmental and Safety policies, which give our staff a clear direction in pursuing an Environmental, Health and Safety culture in daily operations.

Environmental Policy

- To promote healthy living and a green environment;
- To develop a strategic framework and implement environmental management for the promotion of sustainable development;
- To strictly comply with and fully implement all relevant environmental legislation and regulations;
- To address environmental concerns and incorporate environmental initiatives in planning and design, construction and demolition, marketing and estate management activities;
- To minimize environmental impacts (air, dust, noise, waste and water) to residents and the public from our operations;
- To develop procurement policies to minimize the use of resources and achieve cost effectiveness;
- To promote environmental awareness and participation among staff, residents and contractors through education and publicity programmes; and
- To review and seek continual improvement on the implementation of an environmental management system.

Safety Policy

- To provide information on safety and health criteria in building HA projects for contractors, the public and other key stakeholders;
- To make safety and health performance one of the critical considerations in tender selection for all new and existing building projects;
- To build up a safety profile of contractors for continuous assessment of safety performance;
- To monitor contractor safety performance by independent and in-house assessment;
- To work through partnership by incorporation of contractors' input in respect of safe construction technology

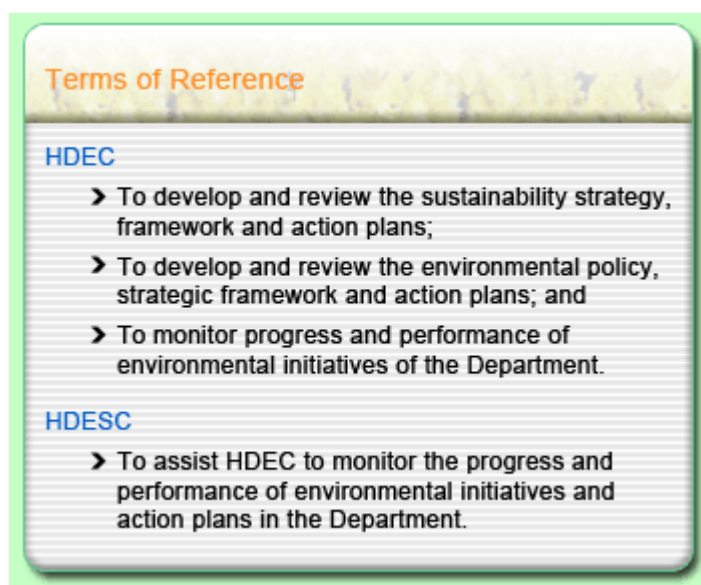
- and equipment; and
- To promote safety and health issues particularly related to HA projects to enhance the safety and health of persons involved.

EHS Governance and Management

HA has a robust organizational structure that includes specific committees and working groups on environmental and safety issues. EHS governance and management are addressed at the highest and most appropriate levels of the Authority, which ensure transparency, sufficient levels and forms of disclosure, accountability, communication and well structured management systems. These attributes are essential in ensuring effective EHS governance and management throughout HA.

In August 2004, the Housing Department Environmental Committee (HDEC) was restructured to enable escalation of environmental protection and associated issues to the highest level of the Department. This was achieved by placement of the Permanent Secretary for Housing, Planning and Lands (Housing) (PSH) cum Director of Housing (DoH) as the chair of HDEC. The Environmental Management Representatives are all the heads of divisions at directorate (D3) levels and include also the Green Manager of the Department. At the same time, the Housing Department Environmental Sub-committee (HDESC), chaired by the Deputy Director (Development and Construction), was established to oversee the progress of environmental matters in detail.

Under this new establishment, the direction on environmental management can be more effectively distributed to the Divisions. This also facilitates DoH to have a direct overview of the environmental performance of the Department. The Terms of Reference of both HDEC and HDESC have been revised.





Summary	Message from the Chairman	Message from the Director	About this Report	2004/05 Highlights	Business Overview	Significant EHS Aspects	Our Vision and Approach to Sustainable Housing
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Environmental Performance 

 **Environmental Performance**

Please Select : 

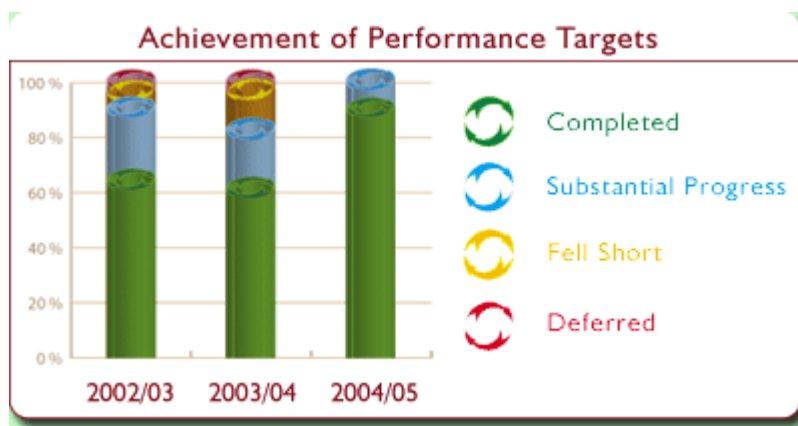
Overview

Meeting Environmental Targets and Initiatives

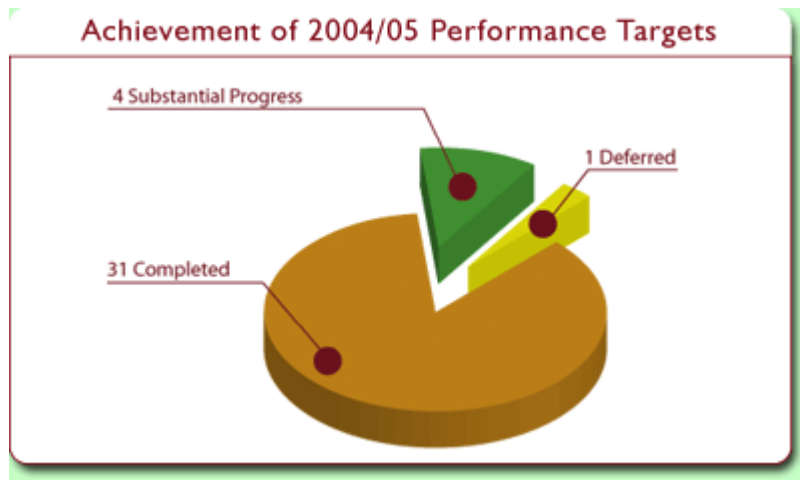
We continued to work together with all of our stakeholders to achieve our environmental performance targets.

During 2004/05, we set 36 environmental targets and initiatives. Of these, 31 were fully achieved. Together with another four targets with substantial progress, we have fully or nearly met 97% of our ultimate environmental targets and initiatives.

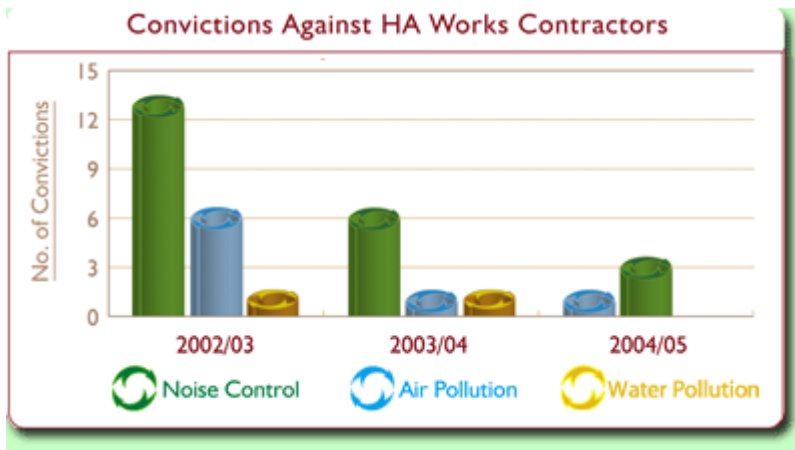
The only target being deferred was on water saving taps, which was due to lack of competitive resource supply in the market.



Looking ahead to the year 2005/06, we have set for ourselves 38 environmental targets and initiatives. A summary of these is provided in [Annex C on Our Targets and Initiatives for 2005/06 and Beyond](#).



Legislative Compliance




There were four convictions against our works contractors during the year (eight convictions in previous year) due to environmental non-compliance: three under the Air Pollution Control Ordinance, and one under the Noise Control Ordinance. No conviction associated with water pollution was recorded during the year.

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Environmental Performance 

Environmental Performance
Please Select : 
Waste Management begins with Source Separation in our Estates

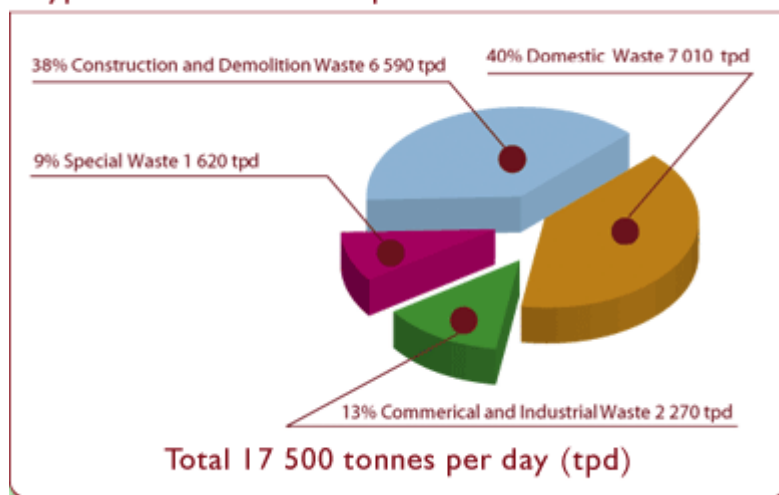

Waste

Proactive Management of Waste

The Environmental Protection Department (EPD) has identified the two main sources of waste disposed in Hong Kong landfills as domestic and construction and demolition (C&D) waste. At the current rate, EPD predicts our landfills will be full within six to ten years. [Source: Environmental Protection Department's Website]

To keep reducing domestic and C&D waste, the Housing Authority (HA) has taken proactive steps to implement various waste reduction and recycling initiatives not only in our offices, but also in our housing estates and construction sites. We will continue to deliver green messages to our tenants and our stakeholders to promote the 4R's: Reduce, Replace, Reuse and Recycle.

Types of Solid Waste Disposed of at Landfills in 2004



[Source: EPD Website - Waste Statistics in 2004]

Managing our Office Waste

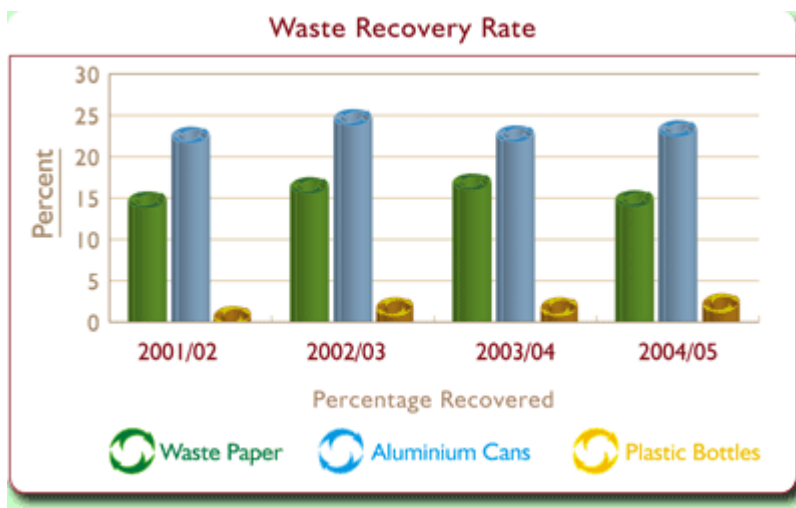
We continued to take initiatives to demonstrate our commitment to waste reduction and recycling at our offices. In 2004/05, the total consumption of A3 and A4 paper in all our offices except site offices was approximately 143 000 reams, representing a reduction of 2.9% as compared with the data in 2003/04. Comparing with the data in 2002/03, we achieved a reduction of 5.3%, which successfully exceeded the 5% reduction target set by the Government in 2002/03. The paper saved amounts to 4 281 reams during the year 2004/05 alone.

While paper consumption in our offices has been reduced, we managed to collect more waste paper for recycling in the past year. In 2004/05, we collected 159 187 kg of waste paper in all our offices except site offices, representing an increase of 7.6% as compared with the data in 2003/04.

As our efforts to support the use of environmentally friendly materials, 100% of our publicity materials were printed with environmentally friendly paper in 2004/05. We continued to increase the percentage in consumption of recycled paper. Of the total paper used by the HA, approximately 54% was from recycled sources.

Managing Waste Generation within Estates

A number of waste reduction and recycling campaigns were launched in our estates with



great support from residents. The HA's Public Housing Recurrent Survey 2005 conducted in the first quarter revealed 73% of households recognized that HA supported environmental protection in public housing.

In 2004/05, 151 of our estates participated in the Waste Recycling Campaign. Records of domestic waste generated in our estates indicated a 4.9% reduction from 0.82kg to 0.78kg per person per day in 2003/04 and 2004/05 respectively. This equates to 24% less than the daily average of 1.02kg waste generated by the Hong Kong population in 2004. [source : Environmental Protection Department's website]



Overall, the domestic waste recovery rate of our estates in 2004/05 was broadly consistent with previous years. Our waste recovery rates for paper and aluminium cans were 14.4% and 23% respectively, with paper recovery slightly lower than the previous year (16% in 2003/04). This slight reduction may have been caused by the more favourable market prices for waste paper, resulting in an increased portion of indirect collection of paper waste by others. Plastic bottle recovery rate showed an increase from 1.4% in 2003/04 to 2% in 2004/05. In recent years, we have also worked together with charity organizations to promote used clothing recovery within all public rental housing (PRH) estates. However, in 2004/05, a 30.1% decrease was recorded in the overall volume of used clothing collected (533.5 tonnes), compared with volumes (763.3 tonnes) collected in 2003/04. The lower recovery may have been the result of reduced disposal of used clothing by our tenants, or better direct resale markets.

In addition to those located at the ground floor lobby of every domestic block, we have continued to provide recycling bins at convenient locations in our estates to encourage tenants to develop environmentally friendly disposal habits. Up to March 2005, more than 27 000 households in eight housing estates have easy access to recycling bins in the common areas of their floors.

Effective Management of Construction and Demolition (C&D) Waste

HA continues to seek new effective means to reduce the generation of C&D waste through all phases of design, construction, and demolition of building projects.

In 2004/05, we derived a definition for the Construction Waste Index, which helps us effectively carry out quarterly surveys to determine the volumes of waste generated by each project.

We have explored a number of opportunities to reduce C&D waste by implementing selective demolition at three school blocks in Lower Ngau Tau Kok Estate. Through this scheme, whereby fittings are removed first, followed by fixtures and building components and then finally demolishing the building structure, we are able to effectively minimize C&D waste and contamination from inert demolition materials and maximize material recycling and reuse. In 2004/05, our piling and demolition works generated a total of 140 000 tonnes of inert C&D material and 15 500 tonnes of non-inert C&D material, an approximate decrease of 77% and 73% from respective volumes generated in 2003/04. This significant decrease is primarily the result of new initiatives such as the use of more precast elements in construction and improved demolition techniques together with a reduction in redevelopment projects undertaken within the year.



In our on-going efforts to achieve sustainable housing, further strategies on waste reduction have been implemented. These include:

- conducting a study on an innovative concept to revitalize old housing estates; and
- establishing the Enhanced Precast and Prefabrication System (EPPS) which allows for structural wall and volumetric precasting. (References are provided in the sections under [Materials Management / Air / Noise](#)).



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Environmental Performance 

Environmental Performance
Please Select : 
**We save energy through Administrative Measures,
 New Design and Technologies**


Energy

Energy Conservation

Global warming, climate change and concerns over energy consumption continued to be high on the agenda of international agencies, national governments and corporate entities worldwide. Hong Kong is no exception. The Government continues in its efforts to promote energy conservation and efficiency throughout the public and private sectors.

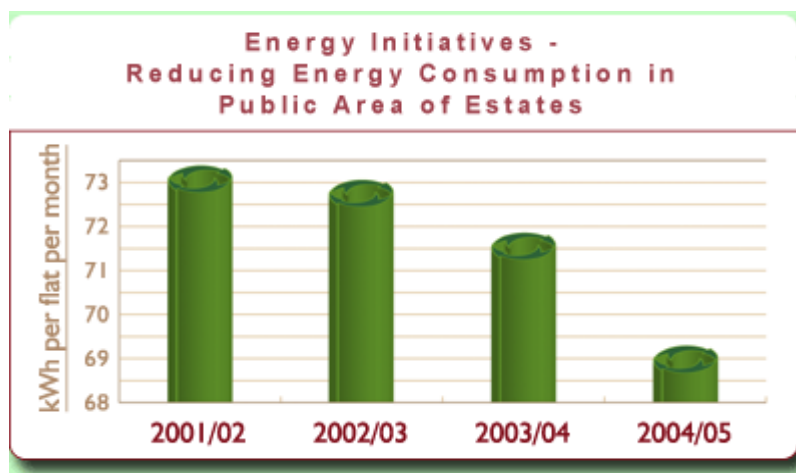
To facilitate the achievement of this overall goal of the Government, the Housing Authority (HA) has implemented various saving measures to reduce energy consumption in offices, domestic and commercial premises. In July 2004, HA established the Special Energy Savings Working Group (ESWG) to review and monitor the progress and performance of the energy saving measures implemented. The ESWG is also responsible for the identification and initiation of new energy saving projects.

Energy Consumption

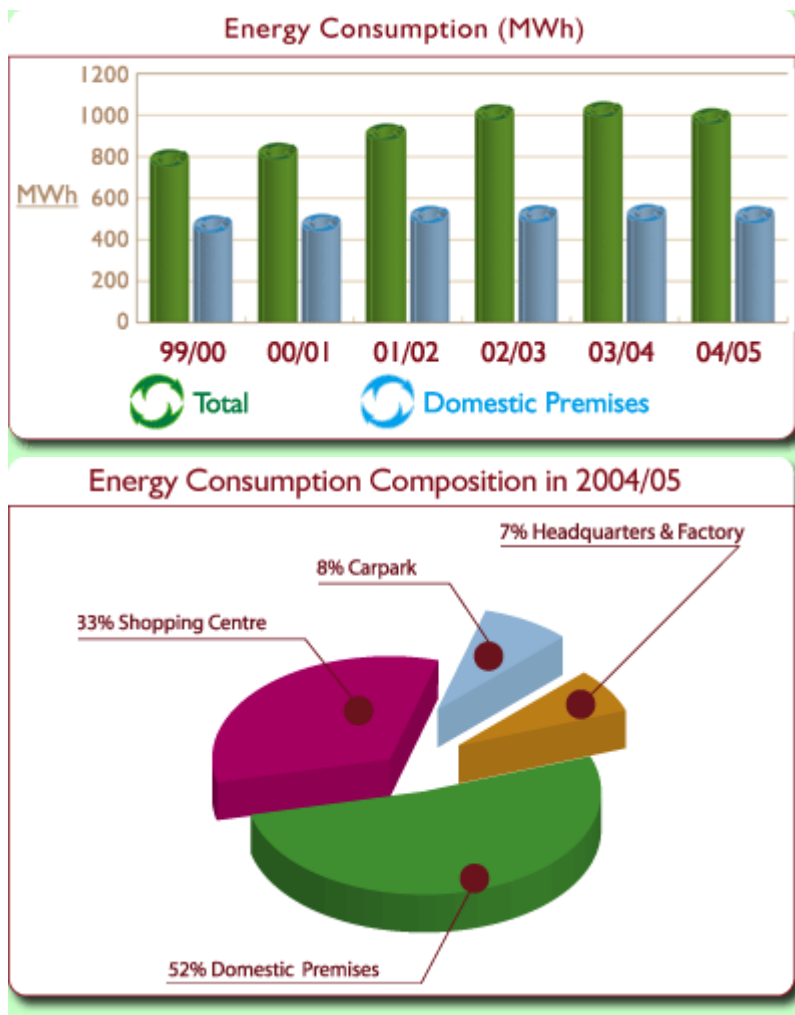
In 2004/05, our total energy consumption was 979 848 MWh, representing a reduction of 3.6% compared with last year. Domestic premises accounted for 52% of our annual energy consumption while our shopping centres and car parks accounted for around 33% and 8% respectively. Our offices together with factories and miscellaneous accounted for 7%.

HA has performed satisfactorily in the electricity reduction initiatives. At our [Headquarters](#), we managed to reduce the energy consumption by 10.7% against 2002/03. This was noticeably higher than our target of 3% set by the Government. Comparing with the data in 2003/04, such reduction in energy consumption was 2.6%. We aim to sustain the level of electricity reduction per the Government target of 6% reduction by 2007/08.

Electricity consumption in public areas of our housing estates also decreased by 3.59% over the same period, representing an average decrease in consumption of 2.57kWh per flat per month.



Simultaneously, throughout the reporting period we continued to identify initiatives that increase our energy efficiency and reduce overall energy consumption in all aspects from the operation of our own offices to the design, construction and management of housing estates and shopping centres.



Energy Saving Equipment and Energy Efficiency Management

In addition to management initiatives, one area that we can make significant gains in conserving energy is through improving the efficiency of equipment such as air conditioning systems, lifts, lighting systems and pumps. To improve long-term energy efficiency, a new Design Guide was endorsed in August 2004, providing guidelines on design of energy saving equipment.

Examples of energy saving measures include:

At our Headquarters:

- Reducing illumination in common areas wherever possible, including car parks after office hours.
- Replacing existing controls for air handling units with variable speed drives and achieving a saving of approximately 2.5% energy after completion of the replacement in December 2004.
- Replacing all lightings at the two main blocks (Block 1 & 2) with electronic ballasts.
- Adjusting temperature (25.5°C) and operating period of air-conditioning systems, as well as promoting staff awareness of the need for and methods of energy conservation.
- Appointing energy wardens to remind colleagues to comply with green housekeeping measures.
- Increasing patrols by securities to switch off lights and air-conditioning.
- Shortening the operating hours of air conditioners, lights and lifts.

Housing Estates:

- Using photocell lighting control in communal areas.
- Switching off unnecessary lighting after midnight.
- Setting illumination levels for lift lobby (85 lux), corridor (50 lux) and staircase (40 lux).
- Adjusting timer settings to optimize the usage of seasonal daylight.

Commercial Properties:

- Resetting the chilled water supply temperature as necessary throughout the year.
- Minimizing outdoor air infiltration by means of air curtains and adopting free

- cooling during winter seasons.
- Optimizing air conditioning supply during non-peak hours and in early morning and late evening.
- Closing down lighting, lifts and escalators during non-business hours.
- Improving the overall power factor efficiency.



Enhanced Energy Efficiency Building

We continued to adopt the Building Energy Codes issued by the Electrical and Mechanical Services Department (EMSD) in all our new development projects. In the year, we had nine more of our public rental housing blocks certified under the EMSD's Energy Efficiency Registration Scheme for Buildings.

Ongoing Studies and Trial Schemes for New Design on Energy Savings

In parallel with the above initiatives, pilot studies on new energy saving initiatives are currently in progress as set out in the following:

Installation of Nano-reflectors

Trial installation of nano-reflectors was arranged at one estate management office in a Shatin project in late 2005. The nano-reflector reflects more light than conventional metallic reflectors by up to 99% of light beams emitted from the luminaire. 95% of the reflected lighting will be evenly diffused to the surrounding area. The combined use of nano-reflectors and fluorescent tube luminaires will enhance the quality of illumination while reducing energy costs.



Light Emitting Diode (LED) and self-luminous exit/directional signs

Two types of energy efficient exit/directional signs are currently under study, i.e. LED and self-luminous models. The LED model consumes much less energy and has a longer life span than the fluorescent tube for the conventional sign boxes. Self-luminous signs, which are permitted for use by the Fire Services Department, emit light through low level radioactive material. Sample installations of these two types of signs at another project in Shatin will be completed in April 2005 for operation. The effectiveness of the devices and feedback from tenants will be assessed for consideration of extending the trial schemes to other projects.

Lift Energy Conservation Research Study

Two preliminary studies on energy savings of lift services are underway. One study is to quantify the possible energy saving through adjusting the lift

counterweight setting against the passenger traffic pattern. Another study is to evaluate the technical/financial viability of reusing of lift regenerative power through an add-on device developed by the lift manufacturer.

Environmentally Responsive Façade


A research study on environmentally responsive façade design in three domestic blocks using overhangs and tinted glass windows was conducted. It was anticipated that energy and hence cost savings in air-conditioning could be achieved. The project will commence its on-site installation work in mid 2006.

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Environmental Performance 

Environmental Performance
Please Select : 

For the **Building Materials** we use, we consider the **Environmental and Economic Values** throughout their **Life Cycle**



Materials Management

Life Cycle Assessment and Life Cycle Costing

Our research on Life Cycle Assessment (LCA) and Life Cycle Costing (LCC) of building materials and components used in domestic blocks was completed this year.

A LCA / LCC decision-making tool has also been derived. It integrates environmental and economic considerations of the building materials. The tool will help us better comprehend the ranking of materials according to their environmental and economic impacts. This will assist us in selecting best value building materials from a long-term perspective, thus contribute to achieving more sustainable building designs.

Management of Construction Materials

Recycled Aggregates Usage in Construction Works

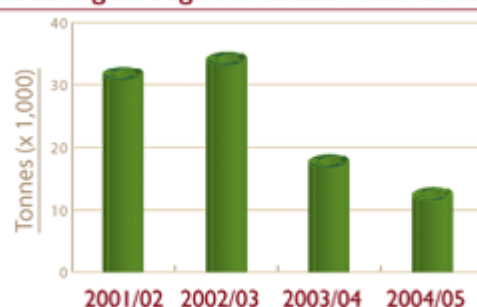


To continue our support for waste reduction, in 2004/05 we continued to use recycled aggregates in new construction projects. This amounted to the use of approximately 400 tonnes of aggregates for pipe surrounds, 50 tonnes for drainage and 70 tonnes for rock-fill in sub-base works.

This is in parallel with our initiative of using Pulverized Fuel Ash (PFA) in foundation and superstructure works where we can, so as to reduce fresh cement use and to provide a useful disposal option for the PFA residue from power stations. In 2004/05, our projects used approximately 12 200 tonnes of PFA. This was about 30% reduction comparing to the PFA used in previous year as a result of a decline in construction activity.

We continued to promote the use of prefabricated building elements in our projects. In 2004/05, we undertook trials of using volumetric precasting to achieve greater and more efficient material use. Among various schemes, we adopted the Enhanced Precast and Prefabrication System (EPPS) for the redevelopment of Kwai Chung Flatted Factory that commenced in January 2005. EPPS is a change extending the coverage from non-structural to structural wall, and from “planar” to “volumetric” precasting. This system has yielded beneficial reduction in potential material damage and waste generation as well as a reduction in construction impacts (such as [waste](#), [air](#),

Cement Saving through Pulverized Fuel Ash Substitution



[noise](#), etc).

Through the introduction and implementation of such materials management methods, we have achieved further savings in timber use. In 2004/05 we had 31 500 tonnes saving in timber, a continued improvement over the previous year (28 500 tonnes in 2003/04).

Management of Hazardous Materials

As part of the management of hazardous materials, the Housing Authority (HA) has been carrying out the Asbestos Abatement Programme through the estate redevelopment and asbestos removal works. In 2004/05 we removed another 2% of asbestos material. The safe removal and disposal of this material was ensured through strict adherence by our Contractors to our asbestos abatement programme and requirements .

The Collection and Recycling of Spent Fluorescent Tube Scheme has been implemented in many of our estates since 2002. As these tubes contain hazardous materials, proper handling is required to avoid adverse environmental impacts. With encouraging support from estates in regions of Kwai Tsing, Tsuen Wan & Island, and Tuen Mun & Yuen Long, we extended the collection scheme to estates in Tai Po, North, Shatin and Sai Kung in 2004/05. To date, we have collected more than 100 000 tubes from 64 participating estates.

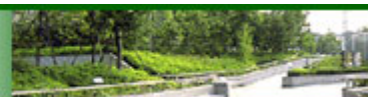


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Environmental Performance 

Environmental Performance
Please Select : 

We promote Greening by adding New Vegetation in our Estates and promoting Green Awareness to our Residents



Estate Landscaping and Greening

Estate Greening

Establishing and maintaining attractive green garden and landscaped areas for estate residents is one of the Housing Authority (HA)'s key objectives.

In 2004/05, we planted about 6 100 trees, 632 200 shrubs and 32 800 annuals to enhance the estates landscaping. Of this new vegetation, about 96 500 and 574 600 plants were added to new and existing estates respectively, which are under the corresponding umbrella of the Landscape Section and Horticulture Team.

Our landscape architects design the greening for our new estates, subject to the construction programme, The Horticulture Team, on the other hand, is responsible for planting works under the Landscape Improvement Programme, with a greening target to upgrade at least 110 000 square metres of landscape features in 2004/05 for 18 selected public rental housing (PRH) estates. We exceeded this target by upgrading almost 113 000 square metres in these estates.

Through partnership with our Estate Management Advisory Committees, we also exceeded our target of 5 000 square metres of new planting at 24 estates by implementing 6 000 square metres of new planting at 22 of these estates.

In addition, the Horticulture Team is responsible for the design, establishment and maintenance of landscape displays and theme gardens in our estates. In 2004/05, they developed theme gardens in two estates including a Palm and Terminalia Garden at Sun Chui Estate and a Camellia Garden at Yau Oi Estate.

As in 2003/04, we again staged a spectacular floral and landscape display that took the Champion Award for Design Excellence at the 2005 Hong Kong Flower Show held at Victoria Park. Our Horticulture Team designed and set up the cyber-look display which comprises fountains decorated with more than 23 species of Rhododendron - the Show's theme flower.

Greening in the Community

Tree planting is an important community activity as it not only supports urban greening, but also contributes to a greater awareness and appreciation of greening and environmental conservation in estate communities. On 20 March 2005, We invited more than 300 public housing

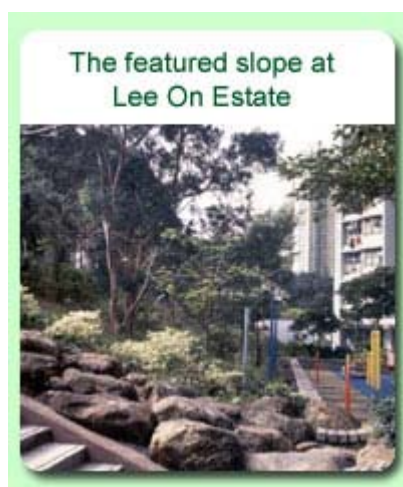


tenants from six estates in Tin Shui Wai to participate in the Hong Kong Tree Planting Day. The greening would help restore the slope appearance of Sham Shui Kok in Tung Chung. In addition, we continued to organize tree planting days and completed planting with community participation at three estates this year.



Other Enhancement Efforts

- In August 2004, we issued the revised External Works Design Guide which aimed at maximizing greening measures in our Estate Landscape Master Plans.
- To mitigate the hard appearance of engineered slopes, in 2004/05 we applied “softening” techniques such as hydro-seeding, planting and colour treatment to all new and 10 existing slopes covering a combined area of 15 300 square metres.



Environmental Performance

Environmental Performance
Please Select :
Water is precious, and we guard the Quality and Quantity spent


Water

Safeguarding Potable Water Quality

Good potable water is essential for life. We continued to place high priority on safeguarding potable water quality for our public rental housing (PRH) tenants through a number of routine control measures. These measures include:

- regular inspections of fresh water supply systems and maintenance works where necessary;
- regular inspections of exterior water pipes; and
- investigating problems with fresh water as identified by residents and conducting water sample testing as appropriate.

In addition to these regular measures, we have implemented two long-term schemes. One is our Replumbing Programme, through which all old style galvanized steel potable water supply pipes installed for 12 years or more will be replaced with copper and ductile iron pipes. In 2004/05, we replaced potable water pipes in 19 PRH blocks. This makes a total of 713 blocks replumbed so far. The replacement for those of the remaining PRH blocks are scheduled for completion by 2010.

The other initiative involves our participation in the Fresh Water Plumbing Quality Maintenance Recognition Scheme launched by the Water Supplies Department three years ago. So far, we have obtained certification for over 460 blocks, and of these, 365 PRH blocks were achieved in 2004/05. We aim to achieve first round of certification for all PRH blocks by 2006.

Conserving Water

Water supply in Hong Kong is precious and nobody can afford to be wasteful. We have continued to conserve water resources for installations under the Housing Authority (HA)'s management in both our properties and construction sites.

Similar to previous years, we aimed to reduce water consumption in estates by 0.5% as compared with the actual water consumed in 2003/04, through the installation of self-stopping water taps and replumbing to reduce pipe bursts and leakage. However, because of the high water demand of our intensive cleaning programme, we only managed to reduce the water consumption by 0.43% as compared to 2003/04.

At our HA headquarters, a trial installation of dual-flush fittings in female washrooms was initiated in February 2004. Flushing water consumption was effectively reduced. The trial has thus been extended to male washrooms with the findings to be reviewed in August 2005.

Plumbing Work



Water Recycling Facilities for LDBP





As for our construction activities, we have continued to adopt water recycling facilities for all large diameter bored piling (LDBP) works. In the coming year, we plan to stipulate the use of water recycling facilities as a mandatory specification for all new contracts.

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Environmental Performance 

Environmental Performance
Please Select : 

We **Control Air Pollution** at **Construction Sites** and enhance the **Air Quality** of our **Estates**

**Air****Controlling Fugitive Emissions During Construction and Demolition**

Fugitive emissions, in particular dust, can be easily generated if not properly controlled during construction and demolition (C&D) works. Recognizing this, all contractors working on the Housing Authority (HA) C&D sites are required to implement all practicable means to avoid or otherwise control dust and exhaust emissions from their works and construction vehicles.

Our contract specifications outline the air pollution control measures which have been implemented on site. Our staff conduct regular inspections and assessments including the Performance Assessment Scoring System to evaluate the performance of all our building contracts.

More recently, we have introduced the Enhanced Precast and Prefabrication System (EPPS) that will potentially reduce air pollution on site during construction. [Reference to [Materials Management](#) / [Noise](#) / [Waste](#) on EPPS] This system reduces the amount of on-site works (i.e. cutting / sawing / nailing of materials) which inherently generate fugitive dust if not properly managed. Prefabrication allows whole segments of construction parts (i.e. window frames, wall / room units, etc) to be constructed within a controlled environment away from residential premises, thereby reducing air emissions and / or nuisance to the general public.

Wheel-washing bay at construction site

**Managing Odour Nuisance at Estates**

When improperly stored and managed, waste at refuse collection points will generate odour which can be a nuisance to residents, passersby and our estate management staff. To mitigate this impact, HA has continually been reviewing the situation at all estates in parallel with a number of air quality enhancement initiatives. These include the installation of over 50 biotechnological equipment items at refuse collection points and 200 packaged deodorizers in the refuse rooms of our public housing estates.

Following the success of these initiatives, we shall introduce more installations into our refuse management facilities as appropriate.

Improving Our Indoor Air Quality

We recognize that maintaining good indoor air quality is important if we are to maintain good health. As such, since 1996, we have adopted a smoke-free environment in our headquarters and other office premises. The indoor air quality of our shopping centres has also been improved with increase in fresh air intake following the SARS outbreak in 2003.

Biotechnological deodorizers in refuse collection point



Besides the installation of gas dessicant dehumidification system at Hin Keng market, we have taken other measures to improve air quality in markets using ultra-violet air purifier unit to disinfect airborne bacteria.



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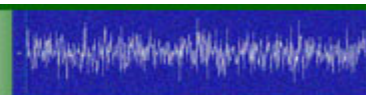


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Environmental Performance

Environmental Performance
Please Select :

With **Noise Complaints reduced** on Construction Sites, we will continue to **explore further Mitigation Measures** in our **daily Operations**



Noise

Noise Minimization at Construction Sites and Estates

Construction and demolition activities can be a source of significant noise, creating nuisance to residents and the community at large. We fully recognize our responsibility to address this issue and have taken extra steps to minimize noise levels wherever practicable. The following outlines some of our initiatives:

Hydraulic Pile Jacking

The pilot hydraulic pile jacking method which commenced in 2003/04 was successfully completed this year. This method was found to be effective in minimizing noise and vibration effects as well as increasing operating hours and greatly enhancing productivity. The Housing Authority (HA) is now considering the use of this construction method in future noise sensitive projects.

Hydraulic Concrete Crushers

In 2003/04, HA commenced pilot trials on the use of hydraulic concrete crushers in place of traditional concrete breakers. Results have shown that this equipment generates negligible residual noise and emits less dust than the traditional concrete breakers. We have prepared a technical guide on the use of hydraulic concrete crushers and is accessible through our website.



Offsite Prefabrication

Prefabrication of building elements continues to be a key initiative adopted by the construction industry at large to avoid and reduce noise associated with construction and maintenance activities. While we have continued to adopt the use of prefabricated building elements such as precast façades and staircases, we have also introduced the new Enhanced Precast and Prefabrication System (EPPS) [Reference to [Materials Management](#) on EPPS] to further enhance our goal of minimizing construction waste and noise impacts on neighbouring residents.

Study on Self-Compacting Concrete (SCC)

Further to the completion of the study undertaken in partnership with the City University of Hong Kong, we are currently preparing Specifications and Guidelines to facilitate the use of SCC in appropriate projects.

Replacement of Water Pumps with Quieter Models in Estates

As part of our yearly programme to replace 3 000 rpm water pumps with quieter 1 500 rpm models, we replaced 27 such pumps in 2004/05, taking the total number of replacements up to 172 since 2000/01.



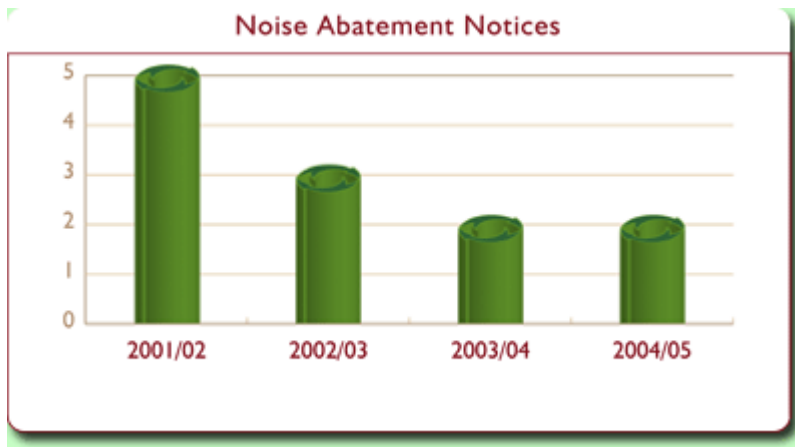
Noise Complaints and Abatement Notices



The number of noise complaints received against our construction sites went down from 24 in 2003/04 to only 10 in 2004/05. This continues the improving trend of previous years.


For our commercial premises, we received two noise abatement notices at two shopping centres from the Environmental Protection Department during the year. This also represents a continual trend of improvement from previous years.

However, noise complaints received at our housing estates have slightly increased from 201 cases in 2003/04 to 208 in 2004/05. We are continuing efforts to work with our Estate Management team and residents to minimize noise nuisance in the community.





Summary	Message from the Chairman	Message from the Director	About this Report	2004/05 Highlights	Business Overview	Significant EHS Aspects	Our Vision and Approach to Sustainable Housing
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Health, Safety and Social Performance 

Health, Safety and Social Performance

Overview

Please Select : 

Meeting Health and Safety Targets

As member of the community, we have the responsibility to provide a safe and healthy environment for our residents at the public rental housing (PRH) estates. It is therefore extremely important that we work closely with our residential property managers and other business partners to ensure all environmental, health and safety (EHS) performance targets are being met.

In 2004/05, three extra targets were included in the health and safety initiatives. All of these targets were fully achieved in the reporting period.

Legislative Compliance

Regarding legal compliance in 2004, there were 72 non-compliances related to health and safety against our contractors. Of these 63 were related to site safety and nine were associated with mosquito-breeding convictions of our contractors.

A Sustainable Working Environment

In terms of social performance in 2004, we continued to ensure a fair and equitable working environment for all our employees.

We provide employee benefits beyond the minimal legal requirements. For our permanent staff this is governed by the Civil Service Regulations. For our contract staff we provide:

- cash allowances in lieu of fringe benefits, depending on grade;
- gratuities;
- medical and dental benefits; and
- group life insurance, including total and permanent disability benefit.

Importantly, we aim to maximize employee satisfaction, which creates a productive work environment and reduces turnover. We endeavour to achieve this on a professional level, by providing opportunities for career development; and on a social level, by providing the opportunity for social and recreational activities. Our Staff Relations Sub-section facilitates these activities by enhancing communication between senior management and staff associations and organizing relevant staff functions.

In terms of professional development, we provide comprehensive training in occupational, health and safety issues depending on job function. This includes training courses, seminars and lunch talks. In 2004/05, we provided over 30 different seminars/training courses covering a wide range of topics, including work-life balance, stress management, computer knowledge and even self defence.

Our work-life balance initiatives continued with the successful operation of our hotline which handled 83 cases and 47% of these were work related and 53% related to personal problems. Although the number of cases handled increased in 2004 (66 cases were recorded in 2003), the cases related to work problems decreased by 13%. We also continued with counselling to help employees deal with personal issues.

On the social level, numerous recreational activities were made available to staff. These include:

- community volunteer work, such as visiting the elderly living at the PRH estates;
- sports activities, such as hiking, inter-organization competitions in tennis, bowling, etc.;
- social functions, such as dinners; and
- group interest classes such as yoga, aerobics, Chinese painting and calligraphy, etc.

Our staff has expressed their satisfaction especially with fulfilling volunteer work. This is an area worth expanding to fully meet staff requirements. We will continue to review and make improvements.

Neighbourhood Development

As part of our social performance, we also considered our impact on the local community, such as the needs of society in the planning and development of our housing estates and commercial premises, a concept that we term "Neighbourhood Development". Ultimately we aim to enhance the endurance, attractiveness and sustainability of the Housing Authority (HA)'s public housing projects through the provision of social facilities to meet the needs of our residents and local communities.

Such provisions include:

- social facilities (e.g. family and child welfare services, children and youth services, correctional services);
- recreational facilities (e.g. playgrounds, open spaces, sports facilities);
- educational facilities (e.g. kindergartens, primary and secondary schools, special schools); and
- commercial facilities (e.g. district shopping centres, wet markets, retail premises and public parking).

This integrated planning is guided by the Hong Kong Planning Standards and Guidelines, statutory Outline Zoning Plans and the Buildings Ordinance. The scope of provision is also determined by the size of population. The guidelines stipulate design criteria. Other considerations in the planning process also include:



- land use compatibility;
- availability of similar facilities in the vicinity;
- special requests from concerned parties;
- community needs and aspirations; and
- area characteristics.

In parallel, HA undertakes a retail assessment on the need of shopping facilities for our tenants.

All facilities are normally owned, managed and maintained by the Housing Department, including retail and parking facilities, open spaces and recreational facilities that serve estate residents.

The success of neighbourhood development in the community is partly attributable to the cooperation of and partnership with all parties involved. These included the Social Welfare Department, the Education Department, the Leisure and Cultural Services Department and the Home Affairs Department, as well as private developers.



Health, Safety and Social Performance 

Health, Safety and Social Performance
Please Select : 
Increasing Satisfaction of our tenants towards the Cleanliness and Environmental Hygiene in the common areas of our Estates


Health and Hygiene

Planning for a Healthy and Hygienic Living Environment

To improve the drainage network of our public rental housing (PRH) estates, we have implemented an ongoing comprehensive inspection and repair programme.

In 2003/04, an academic institute was commissioned to audit the drainage design of our standard harmony blocks. Based on the audit findings, we updated our Specification Library to incorporate changes in specifications and testing requirements for all new contracts.

We continued to undertake technical reviews of our re-entrant design to allow for easy inspection and maintenance from common corridors. Further to the incorporation of 2-way floor drains in 2002, we are now preparing for the trial of sunken shower areas in the coming year. In addition, the use of a common w-trap in drainage systems was tested in the past year, with results accepted in principle by the Buildings Department and the Independent Checking Unit of the Housing Department. This new design will be adopted for new PRH domestic flats subject to the flat layout and drainage configuration.

In 2004/05, we undertook a study of new refuse handling systems aimed at improving the hygienic conditions of waste collection. Two new refuse handling systems, the Central Compactor System (CCS) and the Distributed Compactor System (DCS), have been endorsed by the Housing Authority (HA)'s Building Committee for implementation in newly constructed housing estates in the coming year. The CCS is proposed to be installed in housing estates of more than 2 400 flats as it will handle larger daily refuse outputs, while the DCS, with its smaller handling capacity, will be fitted into housing estates of less than 2 400 flats. A higher level of cleanliness and hygiene is achieved through a combination of control devices at the bottom of both systems, to prevent over packing of the refuse storage bins and spillage during collection and transportation. The feasibility of implementation in existing housing estates will also be examined.

Our recent Public Housing Recurrent Survey 2005 reports a trend of increasing satisfaction among our tenants on the cleanliness and environmental hygiene conditions in common areas of our PRH estates: 64% compared with 62% and 52% in 2004 and 2003 respectively. The number of cleanliness and hygiene complaints received also

2-way Floor Drains



W-Trap in drainage systems



dropped significantly, from 2 123 in 2003/2004 to 1 577 in 2004/2005 (reduced by 25.7%). We look forward to further improving our performance.

Preventive Measures

Since the SARS outbreak in 2003, we have stepped up a comprehensive programme to improve personal and environmental hygiene in public housing estates.



Besides raising the awareness of tenants and visitors in shopping centres, markets and car parks through posters and notices, we have continued to:

- clean and disinfect common facilities, building services, children's play equipment, drainage systems, etc.;
- place automatic hand soap dispensers and sanitizers at our shopping centres and car parks;
- arrange inspections of drainage systems and vent pipes; and
- strengthen rodent and pest control.

The "Drainage Ambassador Scheme", which commenced in 2003, was completed in May 2004. With the assistance of over 100 ambassadors, we have performed inspections for some 430 000 flats and completed all drainage repairs identified. Another programme has been established to replace seriously corroded cast-iron drainage stacks inside flats at 18 estates by 2006.

Up to the end of March 2005, such replacement works have been completed in nine estates. We have completed the fourth round of half-yearly inspections of drainage pipes installed in common areas and external walls since 2003 and rectified those identified defects accordingly.

A three-level Response System: Alert Level, Levels 1 and 2 has also been adopted to ensure an efficient and responsive internal management system to deal with possible resurgence of SARS. The system sets out clear operational guidelines at each alarm level for frontline staff and property management companies, with actions to be taken in public housing estates as well as non-domestic properties depending on the scale and nature of risk. We continued to conduct practice drills to enhance the alertness and preparedness of our frontline staff.

A tighter schedule was also set for cleansing contractors to clean up public areas such as lift control panels, playground equipment, recreational facilities and public toilets with 1:99 diluted bleaching agent. Canopies and refuse collection points were disinfected at least once daily.

Anti-Mosquito Measures

Over the past year, we have persisted with strenuous measures to eradicate mosquitoes and mosquito breeding grounds to prevent the spread of mosquito transmitted diseases such as dengue fever and Japanese encephalitis.

In the rainy season, mosquito control works were stepped up on all fronts, including close monitoring of cleansing contractor performance at all our public rental housing (PRH) estates, commercial properties and construction sites.

Special Teams at Estates and Construction Sites

The four-member Anti-Mosquito Special Cleansing Squads, established in each housing estate from June 2004 are responsible for carrying out daily inspections. Any accumulation of stagnant water or rubbish found is cleared immediately while special attention is given to regions where its latest Area Ovitrap Index has exceeded 10%.



Since May 2004, Special Task Force Teams have been assigned to monitor construction sites. The teams are responsible for carrying out weekly inspections and removing mosquito breeding black spots by clearing stagnant water and spraying larvicidal oil. Mosquito-catching apparatuses have been installed in strategic locations at PRH estates.

In 2004/05, over 9 500 inspections were conducted in our estates and construction sites, with larvicidal oil sprayed at more than 72 500 potential breeding grounds. In addition, the clearing of clogged drains was expedited by performing over 700 desilting operations.

At our construction sites, a total of nine mosquito breeding convictions were recorded in 2004/05, with the offending contractors duly fined. Our inspectors have continued to monitor the contractors to verify that improvement have been implemented.

Educational Campaign Launched

In 2004/05, a Junior Mosquito Inspectors Programme was introduced as part of our massive educational campaign. The Housing Department joined hands with 20 primary schools to recruit students as Junior Mosquito Inspectors to help disseminate anti-mosquito messages to their families and friends.

Furthermore, we co-operated with estate management companies and Estate Management Advisory Committees to carry out joint educational efforts. These included poster displays in lift lobbies and educational video shows in estate offices. Leaflets on the prevention of mosquito breeding were also distributed to our tenants.

As a new initiative, action under the Marking Scheme for Tenancy Enforcement [Reference to [Residents and the Community](#)] will be taken against households where stagnant water is found to have mosquito breeding.

Other Measures for a Hygienic Living Environment

In our estates, accumulation of rubbish on the top of canopies and air-conditioners, dumping of abandoned objects in common areas, and illegal cooked food hawking are common hygiene problems. To combat these, the Housing Authority (HA) has continued to implement measures such as cleaning up hygiene black spots, enhancing refuse collection, providing drainage checks and stamping out illegal cooked food hawking in PRH estates.

Under the hygienic living environment schemes launched in 2003, improvements have been achieved in the following areas:

Marking Scheme for Tenancy Enforcement

Under this Scheme implemented since August 2003, points are allotted to households committing any one of the 20 public hygiene and health related misdeeds. Excluding non-recurrent misdeeds, which lapsed after two years, four households were allotted more than 16 points, 68 households 10 to 15 points, and 2 951 households less than 10 points. Households accumulating more than 16 points will receive notice-to-quit for the tenancy.

Stringent Enforcement Against Spitting and Littering

Further to the endorsement by the Legislative Council in June 2003 to raise the penalty for cleanliness offences, our enforcement teams have increased actions against spitting and littering in PRH estates. Since 26 June 2003 (and up to the end of March 2005), a total of 7 192 fixed penalty notices have been issued to offenders.

Restaurant and Factory Tenants

The relocation of cooked food stalls from open areas to enclosed premises continued in 2004/05. To maintain clean and hygienic conditions, cooked food stall tenants have been requested to regularly clean their stalls, grease traps, common areas and facilities. They are also requested to ensure all waste management practices and the handling/storage of dangerous or high polluting materials follow relevant regulations and guidelines.

To strengthen tenancy enforcement, a new Factory Marking Scheme will be launched in September 2005. The scheme will adopt a more stringent and objective measure to deal with irregularities generally found in factory estates.

The Scheme targets at offences associated with the abuse in the use of factory units, those with adverse effects on



building control and environmental hygiene, or those posing a hazard to public safety.


Penalty points will be allotted according to the seriousness of offence and will be held valid for two years. Tenants will be alerted once the accrued points reached 10 or more. Action for tenancy termination will be triggered when the mark reaches 16.

Combating Illegal Cooked-Food Hawking

We continue to carry out joint enforcement with the Food, Environment and Health Department and the Police against illegal cooked-food hawkers in housing estates. In 2004/05, a total of 216 joint operations were executed.

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 **Top**

Health, Safety and Social Performance 

Health, Safety and Social Performance
Please Select : 

A **Safe Living Environment** is one of our **Major Tasks in achieving Sustainable Housing**



Safety

Safety in Our Estates

One of the major tasks in achieving sustainable housing is to provide a safe living environment and surroundings for our public rental housing (PRH) tenants. To protect the daily life of our tenants, we have been implementing various measures in the past years, ranging from safe building design to adding new safety measures in estate management.

Safe Building Design

Besides ensuring compliance with laws and regulations, we aim to go beyond statutory requirements and achieve a higher building safety standard. During the design stage, we aim to identify safety issues related to the whole process from construction to subsequent use and maintenance of our PRH blocks. One of our initiatives is to adopt practicable principles from UK's Construction Design and Management (CDM) Regulations in our project design. By addressing safety issues in the early design stage, risks affecting safety and health can be better managed, reduced or even avoided. Design guidelines on practising these principles have been issued and we continue to seek improvement.

Digital Falling Object Monitoring System and CCTV System



Measures Against Falling Objects

We have employed a team of security guards formed by ex-Police to patrol round-the-clock at strategic locations to detect and gather evidence on tenants who throw objects from heights. In addition, Digital Falling Object Monitoring Systems and Closed Circuit Television (CCTV) Systems have been installed at strategic locations to support the patrols. These initiatives have proved to be effective. By the end of March 2005, we identified a total of 41 households from which objects were thrown. Under the existing Marking Scheme for Tenancy Enforcement, seven points were allotted to those residents.

The allotment of penalty points is under review with an aim to relate the objects thrown down with the seriousness of the misdeed. Objects thrown from height would be classified into those that would "jeopardize environmental hygiene" and "cause danger or personal injury". More penalty points will be allotted for the latter. We wish to imprint upon the public that unscrupulous acts of throwing objects from heights that may cause danger or personal injury will not be tolerated.

Promotion of Awareness on Fire Safety

"Parents and Children Join Hands in Estate Fire Prevention" was the slogan of



the annual Estate Fire Safety Campaign in 2004/05. A series of fire safety awareness programmes was rolled out following the kick-off ceremony in November 2004.

One major event was the Estate Fire Safety Family Day Camp at the Fire Services Training School in Pat Heung, with 75 primary school students and parents from 25 families receiving intensive fire safety training. These “Estate Fire Safety Families” were then committed to help spread the message among peers and friends.

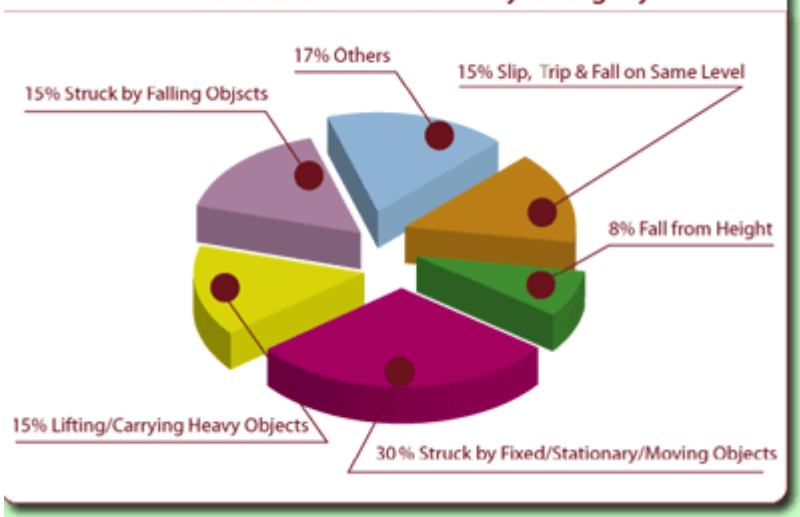
We continued to promote fire safety awareness through radio segments, organizing the Estate Fire Safety Ambassador Scheme, Estate Fire Safety Education Paths, roadshows and training programmes. To widely disseminate the relevant information, we planned to set up a web-based resource centre on estate fire safety on the HA website. Calendar cards carrying fire safety messages were also distributed to every domestic household to alert them on fire hazards.

Occupational Safety in Construction and Estate Management

Statistics in 2004

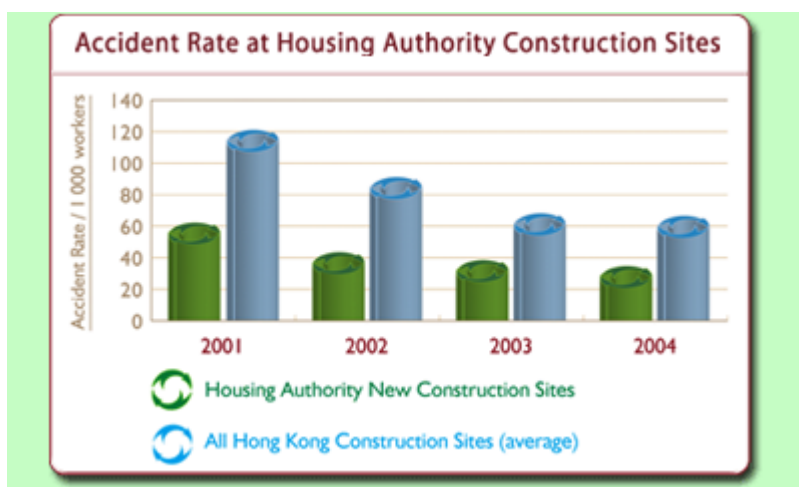
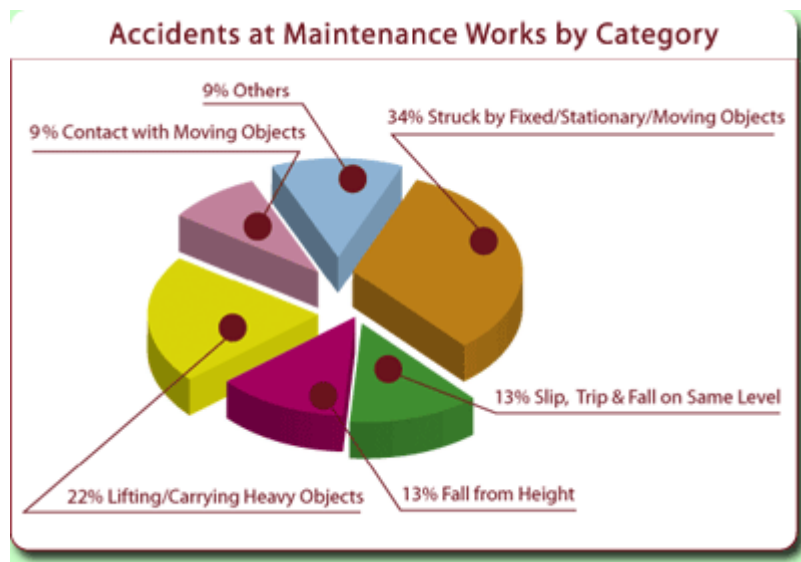
The total number of accidents in our new works and maintenance works contracts has steadily dropped in recent years. Last year we had a total of 160 accidents, compared with 255 accidents in 2003, 390 accidents in 2002 and 875 in 2001. Causes of accident for new works and maintenance works are shown below.

Accidents at New Works by Category



This downward trend is most evident in the accident rate per 1 000 site workers for new works. The accident rate per 1 000 construction workers on Housing Authority (HA) sites declined from 37.8 in 2002 to 32.8 in 2003, and further to 29.2 in 2004. This is far below that recorded by the Hong Kong construction industry (60.3 in 2004). [Source: Occupational Safety and Health Council – 2004 Statistics]

Unfortunately, there was one fatality among all HA contracts in 2004, and actions against the contractors concerned were carried out in accordance with our sanction measures regarding contractors' performance.



Safety Culture and Systems in Construction Sites

We have continued to enhance the safety culture in construction sites through implementing tender contractual controls, conducting regular audits, providing guidelines and promoting experience-sharing among industry partners.

In 2004, we undertook quarterly safety audits under the Housing Authority Safety Audit Scheme for over 30 construction contracts. Contractor performance was assessed and scored by independent safety auditors. The audit results serve as a critical consideration leading to suspension from tendering as a disciplinary measure.

We also promoted best practices to enhance the safety culture at construction sites. In 2004/05, the Safe Working Cycle was introduced as a mandatory requirement while the Guidelines on Hard Paved Construction were issued to minimize dust generation and reduce material damage and contamination during transportation.

We have continued to promote staff and contractor awareness on site safety through conducting training courses, toolbox talks, seminars and awareness promotion events, such as safety campaigns.

The concerted efforts of our contractors and HA were recognized with a total of 14 awards won by HA contractors in the two major safety awards: the Construction Safety Award and Considerate Contractors Site Award in 2004 in Hong Kong.



Health, Safety and Social Performance


Health, Safety and Social Performance

Please Select :

We consider the **Needs of our Society** from Planning to Development and Maintenance of our Housing Estates in ensuring the **Provision of Cohesive Neighborhoods**.



Neighbourhood Development

Our Concerns and Approach

Neighbourhood development refers to the consideration of the needs of society in the planning, development and maintenance of our housing estates and commercial premises and the provision of adequate community facilities for the cohesion of the neighbourhood. Ultimately, we aim to enhance the livability, attractiveness and sustainability of our housing estates through the provision and maintenance of appropriate social facilities to meet the needs of our residents, tenants and local communities.

Planning and Development – In developing public rental housing (PRH), we have to ensure that adequate infrastructure and network such as public transport, pedestrian facilities are timely provided for the population.

We conduct integrated planning for physical facilities within the PRH in accordance with the Hong Kong Planning Standards and Guidelines, statutory outline zoning plans and the Buildings Ordinance. The nature of facilities is also influenced by the size and characteristics of the intake population. The guidelines stipulate design criteria and other planning considerations including land use compatibility, availability of similar facilities in the vicinity, special requests from concerned interested parties, community needs and aspirations and existing culture of the area. In parallel with this, we undertake retail assessment to determine the need for shopping facilities.

Facilities Provision

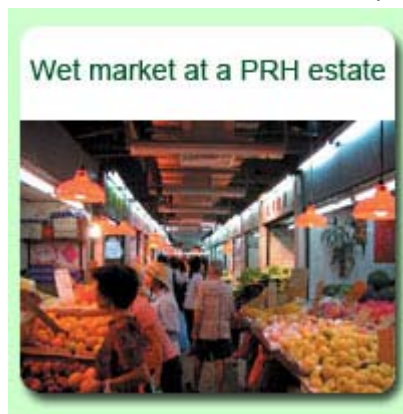
The community facilities in meeting the needs of our residents and the public at large include:

- Social welfare facilities
- Sports and recreation facilities
- Education facilities
- Commercial facilities e.g. district shopping

A Stocktaking of Key Community Facilities as at March 2005

Community Facilities	Number of Facilities
Social Welfare	1 550
Family Welfare and Child Service	19%
Children and Youth Service	18%
Community Support Facilities for the Elderly	16%
Rehabilitation Service	15%
Medical Service	19%
Other Community Service	13%
Education	550
Kindergartens	53%
Primary Schools	33%
Secondary Schools	14%
Commercial	
Retail Facilities	1.1 M square metres
Car Parking	104 500 spaces
Sports and Recreation	2 890
Ball Court (badminton/basketball/volleyball)	27%
Soccer pitch	2%
Game facilities (chess desk with chair/table tennis table)	39%
Children Play Area	31%
Amphitheatre	1%

centres, wet markets, retail and car parking



Maintenance and Community Cooperation – Ensuring long-term satisfactory use of these physical facilities by our residents and tenants requires effective and efficient maintenance of the facilities. Our Estate Management endeavours to provide high quality maintenance services.

Success of neighbourhood development in Hong Kong is also attributable to the cooperation and partnership of the parties involved. These parties include other government bodies such as the Social Welfare Department, Education Department, Leisure and Cultural Services Department and Home Affairs Department as well as private developers.

In August 2004, a joint task force was set up, comprising our housing manager and building professionals together with representatives from the Social Welfare Department, the Kowloon Hospital and non-Government organizations. The Task Force focuses on rehousing severely physically-challenged persons at PRH estates and providing them with supplementary services such as counselling and after care. The Task Force aims to provide a barrier-free living environment in a supportive community for physically-challenged persons. The first severely physically-challenged person was successfully rehoused in February 2005.

We also encouraged community participation in the integrated planning and design process. We invited relevant stakeholders to express their views on planning for our PRH and the neighbourhood. One example was in [the redevelopment of Ngau Tau Kok Estate](#). We gathered residents' opinions through opinion survey and residents' meetings. Residents also attended workshops for understanding the design of reception estates.

Social Well-being

Apart from provision and maintenance of adequate physical facilities, our approach to neighbourhood development also includes ensuring and enhancing social well-being. Our philosophy of achieving social well-being includes four ingredients, namely neighbourhood identity, social interaction, community participation, and heritage preservation.

Neighbourhood Identity enhances a sense of belonging. It promotes the feeling that one belongs to and is proud of the neighbourhood. Identity of our PRH is formulated through the uniqueness of the master layout, building and landscape design. Master layout with building and spatial design as well as soft landscape design that are coherent with the characteristics of the site and its surroundings give distinct identity and character of the estate.

Social Interaction promotes social cohesion and social inclusion and is essential for social well-being. Our landscape design and comfortable communal spaces are designed to encourage people to gather, communicate and interact. Different types of spaces are created for different nature and levels of interaction and social encounters.

Community Participation involves our tenants and residents to contribute to and shape their own neighbourhood. We provide opportunities for them to express creativity and to contribute in ways that satisfy social and mental needs. Examples of our initiatives in 2004/05 include:

- Arranging large scale annual community events at central gathering place for the neighbourhood such as during Yue Lan Festival at Lower Ngau Tau Kok Estate for Chinese opera performance and public auctions.
- Organizing awareness promotion events such as Estate Green Fun Day, Tree Planting Day, Fire Safety Roadshow, Environmental Household Products Design Competition for our estates. Also, participating in public environmental events such as green carnival, green trail walk, tree planting, etc.
- Providing voluntary services by the Housing Department Volunteer Corps (HDVC) which mainly serves the aged tenants in PRH estates. HDVC has conducted activities such as Caring Visits to Elderly Tenants in Tai Hang Tung Estate and Lunar New Year Elderly Service Day in Sun Chui Estate.

Heritage Preservation enhances maintenance and further nourishment of the characteristics of local neighbourhood. A vivid example was the development of Ma Hang Village in 1993. The project preserved the exceptional topographical features, mature trees, cultural features including temples, fung shui, and the waterfront together with

the reconstruction of Murray House.

Working Hand-in-Hand with the Community

In promoting residents participation, we have continued to work hand-in-hand with the community and organized a number of waste reduction schemes in 2004/05. The events have all recorded active involvement and support of our residents.

Mooncake Box Recovery

In September 2004, we once again provided our full support to the Friends of the Earth (HK) (FoE)'s mooncake box recycling campaign to promote environmental awareness of our tenants on the high recyclable value of tin. As most mooncake boxes nowadays are made of tin, a non-toxic and non-corrosive material widely used in food packaging, the boxes when properly collected and recycled, can be used for manufacturing other useful metal products.

By means of the educational poster displays and box collection points set up in our estates, and with active participation of our tenants, more than 28 000 mooncake boxes, weighing over 6 745kg, were collected.



Waste Reduction Credit Scheme

The Housing Department (HD) has been co-organizing this recurrent scheme with the Housing Society (HS) and the Food and Environmental Hygiene Department since 2001. It was in its third phase from September 2003 to August 2004, and the fourth phase started right away from September 2004 for another year.

In this scheme, all HD and HS public housing estates participate to compete for the lowest monthly domestic waste generation rate by person. Every household of the 10 winning estates will receive a souvenir.

In this third phase, we had six estates awarded with the average waste generation per person per month of 0.12 to 0.15 refuse bins. These estates were Choi Fai, Po Tat, Lei Yue Mun, Tin Tze, Shek Yam and Choi Yuen while Tin Tze was the winning estate for two consecutive years.


Environmental Household Products Design Competition

In November 2004, we organized an innovative "Environmental Household Products Design Competition" for our estate tenants with an objective of encouraging them to turn old or unusable household items into useful and environmentally friendly household products.

With overwhelming response, some 550 entries were received. The judging panel comprised of representatives from HA and the three green groups, i.e. FoE, Green Power (GP) and Conservancy Association (CA). Based on the key criteria of creativity, types of materials being recycled and usefulness of the products, over 30 submissions were awarded as winners.



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Stakeholders Engagement 

Stakeholders Engagement
Please Select : 
Our Residents and the Community are the Clients we serve


Residents and the Community

Our Approach and Achievements

Our relationship and engagement with public housing residents and the local community are important elements of our approach to addressing the environmental, health and safety (EHS) impacts of our activities. To this end, we interact with our stakeholders largely by instigating partnership and EHS awareness promotion activities that are both educational and recreational. This approach gains maximum participation and facilitates our goal of developing a cohesive, healthy and productive society.

In 2005, the annual Public Housing Recurrent Survey indicated that the general satisfaction levels of public housing households towards our estate management services had continued to improve. The results were based on a sample of about 5 000 households and a response rate of 90%.

Partnering in Various Channels

The Housing Authority (HA) engagement with local communities may take a variety of forms, ranging from inventive environmental competitions to hands-on environmental practices. We plan these activities specifically with a fun component to attract participation and to establish cohesion in the long run. Examples of events in 2004/05 are given below.

Waste Reduction

Environmental Household Products Design Competition: We organized this educational competition for tenants to produce environmentally friendly household products from old or unusable housewares. The target group of the competition ranged from primary and secondary students to the general public of all ages. Among the 550 entries, 34 items were awarded for their creativity and practicability.

Join Hands to Collect Mooncake Boxes for Recycling: In support of the Friends of the Earth (HK) recycling campaign during the Mid-Autumn Festival, we set up publicity posters and box collection points in our housing estates. Residents were encouraged to bring in their mooncake boxes for recycling. More than 28 000 mooncake boxes weighing over 6 745kg were collected in the HA's public housing estates.

Waste Reduction and Recycling on World Environment Day 2004: We joined hands with the Social Welfare Department to launch an event with focus on reducing, recycling and reusing the waste of our office colleagues on 5 June 2004 (the World Environment Day). Our colleagues were encouraged to bring in idle but functioning items. All collected items were then cleaned and repaired at sheltered workshops prior to donation to those in need.

Green Community

Mural Painting: At Cheung Wang Estate in Tsing Yi, some 600 public housing tenants, students, and local community members, together with our Housing Department (HD) staff, completed the largest mural ever painted. The mural, which stretches across the 128m-long barrier wall and depicts housing block designs and

symbols of the efforts for building a green living environment, was officially unveiled on 11 December 2004. The drawings were based on the winning designs of an open competition for "My Dream Home".

Estate Green Fun Day: The Fun Day, titled "Let's Join Hands to Build a Green Community", was held at the Lok Fu Shopping Centre in February 2005. A 22.5-square metre giant board game conveyed environmental tips and displayed the winning pieces of the Environmental Household Products Design Competition. Thousands of public housing residents and their children enjoyed the first event of this kind organized by the HD.



Green Carnival: HA has for the second consecutive year participated in the Green Carnival organized by the Green Council at the Wanchai Sports Ground on 30 January 2005. On that day, HA set up a game booth with a theme to publicize measures for conserving natural resources in our daily lives.

Green Trail Walk: About 30 HA representatives participated in the Green Trail Walk organized by the Environmental Protection Department and the Environmental Campaign Committee on 30 January 2005. The Walk was part of the Hong Kong Environmental Protection Festival for the year.

Health and Hygiene

Anti-Mosquito Campaign: HD launched a Junior Mosquito Inspectors Programme. With the cooperation of 20 estate primary schools, we recruited students as junior mosquito inspectors to help disseminate information on the hazards of mosquitoes.

Public Housing Estate Cleanliness Incentive Scheme: We continued to organize the Incentive Scheme which encourages tenants to maintain a high level of cleanliness. The scheme included Operation Tai Ping Tei, conducted quarterly in all public rental housing (PRH) estates, as well as 191 various cleaning activities with the help and support from over 1 600 volunteers and 65 800 residents.



Safety


Estate Fire Safety Campaign: For the eighth "Estate Fire Safety Campaign" held in our public housing estates, we had "Parents and Children Join Hands in Estate Fire Prevention" as the slogan for the year.

With the co-operation of the Fire Services Department and the Federation of Parent-Teacher Associations, we arranged for the first time to recruit and train "Fire Safety Families". A total of 75 primary school students and parents from 25 families were nominated to participate in the "Estate Fire Safety Family Day Camp" held at the Fire Services Training School in Pat Heung. During the day, the families received training on precautionary measures against fire hazards and usage of firefighting equipment at public housing estates. They all then pledged to organize fire safety related activities at schools and help spread the fire safety message among peers and friends.





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Stakeholders Engagement 

Stakeholders Engagement
Please Select : 

We work together with **Business Partners** to provide **Environmental Services and Products**



Business Partners

Property Design

In November 2004, the Housing Department Architects Association was honoured to host a leading academic researchers forum on sustainable housing development. Speeches were delivered on the topics of "Innovative Technology in Heating and Air-conditioning Using Renewable Energy" and "Visual Sustainability Using Geographical Information System" respectively at a lunch talk attended by over 50 colleagues.

The speeches organized were to support our ongoing initiative to explore the latest building technology for improvement of the public housing design.

The talk on "Innovative Technology in Heating and Air-conditioning Using Renewable Energy" explained the use of computerized thermoelectric panel to optimize the heating and cooling levels of an air-conditioning system to replace the normal water-based system and effectively double the life span of an air-conditioner.

The talk on "Visual Sustainability Using Geographical Information System" focused on using a geographical information system (GIS) as property planning tool to optimize site and building layout to enhance views and minimize visual obstruction.



Partnering & Procurement Resources

Our business partners are many and diverse, and we need an efficient information management process for effective communication. This is why we operate the COunterparty Management Information System (COMIS) as a web-based information portal to manage business opportunities and procurement issues with our partners. COMIS is used by a wide range of business partners, including development consultants, works contractors and suppliers of general goods and support services.

The Housing Authority (HA) is committed to establishing strong long-term business partnership by implementing procurement principles that are fair and lead to high quality service and products at reasonable cost. On our website we maintain details of procurement principles and business resources for our partners, including information on construction site safety, contractor performance assessments and environmentally friendly construction practices.

Without the willingness of our partners and associates in the construction industry to share their knowledge and experience with us, many of these resources would not be available.

Property Construction

Partnering enables us to work best with our contractors to achieve common objectives and provide quality housing

for our residents.

At the heart of our partnering principles are environmental responsibility, the safety and health of all those involved in the procurement process and high ethical standards. These principles form an integral part of the procurement cycle in our specifications, tendering, management and feedback process. We have also introduced incentive schemes and sanctions to ensure objectives are met. As of March 2005, one civil engineering, five piling and seven building contracts were implementing the Integrated Pay for Safety, Environment and Hygiene Scheme.

On 25 June 2004, under the Bonus Scheme approved by HA's Building Committee as one of the Quality Housing Initiatives, former Director of Housing (DoH) Mr Leung Chin-man presented a HK\$ six million cheque to Gammon Skanska Ltd for its excellent performance in Po Lam Road Housing Development Phase 1 contract. Gammon Skanska Ltd. was one of the first building contractors to meet all five criteria of the scheme:

- outstanding performance;
- completion on time;
- satisfactory site safety performance;
- clean disciplinary record; and
- no offence, malpractice or misconduct.

During the year we also took further steps to strengthen contract specifications for improved environmental, health and safety (EHS) performance. New specifications and guidelines on hard paved construction were prepared for issue in June 2005 to support a tidier and safer working environment.



Property Management

A total of 19 public housing estates were commended in the Green Property Management Award Presentation Ceremony on 23 February 2005.

This is the third year that the Department, together with the three green groups, i.e. the Friends of the Earth (HK), the Green Power and the Conservancy Association, co-organized the Green Property Management Award to evaluate the "green efforts" of our estates. This year, "New Initiatives" have been added to the original three criteria of Green Leadership, Programme and Performance, and Partner Synergy in assessing the performance of estates.

With its initiative to provide separate energy-saving control devices for the lighting system of the refuse room on each floor, [Tin Yuet Estate](#) received the highest honour in the Housing Department Category. Tin Wah Estate won the championship in the Private Service Company / Management Buy-out / Property Management Agent Category for its "green trolleys" used by cleansing workers to collect recyclable and reusable materials.



Awareness Raising Events

We conducted a bimonthly environmental forum with industry representatives and the Environmental Protection Department to ensure all new EHS initiatives are understood and implemented in a top-down manner.

The HA co-organised the third Quality Public Housing Construction and Maintenance Awards in December 2004. The joint aims of the awards are to promote good management practices through experience sharing, and to promote quality craftsmanship and service within the property construction and management sector. A total of 69 awards were presented to building and maintenance contractors, project teams, supervisors and workers for their outstanding performance in construction and maintenance services for public housing over the past year.

The Gold Award for New Projects was awarded to Leighton Contractors (Asia) Ltd. while Gold Awards for Maintenance Projects were given to Sing Fat Construction Co. Ltd. and Keung Kee Construction Ltd. on the district and estate terms contracts respectively.



Stakeholders Engagement 

Stakeholders Engagement
Please Select : 
Staff are our Resources in meeting the Green Challenges ahead


Staff

At Work...

The year began with the Housing Authority (HA) Annual Dinner held on 29 April 2004, where participants welcomed new HA members and paid tribute to the retiring HA members for their invaluable contributions over the years.



Commended for its positive approach to handling public complaints, the Housing Department received the Ombudsman Award for the third time in August 2004. We have taken various measures to ensure complaints are properly addressed. These include performance pledges, clear internal procedures and guidelines and appropriate staff training. In his acceptance speech on behalf of the staff, Mr Leung Chin-man, former Director of Housing, remarked that the award was a recognition of our special emphasis placed on staff training. Courses were provided on handling telephone complaints, interviewing techniques, techniques in preparing replies to complainants and other customer services.

We continue to place great emphasis on promoting a hygienic, healthy and safe working environment for all our staff. Since the implementation of our Departmental General Circular on "Smoke-free Workplace Policy" in April 1996, all of our offices and departmental vehicles have remained smoke-free, providing a healthy working environment for all

staff. In addition, we maintained our internal education initiative on occupational health and safety (OHS). In 2004/05, we provided 32 training courses and seminars on various OHS topics, which were attended by over 960 staff members.



In early 2004, we launched the Health Portal as part of our e-Learning Portal, a tool which facilitates on-line applications for training courses. This Health Portal, developed in accordance with the "Corporate Wellness Framework", is aimed at promoting staff health awareness. "Physical Health and Nutrition", "Industrial Food" and "Germs and Bacteria" are just a few of the many topics on the Portal which attracted more than 7 600 hits in 2004/05. In addition to the e-Learning Portal, the Department publishes a biweekly electronic newsletter, *Housing Dimensions*, which updates staff of the latest developments about the HA and the Department as well as environmental and safety issues. In this newsletter, the Staff Corner invites colleagues to exchange interesting stories. On the whole, these electronic means have enabled quicker dissemination of information on key and interesting topics of concern to our staff.

To encourage staff to maintain a healthy work-life balance, we continue to provide a counselling hotline run by the Hong Kong Family Welfare Society. In 2004/05, the hotline handled 83 cases, of which 47% were for work-related problems such as colleague relationships, work pressure, job insecurity, etc. The remaining 53% of cases were for personal problems related to family, health, etc. Furthermore, we periodically organized work-life balance seminars. In 2004/05, six classes focusing on work-life balance topics were arranged, attracting some 500 participants in total. Our staff is also encouraged to participate in social activities as a means of reducing work stress and to promote a better working relationship among colleagues.

... and Leisure

We urged staff to actively participate in social and sports activities that we organized throughout the year. In 2004/05, we promoted a number of activities, such as hiking (in Pat Sin Leng, on Hong Kong Island and to Ho Pui Reservoir), tour visits (to Coca-Cola, Yakult manufacturing companies, and Kadoorie Farm), as well as sports and recreational competitions (tennis, bowling, soccer, fishing, etc.) and festive dinners. Among the many friendly tournaments, a big event – a cross-country race at the Shing Mun Reservoir was organized by the HA Staff Club. The six-kilometre race took place in April 2004 and attracted 68 male and female colleagues. The fastest man and woman of the day won at a time of 23 minutes and 26 minutes respectively. The judging panel also awarded a "Willpower Cup" to a participant who demonstrated the utmost endurance. Congratulations to all the winners!

In addition to social and sports activities, we organized a number of special interest group classes. In 2004/05, classes included Yoga, Aerobics, Jazz Dance, Social Dance, Chinese Painting and Calligraphy, Tai Chi, Bagua Zhang (Eight Tangram Boxing) and Lu He Ba Fa (Six Harmony & Eight Methods). Staff showed great enthusiasm for these diverse classes.

To mark the World Environment Day on 5 June 2004, HA staff joined hands with the Social Welfare Department (SWD) to launch a series of activities to help reduce, recycle and reuse waste. Colleagues were invited to bring in old but functional items. All collected items were arranged to be cleaned, repaired and packaged by the SWD prior to donation. Moreover, an environmental quiz with lucky draws was designed to promote environmental awareness.



We also encouraged staff to demonstrate social responsibility by forming the Housing Department Volunteer Corps (HDVC). Staff performed volunteer duties after work hours for housing tenants, particularly the elderly residents. In 2004, the HDVC organized events such as "Caring Visits to the Elderly" in Tai Hang Tung and Sun Chui Estates, as well as the territory-wide Estate Cleansing Day for our aged tenants. The HDVC, led by Mr Wong Kwok-hing, Anthony, (AD/Legal Service), has approximately 90 members from different office ranks. These members enjoyed helping others and have found volunteer service to be fulfilling.



Case Study

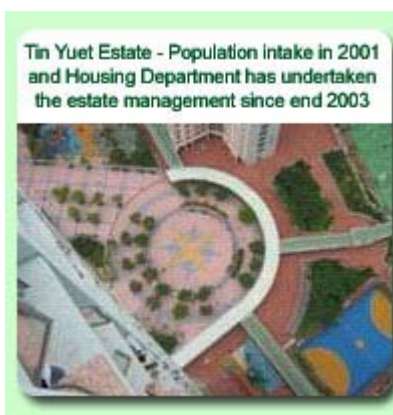

Case Study
Estate Management
Please Select : 
Tin Yuet Estate - the Winner of Green Property Management Award

As a means of raising environmental awareness and protection at our public housing estates, we are running this yearly Green Property Management Award for the third consecutive year in 2004/05.

In this year, a total of 19 estates were recognized for their green property management efforts. Of the Housing Department Category, the championship was awarded to Tin Yuet Estate at Tin Shui Wai, which demonstrated an all-rounded success in promoting environmental management within the estate.

Mr. WC Kwok, Housing Manager of Tin Yuet reckoned that was the outcome of concerted efforts from the community and his estate management staff.

The estate management has only taken up the management of Tin Yuet since the end of 2003. In view of a rather unpleasant impression towards Tin Shui Wai District in general, they have purposely aimed to brighten up the estate by setting a theme of "Greening the Environment".



In doing so, they first decided to enhance the environmental management of Tin Yuet by having a management team to oversee the environmental issues. The team was formed by appointed officers as green managers, green ambassadors and supporting staff. Besides, regular experience sharing sessions were held for members to review their concerns on environmental issues. Training on horticultural knowledge was also organized to enhance various aspects of greening.

Under this set up, the green commitment of staff has become so strong that they were all self motivated to looking for areas of improvement in the estate environment. Meetings in every other month have been held as follow up actions to monitor the sustainability of green improvement works.

Brilliant innovations by the team on greening, waste management, etc. included a "homemade community garden and plant nursery" making use of recyclables, energy savings and extensive dissemination of green information.

Greening

Special features of the community garden includes:

- a plant nursery and a composting area developed at the site of an abandoned storage area;
- an educational green trail set up within the plant nursery by placing tags of plant details;.
- garden and domestic kitchen wastes used for cultivating the composting area and the compost produced for application to planters and potted plants within

- the estate; and
- use of extracted red pepper juice as pesticide.

Community garden



Composting area



Waste Management

Some good practices of waste management concept on waste re-use, recycling and avoidance were applied in the estate. These were:

- use of disposed globe-shaped light fittings for putting potted plants;
- use of cooling water collected from air-conditioners for garden irrigation;
- use of disposed wooden materials for estate decoration; and
- metal tin box collection bins at ground floor of each estate block, which were in addition to the standard set of three recycling bins for aluminium, paper and plastic.

Using disposed wooden materials for decoration



Energy Management

Several energy saving measures were introduced for the lighting in refuse rooms and public area with effective results.

- The lighting systems in all estate refuse rooms have been equipped with independent switches to conserve energy. It is estimated that this simple change can save around 57 800 units of electricity each year!
- After replacing double lighting tubes with single tubes and increasing the lights cleaning frequency, the energy demand of hallway and stairwell lightings can be reduced by about 25%.

Replacing double lighting tubes by single tubes



Green Information Exchange

Apart from the training and experience sharing sessions for the management staff, Tin Yuet has built in many ways to promote environmental awareness to our living tenants. To name a few, these include:

- green messages and circulars displayed at the bulletin boards and Green Corners at ground floor lift lobbies;

- use of the liquid crystal display (LCD) monitors located at the building common areas to convey new environmental initiatives; and
- slogan competition of the residents for the estate “Operation Tai Ping Tei” Cleansing Day.




The Green Property Management Award to Tin Yuet Estate is a vivid testimony to the strong partnership between the estate management team and residents by implementing often simple but effective initiatives.

We look forward to learning about other examples of such effective partnering at the next 2005/06 awards.



- | | | | | | | | |
|---------------------------|---------------------------------------|---------------------------|-------------------|--------------------|------------------------|-------------------------|--|
| Summary | Message from the Chairman | Message from the Director | About this Report | 2004/05 Highlights | Business Overview | Significant EHS Aspects | Our Vision and Approach to Sustainable Housing |
| Environmental Performance | Health, Safety and Social Performance | Stakeholders Engagement | Case Study | Looking Ahead | Verification Statement | Annexes | Feedback Form |

Case Study 

Case Study
Sustainable Community
Please Select : 
**Planning a Sustainable Community
Redevelopment of Upper Ngau Tau Kok Estate Phase 2 & 3**

Sustainable urban planning and design in Hong Kong, one of the highest urban densities in the world, is a challenging priority for the Government. Through Housing Department operations, we have the privilege of playing a key role in contributing to the sustainable development of Hong Kong. We fulfill this responsibility through our strategy for healthy living, sustainable construction and enhancement of the total urban environment. Concurrent with developing the future fabric of the city through new developments, we also take the opportunity to redevelop urban areas and revitalize old neighborhoods for the benefit of the local community. For this, the Housing Authority has initiated a Comprehensive Redevelopment Programme. In executing the programme we take considerable care to address sustainability, from planning and designing for sustainable operation of the housing facilities, to minimizing potential adverse environmental and social impacts by adopting sustainable construction methods.

Planning a Sustainable Community

Under the auspices of the Comprehensive Redevelopment Programme, the redevelopment of Upper Ngau Tau Kok Estate Phase 2 & 3 demonstrates how we put our strategy into action and plan for a sustainable community which balances social, environmental and economic requirements. The estate, which covers a gross area of about 3.5 hectares and will comprise six 40-storey residential towers and community facilities for a population of around 11 000, is expected to be finished by 2008. To achieve our sustainability goals, the overall objectives of the redevelopment are to:

- Revitalize the old neighbourhood and improve quality of living through public housing redevelopment;
- Enhance community involvement through consultation of District Council in the planning process and participation of local resident organizations in heritage conservation and community art design; and
- Provide quality and affordable public housing for the target population.


Ngau Tau Kok Estate as it is Today

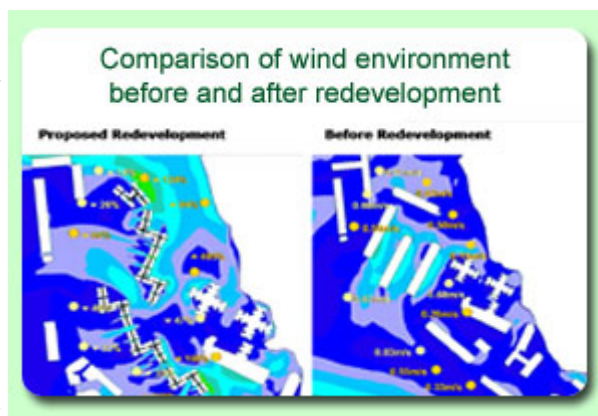
The estate was built in 1960's and is bounded by Ngau Tau Kok Road in the west, Garden Estate in the south, a District Open Space (Kung Lok Road Playground) in the east and a Leisure and Cultural Services Department's market complex in the north.

Achieving Sustainability
Considering the Environment

Environmental issues are a key focus during both the design and construction phases of the redevelopment works, and inevitably

there are many issues to address. As an example, one of our main concerns is the functional energy efficiency of the development. We addressed this by using sophisticated microclimate computer modeling to create residential blocks and facilities configured in a Z-shaped layout which:

- maximize natural light and hence reduce the extent and intensity of artificial lighting;
- maximize the use of natural shade, which along with extra tree planting creates a cooler environment;
- maximize natural ventilation and minimize solar heat gain, thereby reducing air conditioning requirements; and
- improve wind flow in the surrounding streets, thereby improving the surrounding environment.



Besides creating “environmentally oriented” housing, the above initiatives essentially create a pleasant and healthy living environment.

In terms of construction, through locating the blocks on bedrock, we are able to safely reduce the depth of foundations and hence minimise excavated waste for disposal. The use of precast concrete will also minimize the environmental impacts of construction, such as noise and air pollution, issues that unfortunately have adversely affected the quality of life for many Hong Kong residents in recent years.


Considering the Community

Throughout the entire planning and design process, we have liaised with the District Council and local concern groups to ensure that stakeholders concerns are addressed in the redevelopment planning process as far as possible. In particular, community involvement in heritage conservation aspects and in planning and designing the community art garden have proved to be invaluable in creating an environment that we hope local residents will both enjoy and be proud of, and that establishes a local identity. We have also taken care to create an environment that engenders social cohesion, through providing for a central gathering space, with a central plaza strategically located to serve as a venue for community-led social and cultural activities.

Since the elderly occupy a high proportion of the estate, we have also ensured barrier free access as well as providing a network of covered walkways and easily accessible pedestrian linkages to local facilities.

Last but not least, the Economics

It goes without saying that the redevelopment is being designed to optimize land use. To achieve this, at the same time as building to the maximum allowable plot ratio, we aim to maximize the use and amenity value of all open spaces and minimize land use for vehicular access and car parking. Through the planning process and consideration of all these issues, we endeavor to ensure an optimum balance of facilities for the benefit of residents. Since one of the goals of the Ngau Tau Kok Estate redevelopment programme is to revitalize the local economy, provision is also being made for supplementary retail facilities as well as providing easy access to existing facilities in the area.

Case Study **Office**Please Select : 

The Green-focused Office Headquarters

Our Administration Sub-division is responsible for all administration support of Housing Authority Headquarters (HAHQs). "Implementation of green initiatives in such a huge department will absolutely be a challenging task, and having met the government's green management targets with success is definitely one great achievement," Mr. Dennis Tang, Senior Executive Officer, General said.

As part of the Government's economy drive in March 2003 to economize the use of resources, all departments are committed to reduce the consumption of energy and paper of the offices. Against the base year of 2002/03, the consumption of power in kWh and photocopying paper in ream targeted to be reduced respectively by 3% and 5% in 2004/05.

Of energy consumption in 2004/05, we have continued to reduce energy consumption in our headquarters during the year, and managed a 10.7% reduction against 2002/03. This indeed has exceeded our commitment to the target set by the government for each government department of a 6% energy reduction over the four years up to 2006/07.

Another encouragement to our energy saving efforts is the result of Hong Kong Awards for Energy Efficiency and Conservation in Government - Venue Saver Awards organized by the Electrical and Mechanical Services Department (EMSD) revealed in end 2004. Our HAHQs was ranked the fifth among other government departments. The assessment on energy reduction was within the period of October 2003 to September 2004 against that of the previous year.

The reduction achieved so far is by adopting new and improved management initiatives and improved energy efficiency in lifts, air conditioning and lighting systems. Key initiatives on lightings and air conditioning systems and some management measures performed during the year include:

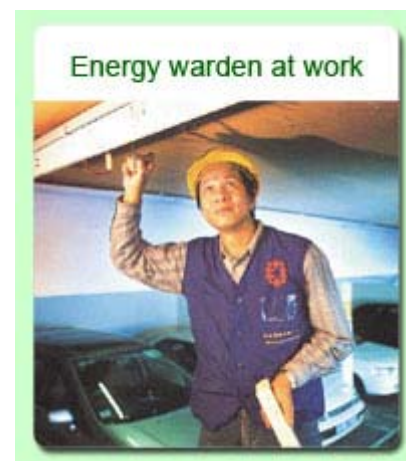
- reduction of illumination in common areas of offices and car parking areas after office hours and replacement of all lightings in two main blocks (Block 1 & 2) with electronic ballasts;
- replacement of existing controls for air handling units with variable speed drives. The initiative is anticipated to give a year-on-year energy saving of approximately 2.5% upon completion;
- appointment of energy wardens with a remit of equipment inspection and staff education, increased patrols by our security staff with instructions to switch off lights and air-conditioning systems when not in use; and
- reduced operating hours of air conditioners, lights and lift systems.

However, the saving would soon reach a plateau since almost all first- and second-tier saving measures have been implemented.

As on paper saving, our Administration Sub-section again takes every endeavour to meet the Government's set target, and has that committed as one environmental target in other arenas such as the Housing Department Environmental Committee and the Environmental Protection Department's Wastewi\$e Scheme. In these respective programmes, we have obtained the same positive results as follows:

- on the target reduction of paper consumption in all Housing Department offices (excluding site offices) by 5% against that of base year 2002/03, a 5.3% reduction was achieved; and
- of the Wastewi\$e target to reduce the paper consumption by 1% on a year-on-year basis, this has been achieved for the last two consecutive

assessment years in 2003/04 and 2004/05.



With the satisfactory assessment on the above target among our other Wastewi\$e targets by EPD, the Department has been awarded to use the prestigious Gold Wastewi\$e Logo in all official printed documents since 2002.

Dennis however remarked that the control of paper consumption in practice was less flexible than that of energy consumption since the paper usage would greatly depend on functional needs rather than demand, and in particular, the Department has started insourcing the printing work in recent year. The Office Administration however will try to monitor the paper consumption of the Department through various means such as:


- distribution of monthly paper consumption report by divisions for individual division to monitor their paper usage;
- circulation of green messages received from the Central Government about paper saving tips to all staff via emails and uploads to the department intranet;
- extensive use of electronic communication and uploading of departmental circulars and publications onto the intranet; and
- enhancement of staff awareness on paper savings through education and training.

With such full support of our green focused administration, we are confident that our office will maintain this notable achievement in meeting the Government's targets in the coming years.



Summary	Message from the Chairman	Message from the Director	About this Report	2004/05 Highlights	Business Overview	Significant EHS Aspects	Our Vision and Approach to Sustainable Housing
Environmental Performance	Health, Safety and Social Performance	Stakeholders Engagement	Case Study	Looking Ahead	Verification Statement	Annexes	Feedback Form

Looking Ahead


Looking Ahead

At present, both the Government and the community at large have high aspiration for a sustainable society. In the provision of public housing, HA has demonstrated its efforts to bring forward a range of initiatives aiming at addressing the social, economic and environmental needs of its tenants. Over the past year, we managed to accomplish tasks as scheduled through wider application of site oriented design green measures at operation and estate management, as well as establishing closer dialogues and partnership with green groups, professional bodies, government departments, tenants and the community.

Working towards the goal of sustainable development in public housing, in addition to the various green measures initiated, we will continue in the years ahead to:

- apply micro-climate studies to enhance environmental performance in design and planning of all new housing projects. These studies make use of the natural environment to optimize and balance the wind environment, natural ventilation, daylight, solar heat gain and road traffic noise to create a healthier, more energy efficient and quality living environment;
- minimize environmental impacts while applying LCA and LCC to maximize building life cycle cost effectiveness;
- actively partner with Public Rental Housing residents to separate waste at source;
- improve construction safety ;
- promote environmental and safety awareness of stakeholders and build in sustainability element in residential estate programmes wherever practical through closer partnership with green groups and professional parties; and
- maintain closer liaison with the Government, the Council for Sustainable Development and others alike for synchronized alignment in sustainable development framework.

A summary of our focuses for 2005/06 and beyond is listed below with details of specific targets and initiatives shown in Annex C.

To reduce environmental risks, we will

- maintain a clean and healthy environment through continued implementation of various schemes and measures;
- complete our asbestos survey and abatement programme; and
- replace cast galvanized steel water pipes for estates with undesirable water quality and participate in the Fresh Water Plumbing Quality Maintenance Recognition Scheme; and
- strengthen the green practices in our offices.

To continue our efforts in waste management, we will

- increase the estate domestic waste recovery rates for recyclable materials and extend the “waste separation at source” scheme to all estates by phases;
- continue our recovery of spent fluorescent tubes and used rechargeable batteries; and
- reduce construction and demolition waste through the development of a waste index, along with the new and revised waste management guidelines.

To further improve energy efficiency and encourage innovation, we will

- extend the micro-climate studies to all building projects;
- encourage the application of the LCA/LCC Study in procurement of building materials;
- explore the adoption of additional energy efficient equipment in a pilot project and seek to improve our building services design guidelines; and

- continue to reduce energy consumption in our Headquarters and office premises, and to extend our same concerns to properties under the management of The Link Management Limited.

To conserve natural resource, we will

- use water recycling systems in all large diameter bored piling works;
- identify a pilot scheme in our estate to test on reducing the flushing water consumption; and
- revise construction specifications to adopt sustainable timber doors in pilot projects.

To reduce noise nuisance, we will

- replace more water pumps with quieter ones in our housing estates; and
- explore quieter construction equipment and technology.

To enhance greening and landscaping, we will

- provide and improve landscaping in new and existing estates; and
- promote residents' involvement in estate greening.

To improve our safety performance, we will

- reduce the accident rate for new works to below 25 per 1 000 workers; and
- continue to partner with industry stakeholders to promote construction safety awareness through a territory-wide publicity campaign.

To continue the promotion of EHS awareness, we will

- extend the "Green Delight in Estates" partnering programme with green groups and other educational activities to our estates; and
- enhance staff awareness and knowledge on EHS issues through training.

Verification Statement


Verification Statement

Purpose of Verification

Hyder Consulting Limited has been appointed as a third-party Independent Verifier for the Housing Authority's (HA's) Environmental, Health and Safety Report for 2004/05 (the EHS Report), which documents the yearly performance of EHS aspects of HA's operations. This Verification Statement represents our independent findings.



Approach to Verification

During the verification process, Hyder Consulting reviewed an advanced draft of the EHS Report and conducted interviews with those responsible for its preparation. Hyder Consulting also reviewed and checked relevant materials including policy statements and objectives, environmental plans, initiatives, strategies and targets. The accuracy and consistency of the information and data presented in the EHS Report were verified through checking of information sources and, where necessary, cross-checking with third-parties to confirm reporting accuracy.

Opinion on the Report

The EHS Report is considered to be a structured and balanced document that provides broad and comprehensive content on recent initiatives, progress, performance and management of all the HA's operations and activities concerning environmental protection and health and safety enhancement measures. The commitments, strategies and support of top management on EHS issues are in line with principles of sustainability and maintain HA's position as an environmentally and socially responsible organization.

The content of the report is complemented by effective graphics, photographs and layout, with interactive features available because of its electronic format. The inclusion of case studies at the end of the report are a valuable means to provide real-world examples of HA's EHS initiatives. Comments on last year's report have received the proper attention, as indicated by the expanded contents of this year's report.

Hyder Consulting is satisfied that the data and information presented in the EHS Report are consistent with the source materials reviewed and thus provide an accurate account of the HA's performance in meeting its stated targets and in explaining initiatives undertaken. The statements made regarding environmental performance are considered to be fair and accurate.

Recommendations for Future Reports

Based on observations during the verification process, Hyder Consulting's recommendations for HA's consideration in preparing future reports are as follows:

- To present the degree of achievement in meeting key performance indicators (in the Annexes) in a **more visual** format, **to better illustrate** achievements and to allow easier comprehension.
- To include further case studies that exemplify the successes that HA have achieved in selected initiatives and strategies. This should include the use of the recently developed Life Cycle Assessment and Life Cycle Costing tool.
- To revise future Municipal Solid Waste (MSW) management targets to better reflect and support the objectives of Government's recently released Policy Framework on MSW.

To further consolidate gains towards sustainability reporting, Hyder Consulting encourages HA to consider the benefits of **moving further towards** recognised international practices, such as Global Reporting Initiative's "Sustainability Reporting Guidelines", in future reporting.



Alexi Bhanja
Principal Environmental Consultant
HYDER CONSULTING LIMITED
(27/01/06)

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 **Top**

Annexes


Annexes
A. Summary of Feedback

Please Select :

Last year, we published our first EHS Report 2003/04 "Paving the Way for Sustainable Housing". It was our first attempt to expand the scope of our previous environmental reports published since 1999. We understand that there is always room for further improvement. We greatly value your feedback and give serious consideration to all views received. We believe that listening to and addressing your feedback is crucial to the continual improvement of our reporting process. In this Annex, we provide a summary of your feedback on last year's report and how we addressed your feedback.

We are pleased that the overall comments on last year's report were very positive. All respondents gave us an overall rating of either "Very Good" or "Good". Similarly, most of the respondents found our report very clear or clear and the remainder thought the clarity was adequate. Regarding the usefulness of information, more than half of the respondents found it adequate. Sections on "Performance Review" and "Targets and Initiatives" continued to be the most useful sections to our readers.

Along with the positive comments, we also received some constructive suggestions for improvement. This year we have taken these comments on board and endeavoured to address them in an appropriate manner. Examples of comments received and how we addressed them in this year report are summarised below.

Your Feedback
Our Response

Elaboration should be given to those targets that were behind schedule or withdrawn

Further information related to the delay or withdrawal was included in the relevant annexes

It would be useful to benchmark the performance with that of other comparable organisations or international standards and best practices

Benchmarking information was included as far as practicable

A short note on how the significant aspects are identified should be made

A short note was included in the section of Significant EHS Aspects




More information on Life Cycle Assessment should be included

Life Cycle Assessment was discussed under the section on materials management





Annexes



Annexes
**B1. Past Performance :
 Targets in 2004/05**

Please Select :










-  DEVELOPMENT AND CONSTRUCTION
-  ESTATE MANAGEMENT
-  OFFICE






DEVELOPMENT AND CONSTRUCTION

Targets	Policy Objectives	Action Plan	Key Performance Indicator (KPI)		Target Met	Actual Performance
			KPI	Unit		
1. Further abate the remaining asbestos containing materials in existing HA managed properties	Promote healthy living and a green environment	Implement asbestos abatement programme through estate redevelopment programme and asbestos removal works	2%	% removed of total remaining asbestos		2% removed
2. Provide green treatment to newly formed slopes	Promote healthy living and a green environment	Hydroseed soil slopes and soften hard surfaces through planting, seeding or colour treatment	100%	% of new projects		100% of new slopes was greenly treated, which covered a total of 13 800 m ²
3. Reduce water wastage in large-diameter bore piling (LDBP) works	Minimize environmental impacts	Adopt water recycling facilities in the construction of LDBP for construction sites	100%	% of sites in 2004/05 adopting water recycling systems		All piling projects
4. Increase construction safety awareness with industry stakeholders	To promote safety and health issues particularly related to HA projects to enhance the safety and health of persons involved	Organize safety enhancement training and territory-wide publicity campaigns	Organize no less than 3 major safety campaigns. Conduct training with stakeholders.	Number of campaign conducted		Four campaigns include Construction Safety Award Scheme (March), HK Occupational Safety and Health Award (June), Construction Safety Award (September), and Considerate



5. Improve safety records at HA construction sites	To monitor contractor safety performance by the independent and in-house assessment	Reduce accident rate (number of accidents per 1 000 workers)	30	Accidents per 1 000 workers		Contractors Site Award (December). Ongoing training and seminars conducted. 29.2 accidents per 1 000 workers
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ESTATE MANAGEMENT

Targets	Policy Objectives	Action Plan	Key Performance Indicator (KPI)		Target Met	Actual Performance
			KPI	Unit		
1. Upgrade the existing landscape facilities in 18 selected PRH estates	Promote healthy living and a green environment	Landscape Improvement Programme	110 000 m ²	Area greened		112 982 m ² in 18 estates
2. Promote green environment at 24 Estate Management Advisory Committee estates	Promote healthy living and a green environment	Conduct greening activities	5 000 m ²	Area greened		6 000 m ² in 22 estates
3. Improve the slope appearance in existing PRH estates	Promote healthy living and a green environment	Hydroseed soil slopes and soften hard surfaces through planting, seeding or colour treatment	10	Number of slopes greened		10 slopes in 8 estates
4. Enhance greening in PRH estates	Promote healthy living and a green environment	Allocate open area in selected estates for setting up thematic gardens	2	Number of estates		New Theme Garden in 2 estates: <ul style="list-style-type: none"> • Palm and Terminalia Garden in Sun Chui Estate • Camelia Garden in Yau Oi Estate
5. Reduce noise nuisance from water pumps in PRH estates	Minimize environmental impacts	Replace 3000 rpm water pumps by 1500 rpm water pumps	23	Number of pumps replaced		27
6. Increase domestic waste recovery rate for paper (Pa), aluminium cans (Ac), plastic bottles (PI) and used clothes (Uc)	Minimize environmental impacts and promote environmental awareness and participation among staff, residents and contractors.	Arrange publicity activities such as Waste Recycling Credit Scheme for all public rental housing (PRH) estates and aim for an increase in Pa/Ac/PI recovery rates with reference to EPD's Domestic Waste Composition	Recovery rate for <ul style="list-style-type: none"> • Pa 17% • Ac 22.5% • PI 1.5% • Uc 1% increase 	% recovered of total waste	<ul style="list-style-type: none"> • Pa 17%  • Ac 22.5%  • PI 1.5%  • Uc 1% increase  	Recovery rates are : <ul style="list-style-type: none"> • Pa 14.4% • Ac 23.0% • PI 2.0% • Uc 30.1% reduction <p>Deficiencies for the recovery of paper and used clothes are considered due to material interception/diversion for resale</p>

		Survey and promote used clothes recovery in all PRH estates				
7. Promote recovery of spent fluorescent tubes and bulbs	Minimize environmental impacts and minimize the use of resource	Launch recycling schemes in selected regions by phase	2	Number of regions		3 regions: <ul style="list-style-type: none"> • Kwai Tsing, Tsuen Wan & Island • Tuen Mun & Yuen Long • Tai Po, North, Shatin & Sai Kung
8. Reduce domestic waste	Minimize the use of resources and address environmental concerns	Promote waste reduction through various publicity campaigns	1% reduction	% reduction in domestic waste produced (kg) per person per day as compared with data in 2003/04		4.9% reduction per person per day
9. Reduce potable water consumption for installations under landlord in PRH estates	Minimize the use of resources	Use self-stopping water tap and reduce pipe bursting and leakage through replumbing	0.5% reduction	% savings based on a comparison with the actual expenditure in previous year		0.4% reduction. Despite the on-going water saving measures, intensive cleansing work on the other hand has increased the water consumption
10. Increase tenants' awareness and support of greening	Promote environmental awareness and participation among residents	Organize tree planting days in selected estates	3	Number of estates		3 estates: <ul style="list-style-type: none"> • Sha Kok Estate • Shun Tin Estate • Tsz Ching Estate
11. Promote green management initiatives in public rental estates	Promote environmental awareness and participation among staff, residents and contractors	Organize the Green Property Management Award with green groups	All estates	—		Campaign was completed



Targets	Policy Objectives	Action Plan	Key Performance Indicator (KPI)		Target Met	Actual Performance
			KPI	Unit		
1. Reduce A3 and A4 paper consumption in all Housing Department (HD) offices except site offices	Minimize the use of resources and promote environmental awareness and participation among staff	Implement initiatives to reduce paper consumption of staff, with a target reduction rate in line with the service-wide targets set by the Environment, Transport and Works Bureau	143 349, (or 5% reduction)	Number of reams (or % reduction as compared with data in 2002/03)		142 968 reams (or 5.3% reduction)
2. Collect waste paper in all HD offices except site offices	Minimize the use of resources and promote environmental awareness	Implement various initiative to encourage paper recycling	150 850, (or 2% increase)	Weight of waste paper collected (kg) (or % increase as compared with data in		159 187 kg, (or 7.6% increase)




				2002/03)		
	and participation among staff					
3. Use environmentally friendly paper in printing of all publicity materials (except sales and marketing publication)	Minimize the use of resources and address environmental concerns	Implement the use of environmentally friendly paper as a pre-requisite in printing jobs	100%	% of environmentally friendly paper used as compared with total printing quantity		100 %
4. Reduce energy consumption in Housing Authority (HA) Headquarters	Minimize the use of resources and environmental impacts	Implement administrative measures such as monitoring the operating hours for air-conditioning, lighting, etc. and enhance staff awareness	18 915 504 (or 3% reduction)	kWh (or % reduction as compared with data in 2002/03)		17 413 917 kWh (or 10.7% reduction)
5. Enhance staff awareness and knowledge about environmental legislation and use of Environmental Legislative Database	Promote environmental awareness and participation among staff	Organize seminar on environmental legislation for staff members	1	Number of seminar		1 seminar and 2 workshops
6. Enhance staff awareness and knowledge about environmental issues	Promote environmental awareness and participation among staff	Organize general seminars and arrange displays on environmental issues	3 seminars; 4 displays	Number of seminars and displays		3 seminars, and 4 displays at Green Corner

 Fully Met,  Substantial Progress,  Fall Short or Deferred





Annexes



Annexes
**B1. Past Performance :
 Targets in 2004/05**

Please Select :










-  DEVELOPMENT AND CONSTRUCTION
-  ESTATE MANAGEMENT
-  OFFICE






DEVELOPMENT AND CONSTRUCTION

Targets	Policy Objectives	Action Plan	Key Performance Indicator (KPI)		Target Met	Actual Performance
			KPI	Unit		
1. Further abate the remaining asbestos containing materials in existing HA managed properties	Promote healthy living and a green environment	Implement asbestos abatement programme through estate redevelopment programme and asbestos removal works	2%	% removed of total remaining asbestos		2% removed
2. Provide green treatment to newly formed slopes	Promote healthy living and a green environment	Hydroseed soil slopes and soften hard surfaces through planting, seeding or colour treatment	100%	% of new projects		100% of new slopes was greenly treated, which covered a total of 13 800 m ²
3. Reduce water wastage in large-diameter bore piling (LDBP) works	Minimize environmental impacts	Adopt water recycling facilities in the construction of LDBP for construction sites	100%	% of sites in 2004/05 adopting water recycling systems		All piling projects
4. Increase construction safety awareness with industry stakeholders	To promote safety and health issues particularly related to HA projects to enhance the safety and health of persons involved	Organize safety enhancement training and territory-wide publicity campaigns	Organize no less than 3 major safety campaigns. Conduct training with stakeholders.	Number of campaign conducted		Four campaigns include Construction Safety Award Scheme (March), HK Occupational Safety and Health Award (June), Construction Safety Award (September), and Considerate



5. Improve safety records at HA construction sites	To monitor contractor safety performance by the independent and in-house assessment	Reduce accident rate (number of accidents per 1 000 workers)	30	Accidents per 1 000 workers		Contractors Site Award (December). Ongoing training and seminars conducted. 29.2 accidents per 1 000 workers
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ESTATE MANAGEMENT

Targets	Policy Objectives	Action Plan	Key Performance Indicator (KPI)		Target Met	Actual Performance
			KPI	Unit		
1. Upgrade the existing landscape facilities in 18 selected PRH estates	Promote healthy living and a green environment	Landscape Improvement Programme	110 000 m ²	Area greened		112 982 m ² in 18 estates
2. Promote green environment at 24 Estate Management Advisory Committee estates	Promote healthy living and a green environment	Conduct greening activities	5 000 m ²	Area greened		6 000 m ² in 22 estates
3. Improve the slope appearance in existing PRH estates	Promote healthy living and a green environment	Hydroseed soil slopes and soften hard surfaces through planting, seeding or colour treatment	10	Number of slopes greened		10 slopes in 8 estates
4. Enhance greening in PRH estates	Promote healthy living and a green environment	Allocate open area in selected estates for setting up thematic gardens	2	Number of estates		New Theme Garden in 2 estates: <ul style="list-style-type: none"> • Palm and Terminalia Garden in Sun Chui Estate • Camelia Garden in Yau Oi Estate
5. Reduce noise nuisance from water pumps in PRH estates	Minimize environmental impacts	Replace 3000 rpm water pumps by 1500 rpm water pumps	23	Number of pumps replaced		27
6. Increase domestic waste recovery rate for paper (Pa), aluminium cans (Ac), plastic bottles (PI) and used clothes (Uc)	Minimize environmental impacts and promote environmental awareness and participation among staff, residents and contractors.	Arrange publicity activities such as Waste Recycling Credit Scheme for all public rental housing (PRH) estates and aim for an increase in Pa/Ac/PI recovery rates with reference to EPD's Domestic Waste Composition	Recovery rate for <ul style="list-style-type: none"> • Pa 17% • Ac 22.5% • PI 1.5% • Uc 1% increase 	% recovered of total waste	<ul style="list-style-type: none"> • Pa 17%  • Ac 22.5%  • PI 1.5%  • Uc 1% increase  	Recovery rates are : <ul style="list-style-type: none"> • Pa 14.4% • Ac 23.0% • PI 2.0% • Uc 30.1% reduction <p>Deficiencies for the recovery of paper and used clothes are considered due to material interception/diversion for resale</p>

		Survey and promote used clothes recovery in all PRH estates				
7. Promote recovery of spent fluorescent tubes and bulbs	Minimize environmental impacts and minimize the use of resource	Launch recycling schemes in selected regions by phase	2	Number of regions		3 regions: <ul style="list-style-type: none"> • Kwai Tsing, Tsuen Wan & Island • Tuen Mun & Yuen Long • Tai Po, North, Shatin & Sai Kung
8. Reduce domestic waste	Minimize the use of resources and address environmental concerns	Promote waste reduction through various publicity campaigns	1% reduction	% reduction in domestic waste produced (kg) per person per day as compared with data in 2003/04		4.9% reduction per person per day
9. Reduce potable water consumption for installations under landlord in PRH estates	Minimize the use of resources	Use self-stopping water tap and reduce pipe bursting and leakage through replumbing	0.5% reduction	% savings based on a comparison with the actual expenditure in previous year		0.4% reduction. Despite the on-going water saving measures, intensive cleansing work on the other hand has increased the water consumption
10. Increase tenants' awareness and support of greening	Promote environmental awareness and participation among residents	Organize tree planting days in selected estates	3	Number of estates		3 estates: <ul style="list-style-type: none"> • Sha Kok Estate • Shun Tin Estate • Tsz Ching Estate
11. Promote green management initiatives in public rental estates	Promote environmental awareness and participation among staff, residents and contractors	Organize the Green Property Management Award with green groups	All estates	—		Campaign was completed



Targets	Policy Objectives	Action Plan	Key Performance Indicator (KPI)		Target Met	Actual Performance
			KPI	Unit		
1. Reduce A3 and A4 paper consumption in all Housing Department (HD) offices except site offices	Minimize the use of resources and promote environmental awareness and participation among staff	Implement initiatives to reduce paper consumption of staff, with a target reduction rate in line with the service-wide targets set by the Environment, Transport and Works Bureau	143 349, (or 5% reduction)	Number of reams (or % reduction as compared with data in 2002/03)		142 968 reams (or 5.3% reduction)
2. Collect waste paper in all HD offices except site offices	Minimize the use of resources and promote environmental awareness	Implement various initiative to encourage paper recycling	150 850, (or 2% increase)	Weight of waste paper collected (kg) (or % increase as compared with data in		159 187 kg, (or 7.6% increase)

				2002/03)		
	and participation among staff					
3. Use environmentally friendly paper in printing of all publicity materials (except sales and marketing publication)	Minimize the use of resources and address environmental concerns	Implement the use of environmentally friendly paper as a pre-requisite in printing jobs	100%	% of environmentally friendly paper used as compared with total printing quantity		100 %
4. Reduce energy consumption in Housing Authority (HA) Headquarters	Minimize the use of resources and environmental impacts	Implement administrative measures such as monitoring the operating hours for air-conditioning, lighting, etc. and enhance staff awareness	18 915 504 (or 3% reduction)	kWh (or % reduction as compared with data in 2002/03)		17 413 917 kWh (or 10.7% reduction)
5. Enhance staff awareness and knowledge about environmental legislation and use of Environmental Legislative Database	Promote environmental awareness and participation among staff	Organize seminar on environmental legislation for staff members	1	Number of seminar		1 seminar and 2 workshops
6. Enhance staff awareness and knowledge about environmental issues	Promote environmental awareness and participation among staff	Organize general seminars and arrange displays on environmental issues	3 seminars; 4 displays	Number of seminars and displays		3 seminars, and 4 displays at Green Corner

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Annexes

B2. Past Performance : Initiatives in 2004/05

Please Select :

-  DEVELOPMENT AND CONSTRUCTION
 ESTATE MANAGEMENT
 OFFICE

DEVELOPMENT AND CONSTRUCTION

Initiatives	Policy Objective	Action Plan	Schedule	Target Met	Actual Performance
1. Improve landscaping and promote greening in housing estates	Promote healthy living and a green environment	Enhance greening measures with new initiatives in the Design Guide	2004		The revised External Works Design Guide was issued in August 2004
2. Minimize construction waste	Minimize environmental impacts	Research on wider use of "volumetric" precasting and volumetric prefabrication in future contracts	2004		Research was completed and specification on the use of volumetric pre-cast construction were incorporated into the Specification Library 2004 Edition in December 2004
3. Minimize construction waste	Minimize environmental impacts	Derive a definition for Construction Waste Index and conduct quarterly surveys on all ongoing projects	2004/05		The Index was defined and approved in April 2004 and quarterly surveys were ongoing
4. Study the environmental impact and costing of some building materials in all phases of their life cycle	Minimize environmental impacts and address environmental concerns and incorporate environmental initiatives in operations	Derive a LCA/LCC decision making tool, propose specifications for better alternatives and formulate a LCA/LCC database	2004/05		Study was completed and findings were endorsed in December 2004. The implementation details were issued in February 2005
5. Reduce electricity consumption of landlord services installation in new domestic blocks	Minimize the use of resources and environmental impacts	Explore application of more energy efficient equipment and review existing lighting design and illumination standard in communal area in line with private development	Review and make recommendations for blocks NH1 and NAX5 On-going		Reviews on energy efficient equipment were completed and trial schemes on exit signs, photo-luminous and light emitting diode(LED) designs will commence in April 2005 for six months

					The illumination level of private practice was found higher than that of current design. It was concluded that there was not much room to reduce the communal illumination level in public housing
6. Reduce energy consumption in shopping centres	Minimize the use of resources and minimize environmental impacts	Review and make recommendations on existing installations and new designs	Promulgate new Design Guides in 2004/05		Review was completed and a new design guide was endorsed in August 2004
7. Reduce flushing water consumption	Minimize the use of resources	Conduct pilot trial scheme in Housing Authority (HA) Headquarters	2005/06		The installation of dual flushing fittings was completed. Performance will be reviewed in August 2005
8. Study water saving taps	Minimize the use of resources	Conduct product research and review specifications	2004/05		Due to lack of supply of water saving devices in existing market, more research will be done before conducting review

ESTATE MANAGEMENT

Initiatives	Policy Objective	Action Plan	Schedule	Target Met	Actual Performance
1. Identify potential environmental hazards in flatted factories with a view to drawing up future policy initiatives	Minimize environmental impacts	Appoint specialist consultant to research and identify potential environmental hazardous processes in flatted factories and recommend control as appropriate	November 2004		The Final Report and Executive Summary were submitted by the consultant. A briefing/training workshop will be held in late 2005
2. Review and monitor the environmental awareness in public rental housing (PRH)	Promote environmental awareness and participation among residents	Conduct survey on PRH residents	Review annually		The 2005 Recurrent Survey was completed. Preliminary findings will be available in May 2005
3. Promote environmental care awareness in Housing Ownership Scheme (HOS) estates	Promote environmental awareness and participation among residents	Organize activities for residents in HOS courts	2004/05		82 activities were organized such as game stalls, carnivals, newsletters, etc. for the HOS courts and message on paper-recycling was disseminated
4. Improve safety performance in maintenance works	To monitor contractor safety performance by the independent and in-house assessment	Establish database to monitor site safety performance	2004		Summary of Contractors' Accident and Manpower Reports was established in 04/05 and will continue to be produced each month for Contract Manager's monitoring on site safety performance

OFFICE

Initiatives in 2004/05	Policy Objective	Action Plan	Schedule	Target Met	Actual Performance
1. Enhance energy efficiency for air-conditioning in HA Headquarters	Minimize the use of resources and minimize environmental impacts	Replace existing control for Air Handling Unit with variable speed drive	December 2004		The replacement work was completed in December 2004
2. Enhance staff awareness and	Promote environmental	Solicit and analyze staff	September 2004		Training needs were solicited and suitable courses were identified

knowledge on operation need	awareness and participation among staff	training needs			
3. Enhance staff awareness and knowledge about the Environmental Information System (EnvIS) built in Environmental Management System	Promote environmental awareness and participation among staff	Organize enhanced training on the EnvIS for data input coordinators and system administrators	October 2004		In view of the migration of the EnvIS to e-Housing Portal, the EnvIS data input coordinators and system administrators attended the introductory e-Housing training in December 2004
4. Review the environmental awareness of housing staff	Promote environmental awareness and participation among staff	Conduct telephone survey on staff's views towards environmental protection	2004/05		Survey was completed in December 2004 and the preliminary findings were released in March 2005. Recommendations for further improvement will be made
5. Increase community awareness of environmental protection and in particular to promote greening in PRH	Promote environmental awareness and participation among staff, residents and contractors	Launch waste reduction and recycling campaigns, relay green messages in Estate Management Advisory Committee (EMAC) newsletter, distribute publicity materials and launch joint programmes with green groups and EMACs	2004/05		Major activities jointly organized with green groups included: <ul style="list-style-type: none"> • The Green Estate Exchange Square Scheme • The "Environmental Household Products Design Competition" • The "Green Property Management Award" (held for 3 consecutive years) • Phase IV of the "Waste Reduction Credit Scheme" • "Estate Green Fun Day" with interactive workshops, game booths, exhibitions and performances held at Lok Fu Shopping Centre • The "Hong Kong Tree Planting Day 2005" with over 400 PRH tenants participants




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Annexes


Annexes
C. Future Targets and Initiatives

Please Select :

-  DEVELOPMENT AND CONSTRUCTION
 ESTATE MANAGEMENT
 OFFICE

DEVELOPMENT AND CONSTRUCTION

Initiatives in 2005/06 and Beyond	Action Plan	Schedule	Key Performance Indicator (KPI)
1. Review and monitor environmental awareness in public rental housing (PRH)	Provide input to the survey on PRH residents	2005/06 2006/07 2007/08 2008/09	Conduct a survey; and review the need of survey annually in subsequent years, as appropriate
2. Monitor environmental awareness of housing staff and enhance the general awareness	Review the training and/or publicity strategies on environmental awareness; and conduct an in-house telephone survey as appropriate	2005/06 2006/07 2007/08 2008/09	Review the relevant strategies and conduct the telephone survey as appropriate
3. Collaborate with green groups to conduct environmental awareness programme in PRH	Organize an estate-wide campaign and educational programmes for PRH estates	2005/06 2006/07 2007/08 2008/09	Organize estate-wide campaign for all PRH estates and tailor-made educational programmes for not less than 30 estates annually
4. Reduce electricity consumption of landlord services installation in new domestic blocks	Adopt the Energy Codes	On-going	90% of completed projects obtained energy certificates
5. Reduce water wastage in large diameter bore piling (LDBP) works	Adopt water recycling system in the construction of LDBP for construction sites	From 2005/06 onwards	100% of new contracts using the revised specifications
6. Reduce construction & demolition waste and ensure proper disposal	Develop Construction Waste Index and analyse results of scheme trial of Selective Demolition and develop guidelines	2005/06	Conduct quarterly surveys and promulgate guidelines
7. Reduce flushing water consumption	Conclude pilot scheme in Housing Authority Headquarters (HAHQs) and identify pilot project	2005/06	Complete performance analysis and identify pilot project
8. Provide Green treatment to newly formed slopes	Hydroseed soil slopes; Soften hard surface by planting and/or colour treatment; and Improve Chunam surface with hydroseeding, stone pitching and toe planters	2005/06 2006/07 2007/08 2008/09	100% (1 900m ²) 100% (550m ²) 100% (no new slope to be formed due to 0 m ²) 100% (480m ²)
9. Improve hygiene and cleanliness in housing estates	Install Alternative Refuse Handling System (ARHS) in new development projects	2005/06 onwards	100% of new developments (without ARHS) to adopt ARHS

10. Mandatory installation of water recycling facilities in all new building, piling and civil engineering contracts	Revise specifications	2005/06 onwards	100% of new contracts using the revised specifications
11. Use sustainable timber doors	Revise specifications and identify pilot project	2005/06	Revise specifications and identify pilot project
12. Explore and study application of more energy efficient equipment	Conduct trials on light emitting diode(LED) Exit Sign, Self-luminous (radioactive type) Exit Sign, solar powered lamp pole and adjust lift counterweight settings in a pilot project and upgrade the Design Guides as appropriate	2005/06	Conduct trails and upgrade the Design Guides
13. Explore and Study application of green design for building services equipment	Conduct trial on low friction type street fire hydrant and design roof and sump tanks for dirt settling	2005/06	Conduct trail and design work
14. Further abate the remaining asbestos containing materials in existing HA managed properties	Implement asbestos abatement programme and asbestos removal works	2005/06 2006/07 2007/08	0.5% removed 1.5% removed 1% removed
15. Improve safety records at HA construction sites	Reduce accident rate (number of accidents per 1 000 workers)	2005/06	25 accidents per 1 000 workers at most KPI to be set annually
16. Increase construction safety awareness with industry stakeholders	Organize territory-wide publicity campaigns and promulgate safety training / seminars	2005/06	Organize no less than 3 publicity campaigns and conduct safety training / seminars with stakeholders. KPI to be set annually

ESTATE MANAGEMENT

Initiatives in 2005/06 and Beyond	Action Plan	Schedule	Key Performance Indicator (KPI)
1. Increase domestic waste recovery rate for paper (Pa), aluminium cans (Ac), plastic bottles (PI) and used clothes(Uc)	Continue publicity activities such as Waste Recycling Credit Scheme for all PRH estates	Pa	
		2005/06	14%
		2006/07	14%
		2007/08	14%
		2008/09	14%
		Ac	
		2005/06	23%
		2006/07	23%
		2007/08	23%
		2008/09	23%
		PI	
		2005/06	1.9%
		2006/07	1.9%
		2007/08	1.9%
		2008/09	1.9%
		Uc	
2005/06	0.5%		
2006/07	1%		
2007/08	1%		
2008/09	1%		
2. Implementation of Waste Separation at Source	Implement the programme in all estates by phase	2005/06 2006/07 2007/08 2008/09	30 estates 60 estates 90 estates 120 estates
3. Reduce domestic waste	Promote waste reduction through various publicity campaigns (Environmental Family Competition, EMAC newsletters and activities, and other joint activities with green groups)	2005/06 2006/07 2007/08 2008/09	1% reduction 1% reduction 1% reduction 1% reduction
4. Reduce noise nuisance from water pumps in PRH estates	Replace 3000 rpm water pumps by 1500 rpm water pumps	2005/06 2006/07 2007/08 2008/09	15 replacements 15 replacements 20 replacements 20 replacements
5. Reduce potable water consumption for installations under landlord in PRH estates	Use self-stopping water tap and reduce pipe bursting and leakage through replumbing programme	2005/06 2006/07 2007/08 2008/09	0.5% reduction 0.5% reduction 0.5% reduction 0.5% reduction
6. Upgrade the existing landscape facilities in 18 selected PRH estates	Improve soft landscaping through Landscape Improvement Programme	2005/06 2006/07 2007/08	110 000 m ² 110 000 m ² 110 000 m ²

		2008/09	110 000 m ²
7. Improve the slope appearance in existing PRH estates	Apply green treatment to hard surfaced slopes and improve existing vegetated slopes; and improve Chunam surface with hydroseeding stone pitching and toe planters	2005/06 2006/07 2007/08 2008/09	10 slopes 10 slopes 10 slopes 10 slopes
8. Enhance greening in PRH estates	Allocate open area in selected estates for setting up thematic gardens	2005/06 2006/07 2007/08 2008/09	2 estates 2 estates 2 estates 2 estates
9. Increase tenants' awareness and support of greening	Organize tree planting days in selected estates	2005/06 2006/07 2007/08 2008/09	3 estates 3 estates 3 estates 3 estates
10. Promote green environment in 24 estates inherited by Estate Management Advisory Committees (EMAC) estates	Provide greening in PRH through EMAC	2005/06 2006/07 2007/08 2008/09	5 000 m ² 5 000 m ² 5 000 m ² 5 000 m ²
11. Promote recovery of spent fluorescent tubes and bulbs	Manage the recycling scheme in 5 regions	2005/06 2006/07 2007/08 2008/09	All estates All estates All estates All estates
12. Promote green management initiatives in PRH estates	Participate in the Hong Kong Eco-Business Awards-Green Property Management Competition organized by the Environmental Campaign Committees and some other green organization.	2005/06	20 estates
13. Promote environmental care awareness in Housing Ownership Scheme (HOS) estates	Liaise with Property Management Agents (PMAs) to organize activities for residents in HOS Courts and refer environmental messages from the Environmental Protection Department to PMAs	2005/06 2006/07	All HOS estates under the management of HA
14. Promote recovery of used rechargeable batteries	Launch the recycling scheme	2005/06 2006/07 2007/08 2008/09	All estates All estates All estates All estates



Initiatives in 2005/06 and Beyond	Action Plan	Schedule	Key Performance Indicator (KPI)
1. Use environmentally friendly paper in printing to all publicity materials (except sales and marketing publication)	Implement the use of environmentally friendly paper as a prerequisite in future printing jobs	2005/06 2006/07 2007/08 2008/09	100% of paper used 100% of paper used 100% of paper used 100% of paper used
2. Collect waste paper in all offices except site offices	Develop and implement various initiatives	2005/06 2006/07 2007/08 2008/09	Compared with quantity collected (kg) in 2002/03 2% increase 2% increase 2% increase 2% increase
3. Reduce A3 and A4 paper consumption in all offices except site offices	Develop and implement various initiatives	2005/06 2006/07 2007/08 2008/09	Compared with quantity (ream) used in 2002/03 7.5% reduction 10% reduction 10% reduction 10% reduction
4. Reduce energy consumption in HA Headquarters (HAHQs)	Develop and implement various initiatives	2005/06 2006/07 2007/08 2008/09	Compared with electricity consumed (kWh) in 2002/03 4.5% reduction 6% reduction 6% reduction 6% reduction
5. Enhance staff awareness and knowledge about general environmental issues and legislation	Organize seminar on general environmental issues / legislation and/or sponsor staff to attend external seminars/courses; and	2005/06	Organize 2 seminars; and Uploading of relevant training

	Upload a self-learning module on how to use the Environmental Legislative Database under the new e-Housing Portal		module
6. Enhance staff awareness and knowledge about energy saving	Organize seminars on green housekeeping issues for energy wardens	2005/06	2 seminars
7. Enhance staff awareness and knowledge on environmental issues	Organize general seminars on environmental issues; and Arrange displays at the Green Corner to promote environmental initiatives of various divisions	On going	Complete the task as scheduled and the number of seminars will be subject to demand The set up of Green Corner displays will be ongoing throughout the year. Each division will take turn to prepare for the display content on the environmental issues
8. Increase community awareness of environmental protection and in particular to promote greening in PRH	Launch campaigns to promote waste reduction and recycling; Relay green messages in EMAC newsletters; Distribute publicity materials such as posters, leaflets and souvenirs to educate residential tenants on environmental issues; and Launch joint programmes with green groups and the EMACs	On going	Complete the task as scheduled
9. Enhance staff awareness in central government's sustainable development policy and the use of Computer-aided Sustainability Evaluation Tool	Organize a seminar on sustainable development and how to conduct sustainability assessment	2005/06	1 seminar
10. Enhance staff awareness and knowledge on appropriate elements of environmental management plan	Organize training seminars on appropriate elements of environmental management plan	2005/06	2 seminars



Summary	Message from the Chairman	Message from the Director	About this Report	2004/05 Highlights	Business Overview	Significant EHS Aspects	Our Vision and Approach to Sustainable Housing
Environmental Performance	Health, Safety and Social Performance	Stakeholders Engagement	Case Study	Looking Ahead	Verification Statement	Annexes	Feedback Form

Feedback Form 

 Feedback Form

Thank you for reading our Environmental, Health and Safety Report 2004/05. Please take a moment to fill out the Feedback Form and send your valuable comments via email or post before **30 September 2006** to:

Senior Manager, Environmental Management
By Post: Environmental Management Unit
Hong Kong Housing Authority Headquarters
33 Fat Kwong Street, Ho Man Tin
Kowloon, Hong Kong
E-mail: emu@housingauthority.gov.hk

Please click the following link to download the Feedback Form:

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Feedback Form

Thank you for reading our Environmental, Health and Safety(EHS) Report 2004/05. Please take a moment to give us your valuable feedback and return to us via post or email before 30 September 2006.

- | | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. What is your overall view of the Report? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | Very Good | Good | Adequate | Poor | Very poor |
| 2. Did you find the Report information/useful? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | Very Useful | Useful | Adequate | Partly | No |
| 3. Did you find the Report easy to understand? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | Very Easy | Easy | Adequate | Partly | No |
| 4. Did you think the presentation of the Report is clear? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | Very Clear | Clear | Adequate | Partly | No |

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|---|----------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Major Aspects* | A | B | C | D | E | F | G | H | I |
| 5. Which aspect of the Report did you find most useful? | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please specify _____

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|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 6. Which aspect of the Report did you find least useful? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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| 7. Which aspect(s) of the Report would you like more information on? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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| 8. What improvement(s) would you recommend for our next Report? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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Please specify _____

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|--|---|---|
| *A. Supporting Sections (Messages from the Chairman and the Director, About this Report, Looking Ahead) | *B. Business Overview, Vision, EHS Management Structure | *C. EHS Aspects, and Performance Highlights |
| *D. Environmental Performance Overview | *E. Health, Safety and Social Performance Overview | *F. Stakeholder Engagement |
| *G. 3 Case Studies | *H. Targets and Initiatives for 2005/06 & Beyond | *I. Verification Statement and Feedback |

Feedback Form

9. What group(s) do you belong to? (you can tick more than one box)

- | | | |
|--|--|--|
| <input type="checkbox"/> Owner/Tenant in HA flat | <input type="checkbox"/> Environmental Group | <input type="checkbox"/> Education/Academic |
| <input type="checkbox"/> Government Department | <input type="checkbox"/> Other Public Organization | <input type="checkbox"/> Professional Engineer/Scientist |
| <input type="checkbox"/> Other, please specify _____ | | |

10. Would you like to receive HA future EHS Reports? Yes No

Name: _____ Contact Number: _____

E-mail Address: _____ Mailing Address: _____

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